

# KIC 006720363

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006720363-01	OBS	No	2.311734	133.478603	2.3	24.982	8.2	0.9	1.73	6440	0.28	3539.04

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006720363-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_FEW_DIFFS

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

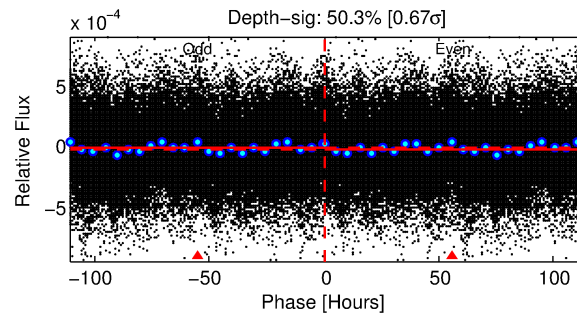
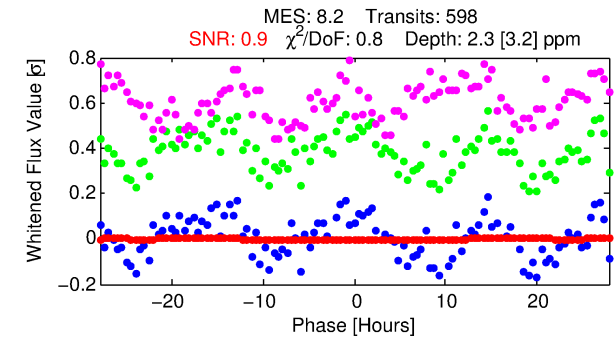
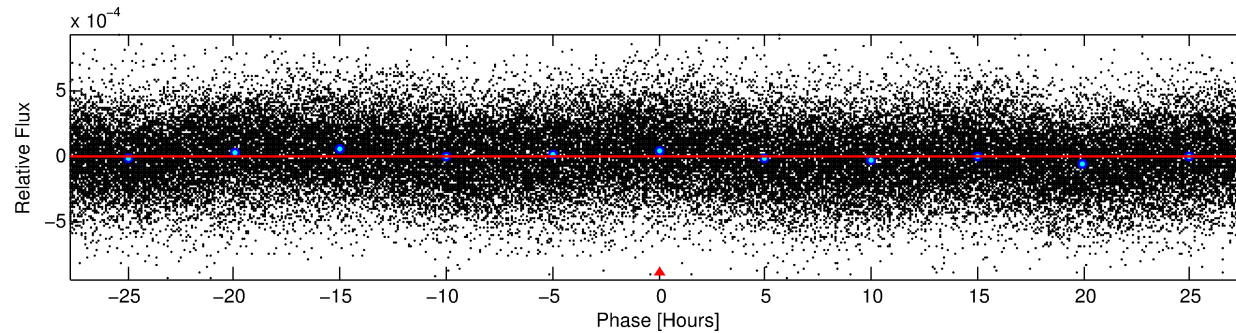
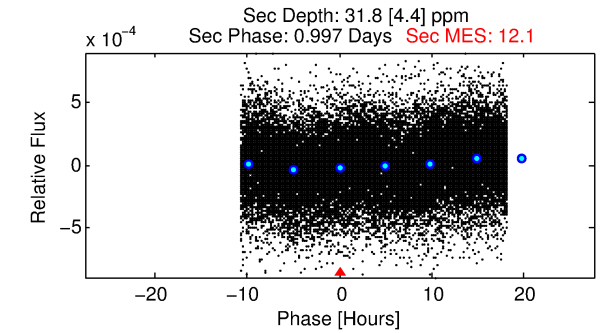
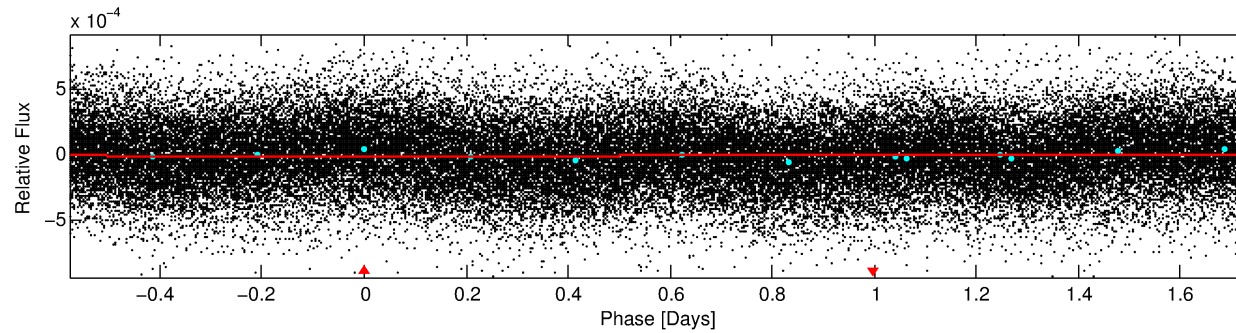
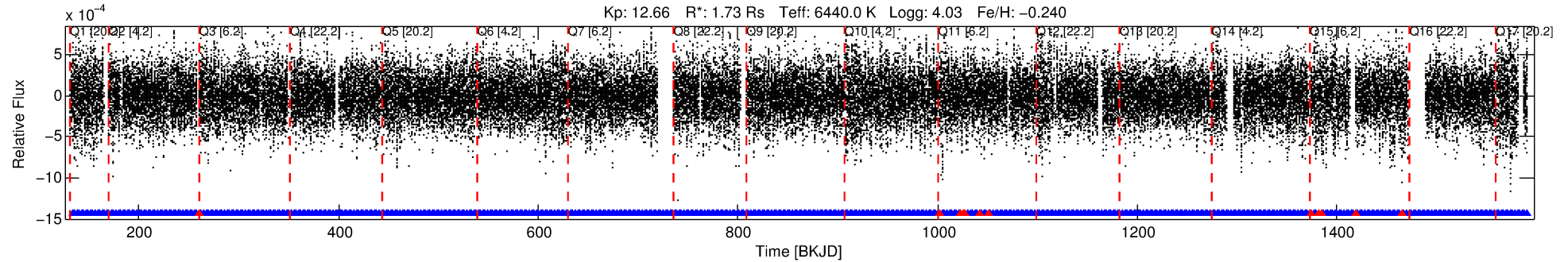
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006720363-01

No Significant Match Found

# DV One-Page Summary

KIC: 6720363 Candidate: 1 of 1 Period: 2.312 d



## DV Fit Results:

Period = 2.31173 [0.00048] d  
Epoch = 133.4786 [0.0955] BKJD  
Rp/R\* = 0.0015 [0.0092]  
a/R\* = 1.01 [0.61]  
b = 0.64 [32.86]  
Seff = 3539.04 [1891.06]  
Teq = 1967 [263] K  
Rp = 0.28 [1.73] Re  
a = 0.0361 [0.0117] AU  
Ag = 291.83 [3611.77] [0.08σ]  
Teffp = 12568 [38854] K [0.27σ]

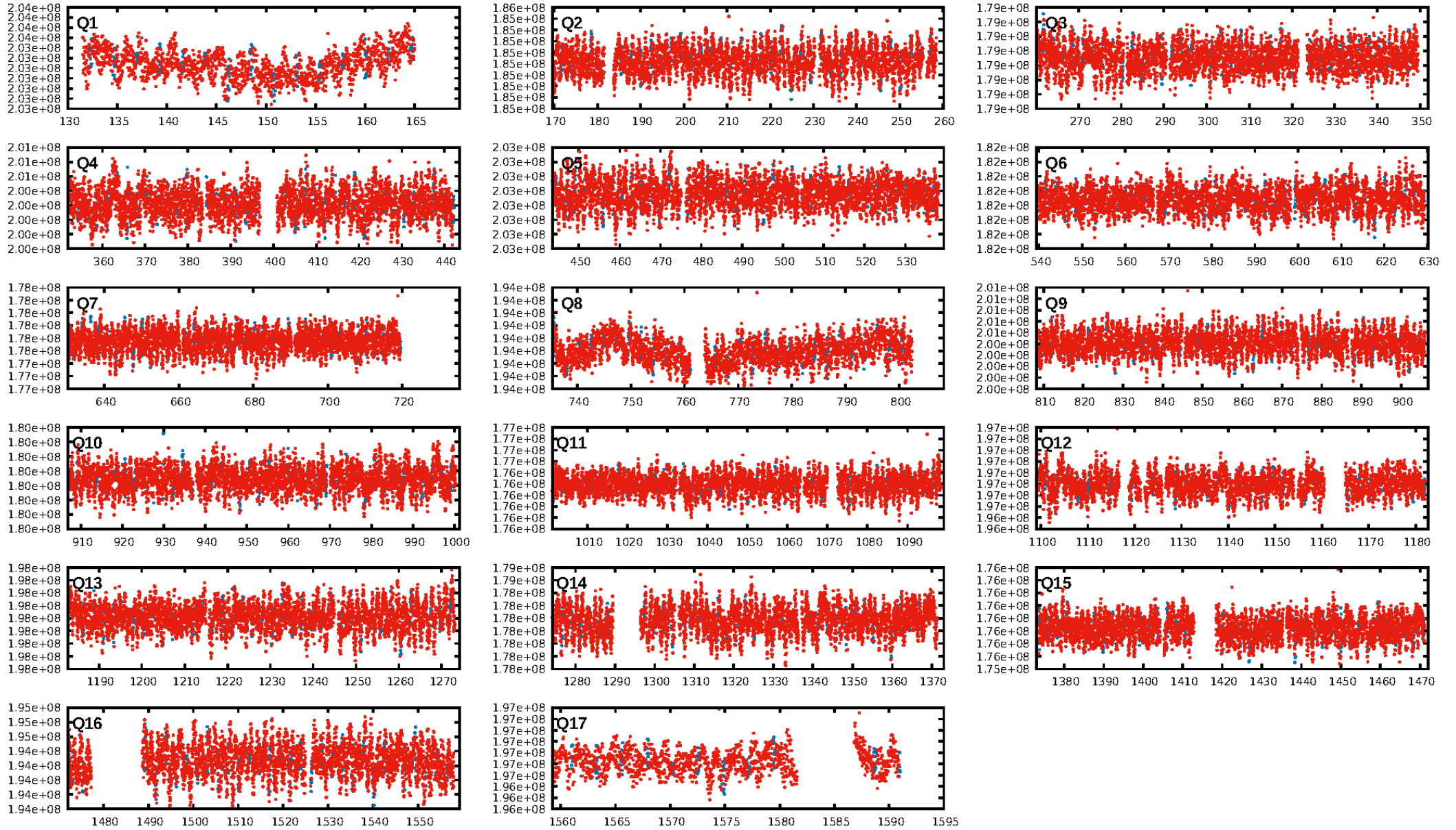
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-fgt: 0.98 [559/571]  
GhostDiagnostic-chr: N/A  
Centroid-sig: N/A  
Centroid-so: N/A  
OotOffset-rm: N/A  
KicOffset-rm: N/A  
OotOffset-st: 0/0/0/0 [0]  
KicOffset-st: 0/0/0/0 [0]  
DiffImageQuality-fgm: N/A  
DiffImageOverlap-fno: 1.00 [17/17]

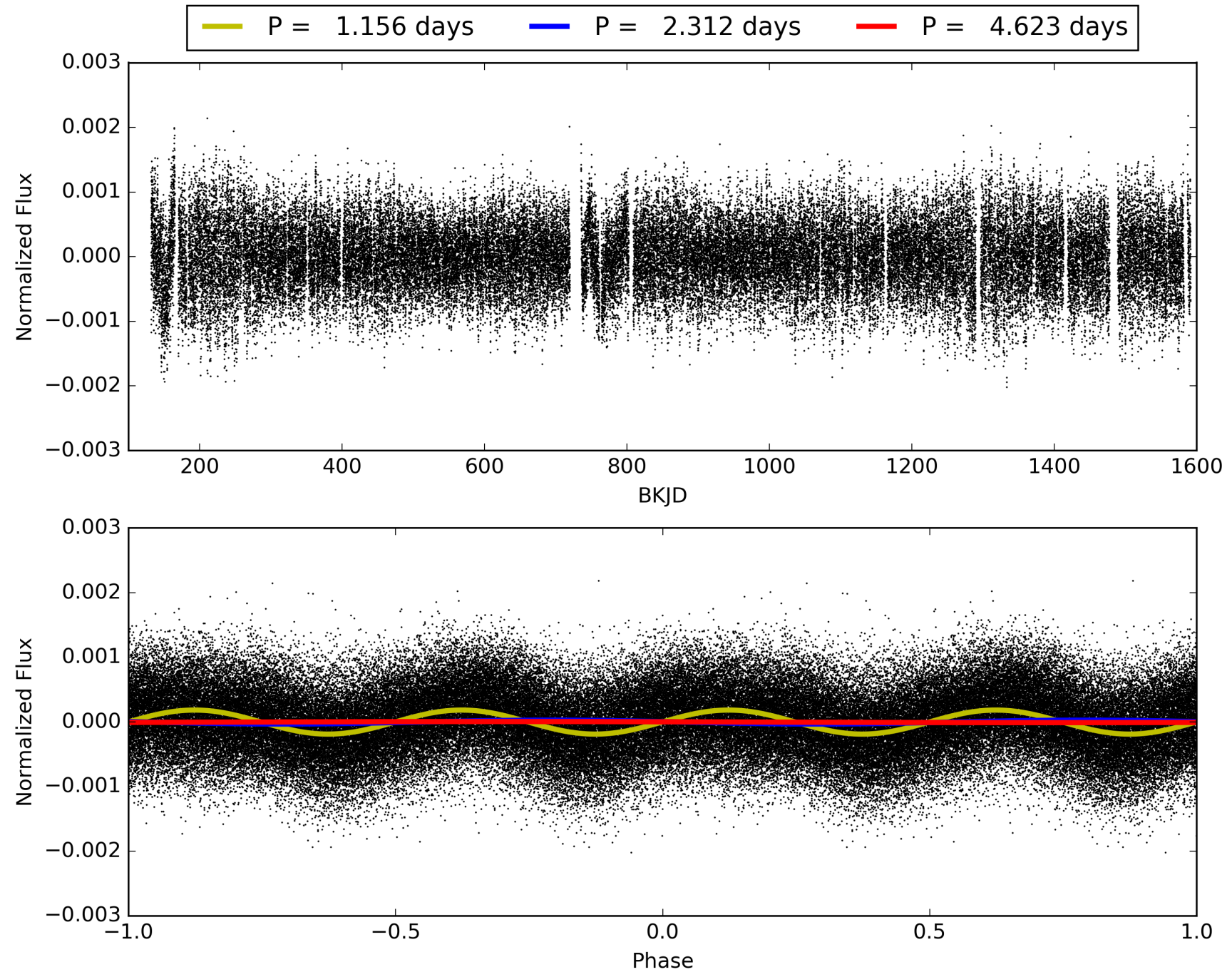
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:14:18 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006720363-01, PDC Light Curves

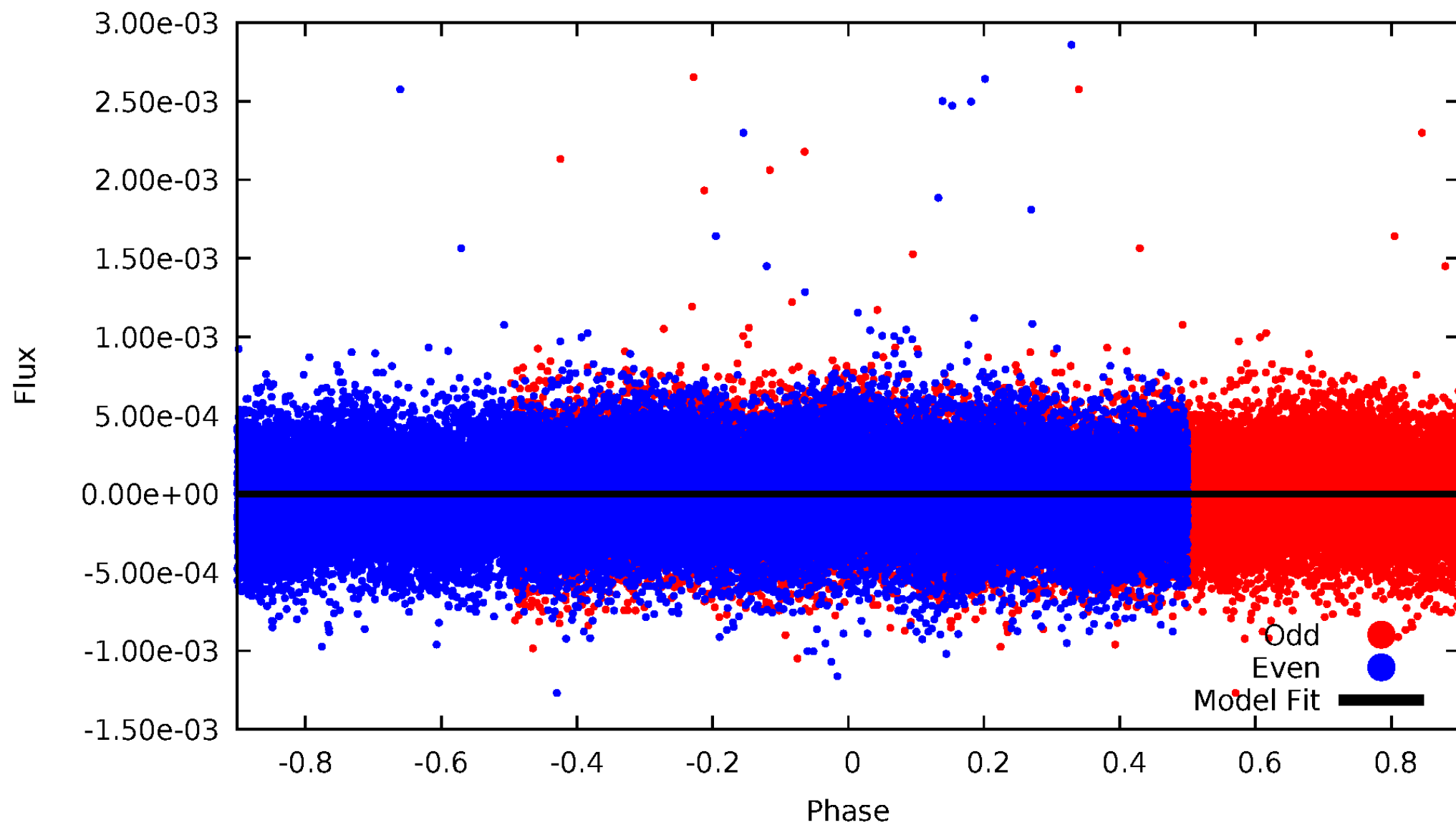


TCE 006720363-01



# DV Odd/Even

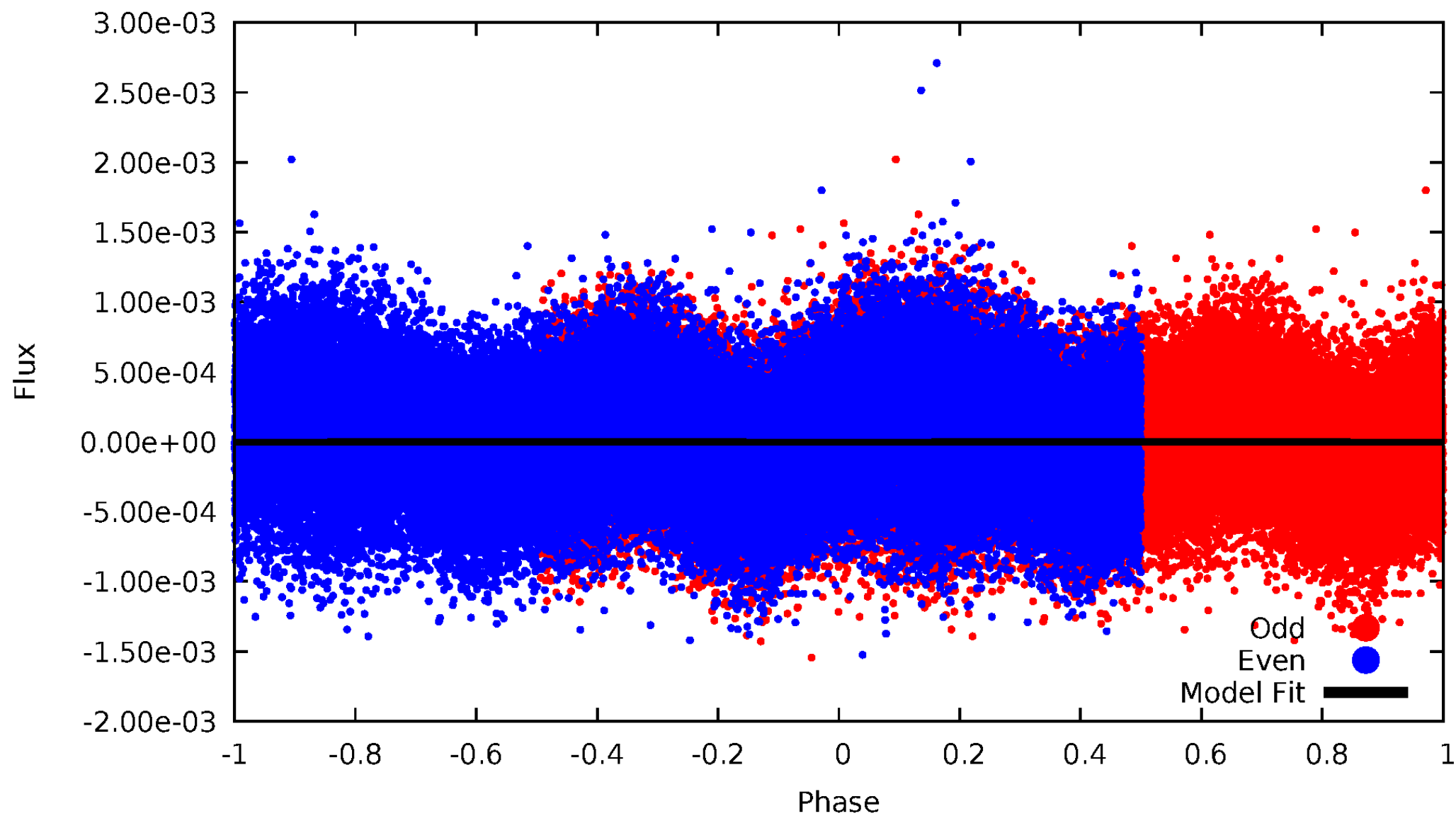
TCE 006720363-01



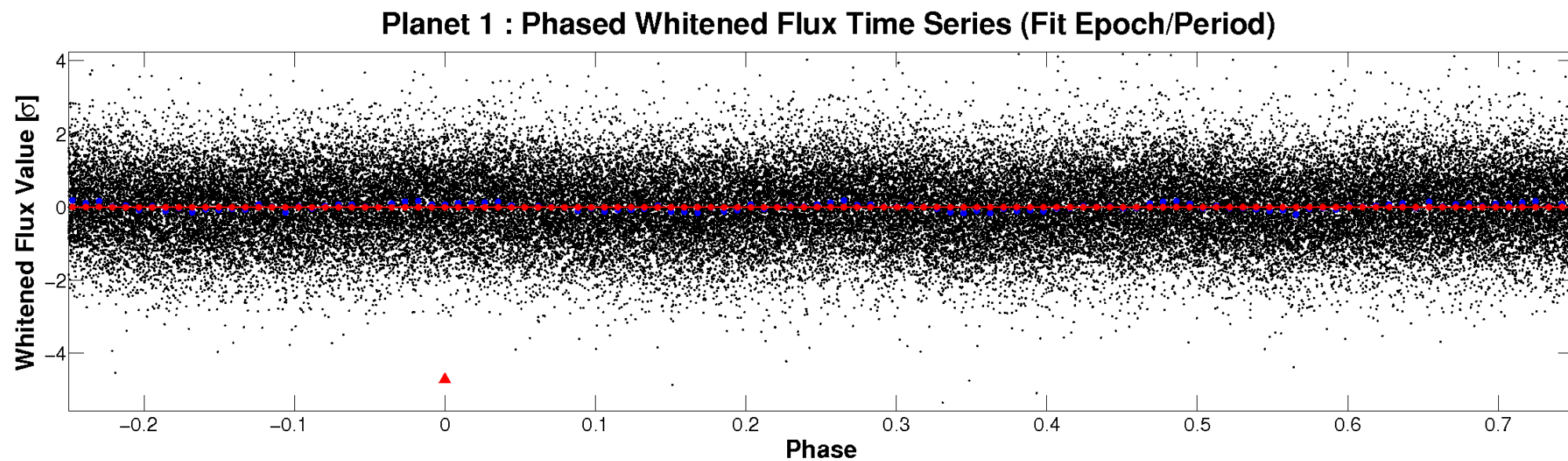
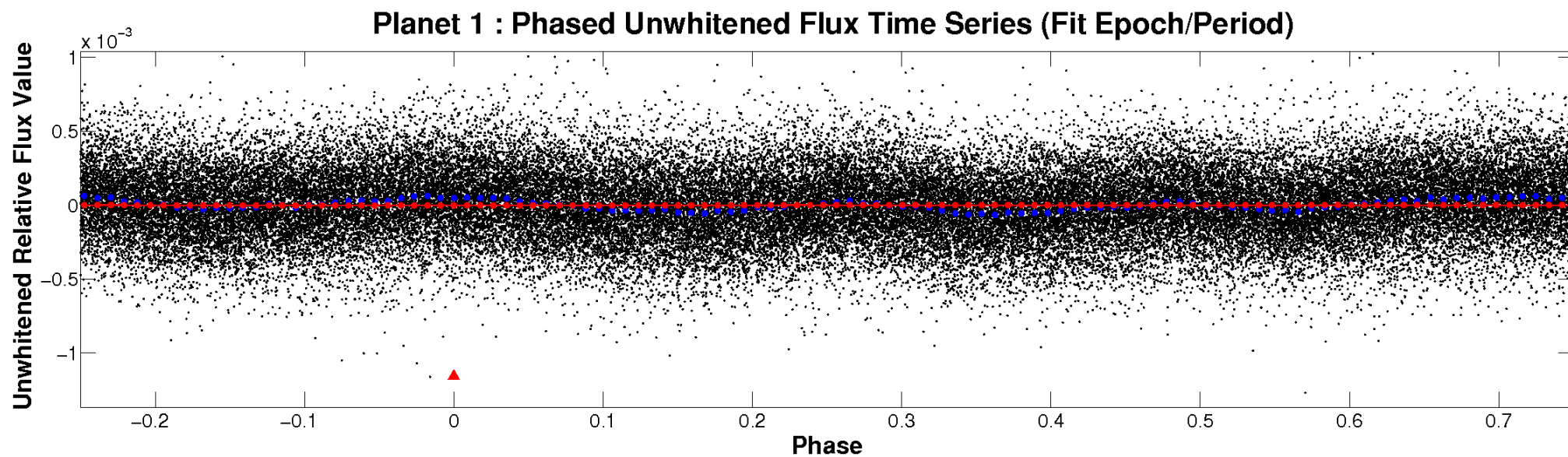


# ALT Odd/Even

TCE 006720363-01

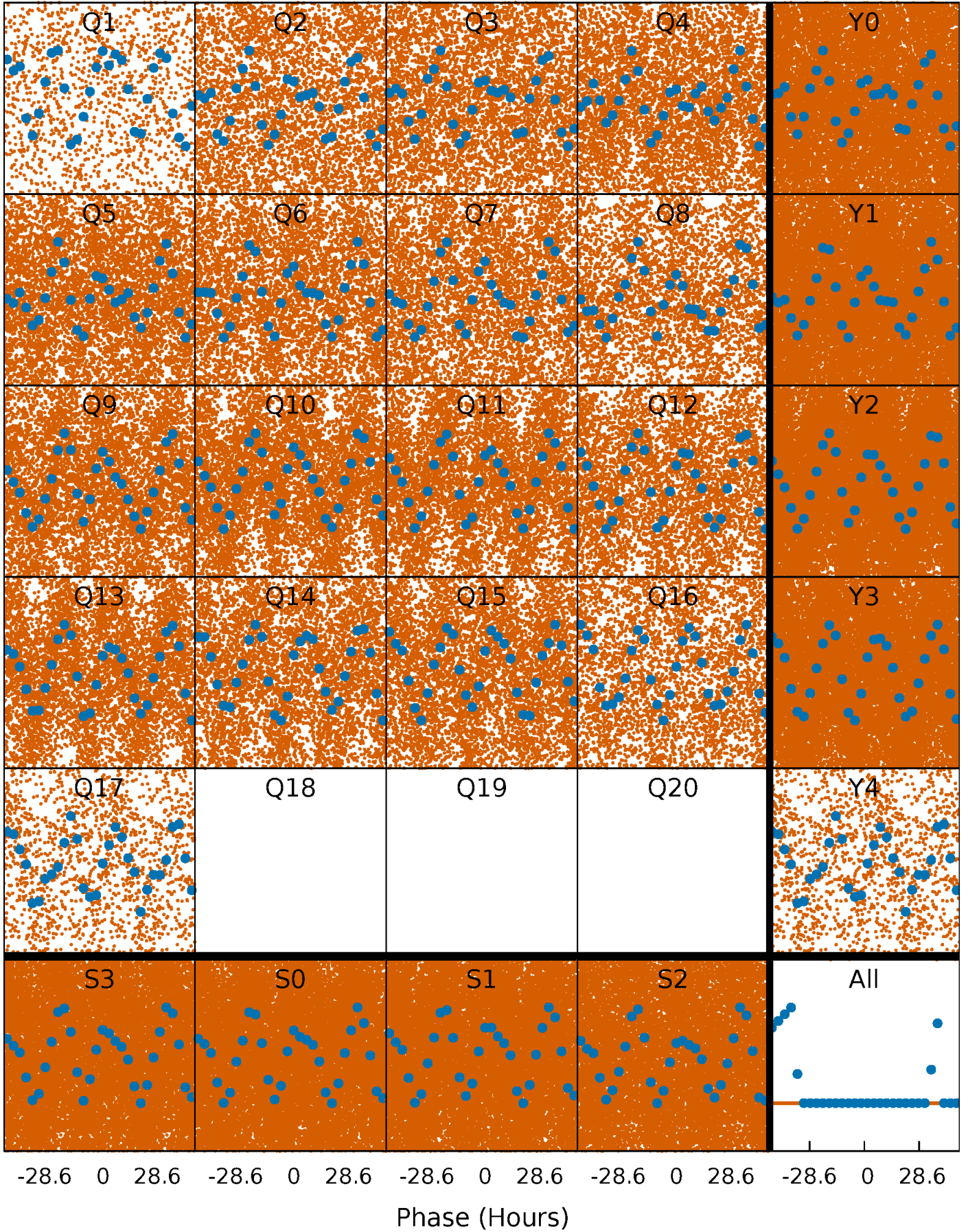


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

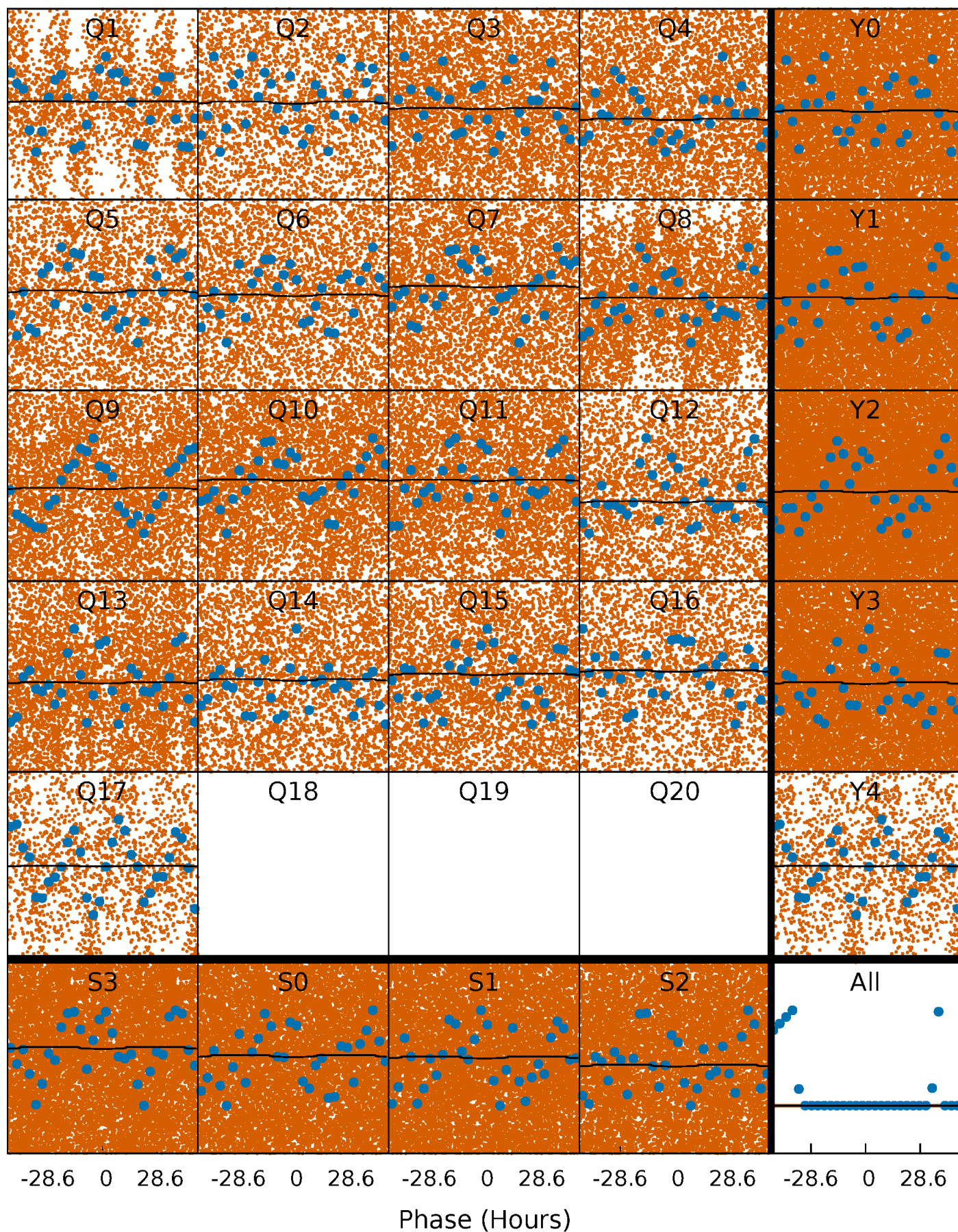
TCE 006720363-01 P= 2.311734 Days  $T_0=133.478603$  (BKJD)





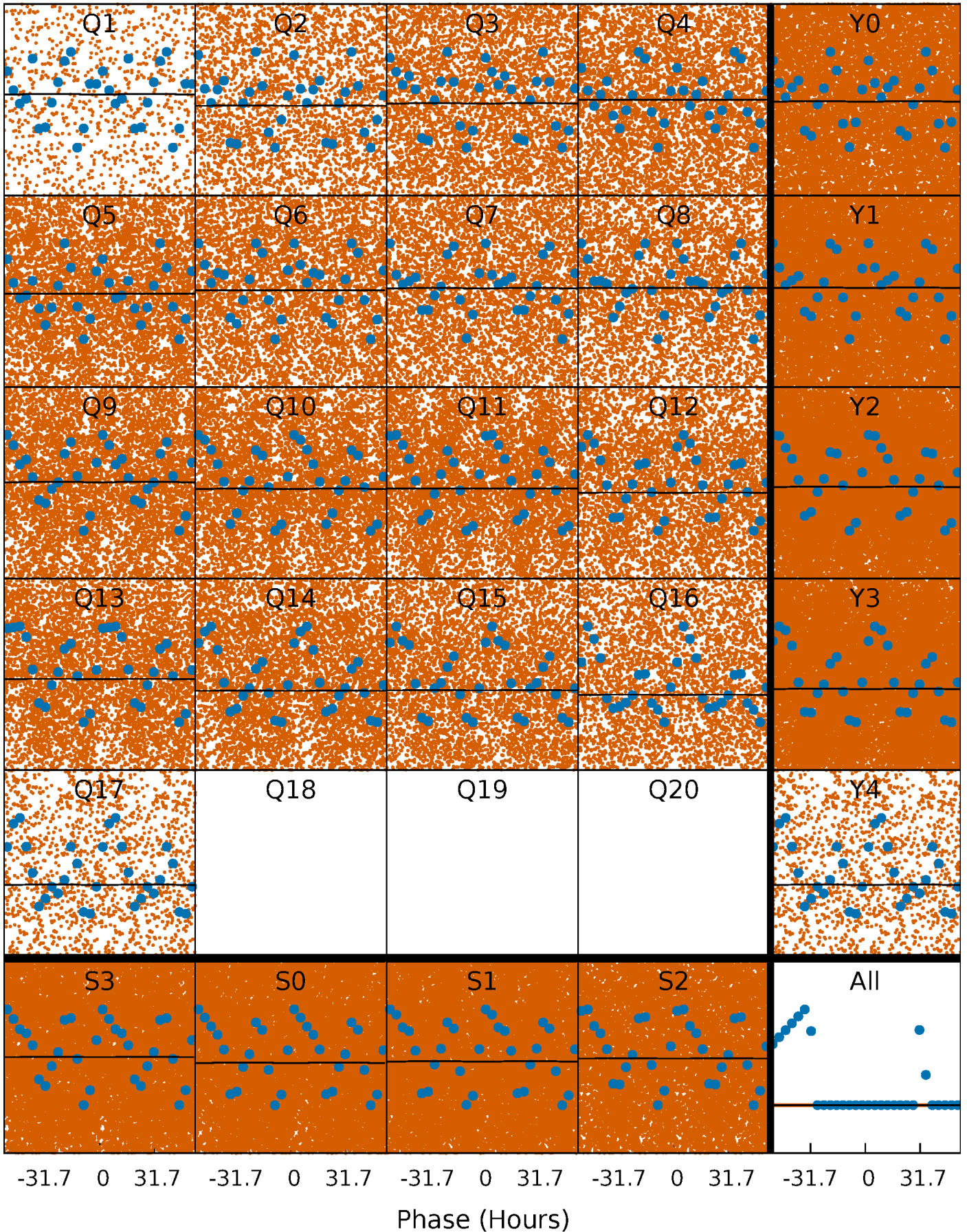
# DV Quarter-Phased Transit Curves

TCE 006720363-01 P= 2.311734 Days  $T_0=133.478603$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006720363-01 P= 2.311995 Days  $T_0=133.373317$  (BKJD)

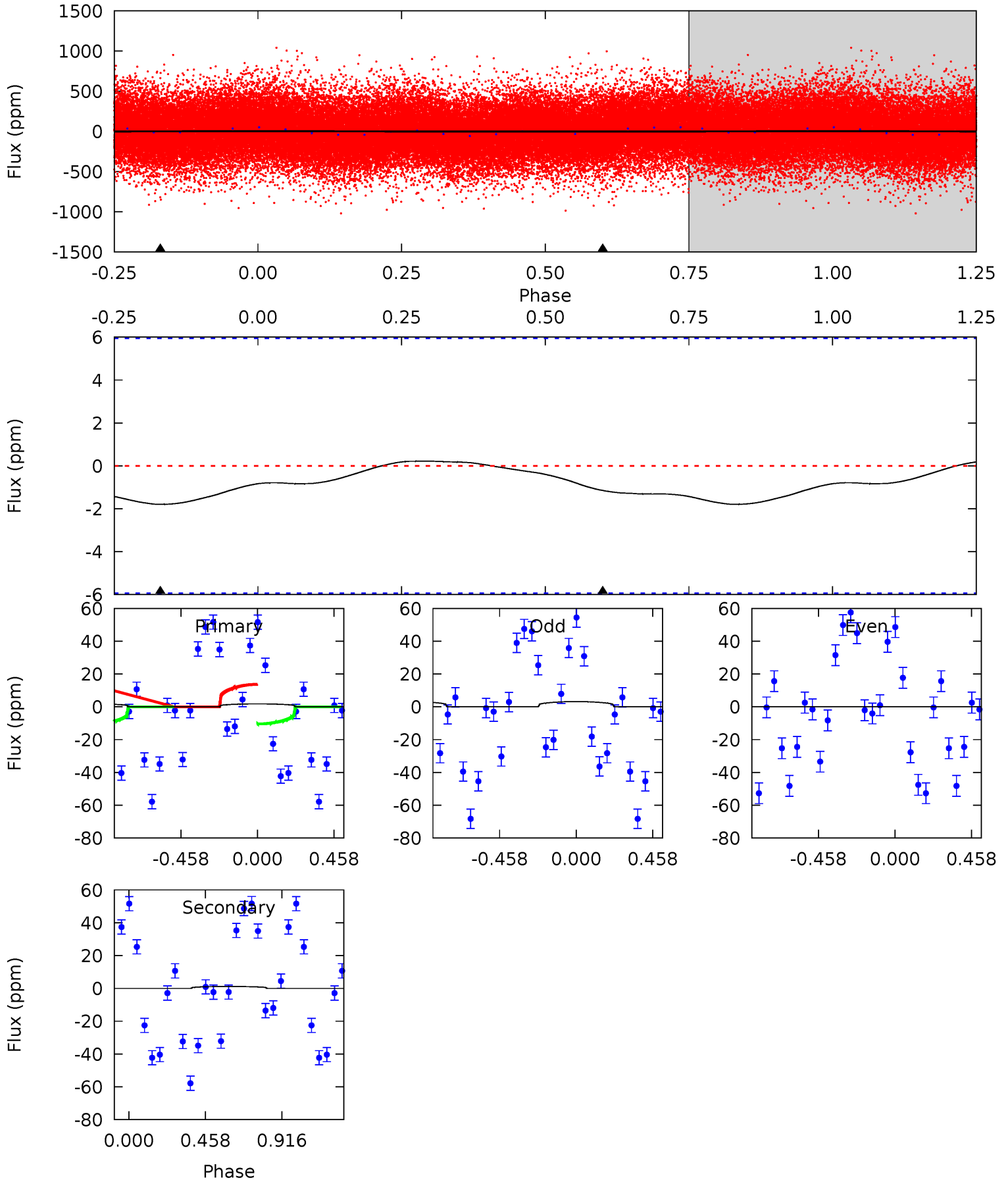




# DV Model-Shift Uniqueness Test

006720363-01, P = 2.311734 Days, E = 131.166869 Days

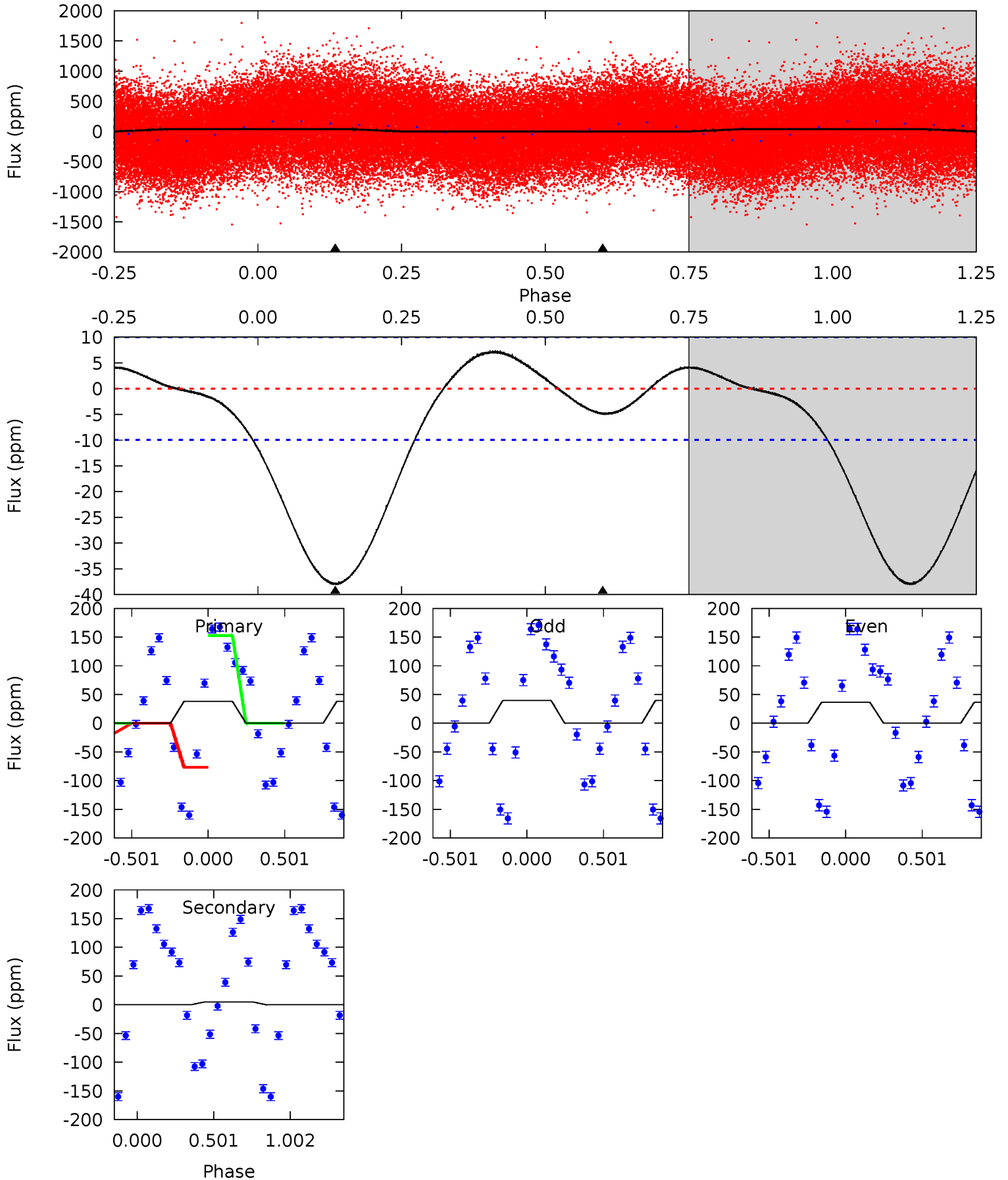
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.27	0.82	0	0	4.23	0.74	0.14	1.27	1.27	0.82	0.82	1.09	0.93	0.11	1.13



# Alt Model-Shift Uniqueness Test

006720363-01, P = 2.311995 Days, E = 131.061322 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	2.06	0	0	4.21	0.67	0.94	16.1	16.1	2.06	2.06	0.70	5.36	0.16	17.0





### Stellar Parameters For KIC 006720363

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6440^{+162}_{-194}$	$4.032^{+0.306}_{-0.165}$	$-0.240^{+0.250}_{-0.300}$	$1.732^{+0.477}_{-0.583}$	$1.177^{+0.188}_{-0.169}$	$0.319^{+0.712}_{-0.139}$
	+3%/-3%	+8%/-4%	+104%/-125%	+28%/-34%	+16%/-14%	+223%/-44%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 006720363-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-1 \pm 1$	$1.35^{+1.37}_{-0.91}$	$2712^{+221}_{-242}$	$-1838^{+6045}_{-1207}$	$0.295^{+3.159}_{-0.363}$
Alt.	$-5 \pm 2$	$1.15^{+1.38}_{-0.80}$	$2717^{+217}_{-251}$	$3923^{+2847}_{-1355}$	$2.564^{+23.009}_{-2.150}$

$T_{\text{max}}$  = Theoretical Maximum Planetary Temperature

$T_{\text{obs}}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{\text{obs}}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{\text{obs}} \gg T_{\text{max}}$  AND  $A_{\text{obs}} \gg 1.0$

## DV Centroid Data

Supplemental centroid analysis for 006720363-01. Kepler magnitude: 12.66. Transit SNR 0.87

There are 0 quarters with good PRF difference image offsets

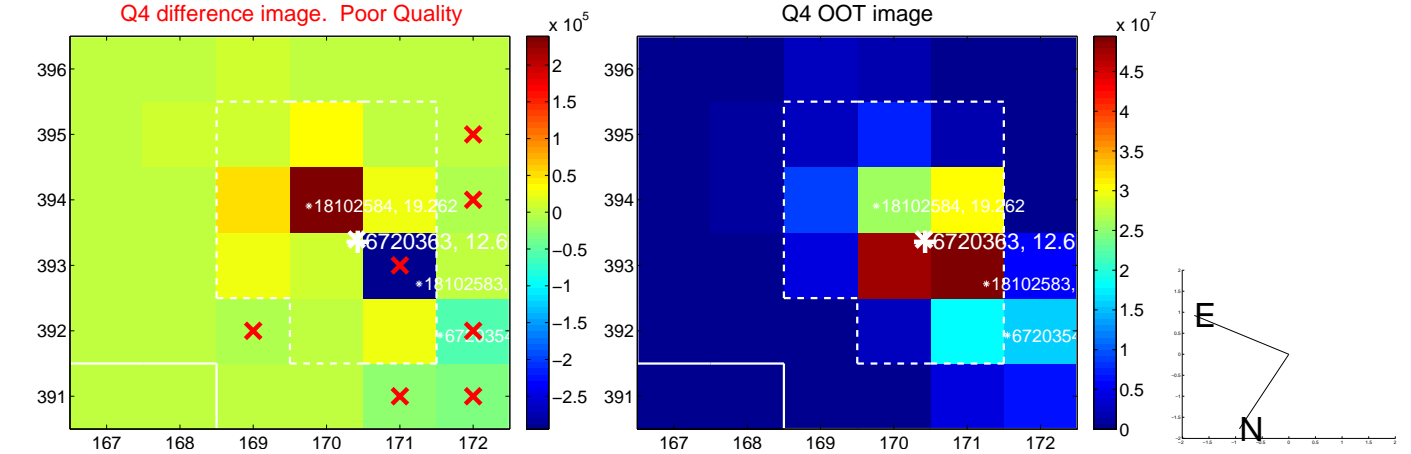
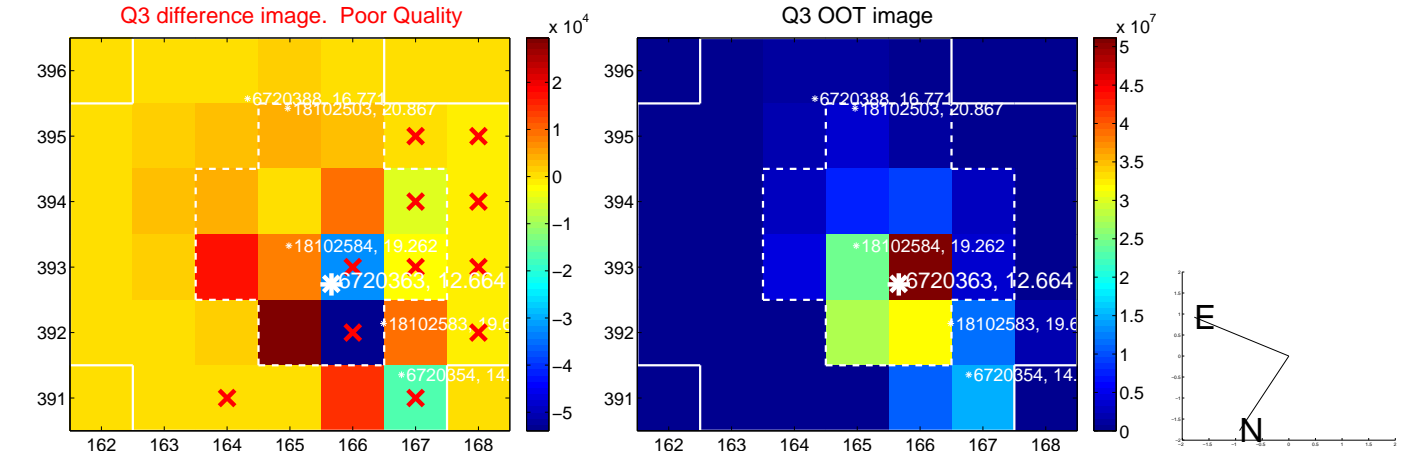
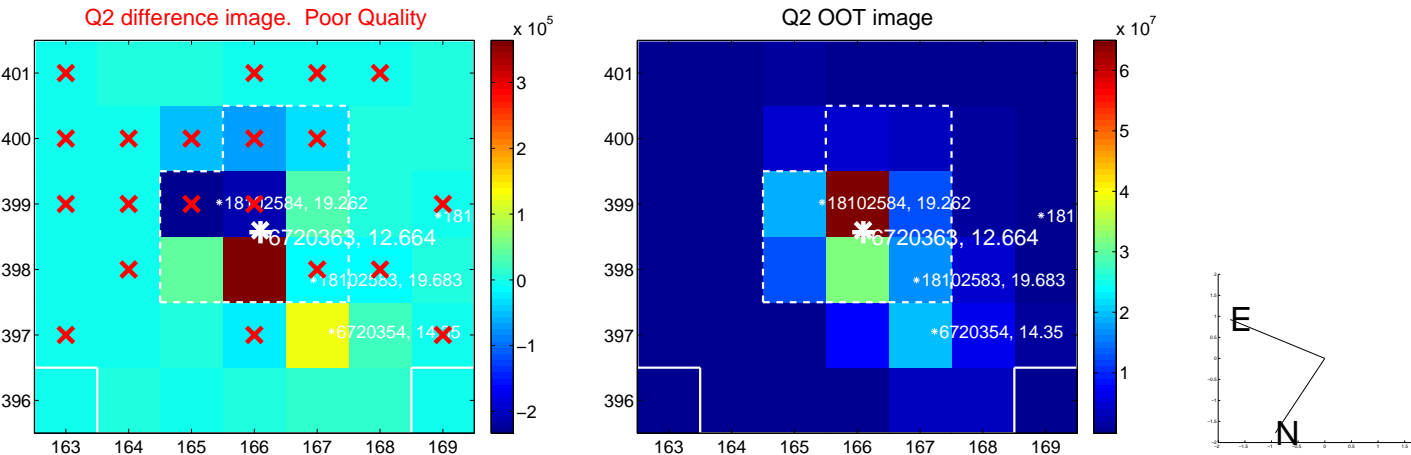
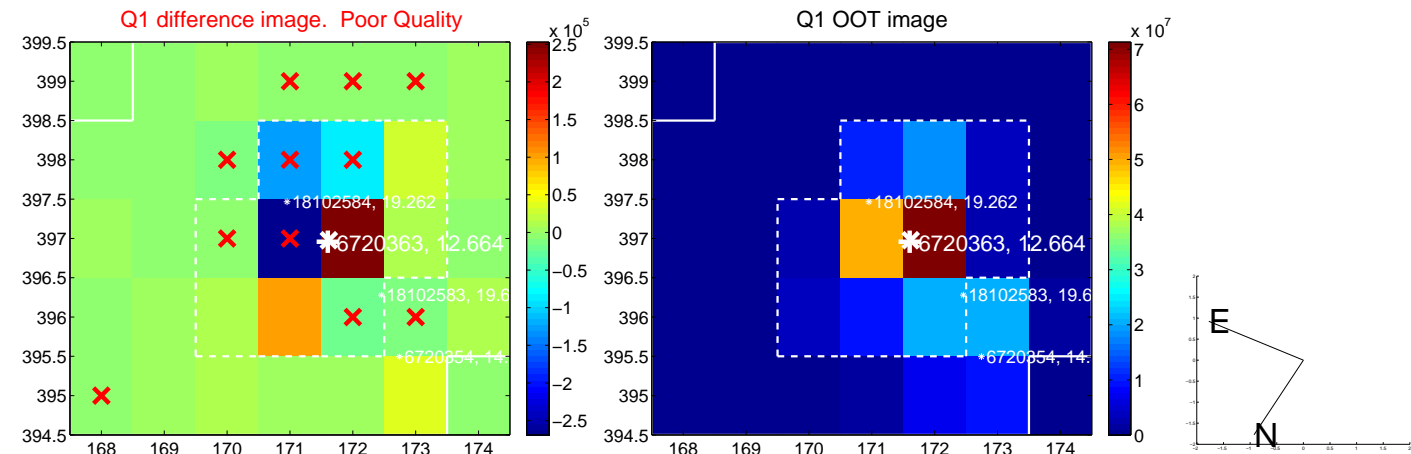
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—

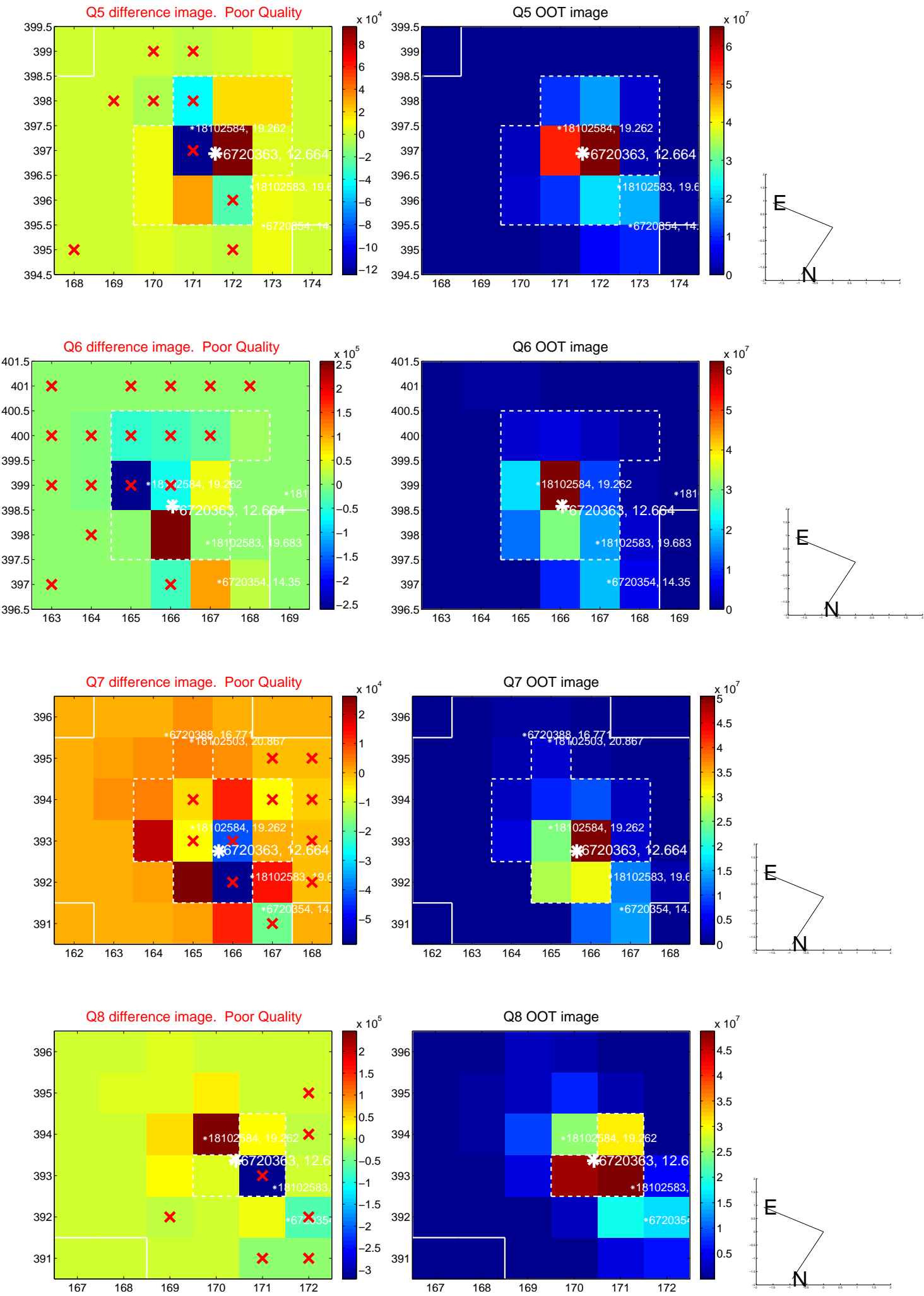


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

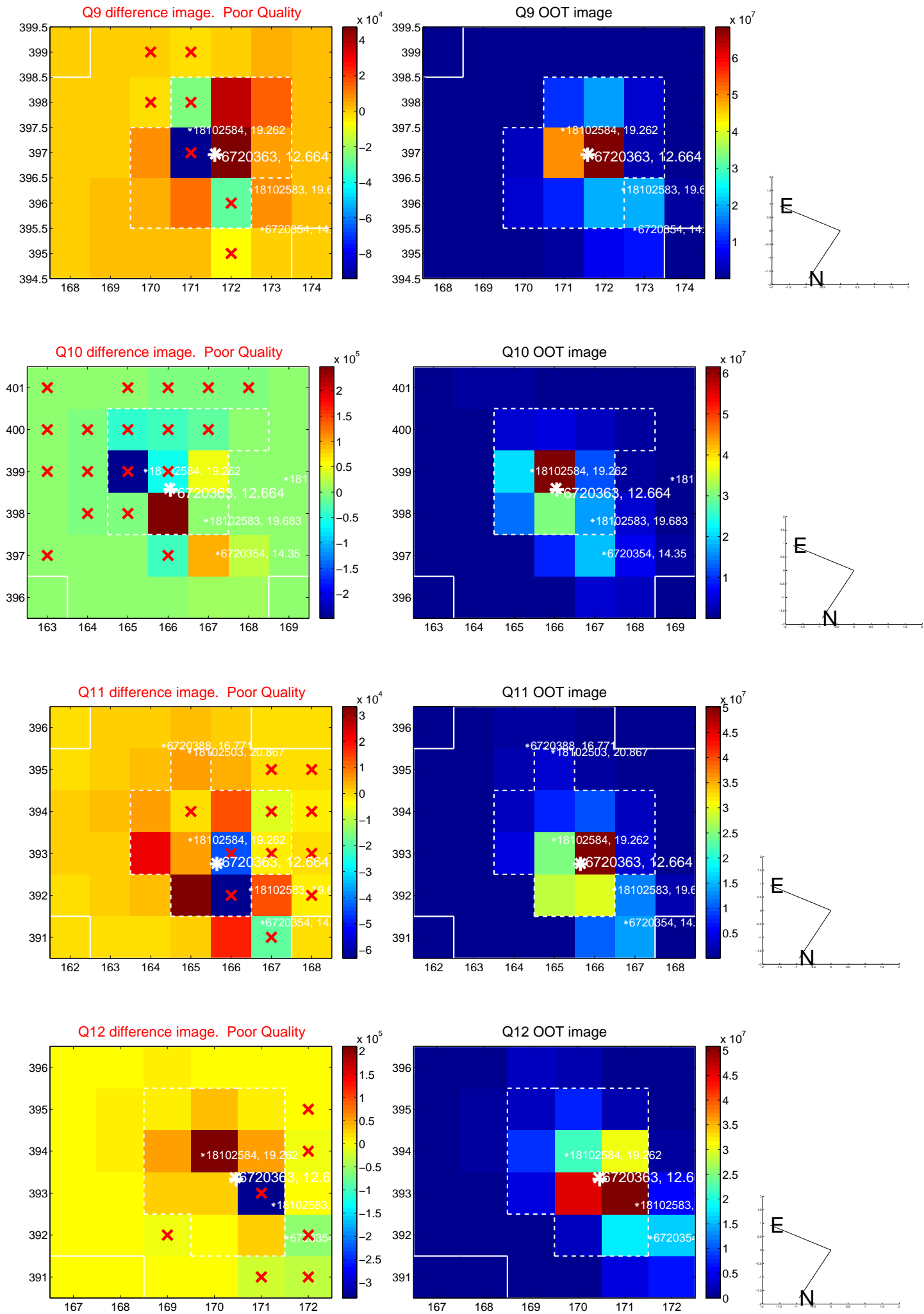


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

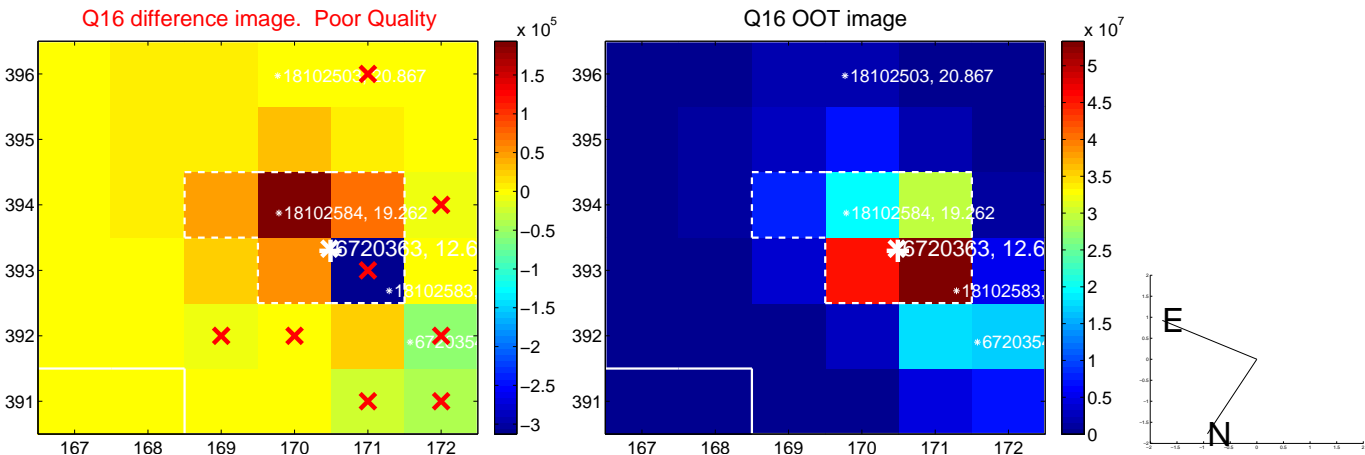
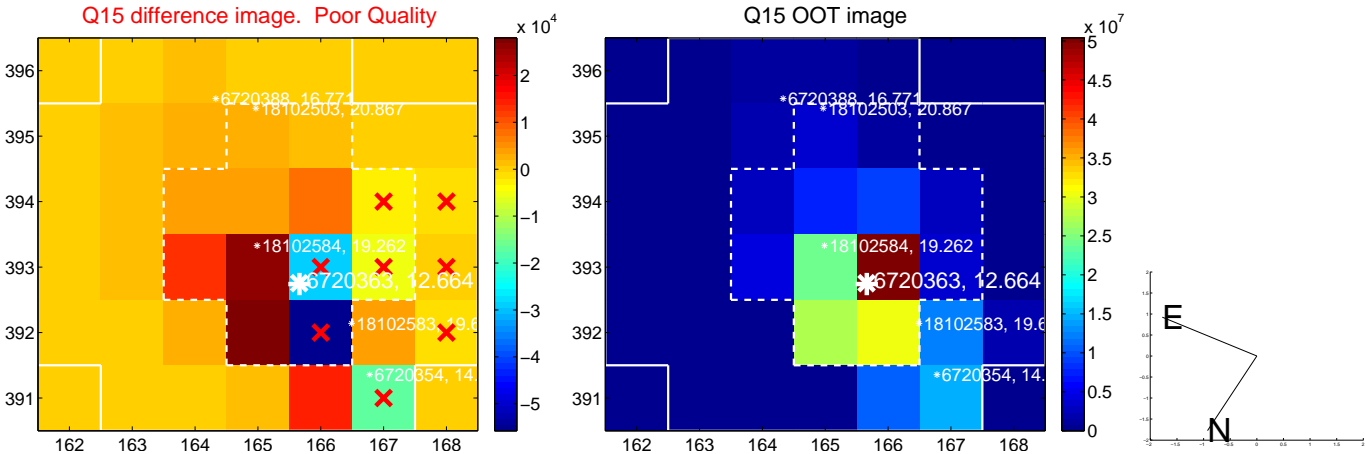
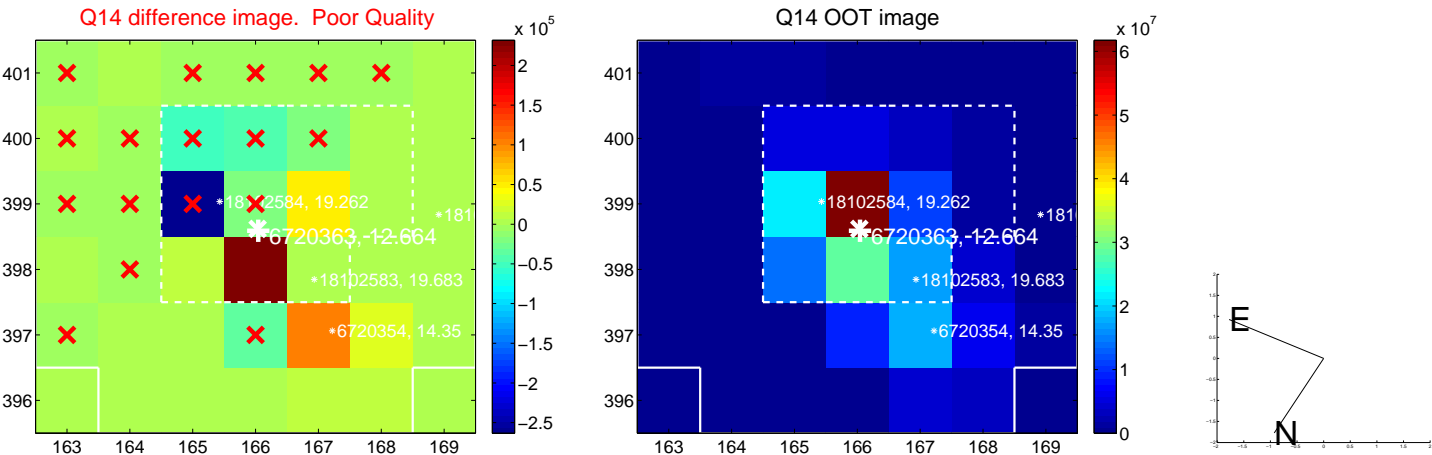
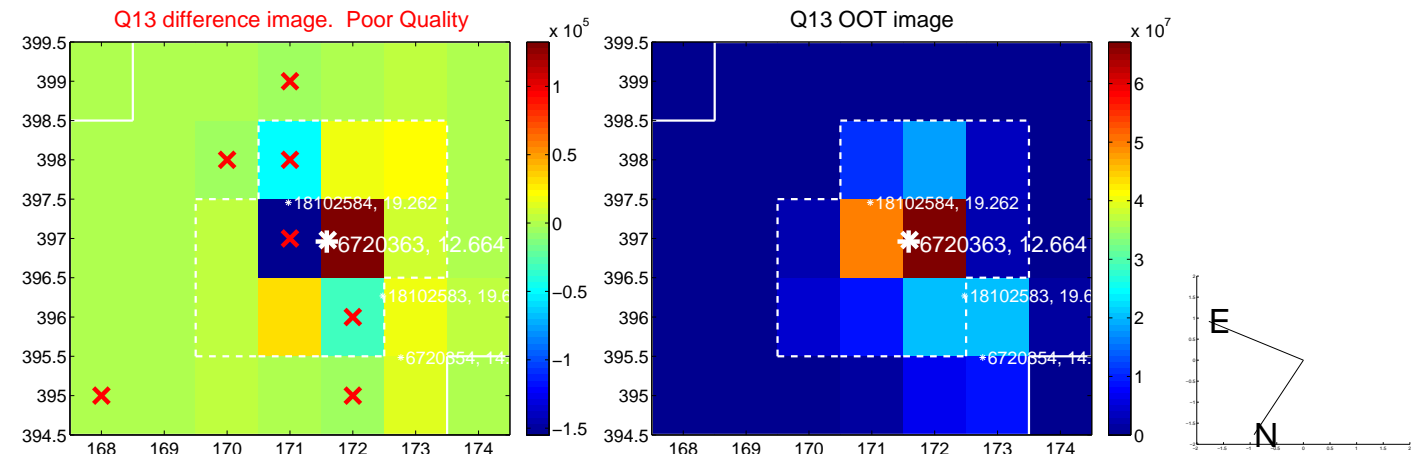




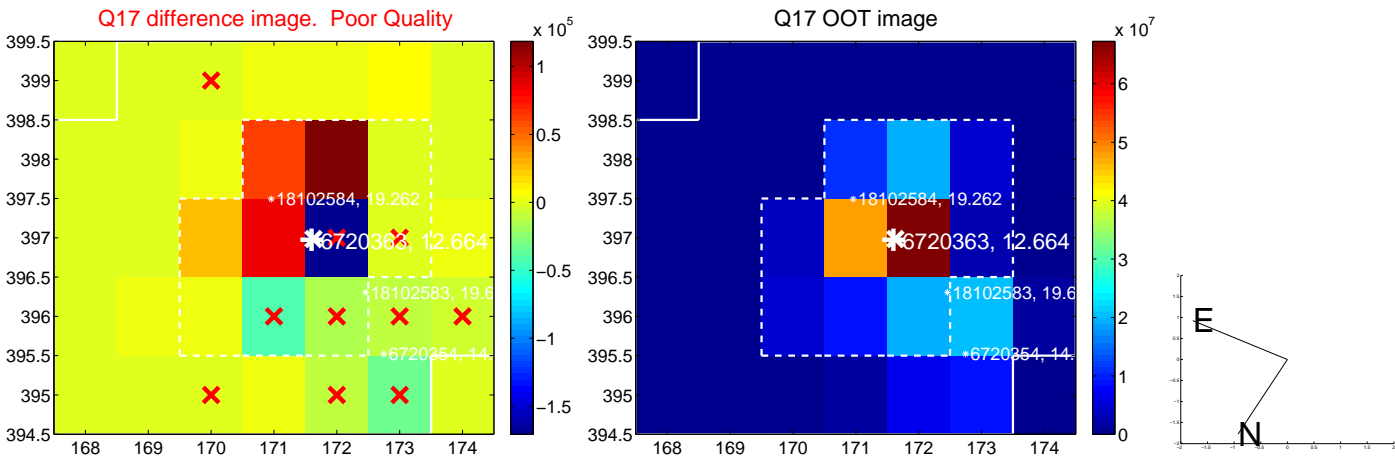
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

