

# KIC 006849046

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
006849046-01	OBS	0201.01	4.225383	133.335626	7555.8	2.873	1401.7	1365.1	1.05	5574	9.25	361.11

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006849046-01	OBS	PC	1.00	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.

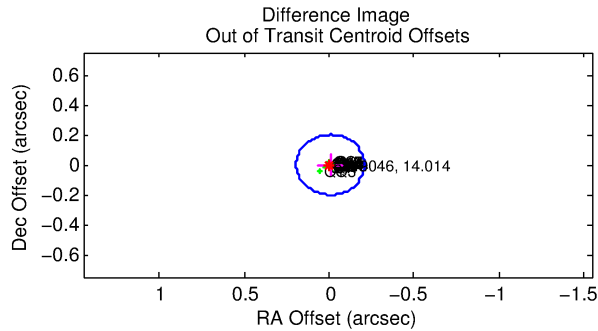
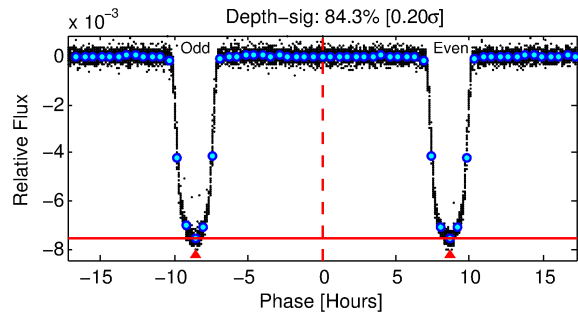
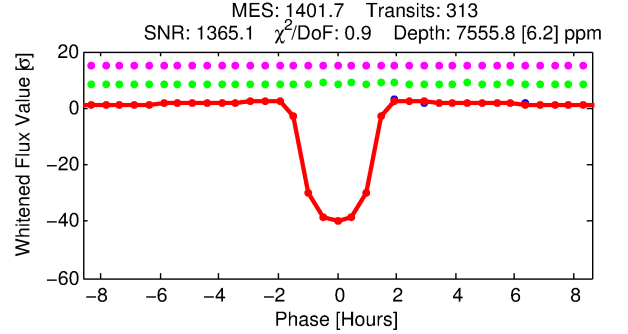
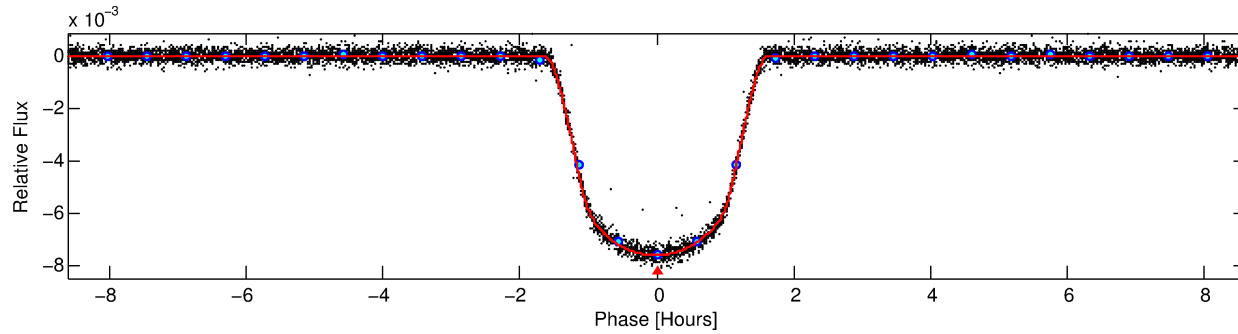
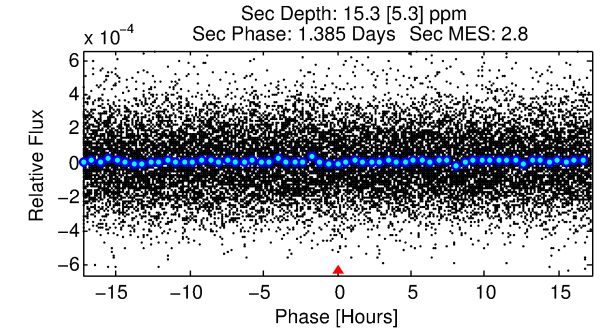
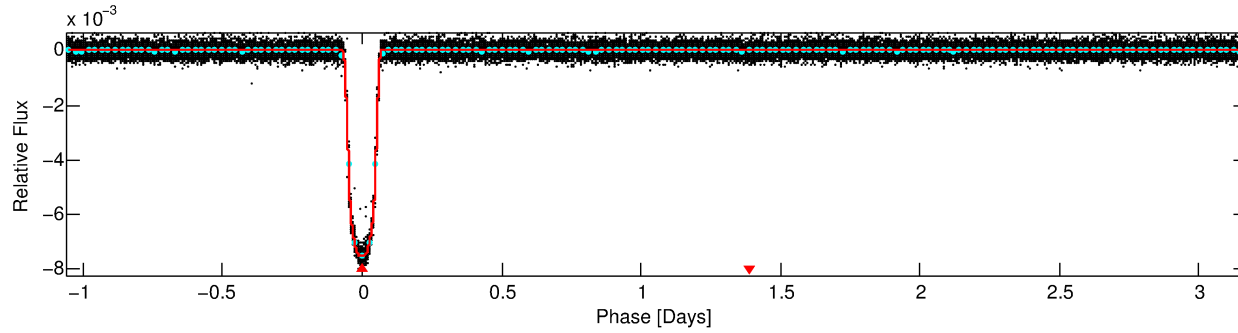
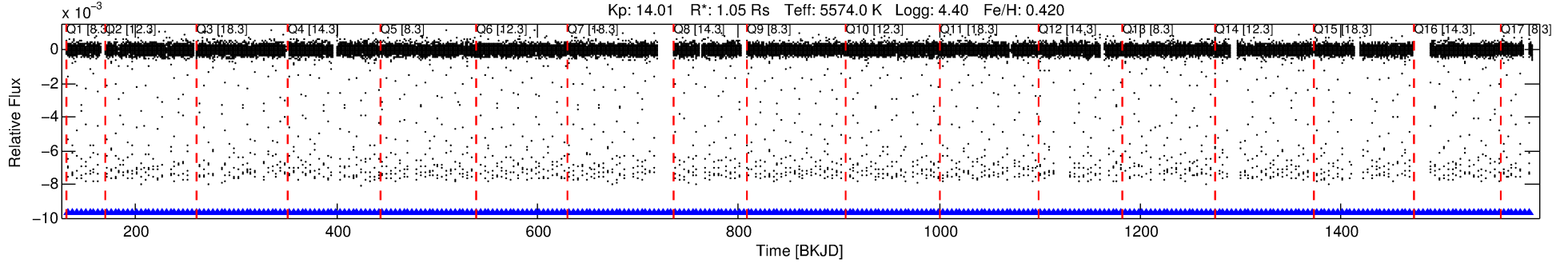
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 006849046-01

No Significant Match Found

# DV One-Page Summary

KIC: 6849046 Candidate: 1 of 1 Period: 4.225 d  
KOI: K00201.01 Corr: 0.991



## DV Fit Results:

Period = 4.22538 [0.00000] d  
Epoch = 133.3356 [0.0000] BKJD  
Rp/R\* = 0.0804 [0.0004]  
a/R\* = 11.05 [0.21]  
b = 0.45 [0.03]  
Seff = 361.11 [81.90]  
Teff = 1112 [63] K  
Rp = 9.25 [1.47] Re  
a = 0.0516 [0.0072] AU  
Ag = 0.26 [0.11] [-6.91σ]  
Teffp = 1230 [109] K [0.94σ]

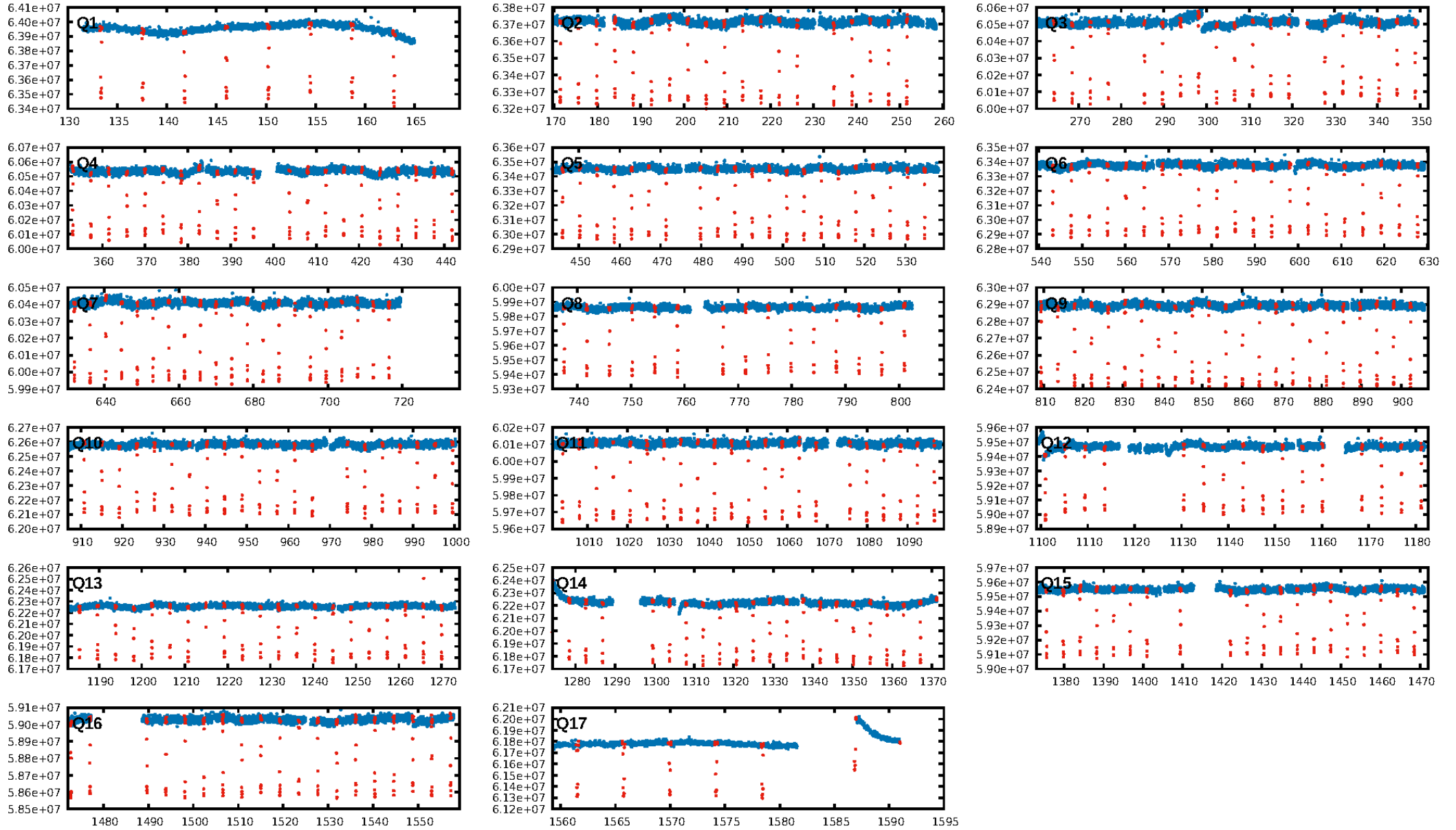
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 1.00 [299/299]  
GhostDiagnostic-chr: 7.408  
Centroid-sig: N/A  
Centroid-so: 0.088 arcsec [9.53σ]  
OotOffset-rm: 0.006 arcsec [0.10σ]  
KicOffset-rm: 0.064 arcsec [0.95σ]  
OotOffset-st: 4/4/4/5 [17]  
KicOffset-st: 4/4/4/5 [17]  
DiffImageQuality-fgm: 1.00 [17/17]  
DiffImageOverlap-fno: 1.00 [17/17]

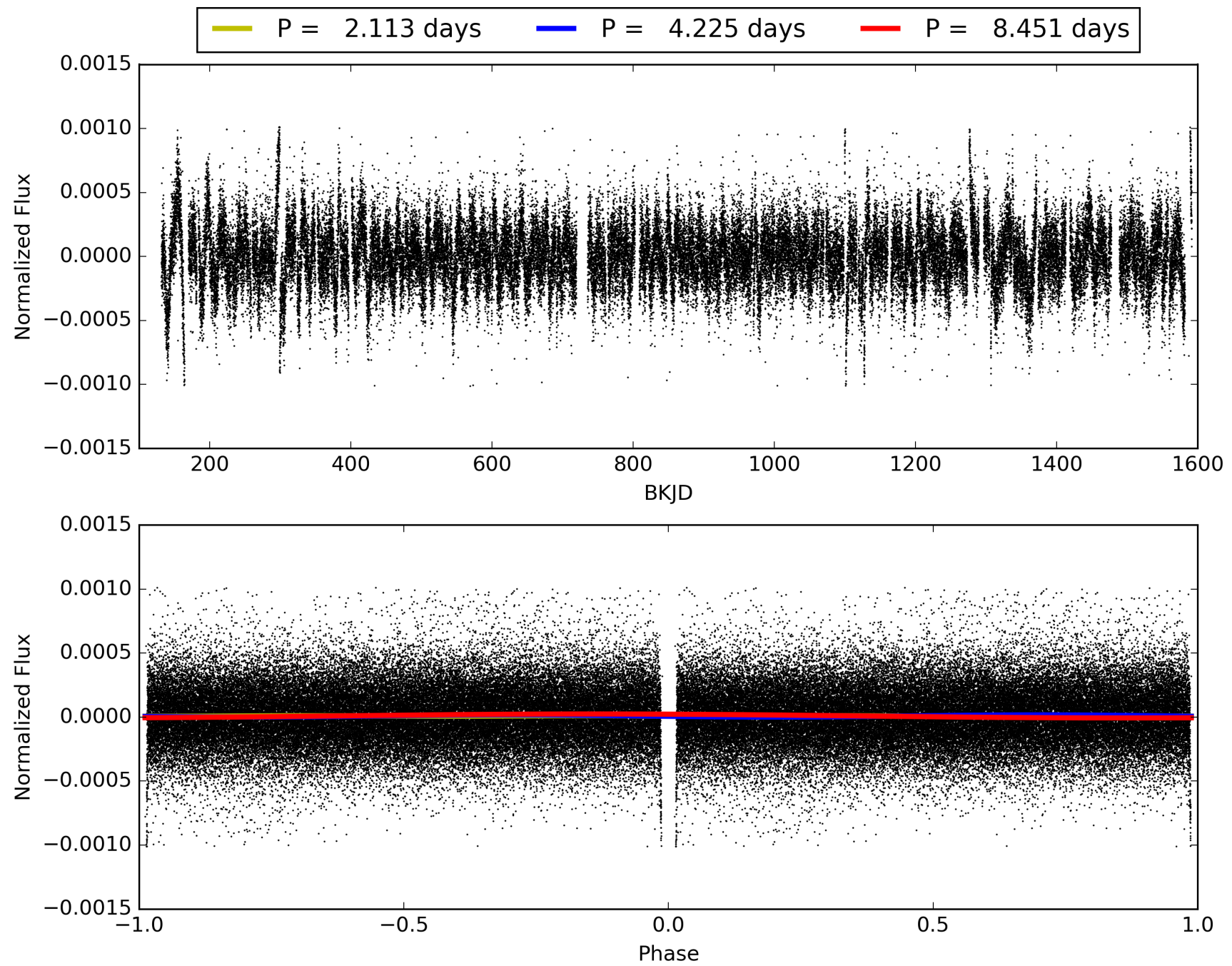
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 06:01:48 Z

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

# TCE 006849046-01, PDC Light Curves

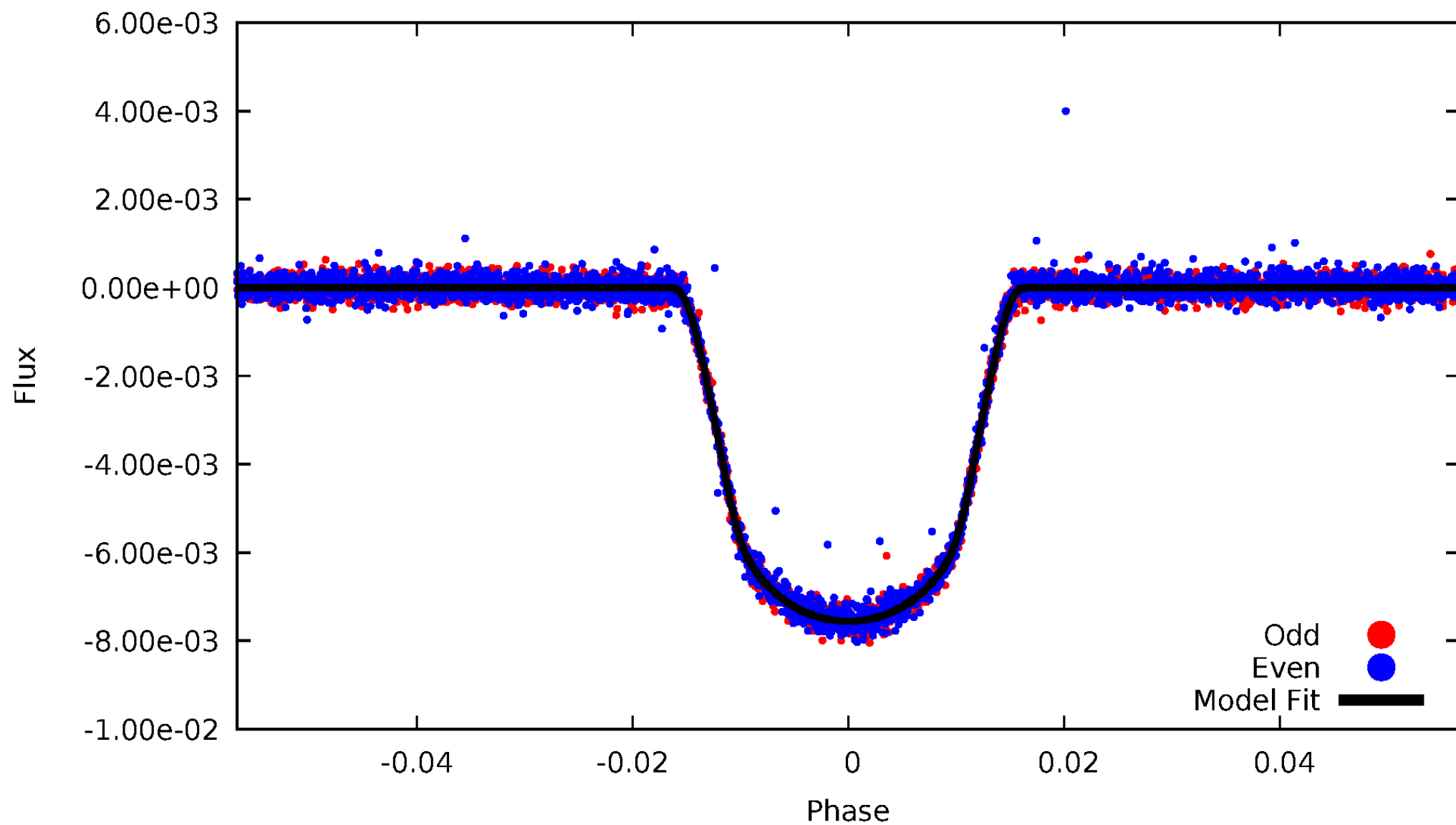


TCE 006849046-01



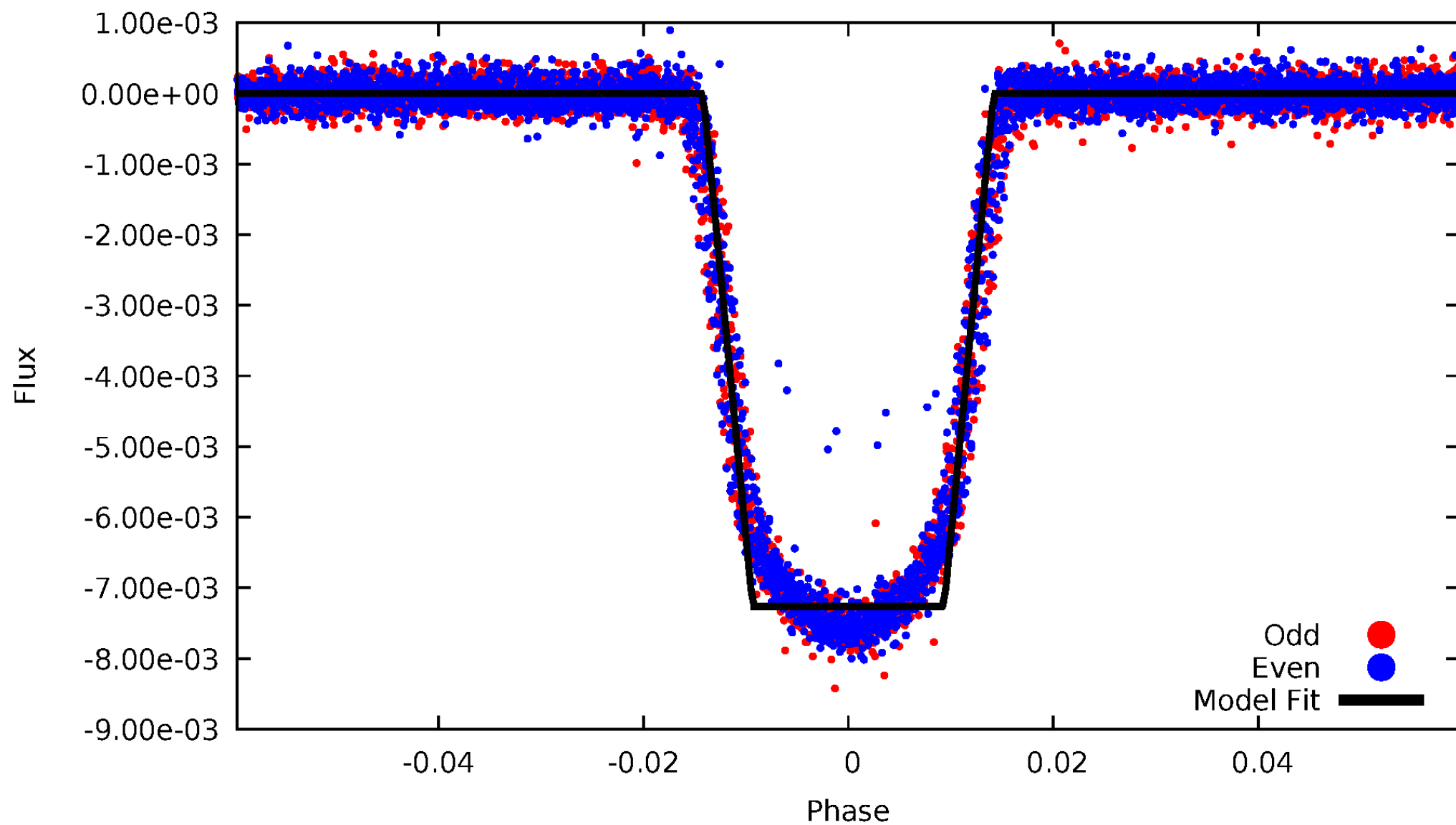
# DV Odd/Even

TCE 006849046-01



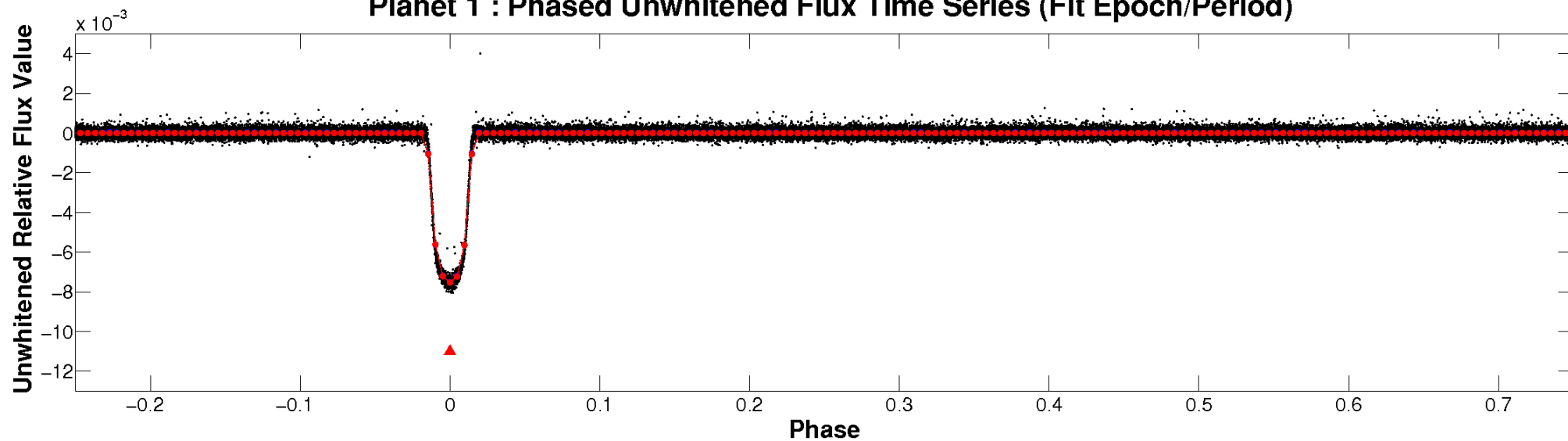
# ALT Odd/Even

TCE 006849046-01

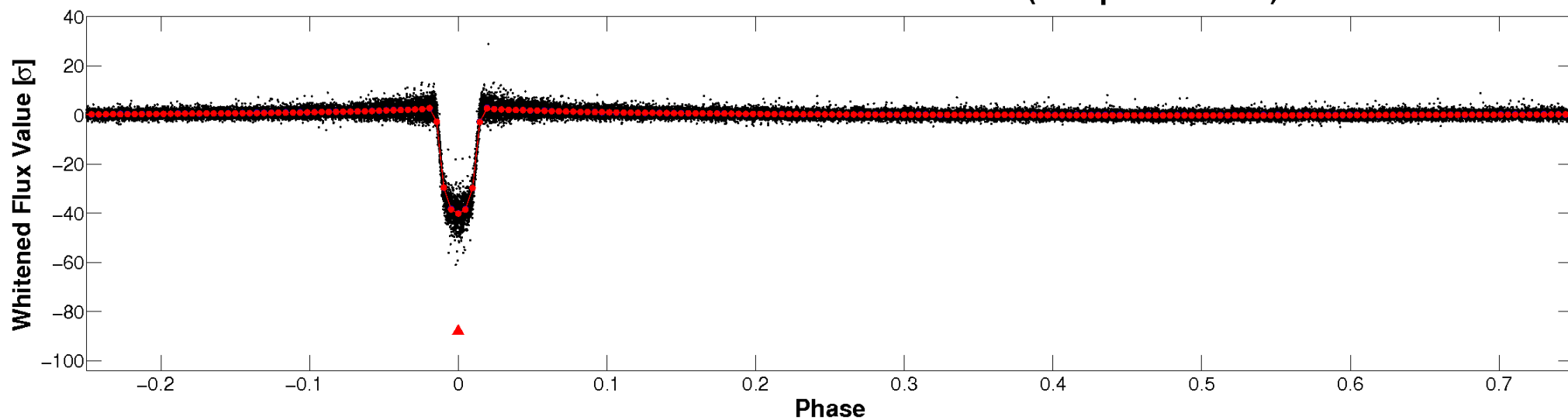


# Non-Whitened Vs. Whitened Light Curve

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

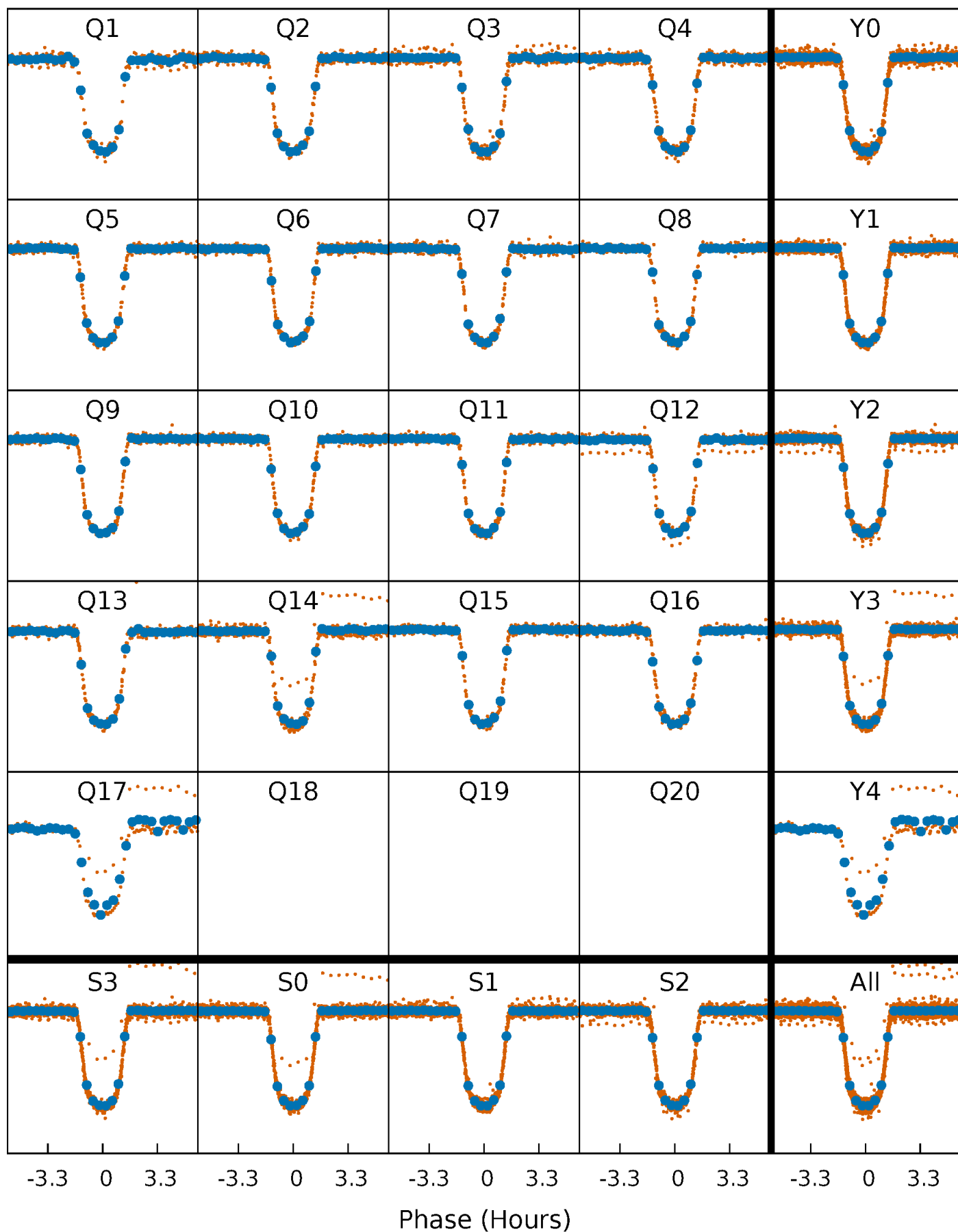


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

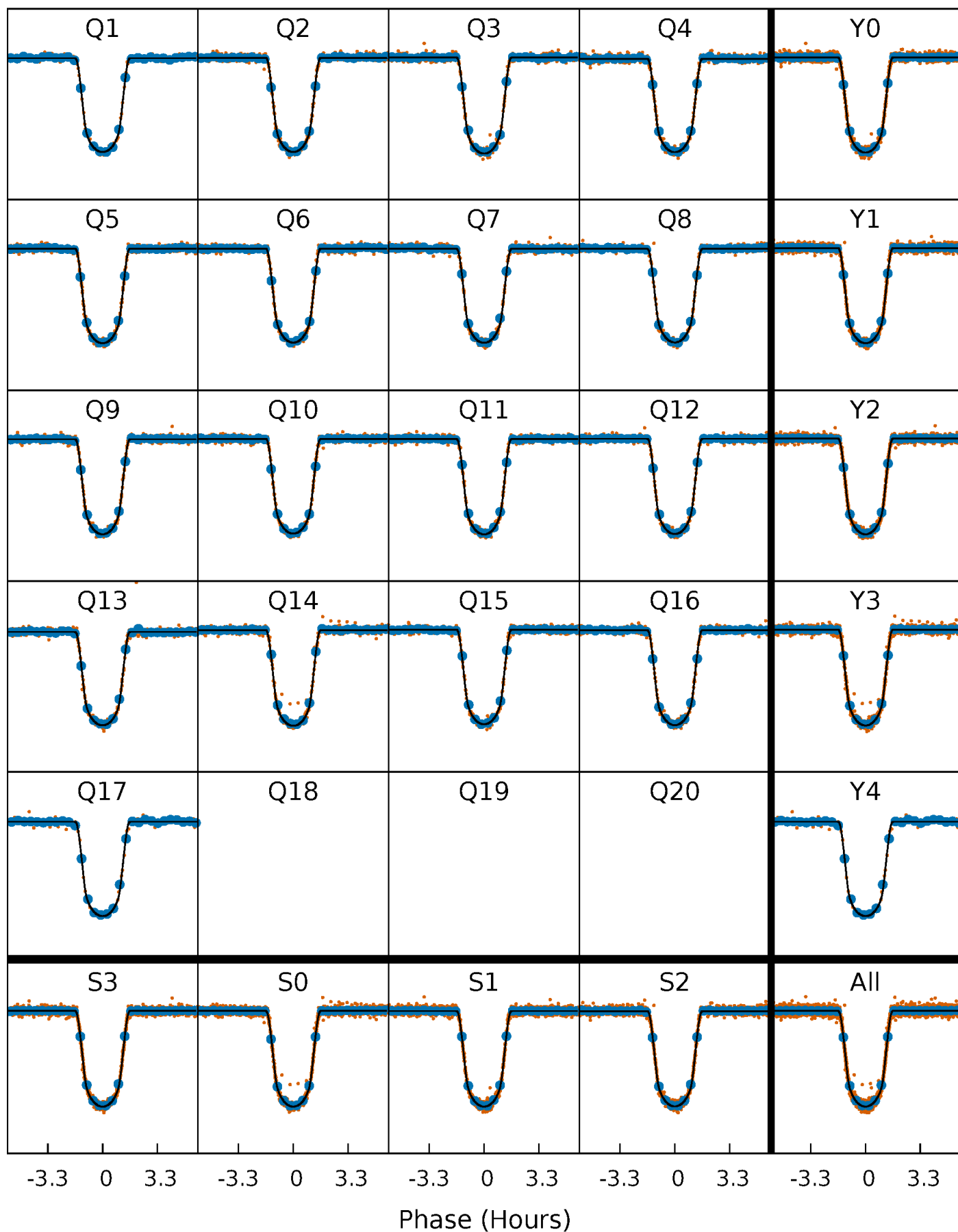
TCE 006849046-01 P= 4.225383 Days  $T_0=133.335626$  (BKJD)





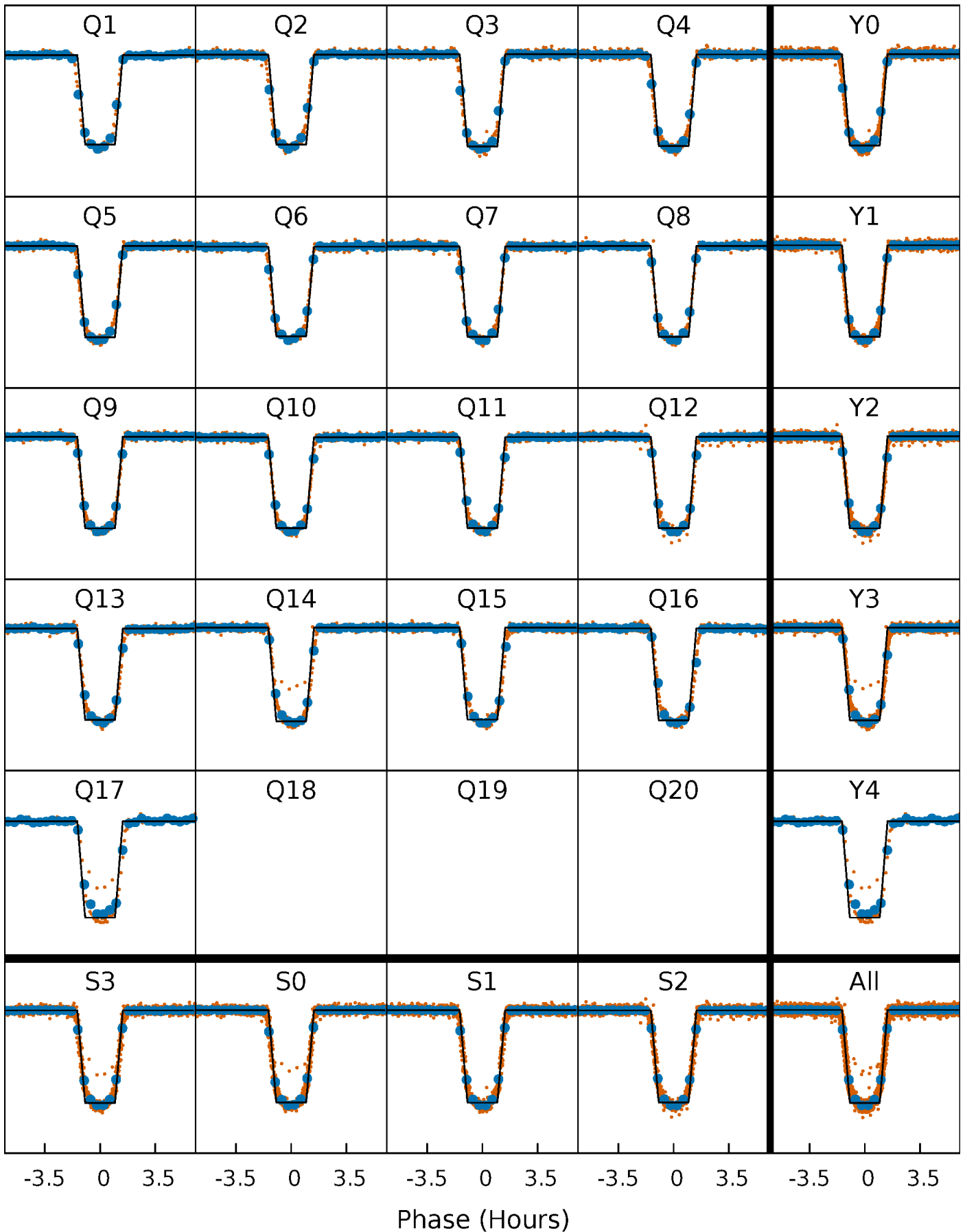
# DV Quarter-Phased Transit Curves

TCE 006849046-01 P= 4.225383 Days  $T_0=133.335626$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

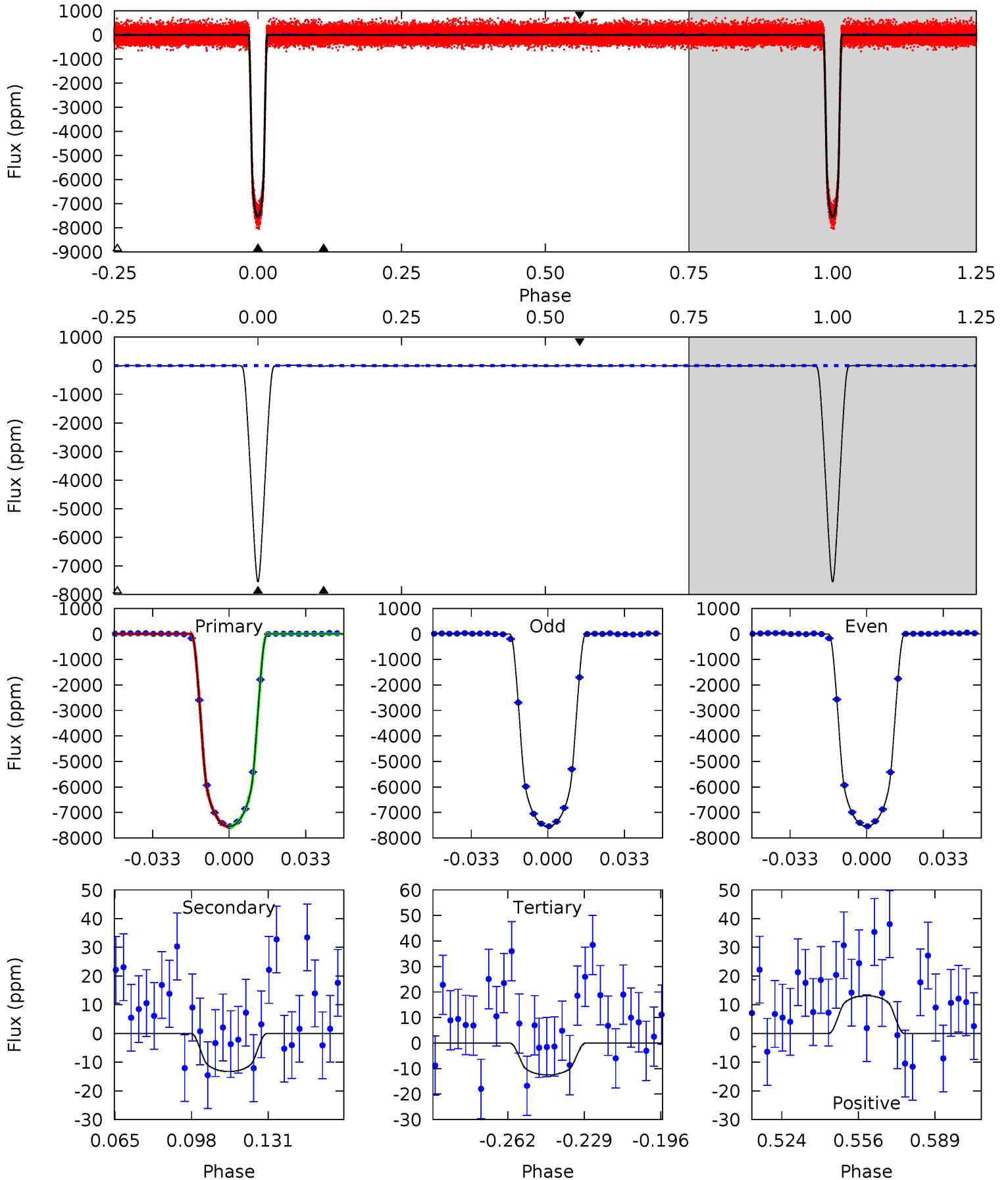
TCE 006849046-01 P= 4.225352 Days  $T_0=133.340708$  (BKJD)



# DV Model-Shift Uniqueness Test

006849046-01, P = 4.225383 Days, E = 129.110243 Days

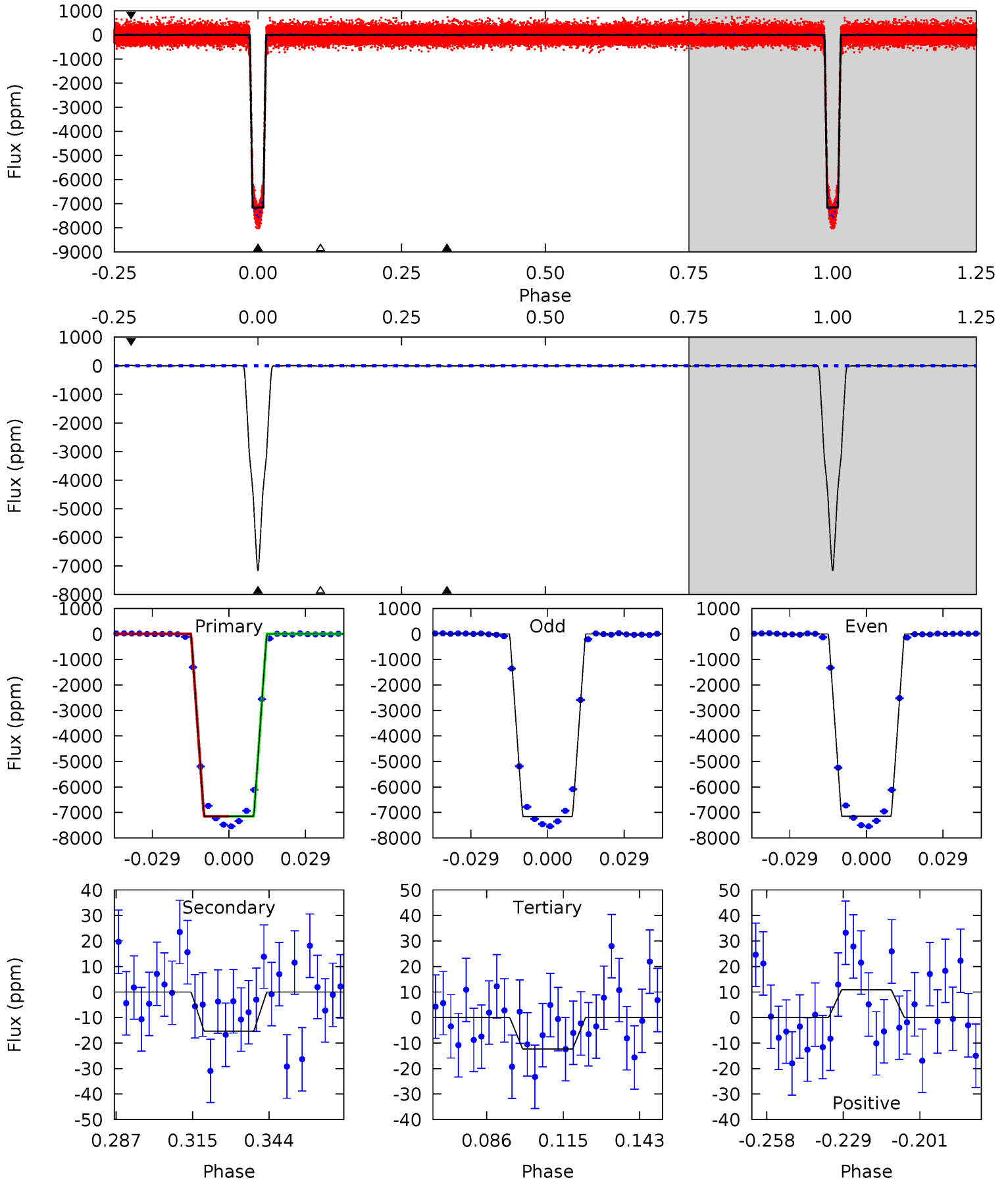
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1981	3.48	3.27	3.46	4.79	2.14	1.27	1978	1977	0.21	0.02	1.27	1.00	0.00	0.65



# Alt Model-Shift Uniqueness Test

006849046-01, P = 4.225352 Days, E = 129.115356 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
1564	3.35	2.70	2.37	4.82	2.19	0.99	1561	1562	0.64	0.98	1.10	1.00	0.00	0.27



### Stellar Parameters For KIC 006849046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5574^{+100}_{-111}$	$4.403^{+0.080}_{-0.120}$	$0.420^{+0.050}_{-0.150}$	$1.054^{+0.167}_{-0.090}$	$1.025^{+0.057}_{-0.057}$	$1.233^{+0.382}_{-0.439}$
	+2%/-2%	+2%/-3%	+12%/-36%	+16%/-9%	+6%/-6%	+31%/-36%
Source	SPE59	SPE59	SPE59	DSEP		

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

### Secondary Eclipse Parameters for KIC 006849046-01 / KOI 0201.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-13 \pm 4$	$9.26^{+0.80}_{-0.51}$	$1559^{+63}_{-57}$	$-1937^{+420}_{-142}$	$0.216^{+0.078}_{-0.065}$
Alt.	$-15 \pm 5$	$9.81^{+0.83}_{-0.56}$	$1556^{+67}_{-52}$	$-1914^{+3477}_{-161}$	$0.227^{+0.081}_{-0.076}$

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

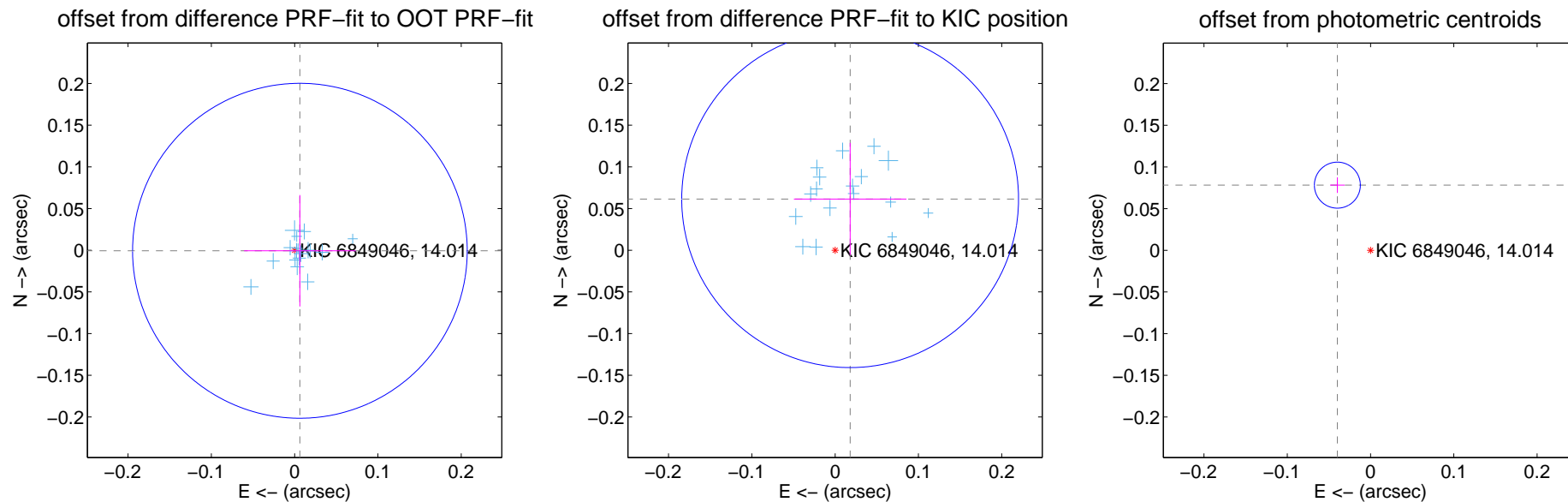
## DV Centroid Data

Supplemental centroid analysis for 006849046-01. Kepler magnitude: 14.01. Transit SNR 1365.14

There are 17 quarters with good PRF difference image offsets

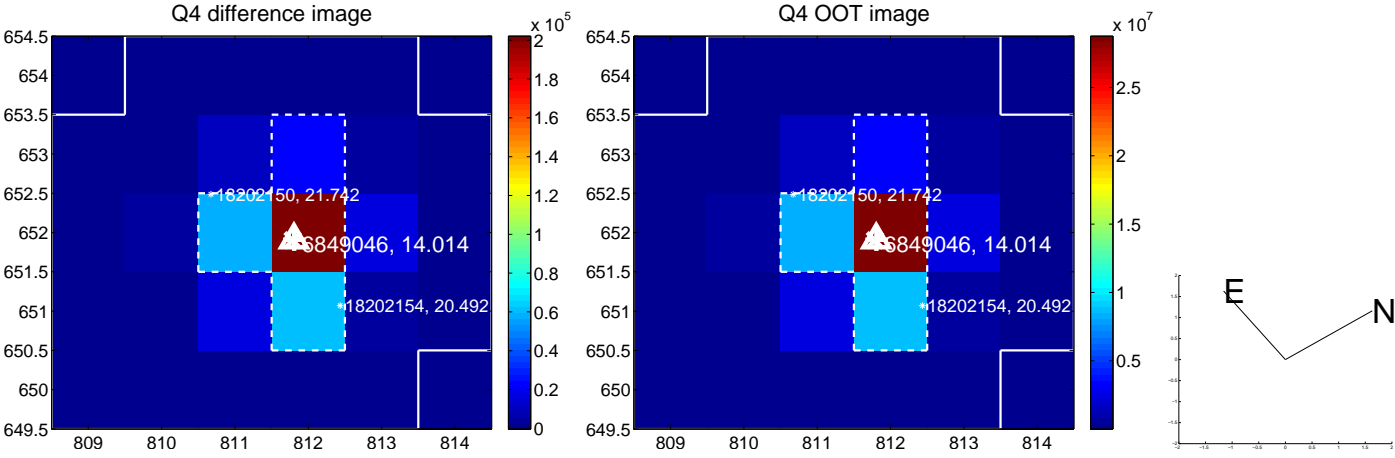
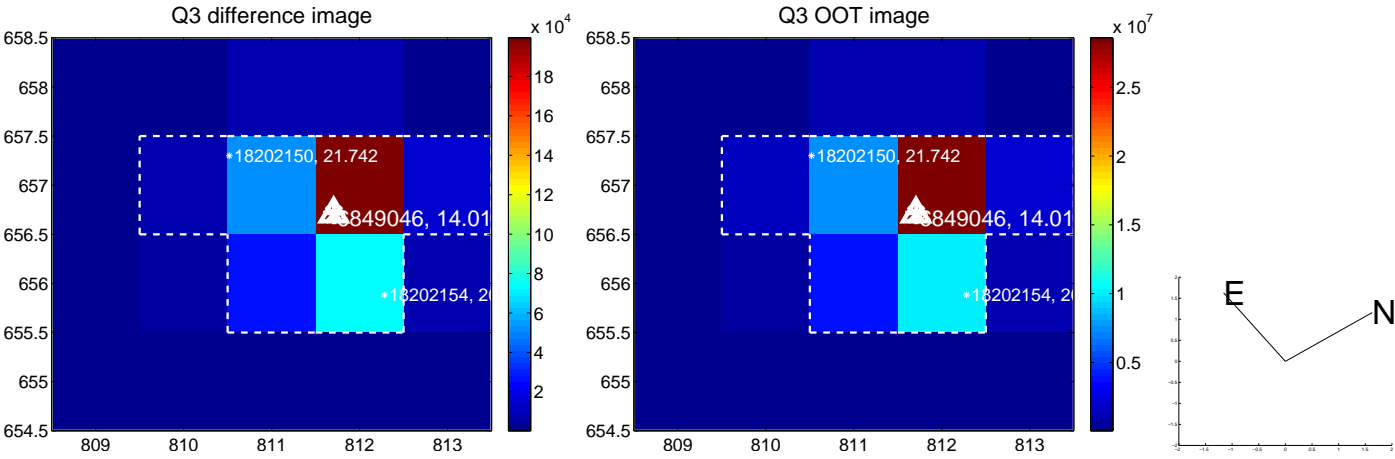
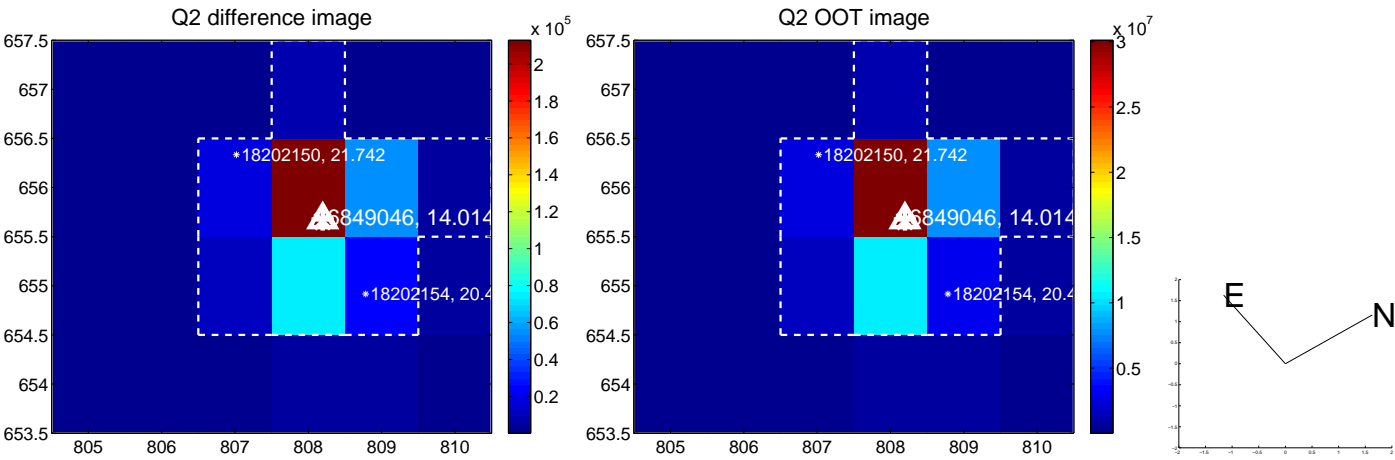
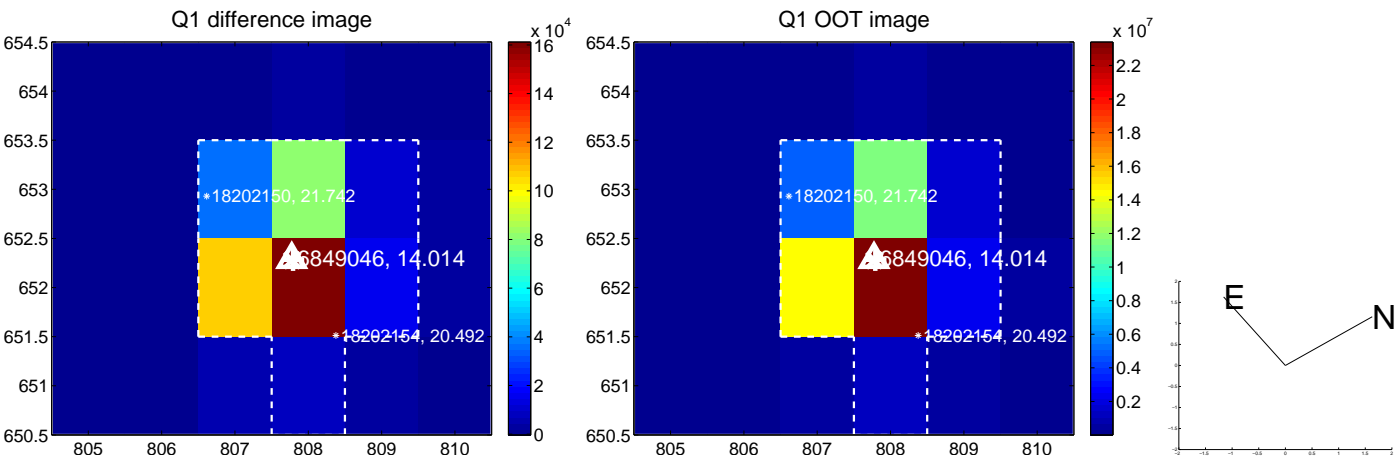
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.006 \pm 0.067$	0.10	$-0.006 \pm 0.067$	$-0.001 \pm 0.067$
PRF-fit source offset from KIC position	$0.064 \pm 0.067$	0.95	$-0.018 \pm 0.068$	$0.061 \pm 0.067$
photometric centroid source offset	$0.09 \pm 0.01$	9.53	$0.04 \pm 0.01$	$0.08 \pm 0.01$

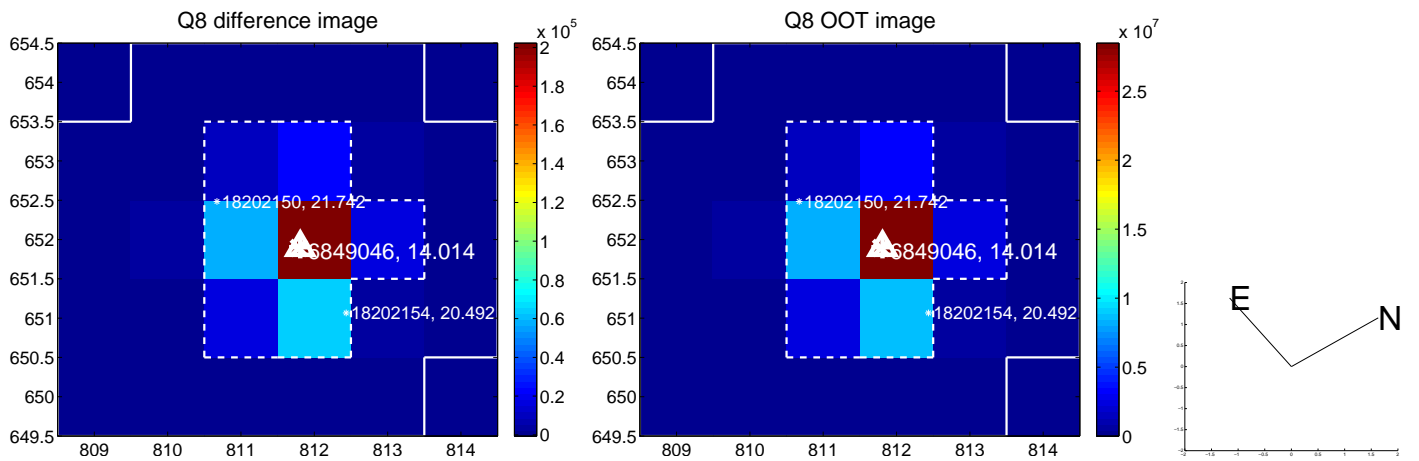
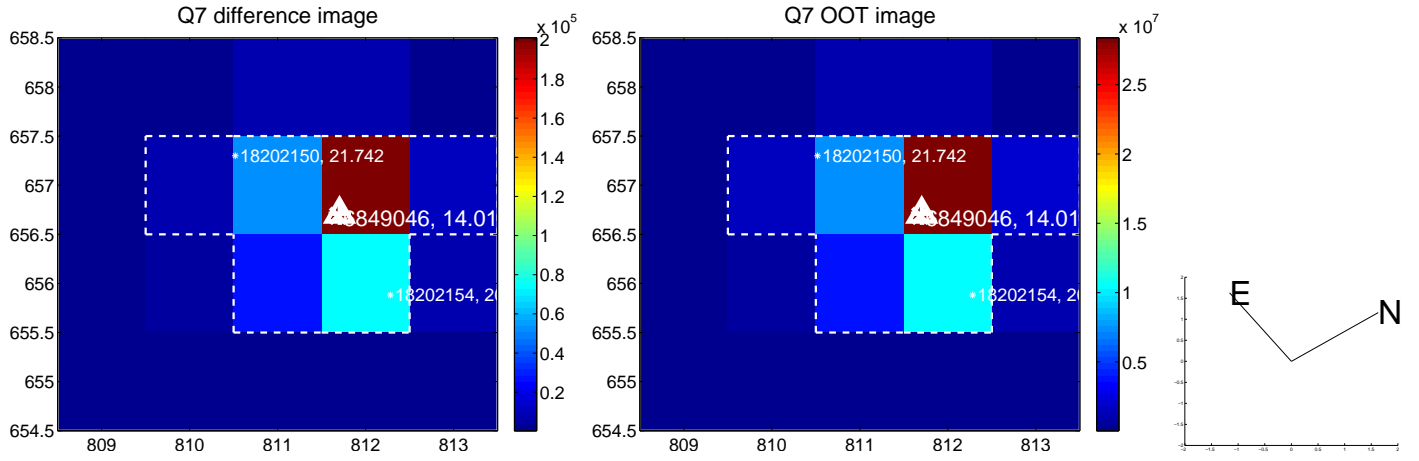
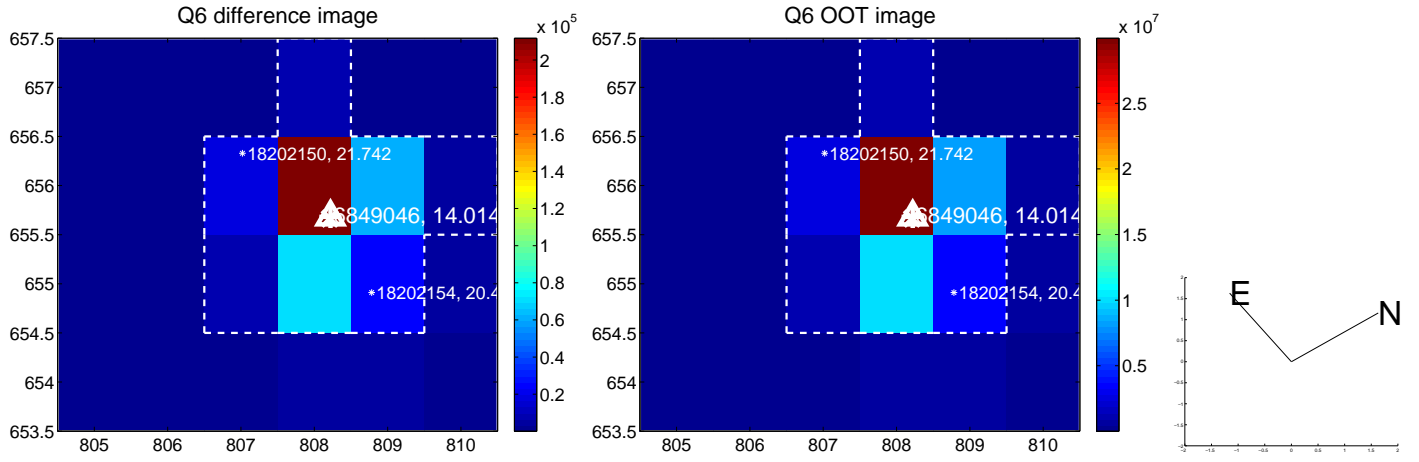
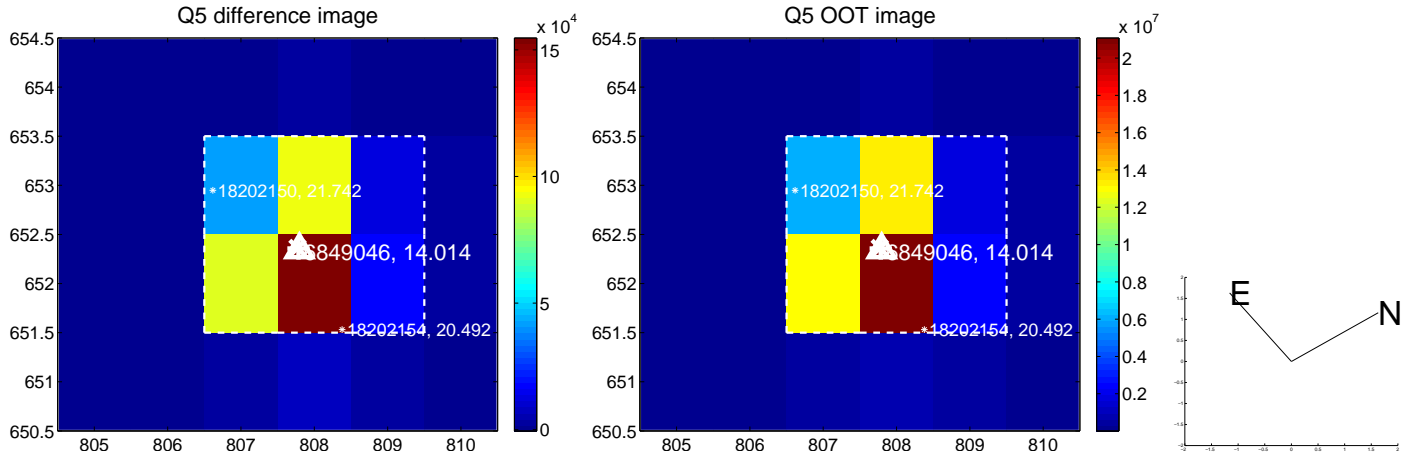


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

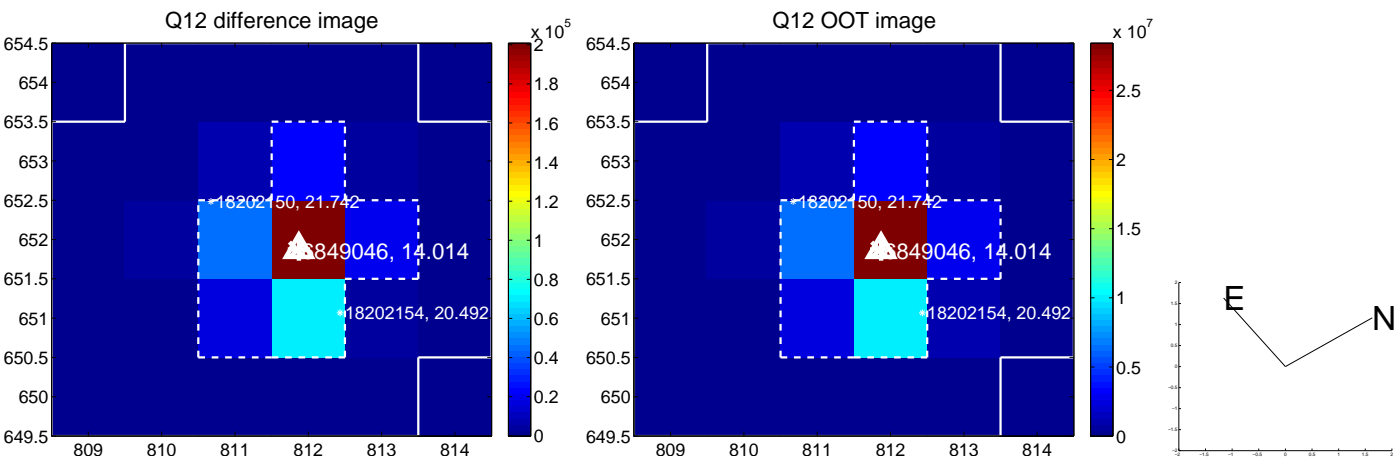
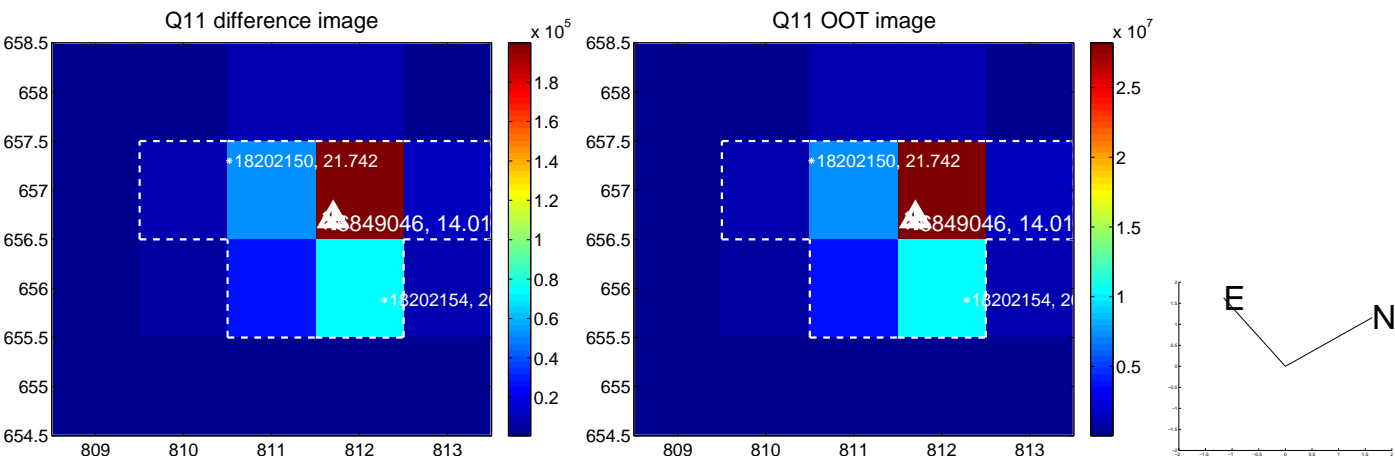
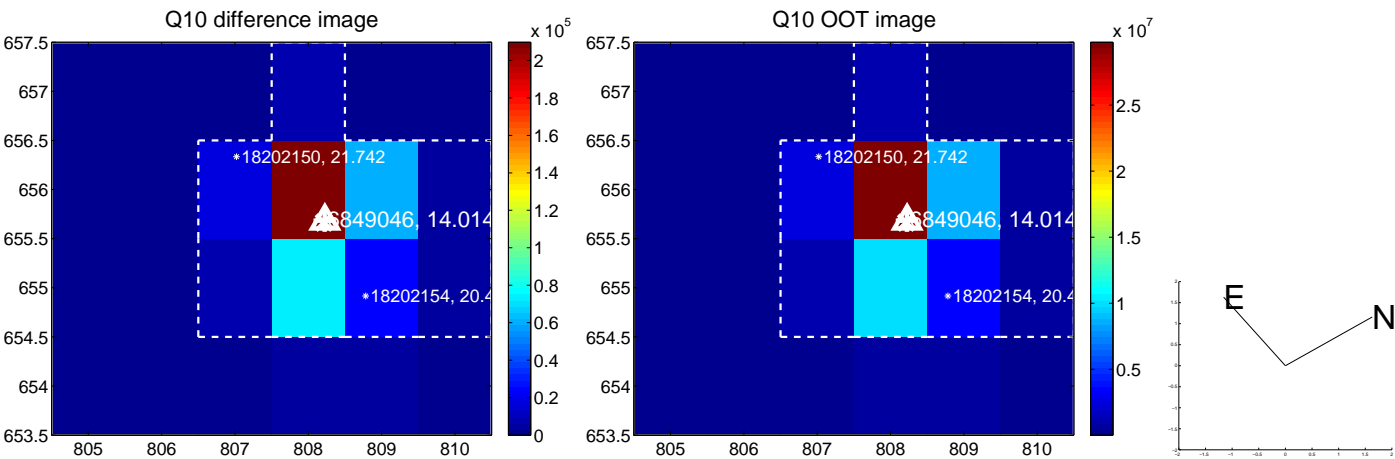
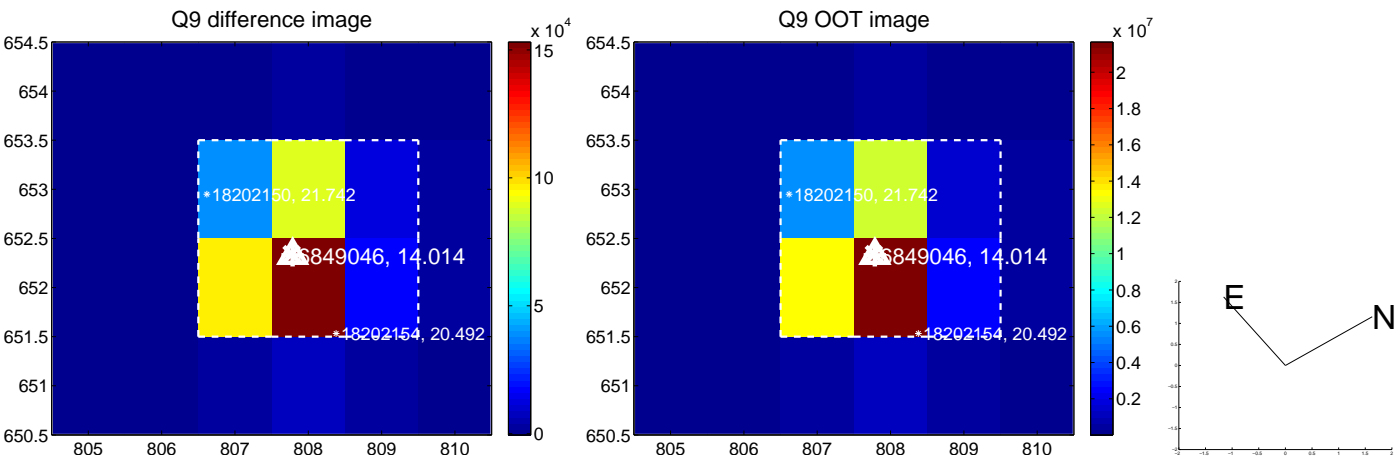


white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

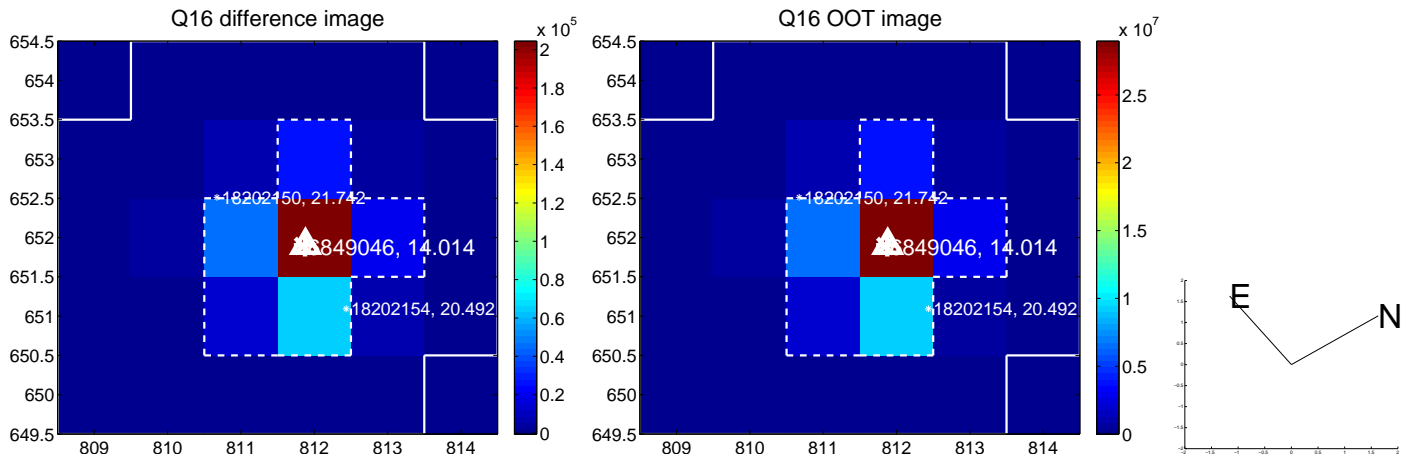
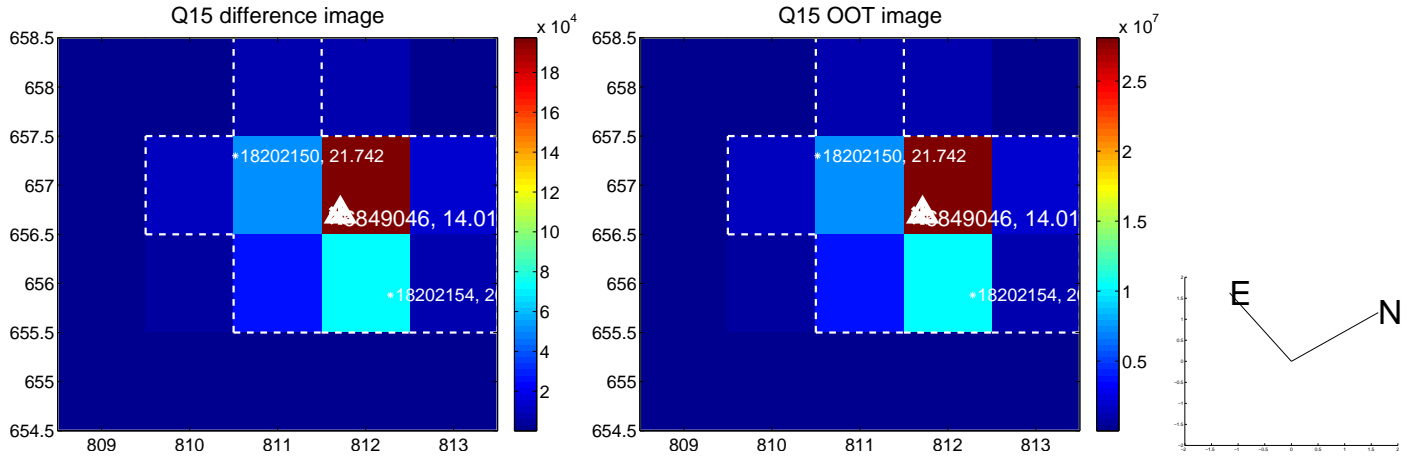
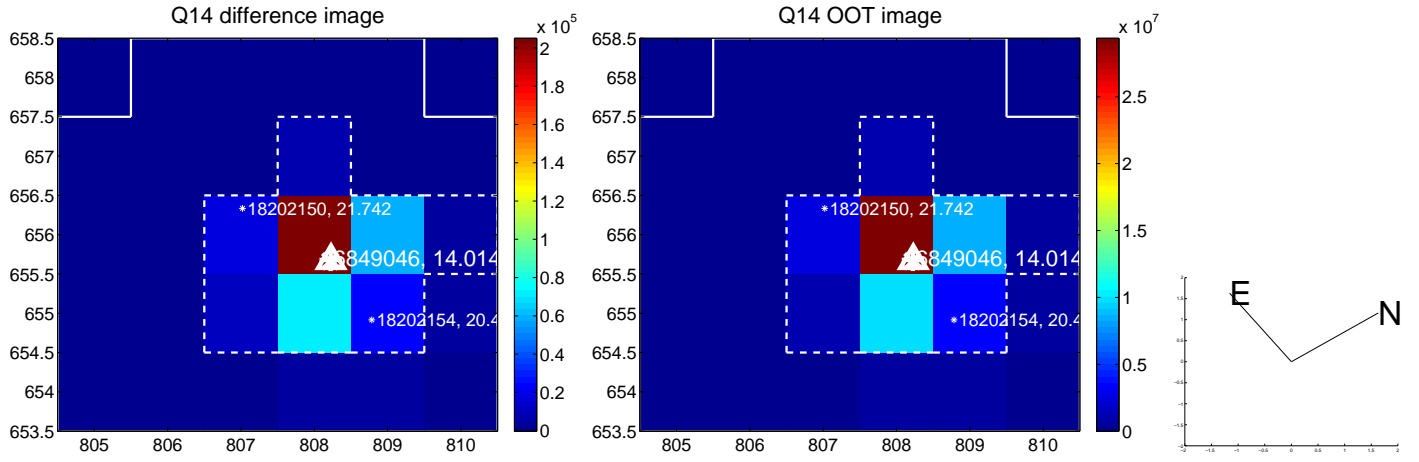
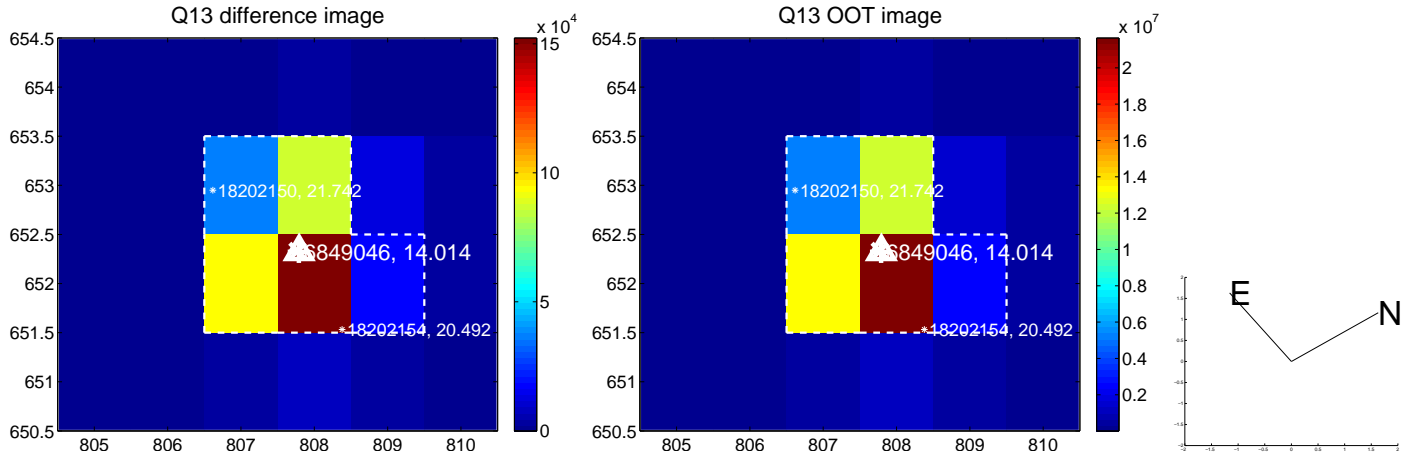




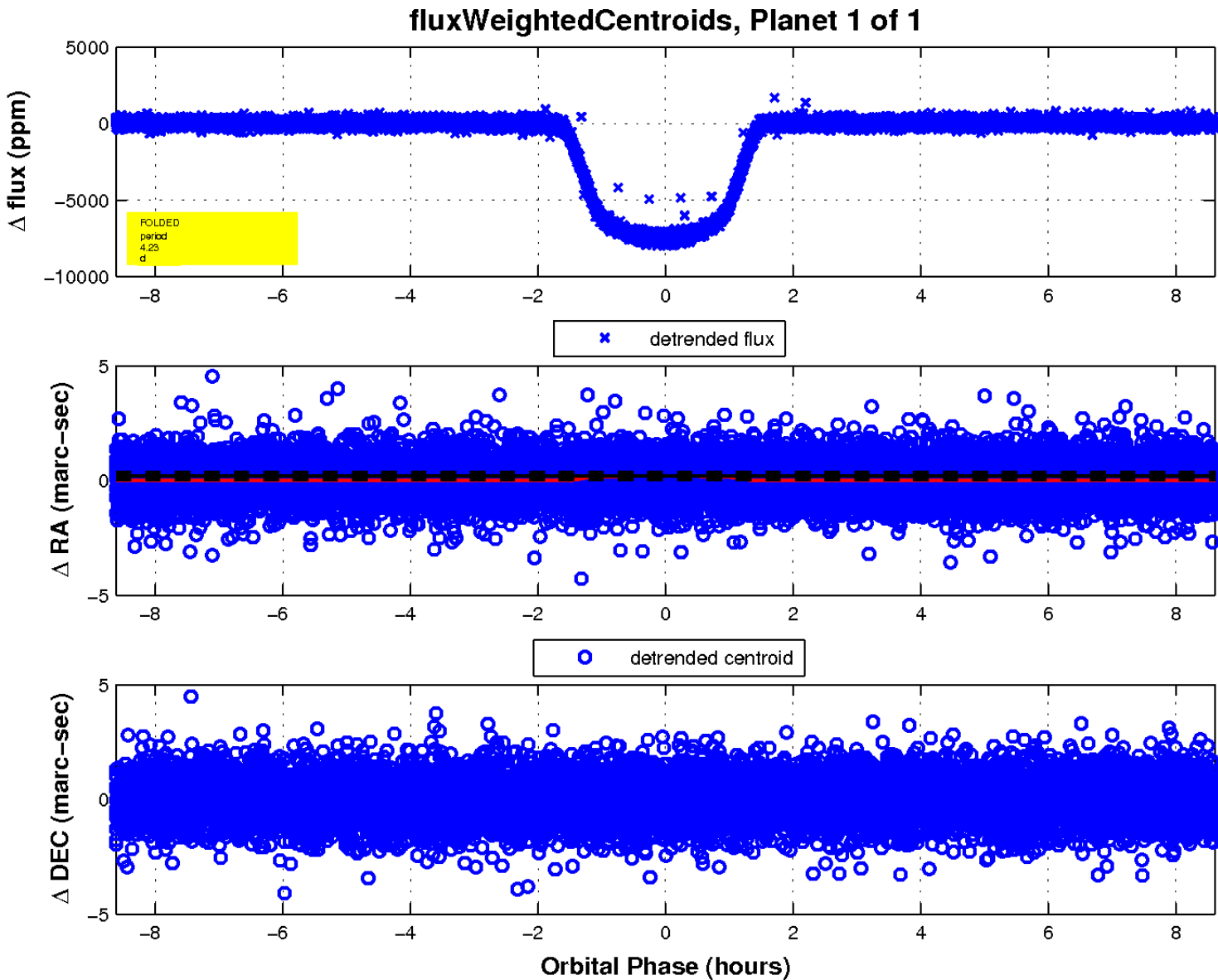
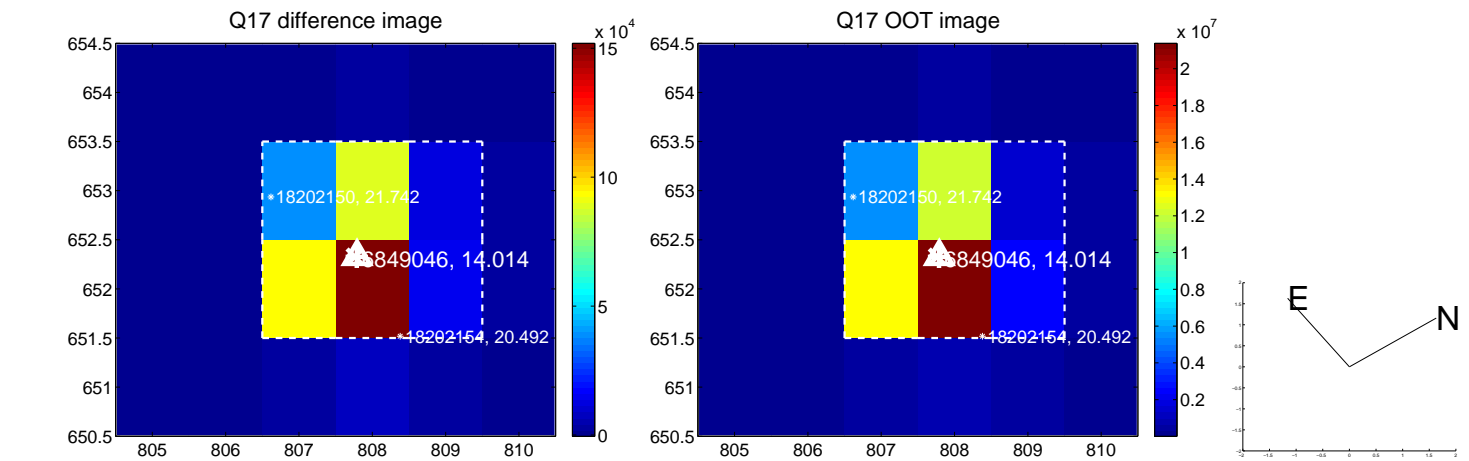
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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

