

# KIC 006614492

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006614492-01	OBS	No	1.460515	132.413548	14.7	3.282	8.3	8.1	1.88	7606	0.86	12104.60

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006614492-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

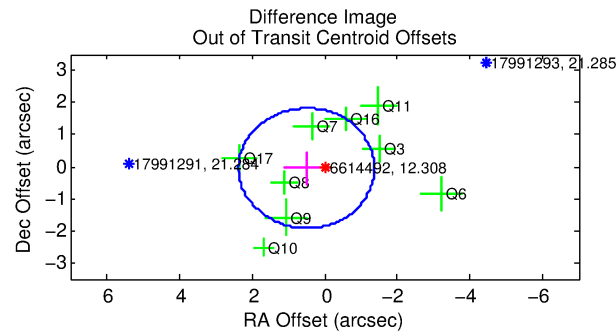
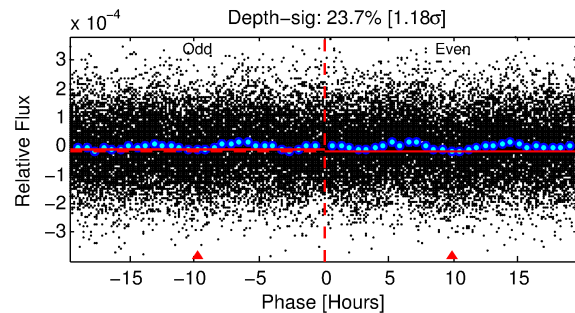
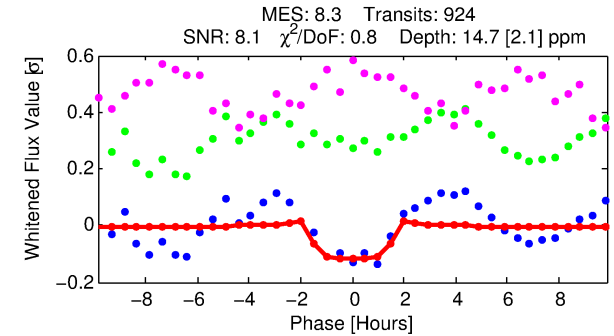
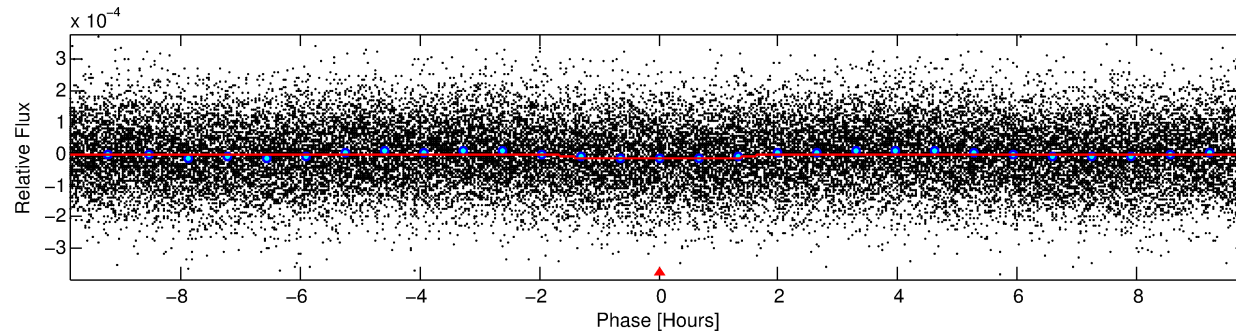
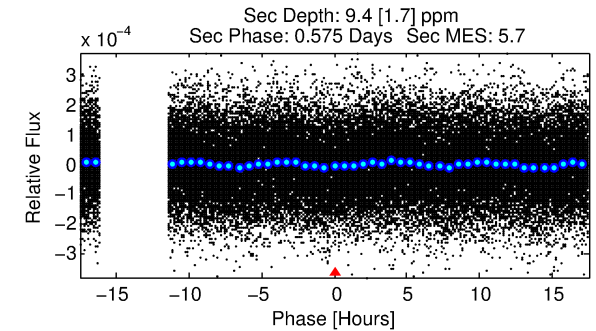
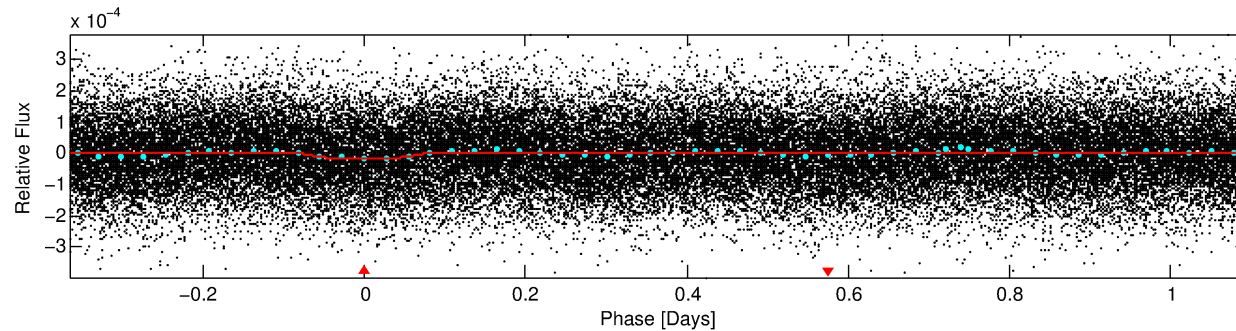
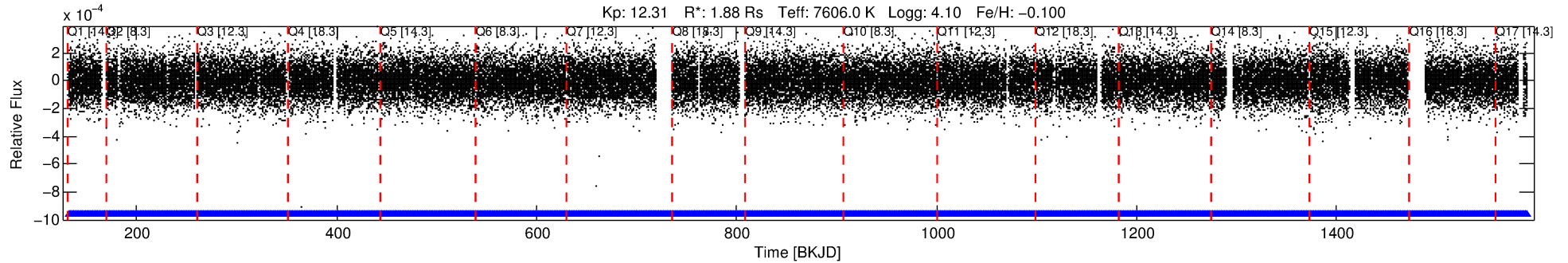
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006614492-01

No Significant Match Found

# DV One-Page Summary

KIC: 6614492 Candidate: 1 of 1 Period: 1.461 d



## DV Fit Results:

Period = 1.46051 [0.00002] d  
Epoch = 132.4135 [0.0042] BKJD  
Rp/R\* = 0.0042 [0.0013]  
a/R\* = 1.55 [1.79]  
b = 0.94 [0.25]  
Seff = 12104.60 [4447.59]  
Teq = 2675 [246] K  
Rp = 0.86 [0.35] Re  
a = 0.0296 [0.0068] AU  
Ag = 6.04 [4.26] [1.18σ]  
Teffp = 6484 [1047] K [3.54σ]

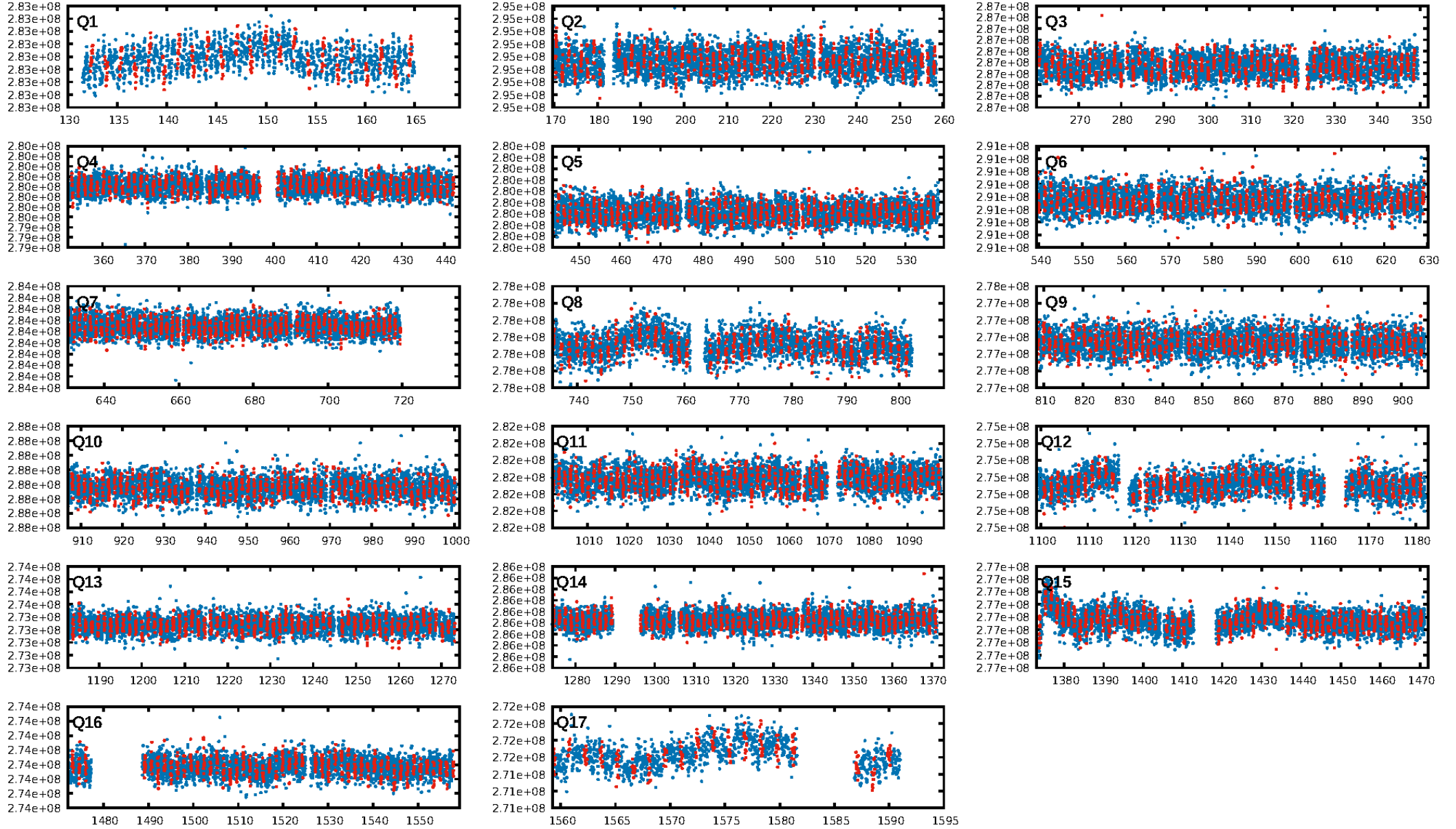
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.57e-14  
RollingBand-fgt: 1.00 [882/882]  
GhostDiagnostic-chr: 2.176  
Centroid-sig: 0.8%  
Centroid-so: 2.213 arcsec [2.42σ]  
OotOffset-rm: 0.503 arcsec [0.81σ]  
KicOffset-rm: 0.357 arcsec [0.57σ]  
OotOffset-st: 2/3/2/2 [9]  
KicOffset-st: 2/3/2/2 [9]  
DiffImageQuality-fgm: 0.56 [5/9]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:32:39 Z

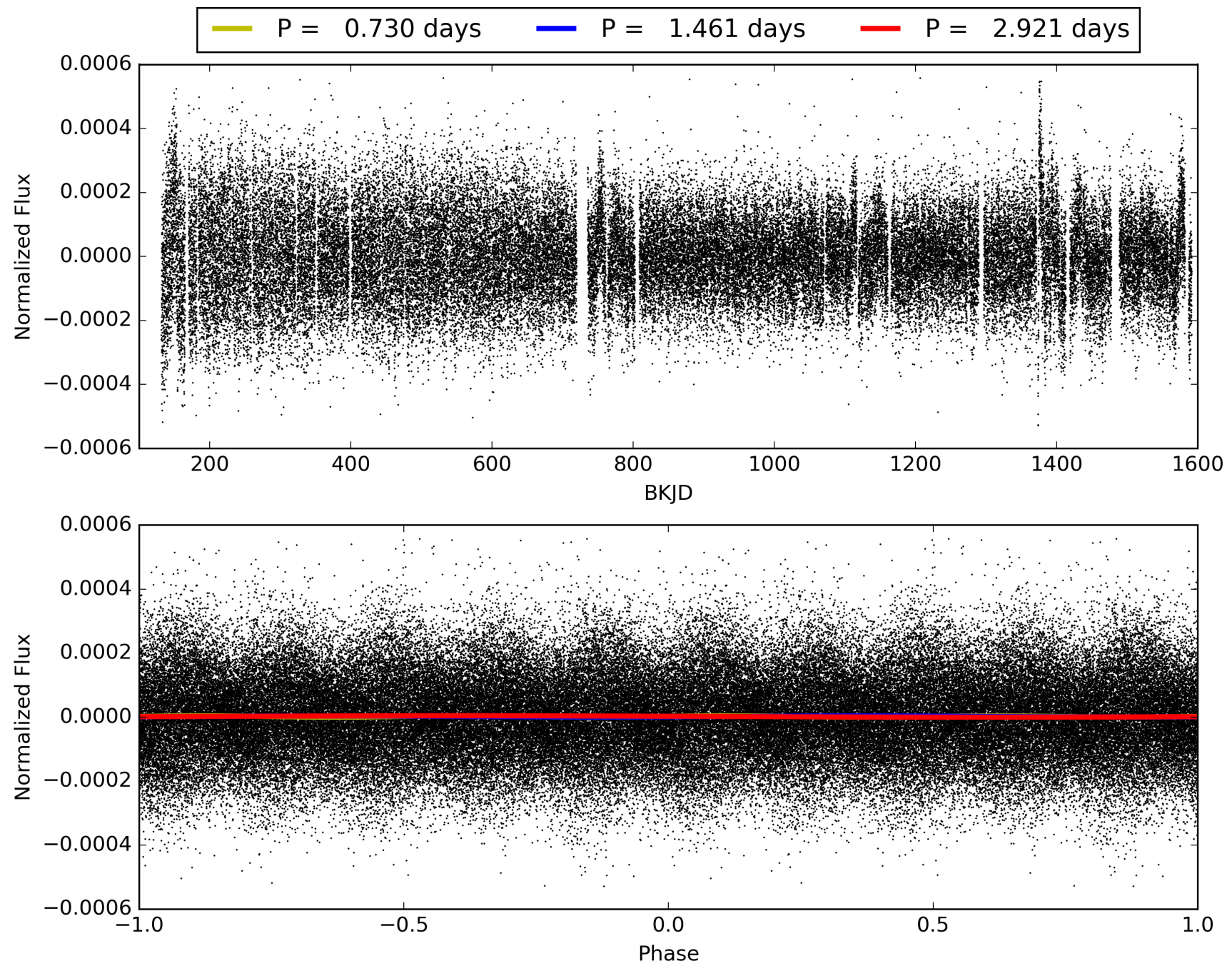
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 006614492-01, PDC Light Curves



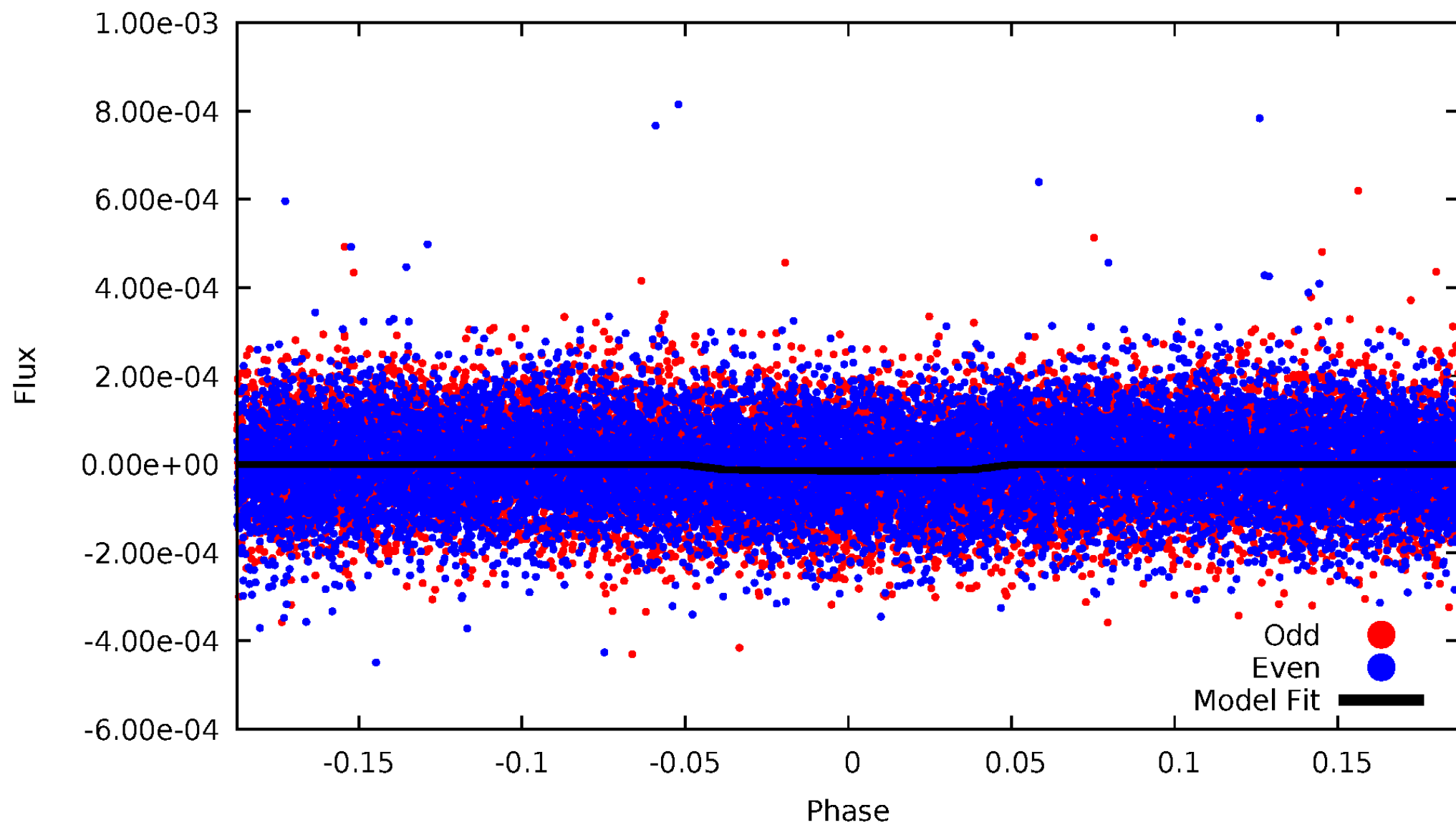


TCE 006614492-01



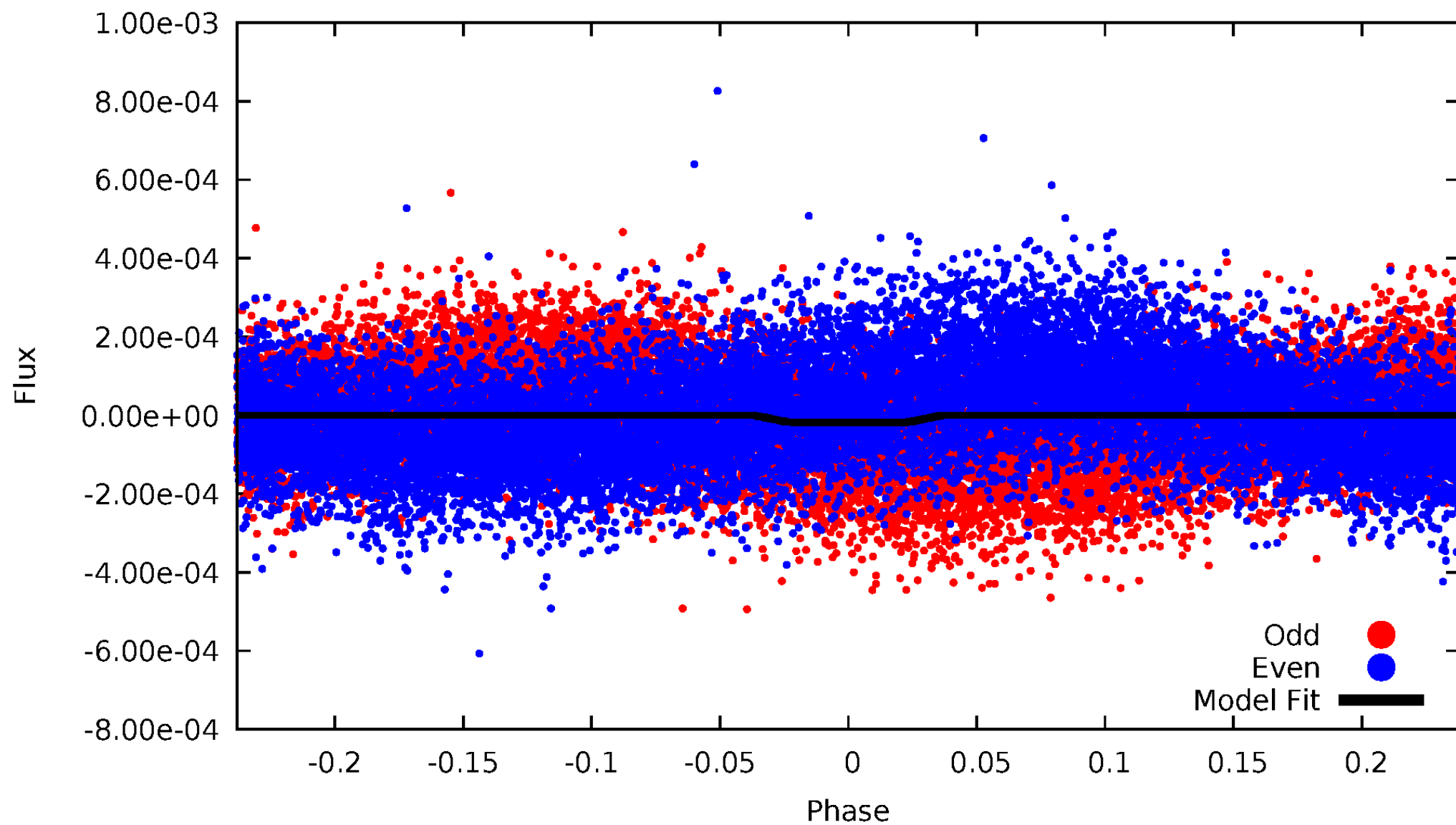
# DV Odd/Even

TCE 006614492-01

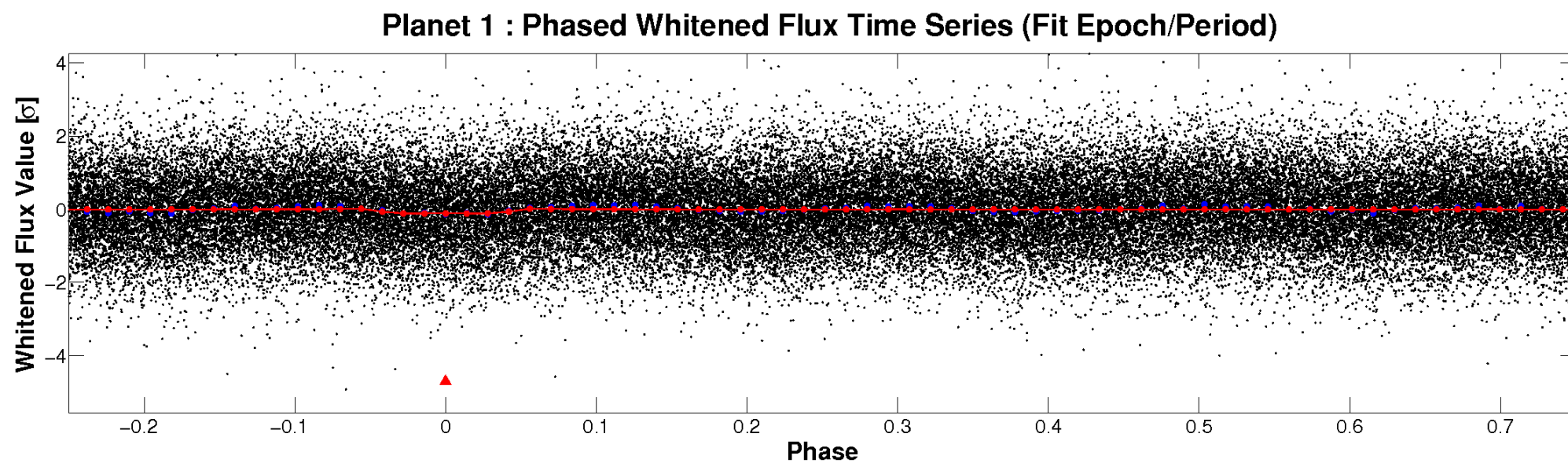
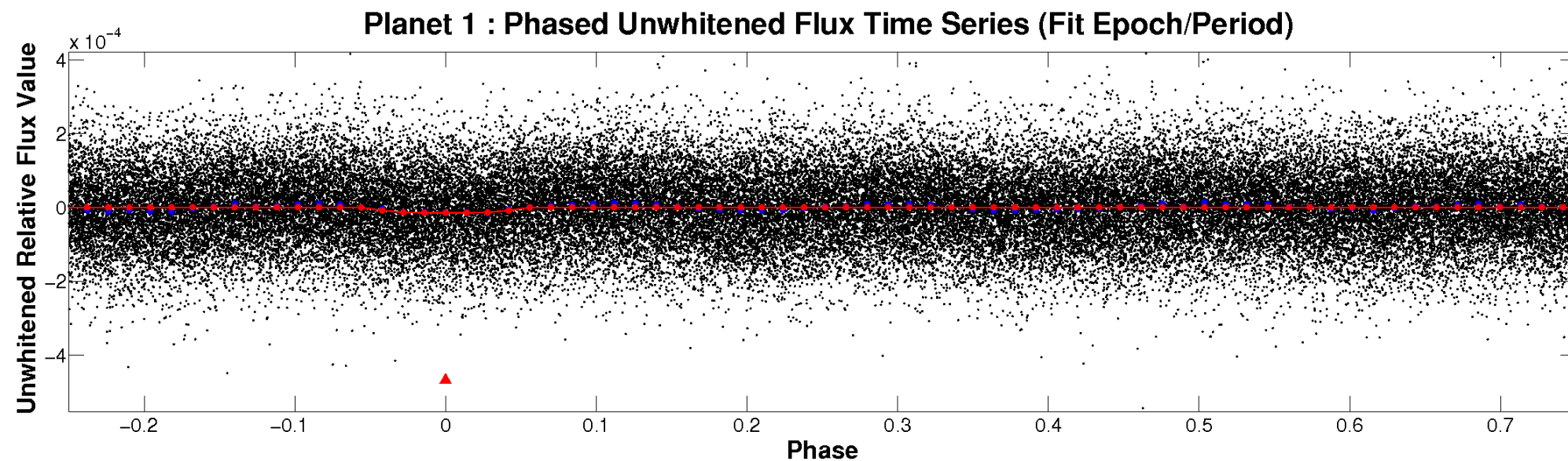


# ALT Odd/Even

TCE 006614492-01



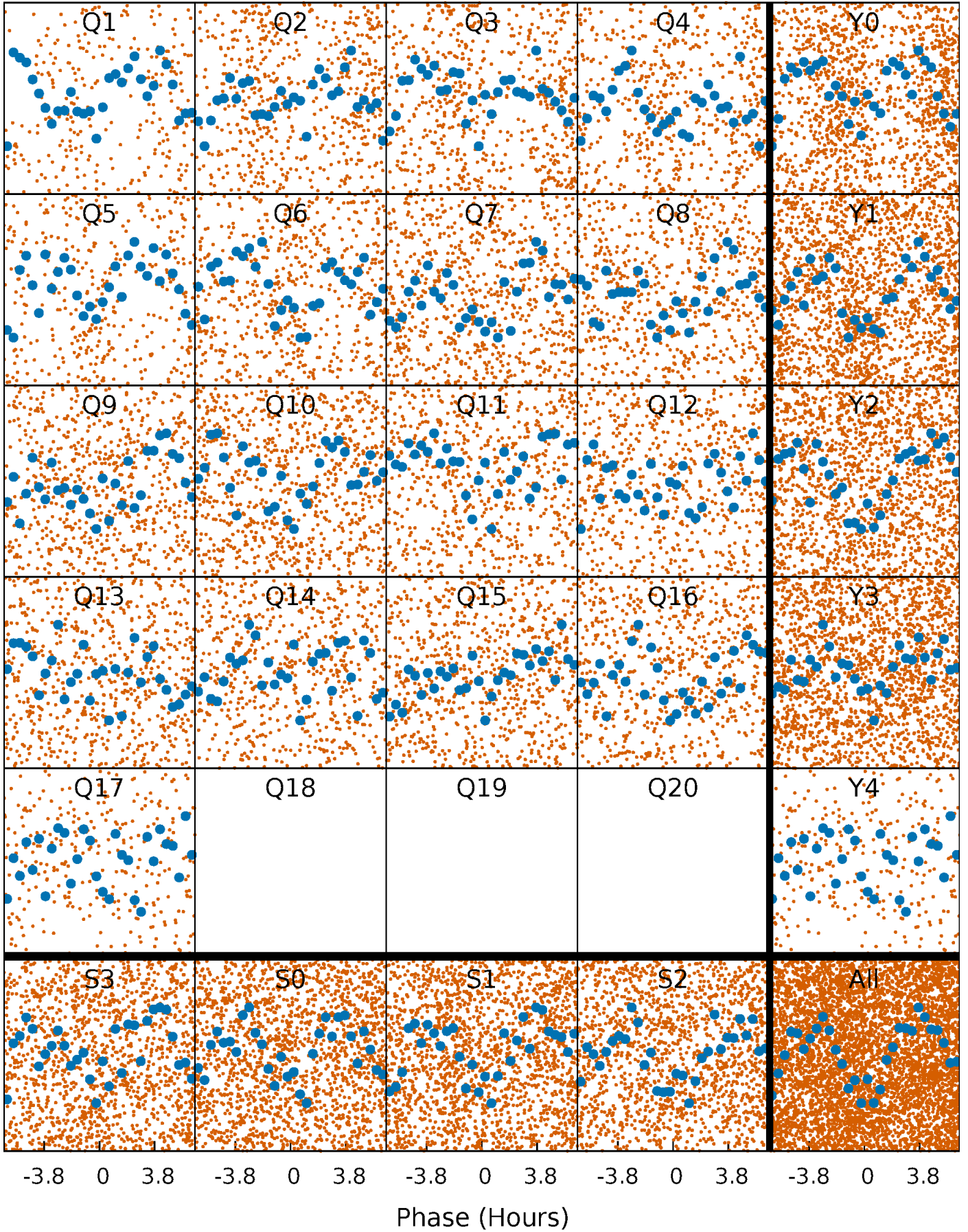
# Non-Whitened Vs. Whitened Light Curve





# PDC Quarter-Phased Transit Curves

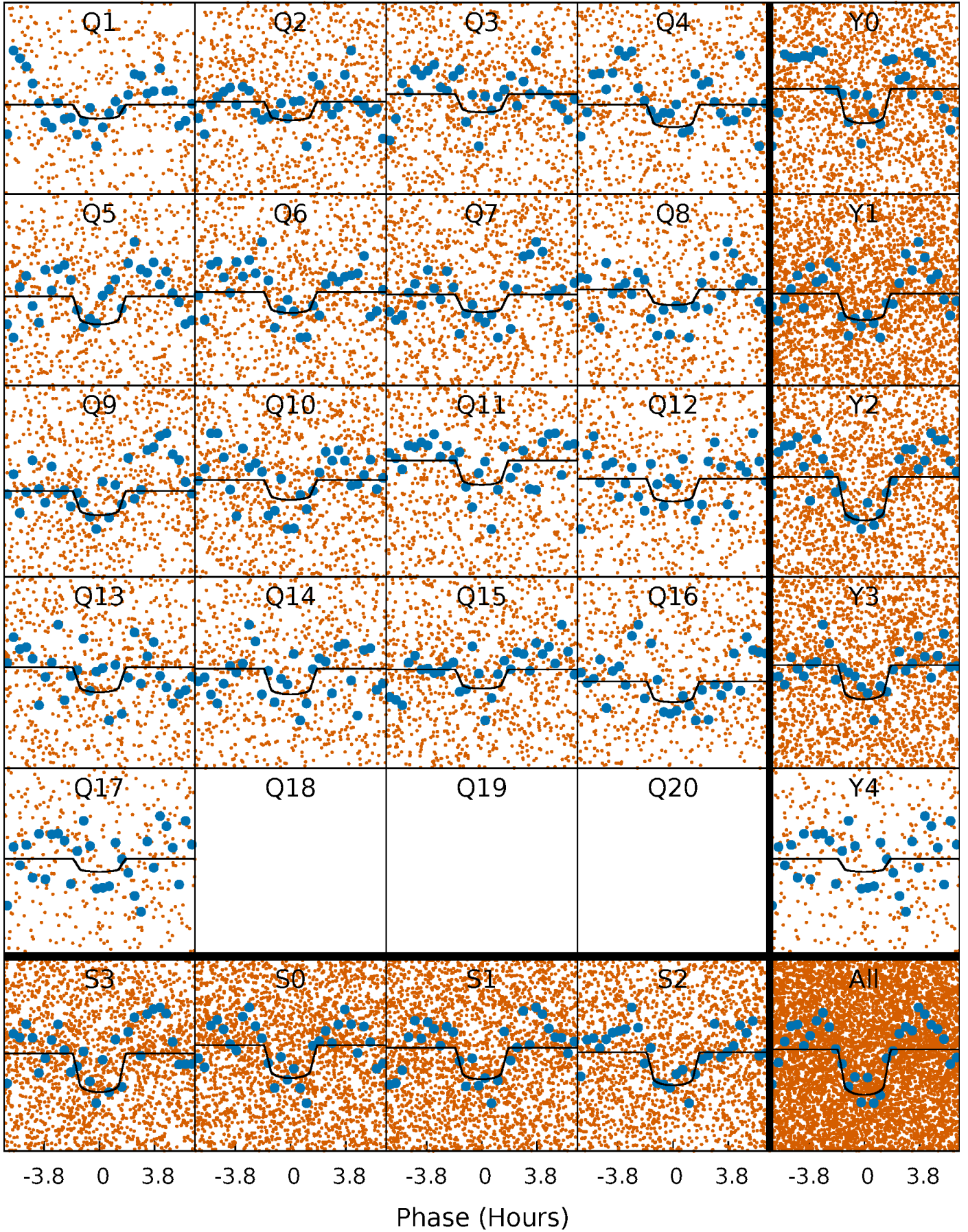
TCE 006614492-01 P= 1.460515 Days  $T_0=132.413548$  (BKJD)





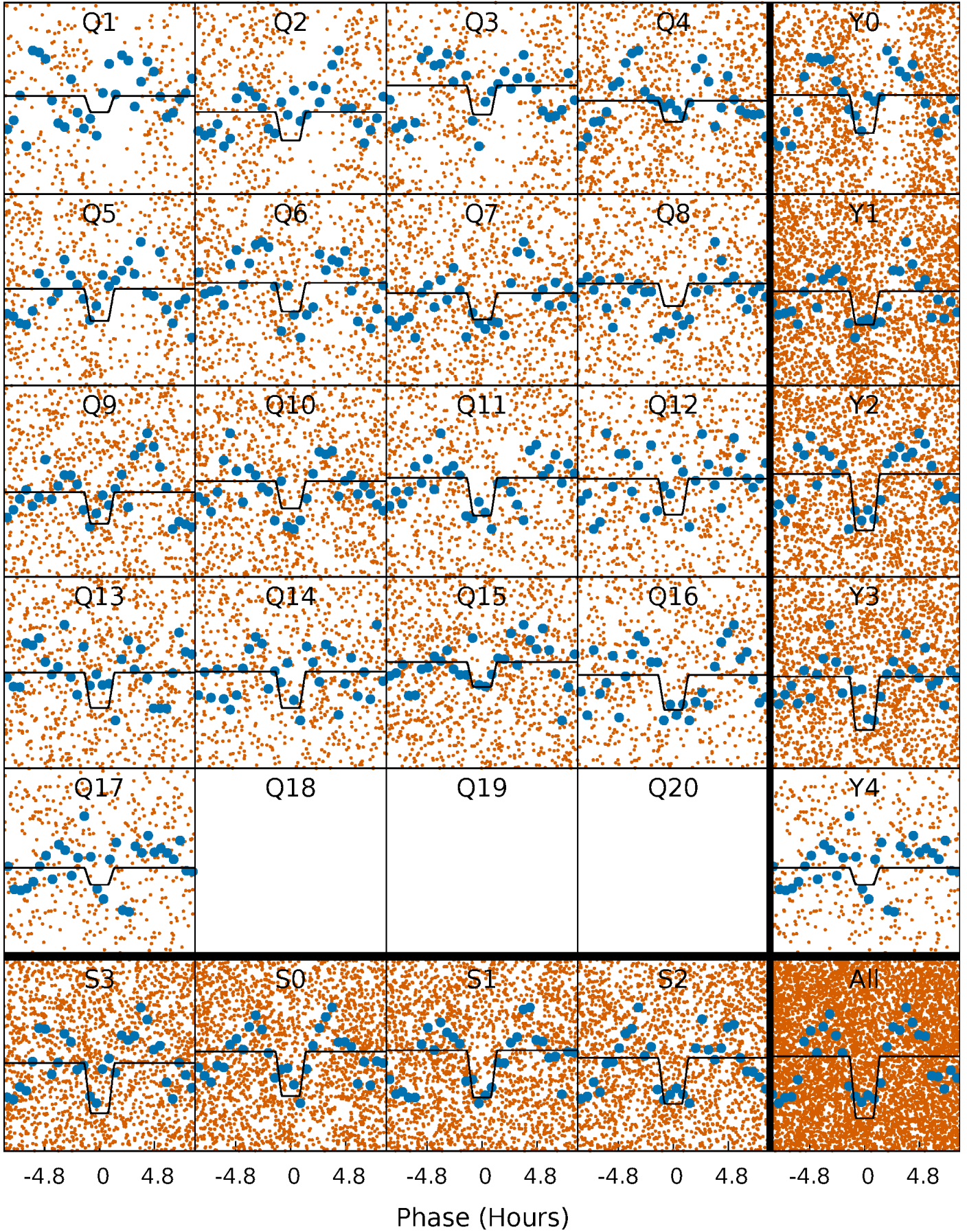
# DV Quarter-Phased Transit Curves

TCE 006614492-01 P= 1.460515 Days  $T_0=132.413548$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 006614492-01 P= 1.460528 Days  $T_0=132.410628$  (BKJD)

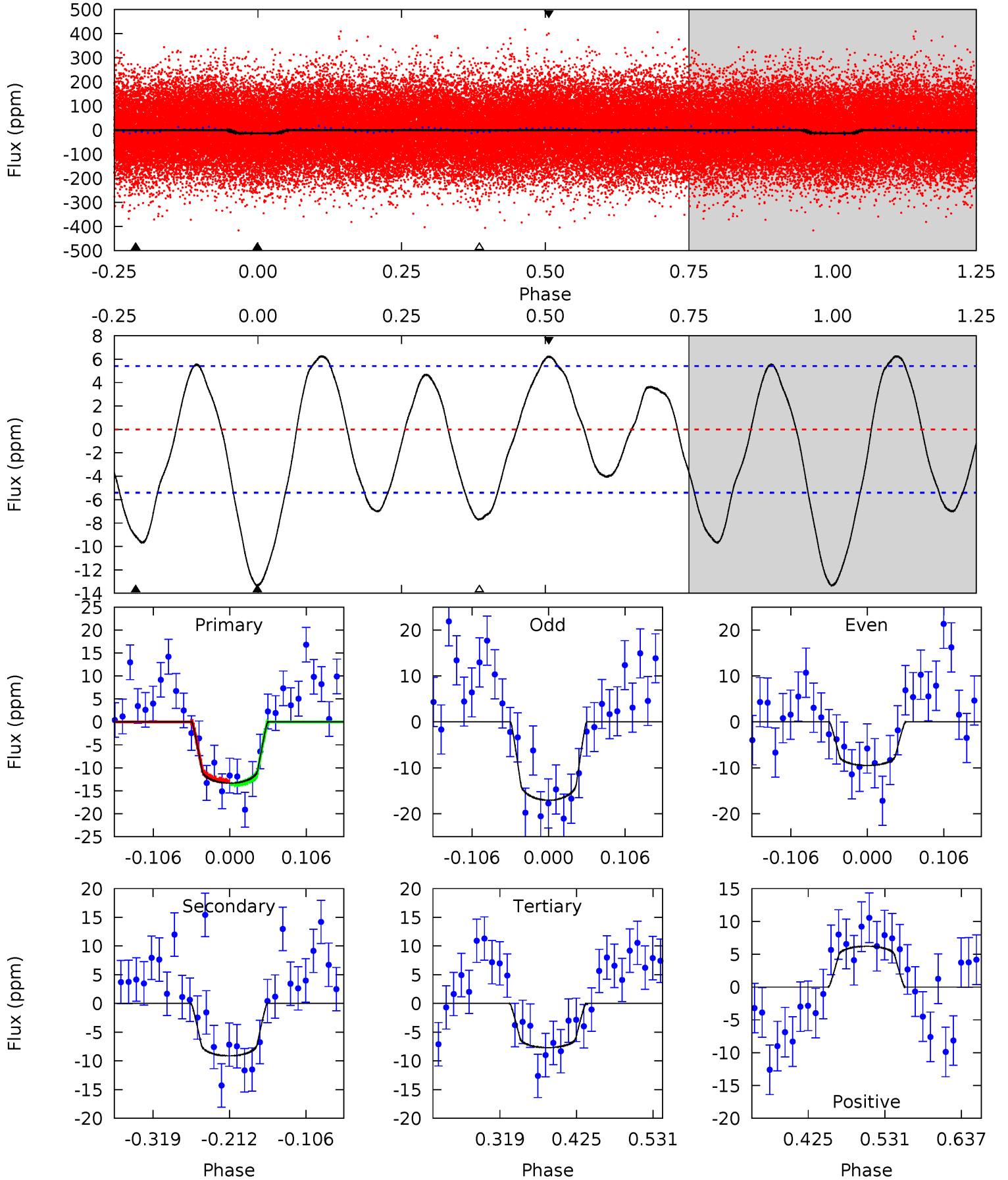




# DV Model-Shift Uniqueness Test

006614492-01, P = 1.460515 Days, E = 130.953033 Days

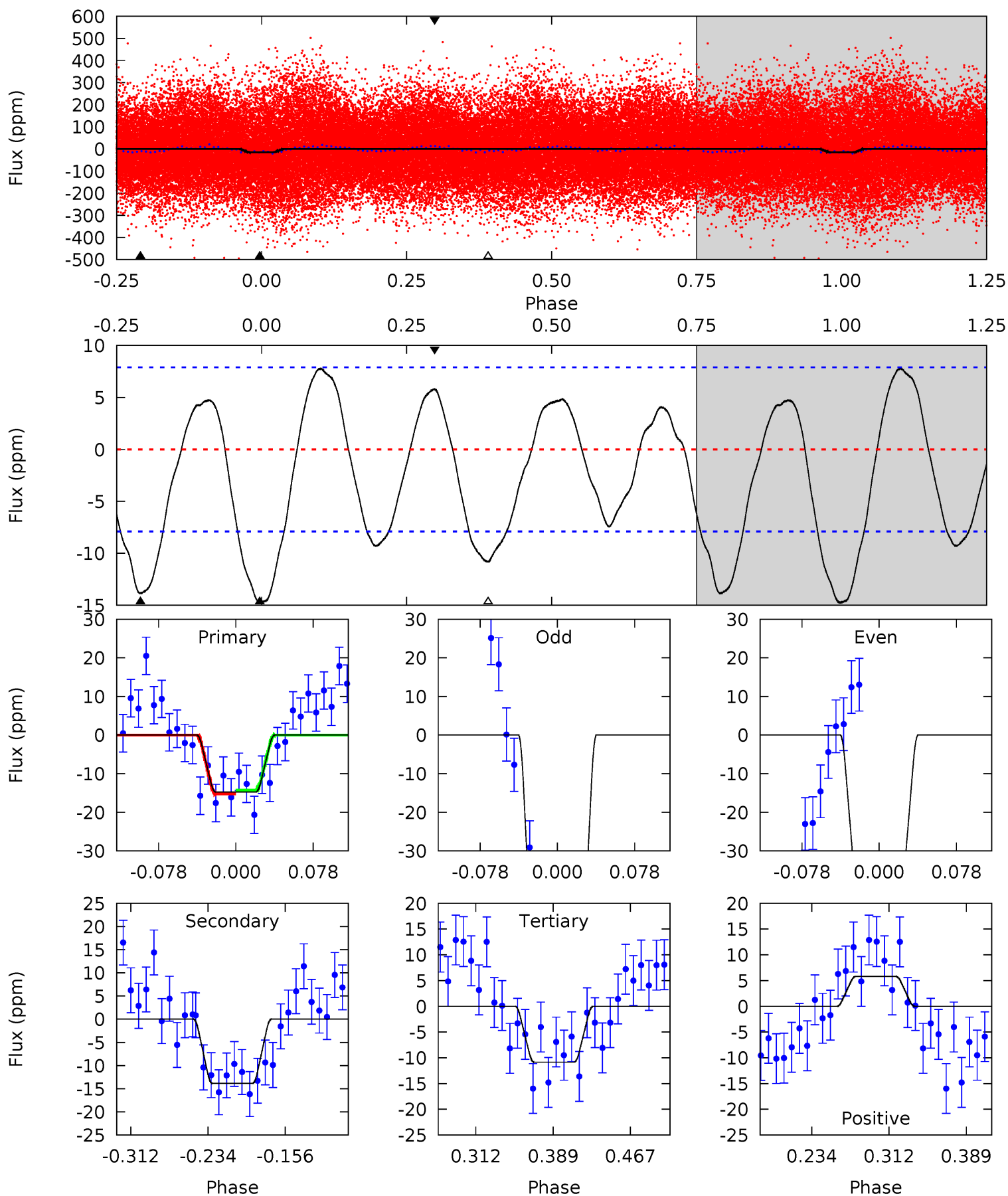
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	7.68	6.47	5.23	4.55	1.62	3.48	4.75	5.99	1.21	2.45	3.18	1.04	0.32	0.34



# Alt Model-Shift Uniqueness Test

006614492-01, P = 1.460528 Days, E = 130.950100 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
8.62	8.10	6.33	3.38	4.62	1.76	3.11	2.28	5.23	1.76	4.71	8.91	0.86	0.35	0.29





### Stellar Parameters For KIC 006614492

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7606^{+211}_{-316}$	$4.099^{+0.144}_{-0.176}$	$-0.100^{+0.200}_{-0.350}$	$1.880^{+0.523}_{-0.428}$	$1.617^{+0.197}_{-0.263}$	$0.343^{+0.287}_{-0.167}$
	+3%/-4%	+4%/-4%	+200%/-350%	+28%/-23%	+12%/-16%	+84%/-49%
Source	KIC0	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 006614492-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-9 \pm 1$	$0.87^{+0.28}_{-0.28}$	$3740^{+281}_{-241}$	$6209^{+1444}_{-792}$	$5.830^{+6.816}_{-2.569}$
Alt.	$-14 \pm 2$	$0.89^{+0.30}_{-0.28}$	$3750^{+268}_{-250}$	$6912^{+1649}_{-963}$	$8.249^{+9.709}_{-3.664}$

$T_{max}$  = Theoretical Maximum Planetary Temperature

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

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

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

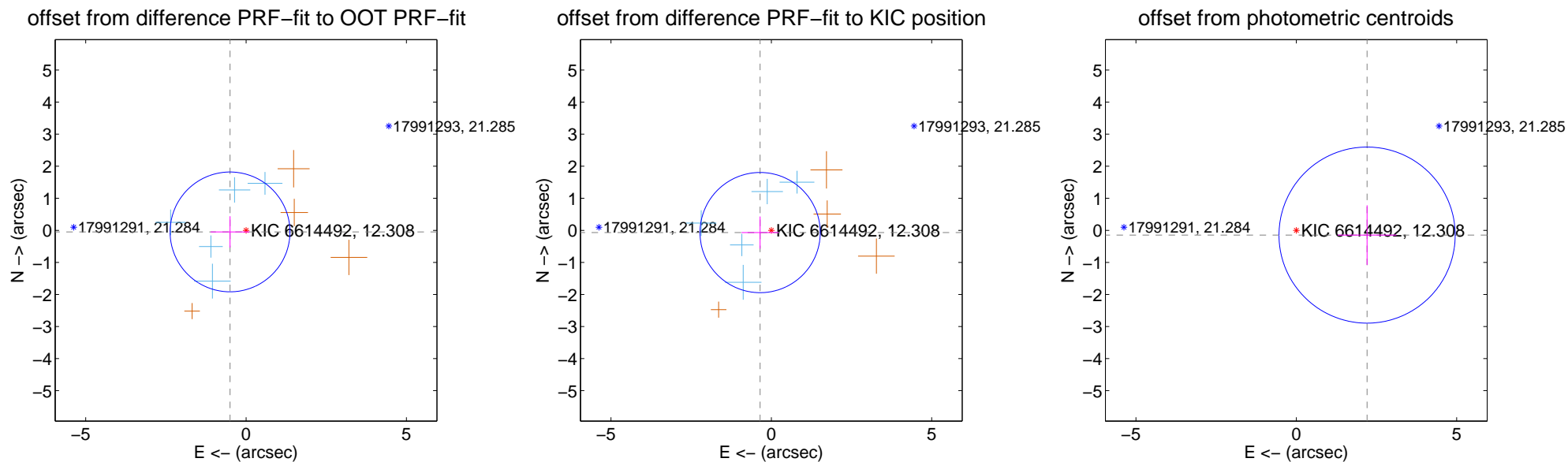
## DV Centroid Data

Supplemental centroid analysis for 006614492-01. Kepler magnitude: 12.31. Transit SNR 8.09

There are 5 quarters with good PRF difference image offsets

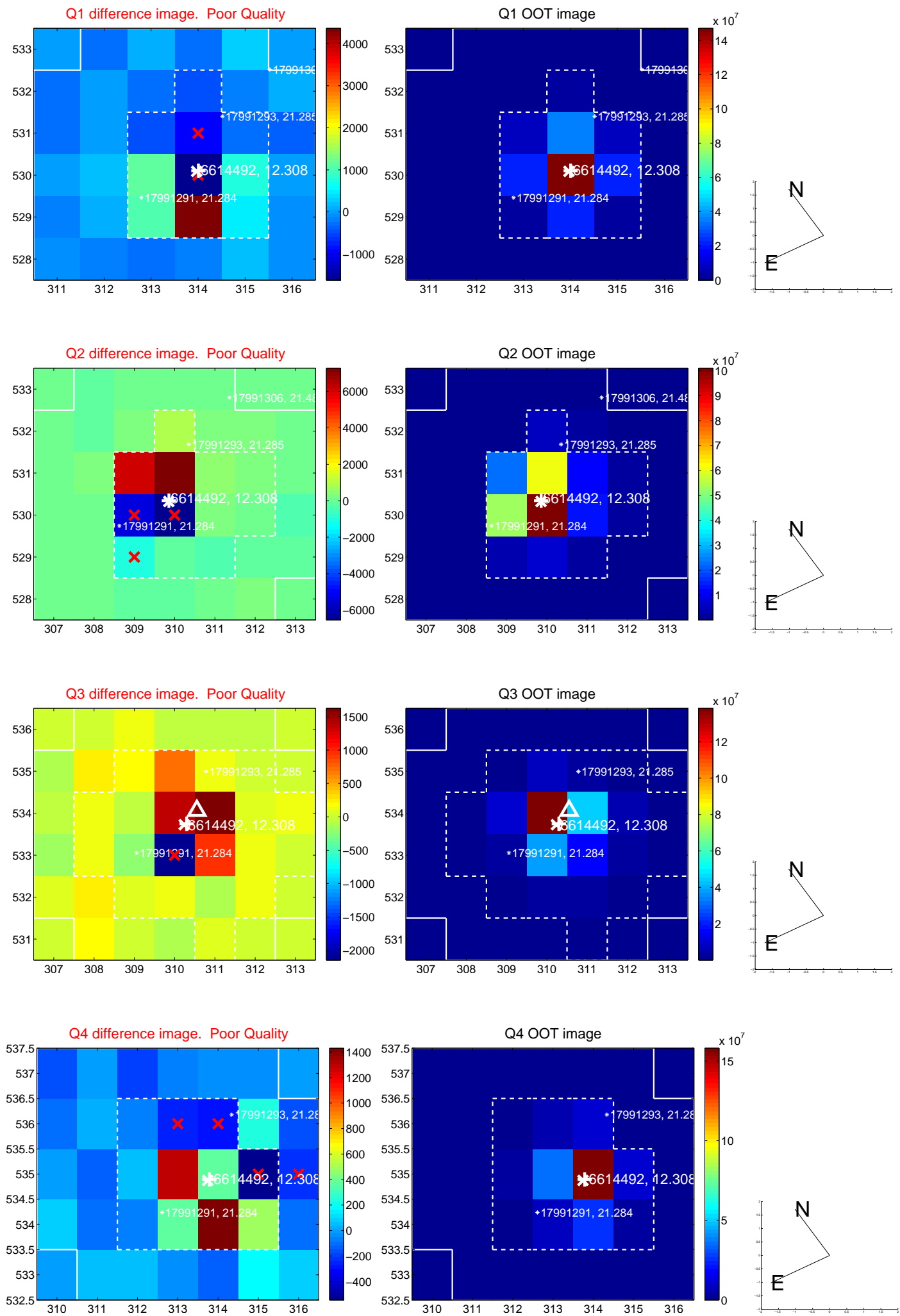
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.503 \pm 0.623$	0.81	$0.500 \pm 0.606$	$-0.049 \pm 0.489$
PRF-fit source offset from KIC position	$0.357 \pm 0.625$	0.57	$0.350 \pm 0.579$	$-0.070 \pm 0.502$
photometric centroid source offset	$2.21 \pm 0.92$	2.42	$-2.21 \pm 0.92$	$-0.15 \pm 0.93$

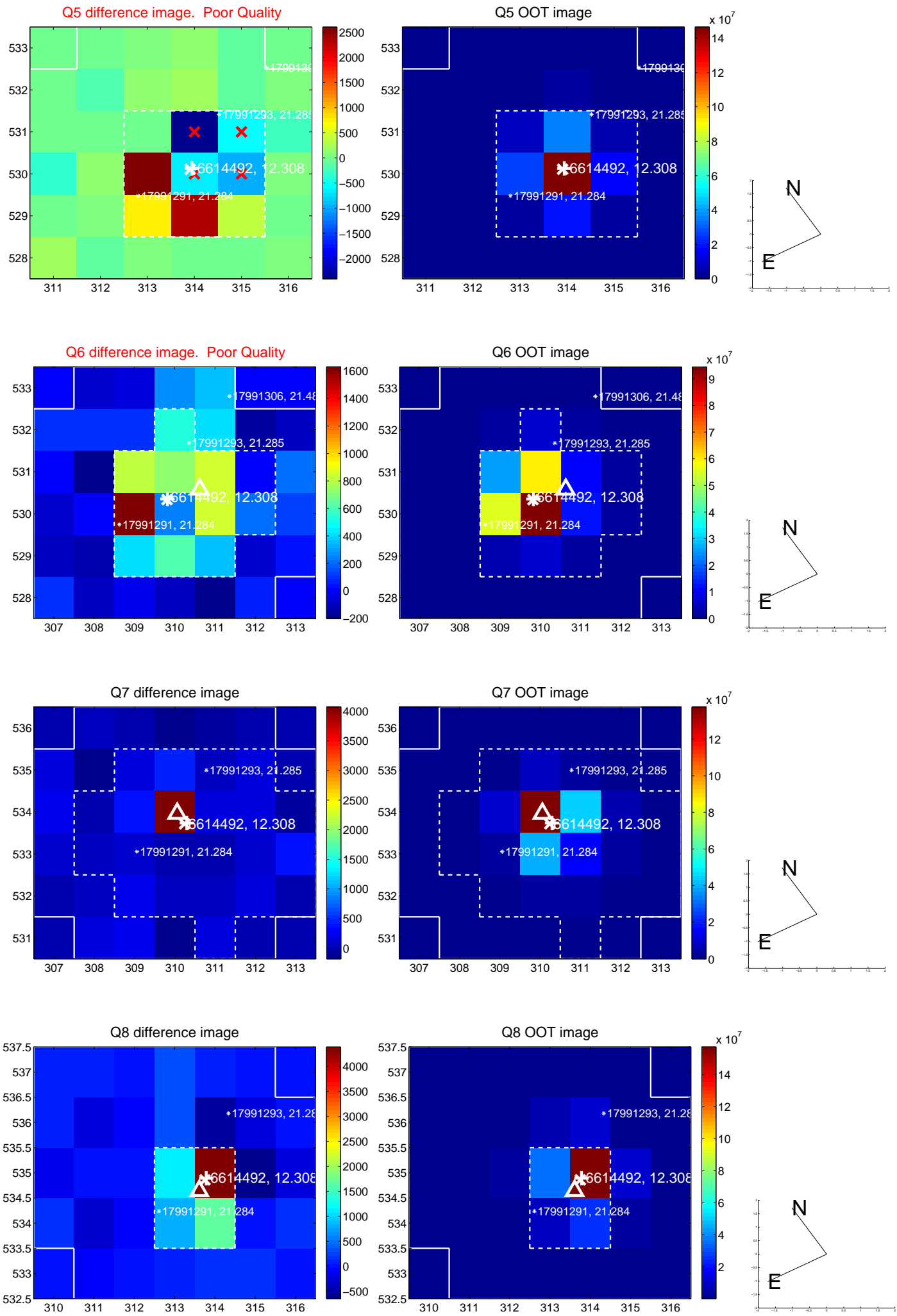


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: 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.

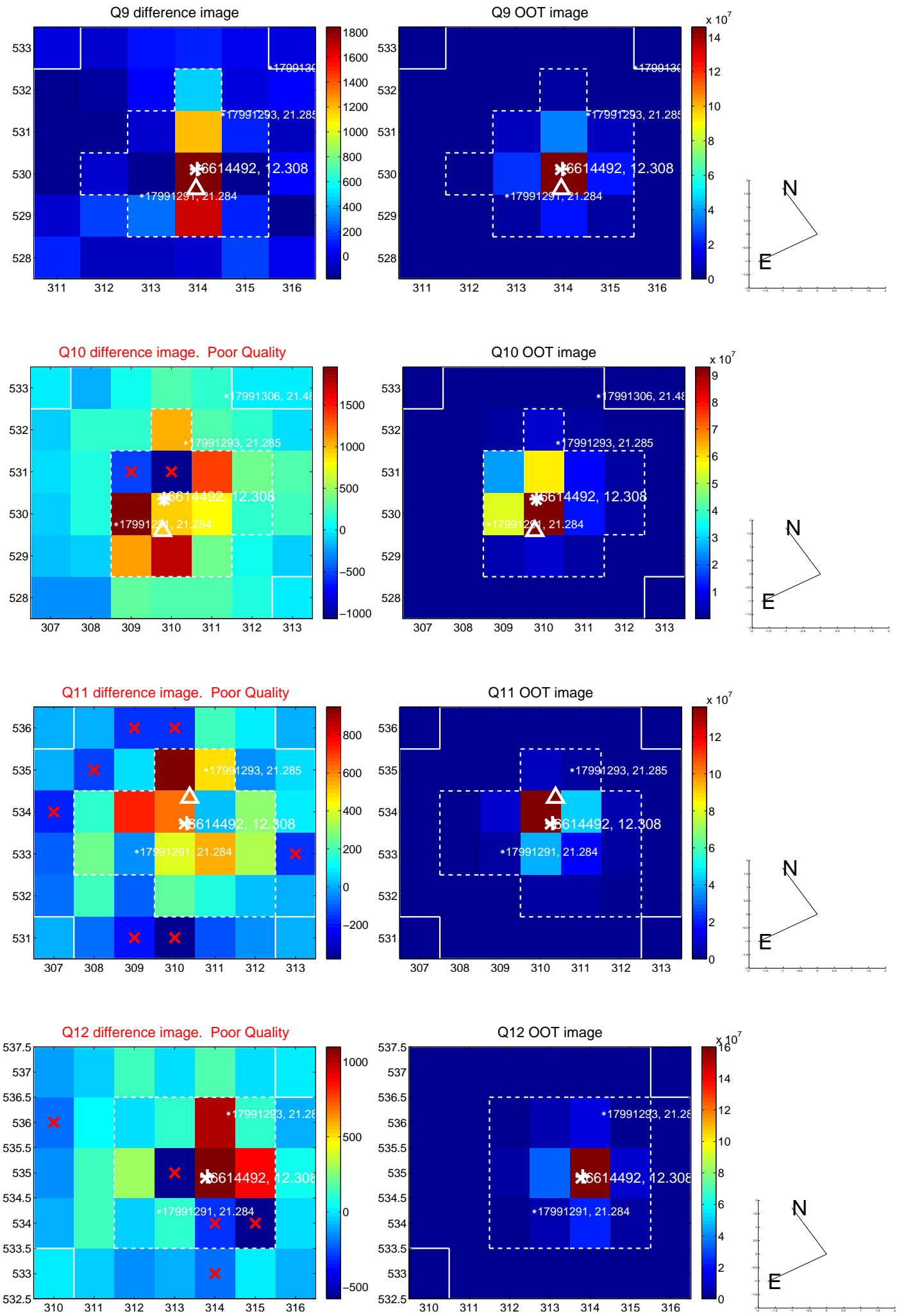


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

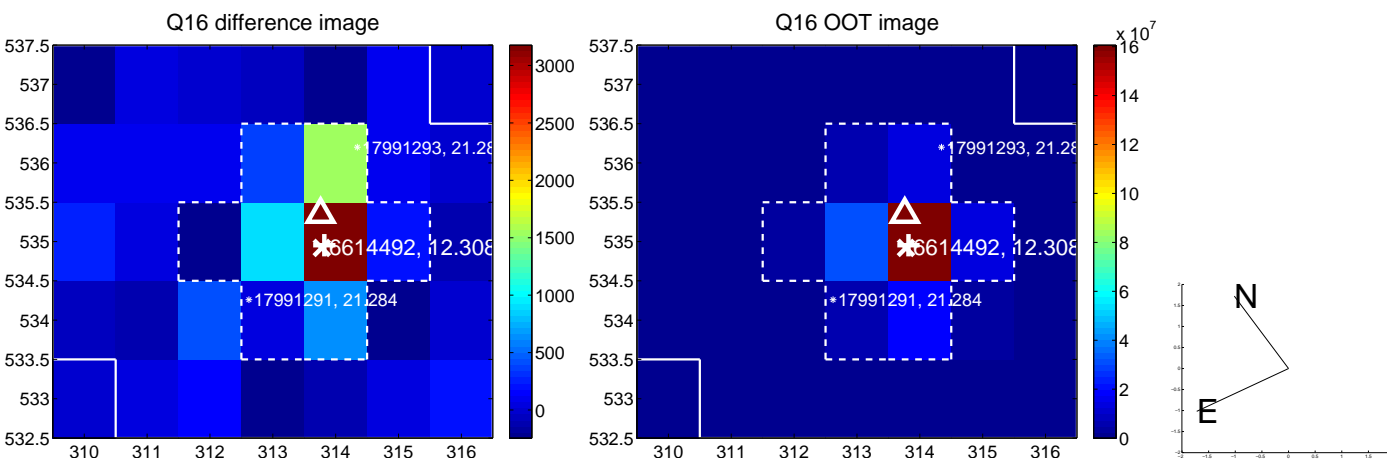
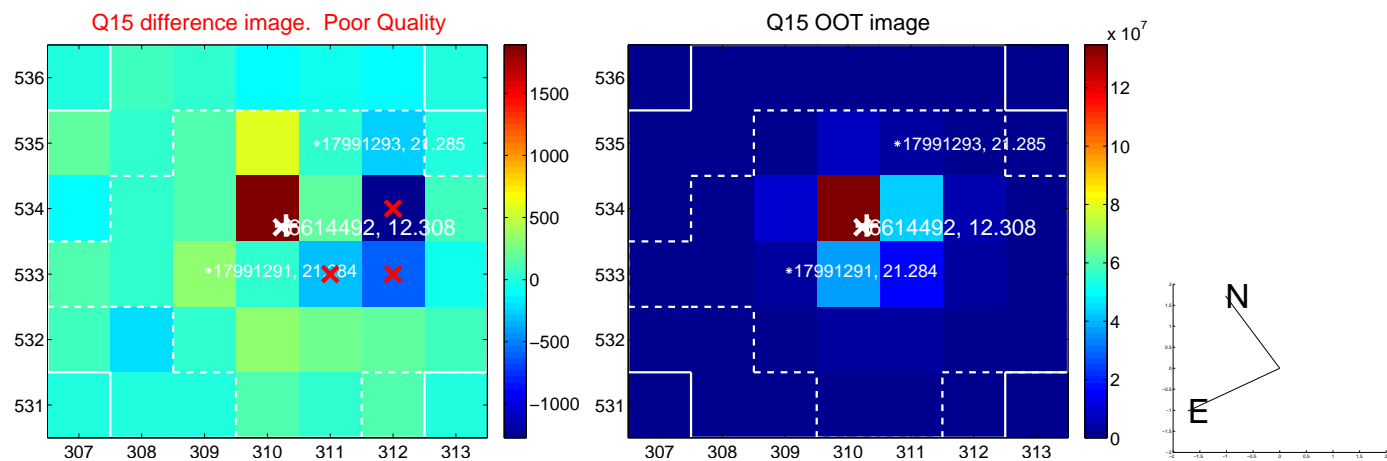
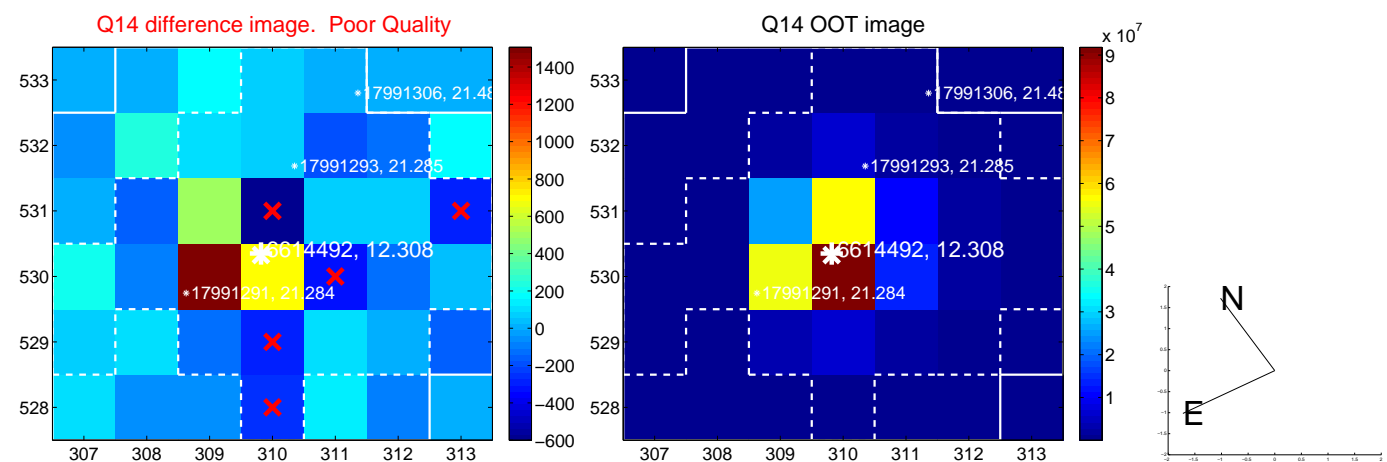
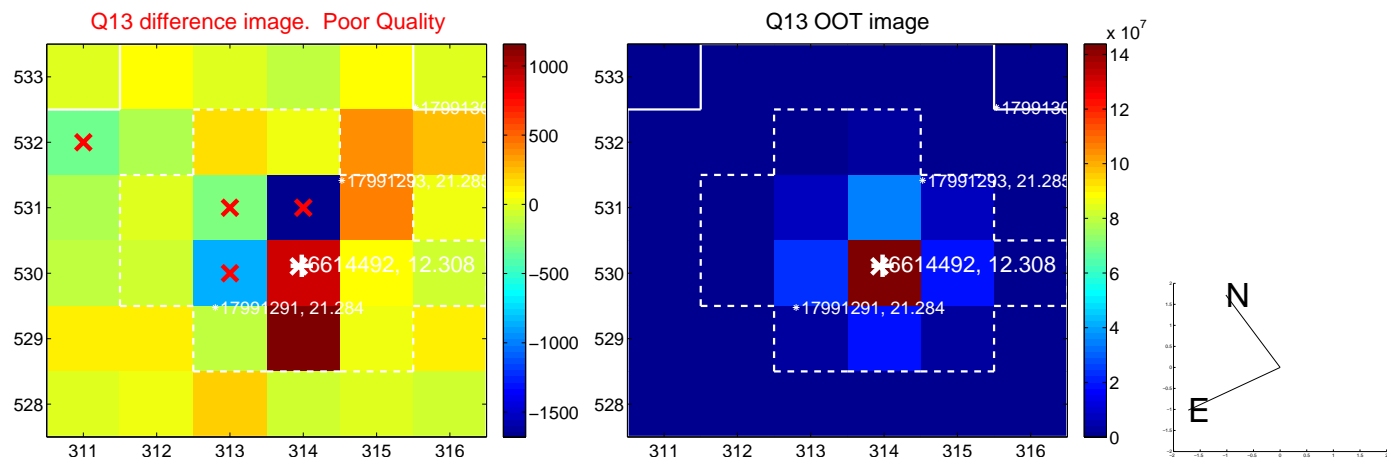




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white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





UKIRT Image

Declination

