VSO Data Model Version 1.2.1

Instrument Related:

Element Name	Keywords (FITS)	Sample Values/Explanation
Organization	INSTITUT	NSO, Stanford, NJIT, UHawaii
Observatory	OBSERVAT	SOHO, Kitt_Peak, TRACE, BBSO, Mees
Network	NETWORK	GONG, VSM_NET, BISON, TON, IRIS
Telescope	TELESCOP	McMath_Pierce, KPVT, SOLAR-C, SOLIS
Location	GRND_LAT GRND_LON SPC_ORBX SPC_ORBY SPC_ORBZ COORDSYS	Latitude of telescope Longitude of telescope Orbital parameter for x Orbital parameter for y Orbital parameter for z Coordinate system: Terrestrial, geocentric, heliocentric
Instrument	INSTRUME	SUMER, SX-T, MDI, VSM, Coronagraph
Detector	DETECTOR	Xedar, Rockwell_1000
Auxiliary	AUXILIAR	AO, Tip-Tilt
Filter	FILTER	Schott_450, Mylar

Data Provision Related:

Element Name	Keywords (FITS)	Sample Values/Explanation
Archive	ARCHIVE	SDAC, NSODL, MSU
Contact	CONTACT	R_Bogart, J_Gurman
URI	URL	Web or ftp address
Data Format	FORMAT	FITS, JPEG_2000
Status	STATUS	On_Line, Off_Line, Near_Line
Access Rights	ACCESS	Open, Restricted
Delivery method	DELIVERY	ftp_push, ftp_pull, LTO
Data Identification	FILENAME	Name of the data file

Data Set Related:

Element Name	Keywords (FITS)	Sample Values/Explanation
Observable	PHYSPARA	Doppler velocity, LOS magnetic field, vector magnetic field, line depth intensity, continuum intensity, equivalent width, acoustic power, number density, polarization state (I,Q,U,V), etc.
Sampling (General)	NAXISn	Number of axes
	COUNT	Number of sequences in file
Sampling (Temporal)	DATE-OBS DATE-END	UTC Start and end date: YYYY-MM-DD:HH-SS.SSS
	EXPTIME	Length of exposure in sec
	TIMESTEP	Temporal step between 2 exposures, in sec
	CADENCE	Constant number of frames per hour or “variable”
	FILL	Duty cycle (0-1)
Sampling (Spectral)	NBANDS	Number of wavelength bands
	WAVEMNxx	Minimum wavelength for band xx
	WAVEMXxx	Maximum wavelength for band xx
	WAVEUNIT	Physical units of wavelength e.g. nm, microns (same for all bands)
	WAVESTxx	Dispersion, wavelength units per pixel for bandxx
	WAVELNxx	Nominal wavelength for band xx
Sampling (Spatial)	FOV	Field of view: rectangular, full-disk, corona.
	C_SYSTEM	Coordinate system: Cartesian, Heliographic, Heliocentric, Polar, Other projection.
	R_INNER R_OUTER	Inner and outer radii in units of r_sun for coronal observations.
	XCEN	X and Y center of area for rectangular

	YCEN IXWIDTH IYWIDTH	observations. X and Y width of area for rectangular observations.
	X1 Y1 X2 Y2	Coordinates (X1,Y1) and (X2,Y2) of southwest and northeast corners of rectangular area
	XSTEP YSTEP	Pixel size in X and Y
	SPCUNIT	Spatial units (e.g. arcsec, degrees)
Sampling (Global acoustic)	SHDLMIN	Minimum value of spherical harmonic degree ℓ
	SHDLMAX	Maximum value of spherical harmonic degree ℓ
	SHDLSTEP	Spacing between spherical harmonic degree ℓ
	SHONMIN	Minimum value of spherical harmonic radial order n
	SHONMAX	Maximum value of spherical harmonic radial order n
	SHONSTEP	Spacing between spherical harmonic radial order n
Sampling (Local acoustic)	K_UNIT	The units of the spatial wavenumber
	KX_MIN	Minimum value of the x-component of the spatial wavenumber
	KX_MAX	Maximum value of the x-component of the spatial wavenumber
	KX_STEP	Sampling size of the x-component of the spatial wavenumber
	KY_MIN	Minimum value of the y-component of the spatial wavenumber
	KY_MAX	Maximum value of the y-component of the spatial wavenumber
	KY_STEP	Sampling size of the y-component of the spatial wavenumber

	KZ_MIN	Minimum value of the *z*-component of the spatial wavenumber
	KZ_MAX	Maximum value of the *z*-component of the spatial wavenumber
	KZ_STEP	Sampling size of the *z*-component of the spatial wavenumber
Sampling (Temporal Frequency)	FRQUNIT	The units of the temporal frequency
	FRQMIN	Minimum value of the temporal frequency
	FRQMAX	Maximum value of the temporal frequency
	FRQSTEP	Sampling size of the temporal frequency
Target	OBJECT	Object identifier, e.g. active region number, “filament”, “CME”, etc.
	TARGET	Identifier for a particular observation
	EXPERMNT	Identification string for a particular experiment
	CAMPAIGN	Identification for a particular campaign
Observer	OBSERVER	Person who obtained the observations, e.g. P_Martens
Quality	SEEING	Estimate of seeing for ground-based observations
	SEQVALID	Boolean (Y/N) is data good for science?
	QUALITY	Numerical quality value

Data Processing Related:

Element Name	Keywords (FITS)	Sample Values/Explanation
Algorithm	AVETYPE	Average: none, unweighted, running, weighted, etc.
	TRANSFRM	Transform applied: none, Fourier, Hilbert, Spherical harmonic, Radon, etc.
	SPECTRUM	Spectral type: power, phase, coherence, etc.
	COMPRESS	Compression: none, gzip, Rice, etc.
	CALIBRAT	Calibration: none, Gain, DC, etc.
Version	AL_VER	Version number of algorithm
Input	AL_INPUT	File name of input parameter set
Metadata	MD_VER	Version number of metadata set
Input	MD_INPUT	File name of input metadata set