WASP KEYWORDS							
Name	**Meaning**	**Type**	**Units**	**WASP default value**	**SOFIA Availability ?**	**ARCHIVE keyword**	**SOFIA HK Name**
Standard FITS							
Frequently Accessed Keywords							
CHOPFREQ	Frequency at which the secondary is chopped, in Hz.	d	[Hz]	-1	Y	CHPFREQ	sma.frequency
NODTIME	Exposure time per nod side, in seconds. Exposure time divided by nod time gives number of nods.	d	[s]	-1	?	same	
Date and Time							
Telescope Description							
SITELONG	The site longitude in degrees. Note this may continuously change in an airplane (SOFIA).	d	[deg]	-1	Y	AC_LONG	
SITELAT	The site latitude in degrees. Note this may continuously change in an airplane (SOFIA).	d	[deg]	-1	Y	AC_LAT	
SITEELEV	The site elevation above sea level in meters. Note this may continuously change in an airplane (SOFIA).	d	[m]	-1	Y	AC_ALT	
Efficiencies and Beam Parameters							
Source and Project Information							
Tuning Specification							
Positions							
AZIMUTH	The azimuth at TIME (degrees). If the TIME axis is non-degenerate, then this is the azimuth at the TIME of the first pixel on the TIME axis.	d	[deg]	-1	Y		
ELEVATIO	The elevation at TIME (degrees). Same caveat as for AZIMUTH.	d	[deg]	-1	Y		ta_pos.ta_deg_el
RAREF	Right ascension of OFF position (hours in EQUINOX year), if position-switching in equatorial coordinates. Can have multiple "offs", in which case this will be an array.	d	[h]	-1	Y		ta_pos.sibs_ra & sma.sma_amplitude & sma.sma_angle
DECREF	Declination of OFF position (degrees in EQUINOX year), if position-switching in equatorial coordinates. Can have multiple "offs", in which case this will be an array.	d	[deg]	-1	Y		ta_pos.sibs_dec & sma.sma_amplitude & sma.sma_angle
LREF	Galactic longitude of OFF position (degrees), if position-switching in galactic coordinates. Can have multiple "offs", in which case this will be an array.	d	[deg]	-1	Y		' "
BREF	Galactic latitude of OFF position (degrees), if position-switching in galactic coordinates. Can have multiple "offs", in which case this will be an array.	d	[deg]	-1	Y		" "
AZREF	Reference Azimuth offset (degrees), if position-switching in AzEl coordinates. Can have multiple "offs", in which case this will be an array.	d	[deg]	-1	Y		" "

ELREF	Reference Elevation offset (degrees), if position-switching in AzEl coordinates. Can have multiple "offs", in which case this will be an array.	d	[deg]	-1	Y		" "
AZDELTA	Azimuth Pointing correction (degrees).	d	[deg]	-1	?		ta_pos.sibs_error - not
ELDELTA	Elevation Pointing correction (degrees).	d	[deg]	-1	?		becomposed into AzEl
Special WASP keywords							
Calibration Cycle							
Observation Description							
Weather Information							
DEWPOINT	The dew point (K).	d	[K]	-1	?		
HUMIDITY	Relative humidity at ground level, expressed as a decimal between 0 and 1; i.e. 50% humidity is humidity=0.5.	d	[ ]	-1	N		
REFRAC	The refraction correction in arcseconds.	d	[arcsec]	-1	?		
TAU	The atmospheric opacity at OBSFREQ.	d	[ ]	-1	N		
TAUIMAGE	The atmospheric opacity at IMAGREQ.	d	[ ]	-1	N		
TAUZENIT	The atmospheric opacity at OBSFREQ at zenith (i.e. per unit air mass).	d	[ ]	-1	N		
WINDDIRE	The direction the wind is blowing (degrees west of north).	d	[deg]	-1	Y		
WINDSPEE	The wind speed in m/s.	d	[m/s]	-1	Y		

ARCHIVE REQUIRED/CONDITIONAL KEYWORDS						
Name	**Meaning**	**Type**	**Units**	**SOFIA Availability?**	**Archive Required ?**	**SOFIA HK Name**
Mission Management Keywords						
PROPID	Proposal identification	s	[]	?	Y	
PLANID	Observing plan identification	s	[]	?	Y	
DEPLOY	Site Deployment	s	[]	?	Y	
SCHEDBLK	Scheduling block identifier	s	[]	?	Y	
FLIGHTNO	Flight Number	i	[]	?	Y	
FLIGHTLG	Flight Leg	i	[]	?	Y	
Origination Keywords						
OPERATOR	Telescope Operator	s	[]	?	Y	
Environmental Keywords						
WVCOLDEN	Water vapor	d	[microns]	Y	Y	
TEMP_OUT	Static air temperature outside aircraft	d	[Deg (C)]	Y	Y	
TEMPPri1	Temperature of primary mirror	d	[Deg (C)]	Y	Y	
TEMPPri2	Temperature of primary mirror	d	[Deg (C)]	Y	Y	
TEMPPri3	Temperature of primary mirror	d	[Deg (C)]	Y	Y	
TEMPSEC1	Temperature of Temperature	d	[Deg (C)]	Y	Y	
Aircraft Keywords						
HEADING	Aircraft heading	d	[deg]	Y	Y	
Telescope Keywords						
TELRA	Right Ascension	d/s	[hours]	Y	Y	ta_pos.sibs_ra
TELDEC	Right Ascension	d/s	[hours]	Y	Y	ta_pos.sibs_dec
EQUINOX	Coordinate equinox for RA and Dec	d	[yr]	?	Y	
SUNANGL	Sun angle	d	[deg]	?	N	
MOONANGL	Moon angle	d	[deg]	?	N	
TELFOCUS	Telescope focus	d	encoder	?	N	
TRACMODE	SOFIA tracking mode	s	[]	Y	Y	ta_pos.track.state
TRACGDST	Guide star for tracking	s	[]	Y	Y	ta_pos.track.aoi + ???
Data Collection Keywords						
CHOPPING	Chopping flag	bool	[]	Y	Y	
SCANNING	Scanning flag	bool	[]	Y	Y	
TRACKING	Tracking flag	bool	[]	Y	Y	ta_pos.track.state
ROF_FRZ	SOFIA rotation of field (ROF) freeze mode flag	bool	[]	Y	Y	ta_pos.chop_sys?

Chopping Keywords						
CHPHWV	Chopper hardware version	s	[]	Y	Y	
CHPSWV	Chopper software version	s	[]	Y	Y	
CHPSETL	Chop settle time	d	[msec]	Y	Y	sma.settling_time
Scanning Keywords						
SCANRAO	Start of scan - RA	d	[hours]	N	Y	
SCANDECO	Start of scan - Dec	d	[degrees]	N	Y	
SCANRAF	End of scan - RA	d	[hours]	N	Y	
SCANDECF	End of scan - Dec	d	[degrees]	N	Y	
SCNRATE	Scan rate	d	[arcsec/sec]	Y	Y	ta_pos.ra_rate &
SCNDIR	Scan direction	d	degrees	Y	Y	ta_pos.dec_rate

AVAILABLE HOUSEKEEPING				
Name	**Meaning**	**Type**	**Units**	**SOFIA HK Name**
Basic Position and Reference Frame Handling				
	radial los velocity	?	?	coord.vlos
Telescope Position Handling				
	Rotation of Field at SI boresight	?	?	ta_pos.sibs_rof
	Pointing error estimate (20Hz)	?	?	ta_pos.sibs_error
Secondary Mirror Assembly Handling				