

CuPID Science Data Variables

Descriptions generated on September 16, 2021

File	File Description	Variable Name	Data Product Description	Time Cadence
dosi	Microdosimeter data of energetic particles coaligned with the x-ray telescope	DosA_CR	Count Rate	Typically 10s. High resolution data up to 0.1s also available for special events
		DosB_CR	Count Rate	Typically 10s. High resolution data up to 0.1s also available for special events
		PA	Pitch angle [Rad]	Corresponds to Dos measurements above
ephm	Position and pointing data. Pointing presented in reference to the x-ray telescope	P_GSE	Position in geocentric solar ecliptic coordinates in earth radii	60s
		P_GSM	Position in geocentric solar mag coordinates in earth radii	60s
		P_MAG	Position in Magnetic Latitude and Magnetic Local Time	60s
		POINT	Pointing angle [Deg]	60s
mags	Magnetometer	B_GEO	Magnetometer data in geographic coordinates [nT]	Typically 60s. High resolution data up to 5s also available for special events
		B_GSM	Magnetometer data in geocentric solar magnetic coordinates [nT]	Typically 60s. High resolution data up to 5s also available for special events
		B_GSE	Magnetometer data in geocentric solar ecliptic coordinates [nT]	Typically 60s. High resolution data up to 5s also available for special events
srvy	Survey data	Xray_CR_SRVY	Count Rate in bucket photometer mode. No position sensing. Background subtracted.	10s

		Xray_CR_BG_SRVY	Background countrate	10s
		Xray_CR_RAW_SRVY	Bucket photometer countrate, no background subtraction	10s
		DosA_CR_SRVY	Count Rate	10s
		DosB_CR_SRVY	Count Rate	10s
xray		Pos_CEL	X-Ray Arrival Position in RA/Dec	Time tagged per arrival (variable).

NOTE: All files have quality flags (Flags_****). 0 is no warning (good data), 1 is a soft warning (good to use with caution), 2 is a hard warning (use at own risk).

For further description of the mission or the instruments please see

Walsh, B. M., et al. (2021). The Cusp Plasma Imaging Detector (CuPID) CubeSat Observatory: Mission overview. Journal of Geophysical Research: Space Physics, 126, e2020JA029015. <https://doi.org/10.1029/2020JA029015>

Atz instrument paper reference

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