

ImageMeta

Description: Contains metadata related to an individual OTA image that comprises a portion of the full exposure. The characterization of the image quality, the detrends applied, and the astrometric solution from the raw pixels (X,Y) to the detector focal plane (L,M) is provided.

Name	Unit	Data Type	Size	Default Value	Description
imageID	dimensionless	BIGINT	8	NA	Unique image identifier. Constructed as (100 * frameID + ccdID).
frameID	dimensionless	INT	4	NA	Unique frame/exposure identifier.
ccdID	dimensionless	SMALLINT	2	NA	OTA identifier based on location in the focal plane, specific to an individual device.
photoCalID	dimensionless	INT	4	NA	Photometric calibration identifier. Details in the PhotoCal table.
filterID	dimensionless	TINYINT	1	NA	Filter identifier. Details in the Filter table.
bias	adu	REAL	4	-999	OTA bias level.
biasScat	adu	REAL	4	-999	Scatter in bias level.
sky	Janskys/arcsec^2	REAL	4	-999	Mean sky brightness.
skyScat	Janskys/arcsec^2	REAL	4	-999	Scatter in mean sky brightness.
nDetect	dimensionless	INT	4	-999	Number of detections in this image.
detectionThreshold	magnitudes	REAL	4	-999	Reference magnitude for detection efficiency calculation.
astroScat	arcsec	REAL	4	-999	Measurement of the calibration (not astrometric error) defined to be the sum in quadrature of the standard deviations in the X and Y directions.
photoScat	magnitudes	REAL	4	-999	Photometric scatter relative to reference catalog.
nAstroRef	dimensionless	INT	4	-999	Number of astrometric reference sources.
nPhotoRef	dimensionless	INT	4	-999	Number of photometric reference sources.
recalAstroScatX	arcsec	REAL	4	-999	Measurement of the re-calibration (not astrometric error) in the X direction.
recalAstroScatY	arcsec	REAL	4	-999	Measurement of the re-calibration (not astrometric error) in the Y direction.
recalNAstroStars	dimensionless	INT	4	-999	Number of astrometric reference sources used in recalibration.
recalphotoScat	magnitudes	REAL	4	-999	Photometric scatter relative to reference catalog.
recalNPhotoStars	dimensionless	INT	4	-999	Number of astrometric reference sources used in recalibration.
nAxis1	pixels	SMALLINT	2	-999	Image dimension in x.
nAxis2	pixels	SMALLINT	2	-999	Image dimension in y.
psfModelID	dimensionless	INT	4	-999	PSF model identifier.
psfFWHM	arcsec	REAL	4	-999	Mean PSF full width at half maximum at image center.
psfWidMajor	arcsec	REAL	4	-999	PSF major axis FWHM at image center.
psfWidMinor	arcsec	REAL	4	-999	PSF minor axis FWHM at image center.
psfTheta	degrees	REAL	4	-999	PSF major axis orientation at image center.
momentMajor	arcsec	REAL	4	-999	PSF major axis second moment.
momentMinor	arcsec	REAL	4	-999	PSF minor axis second moment.
momentM2C	arcsec^2	REAL	4	-999	Moment M2C = $M_{xx} - M_{yy}$.
momentM2S	arcsec^2	REAL	4	-999	Moment M2S = $2 * M_{xy}$.
momentM3	arcsec^2	REAL	4	-999	trefoil second moment = $\sqrt{(M_{xxx} - 3 * M_{xyy})^2 + (3 * M_{xxy} - M_{yyy})^2}$.
momentM4	arcsec^2	REAL	4	-999	quadrupole second moment = $\sqrt{(M_{xxxx} - 6 * M_{xxyy} + M_{yyyy})^2 + (4 * M_{xxxy} - 4 * M_{xyyy})^2}$.
apResid	magnitudes	REAL	4	-999	Residual of aperture corrections.
dapResid	magnitudes	REAL	4	-999	Scatter of aperture corrections.

detectorID	dimensionless	VARCHAR(100)	100		Identifier for each individual OTA detector device.
qaFlags	dimensionless	BIGINT	8	-999	Q/A flags for this image. Values listed in ImageFlags.
detrend1	dimensionless	VARCHAR(100)	100		Identifier for detrend image 1, the static mask.
detrend2	dimensionless	VARCHAR(100)	100		Identifier for detrend image 2, the dark model.
detrend3	dimensionless	VARCHAR(100)	100		Identifier for detrend image 3, the flat.
detrend4	dimensionless	VARCHAR(100)	100		Identifier for detrend image 4, the fringe.
detrend5	dimensionless	VARCHAR(100)	100		Identifier for detrend image 5, the noisemap.
detrend6	dimensionless	VARCHAR(100)	100		Identifier for detrend image 6, the non-linearity correction.
detrend7	dimensionless	VARCHAR(100)	100		Identifier for detrend image 7, the video dark model.
detrend8	dimensionless	VARCHAR(100)	100		Identifier for detrend image 8.
photoZero	magnitudes	REAL	4	-999	Locally derived photometric zero point for this image.
ctype1	dimensionless	VARCHAR(100)	100		Name of astrometric projection in focal plane L.
ctype2	dimensionless	VARCHAR(100)	100		Name of astrometric projection in focal plane M.
crval1	focal plane pixels	FLOAT	8	-999	Focal plane L corresponding to reference pixel.
crval2	focal plane pixels	FLOAT	8	-999	Focal plane M corresponding to reference pixel.
crpix1	raw pixels	FLOAT	8	-999	Reference pixel for focal plane L.
crpix2	raw pixels	FLOAT	8	-999	Reference pixel for focal plane M.;
cdelt1	focal plane pixels /raw pixel	FLOAT	8	-999	Pixel scale in focal plane x.
cdelt2	focal plane pixels /raw pixel	FLOAT	8	-999	Pixel scale in focal plane y.
pc001001	dimensionless	FLOAT	8	-999	Linear transformation matrix element between image pixel x and focal plane pixel L.
pc001002	dimensionless	FLOAT	8	-999	Linear transformation matrix element between image pixel y and focal plane pixel L.
pc002001	dimensionless	FLOAT	8	-999	Linear transformation matrix element between image pixel x and focal plane pixel M.
pc002002	dimensionless	FLOAT	8	-999	Linear transformation matrix element between image pixel y and focal plane pixel M.
polyOrder	dimensionless	TINYINT	1	255	Polynomial order of astrometric fit between the image pixels and the detector focal plane.
pca1x3y0	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^3 y^0$) for focal plane L.
pca1x2y1	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^2 y^1$) for focal plane L.
pca1x1y2	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^1 y^2$) for focal plane L.
pca1x0y3	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^0 y^3$) for focal plane L.
pca1x2y0	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^2 y^0$) for focal plane L.
pca1x1y1	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^1 y^1$) for focal plane L.
pca1x0y2	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^0 y^2$) for focal plane L.
pca2x3y0	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^3 y^0$) for focal plane M.
pca2x2y1	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^2 y^1$) for focal plane M.
pca2x1y2	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^1 y^2$) for focal plane M.
pca2x0y3	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^0 y^3$) for focal plane M.
pca2x2y0	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^2 y^0$) for focal plane M.
pca2x1y1	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^1 y^1$) for focal plane M.
pca2x0y2	dimensionless	FLOAT	8	-999	Polynomial coefficient for the astrometric fit component ($x^0 y^2$) for focal plane M.
processingVersion	dimensionless	TINYINT	1	NA	Data release version.

