

# KIC 008626325

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
008626325-01	OBS	4775.01	16.449142	145.742105	72.1	6.588	7.8	8.4	2.79	5334	2.80	273.24

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008626325-01	OBS	PC	0.62	0	0	0	0	NO_COMMENT

**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.

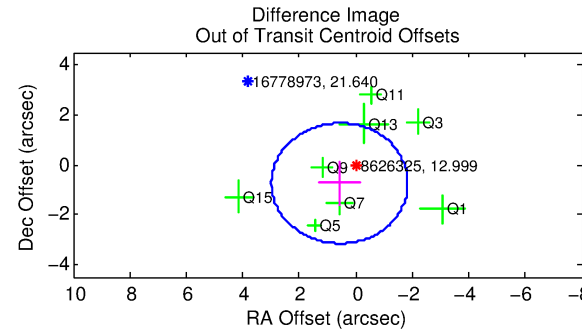
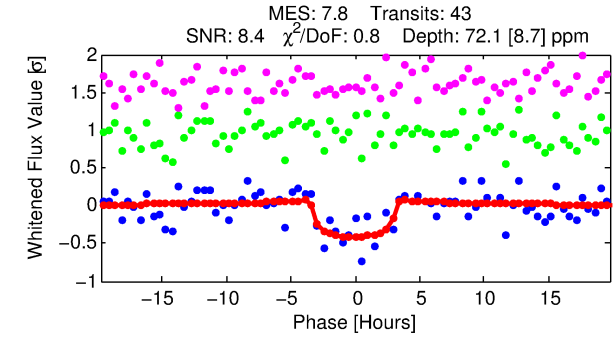
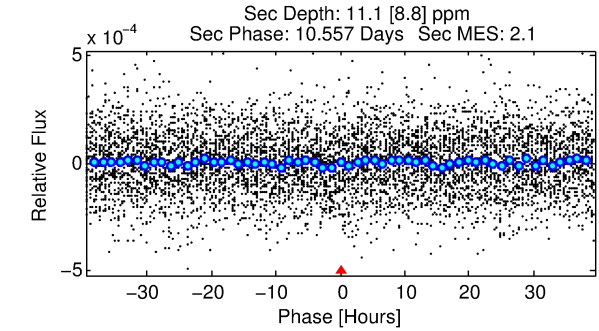
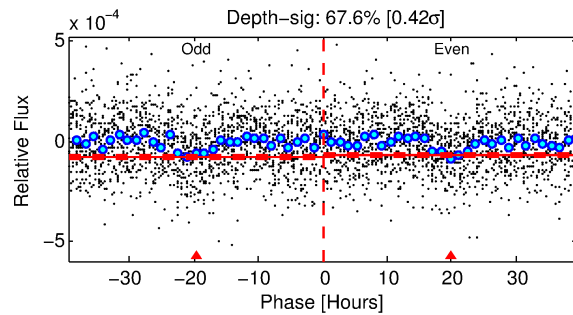
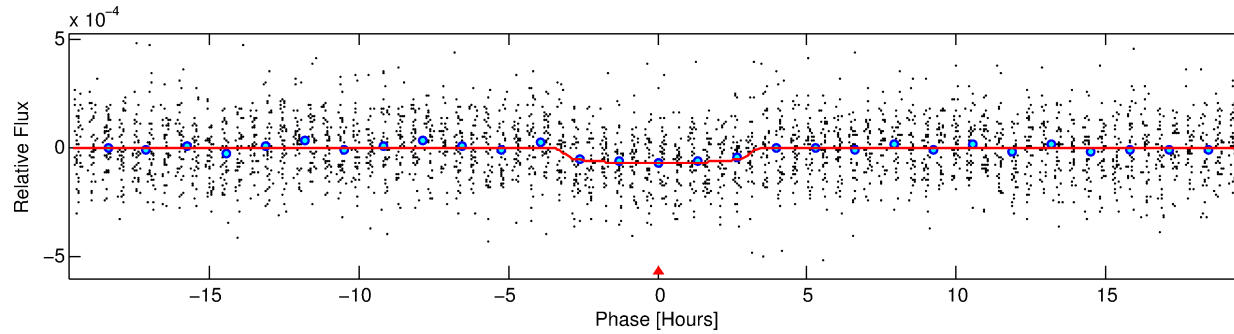
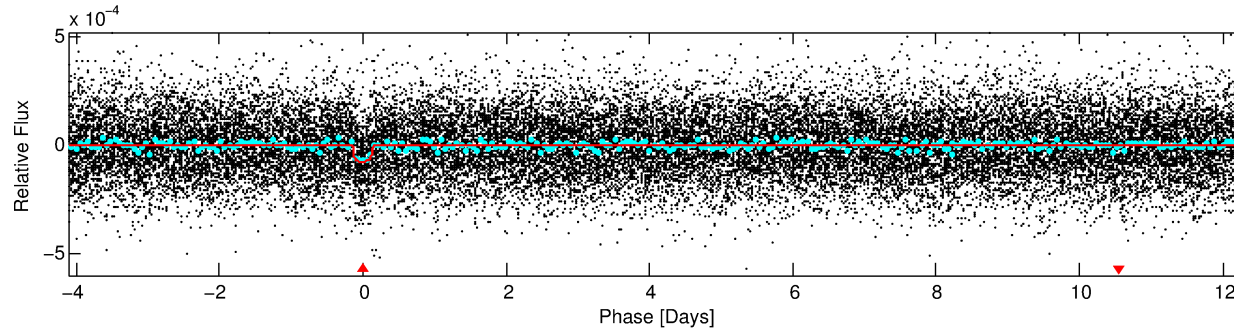
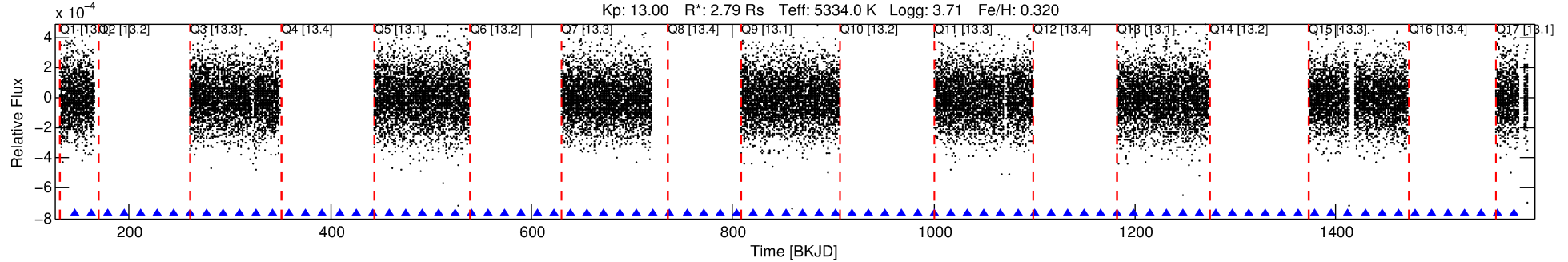
## Ephemeris Match Information For 008626325-01

No Significant Match Found

# DV One-Page Summary

KIC: 8626325 Candidate: 1 of 1 Period: 16.449 d  
KOI: K04775.01 Corr: 0.989

Kp: 13.00 R\*: 2.79 Rs Teff: 5334.0 K Logg: 3.71 Fe/H: 0.320



## DV Fit Results:

Period = 16.44914 [0.00025] d  
Epoch = 145.7421 [0.0121] BKJD  
Rp/R\* = 0.0092 [0.0063]  
a/R\* = 9.55 [27.39]  
b = 0.88 [0.77]  
Seff = 273.24 [154.10]  
Teq = 1037 [146] K  
Rp = 2.80 [2.22] Re  
a = 0.1437 [0.0507] AU  
Ag = 16.16 [27.13] [0.56σ]  
Teffp = 3214 [1283] K [1.69σ]

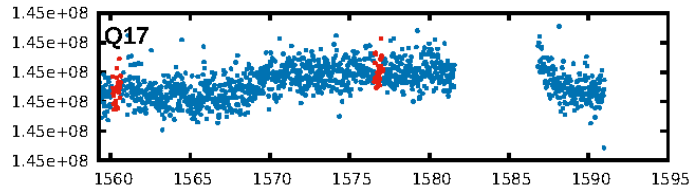
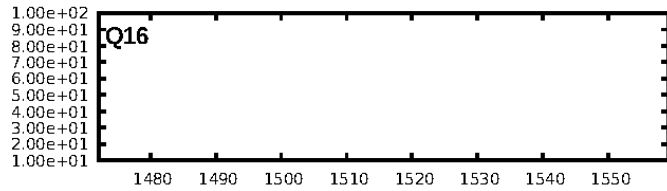
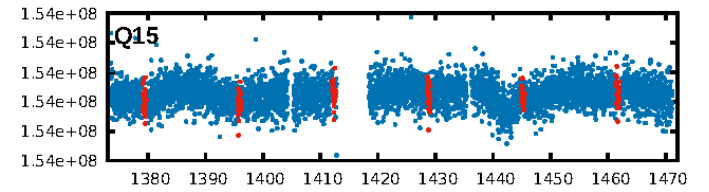
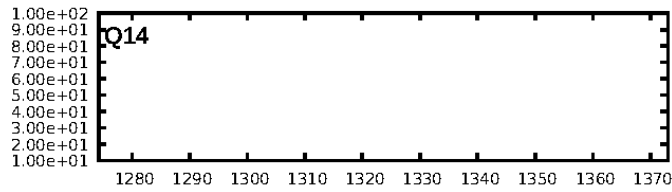
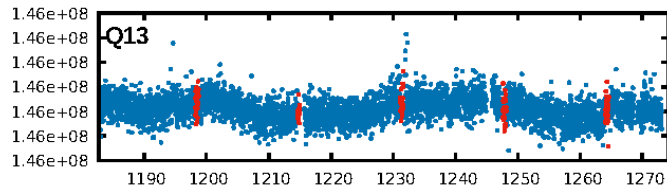
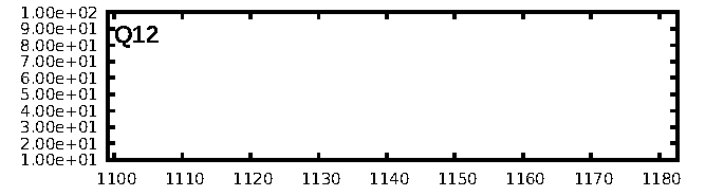
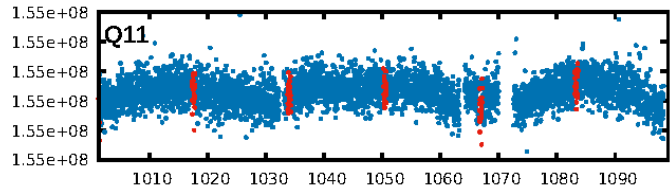
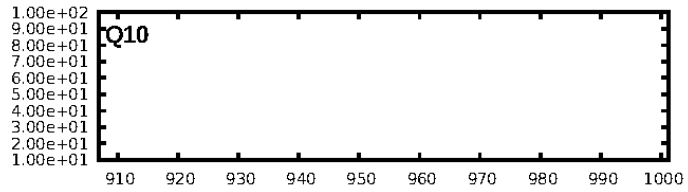
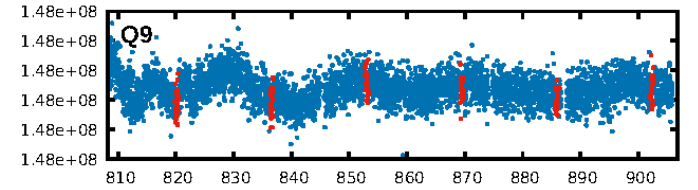
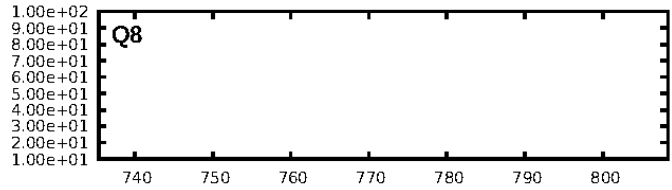
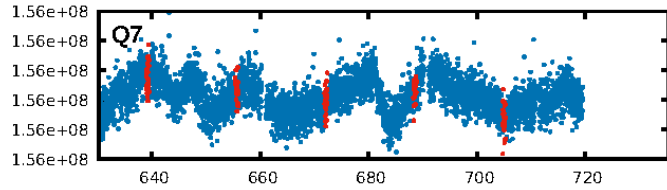
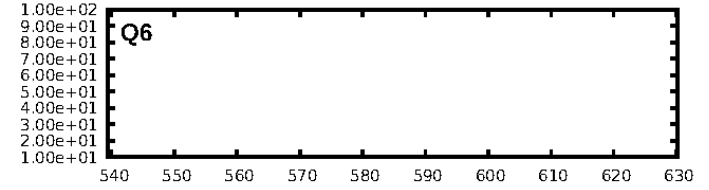
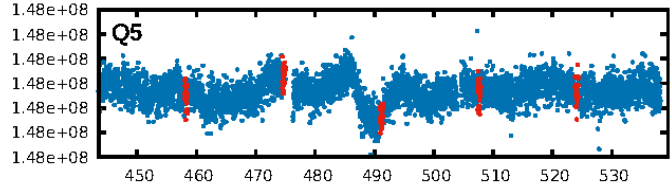
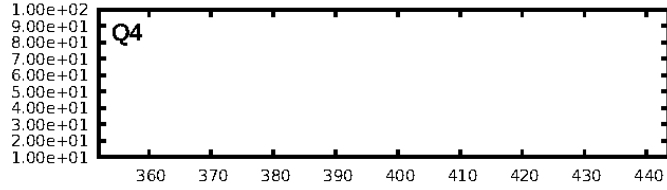
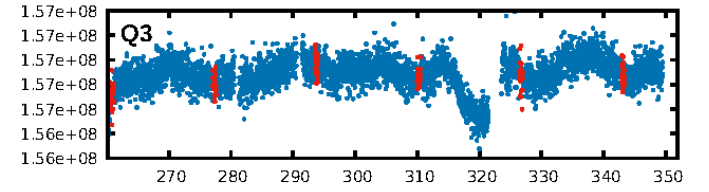
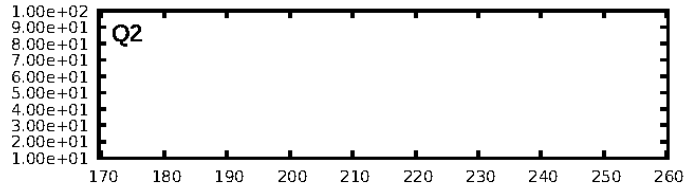
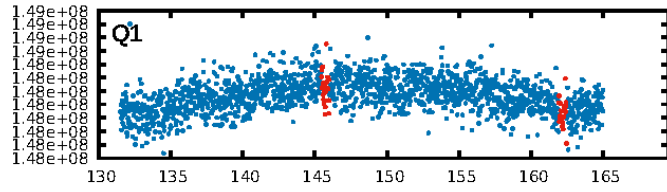
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 99.8%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 9.97e-15  
RollingBand-fgt: 1.00 [39/39]  
GhostDiagnostic-chr: 6.001  
Centroid-sig: 58.4%  
Centroid-so: 0.641 arcsec [0.61σ]  
OotOffset-rm: 0.940 arcsec [1.17σ]  
OotOffset-st: 0/4/0/4 [8]  
KicOffset-rm: 0.914 arcsec [1.14σ]  
KicOffset-st: 0/4/0/4 [8]  
DiffImageQuality-fgm: 0.75 [6/8]  
DiffImageOverlap-fno: 1.00 [9/9]

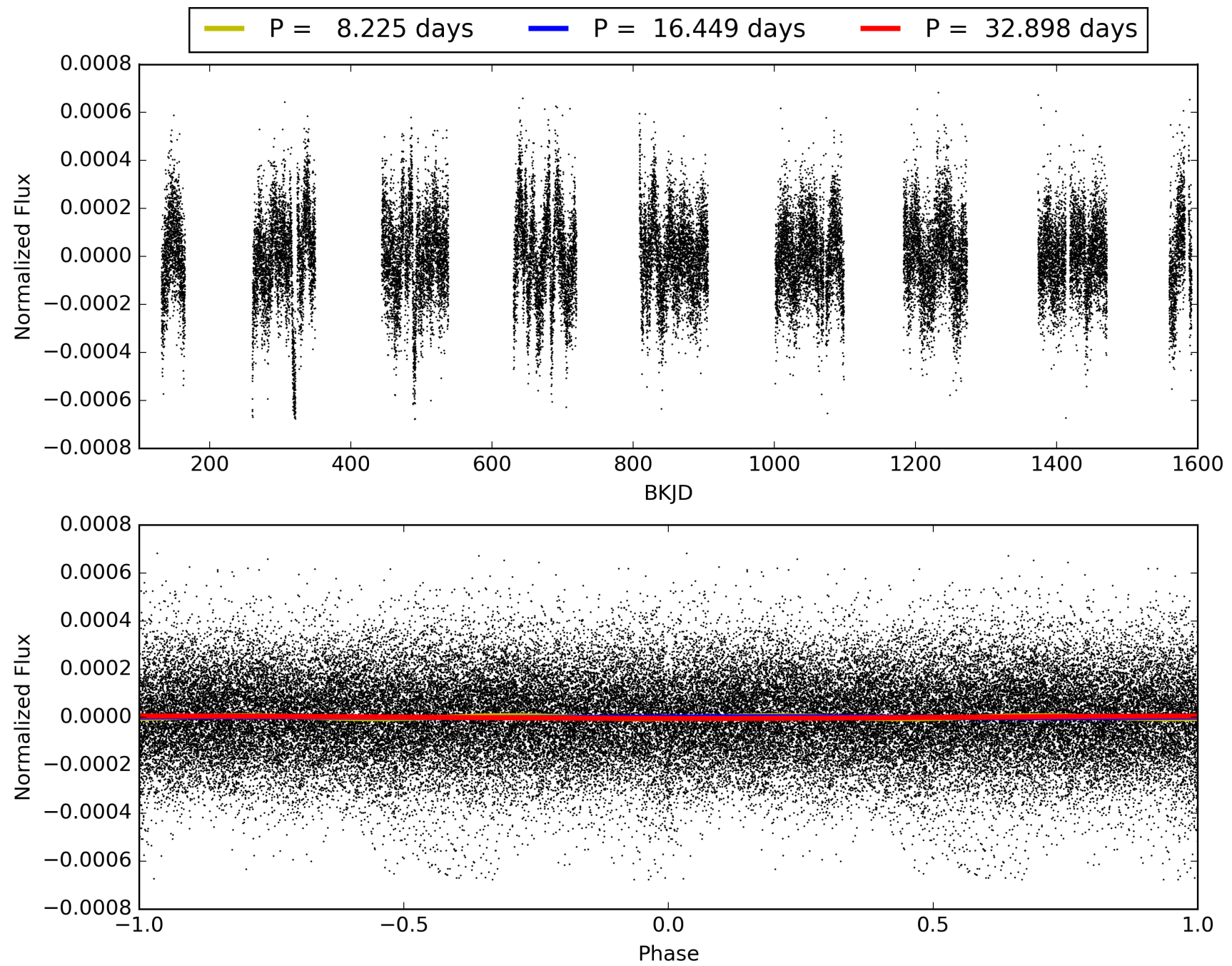
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:23:28 Z

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

## TCE 008626325-01, PDC Light Curves

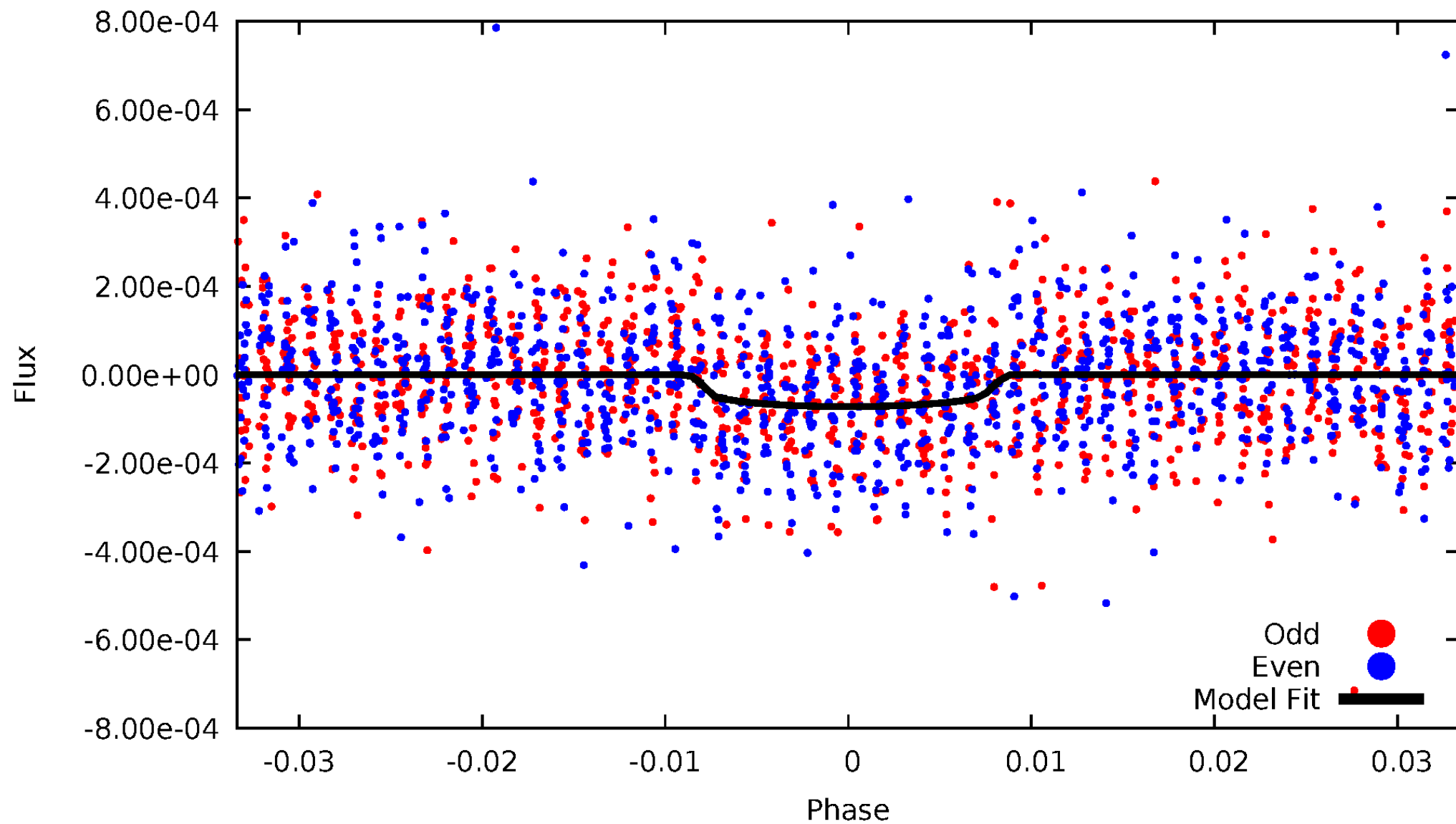


# TCE 008626325-01



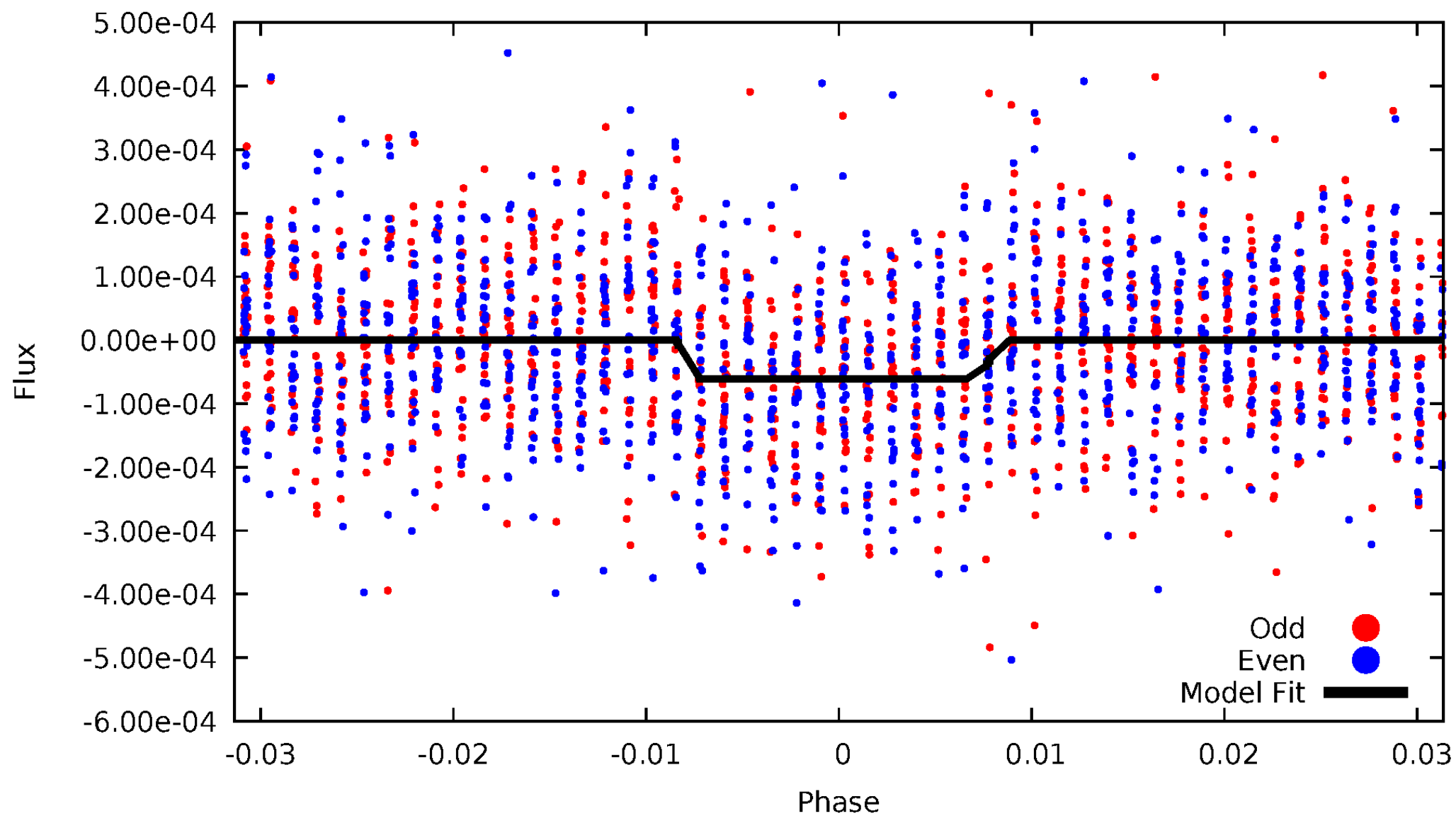
# DV Odd/Even

TCE 008626325-01



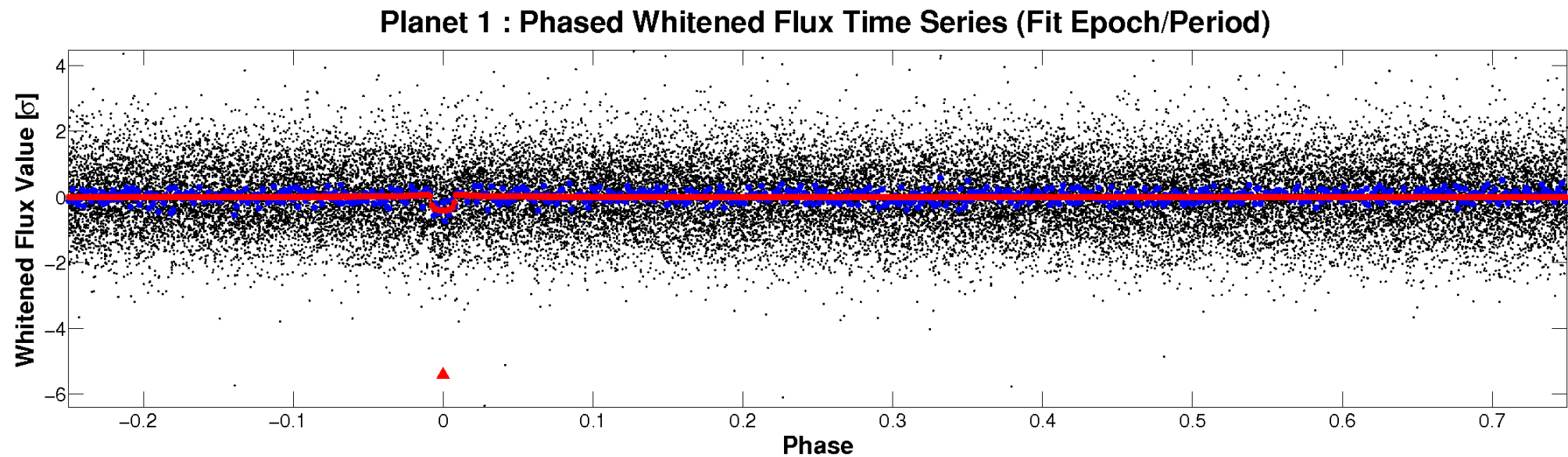
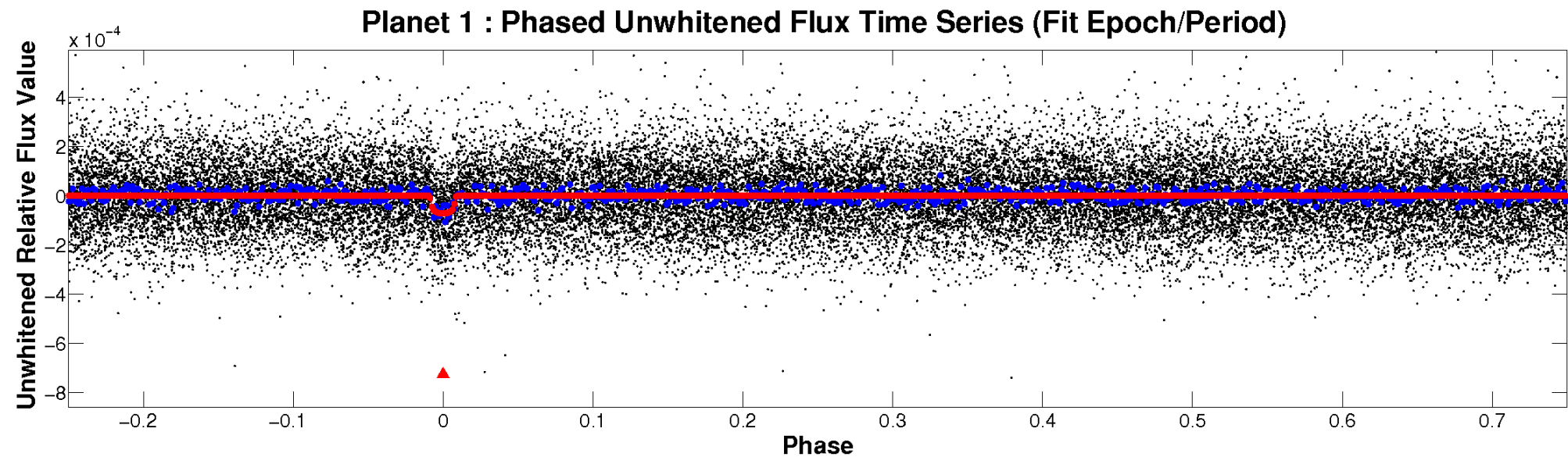
# ALT Odd/Even

TCE 008626325-01



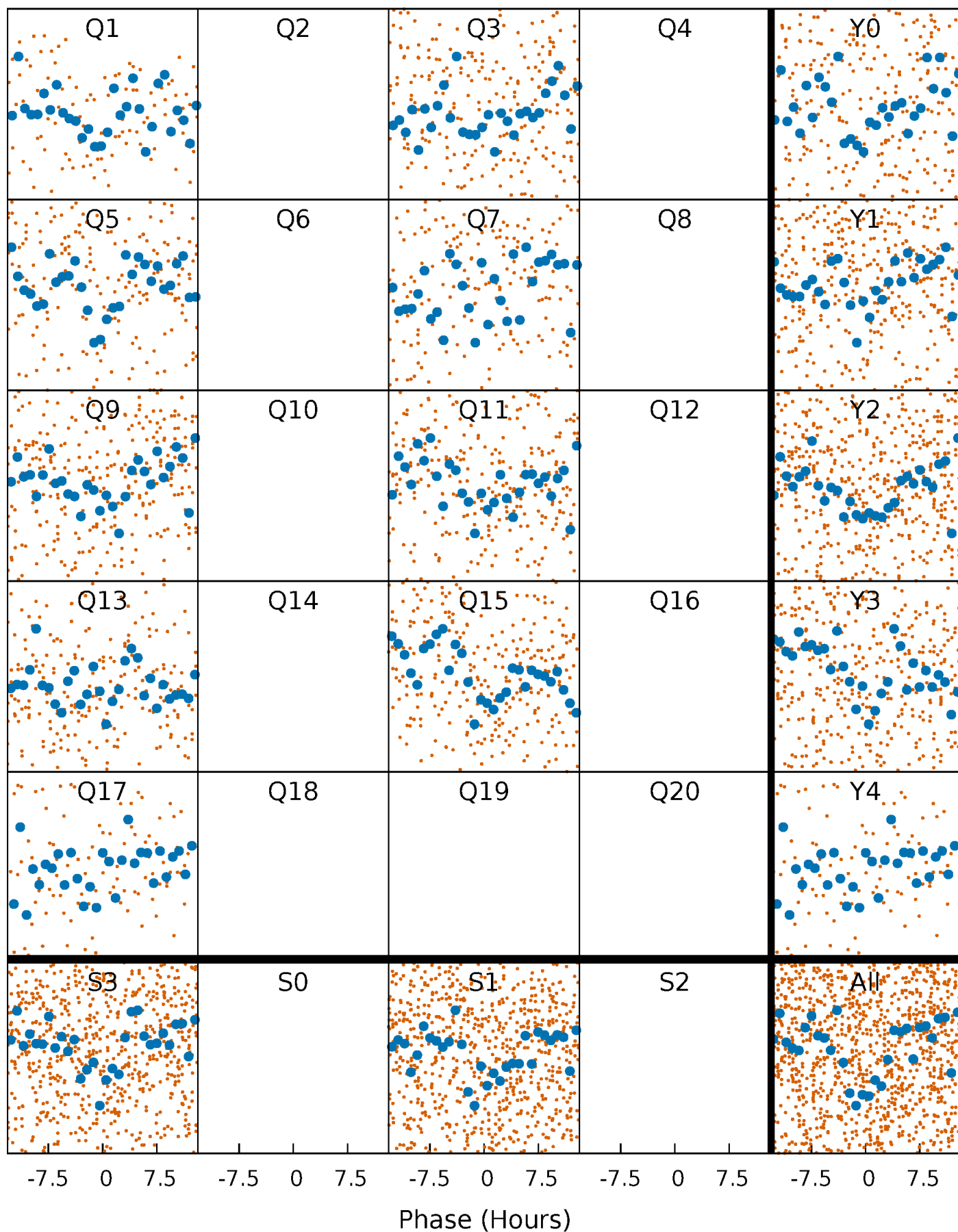


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

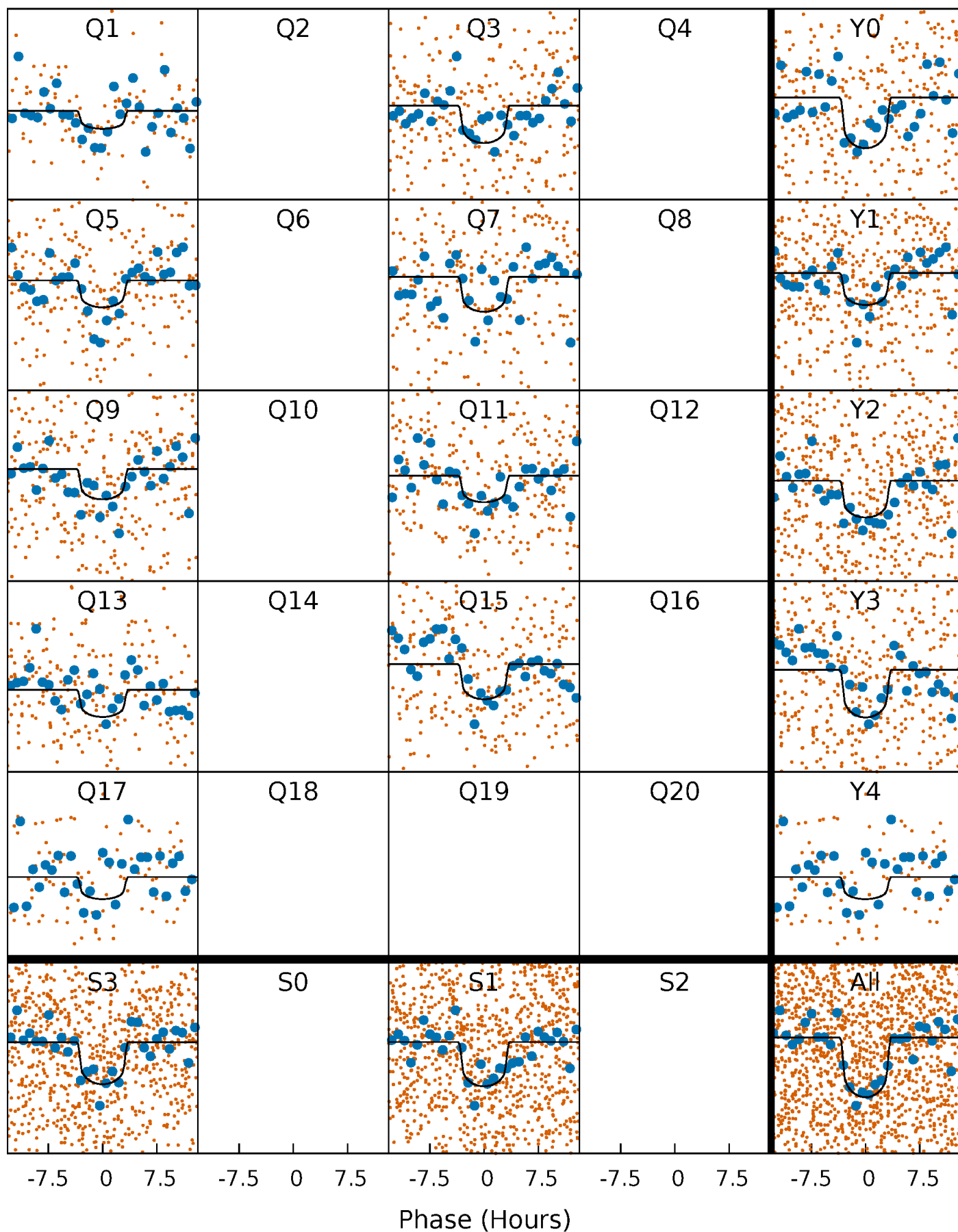
TCE 008626325-01 P= 16.449142 Days  $T_0=145.742105$  (BKJD)





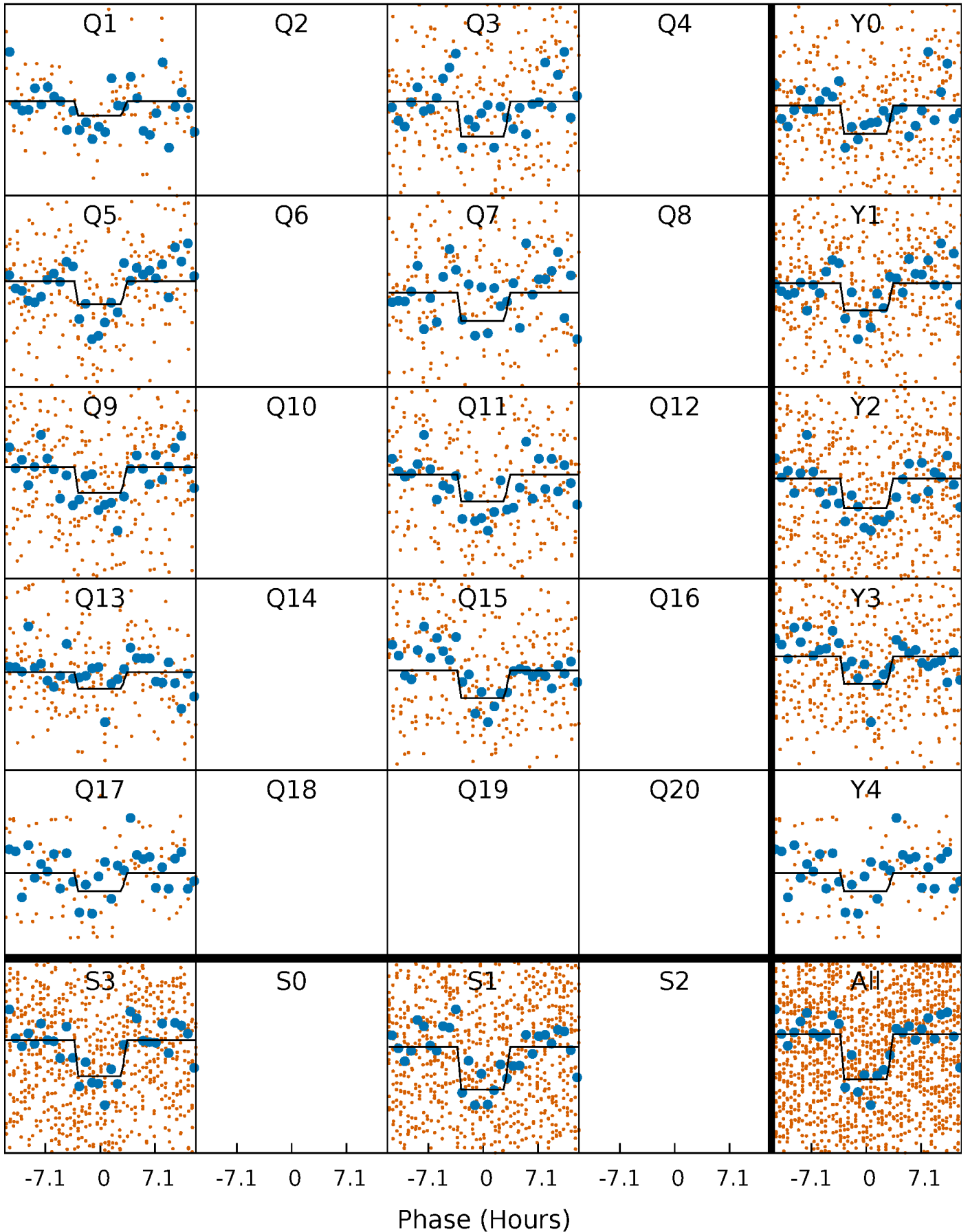
# DV Quarter-Phased Transit Curves

TCE 008626325-01 P= 16.449142 Days  $T_0=145.742105$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

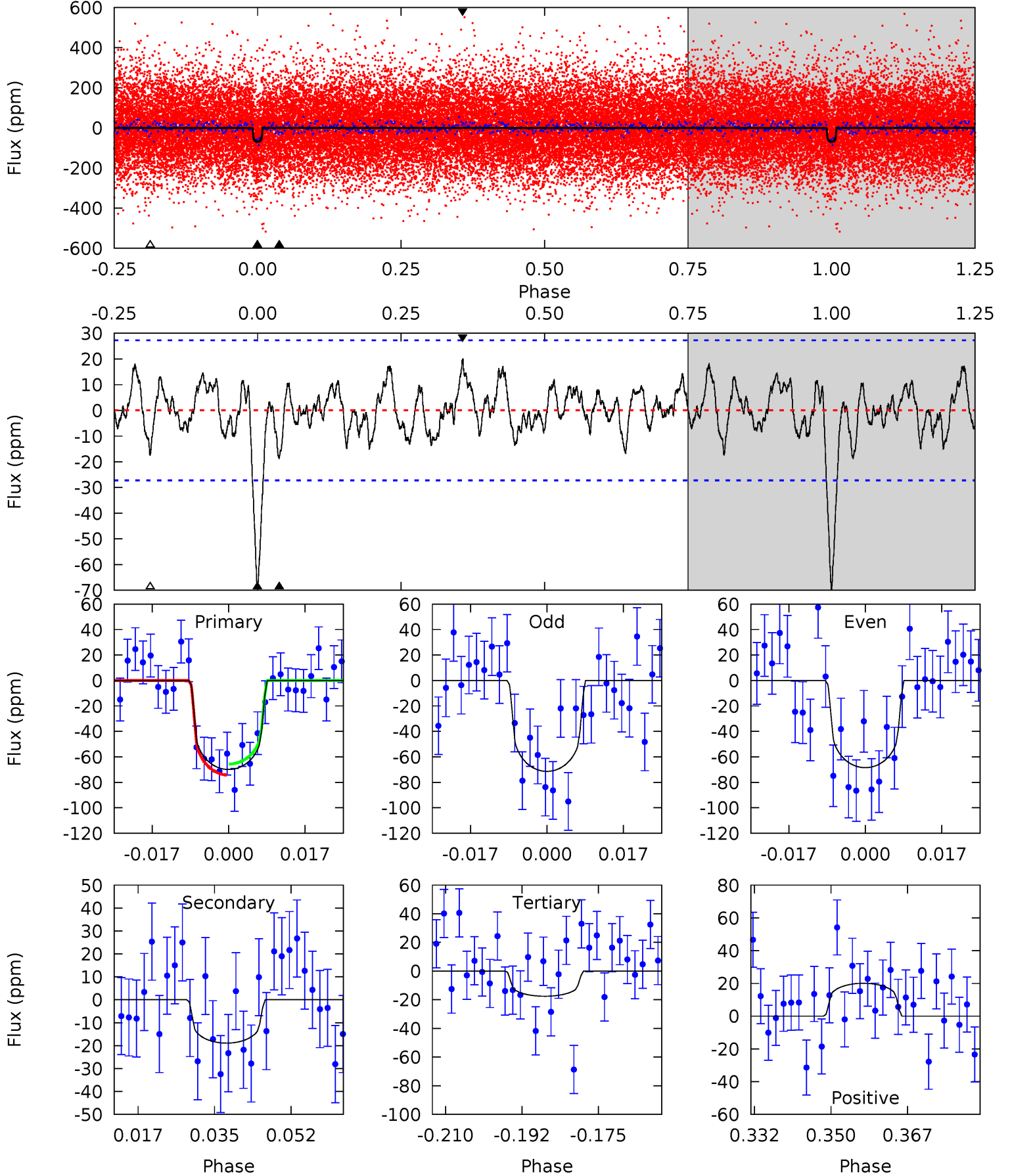
TCE 008626325-01 P= 16.449034 Days  $T_0=145.749953$  (BKJD)



# DV Model-Shift Uniqueness Test

008626325-01, P = 16.449142 Days, E = 129.292963 Days

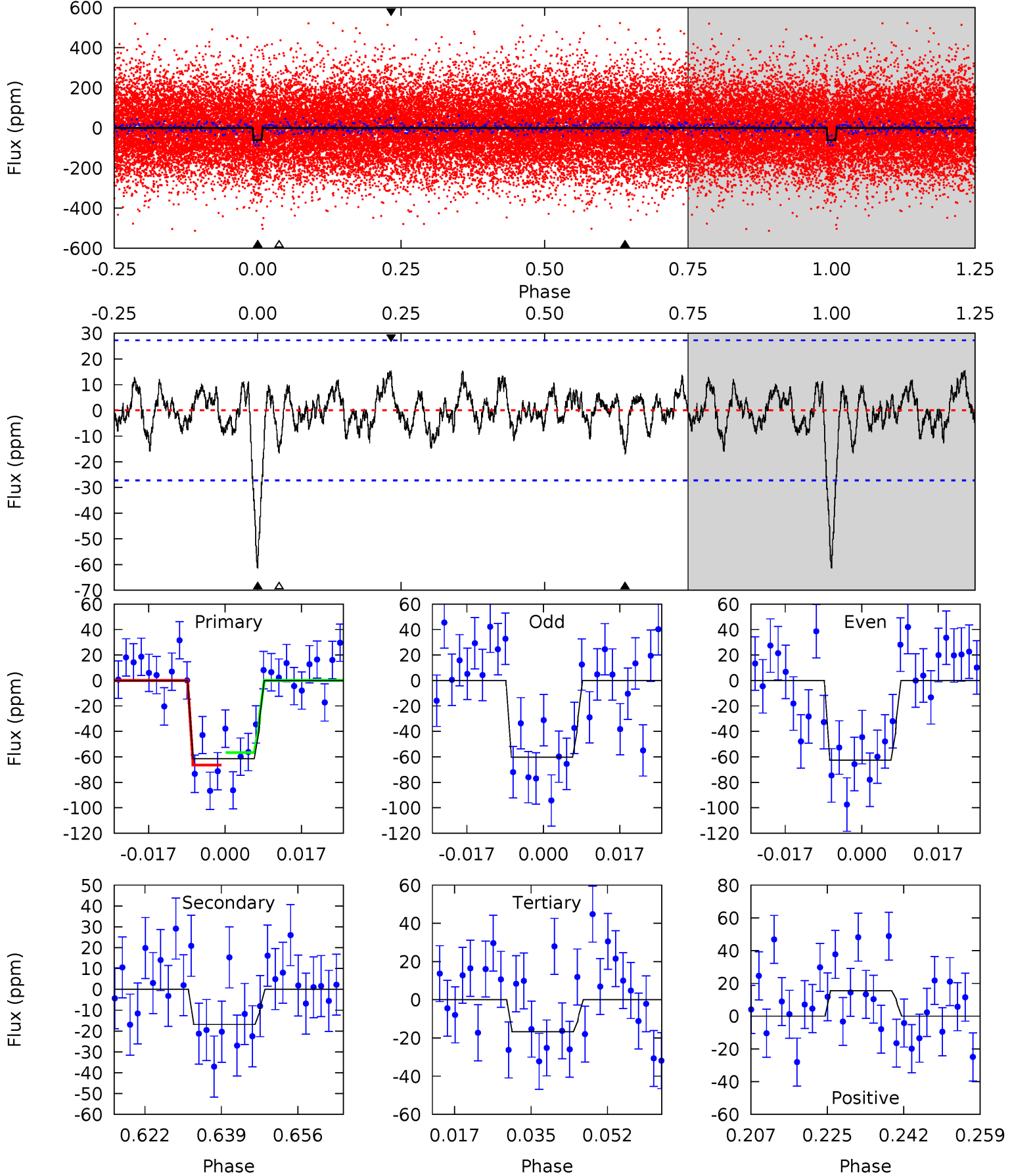
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	3.42	3.17	3.62	4.92	2.38	1.30	9.46	9.01	0.25	-0.21	0.26	1.10	0.22	0.78



# Alt Model-Shift Uniqueness Test

008626325-01,  $P = 16.449034$  Days,  $E = 129.300919$  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
11.1	3.04	3.02	2.81	4.92	2.38	1.04	8.07	8.28	0.02	0.23	0.21	1.08	0.20	0.87



### Stellar Parameters For KIC 008626325

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5334^{+214}_{-214}$	$3.712^{+0.308}_{-0.132}$	$0.320^{+0.150}_{-0.300}$	$2.789^{+0.591}_{-1.097}$	$1.464^{+0.175}_{-0.438}$	$0.095^{+0.208}_{-0.037}$
	+4%/-4%	+8%/-4%	+47%/-94%	+21%/-39%	+12%/-30%	+219%/-39%
Source	KIC0	FLK73	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 008626325-01 / KOI 4775.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-19 \pm 6$	$2.81^{+1.85}_{-1.65}$	$1425^{+106}_{-135}$	$3820^{+1501}_{-556}$	$25^{+121}_{-16}$
Alt.	$-17 \pm 6$	$2.53^{+1.80}_{-1.52}$	$1420^{+120}_{-142}$	$3914^{+1694}_{-657}$	$29^{+154}_{-19}$

$T_{\text{max}}$  = 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  $A_{\text{obs}} \gg 1.0$

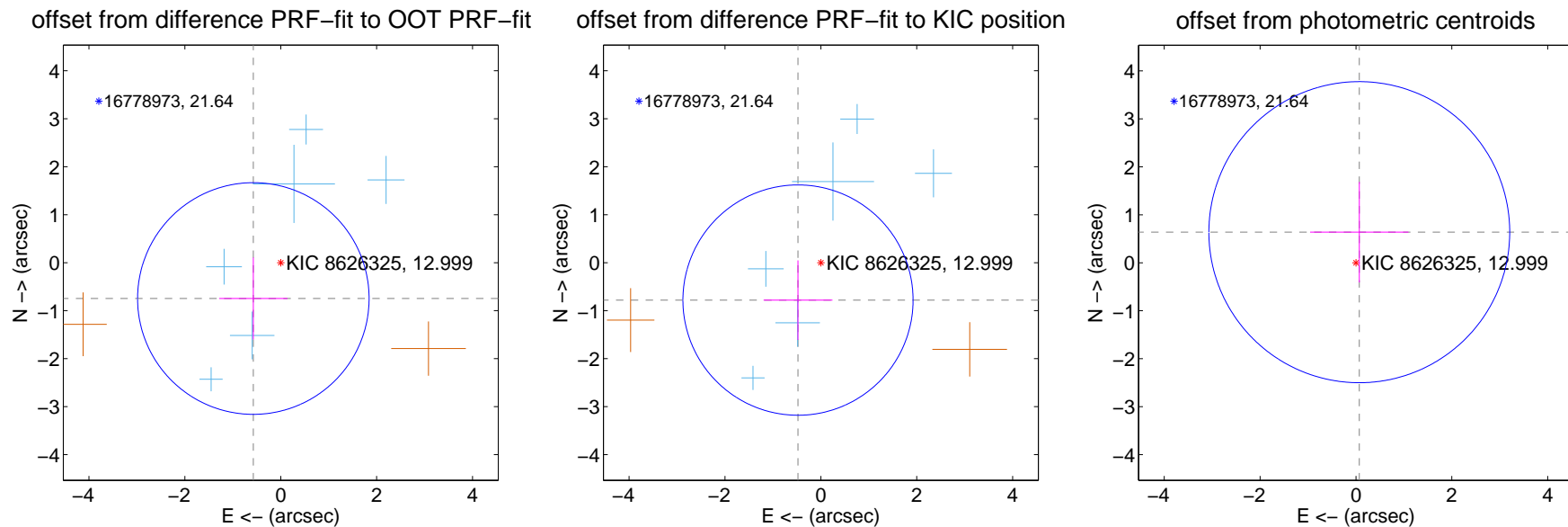
## DV Centroid Data

Supplemental centroid analysis for 008626325-01. Kepler magnitude: 13.00. Transit SNR 8.35

There are 6 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

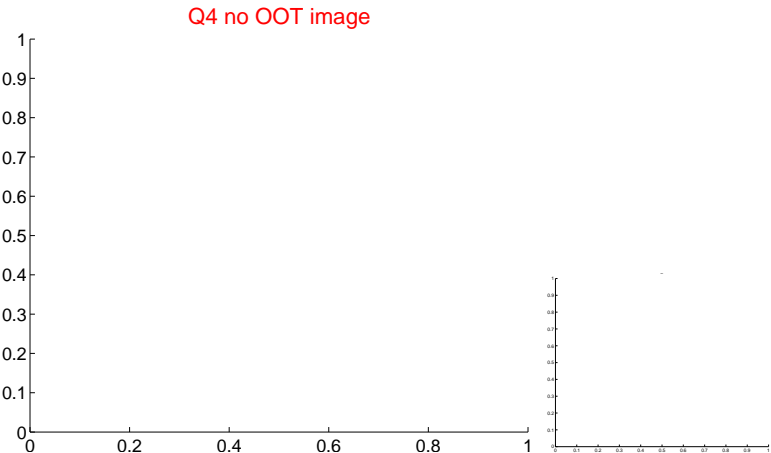
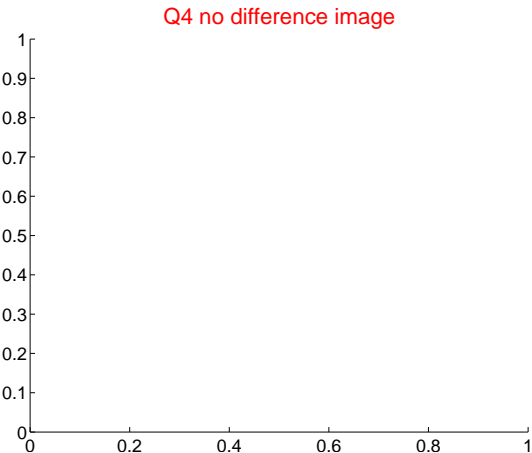
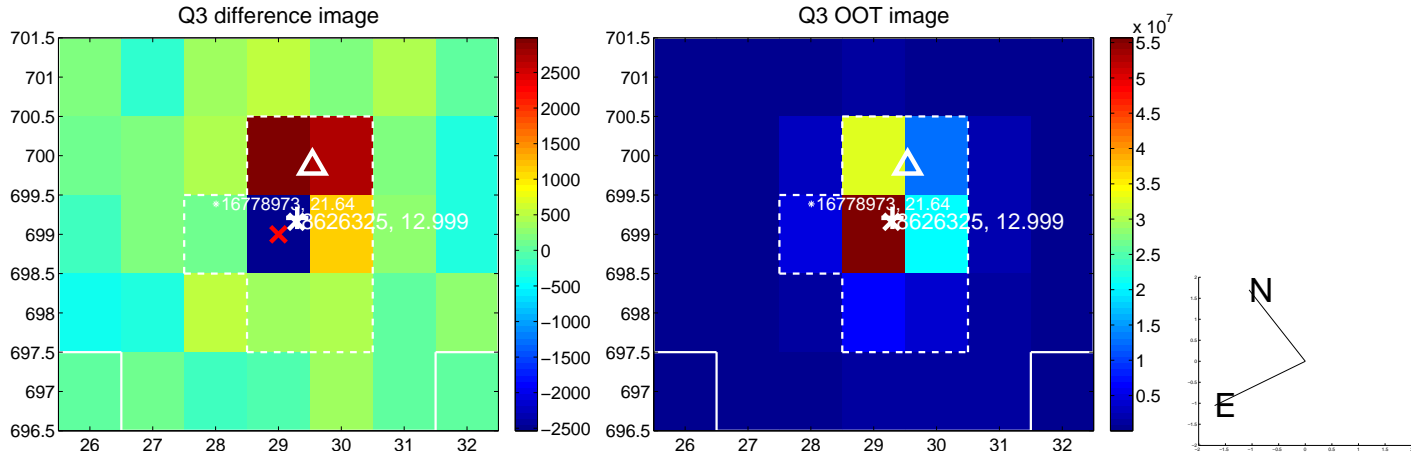
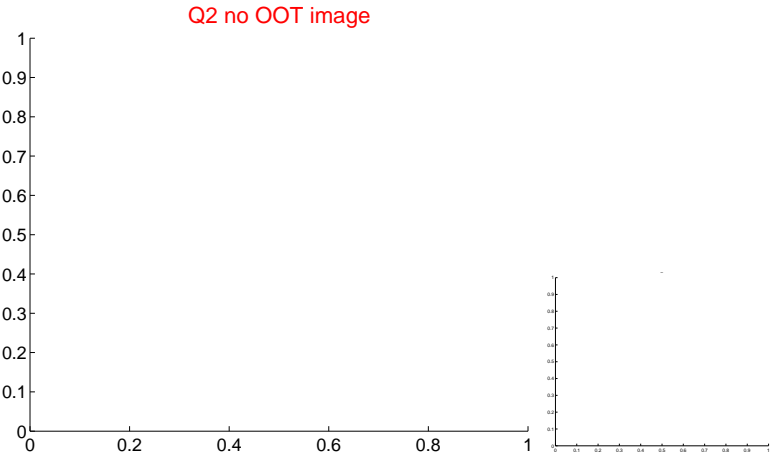
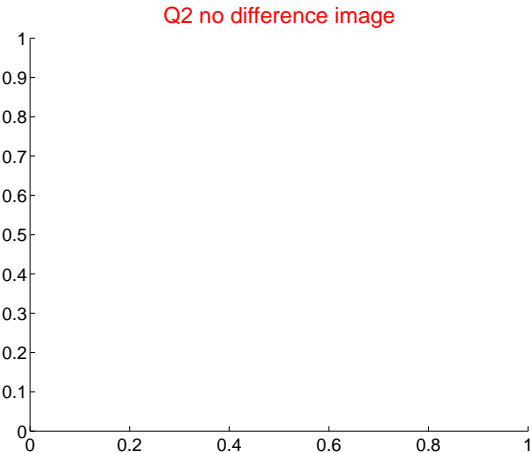
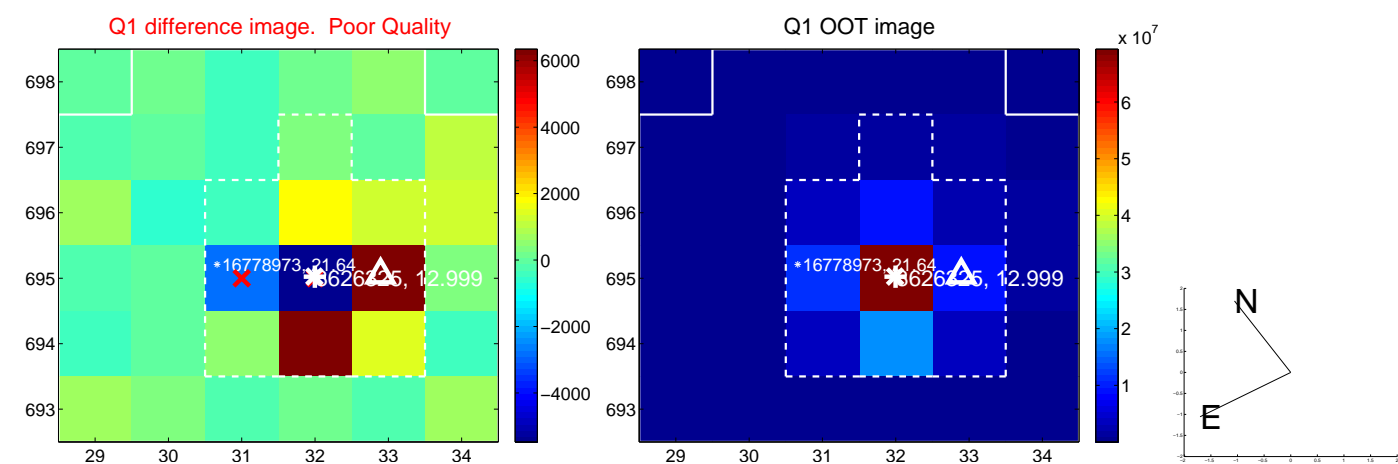
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.940 \pm 0.805$	1.17	$0.572 \pm 0.713$	$-0.746 \pm 0.854$
PRF-fit source offset from KIC position	$0.914 \pm 0.800$	1.14	$0.477 \pm 0.718$	$-0.779 \pm 0.828$
photometric centroid source offset	$0.64 \pm 1.05$	0.61	$-0.07 \pm 1.03$	$0.64 \pm 1.05$



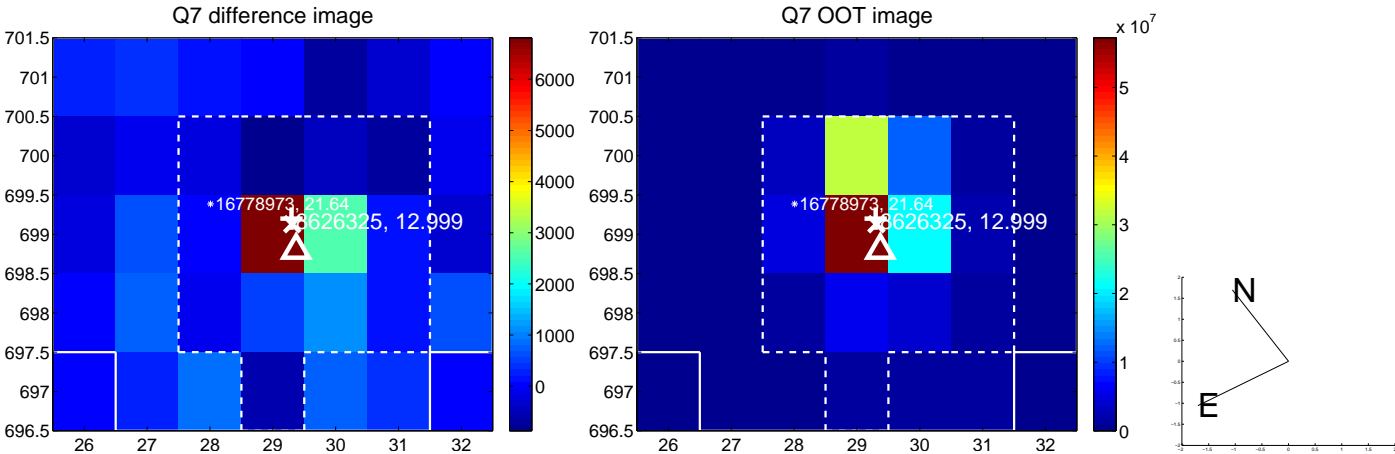
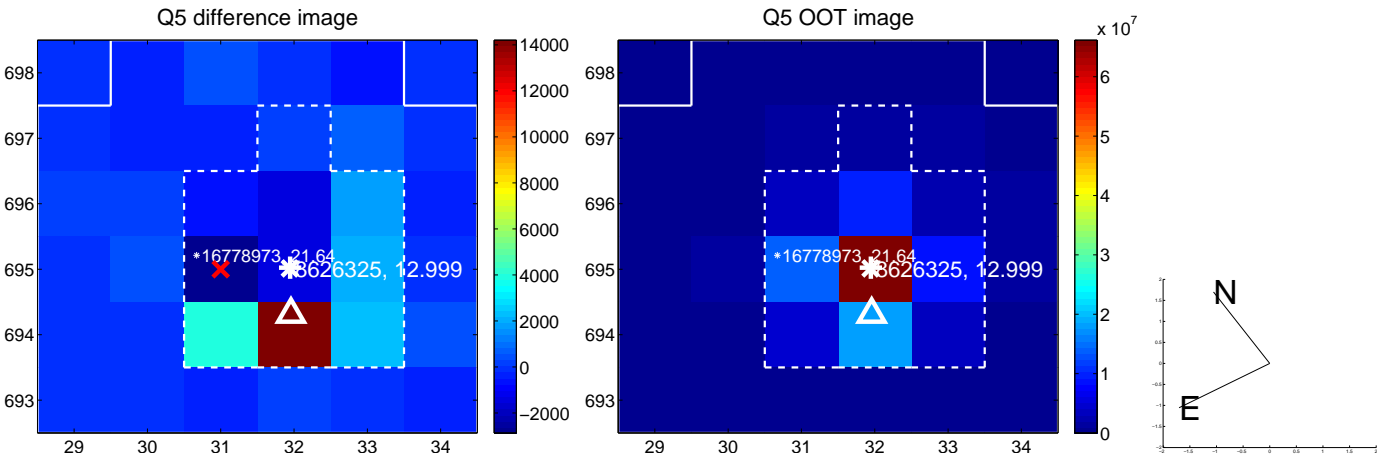
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



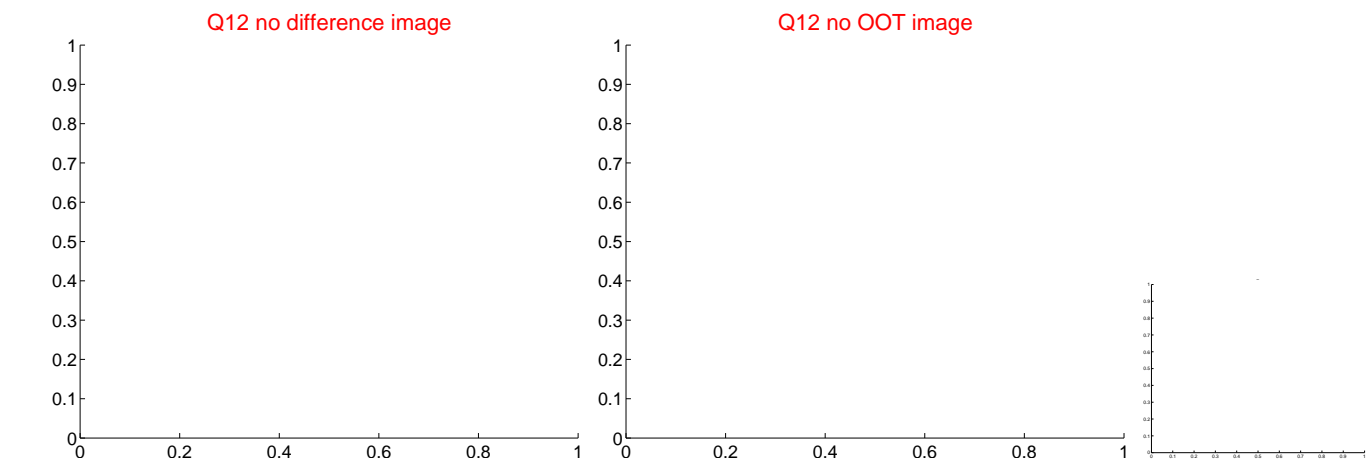
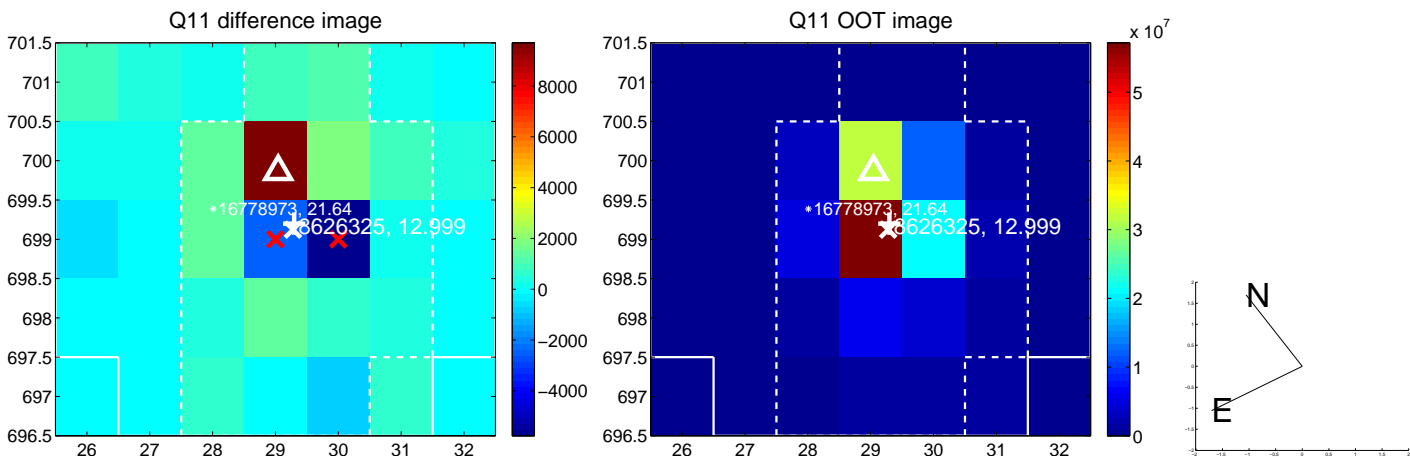
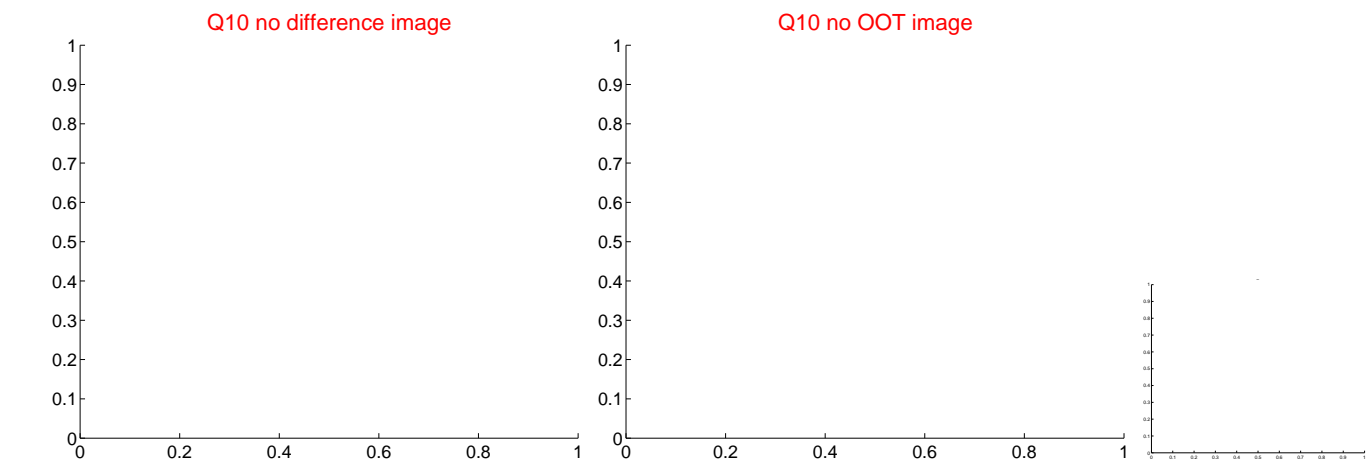
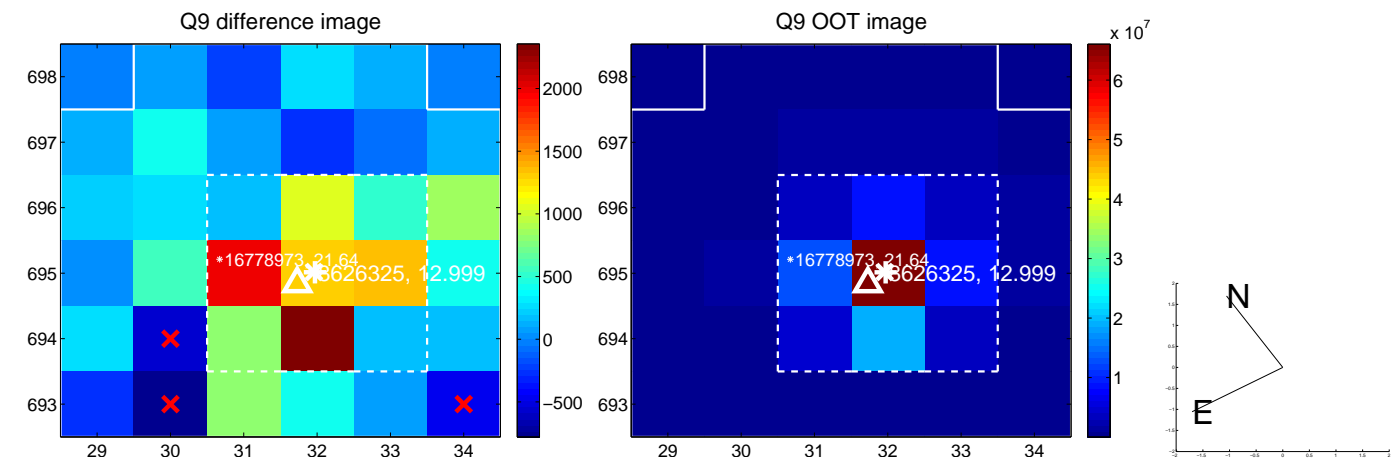
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



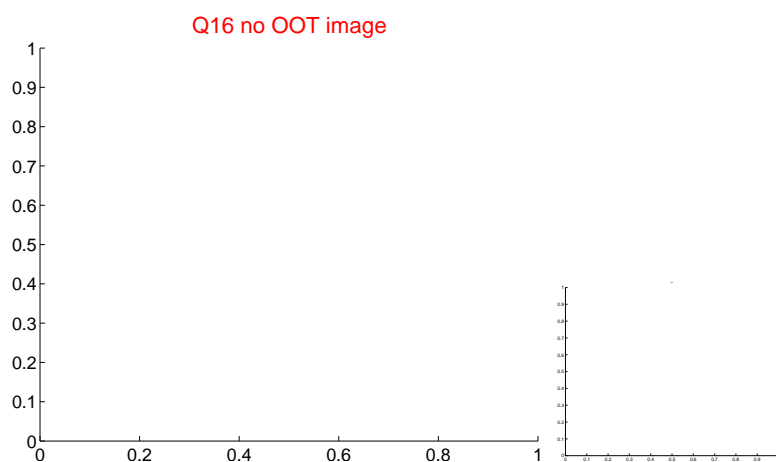
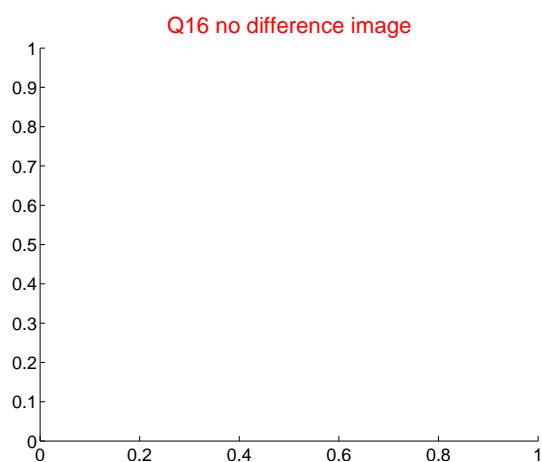
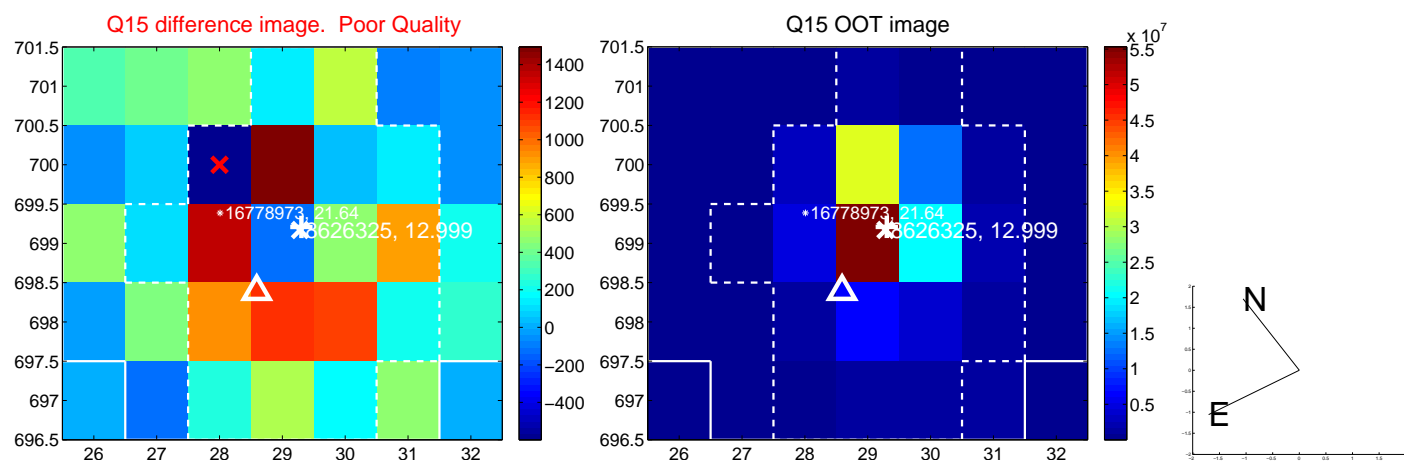
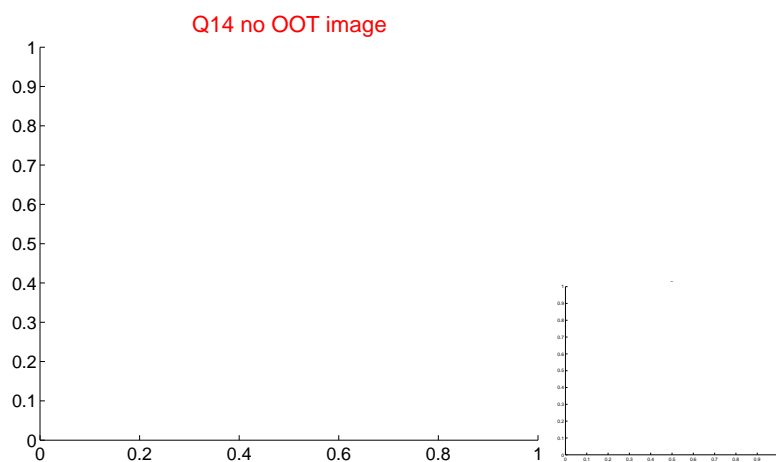
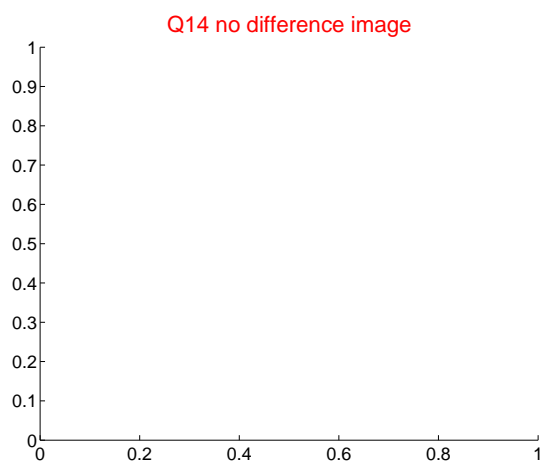
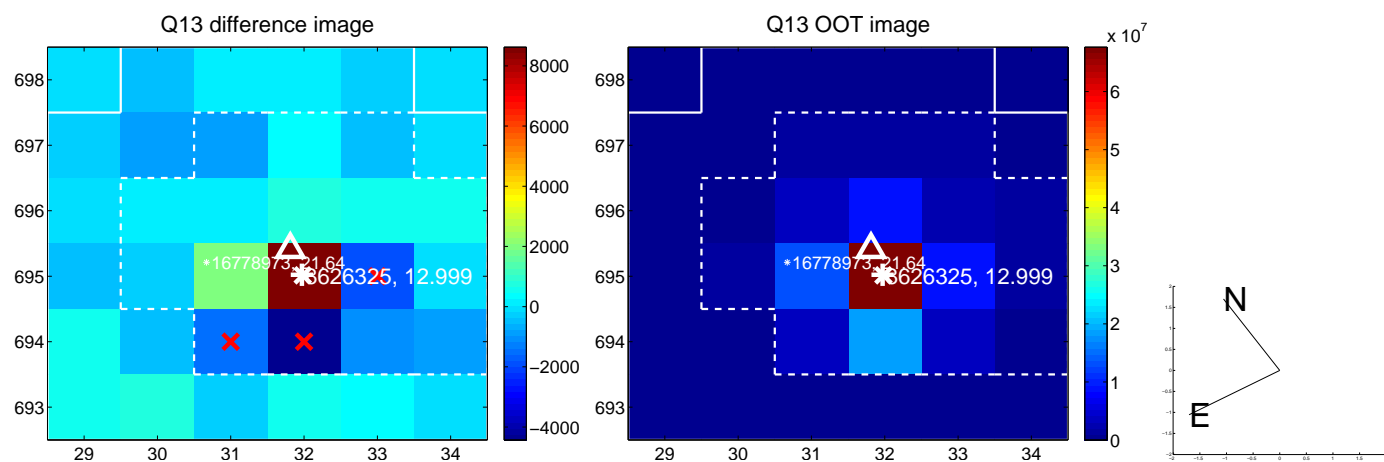
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



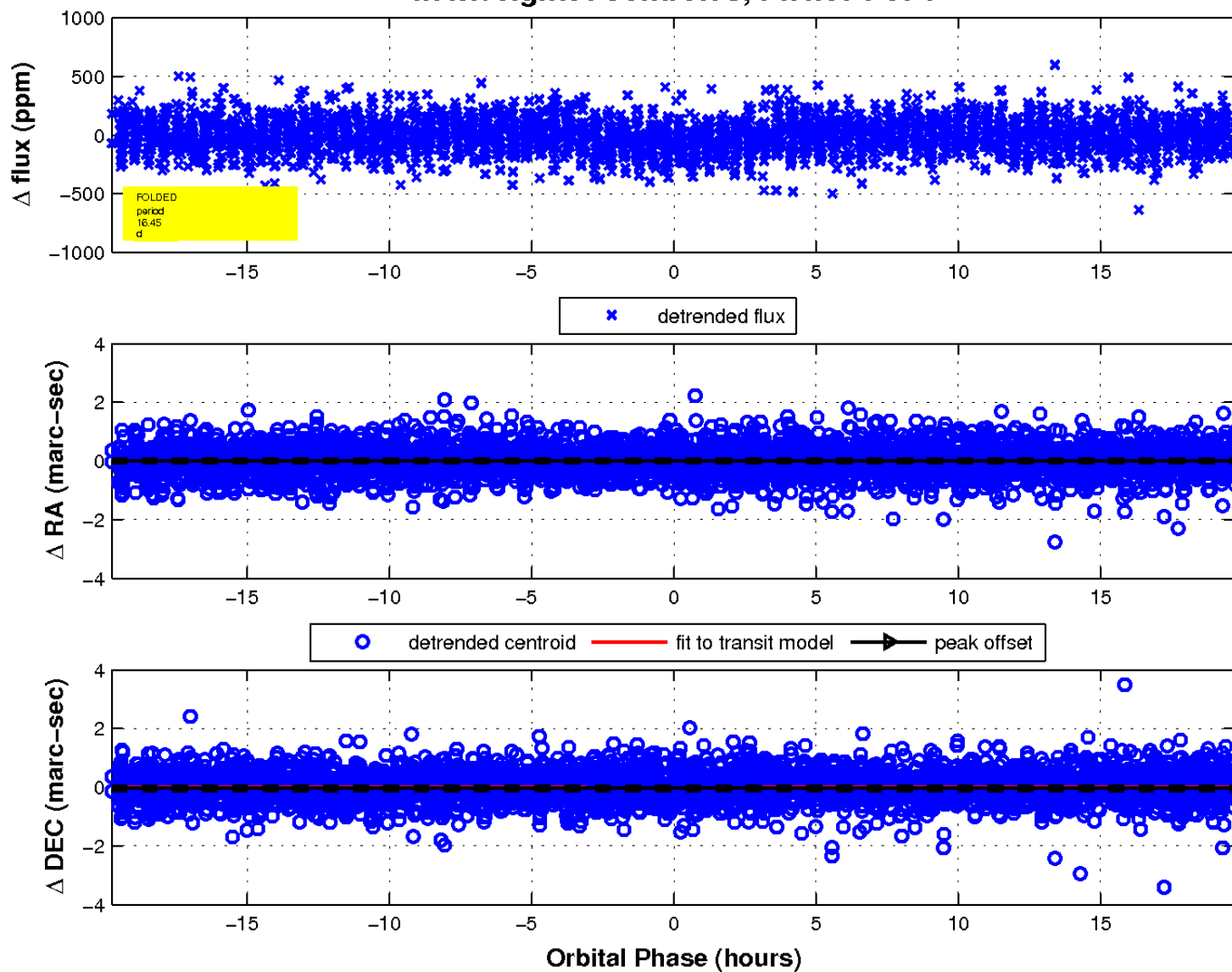
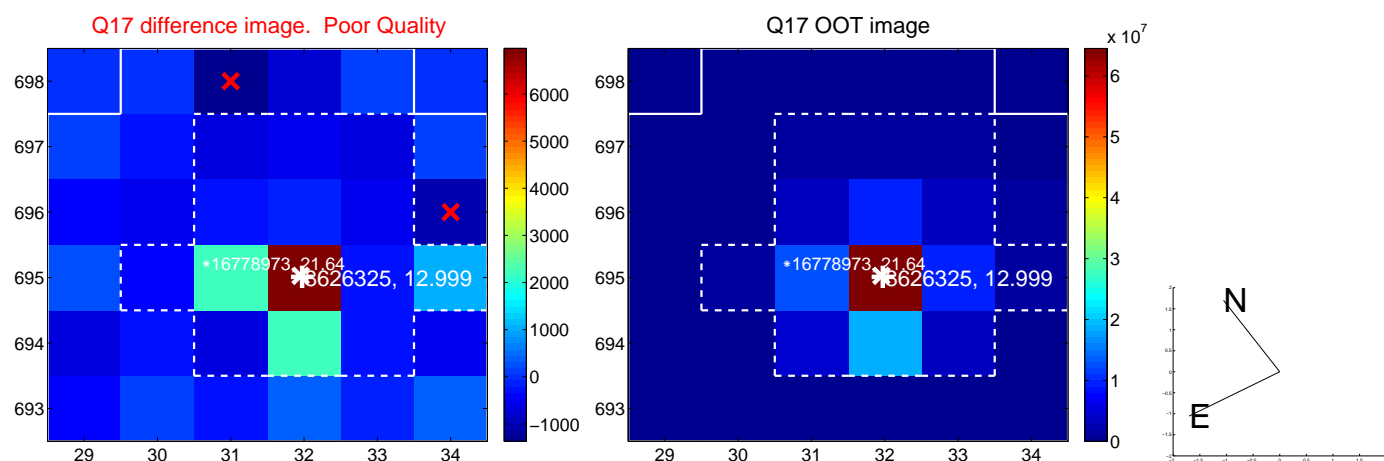
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

Declination

