

# KIC 011199725

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011199725-01	OBS	7418.01	1.032957	131.924432	101.5	1.547	20.9	20.9	18.96	5283	22.93	0.00

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011199725-01	OBS	FP	0.34	0	0	1	0	PLANET_IN_STAR—CENT_UNRESOLVED_OFFSET

**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 011199725-01

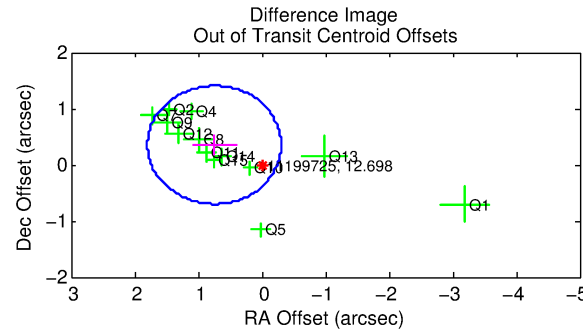
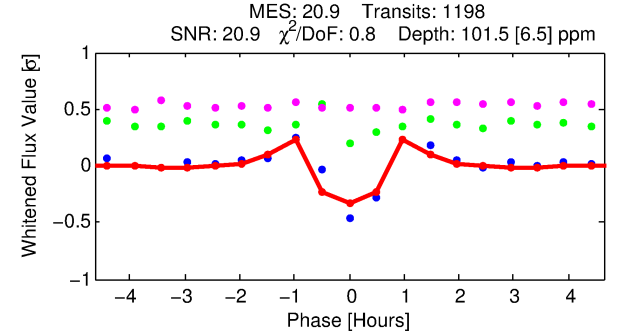
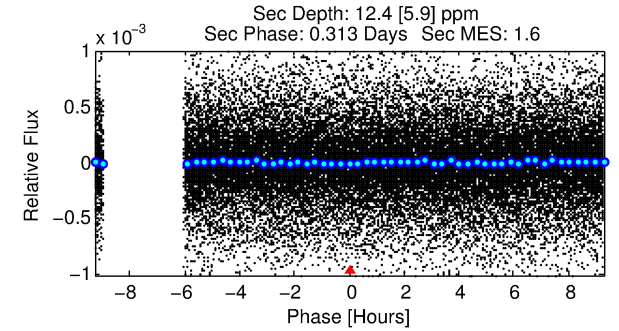
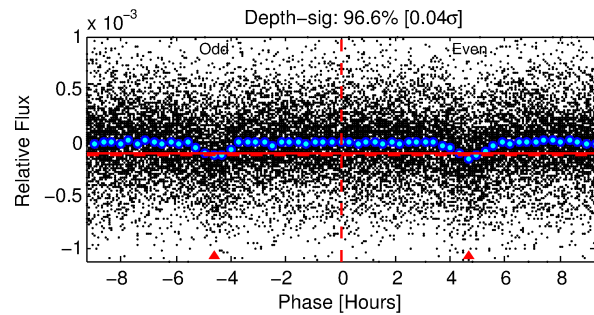
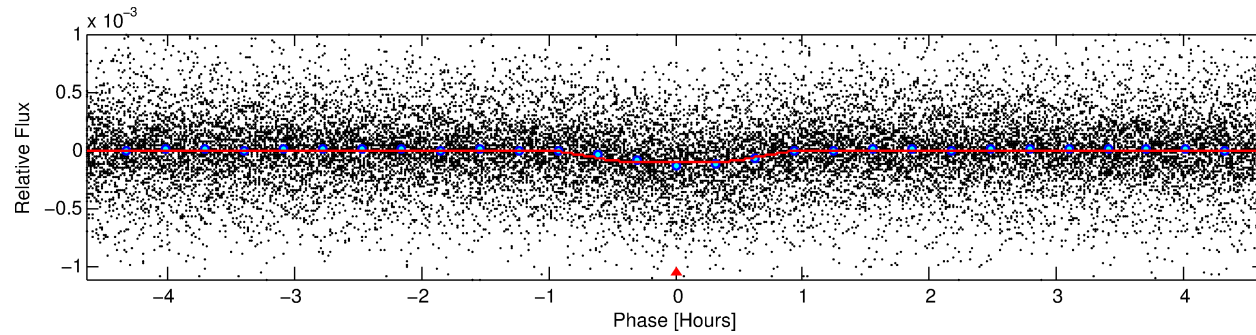
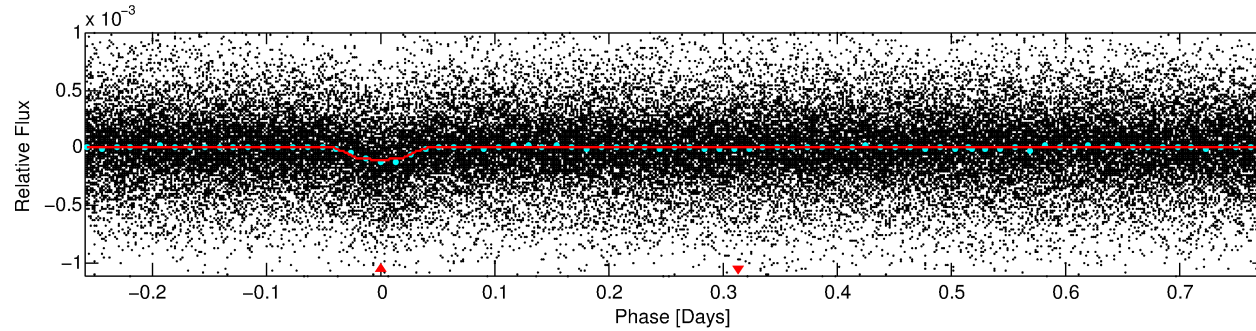
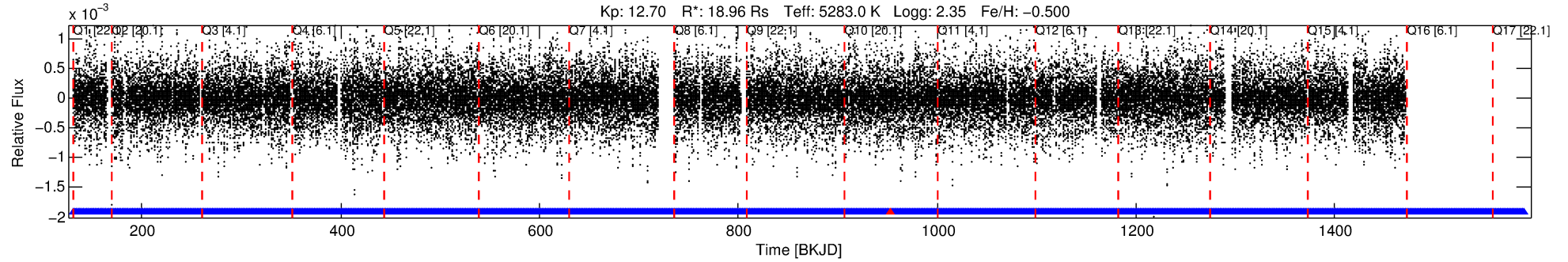
No Significant Match Found

# DV One-Page Summary

KIC: 11199725 Candidate: 1 of 1 Period: 1.033 d

KOI: K07418.01 Corr: 0.811

Kp: 12.70 R\*: 18.96 Rs Teff: 5283.0 K Logg: 2.35 Fe/H: -0.500



## DV Fit Results:

Period = 1.03296 [0.00000] d  
Epoch = 131.9244 [0.0006] BKJD  
Rp/R\* = 0.0111 [0.0018]  
a/R\* = 2.50 [1.55]  
b = 0.90 [0.15]  
Seff = N/A  
Teq = N/A  
Rp = 22.93 [8.47] Re  
a = N/A  
Ag = N/A  
Teffp = N/A

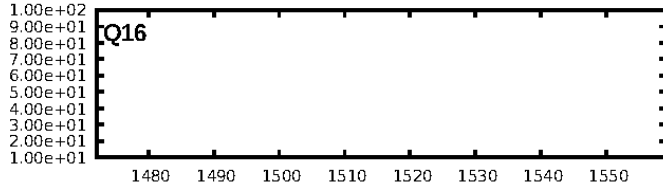
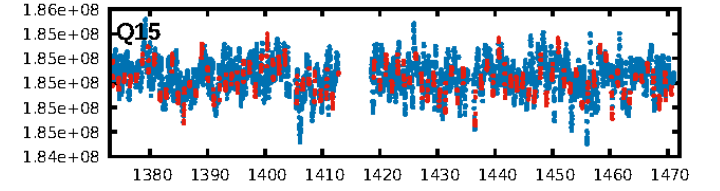
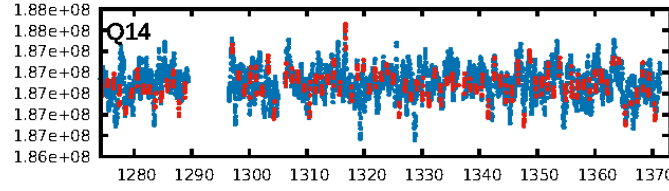
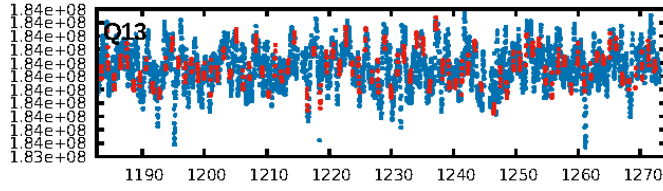
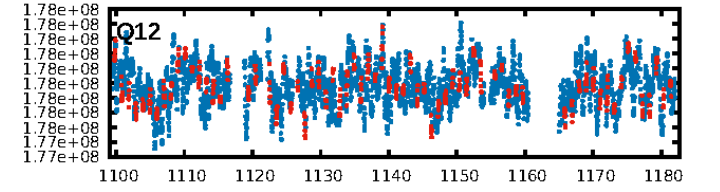
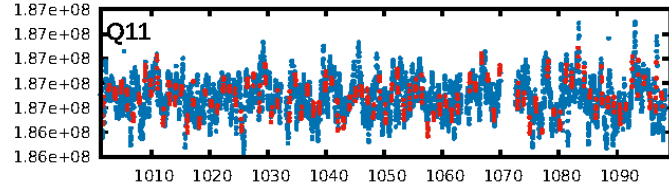
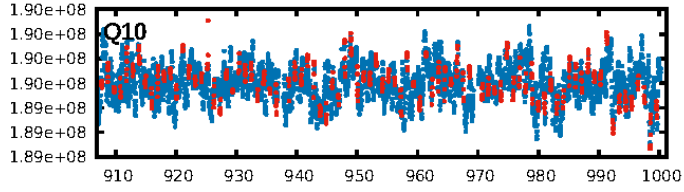
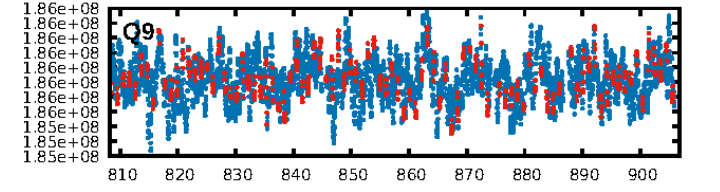
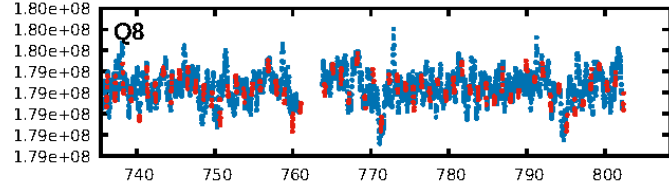
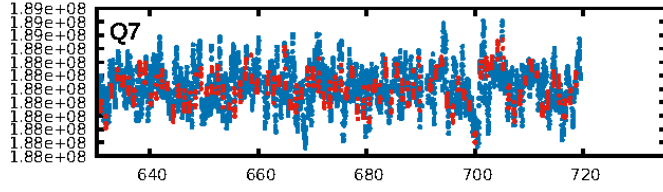
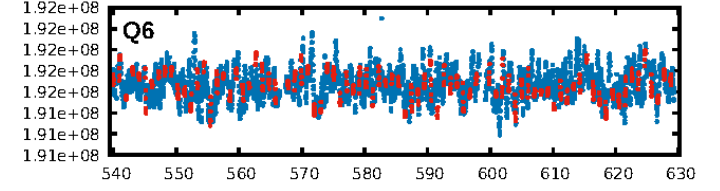
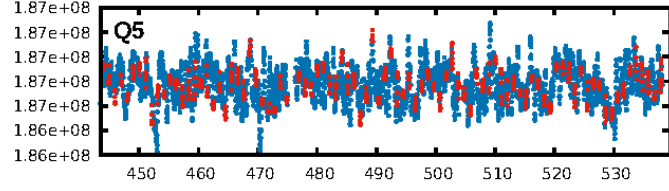
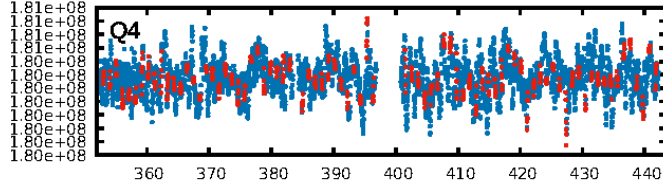
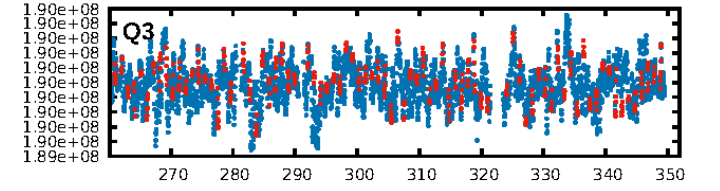
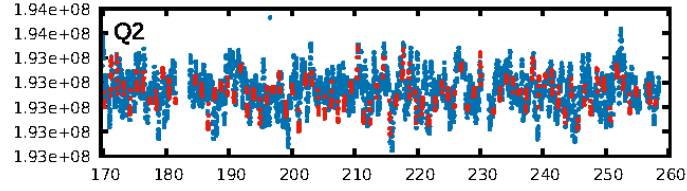
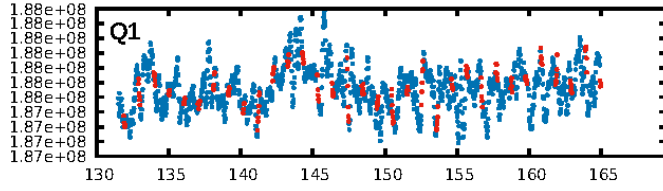
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 2.43e-99  
RollingBand-fgt: 1.00 [1164/1165]  
GhostDiagnostic-chr: 1.74  
Centroid-sig: 0.0%  
Centroid-so: 1.327 arcsec [5.42σ]  
OotOffset-rm: 0.826 arcsec [2.36σ]  
KicOffset-rm: 0.880 arcsec [2.40σ]  
OotOffset-st: 3/3/3/4 [13]  
KicOffset-st: 3/3/3/4 [13]  
DiffImageQuality-fgm: 0.85 [11/13]  
DiffImageOverlap-fno: 1.00 [15/15]

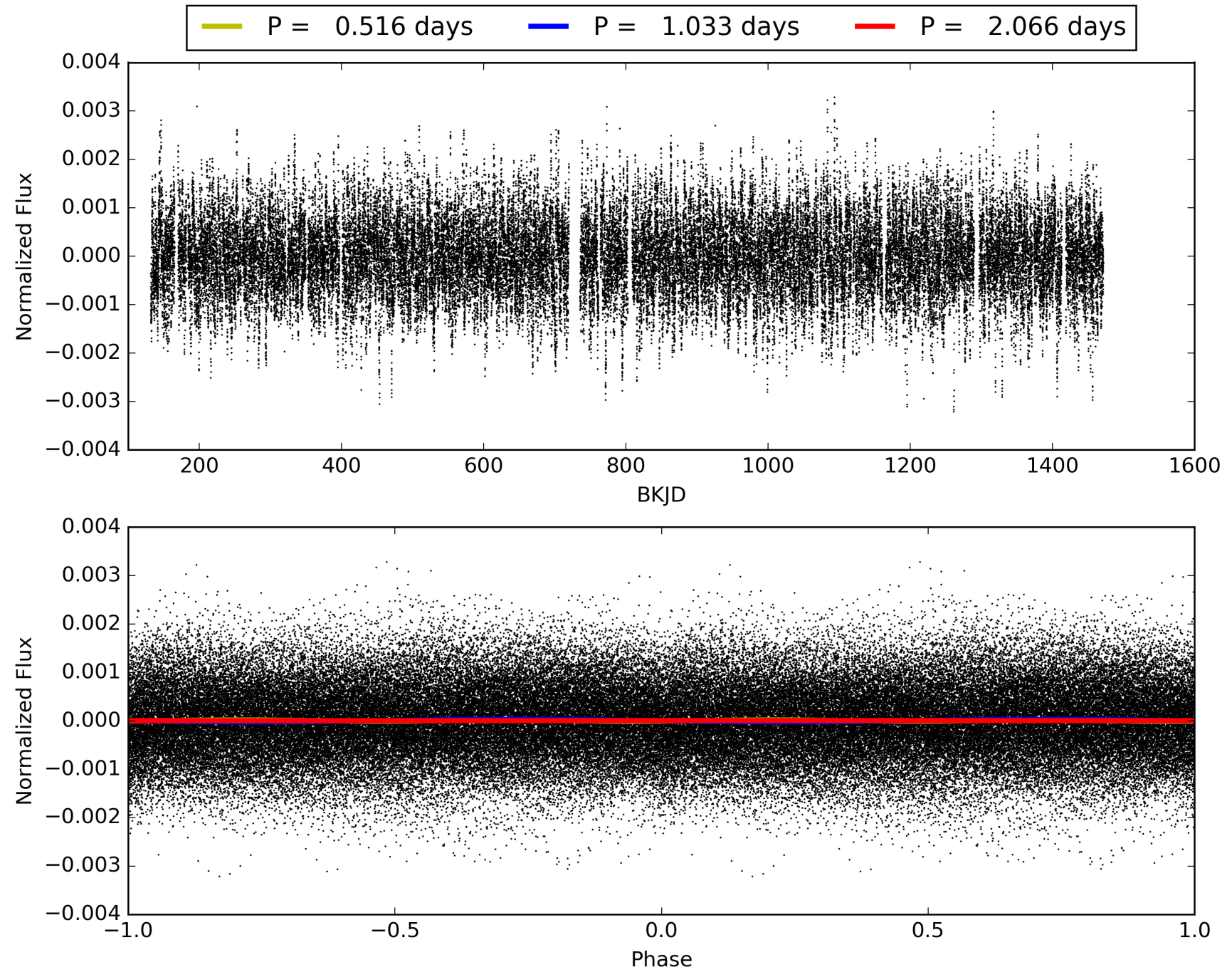
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:32:34 Z

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

# TCE 011199725-01, PDC Light Curves



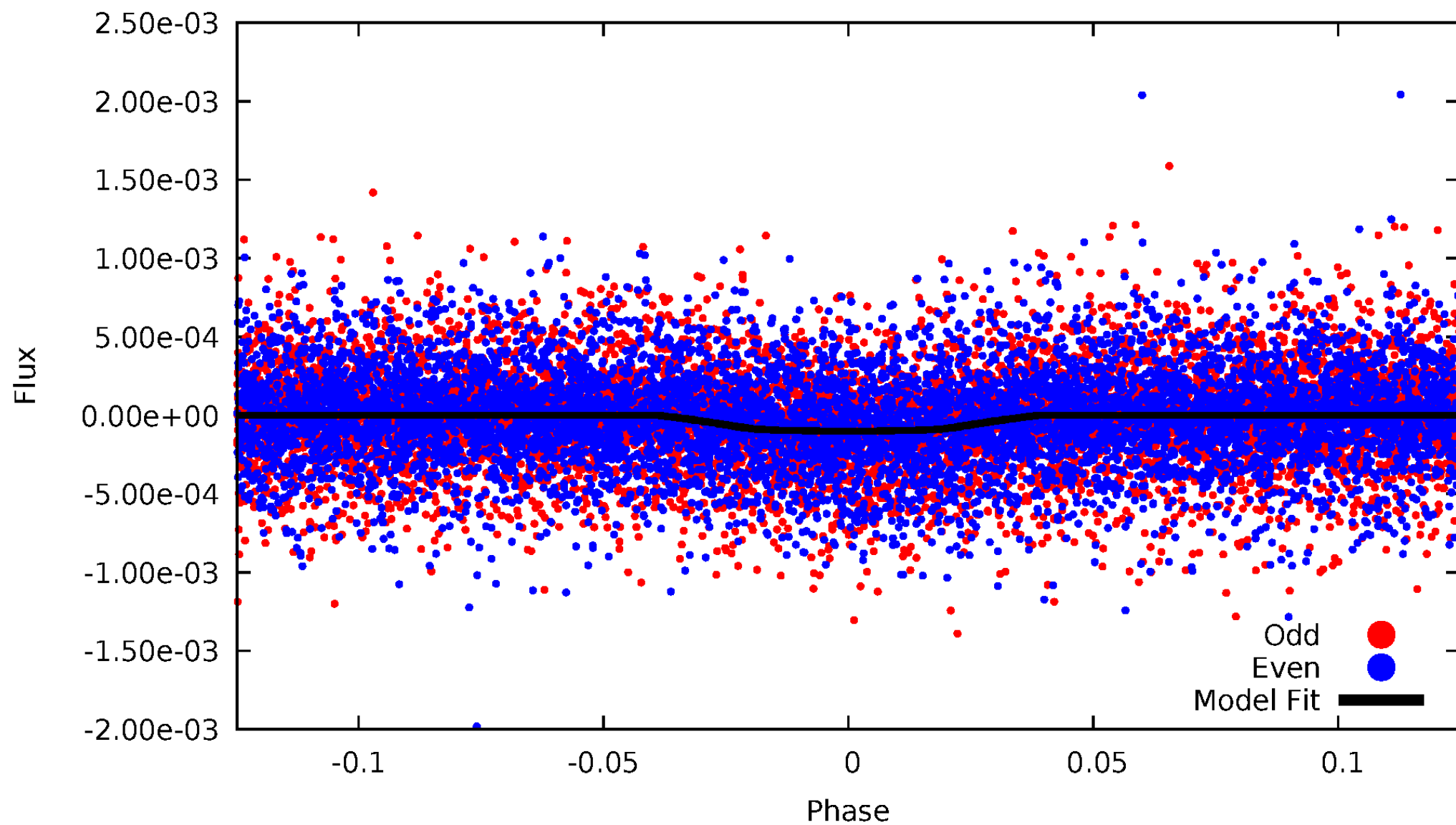
# TCE 011199725-01





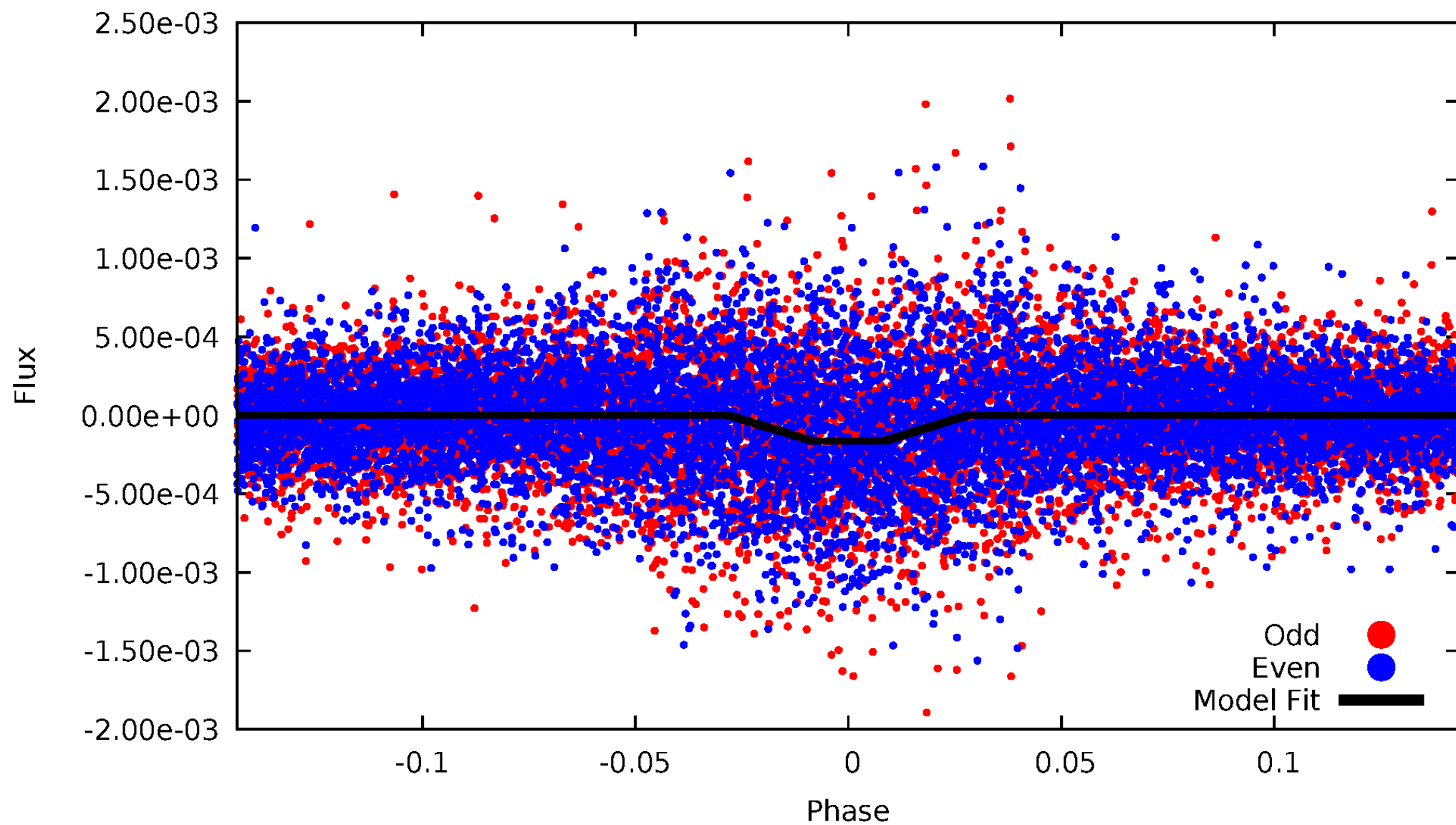
# DV Odd/Even

TCE 011199725-01

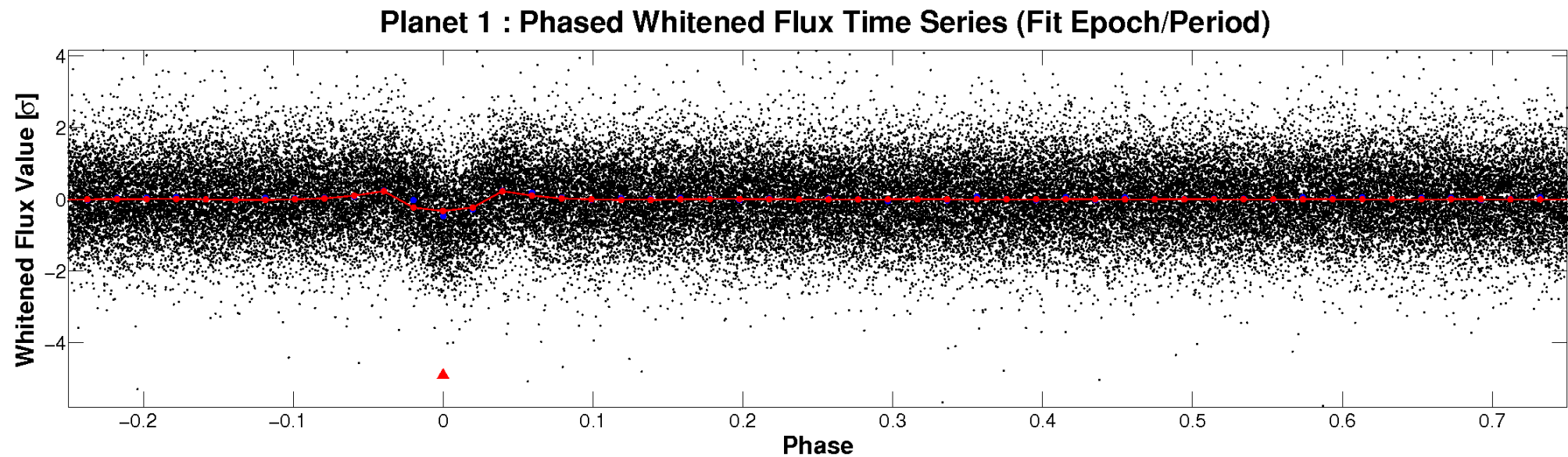
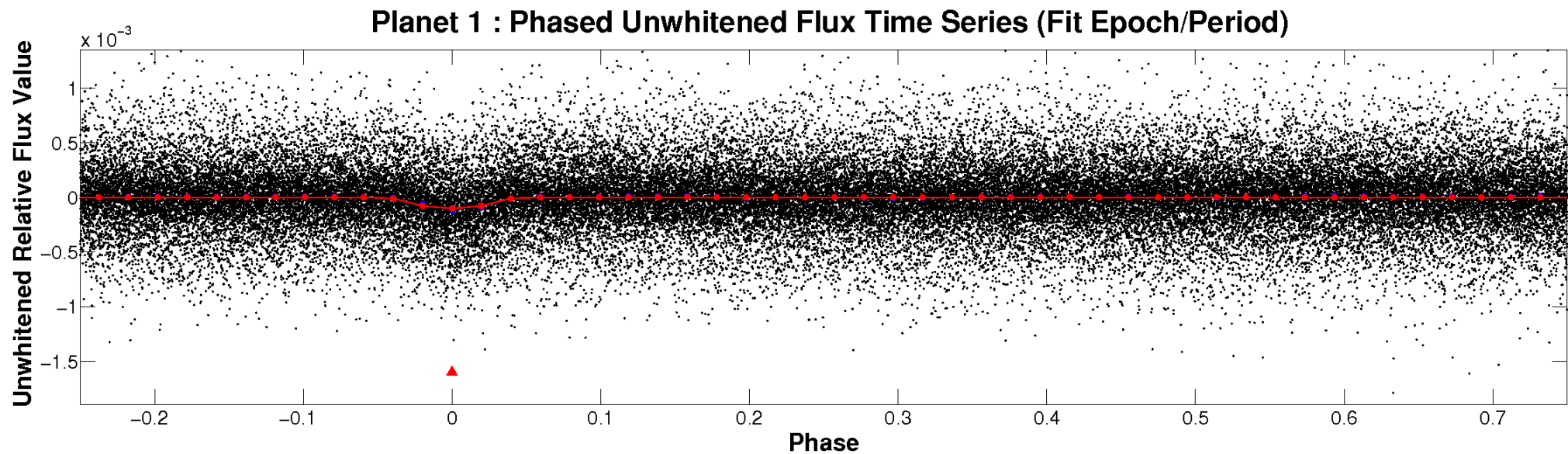


# ALT Odd/Even

TCE 011199725-01

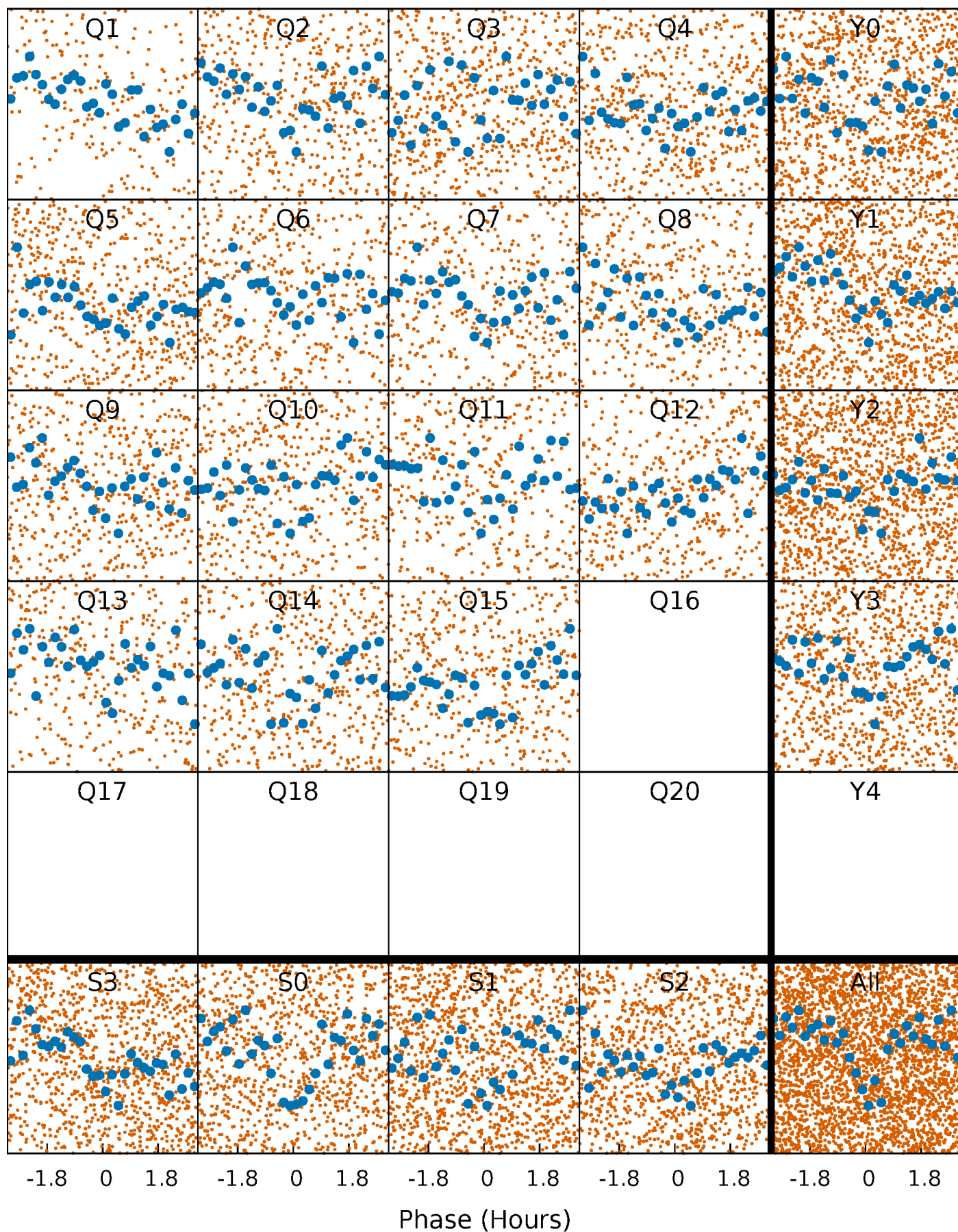


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

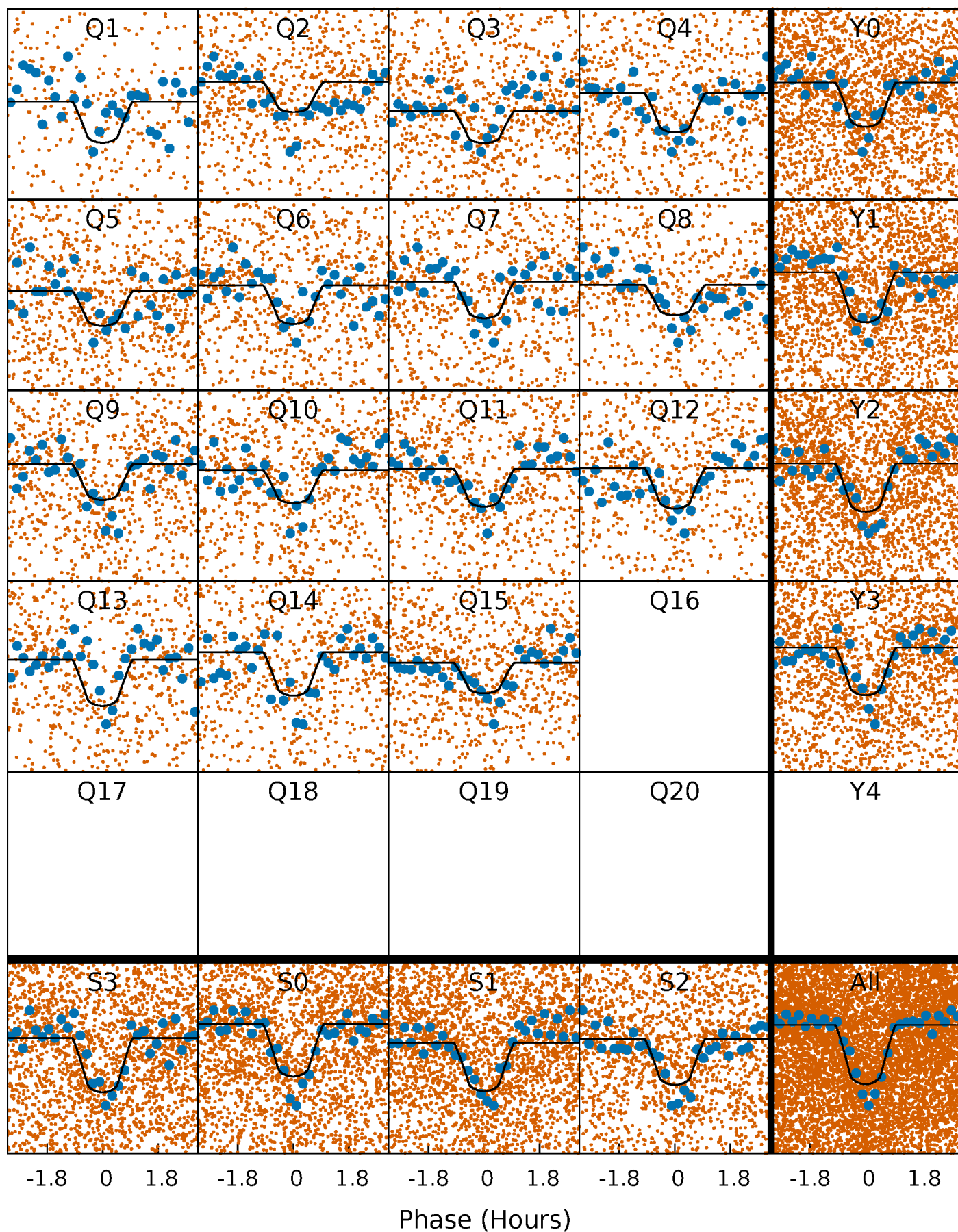
TCE 011199725-01 P= 1.032957 Days  $T_0=131.924432$  (BKJD)





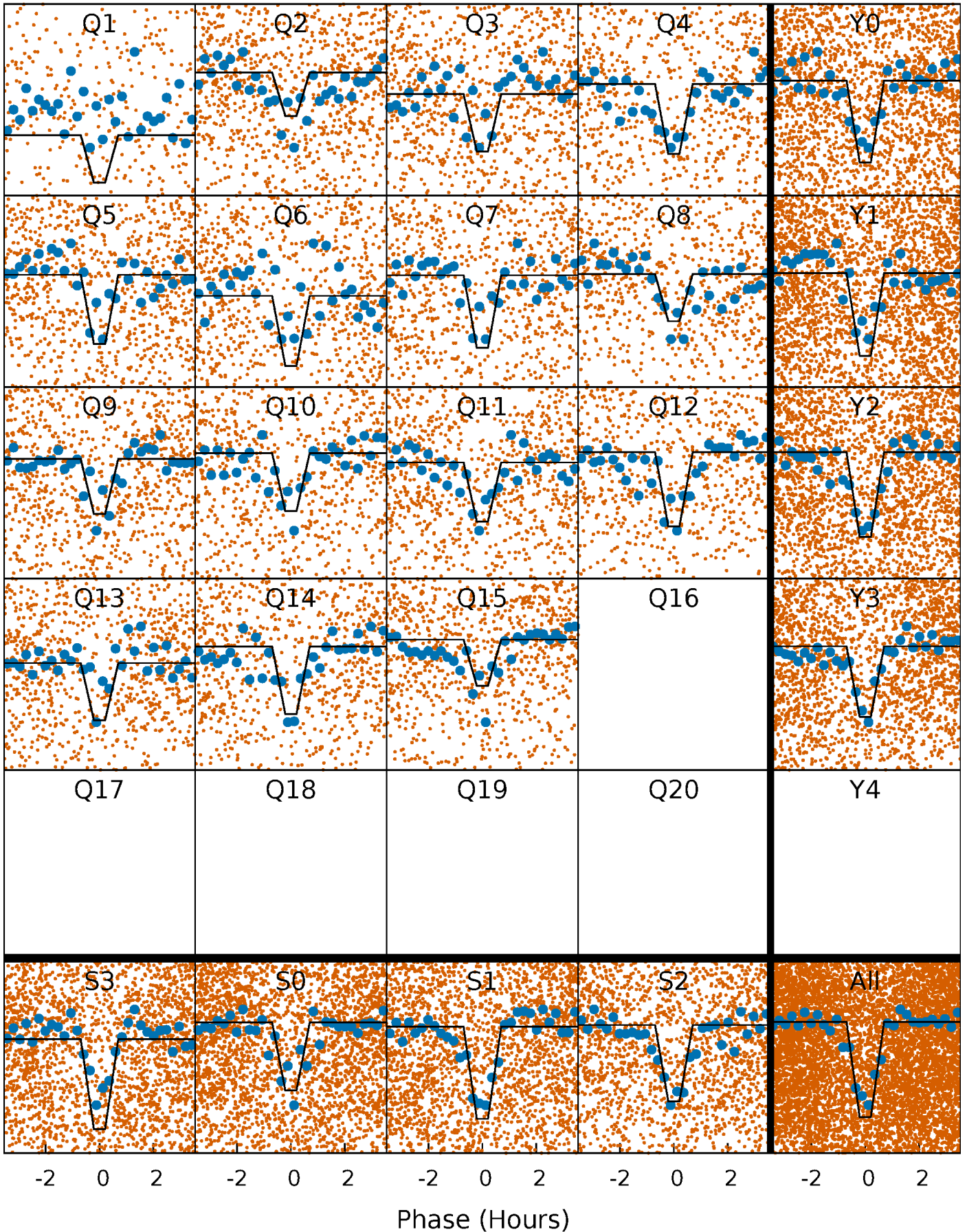
# DV Quarter-Phased Transit Curves

TCE 011199725-01 P= 1.032957 Days  $T_0=131.924432$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

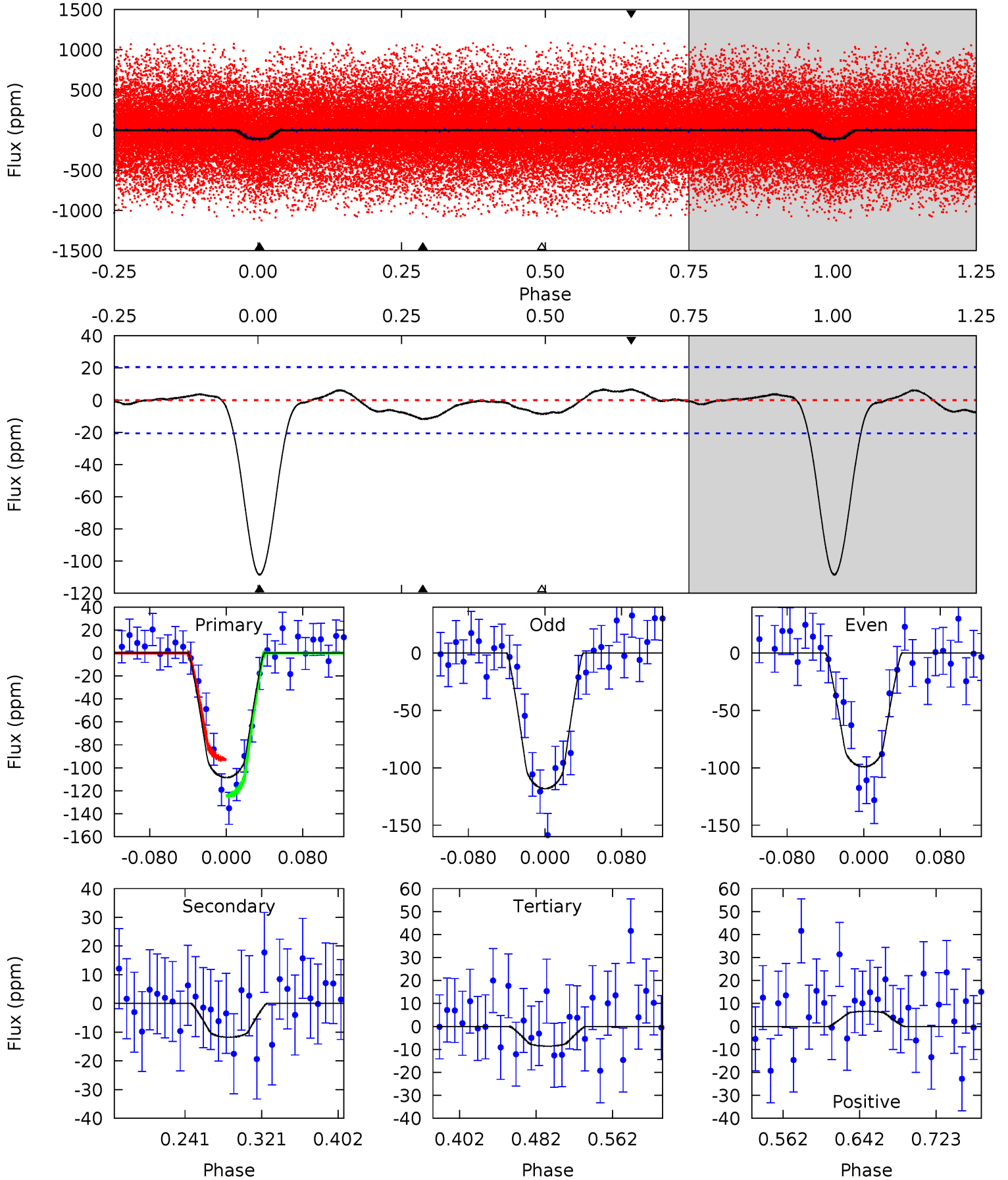
TCE 011199725-01 P= 1.032966 Days  $T_0=131.923167$  (BKJD)



# DV Model-Shift Uniqueness Test

011199725-01, P = 1.032957 Days, E = 130.891475 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
24.3	2.63	1.92	1.48	4.61	1.75	0.90	22.4	22.8	0.71	1.15	2.14	1.07	0.06	3.55

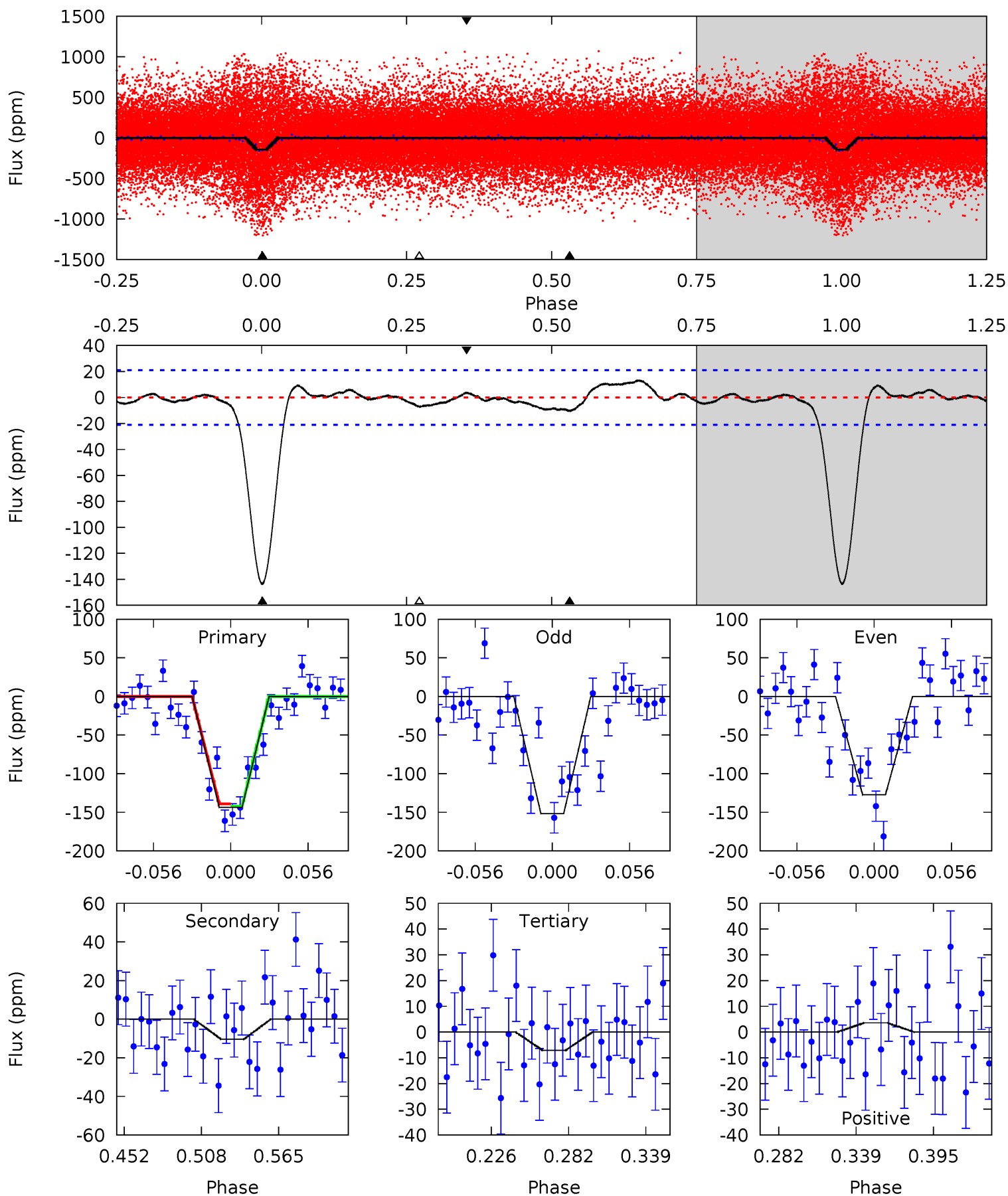




# Alt Model-Shift Uniqueness Test

011199725-01, P = 1.032966 Days, E = 130.890201 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
31.9	2.30	1.58	0.80	4.68	1.91	1.03	30.3	31.1	0.72	1.51	2.70	0.97	0.08	0.36





### Stellar Parameters For KIC 011199725

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5283^{+153}_{-429}$	$2.352^{+0.032}_{-0.025}$	$-0.500^{+0.050}_{-0.350}$	$18.959^{+1.113}_{-6.307}$	$2.948^{+0.181}_{-1.627}$	$0.001^{+0.000}_{-0.000}$
	+3%/-8%	+1%/-1%	+10%/-70%	+6%/-33%	+6%/-55%	+53%/-8%
Source	PHO1	AST9	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 011199725-01 / KOI 7418.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-12 \pm 4$	$22.92^{+3.96}_{-3.61}$	$8348^{+297}_{-646}$	$-6719^{+615}_{-312}$	$0.010^{+0.006}_{-0.005}$
Alt.	$-10 \pm 4$	$26.95^{+4.03}_{-4.27}$	$8329^{+312}_{-662}$	$-6736^{+644}_{-316}$	$0.006^{+0.004}_{-0.003}$

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

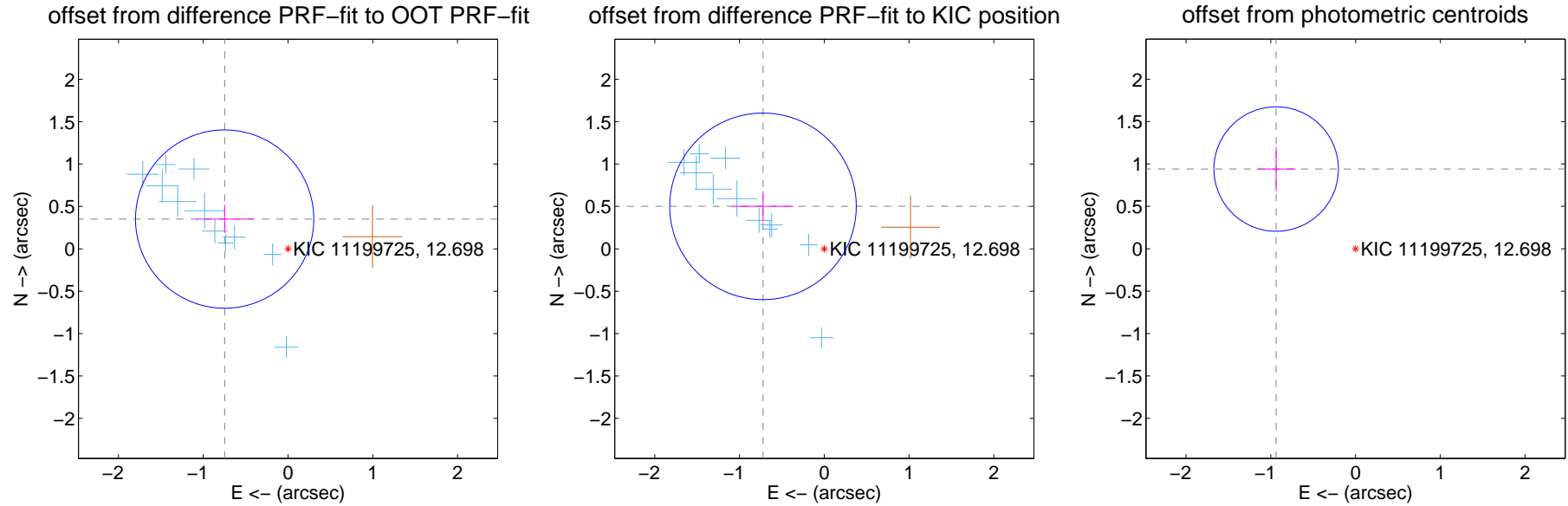
## DV Centroid Data

Supplemental centroid analysis for 011199725-01. Kepler magnitude: 12.70. Transit SNR 20.93

There are 11 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

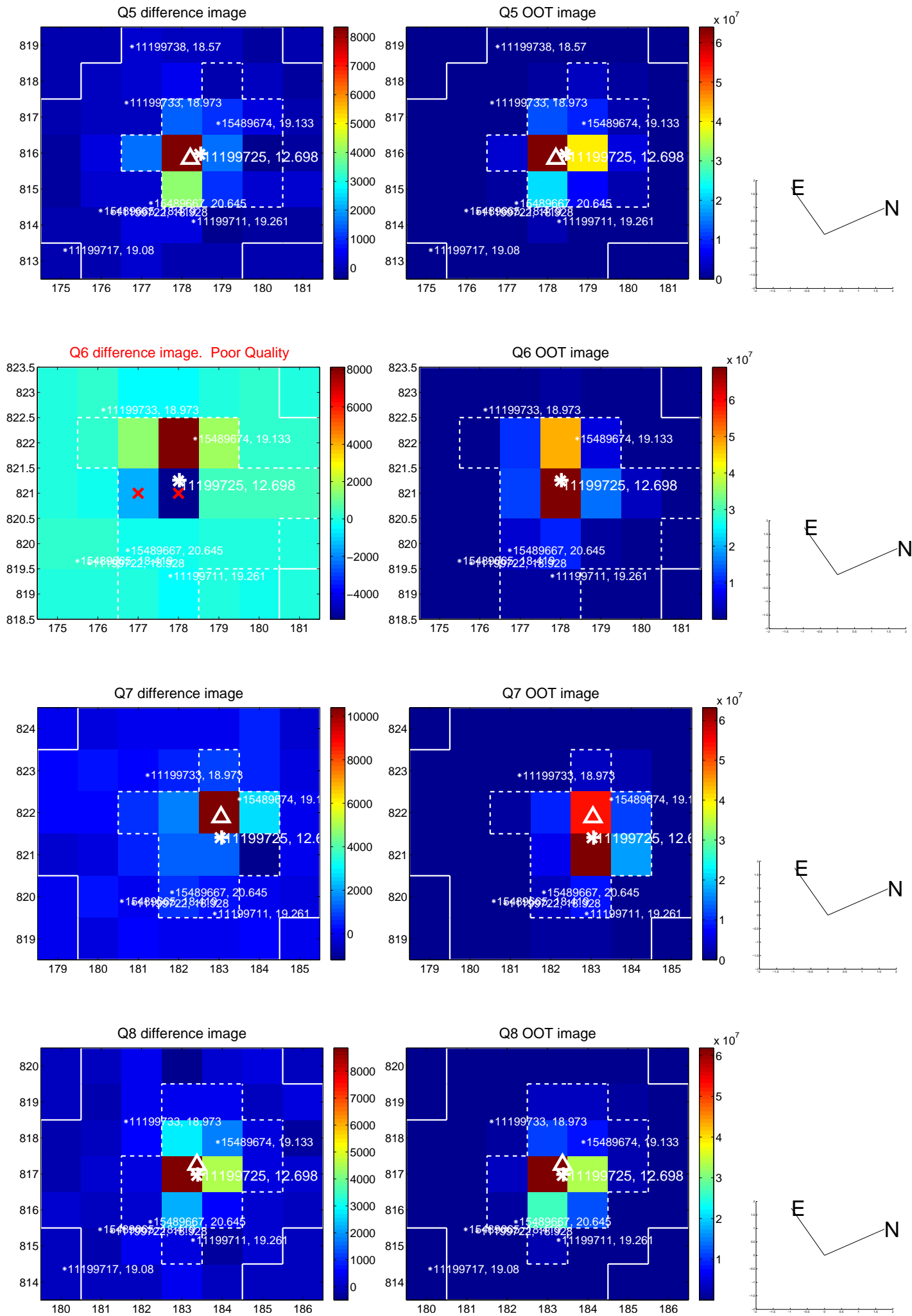
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.826 \pm 0.351$	2.36	$0.748 \pm 0.337$	$0.351 \pm 0.167$
PRF-fit source offset from KIC position	$0.880 \pm 0.367$	2.40	$0.724 \pm 0.359$	$0.501 \pm 0.180$
photometric centroid source offset	$1.33 \pm 0.24$	5.42	$0.94 \pm 0.23$	$0.94 \pm 0.26$



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.

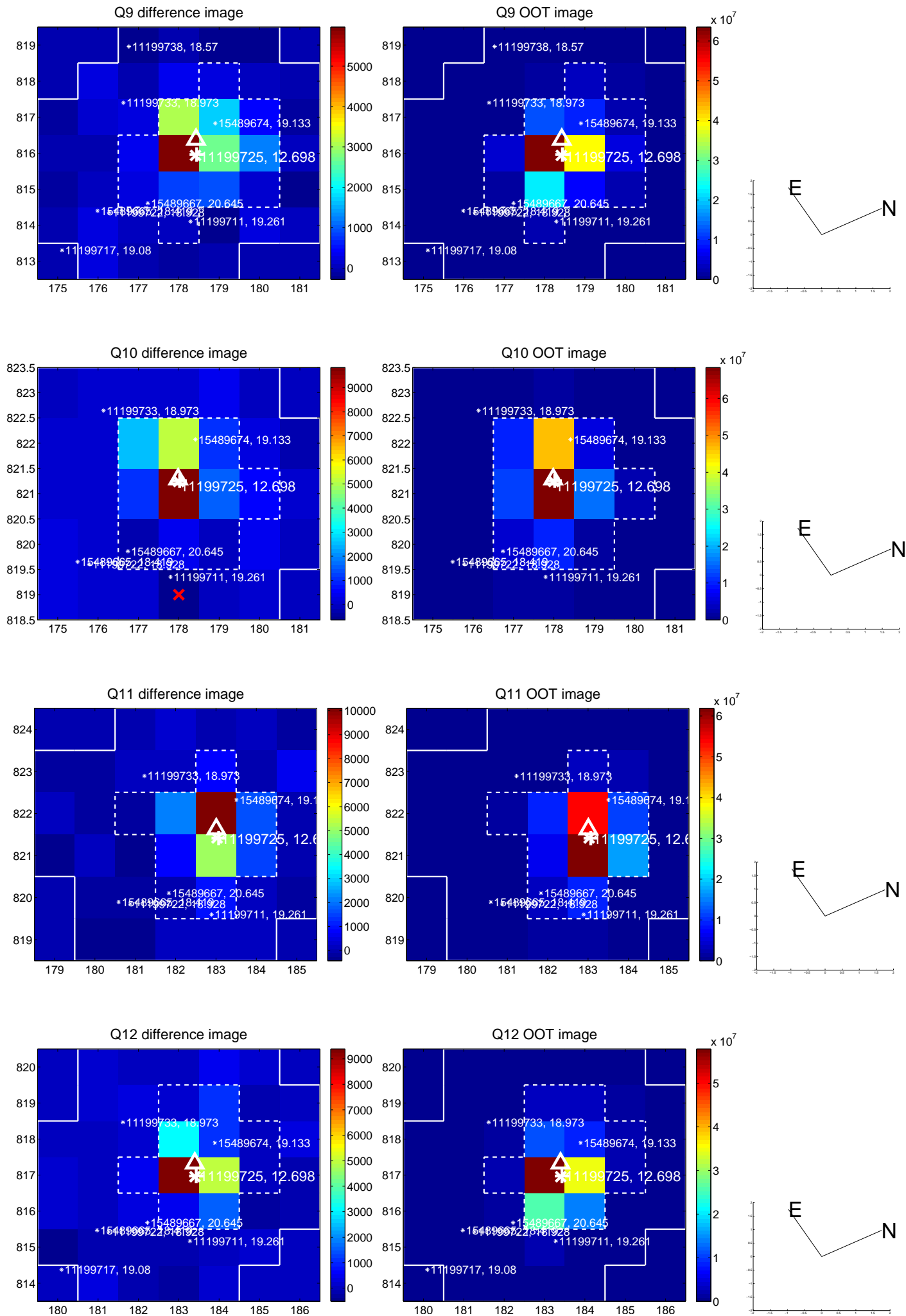


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

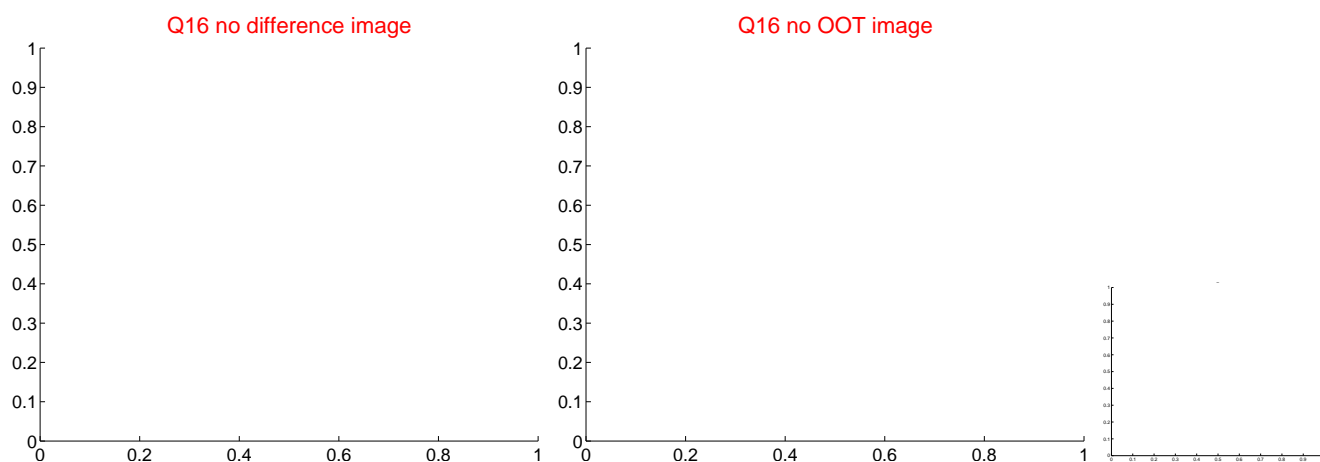
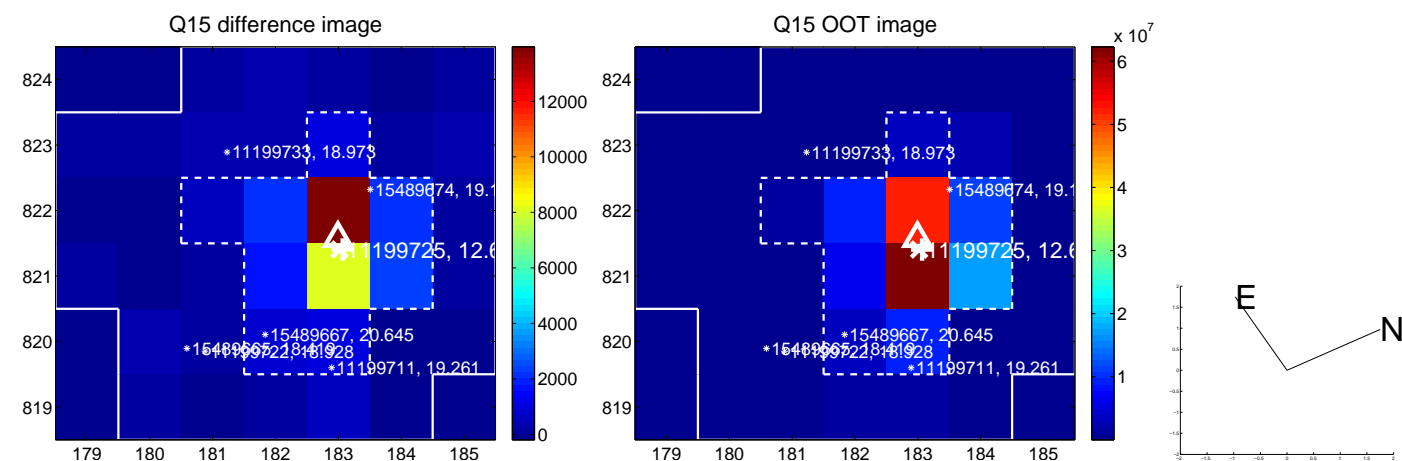
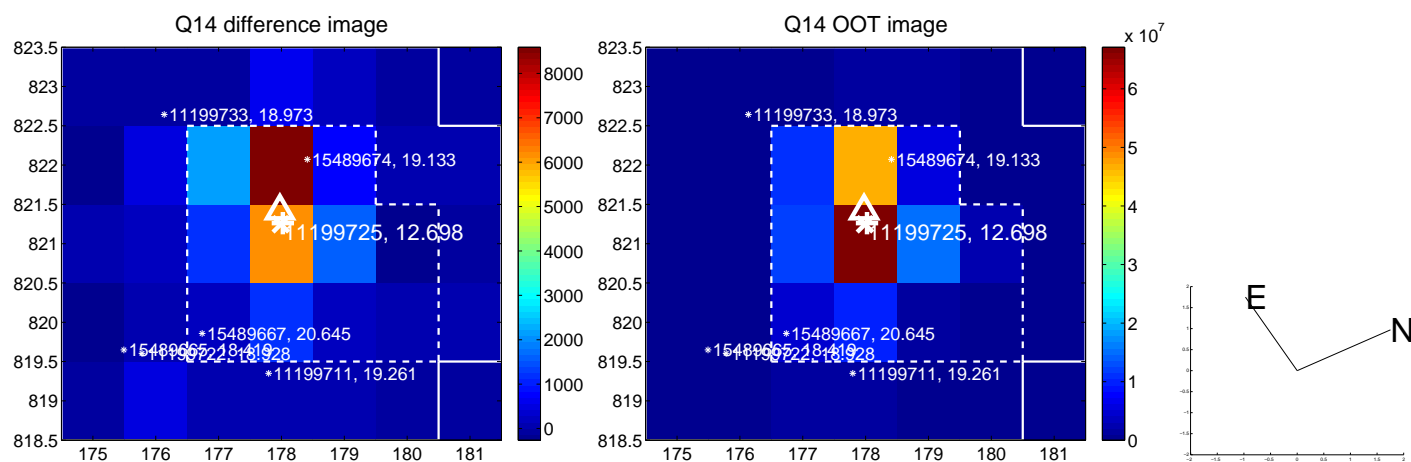
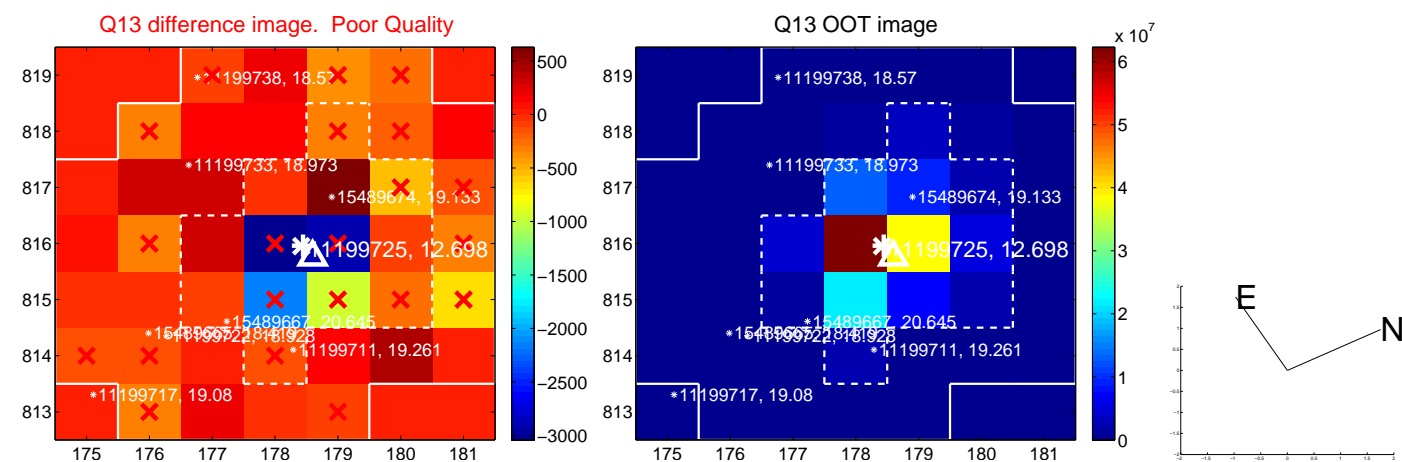




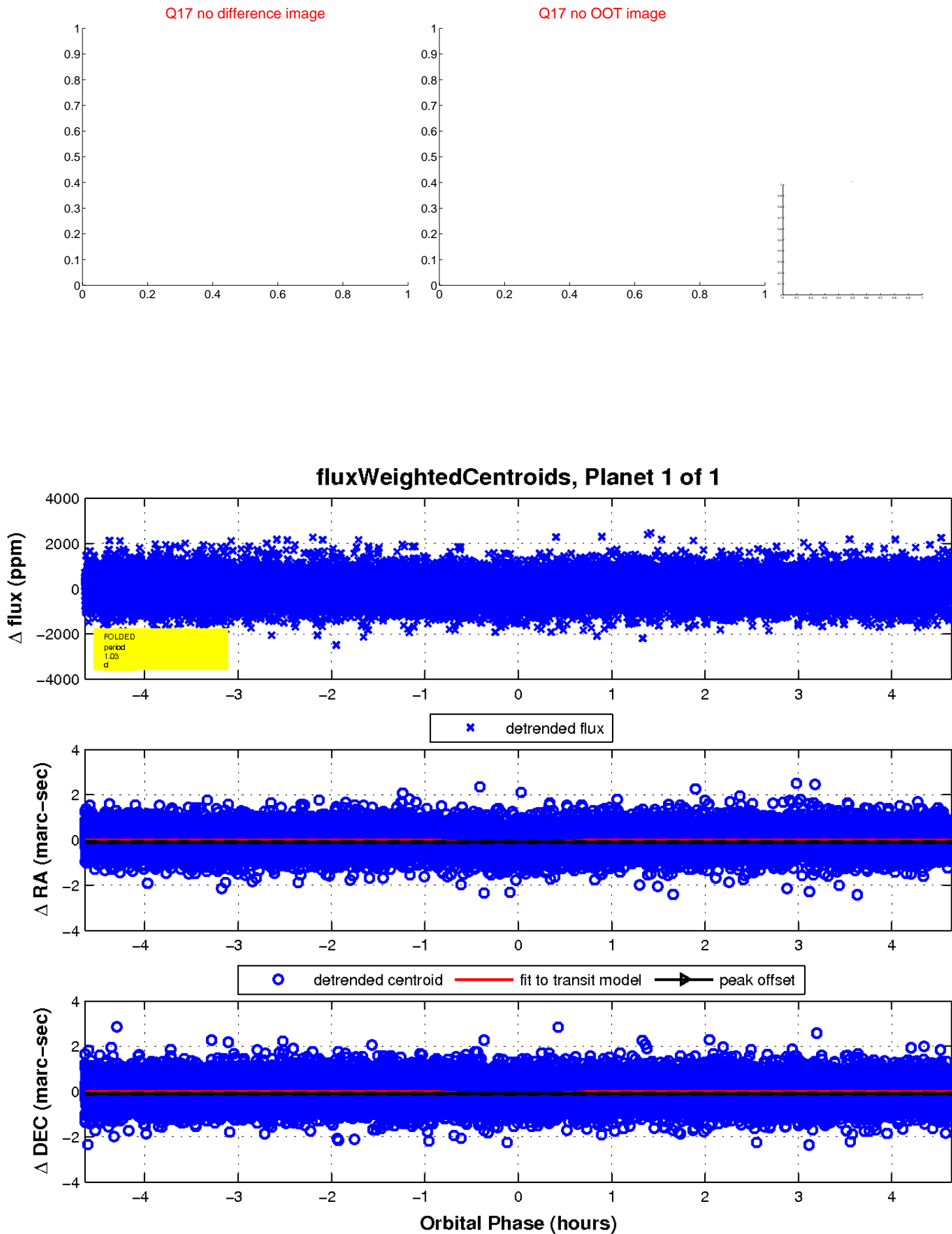
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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.



UKIRT Image

