

KSFO

San Francisco International

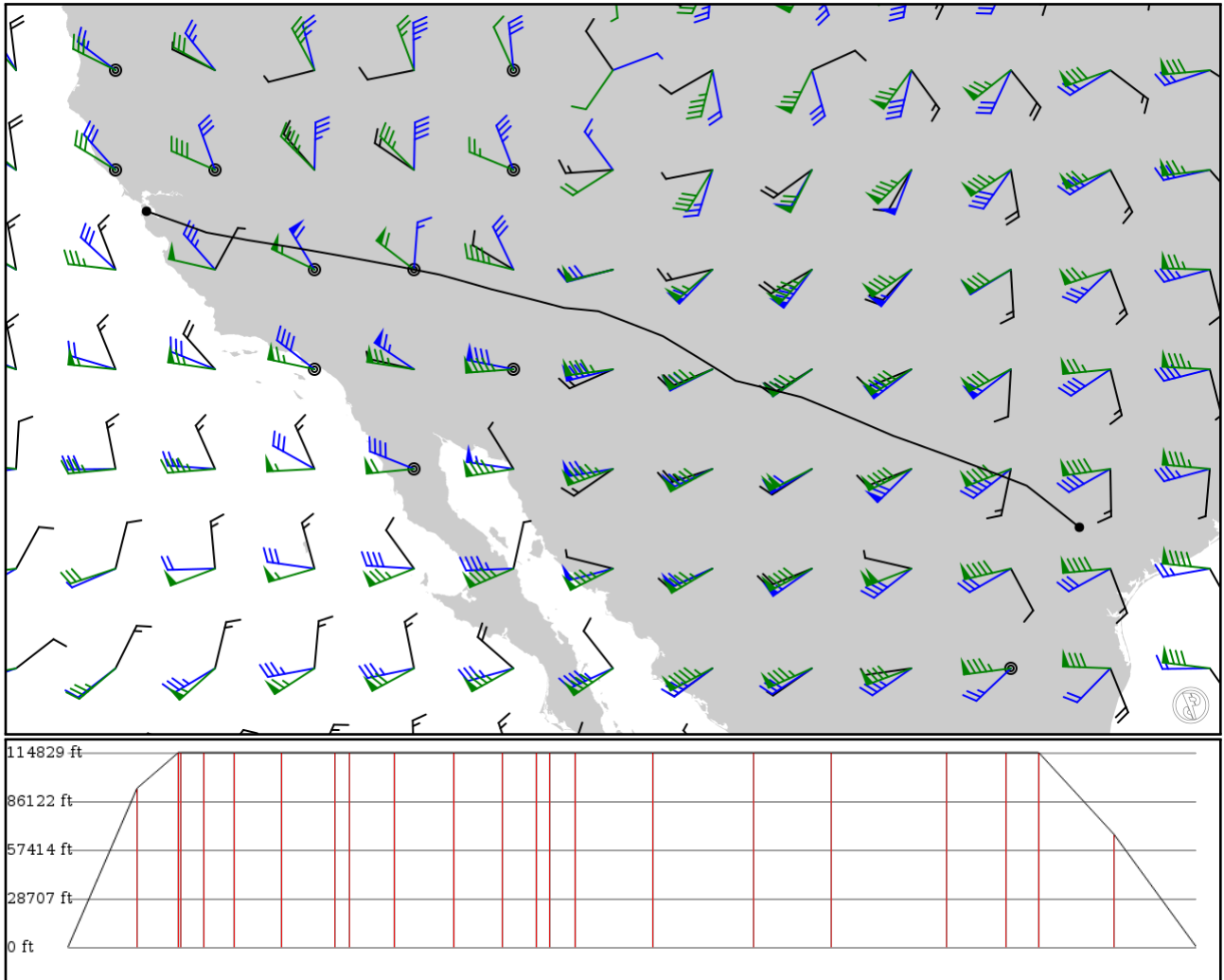
KSAT

San Antonio Intl

2024/05/16 0822Z

KSFO MKNNA T331 NTELL CZQ J110 BLD J72 PGS V291 INW J108 INK J15 JCT KSAT

1297.24 nm / 2402.49 km



Notes

Basic altitude profile:

- Ascent Rate: 2500ft/min
- Ascent Speed: 250kts
- Cruise Altitude: 35000ft
- Cruise Speed: 420kts
- Descent Rate: 1500ft/min
- Descent Speed: 250kts

Options:

- Use NATs: yes
- Use PACOTS: yes
- Use low airways: yes
- Use high airways: yes

Route

Ident Type	Via	Lat Lon	Alt	Dist (nm)	Name
KSFO APT	-	37.61850 -122.37500	0 ft 0 m	-	San Francisco International
MKNNA FIX	-	37.07320 -120.84000	28,600 ft 8,717 m	80	-
NTELL FIX	T331 AWY-LO	36.89970 -119.89000	35,000 ft 10,668 m	46	-
CZQ VOR	-	36.88430 -119.81500	35,000 ft 10,668 m	3	CLOVIS (FRESNO)
PINNI FIX	J110 AWY-HI	36.79780 -119.27200	35,000 ft 10,668 m	26	-
MITEL FIX	J110 AWY-HI	36.68440 -118.58400	35,000 ft 10,668 m	33	-
FURNY FIX	J110 AWY-HI	36.49010 -117.46200	35,000 ft 10,668 m	55	-
SHADO FIX	J110 AWY-HI	36.26370 -116.23100	35,000 ft 10,668 m	61	-
FUZZY FIX	J110 AWY-HI	36.20060 -115.90000	35,000 ft 10,668 m	16	-
BLD VOR	J110 AWY-HI	35.99580 -114.86400	35,000 ft 10,668 m	51	BOULDER CITY
PGS VOR	J72 AWY-HI	35.62470 -113.54400	35,000 ft 10,668 m	68	PEACH SPRINGS
KACEE FIX	V291 AWY-LO	35.34670 -112.43900	35,000 ft 10,668 m	56	-
FLG VOR	V291 AWY-LO	35.14720 -111.67400	35,000 ft 10,668 m	39	FLAGSTAFF
TAWNE FIX	V291 AWY-LO	35.11850 -111.37100	35,000 ft 10,668 m	14	-
INW VOR	V291 AWY-LO	35.06160 -110.79500	35,000 ft 10,668 m	28	WINSLOW
SJN VOR	J108 AWY-HI	34.42400 -109.14400	35,000 ft 10,668 m	90	ST JOHNS
TCS VOR	J108 AWY-HI	33.28250 -107.28100	35,000 ft 10,668 m	115	TRUTH OR CONSEQUENCES
GINGR FIX	J108 AWY-HI	32.86150 -105.58800	35,000 ft 10,668 m	88	-
INK VOR	J108 AWY-HI	31.87480 -103.24400	35,000 ft 10,668 m	132	WINK
LOWGO FIX	J15 AWY-HI	31.43400 -102.02200	35,000 ft 10,668 m	67	-
FUSCO FIX	J15 AWY-HI	31.17690 -101.32900	35,000 ft 10,668 m	38	-
JCT VOR	J15 AWY-HI	30.59800 -99.81750	20,300 ft 6,187 m	85	JUNCTION
KSAT APT	-	29.53410 -98.46930	0 ft 0 m	94	San Antonio Intl

KSFO

Region: UNITED STATES
Timezone: AMERICA/LOS_ANGELES
Runways: 4

Elevation: 13 ft / 4 m
Location: 37.618500 -122.375000
Magnetic Var: 12.842 E

METAR

KSFO 160756Z 24003KT 10SM FEW006 13/10 A2993 RMK AO2 SLP133 T01330100 402000117 \$

TAF

TAF KSFO 160520Z 1606/1712 26009KT P6SM FEW004 FM160900 25009KT P6SM BKN010 FM161100 22008KT P6SM OVC010 FM161600

Frequencies

REC - 113.70 MHz - D-ATIS
REC - 118.85 MHz - D-ATIS
CLD - 118.20 MHz -
SAN FRANCISCO CLEARANCE DELIVERY
TWR - 120.50 MHz - SAN FRANCISCO TOWER
APP - 128.32 MHz - NORCAL APPROACH
APP - 133.95 MHz - NORCAL APPROACH
DEP - 135.10 MHz - NORCAL DEPARTURE

REC - 115.80 MHz - D-ATIS
COM - 122.95 MHz - UNICOM
GND - 121.80 MHz - SAN FRANCISCO GROUND
APP - 134.50 MHz - NORCAL APPROACH
APP - 128.57 MHz - NORCAL APPROACH
DEP - 120.90 MHz - NORCAL DEPARTURE

Runways

Ident	Width	Length	Bearing (true) (mag)	Surface	Threshold Offset	Overrun Length
10L	200 ft	11,859 ft	117.90	ASPHALT	0 ft	876 ft
	61 m	3,615 m	105.06		0 m	267 m
28R	200 ft	11,859 ft	297.92	ASPHALT	302 ft	318 ft
	61 m	3,615 m	285.08		92 m	97 m
10R	200 ft	11,371 ft	117.90	ASPHALT	0 ft	748 ft
	61 m	3,466 m	105.06		0 m	228 m
28L	200 ft	11,371 ft	297.92	ASPHALT	305 ft	322 ft
	61 m	3,466 m	285.08		93 m	98 m
01R	200 ft	8,665 ft	27.71	ASPHALT	564 ft	404 ft
	61 m	2,641 m	14.87		172 m	123 m
19L	200 ft	8,665 ft	207.72	ASPHALT	0 ft	443 ft
	61 m	2,641 m	194.88		0 m	135 m
01L	200 ft	7,664 ft	27.71	ASPHALT	643 ft	469 ft
	61 m	2,336 m	14.87		196 m	143 m
19R	200 ft	7,664 ft	207.72	ASPHALT	0 ft	446 ft
	61 m	2,336 m	194.88		0 m	136 m

Approach Nav aids

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
19L	DME	ISIA	108.90 MHz	18 nm	-	-	24 ft
				33 km	-		24 m
28L	DME	ISFO	109.55 MHz	18 nm	-	-	22 ft
				33 km	-		22 m
28R	DME	IGWQ	111.70 MHz	18 nm	-	-	17 ft
				33 km	-		17 m
28R	DME	IFNP	110.75 MHz	18 nm	-	-	13 ft
				33 km	-		13 m
19L	LOC-ILS	ISIA	108.90 MHz	18 nm	207.72	-	13 ft
				33 km	194.88		13 m

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
28L	LOC-ILS	ISFO	109.55 MHz	18 nm	297.91	-	13 ft
				33 km	285.07		13 m
28R	LOC-ILS	IGWQ	111.70 MHz	18 nm	297.91	-	13 ft
				33 km	285.07		13 m
19L	GS	ISIA	108.90 MHz	10 nm	207.72	3.00	13 ft
				19 km	194.88		13 m
28L	GS	ISFO	109.55 MHz	10 nm	297.91	2.85	13 ft
				19 km	285.07		13 m
28R	GS	IGWQ	111.70 MHz	10 nm	297.91	3.00	13 ft
				19 km	285.07		13 m

KSAT

Region: UNITED STATES
Timezone: AMERICA/CHICAGO
Runways: 3

Elevation: 809 ft / 247 m
Location: 29.534100 -98.469300
Magnetic Var: 3.528 E

METAR

KSAT 160751Z 11009KT 10SM OVC024 23/20 A2977 RMK A02 SLP061 T02330200 \$

TAF

KSAT 160731Z 1608/1712 13007KT P6SM OVC020 FM161200 14006KT P6SM BKN008 OVC012 FM161800 16008KT P6SM VCSH OVC020

Frequencies

REC - 118.90 MHz - SAN ANTONIO ATIS	COM - 122.95 MHz - SAN ANTONIO UNICOM
GND - 121.90 MHz - SAN ANTONIO GROUND	TWR - 119.80 MHz - SAN ANTONIO TOWER
APP - 124.45 MHz - SAN ANTONIO APPROACH	APP - 128.05 MHz - SAN ANTONIO APPROACH
APP - 118.05 MHz - SAN ANTONIO APPROACH	APP - 125.10 MHz - SAN ANTONIO APPROACH
DEP - 124.45 MHz - SAN ANTONIO DEPARTURE	DEP - 128.05 MHz - SAN ANTONIO DEPARTURE
DEP - 118.05 MHz - SAN ANTONIO DEPARTURE	DEP - 125.10 MHz - SAN ANTONIO DEPARTURE

Runways

Ident	Width	Length	Bearing (true) (mag)	Surface	Threshold Offset	Overrun Length
04	150 ft	8,516 ft	40.63	CONCRETE	0 ft	200 ft
	46 m	2,596 m	37.10		0 m	61 m
22	150 ft	8,516 ft	220.63	CONCRETE	0 ft	400 ft
	46 m	2,596 m	217.11		0 m	122 m
13R	150 ft	8,507 ft	131.75	CONCRETE	0 ft	210 ft
	46 m	2,593 m	128.22		0 m	64 m
31L	150 ft	8,507 ft	311.76	CONCRETE	0 ft	197 ft
	46 m	2,593 m	308.23		0 m	60 m
13L	100 ft	5,519 ft	131.78	ASPHALT	0 ft	154 ft
	30 m	1,682 m	128.25		0 m	47 m
31R	100 ft	5,519 ft	311.79	ASPHALT	0 ft	0 ft
	30 m	1,682 m	308.26		0 m	0 m

Approach Nav aids

Runway	Type	Ident	Frequency	Range	Bearing (true) (mag)	Slope	Elevation
13R	DME	IANT	110.90 MHz	18 nm	-	-	791 ft
				33 km	-		791 m
31L	DME	IIZR	110.90 MHz	18 nm	-	-	809 ft
				33 km	-		809 m
04	LOC-ILS	ISAT	109.70 MHz	18 nm	40.63	-	809 ft
				33 km	37.10		809 m
13R	LOC-ILS	IANT	110.90 MHz	18 nm	131.76	-	809 ft
				33 km	128.23		809 m
31L	LOC-ILS	IIZR	110.90 MHz	18 nm	311.76	-	809 ft
				33 km	308.23		809 m
04	GS	ISAT	109.70 MHz	10 nm	40.63	3.00	809 ft
				19 km	37.10		809 m
13R	GS	IANT	110.90 MHz	10 nm	131.76	3.00	809 ft
				19 km	128.23		809 m
31L	GS	IIZR	110.90 MHz	10 nm	311.76	3.00	809 ft
				19 km	308.23		809 m