

Safety and Airspace Monitoring

Update of the development of a comprehensive profile of operators, aircraft types, and readiness in the Middle East (MID) Region where the Reduced Vertical Separation Minimum (RVSM) is provisionally planned to be applied

1. INTRODUCTION

1.1 This paper presents an update to the comprehensive profile of operators and aircraft types operating in the Middle East (MID) Region. The initial analysis, presented at MIDANPIRG RVSM TF/2 (reference 1) has been updated with additional traffic samples received from Iran, Jordan, and Oman.

2. BACKGROUND

2.1 The guidelines for the sample were similar to those used for the Asia Pacific Reduced Vertical Separation Minima (RVSM) Task Force work. Table 1 presents the information requested for an individual traffic movement, or flight, in the sample.

ITEM	EXAMPLE	NECESSARY OR OPTIONAL
Date (either month/day/year or day/month/year format)	5/01/00 or 01/05/00 for 1 May 2000	NECESSARY
Aircraft call sign	MAS704	NECESSARY
Aircraft Type	B734	NECESSARY
Origin Aerodrome	WMKK	NECESSARY
Destination Aerodrome	RPLL	NECESSARY
Entry Fix into RVSM Airspace	MESOK	NECESSARY
Time at Entry Fix	2:25 (or 0225)	NECESSARY
Flight Level at Entry Fix	330	NECESSARY
Exit Fix from RVSM Airspace	NISOR	NECESSARY
Time at Exit Fix	4:01 (or 0401)	NECESSARY
Flight Level at Exit Fix	330	NECESSARY
First Fix Within RVSM Airspace OR First Airway Within RVSM Airspace	MESOK OR G582	OPTIONAL
Time at First Fix	02:25 OR 0225	OPTIONAL
Flight Level at First Fix	330	OPTIONAL
Second Fix Within RVSM Airspace OR Second Airway Within RVSM Airspace	MEVAS OR G577	
Time at Second Fix	02:50 OR 0250	OPTIONAL
Flight Level at Second Fix	330	OPTIONAL
(Continue with as many Fix/Time/Flight-Level entries as are required to describe the flight's movement within RVSM airspace)		OPTIONAL

Table 1. Information Required for a Flight in Traffic Sample

2.2 The following section presents the results of processing the traffic sample obtained from several Flight Information Regions (FIRs) in the MID region. These results are presented in terms of summaries of operators, fleet composition, flight level utilization and origin-destination combinations in MID Region, as obtained from the sample.

3. DISCUSSION

- 3.1 Eight States – Bahrain, Egypt, Iran, Jordan, Lebanon, Oman, Saudi Arabia, and United Arab Emirates (UAE) - provided the traffic data in the sample. Traffic data from 20 January 2001 through 20 February 2001 were available from the Bahrain, Egypt, Iran, Lebanon, Saudi Arabia, and UAE FIRs. The Oman FIR data sample contained traffic movement data for 20 - 31 January 2001, and 1, 10, 15 February 2001. The Jordan FIR data sample contained traffic movement data for 20 January – 2 February, and 7 – 8 February 2001. Table 2 contains a profile of the FIR data used in this analysis.

State	FIR	Traffic Sample Dates
Bahrain	Bahrain	20 January – 20 February 2001
Egypt	Cairo	19 January – 22 February 2001
Iran	Tehran	20 January – 20 February 2001
Jordan	Amman	20 January – 2 February; and 7 - 8 February 2001
Lebanon	Beirut	21 January – 19 February 2001
Oman	Muscat	20 – 31 January 2001, and 1, 10, 15 February 2001
Saudi Arabia	Jeddah	24 January – 26 February 2001
United Arab Emirates	UAE	20 January – 20 February 2001

Table 2. States which contributed data to this analysis

- 3.2 Flight level data were not available in all traffic samples. Therefore, all flights contained in the traffic samples were included in the analysis regardless of flight level. This means that the analysis includes regional aircraft types that normally do not operate in RVSM airspace as well as the commercial aircraft types capable of high altitude operations. The sample days are represented in Figure 1. Appendix A provides detail regarding the FIR sources of the traffic movement data by day and also gives actual daily counts of flights contributed by each such source.
- 3.3 Figure 2 shows the top 20 commercial operators, in terms of total operations, as observed in the traffic sample. These operators account for roughly 60 percent of the operations observed in the sample. The top five, representing roughly 36 percent of total operations in the data sample, are Saudi Arabian Airlines, Egypt Air, Gulf Air, Emirates, and Pakistan International Airlines Corporation.

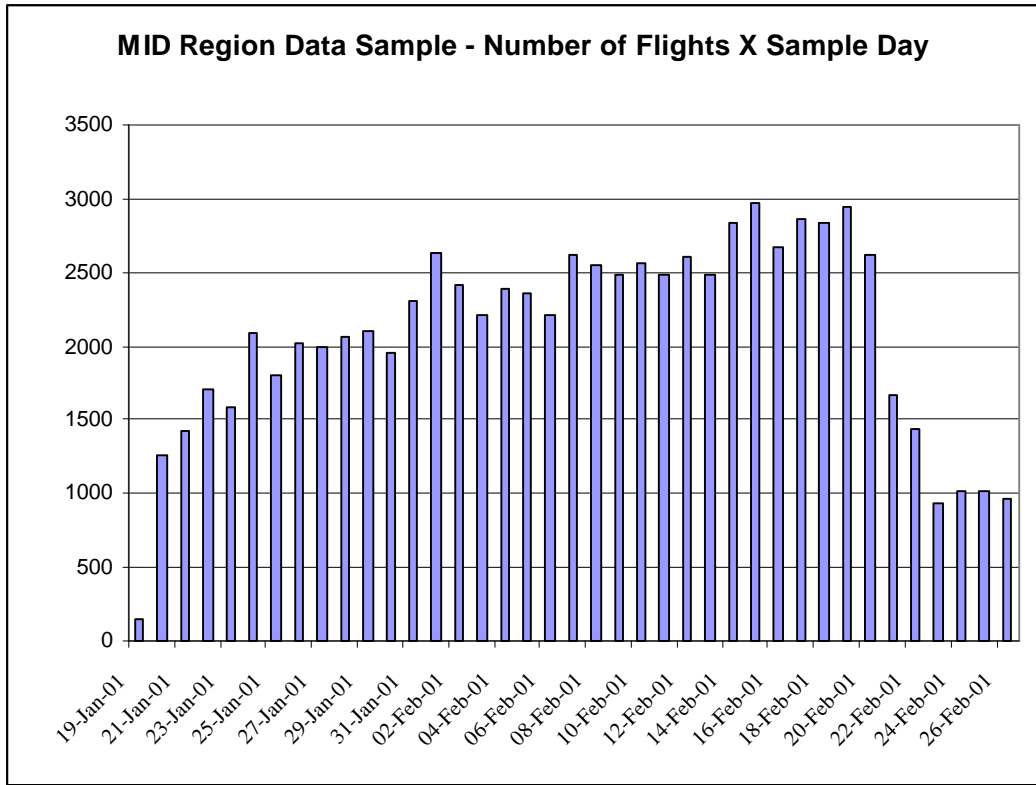


Figure 1. Plot of Daily Flight Activity Contributions to MID Region Traffic Sample

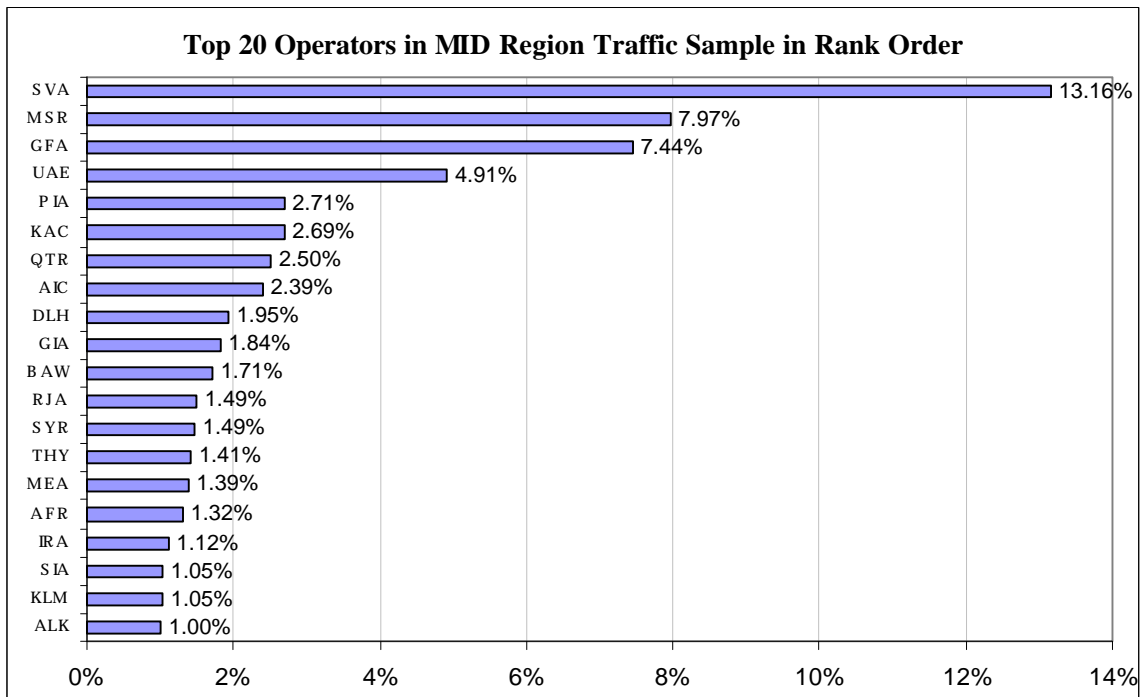


Figure 2. Top 20 MID Region Operators in Rank Order

3.4 The use of aircraft-type designators varied among the FIR samples. In order to standardize the presentation of results, the aircraft types observed in the various FIR samples were combined into aircraft groups. The aircraft type group definitions are shown

in Table 3. Aircraft types, which did not belong to one the groups listed in the table, were included in the analysis using the designator obtained during the sample.

Aircraft Type Group	Aircraft Types
A300	A300, A306, EA30, A30B
A310	A310, EA31
A320	A320, A319, A321, EA32
A330	A330, EA33, A333, A332
A340	A340, EA34, A343, A342
B727	B727, B721, B722, B72A, B72Q, B72S
B737 I	B733, B734, B735, B73B, B73J, B73S
B737 II	B73A, B731, B732
B737 III	B736, B737, B738, B73C
B744	B744, B74F, B74B
B747	B747, B741, B742, B743, B74A, B74S, B74R
B757	B757, B752
B767	B767, B762, B763
B777	B777, B772, B773

TABLE 3. DEFINITIONS OF THE AIRCRAFT TYPE GROUPS USED IN ANALYSIS OF TRAFFIC SAMPLE

- 3.5 The distribution of the top 20 Aircraft Types/Groups representing over 88 percent of total operations is shown in Figure 3. The top five aircraft types/groups, representing roughly 46 percent of the operations in the combined FIR samples, as defined in Table 3, are: A320, A300, B747, B777, and B767. Complete details of operations by aircraft type as observed in the sample are shown in Appendix B.
- 3.6 It is noted that the C130 aircraft is present in the list of top 20 aircraft types for the MID traffic sample. The C130 aircraft accounted for 2.47 percent of the total traffic in the sample.

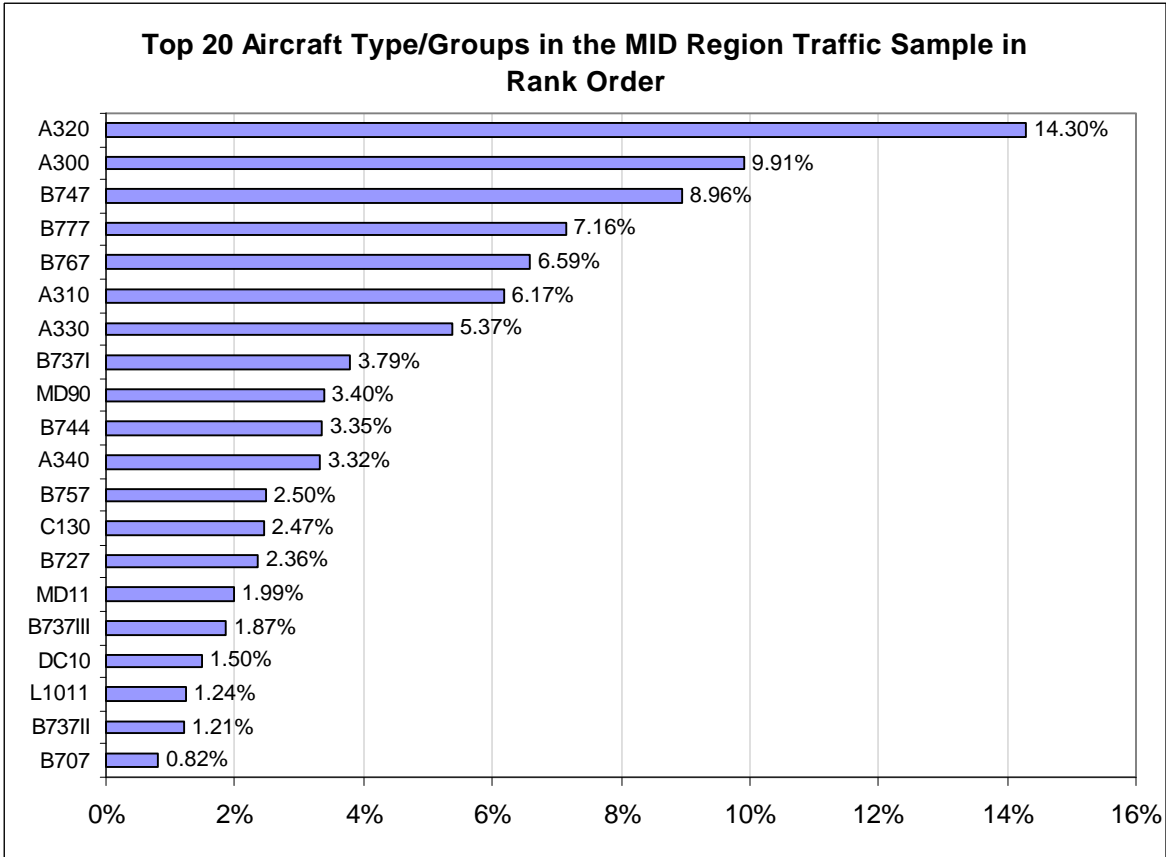


FIGURE 3. TOP 20 MID REGION AIRCRAFT TYPES/GROUPS IN RANK ORDER

3.7 Approximately 67 percent of the flights in the FIR traffic samples contained flight level information. Figure 4 shows the flight level utilization for those flights with flight level data.

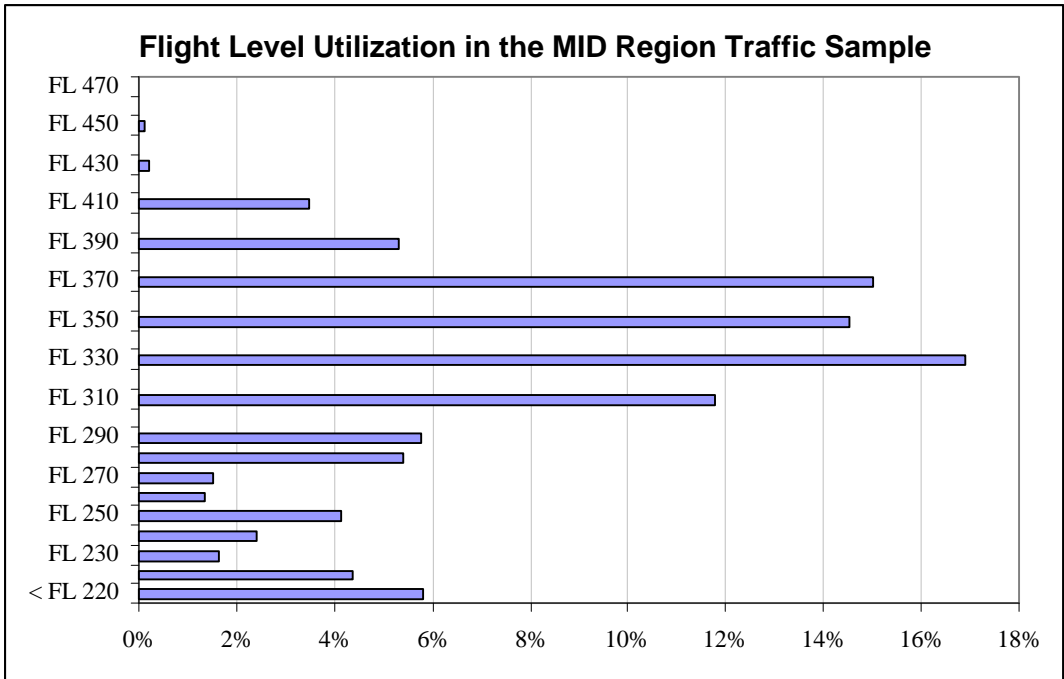


FIGURE 4. FLIGHT LEVEL UTILIZATION IN MID REGION DATA SAMPLE

3.8 The number of unique origin- destination combinations in the data sample is large. Figure 5 shows the top 20 unique origin-destinations combinations, which represents approximately 16 percent of total operations in the sample.

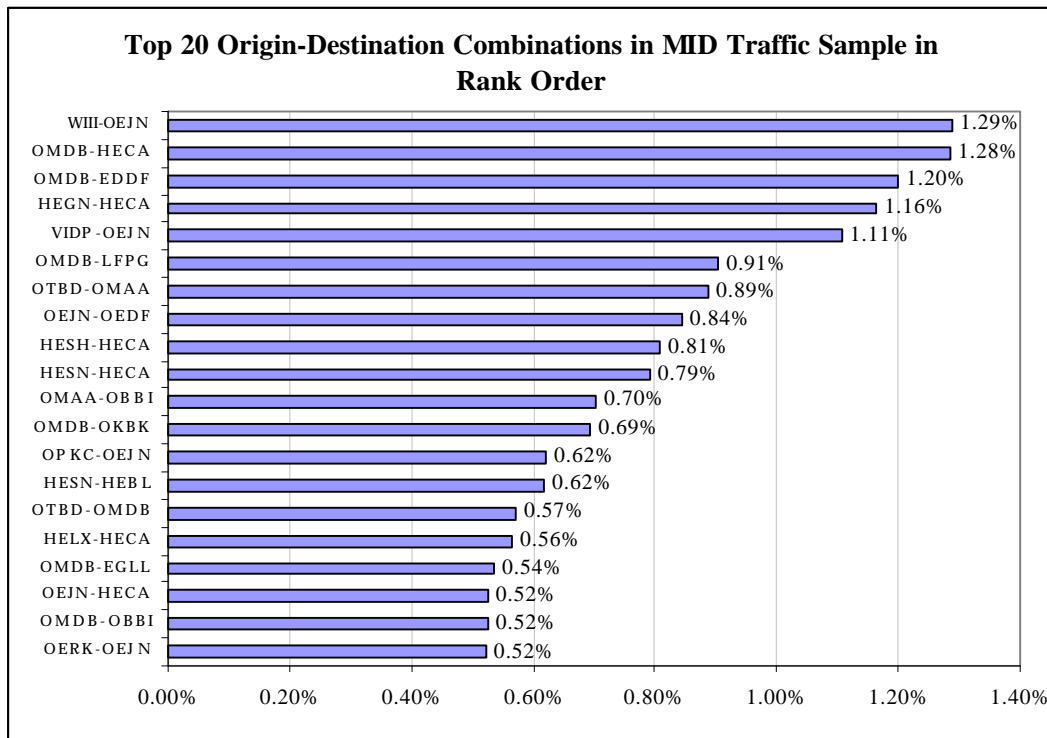


FIGURE 5. TOP 20 ORIGIN-DESTINATIONS IN THE MID REGION TRAFFIC SAMPLE

3.9 The top 60 unique State-State origin-destination combinations, as defined by the first two characters of an ICAO airport designator, are presented in Table 4. When organized by State of origin and State of destination, the entries in Table 4 account for roughly 63 percent of the total traffic operations in the sample. Appendix C contains the Origin-destination details for the top 10 State-state combinations.

First Two Characters of ICAO Airport Designators	State Name	State Name	Count	Percentage	Cumulative Percentage
OE-OE	Saudi Arabia	Saudi Arabia	5864	7.47%	7.47%
HE-HE	Egypt	Egypt	5299	6.75%	14.22%
OP-OE	Pakistan	Saudi Arabia	1845	2.35%	16.56%
OM-EG	United Arab Emirates	United Kingdom	1839	2.34%	18.91%
OM-OB	United Arab Emirates	Bahrain	1761	2.24%	21.15%
OE-HE	Saudi Arabia	Egypt	1728	2.20%	23.35%
OM-OE	United Arab Emirates	Saudi Arabia	1683	2.14%	25.49%
HE-ED	Egypt	Germany	1240	1.58%	27.07%
WI-OE	Indonesia	Saudi Arabia	1229	1.57%	28.64%
OT-OM	Qatar	United Arab Emirates	1219	1.55%	30.19%
OM-ED	United Arab Emirates	Germany	1212	1.54%	31.73%
OP-OM	Pakistan	United Arab Emirates	1157	1.47%	33.21%
OE-LT	Saudi Arabia	Turkey	1126	1.43%	34.64%
OM-HE	United Arab Emirates	Egypt	891	1.13%	35.77%

First Two Characters of ICAO Airport Designators	State Name	State Name	Count	Percentage	Cumulative Percentage
LI-HE	Italy	Egypt	888	1.13%	36.91%
VA-OE	India	Saudi Arabia	845	1.08%	37.98%
OI-OE	Iran	Saudi Arabia	833	1.06%	39.04%
OM-OK	United Arab Emirates	Kuwait	794	1.01%	40.05%
OB-EG	Bahrain	United Kingdom	704	0.90%	40.95%
OO-OM	Oman	United Arab Emirates	700	0.89%	41.84%
OM-LF	United Arab Emirates	France	686	0.87%	42.71%
WR-OE	Indonesia	Saudi Arabia	633	0.81%	43.52%
OM-OJ	United Arab Emirates	Jordan	575	0.73%	44.25%
VI-OE	India	Saudi Arabia	561	0.71%	44.97%
LF-HE	France	Egypt	554	0.71%	45.67%
OK-HE	Kuwait	Egypt	547	0.70%	46.37%
VA-OM	India	United Arab Emirates	525	0.67%	47.04%
VG-OE	Bangladesh	Saudi Arabia	523	0.67%	47.70%
OS-OE	Syrian Arab Rep.	Saudi Arabia	500	0.64%	48.34%
OL-OE	Lebanon	Saudi Arabia	487	0.62%	48.96%
OM-EH	United Arab Emirates	Netherlands	481	0.61%	49.57%
OK-OE	Kuwait	Saudi Arabia	479	0.61%	50.18%
OM-OI	United Arab Emirates	Iran	479	0.61%	50.79%
OM-OL	United Arab Emirates	Lebanon	477	0.61%	51.40%
OE-EG	Saudi Arabia	United Kingdom	474	0.60%	52.00%
HE-EG	Egypt	United Kingdom	464	0.59%	52.60%
WM-OE	Malaysia (Peninsular)	Saudi Arabia	441	0.56%	53.16%
OE-GM	Saudi Arabia	Morocco	423	0.54%	53.70%
OM-LT	United Arab Emirates	Turkey	402	0.51%	54.21%
VT-OM	Thailand	United Arab Emirates	390	0.50%	54.70%
OE-OB	Saudi Arabia	Bahrain	383	0.49%	55.19%
OM-EL	United Arab Emirates	Luxembourg	382	0.49%	55.68%
OM-LI	United Arab Emirates	Italy	366	0.47%	56.14%
VO-OE	India	Saudi Arabia	356	0.45%	56.60%
OM-HS	United Arab Emirates	Sudan	345	0.44%	57.04%
OS-OM	Syrian Arab Rep.	United Arab Emirates	345	0.44%	57.48%
OE-DA	Saudi Arabia	Algeria	340	0.43%	57.91%
HE-EB	Egypt	Belgium	339	0.43%	58.34%
OE-LF	Saudi Arabia	France	330	0.42%	58.76%
VO-OM	India	United Arab Emirates	327	0.42%	59.18%
OE-DN	Saudi Arabia	Nigeria	322	0.41%	59.59%
OT-OP	Qatar	Pakistan	318	0.40%	59.99%
OL-OK	Lebanon	Kuwait	316	0.40%	60.40%
VA-OB	India	Bahrain	290	0.37%	60.76%
WS-OM	Singapore	United Arab Emirates	290	0.37%	61.13%
OM-LS	United Arab Emirates	France	282	0.36%	61.49%
OK-OB	Kuwait	Bahrain	275	0.35%	61.84%
OY-OE	Yemen	Saudi Arabia	275	0.35%	62.19%
VI-OM	India	United Arab Emirates	273	0.35%	62.54%

TABLE 4. TOP 60 UNIQUE STATE-STATE COMBINATIONS

- 3.10 In order to assess the current readiness of the target MID airspace for RVSM, State RVSM approvals contained in the Unified Asia Pacific Approvals Registry and Monitoring Organization (APARMO) Database were assembled. The Unified APARMO Database contains all State RVSM approvals reported to either the APARMO or the North Atlantic Central Monitoring Agency. Eurocontrol's RVSM website presents all airframes considered by that agency to be RVSM MASPS compliant. The designation "MASPS Compliant" for an airframe may mean that the airframe already has State RVSM approval, or that the airframe is judged by its operator to be ready for presentation to a State approval process. The approvals in the Unified APARMO Database and the Eurocontrol listing of MASPS-compliant airframes were compared to the operator/aircraft-type combinations in Appendix D in order to assess the readiness of the airspace for RVSM. Appendix D shows the results of the careful comparison of State approvals and MASPS-complaint aircraft to the entries in that Appendix D. As will be observed, the overall result presented in Appendix D indicates that 0.804 is the proportion of operations currently being conducted by State approved (or readily able to be approved) operators and aircraft in the MID RVSM target airspace.

4. CONCLUSIONS

- 4.1 This paper has presented the results of analyzing traffic samples from eight MID Region FIRs where the RVSM is provisionally planned for implementation. The data were collected during the period 20 January through 20 February 2001 for the Bahrain, Egypt, Iran, Lebanon, Saudi Arabia, and UAE FIRs. The Oman FIR traffic sample included traffic from 20 – 31 January 2001, and 1, 10, and 15 February 2001. The Jordan FIR data sample contained traffic movement data for 20 January – 2 February, and 7 – 8 February 2001.
- 4.2 Twenty commercial operators accounted for roughly 60 percent of the total operations in the traffic sample, with the top five of these operators responsible for slightly more than 36 percent.
- 4.3 Twenty aircraft types/group accounted for roughly 88 percent of the total operations in the traffic sample, with the top five of these aircraft types/groups responsible for more than 46 percent of total operations. It was noted that the C130 aircraft was included in the top twenty aircraft types in the traffic sample, it was responsible for 2.47 percent of total operations in the traffic sample.
- 4.4 The proportion of operations currently being conducted by State approved operators and aircraft in the MID RVSM target airspace is 0.804.

References

1. "Development Of A Comprehensive Profile Of Operators And Aircraft Types In the Middle East (MID) Region Where the Reduced Vertical Separation Minimum (RVSM) is Provisionally Planned To Be Applied," MIDANPIRG RVSM/TF/2, Dubai, 10-11 April 2001.

Appendix A

Details of Traffic Samples Collected in Middle East Region Where the RVSM Is Provisionally Planned for Application

Date	Bahrain	Egypt	Iran	Jordan	Lebanon	Oman	Saudi	UAE	Number of Unique Flights
19-Jan-01	0	155	0	0	0	0	0	0	155
20-Jan-01	403	293	212	124	0	391	0	508	1265
21-Jan-01	426	314	227	146	109	395	0	531	1421
22-Jan-01	437	662	207	177	108	385	0	532	1708
23-Jan-01	397	536	221	154	113	385	0	523	1592
24-Jan-01	499	594	176	177	118	410	3	541	2087
25-Jan-01	474	650	186	168	133	425	2	555	1806
26-Jan-01	492	647	177	156	74	431	3	512	2024
27-Jan-01	451	654	166	156	95	418	0	484	1999
28-Jan-01	478	666	114	167	127	420	4	512	2067
29-Jan-01	517	673	100	187	105	434	5	499	2098
30-Jan-01	458	607	131	146	98	413	2	488	1951
31-Jan-01	568	680	118	207	130	454	56	539	2308
1-Feb-01	535	642	423	174	131	481	643	557	2632
2-Feb-01	540	596	222	175	107	0	686	546	2415
3-Feb-01	471	678	0	0	119	0	681	512	2218
4-Feb-01	491	689	230	0	130	0	687	549	2391
5-Feb-01	498	642	221	0	125	0	729	551	2362
6-Feb-01	449	554	237	0	109	0	712	528	2206
7-Feb-01	577	672	238	220	112	0	817	583	2623
8-Feb-01	574	656	246	197	116	0	753	598	2551
9-Feb-01	585	634	252	0	122	0	769	579	2487
10-Feb-01	541	755	212	0	105	496	406	537	2568
11-Feb-01	545	747	233	0	126	0	1227	569	2482
12-Feb-01	593	729	229	0	124	0	826	550	2601
13-Feb-01	489	753	228	0	110	0	819	475	2489
14-Feb-	616	820	227	0	123	0	963	567	2830

01									
15-Feb-01	592	771	243	0	120	497	874	596	2973
16-Feb-01	580	658	229	0	111	0	925	545	2674
17-Feb-01	537	872	260	0	110	0	906	546	2858
18-Feb-01	552	904	0	0	132	0	943	545	2838
19-Feb-01	581	841	238	0	122	0	970	553	2949
20-Feb-01	498	744	208	0	0	0	956	479	2624
21-Feb-01	0	813	0	0	0	0	1051	0	1669
22-Feb-01	0	571	0	0	0	0	942	0	1435
23-Feb-01	0	0	0	0	0	0	932	0	932
24-Feb-01	0	0	0	0	0	0	1018	0	1018
25-Feb-01	0	0	0	0	0	0	1014	0	1014
26-Feb-01	0	0	0	0	0	0	963	0	963

5. APPENDIX B

6. AIRCRAFT TYPE/GROUP DISTRIBUTION FOR THE MID REGION TRAFFIC SAMPLE (OVER 98% OF AIRCRAFT TYPE/GROUPS SHOWN)

Aircraft Type/Group	Count	Percentage	Cumulative Percentage
A320	11230	14.30%	14.30%
A300	7780	9.91%	24.21%
B747	7037	8.96%	33.17%
B777	5623	7.16%	40.33%
B767	5178	6.59%	46.93%
A310	4845	6.17%	53.10%
A330	4215	5.37%	58.46%
B737I	2976	3.79%	62.25%
MD90	2668	3.40%	65.65%
B744	2629	3.35%	69.00%
A340	2604	3.32%	72.31%
B757	1963	2.50%	74.81%
C130	1939	2.47%	77.28%
B727	1854	2.36%	79.64%
MD11	1562	1.99%	81.63%

Aircraft Type/Group	Count	Percentage	Cumulative Percentage
B737III	1465	1.87%	83.50%
DC10	1181	1.50%	85.00%
L1011	972	1.24%	86.24%
B737II	947	1.21%	87.45%
B707	645	0.82%	88.27%
TU54	620	0.79%	89.06%
IL76	577	0.73%	89.79%
G4	512	0.65%	90.45%
BE20	420	0.53%	90.98%
IL86	350	0.45%	91.43%
DC8	311	0.40%	91.82%
CL60	290	0.37%	92.19%
IL18	261	0.33%	92.52%
BA11	251	0.32%	92.84%
YK42	251	0.32%	93.16%
MD80	240	0.31%	93.47%
T204	235	0.30%	93.77%
B190	226	0.29%	94.06%
LJ35	221	0.28%	94.34%
AT42	200	0.25%	94.59%
SW3	200	0.25%	94.85%
G3	189	0.24%	95.09%
IL62	179	0.23%	95.31%
F900	177	0.23%	95.54%
H25B	164	0.21%	95.75%
G2	160	0.20%	95.95%
C17	151	0.19%	96.15%
G5	150	0.19%	96.34%
AN12	146	0.19%	96.52%
C5	123	0.16%	96.68%
C560	98	0.12%	96.80%
DA20	93	0.12%	96.92%
P3	92	0.12%	97.04%
FA50	84	0.11%	97.15%
VC10	75	0.10%	97.24%
DC9	62	0.08%	97.32%
F27	59	0.08%	97.40%
IL96	58	0.07%	97.47%
T134	58	0.07%	97.54%
CN35	55	0.07%	97.61%
FK50	55	0.07%	97.68%
F2TH	54	0.07%	97.75%
LJ60	51	0.06%	97.82%
HS25	50	0.06%	97.88%
C160	41	0.05%	97.93%
KE3	39	0.05%	97.98%
FA20	36	0.05%	98.03%
PC12	36	0.05%	98.07%
TU34	35	0.04%	98.12%

Appendix C

7. ORIGIN-DESTINATION DETAILS FOR THE TOP TEN STATE-STATE COMBINATIONS IN THE MID REGION TRAFFIC SAMPLE

State-State Combination	Origin-Destination Combination		Count	Percentage Within the State-State Combination	Percentage of Total Sample
OE-OE	OERK	OEJN	1011	17.24%	1.29%
	OEJN	OEDF	487	8.30%	0.62%
	OEMA	OEJN	382	6.51%	0.49%
	OERK	OEDF	256	4.37%	0.33%
	OERK	OEMA	194	3.31%	0.25%
	OERY	OEJN	182	3.10%	0.23%
	OEYN	OEJN	160	2.73%	0.20%
	OERK	OEAB	145	2.47%	0.18%
	OEWD	OEJN	126	2.15%	0.16%
	OERK	OEHL	120	2.05%	0.15%
	OEJN	OEGN	113	1.93%	0.14%
	OERK	OEGN	111	1.89%	0.14%
	OEJN	OEAB	95	1.62%	0.12%
	OETB	OEJN	92	1.57%	0.12%
	OERK	OENG	82	1.40%	0.10%
	OERY	OEDR	78	1.33%	0.10%
	OETB	OERK	76	1.30%	0.10%
	OEJN	OEGS	71	1.21%	0.09%
	OERR	OERK	71	1.21%	0.09%
	OETF	OEJN	68	1.16%	0.09%
	OEMA	OEDF	66	1.13%	0.08%
	OERY	OEKM	66	1.13%	0.08%
	OESK	OERK	66	1.13%	0.08%
	OETF	OERK	66	1.13%	0.08%
	OERK	OEGS	62	1.06%	0.08%
	OEYN	OEDF	61	1.04%	0.08%
	OERK	OEBH	59	1.01%	0.08%
	OETF	OERY	56	0.95%	0.07%
	OERK	OEBA	52	0.89%	0.07%
	OERY	OEGS	50	0.85%	0.06%
	OERY	OEKK	49	0.84%	0.06%
	OEJN	OEDR	47	0.80%	0.06%
	OENG	OEJN	46	0.78%	0.06%
	OEJN	OEBA	45	0.77%	0.06%
	OEWD	OERK	43	0.73%	0.05%
	OEJN	OEHL	40	0.68%	0.05%
	OEJN	OEJN	39	0.67%	0.05%
	OEJN	OEBH	37	0.63%	0.05%
	OETF	OEKM	36	0.61%	0.05%
	OERK	OEPA	31	0.53%	0.04%
	OEKM	OEDR	29	0.49%	0.04%
	OEKM	OEJN	29	0.49%	0.04%
	OETB	OEMA	29	0.49%	0.04%
	OESH	OENG	27	0.46%	0.03%

State-State Combination	Origin-Destination Combination		Count	Percentage Within the State-State Combination	Percentage of Total Sample
	OETB	OEDR	25	0.43%	0.03%
	OETB	OERY	25	0.43%	0.03%
	OEDF	OEGS	24	0.41%	0.03%
	OERY	OEHL	24	0.41%	0.03%
	OEYN	OERK	24	0.41%	0.03%
	OERK	OEAH	21	0.36%	0.03%
	OEWD	OEJN	21	0.36%	0.03%
	OETF	OEDF	19	0.32%	0.02%
	OESK	OEJN	19	0.32%	0.02%
	OEWJ	OETB	19	0.32%	0.02%
	OETF	OEAB	18	0.31%	0.02%
	OEPJ	OEPF	18	0.31%	0.02%
	OETB	OEGT	15	0.26%	0.02%
	OERY	OEMA	15	0.26%	0.02%
	OESH	OERY	15	0.26%	0.02%
	OEPA	OEJN	13	0.22%	0.02%
	OERB	OEJN	13	0.22%	0.02%
	OESH	OEKM	13	0.22%	0.02%
	OERY	OENG	13	0.22%	0.02%
	OEGN	OEDF	12	0.20%	0.02%
	OERK	OEGT	12	0.20%	0.02%
	OEWD	OERY	12	0.20%	0.02%
	OESK	OETF	12	0.20%	0.02%
	OEKM	OEKK	11	0.19%	0.01%
	OETF	OEKK	11	0.19%	0.01%
	OEDF	OEAB	10	0.17%	0.01%
	OERR	OEGT	10	0.17%	0.01%
	OERF	OEHL	10	0.17%	0.01%
	OETF	OETB	10	0.17%	0.01%
	OERY	OESK	10	0.17%	0.01%
	OESK	OEHL	9	0.15%	0.01%
	OESK	OEMA	9	0.15%	0.01%
	OERY	OERR	9	0.15%	0.01%
	OETB	OESK	9	0.15%	0.01%
	OETF	OEGN	8	0.14%	0.01%
	OEMA	OEGS	8	0.14%	0.01%
	OESK	OEGT	8	0.14%	0.01%
	OEBH	OERY	8	0.14%	0.01%
	OEGS	OETB	8	0.14%	0.01%
	OEDR	OERK	8	0.14%	0.01%
	OEMA	OEHL	7	0.12%	0.01%
	OESH	OEJN	7	0.12%	0.01%
	OEJN	OEKK	7	0.12%	0.01%
	OETB	OEKK	7	0.12%	0.01%
	OETB	OEKM	7	0.12%	0.01%
	OERK	OERF	7	0.12%	0.01%
	OEDF	OERY	7	0.12%	0.01%
	OEGS	OESK	7	0.12%	0.01%
	OERY	OEWJ	7	0.12%	0.01%

State-State Combination	Origin-Destination Combination		Count	Percentage Within the State-State Combination	Percentage of Total Sample
	OERY	OEAB	6	0.10%	0.01%
	OESH	OEAB	6	0.10%	0.01%
	OEWD	OEBH	6	0.10%	0.01%
	OERY	OEGN	6	0.10%	0.01%
	OERR	OEGS	6	0.10%	0.01%
	OETB	OEHL	6	0.10%	0.01%
	OERR	OEMA	6	0.10%	0.01%
	OETF	OEMA	6	0.10%	0.01%
	OEGN	OESH	6	0.10%	0.01%
	OETB	OETR	6	0.10%	0.01%
	OERF	OEGS	5	0.09%	0.01%
	OEGT	OEHL	5	0.09%	0.01%
	OEDR	OEKK	5	0.09%	0.01%
	OEDF	OEPC	5	0.09%	0.01%
	OEDF	OESB	5	0.09%	0.01%
	OEAH	OEPC	4	0.07%	0.01%
	OEPA	OERF	4	0.07%	0.01%
	OERY	OERF	4	0.07%	0.01%
	OETR	OERF	4	0.07%	0.01%
	OEJB	OERK	4	0.07%	0.01%
	OEHL	OERR	4	0.07%	0.01%
	OEBA	OERY	4	0.07%	0.01%
	OEHL	OETR	4	0.07%	0.01%
	OETB	OEAB	3	0.05%	0.00%
	OETF	OEKJ	3	0.05%	0.00%
	OERK	OEKM	3	0.05%	0.00%
	OETF	OENG	3	0.05%	0.00%
	OERY	OERY	3	0.05%	0.00%
	OEBH	OETF	3	0.05%	0.00%
	OEDR	OETF	3	0.05%	0.00%
	OEMA	OEWJ	3	0.05%	0.00%
	OEGN	OEBA	2		0.00%
	OEHL	OEGS		0.03%	0.00%
	OERY		2	0.03%	
		OEJF	2		0.00%
	OEPA	OEKK		0.03%	0.00%
	OEAH		2	0.03%	
		OEJN	2	0.03%	0.00%
	OEJB		2	0.03%	
		OENG	2		0.00%
	OETB	OESH		0.03	0.00%
	OENG	OEBH		0.02%	0.00%
	OESH		1	0.02%	
		OEDR	1		0.00%
	OERK	OEHW		0.02%	0.00%
	OETF		1	0.02%	
		OEKJ	1		0.00%
	OESH	OEKK		0.02%	0.00%
	OESH		1	0.02%	

State-State Combination	Origin-Destination Combination		Count	Percentage Within the State-State Combination	Percentage of Total Sample
	OEYN	OETF	1	0.02%	0.00%
	OEJN	OETN	1	0.02%	0.00%
	OETF	OEWD	1	0.02%	0.00%
	OEMA	OEYN	1	0.02%	0.00%
	OEAB	OEBA	1	0.02%	0.00%
	OEAB	OEDR	1	0.02%	0.00%
	OEDF	OESK	1	0.02%	0.00%
	OEGN	OETB	1	0.02%	0.00%
	OEGS	OETF	1	0.02%	0.00%
	OEJB	OERY	1	0.02%	0.00%
	OEKK	OEKK	1	0.02%	0.00%
	OEKK	OERK	1	0.02%	0.00%
	OEPC	OEPJ	1	0.02%	0.00%
	OEPS	OEJN	1	0.02%	0.00%
	OERR	OEDR	1	0.02%	0.00%
	OERY	OEJF	1	0.02%	0.00%
	OETB	OEJF	1	0.02%	0.00%
	OETB	OERR	1	0.02%	0.00%
	OEYN	OERY	1	0.02%	0.00%
	OEBA	OEDF	1	0.02%	0.00%
	OEKM	OEDF	1	0.02%	0.00%
	OEPA	OEDF	1	0.02%	0.00%
	OEDF	OETB	1	0.02%	0.00%
		TOTAL	5864	100.00%	7.47%
HE-HE	HELX	HECA	870	16.42%	1.11%
	HESN	HEBL	697	13.15%	0.89%
	HESN	HECA	552	10.42%	0.70%
	HESH	HECA	545	10.28%	0.69%
	HEGN	HECA	421	7.94%	0.54%
	HESN	HELX	340	6.42%	0.43%
	HELX	HEGN	226	4.26%	0.29%
	HECA	HEBA	185	3.49%	0.24%
	HESH	HEGN	173	3.26%	0.22%
	HECA	HEBL	157	2.96%	0.20%
	HESH	HELX	142	2.68%	0.18%
	HECA	HECA	127	2.40%	0.16%
	HECA	HEAX	114	2.15%	0.15%
	HECA	HEAT	88	1.66%	0.11%
	HELX	HEAZ	63	1.19%	0.08%
	HEMM	HECA	46	0.87%	0.06%
	HEGN	HEAZ	36	0.68%	0.05%
	HELX	HEBA	30	0.57%	0.04%
	HEKG	HEAZ	25	0.47%	0.03%
	HEGN	HEBA	23	0.43%	0.03%
	HECA	HEAZ	21	0.40%	0.03%
	HESH	HEBA	21	0.40%	0.03%
	HELX	HEAT	20	0.38%	0.03%

State-State Combination	Origin-Destination Combination		Count	Percentage Within the State-State Combination	Percentage of Total Sample
	HEOC	HECA	19	0.36%	0.02%
	HELX	HEBL	18	0.34%	0.02%
	HETB	HESH	18	0.34%	0.02%
	HESH	HEAZ	17	0.32%	0.02%
	HEKG	HECA	17	0.32%	0.02%
	HECA	HEAR	16	0.30%	0.02%
	HECW	HECW	16	0.30%	0.02%
	HETB	HECA	15	0.28%	0.02%
	HEAZ	HEAZ	12	0.23%	0.02%
	HETR	HECA	11	0.21%	0.01%
	HEAT	HEAZ	11	0.21%	0.01%
	HEAR	HEAR	10	0.19%	0.01%
	HEMN	HECA	10	0.19%	0.01%
	HEAZ	HEAX	8	0.15%	0.01%
	HEEM	HEEM	8	0.15%	0.01%
	HESN	HEOW	8	0.15%	0.01%
	HEAT	HEAR	7	0.13%	0.01%
	HEEM	HEAT	7	0.13%	0.01%
	HEKG	HEAT	7	0.13%	0.01%
	HEOW	HECA	7	0.13%	0.01%
	HEKG	HEDK	7	0.13%	0.01%
	HEMM	HEAZ	7	0.13%	0.01%
	HETB	HEAR	6	0.11%	0.01%
	HEDK	HECA	6	0.11%	0.01%
	HETR	HEGN	6	0.11%	0.01%
	HEAX	HEBA	6	0.11%	0.01%
	HEAX	HESN	6	0.11%	0.01%
	HEBA	HEAZ	5	0.09%	0.01%
	HEAZ	HESN	5	0.09%	0.01%
	HEAZ	HECW	4	0.08%	0.01%
	HEBA	HEBA	3	0.06%	0.00%
	HESC	HECA	3	0.06%	0.00%
	HEAR	HEEM	3	0.06%	0.00%
	HEGN	HEGN	3	0.06%	0.00%
	HEAZ	HEPS	3	0.06%	0.00%
	HESN	HESH	3	0.06%	0.00%
	HECA	HEEM	3	0.06%	0.00%
	HEGN	HESN	3	0.06%	0.00%
	HEOC	HEPS	3	0.06%	0.00%
	HEAT	HEAT	3	0.06%	0.00%
	HEBL	HEAZ	3	0.06%	0.00%
	HEPS	HECA	3	0.06%	0.00%
	HELX	HEKG	3	0.06%	0.00%
	HEAX	HEAX	2	0.04%	0.00%
	HEAZ	HETR	2	0.04%	0.00%
	HEAT	HEBL	2	0.04%	0.00%
	HEAX	HEPS	2	0.04%	0.00%
	HEGN	HEAR	2	0.04%	0.00%
	HEKG	HEGN	2	0.04%	0.00%

	HESC	HELX	2	0.04%	0.00%
	HESH	HEAT	1	0.02%	0.00%
	HEMM	HEBA	1	0.02%	0.00%
	HEGN	HEBL	1	0.02%	0.00%
	HECW	HECA	1	0.02%	0.00%
	HESH	HEGR	1	0.02%	0.00%
	HESH	HEKG	1	0.02%	0.00%
	HEAZ	HEMN	1	0.02%	0.00%
	HETR	HESC	1	0.02%	0.00%
	HESH	HETR	1	0.02%	0.00%
	HEAR	HESH	1	0.02%	0.00%
	HEAT	HEGN	1	0.02%	0.00%
	HEAT	HEOW	1	0.02%	0.00%
	HEBA	HESN	1	0.02%	0.00%
	HEDK	HELX	1	0.02%	0.00%
	HEEM	HEOC	1	0.02%	0.00%
	HEGR	HECA	1	0.02%	0.00%
	HELX	HEAX	1	0.02%	0.00%
	HESN	HEAT	1	0.02%	0.00%
	HESN	HEMN	1	0.02%	0.00%
	HEOC	HEBA	1	0.02%	0.00%
	HEAZ	HEOC	1	0.02%	0.00%
	HESH	HESH	1	0.02%	0.00%
	HESN	HESN	1	0.02%	0.00%
	HEGN	HETB	1	0.02%	0.00%
		TOTAL	5299	100.00%	6.75%
			.		
OP-OE	OPKC	OEJN	662	35.88%	0.84%
	OPLA	OEJN	249	13.50%	0.32%
	OPRN	OEJN	218	11.82%	0.28%
	OPKC	OEDF	135	7.32%	0.17%
	OPFA	OEJN	129	6.99%	0.16%
	OPPS	OEJN	123	6.67%	0.16%
	OPKC	OERK	84	4.55%	0.11%
	OPLA	OEDF	40	2.17%	0.05%
	OPPS	OERK	40	2.17%	0.05%
	OPLA	OERK	39	2.11%	0.05%
	OPQT	OEJN	38	2.06%	0.05%
	OPRN	OERK	38	2.06%	0.05%
	OPRN	OEDF	26	1.41%	0.03%
	OPSF	OEJN	5	0.27%	0.01%
	OPPI	OEJN	3	0.16%	0.00%
	OERY	OPSF	3	0.16%	0.00%
	OPPN	OEJN	2	0.11%	0.00%
	OPDB	OERY	2	0.11%	0.00%
	OPPS	OEDR	1	0.05%	0.00%
	OPRN	OEDR	1	0.05%	0.00%
	OEDR	OPKC	1	0.05%	0.00%

	OPLA	OERY	1	0.05%	0.00%
	OPQI	OEJN	1	0.05%	0.00%
	OPRM	OEJN	1	0.05%	0.00%
	OPSF	OEJB	1	0.05%	0.00%
	OPRL	OEJN	1	0.05%	0.00%
	OEJB	OPKC	1	0.05%	0.00%
		TOTAL	1845	100.00%	2.35%
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OM-EG	OMDB	EGLL	913	49.65%	1.16%
	OMAA	EGLL	369	20.07%	0.47%
	OMDB	EGCC	153	8.32%	0.19%
	OMDB	EGKK	147	7.99%	0.19%
	OMDB	EGBB	107	5.82%	0.14%
	OMAA	EGBB	32	1.74%	0.04%
	OMAA	EGKK	26	1.41%	0.03%
	OMSJ	EGSS	20	1.09%	0.03%
	OMAA	EGVN	11	0.60%	0.01%
	OMDB	EGSS	9	0.49%	0.01%
	OMSJ	EGPK	8	0.44%	0.01%
	OMAM	EGUN	8	0.44%	0.01%
	OMDB	EGLF	7	0.38%	0.01%
	EGGW	OMAA	6	0.33%	0.01%
	EGKK	OMSJ	5	0.27%	0.01%
	OMDB	EGFF	4	0.22%	0.01%
	EGPF	OMAA	3	0.16%	0.00%
	OMAL	EGKK	2	0.11%	0.00%
	OMDB	EGMH	2	0.11%	0.00%
	EGMH	OMAA	2	0.11%	0.00%
	OMAL	EGLL	2	0.11%	0.00%
	OMDB	EGLT	1	0.05%	0.00%
	EGGW	OMDB	1	0.05%	0.00%
	OMAA	EGLT	1	0.05%	0.00%
		TOTAL	1839	100.00%	2.34%
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OM-OB	OMDB	OBBI	1008	57.24%	1.28%
	OMAA	OBBI	623	35.38%	0.79%
	OMSJ	OBBI	42	2.39%	0.05%
	OBBI	OMFJ	29	1.65%	0.04%
	OMRK	OBBI	27	1.53%	0.03%
	OBBI	OMAL	15	0.85%	0.02%
	OBBI	OMDM	9	0.51%	0.01%
	OBBI	OMAD	4	0.23%	0.01%
	OMAM	OBBS	2	0.11%	0.00%
	OBBI	OMAM	2	0.11%	0.00%
		TOTAL	1761	100.00%	2.24%
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OE-HE	OEJN	HECA	943	54.57%	1.20%
	OERK	HECA	200	11.57%	0.25%

	Origin-Destination Combination		Count	Percentage Within the State-State Combination	Percentage of Total Sample
	OEDF	HECA	138	7.99%	0.18%
	OEJN	HEAR	125	7.23%	0.16%
	OEJN	HEBA	53	3.07%	0.07%
	OEJN	HELX	52	3.01%	0.07%
	OEMA	HECA	43	2.49%	0.05%
	HECA	OERY	33	1.91%	0.04%
	OEJN	HEGN	23	1.33%	0.03%
	OEDF	HEBA	19	1.10%	0.02%
	OERK	HEBA	19	1.10%	0.02%
	OEJN	HESH	16	0.93%	0.02%
	OEJN	HESN	9	0.52%	0.01%
	OEKJ	HECA	8	0.46%	0.01%
	HESH	OERK	8	0.46%	0.01%
	OEKJ	HEGR	6	0.35%	0.01%
	OEDF	HEAX	5	0.29%	0.01%
	HELX	OERK	5	0.29%	0.01%
	HEAT	OEJN	4	0.23%	0.01%
	OEMA	HEBA	3	0.17%	0.00%
	HESH	OEMA	3	0.17%	0.00%
	HESH	OEKJ	2	0.12%	0.00%
	OEGS	HECA	2	0.12%	0.00%
	OERK	HEGN	2	0.12%	0.00%
	OERK	HEAX	2	0.12%	0.00%
	HECA	OEJD	1	0.06%	0.00%
	HELX	OEJD	1	0.06%	0.00%
	HEAB	OERK	1	0.06%	0.00%
	OEDF	HEAM	1	0.06%	0.00%
	OEWJ	HESH	1	0.06%	0.00%
		TOTAL	1728	100.00%	2.20%
OM-OE	OMDB	OEJN	358	21.27%	0.46%
	OMSJ	OEJN	313	18.60%	0.40%
	OMDB	OERK	312	18.54%	0.40%
	OMAA	OERK	211	12.54%	0.27%
	OMDB	OEDF	172	10.22%	0.22%
	OMAA	OEJN	115	6.83%	0.15%
	OEMA	OMAA	43	2.55%	0.05%
	OEKH	OMSJ	36	2.14%	0.05%
	OEMA	OMDB	20	1.19%	0.03%
	OEKH	OMDB	17	1.01%	0.02%
	OMSJ	OERK	12	0.71%	0.02%
	OEGS	OMAD	11	0.65%	0.01%
	OMSJ	OEMA	9	0.53%	0.01%
	OEDF	OMSJ	8	0.48%	0.01%
	OMAD	OEKK	6	0.36%	0.01%
	OMSJ	OEKK	6	0.36%	0.01%
	OEKJ	OMSJ	6	0.36%	0.01%
	OEGS	OMDM	5	0.30%	0.01%

	OEKJ	OMDB	4	0.24%	0.01%
	OEKK	OMFJ	4	0.24%	0.01%
	OEMA	OMAL	4	0.24%	0.01%
	OEKJ	OMAM	2	0.12%	0.00%
	OMAL	OEAH	2	0.12%	0.00%
	OMAD	OERK	2	0.12%	0.00%
	OMMN	OEJN	1	0.06%	0.00%
	OEGS	OMDB	1	0.06%	0.00%
	OEJN	OMSH	1	0.06%	0.00%
	OMAA	OERY	1	0.06%	0.00%
	OMAL	OEGS	1	0.06%	0.00%
		TOTAL	1683	100.00%	2.14%
HE-ED	HECA	EDDF	189	15.24%	0.24%
	HEGN	EDDM	128	10.32%	0.16%
	HEGN	EDDF	127	10.24%	0.16%
	HEGN	EDDL	81	6.53%	0.10%
	HESH	EDDM	73	5.89%	0.09%
	HEGN	EDDN	65	5.24%	0.08%
	HEGN	EDDB	58	4.68%	0.07%
	HELX	EDDN	49	3.95%	0.06%
	HEGN	EDDV	44	3.55%	0.06%
	HECA	EDDM	38	3.06%	0.05%
	HELX	EDDM	38	3.06%	0.05%
	HEBA	EDDF	36	2.90%	0.05%
	HEGN	EDDP	35	2.82%	0.04%
	HESH	EDDN	29	2.34%	0.04%
	HEGN	EDDS	29	2.34%	0.04%
	HEGN	EDDT	28	2.26%	0.04%
	HEGN	EDDH	21	1.69%	0.03%
	HECA	EDDL	18	1.45%	0.02%
	EDDL	HELX	15	1.21%	0.02%
	HECA	EDDB	14	1.13%	0.02%
	HEGN	EDDK	13	1.05%	0.02%
	EDDT	HELX	13	1.05%	0.02%
	HESH	EDDF	11	0.89%	0.01%
	EDDF	HELX	11	0.89%	0.01%
	HEGN	EDLP	10	0.81%	0.01%
	HEGN	EDDC	9	0.73%	0.01%
	HESH	EDDL	6	0.48%	0.01%
	EDDH	HELX	6	0.48%	0.01%
	EDDP	HELX	6	0.48%	0.01%
	HETB	EDDM	5	0.40%	0.01%
	HEGN	EDDR	5	0.40%	0.01%
	EDSB	HEGN	5	0.40%	0.01%
	EDDS	HELX	5	0.40%	0.01%
	HECA	EDDH	4	0.32%	0.01%
	EDFH	HESN	3	0.24%	0.00%

	HECA	EDDK	2	0.16%	0.00%
	EDNY	HESN	2	0.16%	0.00%
	EDSB	HELX	2	0.16%	0.00%
	HELX	EDDV	1	0.08%	0.00%
	HECA	EDNY	1	0.08%	0.00%
	EDDF	HESN	1	0.08%	0.00%
	EDDG	HEGN	1	0.08%	0.00%
	EDWA	HEGN	1	0.08%	0.00%
	HECA	EDDS	1	0.08%	0.00%
	HELX	EDDK	1	0.08%	0.00%
		TOTAL	1240	100.00%	1.58%
WI-OE	WIII	OEJN	410	33.36%	0.52%
	WIKB	OEJN	296	24.08%	0.38%
	WIMM	OEJN	208	16.92%	0.26%
	WIII	OEMA	99	8.06%	0.13%
	WITT	OEJN	78	6.35%	0.10%
	WIII	OERK	67	5.45%	0.09%
	WIII	OEDF	42	3.42%	0.05%
	WIKB	OEMA	28	2.28%	0.04%
	WIIT	OEJN	1	0.08%	0.00%
		TOTAL	1229	100.00%	1.57%
OT-OM	OTBD	OMDB	711	58.33%	0.91%
	OTBD	OMAA	484	39.70%	0.62%
	OTBD	OMAL	10	0.82%	0.01%
	OTBD	OMSJ	7	0.57%	0.01%
	OTBD	OMAM	5	0.41%	0.01%
	OMFJ	OTBD	2	0.16%	0.00%
		TOTAL	1219	100.00%	1.55%

Proportion of Operations Conducted by State Approved Operators and Aircraft in the
MID RVSM Target Airspace

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
AAB	LR45	1	Yes	0.00%	0.00%
ABD	B742	2	Yes	0.00%	0.00%
ABD	L101	1	Yes	0.00%	0.01%
ACA	B763	1	Yes	0.00%	0.01%
ACS	AN24	2	No	0.00%	0.01%
ACT	B732	1	No	0.00%	0.01%
ADB	A124	20	Yes	0.03%	0.04%
ADH	A310	1	No	0.00%	0.04%
ADH	B734	17	Yes	0.03%	0.06%
ADN	B737	1	No	0.00%	0.06%
ADW	A320	1	No	0.00%	0.06%
ADY	B733	1	No	0.00%	0.06%
AEF	A320	60	Yes	0.09%	0.15%
AEF	A321	97	Yes	0.14%	0.30%
AEL	A320	28	No	0.00%	0.30%
AEL	A340	1	No	0.00%	0.30%
AEL	B722	1	No	0.00%	0.30%
AEL	B737	2	No	0.00%	0.30%
AEL	B772	108	Yes	0.16%	0.46%
AEW	B733	3	Yes	0.00%	0.46%
AEW	B737	14	No	0.00%	0.46%
AEY	DC10	3	Yes	0.00%	0.47%
AFG	A306	1	No	0.00%	0.47%
AFG	B727	461	No	0.00%	0.47%
AFG	B772	1	No	0.00%	0.47%
AFL	A310	21	Yes	0.03%	0.50%
AFL	B721	1	No	0.00%	0.50%
AFL	B722	1	No	0.00%	0.50%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
AFL	B734	14	Yes	0.02%	0.52%
AFL	B763	22	Yes	0.03%	0.55%
AFL	B772	34	Yes	0.05%	0.60%
AFL	B773	1	No	0.00%	0.60%
AFR	A300	85	No	0.00%	0.60%
AFR	A310	344	Yes	0.51%	1.12%
AFR	A320	37	Yes	0.06%	1.17%
AFR	A330	2	No	0.00%	1.17%
AFR	A340	71	Yes	0.11%	1.28%
AFR	B742	352	Yes	0.53%	1.80%
AFR	B744	27	Yes	0.04%	1.84%
AFR	B772	80	Yes	0.12%	1.96%
AGF	A310	1	No	0.00%	1.96%
AGF	B722	1	No	0.00%	1.96%
AGF	B727	1	No	0.00%	1.96%
AGN	B762	20	No	0.00%	1.96%
AGS	B737	1	No	0.00%	1.96%
AHA	A332	1	No	0.00%	1.96%
AHH	B734	3	No	0.00%	1.96%
AHK	B742	108	Yes	0.16%	2.13%
AHK	B744	1	No	0.00%	2.13%
AHK	B74S	1	No	0.00%	2.13%
AHM	B737	3	No	0.00%	2.13%
AHX	B742	1	No	0.00%	2.13%
AHX	B752	1	No	0.00%	2.13%
AHY	B752	33	Yes	0.05%	2.17%
AIB	A306	3	No	0.00%	2.17%
AIC	A300	133	No	0.00%	2.17%
AIC	A310	259	Yes	0.39%	2.56%
AIC	A320	62	No	0.00%	2.56%
AIC	A340	1	No	0.00%	2.56%
AIC	B743	71	Yes	0.11%	2.67%
AIC	B744	409	Yes	0.61%	3.28%
AIC	B747	187	Yes	0.28%	3.56%
AIC	L101	696	No	0.00%	3.56%
AIH	A330	5	Yes	0.01%	3.56%
AIH	B738	1	No	0.00%	3.56%
AIH	B763	130	Yes	0.19%	3.76%
AIH	B772	1	No	0.00%	3.76%
AIH	DC10	47	Yes	0.07%	3.83%
AIK	A330	1	No	0.00%	3.83%
AIN	DC10	1	No	0.00%	3.83%
AIN	DC8	5	No	0.00%	3.83%
AIN	DC85	11	No	0.00%	3.83%
AIR	B777	1	No	0.00%	3.83%
AIV	B742	1	No	0.00%	3.83%
AKH	B742	1	No	0.00%	3.83%
ALF	A310	1	No	0.00%	3.83%
ALH	B757	1	No	0.00%	3.83%
ALI	A332	1	No	0.00%	3.83%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
ALI	B744	1	No	0.00%	3.83%
ALK	A310	2	No	0.00%	3.83%
ALK	A320	9	No	0.00%	3.83%
ALK	A330	500	Yes	0.75%	4.58%
ALK	A340	257	Yes	0.38%	4.96%
AMC	A310	1	No	0.00%	4.96%
AMC	A320	51	Yes	0.08%	5.04%
AMC	B733	25	Yes	0.04%	5.07%
AME	B703	5	No	0.00%	5.07%
AMI	A300	1	No	0.00%	5.07%
AMI	A310	61	No	0.00%	5.07%
AMI	A320	19	No	0.00%	5.07%
AMI	A340	20	No	0.00%	5.07%
AMI	B74A	1	No	0.00%	5.07%
AMM	B752	40	Yes	0.06%	5.13%
AMM	B753	1	No	0.00%	5.13%
AMM	B763	127	Yes	0.19%	5.32%
AMP	B722	2	No	0.00%	5.32%
AMV	A300	1	No	0.00%	5.32%
AMV	A30B	2	No	0.00%	5.32%
AMV	B732	21	No	0.00%	5.32%
AMV	B734	4	No	0.00%	5.32%
AMV	B737	4	No	0.00%	5.32%
AMV	MD90	97	No	0.00%	5.32%
AMX	B747	1	No	0.00%	5.32%
AMY	A320	1	No	0.00%	5.32%
ANG	B762	1	No	0.00%	5.32%
AOM	A320	1	No	0.00%	5.32%
AOM	A340	31	Yes	0.05%	5.37%
AOM	B763	26	No	0.00%	5.37%
AOM	DC10	15	Yes	0.02%	5.39%
ASD	A321	6	No	0.00%	5.39%
ASD	B735	19	No	0.00%	5.39%
ASR	B737	2	No	0.00%	5.39%
ATC	B732	1	No	0.00%	5.39%
ATC	B732	7	No	0.00%	5.39%
ATC	B733	9	No	0.00%	5.39%
ATH	B763	2	No	0.00%	5.39%
ATN	DC87	1	No	0.00%	5.39%
AUA	A320	94	Yes	0.14%	5.53%
AUA	A330	6	Yes	0.01%	5.54%
AUA	A340	18	Yes	0.03%	5.57%
AUA	MD80	73	Yes	0.11%	5.68%
AUI	B733	11	Yes	0.02%	5.69%
AUI	B735	1	No	0.00%	5.69%
AUI	B737	2	No	0.00%	5.69%
AVA	B772	1	No	0.00%	5.69%
AWD	A320	1	No	0.00%	5.69%
AXK	B722	4	No	0.00%	5.69%
AXK	B727	2	No	0.00%	5.69%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
AXM	B741	1	No	0.00%	5.69%
AXM	B742	1	No	0.00%	5.69%
AXM	B743	173	No	0.00%	5.69%
AXM	B747	2	No	0.00%	5.69%
AXM	B74A	2	No	0.00%	5.69%
AXX	MD80	1	No	0.00%	5.69%
AXX	MD83	20	Yes	0.03%	5.72%
AZA	A300	1	No	0.00%	5.72%
AZA	A320	315	Yes	0.47%	6.19%
AZA	B732	1	No	0.00%	6.19%
AZA	B733	1	No	0.00%	6.19%
AZA	B734	1	No	0.00%	6.19%
AZA	B744	18	No	0.00%	6.19%
AZA	B747	35	Yes	0.05%	6.25%
AZA	B767	124	Yes	0.19%	6.43%
AZA	MD11	76	Yes	0.11%	6.54%
AZI	B733	28	No	0.00%	6.54%
AZI	B737	60	Yes	0.09%	6.63%
AZI	B738	1	No	0.00%	6.63%
AZI	B747	1	No	0.00%	6.63%
AZI	B762	1	No	0.00%	6.63%
AZM	B777	1	No	0.00%	6.63%
AZZ	B703	5	No	0.00%	6.63%
AZZ	B707	5	No	0.00%	6.63%
BAH	B722	27	Yes	0.04%	6.67%
BAH	B74S	9	Yes	0.01%	6.69%
BAL	B742	1	No	0.00%	6.69%
BAL	B752	22	Yes	0.03%	6.72%
BAL	B762	44	Yes	0.07%	6.79%
BAL	B763	42	Yes	0.06%	6.85%
BAS	DC10	21	No	0.00%	6.85%
BAW	A340	1	No	0.00%	6.85%
BAW	B722	8	No	0.00%	6.85%
BAW	B732	1	Yes	0.00%	6.85%
BAW	B743	1	No	0.00%	6.85%
BAW	B744	216	Yes	0.32%	7.17%
BAW	B747	234	Yes	0.35%	7.52%
BAW	B767	99	Yes	0.15%	7.67%
BAW	B777	732	Yes	1.09%	8.76%
BAZ	B744	1	No	0.00%	8.76%
BBA	B763	1	No	0.00%	8.76%
BBB	B752	58	Yes	0.09%	8.85%
BBB	B763	38	Yes	0.06%	8.91%
BBC	A310	115	Yes	0.17%	9.08%
BBC	B742	2	No	0.00%	9.08%
BBC	B743	118	No	0.00%	9.08%
BBC	B747	5	No	0.00%	9.08%
BBC	DC10	421	Yes	0.63%	9.71%
BBC	L101	1	No	0.00%	9.71%
BER	A321	2	No	0.00%	9.71%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
BER	B733	1	No	0.00%	9.71%
BER	B734	33	Yes	0.05%	9.76%
BER	B737	2	No	0.00%	9.76%
BER	B738	140	Yes	0.21%	9.97%
BLX	B738	21	Yes	0.03%	10.00%
BLX	B752	30	Yes	0.04%	10.04%
BLX	B763	109	Yes	0.16%	10.20%
BOA	DC10	2	No	0.00%	10.20%
BPA	B734	16	Yes	0.02%	10.23%
BPA	B737	3	No	0.00%	10.23%
BRS	B732	8	No	0.00%	10.23%
BRS	B737	1	No	0.00%	10.23%
BSK	B722	2	No	0.00%	10.23%
CAL	B742	230	Yes	0.34%	10.57%
CAL	B744	62	Yes	0.09%	10.66%
CAL	B752	1	No	0.00%	10.66%
CAL	B772	1	No	0.00%	10.66%
CAL	MD11	137	Yes	0.20%	10.87%
CAN	B767	1	No	0.00%	10.87%
CCA	B762	9	Yes	0.01%	10.88%
CFA	B74A	1	No	0.00%	10.88%
CFC	A310	8	Yes	0.01%	10.89%
CFG	A320	50	No	0.00%	10.89%
CFG	B752	205	Yes	0.31%	11.20%
CFG	B753	73	Yes	0.11%	11.31%
CFG	B757	5	Yes	0.01%	11.32%
CFG	B767	141	Yes	0.21%	11.53%
CIA	B773	1	No	0.00%	11.53%
CKS	B741	9	Yes	0.01%	11.54%
CKS	B742	1	Yes	0.00%	11.54%
CLX	B742	25	Yes	0.04%	11.58%
CLX	B744	482	Yes	0.72%	12.30%
CON	B777	1	No	0.00%	12.30%
CPA	A330	2	Yes	0.00%	12.30%
CPA	A340	39	Yes	0.06%	12.36%
CPA	B722	1	No	0.00%	12.36%
CPA	B742	137	Yes	0.20%	12.57%
CPA	B744	21	Yes	0.03%	12.60%
CPA	B752	2	No	0.00%	12.60%
CPA	B777	181	Yes	0.27%	12.87%
CRL	A300	1	No	0.00%	12.87%
CRL	A320	2	No	0.00%	12.87%
CRL	A330	42	Yes	0.06%	12.93%
CRL	A340	1	No	0.00%	12.93%
CRL	B733	6	Yes	0.01%	12.94%
CRL	B734	33	Yes	0.05%	12.99%
CRL	B737	1	No	0.00%	12.99%
CRL	B742	3	Yes	0.00%	12.99%
CRL	B743	5	Yes	0.01%	13.00%
CRL	B74S	6	Yes	0.01%	13.01%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
CRX	MD83	62	Yes	0.09%	13.10%
CSA	A310	36	Yes	0.05%	13.16%
CSA	A320	1	No	0.00%	13.16%
CSA	B734	57	Yes	0.09%	13.24%
CSA	B735	28	Yes	0.04%	13.28%
CSA	B737	3	No	0.00%	13.28%
CSN	B752	17	No	0.00%	13.28%
CSN	B753	3	No	0.00%	13.28%
CSN	B757	4	No	0.00%	13.28%
CSN	B763	1	No	0.00%	13.28%
CTB	A300	1	Yes	0.00%	13.28%
CTB	B733	4	Yes	0.01%	13.29%
CTB	B734	70	Yes	0.10%	13.39%
CTB	B737	2	No	0.00%	13.39%
CTB	B763	5	Yes	0.01%	13.40%
CTM	A300	1	No	0.00%	13.40%
CTM	A310	7	Yes	0.01%	13.41%
CTM	DC8	1	No	0.00%	13.41%
CTM	DC87	4	No	0.00%	13.41%
CVC	LR35	1	No	0.00%	13.41%
CYP	A310	8	Yes	0.01%	13.42%
CYP	A320	172	Yes	0.26%	13.68%
CYP	B720	3	No	0.00%	13.68%
CYP	B737	1	No	0.00%	13.68%
DAH	A310	99	No	0.00%	13.68%
DAH	B707	2	No	0.00%	13.68%
DAH	B722	56	No	0.00%	13.68%
DAH	B727	15	No	0.00%	13.68%
DAH	B732	1	No	0.00%	13.68%
DAH	B734	6	No	0.00%	13.68%
DAH	B734	1	No	0.00%	13.68%
DAH	B735	1	No	0.00%	13.68%
DAH	B737	4	No	0.00%	13.68%
DAH	B738	2	Yes	0.00%	13.68%
DAH	B763	79	Yes	0.12%	13.80%
DAH	B767	22	Yes	0.03%	13.83%
DAH	DC10	1	No	0.00%	13.83%
DAH	L101	79	No	0.00%	13.83%
DAL	B734	2	No	0.00%	13.83%
DAL	B752	1	No	0.00%	13.83%
DAL	B763	88	Yes	0.13%	13.97%
DAN	B735	8	Yes	0.01%	13.98%
DAN	B737	53	Yes	0.08%	14.06%
DAN	B757	23	No	0.00%	14.06%
DAO	AN24	1	No	0.00%	14.06%
DHA	A340	1	No	0.00%	14.06%
DHL	A340	1	No	0.00%	14.06%
DHX	A300	4	No	0.00%	14.06%
DHX	B752	218	No	0.00%	14.06%
DHX	B757	7	No	0.00%	14.06%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
DLF	B741	1	No	0.00%	14.06%
DLF	B742	3	No	0.00%	14.06%
DLF	B747	2	No	0.00%	14.06%
DLH	A300	34	Yes	0.05%	14.11%
DLH	A310	3	Yes	0.00%	14.11%
DLH	A320	89	Yes	0.13%	14.25%
DLH	A330	2	No	0.00%	14.25%
DLH	A340	562	Yes	0.84%	15.08%
DLH	B742	299	Yes	0.45%	15.53%
DLH	B744	84	Yes	0.13%	15.66%
DLH	B747	1	Yes	0.00%	15.66%
DLH	B752	8	No	0.00%	15.66%
DLH	B753	52	No	0.00%	15.66%
DLH	B757	2	No	0.00%	15.66%
DLH	B763	3	No	0.00%	15.66%
DLH	B772	1	No	0.00%	15.66%
DLH	DC10	4	No	0.00%	15.66%
DLH	MD11	335	No	0.00%	15.66%
DLX	B744	1	No	0.00%	15.66%
DOR	A320	1	No	0.00%	15.66%
DOR	B733	1	No	0.00%	15.66%
DSO	A320	2	No	0.00%	15.66%
DSR	B707	1	No	0.00%	15.66%
DSR	DC10	45	Yes	0.07%	15.73%
DTA	A320	1	No	0.00%	15.73%
DUB	B732	1	No	0.00%	15.73%
DUB	B733	3	No	0.00%	15.73%
DUB	B737	5	Yes	0.01%	15.73%
DUB	B738	1	No	0.00%	15.73%
DUB	B742	8	Yes	0.01%	15.74%
DUB	B74S	20	Yes	0.03%	15.77%
DUD	A300	1	No	0.00%	15.77%
EDL	MD90	1	No	0.00%	15.77%
EDW	A320	47	Yes	0.07%	15.84%
EDW	A330	37	Yes	0.06%	15.90%
EDW	B763	1	No	0.00%	15.90%
EEZ	A320	2	No	0.00%	15.90%
EEZ	B737	2	No	0.00%	15.90%
EEZ	B763	127	Yes	0.19%	16.09%
EEZ	MD80	67	Yes	0.10%	16.19%
EGW	A320	1	No	0.00%	16.19%
EGY	A340	15	No	0.00%	16.19%
EGY	B777	1	No	0.00%	16.19%
EIA	B741	1	Yes	0.00%	16.19%
EIA	B742	2	Yes	0.00%	16.19%
ELA	AN2	1	No	0.00%	16.19%
ELD	A310	4	No	0.00%	16.19%
ELD	B732	1	No	0.00%	16.19%
ELD	B733	1	No	0.00%	16.19%
ELD	B734	7	No	0.00%	16.19%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
ELD	B737	1	No	0.00%	16.19%
ELD	MD90	24	No	0.00%	16.19%
ELY	B737	22	Yes	0.03%	16.23%
ELY	B738	15	Yes	0.02%	16.25%
ELY	B742	26	Yes	0.04%	16.29%
ELY	B743	1	No	0.00%	16.29%
ELY	B744	6	Yes	0.01%	16.30%
ELY	B747	20	Yes	0.03%	16.33%
ELY	B752	11	Yes	0.02%	16.34%
ELY	B757	8	Yes	0.01%	16.36%
ELY	B762	26	Yes	0.04%	16.39%
ELY	B767	17	Yes	0.03%	16.42%
ELY	B777	1	Yes	0.00%	16.42%
EMA	B737	1	No	0.00%	16.42%
ENK	B741	1	No	0.00%	16.42%
ESN	B733	1	No	0.00%	16.42%
ESW	A332	1	No	0.00%	16.42%
ETC	B703	9	No	0.00%	16.42%
ETC	B707	2	No	0.00%	16.42%
ETH	B703	13	No	0.00%	16.42%
ETH	B707	2	No	0.00%	16.42%
ETH	B732	39	No	0.00%	16.42%
ETH	B732	6	No	0.00%	16.42%
ETH	B733	2	No	0.00%	16.42%
ETH	B734	1	No	0.00%	16.42%
ETH	B742	1	No	0.00%	16.42%
ETH	B751	1	No	0.00%	16.42%
ETH	B752	213	No	0.00%	16.42%
ETH	B753	1	No	0.00%	16.42%
ETH	B757	102	No	0.00%	16.42%
ETH	B762	39	Yes	0.06%	16.48%
ETH	B763	74	Yes	0.11%	16.59%
ETH	B767	45	Yes	0.07%	16.66%
ETH	DC10	2	No	0.00%	16.66%
ETH	DC8	9	No	0.00%	16.66%
ETH	DC86	55	No	0.00%	16.66%
EUL	B737	2	No	0.00%	16.66%
EUL	B738	38	Yes	0.06%	16.71%
EVA	A340	1	No	0.00%	16.71%
EVA	B742	5	No	0.00%	16.71%
EVA	B743	3	No	0.00%	16.71%
EVA	B744	125	Yes	0.19%	16.90%
EVA	B747	18	No	0.00%	16.90%
EVA	MD11	184	Yes	0.27%	17.18%
EWD	A320	1	No	0.00%	17.18%
EWG	A319	44	Yes	0.07%	17.24%
EWG	EA31	1	No	0.00%	17.24%
EXI	B703	3	No	0.00%	17.24%
EXS	A300	67	Yes	0.10%	17.34%
EXS	A310	1	No	0.00%	17.34%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
EXS	A332	1	No	0.00%	17.34%
FAT	B737	1	No	0.00%	17.34%
FAV	B732	4	No	0.00%	17.34%
FDI	EA32	1	No	0.00%	17.34%
FDN	B703	1	No	0.00%	17.34%
FDN	B707	1	No	0.00%	17.34%
FDX	A310	171	Yes	0.26%	17.60%
FDX	MD11	17	Yes	0.03%	17.62%
FEC	B744	1	No	0.00%	17.62%
FFR	B732	1	No	0.00%	17.62%
FFR	B733	17	Yes	0.03%	17.65%
FGA	B721	1	No	0.00%	17.65%
FGH	DC10	1	No	0.00%	17.65%
FIN	B752	219	Yes	0.33%	17.97%
FRN	B757	1	No	0.00%	17.97%
FTI	A320	109	No	0.00%	17.97%
FVA	B737	1	No	0.00%	17.97%
FWQ	A30B	2	No	0.00%	17.97%
GAF	A310	10	Yes	0.01%	17.99%
GAF	A320	1	No	0.00%	17.99%
GAH	DC10	1	No	0.00%	17.99%
GAM	B737	1	No	0.00%	17.99%
GAN	B767	1	No	0.00%	17.99%
GEC	A310	1	No	0.00%	17.99%
GFA	A300	4	No	0.00%	17.99%
GFA	A310	1	No	0.00%	17.99%
GFA	A320	2904	Yes	4.34%	22.33%
GFA	A330	854	Yes	1.28%	23.60%
GFA	A340	519	Yes	0.78%	24.38%
GFA	B743	1	No	0.00%	24.38%
GFA	B747	1	No	0.00%	24.38%
GFA	B752	1	No	0.00%	24.38%
GFA	B753	1	No	0.00%	24.38%
GFA	B762	6	No	0.00%	24.38%
GFA	B763	1319	Yes	1.97%	26.35%
GFA	B767	47	No	0.00%	26.35%
GFB	B763	1	No	0.00%	26.35%
GFC	EA31	1	No	0.00%	26.35%
GFG	B757	1	No	0.00%	26.35%
GFS	A332	1	No	0.00%	26.35%
GHA	DC10	34	Yes	0.05%	26.40%
GIA	A300	5	No	0.00%	26.40%
GIA	A320	4	No	0.00%	26.40%
GIA	A330	121	Yes	0.18%	26.58%
GIA	A340	173	No	0.00%	26.58%
GIA	B742	350	Yes	0.52%	27.10%
GIA	B743	1	No	0.00%	27.10%
GIA	B744	108	Yes	0.16%	27.26%
GIA	B747	14	Yes	0.02%	27.28%
GIA	B763	357	No	0.00%	27.28%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
GIA	MD11	257	Yes	0.38%	27.67%
GIN	B747	1	No	0.00%	27.67%
GLF	B737	1	No	0.00%	27.67%
GMC	B752	1	No	0.00%	27.67%
GMI	A320	1	No	0.00%	27.67%
GMI	B737	42	Yes	0.06%	27.73%
GMI	B747	1	No	0.00%	27.73%
GNA	B703	1	No	0.00%	27.73%
GTI	B742	9	Yes	0.01%	27.74%
GTI	B744	5	Yes	0.01%	27.75%
GTS	A340	1	No	0.00%	27.75%
GTY	B733	3	No	0.00%	27.75%
GTY	B737	5	No	0.00%	27.75%
GTY	DC8	2	No	0.00%	27.75%
GTY	DC85	12	No	0.00%	27.75%
HBI	B733	1	No	0.00%	27.75%
HBI	B734	1	No	0.00%	27.75%
HBI	B737	1	No	0.00%	27.75%
HBI	B752	1	No	0.00%	27.75%
HBI	B757	2	No	0.00%	27.75%
HBI	DC87	4	No	0.00%	27.75%
HDA	B742	30	No	0.00%	27.75%
HLF	A310	12	Yes	0.02%	27.77%
HLF	B738	84	Yes	0.13%	27.89%
HLN	B752	5	Yes	0.01%	27.90%
HLN	B753	1	No	0.00%	27.90%
HSA	B763	1	No	0.00%	27.90%
HVN	A306	9	No	0.00%	27.90%
HVN	A320	1	No	0.00%	27.90%
HVN	B762	3	No	0.00%	27.90%
HVN	B763	125	No	0.00%	27.90%
HVN	EA30	2	No	0.00%	27.90%
HZA	MD11	1	No	0.00%	27.90%
HZD	B721	13	No	0.00%	27.90%
HZD	B727	8	No	0.00%	27.90%
HZH	B722	21	No	0.00%	27.90%
HZM	B732	9	No	0.00%	27.90%
HZM	B732	2	No	0.00%	27.90%
HZT	B732	1	No	0.00%	27.90%
HZT	B732	6	No	0.00%	27.90%
HZT	B735	3	No	0.00%	27.90%
HZT	B737	1	No	0.00%	27.90%
HZT	B738	3	No	0.00%	27.90%
HZW	A340	4	No	0.00%	27.90%
HZW	B763	10	No	0.00%	27.90%
IAC	A300	84	No	0.00%	27.90%
IAC	A320	349	No	0.00%	27.90%
IAF	B703	4	No	0.00%	27.90%
IAF	B707	3	No	0.00%	27.90%
IAF	B747	2	No	0.00%	27.90%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
IBE	A320	29	Yes	0.04%	27.94%
IEY	A310	1	No	0.00%	27.94%
IEY	B722	1	No	0.00%	27.94%
IFC	B733	1	No	0.00%	27.94%
IHA	B737	1	No	0.00%	27.94%
IMP	B721	1	No	0.00%	27.94%
IMP	B722	1	No	0.00%	27.94%
IRA	A300	397	Yes	0.59%	28.54%
IRA	A310	2	Yes	0.00%	28.54%
IRA	A320	1	No	0.00%	28.54%
IRA	B721	3	No	0.00%	28.54%
IRA	B722	28	No	0.00%	28.54%
IRA	B727	2	No	0.00%	28.54%
IRA	B732	7	Yes	0.01%	28.55%
IRA	B741	93	Yes	0.14%	28.69%
IRA	B742	151	Yes	0.23%	28.91%
IRA	B743	5	No	0.00%	28.91%
IRA	B744	2	No	0.00%	28.91%
IRA	B745	3	No	0.00%	28.91%
IRA	B747	28	Yes	0.04%	28.96%
IRA	B74S	117	Yes	0.17%	29.13%
IRA	B757	1	No	0.00%	29.13%
IRA	L101	1	No	0.00%	29.13%
IRC	B722	187	No	0.00%	29.13%
IRC	B772	1	No	0.00%	29.13%
IRM	A306	1	No	0.00%	29.13%
IRM	A30B	23	No	0.00%	29.13%
ISR	B732	1	No	0.00%	29.13%
ISR	B737	1	No	0.00%	29.13%
ISR	B738	2	No	0.00%	29.13%
IWD	A320	19	Yes	0.03%	29.16%
IWD	A330	2	No	0.00%	29.16%
IYE	A300	2	No	0.00%	29.16%
IYE	A310	292	Yes	0.44%	29.60%
IYE	A320	1	No	0.00%	29.60%
IYE	B721	2	No	0.00%	29.60%
IYE	B722	159	No	0.00%	29.60%
IYE	B727	31	No	0.00%	29.60%
IYE	B731	1	No	0.00%	29.60%
IYE	B732	13	No	0.00%	29.60%
IYE	B732	7	No	0.00%	29.60%
IYE	B733	4	No	0.00%	29.60%
IYE	B737	9	No	0.00%	29.60%
IYE	B772	2	No	0.00%	29.60%
JAT	B722	3	No	0.00%	29.60%
JAT	B733	29	Yes	0.04%	29.64%
JMC	B752	12	Yes	0.02%	29.66%
KAC	A300	668	Yes	1.00%	30.65%
KAC	A310	269	Yes	0.40%	31.06%
KAC	A320	514	Yes	0.77%	31.82%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
KAC	A330	3	No	0.00%	31.82%
KAC	A340	301	Yes	0.45%	32.27%
KAC	B742	30	Yes	0.04%	32.32%
KAC	B743	2	No	0.00%	32.32%
KAC	B744	33	Yes	0.05%	32.37%
KAC	B772	147	Yes	0.22%	32.59%
KAL	A306	1	Yes	0.00%	32.59%
KAL	B744	72	Yes	0.11%	32.70%
KAL	B747	3	Yes	0.00%	32.70%
KAL	B763	1	No	0.00%	32.70%
KAR	B737	2	No	0.00%	32.70%
KLA	B763	1	No	0.00%	32.70%
KLM	B733	12	Yes	0.02%	32.72%
KLM	B734	1	Yes	0.00%	32.72%
KLM	B738	28	Yes	0.04%	32.76%
KLM	B742	5	Yes	0.01%	32.77%
KLM	B743	96	Yes	0.14%	32.91%
KLM	B744	37	Yes	0.06%	32.97%
KLM	B763	475	Yes	0.71%	33.68%
KLM	B767	10	Yes	0.01%	33.69%
KLM	MD11	127	Yes	0.19%	33.88%
KMP	L101	4	No	0.00%	33.88%
KQA	A300	1	No	0.00%	33.88%
KQA	A310	73	Yes	0.11%	33.99%
KQA	B732	4	No	0.00%	33.99%
KQA	B733	25	No	0.00%	33.99%
KQA	B735	1	No	0.00%	33.99%
KQA	B737	14	No	0.00%	33.99%
KQA	B767	1	No	0.00%	33.99%
KZK	A310	7	Yes	0.01%	34.00%
LAA	A300	118	No	0.00%	34.00%
LAA	A310	128	No	0.00%	34.00%
LAA	A320	15	No	0.00%	34.00%
LAA	A340	1	No	0.00%	34.00%
LAA	B703	25	No	0.00%	34.00%
LAA	B707	4	No	0.00%	34.00%
LAA	B720	9	No	0.00%	34.00%
LAA	B722	5	No	0.00%	34.00%
LAA	B727	17	No	0.00%	34.00%
LAA	B732	1	No	0.00%	34.00%
LAA	B734	4	No	0.00%	34.00%
LAA	B737	15	No	0.00%	34.00%
LAA	B742	8	No	0.00%	34.00%
LAA	B747	16	No	0.00%	34.00%
LAA	B767	1	No	0.00%	34.00%
LAA	MD80	4	No	0.00%	34.00%
LAD	B738	1	No	0.00%	34.00%
LAD	B763	1	No	0.00%	34.00%
LAJ	A320	123	Yes	0.18%	34.18%
LAM	B762	13	Yes	0.02%	34.20%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
LAZ	B703	1	No	0.00%	34.20%
LAZ	B733	28	No	0.00%	34.20%
LAZ	B735	1	No	0.00%	34.20%
LBT	A320	1	Yes	0.00%	34.21%
LDA	B732	3	No	0.00%	34.21%
LDA	B734	33	Yes	0.05%	34.25%
LDA	B737	1	Yes	0.00%	34.26%
LDA	B738	100	Yes	0.15%	34.41%
LDA	B763	30	Yes	0.04%	34.45%
LDA	B772	54	Yes	0.08%	34.53%
LDA	MD82	3	No	0.00%	34.53%
LDI	B763	39	Yes	0.06%	34.59%
LER	B777	1	No	0.00%	34.59%
LFA	A300	3	Yes	0.00%	34.59%
LGL	B734	10	Yes	0.01%	34.61%
LIB	B720	2	No	0.00%	34.61%
LIB	DC10	38	Yes	0.06%	34.67%
LID	B767	1	No	0.00%	34.67%
LIL	B732	5	No	0.00%	34.67%
LOT	B733	37	No	0.00%	34.67%
LTB	DC10	1	No	0.00%	34.67%
LTU	A310	2	No	0.00%	34.67%
LTU	A320	4	Yes	0.01%	34.67%
LTU	A330	163	Yes	0.24%	34.91%
LTU	B738	1	No	0.00%	34.91%
LTU	B752	46	Yes	0.07%	34.98%
LTU	B762	1	No	0.00%	34.98%
LTU	B763	170	Yes	0.25%	35.24%
LWA	DC85	12	No	0.00%	35.24%
LXO	B701	4	No	0.00%	35.24%
LXO	B707	9	No	0.00%	35.24%
LXO	B734	13	No	0.00%	35.24%
LXO	B737	2	No	0.00%	35.24%
LXO	MD90	17	No	0.00%	35.24%
LXR	L101	2	Yes	0.00%	35.24%
MAH	B733	28	Yes	0.04%	35.28%
MAH	B734	20	Yes	0.03%	35.31%
MAH	B735	8	Yes	0.01%	35.32%
MAH	B762	33	Yes	0.05%	35.37%
MAH	B763	2	Yes	0.00%	35.38%
MAH	B767	2	Yes	0.00%	35.38%
MAH	F70	2	Yes	0.00%	35.38%
MAS	A330	84	Yes	0.13%	35.51%
MAS	B722	7	No	0.00%	35.51%
MAS	B742	87	Yes	0.13%	35.64%
MAS	B743	4	Yes	0.01%	35.64%
MAS	B744	115	Yes	0.17%	35.82%
MAS	B747	5	Yes	0.01%	35.82%
MAS	B772	334	Yes	0.50%	36.32%
MAS	B777	31	Yes	0.05%	36.37%

Operator	Aircraft	Operations in	Approved	Operations	Of Operations
	A340	13		0.02%	36.39%
	B762	9		0.01%	36.40%
	B763	3		0.00%	36.40%
	B733	33		0.00%	36.40%
	B737	10		0.00%	36.40%
	B767	2		0.00%	36.40%
	B733	2		0.00%	36.40%
	B734	2		0.00%	36.40%
	A300	4		0.01%	36.41%
	A306	8		0.01%	36.42%
	A30B	28		0.04%	36.46%
	A310	355		0.53%	36.99%
	A320	392		0.59%	37.58%
	A321	244		0.36%	37.94%
	DC10	19		0.00%	37.94%
	B737	2		0.00%	37.94%
	B722	10		0.00%	37.94%
	B727	164		0.00%	37.94%
	B733	32		0.00%	37.94%
	B737	25		0.00%	37.94%
	B7	9	Yes		37.96%
MKA		36	No		37.96%
MKA		32	No		37.96%
MKA		17	No		37.96%
MNS		4	No		37.96%
MON		251	Yes		38.33%
MON		4	Yes		38.34%
MON		86	Yes		38.47%
MON		118	Yes		38.64%
MPH		121	Yes		38.82%
MPH		3	Yes		38.83%
MPH		78	Yes		38.94%
MPH		2	No		38.94%
MPH		14	Yes		38.96%
MPH		51	Yes		39.04%
MSR		1722	Yes		41.61%
MSR	A310	5	No	0.00%	41.61%
MSR	A320	2145	Yes	3.20%	44.82%
MSR	A330	2	No	0.00%	44.82%
MSR	A340	234	Yes	0.35%	45.17%
MSR	B707	4	No	0.00%	45.17%
MSR	B732	4	No	0.00%	45.17%
MSR	B733	2	Yes	0.00%	45.17%
MSR	B734	2	No	0.00%	45.17%
MSR	B735	1024	Yes	1.53%	46.70%
MSR	B737	37	Yes	0.06%	46.75%
MSR	B73A	6	No	0.00%	46.75%
MSR	B73B	2	Yes	0.00%	46.76%
MSR	B742	6	No	0.00%	46.76%
MSR	B743	173	Yes	0.26%	47.01%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
MSR	B747	30	Yes	0.04%	47.06%
MSR	B763	159	Yes	0.24%	47.30%
MSR	B772	245	Yes	0.37%	47.66%
MWA	A310	13	Yes	0.02%	47.68%
NAO	B752	3	Yes	0.00%	47.69%
NBK	A300	28	No	0.00%	47.69%
NBK	A310	3	No	0.00%	47.69%
NBK	B707	18	No	0.00%	47.69%
NCH	B722	2	No	0.00%	47.69%
NGA	B703	12	No	0.00%	47.69%
NGA	B707	19	No	0.00%	47.69%
NGA	B742	7	No	0.00%	47.69%
NGA	B743	2	No	0.00%	47.69%
NGA	B747	9	No	0.00%	47.69%
NGA	B74A	5	No	0.00%	47.69%
NGA	DC10	76	No	0.00%	47.69%
NVR	A330	53	Yes	0.08%	47.77%
NVR	B738	44	Yes	0.07%	47.83%
NWA	DC10	123	Yes	0.18%	48.01%
OAL	A300	34	Yes	0.05%	48.07%
OAL	A340	67	Yes	0.10%	48.17%
OAL	B732	48	No	0.00%	48.17%
OAL	B733	2	No	0.00%	48.17%
OAL	B734	275	No	0.00%	48.17%
OAL	B737	18	No	0.00%	48.17%
OAL	B73A	4	No	0.00%	48.17%
OEI	CL60	17	No	0.00%	48.17%
OHY	A30B	3	Yes	0.00%	48.17%
OHY	A321	4	Yes	0.01%	48.18%
OMA	A310	255	Yes	0.38%	48.56%
OMA	B734	178	No	0.00%	48.56%
OMA	B737	4	No	0.00%	48.56%
OMA	B74S	17	No	0.00%	48.56%
ORK	DC8	2	No	0.00%	48.56%
OSR	DC10	2	No	0.00%	48.56%
OYM	CL60	2	No	0.00%	48.56%
PAL		99	Yes		48.70%
PAL		3	Yes		48.71%
PIA		772	No		48.71%
PIA		31	Yes		48.76%
PIA		2	No		48.76%
PIA		3	No		48.76%
PIA		269	No		48.76%
PIA		2	No		48.76%
PIA		50	No		48.76%
PIA		2	No		48.76%
PIA		3	No		48.76%
PIA		553	Yes		49.58%
PIA		228	Yes		49.92%
PIA		8	No		49.92%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
PIA	B747	68	Yes	0.10%	50.02%
PIA	B74A	12	Yes	0.02%	50.04%
PIA	F27	42	No	0.00%	50.04%
PKA	B747	2	No	0.00%	50.04%
PKM	B732	4	No	0.00%	50.04%
PNW	A320	37	No	0.00%	50.04%
PNW	B701	3	No	0.00%	50.04%
PNW	B703	2	No	0.00%	50.04%
PNW	B707	28	No	0.00%	50.04%
PNW	B721	2	No	0.00%	50.04%
PNW	B722	16	No	0.00%	50.04%
PNW	B727	43	No	0.00%	50.04%
PRN	B734	2	No	0.00%	50.04%
PTI	B733	3	No	0.00%	50.04%
PTI	B737	2	No	0.00%	50.04%
QCA	B703	2	No	0.00%	50.04%
QCA	B707	2	No	0.00%	50.04%
QFA	B743	54	Yes	0.08%	50.12%
QFA	B744	48	Yes	0.07%	50.19%
QFA	B747	2	Yes	0.00%	50.20%
QFA	B763	2	Yes	0.00%	50.20%
QKN	A310	2	No	0.00%	50.20%
QKN	B747	2	No	0.00%	50.20%
QNK	A300	2	No	0.00%	50.20%
QNK	A310	23	No	0.00%	50.20%
QNK	B741	5	No	0.00%	50.20%
QNK	B742	21	No	0.00%	50.20%
QNK	B747	56	No	0.00%	50.20%
QNK	B74A	12	No	0.00%	50.20%
QSC	DC10	14	No	0.00%	50.20%
QTR	A306	735	Yes	1.10%	51.30%
QTR	A30B	2	Yes	0.00%	51.30%
QTR	A310	3	No	0.00%	51.30%
QTR	A320	1140	No	0.00%	51.30%
QTR	A321	3	No	0.00%	51.30%
QUN	B747	3	No	0.00%	51.30%
RAK	B747	2	No	0.00%	51.30%
RAM	B732	5	No	0.00%	51.30%
RAM	B737	33	Yes	0.05%	51.35%
RAM	B738	11	Yes	0.02%	51.37%
RAM	B73A	3	No	0.00%	51.37%
RAM	B73S	2	Yes	0.00%	51.37%
RAM	B742	41	Yes	0.06%	51.43%
RAM	B744	24	Yes	0.04%	51.47%
RAM	B747	10	Yes	0.01%	51.48%
RAM	B74A	4	Yes	0.01%	51.49%
RAM	B752	114	Yes	0.17%	51.66%
RAM	B757	50	Yes	0.07%	51.73%
RAT	DC8	4	No	0.00%	51.73%
RBA	B762	4	No	0.00%	51.73%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
RBA	B763	387	Yes	0.58%	52.31%
RBA	B767	27	Yes	0.04%	52.35%
RJA	A310	563	Yes	0.84%	53.19%
RJA	A320	469	Yes	0.70%	53.89%
RJA	A340	2	No	0.00%	53.89%
RJA	B703	54	No	0.00%	53.89%
RJA	B707	12	No	0.00%	53.89%
RJA	CL60	22	No	0.00%	53.89%
RKA	A300	5	Yes	0.01%	53.90%
RKA	A306	2	Yes	0.00%	53.90%
RKA	A30B	5	Yes	0.01%	53.91%
RKA	B742	55	No	0.00%	53.91%
RKA	B743	2	No	0.00%	53.91%
RKA	B747	15	No	0.00%	53.91%
RKA	B74A	10	No	0.00%	53.91%
RNA	B752	56	No	0.00%	53.91%
RNA	B763	21	Yes	0.03%	53.94%
ROT	A310	3	Yes	0.00%	53.94%
ROT	B703	16	No	0.00%	53.94%
ROT	B707	3	No	0.00%	53.94%
ROT	B733	112	Yes	0.17%	54.11%
ROT	B737	15	Yes	0.02%	54.13%
ROT	B73A	2	No	0.00%	54.13%
RRR	DC10	4	No	0.00%	54.13%
RRR	L101	55	No	0.00%	54.13%
SAB	A320	26	Yes	0.04%	54.17%
SAB	A330	14	Yes	0.02%	54.19%
SAB	A340	16	Yes	0.02%	54.22%
SAR	B737	2	No	0.00%	54.22%
SAS	MD11	32	No	0.00%	54.22%
SB0	DC10	19	No	0.00%	54.22%
SB1	DC10	4	No	0.00%	54.22%
SBE	B737	3	No	0.00%	54.22%
SBE	B738	33	Yes	0.05%	54.27%
SEU	A320	26	Yes	0.04%	54.31%
SEY	B762	57	No	0.00%	54.31%
SEY	B763	60	Yes	0.09%	54.40%
SEY	B767	16	No	0.00%	54.40%
SHJ	A310	2	No	0.00%	54.40%
SHJ	A319	4	Yes	0.01%	54.40%
SHK	A320	308	Yes	0.46%	54.86%
SHK	A321	2	No	0.00%	54.86%
SIA	A340	156	Yes	0.23%	55.09%
SIA	B733	3	No	0.00%	55.09%
SIA	B742	2	No	0.00%	55.09%
SIA	B743	2	No	0.00%	55.09%
SIA	B744	420	Yes	0.63%	55.72%
SIA	B747	2	Yes	0.00%	55.72%
SIA	B772	117	Yes	0.17%	55.90%
SIA	B773	95	Yes	0.14%	56.04%

Operator	Aircraft	Operations in	Approved	Operations	Of Operations
	DC10	2		0.00%	56.04%
	B733	65		0.10%	56.14%
	B734	24		0.04%	56.17%
	B737	5		0.00%	56.17%
	B738	42		0.06%	56.24%
	B722	3		0.00%	56.24%
	B727	4		0.00%	56.24%
	DC10	6		0.00%	56.24%
	DC10	3		0.00%	56.24%
	A300	123		0.00%	56.24%
	A306	103		0.00%	56.24%
	A30B	20		0.00%	56.24%
	A310	13		0.00%	56.24%
	B703	63		0.0	56.24%
SUD		55	No		56.24%
SUD		2	No		56.24%
SUD		2	No		56.24%
SUD		30	No		56.24%
SUD	B733	4	No	0.00%	56.24%
	B737	16		0.00%	56.24%
	B73A	12		0.00%	56.24%
	C560	23		0.00%	56.24%
	A300	1634	s		58.68%
SVA		13	No		58.68%
SVA		3	No		58.68%
SVA		74	No		58.68%
SVA		19	No		58.68%
SVA		2	No		58.68%
SVA		4	No		58.68%
SVA		448	No		58.68%
SVA		2	No		58.68%
SVA		5	No		58.68%
SVA		17	No		58.68%
SVA		732	Yes		59.77%
SVA		209	Yes		60.08%
SVA		796	Yes		61.27%
SVA		203	Yes		61.57%
SVA		2	No		61.57%
SVA		128	Yes	0.19%	61.77%
SVA	B74S	15	Yes	0.02%	61.79%
SVA	B763	8	No	0.00%	61.79%
SVA	B767	3	No	0.00%	61.79%
SVA	B777	2327	Yes	3.48%	65.26%
SVA	DC10	96	No	0.00%	65.26%
SVA	L101	36	Yes	0.05%	65.32%
SVA	MD11	206	Yes	0.31%	65.62%
SVA	MD90	2510	Yes	3.75%	69.37%
SWR	A310	2	No	0.00%	69.37%
SWR	A320	39	Yes	0.06%	69.43%
SWR	A330	358	Yes	0.53%	69.97%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
SWR	B744	12	No	0.00%	69.97%
SWR	DC10	42	No	0.00%	69.97%
SWR	MD11	128	Yes	0.19%	70.16%
SYE	B767	3	No	0.00%	70.16%
SYR	A300	2	No	0.00%	70.16%
SYR	A310	4	No	0.00%	70.16%
SYR	A320	430	Yes	0.64%	70.80%
SYR	B722	349	No	0.00%	70.80%
SYR	B727	42	No	0.00%	70.80%
SYR	B742	3	No	0.00%	70.80%
SYR	B744	4	No	0.00%	70.80%
SYR	B745	9	No	0.00%	70.80%
SYR	B747	37	Yes	0.06%	70.85%
SYR	B74A	6	Yes	0.01%	70.86%
SYR	B74S	158	Yes	0.24%	71.10%
SYR	B772	2	No	0.00%	71.10%
TAR	A300	13	Yes	0.02%	71.12%
TAR	A306	40	Yes	0.06%	71.18%
TAR	A30B	28	Yes	0.04%	71.22%
TAR	A320	50	No	0.00%	71.22%
TAR	B732	2	No	0.00%	71.22%
TAR	B736	20	Yes	0.03%	71.25%
TAR	B763	2	No	0.00%	71.25%
TAS	A320	339	Yes	0.51%	71.76%
TAS	A321	2	No	0.00%	71.76%
TAS	B733	3	No	0.00%	71.76%
TAS	MD90	2	No	0.00%	71.76%
TDX	L101	7	Yes	0.01%	71.77%
TES	A320	9	No	0.00%	71.77%
TES	B734	2	No	0.00%	71.77%
TES	B737	3	No	0.00%	71.77%
THA	A306	35	No	0.00%	71.77%
THA	A330	25	No	0.00%	71.77%
THA	A332	7	No	0.00%	71.77%
THA	A333	3	No	0.00%	71.77%
THA	B744	44	Yes	0.07%	71.83%
THA	B773	37	Yes	0.06%	71.89%
THX	A343	2	No	0.00%	71.89%
THY	A300	2	No	0.00%	71.89%
THY	A310	744	Yes	1.11%	73.00%
THY	A320	3	No	0.00%	73.00%
THY	A340	4	Yes	0.01%	73.00%
THY	A343	64	Yes	0.10%	73.10%
THY	B732	2	No	0.00%	73.10%
THY	B733	9	Yes	0.01%	73.11%
THY	B734	78	Yes	0.12%	73.23%
THY	B735	15	Yes	0.02%	73.25%
THY	B737	5	Yes	0.01%	73.26%
THY	B738	108	Yes	0.16%	73.42%
THY	B73A	28	No	0.00%	73.42%

Operator ICAO Code	Aircraft Type	Operations in Sample	Approved	Percent of Operations	Cumulative % Of Operations
THY	B73B	2	Yes	0.00%	73.42%
TMA	B703	98	No	0.00%	73.42%
TMA	B707	21	No	0.00%	73.42%
TRA	B737	2	Yes	0.00%	73.43%
TRA	B738	70	Yes	0.10%	73.53%
TRA	B747	88	No	0.00%	73.53%
TRA	B752	72	Yes	0.11%	73.64%
TRA	B757	3	Yes	0.00%	73.64%
TSY	A300	4	Yes	0.01%	73.65%
TSY	A30B	10	Yes	0.01%	73.66%
TUA	B733	28	No	0.00%	73.66%
TUA	B752	4	Yes	0.01%	73.67%
TVS	B734	10	Yes	0.01%	73.69%
TVS	B738	22	Yes	0.03%	73.72%
TWA	B763	67	Yes	0.10%	73.82%
TWA	B767	2	Yes	0.00%	73.82%
TWJ	A319	6	Yes	0.01%	73.83%
UAE	A300	30	Yes	0.04%	73.88%
UAE	A306	385	Yes	0.57%	74.45%
UAE	A30B	4	Yes	0.01%	74.46%
UAE	A310	766	Yes	1.14%	75.60%
UAE	A320	38	Yes	0.06%	75.66%
UAE	A330	314	Yes	0.47%	76.13%
UAE	A332	1126	Yes	1.68%	77.81%
UAE	A333	3	Yes	0.00%	77.81%
UAE	B742	11	Yes	0.02%	77.83%
UAE	B744	30	Yes	0.04%	77.87%
UAE	B772	814	Yes	1.22%	79.09%
UAE	B773	211	Yes	0.32%	79.40%
UAE	B777	14	Yes	0.02%	79.42%
UAL	DC10	2	Yes	0.00%	79.43%
UEA	A330	2	No	0.00%	79.43%
UEA	A332	5	No	0.00%	79.43%
UKR	B733	4	No	0.00%	79.43%
UNK	DC10	3	No	0.00%	79.43%
UNM	A306	8	No	0.00%	79.43%
UNM	A310	6	No	0.00%	79.43%
UPS	B763	103	Yes	0.15%	79.58%
UYC	B733	4	No	0.00%	79.58%
UYC	B73A	2	No	0.00%	79.58%
UYC	B742	4	No	0.00%	79.58%
UZB	A310	53	Yes	0.08%	79.66%
VDA	A124	8	Yes	0.01%	79.67%
VHV	B734	3	No	0.00%	79.67%
VKG	A30B	7	Yes	0.01%	79.68%
VKG	A320	28	Yes	0.04%	79.72%
VKG	A330	268	Yes	0.40%	80.12%
VLE	A320	166	Yes	0.25%	80.37%
VPB	B721	56	No	0.00%	80.37%
VPB	B727	5	No	0.00%	80.37%

Operator	Aircraft	Operations in	Approved	Percent of Operations	Cumulative % Of Operations
VPB	B73A	5	No	0.00%	80.37%
VPB	B763	9	No	0.00%	80.37%
VPB	B772	20	No	0.00%	80.37%
VPB	B777	2	No	0.00%	80.37%
VPB	C560	22	No	0.00%	80.37%
VPB	C56X	2	No	0.00%	80.37%
VPB	CL60	45	No	0.00%	80.37%
VPC	B721	13	No	0.00%	80.37%
VPC	B722	4	No	0.00%	80.37%
VPC	B727	4	No	0.00%	80.37%
VPC	B732	13	No	0.00%	80.37%
VPC	B737	3	No	0.00%	80.37%
VPC	C650	2	No	0.00%	80.37%
VPC	CL60	33	No	0.00%	80.37%
VTJ	B738	2	No	0.00%	80.37%
VVR	DC9	3	No	0.00%	80.37%
WEA	B734	31	Yes	0.05%	80.42%
WOA	DC10	16	Yes	0.02%	80.44%
WOA	MD11	4	Yes	0.01%	80.45%
ZSO	B732	2	No	0.00%	80.45%

80.45%

Conclusion 3/- Requirements for Monitoring

That,

- a) MID and non-MID operators having met the monitoring requirements for PAC or NAT for given fleet/type of aircraft will be accepted as having satisfied the monitoring requirements for the MID Region. For MID operators, documentation for monitoring shall be provided to MECMA.
- b) Operators that have not met the monitoring requirements detailed under a above, the following monitoring requirements shall apply:
 - Monitoring must take place after airworthiness approval has been issued by the State of Registry.
 - Monitoring is required for two (2) aircraft per type group per operator for operators with previous RVSM experience.
 - Monitoring is required for three (3) aircraft per type group per operator for operators without previous RVSM experience.
- c) For CIS-built airframes, monitoring of each individual airframe shall be carried out prior to approval. Monitoring results will not be accepted for transfer from one operator to another.

Appendix A

Middle East RVSM Minimum Monitoring Requirements

as of

29 August 2001

Initial Monitoring All Middle East operators that operate or intend to operate in airspace where RVSM is applied are required to participate in the RVSM monitoring program. The table of monitoring requirements shown below establishes requirements initial monitoring associated with Middle East RVSM implementation. In their application to the appropriate State authority for RVSM approval, operators must show a plan for meeting the applicable initial monitoring requirements.

Aircraft Status for Monitoring Aircraft engineering work required for the aircraft to receive RVSM airworthiness approval must be completed prior to the aircraft being monitored. Any exception to this rule will be co-ordinated with the State authority.

Follow-on Monitoring Monitoring is an on-going program that will continue after the initial RVSM approval process. A follow-on sampling program for additional operator aircraft will be co-ordinated by the Middle East RVSM Task Force.

Monitoring of Airframes that are RVSM Compliant on Delivery If an operator adds new RVSM compliant airframes of a type for which it already has RVSM operational approval and has completed monitoring requirements for the type in accordance with the table below, the new airframes are not required to be monitored – except as targeted at a later date in the follow-on monitoring program. If an operator adds new RVSM compliant airframes of an aircraft type for which it has **NOT** previously received RVSM operational approval, then the operator should complete monitoring in accordance with the table below.

Applicability of North Atlantic and Asia/Pacific Monitoring Monitoring data obtained in conjunction with RVSM monitoring programmes from other regions can be used to meet Middle East monitoring requirements. The Middle East Central Monitoring Agency (MECMA), which is responsible for administering the Middle East monitoring programme, will get access to monitoring data from other regions and will coordinate with States and operators to inform them on the status of individual operator monitoring requirements.

Update of Monitoring Requirements Table and Website As significant data is obtained, monitoring requirements for specific aircraft types may change. When the table is updated, a letter will be distributed to States and operators. The updated table will be posted on the MECMA website being maintained by the UAE GCAA.

The website address is: www.mecma.com

For most aircraft types, monitoring is **NOT** required to be completed prior to operational approval being granted. **SEE THE TABLE BELOW.**

Monitoring NOT REQUIRED Prior to the Grant of RVSM Approval			
	Classification	Aircraft Group	Minimum Operator Monitoring for Each Aircraft Type
1	Operators with prior RVSM experience	New aircraft types from a manufacturer with a demonstrable track record of the production of MASPS compliant airframes – OR any of the following types: A306, A30B, A312-GE, A312-PW, A313-GE, A313-PW, A319, A320, A321, A330, A340, ASTR-SPX, B703, B712, B721B722, B732tru-8, B741tru-4, B74S, B7752, B753, B762, B763, B764, B772, B773, C525, C525-I, C550-B, C560-U, C56X, CARJ, CL60-600, CL60-601, CL60-604, DC10, F100, F2TH, F70, F900, F900-EX, FA20, GLF2, GLF3, GLF4, GLF5, H25B-800, H25C, L101, LJ45, LJ60, MD11, MD80, MD90, SBR1-65.	at least TWO airframes unless operator has only one of a type, than ONE airframe - monitoring to be completed as soon as possible but not later than within 6 months after the issue of RVSM operational approval or the start of Middle East RVSM operations whichever occurs later.
2	Operators without prior RVSM experience	Same types as above in section 1	at least THREE airframes unless operator has only 1 or 2 of a type, than all operator airframes of that type - monitoring to be completed as soon as possible but not later than within 3 months after the issue of RVSM operational approval or the start of Middle East RVSM operations whichever occurs later.
3	All operators of aircraft that are expected to meet reduced monitoring requirements	DC9, GALX, C501, E135, F200, B74R, FA10, DC8, C560	Individual monitoring of RVSM approved airframes, - monitoring to be completed as soon as possible but no later than within 3 months after the issue of RVSM operational approval or the start of Middle East RVSM operations whichever occurs later.
Monitoring REQUIRED Prior to the Grant of RVSM Approval			
4	Insufficient data on approved aircraft	Other group or non-group aircraft not listed in above 3 sections OR New aircraft types from a manufacturer without a demonstrable track record of the production of MASPS compliant airframes	Individual monitoring of airworthiness approved airframes to be completed prior to the issue of RVSM operational approval