



NOAA ESRL

Solar Position Calculator

Earth System
Research Lab

n of the NOAA Solar Calculator. Back when this calculator was first created, we decided to use a n
ard. So on this page, both longitude and time zone are defined as positive to the west, instead of the

people who, for whatever reason, prefer the old calculator. For the rest of you, we encourage you to i

City:		Deg:	Min:	Sec:	Time Zone	
Enter Lat/Long ->	Lat: North==+ South==-	39	33	32	Offset to UTC (MST=+7):	Daylight Saving Time: No
Click here for help finding your lat/long coordinates	Long: East==-- West==+	119	40	52		

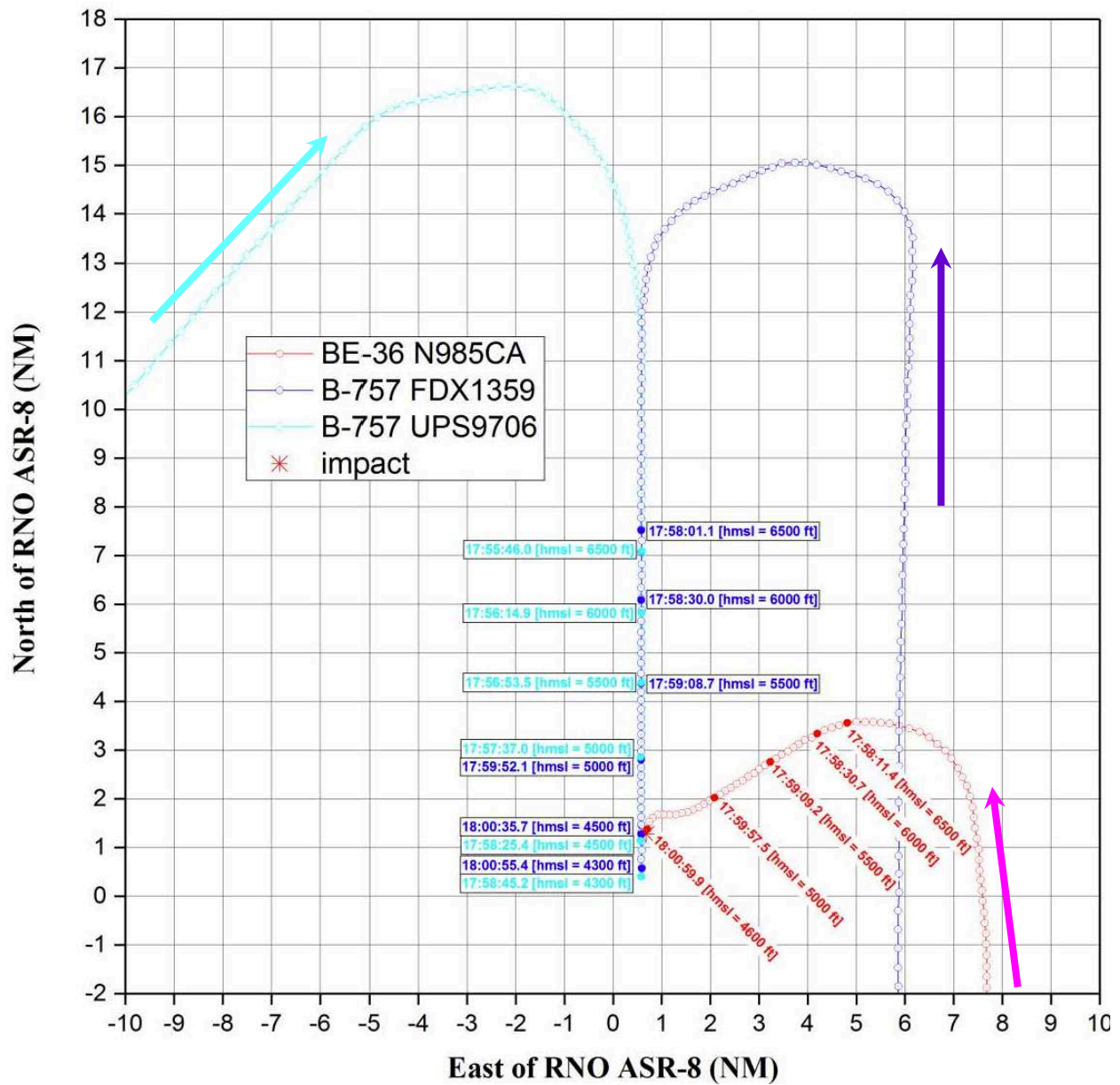
Note: To manually enter latitude/longitude, select **Enter Lat/Long ->** from the City pulldown box, and enter the values in the text boxes to the right.

Month:	Day:	Year (e.g. 2000):	Time: (hh:mm:ss)					
August	30	2016	17	:	58	:	00	☐ AM ☐ PM ☒ 24hr

Equation of Time (minutes):	Solar Declination (degrees):	Solar Azimuth:	Solar Elevation:	cosine of solar zenith angle
-0.34	8.54	266.92	17.22	0.2961
Azimuth is measured in degrees clockwise from north. Elevation is measured in degrees up from the horizon. Az & El both report <i>dark</i> after astronomical twilight.				

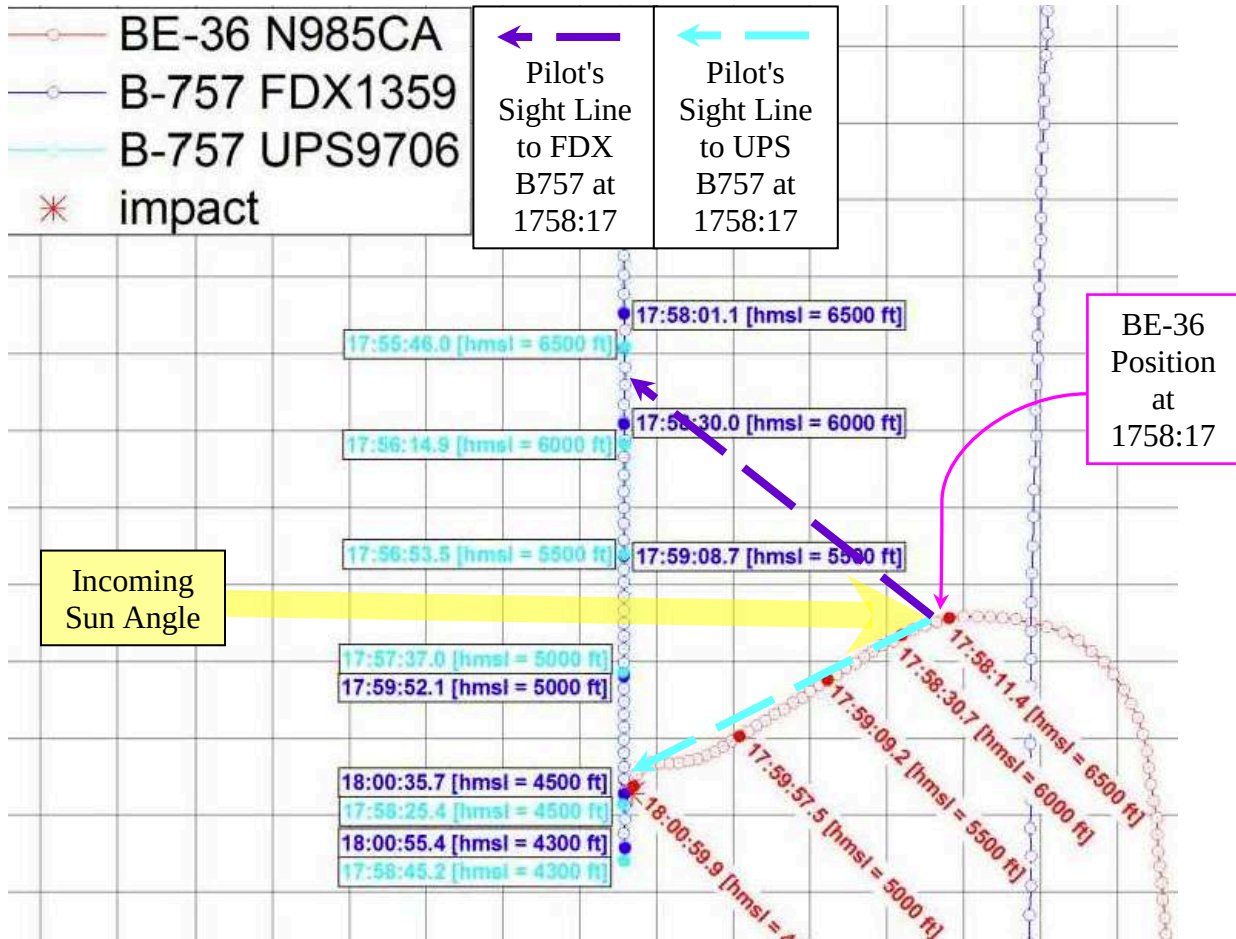
WPR16FA172 Solar Position (1758 lcl time)

At 1758:17, the BE-36 Bonanza pilot reported to ATC that he saw "the airliner"



Overall View

WPR16FA172 Solar Position (1758 lcl time)



Altitudes (ft msl) at 1758:17
 UPS B757 = ~4,600
 BE-36 = ~6,250 (in 1,500 fpm descent)
 FDX B757 = ~6,250

Annotated Close-Up View