

# KIC 011602794

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
011602794-01	OBS	7460.01	5.705080	136.208697	227.6	2.085	8.4	8.6	0.93	5455	1.54	190.16

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011602794-01	OBS	PC	0.93	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 011602794-01

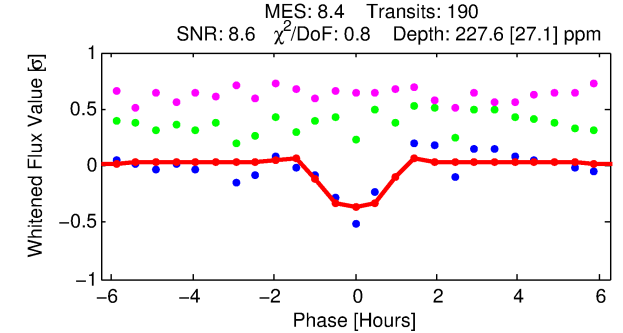
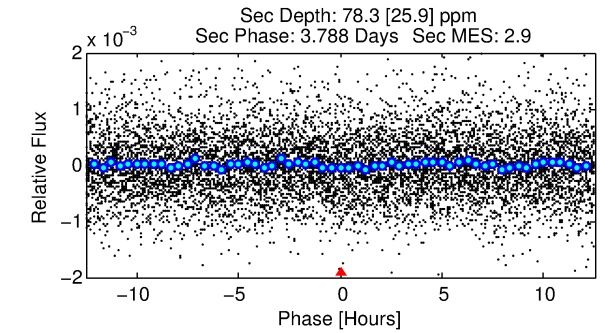
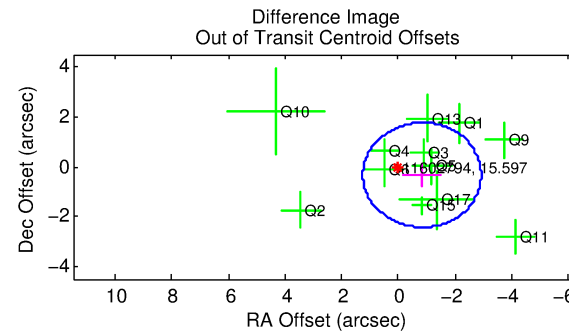
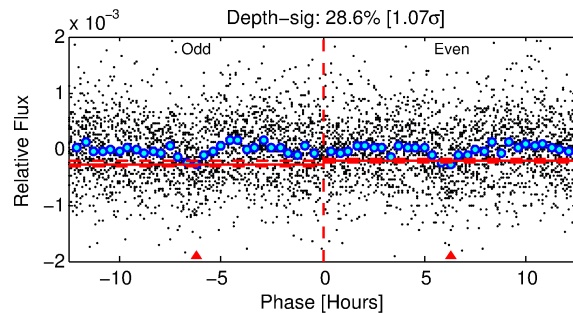
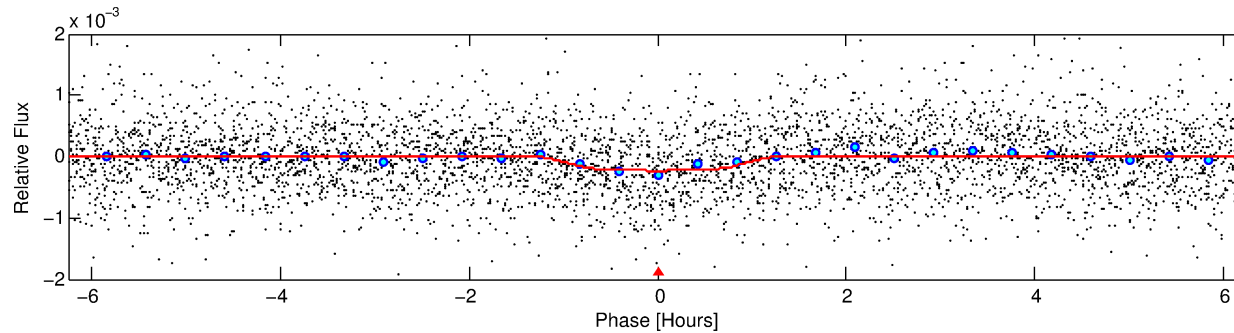
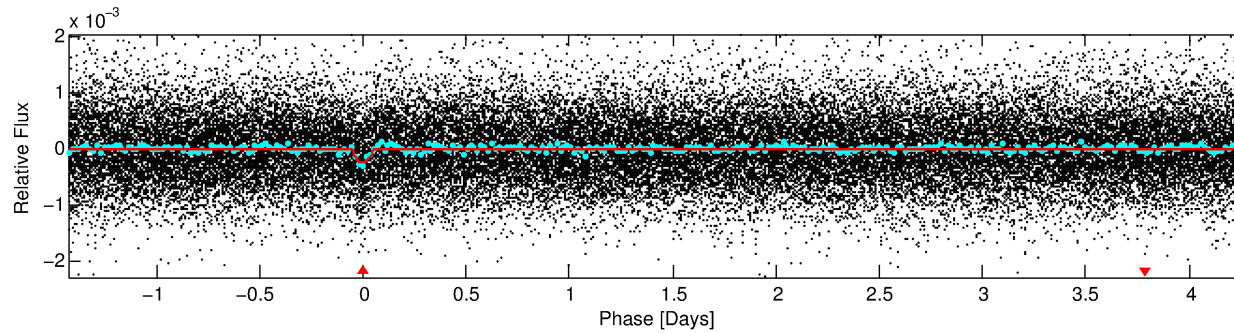
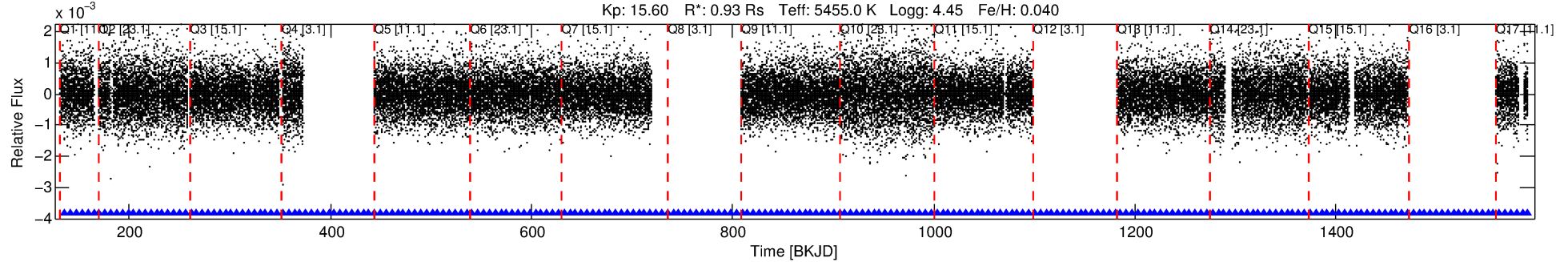
No Significant Match Found

# DV One-Page Summary

KIC: 11602794 Candidate: 1 of 1 Period: 5.705 d

KOI: K07460.01 Corr: 0.844

Kp: 15.60 R\*: 0.93 Rs Teff: 5455.0 K Logg: 4.45 Fe/H: 0.040



## DV Fit Results:

Period = 5.70508 [0.00004] d  
Epoch = 136.2087 [0.0042] BKJD  
Rp/R\* = 0.0152 [0.0173]  
a/R\* = 13.73 [62.46]  
b = 0.78 [2.41]  
Seff = 190.16 [62.80]  
Teq = 947 [78] K  
Rp = 1.54 [1.79] Re  
a = 0.0599 [0.0122] AU  
Ag = 65.03 [150.40] [0.43σ]  
Teffp = 4157 [2387] K [1.34σ]

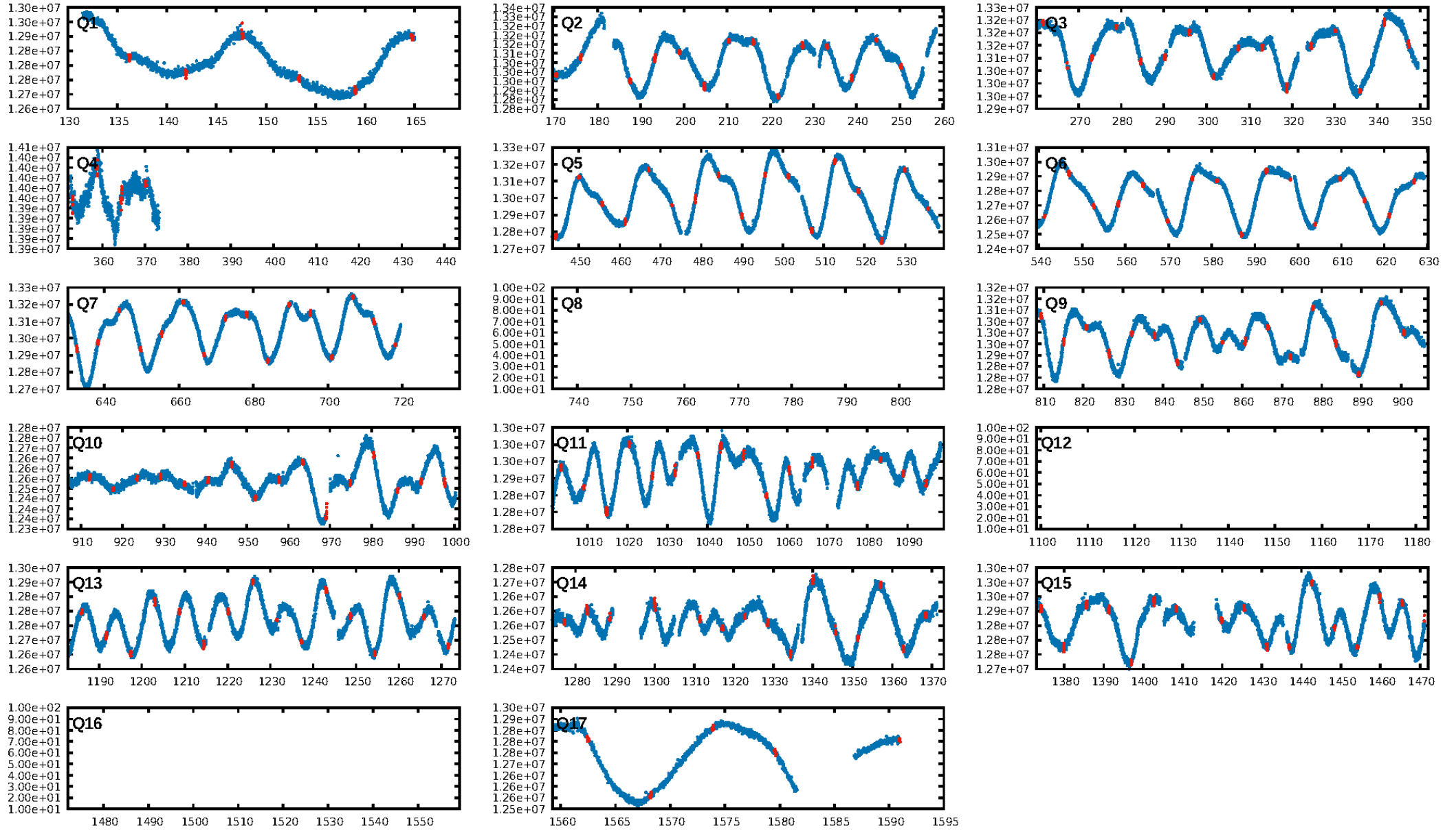
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 100.0%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 3.66e-17  
RollingBand-fgt: 1.00 [175/175]  
GhostDiagnostic-chr: 1.468  
Centroid-sig: 5.7%  
Centroid-so: 1.921 arcsec [1.29σ]  
OotOffset-rm: 0.906 arcsec [1.30σ]  
KicOffset-rm: 1.029 arcsec [1.30σ]  
OotOffset-st: 3/3/1/5 [12]  
KicOffset-st: 3/3/1/5 [12]  
DiffImageQuality-fgm: 0.58 [7/12]  
DiffImageOverlap-fno: 1.00 [14/14]

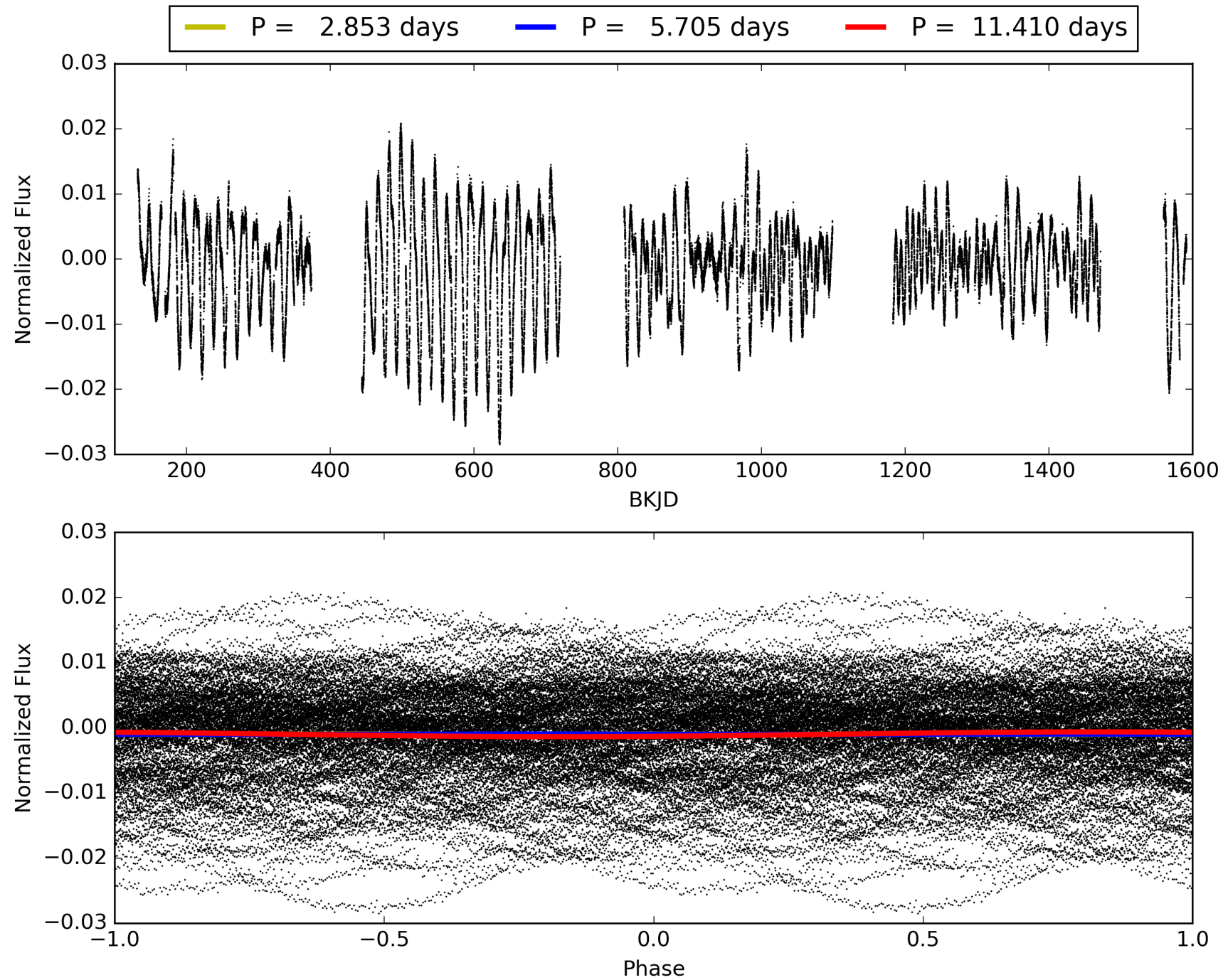
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:39:34 Z

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

# TCE 011602794-01, PDC Light Curves

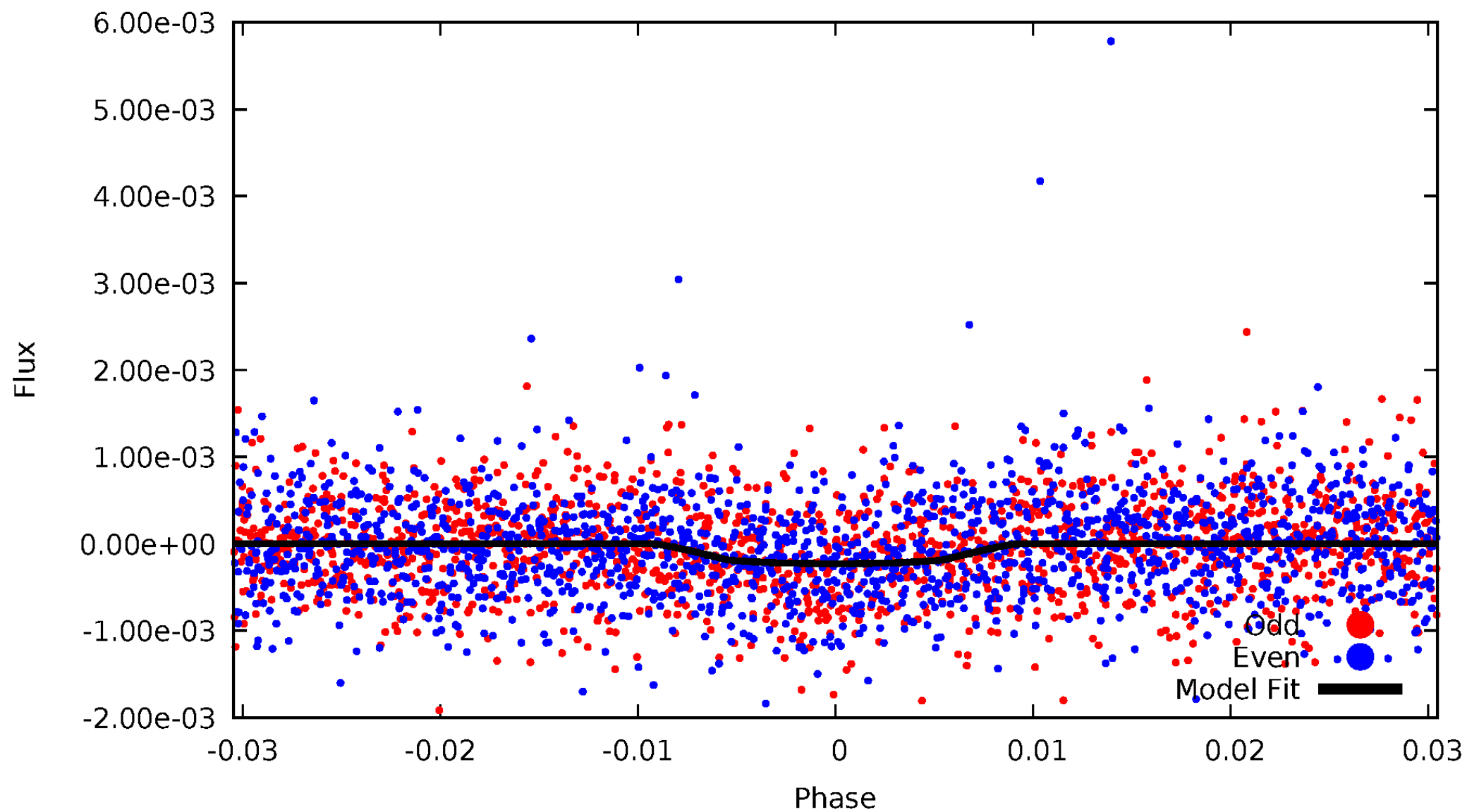


# TCE 011602794-01



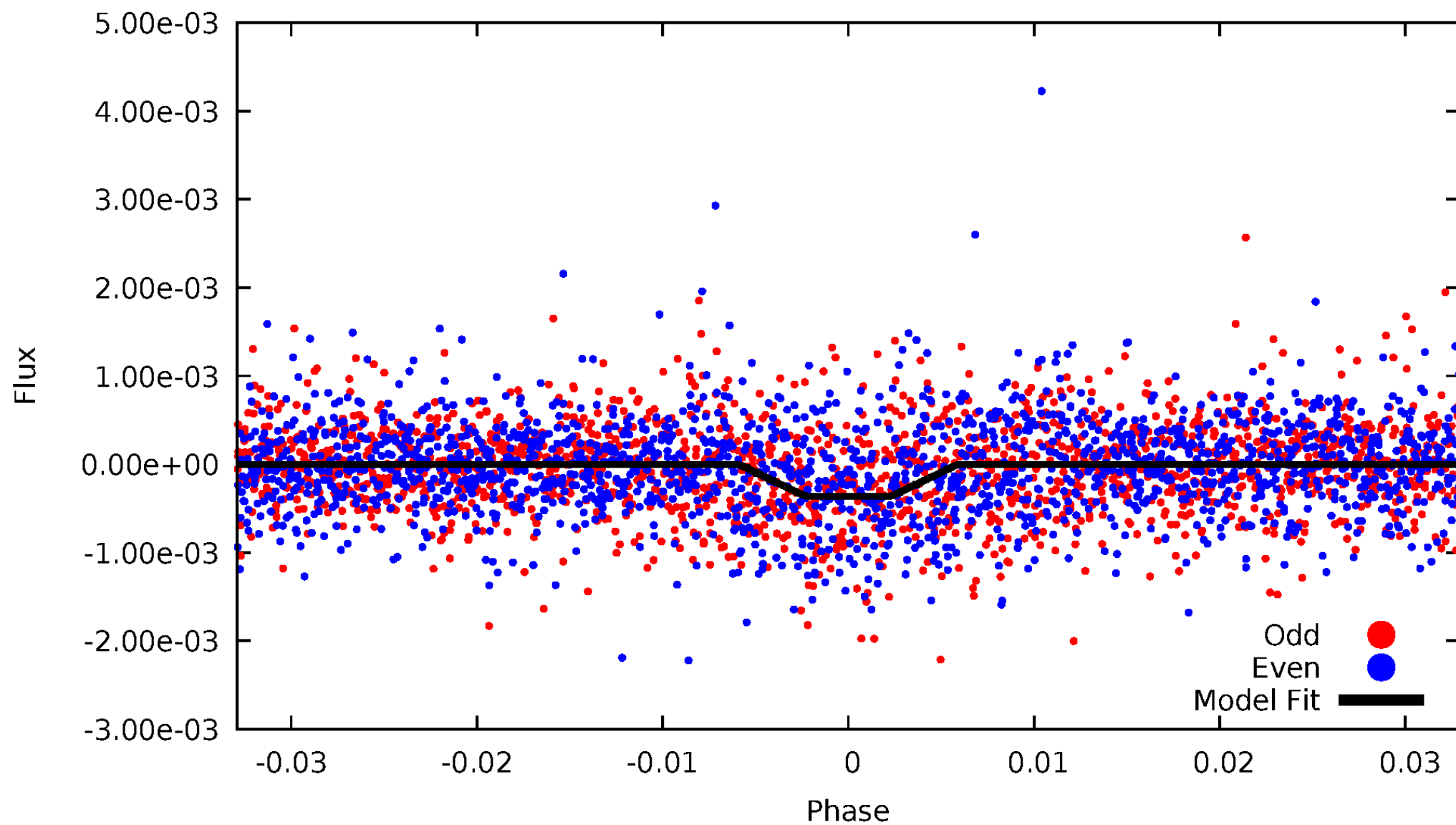
# DV Odd/Even

TCE 011602794-01



# ALT Odd/Even

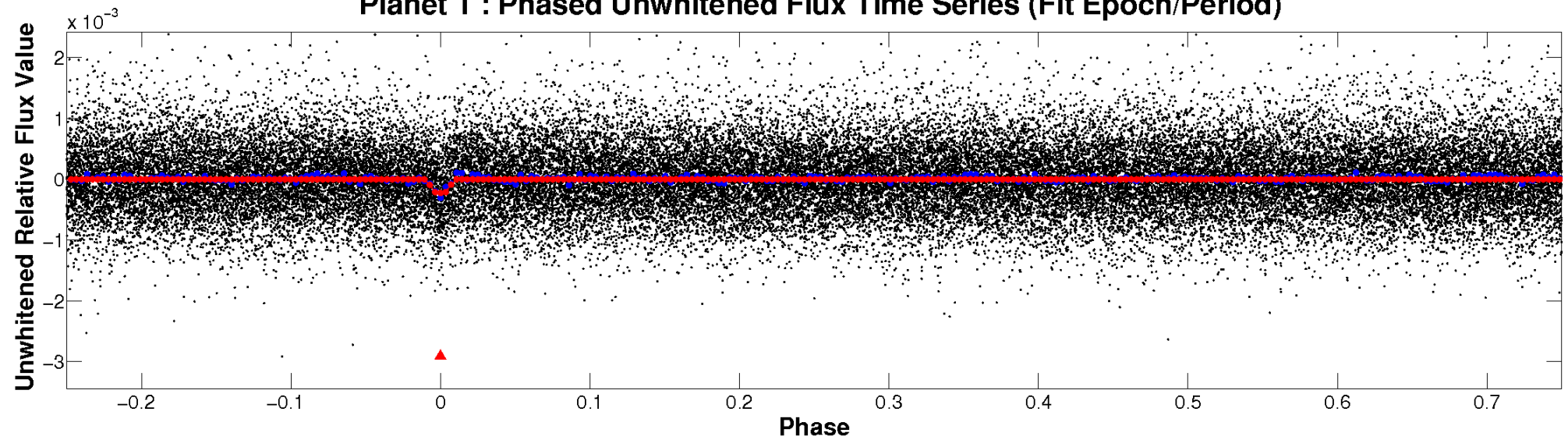
TCE 011602794-01



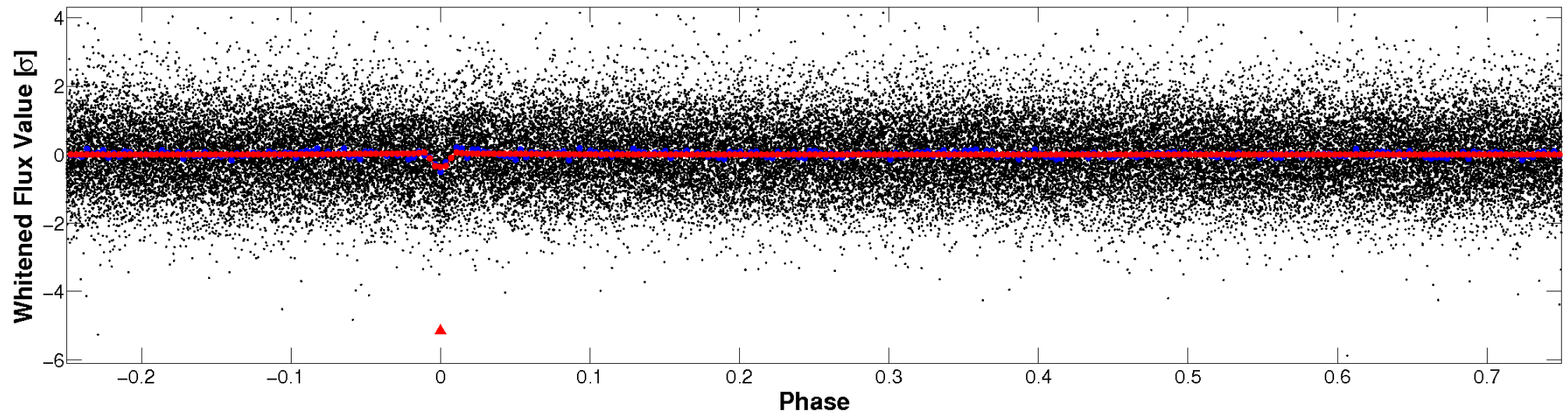


# Non-Whitened Vs. Whitened Light Curve

**Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)**

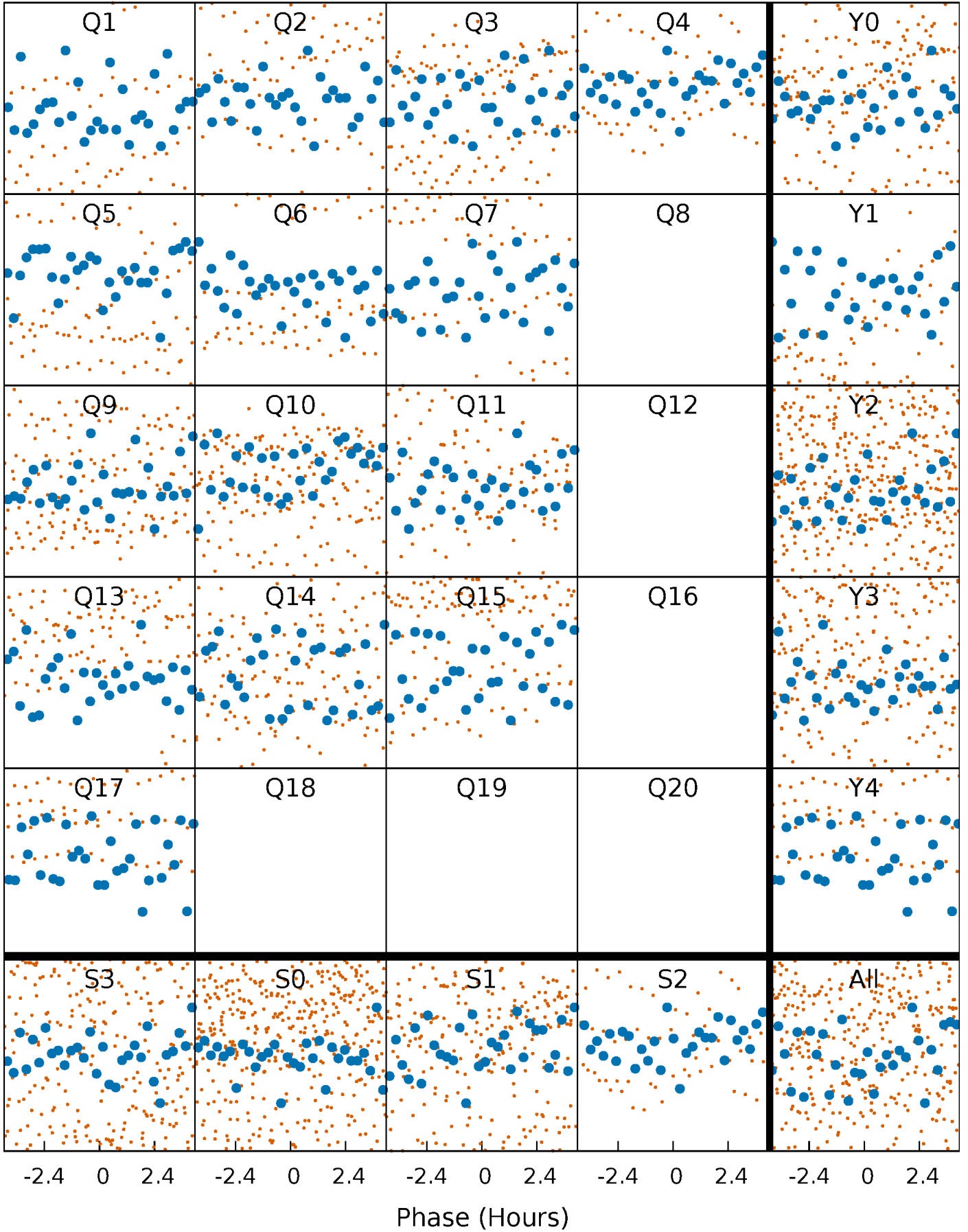


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

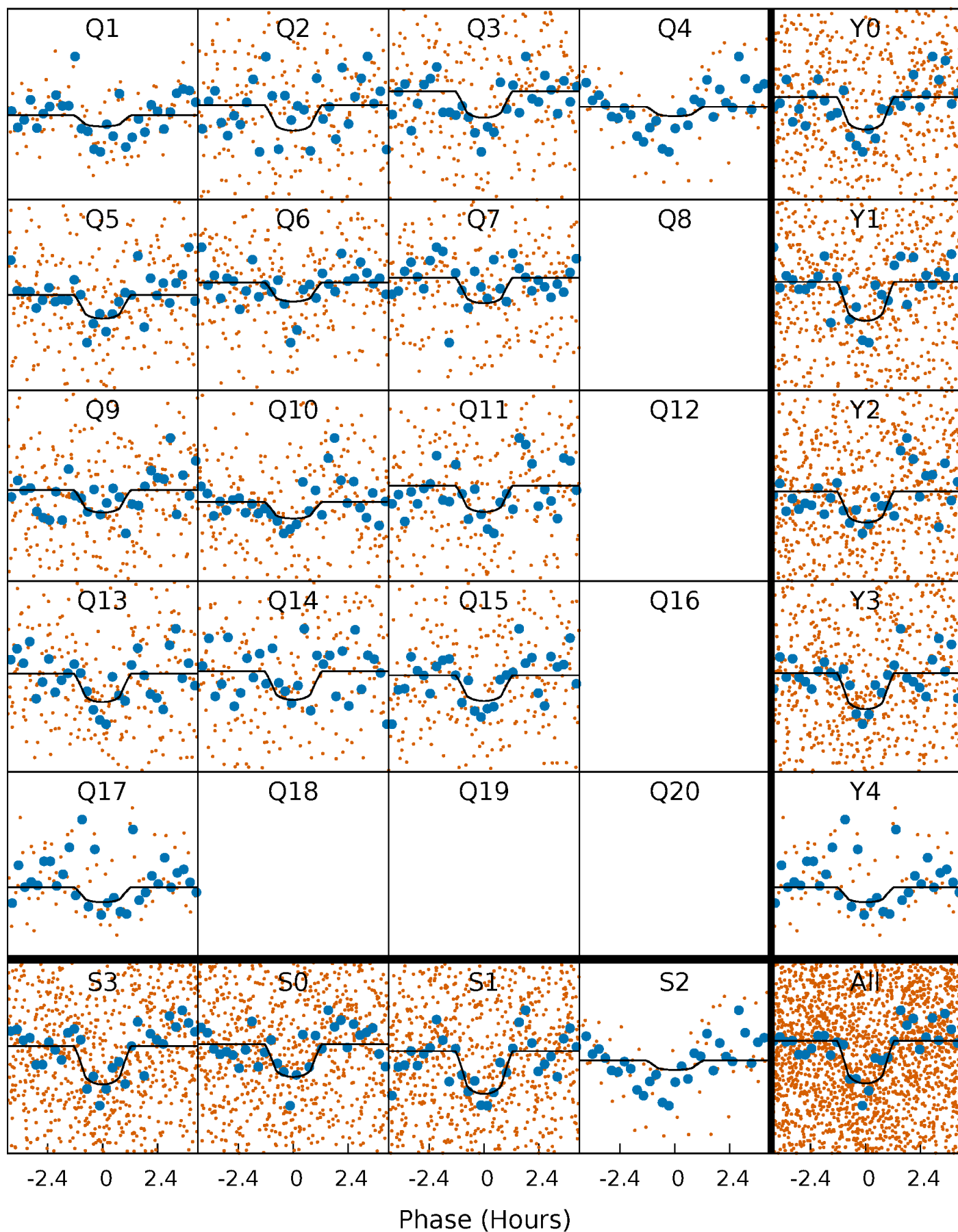
TCE 011602794-01   P= 5.705080 Days    $T_0=136.208697$  (BKJD)





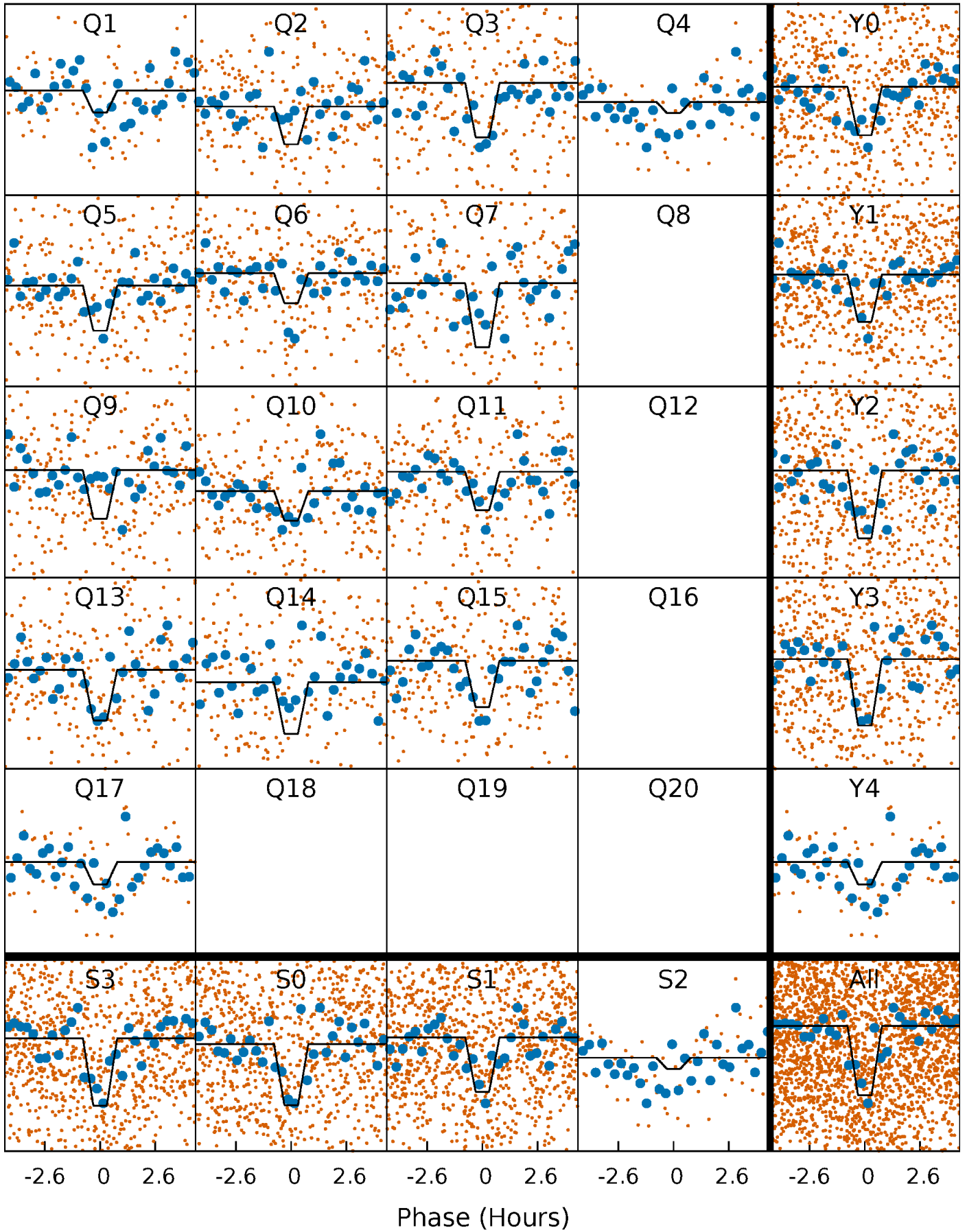
# DV Quarter-Phased Transit Curves

TCE 011602794-01 P= 5.705080 Days  $T_0=136.208697$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

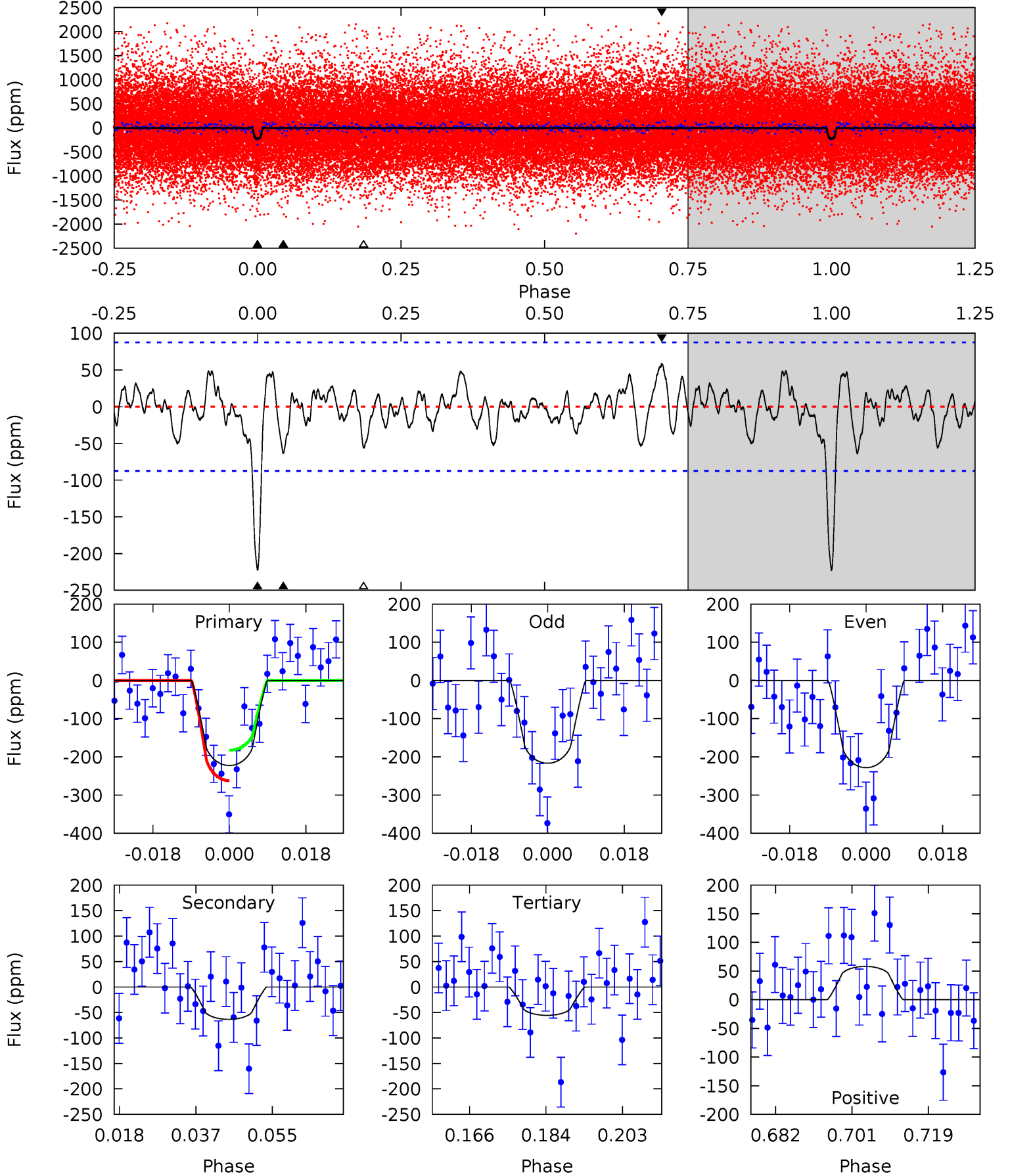
TCE 011602794-01 P= 5.705109 Days  $T_0=136.204154$  (BKJD)



# DV Model-Shift Uniqueness Test

011602794-01, P = 5.705080 Days, E = 130.503617 Days

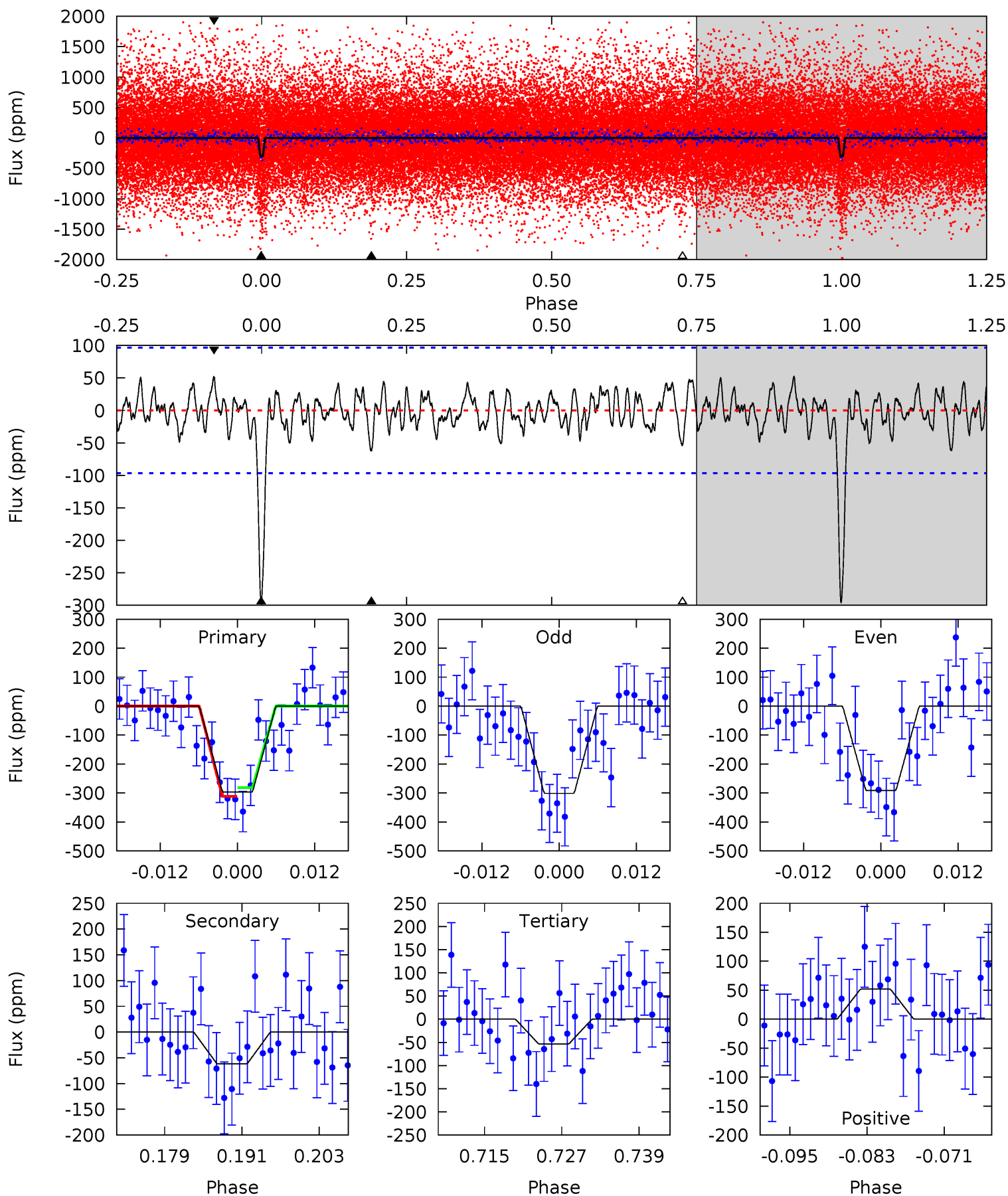
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	3.56	3.12	3.26	4.91	2.36	1.23	9.36	9.22	0.44	0.30	0.33	0.93	0.21	2.25



# Alt Model-Shift Uniqueness Test

011602794-01, P = 5.705109 Days, E = 130.499045 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
15.3	3.20	2.77	2.68	4.99	2.51	1.13	12.5	12.6	0.43	0.52	0.25	0.94	0.15	0.77



### Stellar Parameters For KIC 011602794

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M$ ( $M_{\odot}$ )	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5455^{+180}_{-164}$	$4.448^{+0.104}_{-0.169}$	$0.040^{+0.250}_{-0.300}$	$0.927^{+0.217}_{-0.117}$	$0.880^{+0.099}_{-0.082}$	$1.554^{+0.635}_{-0.694}$
	+3%/-3%	+2%/-4%	+625%/-750%	+23%/-13%	+11%/-9%	+41%/-45%
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 011602794-01 / KOI 7460.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{\text{max}}$ (K)	$T_{\text{obs}}$ (K)	$A_{\text{obs}}$
DV	$-64 \pm 18$	$2.06^{+1.53}_{-1.32}$	$1337^{+85}_{-73}$	$3786^{+1892}_{-614}$	$29^{+195}_{-20}$
Alt.	$-62 \pm 19$	$2.31^{+1.72}_{-1.38}$	$1338^{+87}_{-67}$	$3615^{+1385}_{-580}$	$21^{+106}_{-15}$

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

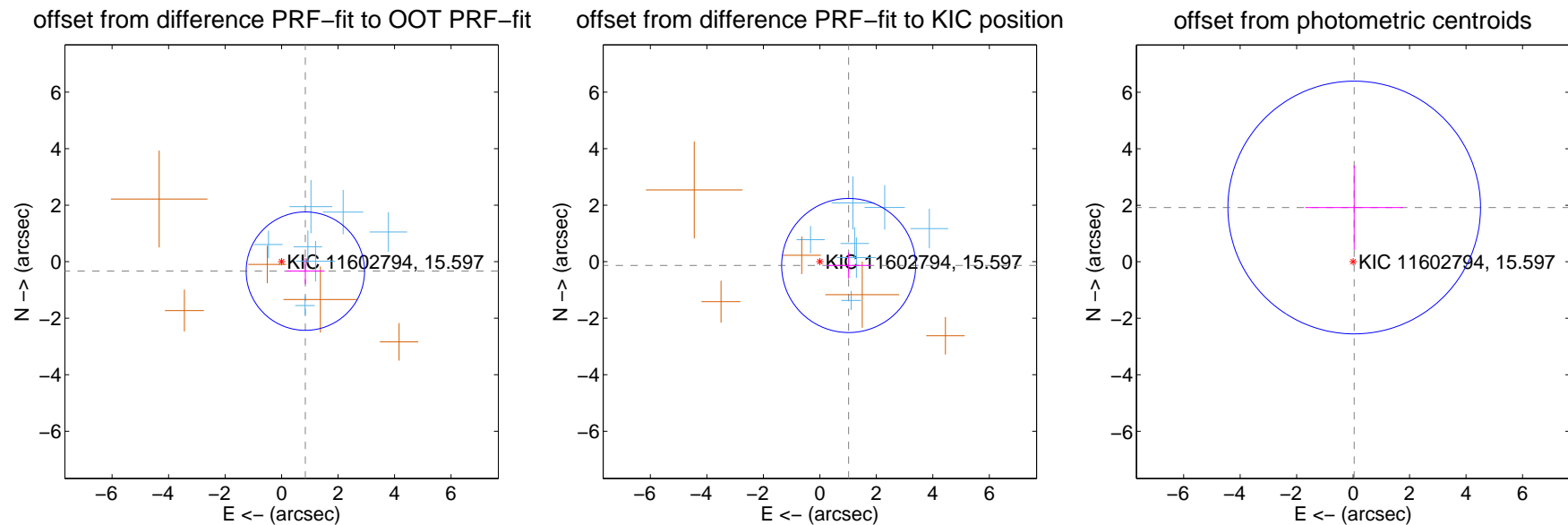
## DV Centroid Data

Supplemental centroid analysis for 011602794-01. Kepler magnitude: 15.60. Transit SNR 8.62

There are 7 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

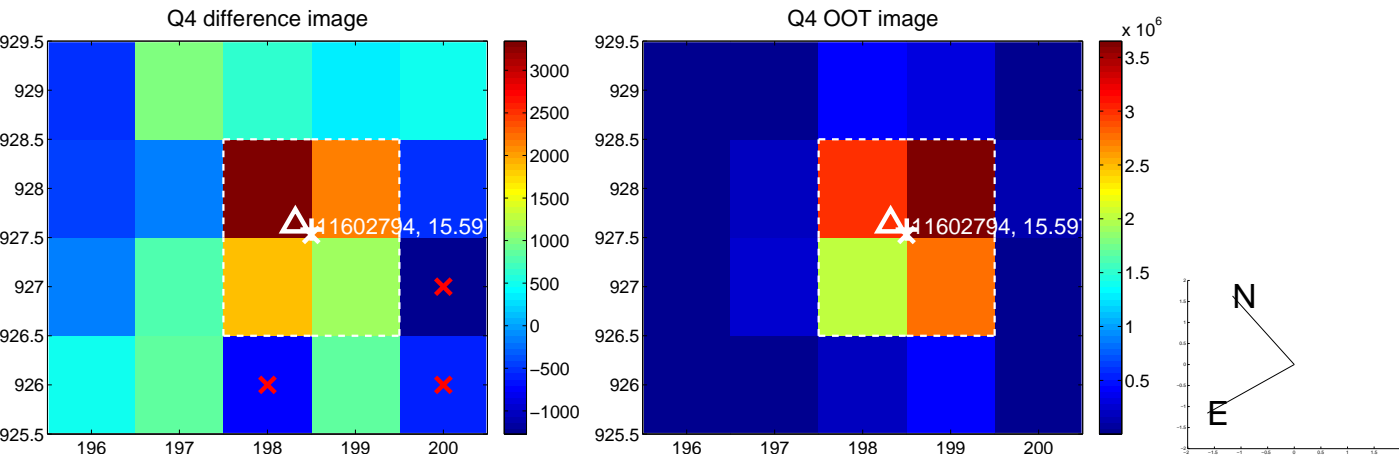
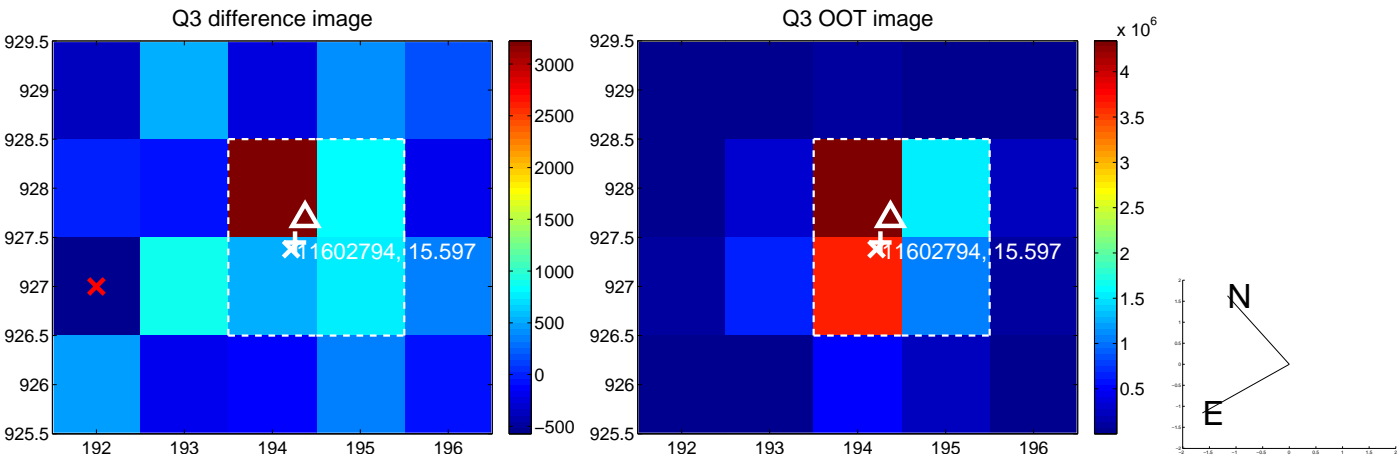
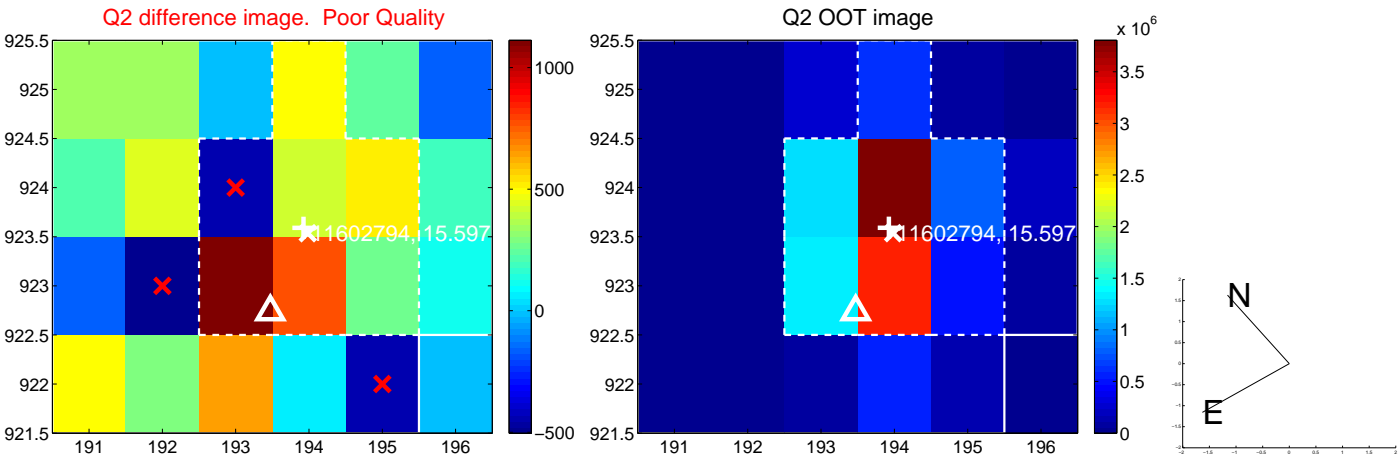
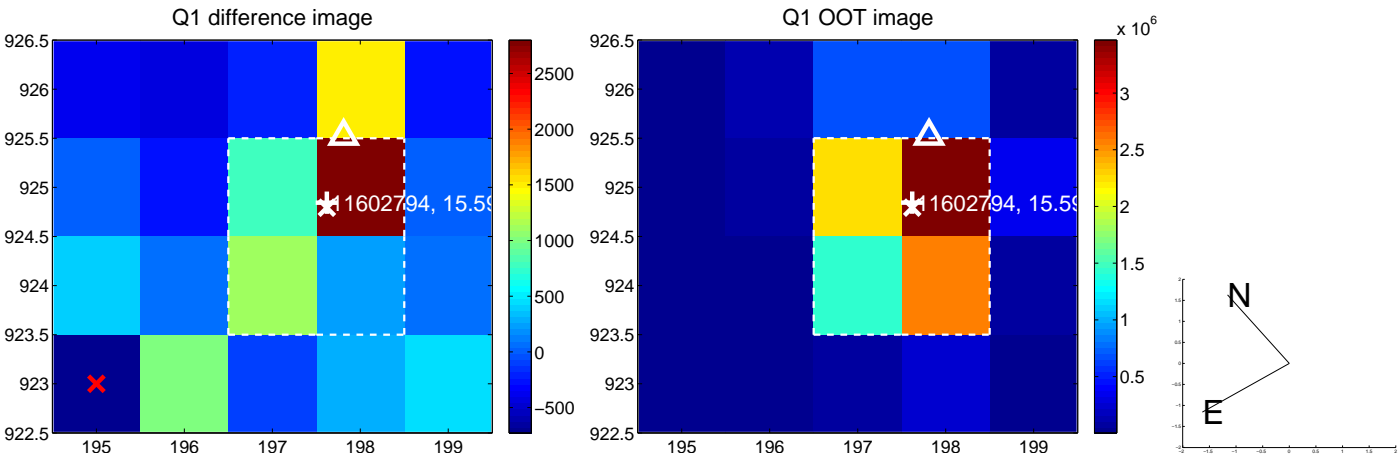
	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.906 \pm 0.698$	1.30	$-0.843 \pm 0.681$	$-0.334 \pm 0.460$
PRF-fit source offset from KIC position	$1.029 \pm 0.791$	1.30	$-1.020 \pm 0.781$	$-0.134 \pm 0.457$
photometric centroid source offset	$1.92 \pm 1.49$	1.29	$-0.04 \pm 1.73$	$1.92 \pm 1.49$



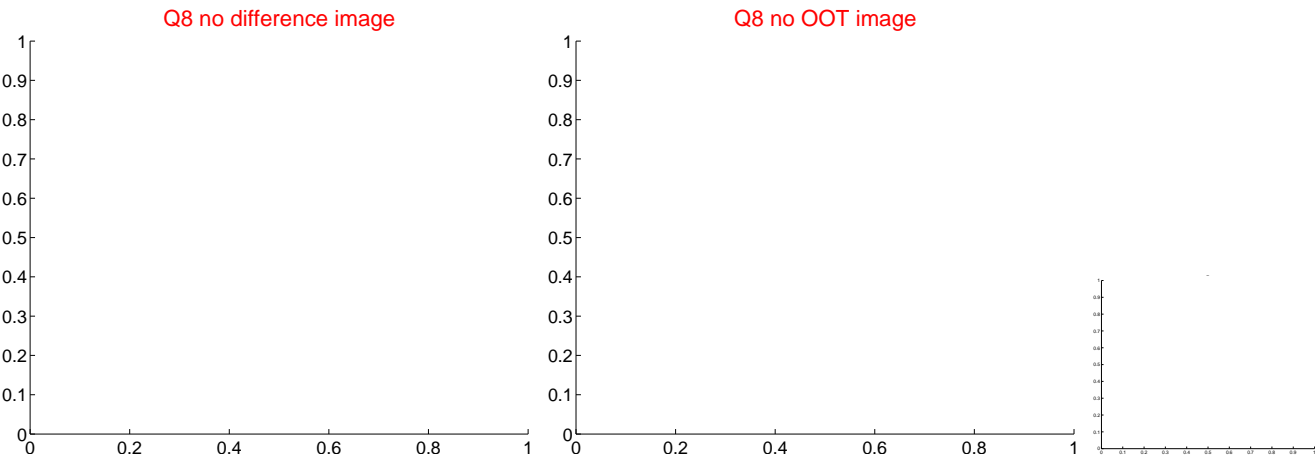
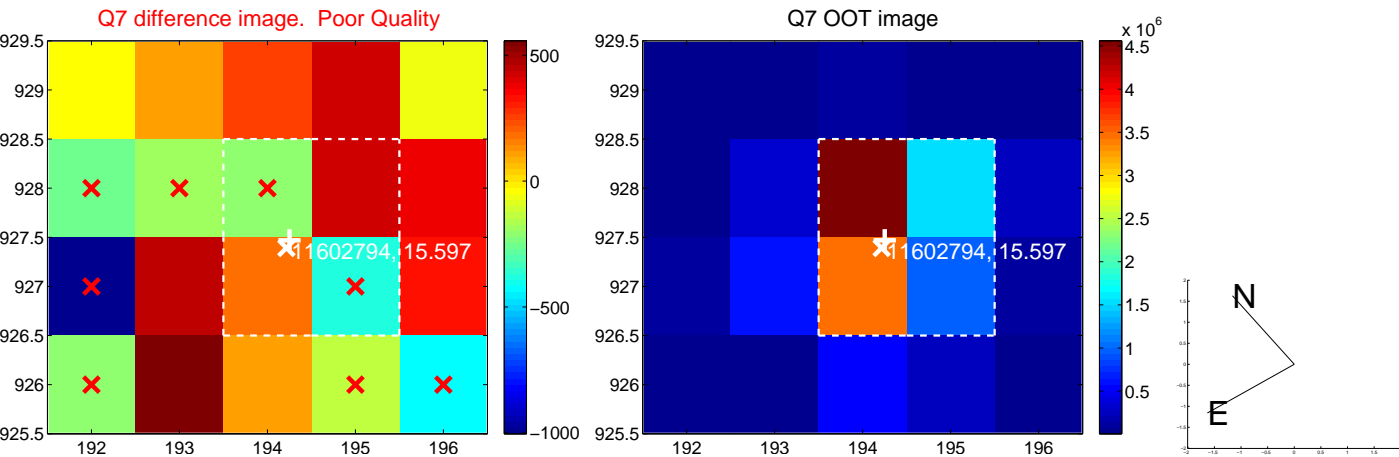
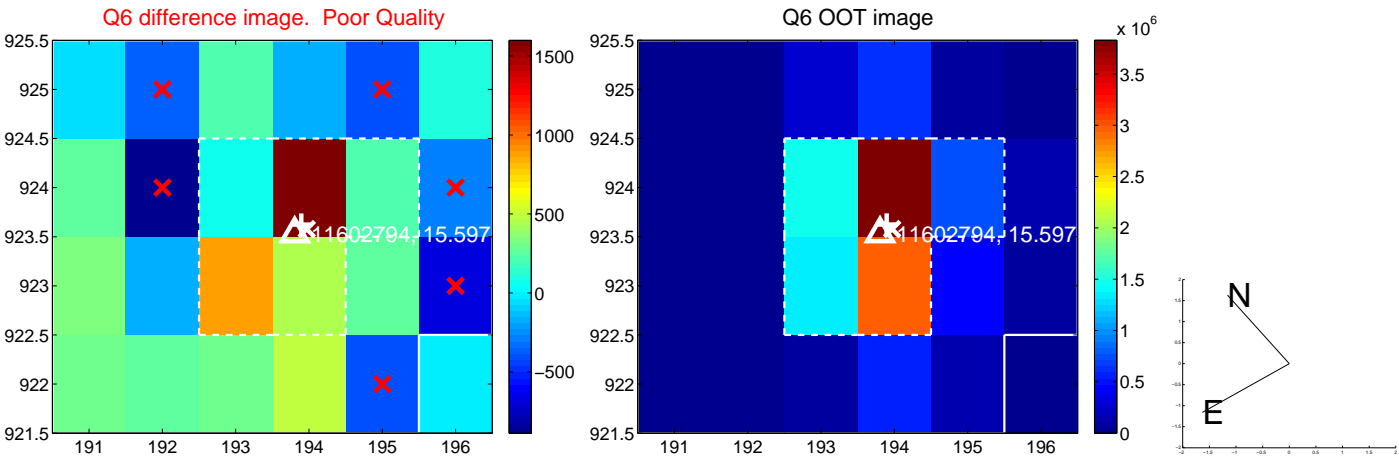
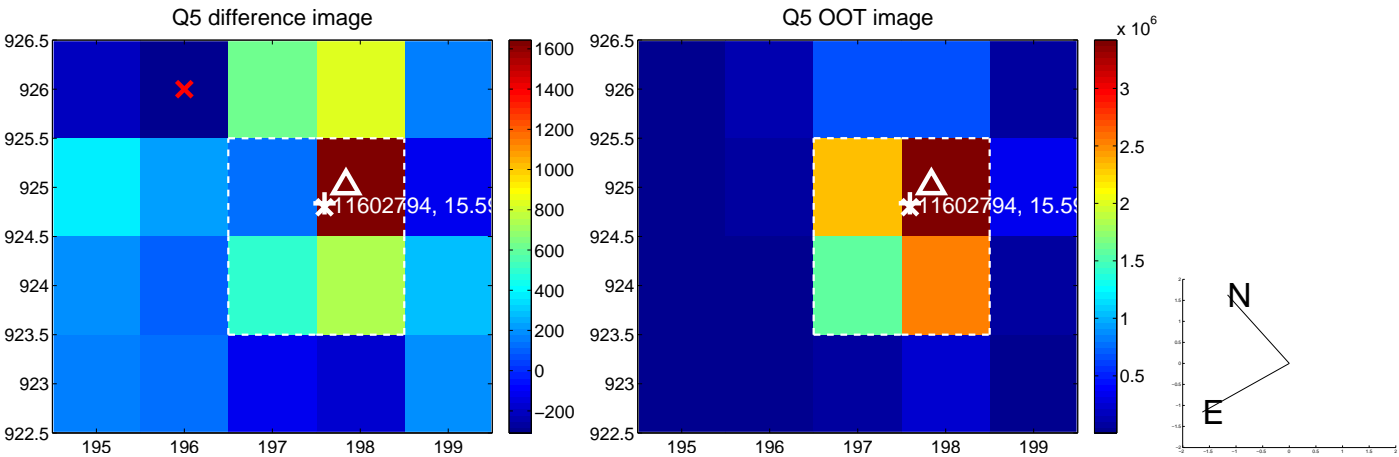
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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



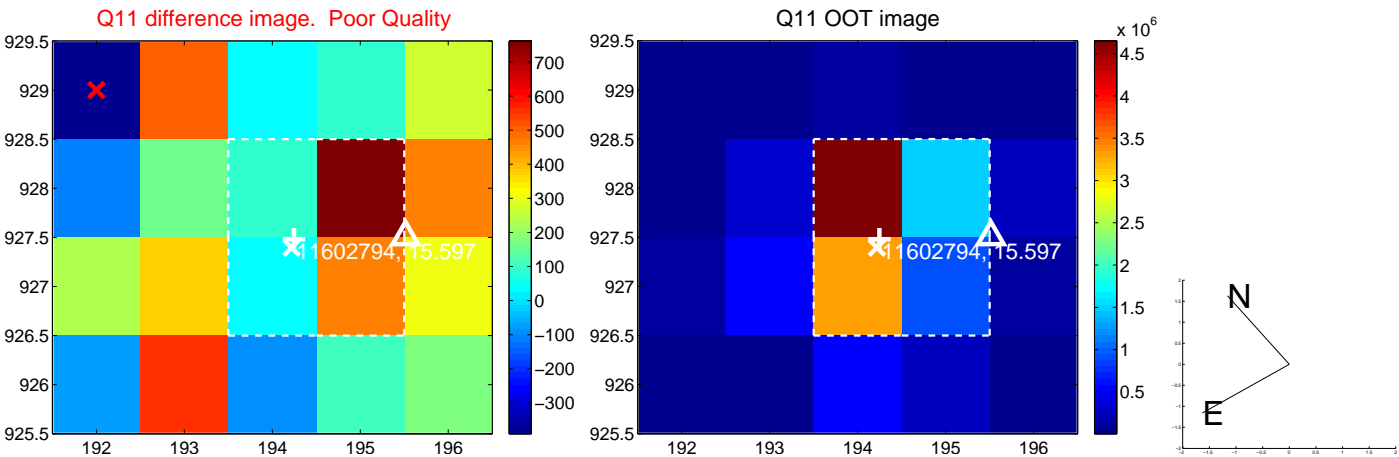
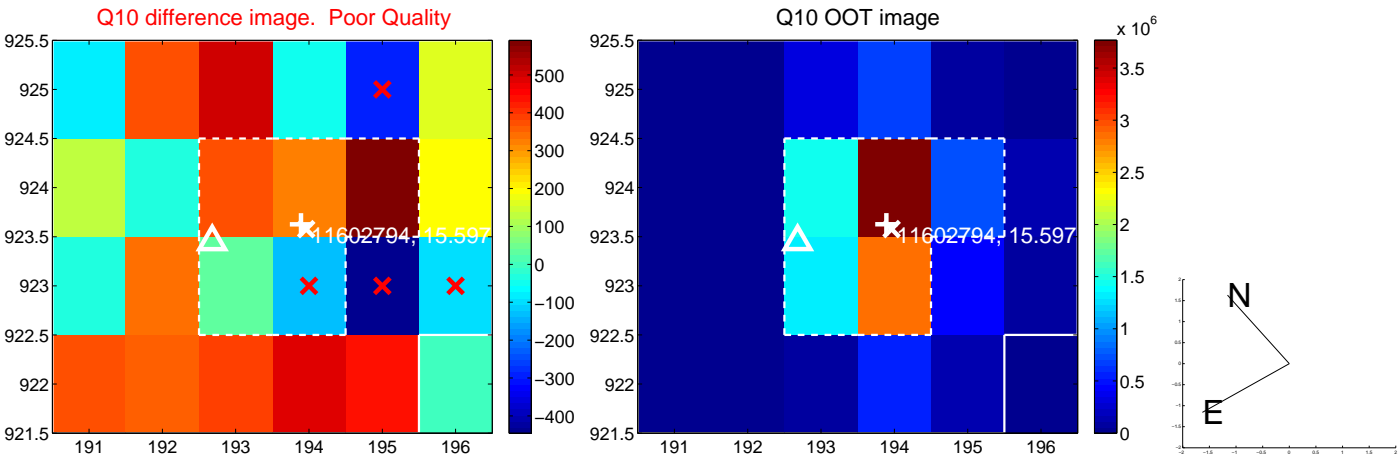
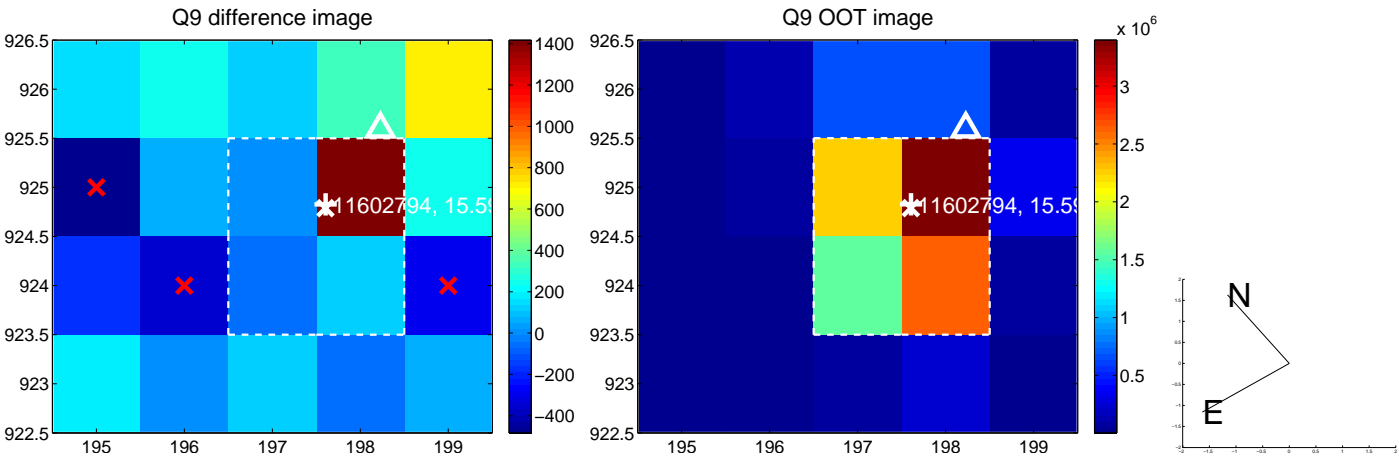
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



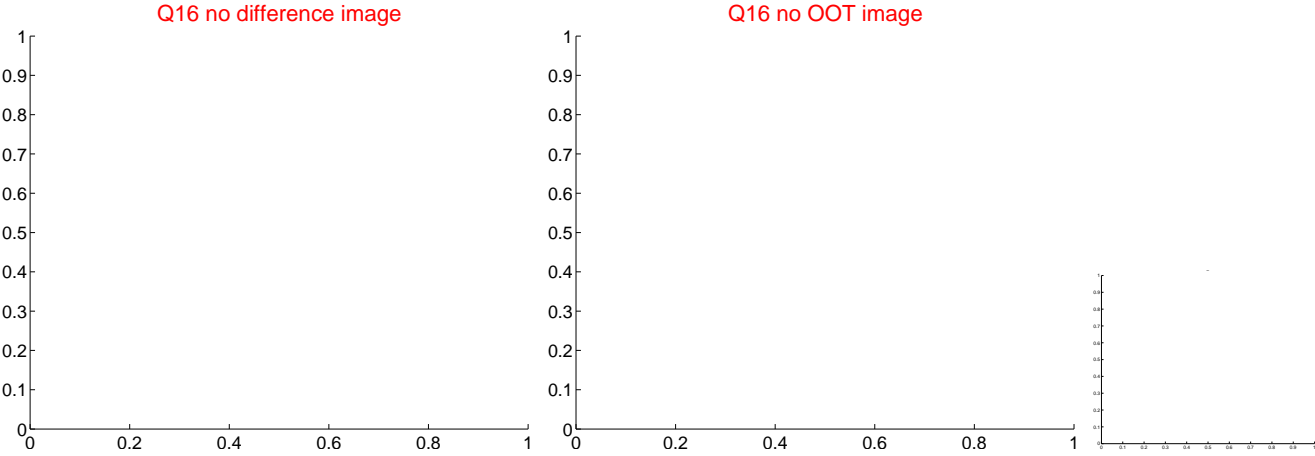
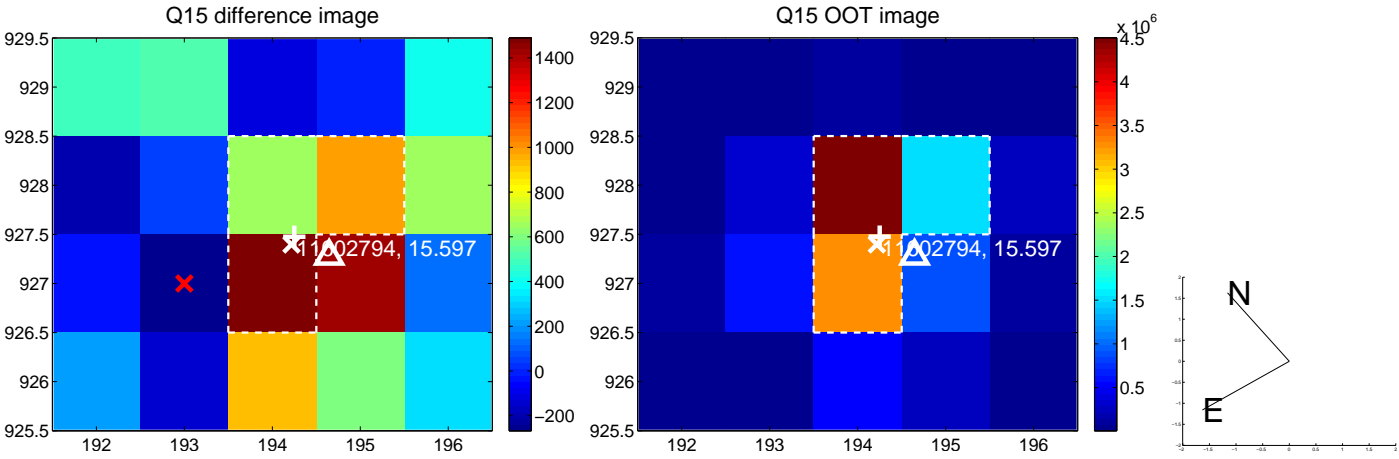
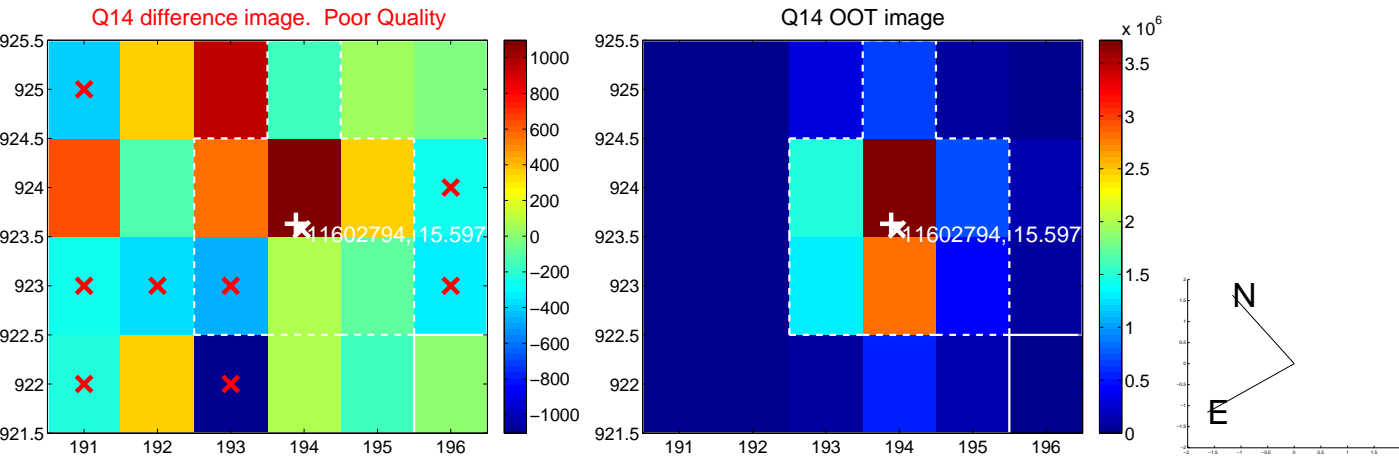
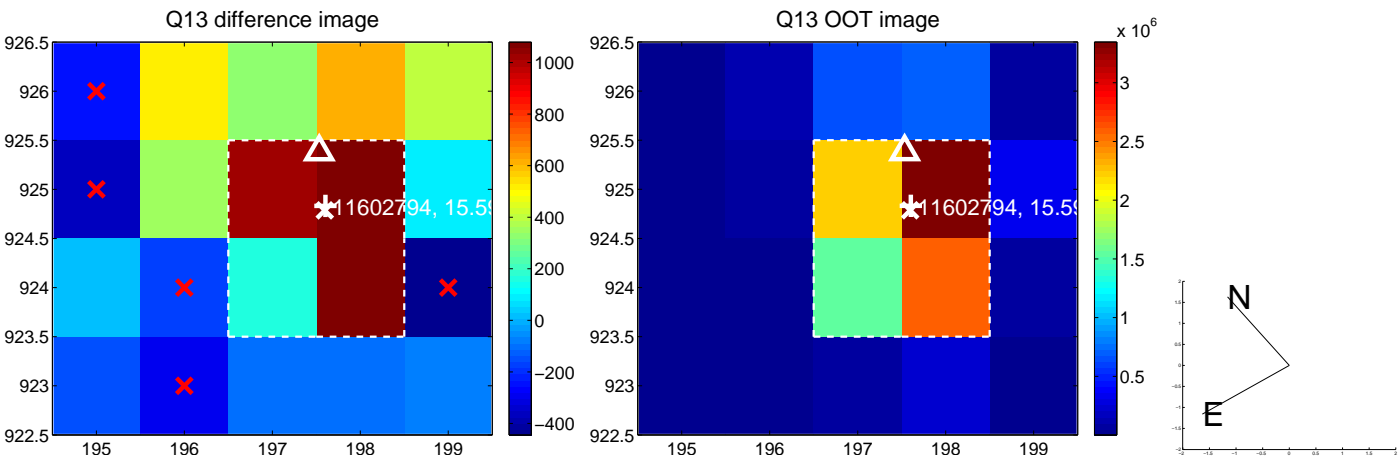
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



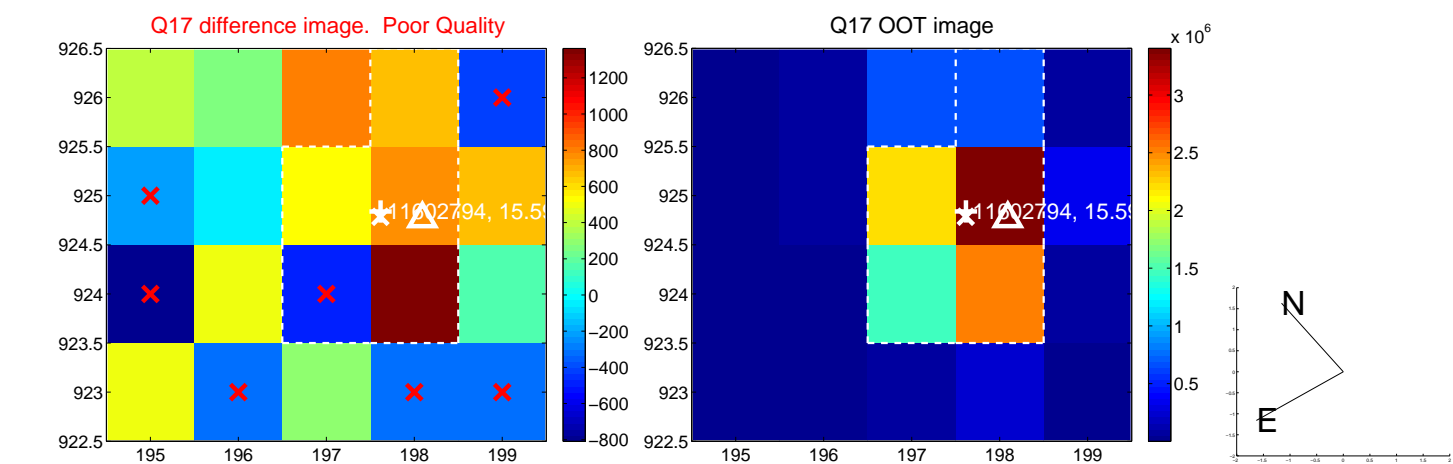
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



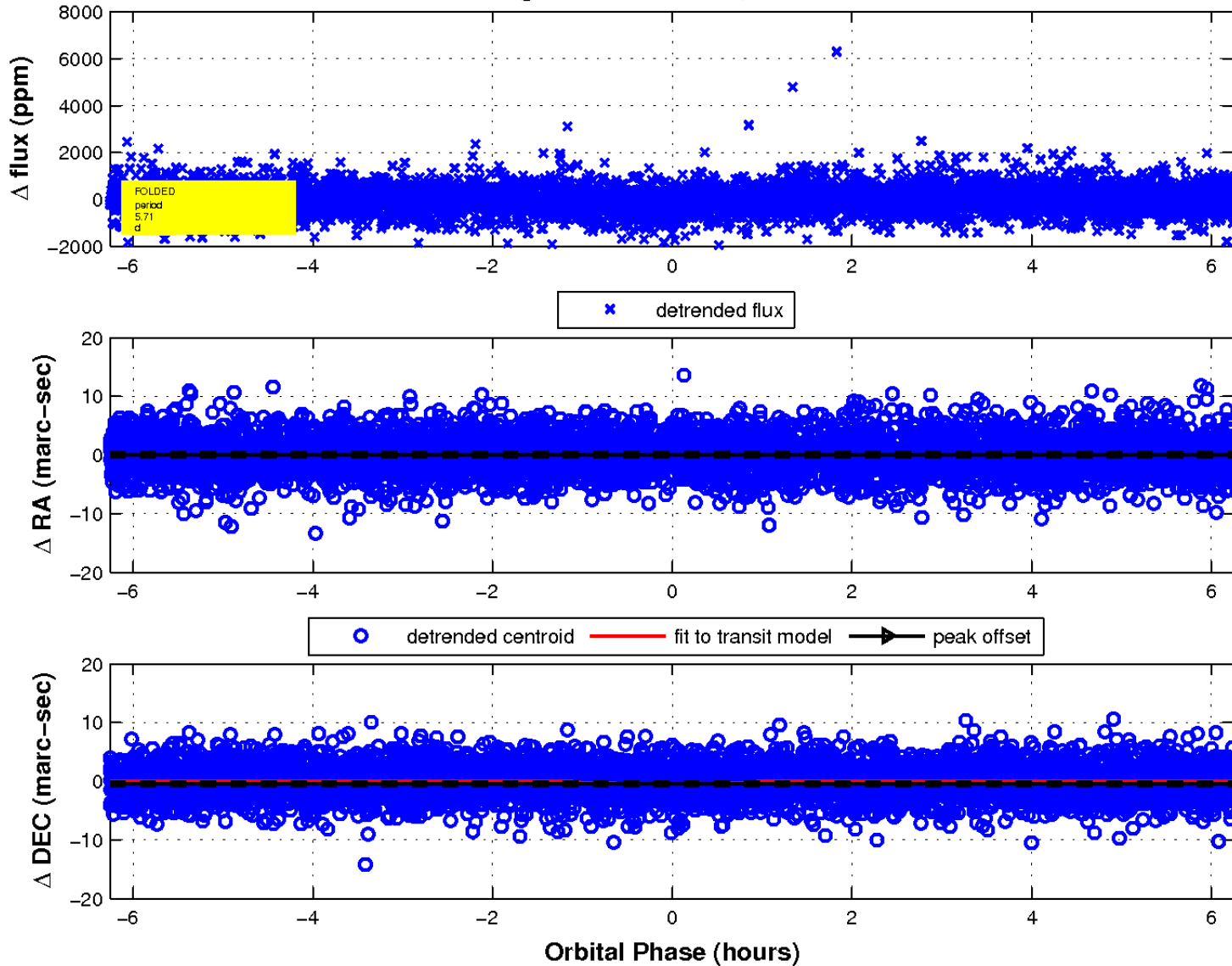
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

