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AIRAC AIP SUP 014/2025

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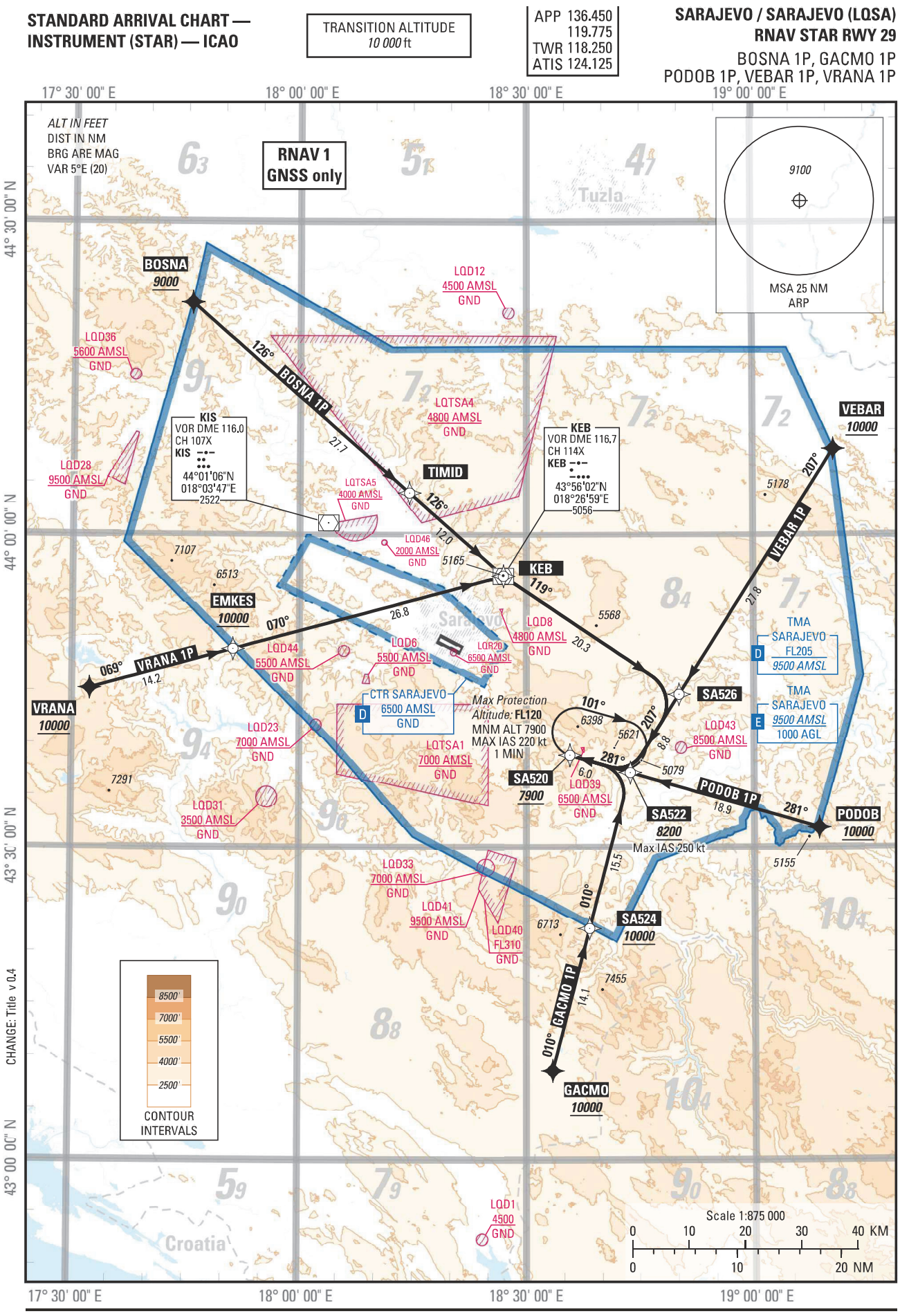
LQSA – Sarajevo International Airport
Trial PBN instrument flight procedures

With this AIRAC AIP SUP a trial PBN satellite based RNAV STARs RWY 29 and RNP APCH RWY 29 (AR) are available for testing purpose only at Sarajevo Airport. The satellite instrument flight procedure is GNSS based and contain STARs and APCH flight procedures for RWY 29.

Trial PBN procedures are not intended for planning of operations. They are primarily published for flight validation and flyability check purpose with the aim of collecting and developing safety argumentation for PBN implementation in Bosnia and Herzegovina.


STANDARD ARRIVAL CHART — INSTRUMENT (STAR) — ICAO
TRANSITION ALTITUDE 10 000 ft
APP 136.450 119.775
TWR 118.250
ATIS 124.125
SARAJEVO / SARAJEVO (LQSA)
RNAV STAR RWY 29
BOSNA 1P, GACMO 1P
PODOB 1P, VEBAR 1P, VRANA 1P
17° 30' 00" E
18° 00' 00" E
18° 30' 00" E
19° 00' 00" E
44° 30' 00" N
44° 00' 00" N
43° 30' 00" N
43° 00' 00" N
ALT IN FEET
DIST IN NM
BRG ARE MAG
VAR 5°E (20)
RNAV 1
GNSS only
9100
MSA 25 NM
ARP
BOSNA
9000
126°
BOSNA 1P
27.7
TIMID
LQD12
4500 AMSL
GND
LQD36
5600 AMSL
GND
KIS
VOR DME 116,0
CH 107X
KIS
44°01'06"N
018°03'47"E
2522
LQD28
9500 AMSL
GND
LQTSA4
4800 AMSL
GND
LQTSA5
4000 AMSL
GND
KEB
VOR DME 116,7
CH 114X
KEB
43°56'02"N
018°26'59"E
5056
VEBAR
10000
207°
VEBAR 1P
27.8
5178
LQD46
2000 AMSL
GND
12.0
5165
KEB
119°
7107
6513
EMKES
10000
070°
26.8
069°
VRANA 1P
14.2
VRANA
10000
LQD44
5500 AMSL
GND
LQD6
5500 AMSL
GND
LQR20
6500 AMSL
GND
LQD8
4800 AMSL
GND
20.3
5568
TMA
SARAJEVO
D
FL205
9500 AMSL
TMA
SARAJEVO
E
9500 AMSL
1000 AGL
CTR SARAJEVO
D
6500 AMSL
GND
Max Protection
Altitude: FL120
MNM ALT 7900
MAX IAS 220 kt
1 MIN
SA526
101°
6398
207°
8.8
5621
LQD43
8500 AMSL
GND
LQD23
7000 AMSL
GND
LQTSA1
7000 AMSL
GND
281°
6.0
5079
SA520
7900
LQD39
6500 AMSL
GND
PODOB 1P
18.9
281°
PODOB
10000
7291
LQD31
3500 AMSL
GND
SA522
8200
Max IAS 250 kt
5155
LQD33
7000 AMSL
GND
LQD41
9500 AMSL
GND
LQD40
FL310
GND
010°
15.5
6713
SA524
10000
7455
010°
GACMO 1P
14.1
GACMO
10000
8500'
7000'
5500'
4000'
2500'
CONTOUR
INTERVALS
LQD1
4500
GND
Croatia
Tuzla
Sarajevo
Scale 1:875 000
0 10 20 30 40 KM
0 10 20 NM
CHANGE: Title v 0.4

LQSA RNAV STAR RWY 29

Proposed tabular description for navigation database coding

Seq N°	PT	WP ID	OverFly	CRS Val (°)	CRS Type	DIST val NM	ALT DESC	ALT ONE FT	ALT TWO FT	SPD LMT KT	NAV PERF NM	Phase	Transition Identifier	Runway Direction	Magnetic CRS val (°)
BOSNA 1P															
10	IF	BOSNA					+	9000			1.000 NM	5	RW29	29	
20	TF	TIMID	N	131.066	TT	27.687					1.000 NM	5	RW29	29	126.066
30	TF	KEB	N	131.419	TT	12.001					1.000 NM	5	RW29	29	126.419
40	TF	SA526	N	123.918	TT	20.289					1.000 NM	5	RW29	29	118.918
50	TF	SA522	N	212.199	TT	8.840	+	8200		250	1.000 NM	5	RW29	29	207.199
60	TF	SA520	N	286.112	TT	6.000	+	7900			1.000 NM	5	RW29	29	281.112
GACMO 1P															
10	IF	GACMO					+	10000			1.000 NM	5	RW29	29	
20	TF	SA524	N	014.579	TT	14.120	+	10000			1.000 NM	5	RW29	29	009.579
30	TF	SA522	N	014.635	TT	15.454	+	8200		250	1.000 NM	5	RW29	29	009.635
40	TF	SA520	N	286.112	TT	6.000	+	7900			1.000 NM	5	RW29	29	281.112
PODOB 1P															
10	IF	PODOB					+	10000			1.000 NM	5	RW29	29	
20	TF	SA522	N	286.398	TT	18.881	+	8200		250	1.000 NM	5	RW29	29	281.398
30	TF	SA520	N	286.112	TT	6.000	+	7900			1.000 NM	5	RW29	29	281.112
VEBAR 1P															
10	IF	VEBAR					+	10000			1.000 NM	5	RW29	29	
20	TF	SA526	N	212.437	TT	27.841					1.000 NM	5	RW29	29	207.437
30	TF	SA522	N	212.199	TT	8.840	+	8200		250	1.000 NM	5	RW29	29	207.199
40	TF	SA520	N	286.112	TT	6.000	+	7900			1.000 NM	5	RW29	29	281.112
VRANA 1P															
10	IF	VRANA					+	10000			1.000 NM	5	RW29	29	
20	TF	EMKES	N	074.414	TT	14.228	+	10000			1.000 NM	5	RW29	29	063.414
30	TF	KEB	N	074.628	TT	26.824					1.000 NM	5	RW29	29	063.628
40	TF	SA526	N	123.918	TT	20.289					1.000 NM	5	RW29	29	118.918
50	TF	SA522	N	212.199	TT	8.840	+	8200		250	1.000 NM	5	RW29	29	207.199
60	TF	SA520	N	286.112	TT	6.000	+	7900			1.000 NM	5	RW29	29	281.112

LQSA RNAV STAR RWY 29 HOLDINGS

Proposed tabular description for navigation database coding

Region Code	ICAO Code	Duplicate Identifier	Type	WP ID	Name	Inbound CRS Val (°)	Inbound CRS Type	TD	Inbound length val	Inbound length uom	Inbound time val	Inbound time uom	ALT MIN FT	ALT MAX	SPD LMT KT	NAV PERF	ARC RADIUS val	ARC RADIUS uom	Magnetic CRS val(°)
LQSA	LQ		TER	SA520		286.000	TERG	R			60.000	S	7900.00 FT [ALT]	FL120 [STD]	220 KT				281.000

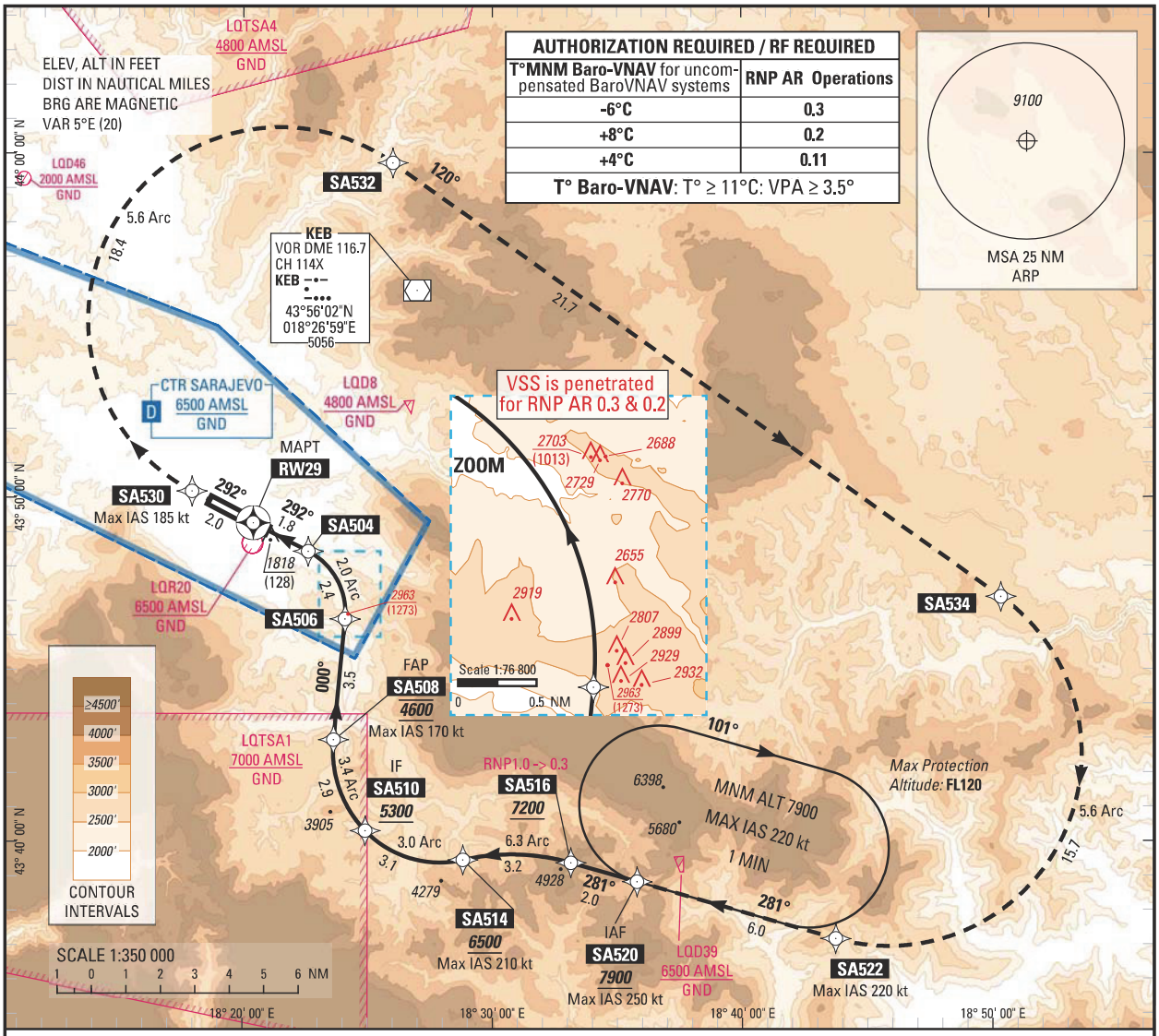
INSTRUMENT APPROACH CHART — ICAO

AERODROME ELEV 1705 ft
HEIGHTS RELATED TO
DTHR RWY 29 — ELEV 1690 ft

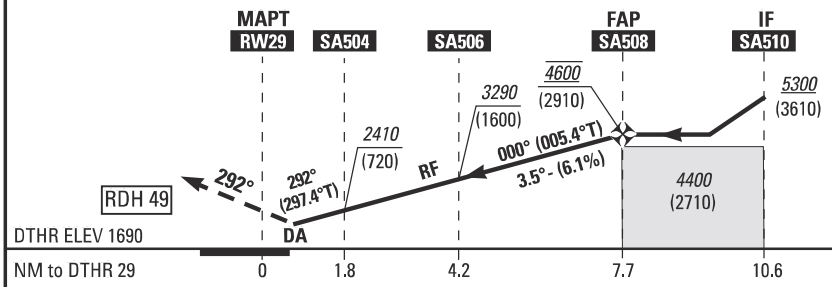
APP	136.450
	119.775
TWR	118.250
ATIS	124.125

SARAJEVO / SARAJEVO (LQSA)

RNP RWY 29 (AR)



TRANSITION ALTITUDE 10000



MISSED APPROACH:

Climb to **SA530** (Max IAS **185kt**)
then to **SA532** then to **SA534**
then to **SA522** (Max IAS **220kt**), then to **SA520**
up to ***7900*** (6210).
At **SA520**, hold or follow ATC instructions

MNM AD: *Vertical distances in feet* REF HGT: *DTHR ELEV*

	RNP 0.3 T°min: -6°C	RNP 0.2 ❶ T°min: +8°C	RNP 0.11 ❶ T°min: +4°C
CAT	***OCA*** (H)	***OCA*** (H)	***OCA*** (H)
A	***3100*** (1410)	***2840*** (1150)	***1960*** (270)
B	***3120*** (1430)	***2860*** (1170)	***1970*** (280)
C	***3130*** (1440)	***2870*** (1180)	***1980*** (290)
D	***3140*** (1450)	***2880*** (1190)	***2000*** (310)

❶ **RNP 0.11/0.2** from **SA508** to **RW29**

RNP RWY 29 (AR)

Proposed tabular description for navigation database coding (H29Y) - RNP RWY 29 (AR)

Seq N°	PT	WP ID	Overfly	Fix role	TD	THETA (°) magnetic	CRS Val (°)	CRS Type	TIME val	TIME uom	DIST val NM	ALT DESC	ALT ONE FT	ALT TWO FT	SPD LMT KT	VRT ANG (°)	NAV PERF	RADIUS val	RADIUS uom	ARC CTR ID	Phase	Transition Identifier	Runway Direction	Magnetic CRS val(°)
Proposed tabular description for navigation database coding (H29) - APPROACH TRANSITION																								
10	IF	SA520		IAF								+	7900		250		1.000 NM				R		29	
20	TF	SA516	N				286.020	TT			2.000	+	7200				0.300 NM				R		29	281.020
30	RF	SA514	N		L	280.869	257.078	TT			3.170	+	6500		210		0.300 NM	6.294	NM	RFC20	R		29	252.078
40	RF	SA510	N	IF	R	252.078	316.201	TT			3.098	+	5300				0.300 NM	3.000	NM	RFC23	R		29	311.201
50	RF	SA508	N	FAF	R	311.201	005.409	TT			2.889	@	4600		170		0.300 NM	3.363	NM	RFC21	R		29	000.409
60	TF	SA506	N				005.415	TT			3.524			-3.500			0.300 NM				R		29	000.415
70	RF	SA504	N		L	000.419	297.401	TT			2.374			-3.500			0.300 NM	2.000	NM	RFC22	R		29	292.401
80	TF	RW29	Y	MAPT			297.392	TT			1.800	@	1739	-3.500			0.300 NM				R		29	292.392
10	TF	SA530	N				297.368	TT			2.000				185		0.300 NM				Z	SA520		292.368
20	RF	SA532	N		R	292.339	125.386	TT			18.370						0.300 NM	5.600	NM	RFC24	Z	SA520		120.386
30	TF	SA534	N				125.467	TT			21.680						0.300 NM				Z	SA520		120.467
40	RF	SA522	N		R	120.749	286.112	TT			15.681				220		0.300 NM	5.600	NM	RFC25	Z	SA520		281.112
50	TF	SA520	N				286.112	TT			6.000	+	7900		250		0.300 NM				Z	SA520		281.112

ADHP ICAO Identifier	WP ID	WP ICAO Code	WP Type	Latitude	Longitude
LQ	BOSNA		ICAO	44°22'14.0000"N	017°45'35.0000"E
LQ	EMKES		ICAO	43°49'00.8300"N	017°51'11.7600"E
LQ	GACMO		ICAO	43°08'34.0000"N	018°33'29.0000"E
LQ	KEB		ICAO	43°56'01.9100"N	018°26'59.3800"E
LQ	MITNO		ICAO	43°46'24.0000"N	019°14'30.0000"E
LQ	OSLUD		ICAO	43°28'38.0000"N	018°47'14.0000"E
LQ	PODOB		ICAO	43°31'54.0000"N	019°08'40.0000"E
LQ	RFC20		ADHP	43°33'20.7810"N	018°30'45.5990"E
LQ	RFC21		ADHP	43°42'39.4330"N	018°28'15.6590"E
LQ	RFC22		ADHP	43°46'40.3500"N	018°21'21.3090"E
LQ	RFC23		ADHP	43°42'24.3650"N	018°27'53.9710"E
LQ	RFC24		ADHP	43°55'10.1740"N	018°21'31.3390"E
LQ	RFC25		ADHP	43°42'33.9590"N	018°45'52.4460"E
LQ	RW29		ADHP	43°49'16.5900"N	018°20'25.0800"E
LQ	SA504		ADHP	43°48'26.9150"N	018°22'37.5440"E
LQ	SA506		ADHP	43°46'29.0480"N	018°24'06.2140"E
LQ	SA508		ADHP	43°42'58.5490"N	018°23'38.6770"E
LQ	SA510		ADHP	43°40'19.8040"N	018°24'54.8580"E
LQ	SA514		ADHP	43°39'28.9060"N	018°28'49.4660"E
LQ	SA516		ADHP	43°39'23.8680"N	018°33'08.6470"E
LQ	SA520		ADHP	43°38'50.7780"N	018°35'47.5290"E
LQ	SA522		ADHP	43°37'11.1350"N	018°43'43.8900"E
LQ	SA524		ADHP	43°22'13.9510"N	018°38'21.3670"E
LQ	SA526		ADHP	43°44'40.2020"N	018°50'12.9760"E
LQ	SA530		ADHP	43°50'11.7330"N	018°17'57.8400"E
LQ	SA532		ADHP	43°59'44.2140"N	018°26'00.5410"E
LQ	SA534		ADHP	43°47'06.7550"N	018°50'23.0790"E
LQ	SA720		ADHP	43°51'24.2550"N	018°14'43.8190"E
LQ	SA721		ADHP	43°49'39.3460"N	018°02'31.8760"E
LQ	SA722		ADHP	43°48'10.9150"N	017°52'22.3900"E
LQ	SA723		ADHP	43°57'09.0730"N	018°15'26.1940"E
LQ	SA724		ADHP	44°00'56.0910"N	018°31'46.7020"E
LQ	SA725		ADHP	44°18'02.1310"N	018°48'36.6980"E
LQ	SA726		ADHP	43°55'47.0200"N	018°44'25.2130"E
LQ	SA728		ADHP	43°49'27.8200"N	019°04'44.5770"E
LQ	SA729		ADHP	43°22'51.3640"N	018°36'45.7620"E
LQ	SOMUN		ICAO	44°35'47.0000"N	019°06'18.0000"E
LQ	TIMID		ICAO	44°03'58.9800"N	018°14'32.1400"E
LQ	VEBAR		ICAO	44°08'12.0000"N	019°10'49.0000"E
LQ	VRANA		ICAO	43°45'13.0000"N	017°32'16.0000"E

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