

## Description file for PDS list

Column	Name	Description
A	Number	Asteroid number
B	Name	Asteroid name
C	Designation	Asteroid provisional designation
D	Slit	Position of the slit wheel. Possible values are: Open, Mirror, 0.3x15, 0.5x15, 0.8x15, 1.6x15, 3.0x15, 0.3x60, 0.5x60, 0.8x60, 1.6x60, 3.0x60, where first value is slit width and second value is slit length in arcsec. SLIT FITS keyword.
E	Grating	Position of the grating wheel. Possible values are: ShortXD, Prism, LXD_long, LXD_short, SO_long, SO_short. LowRes15 is the old keyword value for SpeX before the 2014 upgrade. GRAT FITS keyword.
F	StartTime	Start time of observation: DATE_OBS+TIME_OBS FITS keywords from the first file.
G	EndTime	End time of observation: DATE_OBS+TIME_OBS+ITIME FITS keywords from the last file.
H	StartAirmass	Start airmass. TCS_AM FITS keyword for recent SpeX files, AIRMASS for the old ones.
I	EndAirmass	End airmass. TCS_AM FITS keyword for recent SpeX files, AIRMASS for the old ones.
J	PosAngle	The sky position angle provided by the rotator. In degrees. POSANGLE FITS keyword.
K	StartParAng (TCS)	TCS start parallactic angle, degrees. TCS_PA FITS keyword. Only available for recent SpeX files.
L	EndParAng (TCS)	TCS end parallactic angle, degrees. TCS_PA FITS keyword. Only available for recent SpeX files.
M	StartParAng	Calculated start parallactic angle, in degrees. Value is calculated from the hour angle of the target and the observatory latitude as described in <a href="https://stackoverflow.com/questions/31109366/parallactic-angle-method-in-pyephem">https://stackoverflow.com/questions/31109366/parallactic-angle-method-in-pyephem</a>
N	EndParAng	Calculated end parallactic angle, in degrees. Value is calculated from the hour angle of the target and the observatory latitude as described in <a href="https://stackoverflow.com/questions/31109366/parallactic-angle-method-in-pyephem">https://stackoverflow.com/questions/31109366/parallactic-angle-method-in-pyephem</a>
O	ExpTime	Single exposure integration time, seconds. ITIME FITS keyword.
P	ImgCount	Number of spectral files used to produce the final combined spectrum. This is read from the group file in the AutospeX reduction pipeline
Q	TotalExpTime	Total exposure time of the final spectrum: ExpTime*ImgCount*ncoadds.
R	GeoDist (au)	Geocentric distance of the asteroid at the time of observations, in au. From the minor planet center (MPC).
S	SolarDist (au)	Heliocentric distance of the asteroid at the time of observations, in au. From the MPC.
T	Vmag	Visible magnitude of the asteroid at the time of observations. From the MPC.
U	PhaseAngle	Asteroid phase angle at the time of observation. From the MPC.
V	PWV	Fitted pressure water vapor. Read from the RECORD file in the idl/ folder created as an output of the IDL telluric correction routine.
W	RA (Sp)	TCS RA position in FK5 J2000.0. TCA_RA FITS keyword for new SpeX files, RA for the old ones. RA/Dec coordinates used to be manually entered by the observer. Now, this is done automatically.
X	RA (MPC)	RA position of the asteroid from the MPC. This is to check that the RA coordinates of the telescope match the RA coordinates of the asteroid.
Y	Dec (Sp)	TCS Dec position in FK5 J2000.0. TCA_DEC FITS keyword for new SpeX files, DEC for the old ones. RA/Dec coordinates used to be manually entered by the observer. Now, this is done automatically.
Z	Dec (MPC)	Dec position of the asteroid from the MPC. This is to check that the Dec coordinates of the telescope match the Dec coordinates of the asteroid.
AA	Solar Analogs	Solar Analogs used to divide the asteroid spectrum. Read from the group list in idl/.
AB	ObsRun	Our group's internal observing run designation (sp***).
AC	Seeing (MASS)	A seeing measurement from the Maunakea MASS instrument. This Differential Image Motion Monitor determines how much atmospheric turbulence there is overall. MASS FITS keyword. Not present if no data is available. Only available for recent SpeX files.
AD	StartFOC	The TCS start focus position. The secondary, and chopper have different focus units. TCS_FOC FITS keyword. Only available for recent SpeX files.
AE	EndFOC	The TCS end focus position. The secondary, and chopper have different focus units. TCS_FOC FITS keyword. Only available for recent SpeX files.
AF	StartAirTemp	TCS start outside air temp, DegC. TCS_AIRT FITS keyword. Only available for recent SpeX files.

AG	EndAirTemp	TCS end outside air temp, DegC. TCS_AIRT FITS keyword. Only available for recent SpeX files.
AH	StartHumidity	TCS start humidity, 0-100. TCS_HUM FITS keyword. Only available for recent SpeX files.
AI	EndHumidity	TCS end humidity, 0-100. TCS_HUM FITS keyword. Only available for recent SpeX files.
AJ	StartWindSpeed	TCS start mean wind speed, mph. TCS_WMSP FITS keyword. Only available for recent SpeX files.
AK	EndWindSpeed	TCS end mean wind speed, mph. TCS_WMSP FITS keyword. Only available for recent SpeX files.
AL	StartWindDir	TCS start wind direction, deg. TCS_WDIR FITS keyword. Only available for recent SpeX files.
AM	EndWindDir	TCS end wind direction, deg. TCS_WDIR FITS keyword. Only available for recent SpeX files.

Last edited Feb 27, 2019