

KSFO

San Francisco Intl

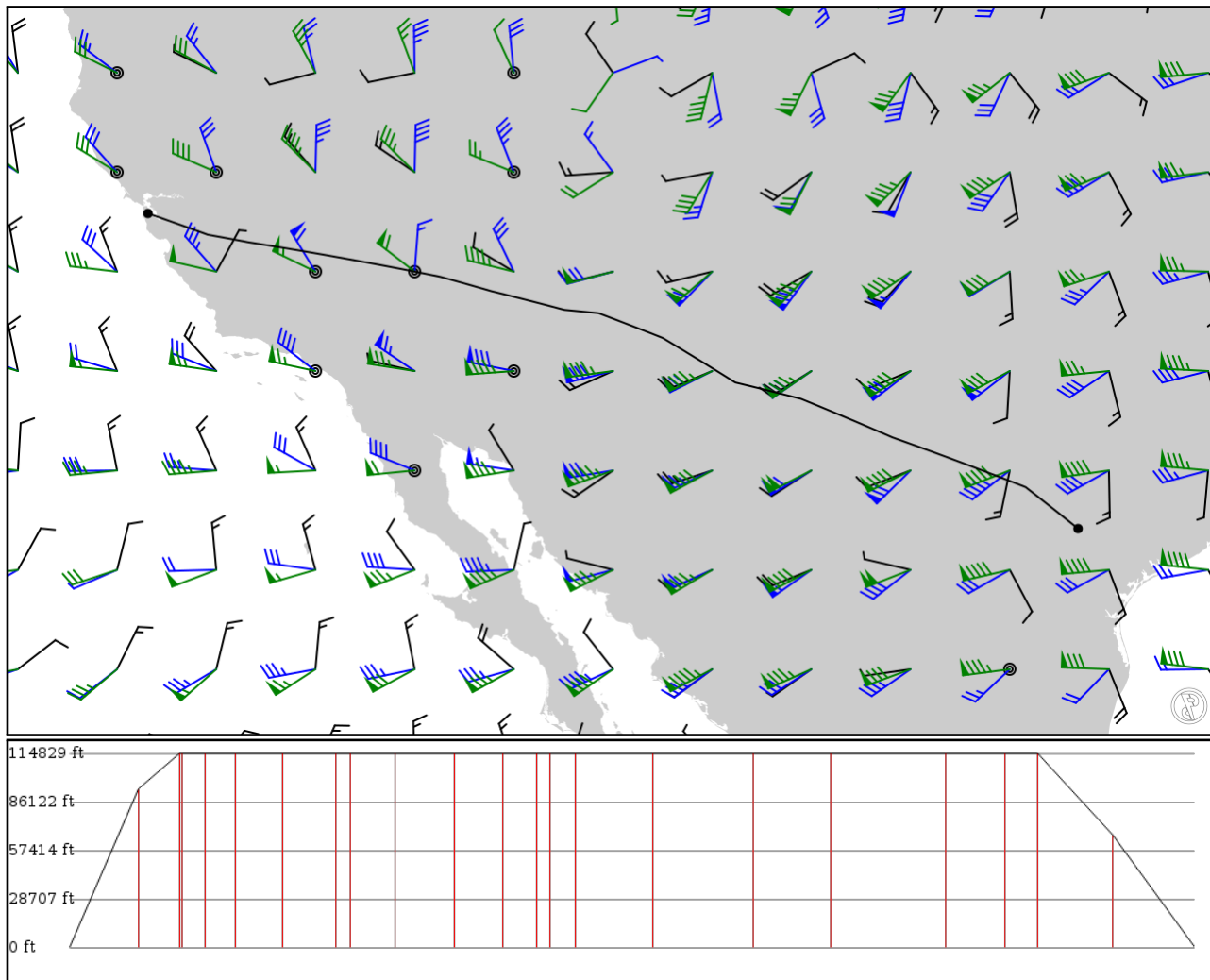
KSAT

San Antonio Intl

2024/05/16 0730Z

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

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 160656Z 30006KT 10SM FEW006 13/11 A2992 RMK AO2 SLP130 T01330106 \$

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 - 115.80 MHz - D-ATIS
REC - 118.85 MHz - D-ATIS	COM - 122.95 MHz - UNICOM
CLD - 118.20 MHz -	GND - 121.80 MHz - SAN FRANCISCO GROUND
SAN FRANCISCO CLEARANCE DELIVERY	APP - 134.50 MHz - NORCAL APPROACH
TWR - 120.50 MHz - SAN FRANCISCO TOWER	APP - 128.57 MHz - NORCAL APPROACH
APP - 128.32 MHz - NORCAL APPROACH	DEP - 120.90 MHz - NORCAL DEPARTURE
APP - 133.95 MHz - NORCAL APPROACH	
DEP - 135.10 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 160658Z 12010KT 10SM BKN024 BKN035 OVC250 23/20 A2978 RMK A02 T02330200 \$

TAF

TAF KSAT 160520Z 1606/1712 14011KT P6SM BKN100 FM160800 13007KT P6SM OVC015 FM161200 14006KT P6SM BKN008 OVC012 FM170000 15007KT P6SM BKN010 OVC012

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