

# KIC 002995392

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
002995392-01	OBS	3379.01	30.454143	140.770388	485.5	7.370	14.6	16.1	0.98	6283	2.75	35.98

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002995392-01	OBS	PC	0.99	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 002995392-01

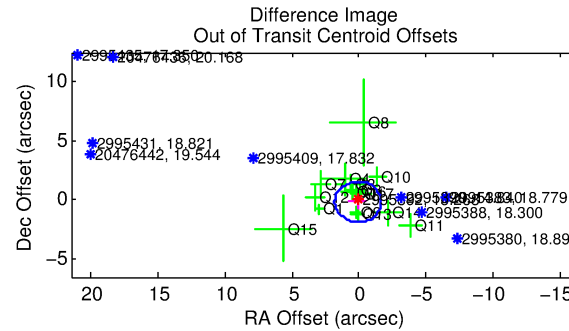
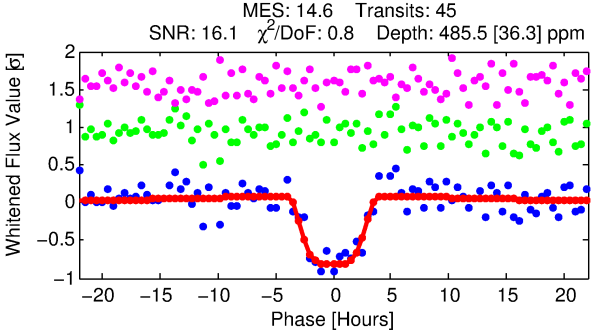
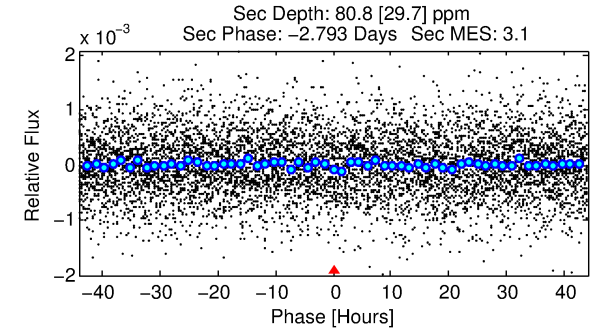
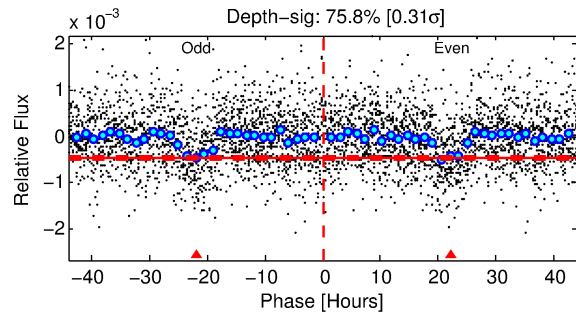
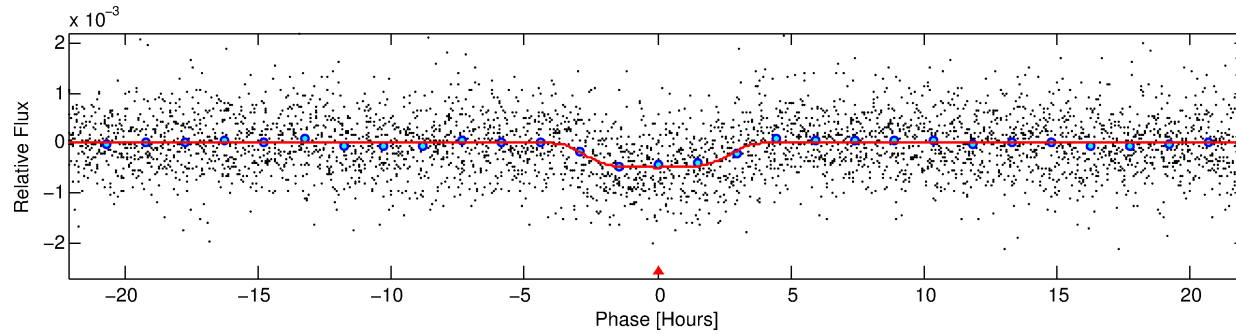
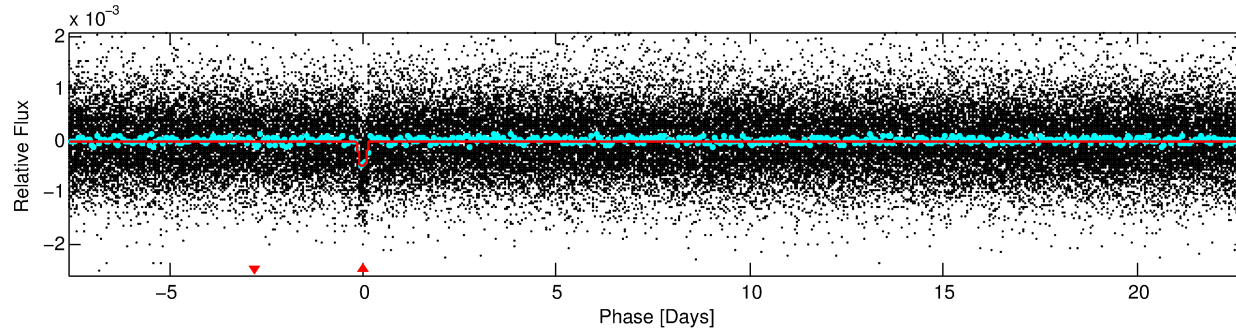
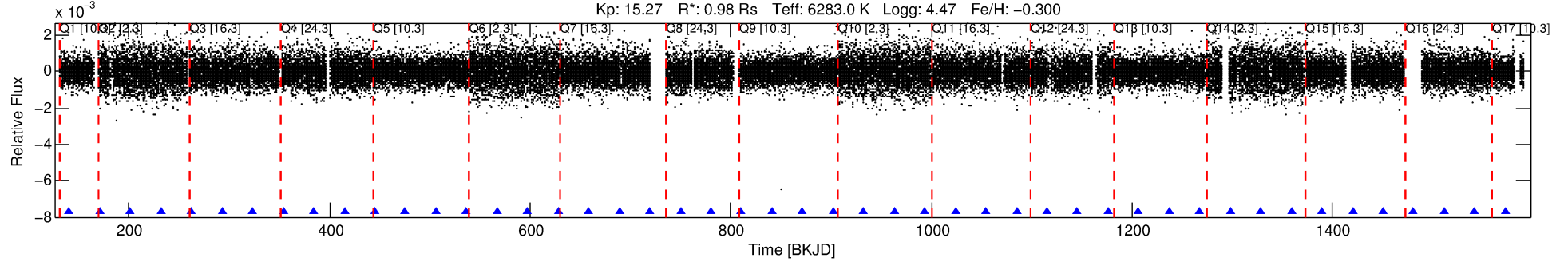
No Significant Match Found

# DV One-Page Summary

KIC: 2995392 Candidate: 1 of 1 Period: 30.454 d

KOI: K03379.01 Corr: 0.912

Kp: 15.27 R\*: 0.98 Rs Teff: 6283.0 K Logg: 4.47 Fe/H: -0.300



## DV Fit Results:

Period = 30.45414 [0.00039] d  
Epoch = 140.7704 [0.0109] BKJD  
Rp/R\* = 0.0256 [0.0015]  
a/R\* = 11.29 [1.87]  
b = 0.96 [0.01]  
Seff = 35.98 [15.02]  
Teq = 625 [65] K  
Rp = 2.75 [0.89] Re  
a = 0.1938 [0.0521] AU  
Ag = 220.32 [121.17] [1.81σ]  
Teffp = 3720 [381] K [8.02σ]

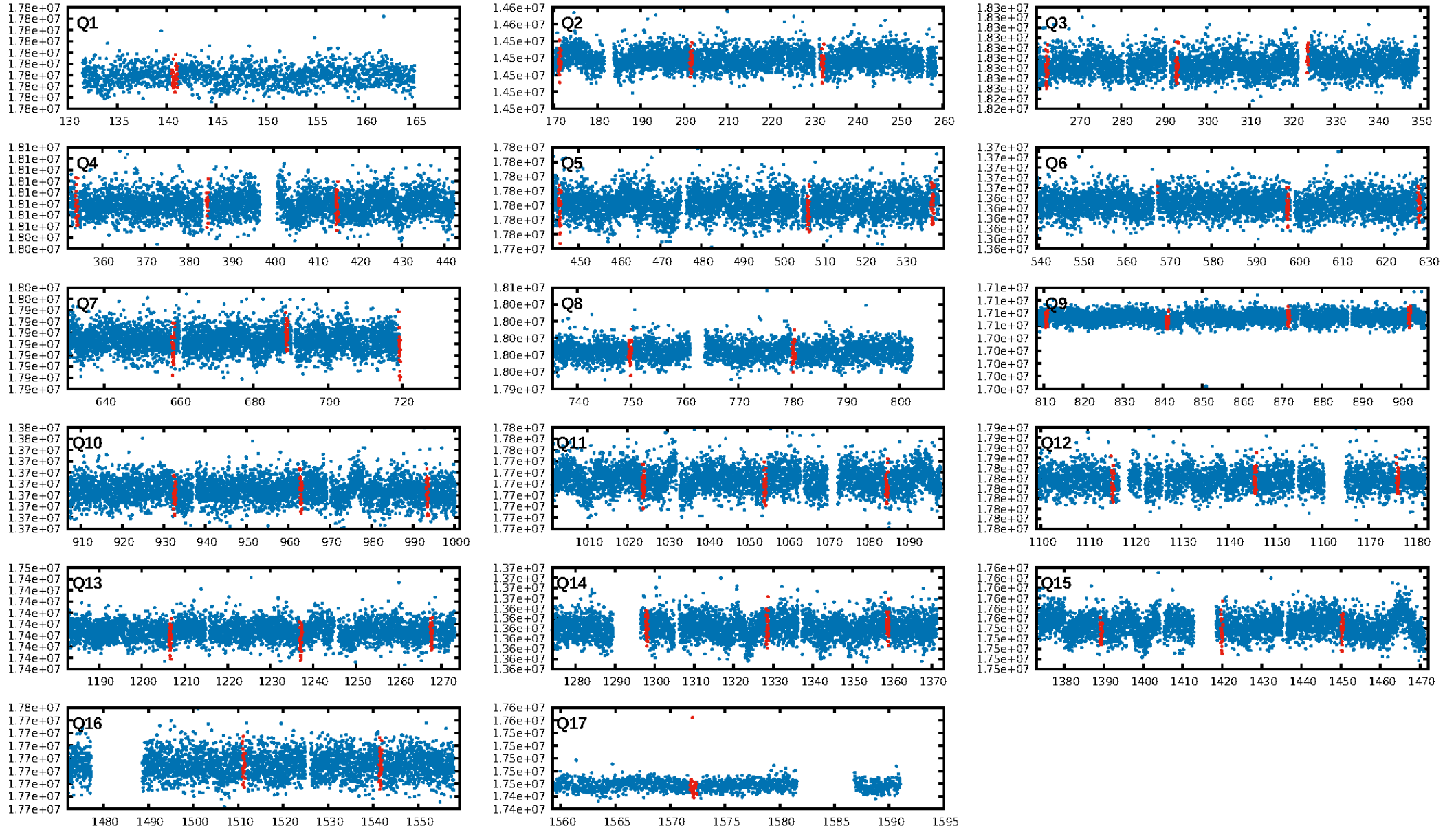
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 80.4%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 1.37e-45  
RollingBand-fgt: 1.00 [43/43]  
GhostDiagnostic-chr: 1.463  
Centroid-sig: 4.8%  
Centroid-so: 1.629 arcsec [2.13σ]  
OotOffset-rm: 0.176 arcsec [0.31σ]  
KicOffset-rm: 0.167 arcsec [0.31σ]  
OotOffset-st: 3/4/4/4 [15]  
KicOffset-st: 3/4/4/4 [15]  
DiffImageQuality-fgm: 0.33 [5/15]  
DiffImageOverlap-fno: 1.00 [17/17]

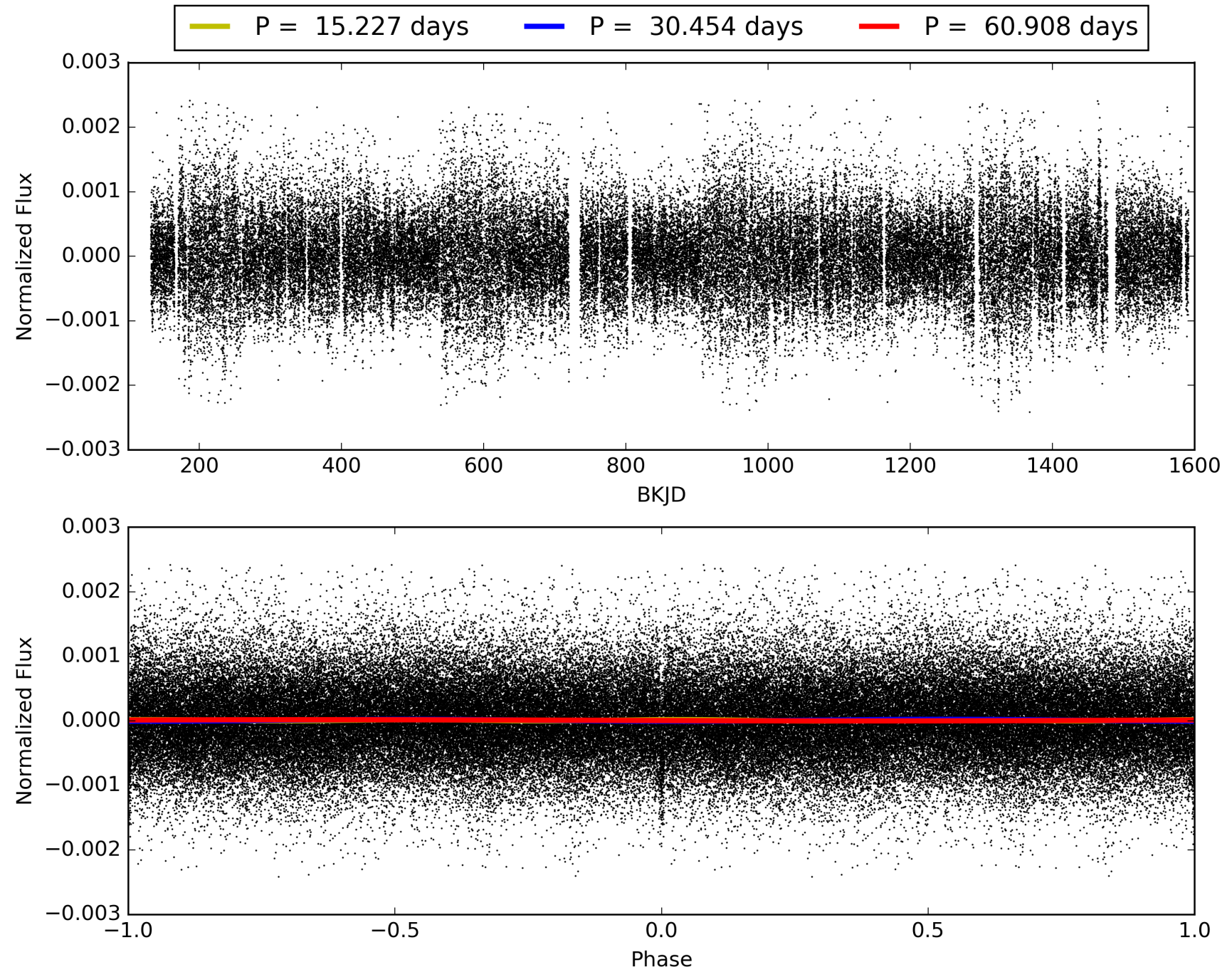
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:34:37 Z

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

# TCE 002995392-01, PDC Light Curves

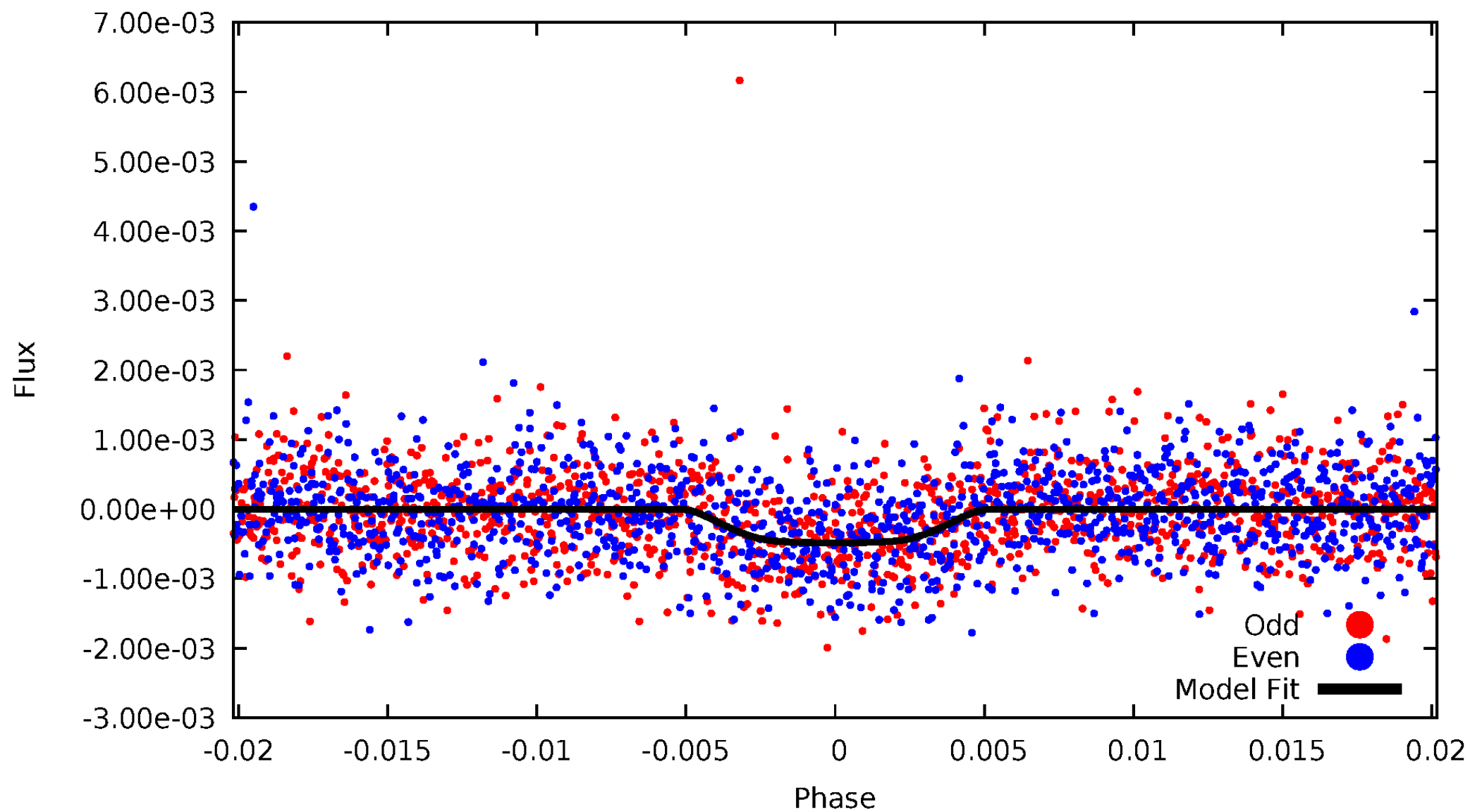


# TCE 002995392-01



# DV Odd/Even

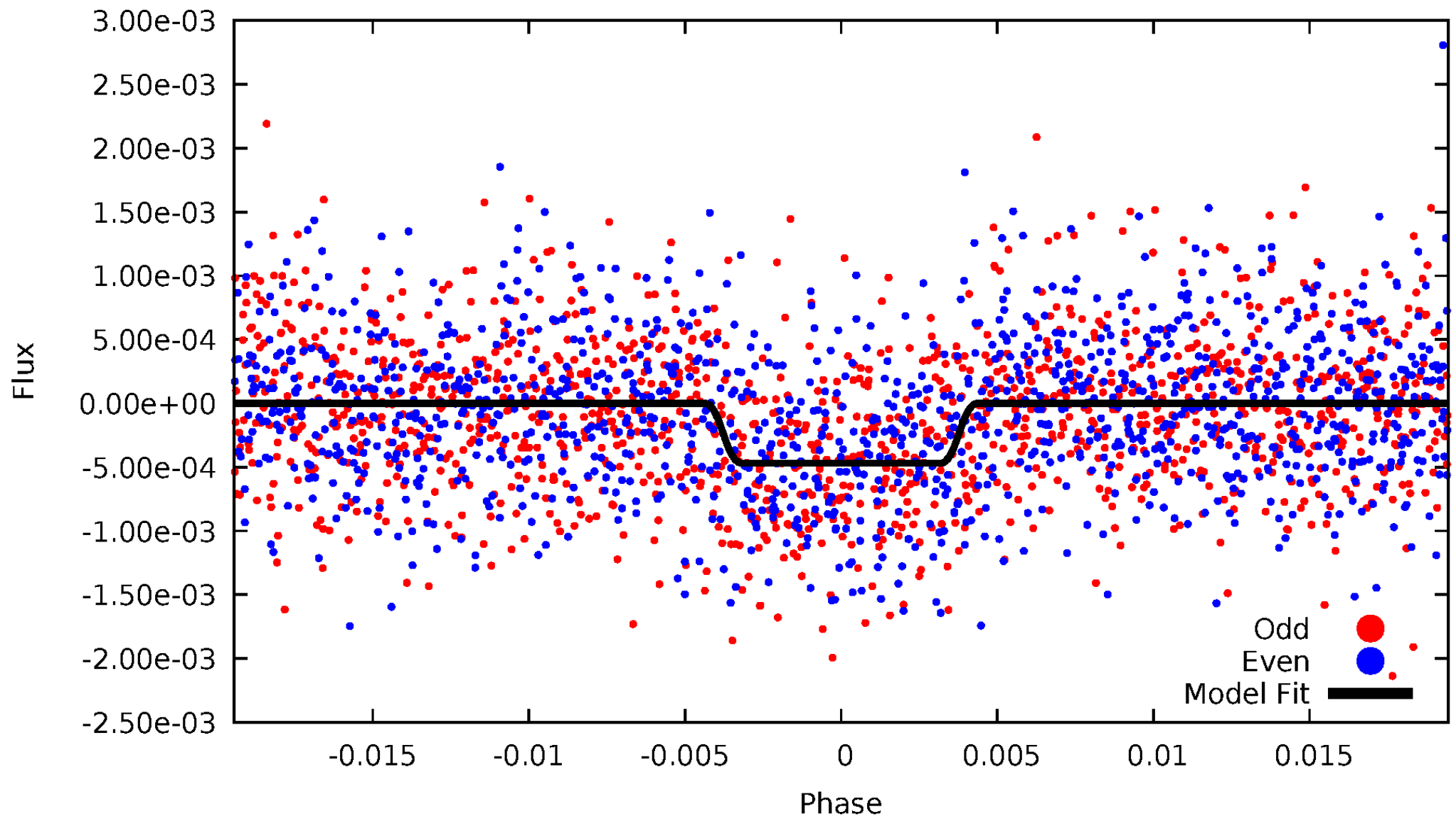
TCE 002995392-01



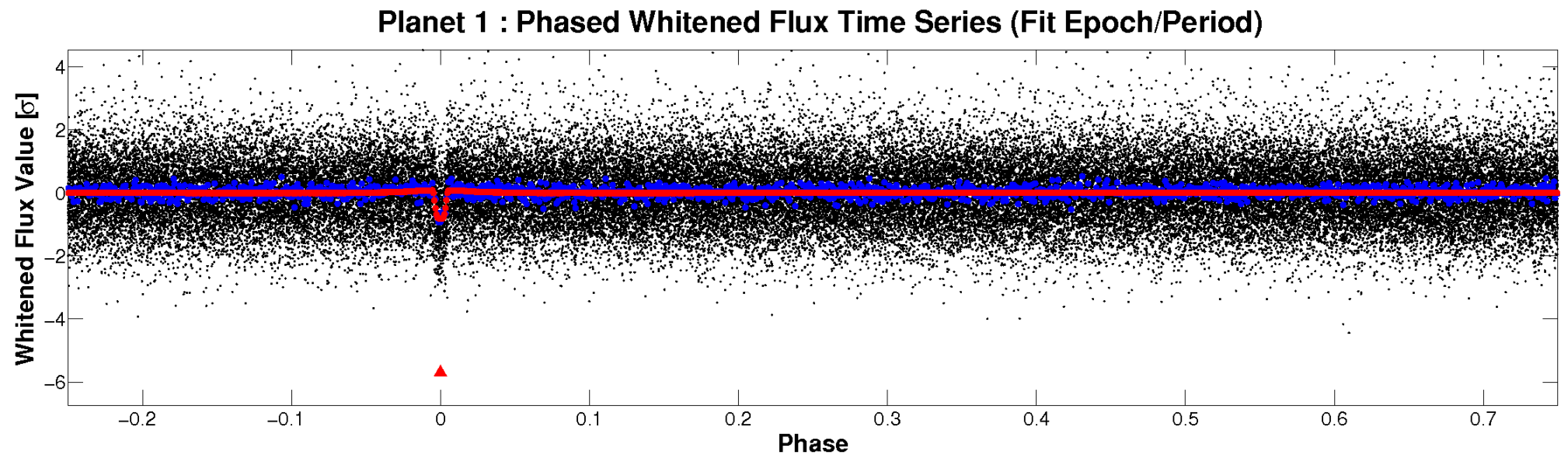
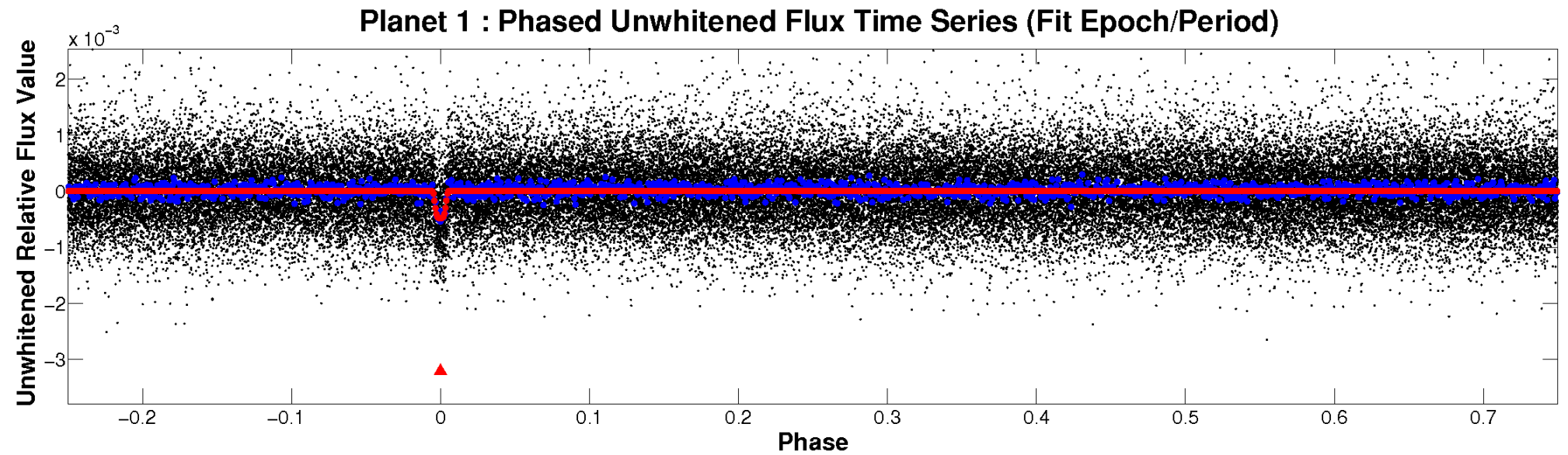


# ALT Odd/Even

TCE 002995392-01

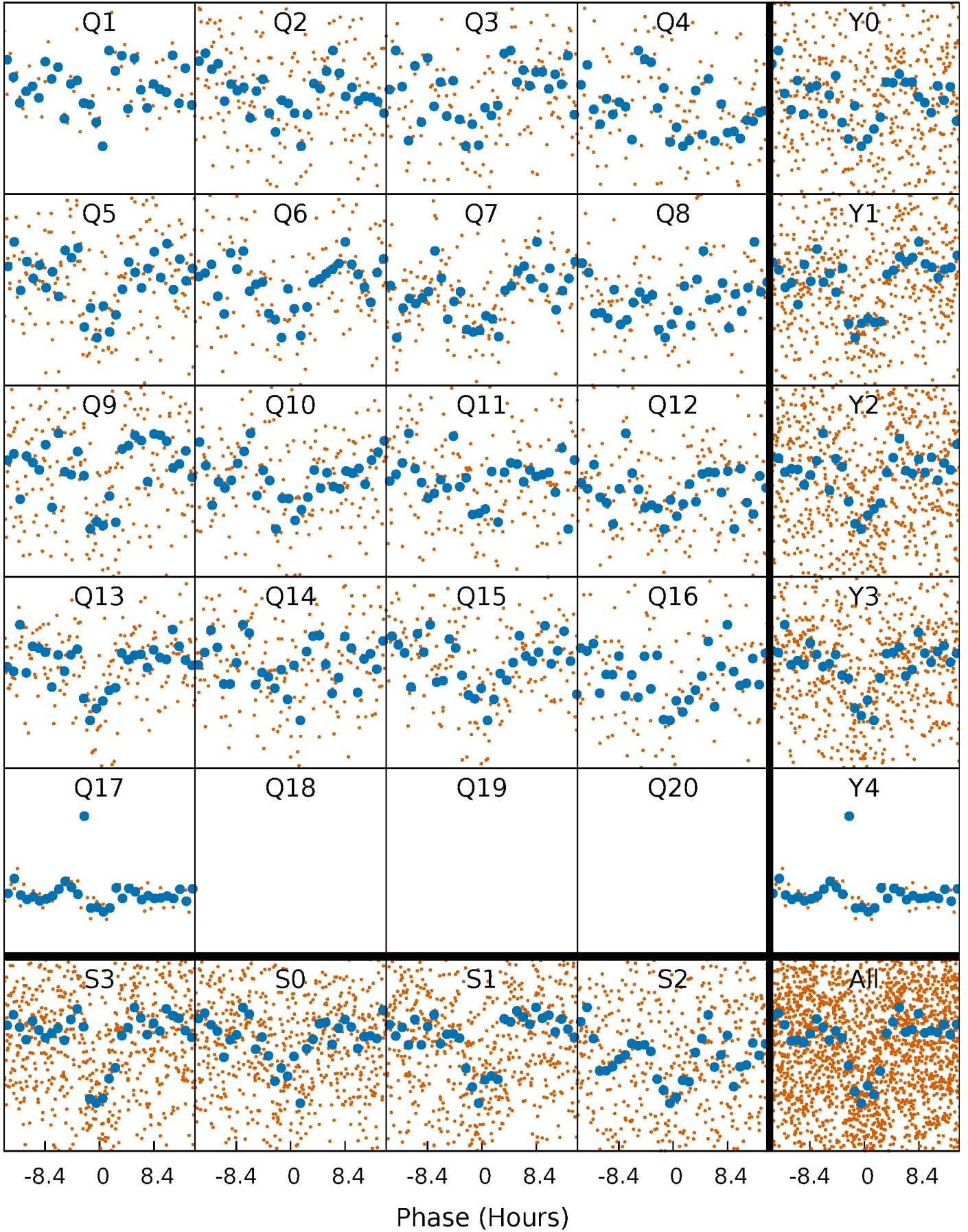


# Non-Whitened Vs. Whitened Light Curve



# PDC Quarter-Phased Transit Curves

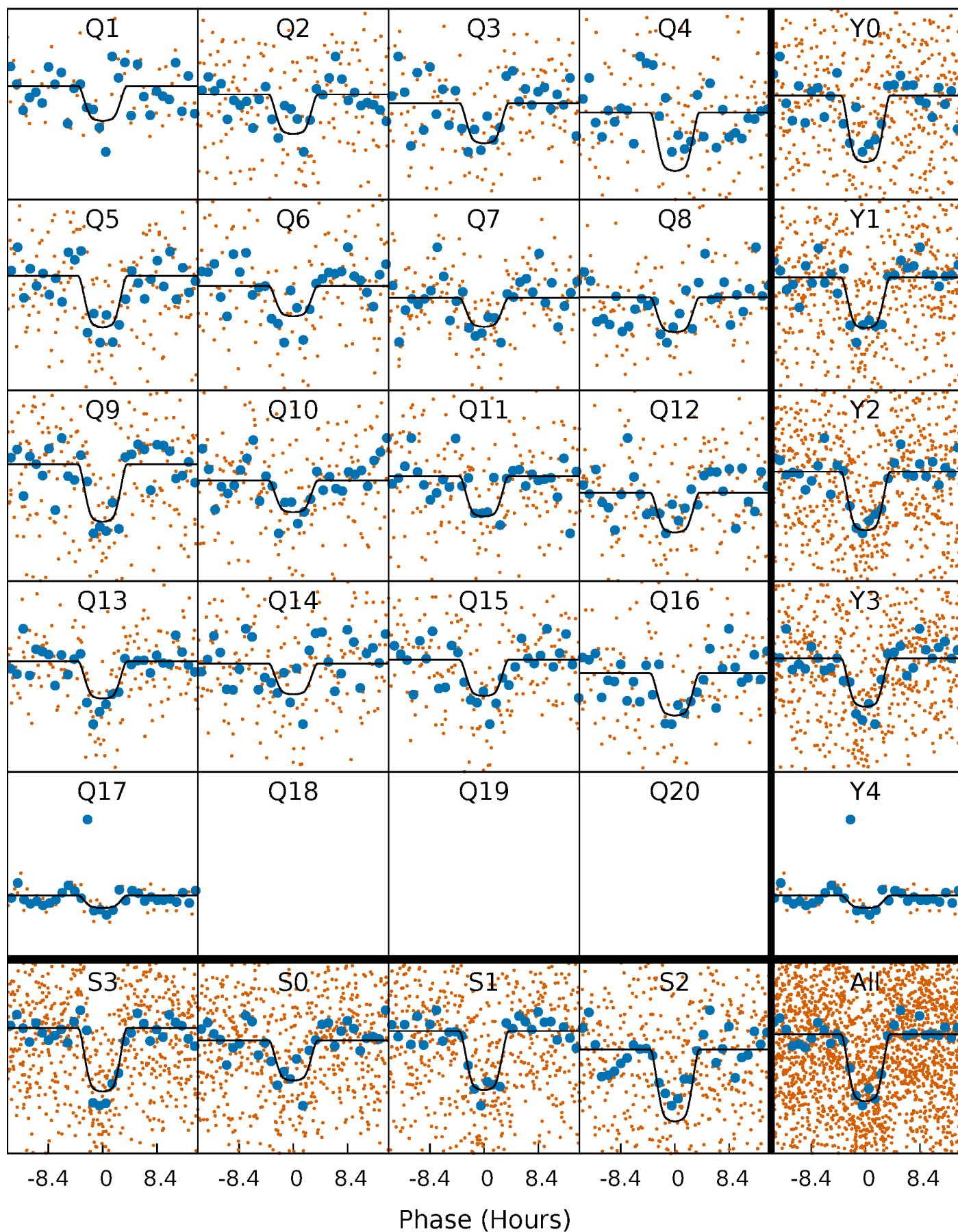
TCE 002995392-01     $P = 30.454143$  Days     $T_0 = 140.770388$  (BKJD)





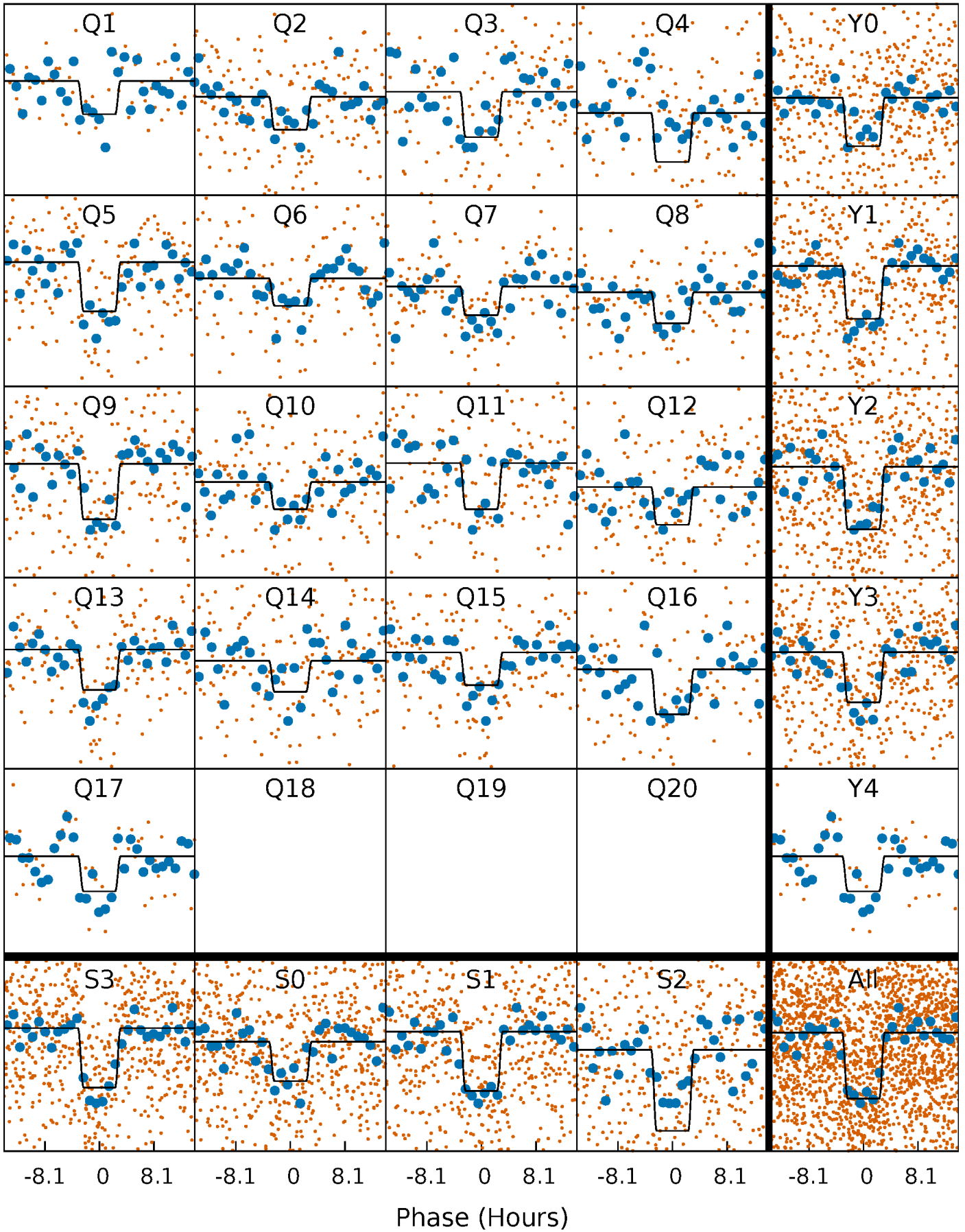
# DV Quarter-Phased Transit Curves

TCE 002995392-01 P= 30.454143 Days  $T_0=140.770388$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

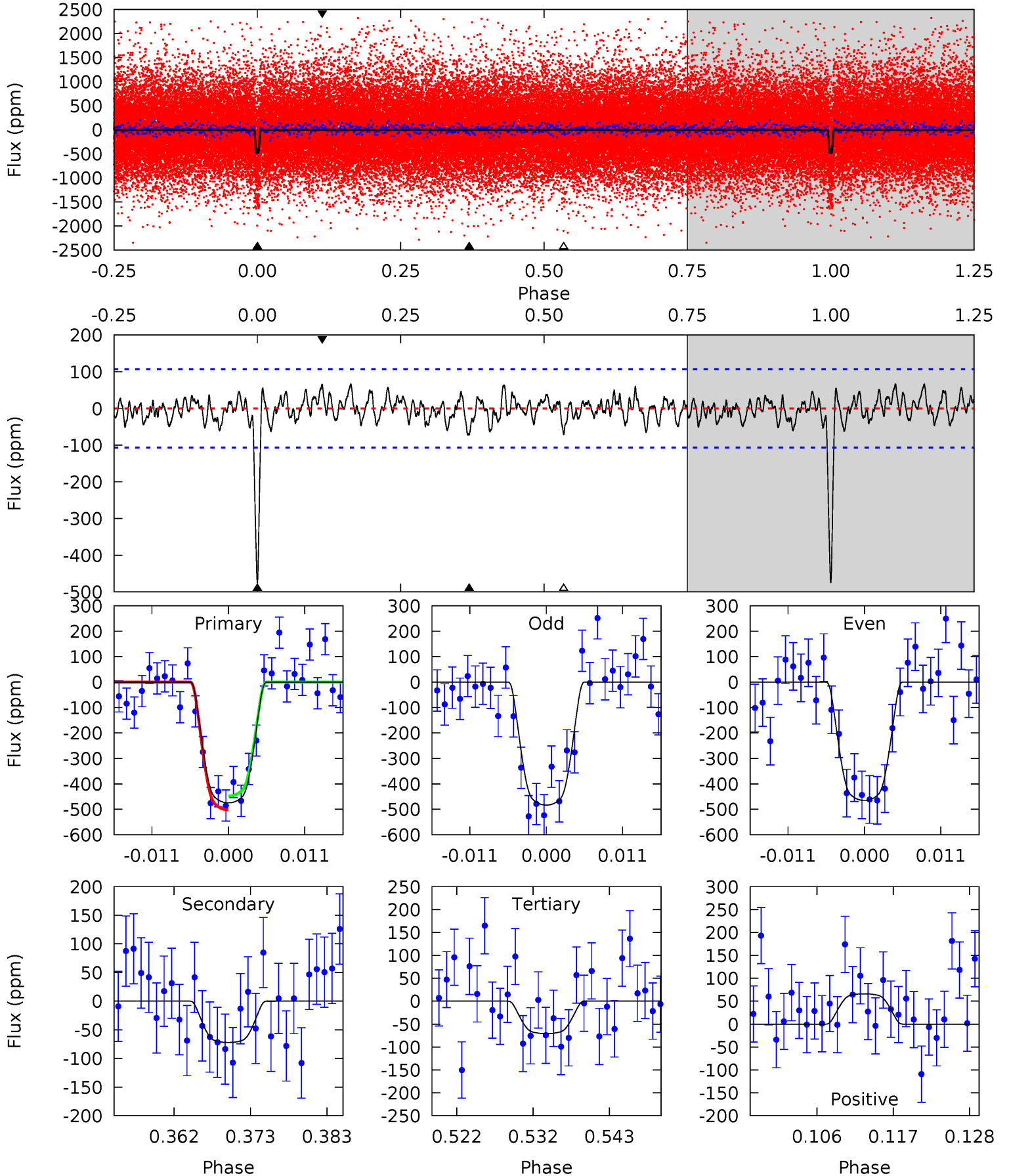
TCE 002995392-01     $P = 30.454282$  Days     $T_0 = 140.770882$  (BKJD)



# DV Model-Shift Uniqueness Test

002995392-01,  $P = 30.454143$  Days,  $E = 110.316245$  Days

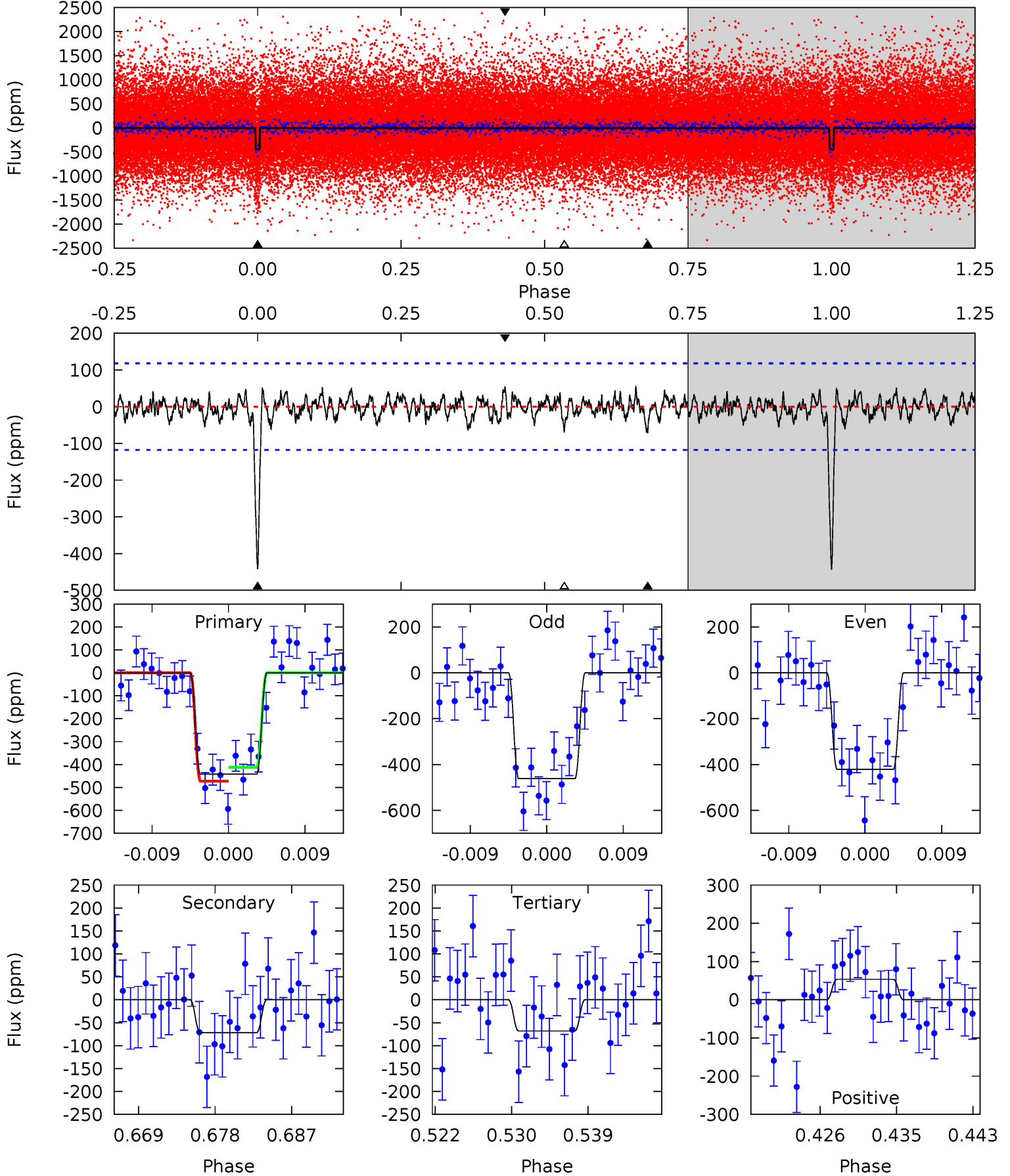
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.3	3.39	3.32	3.10	5.01	2.55	1.19	19.0	19.2	0.07	0.29	0.43	0.91	0.12	1.28



# Alt Model-Shift Uniqueness Test

002995392-01,  $P = 30.454282$  Days,  $E = 110.316600$  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
18.9	3.08	2.91	2.30	5.05	2.62	0.91	16.0	16.6	0.16	0.78	0.87	0.97	0.11	1.29



### Stellar Parameters For KIC 002995392

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$6283^{+176}_{-220}$	$4.472^{+0.054}_{-0.216}$	$-0.300^{+0.300}_{-0.300}$	$0.984^{+0.312}_{-0.111}$	$1.047^{+0.143}_{-0.143}$	$1.548^{+0.449}_{-0.820}$
	+3%/-4%	+1%/-5%	+100%/-100%	+32%/-11%	+14%/-14%	+29%/-53%
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 002995392-01 / KOI 3379.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-72 \pm 21$	$2.85^{+0.50}_{-0.30}$	$889^{+70}_{-45}$	$3933^{+228}_{-262}$	$169^{+77}_{-58}$
Alt.	$-72 \pm 23$	$2.40^{+0.41}_{-0.26}$	$889^{+58}_{-45}$	$4160^{+272}_{-320}$	$237^{+109}_{-93}$

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



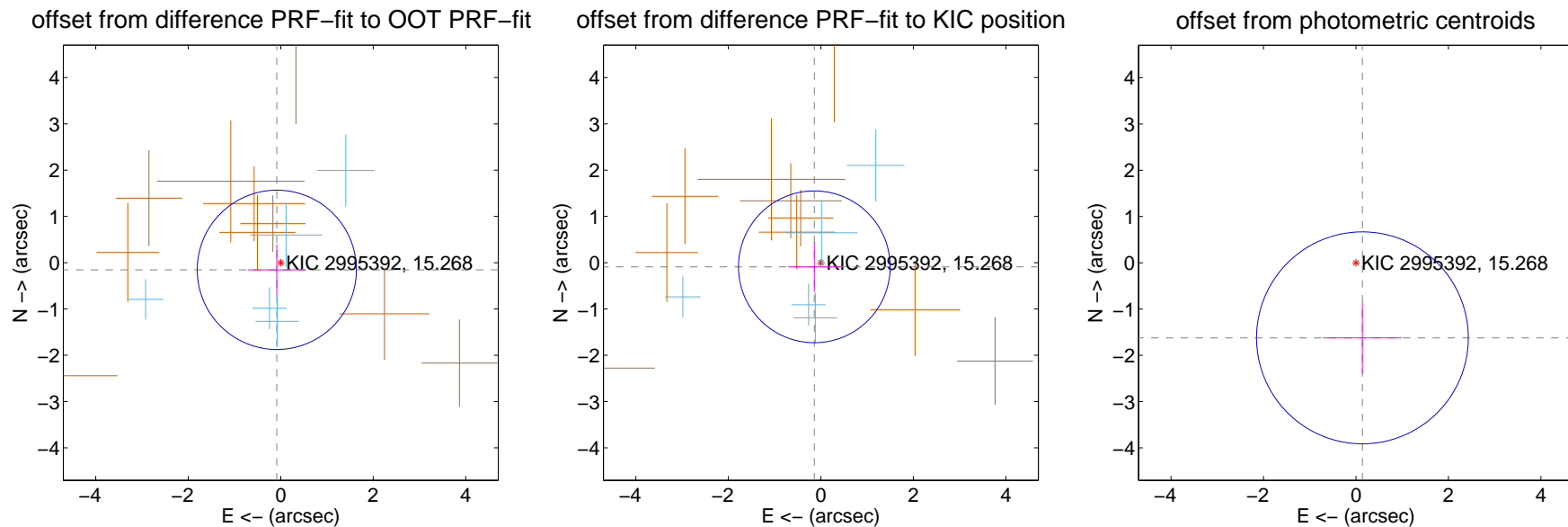
## DV Centroid Data

Supplemental centroid analysis for 002995392-01. Kepler magnitude: 15.27. Transit SNR 16.10

There are 5 quarters with good PRF difference image offsets

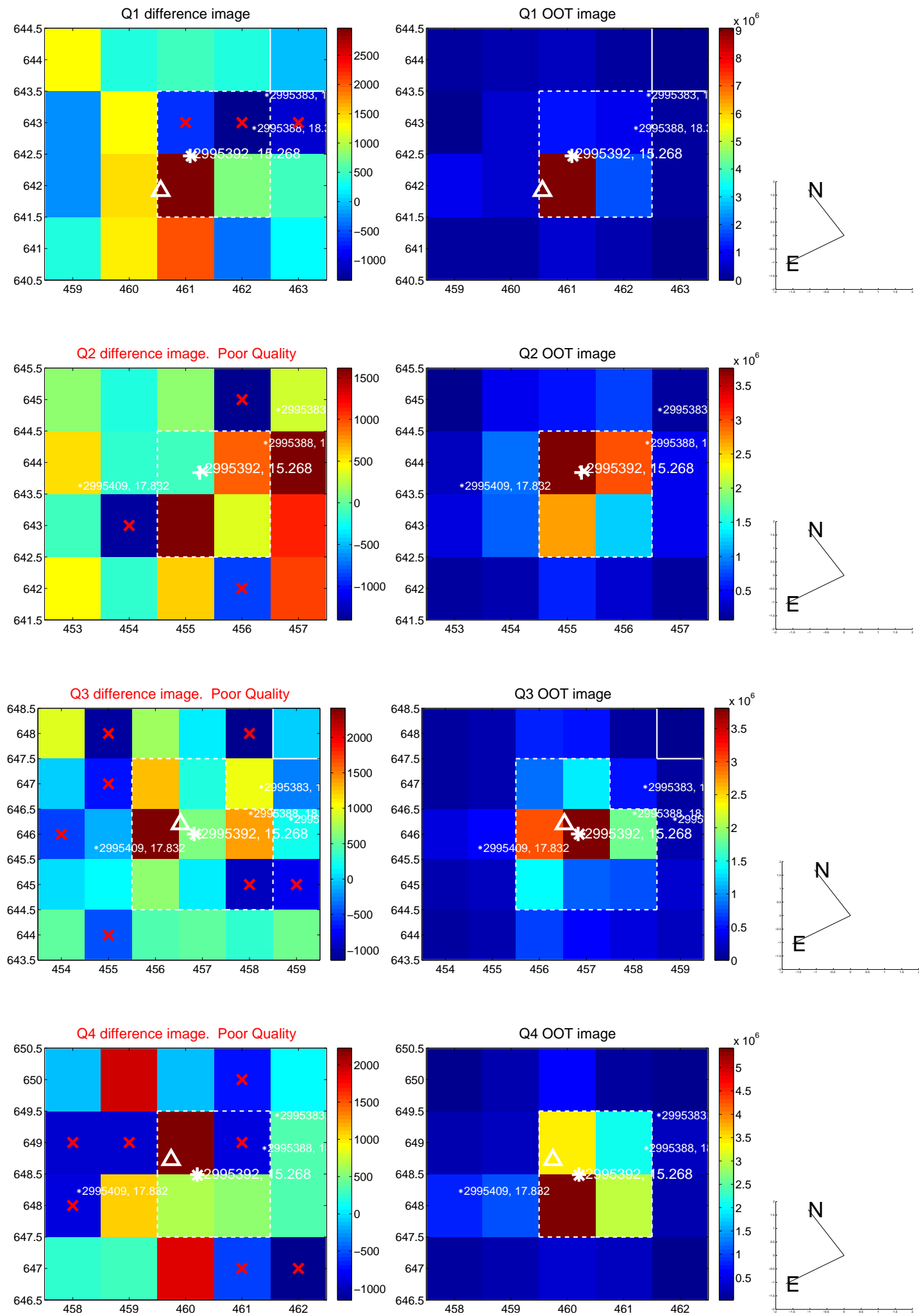
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.176 \pm 0.574$	0.31	$0.085 \pm 0.628$	$-0.154 \pm 0.550$
PRF-fit source offset from KIC position	$0.167 \pm 0.547$	0.31	$0.141 \pm 0.568$	$-0.089 \pm 0.537$
photometric centroid source offset	$1.63 \pm 0.76$	2.13	$-0.14 \pm 0.85$	$-1.62 \pm 0.76$

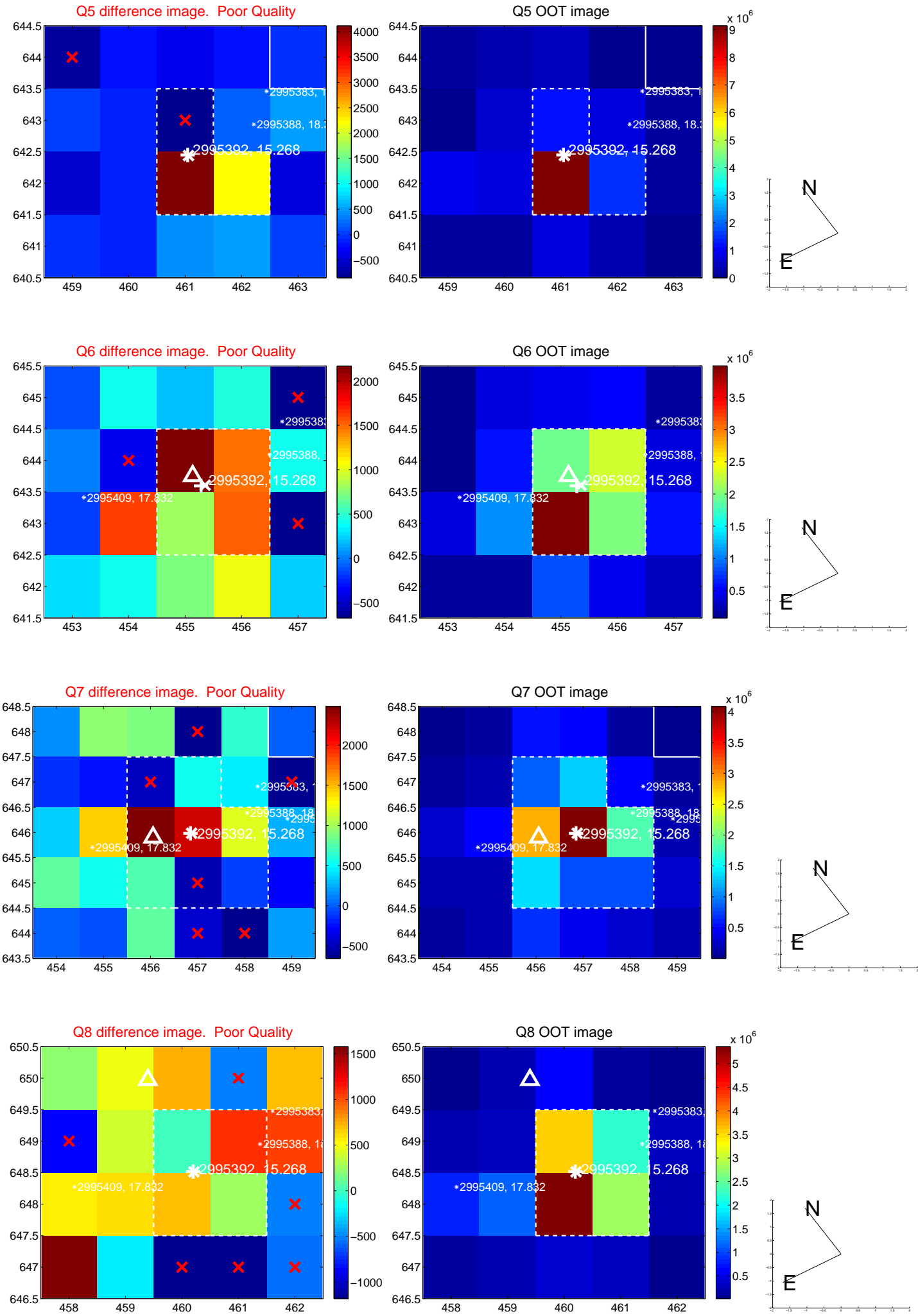


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

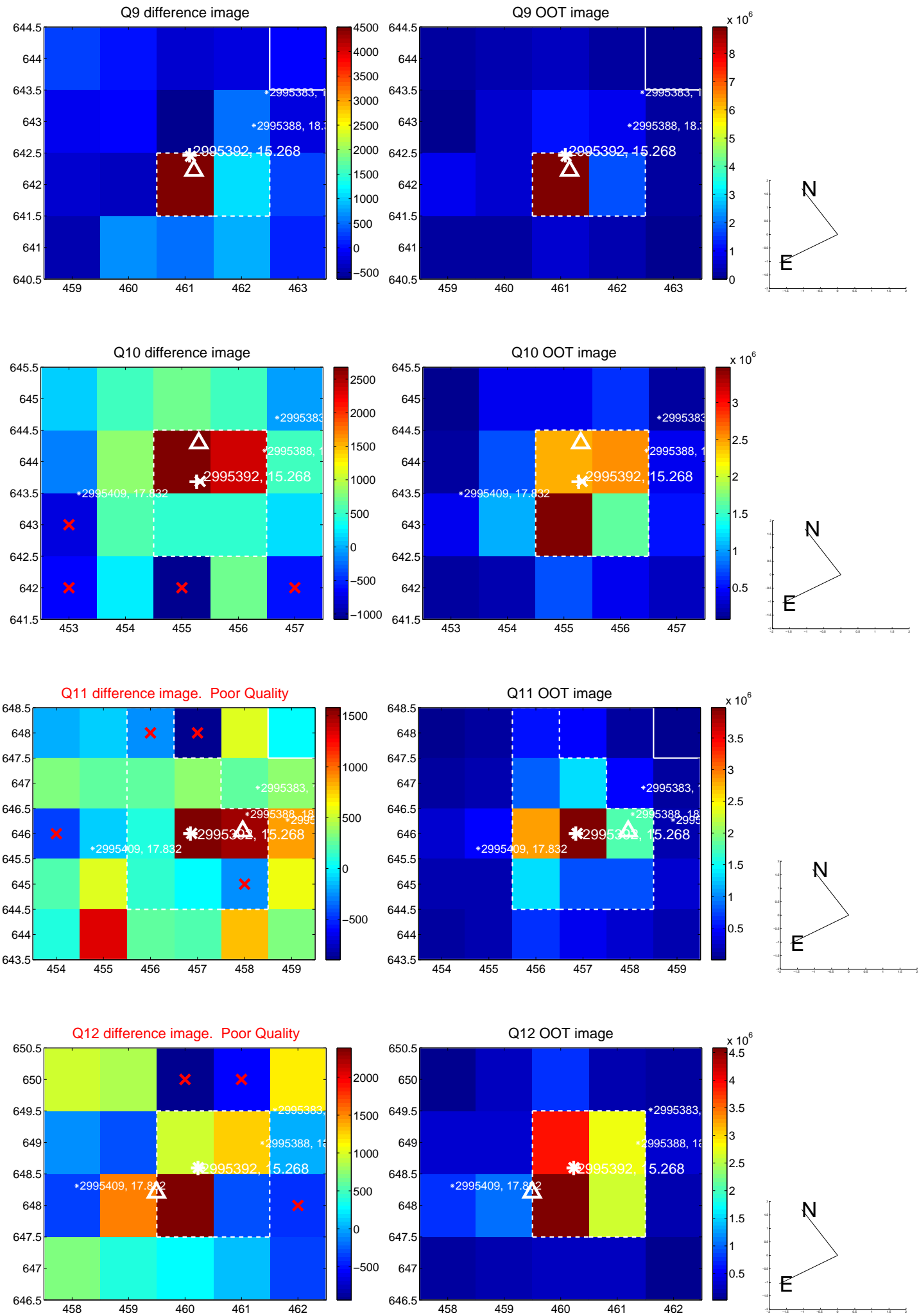
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



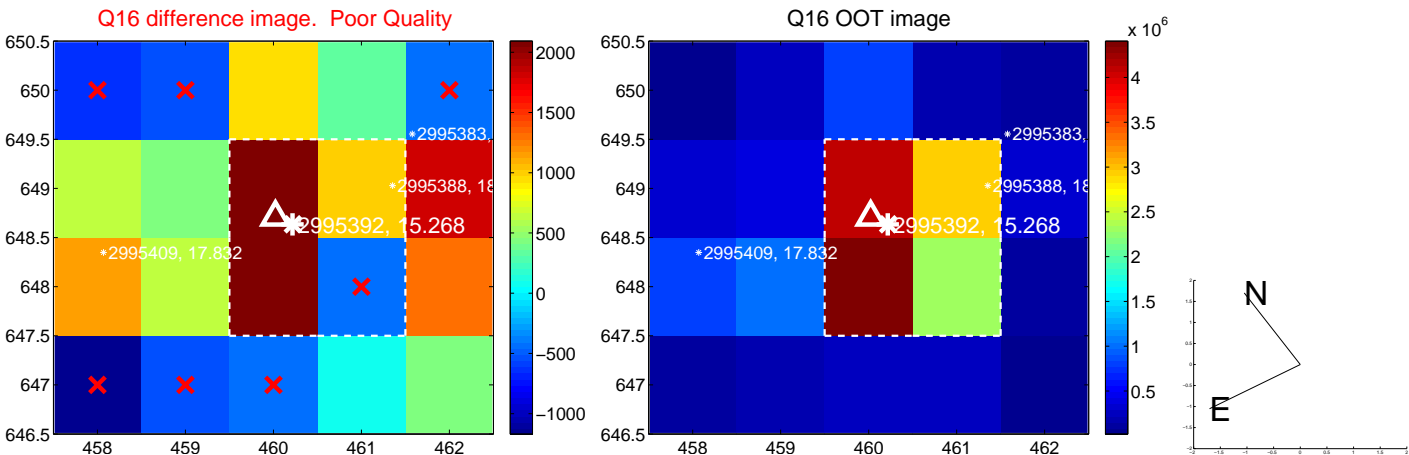
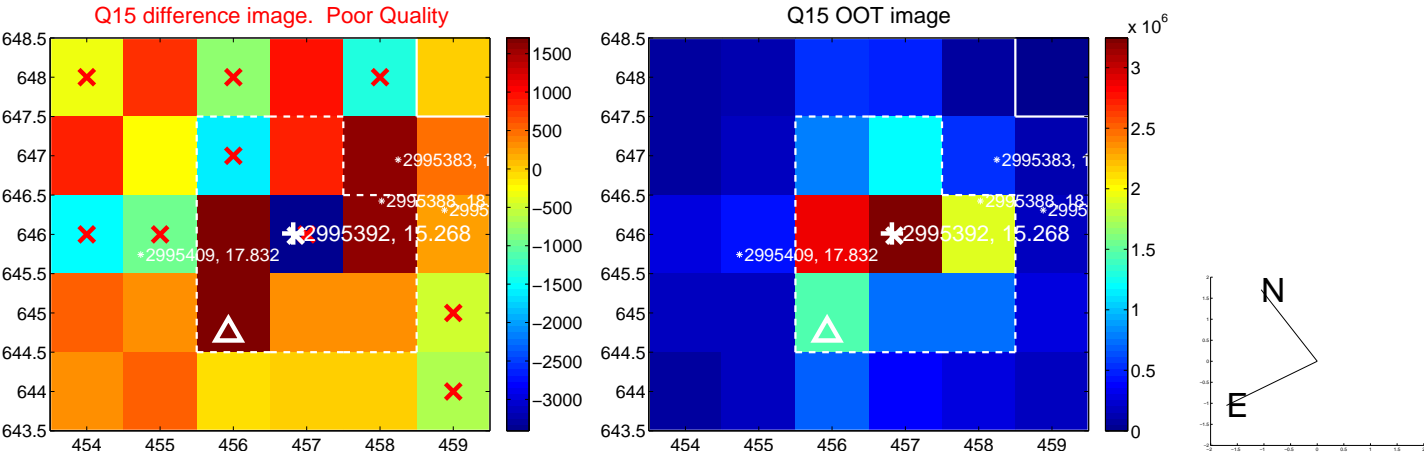
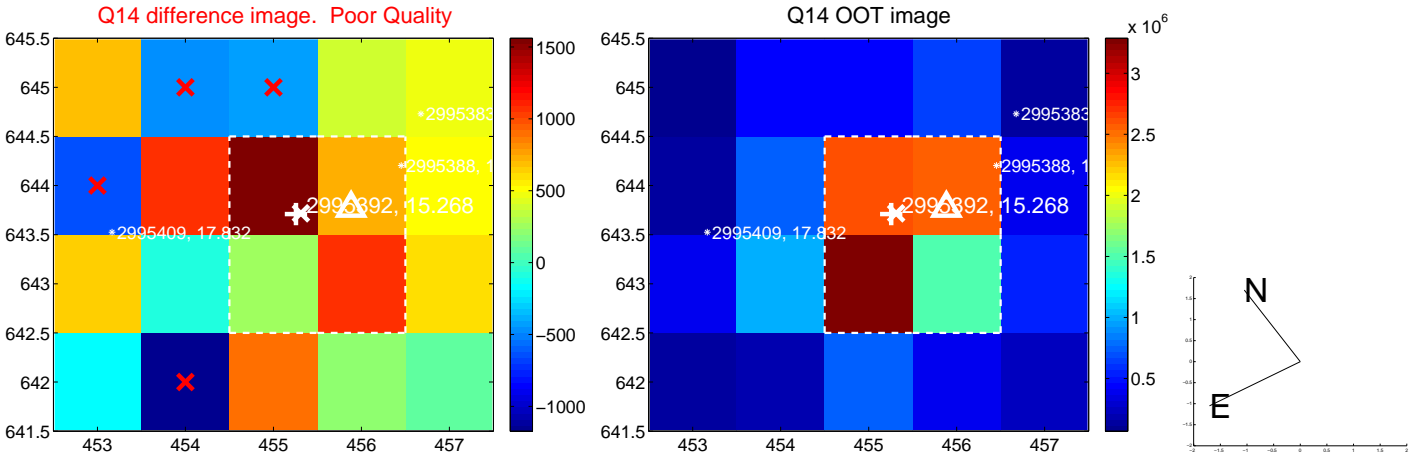
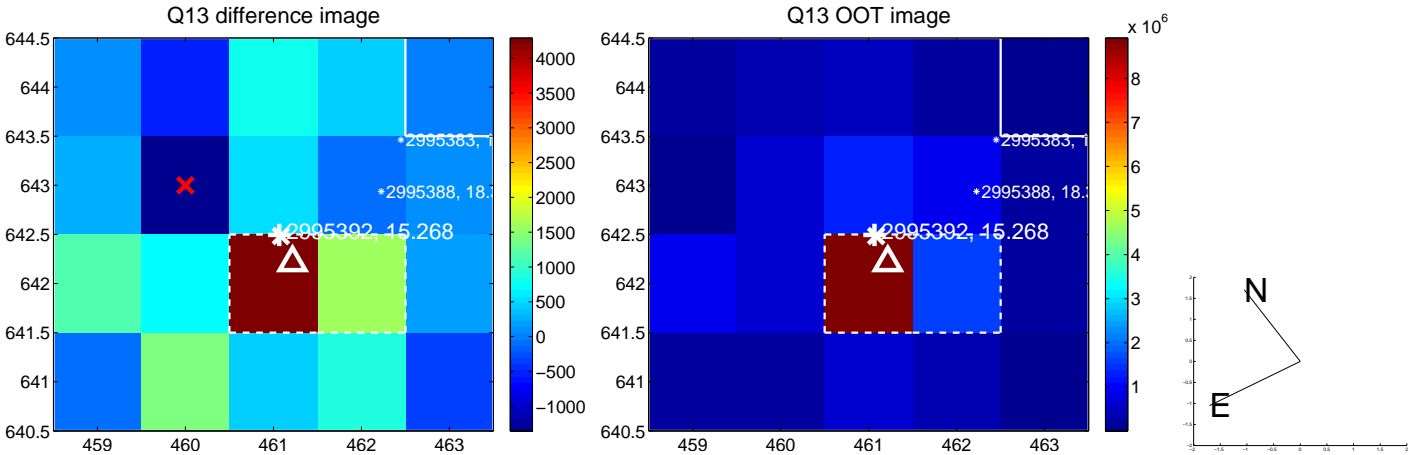
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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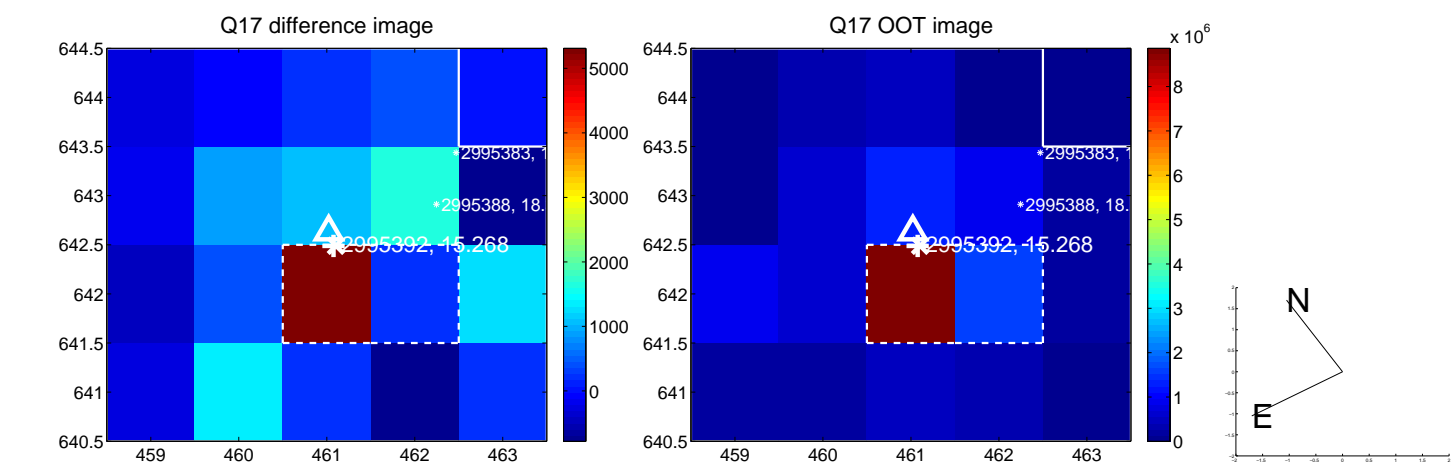


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

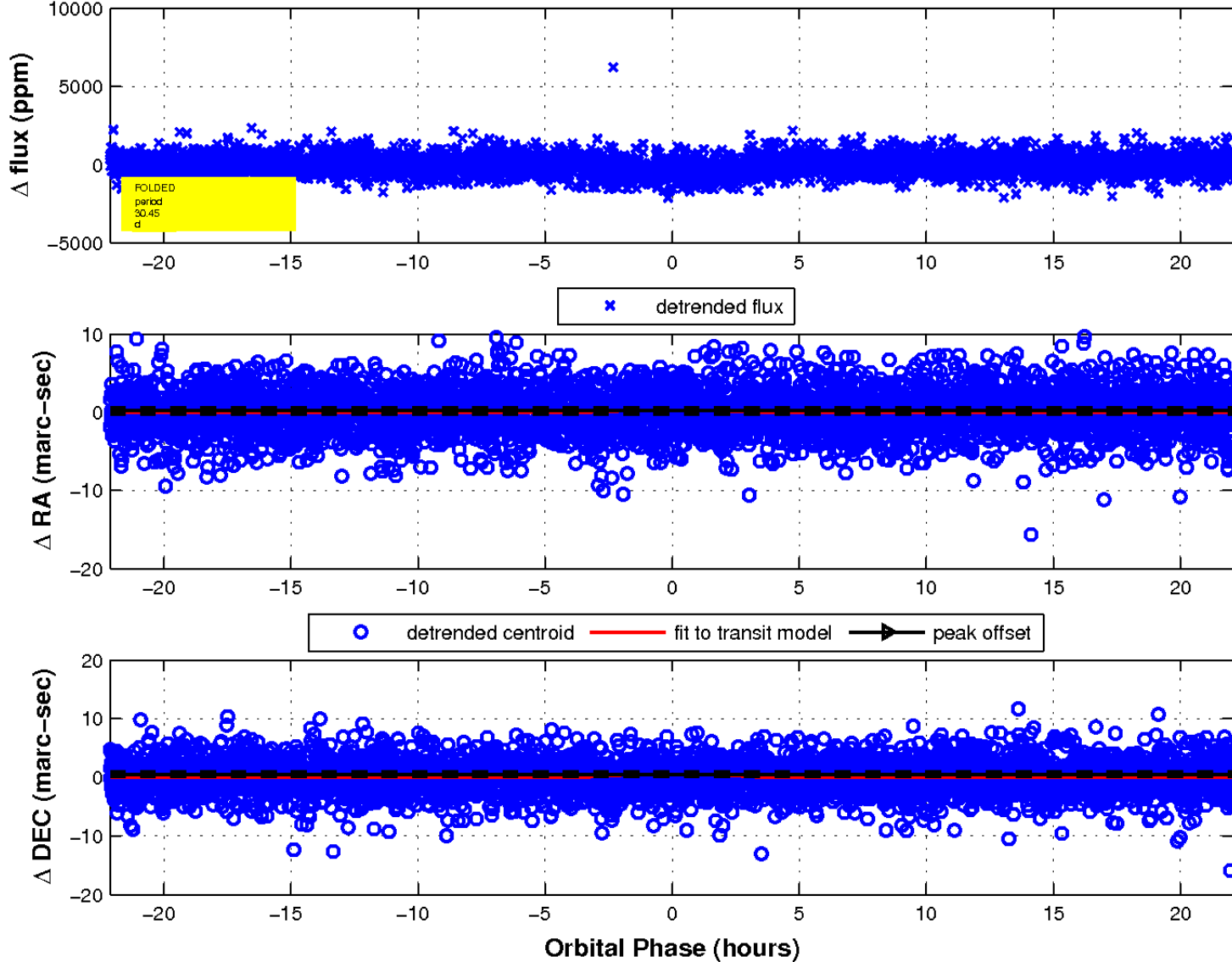




white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

