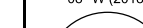
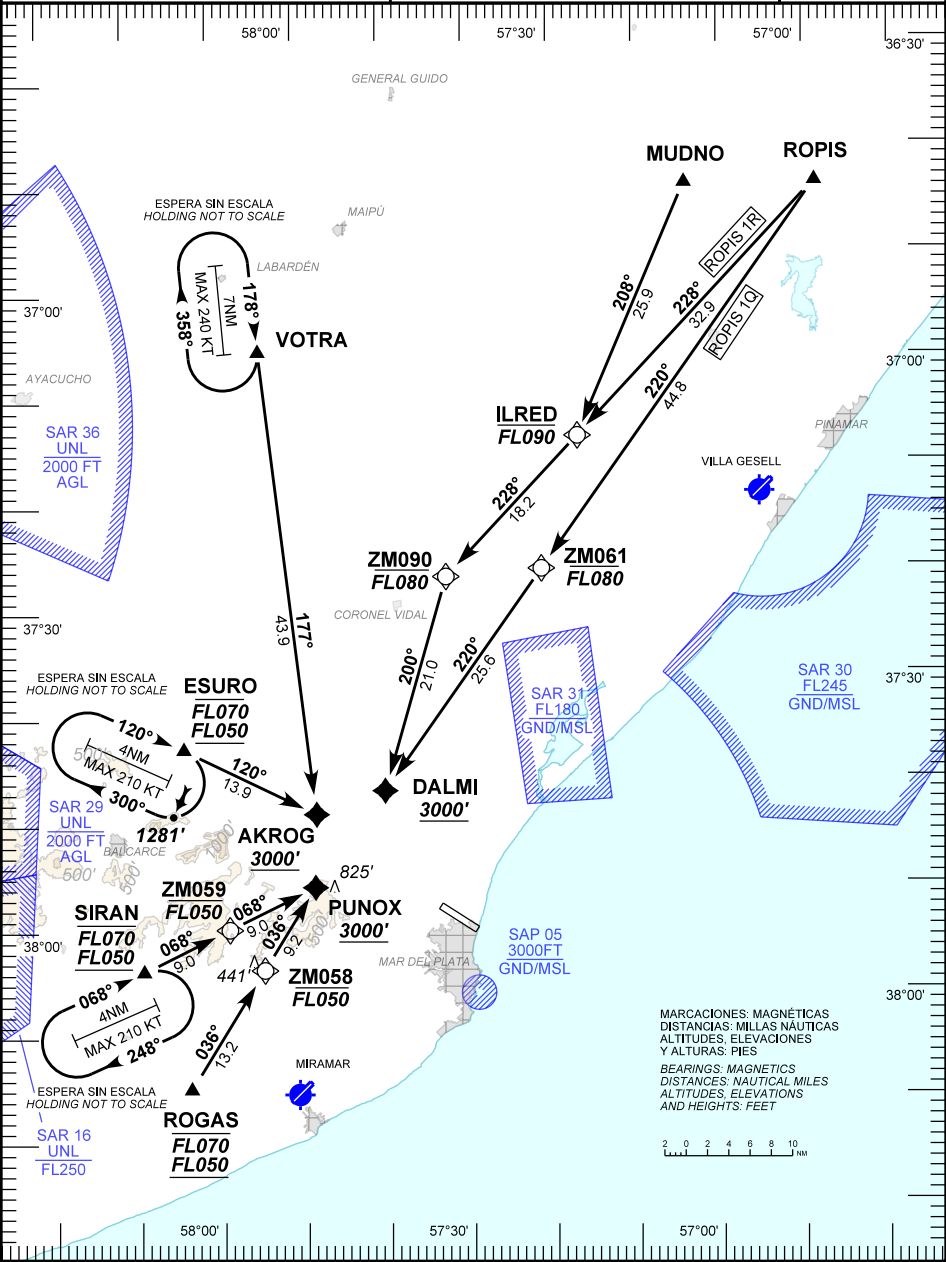


ASTOR PIAZZOLLA (SAZM)
MAR DEL PLATA

STAR RNP RWY 13
SURO 1Q - MUDNO 1Q - ROGAS 1Q - ROPIS 1Q - ROPIS 1R - SIRAN 1Q - VOTRA1Q

Requiere Certificación Certification required				AD ELEV 71'		08° W (2018) 
RNP 1 / RNAV 1 GNSS				TRANS ALT 3000'		
MAR DEL PLATA CTL 118.75 118.20	MAR DEL PLATA APP 118.75 118.20	MAR DEL PLATA TWR 118.75 118.20	EMERG 121.50			
NOTA: Nivel de transición asignado por ATC.		RMK: Transition level assigned by ATC.				



ASTOR PIAZZOLLA (SAZM) STAR RNP RWY 13 ESURO 1Q – MUDNO 1Q – ROGAS 1Q – ROPIS 1Q – ROPIS 1R – SIRAN 1Q – VOTRA 1Q	
FIX IDENT	COORDINATES
ESURO	S 37°41'43.00" W 58°08'08.00"
MUDNO	S 36°45'29.00" W 57°12'46.00"
ROGAS	S 38°13'40.00" W 58°05'11.00"
ROPIS	S 36°44'30.00" W 56°57'30.00"
SIRAN	S 38°02'51.00" W 58°11'35.00"
VOTRA	S 37°03'50.00" W 58°01'46.00"
DALMI	S 37°44'27.57" W 57°43'58.69"
PUNOX	S 37°53'56.85" W 57°51'41.40"
AKROG	S 37°47'03.70" W 57°52'00.93"
ZM058	S 38°02'01.80" W 57°57'12.23"
ZM059	S 37°58'24.35" W 58°01'37.60"
ZM061	S 37°22'40.88" W 57°26'55.56"
ZM090	S 37°23'58.76" W 57°38'09.55"
ILRED	S 37°09'57.30" W 57°23'36.43"

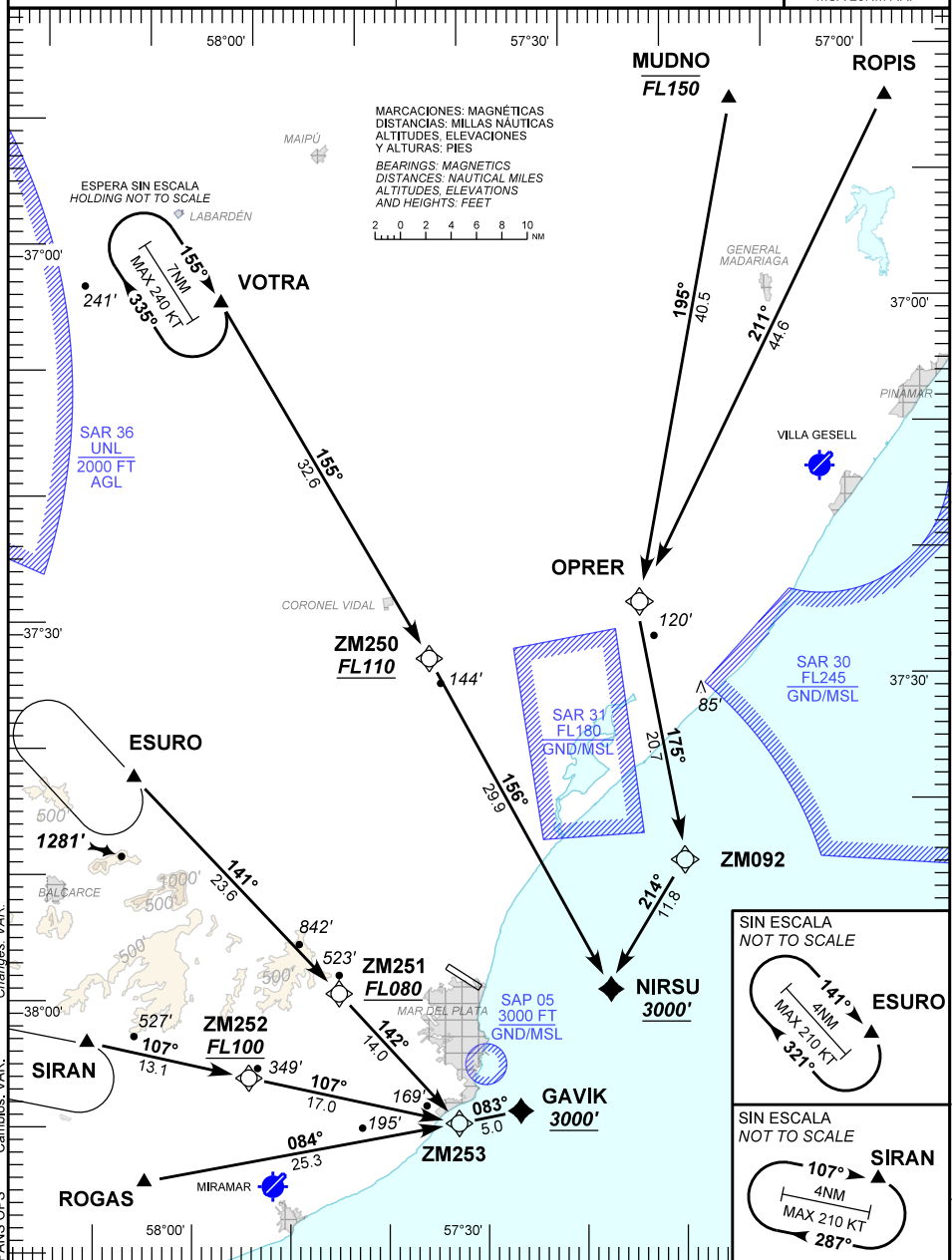
31 ENERO 2019

ASTOR PIAZZOLLA (SAZM) STAR RNP RWY 13 ESURO 1Q – MUDNO 1Q – ROGAS 1Q – ROPIS 1Q – ROPIS 1R – SIRAN 1Q – VOTRA 1Q												
Seq Num	Fix Ident	Path Terminator	Fly Over	Distance (NM)	Course M°(T°)	Turn	Altitude (ft/FL)	Altitude Description	Speed Limit (Kt)	Navigation Specification	RNP	Dec (ARP 2018)
010	ROPIS	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV 1 or RNP 1	1.0	8 W
020	ZM061	TF	N	44.8	220 (211.8)	N/A	FL 080	-	N/A	RNAV 1 or RNP 1	1.0	8 W
030	DALMI	TF	N	25.6	220 (212.0)	N/A	3000	+	N/A	RNAV 1 or RNP 1	1.0	8 W
010	ROPIS	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV 1 or RNP 1	1.0	8 W
020	ILRED	TF	N	32.9	228 (219.6)	N/A	FL 090	-	N/A	RNAV 1 or RNP 1	1.0	8 W
030	ZM090	TF	N	18.2	228 (219.7)	N/A	FL 080	-	N/A	RNAV 1 or RNP 1	1.0	8 W
040	DALMI	TF	N	21.0	200 (192.8)	N/A	3000	+	N/A	RNAV 1 or RNP 1	1.0	8 W
010	VOTRA	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV 1 or RNP 1	1.0	8 W
020	AKROG	TF	N	43.9	177 (169.8)	N/A	3000	+	N/A	RNAV 1 or RNP 1	1.0	8 W
010	ROGAS	IF	N	N/A	N/A	N/A	FL 070 FL 050	- +	N/A	RNAV 1 or RNP 1	1.0	8 W
020	ZM058	TF	N	13.2	036 (028.4)	N/A	FL 050	-	N/A	RNAV 1 or RNP 1	1.0	8 W
030	PUNOX	TF	N	9.2	036 (028.3)	N/A	3000	+	N/A	RNAV 1 or RNP 1	1.0	8 W
010	SIRAN	IF	N	N/A	N/A	N/A	FL 070 FL 050	- +	N/A	RNAV 1 or RNP 1	1.0	8 W
020	ZM059	TF	N	9.0	068 (060.5)	N/A	FL 050	-	N/A	RNAV 1 or RNP 1	1.0	8 W
030	PUNOX	TF	N	9.0	068 (060.4)	N/A	3000	+	N/A	RNAV 1 or RNP 1	1.0	8 W
010	ESURO	IF	N	N/A	N/A	N/A	FL 070 FL 050	- +	N/A	RNAV 1 or RNP 1	1.0	8 W
020	AKROG	TF	N	13.9	120 (112.6)	N/A	3000	+	N/A	RNAV 1 or RNP 1	1.0	8 W
010	MUDNO	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV 1 or RNP 1	1.0	8 W
020	ILRED	TF	N	25.9	208 (199.6)	N/A	FL 090	-	N/A	RNAV 1 or RNP 1	1.0	8 W
030	ZM090	TF	N	18.2	228 (219.7)	N/A	FL 080	-	N/A	RNAV 1 or RNP 1	1.0	8 W
040	DALMI	TF	N	21.0	200 (192.8)	N/A	3000	+	N/A	RNAV 1 or RNP 1	1.0	8 W

31 ENERO 2019

STAR RNP RWY 31

ESURO 1U - MUDNO 1U - ROGAS 1U - ROPIS 1U - SIRAN 1U - VOTRA 1U



ASTOR PIAZZOLLA (SAZM) STAR RNP RWY 31 ROGA1U – ESUR1U – SIRA1U – VOTR1U – MUDN1U – ROP11U	
FIX IDENT	COORDINATES
ESURO	S 37°41:43.00" W 58°08:08.00"
ZM251	S 37°58:01.05" W 57°46:36.98"
ZM253	S 38°07:47.49" W 57°33:55.35"
GAVIK	S 38°06:31.96" W 57°27:47.41"
SIRAN	S 38°02:51.00" W 58°11:35.00"
ZM252	S 38°05:04.08" W 57°55:11.40"
ROGAS	S 38°13:40.00" W 58°05:11.00"
VOTRA	S 37°03:50.00" W 58°01:46.00"
ZM250	S 37°31:06.85" W 57°39:22.87"
NIRSU	S 37°56:29.68" W 57°19:26.66"
MUDNO	S 36°45:29.00" W 57°12:46.00"
ROPIS	S 36°44:30.00" W 56°57:30.00"
OPRER	S 37°25:44.28" W 57°18:47.83"
ZM092	S 37°45:55.90" W 57°12:50.80"

31 ENERO 2019

1/2 - ASTOR PIAZZOLLA (SAZM) STAR RNP RWY 31 ROGA1U – ESUR1U – SIRA1U – VOTR1U – MUDN1U – ROPI1U												
Seq Num	Fix Ident	Path Terminator	Fly Over	Distance (NM)	Course M°(T°)	Turn	Altitude (ft/FL)	Altitude Description	Speed Limit (Kt)	Navigation Specification	RNP	Dec (ARP 2018)
010	ESURO	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
020	ZM251	TF	N	23.6	141 (133.6)	N/A	FL 080	+	N/A	RNAV or RNP 1	1.0	8 W
030	ZM253	TF	N	14.0	142 (134.2)	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
040	GAVIK	TF	N	5.0	083 (075.4)	N/A	3000	+	N/A	RNAV or RNP 1	1.0	8 W
010	SIRAN	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
020	ZM252	TF	N	13.1	107 (099.6)	N/A	FL 100	+	N/A	RNAV or RNP 1	1.0	8 W
030	ZM253	TF	N	17.0	107 (099.1)	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
040	GAVIK	TF	N	5.0	083 (075.4)	N/A	3000	+	N/A	RNAV or RNP 1	1.0	8 W
010	ROGAS	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
020	ZM253	TF	N	25.3	084 (076.4)	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
030	GAVIK	TF	N	5.0	083 (075.4)	N/A	3000	+	N/A	RNAV or RNP 1	1.0	8 W

31 ENERO 2019

2/2 - ASTOR PIAZZOLLA (SAZM) STAR RNP RWY 31 ROGA1U – ESUR1U – SIRA1U – VOTR1U – MUDN1U – ROP1U												
Seq Num	Fix Ident	Path Terminator	Fly Over	Distance (NM)	Course M°(T°)	Turn	Altitude (ft/FL)	Altitude Description	Speed Limit (Kt)	Navigation Specification	RNP	Dec (ARP 2018)
010	VOTRA	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
020	ZM250	TF	N	32.6	155 (146.6)	N/A	FL 110	+	N/A	RNAV or RNP 1	1.0	8 W
030	NIRSU	TF	N	29.9	156 (147.9)	N/A	3000	+	N/A	RNAV or RNP 1	1.0	8 W
010	MUDNO	IF	N	N/A	N/A	N/A	FL 150	-	N/A	RNAV or RNP 1	1.0	8 W
020	OPRER	TF	N	40.5	195 (186.9)	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
030	ZM092	TF	N	20.7	175 (166.8)	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
040	NIRSU	TF	N	11.8	214 (206.4)	N/A	3000	+	N/A	RNAV or RNP 1	1.0	8 W
010	ROPIS	IF	N	N/A	N/A	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
020	OPRER	TF	N	44.6	211 (202.6)	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
030	ZM092	TF	N	20.7	175 (166.8)	N/A	N/A	N/A	N/A	RNAV or RNP 1	1.0	8 W
040	NIRSU	TF	N	11.8	214 (206.4)	N/A	3000	+	N/A	RNAV or RNP 1	1.0	8 W

31 ENERO 2019