
IUVS Dayside Temperature Data README file

The tar file contains IDL SAV files named fit.sav stored in folders organized by orbit, limb, and scan. These files are the scans that meet the filtering requirements detailed in Evans et al. 2022.

The SAV file makes use of regular IDL arrays. Below are the variables used for the analysis and to generate figures in the accompanying manuscript.

ALT	FLOAT	= Array[15]	; Altitude profile [km] for density and temperature
CHAP_H	DOUBLE	= Array[2]	; Scale height [km] from Chapman fit
CHAP_IPK	FLOAT	= Array[2]	; Peak intensities [kR] from Chapman fit
CHAP_T	DOUBLE	= Array[2]	; Temperatures [K] from Chapman fit
CHAP_ZPK	DOUBLE	= Array[2]	; Altitude [km] of peak intensities from Chapman fit
CO2	DOUBLE	= Array[15]	; CO2 density [cm ⁻³]
CO2_UNC	DOUBLE	= Array[15]	; CO2 density uncertainties [cm ⁻³]
DAY	STRING	= Array[1]	; Day of month
INT	DOUBLE	= Array[*]	; O I 297.2 nm intensities [kR]
INT_ALT	DOUBLE	= Array[*]	; Altitude [km] profile for O I 297.2 nm intensity profile
INT_FIT	FLOAT	= Array[*]	; Model fit [kR] to the observed intensity INT
INT_UNC	DOUBLE	= Array[*]	; O I 297.2 nm intensity uncertainties [kR]
LIMB	STRING	= Array[1]	; MAVEN orbit segment (inlimb, outlimb, periapse)
LYMAN	DOUBLE	= Array[1]	; Retrieved Lyman Alpha Flux [ph cm ⁻² s ⁻¹]
MONTH	STRING	= Array[1]	; Month
ORBIT	STRING	= Array[1]	; Orbit number
PARR	DOUBLE	= Array[15]	; CO2 partial pressure [Pa] derived from hydrostatic integration of CO2 density
PVAR	DOUBLE	= Array[15]	; Variance of CO2 partial pressure [Pa ²]
SCAN	STRING	= Array[1]	; Scan number
SFAC	DOUBLE	= Array[1]	; Forward Model Scale Factor [unitless]
SZA	DOUBLE	= Array[1]	; Solar Zenith Angle [deg]
T0	DOUBLE	= Array[1]	; Exospheric Temperature [K]
T0VAR	DOUBLE	= Array[1]	; Variance of exospheric temperature [K ²]
TARR	DOUBLE	= Array[15]	; Temperature [K] derived from hydrostatic integration of CO2 density
TVAR	DOUBLE	= Array[15]	; Variance of derived temperature [K ²]
YEAR	STRING	= Array[1]	; Year

*Arrays denoted with an asterisk vary in size from scan to scan (typically 21 elements)

For any questions regarding data access please contact the corresponding author:

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