

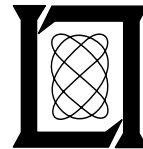
**Project Report
ATC-240**

**Lincoln Laboratory Evaluation of
TCAS II Logic Version 6.04a - Appendices
Volume II**

A. C. Drumm

15 February 1996

Lincoln Laboratory
MASSACHUSETTS INSTITUTE OF TECHNOLOGY
LEXINGTON, MASSACHUSETTS



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16. Abstract <p>This report documents the Lincoln Laboratory evaluation of the Traffic Alert and Collision Avoidance System II (TCAS II) logic version 6.04a. TCAS II is an airborne collision avoidance system required since 30 December 1993 by the FAA on all air carrier aircraft with more than 30 passenger seats operating in U.S. airspace. Version 6.04a is a logic version mandated by the FAA by 30 December 1994 in order to correct a potential safety problem in earlier versions and to make the TCAS logic more compatible with the air traffic control system.</p> <p>Lincoln Laboratory evaluated the logic by examining approximately two million simulated pairwise TCAS-TCAS encounters, derived from actual aircraft tracks recorded in U.S. airspace. The main goals of the evaluation effort were: (1) to determine if version 6.04a successfully corrected the potential safety problem without introducing new problems; (2) to detect and explain any areas of poor performance; and (3) to understand the performance limits of the logic. Five analysis programs were written to aid in the evaluation, and these programs are described in the report.</p> <p>There were three phases of the evaluation corresponding to the above three goals. For each phase, the report gives an overview of the evaluation approach taken, a description of the results, and a summary. A description of follow-on activities plus overall conclusions and recommendations are given at the end of the report.</p>					
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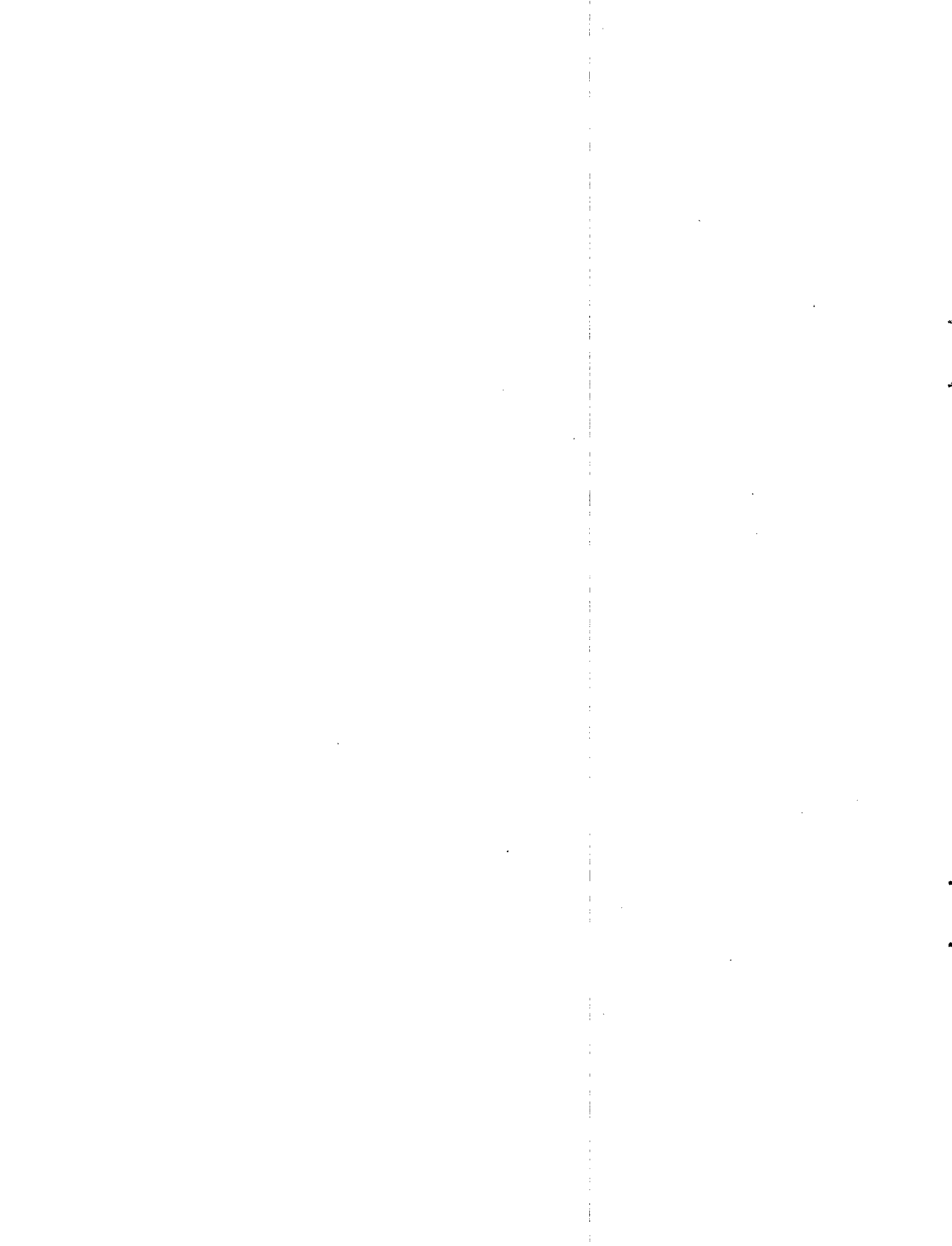
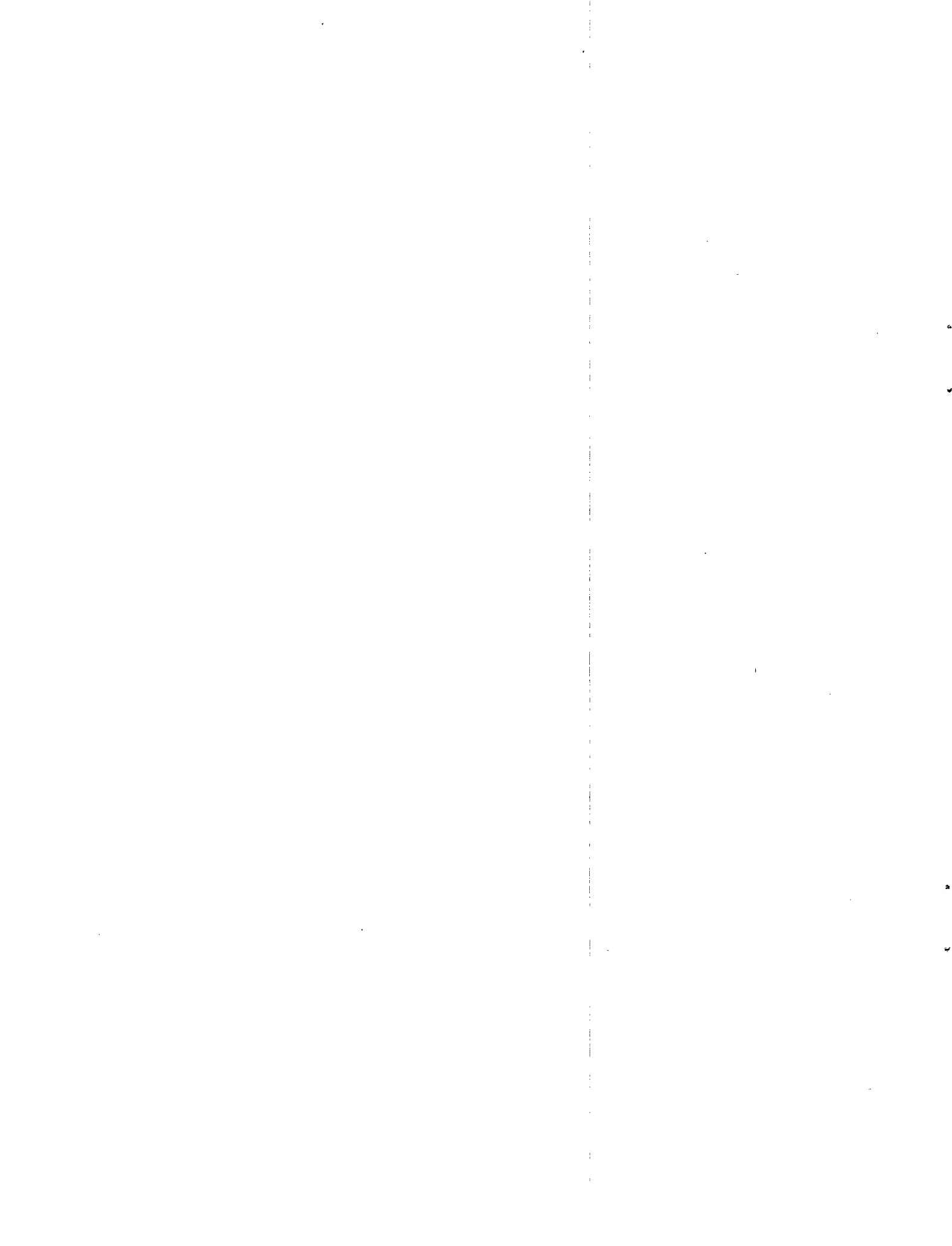


TABLE OF CONTENTS

Volume II

APPENDIX A SCENARIO DEFINITIONS FOR TCAS II TESTING	69
APPENDIX B TOTAL OF ENCOUNTERS RUN; BREAKDOWN BY ENCOUNTER CLASS AND EQUIPAGE.....	73
APPENDIX C NMAC TABLES.....	75
APPENDIX D PARAMETER FILE DESCRIPTION AND PARAMETER FILE PRINTOUT FOR CLASS 9/19.....	135
APPENDIX E SUMMARY NMAC TABLES.....	165
APPENDIX F NMACs AS A FUNCTION OF PARAMETER VALUES.....	175
APPENDIX G NMACs AS A FUNCTION OF LOGIC VERSION.....	181
APPENDIX H CAS THRESHOLDS, LAYERS, AND SENSITIVITY LEVELS.....	199
APPENDIX I PERFORMANCE STATISTICS OUTPUTS	201
APPENDIX J NMACS UNIQUE TO 6.04A – TABLES 7.4 AND 9.4.....	213
APPENDIX K CLASS WEIGHTS	219
APPENDIX L 30 REPRESENTATIVE 6.04A NMAC ENCOUNTERS	221
APPENDIX M MINUTES OF 24 AUGUST 1994 NMAC REVIEW MEETING.....	315



APPENDIX A

SCENARIO DEFINITION FOR TCAS II TESTING

<u>CLASS</u>	<u>PARAMETER VARIED</u>	<u>RANGE</u>	<u>STEP SIZE</u>	<u>MULTIPLICATION FACTOR</u>
0,10	alt sep @ CPA	-750, 750 ft	250	7
	vertical rate 1	-400, 400 fpm	400	3
	vertical rate 2	0, 400 fpm	400	2
	alt a/c 1 at CPA	3700,7500 ft	3800	2
				<hr/> 84 * 26 = 2184
1,11	alt sep @ CPA	-750, 750 ft	250	7
	vertical rate 1	-400, 400 fpm	400	3
	vertical rate 2	1000, 5000 fpm	2000	3
	alt bins	-20, 20 ft	40	2
	alt a/c 1 at CPA	3700,7500 ft	3800	2
				<hr/> 252 * 26 = 6552
2,12	alt sep @ CPA	-750, 750 ft	250	7
	vertical rate 1	-400, 400 fpm	400	3
	vertical rate 2	1000, 5000 fpm	2000	3
	vertical accel 2	.05, .35 g	.1	4
	time vert accel 2	20, 30 sec	5	3
	alt bins	-20, 20 ft	40	2
	alt a/c 1 at CPA	3700,7500 ft	3800	2
				<hr/> 3024 * 26 = 78624
3,13	alt sep @ CPA	-1000, 1000 ft	250	9
	vertical rate 1	-400, 400 fpm	400	3
	vertical rate 2	1000, 5000 fpm	2000	3
	vertical accel 2	-.35, -.05 g	.1	4
	time vert accel 2	20, 30 sec	5	3
	alt bins	-20, 20 ft	40	2
	alt a/c 1 at CPA	3700,7500 ft	3800	2
				<hr/> 3888 * 26 = 101088
4,14	alt sep @ CPA	-750, 750 ft	250	7
	vertical rate 1	-5000, 5000 fpm	2000	6
	vertical rate 2	1000, 5000 fpm	2000	3
	alt bins	-20, 20 ft	40	2
	alt a/c 1 at CPA	3700,7500 ft	3800	2
				<hr/> 504 * 26 = 13104

5,15	alt sep @ CPA	-750, 750 ft	250	7
	vertical rate 1	-5000, 5000 fpm	2000	6
	vertical rate 2	1000, 5000 fpm	2000	3
	vertical accel 2	.05, .35 g	.1	4
	time vert accel 2	20, 30 sec	5	3
	alt bins	-20, 20 ft	40	2
	alt a/c 1 at CPA	3700,7500 ft	3800	2

$$6048 * 26 = 157248$$

6,16	alt sep @ CPA	-750, 750 ft	250	7
	vertical rate 1	-5000, 5000 fpm	2000	6
	vertical rate 2	-5000, -1000 fpm	2000	3
	vertical accel 2	.05, .35 g	.1	4
	time vert accel 2	20, 30 sec	5	3
	alt bins	-20, 20 ft	40	2
	alt a/c 1 at CPA	3700,7500 ft	3800	2

$$6048 * 26 = 157248$$

7,17	alt sep @ CPA	-750, 750 ft	250	7
	vertical rate 1	1000, 5000 fpm	2000	3
	vertical rate 2	-5000, 5000 fpm	2000	6
	vertical accel 1	.05, .25 g	.1	3
	vertical accel 2	magnitudes .05 to .35 g; sign is same sign of vertical rate	.1	4
	time vert accel 1	25 sec		1
	time vert accel 2	20, 30 sec	5	3
	alt a/c 1 at CPA	3700,7500 ft	3800	2

$$9072 * 26 = 235872$$

8,18	alt sep @ CPA	-750, 750 ft	250	7
	vertical rate 1	-5000, -1000 fpm	2000	3
	vertical rate 2	-5000, 5000 fpm	2000	6
	vertical accel 1	.05, .25 g	.1	3
	vertical accel 2	magnitudes .05 to .35 g; sign is same sign of vertical rate	.1	4
	time vert accel 1	25 sec		1
	time vert accel 2	20, 30 sec	5	3
	alt a/c 1 at CPA	3700,7500 ft	3800	2

$$9072 * 26 = 235872$$

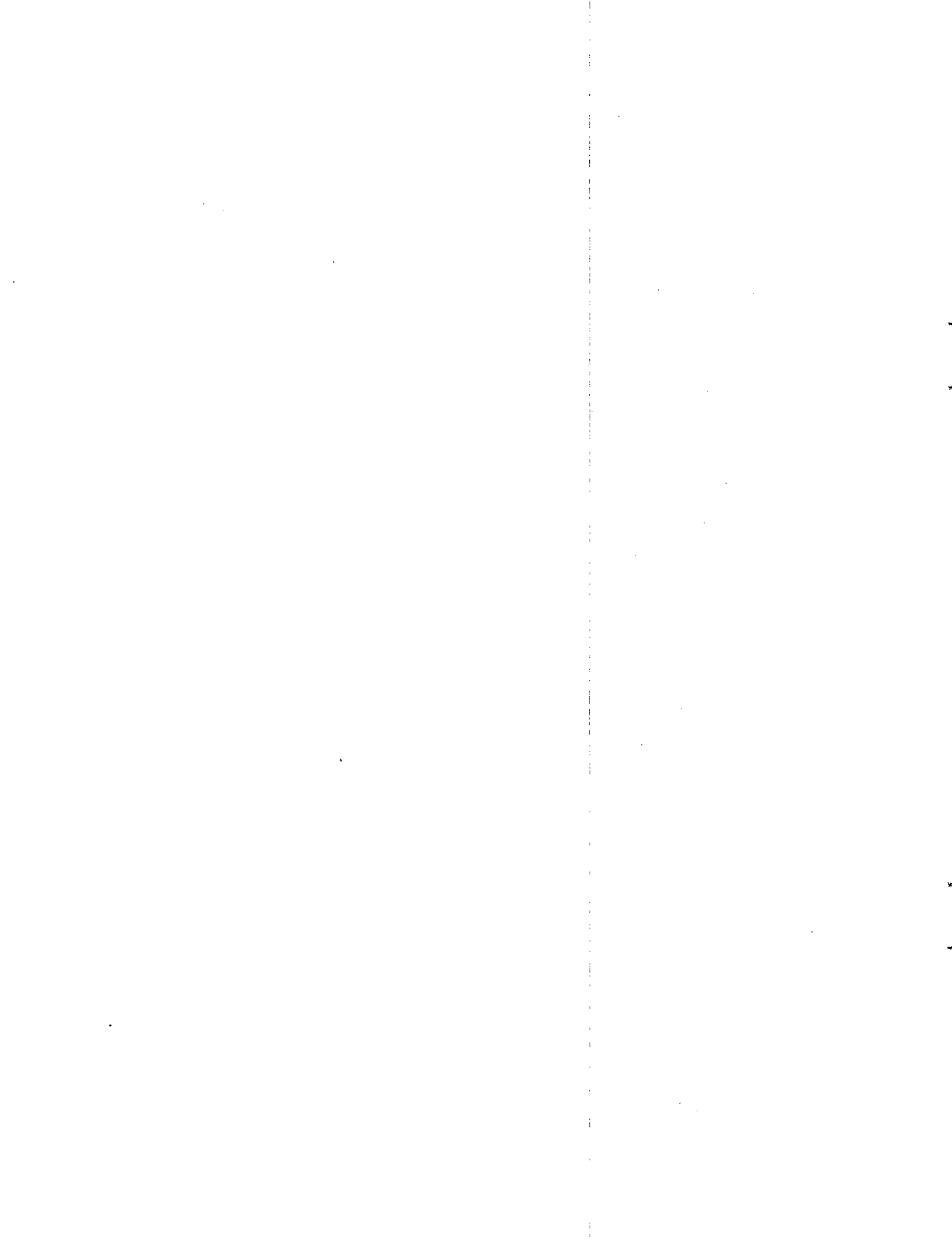
9,19	alt sep @ CPA	-1000, 1000 ft	250	9
	vertical rate 1	1000, 5000 fpm	2000	3
	vertical rate 2	-5000, 5000 fpm	2000	6
	vertical accel 1	-.15, -.05	.1	2
	vertical accel 2	magnitudes .05	.1	4
		to .35 g; sign		
		is opposite sign of		
		vertical rate		
	time vert accel 1	25 sec		1
	time vert accel 2	20, 30 sec	5	3
	alt a/c 1 at CPA	3700,7500 ft	3800.	2

7776 * 26 = 202176

TOTAL SCENARIOS RUN :

CLASS 0,10	2,184
CLASS 1,11	6,552
CLASS 2,12	78,624
CLASS 3,13	101,088
CLASS 4,14	13,104
CLASS 5,15	157,248
CLASS 6,16	157,248
CLASS 7,17	235,872
CLASS 8,18	235,872
CLASS 9,19	202,176

TOTAL	1,189,968



APPENDIX B

TOTAL OF ENCOUNTERS RUN; BREAKDOWN BY ENCOUNTER CLASS AND EQUIPAGE

Class	Number of Parameters Variations*	Dataset 1 (26 equip. pairs)	Dataset 2 (30 equip. pairs)	Dataset 3 (30 equip. pairs)
0/10	84	2184	2520	2520
1/11	252	6552	7560	7560
2/12	3024	78624	90720	90720
3/13	3888	101088	116640	116640
4/14	504	13104	15120	15120
5/15	6048	157248	181440	181440
6/16	6048	157248	181440	181440
7/17	9072	235872	272160	272160
8/18	9072	235872	272160	272160
9/19	7776	202176	233280	233280
Total		1,189,968	1,373,040	1,373,040

* from "multiplication factor" in Appendix A

Dataset 1 - 26 equipage pairs

6.02, 6.04, 6.04a

Pilot Responding

- | <u>AC1</u> | <u>AC2</u> | <u>AC1</u> | <u>AC2</u> |
|---------------------------------------|------------|--|------------|
| 1. Mode C vs. non-resp TCAS (planned) | | 14. non-resp TCAS vs. Mode C (planned) | |
| 2. Mode C vs. 6.02 | | 15. 6.02 vs. Mode C | |
| 3. Mode C vs. 6.04 | | 16. 6.04 vs. Mode C | |
| 4. Mode C vs. 6.04a | | 17. 6.04a vs. Mode C | |
| 5. 6.02 low ID vs. 6.02 high ID | | 18. 6.02 high ID vs. 6.02 low ID | |
| 6. 6.02 low ID vs. 6.04 high ID | | 19. 6.04 high ID vs. 6.02 low ID | |
| 7. 6.02 high ID vs. 6.04 low ID | | 20. 6.04 low ID vs. 6.02 high ID | |
| 8. 6.02 low ID vs. 6.04a high ID | | 21. 6.04a high ID vs. 6.02 low ID | |
| 9. 6.02 high ID vs. 6.04a low ID | | 22. 6.04a low ID vs. 6.02 high ID | |
| 10. 6.04 low ID vs. 6.04 high ID | | 23. 6.04 high ID vs. 6.04 low ID | |
| 11. 6.04 low ID vs. 6.04a high ID | | 24. 6.04a high ID vs. 6.04 low ID | |
| 12. 6.04 high ID vs. 6.04a low ID | | 25. 6.04a low ID vs. 6.04 high ID | |
| 13. 6.04a low ID vs. 6.04a high ID | | 26. 6.04a high ID vs. 6.04a low ID | |

Dataset 2 - 30 equipage pairs

6.02, 6.04a

Pilot Responding and Pilot Non-responding (PNR)

- | <u>AC1</u> | <u>AC2</u> | <u>AC1</u> | <u>AC2</u> |
|--|------------|--|------------|
| 1. Mode C vs. non-resp TCAS (planned) | | 16. non-resp TCAS vs. Mode C (planned) | |
| 2. Mode C vs. 6.02 | | 17. 6.02 vs. Mode C | |
| 3. Mode C vs. 6.04a | | 18. 6.04a vs. Mode C | |
| 4. 6.02 low ID vs. 6.02 high ID | | 19. 6.02 high ID vs. 6.02 low ID | |
| 5. 6.02 low ID vs. 6.04a high ID | | 20. 6.04a high ID vs. 6.02 low ID | |
| 6. 6.02 high ID vs. 6.04a low ID | | 21. 6.04a low ID vs. 6.02 high ID | |
| 7. 6.02 low ID vs. 6.02 PNR high ID | | 22. 6.02 PNR high ID vs. 6.02 low ID | |
| 8. 6.02 high ID vs. 6.02 PNR low ID | | 23. 6.02 PNR low ID vs. 6.02 high ID | |
| 9. 6.02 low ID vs. 6.04a PNR high ID | | 24. 6.04a PNR high ID vs. 6.02 low ID | |
| 10. 6.02 high ID vs. 6.04a PNR low ID | | 25. 6.04a PNR low ID vs. 6.02 high ID | |
| 11. 6.04a low ID vs. 6.04a high ID | | 26. 6.04a high ID vs. 6.04a low ID | |
| 12. 6.04a low ID vs. 6.02 PNR high ID | | 27. 6.02 PNR high ID vs. 6.04a low ID | |
| 13. 6.04a high ID vs. 6.02 PNR low ID | | 28. 6.02 PNR low ID vs. 6.04a high ID | |
| 14. 6.04a low ID vs. 6.04a PNR high ID | | 29. 6.04a PNR high ID vs. 6.04a low ID | |
| 15. 6.04a high ID vs. 6.04a PNR low ID | | 30. 6.04a PNR low ID vs. 6.04a high ID | |

Dataset 3 - 30 equipage pairs

6.04, 6.04a

Pilot Responding and Pilot Non-responding (PNR)

- | <u>AC1</u> | <u>AC2</u> | <u>AC1</u> | <u>AC2</u> |
|--|------------|--|------------|
| 1. Mode C vs. non-resp TCAS (planned) | | 16. non-resp TCAS vs. Mode C (planned) | |
| 2. Mode C vs. 6.04 | | 17. 6.04 vs. Mode C | |
| 3. Mode C vs. 6.04a | | 18. 6.04a vs. Mode C | |
| 4. 6.04 low ID vs. 6.04 high ID | | 19. 6.04 high ID vs. 6.04 low ID | |
| 5. 6.04 low ID vs. 6.04a high ID | | 20. 6.04a high ID vs. 6.04 low ID | |
| 6. 6.04 high ID vs. 6.04a low ID | | 21. 6.04a low ID vs. 6.04 high ID | |
| 7. 6.04 low ID vs. 6.04 PNR high ID | | 22. 6.04 PNR high ID vs. 6.04 low ID | |
| 8. 6.04 high ID vs. 6.04 PNR low ID | | 23. 6.04 PNR low ID vs. 6.04 high ID | |
| 9. 6.04 low ID vs. 6.04a PNR high ID | | 24. 6.04a PNR high ID vs. 6.04 low ID | |
| 10. 6.04 high ID vs. 6.04a PNR low ID | | 25. 6.04a PNR low ID vs. 6.04 high ID | |
| 11. 6.04a low ID vs. 6.04a high ID | | 26. 6.04a high ID vs. 6.04a low ID | |
| 12. 6.04a low ID vs. 6.04 PNR high ID | | 27. 6.04 PNR high ID vs. 6.04a low ID | |
| 13. 6.04a high ID vs. 6.04 PNR low ID | | 28. 6.04 PNR low ID vs. 6.04a high ID | |
| 14. 6.04a low ID vs. 6.04a PNR high ID | | 29. 6.04a PNR high ID vs. 6.04a low ID | |
| 15. 6.04a high ID vs. 6.04a PNR low ID | | 30. 6.04a PNR low ID vs. 6.04a high ID | |

APPENDIX C

NMAC TABLES

MITRE encounter class: 0 "planned = CROSSING" Date processed: 6/21/94
 TCAS Logic Version 6.04a; All aircraft responding. June 1994

Table 0.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 8
 Normalizing number for TCAS-TCAS cells: 16

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	0	0	0	—	
	6.02	0	0	0	0	—	
	6.04	0	0	0	0	—	
	6.05	0	0	0	0	—	
	1	—	—	—	—	—	

Table 0.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 8
 Normalizing number for TCAS-TCAS cells: 16

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	0	0	0	—	
	6.02	0	0	0	0	—	
	6.04	0	0	0	0	—	
	6.05	0	0	0	0	—	
	1	—	—	—	—	—	

Table 0.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 8
 Normalizing number for TCAS-TCAS cells: 16

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	0	0	0	—	
	6.02	0	0	0	0	—	
	6.04	0	0	0	0	—	
	6.05	0	0	0	0	—	
1	—	—	—	—	—	—	

Table 0.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 10
 Normalizing number for TCAS-TCAS cells: 20

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	—	0	0	0	—	
r							
c	6.02	0	0	0	0	—	
r							
a	6.04	0	0	0	0	—	
f							
t	6.05	0	0	0	0	—	
1		—	—	—	—	—	

Table 0.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 10
 Normalizing number for TCAS-TCAS cells: 20

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	—	10	10	10	—	
r							
c	6.02	10	20	20	20	—	
r							
a	6.04	10	20	20	20	—	
f							
t	6.05	10	20	20	20	—	
1		—	—	—	—	—	

Table 10.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 4
 Normalizing number for TCAS-TCAS cells: 8

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	0	0	0	—	
	6.02	0	0	0	0	—	
	6.04	0	0	0	0	—	
	6.05	0	0	0	0	—	
	1	—	—	—	—	—	

Table 10.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 4
 Normalizing number for TCAS-TCAS cells: 8

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	0	0	0	—	
	6.02	0	0	0	0	—	
	6.04	0	0	0	0	—	
	6.05	0	0	0	0	—	
	1	—	—	—	—	—	

Table 10.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 4
 Normalizing number for TCAS-TCAS cells: 8

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A		—	0	0	0	—	
i	Mode C	—	0	0	0	—	
r							
c	6.02	0	0	0	0	—	
r							
a	6.04	0	0	0	0	—	
f							
t	6.05	0	0	0	0	—	
l		—	—	—	—	—	

Table 10.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 62
 Normalizing number for TCAS-TCAS cells: 124

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	—	0	0	0	—	
r							
c	6.02	0	0	0	0	—	
r							
a	6.04	0	0	0	0	—	
f							
t	6.05	0	0	0	0	—	
1		—	—	—	—	—	

Table 10.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 62
 Normalizing number for TCAS-TCAS cells: 124

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	—	57	38	38	—	
r							
c	6.02	55	118	110	110	—	
r							
a	6.04	38	114	76	76	—	
f							
t	6.05	38	114	76	76	—	
1		—	—	—	—	—	

Table 1.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 36
 Normalizing number for TCAS-TCAS cells: 72

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A								
i	Mode C	--	0	0	0	--		
r								
c	6.02	0	0	0	0	--		
r								
a	6.04	0	0	0	0	--		
f								
t	6.05	0	0	0	0	--		
1		--	--	--	--	--		

Table 1.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 36
 Normalizing number for TCAS-TCAS cells: 72

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A								
i	Mode C	--	0	0	0	--		
r								
c	6.02	0	0	0	0	--		
r								
a	6.04	0	0	0	0	--		
f								
t	6.05	0	0	0	0	--		
1		--	--	--	--	--		

Table 1.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 36
 Normalizing number for TCAS-TCAS cells: 72

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 1.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 152
 Normalizing number for TCAS-TCAS cells: 304

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	0	0	0	--	
	6.02	0	0	0	0	--	
	6.04	0	0	0	0	--	
	6.05	0	0	0	0	--	
	1	--	--	--	--	--	

Table 1.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 152
 Normalizing number for TCAS-TCAS cells: 304

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	152	145	145	--	
	6.02	152	304	304	304	--	
	6.04	145	304	290	290	--	
	6.05	145	304	290	290	--	
	1	--	--	--	--	--	

Table 11.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A		—	0	0	0	—	
i	Mode C	—	0	0	0	—	
r							
c	6.02	0	0	0	0	—	
r							
a	6.04	0	0	0	0	—	
f							
t	6.05	0	0	0	0	—	
1		—	—	—	—	—	

Table 11.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A		—	0	0	0	—	
i	Mode C	—	0	0	0	—	
r							
c	6.02	0	0	0	0	—	
r							
a	6.04	0	0	0	0	—	
f							
t	6.05	0	0	0	0	—	
1		—	—	—	—	—	

Table 11.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
l		--	--	--	--	--	

Table 11.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 64
 Normalizing number for TCAS-TCAS cells: 128

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	—	0	0	0	—	
i	6.02	0	0	0	0	—	
r	6.04	0	0	0	0	—	
c	6.05	0	0	0	0	—	
a		—	—	—	—	—	
f							
t							
1							

Table 11.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 64
 Normalizing number for TCAS-TCAS cells: 128

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	—	64	38	38	—	
i	6.02	64	128	128	128	—	
r	6.04	38	128	76	76	—	
c	6.05	38	128	76	76	—	
a		—	—	—	—	—	
f							
t							
1							

Table 2.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 432
 Normalizing number for TCAS-TCAS cells: 864

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	—	0	0	0	—
r						
c	6.02	0	0	0	0	—
r						
a	6.04	0	0	0	0	—
f						
t	6.05	0	0	0	0	—
1		—	—	—	—	—

Table 2.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 432
 Normalizing number for TCAS-TCAS cells: 864

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	—	0	0	0	—
r						
c	6.02	2	0	0	0	—
r						
a	6.04	14	2	5	5	—
f						
t	6.05	14	2	5	5	—
1		—	—	—	—	—

Table 2.3

Total number of unresolved NMAs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMA, based on simulation truth): 432
 Normalizing number for TCAS-TCAS cells: 864

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	—	0	0	0	—	
r							
c	6.02	2	0	0	0	—	
r							
a	6.04	14	2	5	5	—	
f							
t	6.05	14	2	5	5	—	
1		—	—	—	—	—	

Table 2.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1516
 Normalizing number for TCAS-TCAS cells: 3032

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	56	63	63	--	
r							
c	6.02	206	12	16	16	--	
r							
a	6.04	170	20	52	52	--	
f							
t	6.05	170	20	52	52	--	
l							
		--	--	--	--	--	

Table 2.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1516
 Normalizing number for TCAS-TCAS cells: 3032

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	1460	1439	1439	--	
r							
c	6.02	1310	3020	3016	3016	--	
r							
a	6.04	1338	3012	2970	2970	--	
f							
t	6.05	1338	3012	2970	2970	--	
l							
		--	--	--	--	--	

Table 12.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A								
i	Mode C	—	0	0	0	—		
r								
c	6.02	0	0	0	0	—		
r								
a	6.04	0	0	0	0	—		
f								
t	6.05	0	0	0	0	—		
l		—	—	—	—	—		

Table 12.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A								
i	Mode C	—	0	0	0	—		
r								
c	6.02	0	0	0	0	—		
r								
a	6.04	0	0	0	0	—		
f								
t	6.05	0	0	0	0	—		
l		—	—	—	—	—		

Table 12.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A		—	0	0	0	—	
i	Mode C	—	0	0	0	—	
r							
c	6.02	0	0	0	0	—	
r							
a	6.04	0	0	0	0	—	
f							
t	6.05	0	0	0	0	—	
1		—	—	—	—	—	

Table 12.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1076
 Normalizing number for TCAS-TCAS cells: 2152

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	---	0	0	0	---	
r	6.02	10	0	0	0	---	
c	6.04	13	0	1	1	---	
r	6.05	13	0	1	1	---	
a							
f							
t							
1		---	---	---	---	---	

Table 12.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1076
 Normalizing number for TCAS-TCAS cells: 2152

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	---	1076	768	768	---	
r	6.02	1066	2152	2152	2152	---	
c	6.04	803	2152	1643	1643	---	
r	6.05	803	2152	1643	1643	---	
a							
f							
t							
1		---	---	---	---	---	

Table 3.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 368
 Normalizing number for TCAS-TCAS cells: 736

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	--	0	0	0	--
r	6.02	0	0	0	0	--
c	6.04	0	0	0	0	--
a	6.05	0	0	0	0	--
f						
t						
l		--	--	--	--	--

Table 3.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 368
 Normalizing number for TCAS-TCAS cells: 736

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	--	0	0	0	--
r	6.02	17	0	0	0	--
c	6.04	33	0	0	0	--
a	6.05	33	0	0	0	--
f						
t						
l		--	--	--	--	--

Table 3.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 368
 Normalizing number for TCAS-TCAS cells: 736

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	—	0	0	0	—	
r							
c	6.02	17	0	0	0	—	
r							
a	6.04	33	0	0	0	—	
f							
t	6.05	33	0	0	0	—	
l		—	—	—	—	—	

Table 3.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1208
 Normalizing number for TCAS-TCAS cells: 2416

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
l		--	--	--	--	--	

Table 3.5

Number of nuisance RAS with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1208
 Normalizing number for TCAS-TCAS cells: 2416

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	966	748	748	--	
r							
c	6.02	934	1940	1868	1868	--	
r							
a	6.04	746	1932	1496	1496	--	
f							
t	6.05	746	1932	1496	1496	--	
l		--	--	--	--	--	

Table 13.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 64
 Normalizing number for TCAS-TCAS cells: 128

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A		---	0	0	0	---	
i	Mode C	---	0	0	0	---	
r	6.02	0	0	0	0	---	
c	6.04	0	0	0	0	---	
r	6.05	0	0	0	0	---	
a		---	---	---	---	---	
f		---	---	---	---	---	
t		---	---	---	---	---	
l		---	---	---	---	---	

Table 13.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 64
 Normalizing number for TCAS-TCAS cells: 128

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A		---	0	0	0	---	
i	Mode C	---	0	0	0	---	
r	6.02	1	0	0	0	---	
c	6.04	1	0	0	0	---	
r	6.05	1	0	0	0	---	
a		---	---	---	---	---	
f		---	---	---	---	---	
t		---	---	---	---	---	
l		---	---	---	---	---	

Table 13.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 64
 Normalizing number for TCAS-TCAS cells: 128

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	---	0	0	0	---	
i	6.02	1	0	0	0	---	
r	6.04	1	0	0	0	---	
c	6.05	1	0	0	0	---	
r		---	---	---	---	---	
a							
f							
t							
l							

Table 13.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 2248
 Normalizing number for TCAS-TCAS cells: 4496

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	26	19	--	
r							
c	6.02	8	0	2	0	--	
r							
a	6.04	11	14	21	3	--	
f							
t	6.05	11	8	18	4	--	
1		--	--	--	--	--	

Table 13.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 2248
 Normalizing number for TCAS-TCAS cells: 4496

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	1724	1280	1287	--	
r							
c	6.02	1642	3624	3498	3500	--	
r							
a	6.04	1174	3434	2691	2709	--	
f							
t	6.05	1174	3440	2694	2708	--	
1		--	--	--	--	--	

Table 4.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 60
 Normalizing number for TCAS-TCAS cells: 120

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 4.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 60
 Normalizing number for TCAS-TCAS cells: 120

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 4.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 60
 Normalizing number for TCAS-TCAS cells: 120

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	—	0	0	0	—	
r							
c	6.02	0	0	0	0	—	
r							
a	6.04	0	0	0	0	—	
f							
t	6.05	0	0	0	0	—	
l		—	—	—	—	—	

Table 4.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 304
 Normalizing number for TCAS-TCAS cells: 608

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	0	1	0	--	
i	6.02	0	0	0	0	--	
r	6.04	1	0	0	0	--	
c	6.05	0	0	0	0	--	
r		--	--	--	--	--	
a							
f							
t							
1							

Table 4.5

Number of nuisance RAS with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 304
 Normalizing number for TCAS-TCAS cells: 608

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	304	293	294	--	
i	6.02	304	608	608	608	--	
r	6.04	293	608	588	588	--	
c	6.05	294	608	588	588	--	
r		--	--	--	--	--	
a							
f							
t							
1							

Table 14.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 12
 Normalizing number for TCAS-TCAS cells: 24

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
l		--	--	--	--	--	

Table 14.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 12
 Normalizing number for TCAS-TCAS cells: 24

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
l		--	--	--	--	--	

Table 14.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 12
 Normalizing number for TCAS-TCAS cells: 24

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A								
i	Mode C	--	0	0	0	--		
r	6.02	0	0	0	0	--		
c	6.04	0	0	0	0	--		
r	6.05	0	0	0	0	--		
a								
f								
t								
1		--	--	--	--	--		

Table 14.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 128
 Normalizing number for TCAS-TCAS cells: 256

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	0	0	0	--	
	6.02	0	0	0	0	--	
	6.04	0	0	0	0	--	
	6.05	0	0	0	0	--	
	1	--	--	--	--	--	

Table 14.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 128
 Normalizing number for TCAS-TCAS cells: 256

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	120	84	84	--	
	6.02	120	256	240	240	--	
	6.04	84	240	168	168	--	
	6.05	84	240	168	168	--	
	1	--	--	--	--	--	

Table 5.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 790
 Normalizing number for TCAS-TCAS cells: 1580

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	--	0	0	0	--
r						
c	6.02	0	0	0	0	--
r						
a	6.04	0	0	0	0	--
f						
t	6.05	0	0	0	0	--
l		--	--	--	--	--

Table 5.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 790
 Normalizing number for TCAS-TCAS cells: 1580

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	--	0	0	6	--
r						
c	6.02	69	0	0	0	--
r						
a	6.04	96	0	0	0	--
f						
t	6.05	91	0	0	0	--
l		--	--	--	--	--

Table 5.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 790
 Normalizing number for TCAS-TCAS cells: 1580

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	6	--	
r	6.02	69	0	0	0	--	
c	6.04	96	0	0	0	--	
r	6.05	91	0	0	0	--	
a							
f							
t							
l		--	--	--	--	--	

Table 5.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 3744
 Normalizing number for TCAS-TCAS cells: 7488

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	40	107	102	—	—
	6.02	176	4	8	8	—	—
	6.04	165	8	26	26	—	—
	6.05	165	8	26	26	—	—
	1	—	—	—	—	—	—

Table 5.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 3744
 Normalizing number for TCAS-TCAS cells: 7488

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	3690	3470	3475	—	—
	6.02	3554	7484	7452	7452	—	—
	6.04	3424	7452	7166	7166	—	—
	6.05	3424	7452	7166	7166	—	—
	1	—	—	—	—	—	—

Table 15.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 74
 Normalizing number for TCAS-TCAS cells: 148

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A	Mode C	--	0	0	0	--		
i	6.02	0	0	0	0	--		
r	6.04	0	0	0	0	--		
c	6.05	0	0	0	0	--		
a		--	--	--	--	--		
f								
t								
l								

Table 15.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 74
 Normalizing number for TCAS-TCAS cells: 148

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A	Mode C	--	0	0	0	--		
i	6.02	28	0	0	0	--		
r	6.04	26	0	0	0	--		
c	6.05	25	0	0	0	--		
a		--	--	--	--	--		
f								
t								
l								

Table 15.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 74
 Normalizing number for TCAS-TCAS cells: 148

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	—	0	0	0	—	
i	6.02	28	0	0	0	—	
r	6.04	26	0	0	0	—	
c	6.05	25	0	0	0	—	
r		—	—	—	—	—	
a							
f							
t							
1							

Table 15.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1440
 Normalizing number for TCAS-TCAS cells: 2880

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A i r c r a f t	Mode C	--	8	1	7	--
	6.02	8	0	9	7	--
	6.04	8	12	28	27	--
	6.05	8	4	25	21	--
	1	--	--	--	--	--

Table 15.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1440
 Normalizing number for TCAS-TCAS cells: 2880

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A i r c r a f t	Mode C	--	1394	1039	1014	--
	6.02	1403	2880	2813	2815	--
	6.04	1089	2800	2220	2213	--
	6.05	1089	2808	2223	2219	--
	1	--	--	--	--	--

Table 6.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 864
 Normalizing number for TCAS-TCAS cells: 1728

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	--	0	0	0	--
r						
c	6.02	0	0	0	0	--
r						
a	6.04	2	0	0	0	--
f						
t	6.05	4	0	0	0	--
l						
		--	--	--	--	--

Table 6.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 864
 Normalizing number for TCAS-TCAS cells: 1728

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	--	0	7	5	--
r						
c	6.02	56	0	0	4	--
r						
a	6.04	118	4	5	13	--
f						
t	6.05	86	4	4	14	--
l						
		--	--	--	--	--

Table 6.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 864
 Normalizing number for TCAS-TCAS cells: 1728

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A						
i	Mode C	---	0	7	5	---
r						
c	6.02	56	0	0	4	---
r						
a	6.04	120	4	5	13	---
f						
t	6.05	90	4	4	14	---
l						
		---	---	---	---	---

Table 6.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 3692
 Normalizing number for TCAS-TCAS cells: 7384

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	44	60	49	--	
i	6.02	16	28	43	19	--	
r	6.04	25	30	60	27	--	
c	6.05	25	20	37	12	--	
r		--	--	--	--	--	
a							
f							
t							
l							

Table 6.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 3692
 Normalizing number for TCAS-TCAS cells: 7384

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	3648	3409	3430	--	
i	6.02	3668	7356	7333	7357	--	
r	6.04	3437	7354	6960	7009	--	
c	6.05	3448	7364	6995	7024	--	
r		--	--	--	--	--	
a							
f							
t							
l							

Table 16.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 16.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 16.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 16.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1492
 Normalizing number for TCAS-TCAS cells: 2984

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	0	10	4	--	
	6.02	14	15	21	7	--	
	6.04	17	10	23	2	--	
	6.05	16	6	12	1	--	
	1	--	--	--	--	--	

Table 16.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 1492
 Normalizing number for TCAS-TCAS cells: 2984

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	1488	1169	1176	--	
	6.02	1474	2969	2959	2973	--	
	6.04	1159	2966	2549	2572	--	
	6.05	1151	2970	2556	2569	--	
	1	--	--	--	--	--	

Table 7.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 1208
 Normalizing number for TCAS-TCAS cells: 2416

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	0	0	0	--	
i	6.02	0	0	0	0	--	
r	6.04	0	0	0	0	--	
c	6.05	0	0	0	0	--	
r							
a							
f							
t							
l		--	--	--	--	--	

Table 7.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 1208
 Normalizing number for TCAS-TCAS cells: 2416

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	64	124	125	--	
i	6.02	51	0	0	0	--	
r	6.04	92	0	4	4	--	
c	6.05	92	0	4	4	--	
r							
a							
f							
t							
l		--	--	--	--	--	

Table 7.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 1208
 Normalizing number for TCAS-TCAS cells: 2416

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	64	124	125	--	
r	6.02	51	0	0	0	--	
c	6.04	92	0	4	4	--	
a	6.05	92	0	4	4	--	
f							
t							
l		--	--	--	--	--	

MITRE encounter class: 7 "planned = CROSSING" Date processed: 6/22/94
 TCAS Logic Version 6.04a; All aircraft responding. June 1994

Table 7.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 4994
 Normalizing number for TCAS-TCAS cells: 9988

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	425	409	422	--	
r							
c	6.02	511	97	146	146	--	
r							
a	6.04	557	121	191	190	--	
f							
t	6.05	562	125	197	196	--	
l		--	--	--	--	--	

Table 7.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 4994
 Normalizing number for TCAS-TCAS cells: 9988

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	4569	4556	4543	--	
r							
c	6.02	4483	9891	9842	9842	--	
r							
a	6.04	4418	9867	9761	9762	--	
f							
t	6.05	4413	9863	9755	9756	--	
l		--	--	--	--	--	

Table 17.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 88
 Normalizing number for TCAS-TCAS cells: 176

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A i r c r a f t	Mode C	--	0	0	0	--		
	6.02	0	0	0	0	--		
	6.04	0	0	0	0	--		
	6.05	0	0	0	0	--		
	1	--	--	--	--	--		

Table 17.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 88
 Normalizing number for TCAS-TCAS cells: 176

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A i r c r a f t	Mode C	--	19	12	12	--		
	6.02	17	0	0	0	--		
	6.04	11	0	0	0	--		
	6.05	11	0	0	0	--		
	1	--	--	--	--	--		

Table 17.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 88
 Normalizing number for TCAS-TCAS cells: 176

		A i r c r a f t 2				
		Mode C	6.02	6.04	6.05	
A	Mode C	—	19	12	12	—
i	6.02	17	0	0	0	—
r	6.04	11	0	0	0	—
c	6.05	11	0	0	0	—
r		—	—	—	—	—
a						
f						
t						
l						

Table 17.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 2782
 Normalizing number for TCAS-TCAS cells: 5564

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	0	18	21	--	
	6.02	0	5	7	7	--	
	6.04	9	4	21	19	--	
	6.05	10	3	14	14	--	
	1	--	--	--	--	--	

Table 17.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 2782
 Normalizing number for TCAS-TCAS cells: 5564

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	2752	2024	2019	--	
	6.02	2731	5559	5509	5509	--	
	6.04	2060	5508	4379	4381	--	
	6.05	2055	5509	4386	4386	--	
	1	--	--	--	--	--	

Table 8.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 1296
 Normalizing number for TCAS-TCAS cells: 2592

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	0	1	4	--	
i	6.02	0	0	0	0	--	
r	6.04	0	0	0	0	--	
c	6.05	0	0	0	0	--	
a		--	--	--	--	--	
f							
t							
l							

Table 8.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 1296
 Normalizing number for TCAS-TCAS cells: 2592

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	35	98	89	--	
i	6.02	12	0	2	2	--	
r	6.04	75	20	30	30	--	
c	6.05	69	20	30	30	--	
a		--	--	--	--	--	
f							
t							
l							

Table 8.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 1296
 Normalizing number for TCAS-TCAS cells: 2592

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t 1	Mode C	--	35	99	93	--	--
	6.02	12	0	2	2	--	--
	6.04	75	20	30	30	--	--
	6.05	69	20	30	30	--	--
		--	--	--	--	--	--

Table 8.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 5022
 Normalizing number for TCAS-TCAS cells: 10044

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	168	182	184	--	
i	6.02	487	38	86	74	--	
r	6.04	473	118	204	184	--	
c	6.05	479	128	207	188	--	
a		--	--	--	--	--	
f							
t							
l							

Table 8.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 5022
 Normalizing number for TCAS-TCAS cells: 10044

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	4842	4520	4518	--	
i	6.02	4529	10006	9946	9958	--	
r	6.04	4310	9902	9388	9408	--	
c	6.05	4316	9892	9409	9428	--	
a		--	--	--	--	--	
f							
t							
l							

Table 18.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 18.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 18.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 0
 Normalizing number for TCAS-TCAS cells: 0

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	0	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
1		--	--	--	--	--	

Table 18.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 2754
 Normalizing number for TCAS-TCAS cells: 5508

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	40	24	18	--	--
	6.02	27	14	16	8	--	--
	6.04	104	26	29	21	--	--
	6.05	72	17	28	17	--	--
	1	--	--	--	--	--	--

Table 18.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 2754
 Normalizing number for TCAS-TCAS cells: 5508

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	--	2710	2221	2198	--	--
	6.02	2724	5494	5486	5494	--	--
	6.04	2058	5482	4687	4673	--	--
	6.05	2094	5491	4692	4685	--	--
	1	--	--	--	--	--	--

Table 9.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 579
 Normalizing number for TCAS-TCAS cells: 1158

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	0	0	0	--	
r							
c	6.02	0	0	0	0	--	
r							
a	6.04	1	0	0	0	--	
f							
t	6.05	0	0	0	0	--	
l		--	--	--	--	--	

Table 9.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 579
 Normalizing number for TCAS-TCAS cells: 1158

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	1	27	18	--	
r							
c	6.02	17	0	0	0	--	
r							
a	6.04	52	0	2	1	--	
f							
t	6.05	61	0	0	0	--	
l		--	--	--	--	--	

Table 9.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 579
 Normalizing number for TCAS-TCAS cells: 1158

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	1	27	18	—	—
	6.02	17	0	0	0	—	—
	6.04	53	0	2	1	—	—
	6.05	61	0	0	0	—	—
	1	—	—	—	—	—	—

Table 9.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 2904
 Normalizing number for TCAS-TCAS cells: 5808

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	6	11	5	—	
	6.02	3	1	3	5	—	
	6.04	14	1	13	12	—	
	6.05	2	0	13	18	—	
	1	—	—	—	—	—	

Table 9.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 2904
 Normalizing number for TCAS-TCAS cells: 5808

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A i r c r a f t	Mode C	—	2374	1860	1956	—	
	6.02	2267	4773	4537	4683	—	
	6.04	1887	4763	3817	3992	—	
	6.05	1996	4984	4017	4022	—	
	1	—	—	—	—	—	

Table 19.1

Number of unresolved NMACs with neither aircraft having an RA
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 285
 Normalizing number for TCAS-TCAS cells: 570

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	0	0	0	--	
i	6.02	0	0	0	0	--	
r	6.04	0	0	0	0	--	
c	6.05	0	0	0	0	--	
r		--	--	--	--	--	
a							
f							
t							
l							

Table 19.2

Number of unresolved NMACs with at least one aircraft having an RA
 (based on simulation truth).

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 285
 Normalizing number for TCAS-TCAS cells: 570

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A	Mode C	--	1	36	32	--	
i	6.02	5	0	0	0	--	
r	6.04	8	0	0	0	--	
c	6.05	5	0	0	0	--	
r		--	--	--	--	--	
a							
f							
t							
l							

Table 19.3

Total number of unresolved NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that resulted in an
 NMAC, based on simulation truth): 285
 Normalizing number for TCAS-TCAS cells: 570

		A i r c r a f t 2					
		Mode C	6.02	6.04	6.05		
A							
i	Mode C	--	1	36	32	--	
r							
c	6.02	5	0	0	0	--	
r							
a	6.04	8	0	0	0	--	
f							
t	6.05	5	0	0	0	--	
l		--	--	--	--	--	

Table 19.4

Number of induced NMACs
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 4008
 Normalizing number for TCAS-TCAS cells: 8016

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A	Mode C	--	48	132	115	--		
i	6.02	29	197	194	101	--		
r	6.04	68	223	233	105	--		
c	6.05	35	140	176	36	--		
a		--	--	--	--	--		
f								
t								
l								

Table 19.5

Number of nuisance RAs with no NMAC
 (based on simulation truth)

Normalizing number for cells in first row and column
 (number of planned encounters that did not result in an
 NMAC, based on simulation truth): 4008
 Normalizing number for TCAS-TCAS cells: 8016

		A i r c r a f t 2						
		Mode C	6.02	6.04	6.05			
A	Mode C	--	3380	2608	2617	--		
i	6.02	3275	6867	6538	6631	--		
r	6.04	2597	6715	5521	5651	--		
c	6.05	2569	6796	5562	5698	--		
a		--	--	--	--	--		
f								
t								
l								

APPENDIX D

PARAMETER FILE DESCRIPTION AND PARAMETER FILE PRINTOUT FOR CLASS 9/19 6.02/6.02 6.04/6.04 6.04a/6.04a

March 29, 1994

The following is the intended format of the parameter file. The data will not include any header labels. The data will be printed in the following order.

Data File	alpha-numeric (8 chars.),
Category	integer (0..19),
Table number	integer (1..5),
Row number	integer(1..5),
Column number	integer(1..5),
Reiteration number	integer(1..999999), (* simulation #*)
Simulation mode number	integer(16001..26414) (* simulation id *)
Geometry Index	integer (1..9999) (* geometry id *)
AC #1 equipage	integer(0, 60, 64), (* 0 --> mode C *)
AC #2 equipage	integer(0, 60, 64), (* 0 --> mode C *)
AC #1 responding	integer(0..1), (* 0 - false, 1 - true *)
AC #2 responding	integer(0..1), (* 0 - false, 1 - true *)
Achieved separation	real(0.0..+/-9999.9), (* feet *)
Converging RA	integer (0..1), (* 0 - false, 1 - true *)
Crossing encounter	integer (0..1), (* 0 - false, 1 - true *)
AC #1 TA Sensitivity level	integer(0..7),
AC #2 TA Sensitivity level	integer(0..7),
AC #1 RA Sensitivity level	integer(0..7),
AC #2 RA Sensitivity level	integer(0..7),
AC #1 Mode S ID	integer(0..999),
AC #2 Mode S ID	integer(0..999),
CPA altitude separation	real(0.0..+/-9999.9), (* FT *)
AC #1 vertical rate	real(0.0..+/-9999.9), (* FPM *)
AC #2 vertical rate	real(0.0..+/-9999.9), (* FPM *)
AC #1 acceleration	real(0.0..+/-0.35?), (* G's *)
AC #2 acceleration	real(0.0..+/-0.35?), (* G's *)
AC #1 acceleration time	real(0.0..-99.9), (* sec. - CPA relative *)
AC #2 acceleration time	real(0.0..-99.9) (* sec. - CPA relative *)
Own Alt CPA Achieved	real(0.0..+/-9999.9), (* FT *)
AC #1 CPA altitude	real(0.0..+/-9999.9), (* FT *)
RA displayed	integer(0..2) (* 0 - none, 1 - AC #1, 2 - AC #2, 3 - both *)
RA selection	integer(0..3) (* 0 - no selection, 1 - AC #1, 2 - AC #2, 3 - unknown *)
Inhibit indication	integer(0..3) (* 0 - none, 1 - AC #1, 2 - AC #2, 3 - both *)
VT Issued RA	integer (0..1) (* 0 - false, 1 - true *)
RA 600 FT Rule	integer (0..1) (* 0 - false, 1 - true *)
Level Wait	integer (0..1) (* 0 - false, 1 - true *)
Defer Display	integer (0..1) (* 0 - false, 1 - true *)
Firmness Delay	integer (0..1) (* 0 - false, 1 - true *)
Logic Crossing	integer (0..1) (* 0 - false, 1 - true *)
RA Enable Time	integer (0.. +/-90) (* time RAs were enabled + -> after CPA, - -> before CPA *)
RA Disabled Time	integer (0.. +/-90) (* time RAs were disabled + -> after CPA, - -> before CPA *)
RA Start Time	integer (0.. +/-90) (* time RAs were issued + -> after CPA, - -> before CPA *)
RA Ending Time	integer (0.. +/-90) (* time RAs were ended + -> after CPA, - -> before CPA *)
AC #1 RA Tracked Alt Rate	real (0..+/-9999)
AC #2 RA Tracked Alt Rate	real (0..+/-9999)
Initially Crossing RA	integer (0..1) (* 0 -> false, 1 -> true *)

AC #1 worst RA	integer(-19..19) (* Most severe RA displayed *)
AC #2 worst RA	integer(-19..19) (* Same as above *)
AC #1 initial RA	integer(-19..19) (* First RA displayed *)
AC #2 initial RA	integer(-19..19) (* Same as above *)
RA sequence time #1	real(0.0..99.9) (* 1st RA displayed *)
RA sequence severity #1	integer(+/-9..+/-21) (* see below *)
RA sequence time #2	real(0.0..99.9) (* 2nd RA displayed *)
RA sequence severity #2	integer(+/-9..+/-21) (* see below *)
RA sequence time #3	real(0.0..99.9) (* 3rd RA displayed *)
RA sequence severity #3	integer(+/-9..+/-21) (* see below *)
RA sequence time #4	real(0.0..99.9) (* 4th RA displayed *)
RA sequence severity #4	integer(+/-9..+/-21) (* see below *)
RA sequence time #5	real(0.0..99.9) (* 5th RA displayed *)
RA sequence severity #5	integer(+/-9..+/-21) (* see below *)
RA sequence time #6	real(0.0..99.9) (* 6th RA displayed *)
RA sequence severity #6	integer(+/-9..+/-21) (* see below *)
RA sequence time #7	real(0.0..99.9) (* 7th RA displayed *)
RA sequence severity #7	integer(+/-9..+/-21) (* see below *)
RA sequence time #8	real(0.0..99.9) (* 8th RA displayed *)
RA sequence severity #8	integer(+/-9..+/-21) (* see below *)
RA sequence time #9	real(0.0..99.9) (* 9th RA displayed *)
RA sequence severity #9	integer(+/-9..+/-21) (* see below *)
RA sequence time #10	real(0.0..99.9) (*10th RA displayed *)
RA sequence severity #10	integer(+/-9..+/-21) (* see below *)
Climb Determination	real(0..99999.99)
Descend Determination	real(0..99999.99)
POT AC1_ZD	real(0..99999.99)
POT AC2_ZD	real(0..99999.99)
Intruder_receipt_time	real(0..99999.99)
PVMD on cycle prior to POTRA	real(0..99999.99)
PVMD on POTRA cycle	real(0..99999.99)
PVMD on INITIAL RA cycle	real(0..99999.99)

To aid in the proper use of these parameters, the following paragraphs will explain exactly what the parameters are.

DATA FILE - This is the name of the scenario definition file which was used to generate the encounter for this data.

CATEGORY - This is the number which corresponds to the MITRE encounter classes (0 - 19).

TABLE, ROW, & COLUMN NUMBERS - These numbers are indicators to the matrix and cell entry which corresponds to the parameter values.

REITERATION NUMBER - This number is an indication of the reiteration in the simulation process. The number can be used, in conjunction with the next number, by the simulation process when it is desired to re-run the simulation and select a particular encounter for more detailed review.

SIMULATION MODE NUMBER - This number is an indication of the equipage pairing of the simulation run. This number is used in conjunction with the previous number to select a particular encounter to be re-run. The number is a five digit value of the form, XYYZZ. X is the aircraft indication (1 or 2). YY is the logic version of own aircraft (60 or 64). ZZ is the equipage pairing identification (1 - 14).

GEOMETRY INDEX - This field is an indication of which geometry the simulation was running.

AC #1 EQUIPAGE - This is the logic version of the AC #1 aircraft (0, 60 or 64). A value of 0 is entered if the intruder is a Mode C aircraft.

AC #2 EQUIPAGE - This is the logic version of the AC #2 aircraft (0, 60 or 64). A value of 0 is entered if the intruder is a Mode C aircraft.

AC #1 RESPONDING - This is an indication of whether AC #1 is responding to its RA's.

AC #2 RESPONDING - This is an indication of whether AC #2 is responding to its RA's.

ACHIEVED SEPARATION - This is the altitude separation at CPA of the "equipped" encounter. The number is computed, using true FTEG position data, by subtracting the intruder's altitude from own's altitude.

CONVERGING RA - This is an indication of an RA which was issued and resulted in the two aircraft converging at CPA.

CROSSING ENCOUNTER - This is an indication that this encounter was a crossing encounter. This parameter is determined by comparing the true FTEG position data of the two aircraft. If a crossing is indicated then a time check is performed to see if the crossing occurred within -40 and +10 seconds relative to CPA.

AC #1 TA SENSITIVITY LEVEL - This is the sensitivity level of AC #1 at TA time.

AC #2 TA SENSITIVITY LEVEL - This is the sensitivity level of AC #2 at TA time.

AC #1 RA SENSITIVITY LEVEL - This is the sensitivity level of AC #1 at POTRA/RA time.

AC #2 RA SENSITIVITY LEVEL - This is the sensitivity level of AC #2 at POTRA/RA time.

AC #1 MODE S ID - This is AC #1's Mode S identifier.

AC #2 MODE S ID - This is AC #2's Mode S identifier.

CPA ALTITUDE SEPARATION - This is the designed vertical separation at CPA. This value is calculated from the scenario definition file information and the current reiteration number. The number is calculated by the following formula: AC₁ altitude - AC₂ altitude. With the values for the altitudes of AC 1 and AC 2 being calculated from the reiteration numbers.

AC #1 VERTICAL RATE - This is the designed vertical rate of aircraft #1. This value is calculated from the scenario definition file information and the current reiteration number.

AC #2 VERTICAL RATE - This is the designed vertical rate of aircraft #2. This value is calculated from the scenario definition file information and the current reiteration number.

AC #1 ACCELERATION - This is the designed vertical acceleration of aircraft #1. This value is calculated from the scenario definition file information and the current reiteration number. A value of 0 indicates that there was no acceleration applied.

AC #2 ACCELERATION - This is the designed vertical acceleration of aircraft #2. This value is calculated from the scenario definition file information and the current reiteration number. A value of 0 indicates that there was no acceleration applied.

AC #1 ACCELERATION TIME - This is the designed vertical acceleration time of aircraft #1. This value is calculated from the scenario definition file information and the current reiteration number. A value of 0 in this field

can have 2 possible meanings. 1). If there is no acceleration applied as indicated by the previous parameter, then this field will also be 0. 2). If an acceleration is applied then a 0 value indicated that the acceleration occurred at CPA.

AC #2 ACCELERATION TIME - This is the designed vertical acceleration time of aircraft #2. This value is calculated from the scenario definition file information and the current reiteration number. A value of 0 in this field can have 2 possible meanings. 1). If there is no acceleration applied as indicated by the previous parameter, then this field will also be 0. 2). If an acceleration is applied then a 0 value indicated that the acceleration occurred at CPA.

Own ALT CPA Achieved - This is the achieved altitude of Own aircraft at CPA. This value is from the recorded simulation true position data.

AC #1 CPA ALTITUDE - This is the designed altitude of aircraft #1 at CPA. This value is calculated from the scenario definition file information and the current reiteration number.

RA DISPLAYED - This is an indication of which aircraft displayed an RA. The possible indications are NONE, AC #1, AC #2, or BOTH.

RA SELECTION - This field is an indication of which aircraft selected the RA sense. The possible indications are NO SELECTION, AC #1, AC #2, or UNKNOWN.

INHIBIT INDICATION - Currently, this field is not used. A default value of zero is used. The field is retained for possible future use. The intended function of this field is to indicate if any aircraft was inhibited at any point during the encounter. The possible indications are NONE, AC #1, AC #2, or BOTH. This parameter is determined by reviewing the climb inhibit and descend inhibit flags at start time, TA time, RA time, CPA time, minimum altitude time, TA end time, and end time.

VT ISSUED RA - This field is an indication that the logic associated with the reduced vertical tau led to OWN's RA selection. This field is a 6.04 logic specific flag. For the parameter file, this flag is set to true if it was true at any time during the encounter.

RA 600 FT RULE - This field is an indication that the logic known as "The 600 FT RULE" led to OWN's RA selection. For the parameter file, this flag is set to true if it was true at any time during the encounter.

LEVEL WAIT - This field indicates that OWN aircraft was in a "level wait" state before issuing an RA. For the parameter file, this flag is set to true if it was true at any time during the encounter.

DEFER DISPLAY - This field indicated that OWN aircraft was in a "defer display" state before issuing an RA. For the parameter file, this flag is set to true if it was true at any time during the encounter.

FIRMNESS DELAY - This field indicates that OWN aircraft was in a "firmness delay" state before issuing an RA. For the parameter file, this flag is set to true if it was true at any time during the encounter.

LOGIC CROSSING - This field is an indication that either of the CAS logic flags OCROSS or ICROSS was set.

NOTE: THE FOLLOWING 4 FIELDS ARE TIMES RELATIVE TO CPA. CONSIDERING THE FORMAT OF THE SCENARIO DEFINITIONS, THESE FIELDS MAY CONTAIN THE FOLLOWING

"SPECIAL NUMBERS". A TIME OF -60 s INDICATES THE EVENT OCCURRED AT THE START OF THE ENCOUNTER RUN. A TIME OF +30 s INDICATES THAT THE EVENT OCCURRED AT THE END OF THE ENCOUNTER RUN.

RA ENABLE TIME - This field is an indication of the time, relative to CPA, that OWN's RAs were enabled. (- -> before CPA, + -> after CPA)

RA DISABLE TIME - This field is an indication of the time, relative to CPA, that OWN's RAs were disabled. (- -> before CPA, + -> after CPA)

RA START TIME - This field is an indication of the time, relative to CPA, that the first RA of OWN was issued. (- -> before CPA, + -> after CPA)

RA END TIME - This field is an indication of the time, relative to CPA, that the last RA of OWN was ended. (- -> before CPA, + -> after CPA)

AC #1 RA TRACKED ALT RATE - This field is the tracked altitude rate of the AC #1 aircraft at the time of the RA.

AC #2 RA TRACKED ALT RATE - This field is the tracked altitude rate of the AC #2 aircraft at the time of the RA.

INITIALLY CROSSING RA - This field is an indication that the first RA issued by OWN was a crossing RA based on the geometry of the encounter and recorded track data. The recorded track position data, along with the sense of Own's RA, is used to determine if the sense of the RA is toward the intruder aircraft. Additionally, the magnitude of the altitude difference of Own and Intruder is checked to ensure the separation is greater than 100 feet.

AC #1_worst_RA - This field is an indication of the most severe RA displayed by AC #1; see the translation table below. Currently, we are only recording 1 point of view. Therefore, this field will only be meaningful if the data is recorded from AC #1's point of view; otherwise, this field will contain a 0.

AC #2_worst_RA - Currently, this field is not used. The intent of this field is to indicate the most severe RA displayed by AC #2; see the translation table below. Currently, we are only recording 1 point of view. Therefore, this field will only be meaningful if the data is recorded from AC #2's point of view; otherwise, this field will contain a 0.

AC #1_init_RA - This field is an indication of the first RA displayed by AC #1; see the translation table below. Currently, we are only recording 1 point of view. Therefore, this field will only be meaningful if the data is recorded from AC #1's point of view; otherwise, this field will contain a 0.

AC #2_init_RA - The intent of this field is to give an indication of the first RA displayed by AC #2; see the translation table below. Currently, we are only recording 1 point of view. Therefore, this field will only be meaningful if the data is recorded from AC #2's point of view; otherwise, this field will contain a 0.

NOTE: For the following table: + = climb sense, - = descend sense.

- (* 0 --> Only surveillance data on intruder. *)
- (* 1 --> Qualified for CAS evaluation. *)
- (* 2 --> Intruder declared a Proximity target *)
- (* 3 --> Intruder declared a TA non Mode C with TCAS on ground *)
- (* 4 --> Intruder declared a TA Mode C with TCAS on ground *)
- (* 5 --> Intruder declared a TA non Mode C with no aural generated *)

(* 6 --> Intruder declared a TA Mode C with no auralx generated *)
 (* 7 --> Intruder declared a TA non Mode C *)
 (* 8 --> Intruder declared a TA Mode C *)
 (* 9 --> Intruder meets RA criteria but the RA is being deferred *)
 (* 10 --> RA was issued but not sure what it was; used for live data *)
 (* +/- 11 --> a negative advisory limit rate to 2000 FPM *)
 (* +/- 12 --> a negative advisory limit rate to 1000 FPM *)
 (* +/- 13 --> a negative advisory limit rate to 500 FPM *)
 (* +/- 14 --> negative advisory i.e. don't climb or don't descend *)
 (* +/- 15 --> positive advisory of a preventive nature *)
 (* +/- 16 --> positive advisory of a corrective nature *)
 (* +/- 17 --> a maintain rate RA *)
 (* +/- 18 --> when either ICROSS or OCROSS is set *)
 (* +/- 19 --> an increased rate RA *)
 (* +/- 20 --> a sense reversal RA *)
 (* +/- 21 --> an increase rate RA after a reversal RA *)
 (* +/- 22 --> ADVISORY INVALID, no longer used; should not be seen *)

NOTE:

The next two fields are repeated a total of ten times. They are the time and display information for RA's. The fields are an indication of the sequence in which RA's were displayed during an encounter. Due to the fixed length format of the recording process, only ten entries are permissible. If there happened to be an encounter which had a sequence of RA's which was greater than ten, then the first RA, the worst RA, and the last RA are definitely kept. The RA's which would be missing would be latest RA's assuming they were not the worst or last. The occurrence of such a long sequence is extremely rare.

RA SEQUENCE TIME #1 - This field is the time of OWN's first RA. **NOTE:** since we are recording information about POTRA, this time may actually be for a POTRA.

RA SEQUENCE SEVERITY #1 - This field contains a numeric code indicating the RA displayed by OWN. This code is the same one which is used for the AC #1/2 WORST RA present above. Since this field is only concerned with RA's then the value will be greater than 8 in magnitude.

CLIMB DETERMINATION - This field contains ZMPCLM, the modelling value of the predicted separation using a climb sense maneuver at the time of the first RA, if available.

DESCEND DETERMINATION - This field contains ZMPDES, the modelling value of the predicted separation using a descend sense maneuver at the time of the first RA, if available.

POT_AC1_ZD - This field contains the TRACKED altitude rate for AC1 at the time of a POTRA.

POT_AC2_ZD - This field contains the TRACKED altitude rate for AC2 at the time of a POTRA.

Intruder_receipt_time - This field contains the time that a message was first received from the TCAS intruder aircraft.

PVMD on cycle prior to POTRA - This field contains the predicted vertical miss distance (PVMD) calculated by CAS for the cycle time exactly prior to the first POTENTIAL RA CYCLE (POTRA).

PVMD on POTRA cycle - This field contains the predicted vertical miss distance (PVMD) calculated by CAS for the cycle time of the first POTENTIAL RA CYCLE (POTRA).

PVMD on INITIAL RA cycle - This field contains the predicted vertical miss distance (PVMD) calculated by CAS for the cycle time of the INITIAL RA CYCLE (RA).

SEQ CLS ROW
NUM TBL COL

00117	9 3 3 3	cl919or	9 3 3 3	3272	2164033	3272	64 64	1 1	-0.0	0 1 3 5 4 4 5 10	0.00	5000.0	-3000.0	-0.15	0.05	-25.0	-30.0	3700.0
00118	9 3 3 3	cl919or	9 3 3 3	3272	2164133	3272	64 64	1 1	-0.0	0 1 3 5 4 4 10 5	0.00	5000.0	-3000.0	-0.15	0.05	-25.0	-30.0	3700.0
00206	9 4 2 2	cl919cf	9 4 2 2	5370	2162022	5370	62 62	1 1	84.8	0 1 5 6 5 6 5 10	-250.00	5000.0	-5000.0	-0.05	0.15	-25.0	-20.0	6922.4
00230	9 4 3 3	cl919or	9 4 3 3	796	2164133	796	64 64	1 1	-61.4	0 1 4 3 4 4 4 10 5	250.00	3000.0	5000.0	-0.05	-0.05	-25.0	-25.0	3437.8
00231	9 4 3 3	cl919or	9 4 3 3	1410	2164033	1410	64 64	1 1	-21.8	0 1 4 4 4 4 4 10 5	-250.00	5000.0	3000.0	-0.05	-0.05	-25.0	-30.0	3717.7
00232	9 4 3 3	cl919or	9 4 3 3	1410	2164133	1410	64 64	1 1	84.4	0 1 4 4 4 4 4 10 5	-250.00	5000.0	3000.0	-0.05	-0.05	-25.0	-30.0	3717.7
00233	9 4 3 3	cl919or	9 4 3 3	1419	2164033	1419	64 64	1 1	45.4	0 1 3 4 4 4 4 10 5	-250.00	5000.0	3000.0	-0.05	-0.05	-25.0	-25.0	3787.3
00234	9 4 3 3	cl919or	9 4 3 3	1551	2164133	1551	64 64	1 1	-68.4	0 1 3 4 4 4 4 10 5	500.00	5000.0	1000.0	-0.05	-0.15	-25.0	-25.0	3167.8
00235	9 4 3 3	cl919or	9 4 3 3	1644	2164033	1644	64 64	1 1	10.2	0 1 2 5 4 4 4 10 5	-250.00	5000.0	-5000.0	-0.05	-0.25	-25.0	-20.0	3787.3
00236	9 4 3 3	cl919or	9 4 3 3	1644	2164133	1644	64 64	1 1	93.5	0 1 2 5 4 4 4 10 5	-250.00	5000.0	-5000.0	-0.05	0.25	-25.0	-20.0	3787.3
00237	9 4 3 3	cl919or	9 4 3 3	1713	2164133	1713	64 64	1 1	-68.4	0 1 3 4 4 4 4 10 5	500.00	5000.0	1000.0	-0.05	-0.25	-25.0	-25.0	3167.8
00238	9 4 3 3	cl919or	9 4 3 3	1738	2164033	1738	64 64	1 1	81.0	1 1 3 3 3 4 4 5 10	1000.00	5000.0	3000.0	-0.05	-0.25	-25.0	-25.0	2831.6
00239	9 4 3 3	cl919or	9 4 3 3	1806	2164033	1806	64 64	1 1	73.3	0 1 2 5 4 4 4 5 10	-250.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3808.7
00240	9 4 3 3	cl919or	9 4 3 3	2095	2164033	2095	64 64	1 1	68.4	0 1 4 3 4 4 4 5 10	-500.00	1000.0	5000.0	-0.15	-0.05	-25.0	-25.0	3736.2
00241	9 4 3 3	cl919or	9 4 3 3	3523	2164133	3523	64 64	1 1	-54.3	0 1 4 4 4 4 4 10 5	250.00	5000.0	3000.0	-0.15	-0.15	-25.0	-25.0	3485.3
00242	9 4 3 3	cl919or	9 4 3 3	5370	2164033	5370	64 64	1 1	-22.0	0 1 4 6 4 6 5 10	-250.00	5000.0	-5000.0	-0.05	0.15	-25.0	-20.0	6877.4
00270	9 4 4 4	cl919WZ	9 4 4 4	1473	2165144	1473	65 65	1 1	-27.8	0 1 2 5 4 4 4 10 5	-250.00	5000.0	-5000.0	-0.05	0.15	-25.0	-25.0	3749.3
00271	9 4 4 4	cl919WZ	9 4 4 4	1509	2165144	1509	65 65	1 1	-27.8	0 1 2 5 3 4 4 10 5	-250.00	5000.0	-3000.0	-0.05	0.15	-25.0	-20.0	3749.3
00272	9 4 4 4	cl919WZ	9 4 4 4	1644	2165144	1644	65 65	1 1	-27.8	0 1 2 5 4 4 4 10 5	-250.00	5000.0	-5000.0	-0.05	0.25	-25.0	-20.0	3749.3
00273	9 4 4 4	cl919WZ	9 4 4 4	1738	2165044	1738	65 65	1 1	81.0	0 1 1 3 3 3 4 4 5 10	1000.00	5000.0	3000.0	-0.05	-0.25	-25.0	-25.0	2831.6
00274	9 4 4 4	cl919WZ	9 4 4 4	1740	2165144	1740	65 65	1 1	-1.1	0 1 3 4 4 4 4 5 10	500.00	5000.0	3000.0	-0.05	-0.25	-25.0	-25.0	3235.1
00275	9 4 4 4	cl919WZ	9 4 4 4	1806	2165044	1806	65 65	1 1	-51.3	1 1 2 5 4 4 4 5 10	-250.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3767.5
00276	9 4 4 4	cl919WZ	9 4 4 4	1806	2165144	1806	65 65	1 1	32.1	0 1 2 5 4 4 4 10 5	-250.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3767.5
00277	9 4 4 4	cl919WZ	9 4 4 4	2095	2165044	2095	65 65	1 1	68.4	0 1 4 3 4 4 4 5 10	-500.00	1000.0	5000.0	-0.15	-0.05	-25.0	-25.0	3736.2
00278	9 4 4 4	cl919WZ	9 4 4 4	3246	2165044	3246	65 65	1 1	51.9	0 1 3 3 4 4 4 5 10	-250.00	5000.0	-5000.0	-0.15	0.05	-25.0	-30.0	3914.6
00279	9 4 4 4	cl919WZ	9 4 4 4	3246	2165144	3246	65 65	1 1	-31.4	0 1 3 3 4 4 4 5 10	-250.00	5000.0	-5000.0	-0.15	0.05	-25.0	-30.0	3831.2
00280	9 4 4 4	cl919WZ	9 4 4 4	3255	2165044	3255	65 65	1 1	-9.6	0 1 3 3 4 4 4 5 10	-250.00	5000.0	-5000.0	-0.15	0.05	-25.0	-25.0	3872.9
00281	9 4 4 4	cl919WZ	9 4 4 4	3255	2165144	3255	65 65	1 1	-93.0	1 1 3 3 4 4 4 10 5	-250.00	5000.0	-5000.0	-0.15	0.05	-25.0	-25.0	3789.6
00282	9 4 4 4	cl919WZ	9 4 4 4	3264	2165044	3264	65 65	1 1	-69.5	0 1 3 3 4 4 4 5 10	-250.00	5000.0	-5000.0	-0.15	0.05	-25.0	-20.0	3831.2
00283	9 4 4 4	cl919WZ	9 4 4 4	3523	2165144	3523	65 65	1 1	-54.3	0 1 4 4 4 4 4 10 5	250.00	5000.0	3000.0	-0.15	-0.15	-25.0	-25.0	3485.3
00284	9 4 4 4	cl919WZ	9 4 4 4	5361	2165144	5361	65 65	1 1	-27.8	0 1 4 6 5 5 5 10 5	-250.00	5000.0	-5000.0	-0.05	0.15	-25.0	-25.0	7549.3
00285	9 4 4 4	cl919WZ	9 4 4 4	5532	2165144	5532	65 65	1 1	-27.8	0 1 4 6 5 5 5 10 5	-250.00	5000.0	-5000.0	-0.05	0.25	-25.0	-20.0	7549.3
00286	9 4 4 4	cl919WZ	9 4 4 4	5694	2165044	5694	65 65	1 1	-51.3	0 1 4 6 5 5 5 10 5	-250.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	7567.5
00287	9 4 4 4	cl919WZ	9 4 4 4	5694	2165144	5694	65 65	1 1	32.0	0 1 4 6 5 5 5 10 5	-250.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	7567.5
00699	19 4 2 2	cl919cf	19 4 2 2	349	2162022	349	62 62	1 1	50.6	0 1 5 5 5 5 5 10	-500.00	1000.0	-5000.0	-0.05	0.25	-25.0	-20.0	3911.1
00700	19 4 2 2	cl919cf	19 4 2 2	503	2162022	503	62 62	1 1	67.4	0 1 5 5 5 5 5 10	-750.00	1000.0	-5000.0	-0.05	0.35	-25.0	-25.0	4011.1
00701	19 4 2 2	cl919cf	19 4 2 2	511	2162022	511	62 62	1 1	76.6	0 1 5 5 5 5 5 10	-500.00	1000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3978.7
00702	19 4 2 2	cl919cf	19 4 2 2	522	2162022	522	62 62	1 1	47.8	0 1 5 5 5 5 5 10	-1000.00	1000.0	-3000.0	-0.05	0.35	-25.0	-30.0	4449.9
00703	19 4 2 2	cl919cf	19 4 2 2	827	2162022	827	62 62	1 1	71.2	0 1 4 5 5 5 5 5 10	-750.00	3000.0	-5000.0	-0.05	0.15	-25.0	-25.0	3993.5
00704	19 4 2 2	cl919cf	19 4 2 2	965	2162022	965	62 62	1 1	-59.2	0 1 5 4 5 4 5 10	750.00	3000.0	5000.0	-0.05	-0.15	-25.0	-20.0	3142.0
00705	19 4 2 2	cl919cf	19 4 2 2	965	2162122	965	62 62	1 1	82.8	0 1 5 4 5 4 5 10 5	750.00	3000.0	5000.0	-0.05	-0.15	-25.0	-20.0	3283.9
00706	19 4 2 2	cl919cf	19 4 2 2	981	2162022	981	62 62	1 1	-6.3	0 1 4 5 5 5 4 5 10	-1000.00	3000.0	-5000.0	-0.05	0.25	-25.0	-30.0	4031.5
00707	19 4 2 2	cl919cf	19 4 2 2	981	2162122	981	62 62	1 1	74.7	0 1 4 5 5 5 5 10 5	-1000.00	3000.0	-5000.0	-0.05	0.25	-25.0	-30.0	4031.5
00708	19 4 2 2	cl919cf	19 4 2 2	989	2162022	989	62 62	1 1	-13.6	0 1 4 5 5 5 5 5 10	-750.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3971.9
00709	19 4 2 2	cl919cf	19 4 2 2	990	2162122	990	62 62	1 1	-50.7	0 1 4 5 5 5 5 10 5	-1000.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3994.6
00710	19 4 2 2	cl919cf	19 4 2 2	1151	2162022	1151	62 62	1 1	62.7	0 1 4 4 5 5 5 5 10 5	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-25.0	4006.5
00711	19 4 2 2	cl919cf	19 4 2 2	1152	2162122	1152	62 62	1 1	-27.1	0 1 4 4 5 5 5 5 10 5	-1000.00	3000.0	-5000.0	-0.05	0.35	-25.0	-25.0	4041.7
00712	19 4 2 2	cl919cf	19 4 2 2	1159	2162122	1159	62 62	1 1	96.7	0 1 4 4 5 5 5 5 10 5	-500.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3915.4
00713	19 4 2 2	cl919cf	19 4 2 2	1160	2162022	1160	62 62	1 1	26.5	0 1 4 4 5 5 5 5 10 5	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	4006.5
00714	19 4 2 2	cl919cf	19 4 2 2	1160	2162122	1160	62 62	1 1	-30.1	0 1 4 4 5 5 5 5 10 5	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3949.9
00715	19 4 2 2	cl919cf	19 4 2 2	1637	2162022	1637	62 62	1 1	62.7	0 1 4 4 5 5 5 5 10 5	-750.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	4006.5
00716	19 4 2 2	cl919cf	19 4 2 2	1638	2162022	1638	62 62	1 1	96.2	0 1 4 4 5 5 5 5 10 5	-1000.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	4141.4
00717	19 4 2 2	cl919cf	19 4 2 2	1638	2162122	1638	62 62	1 1	32.0	0 1 4 4 5 5 4 5 10 5	-1000.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	4077.3
00718	19 4 2 2	cl919cf	19 4 2 2	1799	2162022	1799	62 62	1 1	62.7	0 1 4 4 5 5 5 5 10 5	-750.00	5000.0	-5000.0	-0.05	0.35	-25.0	-25.0	4006.5
00719	19 4 2 2	cl919cf	19 4 2 2	1800	2162122	1800	62 62	1 1	-27.1	0 1 4 4 5 5 4 5 10 5	-1000.00	5000.0	-5000.0	-0.05	0.35	-25.0	-25.0	4041.7
00720	19 4 2 2	cl919cf	19 4 2 2	2216	2162122	2216	62 62	1 1	-19.3	0 1 5 4 5 5 5 10 5	750.00	1000.0	3000.0	-0.15	-0.15	-25.0	-30.0	3217.9
00721	19 4 2 2	cl919cf	19 4 2 2	2225	2162122	2225	62 62	1 1	61.6	1 1 5 4 5 5 5 10 5	750.00	1000.0	3000.0	-0.15	-0.15	-25.0	-25.0	3351.2
00722	19 4 2 2	cl919cf	19 4 2 2	2285	2162022	2285	62 62	1 1	88.4	0 1 5 5 5 5 5 5 10 5	-750.00	1000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4073.8

SEQ CLS ROW
NUM TBL COL

00727	19	4	2	2	2	2448	2162022	2448	62	62	1	1	51.2	0	1	5	5	5	5	5	10	-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	4222.5	
00728	19	4	2	2	2	2448	2162122	2448	62	62	1	1	71.7	0	1	5	5	5	5	5	10	5	-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	4140.5
00729	19	4	2	2	2	2549	2162122	2549	62	62	1	1	47.4	0	1	5	5	5	5	5	10	5	750.00	1000.0	3000.0	-0.15	-0.35	-25.0	-25.0	3201.2
00730	19	4	2	2	2	2690	2162022	2690	62	62	1	1	96.7	0	1	5	5	5	5	5	10	5	-750.00	3000.0	1000.0	-0.15	-0.05	-25.0	-25.0	4081.2
00731	19	4	2	2	2	2762	2162122	2762	62	62	1	1	41.5	0	1	5	5	5	5	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-30.0	3990.4
00732	19	4	2	2	2	2771	2162122	2771	62	62	1	1	60.1	0	1	5	5	5	5	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	4081.2
00733	19	4	2	2	2	2772	2162122	2772	62	62	1	1	-9.1	0	1	5	5	5	5	5	10	5	-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	4164.6
00734	19	4	2	2	2	2861	2162022	2861	62	62	1	1	96.7	0	1	5	5	5	5	5	10	5	-750.00	3000.0	1000.0	-0.15	-0.15	-25.0	-20.0	4081.2
00735	19	4	2	2	2	2891	2162122	2891	62	62	1	1	-7.9	0	1	5	5	5	5	5	10	5	750.00	3000.0	5000.0	-0.15	-0.15	-25.0	-30.0	3156.7
00736	19	4	2	2	2	2900	2162022	2900	62	62	1	1	46.9	0	1	5	5	5	5	5	10	5	750.00	3000.0	5000.0	-0.15	-0.15	-25.0	-25.0	3169.8
00737	19	4	2	2	2	2933	2162122	2933	62	62	1	1	13.0	0	1	5	5	5	5	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4023.8
00738	19	4	2	2	2	2934	2162122	2934	62	62	1	1	-83.8	1	1	5	5	5	5	5	10	5	-1000.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4139.2
00739	19	4	2	2	2	2940	2162122	2940	62	62	1	1	75.7	0	1	5	5	5	5	5	10	5	-250.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	3811.1
00740	19	4	2	2	2	2941	2162022	2941	62	62	1	1	85.6	0	1	5	5	5	5	5	10	5	-500.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	3936.1
00741	19	4	2	2	2	2941	2162122	2941	62	62	1	1	35.6	0	1	5	5	5	5	5	10	5	-500.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	3886.1
00742	19	4	2	2	2	2942	2162022	2942	62	62	1	1	11.2	0	1	5	5	5	5	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	4059.8
00743	19	4	2	2	2	2942	2162122	2942	62	62	1	1	-66.5	0	1	5	5	5	5	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	3982.1
00744	19	4	2	2	2	2943	2162022	2943	62	62	1	1	-23.6	0	1	5	5	5	5	5	10	10	-1000.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	4230.0
00745	19	4	2	2	2	3023	2162022	3023	62	62	1	1	96.7	0	1	5	5	5	5	5	10	10	-750.00	3000.0	1000.0	-0.15	-0.25	-25.0	-20.0	4081.2
00746	19	4	2	2	2	3071	2162022	3071	62	62	1	1	-33.5	0	1	5	5	5	5	5	10	10	750.00	3000.0	5000.0	-0.15	-0.25	-25.0	-20.0	3317.9
00747	19	4	2	2	2	3071	2162122	3071	62	62	1	1	41.5	0	1	5	5	5	5	5	10	5	750.00	3000.0	5000.0	-0.15	-0.25	-25.0	-20.0	3392.9
00748	19	4	2	2	2	3095	2162022	3095	62	62	1	1	65.3	0	1	5	5	5	5	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.35	-25.0	-25.0	4076.1
00749	19	4	2	2	2	3095	2162122	3095	62	62	1	1	17.4	0	1	5	5	5	5	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.35	-25.0	-25.0	3990.4
00750	19	4	2	2	2	3103	2162122	3103	62	62	1	1	43.4	0	1	5	5	5	5	5	10	5	-500.00	3000.0	-5000.0	-0.15	0.35	-25.0	-20.0	3945.5
00751	19	4	2	2	2	3104	2162022	3104	62	62	1	1	-64.0	0	1	5	5	5	5	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.35	-25.0	-20.0	4015.5
00752	19	4	2	2	2	3185	2162022	3185	62	62	1	1	96.7	0	1	5	5	5	5	5	10	5	-750.00	3000.0	1000.0	-0.15	-0.35	-25.0	-20.0	4081.2
00753	19	4	2	2	2	3233	2162022	3233	62	62	1	1	-17.3	0	1	5	5	5	5	5	10	5	750.00	3000.0	5000.0	-0.15	-0.35	-25.0	-20.0	3303.1
00754	19	4	2	2	2	3233	2162122	3233	62	62	1	1	39.0	0	1	5	5	5	5	5	10	5	750.00	3000.0	5000.0	-0.15	-0.35	-25.0	-20.0	3359.5
00755	19	4	2	2	2	3284	2162122	3284	62	62	1	1	27.3	0	1	4	4	4	4	4	10	5	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-25.0	4182.8
00756	19	4	2	2	2	3409	2162022	3409	62	62	1	1	60.5	0	1	4	4	4	4	4	10	5	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	4049.4
00757	19	4	2	2	2	3410	2162122	3410	62	62	1	1	75.7	0	1	4	4	4	4	4	10	5	-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	4102.8
00758	19	4	2	2	2	3419	2162022	3419	62	62	1	1	55.6	0	1	4	4	4	4	4	10	5	-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	4102.8
00759	19	4	2	2	2	3419	2162122	3419	62	62	1	1	84.3	0	1	4	4	4	4	4	10	5	-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	4102.8
00760	19	4	2	2	2	3420	2162022	3420	62	62	1	1	-81.0	0	1	4	4	4	4	4	10	5	-1000.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	4159.5
00761	19	4	2	2	2	3429	2162122	3429	62	62	1	1	93.3	0	1	4	4	4	4	4	10	5	-1000.00	5000.0	-5000.0	-0.15	0.15	-25.0	-20.0	4136.3
00762	19	4	2	2	2	3438	2162022	3438	62	62	1	1	75.5	0	1	4	4	4	4	4	10	5	-1000.00	5000.0	-3000.0	-0.15	0.15	-25.0	-30.0	4227.6
00763	19	4	2	2	2	3445	2162022	3445	62	62	1	1	73.5	0	1	4	4	4	4	4	10	5	-500.00	5000.0	-3000.0	-0.15	0.15	-25.0	-25.0	4062.3
00764	19	4	2	2	2	3447	2162022	3447	62	62	1	1	32.6	0	1	4	4	4	4	4	10	5	-1000.00	5000.0	-3000.0	-0.15	0.15	-25.0	-25.0	4226.3
00765	19	4	2	2	2	3455	2162122	3455	62	62	1	1	98.6	0	1	4	4	4	4	4	10	5	-750.00	5000.0	-3000.0	-0.15	0.15	-25.0	-20.0	4102.8
00766	19	4	2	2	2	3456	2162122	3456	62	62	1	1	1.3	0	1	4	4	4	4	4	10	5	-1000.00	5000.0	-3000.0	-0.15	0.15	-25.0	-20.0	4182.8
00767	19	4	2	2	2	3519	2162022	3519	62	62	1	1	75.5	0	1	5	5	5	5	5	10	5	-1000.00	5000.0	3000.0	-0.15	-0.15	-25.0	-30.0	4227.6
00768	19	4	2	2	2	3536	2162122	3536	62	62	1	1	-75.5	0	1	4	4	4	4	4	10	5	-750.00	5000.0	3000.0	-0.15	-0.15	-25.0	-20.0	3831.2
00769	19	4	2	2	2	3545	2162122	3545	62	62	1	1	-39.1	0	1	4	4	4	4	4	10	5	-750.00	5000.0	5000.0	-0.15	-0.15	-25.0	-30.0	3960.8
00770	19	4	2	2	2	3573	2162022	3573	62	62	1	1	-11.0	0	1	4	4	4	4	4	10	5	-1000.00	5000.0	-5000.0	-0.15	0.25	-25.0	-30.0	4182.8
00771	19	4	2	2	2	3573	2162122	3573	62	62	1	1	61.6	0	1	4	4	4	4	4	10	5	-1000.00	5000.0	-5000.0	-0.15	0.25	-25.0	-30.0	4182.8
00772	19	4	2	2	2	3580	2162022	3580	62	62	1	1	73.5	0	1	4	4	4	4	4	10	5	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4062.3
00773	19	4	2	2	2	3581	2162022	3581	62	62	1	1	-58.2	0	1	4	4	4	4	4	10	5	-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4052.5
00774	19	4	2	2	2	3581	2162122	3581	62	62	1	1	22.5	0	1	4	4	4	4	4	10	5	-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4048.1
00775	19	4	2	2	2	3582	2162022	3582	62	62	1	1	-70.5	0	1	4	4	4	4	4	10	5	-1000.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4164.9
00776	19	4	2	2	2	3588	2162022	3588	62	62	1	1	8.7	0																

SEQ CLS ROW
NUM TBL COL

00793	19	4	2	2	c1919cf	19	4	2	2	3751	2162022	3751	62	62	1	1	-47.5	0	1	4	5	5	10	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	3950.4
00794	19	4	2	2	c1919cf	19	4	2	2	3751	2162122	3751	62	62	1	1	-72.1	0	1	4	5	5	10	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	3950.4
00795	19	4	2	2	c1919cf	19	4	2	2	3752	2162022	3752	62	62	1	1	-52.0	0	1	4	5	5	10	-750.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	4058.8
00796	19	4	2	2	c1919cf	19	4	2	2	3752	2162122	3752	62	62	1	1	-17.4	0	1	4	5	5	10	-750.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	4050.3
00797	19	4	2	2	c1919cf	19	4	2	2	3753	2162022	3753	62	62	1	1	-44.5	0	1	4	5	5	10	-1000.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	4232.6
00798	19	4	2	2	c1919cf	19	4	2	2	3771	2162022	3771	62	62	1	1	-75.5	0	1	4	5	5	10	-1000.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	4227.6
00799	19	4	2	2	c1919cf	19	4	2	2	3778	2162022	3778	62	62	1	1	-65.9	0	1	4	5	5	10	-500.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	4054.7
00800	19	4	2	2	c1919cf	19	4	2	2	3779	2162122	3779	62	62	1	1	-69.4	0	1	4	5	5	10	-750.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	4096.5
00801	19	4	2	2	c1919cf	19	4	2	2	3780	2162022	3780	62	62	1	1	-7.8	0	1	4	5	5	10	-1000.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	4227.6
00802	19	4	2	2	c1919cf	19	4	2	2	3780	2162122	3780	62	62	1	1	-99.1	0	1	4	5	5	10	-1000.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	4136.3
00803	19	4	2	2	c1919cf	19	4	2	2	3852	2162022	3852	62	62	1	1	-75.9	0	1	4	5	5	10	-1000.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	4159.5
00804	19	4	2	2	c1919cf	19	4	2	2	3852	2162122	3852	62	62	1	1	-7.4	0	1	4	5	5	10	-1000.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	4159.5
00805	19	4	2	2	c1919cf	19	4	2	2	4229	2162022	4229	62	62	1	1	-67.4	0	1	6	6	5	10	-750.00	1000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7811.1
00806	19	4	2	2	c1919cf	19	4	2	2	4237	2162022	4237	62	62	1	1	-50.6	0	1	6	6	5	10	-500.00	1000.0	-5000.0	-0.05	0.25	-25.0	-20.0	7711.1
00807	19	4	2	2	c1919cf	19	4	2	2	4399	2162022	4399	62	62	1	1	-76.6	0	1	6	6	5	10	-500.00	1000.0	-5000.0	-0.05	0.35	-25.0	-20.0	7778.7
00808	19	4	2	2	c1919cf	19	4	2	2	4410	2162022	4410	62	62	1	1	-47.8	0	1	6	6	5	10	-1000.00	1000.0	-5000.0	-0.05	0.35	-25.0	-30.0	8249.9
00809	19	4	2	2	c1919cf	19	4	2	2	4853	2162022	4853	62	62	1	1	-59.2	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.05	0.15	-25.0	-20.0	6942.0
00810	19	4	2	2	c1919cf	19	4	2	2	4853	2162122	4853	62	62	1	1	-82.8	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.05	0.15	-25.0	-20.0	7083.9
00811	19	4	2	2	c1919cf	19	4	2	2	4869	2162022	4869	62	62	1	1	-7.3	0	1	6	6	5	10	-1000.00	3000.0	-5000.0	-0.05	0.25	-25.0	-30.0	7831.5
00812	19	4	2	2	c1919cf	19	4	2	2	4869	2162122	4869	62	62	1	1	-64.7	0	1	6	6	5	10	-1000.00	3000.0	-5000.0	-0.05	0.25	-25.0	-30.0	7831.5
00813	19	4	2	2	c1919cf	19	4	2	2	4877	2162022	4877	62	62	1	1	-14.3	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7771.4
00814	19	4	2	2	c1919cf	19	4	2	2	4878	2162122	4878	62	62	1	1	-50.7	0	1	6	6	5	10	-1000.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7794.6
00815	19	4	2	2	c1919cf	19	4	2	2	5039	2162022	5039	62	62	1	1	-39.5	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-25.0	7783.3
00816	19	4	2	2	c1919cf	19	4	2	2	5040	2162122	5040	62	62	1	1	-27.1	0	1	6	6	5	10	-1000.00	3000.0	-5000.0	-0.05	0.35	-25.0	-25.0	7841.7
00817	19	4	2	2	c1919cf	19	4	2	2	5047	2162122	5047	62	62	1	1	-66.6	0	1	6	6	5	10	-500.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	7715.4
00818	19	4	2	2	c1919cf	19	4	2	2	5525	2162022	5525	62	62	1	1	-62.7	0	1	6	6	5	10	-750.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7806.5
00819	19	4	2	2	c1919cf	19	4	2	2	5687	2162022	5687	62	62	1	1	-62.7	0	1	6	6	5	10	-750.00	5000.0	-5000.0	-0.05	0.35	-25.0	-25.0	7806.5
00820	19	4	2	2	c1919cf	19	4	2	2	5688	2162122	5688	62	62	1	1	-27.1	0	1	6	6	5	10	-1000.00	5000.0	-5000.0	-0.05	0.35	-25.0	-25.0	7841.7
00821	19	4	2	2	c1919cf	19	4	2	2	6113	2162122	6113	62	62	1	1	-76.6	0	1	6	6	5	10	-750.00	1000.0	-3000.0	-0.15	0.15	-25.0	-25.0	7013.0
00822	19	4	2	2	c1919cf	19	4	2	2	6181	2162022	6181	62	62	1	1	-55.0	0	1	6	6	5	10	-500.00	1000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7757.1
00823	19	4	2	2	c1919cf	19	4	2	2	6181	2162122	6181	62	62	1	1	-35.6	0	1	6	6	5	10	-500.00	1000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7686.1
00824	19	4	2	2	c1919cf	19	4	2	2	6275	2162122	6275	62	62	1	1	-39.9	0	1	6	6	5	10	-750.00	1000.0	-3000.0	-0.15	0.25	-25.0	-25.0	6962.8
00825	19	4	2	2	c1919cf	19	4	2	2	6336	2162022	6336	62	62	1	1	-51.2	0	1	6	6	5	10	-1000.00	1000.0	-3000.0	-0.15	0.35	-25.0	-25.0	8022.5
00826	19	4	2	2	c1919cf	19	4	2	2	6336	2162122	6336	62	62	1	1	-71.7	0	1	6	6	5	10	-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7940.5
00827	19	4	2	2	c1919cf	19	4	2	2	6437	2162122	6437	62	62	1	1	-43.4	0	1	6	6	5	10	-750.00	1000.0	-3000.0	-0.15	0.35	-25.0	-25.0	6921.2
00828	19	4	2	2	c1919cf	19	4	2	2	6578	2162022	6578	62	62	1	1	-96.7	0	1	6	6	5	10	-750.00	3000.0	-1000.0	-0.15	-0.05	-25.0	-25.0	7881.2
00829	19	4	2	2	c1919cf	19	4	2	2	6650	2162122	6650	62	62	1	1	-41.4	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7790.4
00830	19	4	2	2	c1919cf	19	4	2	2	6659	2162122	6659	62	62	1	1	-60.1	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7881.2
00831	19	4	2	2	c1919cf	19	4	2	2	6660	2162122	6660	62	62	1	1	-9.1	0	1	6	6	5	10	-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7964.6
00832	19	4	2	2	c1919cf	19	4	2	2	6749	2162022	6749	62	62	1	1	-96.7	0	1	6	6	5	10	-750.00	3000.0	-1000.0	-0.15	-0.15	-25.0	-20.0	7881.2
00833	19	4	2	2	c1919cf	19	4	2	2	6779	2162122	6779	62	62	1	1	-7.9	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.15	-0.15	-25.0	-30.0	6956.7
00834	19	4	2	2	c1919cf	19	4	2	2	6788	2162022	6788	62	62	1	1	-46.9	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.15	-0.15	-25.0	-25.0	6969.8
00835	19	4	2	2	c1919cf	19	4	2	2	6821	2162022	6821	62	62	1	1	-1.7	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7881.2
00836	19	4	2	2	c1919cf	19	4	2	2	6821	2162122	6821	62	62	1	1	-70.4	0	1	6	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7881.2
00837	19	4	2	2	c1919cf	19	4	2	2	6822	2162122	6822	62	62	1	1	-85.8	0	1	6	6	5	10	-1000.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7939.2
00838	19	4	2	2	c1919cf	19	4	2	2	6829	2162022	6829	62	62	1	1	-85.6	0	1	6	6	5	10	-500.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7736.1
00839	19	4	2	2	c1919cf	19	4	2	2	6829	2162122	6829	62	62	1	1	-35.6	0	1	6	6	5	10	-500.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7686.1
00840	19	4	2	2	c1919cf	19	4	2	2	6830																					

SEQ CLS ROW
NUM TBL COL

00859	19	4	2	2	cl919cf	19	4	2	2	7343	2162122	7343	62	62	1	1	98.6	0	1	5	5	10	5	-750.00	5000.0	-3000.0	-0.15	0.15	-25.0	-20.0	7902.8	
00860	19	4	2	2	cl919cf	19	4	2	2	7344	2162122	7344	62	62	1	1	1.3	0	1	5	5	10	5	-1000.00	5000.0	-3000.0	-0.15	0.15	-25.0	-20.0	7982.8	
00861	19	4	2	2	cl919cf	19	4	2	2	7407	2162022	7407	62	62	1	1	75.5	0	1	5	5	10	10	-1000.00	5000.0	3000.0	-0.15	-0.15	-25.0	-30.0	8027.6	
00862	19	4	2	2	cl919cf	19	4	2	2	7424	2162122	7424	62	62	1	1	-75.5	0	1	5	5	10	5	-750.00	5000.0	3000.0	-0.15	-0.15	-25.0	-20.0	7631.2	
00863	19	4	2	2	cl919cf	19	4	2	2	7433	2162122	7433	62	62	1	1	-39.1	0	1	5	5	10	5	-750.00	5000.0	5000.0	-0.15	-0.15	-25.0	-30.0	7750.8	
00864	19	4	2	2	cl919cf	19	4	2	2	7461	2162022	7461	62	62	1	1	-11.0	0	1	5	5	10	10	-1000.00	5000.0	-5000.0	-0.15	0.25	-25.0	-30.0	7982.8	
00865	19	4	2	2	cl919cf	19	4	2	2	7461	2162122	7461	62	62	1	1	61.6	0	1	5	5	10	5	-1000.00	5000.0	-5000.0	-0.15	0.25	-25.0	-30.0	7982.8	
00866	19	4	2	2	cl919cf	19	4	2	2	7468	2162022	7468	62	62	1	1	73.5	0	1	5	5	10	5	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7862.4	
00867	19	4	2	2	cl919cf	19	4	2	2	7469	2162022	7469	62	62	1	1	-48.4	0	1	5	5	10	5	-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7862.4	
00868	19	4	2	2	cl919cf	19	4	2	2	7469	2162122	7469	62	62	1	1	36.7	0	1	5	5	10	5	-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7862.4	
00869	19	4	2	2	cl919cf	19	4	2	2	7470	2162022	7470	62	62	1	1	-70.5	0	1	5	5	10	10	-1000.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7964.9	
00870	19	4	2	2	cl919cf	19	4	2	2	7476	2162022	7476	62	62	1	1	70.4	0	1	5	5	10	10	-250.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7672.9	
00871	19	4	2	2	cl919cf	19	4	2	2	7477	2162022	7477	62	62	1	1	89.5	0	1	5	5	10	5	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7792.8	
00872	19	4	2	2	cl919cf	19	4	2	2	7477	2162122	7477	62	62	1	1	8.2	0	1	5	5	10	5	-1000.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7736.5	
00873	19	4	2	2	cl919cf	19	4	2	2	7479	2162022	7479	62	62	1	1	-95.3	1	1	5	5	10	10	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7958.3	
00874	19	4	2	2	cl919cf	19	4	2	2	7497	2162022	7497	62	62	1	1	-11.0	0	1	5	5	10	5	-1000.00	5000.0	-3000.0	-0.15	0.25	-25.0	-25.0	7982.8	
00875	19	4	2	2	cl919cf	19	4	2	2	7497	2162122	7497	62	62	1	1	30.7	0	1	5	5	10	5	-1000.00	5000.0	-3000.0	-0.15	0.25	-25.0	-25.0	7982.8	
00876	19	4	2	2	cl919cf	19	4	2	2	7504	2162022	7504	62	62	1	1	65.7	0	1	5	5	10	10	-500.00	5000.0	-3000.0	-0.15	0.25	-25.0	-20.0	7849.4	
00877	19	4	2	2	cl919cf	19	4	2	2	7506	2162122	7506	62	62	1	1	-75.9	0	1	5	5	10	5	-1000.00	5000.0	-3000.0	-0.15	0.25	-25.0	-20.0	7959.5	
00878	19	4	2	2	cl919cf	19	4	2	2	7596	2162022	7596	62	62	1	1	-11.0	0	1	5	5	10	10	-1000.00	5000.0	5000.0	-0.15	-0.25	-25.0	-30.0	7982.8	
00879	19	4	2	2	cl919cf	19	4	2	2	7596	2162122	7596	62	62	1	1	30.7	0	1	5	5	10	5	-1000.00	5000.0	5000.0	-0.15	-0.25	-25.0	-30.0	7982.8	
00880	19	4	2	2	cl919cf	19	4	2	2	7630	2162022	7630	62	62	1	1	73.5	0	1	5	5	10	10	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7862.4	
00881	19	4	2	2	cl919cf	19	4	2	2	7631	2162022	7631	62	62	1	1	34.0	0	1	5	5	10	10	-750.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7902.8	
00882	19	4	2	2	cl919cf	19	4	2	2	7632	2162122	7632	62	62	1	1	-57.4	0	1	5	5	10	5	-1000.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7936.3	
00883	19	4	2	2	cl919cf	19	4	2	2	7638	2162022	7638	62	62	1	1	70.4	0	1	5	5	10	10	-250.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7672.9	
00884	19	4	2	2	cl919cf	19	4	2	2	7639	2162022	7639	62	62	1	1	-47.6	0	1	5	5	10	10	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7750.4	
00885	19	4	2	2	cl919cf	19	4	2	2	7639	2162122	7639	62	62	1	1	72.1	0	1	5	5	10	10	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7750.4	
00886	19	4	2	2	cl919cf	19	4	2	2	7640	2162022	7640	62	62	1	1	-61.5	0	1	5	5	10	10	-750.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7849.4	
00887	19	4	2	2	cl919cf	19	4	2	2	7640	2162122	7640	62	62	1	1	-8.8	0	1	5	5	10	5	-750.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7858.9	
00888	19	4	2	2	cl919cf	19	4	2	2	7641	2162022	7641	62	62	1	1	-44.5	0	1	5	5	10	10	-1000.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	8032.6	
00889	19	4	2	2	cl919cf	19	4	2	2	7659	2162022	7659	62	62	1	1	75.5	0	1	5	5	10	10	-1000.00	5000.0	-3000.0	-0.15	0.35	-25.0	-25.0	8027.6	
00890	19	4	2	2	cl919cf	19	4	2	2	7666	2162022	7666	62	62	1	1	65.9	0	1	5	5	10	10	-500.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7854.7	
00891	19	4	2	2	cl919cf	19	4	2	2	7667	2162122	7667	62	62	1	1	69.4	0	1	5	5	10	5	-750.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7896.5	
00892	19	4	2	2	cl919cf	19	4	2	2	7668	2162022	7668	62	62	1	1	-7.8	0	1	5	5	10	10	-1000.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	8027.6	
00893	19	4	2	2	cl919cf	19	4	2	2	7668	2162122	7668	62	62	1	1	-99.1	1	1	5	5	10	10	-1000.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7936.3	
00894	19	4	2	2	cl919cf	19	4	2	2	7740	2162022	7740	62	62	1	1	-75.9	0	1	5	5	10	10	-1000.00	5000.0	3000.0	-0.15	-0.35	-25.0	-25.0	7959.5	
00895	19	4	2	2	cl919cf	19	4	2	2	7740	2162122	7740	62	62	1	1	7.4	0	1	5	5	10	5	-1000.00	5000.0	3000.0	-0.15	-0.35	-25.0	-25.0	7959.5	
01482	19	4	3	3	cl919or	19	4	3	3	341	2164033	341	64	64	1	1	88.4	0	1	4	4	5	5	10	-750.00	1000.0	-5000.0	-0.05	0.25	-25.0	-25.0	4073.8
01483	19	4	3	3	cl919or	19	4	3	3	349	2164033	349	64	64	1	1	-12.9	0	1	4	4	5	5	10	-500.00	1000.0	-5000.0	-0.05	0.25	-25.0	-20.0	3930.9
01484	19	4	3	3	cl919or	19	4	3	3	349	2164133	349	64	64	1	1	0.6	0	1	4	4	5	5	10	-500.00	1000.0	-5000.0	-0.05	0.25	-25.0	-20.0	3861.1
01485	19	4	3	3	cl919or	19	4	3	3	511	2164033	511	64	64	1	1	1.7	0	1	4	4	5	5	10	-500.00	1000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3945.5
01486	19	4	3	3	cl919or	19	4	3	3	511	2164133	511	64	64	1	1	74.3	0	1	4	4	5	5	10	-500.00	1000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3945.5
01487	19	4	3	3	cl919or	19	4	3	3	512	2164033	512	64	64	1	1	55.1	0	1	4	4	5	5	10	-750.00	1000.0	-5000.0	-0.05	0.35	-25.0	-20.0	4082.1
01488	19	4	3	3	cl919or	19	4	3	3	512	2164133	512	64	64	1	1	-19.9	0	1	4	4	5	5	10	-750.00	1000.0	-5000.0	-0.05	0.35	-25.0	-20.0	4007.1
01489	19	4	3	3	cl919or	19	4	3	3	640	2164033	640	64	64	1	1	-44.3	0	1	4	4	5	5	10	1000.00	1000.0	5000.0	-0.05	-0.35	-25.0	-20.0	3244.6
01490	19	4	3	3	cl919or	19	4	3	3	640	2164133	640	64	64	1	1	-21.0	0	1	4	4	5	5	10	1000.00	1000.0	5000.0	-0.05	-0.35	-25.0	-20.0	3267.9
01491	19	4	3	3	cl919or	19	4	3	3	827	2164033	827	64	64	1	1	-17.3	0	1	4	4	5	5	10	-750.00	3000.0	-5000.0	-0.05	0.15	-25.0	-25.0	3973.2
0149																																

SEQ CLS ROW
NUM TBL COL

01642	19	4	4	3	3	c1919or	19	4	4	3	3	6336	2164033	6336	64	64	1	1	-17.5	0	1	5	6	5	10	-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7987.0
01643	19	4	4	3	3	c1919or	19	4	4	3	3	6336	2164133	6336	64	64	1	1	76.6	0	1	5	6	5	10	-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7987.0
01644	19	4	4	3	3	c1919or	19	4	4	3	3	6345	2164033	6345	64	64	1	1	31.5	0	1	5	6	5	10	-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	8108.6
01645	19	4	4	3	3	c1919or	19	4	4	3	3	6345	2164133	6345	64	64	1	1	44.1	0	1	5	6	5	10	-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	8121.2
01646	19	4	4	3	3	c1919or	19	4	4	3	3	6437	2164033	6437	64	64	1	1	-34.9	0	1	5	6	5	10	750.00	1000.0	3000.0	-0.15	-0.35	-25.0	-25.0	6888.0
01647	19	4	4	3	3	c1919or	19	4	4	3	3	6651	2164033	6651	64	64	1	1	-60.8	0	1	5	6	5	10	-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7990.2
01648	19	4	4	3	3	c1919or	19	4	4	3	3	6651	2164133	6651	64	64	1	1	-10.0	0	1	5	6	5	10	-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7919.3
01649	19	4	4	3	3	c1919or	19	4	4	3	3	6659	2164033	6659	64	64	1	1	-69.4	0	1	5	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7922.9
01650	19	4	4	3	3	c1919or	19	4	4	3	3	6659	2164133	6659	64	64	1	1	-13.9	0	1	5	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7839.6
01651	19	4	4	3	3	c1919or	19	4	4	3	3	6660	2164033	6660	64	64	1	1	-28.8	0	1	5	6	5	10	-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	8006.2
01652	19	4	4	3	3	c1919or	19	4	4	3	3	6771	2164033	6771	64	64	1	1	-81.7	0	1	5	6	5	10	500.00	3000.0	3000.0	-0.15	-0.15	-25.0	-20.0	7263.9
01653	19	4	4	3	3	c1919or	19	4	4	3	3	6771	2164133	6771	64	64	1	1	-31.7	0	1	5	6	5	10	500.00	3000.0	3000.0	-0.15	-0.15	-25.0	-20.0	7315.9
01654	19	4	4	3	3	c1919or	19	4	4	3	3	6821	2164033	6821	64	64	1	1	1.7	0	1	5	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7881.2
01655	19	4	4	3	3	c1919or	19	4	4	3	3	6821	2164133	6821	64	64	1	1	34.9	0	1	5	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7881.2
01656	19	4	4	3	3	c1919or	19	4	4	3	3	6829	2164033	6829	64	64	1	1	80.0	0	1	5	6	5	10	-500.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7730.9
01657	19	4	4	3	3	c1919or	19	4	4	3	3	6829	2164133	6829	64	64	1	1	28.8	0	1	5	6	5	10	-500.00	3000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7730.9
01658	19	4	4	3	3	c1919or	19	4	4	3	3	6849	2164033	6849	64	64	1	1	83.6	0	1	5	6	5	10	-1000.00	3000.0	-3000.0	-0.15	0.25	-25.0	-25.0	8035.7
01659	19	4	4	3	3	c1919or	19	4	4	3	3	6857	2164133	6857	64	64	1	1	43.4	0	1	5	6	5	10	-750.00	3000.0	-3000.0	-0.15	0.25	-25.0	-20.0	7922.9
01660	19	4	4	3	3	c1919or	19	4	4	3	3	6858	2164033	6858	64	64	1	1	-8.6	0	1	5	6	5	10	-1000.00	3000.0	-3000.0	-0.15	0.25	-25.0	-20.0	8006.2
01661	19	4	4	3	3	c1919or	19	4	4	3	3	6959	2164033	6959	64	64	1	1	-8.5	0	1	5	6	5	10	750.00	3000.0	5000.0	-0.15	-0.25	-25.0	-20.0	7142.9
01662	19	4	4	3	3	c1919or	19	4	4	3	3	6959	2164133	6959	64	64	1	1	66.5	0	1	5	6	5	10	750.00	3000.0	5000.0	-0.15	-0.25	-25.0	-20.0	7217.9
01663	19	4	4	3	3	c1919or	19	4	4	3	3	6992	2164033	6992	64	64	1	1	-54.6	0	1	5	6	5	10	-750.00	3000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7855.9
01664	19	4	4	3	3	c1919or	19	4	4	3	3	7011	2164033	7011	64	64	1	1	91.6	0	1	5	6	5	10	-1000.00	3000.0	-3000.0	-0.15	0.35	-25.0	-20.0	8043.6
01665	19	4	4	3	3	c1919or	19	4	4	3	3	7019	2164133	7019	64	64	1	1	24.2	0	1	5	6	5	10	-750.00	3000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7870.5
01666	19	4	4	3	3	c1919or	19	4	4	3	3	7020	2164033	7020	64	64	1	1	-16.7	0	1	5	6	5	10	-1000.00	3000.0	-3000.0	-0.15	0.35	-25.0	-20.0	8006.2
01667	19	4	4	3	3	c1919or	19	4	4	3	3	7121	2164033	7121	64	64	1	1	-5.7	0	1	5	6	5	10	750.00	3000.0	5000.0	-0.15	-0.35	-25.0	-20.0	7114.8
01668	19	4	4	3	3	c1919or	19	4	4	3	3	7121	2164133	7121	64	64	1	1	64.0	0	1	5	6	5	10	750.00	3000.0	5000.0	-0.15	-0.35	-25.0	-20.0	7184.5
01669	19	4	4	3	3	c1919or	19	4	4	3	3	7163	2164033	7163	64	64	1	1	97.4	0	1	4	6	5	10	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-30.0	7959.5
01670	19	4	4	3	3	c1919or	19	4	4	3	3	7172	2164033	7172	64	64	1	1	62.4	0	1	4	6	5	10	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-25.0	8027.6
01671	19	4	4	3	3	c1919or	19	4	4	3	3	7172	2164133	7172	64	64	1	1	-5.7	0	1	4	6	5	10	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-25.0	7959.5
01672	19	4	4	3	3	c1919or	19	4	4	3	3	7180	2164033	7180	64	64	1	1	80.3	0	1	4	6	5	10	-500.00	5000.0	-3000.0	-0.15	0.15	-25.0	-30.0	7902.8
01673	19	4	4	3	3	c1919or	19	4	4	3	3	7297	2164033	7297	64	64	1	1	-7.9	0	1	4	6	5	10	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7806.0
01674	19	4	4	3	3	c1919or	19	4	4	3	3	7297	2164133	7297	64	64	1	1	42.1	0	1	4	6	5	10	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7806.0
01675	19	4	4	3	3	c1919or	19	4	4	3	3	7298	2164033	7298	64	64	1	1	-48.5	0	1	4	6	5	10	-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7862.4
01676	19	4	4	3	3	c1919or	19	4	4	3	3	7298	2164133	7298	64	64	1	1	35.2	0	1	4	6	5	10	-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7862.4
01677	19	4	4	3	3	c1919or	19	4	4	3	3	7299	2164033	7299	64	64	1	1	96.9	0	1	4	6	5	10	-1000.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	8127.8
01678	19	4	4	3	3	c1919or	19	4	4	3	3	7299	2164133	7299	64	64	1	1	1.7	0	1	4	6	5	10	-1000.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	8032.6
01679	19	4	4	3	3	c1919or	19	4	4	3	3	7305	2164033	7305	64	64	1	1	28.8	0	1	4	6	5	10	-250.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7631.2
01680	19	4	4	3	3	c1919or	19	4	4	3	3	7307	2164033	7307	64	64	1	1	55.6	0	1	4	6	5	10	-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7902.8
01681	19	4	4	3	3	c1919or	19	4	4	3	3	7307	2164133	7307	64	64	1	1	84.2	0	1	4	6	5	10	-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7902.8
01682	19	4	4	3	3	c1919or	19	4	4	3	3	7326	2164033	7326	64	64	1	1	75.5	0	1	4	6	5	10	-1000.00	5000.0	-3000.0	-0.15	0.15	-25.0	-30.0	8027.6
01683	19	4	4	3	3	c1919or	19	4	4	3	3	7333	2164033	7333	64	64	1	1	73.5	0	1	4	6	5	10	-500.00	5000.0	-3000.0	-0.15	0.15	-25.0	-25.0	7862.4
01684	19	4	4	3	3	c1919or	19	4	4	3	3	7334	2164133	7334	64	64	1	1	-75.7	0	1	4	6	5	10	-750.00	5000.0	-3000.0	-0.15	0.15	-25.0	-25.0	7902.8
01685	19	4	4	3	3	c1919or	19	4	4	3	3	7335	2164033	7335	64	64	1	1	-70.5	0	1	4	6	5	10	-1000.00	5000.0	-3000.0	-0.15	0.15	-25.0	-25.0	7964.9
01686	19	4	4	3	3	c1919or	19	4	4	3	3	7335	2164133	7335	64	64	1	1	-28.8	0	1	4	6	5	10</								

01708	19	4	3	3	cl919or	19	4	3	3	7631	2164133	7631	64	64	1	1	75.7	0	1	4	6	5	5	10	5	-750.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7902.8		
01709	19	4	3	3	cl919or	19	4	3	3	7632	2164133	7632	64	64	1	1	-99.1	1	1	4	6	5	5	10	5	-1000.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7936.3		
01710	19	4	3	3	cl919or	19	4	3	3	7639	2164133	7639	64	64	1	1	-23.2	0	1	4	6	5	5	10	5	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7714.6		
01711	19	4	3	3	cl919or	19	4	3	3	7666	2164033	7666	64	64	1	1	65.9	0	1	4	6	5	5	10	5	-500.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7854.7		
01712	19	4	3	3	cl919or	19	4	3	3	7667	2164033	7667	64	64	1	1	27.8	0	1	4	6	5	5	10	5	-750.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7896.5		
01713	19	4	3	3	cl919or	19	4	3	3	7667	2164133	7667	64	64	1	1	69.4	0	1	4	6	5	5	10	5	-750.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7896.5		
01714	19	4	3	3	cl919or	19	4	3	3	7668	2164033	7668	64	64	1	1	-94.3	1	1	4	6	5	5	10	5	-1000.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7982.8		
02171	19	4	4	4	cl919WZ	19	4	4	4	291	2165044	291	65	65	1	1	-80.1	0	1	4	4	4	4	5	10	5	500.00	1000.0	3000.0	-0.05	-0.15	-25.0	-20.0	3417.9	
02172	19	4	4	4	cl919WZ	19	4	4	4	291	2165144	291	65	65	1	1	-28.8	0	1	4	4	4	4	5	10	5	500.00	1000.0	3000.0	-0.05	-0.15	-25.0	-20.0	3469.1	
02173	19	4	4	4	cl919WZ	19	4	4	4	988	2165044	988	65	65	1	1	6.3	0	1	3	5	4	4	5	10	5	-500.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3908.3	
02174	19	4	4	4	cl919WZ	19	4	4	4	988	2165144	988	65	65	1	1	89.6	0	1	3	5	4	4	5	10	5	-500.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3908.3	
02175	19	4	4	4	cl919WZ	19	4	4	4	997	2165044	997	65	65	1	1	-16.5	0	1	3	5	4	4	5	10	5	-500.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3886.7	
02176	19	4	4	4	cl919WZ	19	4	4	4	997	2165144	997	65	65	1	1	-34.2	0	1	3	5	4	4	5	10	5	-500.00	3000.0	-5000.0	-0.05	0.25	-25.0	-20.0	3869.1	
02177	19	4	4	4	cl919WZ	19	4	4	4	1159	2165044	1159	65	65	1	1	57.7	0	1	3	5	4	4	5	10	5	-500.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3915.4	
02178	19	4	4	4	cl919WZ	19	4	4	4	1159	2165144	1159	65	65	1	1	41.8	0	1	3	5	4	4	5	10	5	-500.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3899.6	
02179	19	4	4	4	cl919WZ	19	4	4	4	2285	2165044	2285	65	65	1	1	63.1	0	1	4	5	4	4	5	10	5	-750.00	1000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4073.8	
02180	19	4	4	4	cl919WZ	19	4	4	4	2807	2165044	2807	65	65	1	1	21.5	0	1	4	5	4	4	5	10	5	-750.00	3000.0	-3000.0	-0.15	0.15	-25.0	-20.0	4081.2	
02181	19	4	4	4	cl919WZ	19	4	4	4	2807	2165144	2807	65	65	1	1	82.0	0	1	4	5	4	4	5	10	5	-750.00	3000.0	-3000.0	-0.15	0.15	-25.0	-20.0	4081.2	
02182	19	4	4	4	cl919WZ	19	4	4	4	2883	2165144	2883	65	65	1	1	-28.8	0	1	4	3	4	4	5	10	5	500.00	3000.0	3000.0	-0.15	-0.15	-25.0	-20.0	3469.1	
02183	19	4	4	4	cl919WZ	19	4	4	4	2933	2165044	2933	65	65	1	1	63.1	0	1	4	5	4	4	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	4073.8	
02184	19	4	4	4	cl919WZ	19	4	4	4	3104	2165044	3104	65	65	1	1	-22.0	0	1	4	5	4	4	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.35	-25.0	-20.0	3990.5	
02185	19	4	4	4	cl919WZ	19	4	4	4	3104	2165144	3104	65	65	1	1	92.6	0	1	4	5	4	4	5	10	5	-750.00	3000.0	-5000.0	-0.15	0.35	-25.0	-20.0	4007.1	
02186	19	4	4	4	cl919WZ	19	4	4	4	3274	2165044	3274	65	65	1	1	41.5	0	1	3	5	4	4	5	10	5	-500.00	5000.0	-3000.0	-0.15	0.05	-25.0	-30.0	4058.8	
02187	19	4	4	4	cl919WZ	19	4	4	4	3274	2165144	3274	65	65	1	1	-22.5	0	1	3	5	4	4	5	10	5	-500.00	5000.0	-3000.0	-0.15	0.05	-25.0	-30.0	3994.9	
02188	19	4	4	4	cl919WZ	19	4	4	4	3427	2165044	3427	65	65	1	1	94.8	0	1	3	5	4	4	5	10	5	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-20.0	3960.8	
02189	19	4	4	4	cl919WZ	19	4	4	4	3427	2165144	3427	65	65	1	1	48.6	0	1	3	5	4	4	5	10	5	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-20.0	3914.6	
02190	19	4	4	4	cl919WZ	19	4	4	4	3544	2165144	3544	65	65	1	1	-61.6	0	1	4	4	4	4	4	10	5	-500.00	5000.0	5000.0	-0.15	-0.15	-25.0	-30.0	3914.6	
02191	19	4	4	4	cl919WZ	19	4	4	4	3697	2165144	3697	65	65	1	1	-61.6	0	1	4	4	4	4	4	10	5	-500.00	5000.0	3000.0	-0.15	-0.25	-25.0	-20.0	3914.6	
02192	19	4	4	4	cl919WZ	19	4	4	4	3711	2165044	3711	65	65	1	1	-83.0	0	1	4	3	4	4	4	5	10	5	-500.00	5000.0	5000.0	-0.15	-0.25	-25.0	-25.0	3289.9
02193	19	4	4	4	cl919WZ	19	4	4	4	4876	2165044	4876	65	65	1	1	6.2	0	1	5	6	6	6	6	10	5	-500.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7708.3	
02194	19	4	4	4	cl919WZ	19	4	4	4	4876	2165144	4876	65	65	1	1	89.6	0	1	5	6	6	6	6	10	5	-500.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7708.3	
02195	19	4	4	4	cl919WZ	19	4	4	4	4885	2165144	4885	65	65	1	1	-34.2	0	1	5	6	6	6	6	10	5	-500.00	3000.0	-5000.0	-0.05	0.25	-25.0	-20.0	7669.1	
02196	19	4	4	4	cl919WZ	19	4	4	4	4969	2165144	4969	65	65	1	1	-40.0	0	1	5	6	6	6	6	10	5	1000.00	3000.0	3000.0	-0.05	-0.25	-25.0	-30.0	6622.2	
02197	19	4	4	4	cl919WZ	19	4	4	4	5047	2165044	5047	65	65	1	1	57.6	0	1	5	6	6	6	6	10	5	-500.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	7715.4	
02198	19	4	4	4	cl919WZ	19	4	4	4	5047	2165144	5047	65	65	1	1	41.8	0	1	5	6	6	6	6	10	5	-500.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	7699.6	
02199	19	4	4	4	cl919WZ	19	4	4	4	5131	2165144	5131	65	65	1	1	-40.0	0	1	5	6	6	6	6	10	5	1000.00	3000.0	3000.0	-0.05	-0.35	-25.0	-30.0	6622.2	
02200	19	4	4	4	cl919WZ	19	4	4	4	6695	2165044	6695	65	65	1	1	21.5	0	1	5	6	6	6	6	10	5	-750.00	3000.0	-3000.0	-0.15	0.15	-25.0	-20.0	7881.2	
02201	19	4	4	4	cl919WZ	19	4	4	4	6695	2165144	6695	65	65	1	1	82.0	0	1	5	6	6	6	6	10	5	-750.00	3000.0	-3000.0	-0.15	0.15	-25.0	-20.0	7881.2	
02202	19	4	4	4	cl919WZ	19	4	4	4	6771	2165044	6771	65	65	1	1	-81.7	0	1	5	6	6	6	6	10	5	500.00	3000.0	3000.0	-0.15	-0.15	-25.0	-20.0	7263.9	
02203	19	4	4	4	cl919WZ	19	4	4	4	6771	2165144	6771	65	65	1	1	-31.7	0	1	5	6	6	6	6	10	5	500.00	3000.0	3000.0	-0.15	-0.15	-25.0	-20.0	7313.9	
02204	19	4	4	4	cl919WZ	19	4	4	4	6992	2165044	6992	65	65	1	1	-76.4	0	1	5	6	6	6	6	10	5	-750.00	3000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7736.1	
02205	19	4	4	4	cl919WZ	19	4	4	4	7162	2165144	7162	65	65	1	1	88.5	0	1	5	6	6	6	6	10	5	-500.00	5000.0	-3000.0	-0.15	0.05	-25.0	-30.0	7794.9	
02206	19	4	4	4	cl919WZ	19	4	4	4	7432	2165144	7432	65	65	1	1	-61.6	0	1	5	6	6	6	6	10	5	-500.00	5000.0	5000.0	-0.15	-0.15	-25.0	-30.0	7714.6	

SEQ CLS ROW
NUM TBL COL

01708	19	4	3	3	7500.0	3	2	0	0	0	0	0	0	1	1	-61	28	-17	2	2926.0	-323.7	1	19	0	18	0	42	9	44	18	46	19	61	19	64	8
01709	19	4	4	3	7500.0	0	0	0	0	0	0	0	0	1	1	-61	28	-18	2	3224.0	-938.8	1	19	0	18	0	42	9	43	18	45	18	46	19	63	19
01710	19	4	3	3	7500.0	0	0	0	0	0	0	0	0	1	1	-61	28	-13	2	1760.9	-938.8	1	19	0	18	0	47	9	48	18	50	18	51	19	62	19
01711	19	4	3	3	7500.0	0	0	0	0	0	0	0	0	0	1	-61	28	-16	2	2631.7	-1158.5	1	19	0	18	0	45	18	48	18	49	19	61	19	64	8
01712	19	4	3	3	7500.0	0	0	0	0	0	0	0	0	0	1	-61	28	-17	2	2926.0	-1158.5	1	19	0	18	0	44	18	47	18	48	19	61	19	64	8
01713	19	4	3	3	7500.0	0	0	0	0	0	0	0	0	0	1	-61	28	-17	2	2926.0	-1158.5	1	19	0	18	0	44	18	47	18	48	19	61	19	64	8
01714	19	4	3	3	7500.0	0	0	0	0	0	0	0	0	0	1	-61	28	-20	2	3828.6	-3000.0	1	19	0	18	0	41	18	42	18	45	19	63	19	64	8
02171	19	4	4	4	3700.0	3	1	0	1	1	1	0	0	0	1	-61	28	-16	2	210.6	3000.0	1	-19	0	-18	0	40	9	45	-18	53	-19	61	-19	64	8
02172	19	4	4	4	3700.0	0	1	0	1	1	1	0	1	0	1	-61	28	-14	2	50.0	2869.6	1	-19	0	-18	0	40	9	47	-18	53	-19	61	-19	64	8
02173	19	4	4	4	3700.0	0	0	0	1	0	0	0	1	1	1	-61	28	-15	2	2113.4	-550.2	1	19	0	18	0	34	9	46	18	48	19	61	19	64	8
02174	19	4	4	4	3700.0	3	2	0	0	1	0	0	0	1	1	-61	28	-15	2	2113.4	-550.2	1	19	0	18	0	34	9	46	18	48	19	61	19	64	8
02175	19	4	4	4	3700.0	3	1	0	0	1	0	0	0	1	1	-61	28	-15	2	2113.4	-4603.2	1	19	0	18	0	34	9	46	18	52	18	53	19	62	19
02176	19	4	4	4	3700.0	3	1	0	0	1	0	1	0	1	1	-61	28	-14	2	2016.7	-3632.6	1	19	0	18	0	34	9	47	18	52	18	53	19	62	19
02177	19	4	4	4	3700.0	3	1	0	0	1	0	0	0	1	1	-61	28	-16	2	2210.6	-4536.9	1	19	0	18	0	34	9	45	18	50	18	51	19	61	19
02178	19	4	4	4	3700.0	3	1	0	0	1	0	1	0	1	1	-61	28	-15	2	2113.4	-4536.9	1	19	0	18	0	34	9	46	18	50	18	51	19	61	19
02179	19	4	4	4	3700.0	3	2	0	0	1	1	0	0	1	1	-61	28	-19	2	-2.0	-4459.5	1	19	0	14	0	34	9	42	14	43	18	52	19	61	19
02180	19	4	4	4	3700.0	3	2	0	0	1	0	0	0	1	1	-61	28	-17	2	926.0	-3000.0	1	19	0	18	0	34	9	44	18	46	19	57	18	62	17
02181	19	4	4	4	3700.0	3	2	0	0	1	0	0	0	1	1	-61	28	-17	2	926.0	-3000.0	1	19	0	18	0	34	9	44	18	46	19	60	19	64	8
02182	19	4	4	4	3700.0	3	1	0	0	0	1	0	1	0	1	-61	28	-14	2	149.9	2869.6	1	-19	0	-18	0	44	9	47	-18	53	-19	61	-19	64	8
02183	19	4	4	4	3700.0	3	2	0	0	1	0	0	0	1	1	-61	28	-19	2	1525.6	-4459.5	1	19	0	14	0	34	9	42	14	43	18	51	18	52	19
02184	19	4	4	4	3700.0	3	2	0	0	1	0	0	0	1	1	-61	28	-17	2	926.0	-4632.6	1	19	0	18	0	34	9	44	18	54	19	62	19	64	8
02185	19	4	4	4	3700.0	3	2	0	0	1	0	0	0	1	1	-61	28	-17	2	926.0	-4632.6	1	19	0	18	0	34	9	44	18	53	19	61	19	64	8
02186	19	4	4	4	3700.0	3	1	0	0	1	0	0	0	1	1	-48	28	-16	2	2631.7	-2256.4	1	19	0	18	0	34	9	45	18	47	19	61	19	64	8
02187	19	4	4	4	3700.0	3	1	0	0	1	0	1	0	1	1	-48	28	-15	2	2340.1	-2256.4	1	19	0	18	0	34	9	46	18	51	18	52	19	62	19
02188	19	4	4	4	3700.0	3	1	0	0	1	0	0	0	1	1	-48	28	-14	2	2050.1	-4647.7	1	19	0	18	0	34	9	47	18	49	19	61	19	64	8
02189	19	4	4	4	3700.0	3	1	0	0	1	0	1	0	1	1	-48	28	-13	2	1760.9	-3646.4	1	19	0	18	0	34	9	48	18	50	19	61	19	64	8
02190	19	4	4	4	3700.0	3	2	0	0	0	0	0	0	1	1	-48	28	-13	2	1760.9	379.5	1	19	0	18	0	48	18	50	19	62	19	64	8	0	0
02191	19	4	4	4	3700.0	3	2	0	0	0	0	0	0	1	1	-48	28	-13	2	1760.9	351.7	1	19	0	18	0	48	18	50	19	62	19	64	8	0	0
02192	19	4	4	4	3700.0	3	1	0	0	0	0	0	0	1	1	-48	28	-21	2	4127.1	4610.3	1	-19	0	-12	0	40	-12	42	-13	43	-14	44	-18	48	-19
02193	19	4	4	4	7500.0	3	2	0	0	1	0	0	1	1	1	-61	28	-15	2	2113.4	-550.2	1	19	0	18	0	34	9	46	18	48	19	61	19	64	8
02194	19	4	4	4	7500.0	3	2	0	0	1	0	0	1	1	1	-61	28	-15	2	2113.4	-550.2	1	19	0	18	0	34	9	46	18	48	19	61	19	64	8
02195	19	4	4	4	7500.0	3	1	0	0	1	0	1	0	1	1	-61	28	-32	2	3000.0	-5127.5	1	19	0	18	0	28	9	47	18	52	18	53	19	62	19
02196	19	4	4	4	7500.0	3	1	0	0	0	0	1	0	1	1	-61	28	-24	2	2949.7	598.9	1	-19	0	-18	0	34	9	37	-18	41	-19	61	-19	64	8
02197	19	4	4	4	7500.0	3	1	0	0	1	0	0	0	1	1	-61	28	-16	2	2210.6	-4536.9	1	19	0	18	0	34	9	45	18	50	18	51	19	61	19
02198	19	4	4	4	7500.0	3	1	0	0	1	0	1	0	1	1	-61	28	-15	2	2113.4	-4536.9	1	19	0	18	0	34	9	46	18	50	18	51	19	61	19
02199	19	4	4	4	7500.0	3	1	0	0	0	0	1	0	1	1	-61	28	-24	2	2949.7	351.7	1	-19	0	-18	0	34	9	37	-18	41	-19	61	-19	64	8
02200	19	4	4	4	7500.0	3	1	0	0	1	0	0	0	1	1	-61	28	-17	2	926.0	-3000.0	1	19	0	18	0	34	9	44	18	46	19	57	18	62	17
02201	19	4	4	4	7500.0	3	2	0	0	1	0	0	0	1	1	-61	28	-17	2	926.0	-3000.0	1	19	0	18	0	34	9	44	18	46	19	60	19	64	8
02202	19	4	4	4	7500.0	3	1	0	1	0	0	0	0	1	1	-61	28	-17	2	926.0	3000.0	1	-18	0	-18	0	43	9	44	-18	61	-16	64	8	0	0
02203	19	4	4	4	7500.0	3	1	0	1	0	0	1	0	1	1	-61	28	-15	2	354.9	2869.6	1	-18	0	-18	0	43	9	46	-18	62	-16	64	8	0	0
02204	19	4	4	4	7500.0	3	2	0	0	1	0	0	0	1	1	-61	28	-17	2	926.0	-4632.6	1	18	0	18	0	28	9	44	18	63	16	64	8	0	0
02205	19	4	4	4	7500.0	3	1	0	0	1	0	1	0	1	1	-61	28	-15	2	2340.1	-2256.4	1	19	0	18	0	34	9	46	18	51	18	52	19	60	19
02206	19	4	4	4	7500.0	3	2	0	0	0	0	0	0	1	1	-61	28	-13	2	1760.9	379.5	1	19	0	18	0	48	18	50	19	62	19	64	8	0	0

SEQ CLS ROW
NUM TBL COL

00117	9	3	3	3	0	0	0	0	0	0	0	0	0	0	-9.64	-102.67	2050.11	-1802.05	55.00	654.25	479.72	8.73	-48.25	-1.19
00118	9	3	3	3	0	0	0	0	0	0	0	0	0	0	-9.64	-102.67	2050.11	-1802.05	55.00	654.25	479.72	8.73	-48.25	-1.19
00206	9	4	2	2	60	19	64	8	0	0	0	0	0	0	699.87	347.41	5000.01	-4824.15	38.00	899.66	690.29	690.29	4429.40	2039.99
00230	9	4	3	3	0	0	0	0	0	0	0	0	0	0	56.63	310.48	2408.00	4901.74	51.00	131.07	56.63	60.19	2308.68	1534.86
00231	9	4	3	3	0	0	0	0	0	0	0	0	0	0			3534.86	1737.62	45.00	-375.16	-388.81	-388.81	3438.38	2955.76
00232	9	4	3	3	0	0	0	0	0	0	0	0	0	0			3534.86	1737.62	45.00	-375.39	-389.11	-389.11	3438.38	2955.76
00233	9	4	3	3	0	0	0	0	0	0	0	0	0	0			3920.31	1228.49	45.00	-451.58	-141.55	-141.55	3824.01	3341.86
00234	9	4	3	3	64	8	0	0	0	0	0	0	0	0	462.37	349.38	4803.16	1000.00	52.00	489.92	462.37	635.13	4709.04	3920.31
00235	9	4	3	3	0	0	0	0	0	0	0	0	0	0	-167.10	-302.71	4016.70	-1993.49	47.00	750.55	195.69	0.00	3824.01	3341.86
00236	9	4	3	3	0	0	0	0	0	0	0	0	0	0	-167.10	-302.71	4016.70	-1993.49	47.00	750.95	195.69	0.00	3824.01	3341.86
00237	9	4	3	3	64	8	0	0	0	0	0	0	0	0	462.05	349.16	4803.16	1000.00	52.00	489.56	462.05	635.01	4709.04	3920.31
00238	9	4	3	3	0	0	0	0	0	0	0	0	0	0	320.03	496.77	4803.16	3000.00	52.00	329.97	320.03	320.03	4709.04	4210.56
00239	9	4	3	3	0	0	0	0	0	0	0	0	0	0	-140.91	-100.84	4210.56	-1968.01	46.00	992.05	310.53	121.61	3920.31	3438.38
00240	9	4	3	3	0	0	0	0	0	0	0	0	0	0			1.84	3568.26	40.00	-609.34	-463.90	-463.90	1.50	-0.07
00241	9	4	3	3	0	0	0	0	0	0	0	0	0	0	283.79	514.99	4409.47	3000.00	51.00	386.53	283.79	763.36	4127.13	1760.95
00242	9	4	3	3	61	19	64	8	0	0	0	0	0	0	579.47	332.01	5000.01	-4824.15	40.00	899.66	690.29	690.29	4015.79	1543.58
00270	9	4	4	4	0	0	0	0	0	0	0	0	0	0	-138.68	-12.37	5000.00	-5098.50	49.00	1431.50	1398.26	-105.21	3631.30	3148.81
00271	9	4	4	4	64	8	0	0	0	0	0	0	0	0	-137.80	70.96	5000.00	-3000.00	49.00	798.94	793.72	873.66	3631.30	3148.81
00272	9	4	4	4	0	0	0	0	0	0	0	0	0	0	-138.96	-12.37	5000.00	-4829.93	49.00	1312.10	1132.76	0.00	3631.30	3148.81
00273	9	4	4	4	0	0	0	0	0	0	0	0	0	0	320.03	496.77	4803.16	3000.00	52.00	329.97	320.03	320.03	4709.04	4210.56
00274	9	4	4	4	64	8	0	0	0	0	0	0	0	0	396.92	311.39	4709.04	1158.52	52.00	-162.50	396.92	589.31	4609.54	3824.01
00275	9	4	4	4	0	0	0	0	0	0	0	0	0	0	-144.08	-141.97	5000.00	-5098.50	48.00	1431.66	1398.41	70.91	3727.68	3245.34
00276	9	4	4	4	0	0	0	0	0	0	0	0	0	0	-144.08	-141.97	5000.00	-5098.50	48.00	1431.66	1398.41	70.91	3727.68	3245.34
00277	9	4	4	4	0	0	0	0	0	0	0	0	0	0			420.28	4751.38	40.00	-811.67	-743.80	-463.90	1.50	-0.07
00278	9	4	4	4	0	0	0	0	0	0	0	0	0	0	174.10	-168.28	5000.00	-4925.89	49.00	1476.62	1527.85	123.37	1760.95	334.51
00279	9	4	4	4	0	0	0	0	0	0	0	0	0	0	174.10	-168.28	5000.00	-4925.89	49.00	1476.62	1527.85	60.86	1760.95	20.33
00280	9	4	4	4	0	0	0	0	0	0	0	0	0	0	166.86	-118.27	5000.00	-5007.38	50.00	1317.93	1364.01	0.00	1472.02	137.46
00281	9	4	4	4	0	0	0	0	0	0	0	0	0	0	166.86	-118.27	5000.00	-5007.38	50.00	1317.93	1364.01	-42.01	1472.02	-33.94
00282	9	4	4	4	0	0	0	0	0	0	0	0	0	0	216.82	-94.23	5000.00	-4925.89	51.00	1085.89	1135.41	0.00	1183.04	20.33
00283	9	4	4	4	0	0	0	0	0	0	0	0	0	0	283.79	514.99	4409.47	3000.00	49.00	386.53	283.79	763.36	4127.13	1760.95
00284	9	4	4	4	64	8	0	0	0	0	0	0	0	0	-138.68	-12.37	5000.01	-5098.50	51.00	1431.51	1398.26	-105.21	3631.29	3148.81
00285	9	4	4	4	64	8	0	0	0	0	0	0	0	0	-138.96	-12.37	5000.01	-4829.93	49.00	1312.11	1132.76	-106.98	3631.29	3148.81
00286	9	4	4	4	64	8	0	0	0	0	0	0	0	0	-181.58	42.10	5000.01	-5098.50	48.00	1431.67	1398.41	-186.59	3727.68	3245.34
00287	9	4	4	4	64	8	0	0	0	0	0	0	0	0	-181.58	42.10	5000.01	-5098.50	48.00	1431.67	1398.41	-186.59	3727.68	3245.34
00699	19	4	2	2	0	0	0	0	0	0	0	0	0	0			609.54	-4772.66	43.00	775.89	611.81	429.65	210.57	-16.23
00700	19	4	2	2	0	0	0	0	0	0	0	0	0	0			709.04	-1968.09	39.00	869.88	0.00	0.00	609.54	118.29
00701	19	4	2	2	64	8	0	0	0	0	0	0	0	0			508.53	-4781.92	44.00	856.14	698.33	470.32	118.29	-14.48
00702	19	4	2	2	0	0	0	0	0	0	0	0	0	0	762.34	86.79	1000.00	-3000.00	46.00	627.72	601.53	601.53	1000.00	803.15
00703	19	4	2	2	0	0	0	0	0	0	0	0	0	0			2803.16	-4751.38	38.00	829.83	657.37	657.37	2709.05	2210.56
00704	19	4	2	2	0	0	0	0	0	0	0	0	0	0	202.80	295.01	2709.05	4920.49	47.00	285.83	202.80	202.80	2609.55	2113.35
00705	19	4	2	2	0	0	0	0	0	0	0	0	0	0	202.80	295.01	2709.05	4920.49	47.00	285.83	202.80	50.22	2609.55	1824.01
00706	19	4	2	2	0	0	0	0	0	0	0	0	0	0			2987.94	-3634.77	35.00	1114.61	700.73	700.73	2949.69	2508.53
00707	19	4	2	2	0	0	0	0	0	0	0	0	0	0			2987.94	-3634.77	35.00	1114.61	700.73	700.73	2949.69	2508.53
00708	19	4	2	2	0	0	0	0	0	0	0	0	0	0			2609.55	-4459.52	39.00	753.53	705.07	705.07	2508.53	2016.70
00709	19	4	2	2	0	0	0	0	0	0	0	0	0	0			2803.16	-4610.29	38.00	775.89	616.78	616.78	2709.05	2210.56
00710	19	4	2	2	0	0	0	0	0	0	0	0	0	0			2709.05	-1968.09	39.00	982.74	99.41	99.41	2609.55	2113.35
00711	19	4	2	2	0	0	0	0	0	0	0	0	0	0			2803.16	-4536.90	38.00	847.45	695.52	695.52	2709.05	2210.56
00712	19	4	2	2	64	8	0	0	0	0	0	0	0	0	745.48	-527.37	2408.00	-4781.92	44.00	801.37	745.48	615.16	2308.68	1727.68
00713	19	4	2	2	0	0	0	0	0	0	0	0	0	0	648.85	-189.21	2709.05	-4810.91	42.00	823.55	648.85	648.85	2609.55	2113.35
00714	19	4	2	2	64	8	0	0	0	0	0	0	0	0	648.85	-189.21	2709.05	-4810.91	42.00	823.55	648.85	594.17	2609.55	1920.31
00715	19	4	2	2	0	0	0	0	0	0	0	0	0	0			4709.04	-4459.52	40.00	835.78	693.20	693.20	4609.54	4113.35
00716	19	4	2	2	0	0	0	0	0	0	0	0	0	0	747.25	226.82	4987.94	-4781.88	38.00	920.08	747.25	747.25	4949.69	4508.52
00717	19	4	2	2	64	8	0	0	0	0	0	0	0	0	747.25	226.82	4987.94	-4781.88	38.00	920.08	747.25	717.17	4949.69	4308.67
00718	19	4	2	2	0	0	0	0	0	0	0	0	0	0			4709.04	-1968.09	39.00	921.93	41.98	41.98	4609.54	4113.35
00719	19	4	2	2	0	0	0	0	0	0	0	0	0	0			4803.16	-4536.90	38.00	788.64	639.45	639.45	4709.04	4210.56
00720	19	4	2	2	0	0	0	0	0	0	0	0	0	0	83.32	767.22	1000.00	3000.00	46.00	-49.89	-48.71	629.30	1000.00	-2.02
00721	19	4	2	2	0	0	0	0	0	0	0	0	0	0	246.96	407.93	849.07	3000.00	45.00	98.04	20.39	-95.90	657.64	-20.32
00722	19	4	2	2	64	8	0	0	0	0	0	0	0	0			420.28	-4687.58	40.00	753.30	661.71	464.28	-2.02	-10.58
0																								

SEQ CLS ROW
NUM TBL COL

01708	19	4	3	3	0	0	0	0	0	0	0	0	0	0	-218.50	268.26	3828.62	-932.60	43.00	618.69	209.46	-40.84	2926.03	1472.02	
01709	19	4	3	3	64	8	0	0	0	0	0	0	0	0	0	-331.32	226.31	3828.62	-1984.06	42.00	1159.95	296.27	0.00	3223.99	1760.94
01710	19	4	3	3	64	8	0	0	0	0	0	0	0	0	0	-145.13	-329.69	2340.07	-1984.06	46.00	813.25	206.87	0.00	1760.94	334.52
01711	19	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	2926.03	-1158.52	44.00	779.86	248.44	248.44	2631.69	1183.04
01712	19	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3223.99	-1158.52	43.00	620.53	50.32	50.32	2926.03	1472.02
01713	19	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3223.99	-1158.52	43.00	620.53	50.32	50.32	2926.03	1472.02
01714	19	4	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	592.47	-34.66	43.00	696.02	592.47	592.47	3828.62	2340.07
02171	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	41.21	318.31	803.15	3000.00	46.00	25.77	0.00	-107.09	210.57	-16.23
02172	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	41.21	318.31	803.15	3000.00	46.00	25.77	0.00	-87.34	210.57	-10.13
02173	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	-252.60	101.83	3000.00	-5007.38	44.00	1421.98	1469.35	-119.78	2113.35	1631.30
02174	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	-252.60	101.83	3000.00	-5007.38	44.00	1421.98	1469.35	-119.78	2113.35	1631.30
02175	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	619.93	-405.86	3000.00	-5065.31	46.00	1054.80	1099.13	619.93	2113.35	1631.30
02176	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	619.93	-405.86	3000.00	-5065.31	46.00	1054.80	1099.13	351.61	2113.35	1534.86
02177	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	748.21	-465.37	3000.00	-5007.38	45.00	1125.75	1172.82	748.21	2210.56	1727.68
02178	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	748.21	-465.37	3000.00	-5007.38	45.00	1125.75	1172.82	707.32	2210.56	1631.30
02179	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	1182.79	-579.11	1000.00	-5098.50	40.00	1242.89	1211.59	464.28	-2.02	-10.58
02180	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	235.10	100.31	3000.00	-3000.00	43.00	838.50	834.53	101.74	926.03	-32.16
02181	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	235.10	100.31	3000.00	-3000.00	43.00	838.50	834.53	101.74	926.03	-32.16
02182	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	124.81	261.03	1223.99	3000.00	46.00	116.10	25.11	-63.61	926.03	-30.39
02183	19	4	4	4	61	19	64	8	8	0	0	0	0	0	0	963.53	-550.76	3000.00	-5098.50	41.00	1783.67	1751.90	853.01	1525.58	149.87
02184	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	733.42	-456.95	3000.00	-5098.50	43.00	1485.84	1453.67	493.85	926.03	-32.16
02185	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	733.42	-456.95	3000.00	-5098.50	43.00	1485.84	1453.67	493.85	926.03	-32.16
02186	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	339.50	-16.36	5000.00	-3000.00	45.00	1400.34	1396.43	339.50	2631.69	1183.04
02187	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	339.50	-16.36	5000.00	-3000.00	45.00	1400.34	1396.43	261.22	2631.69	893.89
02188	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	503.98	-383.32	5000.00	-5065.31	47.00	1539.74	1583.44	503.98	2050.11	604.57
02189	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	503.98	-383.32	5000.00	-5065.31	47.00	1539.74	1583.44	230.15	2050.11	334.51
02190	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2050.11	379.48	46.00	-309.20	-308.90	-308.90	1760.95	334.51
02191	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2050.11	351.72	46.00	-293.61	-303.29	-303.29	1760.95	334.51
02192	19	4	4	4	61	-19	64	8	8	0	0	0	0	0	0	95.18	700.52	4409.47	4610.29	49.00	70.30	95.18	95.18	4127.13	2631.69
02193	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	-296.45	101.83	3000.00	-5007.38	44.00	1421.98	1469.35	-119.78	2113.36	1631.30
02194	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	-296.45	101.83	3000.00	-5007.38	44.00	1421.98	1469.35	-119.78	2113.36	1631.30
02195	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	478.15	-405.86	3000.00	-5053.98	46.00	939.30	988.47	1174.59	2113.36	1534.86
02196	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	177.70	959.16	3000.00	3000.00	49.00	177.70	177.70	1151.34	3000.00	2508.52
02197	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	615.16	-465.37	3000.00	-5007.38	45.00	1125.75	1172.82	615.16	2210.57	1727.68
02198	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	615.16	-465.37	3000.00	-5007.38	45.00	1125.75	1172.82	566.51	2210.57	1631.30
02199	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	152.70	984.15	3000.00	3000.00	49.00	127.70	152.70	1240.90	3000.00	2508.52
02200	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	235.10	100.31	3000.00	-3000.00	43.00	838.50	834.53	101.74	926.03	-32.16
02201	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	235.10	100.31	3000.00	-3000.00	43.00	838.50	834.53	101.74	926.03	-32.16
02202	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	124.82	176.86	1525.58	3000.00	45.00	213.21	116.10	25.11	926.03	-32.16
02203	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	124.82	176.86	1525.58	3000.00	45.00	213.21	116.10	0.00	926.03	-43.45
02204	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	733.42	-456.96	3000.00	-5064.30	28.00	1366.06	1332.14	493.86	926.03	-32.16
02205	19	4	4	4	64	8	8	0	0	0	0	0	0	0	0	242.80	-16.37	5000.01	-3000.00	45.00	1400.35	1396.44	163.69	2631.69	893.89
02206	19	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0	2050.11	379.48	46.00	-309.20	-308.89	-308.89	1760.94	334.52

APPENDIX E

SUMMARY NMAC TABLES

MITRE encounter classes: 0,10 Date processed: 6/22/94
 Based on FAA Technical Center data of : 5/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**)= 2.00 Significance threshold (>>) = 1.0 %

Table	0.3 - Percent of unresolved failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table	0.4 - Percent of induced failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table	10.3 - Percent of unresolved failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table	10.4 - Percent of induced failures					
	6.02 only	6.04 only	6.04A only	6.02 / 5.04	6.02 / 6.04A	6.04 / * 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

MITRE encounter classes: 1,11 Date processed: 6/22/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

Table	1.3 - Percent of unresolved failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table	1.4 - Percent of induced failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table	11.3 - Percent of unresolved failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table	11.4 - Percent of induced failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

MITRE encounter classes: 2,12 Date processed: 6/22/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

	Table 2.3		- Percent of unresolved failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	** 0.579	** 0.579	** 0.116	** 0.116	** 0.579
One Mode C	0.231	** >> 1.620	** >> 1.520	-----	-----	-----

	Table 2.4		- Percent of induced failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.396	** >> 1.715	** >> 1.715	0.594	0.594	** >> 1.715
One Mode C	8.641	7.685	7.685	-----	-----	-----

	Table 12.3		- Percent of unresolved failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

	Table 12.4		- Percent of induced failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	** 0.046	** 0.046	0.000	0.000	** 0.046
One Mode C	0.465	0.604	0.604	-----	-----	-----

MITRE encounter classes: 3,13 Date processed: 6/20/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

Table 3.3 - Percent of unresolved failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	2.310	4.484	4.484	-----	-----	-----

Table 3.4 - Percent of induced failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table 13.3 - Percent of unresolved failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.781	0.781	0.781	-----	-----	-----

Table 13.4 - Percent of induced failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	** 0.467	** 0.089	** 0.178	** 0.089	** 0.234
One Mode C	0.178	** 0.823	** 0.667	-----	-----	-----

MITRE encounter classes: 4,14 Date processed: 6/22/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

Table 4.3 - Percent of unresolved failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table 4.4 - Percent of induced failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	** 0.329	0.000	-----	-----	-----

Table 14.3 - Percent of unresolved failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

Table 14.4 - Percent of induced failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	0.000	0.000	0.000	-----	-----	-----

MITRE encounter classes: 5,15 Date processed: 6/20/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

Table 5.3 - Percent of unresolved failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	4.367	6.076	6.139	---	---	---

Table 5.4 - Percent of induced failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.053	** 0.347	** 0.347	0.107	0.107	** 0.347
One Mode C	2.885	3.632	3.566	---	---	---

Table 15.3 - Percent of unresolved failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	18.919	17.568	16.892	---	---	---

Table 15.4 - Percent of induced failures

	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	** 0.972	** 0.729	** 0.365	** 0.191	** 0.903
One Mode C	0.556	0.313	0.521	---	---	---

MITRE encounter classes: 6,16 Date processed: 6/24/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

	Table	6.3 - Percent of unresolved failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.000	** 0.289	** 0.810	** 0.116	** 0.231	** 0.492	
One Mode C	3.241	** >> 7.350	5.498	-----	-----	-----	

	Table	6.4 - Percent of induced failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.379	** 0.813	0.163	0.494	0.264	0.433	
One Mode C	0.813	1.151	1.002	-----	-----	-----	

	Table	16.3 - Percent of unresolved failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000	
One Mode C	0.000	0.000	0.000	-----	-----	-----	

	Table	16.4 - Percent of induced failures					
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.503	0.771	0.034	0.519	0.218	0.235	
One Mode C	0.469	0.905	0.670	-----	-----	-----	

MITRE encounter classes: 7,17 Date processed: 6/24/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

	Table 7.3		- Percent of unresolved failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	** 0.166	** 0.166	0.000	0.000	** 0.166
One Mode C	4.760	8.940	8.982	---	---	---

	Table 7.4		- Percent of induced failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.971	1.912	** >> 1.962	1.337	1.357	1.937
One Mode C	9.371	9.672	9.852	---	---	---

	Table 17.3		- Percent of unresolved failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	20.455	13.068	13.068	---	---	---

	Table 17.4		- Percent of induced failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
TCAS-TCAS	0.090	** 0.377	** 0.252	0.099	0.090	** 0.297
One Mode C	0.000	** 0.485	** 0.557	---	---	---

MITRE encounter classes: 8,18 Date processed: 6/25/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

Table		8.3		- Percent of unresolved failures				
		6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.000	** >>	** >>	** >>	**	**	** >>	
One Mode C	1.813	** >>	** >>	** >>	-----	-----	-----	

Table		8.4		- Percent of induced failures				
		6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.378	** >>	** >>	** >>	** >>	** >>	** >>	
One Mode C	6.521	6.521	6.521	6.601	-----	-----	-----	

Table		18.3		- Percent of unresolved failures				
		6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
One Mode C	0.000	0.000	0.000	0.000	-----	-----	-----	

Table		18.4		- Percent of induced failures				
		6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.254	**	**	**	**	**	**	
One Mode C	1.216	2.324	2.324	1.634	-----	-----	-----	

MITRE encounter classes: 9,19 Date processed: 6/23/94
 Based on FAA Technical Center data of : 3/25/94 All TCAS Responding
 Failure : separation at CPA <= 100 ft based on simulation truth
 Ratio threshold (**) = 2.00 Significance threshold (>>) = 1.0 %

	Table	9.3	-	Percent of unresolved failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.000	** 0.173		0.000	0.000	0.000	** 0.043
One Mode C	1.554	** >> 6.908		** >> 6.822	-----	-----	-----

	Table	9.4	-	Percent of induced failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.017	** 0.224		** 0.310	0.034	** 0.043	** 0.215
One Mode C	0.155	** 0.430		0.121	-----	-----	-----

	Table	19.3	-	Percent of unresolved failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	0.000	0.000	0.000	0.000	0.000	0.000	0.000
One Mode C	1.053	** >> 7.719	** >> 6.491	-----	-----	-----	-----

	Table	19.4	-	Percent of induced failures			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
TCAS-TCAS	2.458	2.907	0.449	2.601	1.503	1.753	
One Mode C	0.961	** >> 2.495	1.871	-----	-----	-----	-----

APPENDIX F

NMACs AS A FUNCTION OF PARAMETER VALUES

PROGRAM CLASS	LLPRPU ROW TBL	COL	AC1 EQ	AC2 EQ	AC1 RES	AC2 RES	Com Nmb	Nmb Com	Parameter Comb.Code	COUNT	H1 ID	CPA SEP	AC1 RATE	AC2 RATE	AC1 ACC	AC2 ACC	AC1 TIM	AC2 TIM	AC1 ALT	
N	2	3	4	4	65	65	1	1	4	1	001000000	(1)	--	--	-400.0	--	--	--	--
N	2	3	4	4	65	65	1	1	4	1	001000000	(2)	--	--	0.0	--	--	--	--
N	2	3	4	4	65	65	1	1	4	1	001000000	(2)	--	--	400.0	--	--	--	7480.0
N	2	3	4	4	65	65	1	1	256	1	000000001	(	2)	--	--	--	--	--	3680.0
N	2	3	4	4	65	65	1	1	256	1	000000001	(	3)	--	--	--	--	--	3680.0
N	2	4	4	4	65	65	1	1	1	1	100000000	(	15)	1	--	--	--	--	--
N	2	4	4	4	65	65	1	1	1	1	100000000	(	37)	2	--	--	--	--	--
N	2	4	4	4	65	65	1	1	2	1	010000000	(	6)	--	-750.00	--	--	--	--
N	2	4	4	4	65	65	1	1	2	1	010000000	(	15)	--	-250.00	--	--	--	--
N	2	4	4	4	65	65	1	1	2	1	010000000	(	31)	--	-500.00	--	--	--	--
N	2	4	4	4	65	65	1	1	2	1	010000000	(	12)	--	--	400.0	--	--	--
N	2	4	4	4	65	65	1	1	4	1	001000000	(	19)	--	--	0.0	--	--	--
N	2	4	4	4	65	65	1	1	4	1	001000000	(	21)	--	--	-400.0	--	--	--
N	2	4	4	4	65	65	1	1	8	1	000100000	(	2)	--	--	3000.0	--	--	--
N	2	4	4	4	65	65	1	1	8	1	000100000	(	50)	--	--	5000.0	--	--	--
N	2	4	4	4	65	65	1	1	3	1	000001000	(	3)	--	--	0.15	--	--	--
N	2	4	4	4	65	65	1	1	3	1	000001000	(	22)	--	--	0.35	--	--	--
N	2	4	4	4	65	65	1	1	3	1	000001000	(	27)	--	--	0.25	--	--	--
N	2	4	4	4	65	65	1	1	128	1	000000010	(	3)	--	--	--	-25.0	--	--
N	2	4	4	4	65	65	1	1	128	1	000000010	(	49)	--	--	--	-20.0	--	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	8)	--	--	--	--	7480.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	9)	--	--	--	--	7520.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	17)	--	--	--	--	3680.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	18)	--	--	--	--	3720.0	--
N	2	4	4	4	65	65	1	1	1	1	100000000	(	2)	1	--	--	--	--	--
N	2	4	4	4	65	65	1	1	1	1	100000000	(	24)	2	--	--	--	--	--
N	2	4	4	4	65	65	1	1	2	1	010000000	(	5)	--	-500.00	--	--	--	--
N	2	4	4	4	65	65	1	1	2	1	010000000	(	10)	--	-750.00	--	--	--	--
N	2	4	4	4	65	65	1	1	2	1	010000000	(	11)	--	-250.00	--	--	--	--
N	2	4	4	4	65	65	1	1	4	1	001000000	(	4)	--	--	3000.0	--	--	--
N	2	4	4	4	65	65	1	1	4	1	001000000	(	4)	--	--	-3000.0	--	--	--
N	2	4	4	4	65	65	1	1	5	1	001000000	(	5)	--	--	-1000.0	--	--	--
N	2	4	4	4	65	65	1	1	8	1	000100000	(	1)	--	--	3000.0	--	--	--
N	2	4	4	4	65	65	1	1	8	1	000100000	(	25)	--	--	5000.0	--	--	--
N	2	4	4	4	65	65	1	1	3	1	000001000	(	2)	--	--	0.15	--	--	--
N	2	4	4	4	65	65	1	1	3	1	000001000	(	7)	--	--	0.35	--	--	--
N	2	4	4	4	65	65	1	1	3	1	000001000	(	17)	--	--	0.25	--	--	--
N	2	4	4	4	65	65	1	1	128	1	000000010	(	2)	--	--	--	-25.0	--	--
N	2	4	4	4	65	65	1	1	128	1	000000010	(	24)	--	--	--	-20.0	--	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	3)	--	--	--	--	7480.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	3)	--	--	--	--	7520.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	10)	--	--	--	--	3680.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	10)	--	--	--	--	3720.0	--
N	2	4	4	4	65	65	1	1	1	1	100000000	(	3)	1	--	--	--	--	--
N	2	4	4	4	65	65	1	1	1	1	100000000	(	11)	2	--	--	--	--	--
N	2	4	4	4	65	65	1	1	4	1	001000000	(	4)	--	--	-5000.0	--	--	--
N	2	4	4	4	65	65	1	1	8	1	000100000	(	10)	--	--	5000.0	--	--	--
N	2	4	4	4	65	65	1	1	8	1	000100000	(	1)	--	--	-3000.0	--	--	--
N	2	4	4	4	65	65	1	1	8	1	000100000	(	13)	--	--	-5000.0	--	--	--
N	2	4	4	4	65	65	1	1	3	1	000001000	(	2)	--	--	0.35	--	--	--
N	2	4	4	4	65	65	1	1	3	1	000001000	(	12)	--	--	0.15	--	--	--
N	2	4	4	4	65	65	1	1	128	1	000000010	(	3)	--	--	--	-25.0	--	--
N	2	4	4	4	65	65	1	1	128	1	000000010	(	4)	--	--	--	-30.0	--	--
N	2	4	4	4	65	65	1	1	128	1	000000010	(	7)	--	--	--	-20.0	--	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	1)	--	--	--	--	7480.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	3)	--	--	--	--	3680.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	4)	--	--	--	--	7520.0	--
N	2	4	4	4	65	65	1	1	256	1	000000001	(	6)	--	--	--	--	3720.0	--
N	2	4	4	4	65	65	1	1	1	1	100000000	(	4)	1	--	--	--	--	--
N	2	4	4	4	65	65	1	1	1	1	100000000	(	8)	2	--	--	--	--	--
N	2	4	4	4	65	65	1	1	2	1	010000000	(	6)	--	-250.00	--	--	--	--

176

PROGRAM CLASS	LLPRPU ROW TBL	COL	AC1 EQ	AC2 EQ	AC1 RES	AC2 RES	Com Nmb	Multiple Valued Parameters; Nmb Com	Parameter Comb.Code	COUNT	HI ID	CPA SEP	AC1 RATE	AC2 RATE	AC1 ACC	AC2 ACC	AC1 TIM	AC2 TIM	AC1 ALT
6	4	4	65	65	1	1	2	1	010000000	(6)	--	-500.00	--	--	--	--	--	--	--
6	4	4	65	65	1	1	32	1	000001000	(2)	--	--	--	--	--	0.15	--	--	--
6	4	4	65	65	1	1	32	1	000001000	(4)	--	--	--	--	--	0.35	--	--	--
6	4	4	65	65	1	1	32	1	000001000	(6)	--	--	--	--	--	0.25	--	--	--
6	4	4	65	65	1	1	128	1	000000010	(2)	--	--	--	--	--	--	--	-25.0	--
6	4	4	65	65	1	1	128	1	000000010	(10)	--	--	--	--	--	--	--	-20.0	--
6	4	4	65	65	1	1	256	1	000000001	(2)	--	--	--	--	--	--	--	--	3680.0
6	4	4	65	65	1	1	256	1	000000001	(2)	--	--	--	--	--	--	--	--	7480.0
6	4	4	65	65	1	1	256	1	000000001	(4)	--	--	--	--	--	--	--	--	3720.0
6	4	4	65	65	1	1	256	1	000000001	(4)	--	--	--	--	--	--	--	--	7520.0
7	3	4	65	65	1	1	1	1	100000000	(2)	--	--	--	--	--	--	--	--	--
7	3	4	65	65	1	1	1	1	100000000	(2)	1	--	--	--	--	--	--	--	--
7	3	4	65	65	1	1	8	1	000100000	(2)	2	--	--	--	--	--	--	--	--
7	3	4	65	65	1	1	8	1	000100000	(2)	--	--	--	-3000.0	--	--	--	--	--
7	4	4	65	65	1	1	1	1	100000000	(92)	1	--	--	--	--	--	--	--	--
7	4	4	65	65	1	1	1	1	100000000	(104)	2	--	--	--	--	--	--	--	--
7	4	4	65	65	1	1	2	1	010000000	(2)	--	-250.00	--	--	--	--	--	--	--
7	4	4	65	65	1	1	2	1	010000000	(53)	--	250.00	--	--	--	--	--	--	--
7	4	4	65	65	1	1	2	1	010000000	(58)	--	500.00	--	--	--	--	--	--	--
7	4	4	65	65	1	1	2	1	010000000	(83)	--	750.00	--	--	--	--	--	--	--
7	4	4	65	65	1	1	4	1	001000000	(35)	--	--	--	3000.0	--	--	--	--	--
7	4	4	65	65	1	1	4	1	001000000	(38)	--	--	--	1000.0	--	--	--	--	--
7	4	4	65	65	1	1	4	1	001000000	(123)	--	--	--	5000.0	--	--	--	--	--
7	4	4	65	65	1	1	8	1	000100000	(2)	--	--	--	--	5000.0	--	--	--	--
7	4	4	65	65	1	1	8	1	000100000	(3)	--	--	--	--	1000.0	--	--	--	--
7	4	4	65	65	1	1	8	1	000100000	(26)	--	--	--	--	-1000.0	--	--	--	--
7	4	4	65	65	1	1	8	1	000100000	(38)	--	--	--	--	-3000.0	--	--	--	--
7	4	4	65	65	1	1	8	1	000100000	(127)	--	--	--	--	-5000.0	--	--	--	--
7	4	4	65	65	1	1	16	1	000010000	(39)	--	--	--	--	--	0.25	--	--	--
7	4	4	65	65	1	1	16	1	000010000	(48)	--	--	--	--	--	0.05	--	--	--
7	4	4	65	65	1	1	16	1	000010000	(109)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	32	1	000001000	(1)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	32	1	000001000	(1)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	32	1	000001000	(3)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	32	1	000001000	(38)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	32	1	000001000	(41)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	32	1	000001000	(48)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	32	1	000001000	(64)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	128	1	000000010	(15)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	128	1	000000010	(25)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	128	1	000000010	(156)	--	--	--	--	--	0.15	--	--	--
7	4	4	65	65	1	1	256	1	000000001	(75)	--	--	--	--	--	0.15	--	--	7500.0
7	4	4	65	65	1	1	256	1	000000001	(121)	--	--	--	--	--	0.15	--	--	3700.0
8	3	4	65	65	1	1	1	1	100000000	(6)	1	--	--	--	--	--	--	--	--
8	3	4	65	65	1	1	1	1	100000000	(24)	2	--	--	--	--	--	--	--	--
8	3	4	65	65	1	1	4	1	001000000	(8)	--	--	--	--	--	--	--	--	--
8	3	4	65	65	1	1	4	1	001000000	(11)	--	-5000.0	--	--	--	--	--	--	--
8	3	4	65	65	1	1	4	1	001000000	(11)	--	-1000.0	--	--	--	--	--	--	--
8	3	4	65	65	1	1	8	1	000100000	(7)	--	-3000.0	--	--	--	--	--	--	--
8	3	4	65	65	1	1	8	1	000100000	(23)	--	--	--	5000.0	--	--	--	--	--
8	3	4	65	65	1	1	16	1	000010000	(8)	--	--	--	-5000.0	--	--	--	--	--
8	3	4	65	65	1	1	16	1	000010000	(9)	--	--	--	--	0.05	--	--	--	--
8	3	4	65	65	1	1	16	1	000010000	(13)	--	--	--	--	0.25	--	--	--	--
8	3	4	65	65	1	1	32	1	000001000	(3)	--	--	--	--	0.15	--	--	--	--
8	3	4	65	65	1	1	32	1	000001000	(7)	--	--	--	--	0.15	--	--	--	--
8	3	4	65	65	1	1	32	1	000001000	(20)	--	--	--	--	0.15	--	--	--	--
8	3	4	65	65	1	1	128	1	000000010	(4)	--	--	--	--	0.15	--	--	--	--
8	3	4	65	65	1	1	128	1	000000010	(26)	--	--	--	--	0.15	--	--	--	-25.0
8	3	4	65	65	1	1	256	1	000000001	(13)	--	--	--	--	0.15	--	--	--	-20.0
8	3	4	65	65	1	1	256	1	000000001	(17)	--	--	--	--	0.15	--	--	--	7500.0
8	4	4	65	65	1	1	1	1	100000000	(74)	1	--	--	--	--	--	--	--	3700.0
8	4	4	65	65	1	1	1	1	100000000	(114)	2	--	--	--	--	--	--	--	--

177

PROGRAM CLASS LLPRPU - Frequency (COUNT) of Multiple Valued Parameters;													(-- are excluded parameters. Thu, 23 Mar 1995, Page 4									
CLASS	TBL	ROW	COL	AC1 EQ	AC2 EQ	AC1 RES	AC2 RES	Com Nmb	Parameter Comb.Code	COUNT	HI ID	CPA SEP	AC1 RATE	AC2 RATE	AC1 ACC	AC2 ACC	AC1 TIM	AC2 TIM	AC1 ALT			
15	4	4	4	65	65	1	1	1	100000000 (	18)	2	--	--	--	--	--	--	--	--		
15	4	4	4	65	65	1	1	2	010000000 (	3)	--	-250.00	--	--	--	--	--	--	--		
15	4	4	4	65	65	1	1	2	010000000 (	5)	--	-750.00	--	--	--	--	--	--	--		
15	4	4	4	65	65	1	1	2	010000000 (	13)	--	-500.00	--	--	--	--	--	--	--		
15	4	4	4	65	65	1	1	4	001000000 (	3)	--	--	1000.0	--	--	--	--	--	--		
15	4	4	4	65	65	1	1	4	001000000 (	7)	--	--	5000.0	--	--	--	--	--	--		
15	4	4	4	65	65	1	1	4	001000000 (	11)	--	--	3000.0	--	--	--	--	--	--		
15	4	4	4	65	65	1	1	32	000001000 (	1)	--	--	--	--	0.15	--	--	--	--		
15	4	4	4	65	65	1	1	32	000001000 (	9)	--	--	--	--	0.25	--	--	--	--		
15	4	4	4	65	65	1	1	32	000001000 (	11)	--	--	--	--	0.35	--	--	--	--		
15	4	4	4	65	65	1	1	128	000000010 (	5)	--	--	--	--	--	--	-25.0	--	--		
15	4	4	4	65	65	1	1	128	000000010 (	16)	--	--	--	--	--	--	-20.0	--	--		
15	4	4	4	65	65	1	1	256	000000001 (	2)	--	--	--	--	--	--	--	7480.0	--		
15	4	4	4	65	65	1	1	256	000000001 (	3)	--	--	--	--	--	--	--	7520.0	--		
15	4	4	4	65	65	1	1	256	000000001 (	6)	--	--	--	--	--	--	--	3720.0	--		
15	4	4	4	65	65	1	1	256	000000001 (	10)	--	--	--	--	--	--	--	3680.0	--		
17	4	4	4	65	65	1	1	1	100000000 (	7)	2	--	--	--	--	--	--	--	--		
17	4	4	4	65	65	1	1	1	100000000 (	7)	--	--	--	--	--	--	--	--	--	--	
17	4	4	4	65	65	1	1	2	010000000 (	1)	--	250.00	--	--	--	--	--	--	--	--	
17	4	4	4	65	65	1	1	2	010000000 (	13)	--	500.00	--	--	--	--	--	--	--	--	
17	4	4	4	65	65	1	1	8	000100000 (	2)	--	--	--	5000.0	--	--	--	--	--	--	
17	4	4	4	65	65	1	1	8	000100000 (	12)	--	--	--	3000.0	--	--	--	--	--	--	
17	4	4	4	65	65	1	1	16	000010000 (	1)	--	--	--	--	0.25	--	--	--	--	--	
17	4	4	4	65	65	1	1	16	000010000 (	13)	--	--	--	--	0.15	--	--	--	--	--	
17	4	4	4	65	65	1	1	32	000001000 (	4)	--	--	--	--	--	0.15	--	--	--	--	
17	4	4	4	65	65	1	1	32	000001000 (	5)	--	--	--	--	--	0.25	--	--	--	--	
17	4	4	4	65	65	1	1	32	000001000 (	5)	--	--	--	--	--	0.35	--	--	--	--	
17	4	4	4	65	65	1	1	128	000000010 (	7)	--	--	--	--	--	--	-25.0	--	--	--	
17	4	4	4	65	65	1	1	128	000000010 (	7)	--	--	--	--	--	--	-30.0	--	--	--	
18	4	4	4	65	65	1	1	1	100000000 (	7)	2	--	--	--	--	--	--	--	--	--	
18	4	4	4	65	65	1	1	1	100000000 (	10)	1	--	--	--	--	--	--	--	--	--	
18	4	4	4	65	65	1	1	2	010000000 (	2)	--	250.00	--	--	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	2	010000000 (	7)	--	750.00	--	--	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	2	010000000 (	8)	--	500.00	--	--	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	4	001000000 (	4)	--	--	-3000.0	--	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	4	001000000 (	13)	--	--	-5000.0	--	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	8	000100000 (	1)	--	--	--	3000.0	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	8	000100000 (	4)	--	--	--	1000.0	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	8	000100000 (	6)	--	--	--	-3000.0	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	8	000100000 (	6)	--	--	--	-5000.0	--	--	--	--	--	--	--
18	4	4	4	65	65	1	1	16	000010000 (	4)	--	--	--	--	0.05	--	--	--	--	--	--
18	4	4	4	65	65	1	1	16	000010000 (	4)	--	--	--	--	0.25	--	--	--	--	--	--
18	4	4	4	65	65	1	1	16	000010000 (	9)	--	--	--	--	0.15	--	--	--	--	--	--
18	4	4	4	65	65	1	1	32	000001000 (	1)	--	--	--	--	--	0.05	--	--	--	--	--
18	4	4	4	65	65	1	1	32	000001000 (	1)	--	--	--	--	--	0.15	--	--	--	--	--
18	4	4	4	65	65	1	1	32	000001000 (	1)	--	--	--	--	--	0.25	--	--	--	--	--
18	4	4	4	65	65	1	1	32	000001000 (	2)	--	--	--	--	--	0.35	--	--	--	--	--
18	4	4	4	65	65	1	1	32	000001000 (	4)	--	--	--	--	--	0.25	--	--	--	--	--
18	4	4	4	65	65	1	1	32	000001000 (	4)	--	--	--	--	--	0.35	--	--	--	--	--
18	4	4	4	65	65	1	1	128	000000010 (	2)	--	--	--	--	--	--	-30.0	--	--	--	--
18	4	4	4	65	65	1	1	128	000000010 (	5)	--	--	--	--	--	--	-25.0	--	--	--	--
18	4	4	4	65	65	1	1	128	000000010 (	10)	--	--	--	--	--	--	-20.0	--	--	--	--
18	4	4	4	65	65	1	1	256	000000001 (	2)	--	--	--	--	--	--	--	7500.0	--	--	--
18	4	4	4	65	65	1	1	256	000000001 (	15)	--	--	--	--	--	--	--	3700.0	--	--	--
19	4	4	4	65	65	1	1	1	100000000 (	16)	2	--	--	--	--	--	--	--	--	--	--
19	4	4	4	65	65	1	1	1	100000000 (20)	1	--	--	--	--	--	--	--	--	--	--	--
19	4	4	4	65	65	1	1	2	010000000 (2)	--	1000.00	--	--	--	--	--	--	--	--	--	--
19	4	4	4	65	65	1	1	2	010000000 (6)	--	500.00	--	--	--	--	--	--	--	--	--	--
19	4	4	4	65	65	1	1	2	010000000 (9)	--	-750.00	--	--	--	--	--	--	--	--	--	--
19	4	4	4	65	65	1	1	2	010000000 (19)	--	-500.00	--	--	--	--	--	--	--	--	--	--
19	4	4	4	65	65	1	1	4	001000000 (3)	--	--	--	1000.0	--	--	--	--	--	--	--	--
19	4	4	4	65	65	1	1	4	001000000 (9)	--	--	--	5000.0	--	--	--	--	--	--	--	--

179

17

PROGRAM CLASS	LLPRPU TBL	ROW	COL	AC1 EQ	AC2 EQ	AC1 RES	AC2 RES	Com Nmb	Nmb Com	Parameter Comb.Code	COUNT	HI ID	CPA SEP	AC1 RATE	AC2 RATE	AC1 ACC	AC2 ACC	AC1 TIM	AC2 TIM	AC1 ALT
19	4	4	4	65	65	1	1	4	1	001000000 (	24)	--	--	3000.0	--	--	--	--	--	--
19	4	4	4	65	65	1	1	8	1	000100000 (	3)	--	--	--	5000.0	--	--	--	--	--
19	4	4	4	65	65	1	1	8	1	000100000 (	7)	--	--	--	-3000.0	--	--	--	--	--
19	4	4	4	65	65	1	1	8	1	000100000 (	8)	--	--	--	3000.0	--	--	--	--	--
19	4	4	4	65	65	1	1	8	1	000100000 (	18)	--	--	--	-5000.0	--	--	--	--	--
19	4	4	4	65	65	1	1	16	1	000010000 (	15)	--	--	--	--	-0.05	--	--	--	--
19	4	4	4	65	65	1	1	16	1	000010000 (	21)	--	--	--	--	-0.15	--	--	--	--
19	4	4	4	65	65	1	1	32	1	000001000 (	1)	--	--	--	--	--	-0.35	--	--	--
19	4	4	4	65	65	1	1	32	1	000001000 (	3)	--	--	--	--	--	0.055	--	--	--
19	4	4	4	65	65	1	1	32	1	000001000 (	3)	--	--	--	--	--	-0.255	--	--	--
19	4	4	4	65	65	1	1	32	1	000001000 (	6)	--	--	--	--	--	0.15	--	--	--
19	4	4	4	65	65	1	1	32	1	000001000 (	7)	--	--	--	--	--	0.35	--	--	--
19	4	4	4	65	65	1	1	32	1	000001000 (	7)	--	--	--	--	--	-0.15	--	--	--
19	4	4	4	65	65	1	1	32	1	000001000 (	9)	--	--	--	--	--	0.25	--	--	--
19	4	4	4	65	65	1	1	128	1	000000010 (	7)	--	--	--	--	--	--	--	-25.0	--
19	4	4	4	65	65	1	1	128	1	000000010 (	7)	--	--	--	--	--	--	--	-30.0	--
19	4	4	4	65	65	1	1	128	1	000000010 (	22)	--	--	--	--	--	--	--	-20.0	--
19	4	4	4	65	65	1	1	256	1	000000001 (	14)	--	--	--	--	--	--	--	--	7500.0
19	4	4	4	65	65	1	1	256	1	000000001 (	22)	--	--	--	--	--	--	--	--	3700.0

APPENDIX G

NMACs AS A FUNCTION OF LOGIC VERSION

CLS	REIT	Modes		CPA Alt		AC#1 Rate	AC#2 Rate	AC#1 Acc.	AC#2 Acc.	AC#1 Time	AC#2 Time	AC #1 CPA Alt	Cell 3,3					Cell 4,4												
		#1	#2	R	C								R	C	Separat	Data File	Achieved	C	I	RAS	Own	Alt	CPA	Ach	Data File	Achieved	C	I	RAS	Own	Alt	CPA	Ach
2	3	375	5	10	3	3	4	4	0.00	0.0	5000.0	0.00	0.15	0.0	-20.0	3680.0	cl212ot	82.5	0	0	4	4	3722.6	cl212uz	82.5	0	0	4	4	3722.6
2	3	1887	5	10	3	3	4	4	0.00	0.0	5000.0	0.00	0.15	0.0	-20.0	7480.0	cl212ot	82.5	0	0	5	5	7522.6	cl212uz	82.5	0	0	5	5	7522.6
2	3	627	5	10	3	3	4	4	0.00	400.0	5000.0	0.00	0.15	0.0	-20.0	3680.0	cl212ot	82.5	0	0	4	4	3722.6	cl212uz	82.5	0	0	4	4	3722.6
2	3	2139	5	10	3	3	4	4	0.00	400.0	5000.0	0.00	0.15	0.0	-20.0	7480.0	cl212ot	82.5	0	0	5	5	7522.6	cl212uz	82.5	0	0	5	5	7522.6
2	3	123	5	10	3	3	4	4	0.00	-400.0	5000.0	0.00	0.15	0.0	-20.0	3680.0	cl212ot	82.5	0	0	4	4	3722.6	cl212uz	82.5	0	0	4	4	3722.6
Subtotal =												5	NMACs																	
2	4	439	5	10	3	3	4	4	-250.00	0.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl212ot	-18.2	1	0	4	4	3811.2	cl212uz	-18.2	1	0	4	4	3811.2
2	4	439	10	5	3	3	4	4	-250.00	0.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl212ot	78.3	0	0	4	4	3811.2	cl212uz	78.3	0	0	4	4	3811.2
2	4	1195	5	10	3	3	4	4	-250.00	0.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl212ot	67.7	0	0	4	4	3892.9	cl212uz	67.7	0	0	4	4	3892.9
2	4	1951	5	10	3	3	4	4	-250.00	0.0	5000.0	0.00	0.25	0.0	-20.0	7480.0	cl212ot	82.2	0	0	5	5	7652.9	cl212uz	82.2	0	0	5	5	7652.9
2	4	2707	5	10	3	3	4	4	-250.00	0.0	5000.0	0.00	0.25	0.0	-20.0	7520.0	cl212ot	82.2	0	0	5	5	7692.9	cl212uz	82.2	0	0	5	5	7692.9
2	4	691	5	10	3	3	4	4	-250.00	400.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl212ot	-28.9	1	0	4	4	3800.6	cl212uz	-28.9	1	0	4	4	3800.6
2	4	691	10	5	3	3	4	4	-250.00	400.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl212ot	67.7	0	0	4	4	3800.6	cl212uz	67.7	0	0	4	4	3800.6
2	4	1447	5	10	3	3	4	4	-250.00	400.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl212ot	-28.9	1	0	4	4	3840.6	cl212uz	-28.9	1	0	4	4	3840.6
2	4	1447	10	5	3	3	4	4	-250.00	400.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl212ot	67.7	0	0	4	4	3840.6	cl212uz	67.7	0	0	4	4	3840.6
2	4	2203	5	10	3	3	4	4	-250.00	400.0	5000.0	0.00	0.25	0.0	-20.0	7480.0	cl212ot	64.9	0	0	5	5	7635.6	cl212uz	64.9	0	0	5	5	7635.6
2	4	2959	5	10	3	3	4	4	-250.00	400.0	5000.0	0.00	0.25	0.0	-20.0	7520.0	cl212ot	64.9	0	0	5	5	7675.6	cl212uz	64.9	0	0	5	5	7675.6
2	4	124	5	10	3	3	4	4	-250.00	-400.0	5000.0	0.00	0.15	0.0	-20.0	3680.0	cl212ot	91.3	0	0	4	4	3807.7	cl212uz	91.3	0	0	4	4	3807.7
2	4	880	5	10	3	3	4	4	-250.00	-400.0	5000.0	0.00	0.15	0.0	-20.0	3720.0	cl212ot	30.8	0	0	4	4	3857.9	cl212uz	30.8	0	0	4	4	3857.9
2	4	187	5	10	3	3	4	4	-250.00	-400.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl212ot	81.0	0	0	4	4	3866.3	cl212uz	81.0	0	0	4	4	3866.3
2	4	943	5	10	3	3	4	4	-250.00	-400.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl212ot	81.0	0	0	4	4	3906.3	cl212uz	81.0	0	0	4	4	3906.3
2	4	370	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.15	0.0	-25.0	3680.0	cl212ot	49.5	0	0	4	4	3936.2	cl212uz	49.5	0	0	4	4	3936.2
2	4	440	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl212ot	39.4	0	0	4	4	3936.2	cl212uz	39.4	0	0	4	4	3936.2
2	4	1196	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl212ot	-48.2	1	0	4	4	3934.6	cl212uz	-48.2	1	0	4	4	3934.6
2	4	1196	10	5	3	3	4	4	-500.00	0.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl212ot	66.1	0	0	4	4	3934.6	cl212uz	66.1	0	0	4	4	3934.6
2	4	1952	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.25	0.0	-20.0	7520.0	cl212ot	-48.2	1	0	5	5	7734.6	cl212uz	-48.2	1	0	5	5	7734.6
2	4	2708	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.25	0.0	-20.0	7520.0	cl212ot	80.5	0	0	5	5	7734.6	cl212uz	80.5	0	0	5	5	7734.6
2	4	2708	10	5	3	3	4	4	-500.00	0.0	5000.0	0.00	0.25	0.0	-20.0	7520.0	cl212ot	-62.6	1	0	4	4	3894.6	cl212uz	-62.6	1	0	4	4	3894.6
2	4	503	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl212ot	66.1	0	0	4	4	3894.6	cl212uz	66.1	0	0	4	4	3894.6
2	4	503	10	5	3	3	4	4	-500.00	0.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl212ot	-48.1	1	0	4	4	3934.6	cl212uz	-48.1	1	0	4	4	3934.6
2	4	1259	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.35	0.0	-20.0	3720.0	cl212ot	66.1	0	0	4	4	3934.6	cl212uz	66.1	0	0	4	4	3934.6
2	4	1259	10	5	3	3	4	4	-500.00	0.0	5000.0	0.00	0.35	0.0	-20.0	3720.0	cl212ot	66.1	0	0	4	4	3934.6	cl212uz	66.1	0	0	4	4	3934.6
2	4	2015	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.35	0.0	-20.0	7480.0	cl212ot	53.8	0	0	5	5	7736.2	cl212uz	53.8	0	0	5	5	7736.2
2	4	2771	5	10	3	3	4	4	-500.00	0.0	5000.0	0.00	0.35	0.0	-20.0	7520.0	cl212ot	53.8	0	0	5	5	7776.2	cl212uz	53.8	0	0	5	5	7776.2
2	4	755	5	10	3	3	4	4	-500.00	400.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl212ot	-86.6	1	0	4	4	3870.6	cl212uz	-86.6	1	0	4	4	3870.6
2	4	755	10	5	3	3	4	4	-500.00	400.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl212ot	42.1	0	0	4	4	3870.6	cl212uz	42.1	0	0	4	4	3870.6
2	4	1511	5	10	3	3	4	4	-500.00	400.0	5000.0	0.00	0.35	0.0	-20.0	3720.0	cl212ot	-86.6	1	0	4	4	3910.6	cl212uz	-86.6	1	0	4	4	3910.6
2	4	1511	10	5	3	3	4	4	-500.00	400.0	5000.0	0.00	0.35	0.0	-20.0	3720.0	cl212ot	42.1	0	0	4	4	3910.6	cl212uz	42.1	0	0	4	4	3910.6
2	4	2267	5	10	3	3	4	4	-500.00	400.0	5000.0	0.00	0.35	0.0	-20.0	7480.0	cl212ot	23.2	1	0	5	5	7705.6	cl212uz	23.2	1	0	5	5	7705.6
2	4	3023	5	10	3	3	4	4	-500.00	400.0	5000.0	0.00	0.35	0.0	-20.0	7520.0	cl212ot	23.2	0	0	5	5	7745.6	cl212uz	23.2	0	0	5	5	7745.6
2	4	188	5	10	3	3	4	4	-500.00	-400.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl212ot	-42.6	1	0	4	4	3914.6	cl212uz	-42.6	1	0	4	4	3914.6
2	4	188	10	5	3	3	4	4	-500.00	-400.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl212ot	86.1	0	0	4	4	3914.6	cl212uz	86.1	0	0	4	4	3914.6
2	4	944	5	10	3	3	4	4	-500.00	-400.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl212ot	-42.6	1	0	4	4	3954.6	cl212uz	-42.6	1	0	4	4	3954.6
2	4	944	10	5	3	3	4	4	-50																					

CLS	REIT TBL	Modes		R,C	R,C	CPA Alt Separat	AC#1 Rate	AC#2 Rate	AC#1 Acc.	AC#2 Acc.	AC#1 Time	AC#2 Time	AC #1 CPA Alt	Cell 3,3					Cell 4,4											
		#1	#2											Data File	Achieved	C	I	RAS	Own	Alt	Data File	Achieved	C	I	RAS	Own	Alt			
5	4	1006	5	10	3	3	4	4	-250.00	1000.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl515oq	31.5	1	0	4	4	3802.3	cl515xz	31.5	1	0	4	4	3802.3
5	4	2518	5	10	3	3	4	4	-250.00	1000.0	5000.0	0.00	0.35	0.0	-20.0	3720.0	cl515oq	94.3	0	0	4	4	3867.3	cl515xz	94.3	0	0	4	4	3867.3
5	4	1195	5	10	3	3	4	4	-250.00	3000.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl515oq	21.9	0	0	4	4	3680.0	cl515xz	21.9	0	0	4	4	3680.0
5	4	2707	5	10	3	3	4	4	-250.00	3000.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl515oq	90.2	0	0	4	4	3720.0	cl515xz	90.2	0	0	4	4	3720.0
5	4	4219	5	10	3	3	4	4	-250.00	3000.0	5000.0	0.00	0.25	0.0	-20.0	7480.0	cl515oq	47.6	0	0	5	5	7480.0	cl515xz	47.6	0	0	5	5	7480.0
5	4	1258	5	10	3	3	4	4	-250.00	3000.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl515oq	90.2	0	0	4	4	3680.0	cl515xz	90.2	0	0	4	4	3680.0
5	4	691	5	10	3	3	4	4	-250.00	-1000.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl515oq	93.7	0	0	4	4	3878.9	cl515xz	93.7	0	0	4	4	3878.9
5	4	2203	5	10	3	3	4	4	-250.00	-1000.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl515oq	78.2	0	0	4	4	3903.4	cl515xz	78.2	0	0	4	4	3903.4
5	4	2141	5	10	3	3	4	4	-500.00	-1000.0	5000.0	0.00	0.15	0.0	-20.0	3720.0	cl515oq	80.3	0	0	4	4	3977.2	cl515xz	80.3	0	0	4	4	3977.2
5	4	620	5	10	3	3	4	4	-500.00	-1000.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl515oq	98.7	0	0	4	4	3995.6	cl515xz	98.7	0	0	4	4	3995.6
5	4	2204	5	10	3	3	4	4	-500.00	-1000.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl515oq	98.7	0	0	4	4	4035.6	cl515xz	98.7	0	0	4	4	4035.6
5	4	5228	5	10	3	3	4	4	-500.00	-1000.0	5000.0	0.00	0.25	0.0	-20.0	7520.0	cl515oq	98.7	0	0	5	5	7835.6	cl515xz	98.7	0	0	5	5	7835.6
5	4	1952	5	10	3	3	4	4	-500.00	-3000.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl515oq	98.4	0	0	4	4	4035.3	cl515xz	98.4	0	0	4	4	4035.3
5	4	2177	5	10	3	3	4	4	-750.00	-1000.0	3000.0	0.00	0.25	0.0	-25.0	3720.0	cl515oq	-54.8	0	1	4	4	3736.1	cl515xz	-54.8	0	1	4	4	3736.1
5	4	693	5	10	3	3	4	4	-750.00	-1000.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl515oq	54.1	0	0	4	4	3995.6	cl515xz	54.1	0	0	4	4	3995.6
5	4	2205	5	10	3	3	4	4	-750.00	-1000.0	5000.0	0.00	0.25	0.0	-20.0	3720.0	cl515oq	7.6	1	0	4	4	4093.9	cl515xz	7.6	1	0	4	4	4093.9
5	4	5229	5	10	3	3	4	4	-750.00	-1000.0	5000.0	0.00	0.25	0.0	-20.0	7520.0	cl515oq	7.6	1	0	5	5	7893.9	cl515xz	7.6	1	0	5	5	7893.9
5	4	756	5	10	3	3	4	4	-750.00	-1000.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl515oq	7.6	0	0	4	4	4053.9	cl515xz	7.6	0	0	4	4	4053.9
5	4	756	5	10	3	3	4	4	-750.00	-1000.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl515oq	84.0	0	0	4	4	4053.9	cl515xz	84.0	0	0	4	4	4053.9
5	4	3780	5	10	3	3	4	4	-750.00	-1000.0	5000.0	0.00	0.35	0.0	-20.0	7480.0	cl515oq	28.5	0	0	5	5	7853.9	cl515xz	28.5	0	0	5	5	7853.9
5	4	441	5	10	3	3	4	4	-750.00	-3000.0	5000.0	0.00	0.25	0.0	-20.0	3680.0	cl515oq	37.8	0	0	4	4	4084.1	cl515xz	37.8	0	0	4	4	4084.1
5	4	3465	5	10	3	3	4	4	-750.00	-3000.0	5000.0	0.00	0.25	0.0	-20.0	7480.0	cl515oq	37.8	0	0	5	5	7884.1	cl515xz	37.8	0	0	5	5	7884.1
5	4	504	5	10	3	3	4	4	-750.00	-3000.0	5000.0	0.00	0.35	0.0	-20.0	3680.0	cl515oq	60.5	0	0	4	4	4106.8	cl515xz	60.5	0	0	4	4	4106.8
5	4	-----	5	10	3	3	4	4	Subtotal	=	26	NMACs																		
6	3	2552	5	10	3	3			0.00	3000.0	-3000.0	0.00	0.05	0.0	-25.0	3720.0	cl616oq	73.6	0	0	3	5	3687.8							
6	3	-----	5	10	3	3			Subtotal	=	1	NMACs																		
6	3	81	5	10	3	3	4	4	0.00	-5000.0	-5000.0	0.00	0.15	0.0	-20.0	3680.0	cl616oq	90.6	0	0	4	4	3716.2	cl616xz	90.6	0	0	4	4	3716.2
6	3	1593	5	10	3	3	4	4	0.00	-5000.0	-5000.0	0.00	0.15	0.0	-20.0	3720.0	cl616oq	70.5	0	0	4	4	3736.1	cl616xz	70.5	0	0	4	4	3736.1
6	3	3105	5	10	3	3	4	4	0.00	-5000.0	-5000.0	0.00	0.15	0.0	-20.0	7480.0	cl616oq	90.6	0	0	5	5	7516.2	cl616xz	90.6	0	0	5	5	7516.2
6	3	4617	5	10	3	3	4	4	0.00	-5000.0	-5000.0	0.00	0.15	0.0	-20.0	7520.0	cl616oq	70.5	0	0	5	5	7536.1	cl616xz	70.5	0	0	5	5	7536.1
6	3	-----	5	10	3	3	4	4	Subtotal	=	4	NMACs																		
6	3	1362	5	10			4	4	0.00	5000.0	-3000.0	0.00	0.15	0.0	-20.0	3680.0							cl616xz	50.7	0	1	4	4	3680.0	
6	3	1334	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.15	0.0	-25.0	3680.0							cl616xz	-9.5	0	0	3	5	3648.0	
6	3	2846	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.15	0.0	-25.0	3720.0							cl616xz	50.7	0	1	4	4	3720.0	
6	3	5870	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.15	0.0	-25.0	7520.0							cl616xz	50.7	0	1	5	5	7520.0	
6	3	2839	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.15	0.0	-30.0	3720.0							cl616xz	22.5	0	1	4	4	3720.0	
6	3	2839	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.15	0.0	-30.0	3720.0							cl616xz	22.5	0	1	4	4	3720.0	
6	3	5863	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.15	0.0	-30.0	7520.0							cl616xz	22.5	0	1	5	5	7520.0	
6	3	5863	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.15	0.0	-30.0	7520.0							cl616xz	22.5	0	1	5	5	7520.0	
6	3	2979	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.35	0.0	-20.0	3720.0							cl616xz	5.6	0	1	4	4	3720.0	
6	3	2979	5	10			4	4	0.00	5000.0	-5000.0	0.00	0.35	0.0	-20.0	3720.0							cl616xz	22.5	0	1	4	4	3720.0	
6	3	-----	5	10			4	4	Subtotal	=	10	NMACs																		
6	4	1153	5	10	3	3			-250.00	3000.0	-5000.0	0.00	0.25	0.0	-20.0	3680.0	cl616oq	6.3	0	1	4	4	3680.0							
6	4	2665	5	10	3	3			-250.00	3000.0	-5000.0	0.00	0.25	0.0	-20.0	3720.0	cl616oq	6.3	0	1	4	4	3720.0							
6	4	4177	5	10	3	3			-250.00	3000.0	-5000.0	0.00	0.25	0.0	-20.0	7480.0	cl616oq	99.4	0	1	5	5	7480.0							
6	4	5689	5	10	3	3																								

CLS	REIT	Modes				CPA Alt	AC#1	AC#2	AC#1	AC#2	AC#1	AC#2	AC #1	Cell 3,3					Cell 4,4								
		#1	#2	R,C	R,C									Rate	Rate	Acc.	Acc.	Time	Time	CPA Alt	Data File	Achieved	C	I	RAS	Own	Alt
7 4	772	5	10	3	3	500.00	3000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	CL7170	-54.8	0	0	4	4	3356.7	cl717wz	-54.8	0	0	4	4	3356.7
7 4	772	10	10	3	3	500.00	3000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	cl717p	74.5	1	0	4	4	3486.1	cl717wz	74.5	1	0	4	4	3486.1
7 4	5308	10	10	3	3	500.00	3000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	cl717p	-48.4	0	0	5	5	7223.5	cl717wz	-48.4	0	0	5	5	7223.5
7 4	898	5	5	3	3	500.00	3000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	cl717p	-84.2	0	0	4	4	3387.7	cl717wz	-84.2	0	0	4	4	3387.7
7 4	2158	5	5	3	3	500.00	3000.0	-5000.0	0.15	-0.15	-25.0	-20.0	3700.0	cl7170	-34.6	1	0	4	4	3488.5	cl717wz	-34.6	1	0	4	4	3488.5
7 4	2284	5	5	3	3	500.00	3000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	cl7170	-55.0	0	0	4	4	3416.9	cl717wz	-55.0	0	0	4	4	3416.9
7 4	6820	5	5	3	3	500.00	3000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	cl7170	-55.0	0	0	5	5	7216.9	cl717wz	-55.0	0	0	5	5	7216.9
7 4	3796	5	10	3	3	500.00	3000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	cl7170	-55.0	0	0	4	4	3416.9	cl717wz	-55.0	0	0	4	4	3416.9
7 4	2578	10	10	3	3	500.00	5000.0	-1000.0	0.15	-0.05	-25.0	-20.0	3700.0	cl717p	2.9	0	0	4	4	3502.9	cl717wz	2.9	0	0	4	4	3502.9
7 4	7114	10	10	3	3	500.00	5000.0	-1000.0	0.15	-0.05	-25.0	-20.0	7500.0	cl717p	2.9	0	0	5	5	7302.9	cl717wz	2.9	0	0	5	5	7302.9
7 4	2571	5	10	3	3	500.00	5000.0	-1000.0	0.15	-0.05	-25.0	-25.0	3700.0	cl7170	20.0	0	0	4	4	3477.2	cl717wz	20.0	0	0	4	4	3477.2
7 4	2571	10	10	3	3	500.00	5000.0	-1000.0	0.15	-0.05	-25.0	-25.0	3700.0	cl717p	-68.0	0	0	4	4	3477.2	cl717wz	-68.0	0	0	4	4	3477.2
7 4	7107	5	5	3	3	500.00	5000.0	-1000.0	0.15	-0.05	-25.0	-25.0	7500.0	cl7170	-93.3	0	0	5	5	7206.7	cl717wz	-93.3	0	0	5	5	7206.7
7 4	2704	5	10	3	3	500.00	5000.0	-1000.0	0.15	-0.15	-25.0	-20.0	3700.0	cl7170	20.0	0	0	4	4	3477.2	cl717wz	20.0	0	0	4	4	3477.2
7 4	2704	5	5	3	3	500.00	5000.0	-1000.0	0.15	-0.15	-25.0	-20.0	3700.0	cl717p	-68.0	0	0	4	4	3477.2	cl717wz	-68.0	0	0	4	4	3477.2
7 4	2830	5	10	3	3	500.00	5000.0	-1000.0	0.15	-0.25	-25.0	-20.0	3700.0	cl7170	20.0	0	0	4	4	3477.2	cl717wz	20.0	0	0	4	4	3477.2
7 4	2830	10	10	3	3	500.00	5000.0	-1000.0	0.15	-0.25	-25.0	-20.0	3700.0	cl717p	-68.0	0	0	4	4	3477.2	cl717wz	-68.0	0	0	4	4	3477.2
7 4	2956	5	10	3	3	500.00	5000.0	-1000.0	0.15	-0.35	-25.0	-20.0	3700.0	cl7170	20.0	0	0	4	4	3477.2	cl717wz	20.0	0	0	4	4	3477.2
7 4	2956	10	10	3	3	500.00	5000.0	-1000.0	0.15	-0.35	-25.0	-20.0	3700.0	cl717p	-68.0	0	0	4	4	3477.2	cl717wz	-68.0	0	0	4	4	3477.2
7 4	5833	5	10	3	3	500.00	5000.0	-3000.0	0.05	-0.25	-25.0	-20.0	7500.0	cl7170	2.7	1	0	5	5	7187.7	cl717wz	2.7	1	0	5	5	7187.7
7 4	2557	10	10	3	3	500.00	5000.0	-3000.0	0.15	-0.05	-25.0	-20.0	3700.0	cl717p	51.6	1	0	4	4	3555.2	cl717wz	51.6	1	0	4	4	3555.2
7 4	7093	10	10	3	3	500.00	5000.0	-3000.0	0.15	-0.05	-25.0	-20.0	7500.0	cl717p	-55.0	0	0	5	5	7302.9	cl717wz	-55.0	0	0	5	5	7302.9
7 4	2550	10	10	3	3	500.00	5000.0	-3000.0	0.15	-0.05	-25.0	-25.0	3700.0	cl7170	-85.1	0	0	4	4	3488.5	cl717wz	-85.1	0	0	4	4	3488.5
7 4	2543	10	10	3	3	500.00	5000.0	-3000.0	0.15	-0.05	-25.0	-30.0	3700.0	cl717p	-61.9	0	0	4	4	3502.9	cl717wz	-61.9	0	0	4	4	3502.9
7 4	2809	5	10	3	3	500.00	5000.0	-3000.0	0.15	-0.25	-25.0	-20.0	3700.0	cl7170	-69.2	0	0	4	4	3406.7	cl717wz	-69.2	0	0	4	4	3406.7
7 4	2809	10	10	3	3	500.00	5000.0	-3000.0	0.15	-0.25	-25.0	-20.0	3700.0	cl717p	53.6	1	0	4	4	3529.5	cl717wz	53.6	1	0	4	4	3529.5
7 4	5686	10	10	3	3	500.00	5000.0	-5000.0	0.05	-0.15	-25.0	-20.0	7500.0	cl717p	53.1	1	0	5	5	7364.9	cl717wz	53.1	1	0	5	5	7364.9
7 4	1143	5	10	3	3	500.00	5000.0	-5000.0	0.05	-0.15	-25.0	-25.0	3700.0	cl7170	-23.8	1	0	4	4	3387.7	cl717wz	-23.8	1	0	4	4	3387.7
7 4	1276	10	10	3	3	500.00	5000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	cl7170	-54.8	0	0	4	4	3356.7	cl717wz	-54.8	0	0	4	4	3356.7
7 4	1276	10	10	3	3	500.00	5000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	cl717p	74.5	1	0	4	4	3486.1	cl717wz	74.5	1	0	4	4	3486.1
7 4	5812	10	10	3	3	500.00	5000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	cl717p	-48.4	0	0	5	5	7223.5	cl717wz	-48.4	0	0	5	5	7223.5
7 4	1402	10	10	3	3	500.00	5000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	cl717p	-84.2	0	0	4	4	3387.7	cl717wz	-84.2	0	0	4	4	3387.7
7 4	2536	10	10	3	3	500.00	5000.0	-5000.0	0.15	-0.05	-25.0	-20.0	3700.0	cl717p	51.6	1	0	4	4	3555.2	cl717wz	51.6	1	0	4	4	3555.2
7 4	7072	10	10	3	3	500.00	5000.0	-5000.0	0.15	-0.05	-25.0	-20.0	7500.0	cl717p	-55.0	0	0	5	5	7302.9	cl717wz	-55.0	0	0	5	5	7302.9
7 4	2529	10	10	3	3	500.00	5000.0	-5000.0	0.15	-0.05	-25.0	-25.0	3700.0	cl717p	-85.1	0	0	4	4	3488.5	cl717wz	-85.1	0	0	4	4	3488.5
7 4	2522	10	10	3	3	500.00	5000.0	-5000.0	0.15	-0.05	-25.0	-30.0	3700.0	cl717p	-61.9	0	0	4	4	3502.9	cl717wz	-61.9	0	0	4	4	3502.9
7 4	7198	5	10	3	3	500.00	5000.0	-5000.0	0.15	-0.15	-25.0	-20.0	7500.0	cl7170	74.8	1	0	5	5	7302.9	cl717wz	74.8	1	0	5	5	7302.9
7 4	2788	5	10	3	3	500.00	5000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	cl7170	6.4	1	0	4	4	3418.0	cl717wz	6.4	1	0	4	4	3418.0
7 4	7324	5	10	3	3	500.00	5000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	cl7170	6.4	1	0	5	5	7218.0	cl717wz	6.4	1	0	5	5	7218.0
7 4	2914	5	10	3	3	500.00	5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	cl7170	6.4	1	0	4	4	3418.0	cl717wz	6.4	1	0	4	4	3418.0
7 4	7450	5	10	3	3	500.00	5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	cl7170	6.4	1	0	5	5	7218.0	cl717wz	6.4	1	0	5	5	7218.0
7 4	4300	5	10	3	3	500.00	5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	cl7170	-43.7	0	0	4	4	3428.1	cl717wz	-43.7	0	0	4	4	3428.1
7 4	8836	5	10	3	3	500.00	5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	cl7170	-43.7	0	0	5	5	7228.1	cl717wz	-43.7	0	0	5	5	7228.1
7 4	267	5	10	3	3	750.00	1000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	cl7170	76.3	1	0	4	4	3341.6	cl717wz	76.3	1	0	4	4	3341.6
7 4	4803	5	10	3	3	750.00	1000.0	-5000.0	0.05	-0.25	-25.0	-25.0	3700.0	cl7170	76.3	1	0	5	5	7141.6	cl717wz	76.3	1	0	5	5	7141.6
7 4	260	5	10	3	3	750.00	1000.0	-5000.0	0.05	-0.25	-25.0	-25.0	3700.0	cl7170	-98.9	0	0	4	4	3267.8	cl717wz	-98.9	0	0	4	4	3267.8
7 4	1779	5	10	3	3	750.00	1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	cl7170	8.0	1	0	4	4	3341.6	cl717wz	8.0	1	0	4	4	3341.6
7 4	1779	10	10	3	3	750.00	1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	cl717p	-97.0	0	0	4	4	3341.6	cl717wz	-97.0	0	0	4	4	3341.6
7 4	6315	5	5	3	3	750.00	1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	cl7170	8.0	1	0	5	5	7141.6	cl717wz	8.0	1	0	5	5	7141.6
7 4	6315	10	10	3	3	750.00	1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	cl717p	-96.9	0	0	5	5	7141.6	cl717wz	-96.9	0	0	5	5	7141.6
7 4	1772	5	5	3	3	750.00	1000.0	-5000.0	0.15	-0.25	-25.																

CLS TBL	REIT Modes				CPA Alt Separat	AC#1 Rate	AC#2 Rate	AC#1 Acc.	AC#2 Acc.	AC#1 Time	AC#2 Time	AC #1 CPA Alt	Cell 3,3					Cell 4,4									
	#1	#2	R,C	R,C									Data File	Achieved Separatn	C	I	RAS	Own	Alt CPA Ach	Data File	Achieved Separatn	C	I	RAS	Own	Alt CPA Ach	
7 4	3704	10	5	3	3	750.00	3000.0	-1000.0	0.25	-0.15	-25.0	-25.0	3700.0	cl717p	89.2	1	0	4	4	3089.8	cl717wz	89.2	1	0	4	4	3089.8
7 4	3830	10	5	3	3	750.00	3000.0	-1000.0	0.25	-0.25	-25.0	-25.0	3700.0	cl717p	89.2	1	0	4	4	3089.8	cl717wz	89.2	1	0	4	4	3089.8
7 4	3956	10	5	3	3	750.00	3000.0	-1000.0	0.25	-0.35	-25.0	-25.0	3700.0	cl717p	89.2	1	0	4	4	3089.8	cl717wz	89.2	1	0	4	4	3089.8
7 4	771	5	10	3	3	750.00	3000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	CL7170	29.8	1	0	4	4	3277.4	cl717wz	29.8	1	0	4	4	3277.4
7 4	5307	5	10	3	3	750.00	3000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL7170	29.8	1	0	5	5	7077.4	cl717wz	29.8	1	0	5	5	7077.4
7 4	897	5	10	3	3	750.00	3000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	CL7170	-17.6	0	0	4	4	3230.0	cl717wz	-17.6	0	0	4	4	3230.0
7 4	5433	5	10	3	3	750.00	3000.0	-5000.0	0.05	-0.35	-25.0	-20.0	7500.0	CL7170	-17.6	0	0	5	5	7030.0	cl717wz	-17.6	0	0	5	5	7030.0
7 4	2157	5	10	3	3	750.00	3000.0	-5000.0	0.15	-0.15	-25.0	-20.0	3700.0	CL7170	20.0	0	0	4	4	3442.6	cl717wz	20.0	0	0	4	4	3442.6
7 4	6693	5	10	3	3	750.00	3000.0	-5000.0	0.15	-0.15	-25.0	-20.0	7500.0	CL7170	20.0	0	0	5	5	7242.6	cl717wz	20.0	0	0	5	5	7242.6
7 4	2283	5	10	3	3	750.00	3000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL7170	-17.3	1	0	4	4	3316.3	cl717wz	-17.3	1	0	4	4	3316.3
7 4	6819	5	10	3	3	750.00	3000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	CL7170	-17.3	1	0	5	5	7116.3	cl717wz	-17.3	1	0	5	5	7116.3
7 4	2409	5	10	3	3	750.00	3000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL7170	-85.5	0	0	4	4	3248.1	cl717wz	-85.5	0	0	4	4	3248.1
7 4	6945	5	10	3	3	750.00	3000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	CL7170	-85.5	0	0	5	5	7048.1	cl717wz	-85.5	0	0	5	5	7048.1
7 4	3669	5	10	3	3	750.00	3000.0	-5000.0	0.25	-0.15	-25.0	-20.0	3700.0	CL7170	-4.1	0	0	4	4	3442.6	cl717wz	-4.1	0	0	4	4	3442.6
7 4	3795	5	10	3	3	750.00	3000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL7170	-17.3	1	0	4	4	3316.3	cl717wz	-17.3	1	0	4	4	3316.3
7 4	3921	5	10	3	3	750.00	3000.0	-5000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL7170	-85.5	0	0	4	4	3248.1	cl717wz	-85.5	0	0	4	4	3248.1
7 4	7113	10	5	3	3	750.00	5000.0	-1000.0	0.15	-0.05	-25.0	-20.0	7500.0	cl717p	-22.9	0	0	5	5	7123.1	cl717wz	-22.9	0	0	5	5	7123.1
7 4	2570	5	10	3	3	750.00	5000.0	-1000.0	0.15	-0.05	-25.0	-25.0	3700.0	CL7170	-30.0	0	0	4	4	3265.1	cl717wz	-30.0	0	0	4	4	3265.1
7 4	7106	5	10	3	3	750.00	5000.0	-1000.0	0.15	-0.05	-25.0	-25.0	7500.0	CL7170	-30.0	0	0	5	5	7065.1	cl717wz	-30.0	0	0	5	5	7065.1
7 4	2703	5	10	3	3	750.00	5000.0	-1000.0	0.15	-0.15	-25.0	-20.0	3700.0	cl717p	32.0	1	0	4	4	3374.5	cl717wz	32.0	1	0	4	4	3374.5
7 4	7239	10	5	3	3	750.00	5000.0	-1000.0	0.15	-0.15	-25.0	-20.0	7500.0	cl717p	32.0	1	0	5	5	7174.5	cl717wz	32.0	1	0	5	5	7174.5
7 4	2829	5	10	3	3	750.00	5000.0	-1000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL7170	-30.0	0	0	4	4	3265.1	cl717wz	-30.0	0	0	4	4	3265.1
7 4	7365	5	10	3	3	750.00	5000.0	-1000.0	0.15	-0.25	-25.0	-20.0	7500.0	CL7170	-30.0	0	0	5	5	7065.1	cl717wz	-30.0	0	0	5	5	7065.1
7 4	2955	5	10	3	3	750.00	5000.0	-1000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL7170	-30.0	0	0	4	4	3265.1	cl717wz	-30.0	0	0	4	4	3265.1
7 4	7491	5	10	3	3	750.00	5000.0	-1000.0	0.15	-0.35	-25.0	-20.0	7500.0	CL7170	-30.0	0	0	5	5	7065.1	cl717wz	-30.0	0	0	5	5	7065.1
7 4	7092	10	5	3	3	750.00	5000.0	-3000.0	0.15	-0.05	-25.0	-20.0	7500.0	cl717p	68.8	1	0	5	5	7232.4	cl717wz	68.8	1	0	5	5	7232.4
7 4	7218	10	5	3	3	750.00	5000.0	-3000.0	0.15	-0.15	-25.0	-20.0	7500.0	cl717p	-48.3	0	0	5	5	7192.2	cl717wz	-48.3	0	0	5	5	7192.2
7 4	2934	5	10	3	3	750.00	5000.0	-3000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL7170	-89.0	0	0	4	4	3265.1	cl717wz	-89.0	0	0	4	4	3265.1
7 4	7470	5	10	3	3	750.00	5000.0	-3000.0	0.15	-0.35	-25.0	-20.0	7500.0	CL7170	-71.3	0	0	5	5	7082.8	cl717wz	-71.3	0	0	5	5	7082.8
7 4	4068	10	5	3	3	750.00	5000.0	-3000.0	0.25	-0.05	-25.0	-20.0	3700.0	cl717p	-100.1	0	0	3	4	3359.8	cl717wz	-100.1	0	0	3	4	3359.8
7 4	4194	5	10	3	3	750.00	5000.0	-3000.0	0.25	-0.15	-25.0	-20.0	3700.0	CL7170	-67.8	0	0	3	4	3334.0	cl717wz	-67.8	0	0	3	4	3334.0
7 4	4320	5	10	3	3	750.00	5000.0	-3000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL7170	-85.5	0	0	3	4	3316.3	cl717wz	-85.5	0	0	3	4	3316.3
7 4	8856	5	10	3	3	750.00	5000.0	-3000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL7170	-67.9	0	0	5	5	7134.0	cl717wz	-67.9	0	0	5	5	7134.0
7 4	4446	5	10	3	3	750.00	5000.0	-3000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL7170	-85.5	0	0	3	4	3316.3	cl717wz	-85.5	0	0	3	4	3316.3
7 4	8982	5	10	3	3	750.00	5000.0	-3000.0	0.25	-0.35	-25.0	-20.0	7500.0	CL7170	-67.9	0	0	5	5	7134.0	cl717wz	-67.9	0	0	5	5	7134.0
7 4	1275	5	10	3	3	750.00	5000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	CL7170	29.8	1	0	4	4	3277.4	cl717wz	29.8	1	0	4	4	3277.4
7 4	5811	5	10	3	3	750.00	5000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL7170	29.8	1	0	5	5	7077.4	cl717wz	29.8	1	0	5	5	7077.4
7 4	1401	5	10	3	3	750.00	5000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	CL7170	-17.6	0	0	4	4	3230.0	cl717wz	-17.6	0	0	4	4	3230.0
7 4	5937	5	10	3	3	750.00	5000.0	-5000.0	0.05	-0.35	-25.0	-20.0	7500.0	CL7170	-17.6	0	0	5	5	7030.0	cl717wz	-17.6	0	0	5	5	7030.0
7 4	7071	10	5	3	3	750.00	5000.0	-5000.0	0.15	-0.05	-25.0	-20.0	7500.0	cl717p	68.8	1	0	5	5	7232.4	cl717wz	68.8	1	0	5	5	7232.4
7 4	7197	5	10	3	3	750.00	5000.0	-5000.0	0.15	-0.15	-25.0	-20.0	7500.0	CL7170	-99.6	0	0	5	5	7123.1	cl717wz	-99.6	0	0	5	5	7123.1
7 4	7197	10	5	3	3	750.00	5000.0	-5000.0	0.15	-0.15	-25.0	-20.0	7500.0	cl717p	80.3	1	0	5	5	7302.9	cl717wz	80.3	1	0	5	5	7302.9
7 4	2654	10	5	3	3	750.00	5000.0	-5000.0	0.15	-0.15	-25.0	-25.0	3700.0	cl717p	-13.5	1	0	4	4	3392.2	cl717wz	-13.5	1	0	4	4	3392.2
7 4	2787	5	10	3	3	750.00	5000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL7170	17.6	1	0	4	4	3282.8	cl717wz	17.6	1	0	4	4	3282.8
7 4	7323	5	10	3	3	750.00	5000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	CL7170	-50.8	1	0	5	5	7082.8	cl717wz	-50.8	1	0	5	5	7082.8
7 4	7323	10	5	3	3	750.00	5000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	cl717p	58.6	1	0	5	5	7192.2	cl717wz	58.6	1	0	5	5	7192.2
7 4	2913	5	10	3	3	750.00	5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL7170	-21.1	1	0	4	4	3265.1	cl717wz	-21.1	1	0	4	4	3265.1
7 4	7449	5	10	3	3	750.00	5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	CL7170	-89.4	0	0	5	5	7065.1	cl717wz	-89.4	0	0	5	5	7065.1
7 4	7449	10	5	3	3	750.00	5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	cl717p	20.0	1	0	5	5	7174.5	cl717wz	20.0	1	0	5	5	7174.5
7 4	4047	5	10	3	3	750.00	5000.0	-5000.0	0.25	-0.05	-25.0	-20.0	3700.0	cl717p	-100.1	0	0	3	4	3359.8	cl717wz	-100.1	0	0	3	4	3359.8
7 4	4173	5	10	3	3	750.00	5000.0	-5000.0	0.25	-0.15	-																

													Cell 3,3					Cell 4,4								
CLS	REIT	ModeS	R,C		CPA	Alt	AC#1	AC#2	AC#1	AC#2	AC #1	Data	Achieved	C	I	RAS	Own	Alt	Data	Achieved	C	I	RAS	Own	Alt	
TBL	#1	#2	R	C	Separat	Rate	Rate	Acc.	Acc.	Time	Time	File	Separatn	N	C	1	2	CPA	File	Separatn	N	C	1	2	CPA	Ach
7	4	2014	5	10		4	4	-250.00	1000.0	5000.0	0.15	0.35	-25.0	-20.0						cl717wz	94.3	0	0	4	4	3847.2
7	4	3526	5	10		4	4	-250.00	1000.0	5000.0	0.25	0.35	-25.0	-20.0						cl717wz	94.3	0	0	4	4	3847.2
7	4	-----				4	4	Subtotal	=	7	NMACs															
8	3	1257	5	10		4	4	0.00	-1000.0	5000.0	0.05	0.15	-25.0	-20.0						CL818OR	82.5	0	0	4	4	3742.6
8	3	2769	5	10		4	4	0.00	-1000.0	5000.0	0.15	0.15	-25.0	-20.0						CL818OR	82.5	0	0	4	4	3742.6
8	3	7305	5	10		4	4	0.00	-1000.0	5000.0	0.15	0.15	-25.0	-20.0						CL818OR	82.5	0	0	5	5	7542.6
8	3	4281	5	10		4	4	0.00	-1000.0	5000.0	0.25	0.15	-25.0	-20.0						CL818OR	82.5	0	0	4	4	3742.6
8	3	8817	5	10		4	4	0.00	-1000.0	5000.0	0.25	0.15	-25.0	-20.0						CL818OR	82.5	0	0	5	5	7542.6
8	3	1152	5	10		4	4	0.00	-1000.0	-5000.0	0.05	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	4	4	3657.4
8	3	5688	5	10		4	4	0.00	-1000.0	-5000.0	0.05	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	5	5	7457.4
8	3	2664	5	10		4	4	0.00	-1000.0	-5000.0	0.15	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	4	4	3657.4
8	3	7200	5	10		4	4	0.00	-1000.0	-5000.0	0.15	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	5	5	7457.4
8	3	4176	5	10		4	4	0.00	-1000.0	-5000.0	0.25	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	4	4	3657.4
8	3	8712	5	10		4	4	0.00	-1000.0	-5000.0	0.25	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	5	5	7457.4
8	3	2265	5	10		4	4	0.00	-3000.0	5000.0	0.15	0.15	-25.0	-20.0						CL818OR	82.5	0	0	4	4	3742.6
8	3	3777	5	10		4	4	0.00	-3000.0	5000.0	0.25	0.15	-25.0	-20.0						CL818OR	82.5	0	0	4	4	3742.6
8	3	641	5	10		4	4	0.00	-3000.0	-5000.0	0.05	-0.15	-25.0	-25.0						CL818OR	77.2	0	1	4	4	3777.2
8	3	641	5	10		4	4	0.00	-3000.0	-5000.0	0.05	-0.15	-25.0	-25.0						CL818OR	19.3	0	1	4	4	3719.3
8	3	5177	5	10		4	4	0.00	-3000.0	-5000.0	0.05	-0.15	-25.0	-25.0						CL818OR	77.2	0	1	5	5	7577.2
8	3	5177	5	10		4	4	0.00	-3000.0	-5000.0	0.05	-0.15	-25.0	-25.0						CL818OR	43.4	0	1	5	5	7543.4
8	3	774	5	10		4	4	0.00	-3000.0	-5000.0	0.05	-0.25	-25.0	-20.0						CL818OR	-92.1	0	0	4	4	3644.1
8	3	2160	5	10		4	4	0.00	-3000.0	-5000.0	0.15	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	4	4	3657.4
8	3	6696	5	10		4	4	0.00	-3000.0	-5000.0	0.15	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	5	5	7457.4
8	3	3672	5	10		4	4	0.00	-3000.0	-5000.0	0.25	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	4	4	3657.4
8	3	8208	5	10		4	4	0.00	-3000.0	-5000.0	0.25	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	5	5	7457.4
8	3	1656	5	10		4	4	0.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-20.0						CL818OR	-9.7	1	0	4	4	3694.4
8	3	1656	5	10		4	4	0.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-20.0						CL818OR	-45.5	1	0	4	4	3694.4
8	3	6192	5	10		4	4	0.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-20.0						CL818OR	-9.7	1	0	5	5	7494.4
8	3	6192	5	10		4	4	0.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-20.0						CL818OR	-45.5	1	0	5	5	7494.4
8	3	1782	5	10		4	4	0.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-20.0						CL818OR	-58.7	1	0	4	4	3677.5
8	3	6318	5	10		4	4	0.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-20.0						CL818OR	-58.7	1	0	5	5	7477.5
8	3	3168	5	10		4	4	0.00	-5000.0	-5000.0	0.25	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	4	4	3657.4
8	3	7704	5	10		4	4	0.00	-5000.0	-5000.0	0.25	-0.15	-25.0	-20.0						CL818OR	-82.5	0	0	5	5	7457.4
8	3	-----				4	4	Subtotal	=	30	NMACs															
8	4	2103	5	10				250.00	-3000.0	3000.0	0.15	0.05	-25.0	-30.0						CL818OR	-88.4	0	1	4	4	3527.1
8	4	1732	5	10				250.00	-5000.0	3000.0	0.15	0.15	-25.0	-25.0						CL818OR	38.7	0	0	5	3	3488.7
8	4	1598	5	10				500.00	-5000.0	3000.0	0.15	0.05	-25.0	-30.0						CL818OR	-39.7	0	1	4	3	3337.6
8	4	1724	5	10				500.00	-5000.0	3000.0	0.15	0.15	-25.0	-30.0						CL818OR	-27.6	0	1	4	3	3172.4
8	4	1850	5	10				500.00	-5000.0	3000.0	0.15	0.25	-25.0	-30.0						CL818OR	-42.3	0	1	4	3	3172.4
8	4	1983	5	10				500.00	-5000.0	3000.0	0.15	0.35	-25.0	-25.0						CL818OR	40.5	0	1	4	3	3240.5
8	4	1983	5	10				500.00	-5000.0	3000.0	0.15	0.35	-25.0	-25.0						CL818OR	40.5	0	1	4	3	3240.5
8	4	3243	5	10				500.00	-5000.0	3000.0	0.25	0.15	-25.0	-25.0						CL818OR	77.1	1	1	4	3	3277.1
8	4	3243	5	10				500.00	-5000.0	3000.0	0.25	0.15	-25.0	-25.0						CL818OR	77.1	1	1	4	3	3277.1
8	4	3236	5	10				500.00	-5000.0	3000.0	0.25	0.15	-25.0	-30.0						CL818OR	-57.8	0	1	4	3	3142.2
8	4	3236	5	10				500.00	-5000.0	3000.0	0.25	0.15	-25.0	-30.0						CL818OR	77.1	1	1	4	3	3277.1
8	4	3369	5	10				500.00	-5000.0	3000.0	0.25	0.25	-25.0	-25.0						CL818OR	-6.2	0	1	4	3	3193.7
8	4	3369	5	10				500.00	-5000.0	3000.0	0.25	0.25	-25.0	-25.0						CL818OR	-6.2	0	1	4	3	3193.7
8	4	3495	5	10				500.00	-5000.0	3000.0	0.25	0.35	-25.0	-25.0						CL818OR	35.4	0	1	4	3	3235.4
8	4	3495	5	10				500.00	-5000.0	3000.0	0.25	0.35	-25.0	-25.0						CL818OR	35.4	0	1	4	3	3235.4
8	4	3131	5	10				500.00	-5000.0	5000.0	0.25	0.05	-25.0	-30.0						CL818OR	-39.9	0	1	4	4	3649.3
8	4	3383	5	10				500.00	-5000.0	5000.0	0.25	0.25	-25.0	-30.0						CL818OR	35.4	0	1	4	3	3235.4
8	4	3383	5	10				500.00	-5000.0	5000.0	0.25	0.25	-25.0	-30.0						CL818OR	35.4	0	1	4	3	3235.4
8	4	1882	5	10				-500.00	-5000.0	5000.0	0.15	0.25	-25.0	-25.0						CL818OR	-77.5	1	0	4	3	4071.8
8	4	1757	5	10																						

CLS	REIT	Modes		CPA	Alt	AC#1	AC#2	AC#1	AC#2	AC#1	AC#2	AC #1	Cell 3,3					Cell 4,4										
		#1	#2										R,C	R,C	Separat	Rate	Rate	Acc.	Acc.	Time	Time	CPA	Alt	Data	Achieved	C	I	RAS	Own	Alt	Data	Achieved	C	I	RAS	Own	Alt
TBL													File	Separatn	N	C	1	2	CPA	Ach	File	Separatn	N	C	1	2	CPA	Ach
8	4	1151	10	5	3	250.00	-1000.0	-5000.0	0.05	-0.15	-25.0	-20.0	3700.0	CL818OR	-84.1	0	0	4	4	3579.5	cl818wz	-84.1	0	0	4	4	3579.5	
8	4	1277	5	10	3	250.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	1403	5	10	3	250.00	-1000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	1789	5	10	3	250.00	-1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	2915	5	10	3	250.00	-1000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	4301	5	10	3	250.00	-1000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	4427	5	10	3	250.00	-1000.0	-5000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	3615	10	10	3	250.00	-3000.0	3000.0	0.25	0.05	-25.0	-30.0	3700.0	CL818OR	82.3	1	1	4	4	3649.3	cl818wz	82.3	1	1	4	4	3649.3	
8	4	3615	10	5	10	250.00	-3000.0	3000.0	0.25	0.05	-25.0	-30.0	3700.0	CL818OR	-90.1	0	1	4	4	3527.1	cl818wz	-90.1	0	1	4	4	3527.1	
8	4	2124	5	10	3	250.00	-3000.0	5000.0	0.15	0.05	-25.0	-30.0	3700.0	CL818OR	-87.5	0	1	4	4	3677.5	cl818wz	-87.5	0	1	4	4	3677.5	
8	4	773	10	10	3	250.00	-3000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL818OR	-87.5	0	0	4	4	3559.6	cl818wz	-87.5	0	0	4	4	3559.6	
8	4	5309	10	5	10	250.00	-3000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL818OR	-87.4	0	0	5	5	7359.6	cl818wz	-87.4	0	0	5	5	7359.6	
8	4	899	10	5	10	250.00	-3000.0	-5000.0	0.05	-0.35	-25.0	-20.0	7500.0	CL818OR	-87.5	0	0	4	4	3559.6	cl818wz	-87.5	0	0	4	4	3559.6	
8	4	5435	10	5	10	250.00	-3000.0	-5000.0	0.05	-0.35	-25.0	-20.0	7500.0	CL818OR	-87.4	0	0	5	5	7359.6	cl818wz	-87.4	0	0	5	5	7359.6	
8	4	2285	5	10	3	250.00	-3000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	2411	5	10	3	250.00	-3000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	3923	5	10	3	250.00	-3000.0	-5000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	1676	10	10	3	250.00	-5000.0	-3000.0	0.15	-0.15	-25.0	-20.0	3700.0	CL818OR	-40.5	0	0	4	4	3568.7	cl818wz	-40.5	0	0	4	4	3568.7	
8	4	6212	10	10	3	250.00	-5000.0	-3000.0	0.15	-0.15	-25.0	-20.0	7500.0	CL818OR	-40.5	0	0	5	5	7368.8	cl818wz	-40.5	0	0	5	5	7368.8	
8	4	1655	10	10	3	250.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-20.0	3700.0	CL818OR	-84.1	0	0	4	4	3579.5	cl818wz	-84.1	0	0	4	4	3579.5	
8	4	6191	10	10	3	250.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-20.0	7500.0	CL818OR	-98.6	0	0	4	4	3739.5	cl818wz	-98.6	0	0	4	4	3739.5	
8	4	1641	10	10	3	250.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-30.0	3700.0	CL818OR	-26.0	0	0	4	4	3568.7	cl818wz	-26.0	0	0	4	4	3568.7	
8	4	6177	10	10	3	250.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-30.0	7500.0	CL818OR	-40.5	0	0	5	5	7368.8	cl818wz	-40.5	0	0	5	5	7368.8	
8	4	1774	10	10	3	250.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-25.0	3700.0	CL818OR	-26.0	0	0	4	4	3568.7	cl818wz	-26.0	0	0	4	4	3568.7	
8	4	1907	10	10	3	250.00	-5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL818OR	-26.0	0	0	4	4	3568.7	cl818wz	-26.0	0	0	4	4	3568.7	
8	4	6443	10	10	3	250.00	-5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	CL818OR	-40.5	0	0	5	5	7368.8	cl818wz	-40.5	0	0	5	5	7368.8	
8	4	3293	10	10	3	250.00	-5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL818OR	-67.7	0	0	4	4	3527.1	cl818wz	-67.7	0	0	4	4	3527.1	
8	4	1143	5	10	3	500.00	-1000.0	-5000.0	0.05	-0.15	-25.0	-25.0	3700.0	CL818OR	62.6	1	0	4	4	3485.4	cl818wz	62.6	1	0	4	4	3485.4	
8	4	5679	10	10	3	500.00	-1000.0	-5000.0	0.05	-0.15	-25.0	-25.0	7500.0	CL818OR	-53.3	0	0	5	5	7254.5	cl818wz	-53.3	0	0	5	5	7254.5	
8	4	1136	10	10	3	500.00	-1000.0	-5000.0	0.05	-0.15	-25.0	-30.0	3700.0	CL818OR	-39.4	0	0	4	4	3443.8	cl818wz	-39.4	0	0	4	4	3443.8	
8	4	1276	10	10	3	500.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	CL818OR	44.0	1	0	4	4	3527.1	cl818wz	44.0	1	0	4	4	3527.1	
8	4	5812	10	10	3	500.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL818OR	48.1	1	0	5	5	7285.4	cl818wz	48.1	1	0	5	5	7285.4	
8	4	5812	10	5	10	500.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL818OR	-80.5	0	0	5	5	7285.4	cl818wz	-80.5	0	0	5	5	7285.4	
8	4	1269	10	10	3	500.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-25.0	3700.0	CL818OR	-39.4	0	0	4	4	3443.8	cl818wz	-39.4	0	0	4	4	3443.8	
8	4	1402	10	10	3	500.00	-1000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	CL818OR	-39.4	0	0	4	4	3443.8	cl818wz	-39.4	0	0	4	4	3443.8	
8	4	5938	10	10	3	500.00	-1000.0	-5000.0	0.05	-0.35	-25.0	-20.0	7500.0	CL818OR	-53.8	0	0	5	5	7243.8	cl818wz	-53.8	0	0	5	5	7243.8	
8	4	2655	10	10	3	500.00	-1000.0	-5000.0	0.15	-0.15	-25.0	-25.0	3700.0	CL818OR	-38.8	0	0	4	4	3454.5	cl818wz	-38.8	0	0	4	4	3454.5	
8	4	7191	10	10	3	500.00	-1000.0	-5000.0	0.15	-0.15	-25.0	-25.0	7500.0	CL818OR	-53.3	0	0	5	5	7254.5	cl818wz	-53.3	0	0	5	5	7254.5	
8	4	2788	10	10	3	500.00	-1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL818OR	62.6	1	0	4	4	3485.4	cl818wz	62.6	1	0	4	4	3485.4	
8	4	2788	10	5	10	500.00	-1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL818OR	-66.1	0	0	4	4	3485.4	cl818wz	-66.1	0	0	4	4	3485.4	
8	4	7324	10	10	3	500.00	-1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	CL818OR	48.2	1	0	5	5	7285.4	cl818wz	48.2	1	0	5	5	7285.4	
8	4	7324	10	5	10	500.00	-1000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	CL818OR	-80.5	0	0	5	5	7285.4	cl818wz	-80.5	0	0	5	5	7285.4	
8	4	2914	5	10	3	500.00	-1000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL818OR	-39.4	0	0	4	4	3443.8	cl818wz	-39.4	0	0	4	4	3443.8	
8	4	7450	10	10	3	500.00	-1000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	CL818OR	-53.8	0	0	5	5	7243.8	cl818wz	-53.8	0	0	5	5	7243.8	
8	4	4167	10	10	3	500.00	-1000.0	-5000.0	0.25	-0.15	-25.0	-25.0	3700.0	CL818OR	-38.8	0	0	4	4	3454.5	cl818wz	-38.8	0	0	4	4	3454.5	
8	4	8703	10	10	3	500.00	-1000.0	-5000.0	0.25	-0.15	-25.0	-25.0	7500.0	CL818OR	-53.3	0	0	5	5	7254.5	cl818wz	-53.3	0	0	5	5	7254.5	
8	4	4300	10	10	3	500.00	-1000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL818OR	62.6	1	0	4	4	3485.4	cl818wz	62.6	1	0	4	4	3485.4	
8	4	4300	10	5	10	500.00	-1000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL818OR	-66.1	0	0	4	4	3485.4	cl818wz	-66.1	0	0	4	4	3485.4	
8	4	8836	10	10	3	500.00	-1000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL818OR	48.2	1	0	5	5	7285.4	cl818wz	48.2	1	0	5	5	7285.4	
8	4	8836	10	5	10	500.00	-1000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL818OR	-80.5	0	0	5	5	7285.4	cl818							

CLS	REIT	ModeS	#1	#2	R,C	R,C	CPA	Alt	AC#1	AC#2	AC#1	AC#2	AC#1	AC#2	AC #1	Cell 3,3					Cell 4,4										
																Data	Achieved	C	I	RAS	Own	Alt	Data	Achieved	C	I	RAS	Own	Alt		
TBL							Separat	Rate	Rate	Acc.	Acc.	Time	Time	CPA	Alt	File	Separatn	N	C	1	2	CPA	Ach	File	Separatn	N	C	1	2	CPA	Ach
8	4	8199	5	10			500.00	-3000.0	-5000.0	0.25	-0.15	-25.0	-25.0	7500.0	CL8180R	-53.3	0	0	5	5	7254.5		cl818wz	-53.3	0	0	5	5	7254.5		
8	4	3796	5	10			500.00	-3000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL8180R	62.6	1	0	4	4	3485.4		cl818wz	62.6	1	0	4	4	3485.4		
8	4	3796	10	10			500.00	-3000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL8180R	-66.1	0	0	4	4	3485.4		cl818wz	-66.1	0	0	4	4	3485.4		
8	4	8332	5	10			500.00	-3000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL8180R	48.1	1	0	5	5	7285.4		cl818wz	48.1	1	0	5	5	7285.4		
8	4	8332	10	10			500.00	-3000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL8180R	-80.5	0	0	5	5	7285.4		cl818wz	-80.5	0	0	5	5	7285.4		
8	4	3922	5	10			500.00	-3000.0	-5000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL8180R	-39.4	0	0	4	4	3443.8		cl818wz	-39.4	0	0	4	4	3443.8		
8	4	8458	5	10			500.00	-3000.0	-5000.0	0.25	-0.35	-25.0	-20.0	7500.0	CL8180R	-53.8	0	0	5	5	7243.8		cl818wz	-53.8	0	0	5	5	7243.8		
8	4	1675	10	10			500.00	-5000.0	-3000.0	0.15	-0.15	-25.0	-20.0	3700.0	CL8180R	55.2	1	0	4	4	3527.1		cl818wz	55.2	1	0	4	4	3527.1		
8	4	6211	5	10			500.00	-5000.0	-3000.0	0.15	-0.15	-25.0	-20.0	7500.0	CL8180R	-86.5	0	0	5	5	7239.2		cl818wz	-86.5	0	0	5	5	7239.2		
8	4	1801	5	10			500.00	-5000.0	-3000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL8180R	-18.2	0	0	4	4	3439.2		cl818wz	-18.2	0	0	4	4	3439.2		
8	4	1801	10	10			500.00	-5000.0	-3000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL8180R	-86.5	0	0	4	4	3439.2		cl818wz	-86.5	0	0	4	4	3439.2		
8	4	6337	5	10			500.00	-5000.0	-3000.0	0.15	-0.25	-25.0	-20.0	7500.0	CL8180R	-18.2	0	0	5	5	7239.2		cl818wz	-18.2	0	0	5	5	7239.2		
8	4	6337	10	10			500.00	-5000.0	-3000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL8180R	-92.4	0	0	4	4	3443.7		cl818wz	-92.4	0	0	4	4	3443.7		
8	4	3313	5	10			500.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-25.0	3700.0	CL8180R	45.1	1	0	4	4	3527.1		cl818wz	45.1	1	0	4	4	3527.1		
8	4	1647	10	10			500.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-25.0	7500.0	CL8180R	45.1	1	0	5	5	7327.1		cl818wz	45.1	1	0	5	5	7327.1		
8	4	6183	5	10			500.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-25.0	3700.0	CL8180R	-72.4	0	0	4	4	3385.0		cl818wz	-72.4	0	0	4	4	3385.0		
8	4	1640	5	10			500.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-30.0	3700.0	CL8180R	-72.4	0	0	5	5	7185.0		cl818wz	-72.4	0	0	5	5	7185.0		
8	4	1640	10	10			500.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-30.0	3700.0	CL8180R	13.6	0	0	4	4	3485.4		cl818wz	13.6	0	0	4	4	3485.4		
8	4	6176	5	10			500.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-30.0	7500.0	CL8180R	-72.4	0	0	5	5	7285.4		cl818wz	-72.4	0	0	5	5	7285.4		
8	4	6176	10	10			500.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-30.0	7500.0	CL8180R	13.6	0	0	5	5	7285.4		cl818wz	13.6	0	0	5	5	7285.4		
8	4	1780	5	10			500.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-20.0	3700.0	CL8180R	42.2	1	0	4	4	3439.2		cl818wz	42.2	1	0	4	4	3439.2		
8	4	6316	5	10			500.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-20.0	7500.0	CL8180R	42.2	1	0	5	5	7239.2		cl818wz	42.2	1	0	5	5	7239.2		
8	4	6309	5	10			500.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-25.0	7500.0	CL8180R	13.6	0	0	5	5	7285.4		cl818wz	13.6	0	0	5	5	7285.4		
8	4	1906	5	10			500.00	-5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL8180R	-18.2	0	0	4	4	3439.2		cl818wz	-18.2	0	0	4	4	3439.2		
8	4	1906	10	10			500.00	-5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL8180R	13.6	0	0	4	4	3485.4		cl818wz	13.6	0	0	4	4	3485.4		
8	4	6442	5	10			500.00	-5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	CL8180R	-18.2	0	0	5	5	7239.2		cl818wz	-18.2	0	0	5	5	7239.2		
8	4	6442	10	10			500.00	-5000.0	-5000.0	0.15	-0.35	-25.0	-20.0	7500.0	CL8180R	13.6	0	0	5	5	7285.4		cl818wz	13.6	0	0	5	5	7285.4		
8	4	6435	5	10			500.00	-5000.0	-5000.0	0.15	-0.35	-25.0	-25.0	7500.0	CL8180R	-18.2	0	0	5	5	7239.2		cl818wz	-18.2	0	0	5	5	7239.2		
8	4	6435	10	10			500.00	-5000.0	-5000.0	0.15	-0.35	-25.0	-25.0	7500.0	CL8180R	-86.5	0	0	5	5	7239.2		cl818wz	-86.5	0	0	5	5	7239.2		
8	4	3159	5	10			500.00	-5000.0	-5000.0	0.25	-0.15	-25.0	-25.0	3700.0	CL8180R	62.6	1	0	4	4	3485.4		cl818wz	62.6	1	0	4	4	3485.4		
8	4	7695	5	10			500.00	-5000.0	-5000.0	0.25	-0.15	-25.0	-25.0	7500.0	CL8180R	48.2	1	0	5	5	7285.4		cl818wz	48.2	1	0	5	5	7285.4		
8	4	3152	5	10			500.00	-5000.0	-5000.0	0.25	-0.15	-25.0	-30.0	3700.0	CL8180R	-39.4	0	0	4	4	3443.7		cl818wz	-39.4	0	0	4	4	3443.7		
8	4	3292	5	10			500.00	-5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL8180R	44.0	1	0	4	4	3527.1		cl818wz	44.0	1	0	4	4	3527.1		
8	4	7828	5	10			500.00	-5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL8180R	29.5	1	0	5	5	7327.1		cl818wz	29.5	1	0	5	5	7327.1		
8	4	3418	5	10			500.00	-5000.0	-5000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL8180R	-39.4	0	0	4	4	3443.7		cl818wz	-39.4	0	0	4	4	3443.7		
8	4	7954	5	10			500.00	-5000.0	-5000.0	0.25	-0.35	-25.0	-20.0	7500.0	CL8180R	-53.8	0	0	5	5	7243.8		cl818wz	-53.8	0	0	5	5	7243.8		
8	4	1135	5	10			750.00	-1000.0	-5000.0	0.05	-0.15	-25.0	-30.0	3700.0	CL8180R	-70.6	0	0	4	4	3360.4		cl818wz	-70.6	0	0	4	4	3360.4		
8	4	1275	5	10			750.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL8180R	68.4	1	0	4	4	3402.1		cl818wz	68.4	1	0	4	4	3402.1		
8	4	5811	5	10			750.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-25.0	3700.0	CL8180R	47.5	0	0	5	5	7202.1		cl818wz	47.5	0	0	5	5	7202.1		
8	4	1268	5	10			750.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-25.0	3700.0	CL8180R	47.5	0	0	4	4	3402.1		cl818wz	47.5	0	0	4	4	3402.1		
8	4	1268	10	10			750.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-25.0	3700.0	CL8180R	-92.4	0	0	4	4	3402.1		cl818wz	-92.4	0	0	4	4	3402.1		
8	4	5804	5	10			750.00	-1000.0	-5000.0	0.05	-0.25	-25.0	-25.0	7500.0	CL8180R	-70.6	0	0	5	5	7160.4		cl818wz	-70.6	0	0	5	5	7160.4		
8	4	1401	5	10			750.00	-1000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	CL8180R	47.5	0	0	4	4	3402.1		cl818wz	47.5	0	0	4	4	3402.1		
8	4	1401	10	10			750.00	-1000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	CL8180R	-92.4	0	0	4	4	3402.1		cl818wz	-92.4	0	0	4	4	3402.1		
8	4	5937	5	10			750.00	-1000.0	-5000.0	0.05	-0.35	-25.0	-20.0	7500.0	CL8180R	47.5	0	0	5	5	7202.1		cl818wz	47.5	0	0	5	5	7202.1		
8	4	2780	5	10			750.00	-1000.0	-5000.0	0.15	-0.35	-25.0	-25.0	3700.0	CL8180R	-70.6	0	0	4	4	3360.4		cl818wz	-70.6	0	0	4	4	3360.4		
8	4	2913	5	10			750.00	-1000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL8180R	47.5	0	0	4	4	3402.1		cl818wz	47.5	0	0	4	4	3402.1		
8	4	2913	10	10			750.00	-1000.0	-5000.0	0.15	-0.35	-25.0	-20.0	3700.0	CL8180R	-92.4	0	0	4	4	3402.										

CLS	REIT	Mode	S				CPA Alt	AC#1	AC#2	AC#1	AC#2	AC #1	Cell 3,3					Cell 4,4										
			#1	#2	R,C	R,C							Rate	Rate	Acc.	Acc.	Time	Time	CPA Alt	Data File	Achieved	C I	RAS	Own	Alt	Data File	Achieved	C I	RAS	Own	Alt
8 4	8331	5	10	3	3	4 4	750.00	-3000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL818OR	-99.1	0	0	5	5	7160.4	cl818wz	-99.1	0	0	5	5	7160.4
8 4	3788	5	10	3	3	4 4	750.00	-3000.0	-5000.0	0.25	-0.25	-25.0	-25.0	3700.0	CL818OR	-70.6	0	0	4	4	3360.4	cl818wz	-70.6	0	0	4	4	3360.4
8 4	3921	5	10	3	3	4 4	750.00	-3000.0	-5000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL818OR	47.5	0	0	4	4	3402.1	cl818wz	47.5	0	0	4	4	3402.1
8 4	3921	10	5	3	3	4 4	750.00	-3000.0	-5000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL818OR	-92.4	0	0	4	4	3402.1	cl818wz	-92.4	0	0	4	4	3402.1
8 4	8457	5	10	3	3	4 4	750.00	-3000.0	-5000.0	0.25	-0.35	-25.0	-20.0	7500.0	CL818OR	47.5	0	0	5	5	7202.1	cl818wz	47.5	0	0	5	5	7202.1
8 4	1653	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-20.0	3700.0	CL818OR	17.8	0	0	4	4	3485.4	cl818wz	17.8	0	0	4	4	3485.4
8 4	6189	5	10	3	3	4 4	750.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-20.0	7500.0	CL818OR	95.4	1	0	5	5	7239.2	cl818wz	95.4	1	0	5	5	7239.2
8 4	1646	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-25.0	3700.0	CL818OR	-64.2	0	0	4	4	3385.0	cl818wz	-64.2	0	0	4	4	3385.0
8 4	6182	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.15	-0.15	-25.0	-25.0	7500.0	CL818OR	-64.2	0	0	5	5	7185.0	cl818wz	-64.2	0	0	5	5	7185.0
8 4	1772	5	10	3	3	4 4	750.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-25.0	3700.0	CL818OR	-14.5	0	0	4	4	3337.6	cl818wz	-11.0	0	0	4	4	3341.1
8 4	1772	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-25.0	3700.0	CL818OR	-99.0	0	0	4	4	3337.6	cl818wz	-95.5	0	0	4	4	3341.1
8 4	6308	5	10	3	3	4 4	750.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-25.0	7500.0	CL818OR	-14.5	0	0	5	5	7137.7	cl818wz	-11.0	0	0	5	5	7141.2
8 4	6308	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.15	-0.25	-25.0	-25.0	7500.0	CL818OR	-99.0	0	0	5	5	7137.7	cl818wz	-95.5	0	0	5	5	7141.2
8 4	3151	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.25	-0.15	-25.0	-30.0	3700.0	CL818OR	-28.9	1	0	4	4	3402.1	cl818wz	-28.9	1	0	4	4	3402.1
8 4	7687	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.25	-0.15	-25.0	-30.0	7500.0	CL818OR	-28.9	1	0	5	5	7202.1	cl818wz	-28.9	1	0	5	5	7202.1
8 4	3291	5	10	3	3	4 4	750.00	-5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL818OR	68.4	1	0	4	4	3402.1	cl818wz	68.4	1	0	4	4	3402.1
8 4	3291	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	3700.0	CL818OR	-36.5	1	0	4	4	3402.1	cl818wz	-36.5	1	0	4	4	3402.1
8 4	7827	5	10	3	3	4 4	750.00	-5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL818OR	-99.1	0	0	5	5	7160.4	cl818wz	-99.1	0	0	5	5	7160.4
8 4	7827	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.25	-0.25	-25.0	-20.0	7500.0	CL818OR	-57.4	0	0	5	5	7202.1	cl818wz	-57.4	0	0	5	5	7202.1
8 4	3417	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.25	-0.35	-25.0	-20.0	3700.0	CL818OR	12.8	1	0	4	4	3443.7	cl818wz	12.8	1	0	4	4	3443.7
8 4	7953	10	5	3	3	4 4	750.00	-5000.0	-5000.0	0.25	-0.35	-25.0	-20.0	7500.0	CL818OR	12.8	1	0	5	5	7243.8	cl818wz	12.8	1	0	5	5	7243.8
8 4	1384	5	10	3	3	4 4	-250.00	-1000.0	5000.0	0.05	0.25	-25.0	-20.0	3700.0	CL818OR	67.7	0	0	4	4	3872.9	cl818wz	67.7	0	0	4	4	3872.9
8 4	2896	5	10	3	3	4 4	-250.00	-1000.0	5000.0	0.15	0.25	-25.0	-20.0	3700.0	CL818OR	67.7	0	0	4	4	3872.9	cl818wz	67.7	0	0	4	4	3872.9
8 4	3022	5	10	3	3	4 4	-250.00	-1000.0	5000.0	0.15	0.35	-25.0	-20.0	3700.0	CL818OR	67.7	0	0	4	4	3872.9	cl818wz	67.7	0	0	4	4	3872.9
8 4	4408	5	10	3	3	4 4	-250.00	-1000.0	5000.0	0.25	0.25	-25.0	-20.0	3700.0	CL818OR	67.7	0	0	4	4	3872.9	cl818wz	67.7	0	0	4	4	3872.9
8 4	4534	5	10	3	3	4 4	-250.00	-1000.0	5000.0	0.25	0.35	-25.0	-20.0	3700.0	CL818OR	67.7	0	0	4	4	3872.9	cl818wz	67.7	0	0	4	4	3872.9
8 4	3904	5	10	3	3	4 4	-250.00	-3000.0	5000.0	0.25	0.25	-25.0	-20.0	3700.0	CL818OR	67.7	0	0	4	4	3872.9	cl818wz	67.7	0	0	4	4	3872.9
8 4	4030	5	10	3	3	4 4	-500.00	-3000.0	5000.0	0.25	0.35	-25.0	-20.0	3700.0	CL818OR	67.7	0	0	4	4	3872.9	cl818wz	67.7	0	0	4	4	3872.9
8 4	1385	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.05	0.25	-25.0	-20.0	3700.0	CL818OR	39.4	0	0	4	4	3956.2	cl818wz	39.4	0	0	4	4	3956.2
8 4	5921	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.05	0.25	-25.0	-20.0	7500.0	CL818OR	53.8	0	0	5	5	7756.2	cl818wz	53.8	0	0	5	5	7756.2
8 4	1511	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.05	0.35	-25.0	-20.0	3700.0	CL818OR	39.4	0	0	4	4	3956.2	cl818wz	39.4	0	0	4	4	3956.2
8 4	2764	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.15	0.15	-25.0	-25.0	3700.0	CL818OR	38.8	0	0	4	4	3945.5	cl818wz	38.8	0	0	4	4	3945.5
8 4	2897	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.15	0.25	-25.0	-20.0	3700.0	CL818OR	-62.6	1	0	4	4	3914.6	cl818wz	-62.6	1	0	4	4	3914.6
8 4	2897	10	5	3	3	4 4	-500.00	-1000.0	5000.0	0.15	0.25	-25.0	-20.0	3700.0	CL818OR	66.1	0	0	4	4	3914.6	cl818wz	66.1	0	0	4	4	3914.6
8 4	7433	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.15	0.25	-25.0	-20.0	7500.0	CL818OR	-48.2	1	0	5	5	7714.6	cl818wz	-48.2	1	0	5	5	7714.6
8 4	7433	10	5	3	3	4 4	-500.00	-1000.0	5000.0	0.15	0.25	-25.0	-20.0	7500.0	CL818OR	80.5	0	0	5	5	7714.6	cl818wz	80.5	0	0	5	5	7714.6
8 4	3023	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.15	0.35	-25.0	-20.0	3700.0	CL818OR	39.4	0	0	4	4	3956.2	cl818wz	39.4	0	0	4	4	3956.2
8 4	7559	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.15	0.35	-25.0	-20.0	7500.0	CL818OR	53.8	0	0	5	5	7756.2	cl818wz	53.8	0	0	5	5	7756.2
8 4	4276	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.25	0.15	-25.0	-25.0	3700.0	CL818OR	38.8	0	0	4	4	3945.5	cl818wz	38.8	0	0	4	4	3945.5
8 4	4409	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.25	0.25	-25.0	-20.0	3700.0	CL818OR	-62.6	1	0	4	4	3914.6	cl818wz	-62.6	1	0	4	4	3914.6
8 4	4409	10	5	3	3	4 4	-500.00	-1000.0	5000.0	0.25	0.25	-25.0	-20.0	3700.0	CL818OR	66.1	0	0	4	4	3914.6	cl818wz	66.1	0	0	4	4	3914.6
8 4	8945	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.25	0.25	-25.0	-20.0	7500.0	CL818OR	-48.2	1	0	5	5	7714.6	cl818wz	-48.2	1	0	5	5	7714.6
8 4	8945	10	5	3	3	4 4	-500.00	-1000.0	5000.0	0.25	0.25	-25.0	-20.0	7500.0	CL818OR	80.5	0	0	5	5	7714.6	cl818wz	80.5	0	0	5	5	7714.6
8 4	4535	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.25	0.35	-25.0	-20.0	3700.0	CL818OR	39.4	0	0	4	4	3956.2	cl818wz	39.4	0	0	4	4	3956.2
8 4	9071	5	10	3	3	4 4	-500.00	-1000.0	5000.0	0.25	0.35	-25.0	-20.0	7500.0	CL818OR	53.8	0	0	5	5	7756.2	cl818wz	53.8	0	0	5	5	7756.2
8 4	881	5	10	3	3	4 4	-500.00	-3000.0	5000.0	0.05	0.25	-25.0	-20.0	3700.0	CL818OR	36.8	0	0	4	4	3979.4	cl818wz	36.8	0	0	4	4	3979.4
8 4	3905	5	10	3	3	4 4	-500.00	-3000.0	5000.0	0.25	0.25	-25.0	-20.0	3700.0	CL818OR	-62.6	1	0	4	4	3914.6	cl818wz	-62.6	1	0	4	4	3914.6
8 4	3905	10	5	3	3	4 4	-500.00	-3000.0	5000.0	0.25	0.25	-25.0	-20.0	3700.0	CL818OR	66.1	0	0	4	4	3914.6	cl818wz	66.1	0	0	4	4	3914.6
8 4	4031	5	10	3	3	4 4	-500.00	-3000.0	5000.0	0.25	0.35	-25.0	-20.0	3700.0	CL818OR	39.4	0	0	4	4	3956.2	cl818wz	39.4</					

CLS TBL	REIT	Modes				CPA Alt Separat	AC#1 Rate	AC#2 Rate	AC#1 Acc.	AC#2 Acc.	AC#1 Time	AC#2 Time	AC #1 CPA Alt	Cell 3,3				Data File	Achieved Separatn	C I N C	RAS 1 2	Own Alt CPA Ach	Cell 4,4				Data File	Achieved Separatn	C I N C	RAS 1 2	Own Alt CPA Ach	
		#1	#2	R,C	R,C									1	2	3	4						1	2	3	4						1	2	3	4
16 4	2491	5	10	3	3	4	4	-500.00	1000.0	-3000.0	0.00	0.35	0.0	-25.0	3720.0	cl616oq	-85.4	1	1	4	4	4045.0	cl616xz	-85.4	1	1	4	4	4045.0			
16 4	-----	3	3	4	4	4	4	Subtotal	=	1	NMACs																					
17 4	7422	10	5	5	3	3		500.00	5000.0	5000.0	0.15	0.25	-25.0	-25.0	7500.0	cl717p	-78.0	0	1	5	5	6922.0										
17 4	2879	5	10	5	3	3		500.00	5000.0	5000.0	0.15	0.25	-25.0	-30.0	3700.0	CL7170	-52.8	0	1	4	3	3160.6										
17 4	2879	10	5	5	3	3		500.00	5000.0	5000.0	0.15	0.25	-25.0	-30.0	3700.0	cl717p	69.4	0	1	4	3	3282.8										
17 4	3012	5	10	5	3	3		500.00	5000.0	5000.0	0.15	0.35	-25.0	-25.0	3700.0	CL7170	-57.1	0	1	4	3	3142.9										
17 4	3012	10	5	5	3	3		500.00	5000.0	5000.0	0.15	0.35	-25.0	-25.0	3700.0	cl717p	65.2	0	1	4	3	3265.1										
17 4	3005	5	10	5	3	3		500.00	5000.0	5000.0	0.15	0.35	-25.0	-30.0	3700.0	CL7170	-46.6	0	1	4	3	3160.6										
17 4	3005	10	5	5	3	3		500.00	5000.0	5000.0	0.15	0.35	-25.0	-30.0	3700.0	cl717p	75.7	0	1	4	3	3282.8										
17 4	-----	3	3	4	4	4	4	Subtotal	=	7	NMACs																					
17 4	4518	10	5	5	3	3	4	4	250.00	5000.0	5000.0	0.25	0.35	-25.0	-30.0	3700.0	cl717p	-97.4	0	1	3	3	3359.8	cl717wz	-97.4	0	1	3	3	3359.8		
17 4	2739	5	10	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.15	-25.0	-25.0	3700.0	CL7170	-57.1	0	0	4	3	3142.9	cl717wz	-57.1	0	0	4	3	3142.9		
17 4	2739	10	5	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.15	-25.0	-25.0	3700.0	cl717p	65.1	1	1	4	3	3265.1	cl717wz	65.1	1	1	4	3	3265.1		
17 4	2732	5	10	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.15	-25.0	-30.0	3700.0	CL7170	-33.0	0	1	4	3	3175.1	cl717wz	-33.0	0	1	4	3	3175.1		
17 4	2732	10	5	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.15	-25.0	-30.0	3700.0	cl717p	89.3	1	1	4	3	3297.3	cl717wz	89.3	1	1	4	3	3297.3		
17 4	2865	5	10	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.25	-25.0	-25.0	3700.0	CL7170	-34.7	0	1	4	3	3175.1	cl717wz	-34.7	0	1	4	3	3175.1		
17 4	2865	10	5	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.25	-25.0	-25.0	3700.0	cl717p	87.6	1	1	4	3	3297.3	cl717wz	87.6	1	1	4	3	3297.3		
17 4	2858	5	10	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.25	-25.0	-30.0	3700.0	CL7170	-26.9	0	1	4	3	3175.1	cl717wz	-26.9	0	1	4	3	3175.1		
17 4	2858	10	5	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.25	-25.0	-30.0	3700.0	cl717p	95.3	1	1	4	3	3297.3	cl717wz	95.3	1	1	4	3	3297.3		
17 4	2991	5	10	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.35	-25.0	-25.0	3700.0	CL7170	-41.8	0	1	4	3	3175.1	cl717wz	-41.8	0	1	4	3	3175.1		
17 4	2991	10	5	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.35	-25.0	-25.0	3700.0	cl717p	80.5	1	1	4	3	3297.3	cl717wz	80.5	1	1	4	3	3297.3		
17 4	2984	5	10	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.35	-25.0	-30.0	3700.0	CL7170	-39.4	0	1	4	3	3160.6	cl717wz	-39.4	0	1	4	3	3160.6		
17 4	2984	10	5	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.35	-25.0	-30.0	3700.0	cl717p	82.8	1	1	4	3	3282.8	cl717wz	82.8	1	1	4	3	3282.8		
17 4	2886	5	10	5	3	3	4	4	500.00	5000.0	3000.0	0.15	0.25	-25.0	-25.0	3700.0	CL7170	-57.1	0	1	4	3	3142.9	cl717wz	-57.1	0	1	4	3	3142.9		
17 4	-----	3	3	4	4	4	4	Subtotal	=	14	NMACs																					
18 4	4804	5	10	5	3	3	4	4	500.00	-5000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL818OR	53.0	1	1	5	5	7368.3									
18 4	1576	10	5	5	3	3	4	4	750.00	-5000.0	1000.0	0.15	0.05	-25.0	-30.0	3700.0	CL818OR	-33.6	0	1	4	3	3263.7									
18 4	3130	10	5	5	3	3	4	4	750.00	-5000.0	5000.0	0.25	0.05	-25.0	-30.0	3700.0	CL818OR	67.3	0	1	4	4	3568.8									
18 4	1541	10	5	5	3	3	4	4	750.00	-5000.0	-3000.0	0.15	-0.05	-25.0	-25.0	3700.0	CL818OR	-44.7	0	1	4	4	3385.0									
18 4	6077	5	10	5	3	3	4	4	750.00	-5000.0	-3000.0	0.15	-0.05	-25.0	-25.0	7500.0	CL818OR	73.2	1	1	5	5	7185.0									
18 4	6077	10	5	5	3	3	4	4	750.00	-5000.0	-3000.0	0.15	-0.05	-25.0	-25.0	7500.0	CL818OR	-44.7	0	1	5	5	7185.0									
18 4	267	10	5	5	3	3	4	4	750.00	-5000.0	-5000.0	0.05	-0.25	-25.0	-20.0	3700.0	CL818OR	-63.8	0	1	4	4	3543.7									
18 4	4803	10	5	5	3	3	4	4	750.00	-5000.0	-5000.0	0.05	-0.25	-25.0	-20.0	7500.0	CL818OR	-84.7	0	1	5	5	7343.7									
18 4	393	10	5	5	3	3	4	4	750.00	-5000.0	-5000.0	0.05	-0.35	-25.0	-20.0	3700.0	CL818OR	49.2	0	1	4	4	3543.7									
18 4	4929	10	5	5	3	3	4	4	750.00	-5000.0	-5000.0	0.05	-0.35	-25.0	-20.0	7500.0	CL818OR	28.2	0	1	5	5	7343.7									
18 4	1520	10	5	5	3	3	4	4	750.00	-5000.0	-5000.0	0.15	-0.05	-25.0	-25.0	3700.0	CL818OR	-44.7	0	1	4	4	3385.0									
18 4	6056	5	10	5	3	3	4	4	750.00	-5000.0	-5000.0	0.15	-0.05	-25.0	-25.0	7500.0	CL818OR	73.2	1	1	5	5	7185.0									
18 4	6056	10	5	5	3	3	4	4	750.00	-5000.0	-5000.0	0.15	-0.05	-25.0	-25.0	7500.0	CL818OR	-44.7	0	1	5	5	7185.0									
18 4	-----	3	3	4	4	4	4	Subtotal	=	13	NMACs																					
18 4	1550	5	10	3	3	4	4	250.00	-5000.0	-3000.0	0.15	-0.05	-25.0	-20.0	3700.0	CL818OR	-100.4	0	0	4	4	3537.8	cl818wz	-100.4	0	0	4	4	3537.8			
18 4	1529	5	10	3	3	4	4	250.00	-5000.0	-5000.0	0.15	-0.05	-25.0	-20.0	3700.0	CL818OR	-100.4	0	0	4	4	3537.8	cl818wz	-100.4	0	0	4	4	3537.8			
18 4	3593	10	5	5	3	4	4	500.00	-3000.0	1000.0	0.25	0.05	-25.0	-30.0	3700.0	CL818OR	85.4	1	1	4	4	3610.4	cl818wz	85.4	1	1	4	4	3610.4			
18 4	3726	10	5	5	3	4	4	500.00	-3000.0	1000.0	0.25	0.15	-25.0	-25.0	3700.0	CL818OR	85.4	1	1	4	4	3610.4	cl818wz	85.4	1	1	4	4	3610.4			
18 4	3852	10	5	5	3	4	4	500.00	-3000.0	1000.0	0.25	0.25	-25.0	-25.0	3700.0	CL818OR	85.4	1	1	4	4	3610.4										

CLS	REIT	ModeS	#1	#2	R,C	R,C	CPA Alt	AC#1	AC#2	AC#1	AC#2	AC #1	Cell 3,3					Cell 4,4													
													Data	Achieved	C	I	RAS	Own	Alt	Data	Achieved	C	I	RAS	Own	Alt					
TBL							Separat	Rate	Rate	Acc.	Acc.	Time	Time	CPA	Alt	File	Separatn	N	C	1	2	CPA	Ach	File	Separatn	N	C	1	2	CPA	Ach
19 4 4322 10 5 3 3 3 750.00 1000.0 3000.0 -0.05 -0.25 -25.0 -30.0 7500.0 cl919or -71.3 0 1 5 5 6851.6																															
19 4 6275 5 5 10 3 3 750.00 1000.0 3000.0 -0.15 -0.25 -25.0 -25.0 7500.0 cl919or 12.9 0 1 5 5 6894.1																															
19 4 6437 5 5 10 3 3 750.00 1000.0 3000.0 -0.15 -0.35 -25.0 -25.0 7500.0 cl919or -34.9 0 1 5 5 6888.0																															
19 4 2909 5 5 10 3 3 750.00 3000.0 5000.0 -0.15 -0.15 -25.0 -20.0 3700.0 cl919or 60.2 0 1 4 3 3329.5																															
19 4 3071 5 5 10 3 3 750.00 3000.0 5000.0 -0.15 -0.25 -25.0 -20.0 3700.0 cl919or 76.8 0 1 4 4 3376.2																															
19 4 6959 5 5 10 3 3 750.00 3000.0 5000.0 -0.15 -0.25 -25.0 -20.0 7500.0 cl919or -8.5 0 1 5 5 7142.9																															
19 4 6959 10 5 5 3 3 750.00 3000.0 5000.0 -0.15 -0.25 -25.0 -20.0 7500.0 cl919or 66.5 0 1 5 5 7217.9																															
19 4 7121 5 5 10 3 3 750.00 3000.0 5000.0 -0.15 -0.35 -25.0 -20.0 7500.0 cl919or -5.7 0 1 5 5 7114.8																															
19 4 7121 10 5 5 3 3 750.00 3000.0 5000.0 -0.15 -0.35 -25.0 -20.0 7500.0 cl919or 64.0 0 1 5 5 7184.5																															
19 4 996 5 5 10 3 3 -250.00 3000.0 -5000.0 -0.05 0.25 -25.0 -20.0 3700.0 cl919or -28.9 1 1 4 4 3787.3																															
19 4 996 10 5 5 3 3 -250.00 3000.0 -5000.0 -0.05 0.25 -25.0 -20.0 3700.0 cl919or 93.5 0 1 4 4 3787.3																															
19 4 1158 5 5 10 3 3 -250.00 3000.0 -5000.0 -0.05 0.35 -25.0 -20.0 3700.0 cl919or 73.3 0 1 4 4 3808.7																															
19 4 2940 5 5 10 3 3 -250.00 3000.0 -5000.0 -0.15 0.25 -25.0 -20.0 3700.0 cl919or -32.6 1 1 4 4 3786.1																															
19 4 2940 10 5 5 3 3 -250.00 3000.0 -5000.0 -0.15 0.25 -25.0 -20.0 3700.0 cl919or 50.7 0 1 4 4 3786.1																															
19 4 3282 10 5 5 3 3 -250.00 5000.0 -3000.0 -0.15 0.05 -25.0 -25.0 3700.0 cl919or 92.2 0 1 4 4 3889.2																															
19 4 3273 5 5 10 3 3 -250.00 5000.0 -3000.0 -0.15 0.05 -25.0 -30.0 3700.0 cl919or 59.7 0 1 4 4 3872.9																															
19 4 3273 10 5 5 3 3 -250.00 5000.0 -3000.0 -0.15 0.05 -25.0 -30.0 3700.0 cl919or 91.4 0 1 4 4 3872.9																															
19 4 3453 10 5 5 3 3 -250.00 5000.0 -3000.0 -0.15 0.15 -25.0 -20.0 3700.0 cl919or 96.7 0 1 4 4 3872.9																															
19 4 3426 5 5 10 3 3 -250.00 5000.0 -5000.0 -0.15 0.15 -25.0 -20.0 3700.0 cl919or 53.2 0 1 4 4 3862.2																															
19 4 3426 10 5 5 3 3 -250.00 5000.0 -5000.0 -0.15 0.15 -25.0 -20.0 3700.0 cl919or -19.4 0 1 4 4 3789.6																															
19 4 7305 10 5 5 3 3 -250.00 5000.0 -5000.0 -0.15 0.15 -25.0 -25.0 7500.0 cl919or 28.8 0 1 5 5 7631.2																															
19 4 3579 5 5 10 3 3 -250.00 5000.0 -5000.0 -0.15 0.25 -25.0 -25.0 3700.0 cl919or 29.7 0 1 4 4 3832.1																															
19 4 3579 10 5 5 3 3 -250.00 5000.0 -5000.0 -0.15 0.25 -25.0 -25.0 3700.0 cl919or 81.0 0 1 4 4 3832.1																															
19 4 3741 5 5 10 3 3 -250.00 5000.0 -5000.0 -0.15 0.35 -25.0 -25.0 3700.0 cl919or 70.5 0 1 4 4 3872.9																															
19 4 349 5 5 10 3 3 -500.00 1000.0 -5000.0 -0.05 0.25 -25.0 -20.0 3700.0 cl919or -12.9 0 1 4 4 3930.9																															
19 4 349 10 5 5 3 3 -500.00 1000.0 -5000.0 -0.05 0.25 -25.0 -20.0 3700.0 cl919or 0.6 0 1 4 4 3861.1																															
19 4 4237 5 5 10 3 3 -500.00 1000.0 -5000.0 -0.05 0.25 -25.0 -20.0 7500.0 cl919or 55.0 0 1 5 5 7757.1																															
19 4 4237 10 5 5 3 3 -500.00 1000.0 -5000.0 -0.05 0.25 -25.0 -20.0 7500.0 cl919or 82.2 0 1 5 5 7686.1																															
19 4 511 5 5 10 3 3 -500.00 1000.0 -5000.0 -0.05 0.35 -25.0 -20.0 3700.0 cl919or 1.7 0 1 4 4 3945.5																															
19 4 511 10 5 5 3 3 -500.00 1000.0 -5000.0 -0.05 0.35 -25.0 -20.0 3700.0 cl919or 74.3 0 1 4 4 3945.5																															
19 4 4399 5 5 10 3 3 -500.00 1000.0 -5000.0 -0.05 0.35 -25.0 -20.0 7500.0 cl919or 76.6 0 1 5 5 7778.7																															
19 4 2293 5 5 10 3 3 -500.00 1000.0 -5000.0 -0.15 0.25 -25.0 -20.0 3700.0 cl919or 55.1 0 1 4 4 3957.1																															
19 4 2293 10 5 5 3 3 -500.00 1000.0 -5000.0 -0.15 0.25 -25.0 -20.0 3700.0 cl919or 35.6 0 1 4 4 3886.1																															
19 4 6181 5 5 10 3 3 -500.00 1000.0 -5000.0 -0.15 0.25 -25.0 -20.0 7500.0 cl919or 55.0 0 1 5 5 7757.1																															
19 4 6181 10 5 5 3 3 -500.00 1000.0 -5000.0 -0.15 0.25 -25.0 -20.0 7500.0 cl919or 35.6 0 1 5 5 7686.1																															
19 4 2455 5 5 10 3 3 -500.00 1000.0 -5000.0 -0.15 0.35 -25.0 -20.0 3700.0 cl919or 1.7 0 1 4 4 3945.5																															
19 4 2455 10 5 5 3 3 -500.00 1000.0 -5000.0 -0.15 0.35 -25.0 -20.0 3700.0 cl919or 85.1 0 1 4 4 3945.5																															
19 4 4885 5 5 10 3 3 -500.00 3000.0 -5000.0 -0.05 0.25 -25.0 -20.0 7500.0 cl919or 76.7 0 1 5 5 7727.3																															
19 4 6829 5 5 10 3 3 -500.00 3000.0 -5000.0 -0.15 0.25 -25.0 -20.0 7500.0 cl919or 80.0 0 1 5 5 7782.1																															
19 4 6829 10 5 5 3 3 -500.00 3000.0 -5000.0 -0.15 0.25 -25.0 -20.0 7500.0 cl919or 28.8 0 1 5 5 7730.9																															
19 4 3859 10 5 5 3 3 -500.00 5000.0 3000.0 -0.15 -0.35 -25.0 -20.0 3700.0 cl919or -36.6 0 1 4 4 3914.6																															
19 4 3544 5 5 10 3 3 -500.00 5000.0 5000.0 -0.15 -0.15 -25.0 -30.0 3700.0 cl919or -36.6 0 1 4 4 3914.6																															
19 4 7432 5 5 10 3 3 -500.00 5000.0 5000.0 -0.15 -0.15 -25.0 -30.0 7500.0 cl919or 13.4 0 1 5 5 7714.6																															
19 4 3715 10 5 5 3 3 -500.00 5000.0 5000.0 -0.15 -0.25 -25.0 -25.0 3700.0 cl919or -36.6 0 1 4 4 3914.6																															
19 4 7603 5 5 10 3 3 -500.00 5000.0 5000.0 -0.15 -0.25 -25.0 -25.0 7500.0 cl919or 1.2 0 1 5 5 7815.0																															
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19 4 3292 10 5 5 3 3 -500.00 5000.0 -3000.0 -0.15 0.05 -25.0 -20.0 3700.0 cl919or 80.3 0 1 4 5 4102.8																															
19 4 7180 10 5 5 3 3 -500.00 5000.0 -3000.0 -0.15 0.05 -25.0 -20.0 7500.0 cl919or 80.3 0 1 5 5 7902.8																															
19 4 3454 5 5 10 3 3 -500.00 5000.0 -3000.0 -0.15 0.15 -25.0 -20.0 3700.0 cl919or 9.3 0 1 4 4 3992.8																															
19 4 3454 10 5 5 3 3 -500.00 5000.0 -3000.0 -0.15 0.15 -25.0 -20.0 3700.0 cl919or -18.9 0 1 4 4 3936.5																															
19 4 7342 10 5 5 3 3 -500.00 5000.0 -3000.0 -0.15 0.15 -25.0 -20.0 7500.0 cl919or 76.3 0 1 5 5 7792.8																															
19 4 3445 5 5 10 3 3 -500.00 5000.0 -3000.0 -0.15 0.15 -25.0 -25.0 3700.0 cl919or 73.5 0 1 4 4 4062.3																															
19 4 7333 5 5 10 3 3 -500.00 5000.0 -3000.0 -0.15 0.15 -25.0 -25.0 7500.0 cl919or 73.5 0 1 5 5 7862.4																															
19 4 3616 5 5 10 3 3 -500.00 5000.0 -3000.0 -0.15 0.25 -25.0 -20.0 3700.0 cl919or -7.8 0 1 4 4 4006.0																															
19 4 3616 10 5 5 3 3 -500.00 5000.0 -3000.0 -0.15 0.25 -25.0 -20.0 3700.0 cl919or 22.3 0 1 4 4 4006.0																															
19 4 7504 5 5 10 3 3 -500.00 5000.0 -3000.0 -0.15 0.25 -25.0 -20.0 7500.0 cl919or -7.8 0 1 5 5 7806.0																															
19 4 7504 10 5 5 3 3 -500.00 5000.0 -3000.0 -0.15 0.25 -25.0 -20.0 7500.0 cl919or 22.3 0 1 5 5 7806.0																															
19 4 3778 5 5 10 3 3 -500.00 5000.0 -3000.0 -0.15 0.35 -25.0 -20.0 3700.0 cl919or 65.9 0 1 4 4 4054.7																															
19 4 3778 10 5 5 3 3 -500.00 5000.0 -3000.0 -0.15 0.35 -25.0 -20.0 3700.0 cl919or 26.2 0 1 4 4 4015.0																															
19 4 7666 5 5 10 3 3 -500.00 5000.0 -3000.0 -0.15 0.35 -25.0 -20.0 7500.0 cl919or 65.9 0 1 5 5 7854.7																															
19 4 1645 5 5 10 3 3 -500.00 5000.0 -5000.0 -0.05 0.25 -25.0 -20.0 3700.0 cl919or -45.8 0 1 4 4 3856.3																															
19 4 1645 10 5 5 3 3 -500.00 5000.0 -5000.0 -0.05 0.25 -25.0 -20.0 3700.0 cl919or 5.8 0 1 4 4 3856.3																															
19 4 5533 10 5 5 3 3 -500.00 5000.0 -5000.0 -0.05 0.25 -25.0 -20.0 7500.0 cl919or 84.0 0 1 4 5 7682.7																															
19 4 1636 5 5 10 3 3 -500.00 5000.0 -5000.0 -0.05 0.25 -25.0 -25.0 3700.0 cl919or 22.3 0 1 4 4 3882.7																															

195

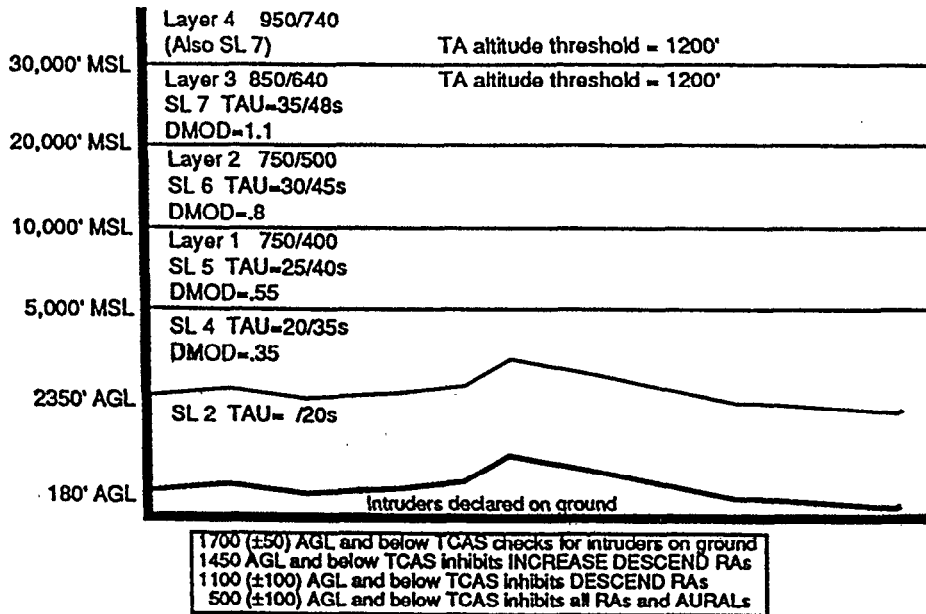
CLS	REIT	Modes	CPA	Alt	AC#1	AC#2	AC#1	AC#2	AC#1	AC#2	AC #1	Cell 3,3					Cell 4,4										
												TBL	#1	#2	R,C	R,C	Separat	Rate	Rate	Acc.	Acc.	Time	Time	CPA	Alt	Data	Achieved	C	I	RAS	Own	Alt	Data	Achieved	C	I	RAS	Own	Alt
19 4	5524	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7500.0	cl919or	92.0	0	1	5	5	7710.8							
19 4	1807	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3700.0	cl919or	-28.7	0	1	4	4	3831.7							
19 4	5695	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	7500.0	cl919or	22.2	0	1	5	5	7682.7							
19 4	5695	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	7500.0	cl919or	63.9	0	1	5	5	7682.7							
19 4	3418	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	-48.0	0	1	4	4	3926.0							
19 4	3418	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	-91.9	1	1	4	4	3882.1							
19 4	3409	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	3700.0	cl919or	-78.1	1	1	4	4	3960.8							
19 4	3409	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	3700.0	cl919or	-28.1	0	1	4	4	3960.8							
19 4	7297	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7500.0	cl919or	-7.9	0	1	5	5	7806.0							
19 4	7297	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7500.0	cl919or	42.1	0	1	5	5	7806.0							
19 4	3589	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	-78.1	1	1	4	4	3936.5							
19 4	7477	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7500.0	cl919or	-38.0	0	1	5	5	7736.5							
19 4	7477	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7500.0	cl919or	-79.2	0	1	5	5	7695.4							
19 4	3580	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	3700.0	cl919or	-78.1	1	1	4	4	3960.8							
19 4	3580	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	3700.0	cl919or	-28.1	0	1	4	4	3960.8							
19 4	7468	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	1.1	0	1	5	5	7815.0							
19 4	7468	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	56.8	0	1	5	5	7815.0							
19 4	7639	10 5	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7500.0	cl919or	-23.2	0	1	5	5	7714.6							
19 4	3742	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	3700.0	cl919or	73.5	0	1	4	4	4062.3							
19 4	7630	5 10	3	3	3	-500.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7500.0	cl919or	73.5	0	1	5	5	7862.4							
19 4	4238	5 10	3	3	3	-750.00	1000.0	-5000.0	-0.05	0.25	-25.0	-20.0	7500.0	cl919or	-76.7	0	1	5	6	7772.0							
19 4	341	5 10	3	3	3	-750.00	1000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3700.0	cl919or	88.4	0	1	4	5	4073.8							
19 4	512	5 10	3	3	3	-750.00	1000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3700.0	cl919or	55.1	0	1	4	5	4082.1							
19 4	512	10 5	3	3	3	-750.00	1000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3700.0	cl919or	-19.9	0	1	4	5	4007.1							
19 4	2294	5 10	3	3	3	-750.00	1000.0	-5000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	45.2	0	1	4	5	4048.8							
19 4	6182	5 10	3	3	3	-750.00	1000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7500.0	cl919or	67.6	0	1	5	6	7871.2							
19 4	6164	10 5	3	3	3	-750.00	1000.0	-5000.0	-0.15	0.25	-25.0	-30.0	7500.0	cl919or	85.1	0	1	5	5	7672.9							
19 4	2969	10 5	3	3	3	-750.00	3000.0	-3000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	43.4	0	1	4	5	4122.9							
19 4	6857	10 5	3	3	3	-750.00	3000.0	-3000.0	-0.15	0.25	-25.0	-20.0	7500.0	cl919or	43.4	0	1	5	5	7922.9							
19 4	3131	10 5	3	3	3	-750.00	3000.0	-3000.0	-0.15	0.35	-25.0	-20.0	3700.0	cl919or	-9.0	0	1	4	4	4070.5							
19 4	7019	10 5	3	3	3	-750.00	3000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7500.0	cl919or	24.2	0	1	5	5	7870.5							
19 4	827	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.15	-25.0	-25.0	3700.0	cl919or	-17.3	0	1	4	5	3973.2							
19 4	827	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.15	-25.0	-25.0	3700.0	cl919or	50.8	0	1	4	5	3973.2							
19 4	998	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.25	-25.0	-20.0	3700.0	cl919or	38.1	0	1	4	5	4041.7							
19 4	998	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.25	-25.0	-20.0	3700.0	cl919or	-43.9	0	1	4	5	3959.7							
19 4	989	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3700.0	cl919or	-78.7	0	1	4	4	3948.3							
19 4	989	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3700.0	cl919or	60.7	0	1	4	4	3952.9							
19 4	4877	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7500.0	cl919or	-69.8	0	1	5	5	7757.3							
19 4	4877	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7500.0	cl919or	60.7	0	1	5	5	7752.9							
19 4	1160	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3700.0	cl919or	-78.7	0	1	4	5	3948.3							
19 4	1151	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-25.0	3700.0	cl919or	-77.2	0	1	4	4	3949.9							
19 4	1151	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-25.0	3700.0	cl919or	43.2	0	1	4	4	3945.3							
19 4	5039	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-25.0	7500.0	cl919or	-12.2	0	1	5	5	7773.2							
19 4	5039	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.05	0.35	-25.0	-25.0	7500.0	cl919or	71.1	0	1	5	5	7773.2							
19 4	2771	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	69.5	0	1	4	5	4122.9							
19 4	2771	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	-13.9	0	1	4	5	4039.6							
19 4	6659	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7500.0	cl919or	69.4	0	1	5	5	7922.9							
19 4	6659	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7500.0	cl919or	-13.9	0	1	5	5	7839.6							
19 4	6821	5 10	3	3	3	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	1.7	0	1	5	5	7881.2							
19 4	6821	10 5	3	3	3	-750.00	3000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	34.9	0	1	5	5	7881.2							
19 4	3338	5 10	3	3	3	-750.00	5000.0	1000.0	-0.15	-0.05	-25.0	-25.0	3700.0	cl919or	100.0	0	1	4	4	4159.5							
19 4	3833	5 10	3	3	3	-750.00	5000.0	1000.0	-0.15	-0.35	-25.0	-20.0	3700.0	cl919or	100.0	0	1	4	4	4159.5							
19 4	3482	10 5	3	3	3	-750.00	5000.0	-1000.0	-0.15	0.15	-25.0	-20.0	3700.0	cl919or	71.9	0	1	4	4	4131.5							
19 4	3644	10 5	3	3	3	-750.00	5000.0	-1000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	71.9	0	1	4	4	4131.5							
19 4	3806	10 5	3	3	3	-750.00	5000.0	-1000.0	-0.15	0.35	-25.0	-20.0	3700.0	cl919or	76.8	0	1	4	4	4136.3							
19 4	3293	10 5	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-20.0	3700.0	cl919or	-6.1	0	1	4	5	4159.5							
19 4	3284	5 10	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-25.0	3700.0	cl919or	62.4	0	1	4	5	4227.6							
19 4	3284	10 5	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-25.0	3700.0	cl919or	-5.7	0	1	4	5	4159.5							
19 4	7172	5 10	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-25.0	7500.0	cl919or	62.4	0	1	5	5	8027.6							
19 4	7172	10 5	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-25.0	7500.0	cl919or	-5.7	0	1	5	5	7959.5							
19 4	3275	10 5	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-30.0	3700.0	cl919or	97.4	0	1	4	5	4159.5							
19 4	7163	10 5	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.05	-25.0	-30.0	7500.0	cl919or	97.4	0	1	5	5	7959.5							
19 4	3455	10 5	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.15	-25.0	-20.0	3700.0	cl919or	91.1	0	1	4	5	4102.8							
19 4	7343	10 5	3	3	3	-750.00	5000.0	-3000.0	-0.15	0.15	-25.0	-20.0	7500.0	cl919or	98.6	0	1	5	5	7902.8							

96

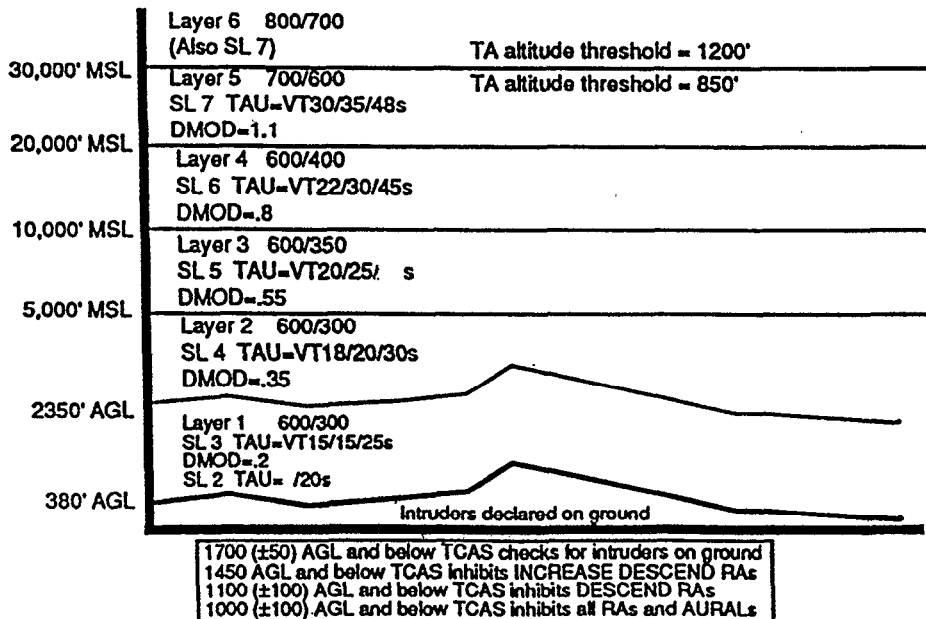
CLS	REIT	Modes	#1	#2	R,C	R,C	CPA	Alt	AC#1	AC#2	AC#1	AC#2	AC#1	AC#2	AC #1	Cell 3,3					Cell 4,4										
																Data	Achieved	C	I	RAS	Own	Alt	Data	Achieved	C	I	RAS	Own	Alt		
TBL							Separat	Rate	Rate	Acc.	Acc.	Time	Time	CPA	Alt	File	Separatn	N	C	1	2	CPA	Ach	File	Separatn	N	C	1	2	CPA	Ach
19	4	3446	5	10			-750.00	5000.0	-3000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	75.0	0	1	4	4			4159.5								
19	4	3446	10	5			-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	-86.1	1	1	4	4			4102.8								
19	4	7334	10	5			-750.00	5000.0	-3000.0	-0.15	0.15	-25.0	-25.0	7500.0	cl919or	75.7	0	1	5	5			7902.8								
19	4	3617	5	10			-750.00	5000.0	-3000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	38.3	0	1	4	5			4136.3								
19	4	3617	10	5			-750.00	5000.0	-3000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	-91.8	1	1	4	4			4058.8								
19	4	7667	5	10			-750.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7500.0	cl919or	27.8	0	1	5	5			7896.5								
19	4	7667	10	5			-750.00	5000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7500.0	cl919or	69.4	0	1	5	5			7896.5								
19	4	1475	10	5			-750.00	5000.0	-5000.0	-0.05	0.15	-25.0	-25.0	3700.0	cl919or	84.1	0	1	4	5			4006.5								
19	4	1637	5	10			-750.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3700.0	cl919or	-86.3	0	1	4	4			3940.8								
19	4	1637	10	5			-750.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	3700.0	cl919or	48.5	0	1	4	4			3940.8								
19	4	5525	5	10			-750.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7500.0	cl919or	-86.3	0	1	5	5			7740.8								
19	4	5525	10	5			-750.00	5000.0	-5000.0	-0.05	0.25	-25.0	-25.0	7500.0	cl919or	48.5	0	1	5	5			7740.8								
19	4	1808	5	10			-750.00	5000.0	-5000.0	-0.05	0.35	-25.0	-20.0	3700.0	cl919or	-20.6	0	1	4	5			4006.5								
19	4	1799	5	10			-750.00	5000.0	-5000.0	-0.05	0.35	-25.0	-25.0	3700.0	cl919or	62.7	0	1	4	4			4006.5								
19	4	5687	5	10			-750.00	5000.0	-5000.0	-0.05	0.35	-25.0	-25.0	7500.0	cl919or	62.7	0	1	5	5			7806.5								
19	4	3257	10	5			-750.00	5000.0	-5000.0	-0.15	0.05	-25.0	-25.0	3700.0	cl919or	39.2	0	1	4	5			4182.8								
19	4	3248	5	10			-750.00	5000.0	-5000.0	-0.15	0.05	-25.0	-30.0	3700.0	cl919or	36.4	0	1	4	5			4182.8								
19	4	3248	10	5			-750.00	5000.0	-5000.0	-0.15	0.05	-25.0	-30.0	3700.0	cl919or	13.1	0	1	4	5			4159.5								
19	4	3419	5	10			-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	55.6	0	1	4	5			4102.8								
19	4	3419	10	5			-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	84.3	0	1	4	5			4102.8								
19	4	7307	5	10			-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7500.0	cl919or	55.6	0	1	5	5			7902.8								
19	4	7307	10	5			-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7500.0	cl919or	84.2	0	1	5	5			7902.8								
19	4	3410	10	5			-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	3700.0	cl919or	-89.0	1	1	4	4			4062.3								
19	4	7298	5	10			-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7500.0	cl919or	-48.5	0	1	5	5			7862.4								
19	4	7298	10	5			-750.00	5000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7500.0	cl919or	35.2	0	1	5	5			7862.4								
19	4	3590	10	5			-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	-68.3	0	1	4	5			3987.6								
19	4	7478	10	5			-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	7500.0	cl919or	-68.3	0	1	5	5			7787.6								
19	4	3581	10	5			-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	-55.0	0	1	4	4			4058.8								
19	4	7469	5	10			-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	-48.4	0	1	5	5			7862.4								
19	4	7469	10	5			-750.00	5000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	35.2	0	1	5	5			7862.4								
19	4	7631	5	10			-750.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7500.0	cl919or	34.0	0	1	5	5			7902.8								
19	4	7631	10	5			-750.00	5000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7500.0	cl919or	75.7	0	1	5	5			7902.8								
19	4	640	5	10			1000.00	1000.0	5000.0	-0.05	-0.35	-25.0	-20.0	3700.0	cl919or	-44.3	0	1	4	3			3244.6								
19	4	640	10	5			1000.00	1000.0	5000.0	-0.05	-0.35	-25.0	-20.0	3700.0	cl919or	-21.0	0	1	4	3			3267.9								
19	4	1117	10	5			1000.00	3000.0	5000.0	-0.05	-0.25	-25.0	-25.0	3700.0	cl919or	-69.2	0	1	4	4			3188.5								
19	4	1774	10	5			1000.00	5000.0	5000.0	-0.05	-0.25	-25.0	-20.0	3700.0	cl919or	-7.6	0	1	4	3			3184.9								
19	4	1936	10	5			1000.00	5000.0	5000.0	-0.05	-0.35	-25.0	-20.0	3700.0	cl919or	52.4	0	1	4	3			3222.4								
19	4	2286	5	10			-1000.00	1000.0	-5000.0	-0.15	0.25	-25.0	-25.0	3700.0	cl919or	-39.0	0	1	4	5			4165.5								
19	4	2286	10	5			-1000.00	1000.0	-5000.0	-0.15	0.25	-25.0	-25.0	3700.0	cl919or	8.5	0	1	4	5			4098.8								
19	4	6174	5	10			-1000.00	1000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	-39.0	0	1	5	5			7965.5								
19	4	6174	10	5			-1000.00	1000.0	-5000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	8.5	0	1	5	5			7898.8								
19	4	6345	5	10			-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7500.0	cl919or	31.5	0	1	5	6			8108.6								
19	4	6345	10	5			-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-20.0	7500.0	cl919or	44.1	0	1	5	6			8121.2								
19	4	2448	5	10			-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	3700.0	cl919or	-17.5	0	1	4	5			4187.0								
19	4	2448	10	5			-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	3700.0	cl919or	76.6	0	1	4	5			4187.0								
19	4	6336	5	10			-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7500.0	cl919or	-17.5	0	1	5	5			7987.0								
19	4	6336	10	5			-1000.00	1000.0	-5000.0	-0.15	0.35	-25.0	-25.0	7500.0	cl919or	76.6	0	1	5	5			7987.0								
19	4	2970	10	5			-1000.00	3000.0	-3000.0	-0.15	0.25	-25.0	-20.0	3700.0	cl919or	-8.6	0	1	4	5			4206.2								
19	4	6858	10	5			-1000.00	3000.0	-3000.0	-0.15	0.25	-25.0	-20.0	7500.0	cl919or	-8.6	0	1	5	5			8006.2								
19	4	2961	5	10			-1000.00	3000.0	-3000.0	-0.15	0.25	-25.0	-25.0	3700.0	cl919or	83.6	0	1	4	5			4235.7								
19	4	6849	5	10			-1000.00	3000.0	-3000.0	-0.15	0.25	-25.0	-25.0	7500.0	cl919or	83.6	0	1	5	5			8035.7								
19	4	3132	10	5			-1000.00	3000.0	-3000.0	-0.15	0.35	-25.0	-20.0	3700.0	cl919or	-16.7	0	1	4	5			4206.2								
19	4	7020	10	5			-1000.00	3000.0	-3000.0	-0.15	0.35	-25.0	-20.0	7500.0	cl919or	-16.7	0	1	5	5			8006.2								
19	4	3123	5	10			-1000.00	3000.0	-3000.0	-0.15	0.35	-25.0	-25.0	3700.0	cl919or	91.6	0	1	4	5			4243.6								
19	4	7011	5	10			-1000.00	3000.0	-3000.0	-0.15	0.35	-25.0	-25.0	7500.0	cl919or	91.6	0	1	5	5			8043.6								
19	4	2772	5	10			-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	3700.0	cl919or	-28.8	0	1	4	5			4206.2								
19	4	6660	5	10			-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-25.0	7500.0	cl919or	-28.8	0	1	5	5			8006.2								
19	4	2763	5	10			-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-30.0	3700.0	cl919or	60.9	0	1	4	5			4190.2								
19	4	2763	10	5			-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-30.0	3700.0	cl919or	-10.0	0	1	4	5			4119.3								
19	4	6651	5	10			-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7500.0	cl919or	60.8	0	1	5	5			7990.2								
19	4	6651	10	5			-1000.00	3000.0	-5000.0	-0.15	0.15	-25.0	-30.0	7500.0	cl919or	-10.0	0	1	5	5			7919.3								
19	4	3456	5	10			-1000.00	5000.0	-3000.0	-0.15</																					

APPENDIX H

CAS THRESHOLDS, LAYERS, AND SENSITIVITY LEVELS¹

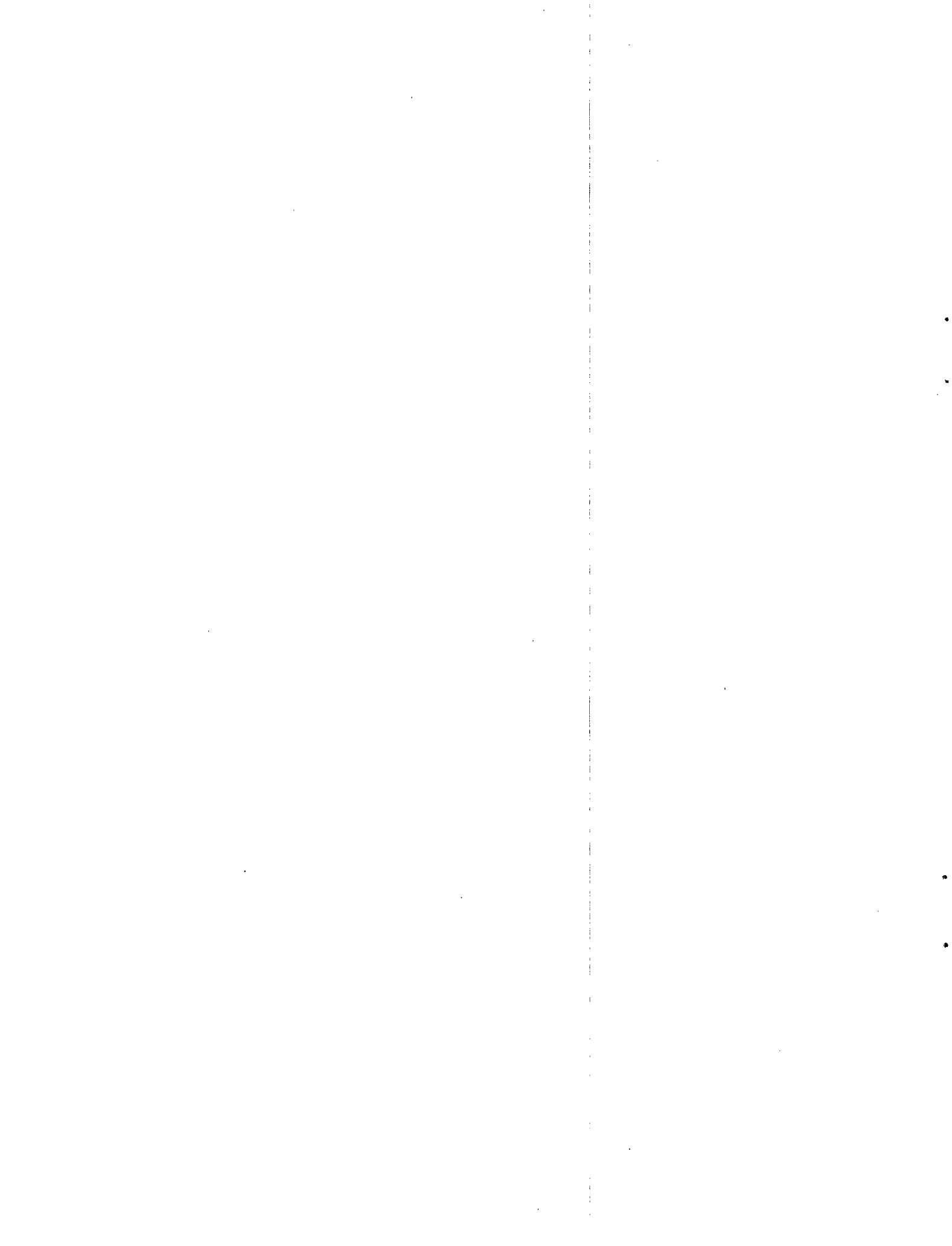


Thresholds for Logic Versions 6.02 and 6.02



Thresholds for Logic Versions 6.04 and 6.04a

¹ Bradley, Suzanne, "Simulation Test and Evaluation of TCAS II Logic Version 6.04." The MITRE Corporation, McLean, VA, MTR 92W0000103, July 1992.



APPENDIX I

PERFORMANCE STATISTICS OUTPUTS

MITRE encounter classes: 0,10 Date processed: 6/23/94
 Based on FAA Technical Center data of: 6/20/94
 Total TCAS-TCAS runs for both points of view : 3012
 Total incorrectly labelled RAs : 12

	Class 0		TCAS - TCAS		Both Responding	
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/runs (%)	100.00	100.00	100.00	100.00	100.00	100.00
Crossing RAs/RAs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Crossing RAs/runs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Cr. RA NMACs/cross RAs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Cr. RA NMACs/NMACs* (%)	0.00	0.00	0.00	0.00	0.00	0.00
NMACs*/runs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Avg warning time** (sec)	25.75	22.75	22.75	25.75	25.75	22.75
Avg alt sep at CPA* (ft)	734.39	662.25	662.25	710.46	710.46	662.25

	Class 10		TCAS - TCAS		Both Responding	
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/runs (%)	90.84	63.64	63.64	75.91	75.91	63.64
Crossing RAs/RAs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Crossing RAs/runs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Cr. RA NMACs/cross RAs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Cr. RA NMACs/NMACs* (%)	0.00	0.00	0.00	0.00	0.00	0.00
NMACs*/runs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Avg warning time** (sec)	22.50	20.76	20.76	22.87	22.87	20.76
Avg alt sep at CPA* (ft)	747.13	672.11	672.11	720.53	720.53	672.11

* NMACs and average alt. sep. at CPA are based on simulation truth
 ** Average warning time includes negative times (ie, RA occurs after CPA)

MITRE encounter classes: 1,11 Date processed: 6/23/94
 Based on FAA Technical Center data of: 6/20/94
 Total TCAS-TCAS runs for both points of view : 9044
 Total incorrectly labelled RAs : 28

	Class	1	TCAS - TCAS			Both Responding	
	| 6.02 |	| 6.04 |	| 6.04A |	| 6.02 / |	| 6.02 / |	| 6.04 / |	
	| only |	| only |	| only |	| 6.04 |	| 6.04A |	| 6.04A |	
RAs/ runs (%)	| 100.00 |	| 96.28 |	| 96.28 |	| 96.28 |	| 96.41 |	| 96.28 |	
Crossing RAs/ RAs (%)	| 5.85 |	| 12.43 |	| 9.25 |	| 13.40 |	| 9.52 |	| 10.84 |	
Crossing RAs/ runs (%)	| 5.85 |	| 11.97 |	| 8.91 |	| 12.90 |	| 9.18 |	| 10.44 |	
Cr. RA NMACs/ cross RAs (%)	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	
Cr. RA NMACs/ NMACs* (%)	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	
NMACs*/ runs (%)	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	
Avg warning time** (sec)	| 22.62 |	| 16.70 |	| 17.14 |	| 20.78 |	| 21.20 |	| 16.88 |	
Avg alt sep at CPA* (ft)	| 929.10 |	| 758.81 |	| 763.20 |	| 845.15 |	| 845.88 |	| 760.82 |	

	Class	11	TCAS - TCAS			Both Responding	
	| 6.02 |	| 6.04 |	| 6.04A |	| 6.02 / |	| 6.02 / |	| 6.04 / |	
	| only |	| only |	| only |	| 6.04 |	| 6.04A |	| 6.04A |	
RAs/ runs (%)	| 100.00 |	| 59.38 |	| 59.38 |	| 74.90 |	| 74.90 |	| 59.38 |	
Crossing RAs/ RAs (%)	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	
Crossing RAs/ runs (%)	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	
Cr. RA NMACs/ cross RAs (%)	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	
Cr. RA NMACs/ NMACs* (%)	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	
NMACs*/ runs (%)	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	| 0.00 |	
Avg warning time** (sec)	| 14.47 |	| 10.76 |	| 10.76 |	| 13.95 |	| 13.95 |	| 10.76 |	
Avg alt sep at CPA* (ft)	| 737.53 |	| 666.19 |	| 666.19 |	| 707.56 |	| 707.56 |	| 666.19 |	

* NMACs and average alt. sep. at CPA are based on simulation truth
 ** Average warning time includes negative times (ie, RA occurs after CPA)

MITRE encounter classes: 2,12 Date processed: 6/23/94

Based on FAA Technical Center data of: 6/20/94

Total TCAS-TCAS runs for both points of view : 108424

Total incorrectly labelled RAS : 440

	Class 2		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/ runs (%)	100.00	99.45	99.45	98.90	98.90	99.45
Crossing RAs/ RAs (%)	0.51	2.28	2.32	0.53	0.53	2.30
Crossing RAs/ runs (%)	0.51	2.27	2.31	0.53	0.53	2.29
Cr. RA NMACs/ cross RAs (%)	0.00	1.13	1.11	0.00	0.00	1.12
Cr. RA NMACs/ NMACs* (%)	0.00	1.75	1.75	0.00	0.00	1.75
NMACs*/ runs (%)	0.31	1.46	1.46	0.49	0.49	1.46
Avg warning time** (sec)	19.36	15.88	15.89	18.35	18.35	15.88
Avg alt sep at CPA* (ft)	691.50	607.19	607.17	651.61	651.61	607.18

	Class 12		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/ runs (%)	99.95	73.58	73.58	85.24	85.24	73.58
Crossing RAs/ RAs (%)	0.28	0.38	0.38	0.33	0.33	0.38
Crossing RAs/ runs (%)	0.28	0.28	0.28	0.29	0.29	0.28
Cr. RA NMACs/ cross RAs (%)	0.00	8.33	8.33	0.00	0.00	8.33
Cr. RA NMACs/ NMACs* (%)	0.00	50.00	50.00	0.00	0.00	50.00
NMACs*/ runs (%)	0.00	0.05	0.05	0.00	0.00	0.05
Avg warning time** (sec)	15.80	15.10	15.10	16.67	16.67	15.10
Avg alt sep at CPA* (ft)	787.82	732.04	732.04	768.71	768.71	732.04

* NMACs and average alt. sep. at CPA are based on simulation truth

** Average warning time includes negative times (ie, RA occurs after CPA)

MITRE encounter classes: 3,13 Date processed: 6/21/94
 Based on FAA Technical Center data of: 6/20/94
 Total TCAS-TCAS runs for both points of view : 139726
 Total incorrectly labelled RAs : 242

	Class		3		TCAS - TCAS		Both Responding	
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A		
RAs/ runs (%)	83.48	70.75	70.75	77.49	77.49	70.75		
Crossing RAs/ RAs (%)	11.86	13.36	10.72	13.70	10.95	12.04		
Crossing RAs/ runs (%)	9.90	9.45	7.58	10.62	8.48	8.52		
Cr. RA NMACs/ cross RAs (%)	0.00	0.00	0.00	0.00	0.00	0.00		
Cr. RA NMACs/ NMACs* (%)	0.00	0.00	0.00	0.00	0.00	0.00		
NMACs*/ runs (%)	0.00	0.00	0.00	0.00	0.00	0.00		
Avg warning time** (sec)	17.98	16.70	17.07	17.70	18.02	16.82		
Avg alt sep at CPA* (ft)	798.99	720.50	728.55	765.50	770.36	721.87		

	Class		13		TCAS - TCAS		Both Responding	
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A		
RAs/ runs (%)	76.72	59.20	59.35	69.91	70.05	59.22		
Crossing RAs/ RAs (%)	15.86	19.23	14.52	17.76	14.87	16.82		
Crossing RAs/ runs (%)	12.17	11.39	8.62	12.41	10.42	9.96		
Cr. RA NMACs/ cross RAs (%)	0.00	3.99	1.00	1.40	0.83	2.28		
Cr. RA NMACs/ NMACs* (%)	0.00	100.00	100.00	100.00	100.00	100.00		
NMACs*/ runs (%)	0.00	0.45	0.09	0.17	0.09	0.23		
Avg warning time** (sec)	21.85	19.94	20.27	21.50	21.73	20.03		
Avg alt sep at CPA* (ft)	941.70	844.26	867.88	905.31	919.88	853.03		

* NMACs and average alt. sep. at CPA are based on simulation truth
 ** Average warning time includes negative times (ie, RA occurs after CPA)

MITRE encounter classes: 4,14 Date processed: 6/23/94

Based on FAA Technical Center data of: 6/20/94

Total TCAS-TCAS runs for both points of view : 18144

Total incorrectly labelled RAs : 0

	Class 4		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/runs (%)	100.00	96.77	96.84	95.95	96.05	96.70
Crossing RAs/RAs (%)	22.87	17.39	7.66	18.61	15.41	11.93
Crossing RAs/runs (%)	22.87	16.83	7.42	17.86	14.80	11.54
Cr. RA NMACs/cross RAs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Cr. RA NMACs/NMACs* (%)	0.00	0.00	0.00	0.00	0.00	0.00
NMACs*/runs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Avg warning time** (sec)	23.59	19.54	19.87	22.40	22.64	19.69
Avg alt sep at CPA* (ft)	1081.05	942.17	948.61	1018.66	1023.71	943.61

	Class 14		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/runs (%)	94.29	68.57	68.57	77.59	77.59	68.57
Crossing RAs/RAs (%)	9.09	10.42	10.42	11.05	11.05	10.42
Crossing RAs/runs (%)	8.57	7.14	7.14	8.57	8.57	7.14
Cr. RA NMACs/cross RAs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Cr. RA NMACs/NMACs* (%)	0.00	0.00	0.00	0.00	0.00	0.00
NMACs*/runs (%)	0.00	0.00	0.00	0.00	0.00	0.00
Avg warning time** (sec)	17.14	14.34	14.34	17.30	17.30	14.34
Avg alt sep at CPA* (ft)	846.34	709.93	709.93	788.05	788.05	709.93

* NMACs and average alt. sep. at CPA are based on simulation truth

** Average warning time includes negative times (ie, RA occurs after CPA)

MITRE encounter classes: 5,15 Date processed: 6/21/94
 Based on FAA Technical Center data of: 6/20/94
 Total TCAS-TCAS runs for both points of view : 217624
 Total incorrectly labelled RAs : 104

	Class		5		TCAS - TCAS		Both Responding	
		6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
RAs/ runs	(%)	99.64	95.94	95.91	97.45	97.44	95.92	
Crossing RAs/ RAs	(%)	5.84	8.47	5.39	7.31	5.03	6.83	
Crossing RAs/ runs	(%)	5.82	8.12	5.17	7.12	4.90	6.55	
Cr. RA NMACs/ cross RAs (%)		0.00	0.07	0.11	0.00	0.00	0.08	
Cr. RA NMACs/ NMACs*	(%)	0.00	1.92	1.92	0.00	0.00	1.92	
NMACs*/ runs	(%)	0.04	0.29	0.29	0.09	0.09	0.29	
Avg warning time** (sec)		19.03	16.34	16.49	17.97	18.11	16.38	
Avg alt sep at CPA* (ft)		875.88	758.08	759.26	818.20	819.82	758.42	

	Class		15		TCAS - TCAS		Both Responding	
		6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A	
RAs/ runs	(%)	95.87	73.58	73.15	82.73	82.56	73.33	
Crossing RAs/ RAs	(%)	7.65	12.10	8.74	10.74	8.07	10.03	
Crossing RAs/ runs	(%)	7.33	8.91	6.39	8.89	6.67	7.35	
Cr. RA NMACs/ cross RAs (%)		0.00	7.24	6.46	2.80	1.24	7.87	
Cr. RA NMACs/ NMACs*	(%)	0.00	69.64	59.52	71.43	45.45	67.31	
NMACs*/ runs	(%)	0.00	0.93	0.69	0.35	0.18	0.86	
Avg warning time** (sec)		17.20	14.39	14.52	16.84	16.94	14.40	
Avg alt sep at CPA* (ft)		942.15	787.74	808.46	874.05	892.87	799.25	

* NMACs and average alt. sep. at CPA are based on simulation truth

** Average warning time includes negative times (ie, RA occurs after CPA)

MITRE encounter classes: 6,16 Date processed: 6/24/94
 Based on FAA Technical Center data of: 6/20/94
 Total TCAS-TCAS runs for both points of view : 216175
 Total incorrectly labelled RAs : 1553

	Class 6		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/ runs (%)	99.91	94.76	94.98	97.03	96.74	94.33
Crossing RAs/ RAs (%)	26.35	21.56	17.45	24.58	22.20	19.30
Crossing RAs/ runs (%)	26.33	20.43	16.58	23.85	21.47	18.20
Cr. RA NMACs/ cross RAs (%)	1.00	2.58	0.63	1.41	0.73	1.19
Cr. RA NMACs/ NMACs* (%)	85.71	73.85	36.54	79.22	61.96	50.00
NMACs*/ runs (%)	0.31	0.71	0.29	0.42	0.25	0.43
Avg warning time** (sec)	20.00	17.33	18.38	18.99	19.67	17.83
Avg alt sep at CPA* (ft)	899.64	791.56	850.60	850.95	883.07	817.92

	Class 16		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/ runs (%)	99.26	77.95	77.93	88.72	88.65	77.88
Crossing RAs/ RAs (%)	29.78	24.03	13.50	28.22	23.08	18.56
Crossing RAs/ runs (%)	29.56	18.73	10.52	25.04	20.46	14.46
Cr. RA NMACs/ cross RAs (%)	1.70	4.16	0.33	2.11	1.08	1.62
Cr. RA NMACs/ NMACs* (%)	100.00	100.00	100.00	100.00	100.00	100.00
NMACs*/ runs (%)	0.50	0.78	0.03	0.53	0.22	0.23
Avg warning time** (sec)	17.91	18.47	18.93	18.67	18.84	18.61
Avg alt sep at CPA* (ft)	819.83	794.06	859.77	813.45	849.56	823.15

* NMACs and average alt. sep. at CPA are based on simulation truth
 ** Average warning time includes negative times (ie, RA occurs after CPA)

MITRE encounter classes: 7,17 Date processed: 6/25/94
 Based on FAA Technical Center data of: 6/20/94
 Total TCAS-TCAS runs for both points of view : 325998
 Total incorrectly labelled RAs : 594

	Class 7		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/ runs (%)	99.93	99.32	99.32	99.24	99.24	99.32
Crossing RAs/ RAs (%)	1.50	3.95	3.20	1.90	1.67	3.56
Crossing RAs/ runs (%)	1.50	3.93	3.18	1.89	1.65	3.54
Cr. RA NMACs/ cross RAs (%)	0.00	0.31	0.38	0.00	0.00	0.34
Cr. RA NMACs/ NMACs* (%)	0.00	0.77	0.75	0.00	0.00	0.76
NMACs*/ runs (%)	0.78	1.57	1.61	1.08	1.09	1.59
Avg warning time** (sec)	17.52	14.79	14.77	16.63	16.62	14.78
Avg alt sep at CPA* (ft)	714.39	616.33	616.19	673.69	673.47	616.26

	Class 17		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/ runs (%)	95.98	71.94	71.94	83.40	83.38	71.94
Crossing RAs/ RAs (%)	1.17	2.09	1.99	1.61	1.58	2.04
Crossing RAs/ runs (%)	1.12	1.50	1.43	1.34	1.31	1.47
Cr. RA NMACs/ cross RAs (%)	7.75	23.98	16.56	7.19	6.67	19.16
Cr. RA NMACs/ NMACs* (%)	100.00	97.62	96.43	100.00	100.00	96.97
NMACs*/ runs (%)	0.09	0.37	0.25	0.10	0.09	0.29
Avg warning time** (sec)	17.93	16.08	16.08	18.11	18.11	16.08
Avg alt sep at CPA* (ft)	982.94	856.35	857.00	939.91	940.08	856.70

* NMACs and average alt. sep. at CPA are based on simulation truth
 ** Average warning time includes negative times (ie, RA occurs after CPA)

MITRE encounter classes: 8,18 Date processed: 6/25/94
 Based on FAA Technical Center data of: 6/20/94
 Total TCAS-TCAS runs for both points of view : 323036
 Total incorrectly labelled RAs : 3556

	Class 8		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/ runs (%)	99.19	94.77	95.04	96.92	96.96	94.82
Crossing RAs/ RAs (%)	7.94	11.97	8.78	8.84	7.45	10.63
Crossing RAs/ runs (%)	7.87	11.34	8.34	8.57	7.22	10.08
Cr. RA NMACs/ cross RAs (%)	0.00	1.61	0.77	0.65	0.69	1.29
Cr. RA NMACs/ NMACs* (%)	0.00	9.91	3.71	6.22	5.58	7.24
NMACs*/ runs (%)	0.30	1.85	1.72	0.90	0.89	1.79
Avg warning time** (sec)	17.97	15.49	16.00	17.20	17.46	15.69
Avg alt sep at CPA* (ft)	831.94	705.38	730.37	777.25	786.48	712.75

	Class 18		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAs/ runs (%)	98.39	79.49	79.02	88.32	88.29	79.16
Crossing RAs/ RAs (%)	13.17	17.28	11.16	15.39	12.32	13.93
Crossing RAs/ runs (%)	12.96	13.73	8.82	13.59	10.88	11.02
Cr. RA NMACs/ cross RAs (%)	1.97	3.10	2.33	2.52	1.58	2.99
Cr. RA NMACs/ NMACs* (%)	100.00	80.70	66.67	88.10	75.51	74.74
NMACs*/ runs (%)	0.26	0.53	0.31	0.39	0.23	0.44
Avg warning time** (sec)	16.74	15.72	16.33	17.01	17.24	15.88
Avg alt sep at CPA* (ft)	905.74	787.22	840.98	859.26	883.20	809.62

* NMACs and average alt. sep. at CPA are based on simulation truth
 ** Average warning time includes negative times (ie, RA occurs after CPA)

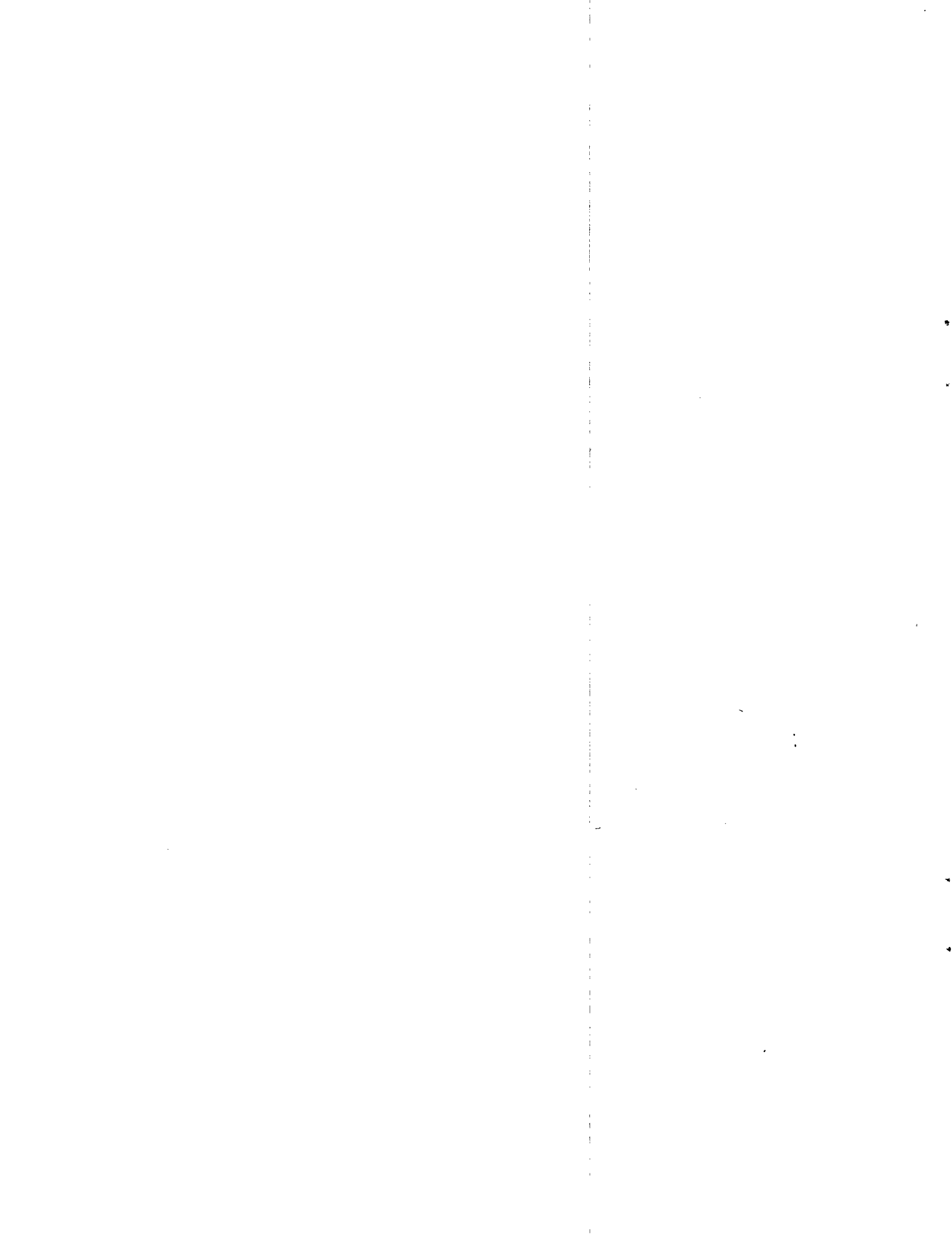
MITRE encounter classes: 9,19 Date processed: 6/23/94
 Based on FAA Technical Center data of: 6/20/94
 Total TCAS-TCAS runs for both points of view : 279616
 Total incorrectly labelled RAS : 320

	Class 9		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAS/runs (%)	82.91	70.54	73.41	77.33	78.12	70.81
Crossing RAs/RAs (%)	29.50	24.84	29.34	27.23	31.66	27.33
Crossing RAs/runs (%)	24.46	17.52	21.53	21.06	24.73	19.35
Cr. RA NMACs/cross RAs (%)	0.03	0.70	0.97	0.05	0.13	0.67
Cr. RA NMACs*/NMACs* (%)	50.00	56.67	82.86	37.50	90.00	69.23
NMACs*/runs (%)	0.01	0.22	0.25	0.03	0.04	0.19
Avg warning time** (sec)	17.34	15.71	17.80	16.87	18.30	16.75
Avg alt sep at CPA* (ft)	843.44	750.35	809.60	806.89	852.21	783.27

	Class 19		TCAS - TCAS Both Responding			
	6.02 only	6.04 only	6.04A only	6.02 / 6.04	6.02 / 6.04A	6.04 / 6.04A
RAS/runs (%)	84.76	71.04	70.59	79.99	79.71	70.66
Crossing RAs/RAs (%)	39.68	32.95	22.94	35.84	32.19	28.92
Crossing RAs/runs (%)	33.63	23.41	16.19	28.67	25.66	20.43
Cr. RA NMACs/cross RAs (%)	6.83	11.58	2.52	8.47	5.42	7.90
Cr. RA NMACs*/NMACs* (%)	100.00	100.00	100.00	100.00	99.58	99.64
NMACs*/runs (%)	2.30	2.71	0.41	2.43	1.40	1.62
Avg warning time** (sec)	21.70	19.80	20.68	21.31	21.82	20.20
Avg alt sep at CPA* (ft)	937.48	863.74	970.62	917.05	972.81	911.84

* NMACs and average alt. sep. at CPA are based on simulation truth

** Average warning time includes negative times (ie, RA occurs after CPA)



APPENDIX J

NMACS UNIQUE TO VERSION 6.04A

TABLES 7.4 AND 9.4

1. TABLE 7.4 NMACS

The plot in Figure J-1 is representative of the Class 7 encounters in which version 6.04a induces an NMAC and version 6.04 resolves the encounter. The plot shows Aircraft 1 and Aircraft 2 performance when both are 6.04a-equipped. The associated encounter summaries for versions 6.02, 6.04, and 6.04a are given in Figure J-2.

This encounter is an example of 6.04a modification 2, described in Section 4.1. Here, Aircraft 1 is the first to detect the threat, selecting a crossing RA against Aircraft 2. However, the altitude separation test comes into play, holding off Aircraft 1's issuance of a crossing RA until the aircraft are within 600 feet. Meanwhile, Aircraft 2, seeing the geometry slightly differently, selects and communicates a non-crossing RA to Aircraft 1. Aircraft 1 must comply with the received intent and thus also selects a non-crossing RA. The real problem is that the non-crossing RA is not a good choice. By the time that Aircraft 2 can respond to the RA, it has already achieved a substantial climb rate toward Aircraft 1 and cannot arrest its rate in time to achieve separation in the opposite direction.

In contrast, with the version 6.04 logic, there is nothing to hold off Aircraft 1's original selection of the crossing RA. Here, the crossing RA is consistent with and reinforces the strong maneuver being executed by Aircraft 2, and adequate separation can be achieved.

As stated in Section 5.2.2, although this encounter is technically labeled an induced NMAC with 6.04a, the encounter without TCAS (separation of 250 feet) is hardly benign. Both aircraft are flying level, separated by less than 1000 feet. Twenty seconds before closest approach, the lower aircraft suddenly accelerates strongly and climbs through the other aircraft's altitude. This is not an encounter that would occur deliberately in the airspace. By delaying issuing the crossing RA, the 6.04a logic is betting that the lower aircraft is more likely to level-off than to cross through the higher aircraft's altitude. Although that is not true for this encounter, it is still generally considered the proper choice.

2. TABLE 9.4 NMACS

The plot in Figure J-3 is representative of the Class 9 encounters in which version 6.04a induces an NMAC and version 6.04 resolves the encounter. The plot shows Aircraft 1 and Aircraft 2 performance when both are 6.04a-equipped. The associated encounter summaries for versions 6.02, 6.04, and 6.04a are given in Figure J-4.

This encounter is similar to the Seattle encounter, except that the aircraft plan to level-off 250 feet apart, instead of 1000 feet. Here again, the 6.04a modification 2 comes into play, with both aircraft selecting crossing RAs and the altitude separation test causing the RAs to be deferred until the aircraft come within 850 feet. In all three versions of the logic, crossing RAs are selected. In versions 6.02 and 6.04, however, the altitude separation test does not apply in this geometry; thus, there is no deferral of the RA, and the extra time allows the aircraft to achieve adequate vertical separation. In version 6.04a, the RA simply comes too late to be effective. Again (as in the Table 7.4 example above), by delaying issuing the crossing RA, the 6.04a logic is betting that the lower aircraft will level-off at least 1000 feet below the higher aircraft. Although that is not true for this encounter, it is still generally considered the proper choice.

One item of note for the version 6.04a logic in this encounter is the long interval between the appearance of the potential RA (time=34 seconds for both aircraft) and the issuance of the RA

(time=49 and 51 seconds for Aircraft 2 and 1, respectively). This is due to a sensitivity level change in the middle of the encounter. Both aircraft detect a threat at time=34 seconds, but while the RA is being delayed (Aircraft 1: defer display (coordination), Aircraft 2: altitude separation test), the sensitivity level drops from 5 to 4, thereby increasing the threat detection thresholds. The threat status then drops back to TA for both aircraft. The sensitivity level 4 thresholds are crossed at time=40 seconds for both aircraft, but the issuance of the RAs is then delayed by the altitude separation test. Note that there is a proposal for the Change 7 TCAS logic to not allow the sensitivity level to change during an encounter.

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL717XZL.605; REIT Number=2014

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)

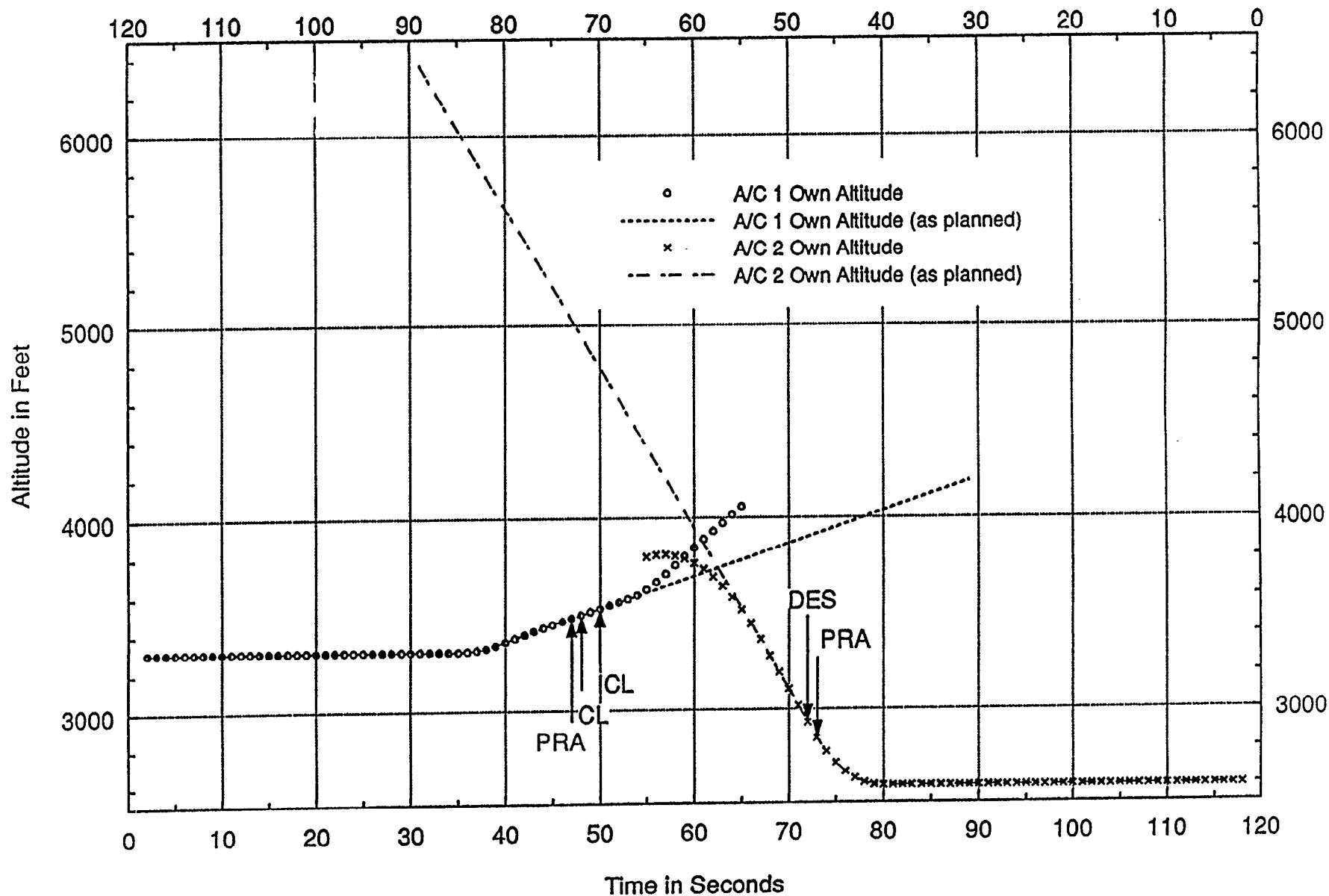


Figure J-1. Encounter Summary - Aircraft Altitudes. Data File Name=LL717XZL.605; REIT Number=2014, SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)

2014 6.02 RL VS 6.02 RH 7 658.58 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 -250.0 (0.0,1000.0) (0.0,5000.0) 0.15 0.35 -25.0 -20.0 3700.0
 A/C1: CL717CF,2162022 |TAUR | LD5 @34 [NXRA] | LD1 @44 | LD2 @56
 A/C2:CL717EF2,2262122 |TAUR | LC5 @34 [NXRA] | LC2 @45

2014 6.04 RL VS 6.04 RH 7 -475.41 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 -250.0 (0.0,1000.0) (0.0,5000.0) 0.15 0.35 -25.0 -20.0 3700.0
 A/C1: CL717O,2164033 |TAUV | DES @47 [XRA]
 A/C2:CL717OP2,2264133 |TAUV | CL @47 [XRA] | ICL @49

2014 6.04A RL VS 6.04A RH 7 94.30 NON_CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 -250.0 (0.0,1000.0) (0.0,5000.0) 0.15 0.35 -25.0 -20.0 3700.0
 A/C1: CL717WZ,2165044 |TAUV | POTRA @47 (6FT) | CL @48 [NXRA] | ICL @50
 A/C2:CL717YZ2,2265144 |TAUV | POTRA @47 (DFD) | DES @48 [NXRA]

Figure J-2. Encounter Summaries for 6.02, 6.04, and 6.04a.

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES
Data File Name=LL919YZH.605; REIT Number=1509
SIM MODE:2165144 (Source: LL Composite FTEG Run, Dated 07/29/94)

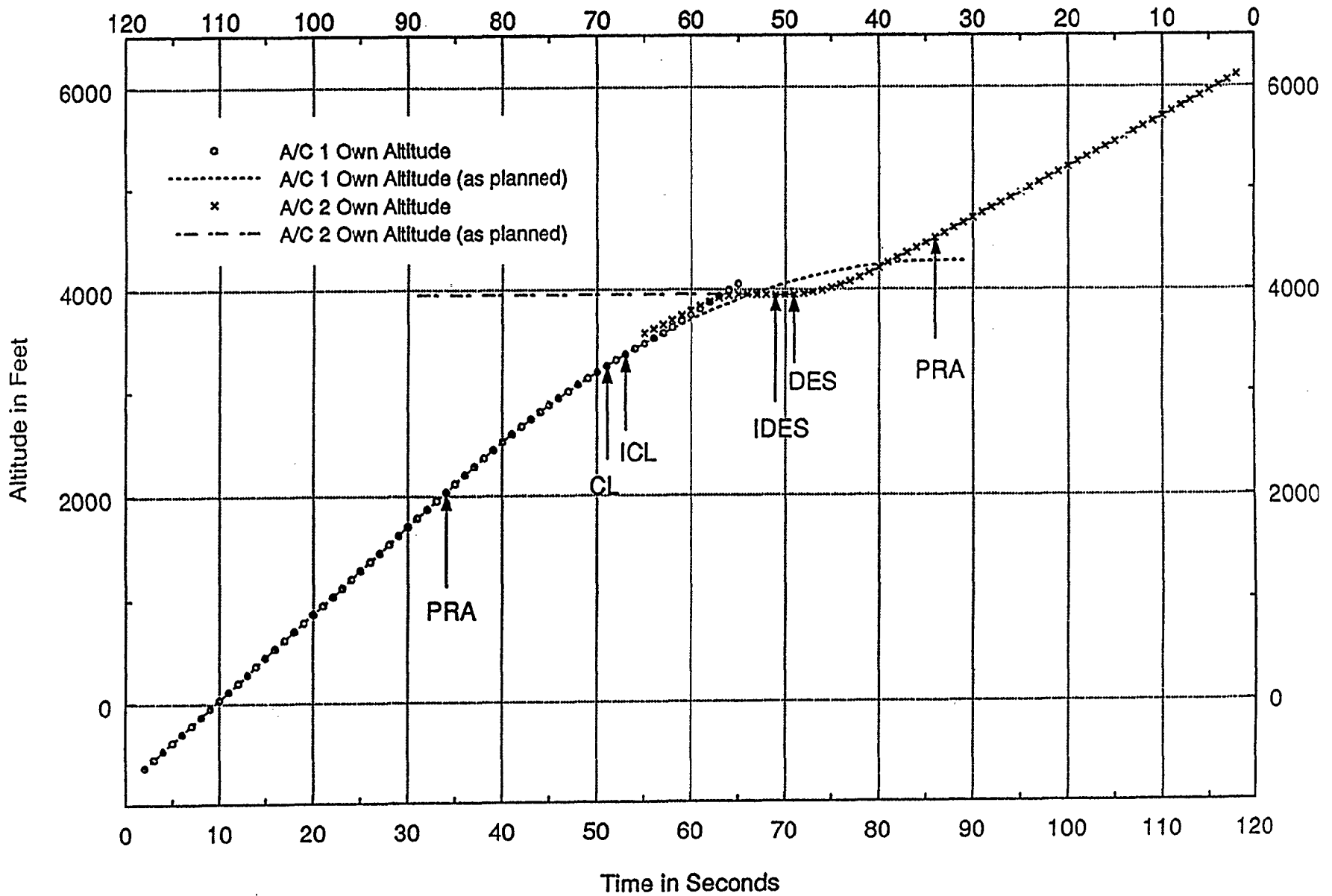


Figure J-3. Encounter Summary - Aircraft Altitudes, Data File Name=LL919YZH.605;
REIT Number=1509, SIM MODE:2165144 (Source: LL Composite FTEG Run, Dated 07/29/94)

1509 6.02 RH VS 6.02 RL 9 898.37 CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 -250.0 (5000.0,0.0) (-3000.0,0.0) -0.05 0.15 -25.0 -20.0 3700.0
 A/C1: CL919CF,2162122 |PVMD | CL @38 [XRA] | LD2 @57
 A/C2:CL919EH2,2262022 |PVMD | DES @35 [XRA] | IDES @54

1509 6.04 RH VS 6.04 RL 9 312.08 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 -250.0 (5000.0,0.0) (-3000.0,0.0) -0.05 0.15 -25.0 -20.0 3700.0
 A/C1: CL919OR,2164133 |PVMD | CL @45 [XRA] | ICL @47 | CL @57
 A/C2:CL919OR2,2264033 |PVMD | DES @44 [XRA] | IDES @50

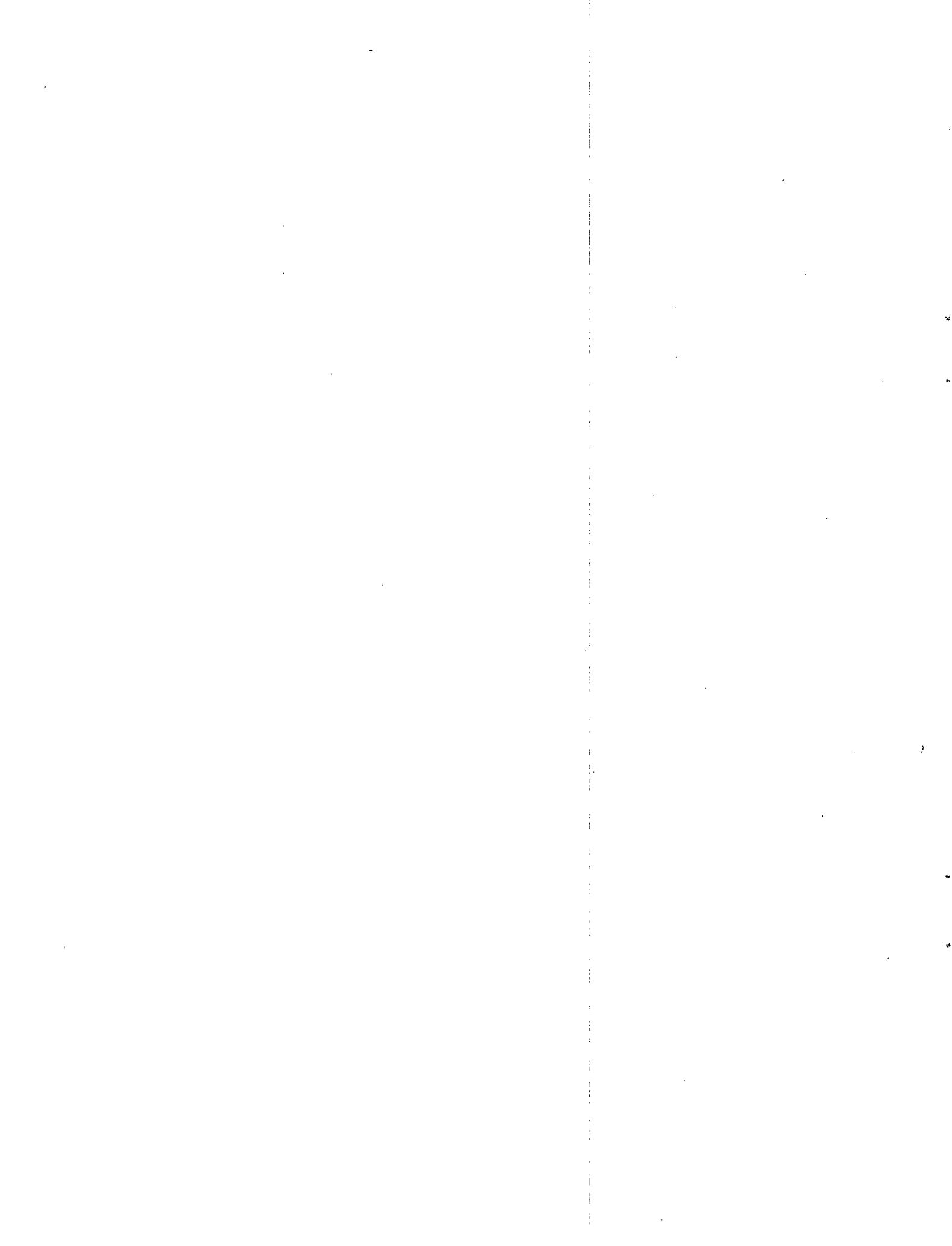
1509 6.04A RH VS 6.04A RL 9 -27.82 CROSSING_ENCOUNTER
 SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 300.0
 -250.0 (5000.0,0.0) (-3000.0,0.0) -0.05 0.15 -25.0 -20.0 3700.0
 A/C1: CL919WZ,2165144 |TAUR | POTRA @34 (DFD) | CL @51 [XRA] | ICL @53
 A/C2:CL919YZ2,2265044 |TAUR | POTRA @34 (6FT) | DES @49 [XRA] | IDES @51

Figure J-4. Encounter Summaries for 6.02, 6.04, and 6.04a.

APPENDIX K
CLASS WEIGHTS²

Class	Weight
1	0.0197
2	0.0004
3	0.0033
4	0.0145
5	0.0025
6	0.0029
7	0.0002
8	0.0005
9	0.0001
10+0	0.3973
11	0.1929
12	0.0759
13	0.1081
14	0.1167
15	0.0205
16	0.0256
17	0.0019
18	0.0094
19	0.0074
Total:	1.0000

² McLaughlin, M.P. and A.D. Zeitlin, "Safety Study of TCAS II for Logic Version 6.04a." The MITRE Corporation, McLean, VA, MTR 93W0000234, November 1993.



APPENDIX L

30 REPRESENTATIVE NMAC ENCOUNTERS

TOTAL 6.04a NMACs AND CHARACTERISTIC 6.04a NMAC GROUPS PER CLASS AND TABLE
 (Table 3 - Unresolved NMACs; Table 4 - Induced NMACs)

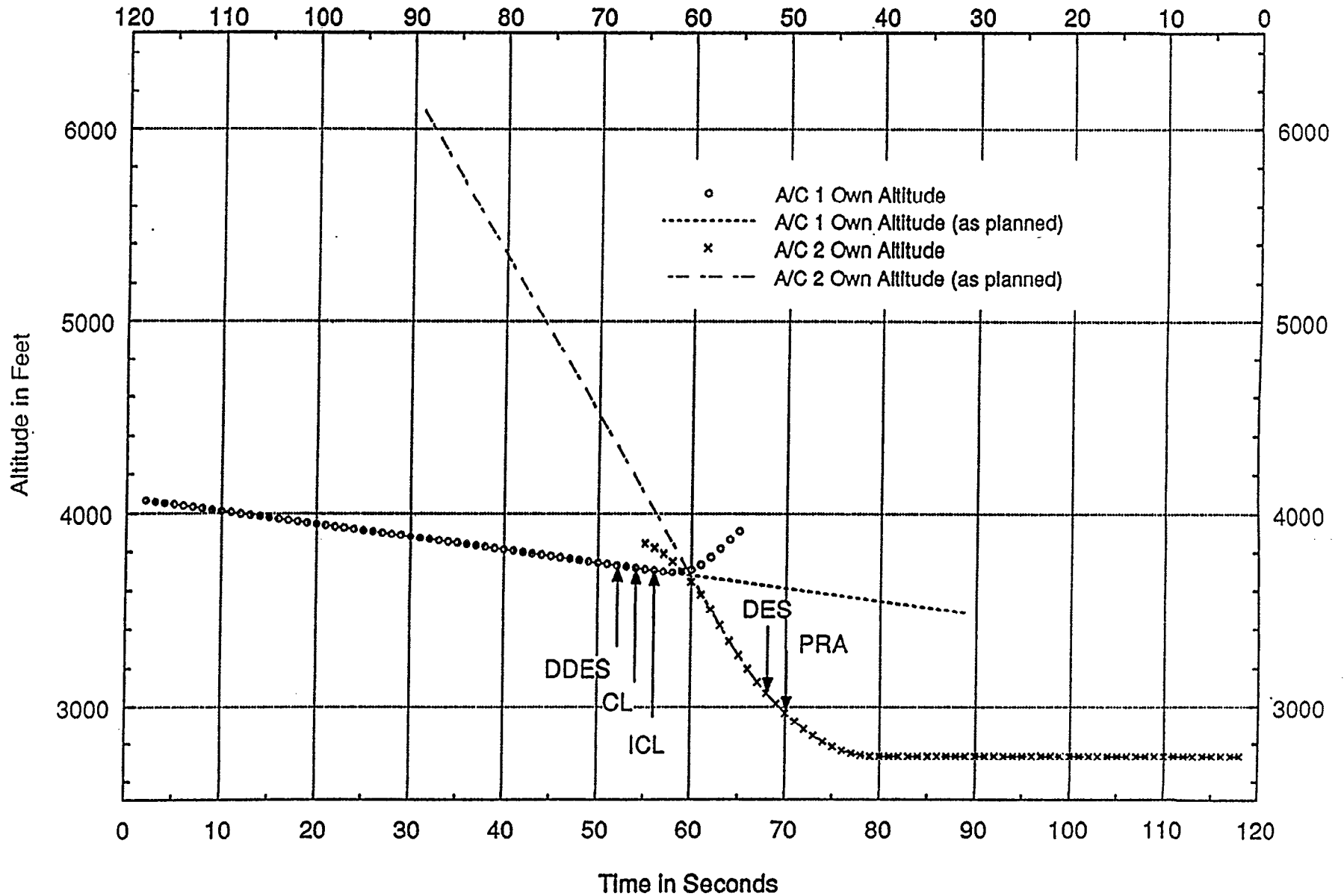
Cls	Tbl	Characteristic Data File and REIT	NMACs in Grp	% of Tbl	NMACs in Tbl	# of Enc.	% of Enc.
0	3	Total NMACs for Table=			0	16	0.0
0	4	Total NMACs for Table=			0	20	0.0
1	3	Total NMACs for Table=			0	72	0.0
1	4	Total NMACs for Table=			0	304	0.0
2	3	Total NMACs for Table= LL212OZL.605 0123	5	100.0%	5	864	0.58%
2	4	Total NMACs for Table= LL212OZL.605 1196	52	100.0%	52	3032	1.72%
3	3	Total NMACs for Table=			0	736	0.0
3	4	Total NMACs for Table=			0	2416	0.0
4	3	Total NMACs for Table=			0	120	0.0
4	4	Total NMACs for Table=			0	608	0.0
5	3	Total NMACs for Table=			0	1580	0.0
5	4	Total NMACs for Table= LL515WZL.605 1006 LL515WZL.605 1195 LL515WZL.605 1952	5 4 17	19.2% 15.4% 65.4%	26	7488	0.35%
6	3	Total NMACs for Table= LL616WZL.605 0081 LL616WZL.605 5863	4 10	28.6% 71.4%	14	1728	0.81%
6	4	Total NMACs for Table= LL616WZL.605 4612	12	100.0	12	7384	0.16%
7	3	Total NMACs for Table= LL717XZL.605 2538	4	100.0	4	2416	0.17%
7	4	Total NMACs for Table= LL717XZL.605 2014 LL717XZL.605 8982	5 191	2.6% 97.4%	196	9988	1.96%
8	3	Total NMACs for Table= LL818YZL.605 0641 LL818YZL.605 7305 LL818YZL.605 8712	4 7 19	13.3% 23.3% 63.3%	30	2592	1.16%
8	4	Total NMACs for Table= LL818YZL.605 1385 LL818YZL.605 2655 LL818YZL.605 3615 LL818YZH.605 4970	27 152 4 5	14.4% 80.9% 2.1% 2.7%	188	10044	1.87%

Cls	Tbl	Characteristic Data File and REIT	NMACs in Grp	% of Tbl	NMACs in Tbl	# of Enc.	% of Enc.
9	3	Total NMACs for Table=			0	1158	0.0
9	4	Total NMACs for Table=			18	5808	0.31%
		LL919YZH.605	1509	14	77.8%		
		LL919YZH.605	3523	4	22.2%		
10	3	Total NMACs for Table=			0	8	0.0
10	4	Total NMACs for Table=			0	124	0.0
11	3	Total NMACs for Table=			0	0	0.0
11	4	Total NMACs for Table=			0	128	0.0
12	3	Total NMACs for Table=			0	0	0.0
12	4	Total NMACs for Table=			1	2152	0.05%
		LL212OZL.605	1421	1	100.0		
13	3	Total NMACs for Table=			0	128	0.0
13	4	Total NMACs for Table=			4	4496	0.09%
		LL313SZL.605	1614	4	100.0		
14	3	Total NMACs for Table=			0	24	0.0
14	4	Total NMACs for Table=			0	256	0.0
15	3	Total NMACs for Table=			0	148	0.0
15	4	Total NMACs for Table=			21	2880	0.73%
		LL515WZL.605	4283	18	85.7%		
		LL515WZL.605	5543	3	14.3%		
16	3	Total NMACs for Table=			0	0	0.0
16	4	Total NMACs for Table=			1	2984	0.03%
		LL616WZL.605	2491	1	100.0		
17	3	Total NMACs for Table=			0	176	0.0
17	4	Total NMACs for Table=			14	5564	0.25%
		LL717XZL.605	2732	14	100.0		
18	3	Total NMACs for Table=			0	0	0.0
18	4	Total NMACs for Table=			17	5508	0.31%
		LL818YZL.605	1520	12	70.6%		
		LL818YZH.605	3978	5	29.4%		
19	3	Total NMACs for Table=			0	570	0.0
19	4	Total NMACs for Table=			36	8016	0.45%
		LL919YZH.605	2883	11	30.6%		
		LL919YZH.605	7162	25	69.4%		
TOTAL						639	

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL212OZL.605; REIT Number=123

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



123 6.02 RL VS 6.02 RH 2 238.85 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUU = 25.0 ALIM = 400.0
0.0 (-400.0,-400.0) (0.0,5000.0) 0.00 0.15 0.0 -20.0 3680.0
A/C1: CL212CH,2162022 |TAUV | DDES @50 [NXRA]| CL @52
A/C2:CL212EJ2,2262122 |TAUV | POTRA @48 (DFD) | DES @50 [NXRA]

123 6.04 RL VS 6.04 RH 2 82.53 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUU = 20.0 ALIM = 300.0
0.0 (-400.0,-400.0) (0.0,5000.0) 0.00 0.15 0.0 -20.0 3680.0
A/C1: CL212OT,2164033 |TAUV | DDES @52 [NXRA]| CL @54 | ICL @56
A/C2:CL212MR2,2264133 |TAUV | POTRA @50 (DFD) | DES @52 [NXRA]

123 6.04A RL VS 6.04A RH 2 82.53 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUU = 20.0 ALIM = 300.0
0.0 (-400.0,-400.0) (0.0,5000.0) 0.00 0.15 0.0 -20.0 3680.0
A/C1: CL212UZ,2165044 |TAUV | DDES @52 [NXRA]| CL @54 | ICL @56
A/C2:CL212UZ2,2265144 |TAUV | POTRA @50 (DFD) | DES @52 [NXRA]

Mitre encounter Class : 2

Reit number : 123

NMAC Characterization

100%	had pattern shown on attached plot	
100%	had planned separation =	0 ft
AC1 rates :	0, +/- 400	fpm
AC2 rates :	5000	fpm
AC1 accel :	0.0	g
AC2 accel :	0.15	g
AC2 accel time : CPA:	20	sec

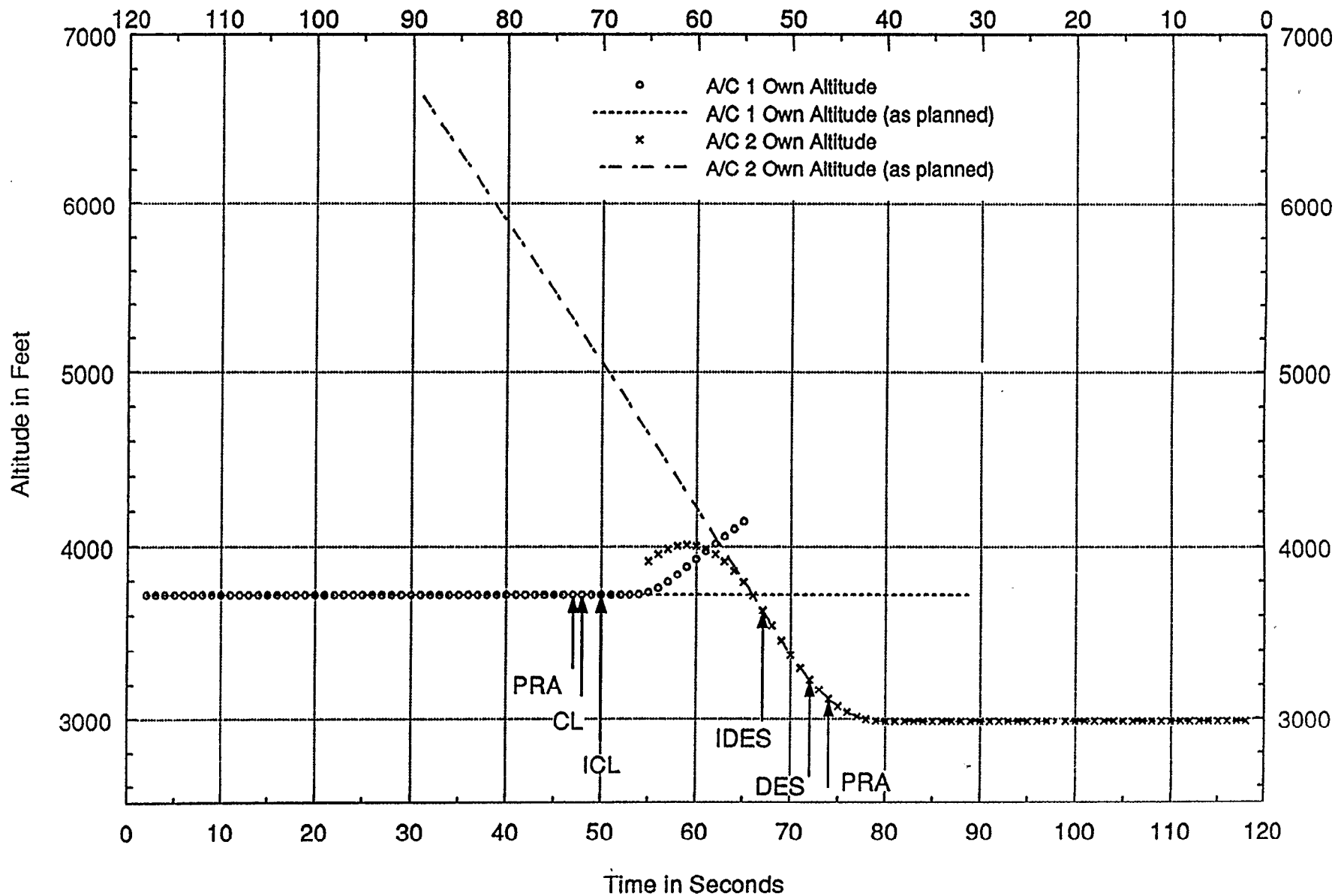
Performance Statistics (relate to whole class)

97% of RAs were non-crossing
98% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL212OZL.605; REIT Number=1196

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



1196 6.02 RL VS 6.02 RH 2 518.60 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUUV = 25.0 ALIM = 400.0
-500.0 (0.0,0.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3720.0
A/C1: CL212CH,2162022 |TAUR | LD5 @34 [NXRA]| LD1 @46 | LD5 @49
A/C2:CL212EJ2,2262122 |TAUR | LC5 @34 [NXRA]| LC1 @51

1196 6.04 RL VS 6.04 RH 2 -48.15 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0
-500.0 (0.0,0.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3720.0
A/C1: CL212OT,2164033 |RELZ | POTRA @47 (LVW) | CL @48 [NXRA]| ICL @50
A/C2:CL212MR2,2264133 |RELZ | POTRA @46 (DFD) | DES @48 [NXRA]| IDES @53

1196 6.04A RL VS 6.04A RH 2 -48.15 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0
-500.0 (0.0,0.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3720.0
A/C1: CL212UZ,2165044 |RELZ | POTRA @47 (LVW) | CL @48 [NXRA]| ICL @50
A/C2:CL212UZ2,2265144 |RELZ | POTRA @46 (DFD) | DES @48 [NXRA]| IDES @53

Mitre encounter Class : 2

Reit number : 1196

NMAC Characterization

100% had pattern shown on attached plot
60% had planned separation = -500 ft
AC1 rates: 0, +/- 400 fpm
96% had AC2 rate: 5000 fpm
AC1 accel: 0.0 g
94% had AC2 accel: 0.25 or 0.35 g
96% had AC2 accel time CPA: 20 sec

Performance Statistics (relate to whole class)

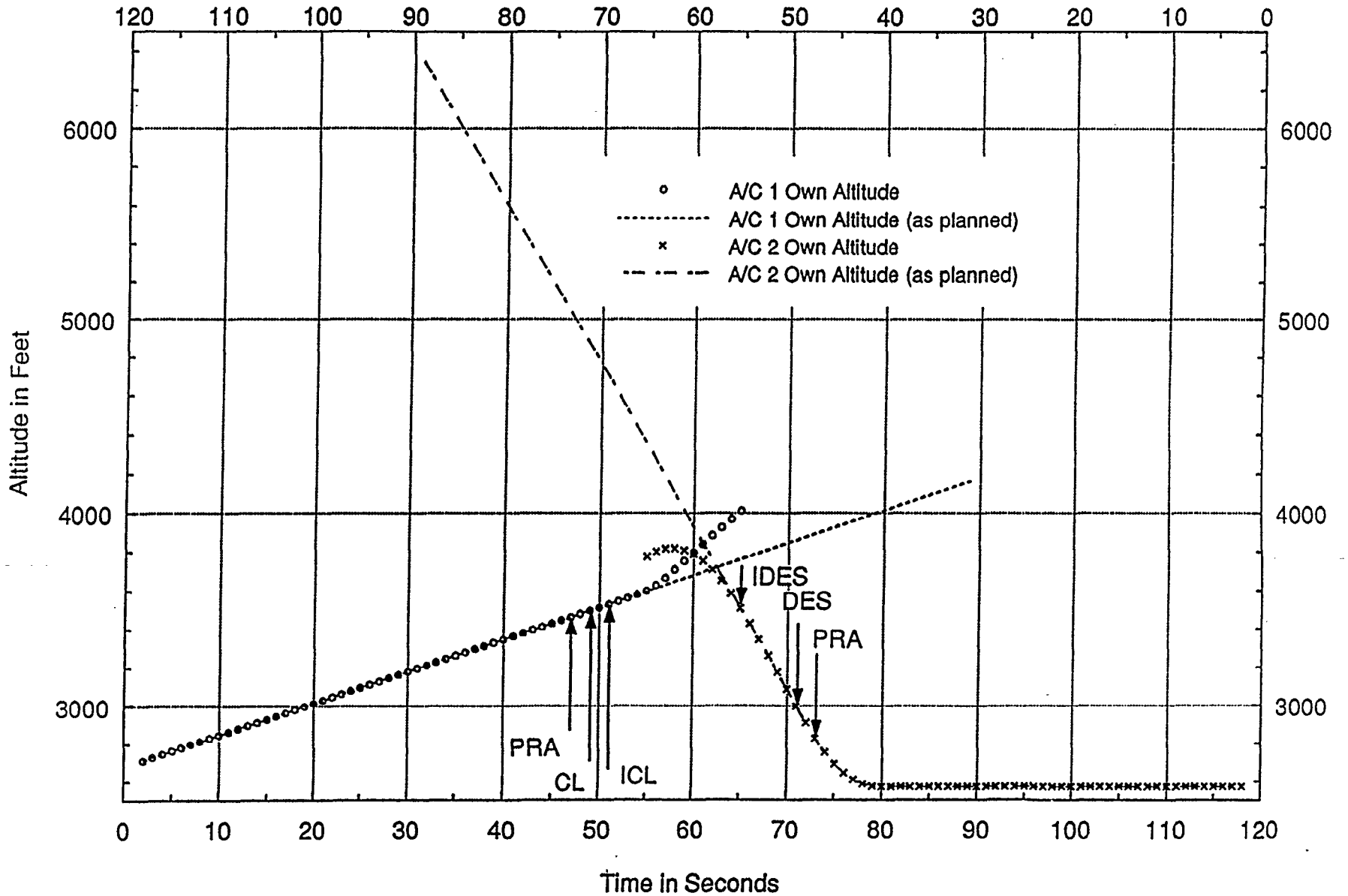
98% of RAs were non-crossing
98% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL515WZL.605; REIT Number=1006

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)

230



1006 6.02 RL VS 6.02 RH 5 272.99 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUUV = 25.0 ALIM = 400.0
-250.0 (1000.0,1000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 3680.0
A/C1: CL515CE,2162022 |PVMD | CL @46 [NXRA]| ICL @49
A/C2:CL515EG2,2262122 |RELZ | POTRA @45 (DFD) | DES @46 [NXRA]

1006 6.04 RL VS 6.04 RH 5 31.50 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0
-250.0 (1000.0,1000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 3680.0
A/C1: CL515OQ,2164033 |TAUV | POTRA @47 (VTT) | CL @49 [NXRA]| ICL @51
A/C2:CL515MO2,2264133 |TAUV | POTRA @47 (DFD) | DES @49 [NXRA]| IDES @55

1006 6.04A RL VS 6.04A RH 5 31.50 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0
-250.0 (1000.0,1000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 3680.0
A/C1: CL515XZ,2165044 |TAUV | POTRA @47 (VTT) | CL @49 [NXRA]| ICL @51
A/C2:CL515XZ2,2265144 |TAUV | POTRA @47 (DFD) | DES @49 [NXRA]| IDES @55

Mitre encounter Class : 5

Reit number : 1006

NMAC Characterization

20% had pattern shown on attached plot
100% had planned separation = 250 ft
AC1 rates : 1000 fpm
AC2 rates : 5000 fpm
AC1 accel : 0.0 g
AC2 accel : 0.15, 0.25, 0.35 g
80% had AC2 accel time CPA: 2.0 sec

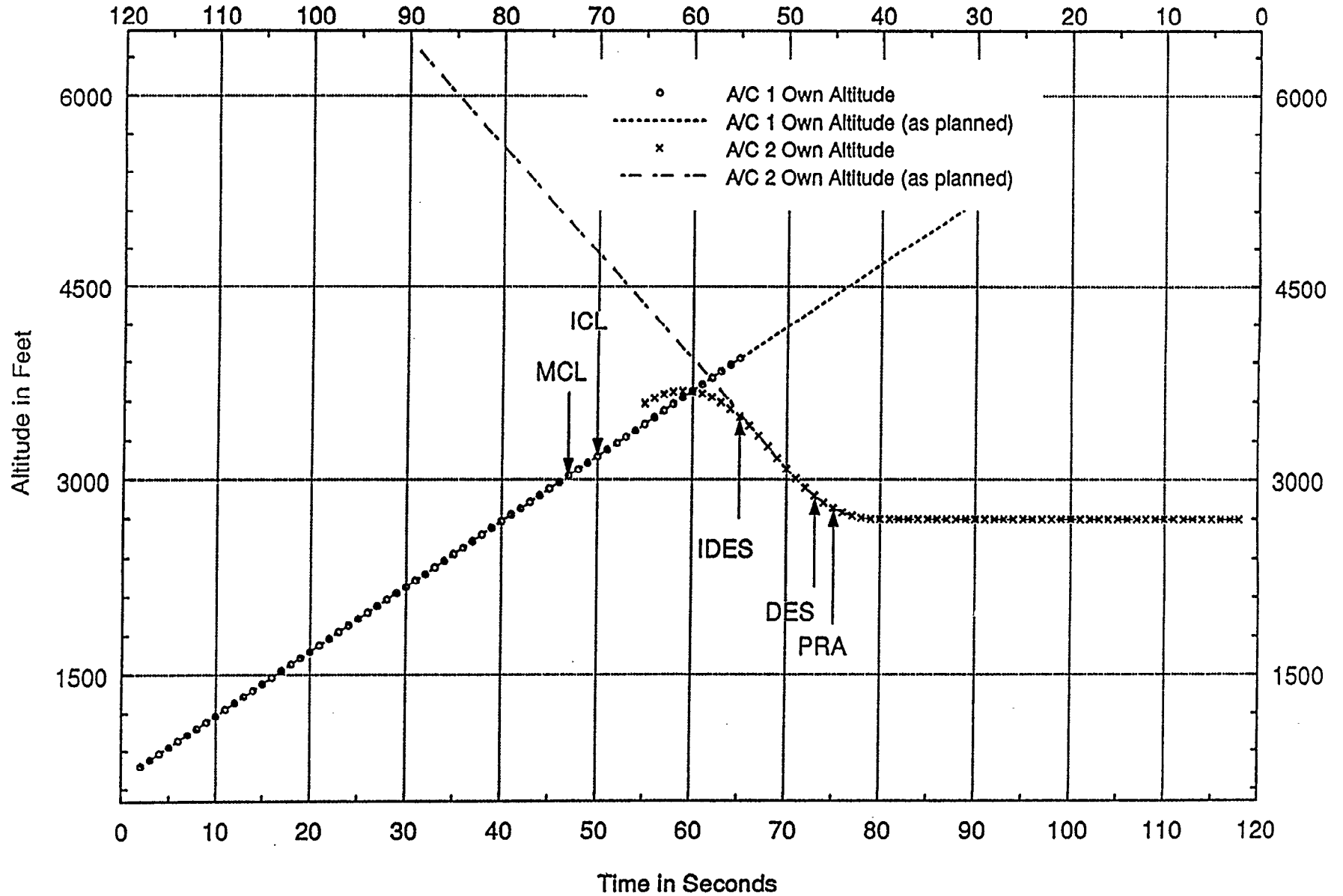
Performance Statistics (relate to whole class)

95% of RAs were non-crossing
98% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL515WZL.605; REIT Number=1195

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



1195 6.02 RL VS 6.02 RH 5 206.39 CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-250.0 (3000.0,3000.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3680.0
A/C1: CL515CE,2162022 |PVMD | POTRA @44 (FRM) | MCL @45 [NXRA]| ICL @50
A/C2:CL515EG2,2262122 |PVMD | POTRA @43 (DFD) | DES @45 [NXRA]| IDES @54

1195 6.04 RL VS 6.04 RH 5 21.86 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-250.0 (3000.0,3000.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3680.0
A/C1: CL515OQ,2164033 |PVMD | MCL @47 [NXRA]| ICL @50
A/C2:CL515MO2,2264133 |PVMD | POTRA @45 (DFD) | DES @47 [NXRA]| IDES @55

1195 6.04A RL VS 6.04A RH 5 21.86 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-250.0 (3000.0,3000.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3680.0
A/C1: CL515XZ,2165044 |PVMD | MCL @47 [NXRA]| ICL @50
A/C2:CL515XZ2,2265144 |PVMD | POTRA @45 (DFD) | DES @47 [NXRA]| IDES @55

Mitre encounter Class : 5

Reit number : 1195

NMAC Characterization

15% had pattern shown on attached plot
100% had planned separation = 250 ft
AC1 rates : 3000 fpm
AC2 rates : 5000 fpm
AC1 accel : 0.0 g
AC2 accel : 0.25, 0.35 g
AC2 accel time : CPA: 20 sec

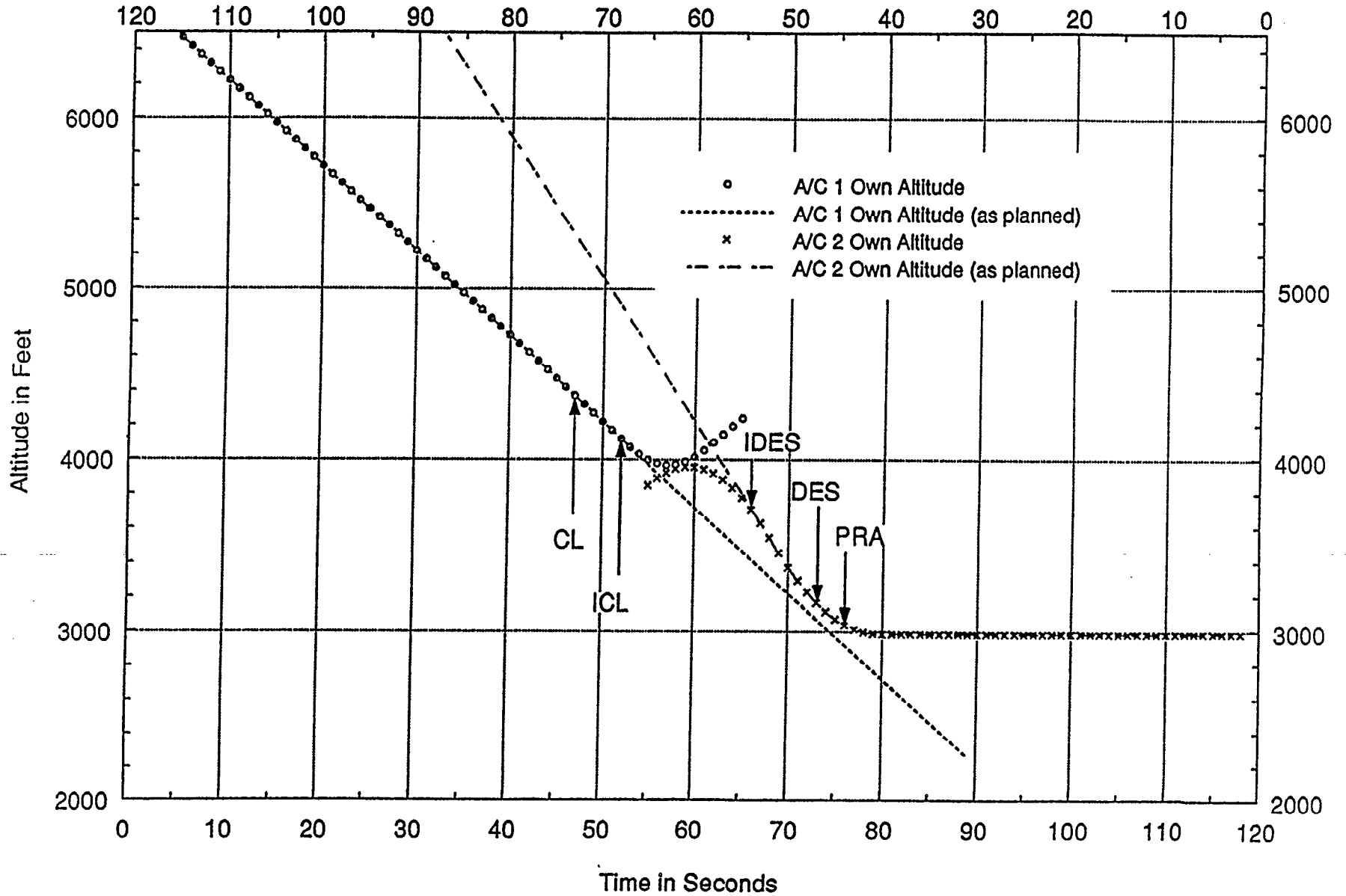
Performance Statistics (relate to whole class)

95% of RAs were non-crossing
98% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL515WZL.605; REIT Number=1952

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



1952 6.02 RL VS 6.02 RH 5 387.83 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-500.0 (-3000.0,-3000.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3720.0
A/C1: CL515CE,2162022 |TAUV | CL @45 [NXRA]| ICL @52
A/C2:CL515EG2,2262122 |TAUV | POTRA @44 (DFD) | DES @45 [NXRA]

1952 6.04 RL VS 6.04 RH 5 98.41 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-500.0 (-3000.0,-3000.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3720.0
A/C1: CL515OQ,2164033 |TAUV | CL @47 [NXRA]| ICL @52
A/C2:CL515MO2,2264133 |TAUV | POTRA @44 (DFD) | DES @47 [NXRA]| IDES @54

1952 6.04A RL VS 6.04A RH 5 98.41 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-500.0 (-3000.0,-3000.0) (0.0,5000.0) 0.00 0.25 0.0 -20.0 3720.0
A/C1: CL515XZ,2165044 |TAUV | CL @47 [NXRA]| ICL @52
A/C2:CL515XZ2,2265144 |TAUV | POTRA @44 (DFD) | DES @47 [NXRA]| IDES @54

Mitre encounter Class : 5

Reit number : 1952

NMAC Characterization

65% had pattern shown on attached plot
planned separation = -250, -500, -750 ft
AC1 rates : (76%)1000, (24%)3000 fpm
AC2 rates : (94%)5000, (6%)3000 fpm
AC1 accel : 0.0 g
AC2 accel : (6%) 0.15, (70%) 0.25, (24%) 0.35 g
AC2 accel time : CPA: (94%)20 or (6%) 25 sec

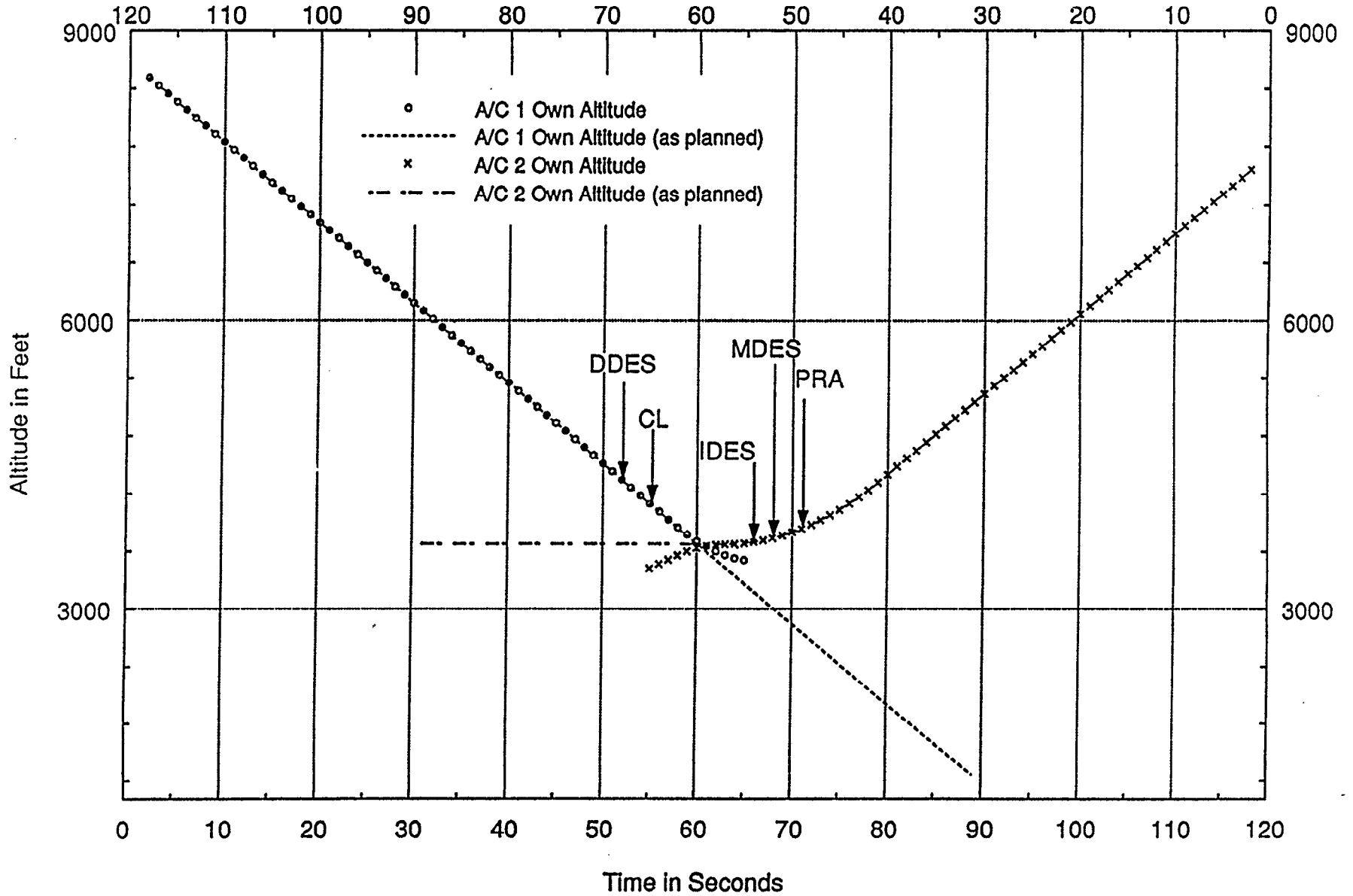
Performance Statistics (relate to whole class)

95% of RAs were non-crossing
98% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL616WZL.605; REIT Number=0081

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



81 6.02 RL VS 6.02 RH 6 171.03 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
0.0 (-5000.0,-5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -20.0 3680.0
A/C1: CL616CE,2162022 |RELZ | LD2 @51 [NXRA]| CL @52
A/C2:CL616EG2,2262122 |TAUV | POTRA @49 (DFD) | MDES @51 [NXRA]| IDES @53

81 6.04 RL VS 6.04 RH 6 90.58 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
0.0 (-5000.0,-5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -20.0 3680.0
A/C1: CL616OQ,2164033 |TAUV | DDES @52 [NXRA]| CL @55
A/C2:CL616MO2,2264133 |TAUV | POTRA @49 (VTT) | MDES @52 [NXRA]| IDES @54

81 6.04A RL VS 6.04A RH 6 90.58 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
0.0 (-5000.0,-5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -20.0 3680.0
A/C1: CL616XZ,2165044 |TAUV | DDES @52 [NXRA]| CL @55
A/C2:CL616XZ2,2265144 |TAUV | POTRA @49 (VTT) | MDES @52 [NXRA]| IDES @54

Mitre encounter Class : 6

Reit number : 81

NMAC Characterization

29%	had pattern shown on attached plot		
100%	had planned separation =	0	ft
AC1 rates :		- 5 0 0 0	fpm
AC2 rates :		- 5 0 0 0	fpm
AC1 accel :		0 . 0	g
AC2 accel :		0 . 1 5	g
AC2 accel time :CPA:		2 0	sec

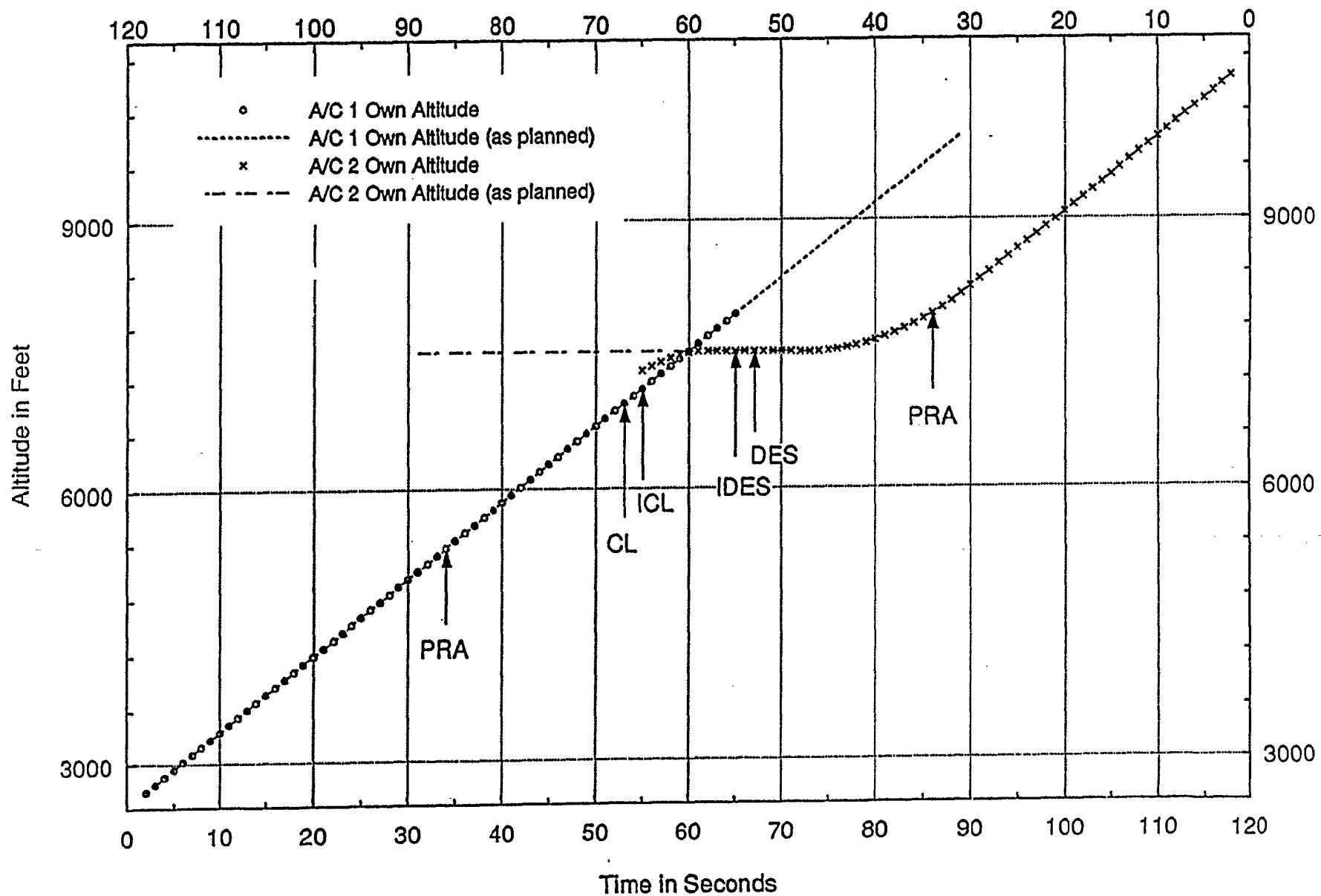
Performance Statistics (relate to whole class)

82%	of RAs were non-crossing
63%	of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL616WZL.605; REIT Number=5863

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



5863 6.02 RL VS 6.02 RH 6 469.11 CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 0.0 (5000.0,5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -30.0 7520.0
 A/C1: CL616CE,2162022 |PVMD | CL @43 [XRA] | MCL @58
 A/C2:CL616EG2,2262122 |PVMD | POTRA @39 (DFD) | DES @42 [XRA] | IDES @44

5863 6.04 RL VS 6.04 RH 6 422.90 CROSSING_ENCOUNTER
 SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
 0.0 (5000.0,5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -30.0 7520.0
 A/C1: CL616OQ,2164033 |PVMD | CL @43 [XRA] | MCL @58
 A/C2:CL616MO2,2264133 |PVMD | POTRA @41 (DFD) | DES @43 [XRA] | IDES @45

5863 6.04A RL VS 6.04A RH 6 22.51 CROSSING_ENCOUNTER
 SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 300.0
 0.0 (5000.0,5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -30.0 7520.0
 A/C1: CL616XZ,2165044 |TAUR | POTRA @34 (6FT) | CL @53 [XRA] | ICL @55
 A/C2:CL616XZ2,2265144 |TAUR | POTRA @34 (6FT) | DES @53 [XRA] | IDES @55

Mitre encounter Class : 6

Reit number : 5863

NMAC Characterization

71% had pattern shown on attached plot
100% had planned separation = 0 ft
AC1 rates : 5000 fpm
AC2 rates : (10%) -3000, (90%) -5000 fpm
AC1 accel : 0.0 g
AC2 accel : (80%) 0.15, (20%) 0.35 g
AC2 accel time :CPA: 20, 25, or 30 sec (evenly distributed)

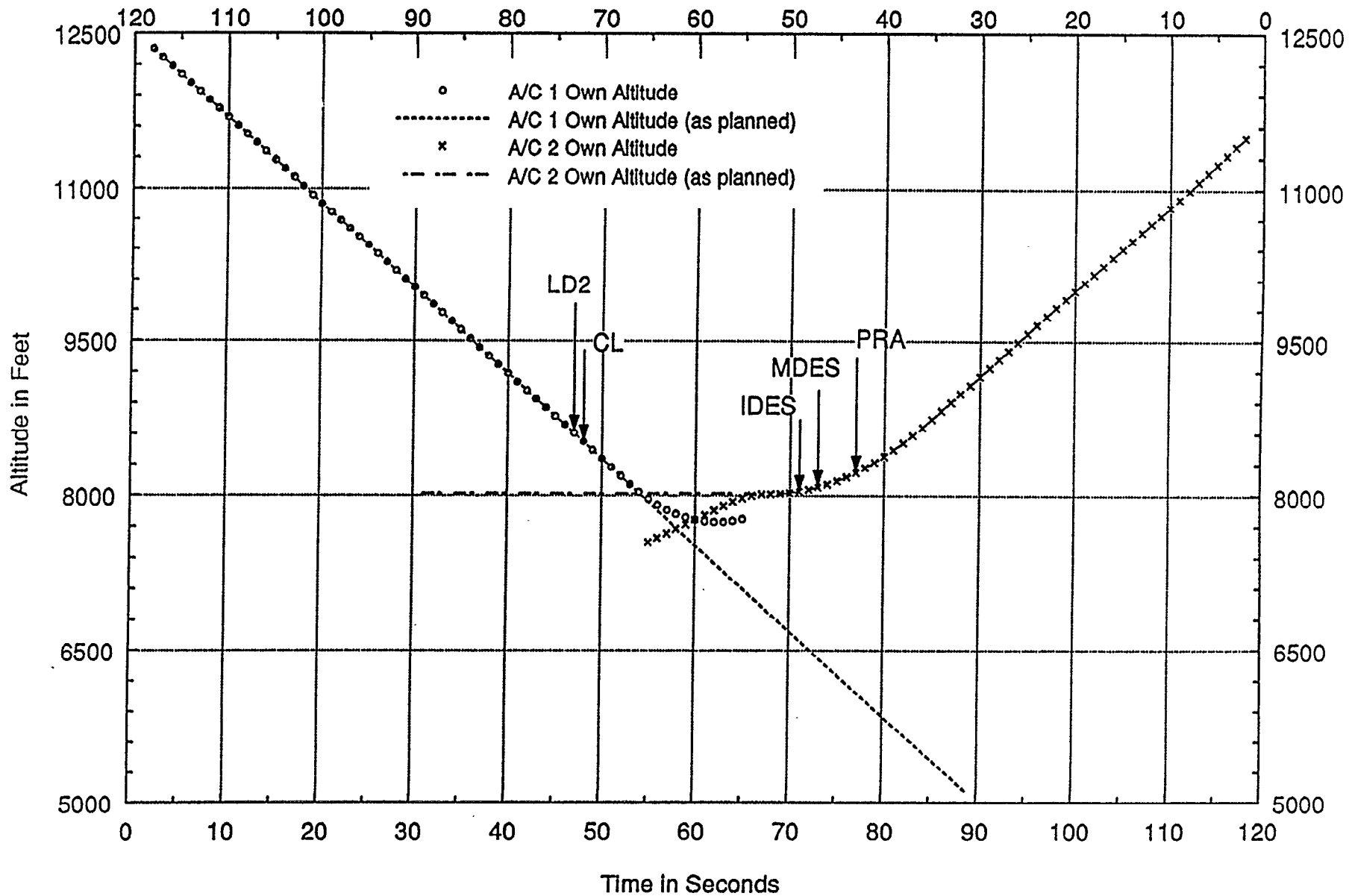
Performance Statistics (relate to whole class)

82% of RAs were non-crossing
63% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL616WZL.605; REIT Number=4612

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



4612 6.02 RL VS 6.02 RH 6 515.43 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 -500.0 (-5000.0,-5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -25.0 7520.0
 A/C1: CL616CE,2162022 |RELZ | LD2 @43 [NXRA]| CL @48
 A/C2:CL616EG2,2262122 |RELZ | POTRA @42 (DFD) | MDES @43 [NXRA]| IDES @45

4612 6.04 RL VS 6.04 RH 6 -725.09 CROSSING_ENCOUNTER
 SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
 -500.0 (-5000.0,-5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -25.0 7520.0
 A/C1: CL616OQ,2164033 |RELZ | DES @47 [XRA] | MDES @56
 A/C2:CL616MO2,2264133 |TAUV | POTRA @43 (VTT) | CL @47 [XRA] | ICL @53

4612 6.04A RL VS 6.04A RH 6 18.15 CROSSING_ENCOUNTER
 SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
 -500.0 (-5000.0,-5000.0) (-5000.0,0.0) 0.00 0.15 0.0 -25.0 7520.0
 A/C1: CL616XZ,2165044 |RELZ | LD2 @47 [NXRA]| CL @48
 A/C2:CL616XZ2,2265144 |TAUV | POTRA @43 (VTT) | MDES @47 [NXRA]| IDES @49

Mitre encounter Class : 6

Reit number : 4612

NMAC Characterization

100% had pattern shown on attached plot

planned separation = -250, -500 ft (evenly distributed)

AC1 rates : -5000 fpm

AC2 rates : -5000 fpm

AC1 accel : 0.0 g

AC2 accel : (17%) 0.15, (50%) 0.25, (33%) 0.35 g

AC2 accel time :CPA: (83%) 20, (17%) 25 sec

Performance Statistics (relate to whole class)

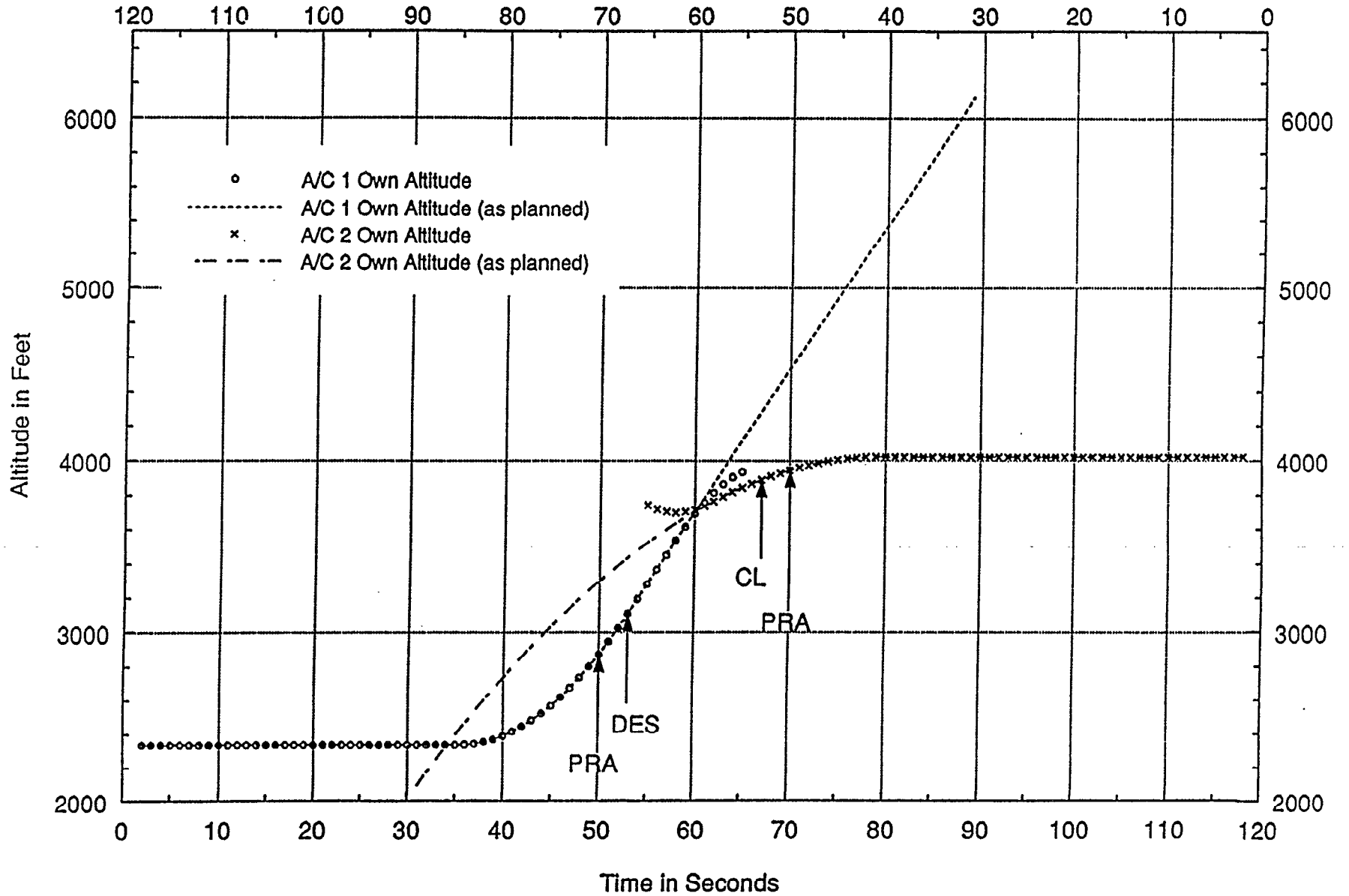
82% of RAs were non-crossing

63% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL717XZL.605; REIT Number=2538

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



2538 6.02 RL VS 6.02 RH 7 -370.75 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUUV = 25.0 ALIM = 400.0
0.0 (0.0,5000.0) (0.0,-5000.0) 0.15 -0.05 -25.0 -20.0 3700.0
A/C1: CL717CF,2162022 |TAUV | LC2 @48 [NXRA] | DES @55
A/C2:CL717EF2,2262122 |TAUV | LD1 @49 [NXRA] | CL @50

2538 6.04 RL VS 6:04 RH 7 -35.39 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0
0.0 (0.0,5000.0) (0.0,-5000.0) 0.15 -0.05 -25.0 -20.0 3700.0
A/C1: CL717O,2164033 |TAUV | POTRA @50 (FRM) | DES @53 [NXRA]
A/C2:CL717OP2,2264133 |TAUV | POTRA @50 (FRM) | CL @53 [NXRA]

2538 6.04A RL VS 6.04A RH 7 -35.39 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0
0.0 (0.0,5000.0) (0.0,-5000.0) 0.15 -0.05 -25.0 -20.0 3700.0
A/C1: CL717WZ,2165044 |TAUV | POTRA @50 (FRM) | DES @53 [NXRA]
A/C2:CL717YZ2,2265144 |TAUV | POTRA @50 (FRM) | CL @53 [NXRA]

Mitre encounter Class : 7

Reit number : 2538

NMAC Characterization

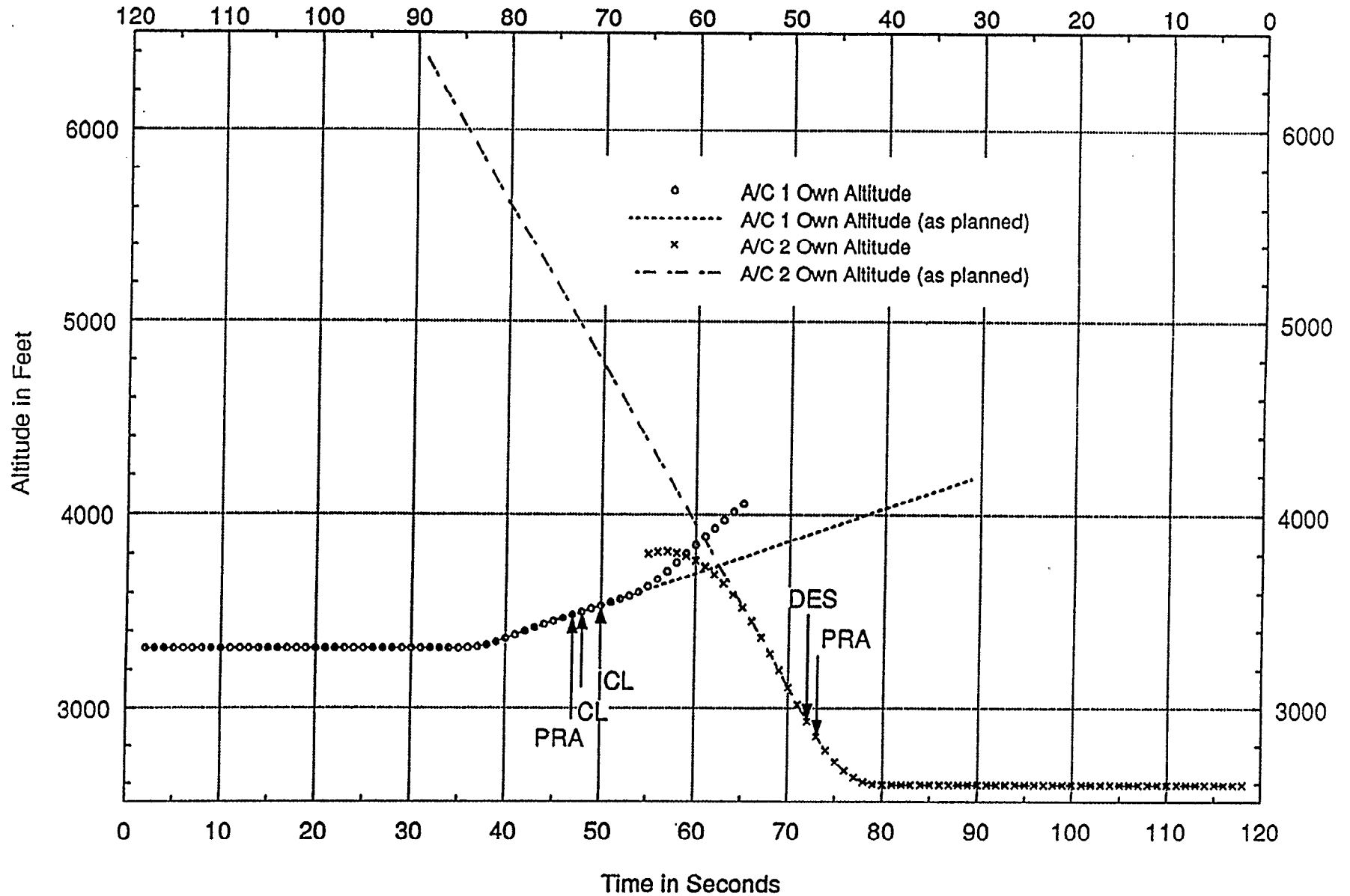
100% had pattern shown on attached plot
100% had planned separation = 0 ft
AC1 rates : 5000 fpm
AC2 rates : -3000, -5000 fpm
AC1 accel : 0.15 g
AC2 accel : -0.05 g
AC2 accel time : CPA: 20 sec

Performance Statistics (relate to whole class)

96% of RAs were non-crossing
99% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL717XZL.605; REIT Number=2014
SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



2014 6.02 RL VS 6.02 RH 7 658.58 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 -250.0 (0.0,1000.0) (0.0,5000.0) 0.15 0.35 -25.0 -20.0 3700.0
 A/C1: CL717CF,2162022 |TAUR | LD5 @34 [NXRA] | LD1 @44 | LD2 @56
 A/C2:CL717EF2,2262122 |TAUR | LC5 @34 [NXRA] | LC2 @45

2014 6.04 RL VS 6.04 RH 7 -475.41 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 -250.0 (0.0,1000.0) (0.0,5000.0) 0.15 0.35 -25.0 -20.0 3700.0
 A/C1: CL717O,2164033 |TAUV | DES @47 [XRA]
 A/C2:CL717OP2,2264133 |TAUV | CL @47 [XRA] | ICL @49

2014 6.04A RL VS 6.04A RH 7 94.30 NON_CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 -250.0 (0.0,1000.0) (0.0,5000.0) 0.15 0.35 -25.0 -20.0 3700.0
 A/C1: CL717WZ,2165044 |TAUV | POTRA @47 (6FT) | CL @48 [NXRA] | ICL @50
 A/C2:CL717YZ2,2265144 |TAUV | POTRA @47 (DFD) | DES @48 [NXRA]

Mitre encounter Class : 7

Reit number : 2014

NMAC Characterization

2% had pattern shown on attached plot
planned separation = +/- 250 ft
AC1 rates : (60%) 5000 (40%) 1000 fpm
AC2 rates : (60%) 1000 (40%) 5000 fpm
AC1 accel : (80%) 0.15, (20%) 0.25 g
AC2 accel : (20%) 0.15, (20%) 0.25, (60%) 0.35 g
AC2 accel time : no distinct pattern

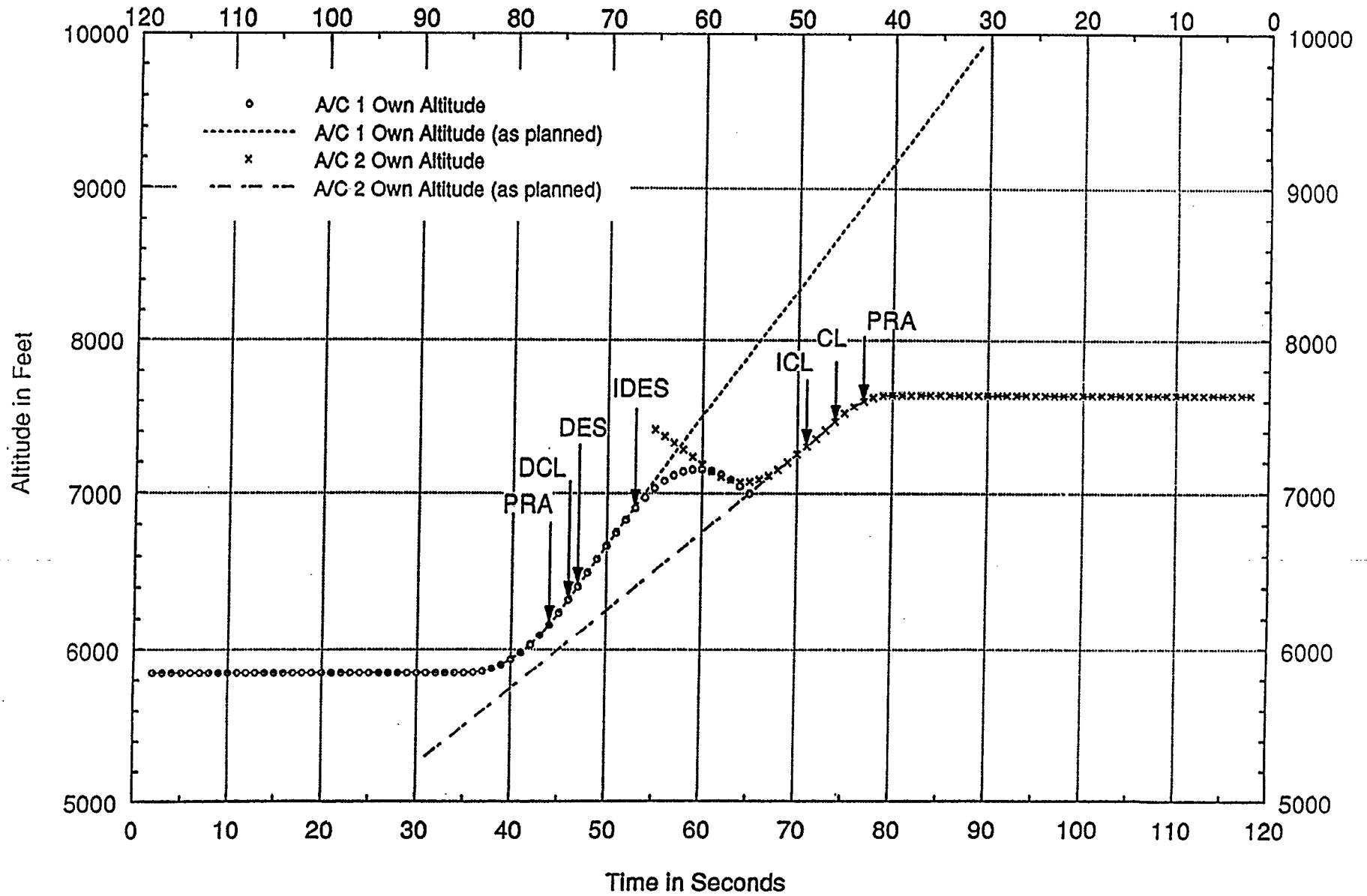
Performance Statistics (relate to whole class)

96% of RAs were non-crossing
99% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL717XZL.605; REIT Number=8982

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



8982 6.02 RL VS 6.02 RH 7 -67.85 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 750.0 (0.0,5000.0) (0.0,-3000.0) 0.25 -0.35 -25.0 -20.0 7500.0
 A/C1: CL717CF,2162022 |TAUV | POTRA @44 (FRM) | DCL @46 [NXRA] | DES @47
 | IDES @53
 A/C2:CL717EF2,2262122 |TAUV | POTRA @43 (FRM) | CL @46 [NXRA] | ICL @49

8982 6.04 RL VS 6.04 RH 7 -67.85 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
 750.0 (0.0,5000.0) (0.0,-3000.0) 0.25 -0.35 -25.0 -20.0 7500.0
 A/C1: CL717O,2164033 |TAUV | POTRA @44 (FRM) | DCL @46 [NXRA] | DES @47
 | IDES @53
 A/C2:CL717OP2,2264133 |TAUV | POTRA @43 (FRM) | CL @46 [NXRA] | ICL @49

8982 6.04A RL VS 6.04A RH 7 -67.85 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
 750.0 (0.0,5000.0) (0.0,-3000.0) 0.25 -0.35 -25.0 -20.0 7500.0
 A/C1: CL717WZ,2165044 |TAUV | POTRA @44 (FRM) | DCL @46 [NXRA] | DES @47
 | IDES @53
 A/C2:CL717YZ2,2265144 |TAUV | POTRA @43 (FRM) | CL @46 [NXRA] | ICL @49

Mitre encounter Class : 7

Reit number : 8982

NMAC Characterization

97% had pattern shown on attached plot
planned separation =250, 500, or 750 ft
AC1 rates : >=1000 fpm
AC2 rates : <= -1000 fpm
AC1 accel : 0.15, 0.25, 0.35 g (evenly distributed)
AC2 accel : -0.15, -0.25, -0.35 g (evenly distributed)
AC2 accel time varies: (20, 25 or 30 sec before CPA)

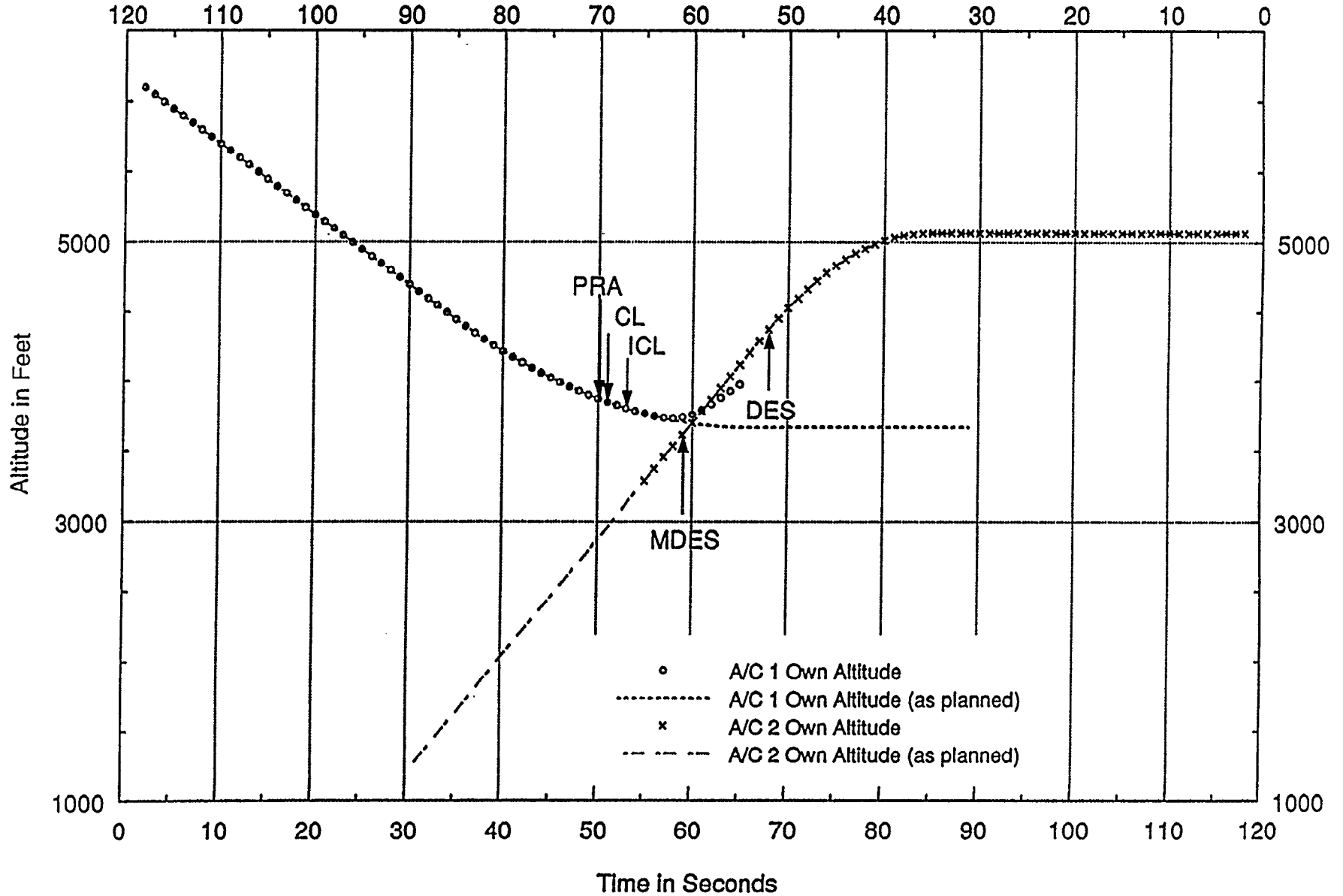
Performance Statistics (relate to whole class)

96% of RAs were non-crossing
99% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZL.605; REIT Number=0641

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



641 6.02 RL VS 6.02 RH 8 -285.17 CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUUV = 25.0 ALIM = 400.0
0.0 (-3000.0,0.0) (0.0,-5000.0) 0.05 -0.15 -25.0 -25.0 3700.0
A/C1: CL818CF,2162022 |RELZ | MDES @49 [NXRA] | IDES @51
A/C2:CL818EH2,2262122 |RELZ | POTRA @48 (DFD) | CL @49 [NXRA]

641 6.04 RL VS 6.04 RH 8 77.21 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0
0.0 (-3000.0,0.0) (0.0,-5000.0) 0.05 -0.15 -25.0 -25.0 3700.0
A/C1: CL818OR,2164033 |TAUV | POTRA @50 (FRM) | CL @51 [XRA] | ICL @53
A/C2:CL818OR2,2264133 |RELZ | DES @52 [XRA] | MDES @61

641 6.04A RL VS 6.04A RH 8 77.21 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0
0.0 (-3000.0,0.0) (0.0,-5000.0) 0.05 -0.15 -25.0 -25.0 3700.0
A/C1: CL818WZ,2165044 |TAUV | POTRA @50 (FRM) | CL @51 [XRA] | ICL @53
A/C2:CL818XZ2,2265144 |RELZ | DES @52 [XRA] | MDES @61

Mitre encounter Class : 8

Reit number : 641

NMAC Characterization

13% had pattern shown on attached plot
100% had planned separation = 0 ft
AC1 rates : -3000 fpm
AC2 rates : -5000 fpm
AC1 accel : 0.05 g
AC2 accel : -0.15 g
AC2 accel time : CPA: 2.5 sec

Performance Statistics (relate to whole class)

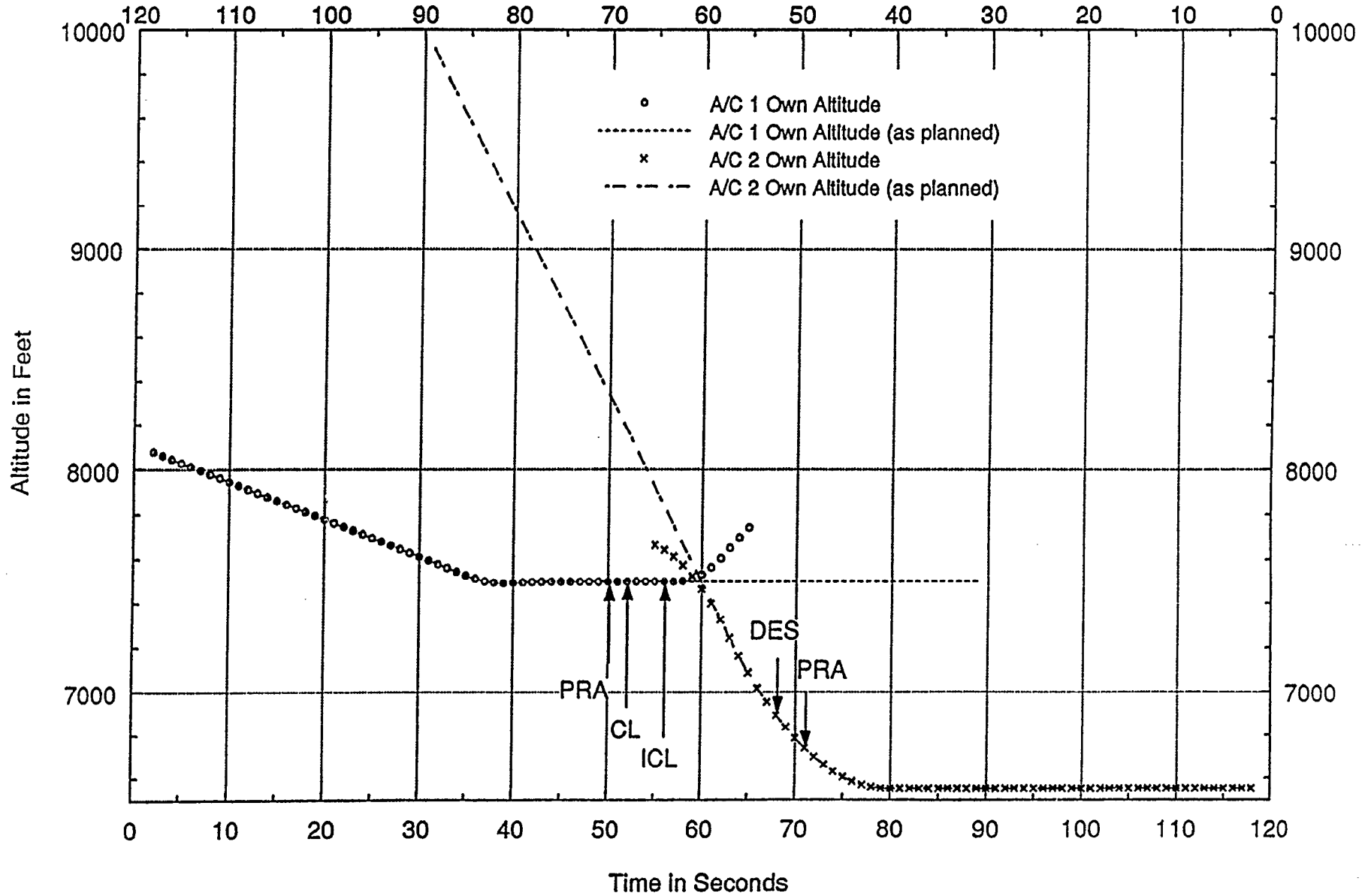
91% of RAs were non-crossing
96% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZL.605; REIT Number=7305

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)

260



7305 6.02 RL VS 6.02 RH 8 248.72 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
0.0 (-1000.0,0.0) (0.0,5000.0) 0.15 0.15 -25.0 -20.0 7500.0
A/C1: CL818CF,2162022 |PVMD | CL @50 [NXRA]| ICL @56
A/C2;CL818EH2,2262122 |TAUV | POTRA @49 (DFD) | DES @50 [NXRA]

7305 6.04 RL VS 6.04 RH 8 82.53 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
0.0 (-1000.0,0.0) (0.0,5000.0) 0.15 0.15 -25.0 -20.0 7500.0
A/C1: CL818OR,2164033 |TAUV | POTRA @50 (VTT) | CL @52 [NXRA]| ICL @56
A/C2:CL818OR2,2264133 |TAUV | POTRA @49 (DFD) | DES @52 [NXRA]

7305 6.04A RL VS 6.04A RH 8 82.53 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
0.0 (-1000.0,0.0) (0.0,5000.0) 0.15 0.15 -25.0 -20.0 7500.0
A/C1: CL818WZ,2165044 |TAUV | POTRA @50 (VTT) | CL @52 [NXRA]| ICL @56
A/C2:CL818XZ2,2265144 |TAUV | POTRA @49 (DFD) | DES @52 [NXRA]

Mitre encounter Class : 8

Reit number : 7305

NMAC Characterization

23% had pattern shown on attached plot

100% had planned separation =	0	ft
AC1 rates :	-1000, -3000	fpm
AC2 rates :	5000	fpm
AC1 accel :	0.5, 0.15, 0.25	g
AC2 accel :	0.15	g
AC2 accel time : CPA:	20	sec

Performance Statistics (relate to whole class)

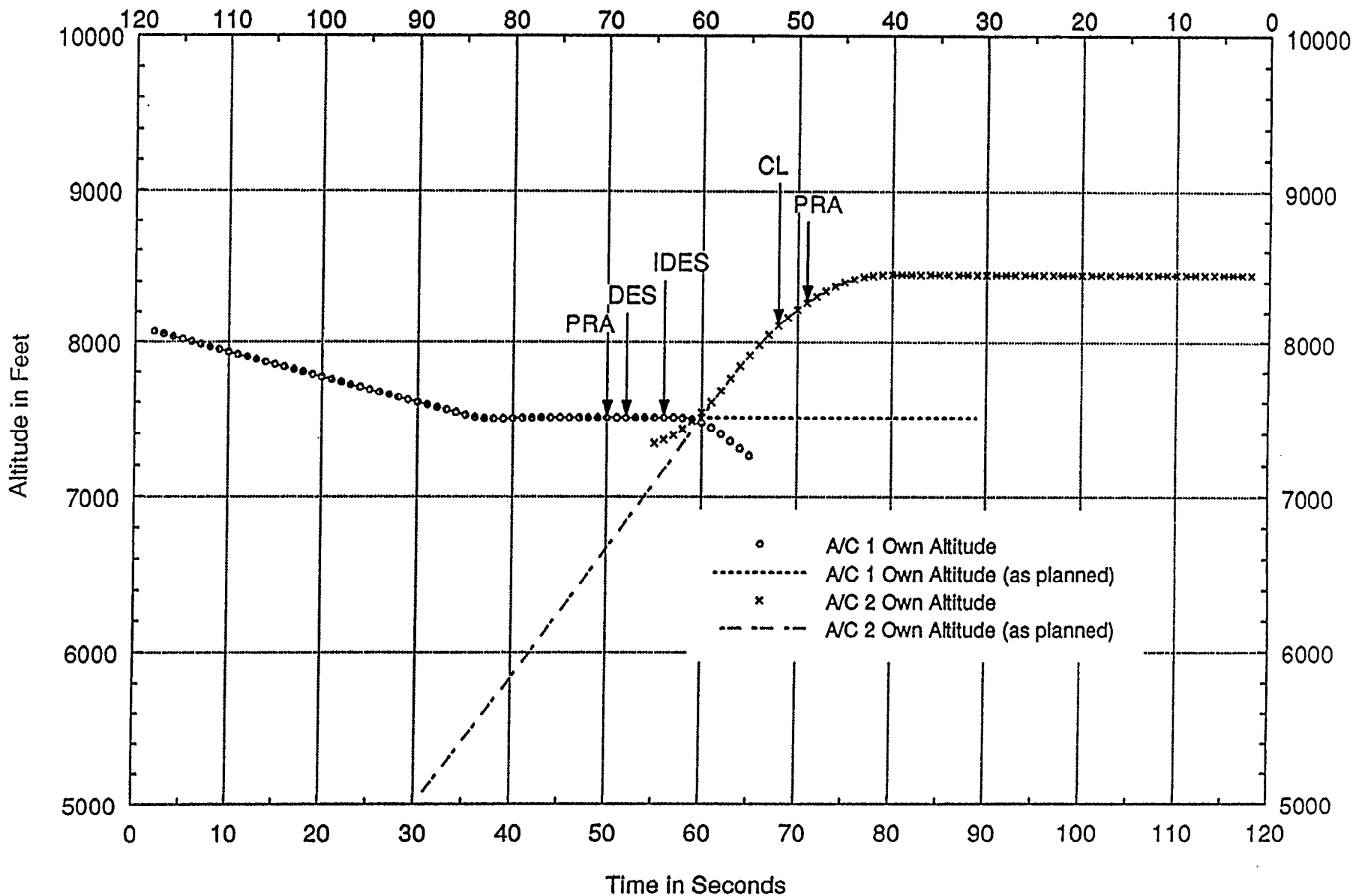
91% of RAs were non-crossing

96% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZL.605; REIT Number=8712

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



8712 6.02 RL VS 6.02 RH 8 -248.72 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
0.0 (-1000.0,0.0) (0.0,-5000.0) 0.25 -0.15 -25.0 -20.0 7500.0
A/C1: CL818CF,2162022 |PVMD | DES @50 [NXRA]| IDES @56
A/C2:CL818EH2,2262122 |TAUV | POTRA @49 (DFD) | CL @50 [NXRA]

8712 6.04 RL VS 6.04 RH 8 -82.53 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
0.0 (-1000.0,0.0) (0.0,-5000.0) 0.25 -0.15 -25.0 -20.0 7500.0
A/C1: CL818OR,2164033 |TAUV | POTRA @50 (VTT) | DES @52 [NXRA]| IDES @56
A/C2:CL818OR2,2264133 |TAUV | POTRA @49 (DFD) | CL @52 [NXRA]

8712 6.04A RL VS 6.04A RH 8 -82.53 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
0.0 (-1000.0,0.0) (0.0,-5000.0) 0.25 -0.15 -25.0 -20.0 7500.0
A/C1: CL818WZ,2165044 |TAUV | POTRA @50 (VTT) | DES @52 [NXRA]| IDES @56
A/C2:CL818XZ2,2265144 |TAUV | POTRA @49 (DFD) | CL @52 [NXRA]

Mitre encounter Class : 8

Reit number : 8712

NMAC Characterization

64% had pattern shown on attached plot

100% had planned separation = 0 ft

AC1 rates : -1000, -3000, -5000 fpm

AC2 rates : -5000 fpm

AC1 accel : 0.05, 0.15, 0.25 g

AC2 accel : -0.15, -0.25 g (most -0.15)

AC2 accel time : CPA: 20 sec

Performance Statistics (relate to whole class)

91% of RAs were non-crossing

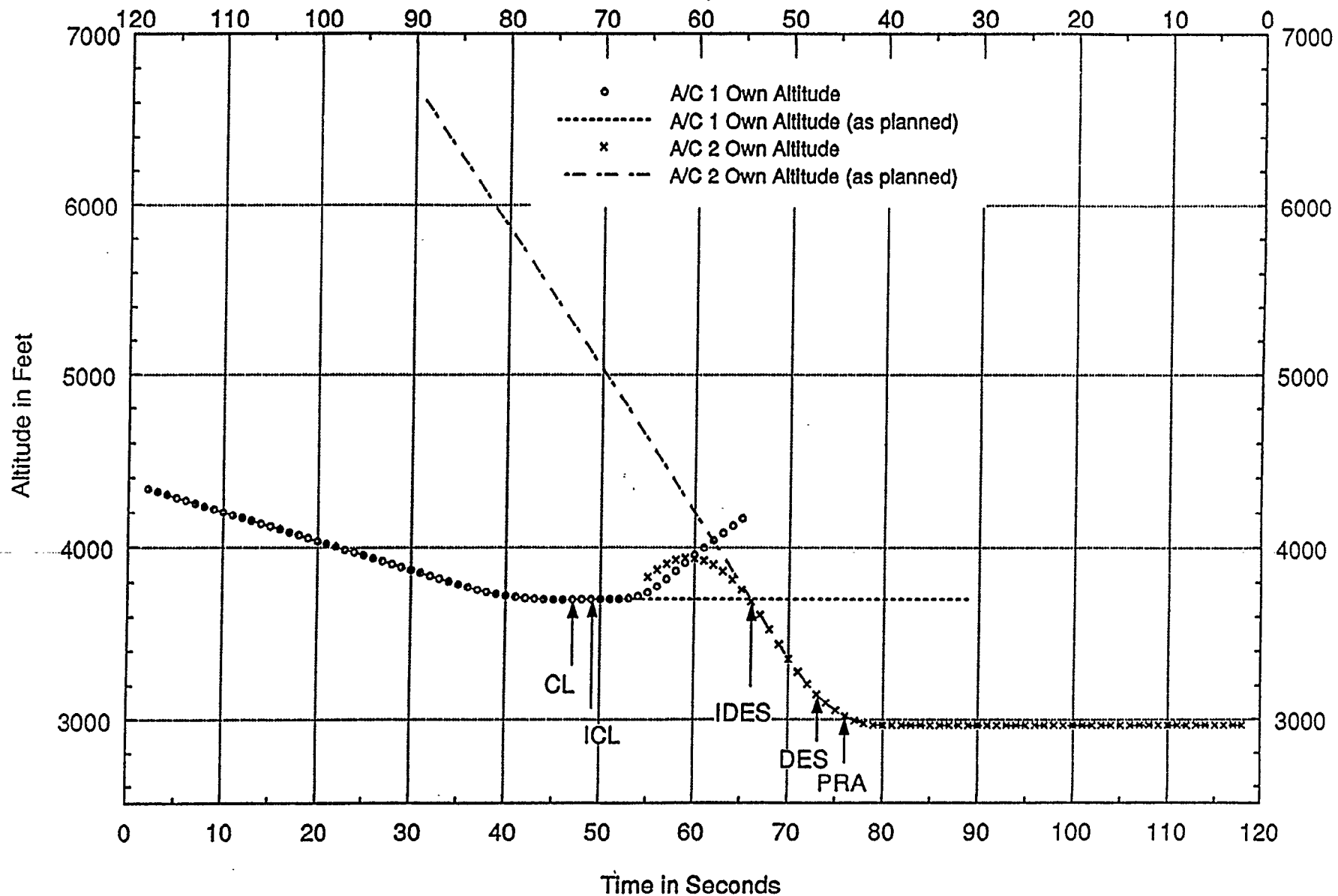
96% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZL.605; REIT Number=1385

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)

266



1385 6.02 RL VS 6.02 RH 8 817.42 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 -500.0 (-1000.0,0.0) (0.0,5000.0) 0.05 0.25 -25.0 -20.0 3700.0
 A/C1: CL818CF,2162022 |RELZ | LD5 @38 [NXRA]| DDES @45 | CL @48
 A/C2:CL818EH2,2262122 |RELZ | DCL @40 [NXRA]| DES @41 | DCL @51

1385 6.04 RL VS 6.04 RH 8 39.36 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 -500.0 (-1000.0,0.0) (0.0,5000.0) 0.05 0.25 -25.0 -20.0 3700.0
 A/C1: CL818OR,2164033 |RELZ | CL @47 [NXRA]| ICL @49
 A/C2:CL818OR2,2264133 |TAUV | POTRA @44 (DFD) | DES @47 [NXRA]| IDES @54

1385 6.04A RL VS 6.04A RH 8 39.36 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 -500.0 (-1000.0,0.0) (0.0,5000.0) 0.05 0.25 -25.0 -20.0 3700.0
 A/C1: CL818WZ,2165044 |RELZ | CL @47 [NXRA]| ICL @49
 A/C2:CL818XZ2,2265144 |TAUV | POTRA @44 (DFD) | DES @47 [NXRA]| IDES @54

Mitre encounter Class : 8

Reit number : 1385

NMAC Characterization

15% had pattern shown on attached plot		
planned separation =	-250, -500	ft
AC1 rates :	(80%) -1000, (20%) -3000	fpm
AC2 rates :	5000	fpm
AC1 accel :	0.05, 0.15, 0.25	g (evenly distributed)
AC2 accel :	0.15, 0.25, 0.35	g (evenly distributed)
AC2 accel time : CPA:	(93%) 20 or (7%) 25	sec

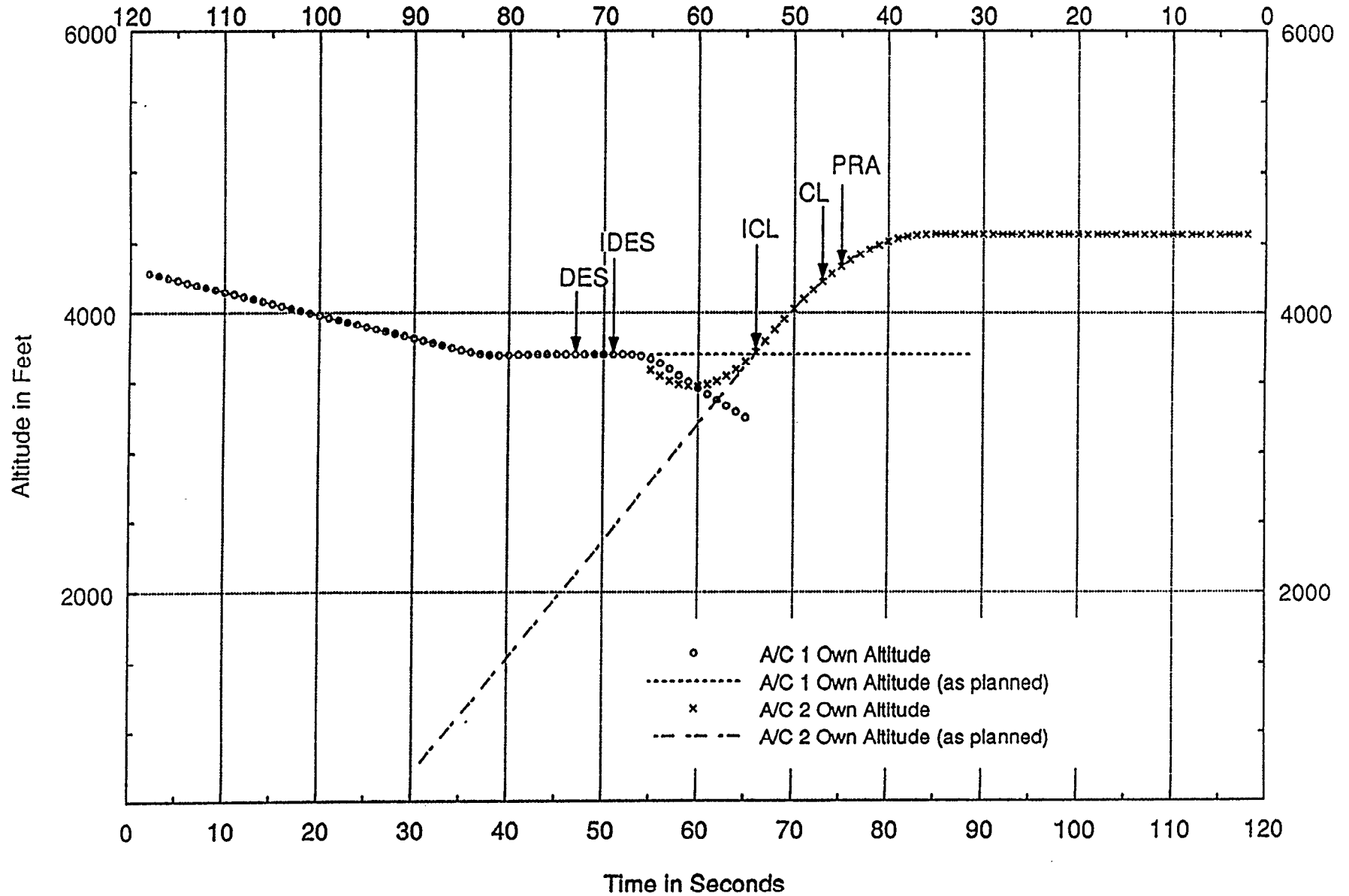
Performance Statistics (relate to whole class)

91% of RAs were non-crossing
96% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZL.605; REIT Number=2655

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



2655 6.02 RL VS 6.02 RH 8 -508.13 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
500.0 (-1000.0,0.0) (0.0,-5000.0) 0.15 -0.15 -25.0 -25.0 3700.0
A/C1: CL818CF,2162022 |RELZ | DES @42 [NXRA]| IDES @52
A/C2;CL818EH2,2262122 |RELZ | DDES @44 [NXRA]| CL @45

2655 6.04 RL VS 6.04 RH 8 -38.78 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
500.0 (-1000.0,0.0) (0.0,-5000.0) 0.15 -0.15 -25.0 -25.0 3700.0
A/C1: CL818OR,2164033 |RELZ | DES @47 [NXRA]| IDES @51
A/C2:CL818OR2,2264133 |TAUV | POTRA @45 (DFD) | CL @47 [NXRA]| ICL @54

2655 6.04A RL VS 6.04A RH 8 -38.78 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
500.0 (-1000.0,0.0) (0.0,-5000.0) 0.15 -0.15 -25.0 -25.0 3700.0
A/C1: CL818WZ,2165044 |RELZ | DES @47 [NXRA]| IDES @51
A/C2:CL818XZ2,2265144 |TAUV | POTRA @45 (DFD) | CL @47 [NXRA]| ICL @54

Mitre encounter Class : 8

Reit number : 2655

NMAC Characterization

80% had pattern shown on attached plot

planned separation =	-500, -750	ft
AC1 rates :	<= -1000	fpm
AC2 rates :	<= -3000	fpm
AC1 accel :	0.05, 0.15, 0.25	g
AC2 accel :	-0.15, -0.25, -0.35	g
AC2 accel time : CPA:	(67%) 20, (22%) 25, (11%) 30	sec

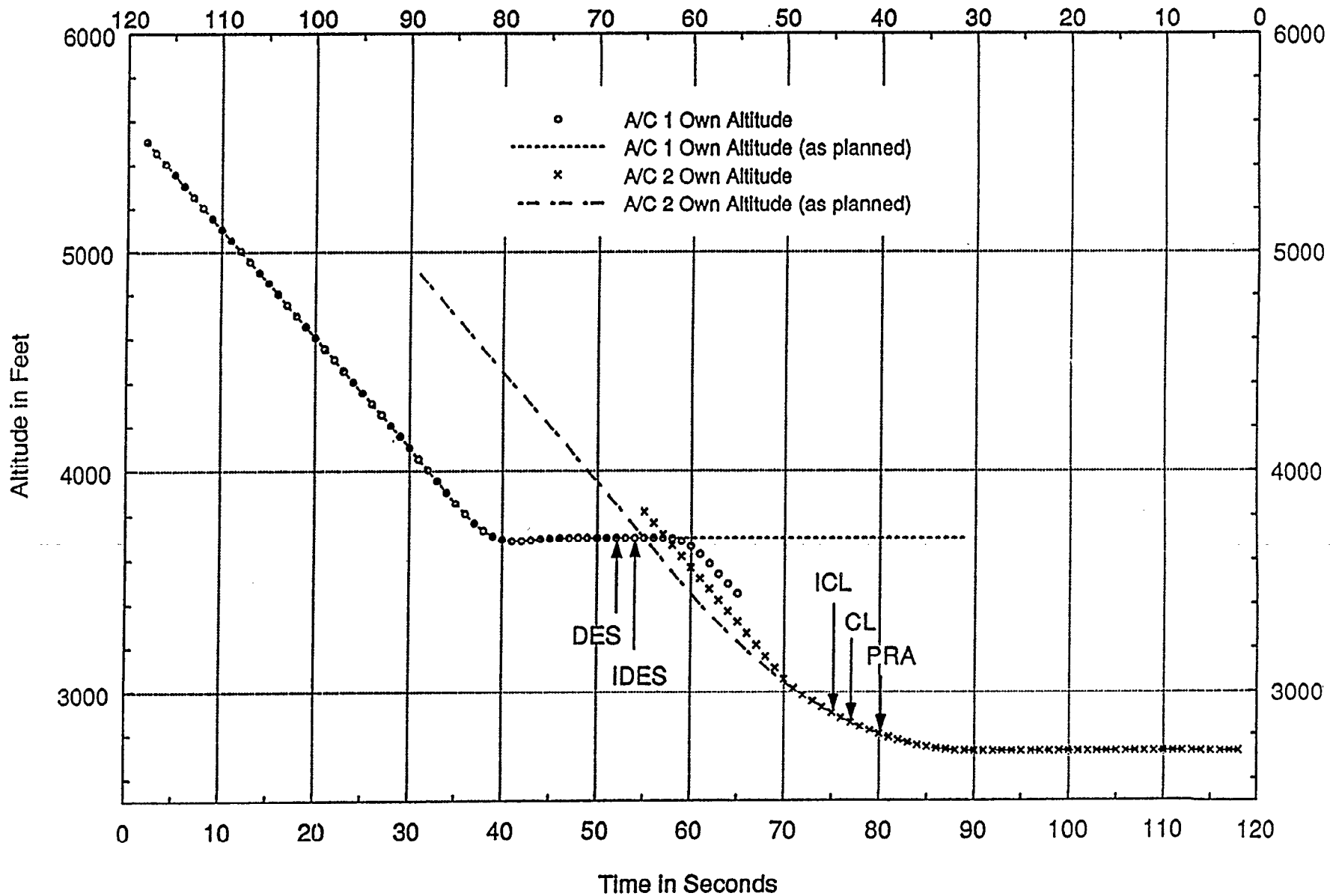
Performance Statistics (relate to whole class)

91% of RAs were non-crossing
96% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZL.605; REIT Number=3615

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



3615 6.02 RL VS 6.02 RH 8 822.04 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
250.0 (-3000.0,0.0) (0.0,3000.0) 0.25 0.05 -25.0 -30.0 3700.0
A/C1: CL818CF,2162022 |TAUR | LD1 @34 [NXRA]| LD2 @47
A/C2:CL818EH2,2262122 |TAUR | POTRA @34 (LVW) | DES @35 [NXRA]| LC1 @45
| LC2 @55

3615 6.04 RL VS 6.04 RH 8 82.28 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
250.0 (-3000.0,0.0) (0.0,3000.0) 0.25 0.05 -25.0 -30.0 3700.0
A/C1: CL818OR,2164033 |RELZ | DES @52 [XRA] | IDES @54
A/C2:CL818OR2,2264133 |TAUR | POTRA @40 (DFD) | CL @43 [XRA] | ICL @45

3615 6.04A RL VS 6.04A RH 8 82.28 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
250.0 (-3000.0,0.0) (0.0,3000.0) 0.25 0.05 -25.0 -30.0 3700.0
A/C1: CL818WZ,2165044 |RELZ | DES @52 [XRA] | IDES @54
A/C2:CL818XZ2,2265144 |TAUR | POTRA @40 (DFD) | CL @43 [XRA] | ICL @45

Mitre encounter Class : 8

Reit number : 3615

NMAC Characterization

2%	had pattern shown on attached plot	
100%	had planned separation =	250 ft
AC1 rates :	-3000	fpm
AC2 rates :	3000, 5000	fpm
AC1 accel :	0.15, 0.25	g
AC2 accel :	0.05	g
AC2 accel time : CPA:	30	sec

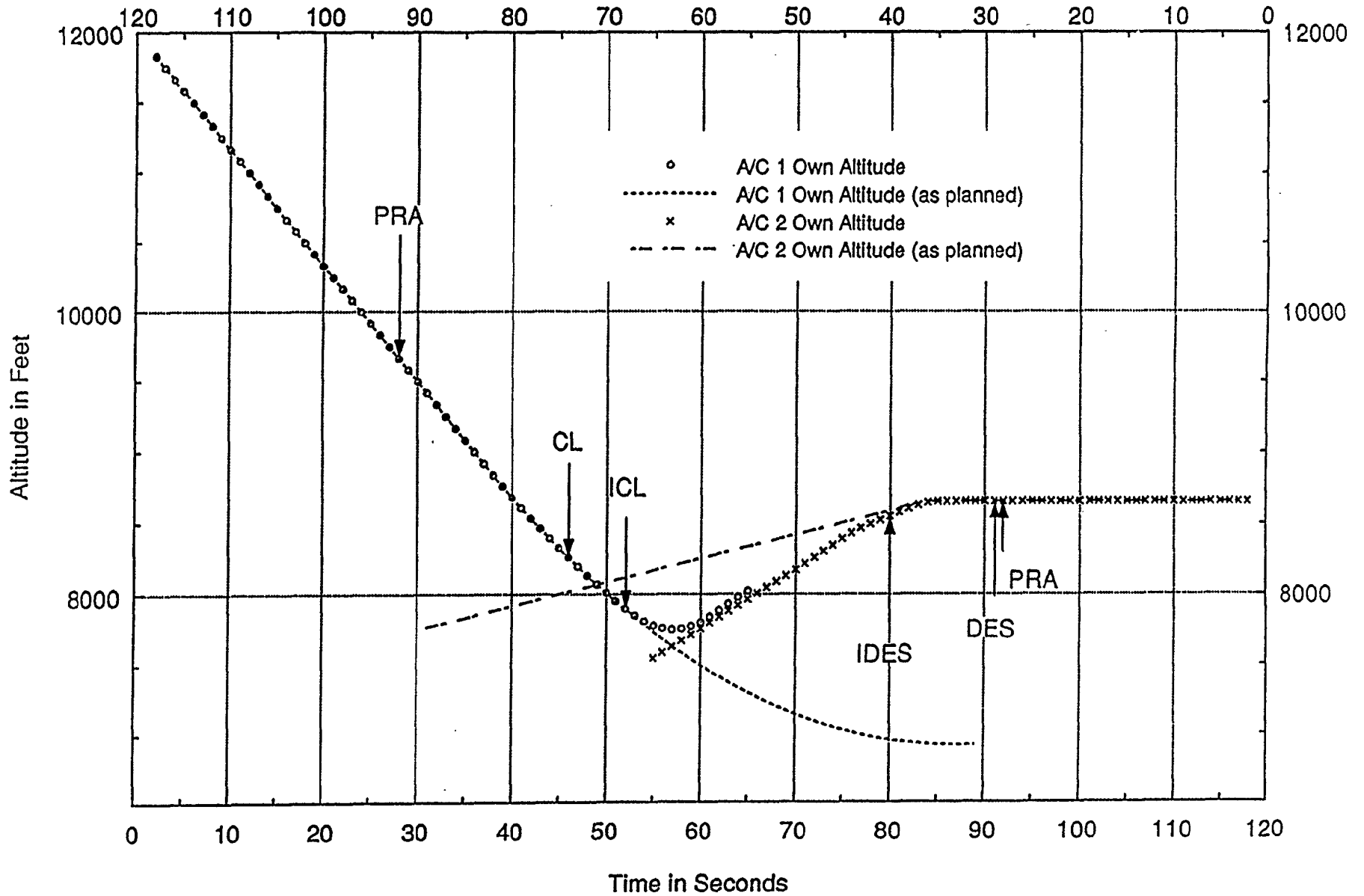
Performance Statistics (relate to whole class)

91% of RAs were non-crossing
96% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZH.605; REIT Number=4970

SIM MODE:2165144 (Source: LL Composite FTEG Run, Dated 07/29/94)



275

4970 6.02 RH VS 6.02 RL 8 -767.67 CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-750.0 (-5000.0,0.0) (0.0,-1000.0) 0.05 -0.35 -25.0 -25.0 7500.0
A/C1: CL818CF,2162122 |PVMD | POTRA @50 (DFD) | MDES @53 [NXRA]| DES @61
A/C2:CL818EH2,2262022 |PVMD | LD2 @52 [NXRA]

4970 6.04 RH VS 6.04 RL 8 -749.99 CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-750.0 (-5000.0,0.0) (0.0,-1000.0) 0.05 -0.35 -25.0 -25.0 7500.0
A/C1: CL818OR,2164133 NO RAs
A/C2:CL818OR2,2264033 NO RAs

4970 6.04A RH VS 6.04A RL 8 62.99 CROSSING_ENCOUNTER
SL = 6 ZTHR = 600.0 TAUR = 30.0 TAUV = 30.0 ALIM = 400.0
-750.0 (-5000.0,0.0) (0.0,-1000.0) 0.05 -0.35 -25.0 -25.0 7500.0
A/C1: CL818WZ,2165144 |TAUR | POTRA @28 (DFD) | CL @46 [NXRA]| ICL @52
A/C2:CL818X22,2265044 |TAUR | POTRA @28 (LVW) | DES @29 [NXRA]| IDES @40

Mitre encounter Class : 8

Reit number : 4970

NMAC Characterization

3% had pattern shown on attached plot
100% had planned separation = -750 ft
AC1 rates : -5000 fpm
AC2 rates : -1000 fpm
AC1 accel : 0.05 g
AC2 accel : -0.15, -0.25, -0.35 g
AC2 accel time : CPA: (40%) 25, (60%) 30 sec

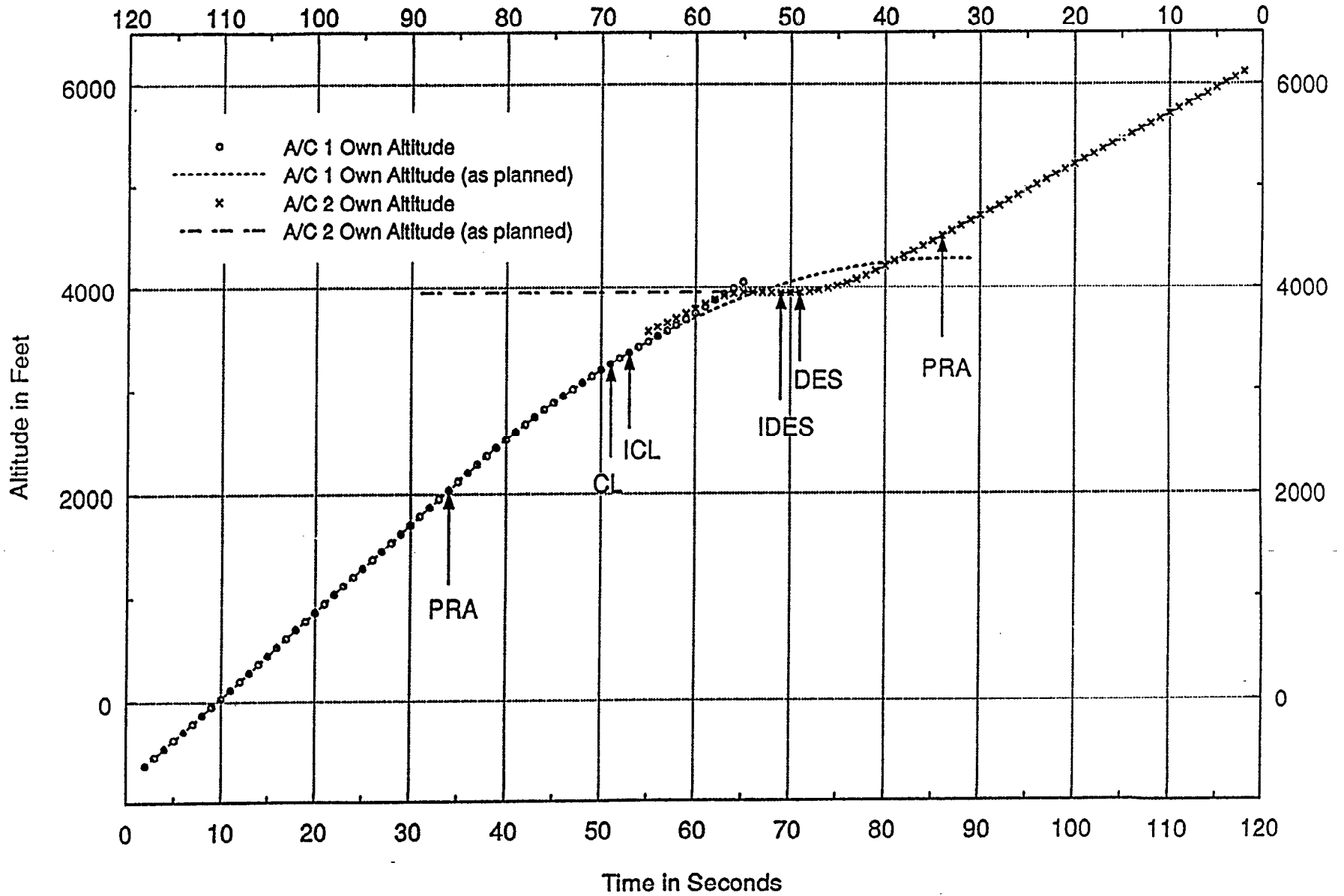
Performance Statistics (relate to whole class)

91% of RAs were non-crossing
96% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL919YZH.605; REIT Number=1509

SIM MODE:2165144 (Source: LL Composite FTEG Run, Dated 07/29/94)



1509 6.02 RH VS 6.02 RL 9 898.37 CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-250.0 (5000.0,0.0) (-3000.0,0.0) -0.05 0.15 -25.0 -20.0 3700.0
A/C1: CL919CF,2162122 |PVMD | CL @38 [XRA] | LD2 @57
A/C2:CL919EH2,2262022 |PVMD | DES @35 [XRA] | IDES @54

1509 6.04 RH VS 6.04 RL 9 312.08 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-250.0 (5000.0,0.0) (-3000.0,0.0) -0.05 0.15 -25.0 -20.0 3700.0
A/C1: CL919OR,2164133 |PVMD | CL @45 [XRA] | ICL @47 | CL @57
A/C2:CL919OR2,2264033 |PVMD | DES @44 [XRA] | IDES @50

1509 6.04A RH VS 6.04A RL 9 -27.82 CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 300.0
-250.0 (5000.0,0.0) (-3000.0,0.0) -0.05 0.15 -25.0 -20.0 3700.0
A/C1: CL919WZ,2165144 |TAUR | POTRA @34 (DFD) | CL @51 [XRA] | ICL @53
A/C2:CL919YZ2,2265044 |TAUR | POTRA @34 (6FT) | DES @49 [XRA] | IDES @51

Mitre encounter Class : 9

Reit number : 1509

NMAC Characterization

78% had pattern shown on attached plot

100% had planned separation = 250 ft

AC1 rates : 5000 fpm

AC2 rates : (7%) -3000, (93%) -5000 fpm

AC1 accel : -0.05, -0.15 g

AC2 accel : 0.05, 0.15, 0.25, 0.35 g

AC2 accel time : CPA: (50%) 20, (29%) 25, (21%) 30 sec

Performance Statistics (relate to whole class)

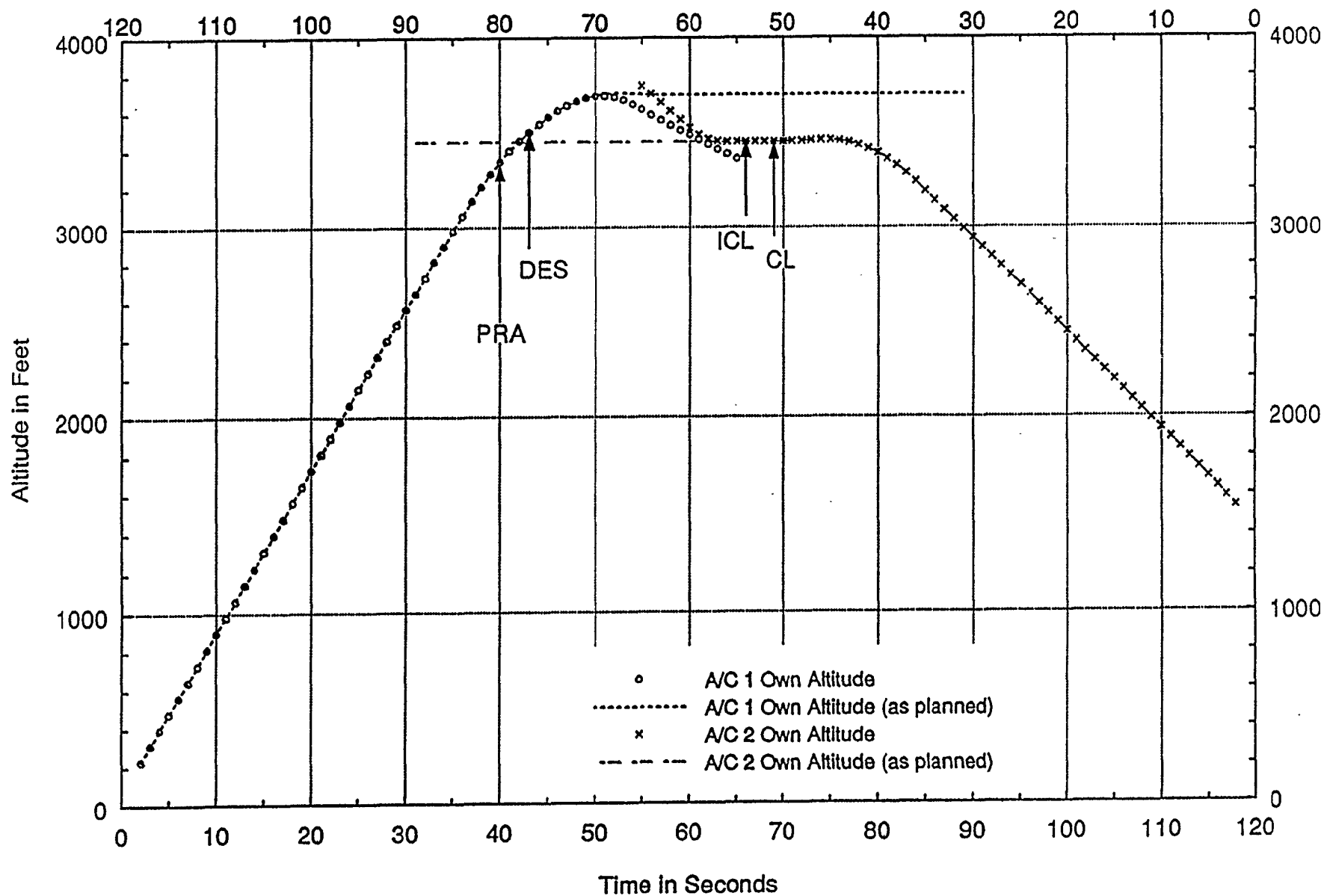
70% of RAs were non-crossing.

17% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL919YZH.605; REIT Number=3523

SIM MODE:2165144 (Source: LL Composite FTEG Run, Dated 07/29/94)



3523 6.02 RH VS 6.02 RL 9 -779.19 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 250.0 (5000.0,0.0) (3000.0,0.0) -0.15 -0.15 -25.0 -25.0 3700.0
 A/C1: CL919CF,2162122 |TAUR | POTRA @34 (DFD) | DES @35 [NXRA] | LC1 @52
 A/C2:CL919EH2,2262022 |TAUR | MCL @34 [NXRA] | CL @39 | ICL @40
 | LD1 @54

3523 6.04 RH VS 6.04 RL 9 -54.29 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 250.0 (5000.0,0.0) (3000.0,0.0) -0.15 -0.15 -25.0 -25.0 3700.0
 A/C1: CL919OR,2164133 |TAUR | POTRA @40 (DFD) | DES @43 [NXRA]
 A/C2:CL919OR2,2264033 |PVMD | CL @51 [XRA] | ICL @54

3523 6.04A RH VS 6.04A RL 9 -54.29 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 250.0 (5000.0,0.0) (3000.0,0.0) -0.15 -0.15 -25.0 -25.0 3700.0
 A/C1: CL919WZ,2165144 |TAUR | POTRA @40 (DFD) | DES @43 [NXRA]
 A/C2:CL919YZ2,2265044 |PVMD | CL @51 [XRA] | ICL @54

Mitre encounter Class : 9

Reit number : 3523

NMAC Characterization

22% had pattern shown on attached plot
planned separation = 250, +/- 500, 1000 ft
AC1 rates : 1000, 5000 fpm
AC2 rates : 3000, 5000 fpm
AC1 accel : -0.05, -0.15 g
AC2 accel : -0.05, -0.15, -0.25, -0.35 g
AC2 accel time : CPA: 2 5 sec

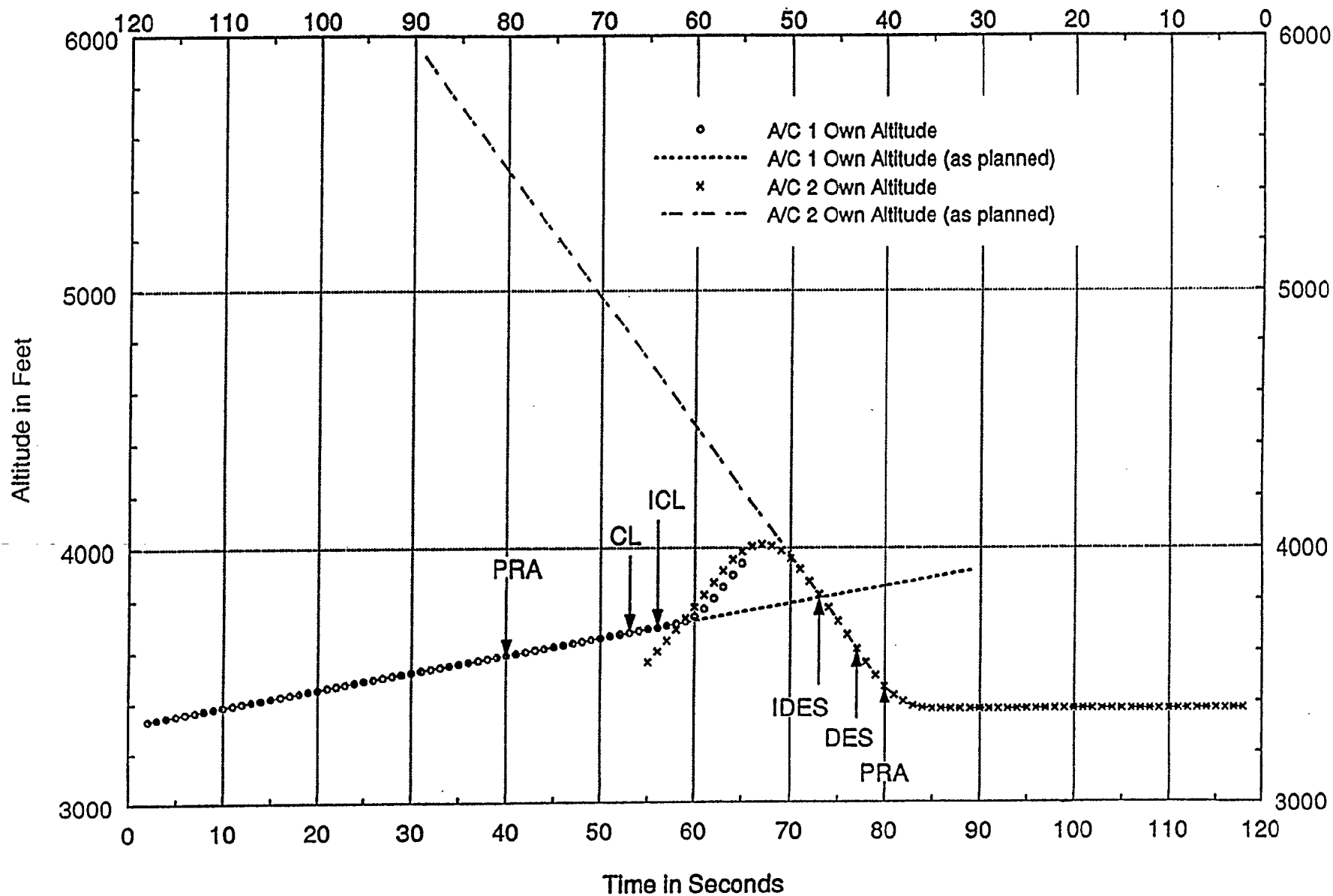
Performance Statistics (relate to whole class)

70% of RAs were non-crossing
17% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL212OZL.605; REIT Number=1421

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



1421 6.02 RL VS 6.02 RH 12 674.97 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-750.0 (400.0, 400.0) (0.0,3000.0) 0.00 0.25 0.0 -25.0 3720.0
A/C1: CL212CH,2162022 |TAUR | CL @34 [NXRA] | LD1 @51
A/C2:CL212EJ2,2262122 |TAUR | DES @34 [NXRA] | LC1 @51

1421 6.04 RL VS 6.04 RH 12 -25.63 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-750.0 (400.0, 400.0) (0.0,3000.0) 0.00 0.25 0.0 -25.0 3720.0
A/C1: CL212OT,2164033 |TAUR | POTRA @40 (FRM) | CL @53 [XRA] | ICL @56
A/C2:CL212MR2,2264133 |TAUR | POTRA @40 (DFD) | DES @43 [NXRA] | IDES @47

1421 6.04A RL VS 6.04A RH 12 -25.63 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-750.0 (400.0, 400.0) (0.0,3000.0) 0.00 0.25 0.0 -25.0 3720.0
A/C1: CL212UZ,2165044 |TAUR | POTRA @40 (FRM) | CL @53 [XRA] | ICL @56
A/C2:CL212UZ2,2265144 |TAUR | POTRA @40 (DFD) | DES @43 [NXRA] | IDES @47

Mitre encounter Class : 12

Reit number : 1421

NMAC Characterization

100% had pattern shown on attached plot
100% had planned separation = 750 ft
AC1 rates : 400 fpm
AC2 rates : 3000 fpm
AC1 accel : 0.0 g
AC2 accel : 0.25 g
AC2 accel time : CPA: 25 sec

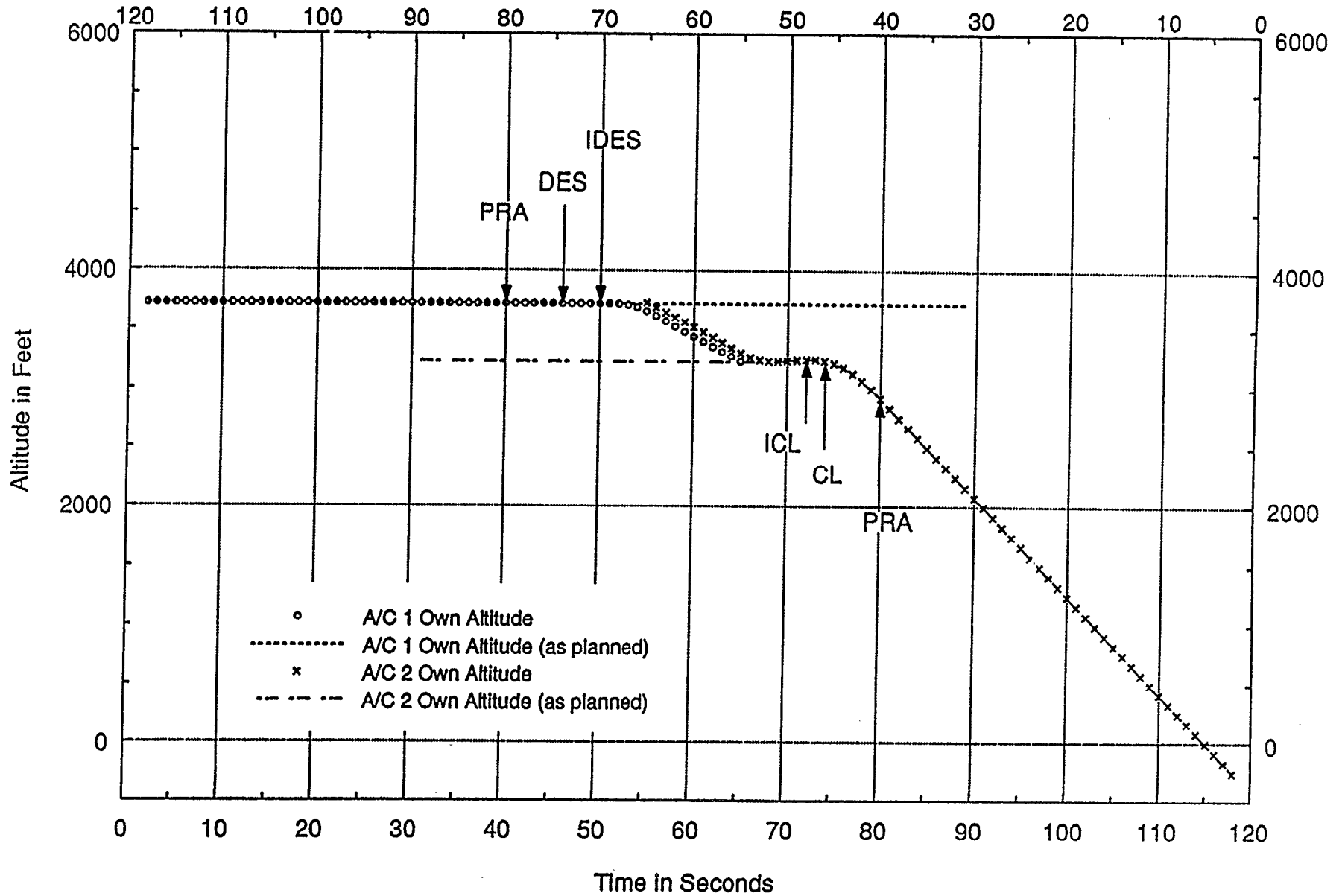
Performance Statistics (relate to whole class)

99% of RAs were non-crossing
50% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL313SZL.605; REIT Number=1614

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



1614 6.02 RL VS 6.02 RH 13 -268.81 CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 500.0 (0.0,0.0) (5000.0,0.0) 0.00 -0.35 0.0 -20.0 3720.0
 A/C1: CL313CG,2162022 |TAUR | POTRA @34 (LVW) | LC1 @42 [XRA] | LC5 @44
 | DES @46 | IDES @55
 A/C2:CL313EH2,2262122 |PVMD | POTRA @40 (DFD) | CL @42 [XRA] | ICL @45

1614 6.04 RL VS 6.04 RH 13 -85.07 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 500.0 (0.0,0.0) (5000.0,0.0) 0.00 -0.35 0.0 -20.0 3720.0
 A/C1: CL313MQ,2164033 |PVMD | DES @46 [XRA] | IDES @50
 A/C2:CL313OR2,2264133 |PVMD | POTRA @43 (DFD) | CL @46 [XRA] | ICL @48

1614 6.04A RL VS 6.04A RH 13 -85.07 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 500.0 (0.0,0.0) (5000.0,0.0) 0.00 -0.35 0.0 -20.0 3720.0
 A/C1: CL313WZ,2165044 |TAUR | POTRA @40 (LVW) | DES @46 [XRA] | IDES @50
 A/C2:CL313YZ2,2265144 |TAUR | POTRA @40 (6FT) | CL @46 [XRA] | ICL @48

Mitre encounter Class : 13

Reit number : 1614

NMAC Characterization

100% had pattern shown on attached plot
100% had planned separation = 500 ft
AC1 rates: 0 fpm
AC2 rates: 5000 fpm
AC1 accel: 0.0 g
AC2 accel: -0.25, -0.35 g
AC2 accel time CPA: 20 sec

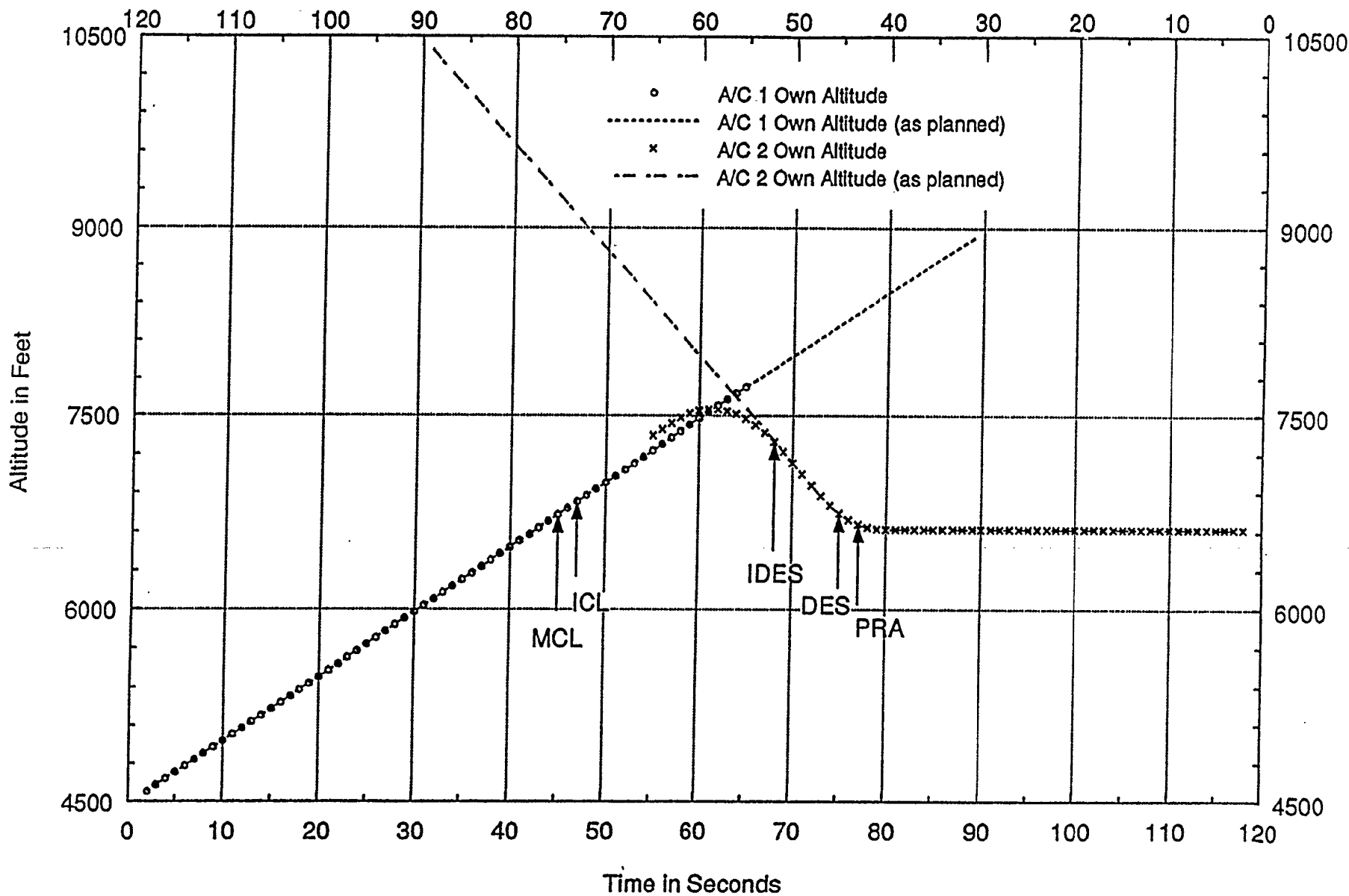
Performance Statistics (relate to whole class)

85% of RAs were non-crossing
0% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL515WZL.605; REIT Number=4283

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



4283' 6.02 RL VS 6.02 RH 15 137.02 CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-500.0 (3000.0,3000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 7480.0
A/C1: CL515CE,2162022 |PVMD | MCL @43 [NXRA]| ICL @45
A/C2:CL515EG2,2262122 |PVMD | POTRA @41 (DFD) | DES @43 [NXRA]| IDES @52

4283 6.04 RL VS 6.04 RH 15 -39.93 CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
-500.0 (3000.0,3000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 7480.0
A/C1: CL515OQ,2164033 |PVMD | MCL @45 [NXRA]| ICL @47
A/C2:CL515MO2,2264133 |PVMD | POTRA @43 (DFD) | DES @45 [NXRA]| IDES @52

4283 6.04A RL VS 6.04A RH 15 -39.93 CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
-500.0 (3000.0,3000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 7480.0
A/C1: CL515XZ,2165044 |PVMD | MCL @45 [NXRA]| ICL @47
A/C2:CL515XZ2,2265144 |PVMD | POTRA @43 (DFD) | DES @45 [NXRA]| IDES @52

Mitre encounter Class : 15

Reit number : 4283

NMAC Characterization

86% had pattern shown on attached plot
planned separation =(16%) -250, (56%) -500, (28%) -750 ft
AC1 rates : (39%) 5000, (61%) 3000 fpm
AC2 rates : 5000 fpm
AC1 accel : 0.0 g
AC2 accel : (6%) 0.15, (44%) 0.25, (50%) 0.35 g
AC2 accel time : CPA: (78%) 20, or (22%) 25 sec

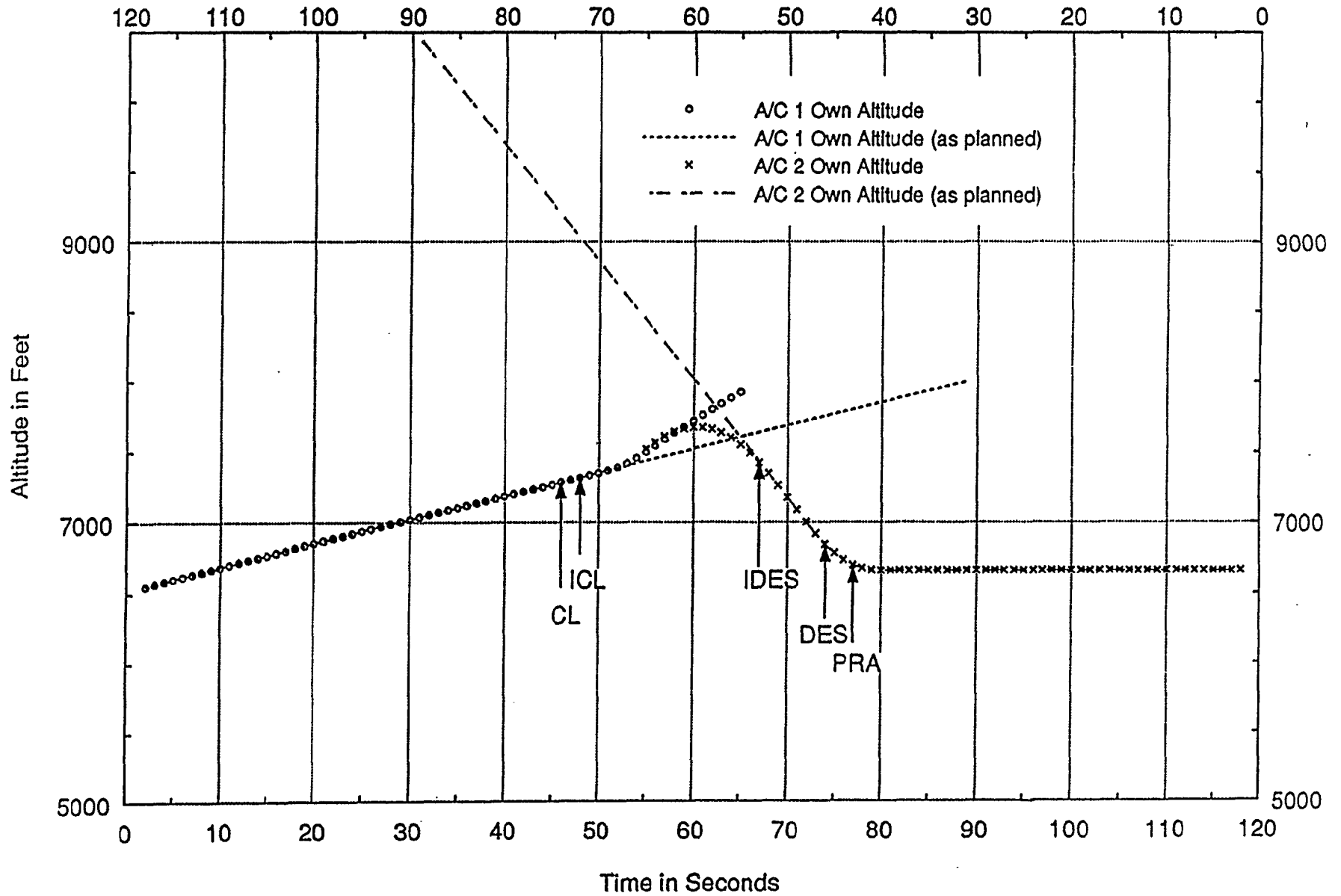
Performance Statistics (relate to whole class)

91% of RAs were non-crossing
40% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL515WZL.605; REIT Number=5543

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



5543 6.02 RL VS 6.02 RH 15 248.33 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-500.0 (1000.0,1000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 7520.0
A/C1: CL515CE,2162022 |PVMD | CL @44 [NXRA]| ICL @46
A/C2:CL515EG2,2262122 |PVMD | POTRA @42 (DFD) | DES @44 [NXRA]| IDES @55

5543 6.04 RL VS 6.04 RH 15 63.21 CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
-500.0 (1000.0,1000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 7520.0
A/C1: CL515OQ,2164033 |PVMD | CL @46 [NXRA]| ICL @48
A/C2:CL515MO2,2264133 |PVMD | POTRA @43 (DFD) | DES @46 [NXRA]| IDES @53

5543 6.04A RL VS 6.04A RH 15 63.21 CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
-500.0 (1000.0,1000.0) (0.0,5000.0) 0.00 0.35 0.0 -20.0 7520.0
A/C1: CL515XZ,2165044 |PVMD | CL @46 [NXRA]| ICL @48
A/C2:CL515XZ2,2265144 |PVMD | POTRA @43 (DFD) | DES @46 [NXRA]| IDES @53

Mitre encounter Class : 15

Reit number : 5543

NMAC Characterization

14% had pattern shown on attached plot
100% had planned separation = -500 ft
AC1 rates : 1000 fpm
AC2 rates : 5000 fpm
AC1 accel : 0.0 g
AC2 accel : 0.25, 0.35 g
AC2 accel time : CPA: 20 sec

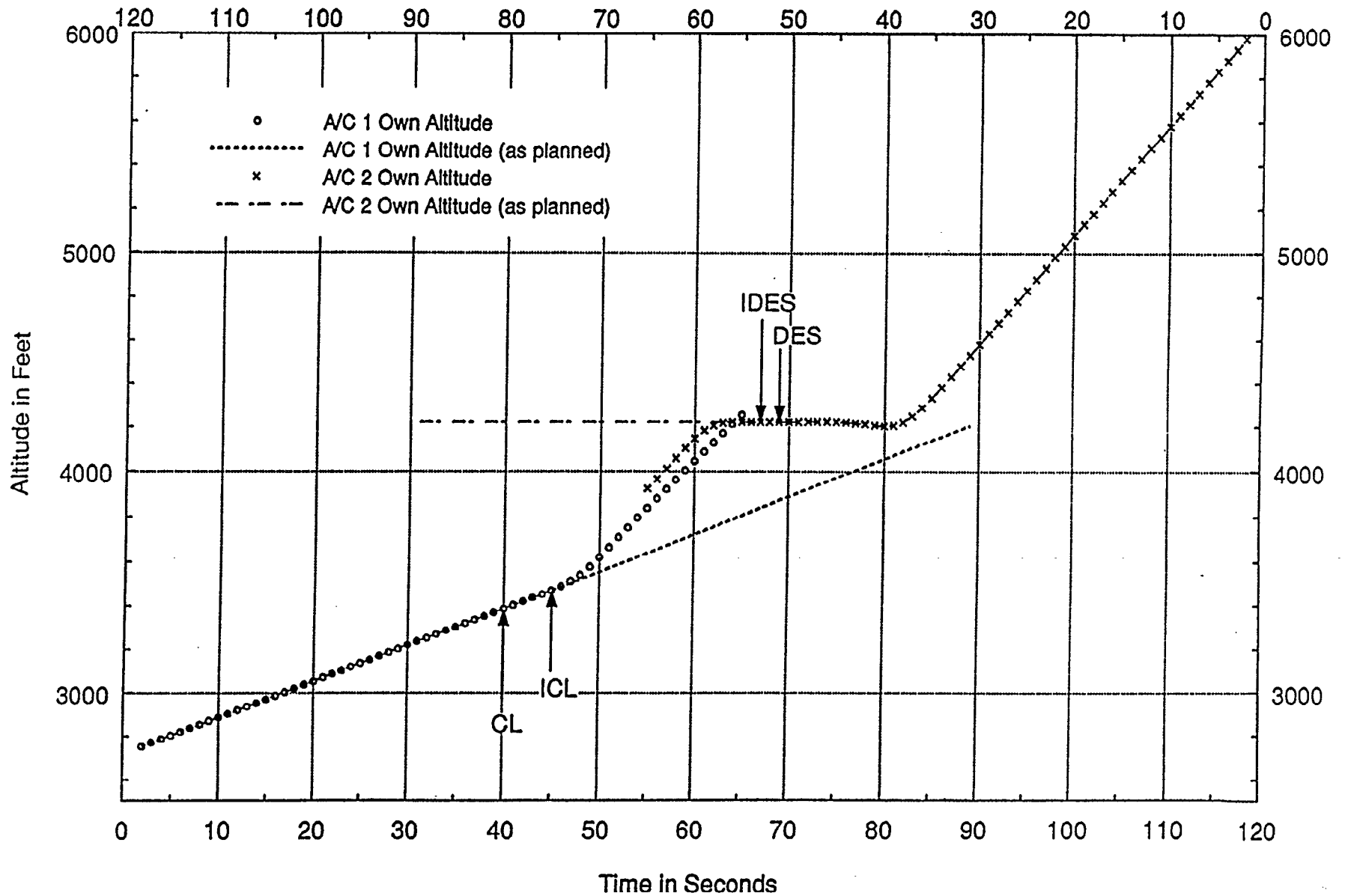
Performance Statistics (relate to whole class)

91% of RAs were non-crossing
40% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL616WZL.605; REIT Number=2491

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



2491 6.02 RL VS 6.02 RH 16 534.63 CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-500.0 (1000.0,1000.0) (-3000.0,0.0) 0.00 0.35 0.0 -25.0 3720.0
A/C1: CL616CE,2162022 |TAUR | CL @34 [XRA] | ICL @53
A/C2:CL616EG2,2262122 |TAUR | DES @34 [XRA] | IDES @40

2491 6.04 RL VS 6.04 RH 16 -85.41 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-500.0 (1000.0,1000.0) (-3000.0,0.0) 0.00 0.35 0.0 -25.0 3720.0
A/C1: CL616OQ,2164033 |TAUR | CL @40 [XRA] | ICL @45
A/C2:CL616MO2,2264133 |RELZ | DES @51 [XRA] | IDES @53

2491 6.04A RL VS 6.04A RH 16 -85.41 CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
-500.0 (1000.0,1000.0) (-3000.0,0.0) 0.00 0.35 0.0 -25.0 3720.0
A/C1: CL616XZ,2165044 |TAUR | CL @40 [XRA] | ICL @45
A/C2:CL616XZ2,2265144 |RELZ | DES @51 [XRA] | IDES @53

Mitre encounter Class : 16

Reit number : 2491

NMAC Characterization

100% had pattern shown on attached plot

100% had planned separation = -500 ft

AC1 rates : 1000 fpm

AC2 rates : -3000 fpm

AC1 accel : 0.0 g

AC2 accel : 0.35 g

AC2 accel time : CPA : 2.5 sec

Performance Statistics (relate to whole class)

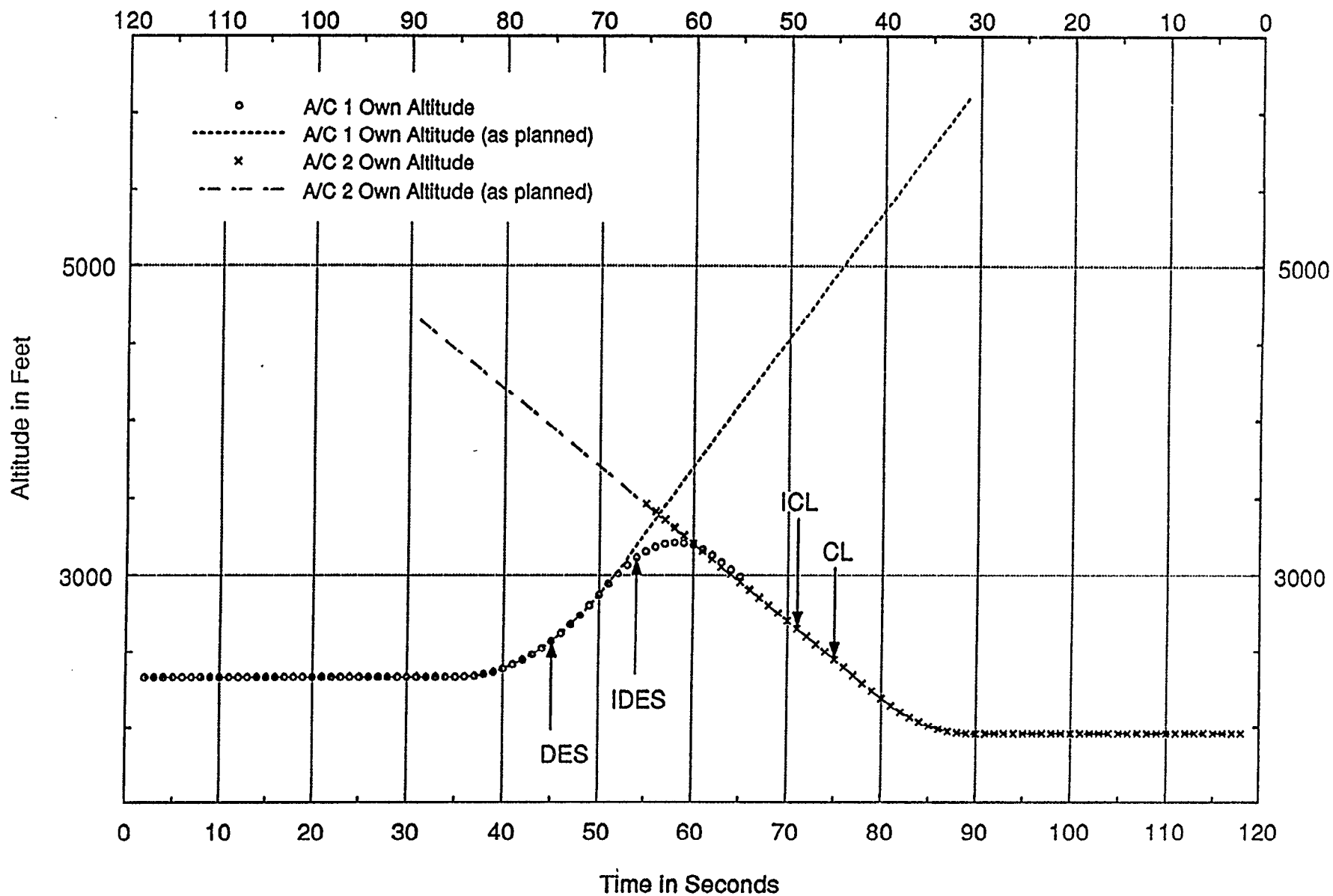
86% of RAs were non-crossing

0% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL717XZL.605; REIT Number=2732

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



2732 6.02 RL VS 6.02 RH 17 -663.91 CROSSING_ENCOUNTER

SL = 4 ZTHR = 750.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 400.0

500.0 (0.0,5000.0) (0.0,3000.0) 0.15 0.15 -25.0 -30.0 3700.0

A/C1: CL717CF,2162022 |TAUR | LC1 @40 [XRA] | DCL @42 | DES @43

A/C2:CL717EF2,2262122 |TAUR | POTRA @40 (FRM) | CL @41 [XRA] | ICL @46
| MCL @56

2732 6.04 RL VS 6.04 RH 17 -33.01 CROSSING_ENCOUNTER

SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0

500.0 (0.0,5000.0) (0.0,3000.0) 0.15 0.15 -25.0 -30.0 3700.0

A/C1: CL7170,2164033 |TAUR | DES @45 [XRA] | IDES @54

A/C2:CL717OP2,2264133 |TAUR | CL @45 [XRA] | ICL @49

2732 6.04A RL VS 6.04A RH 17 -33.01 CROSSING_ENCOUNTER

SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUUV = 20.0 ALIM = 300.0

500.0 (0.0,5000.0) (0.0,3000.0) 0.15 0.15 -25.0 -30.0 3700.0

A/C1: CL717WZ,2165044 |TAUR | DES @45 [XRA] | IDES @54

A/C2:CL717YZ2,2265144 |TAUR | CL @45 [XRA] | ICL @49

Mitre encounter Class : 17

Reit number : 2732

NMAC Characterization

100% had pattern shown on attached plot

planned separation = 250, 500 ft

AC1 rates : 5000 fpm

AC2 rates : 3000, 5000 fpm

AC1 accel : (93%) 0.15, (7%) 0.25 g

AC2 accel : 0.15, 0.25, 0.35 g (evenly distributed)

AC2 accel time : CPA: 25 or 30 sec (evenly distributed)

Performance Statistics (relate to whole class)

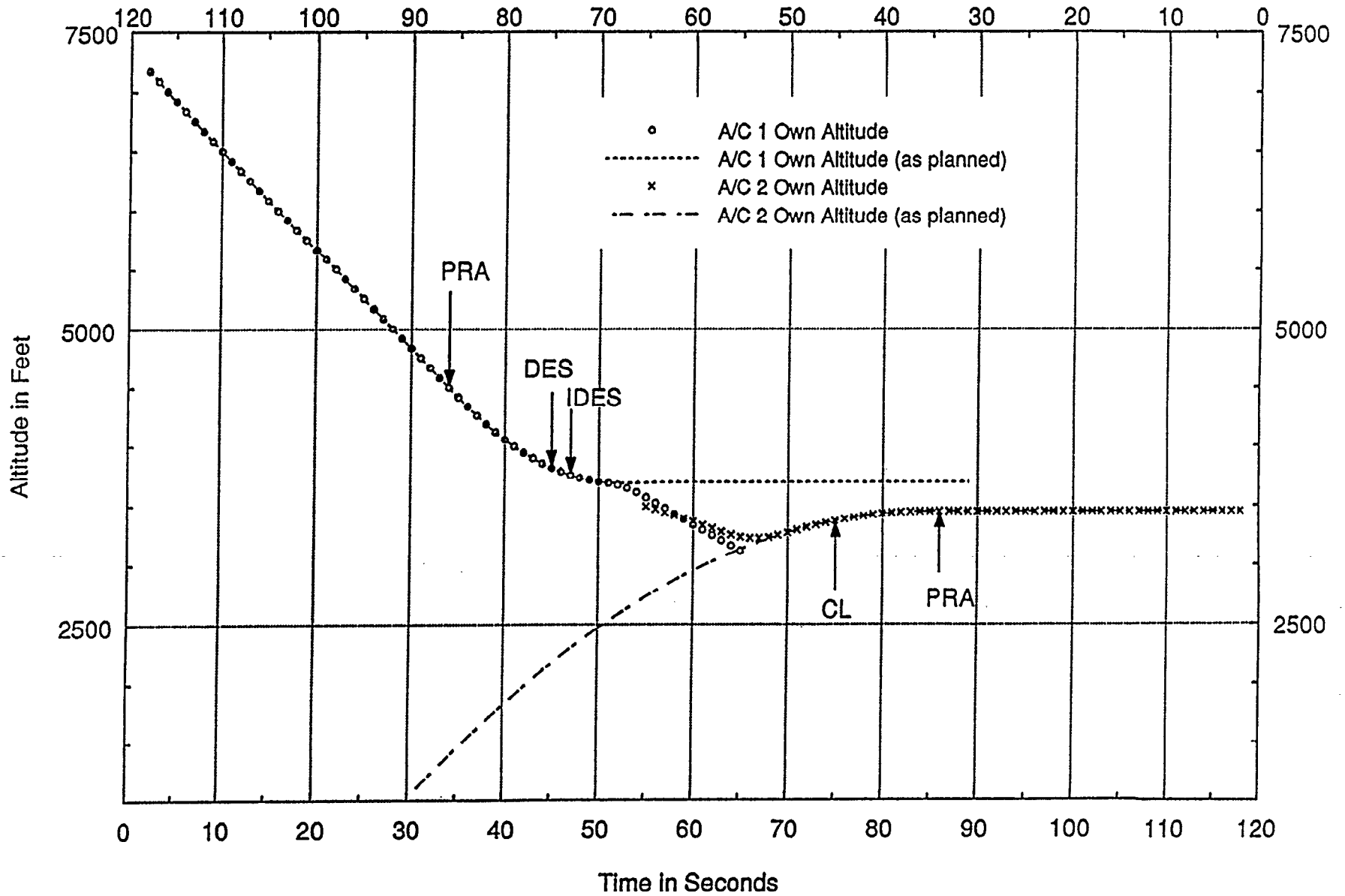
98% of RAs were non-crossing

4% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZL.605; REIT Number=1520

SIM MODE:2165044 (Source: LL Composite FTEG Run, Dated 07/29/94)



302

1520 6.02 RL VS 6.02 RH 18 73.23 NON_CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
750.0 (-5000.0,0.0) (0.0,-5000.0) 0.15 -0.05 -25.0 -25.0 3700.0
A/C1: CL818CF,2162022 |PVMD | POTRA @38 (FRM) | DES @46 [XRA] | IDES @48
A/C2:CL818EH2,2262122 |PVMD | POTRA @41 (LVW) | CL @46 [XRA]

1520 6.04 RL VS 6.04 RH 18 73.23 NON_CROSSING_ENCOUNTER
SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
750.0 (-5000.0,0.0) (0.0,-5000.0) 0.15 -0.05 -25.0 -25.0 3700.0
A/C1: CL818OR,2164033 |TAUR | POTRA @40 (FRM) | DES @46 [XRA] | IDES @48
A/C2:CL818OR2,2264133 |PVMD | POTRA @43 (LVW) | CL @46 [XRA]

1520 6.04A RL VS 6.04A RH 18 -30.53 CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
750.0 (-5000.0,0.0) (0.0,-5000.0) 0.15 -0.05 -25.0 -25.0 3700.0
A/C1: CL818WZ,2165044 |TAUR | POTRA @34 (6FT) | DES @45 [XRA] | IDES @47
A/C2:CL818XZ2,2265144 |TAUR | POTRA @34 (LVW) | CL @45 [XRA]

Mitre encounter Class : 18

Reit number : 1520

NMAC Characterization

71% had pattern shown on attached plot
planned separation = 250, 500, 750 ft
AC1 rates : -5000 fpm
AC2 rates : (41%) -3000, (59%) -5000 fpm
AC1 accel : 0.05, 0.15 g
AC2 accel : -0.05, -0.15, -0.25 g
AC2 accel time : CPA: (83%) 20, (17%) 25 sec

Performance Statistics (relate to whole class)

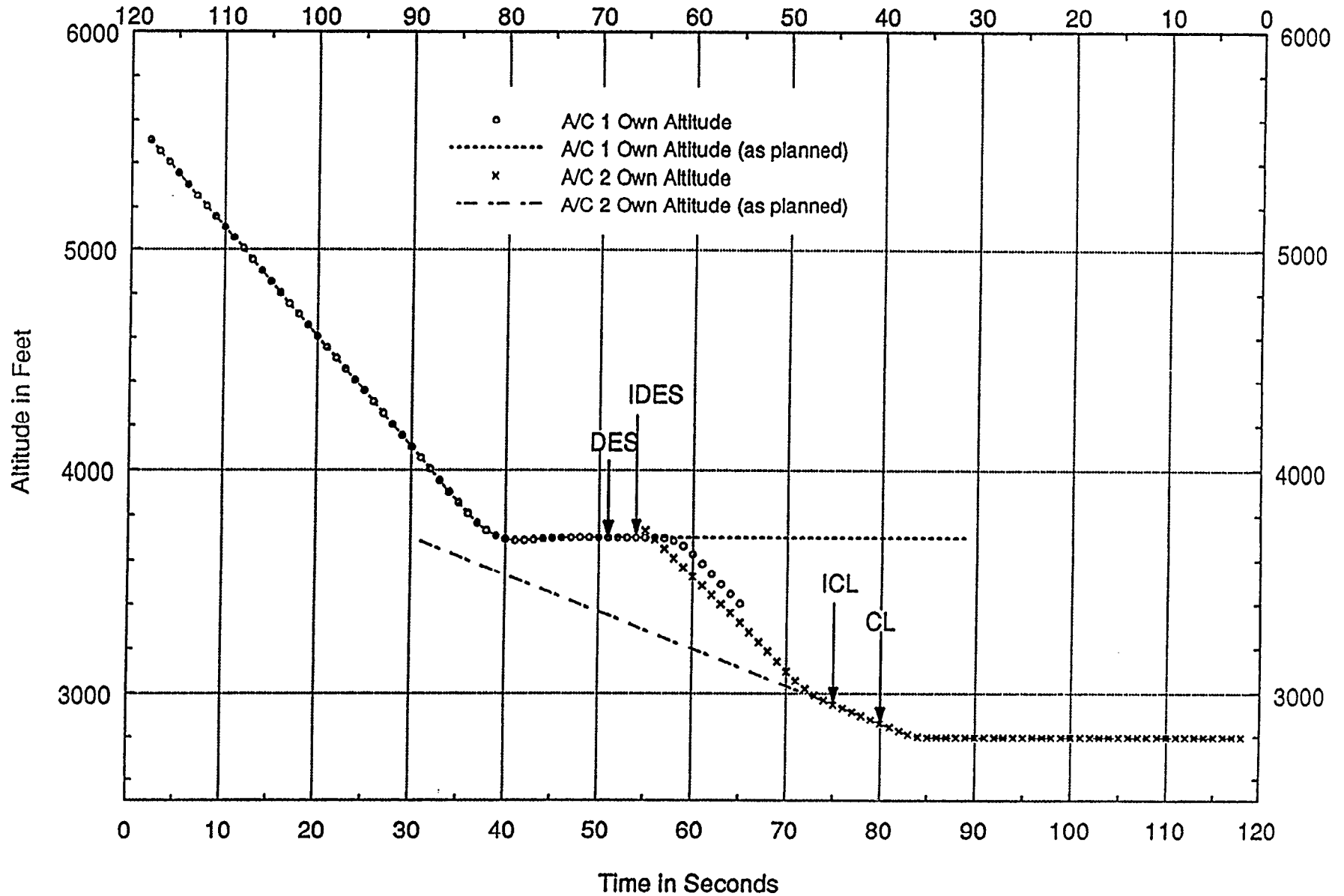
89% of RAs were non-crossing
33% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL818YZH.605; REIT Number=3978

SIM MODE:2165144 (Source: LL Composite FTEG Run, Dated 07/29/94)

305



3978 6.02 RH VS 6.02 RL 18 961.25 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 500.0 (-3000.0,0.0) (0.0,1000.0) 0.25 0.35 -25.0 -25.0 3700.0
 A/C1: CL818CF,2162122 |TAUR | POTRA @34 (DFD) | CL @36 [NXRA] | LD1 @46
 | LD2 @56
 A/C2:CL818EH2,2262022 |TAUR | POTRA @34 (LVW) | DES @35 [NXRA] | LC1 @45
 | LC2 @58

3978 6.04 RH VS 6.04 RL 18 85.41 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 500.0 (-3000.0,0.0) (0.0,1000.0) 0.25 0.35 -25.0 -25.0 3700.0
 A/C1: CL818OR,2164133 |RELZ | DES @51 [XRA] | IDES @54
 A/C2:CL818OR2,2264033 |TAUR | CL @40 [XRA] | ICL @45

3978 6.04A RH VS 6.04A RL 18 85.41 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 500.0 (-3000.0,0.0) (0.0,1000.0) 0.25 0.35 -25.0 -25.0 3700.0
 A/C1: CL818WZ,2165144 |RELZ | DES @51 [XRA] | IDES @54
 A/C2:CL818XZ2,2265044 |TAUR | CL @40 [XRA] | ICL @45

Mitre encounter Class : 18

Reit number : 3978

NMAC Characterization

29% had pattern shown on attached plot
100% had planned separation = 500 ft
AC1 rates : -3000 fpm
AC2 rates : 1000 fpm
AC1 accel : 0.25 g
AC2 accel : 0.05, 0.15, 0.25, 0.35 g
AC2 accel time : CPA: (60%) 25, (40%) 30 sec

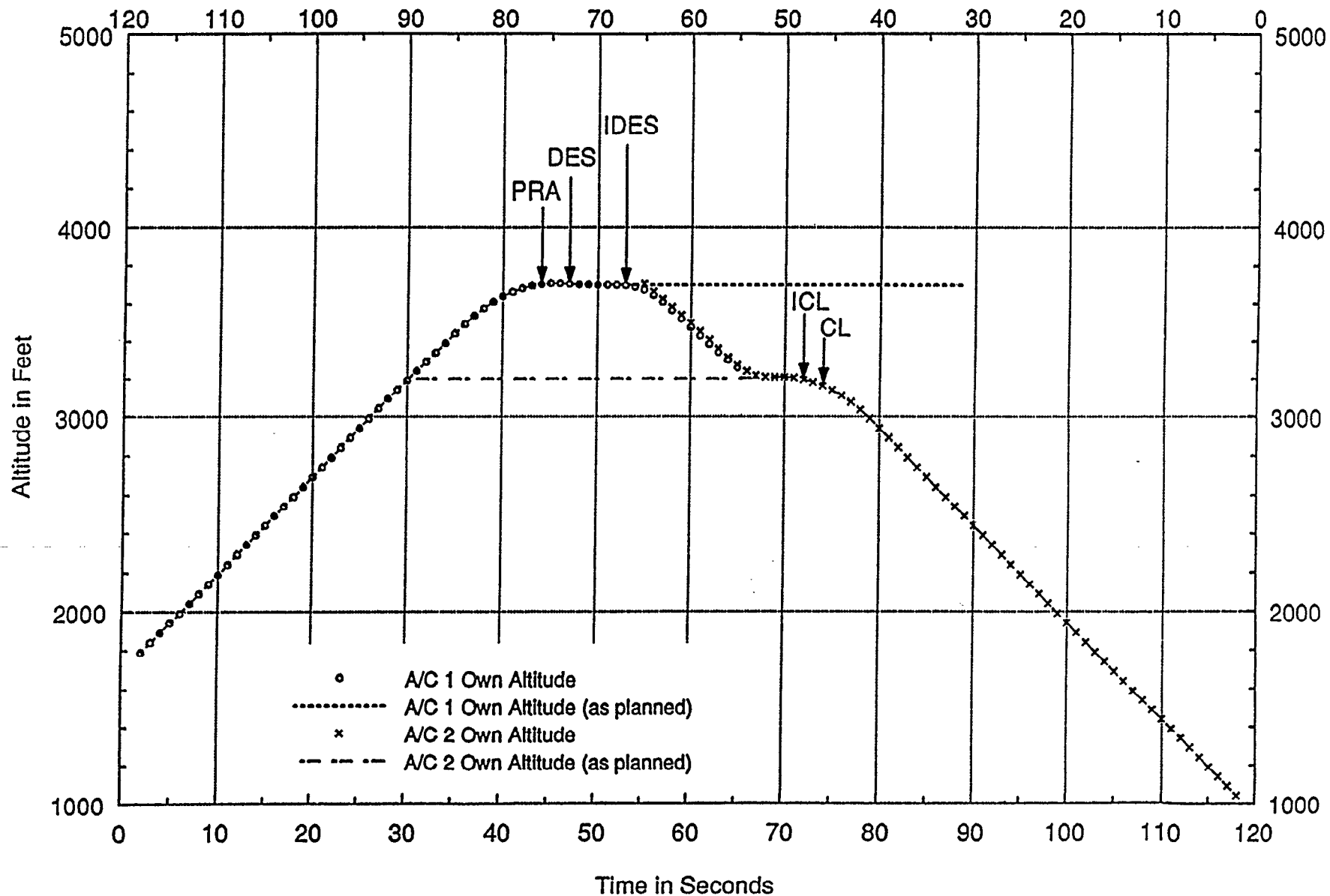
Performance Statistics (relate to whole class)

89% of RAs were non-crossing
33% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL919YZH.605; REIT Number=2883

SIM MODE:2165144 (Source: LL Composite FTEG Run, Dated 07/29/94)



808

2883 6.02 RH VS 6.02 RL 19 1004.89 NON_CROSSING_ENCOUNTER
 SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
 500.0 (3000.0,0.0) (3000.0,0.0) -0.15 -0.15 -25.0 -20.0 3700.0
 A/C1: CL919CF,2162122 |RELZ | MCL @38 [NXRA] | CL @43 | LD1 @48
 | LD2 @58
 A/C2:CL919EH2,2262022 |TAUR | LC2 @34 [NXRA] | LC1 @45

2883 6.04 RH VS 6.04 RL 19 -28.78 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 500.0 (3000.0,0.0) (3000.0,0.0) -0.15 -0.15 -25.0 -20.0 3700.0
 A/C1: CL919OR,2164133 |RELZ | POTRA @44 (DFD) | DES @47 [XRA] | IDES @53
 A/C2:CL919OR2,2264033 |RELZ | CL @46 [XRA] | ICL @48

2883 6.04A RH VS 6.04A RL 19 -28.78 CROSSING_ENCOUNTER
 SL = 4 ZTHR = 600.0 TAUR = 20.0 TAUV = 20.0 ALIM = 300.0
 500.0 (3000.0,0.0) (3000.0,0.0) -0.15 -0.15 -25.0 -20.0 3700.0
 A/C1: CL919WZ,2165144 |RELZ | POTRA @44 (DFD) | DES @47 [XRA] | IDES @53
 A/C2:CL919YZ2,2265044 |RELZ | CL @46 [XRA] | ICL @48

Mitre encounter Class : 19

Reit number : 2883

NMAC Characterization

31% had pattern shown on attached plot		
planned separation =	+/- 500, 1000	ft
AC1 rates :	1000, 3000, 5000	fpm
AC2 rates :	3000, 5000	fpm
AC1 accel :	(36%) -0.05, (64%) -0.15	g
AC2 accel :	(64%) -0.15, (27%) -0.25, (9%) -0.35	g
AC2 accel time : CPA:	(55%) 20, (9%) 25, (36%) 30	sec

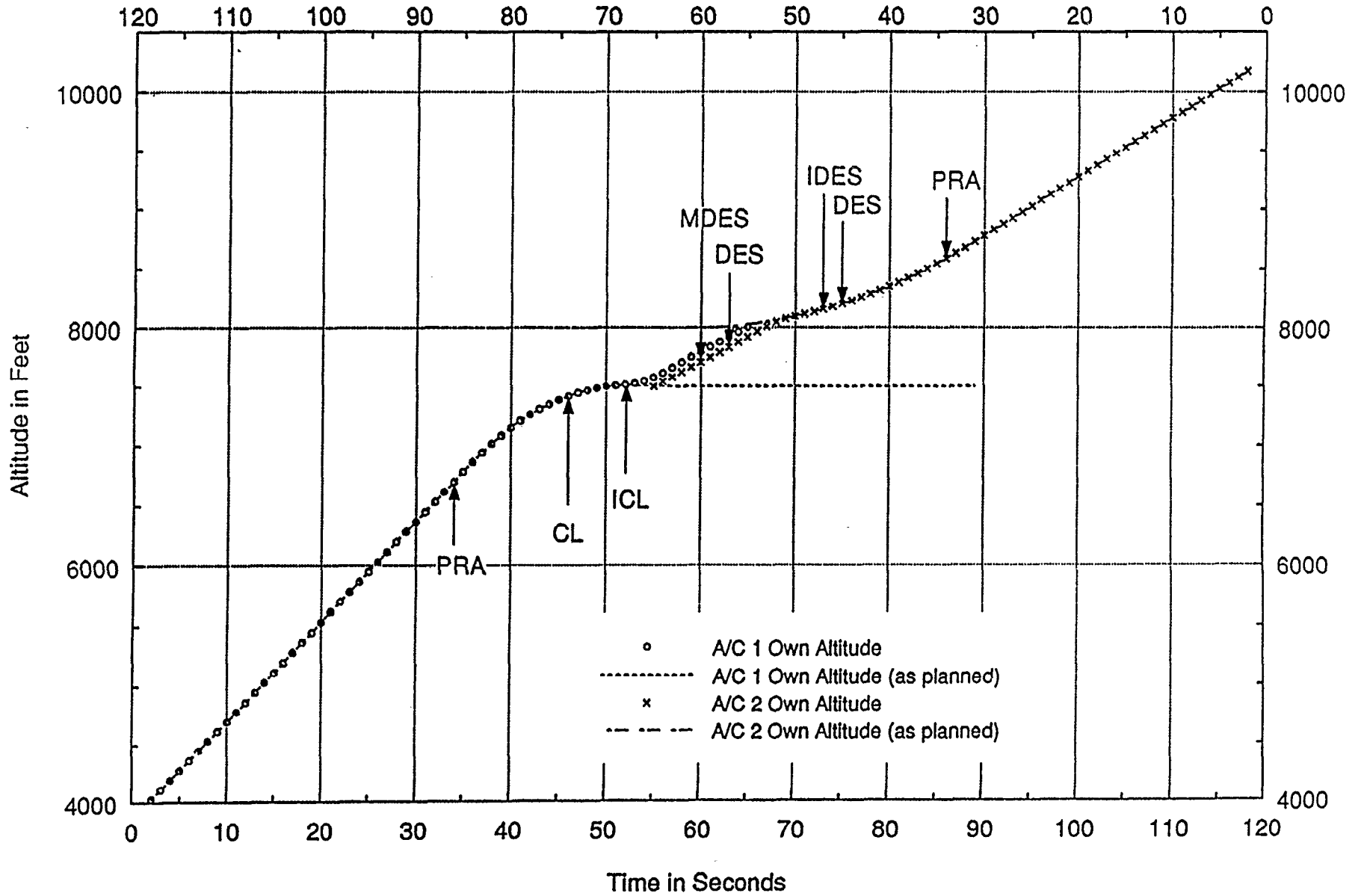
Performance Statistics (relate to whole class)

77% of RAs were non-crossing
0% of NMACs were non-crossing

ENCOUNTER SUMMARY - AIRCRAFT ALTITUDES

Data File Name=LL919YZH.605; REIT Number=7162

SIM MODE:2165144 (Source: LL Composite FTEG Run, Dated 07/29/94)



7162 6.02 RH VS 6.02 RL 19 242.44 CROSSING_ENCOUNTER
SL = 5 ZTHR = 750.0 TAUR = 25.0 TAUV = 25.0 ALIM = 400.0
-500.0 (5000.0,0.0) (-3000.0,0.0) -0.15 0.05 -25.0 -30.0 7500.0
A/C1: CL919CF,2162122 |PVMD | POTRA @41 (DFD) | CL @44 [XRA] | ICL @46
A/C2:CL919EH2,2262022 |PVMD | DES @43 [XRA] | IDES @47

7162 6.04 RH VS 6.04 RL 19 242.44 CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
-500.0 (5000.0,0.0) (-3000.0,0.0) -0.15 0.05 -25.0 -30.0 7500.0
A/C1: CL919OR,2164133 |PVMD | POTRA @42 (DFD) | CL @44 [XRA] | ICL @46
A/C2:CL919OR2,2264033 |PVMD | DES @43 [XRA] | IDES @47

7162 6.04A RH VS 6.04A RL 19 88.47 CROSSING_ENCOUNTER
SL = 5 ZTHR = 600.0 TAUR = 25.0 TAUV = 25.0 ALIM = 350.0
-500.0 (5000.0,0.0) (-3000.0,0.0) -0.15 0.05 -25.0 -30.0 7500.0
A/C1: CL919WZ,2165144 |TAUR | POTRA @34 (6FT) | CL @46 [XRA] | ICL @52
A/C2:CL919YZ2,2265044 |TAUR | POTRA @34 (6FT) | DES @45 [XRA] | IDES @47
| DES @57 | MDES @60

Mitre encounter Class : 19

Reit number : 7162

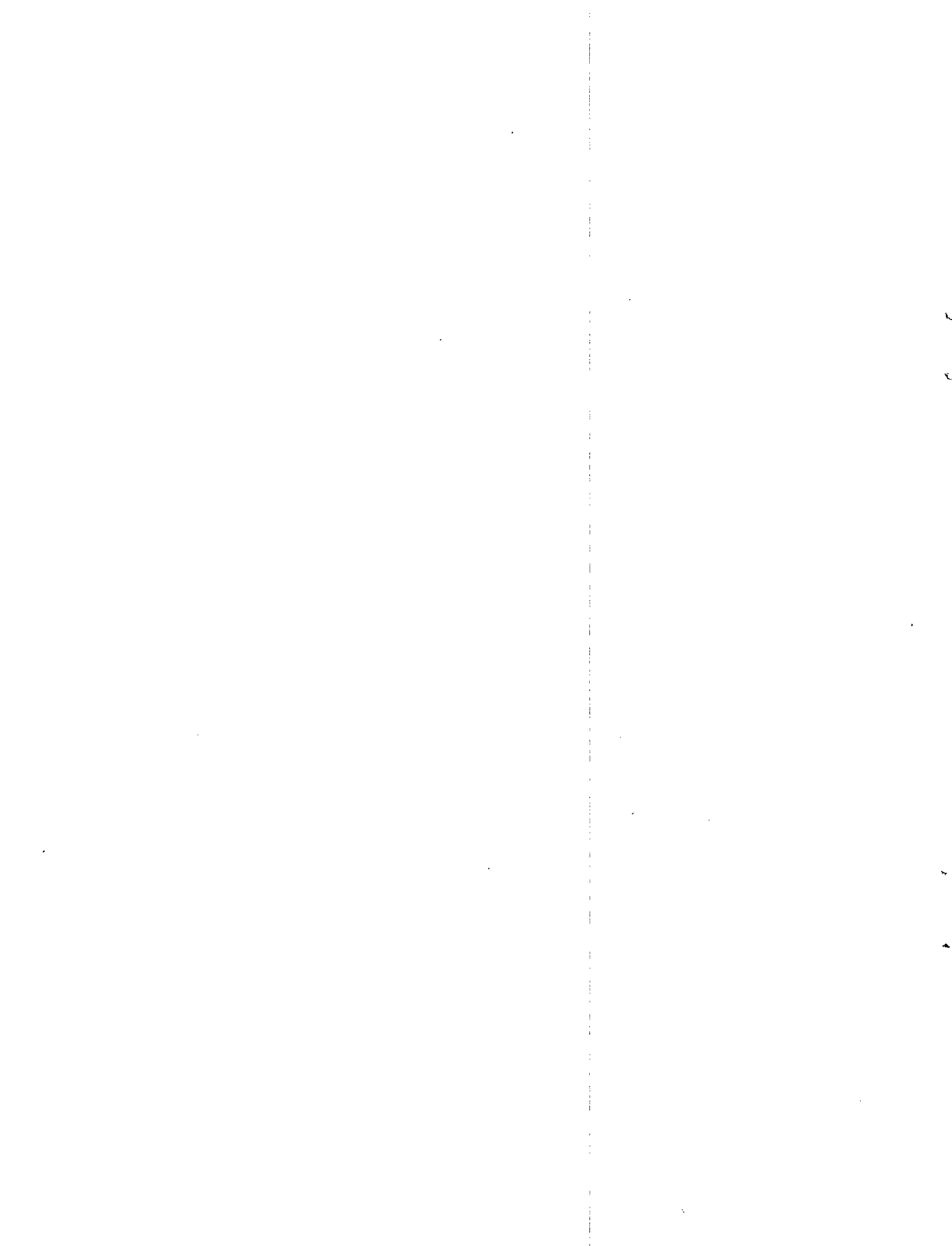
NMAC Characterization

69% had pattern shown on attached plot

planned separation =	-500, -750	ft
AC1 rates :	(3%) 1000, (76%) 3000, (21%) 5000	fpm
AC2 rates :	(28%) -3000, (72%) -5000	fpm
AC1 accel :	-0.05, -0.15	g
AC2 accel :	0.05, 0.15, 0.25, 0.35	g
AC2 accel time : CPA:	(64%) 20, (24%) 25, (12%) 30	sec

Performance Statistics (relate to whole class)

77% of RAs were non-crossing
0% of NMACs were non-crossing



APPENDIX M

MINUTES OF 24 AUGUST 1994 NMAC REVIEW MEETING

I. Overview

A meeting was held at Lincoln Laboratory on 24 August 1994 to review the CAS version 6.04A NMACs. An attendance list is given on page 3. Agenda items included:

- (1) a review of Lincoln's 30 "representative NMACS," i.e., TCAS-TCAS simulated encounters in which both aircraft were TCAS-equipped (6.04A), both pilots responded properly, and yet the vertical separation at closest approach was less than 100 ft.
- (2) a review of FAA Technical Center's 13 failure mechanisms, i.e., the primary logic mechanisms underlying the TCAS-TCAS NMACs.
- (3) a discussion of how to develop a class of encounters that would include known TCAS "events." This would include aircraft overshooting their altitude-clearances (two aircraft accelerations instead of just one).

Most of the meeting was devoted to item 1. Item 2 was also completed. Item 3 was essentially not addressed.

II. Agenda Item 1

For each of the 30 NMACs, we attempted to answer the following questions:

- (1) Did we understand the NMAC? What caused it? Was there anything about the logic performance that we could not explain or that seemed wrong? Were we satisfied with the trade-offs made by the logic?
- (2) How frequently did we expect this encounter to occur in the airspace? Would it occur only as a result of some breakdown or error in the system, or would it be something that controllers would do on a regular basis?
- (3) Would this encounter be affected by any of the version 7 changes? Might the problems go away with version 7?

We flagged encounters that we did not understand and encounters that could occur frequently. Encounters were considered somewhat less urgent if they would be improved by version 7. Version 7 improvements could come from the following: better tracker (faster detection of maneuvers), elimination of coordination delay (earlier posting of RA - earlier pilot response and less time for aircraft contrary motion), TCAS-TCAS reversals, and immediate posting of a crossing RA in both aircraft if a crossing RA is selected by one aircraft.

Comments on specific encounters:

Class 515, reit 1195. The question was raised about the likelihood of an aircraft going to 5000 fpm from level flight at low altitude. The group felt that high rate climb-outs from busy airports are likely. Also, these rates could occur with crossing restrictions, i.e., when an aircraft has to be above or below a set altitude by a certain distance. See action item 6.

Class 616, reit 5863. This would be a good encounter to check the effect of the 25ft tracker.

Class 717, reit 2538. (Ref CRF 176) The comment was made that with version 7 neither aircraft would issue an RA. Both aircraft would remain yellow TAs *even though both would clearly be threats*. We agreed that this needs further thought. This same idea was rejected some years ago because it essentially communicated false information (that the intruder was not a threat) to the pilot, perhaps preventing the aircraft from making some last-minute saving maneuver (a turn?).

Class 717, reit 8982. A suggestion was made to trigger the TCAS-TCAS reversal logic when TCAS detects an intruder acceleration during own's pilot response delay period.

Class 818, reit 3615. (Ref CRF 139) This will exercise the new logic that immediately issues a crossing RA in both aircraft when a crossing is issued in one aircraft. (Or it could exercise the TCAS-TCAS reversal logic.) This would be a good encounter to check the balance between early crossings for both aircraft vs. a TCAS-TCAS reversal.

Class 818, reit 4970. (Ref CRF 205) See action item 2.

Class 515, reit 4283. See action item 1.

Class 515, reit 5543. SL3 is not adequate to handle the high vertical rates we are using. See action item 6.

Class 818, reit 1520. See action item 3.

Class 818, reit 3978. Same comment as Class 818, reit 3615 above.

Class 919, reit 2883. This was compared to the Houston encounter. Concern was expressed that this could (has?) happened in the airspace. See action item 6.

Class 919, reit 7162. This is a "Seattle encounter" but with 750 or 500 ft planned separation. The comment was made that all Seattle encounters that we know of in the airspace have had 1000ft planned separation. It was agreed to include this encounter (as an overshoot) in the special encounter set. Andy Zeitlin pointed out that the overshoot is an easy extension of the level-off encounters we already have. We would just add an extra parameter to our existing classes. See action item 4.

Class 919, reit 1509. There was no concern about this encounter because the aircraft is delaying a crossing RA, waiting for a level-off to occur, and this is viewed as an appropriate trade-off.

Class 919, reit 3523. See action item 5.

Class 313, reit 1614. This could happen in the airspace. See action item 6.

III. Agenda Item 2

FAA Technical Center reviewed the failure mechanisms observed in their simulation database. Their groupings were based on logic features, rather than on geometry (the Lincoln basis). The 13 failure mechanisms were:

1. Contrary Encounter Mechanism
2. Firmness Encounter Mechanism
- 3-7. Maintain Encounter Mechanism
- 8-11. Recovery Encounter Mechanism
12. Restart Encounter Mechanism
13. Slow Level-off Encounter Mechanism

Example plots were reviewed for each type of failure mechanism.

IV. Action Items

(answers to be faxed to other members of review committee)

- (1) FAATC: Class 515, reit 4283. Look into why we get an increase RA when the aircraft's vertical rate is already 3000 fpm.
- (2) FAATC: Class 818, reit 4970. Explain why 6.04 and 6.04A have such different results - 6.04 gives no RAs while 6.04A gives RAs that lead to NMACS.
- (3) MITRE: Class 818, reit 1520. Look into the subject of many deferrals occurring one after another, resulting in too long a delay in issuing an RA.
- (4) MITRE: Present thoughts on an overshoot class at the next TCAS Program Review.
- (5) Lincoln Lab: Give second-by-second and summary data to Larry Nivert and MITRE for each of the three NMAC encounters in which the planned separation was 1000 ft. (all class 919, reits 1738, 4969, 5131)
- (6) Lincoln Lab: Communicate results of altimetry monitoring when available (what vertical rates and accelerations are we seeing in the airspace? what kinds of overshoots?) Check with ARINC on expected autopilot performance.
- (7) Lincoln Lab: Circulate meeting minutes to all attendees (one per organization). Give a report at the next TCAS Program Review.

V. Attendance List

1. Larry Nivert	FAA/ARD-140	202-267-8462
2. Andrew Zeitlin	MITRE/CAASD	703-883-6858
3. Tom Choyce	FAATC/ACD-320	609-485-4658
4. Kathryn Ciaramella	FAATC/ACD-320	609-485-5254
5. Ellen Meadors	TASC	617-942-2000
6. Rob Bradley	CRC	703-934-7800
7. Mike Rubinstein	CRC	703-934-7800
8. Ann Drumm	Lincoln Laboratory	617-981-3594
9. Richard Potts	Lincoln Laboratory	617-981-3285
10. Barbara Chludzinski	Lincoln Laboratory	617-981-4986