

# KIC 007211141

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007211141-01	OBS	1355.01	51.929340	151.930033	3396.8	5.384	79.5	75.2	1.44	5671	8.73	25.64

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007211141-01	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 007211141-01

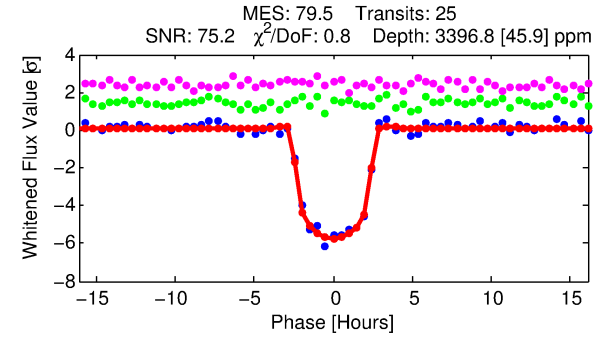
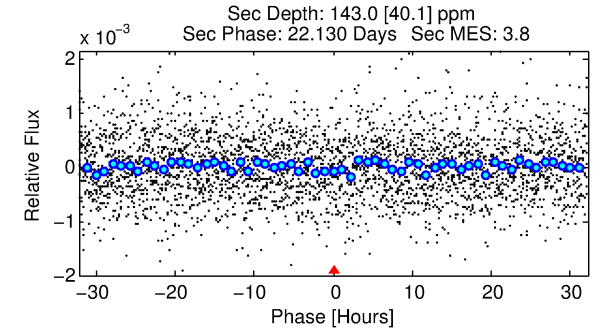
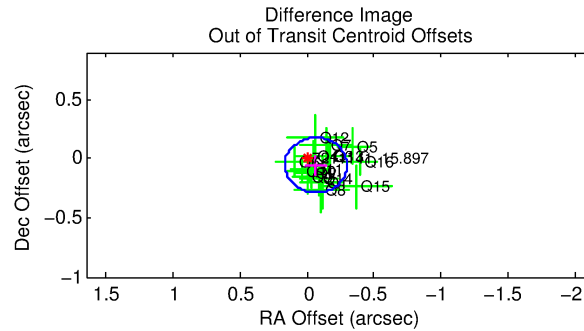
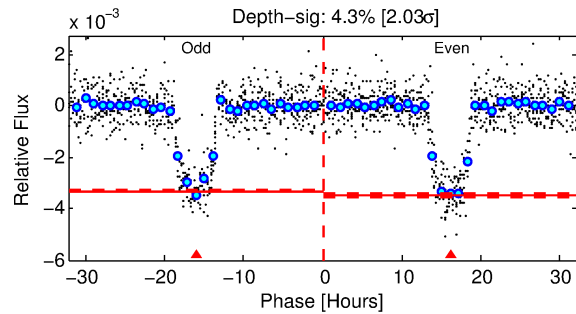
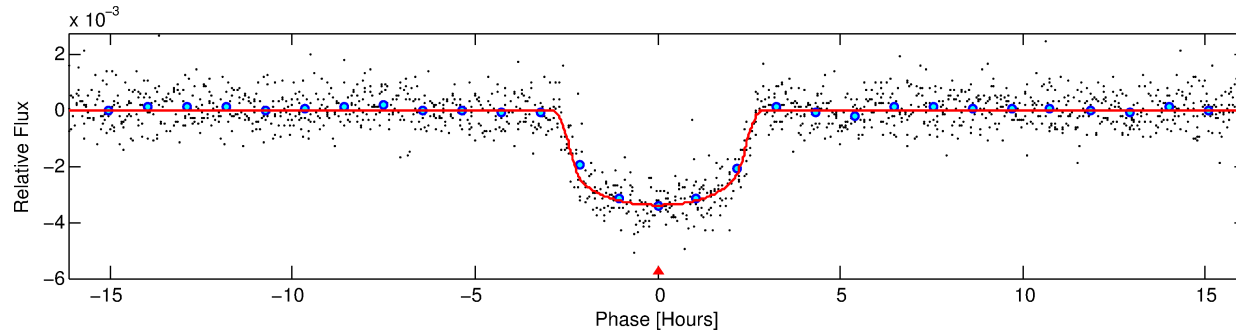
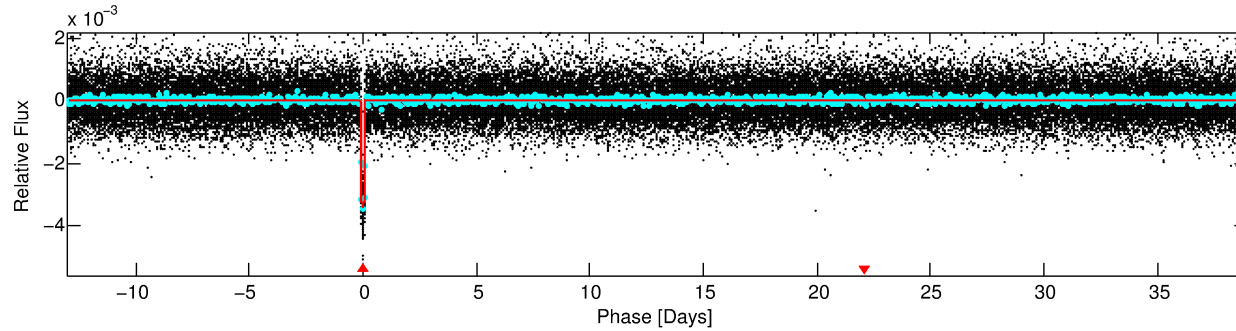
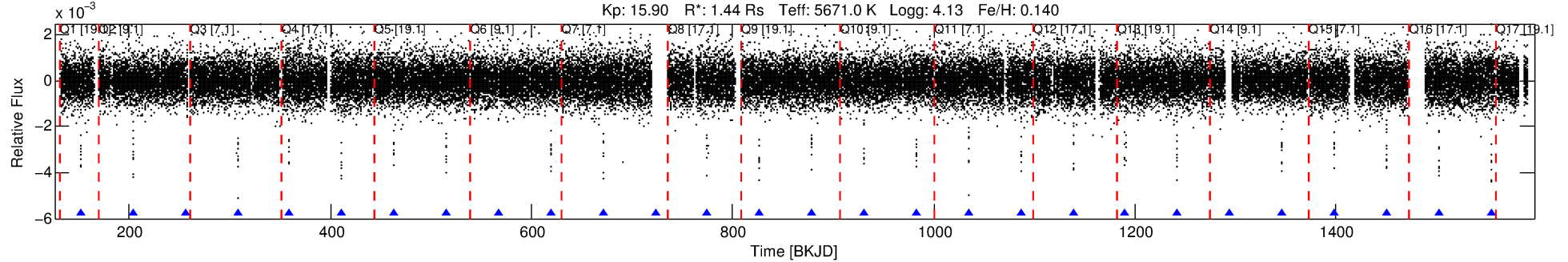
No Significant Match Found

# DV One-Page Summary

KIC: 7211141 Candidate: 1 of 1 Period: 51.929 d

KOI: K01355.01 Corr: 0.993

Kp: 15.90 R\*: 1.44 Rs Teff: 5671.0 K Logg: 4.13 Fe/H: 0.140



## DV Fit Results:

Period = 51.92934 [0.00010] d  
Epoch = 151.9300 [0.0016] BKJD  
Rp/R\* = 0.0555 [0.0032]  
a/R\* = 64.18 [15.14]  
b = 0.60 [0.26]  
Seff = 25.64 [8.71]  
Teq = 574 [49] K  
Rp = 8.73 [1.98] Re  
a = 0.2741 [0.0575] AU  
Ag = 77.62 [35.08] [2.18σ]  
Teffp = 2633 [204] K [9.82σ]

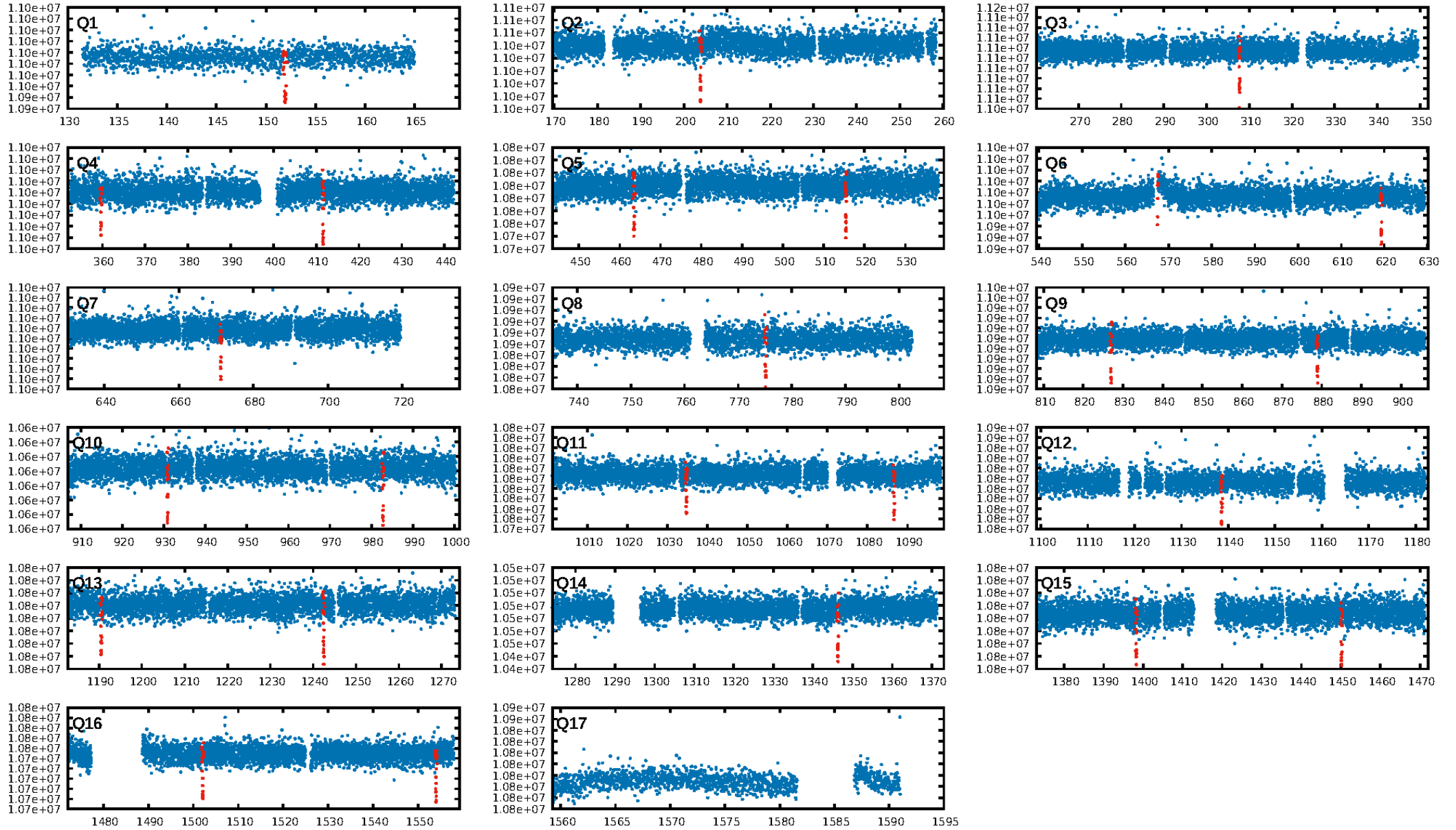
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: 51.1%  
ModelChiSquareGof-sig: 100.0%  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [24/24]  
GhostDiagnostic-chr: 4.179  
Centroid-sig: 0.4%  
Centroid-so: 0.355 arcsec [1.99σ]  
OotOffset-rm: 0.085 arcsec [1.10σ]  
KicOffset-rm: 0.118 arcsec [1.49σ]  
OotOffset-st: 4/4/4/4 [16]  
KicOffset-st: 4/4/4/4 [16]  
DiffImageQuality-fgm: 1.00 [16/16]  
DiffImageOverlap-fno: 1.00 [16/16]

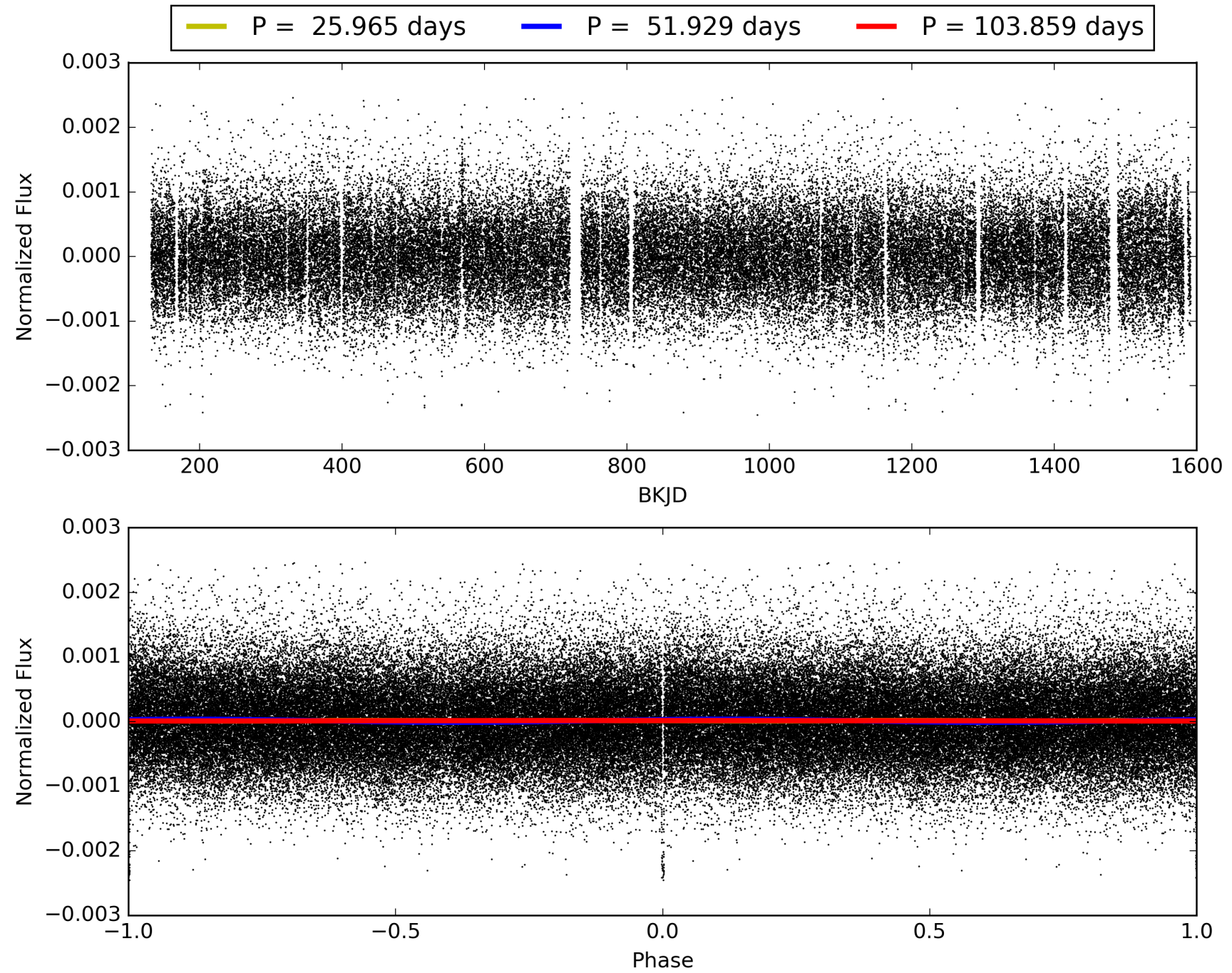
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:55:31 Z

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

# TCE 007211141-01, PDC Light Curves

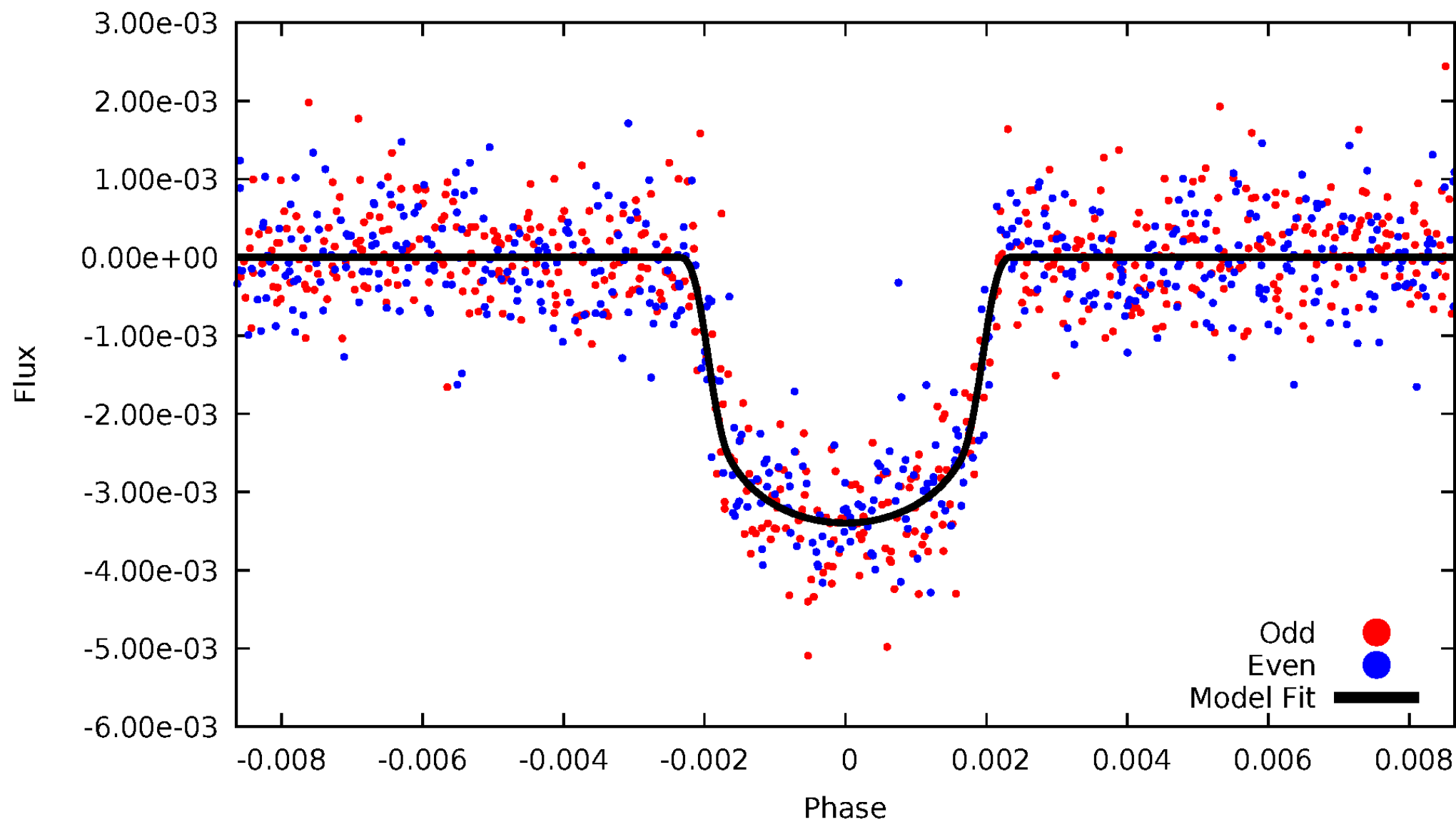


TCE 007211141-01



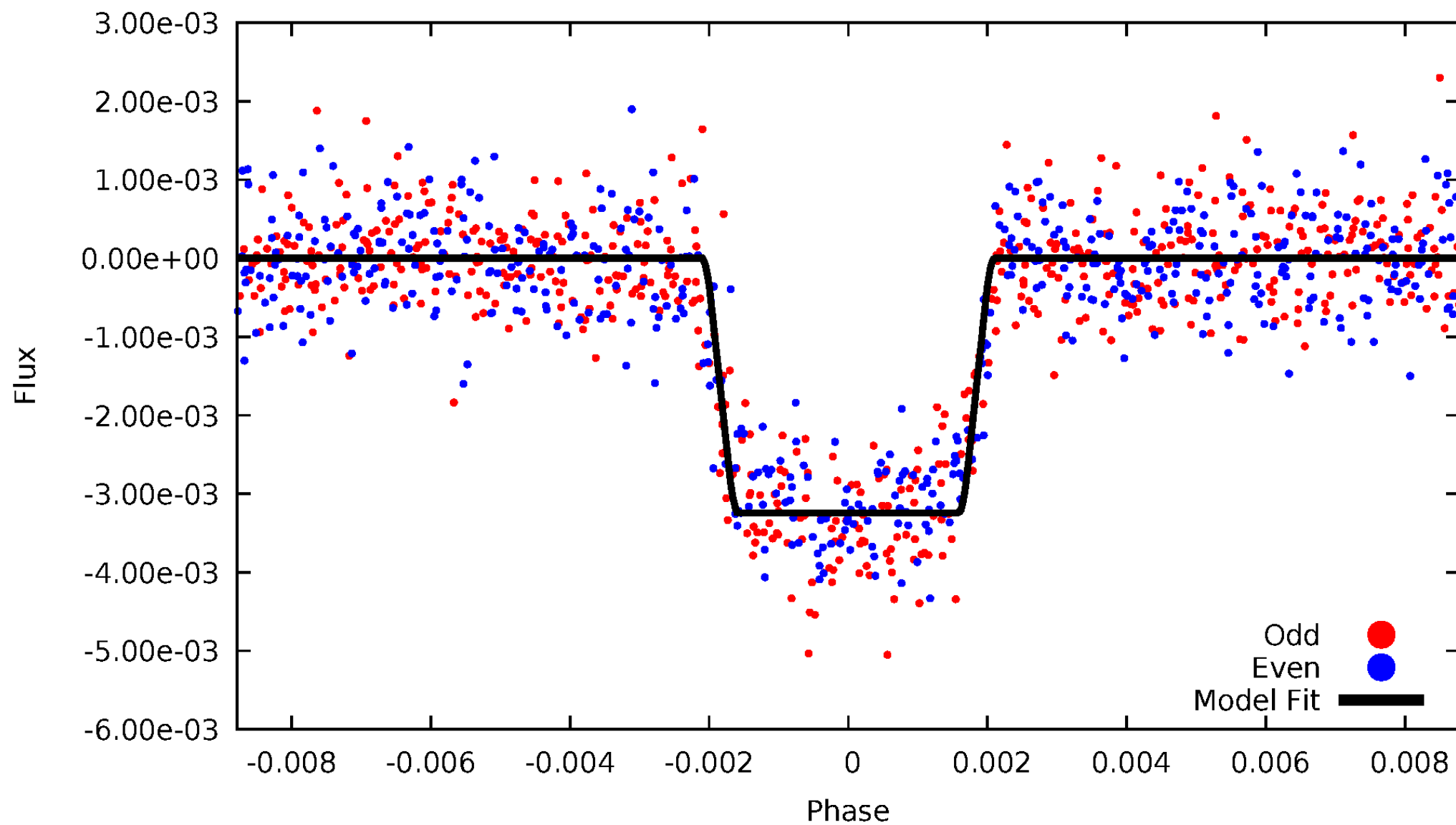
# DV Odd/Even

TCE 007211141-01



# ALT Odd/Even

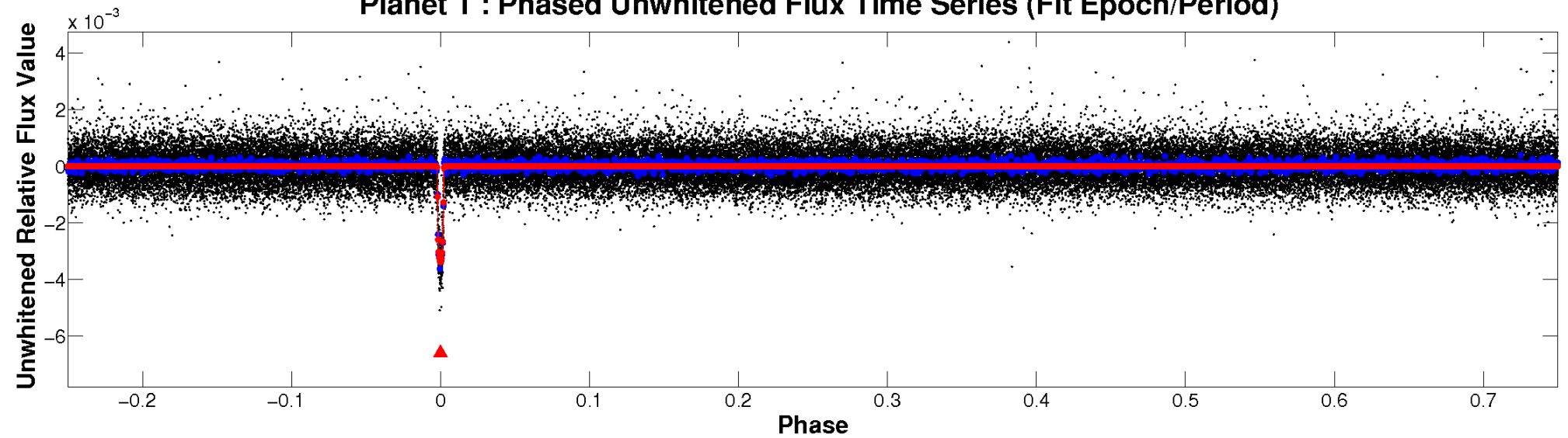
TCE 007211141-01



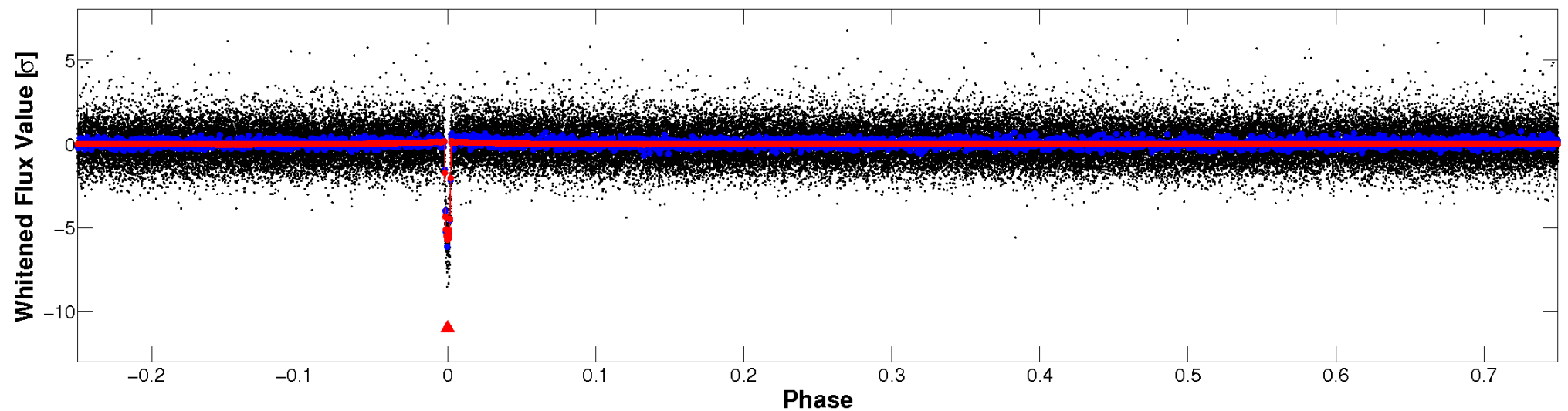


# Non-Whitened Vs. Whitened Light Curve

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

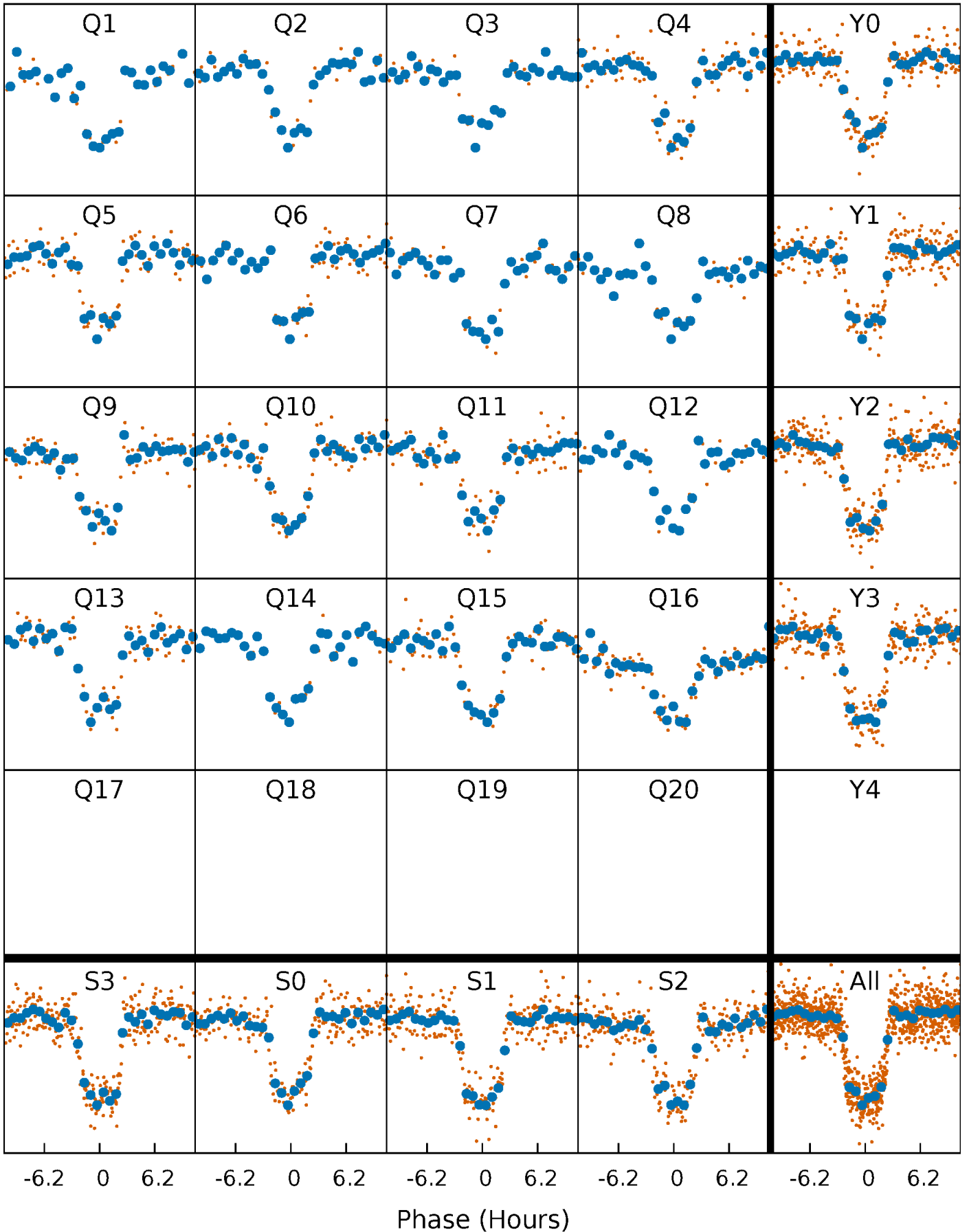


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

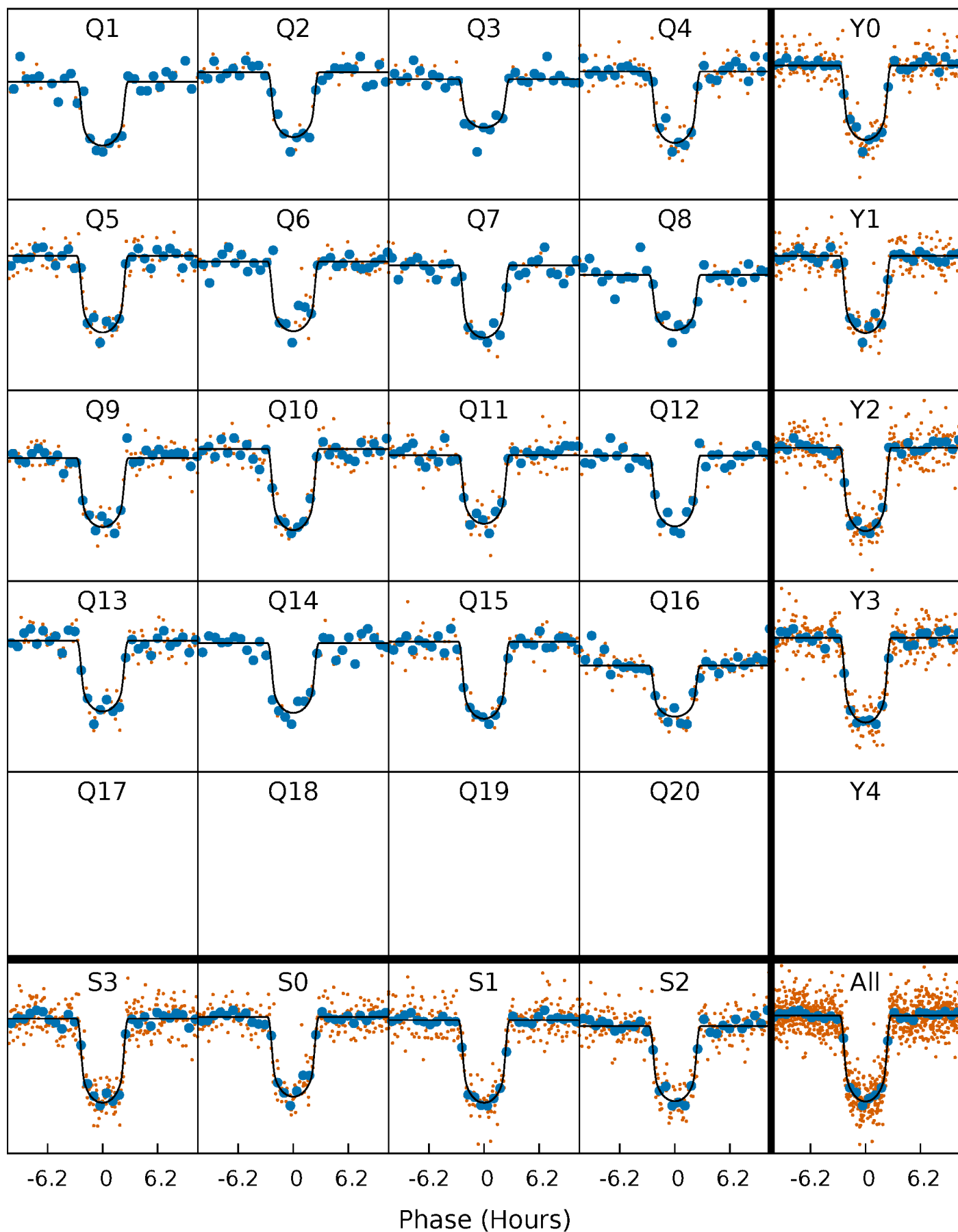
TCE 007211141-01 P= 51.929340 Days  $T_0=151.930033$  (BKJD)





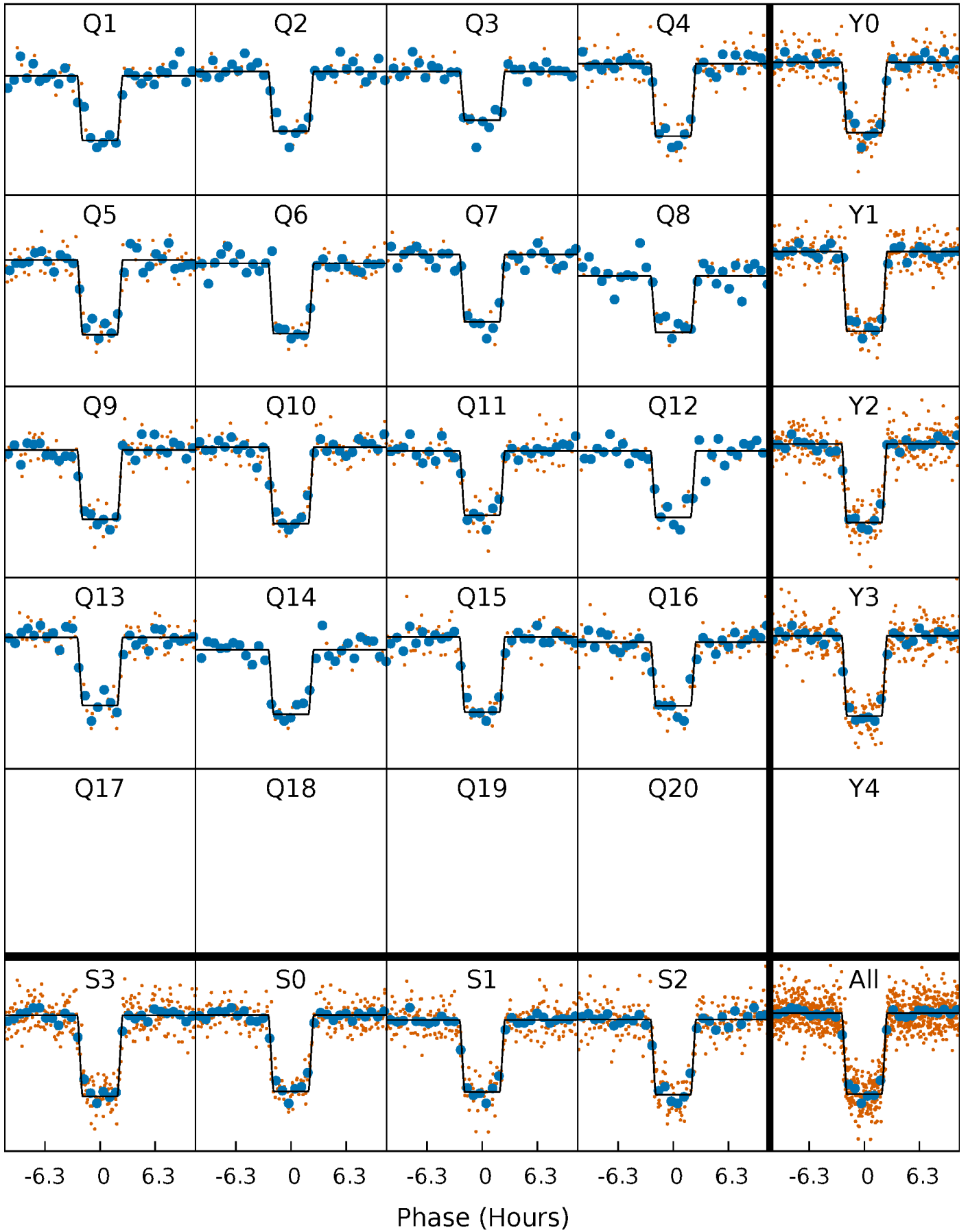
# DV Quarter-Phased Transit Curves

TCE 007211141-01 P= 51.929340 Days  $T_0=151.930033$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

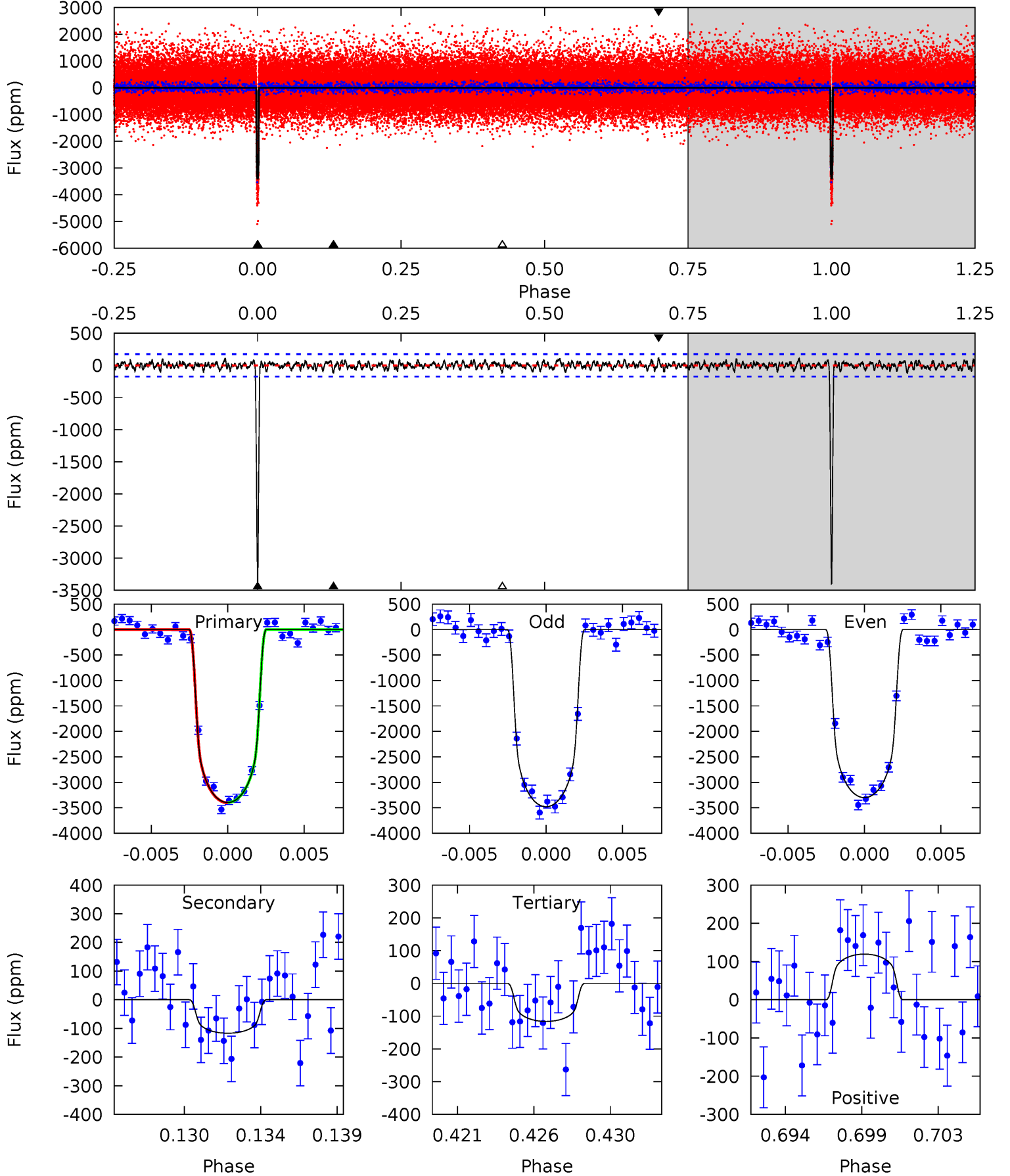
TCE 007211141-01 P= 51.929295 Days  $T_0=151.932242$  (BKJD)



# DV Model-Shift Uniqueness Test

007211141-01, P = 51.929340 Days, E = 100.000693 Days

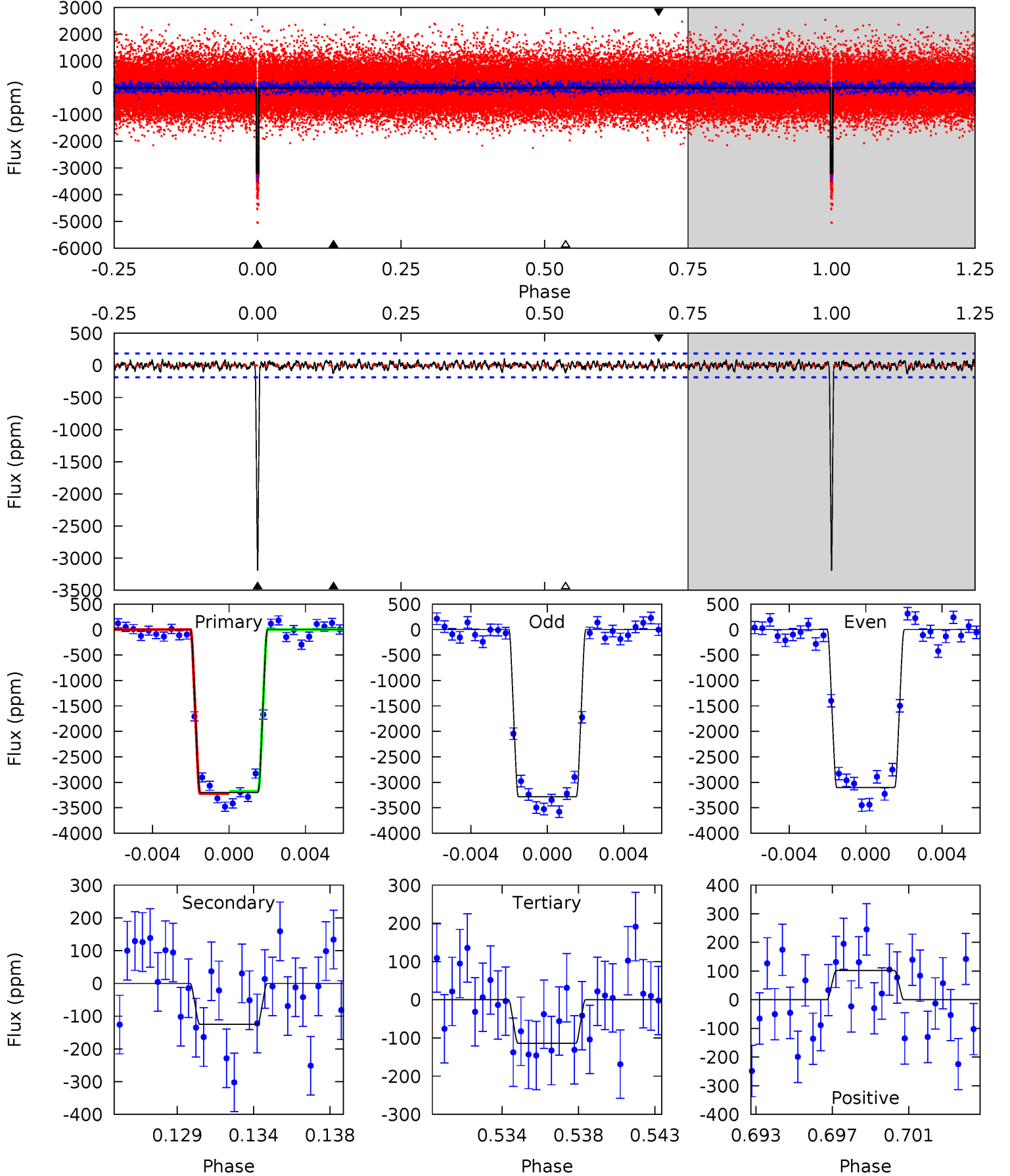
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
100.6	3.46	3.44	3.54	5.17	2.83	1.15	97.1	97.0	0.02	-0.08	2.64	0.99	0.03	0.09



# Alt Model-Shift Uniqueness Test

007211141-01, P = 51.929295 Days, E = 100.002947 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
90.0	3.52	3.20	2.88	5.19	2.86	1.01	86.8	87.2	0.31	0.64	2.58	1.01	0.03	0.62



### Stellar Parameters For KIC 007211141

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$5671^{+85}_{-77}$	$4.128^{+0.196}_{-0.098}$	$0.140^{+0.150}_{-0.150}$	$1.442^{+0.237}_{-0.316}$	$1.017^{+0.093}_{-0.067}$	$0.478^{+0.469}_{-0.148}$
	+1%/-1%	+5%/-2%	+107%/-107%	+16%/-22%	+9%/-7%	+98%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 007211141-01 / KOI 1355.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	$A_{\text{obs}}$
DV	$-117 \pm 34$	$8.61^{+0.95}_{-1.17}$	$795^{+37}_{-51}$	$3121^{+139}_{-155}$	$66^{+31}_{-21}$
Alt.	$-125 \pm 36$	$8.82^{+1.06}_{-1.08}$	$799^{+33}_{-47}$	$3127^{+139}_{-157}$	$67^{+28}_{-23}$

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

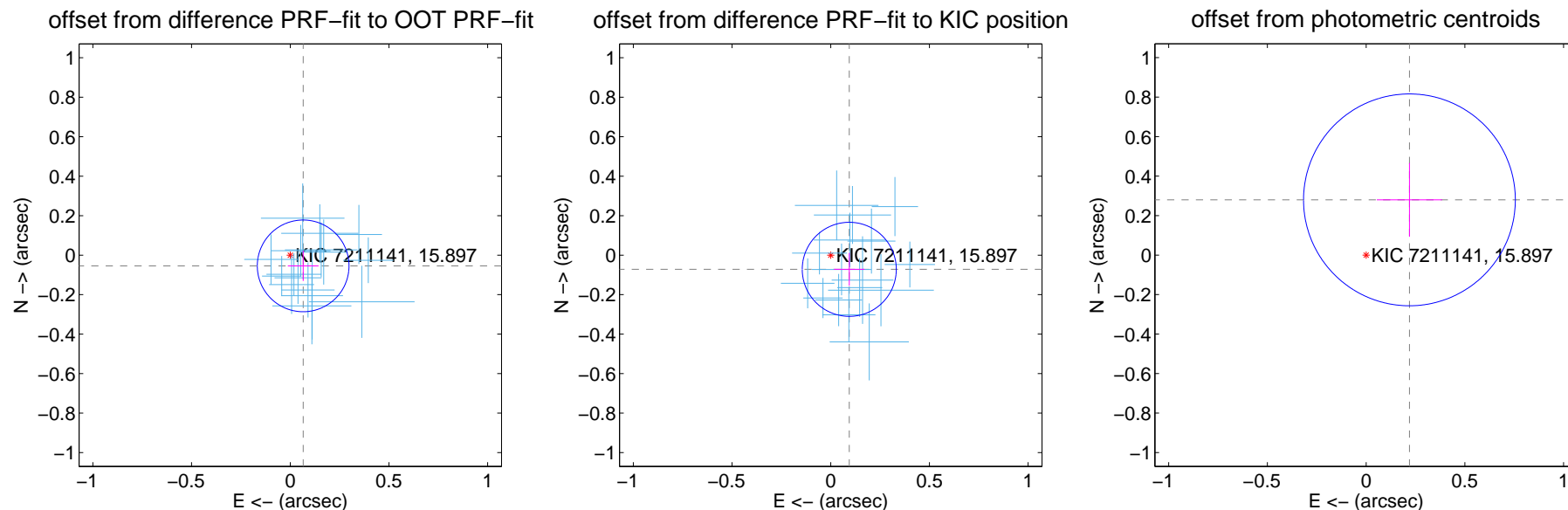
## DV Centroid Data

Supplemental centroid analysis for 007211141-01. Kepler magnitude: 15.90. Transit SNR 75.18

There are 16 quarters with good PRF difference image offsets

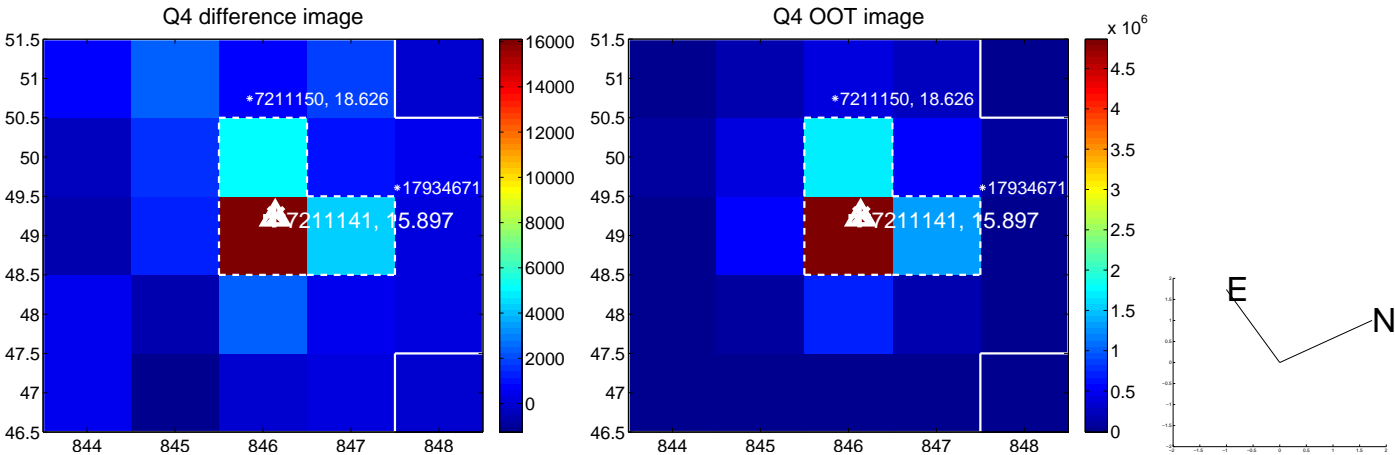
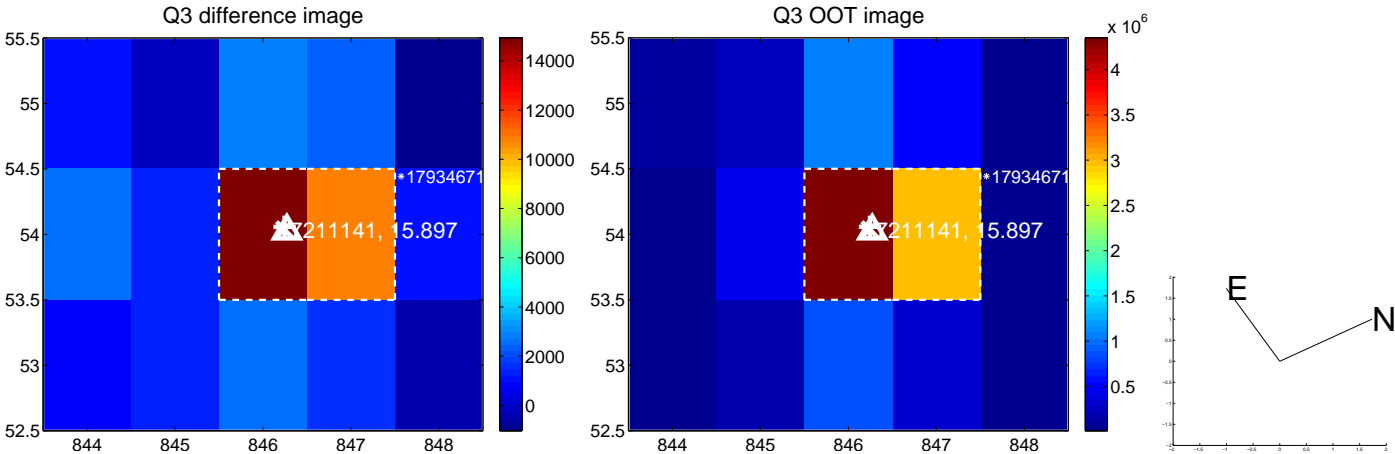
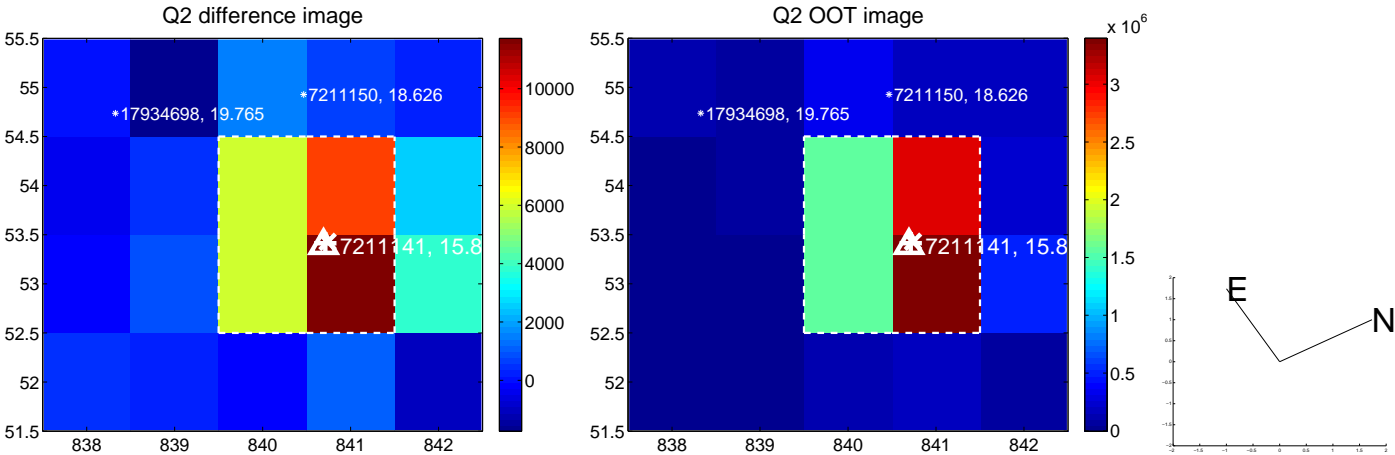
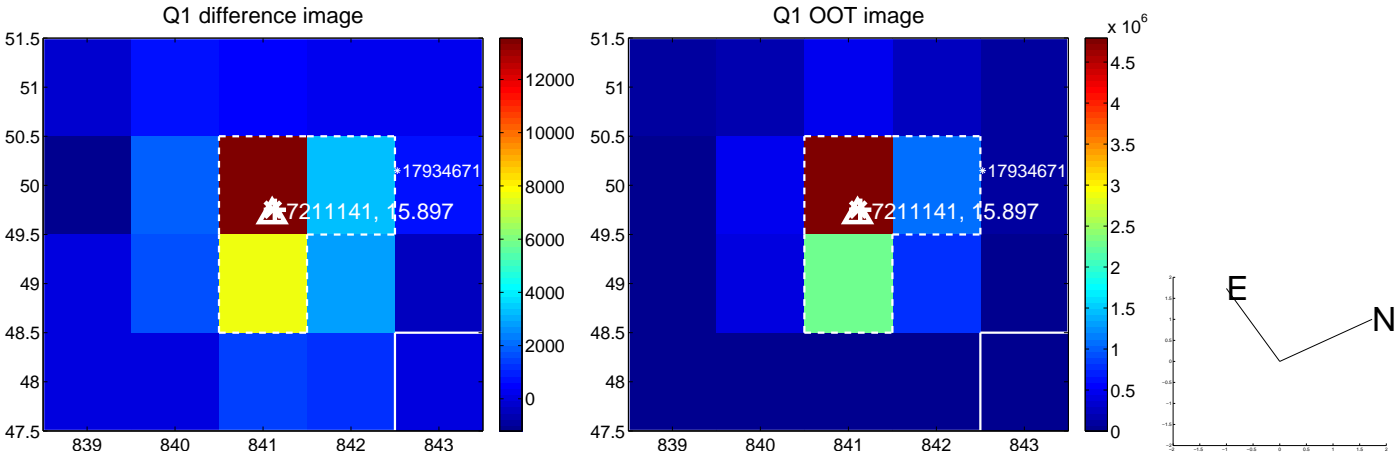
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.085 \pm 0.077$	1.10	$-0.065 \pm 0.078$	$-0.054 \pm 0.077$
PRF-fit source offset from KIC position	$0.118 \pm 0.079$	1.49	$-0.094 \pm 0.077$	$-0.072 \pm 0.083$
photometric centroid source offset	$0.36 \pm 0.18$	1.99	$-0.22 \pm 0.17$	$0.28 \pm 0.19$



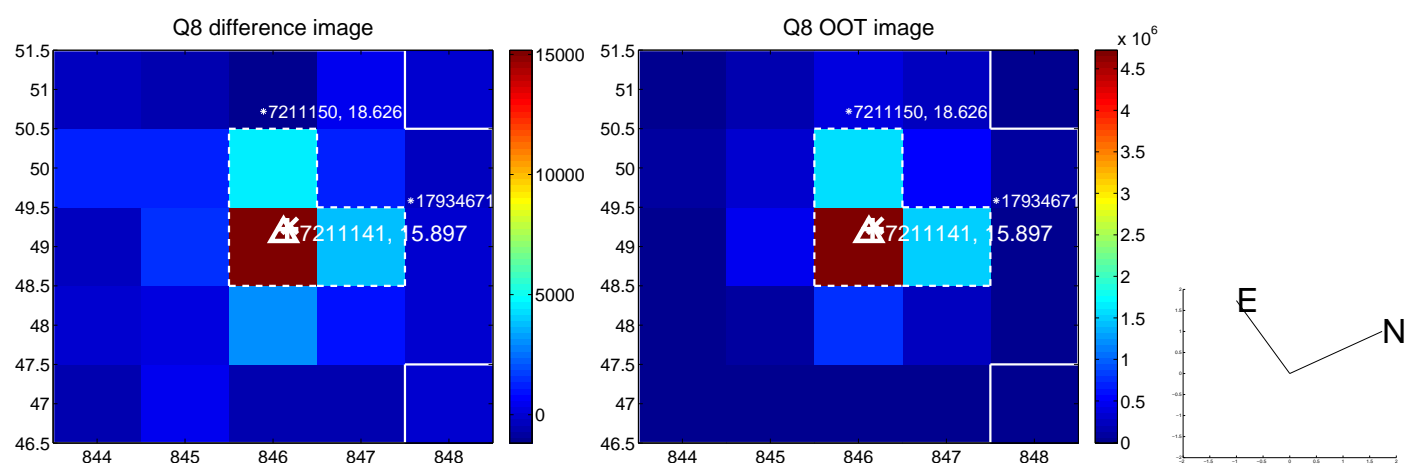
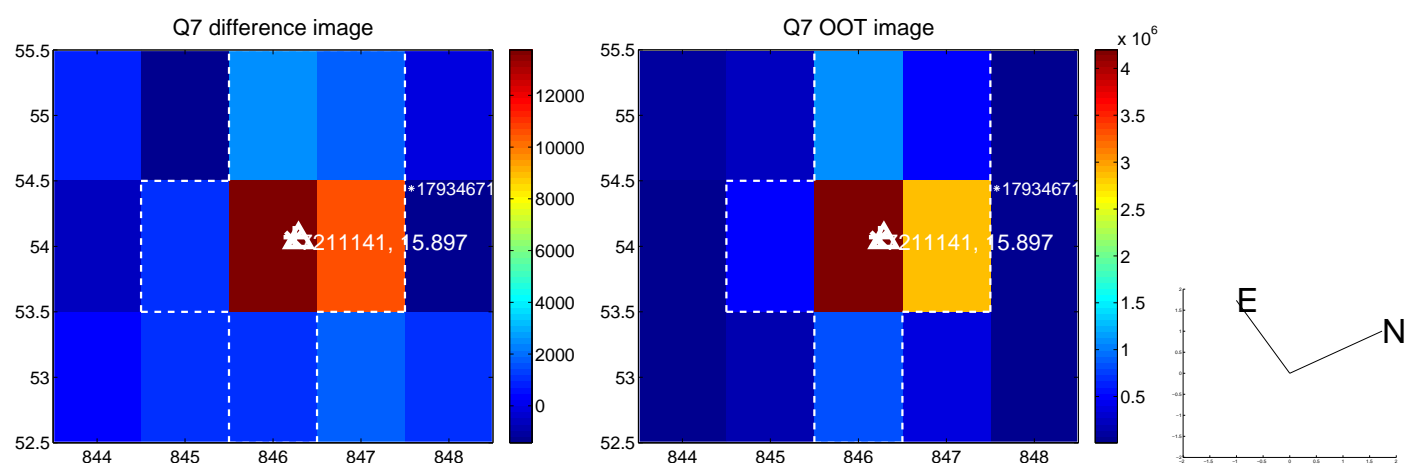
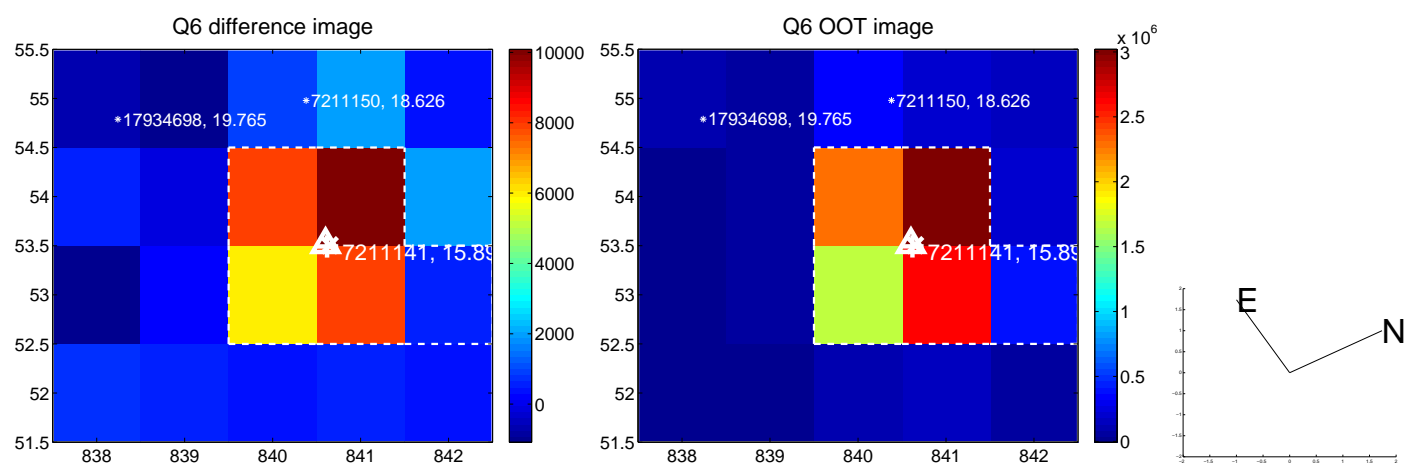
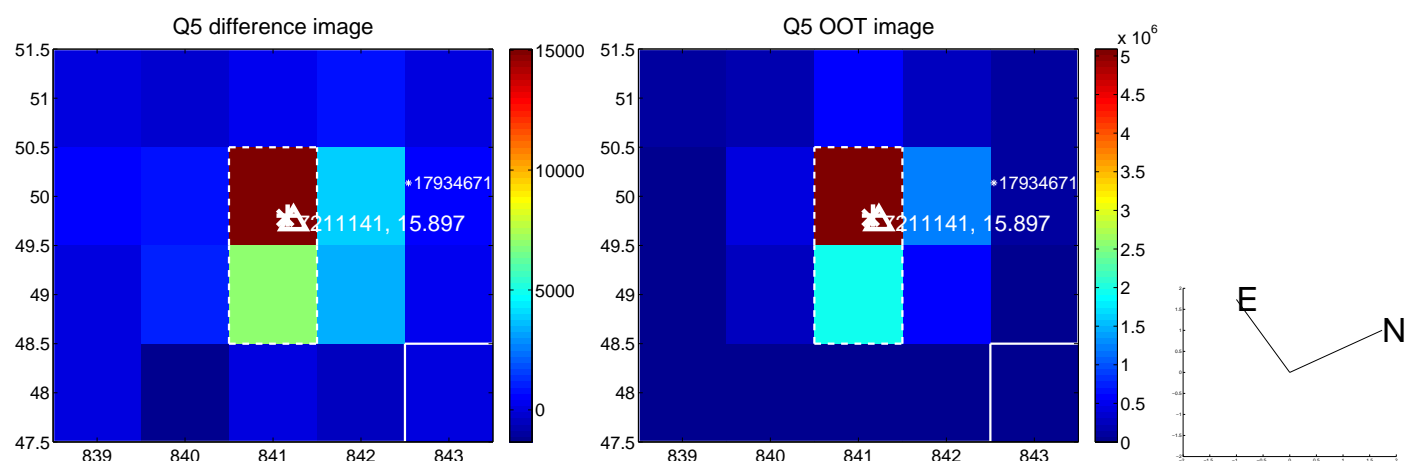
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

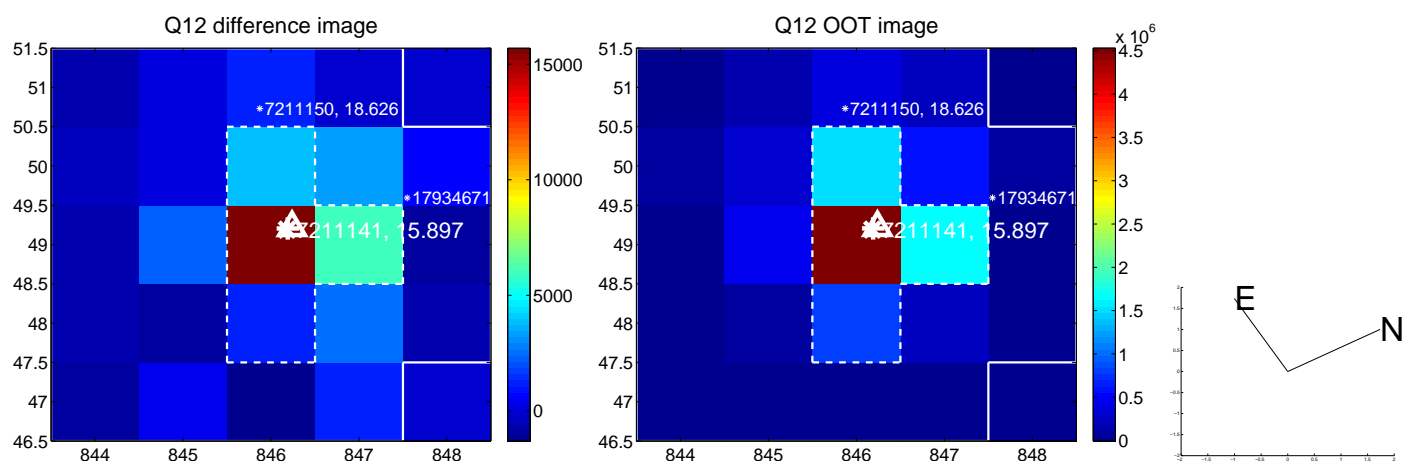
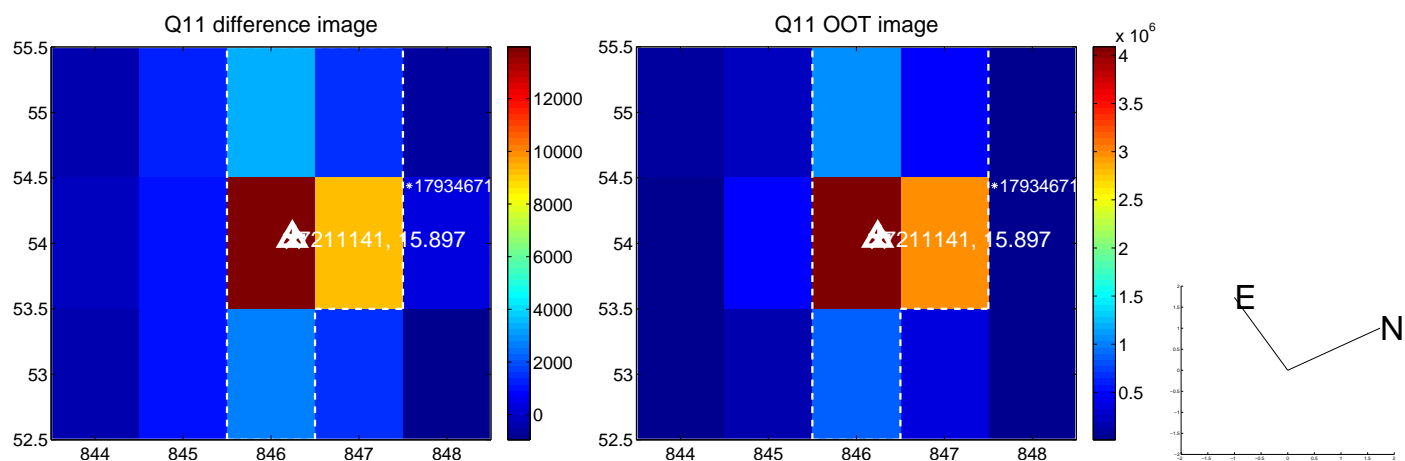
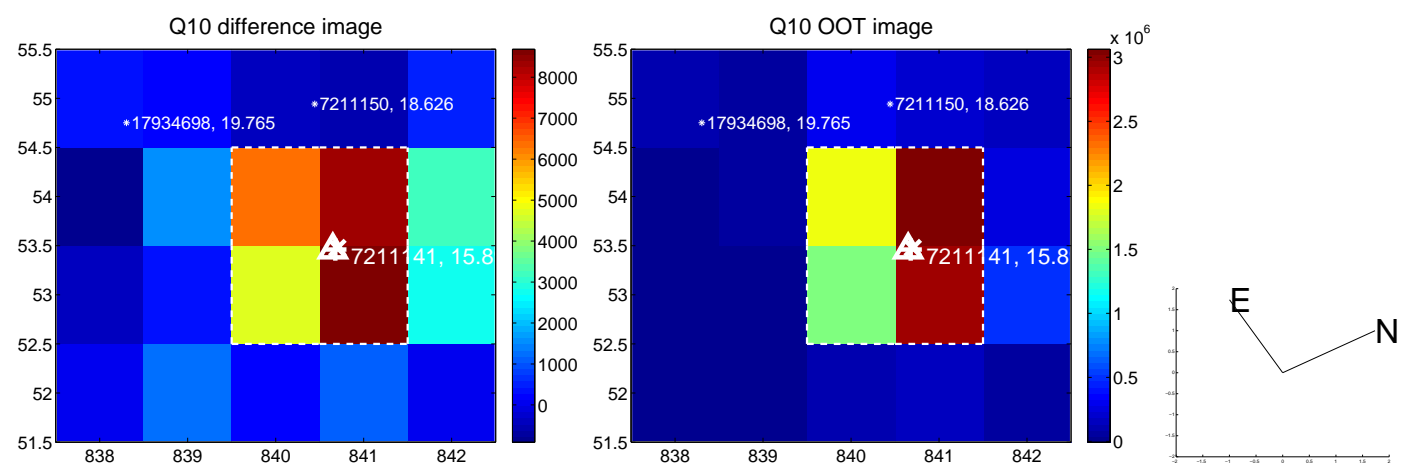
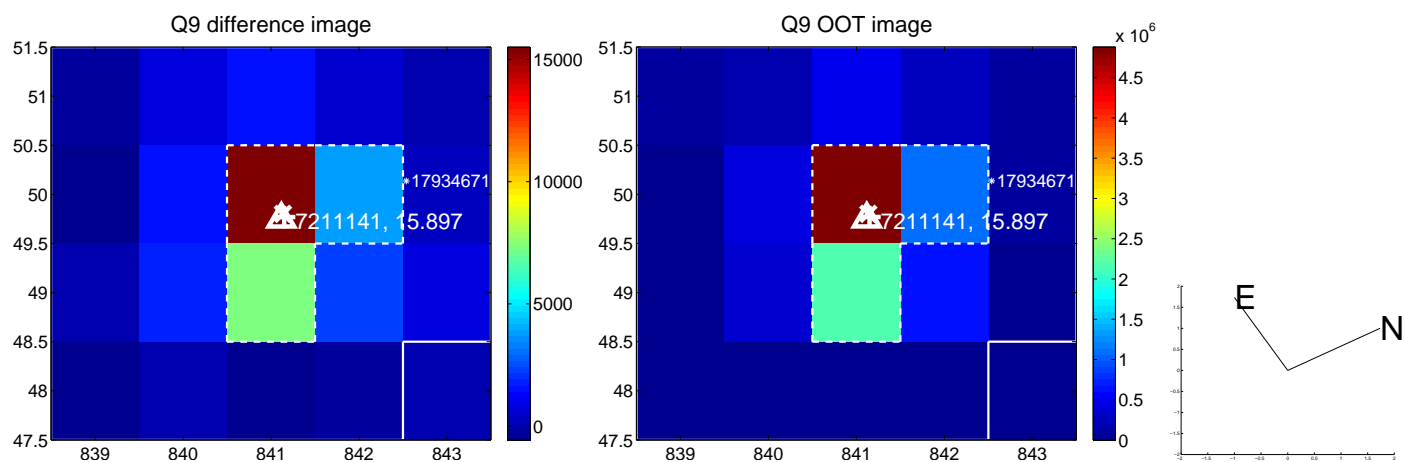




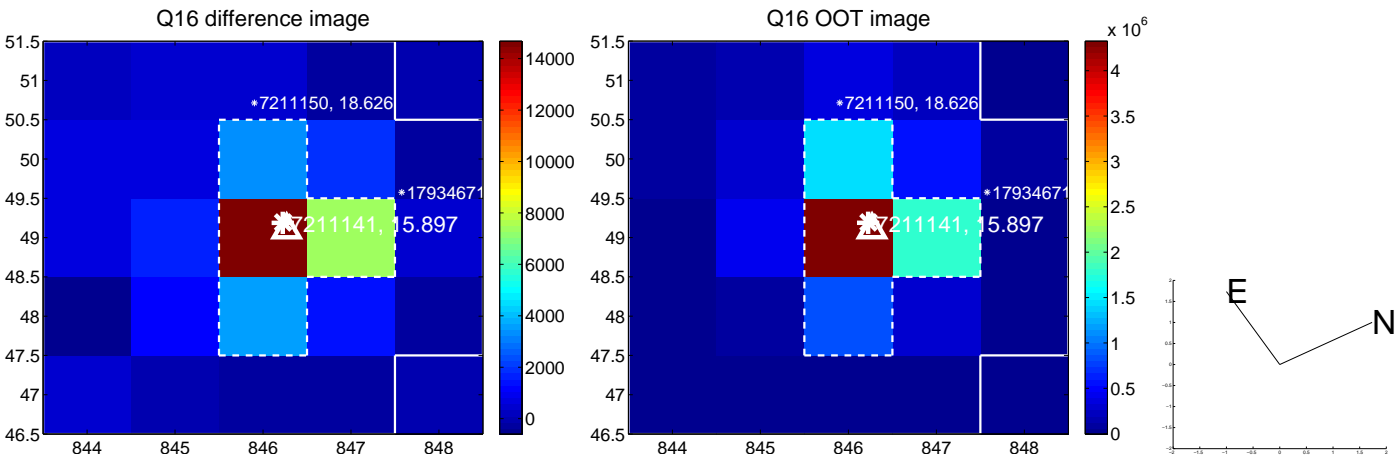
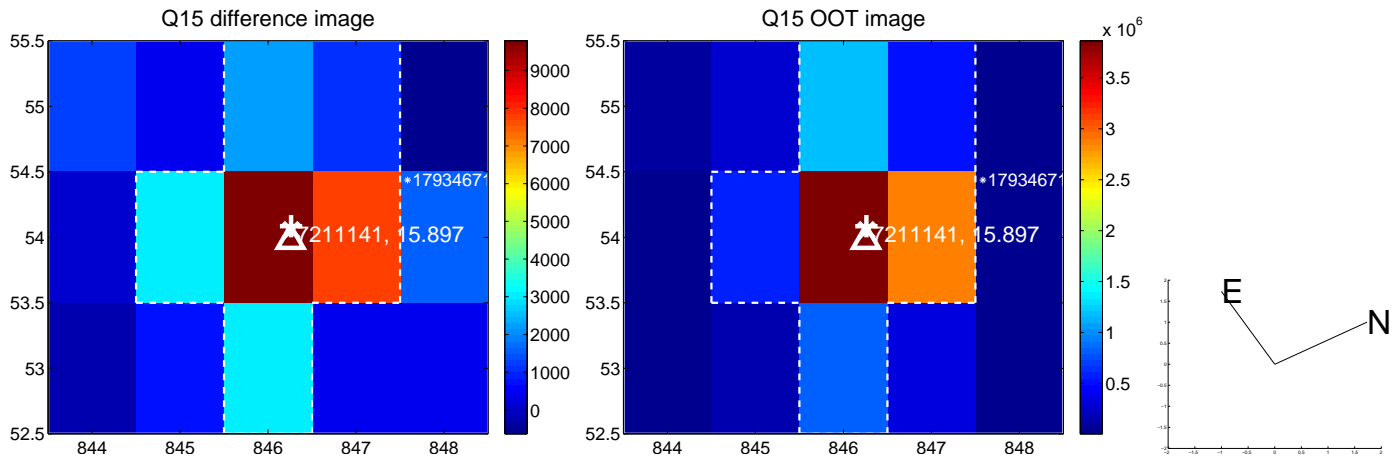
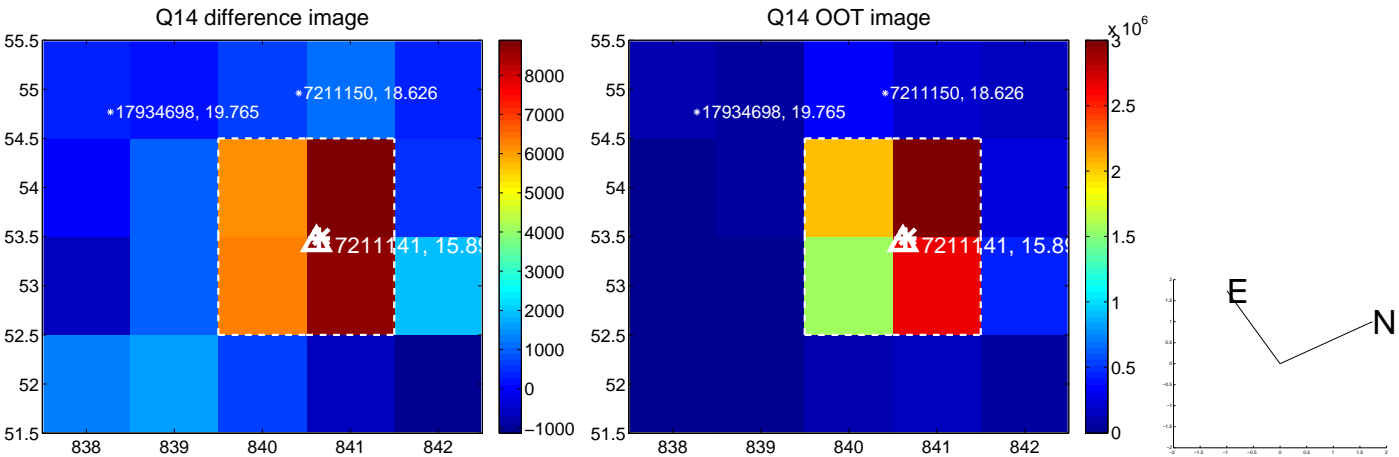
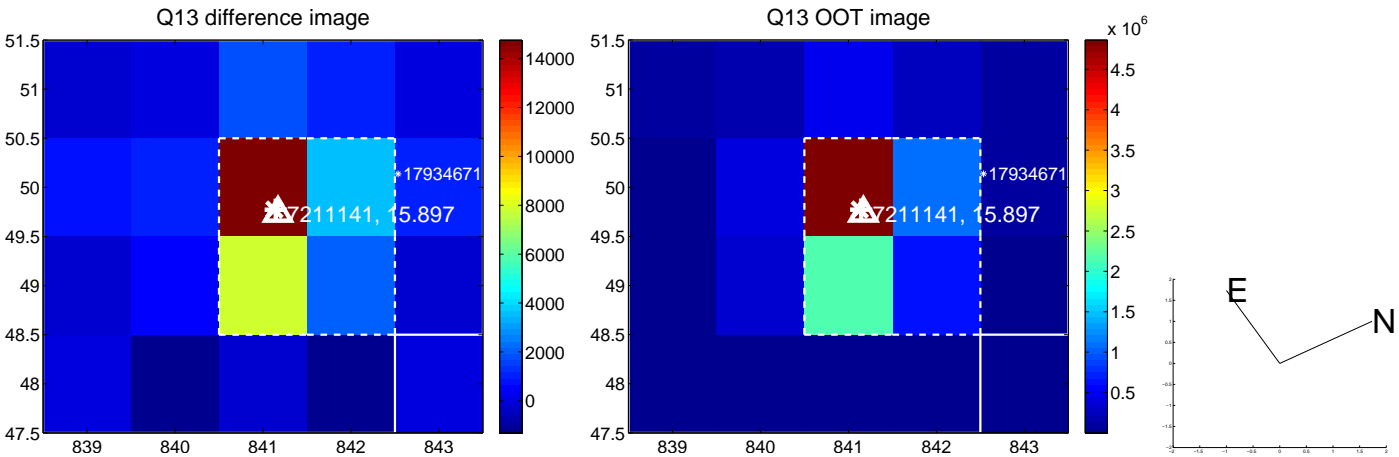
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



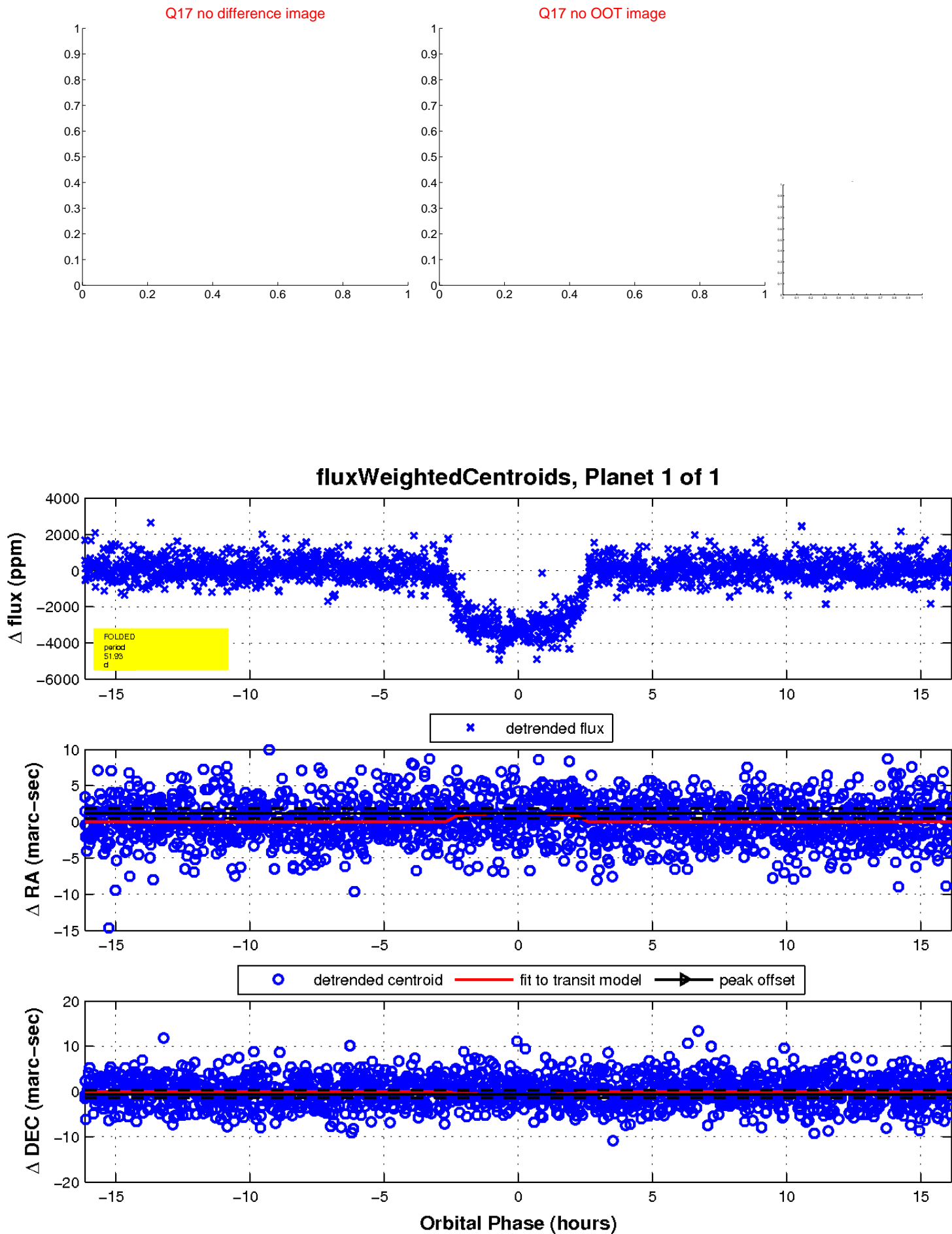
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

