

# KIC 007035394

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007035394-01	OBS	No	0.786418	132.012584	26.2	4.516	9.6	4.9	1.78	7214	0.94	26253.43

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007035394-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

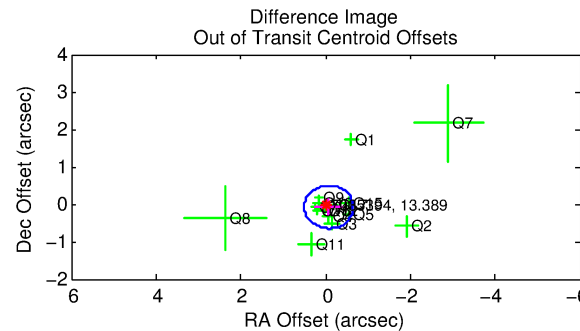
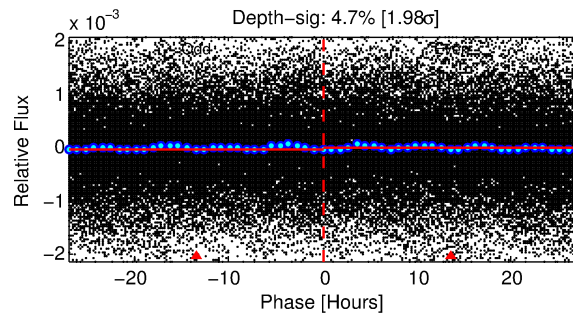
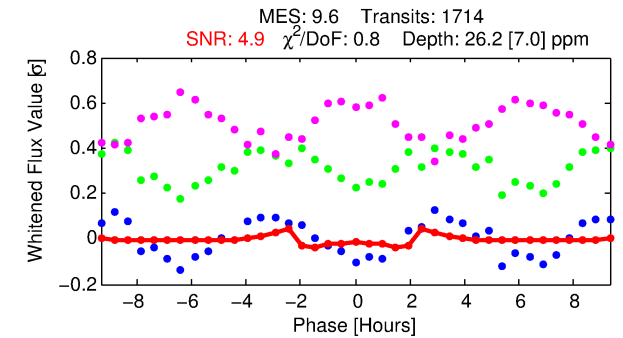
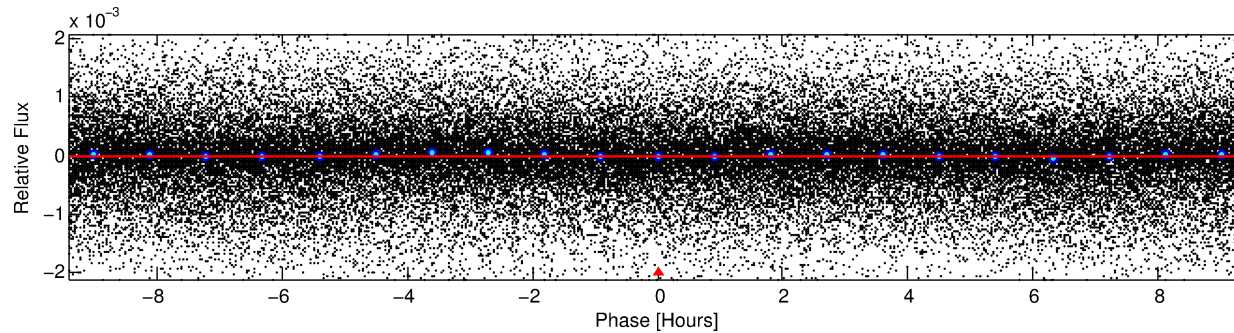
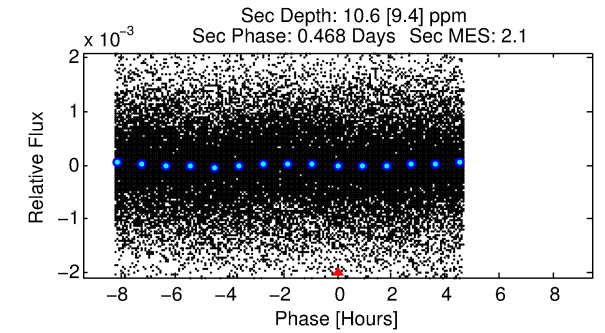
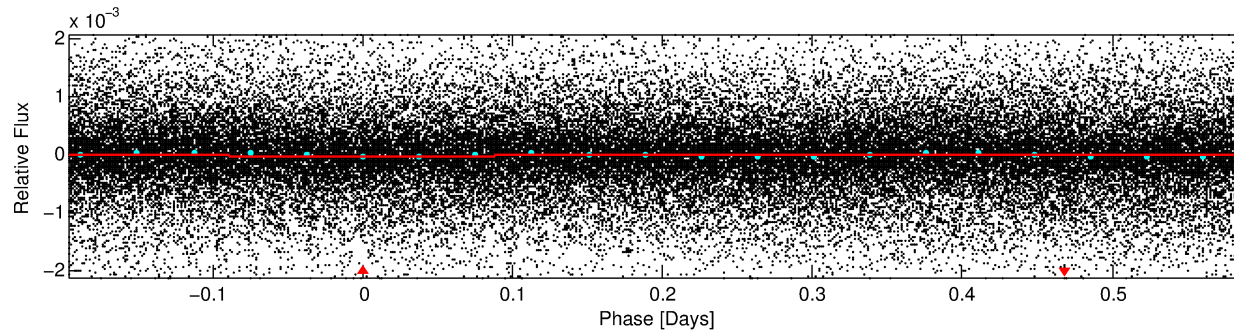
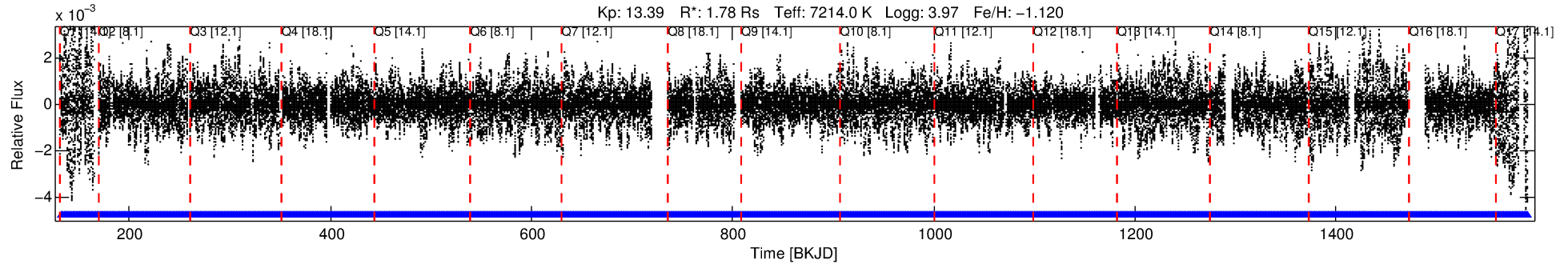
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007035394-01

No Significant Match Found

# DV One-Page Summary

KIC: 7035394 Candidate: 1 of 1 Period: 0.786 d



## DV Fit Results:

Period = 0.78642 [0.00002] d  
Epoch = 132.0126 [0.0031] BKJD  
Rp/R\* = 0.0048 [0.0018]  
a/R\* = 1.39 [1.46]  
b = 0.46 [3.80]  
Seff = 26253.43 [18887.80]  
Teff = 3246 [584] K  
Rp = 0.94 [0.52] Re  
a = 0.0171 [0.0072] AU  
Ag = 1.93 [2.61] [0.36σ]  
Teffp = 5916 [1732] K [1.46σ]

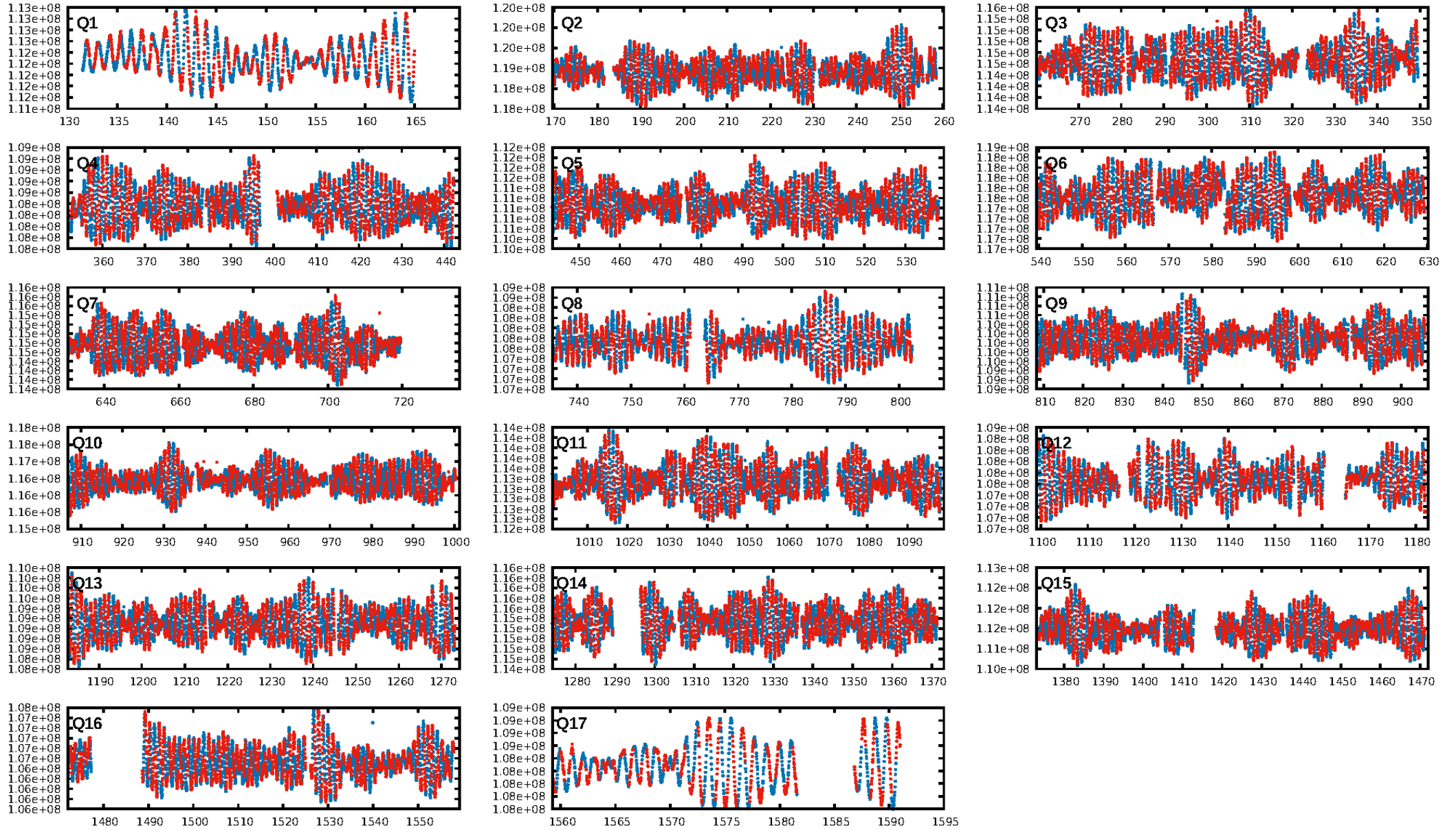
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 1.01e-22  
RollingBand-fgt: 1.00 [1636/1636]  
GhostDiagnostic-chr: 3.316  
Centroid-sig: 0.1%  
Centroid-so: 1.213 arcsec [2.15σ]  
OotOffset-rm: 0.104 arcsec [0.54σ]  
KicOffset-rm: 0.216 arcsec [1.00σ]  
OotOffset-st: 3/4/4/4 [15]  
KicOffset-st: 3/4/4/4 [15]  
DiffImageQuality-fgm: 0.60 [9/15]  
DiffImageOverlap-fno: 1.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 10:46:16 Z

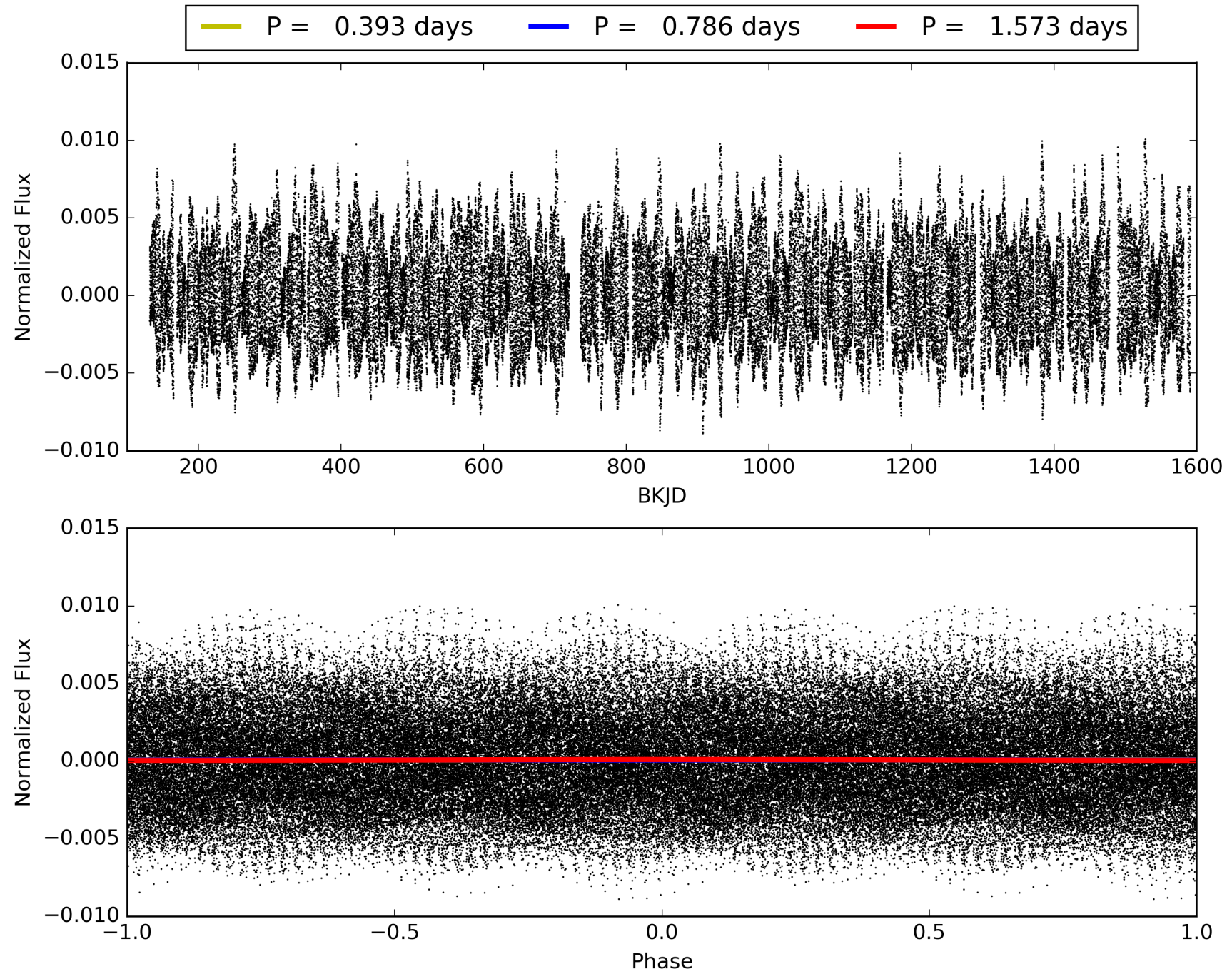
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 007035394-01, PDC Light Curves



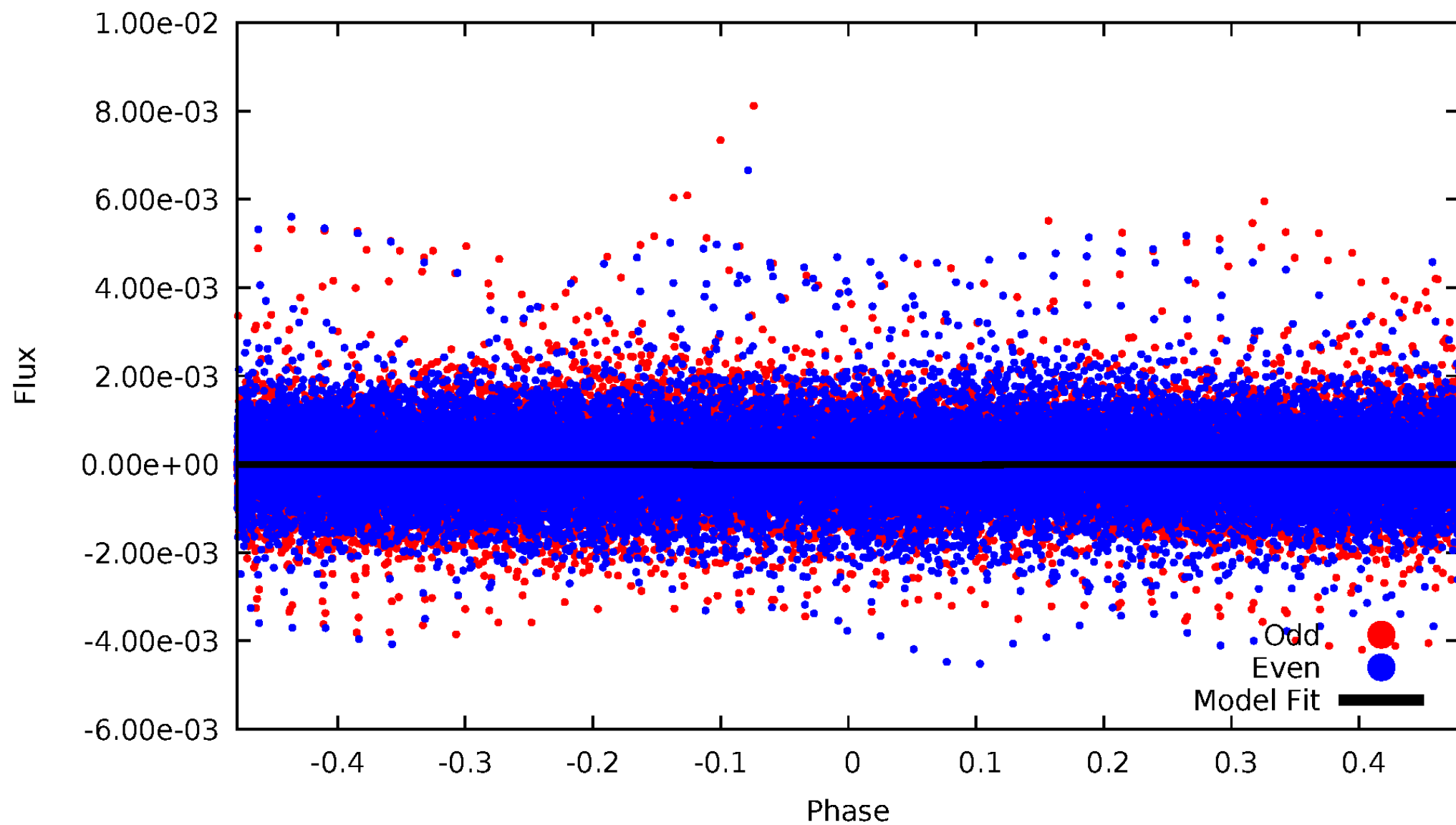


TCE 007035394-01



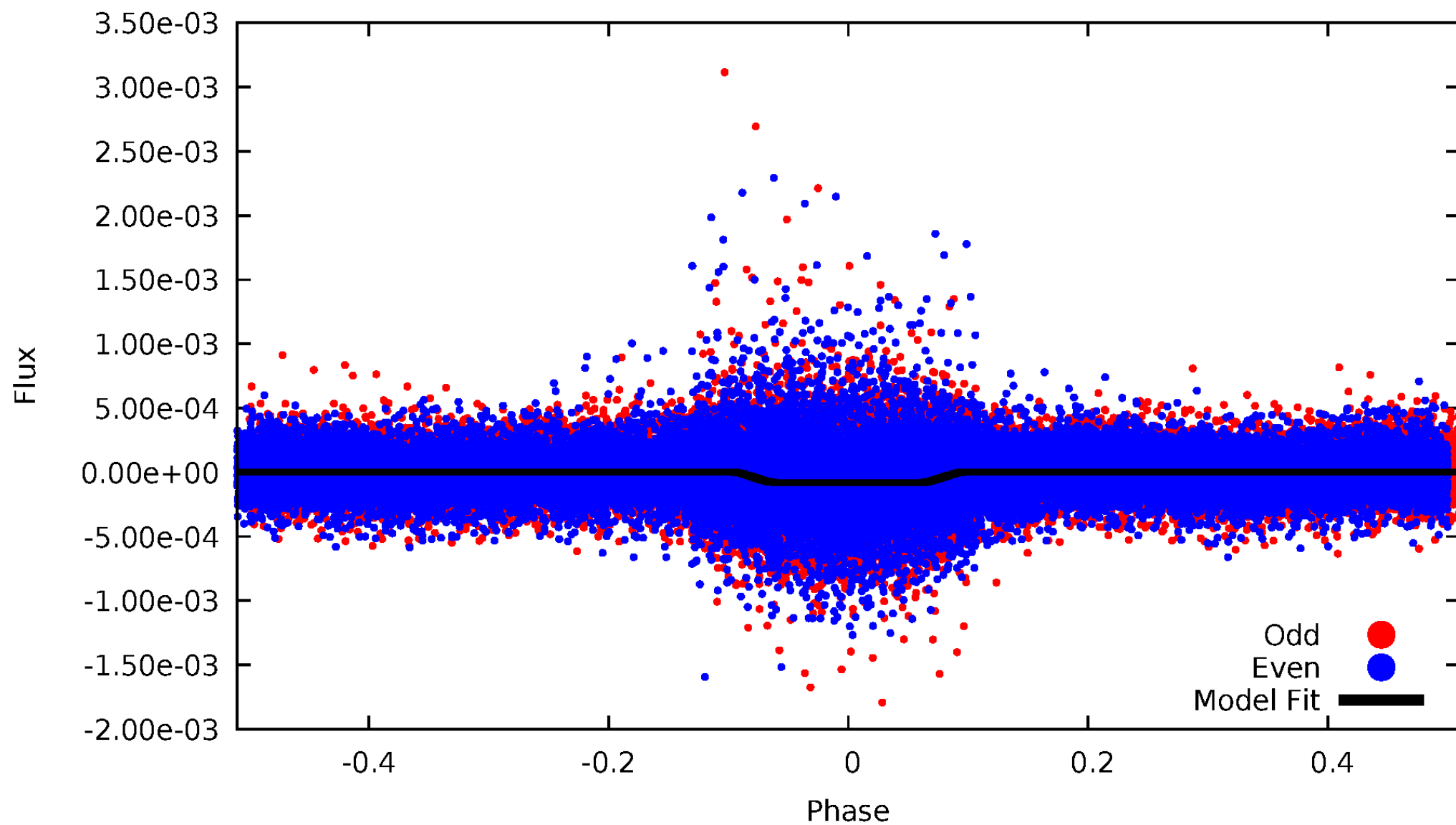
# DV Odd/Even

TCE 007035394-01



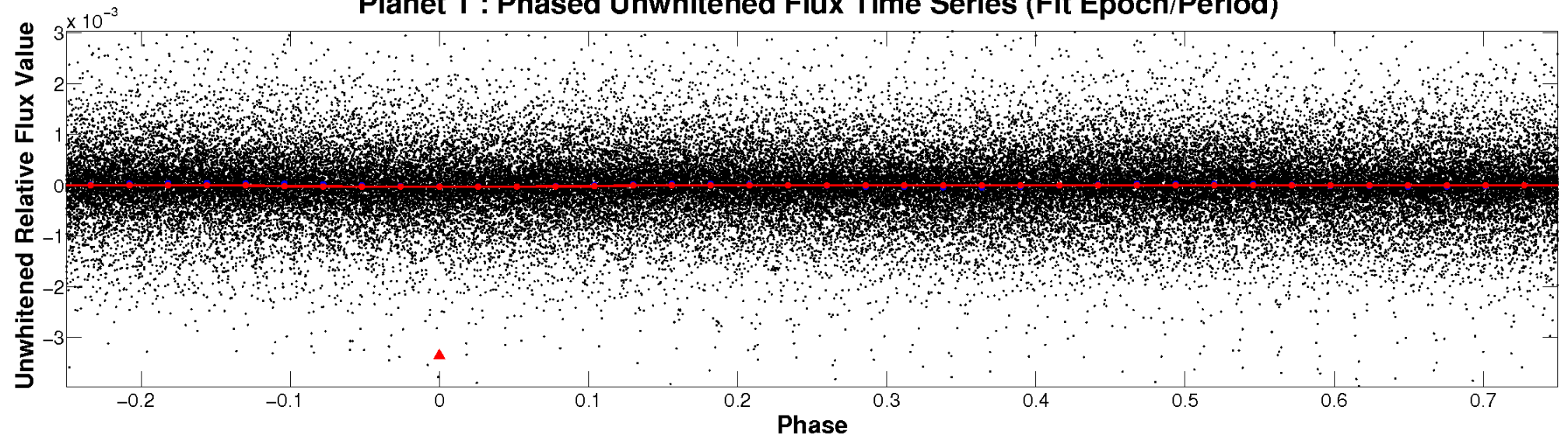
# ALT Odd/Even

TCE 007035394-01

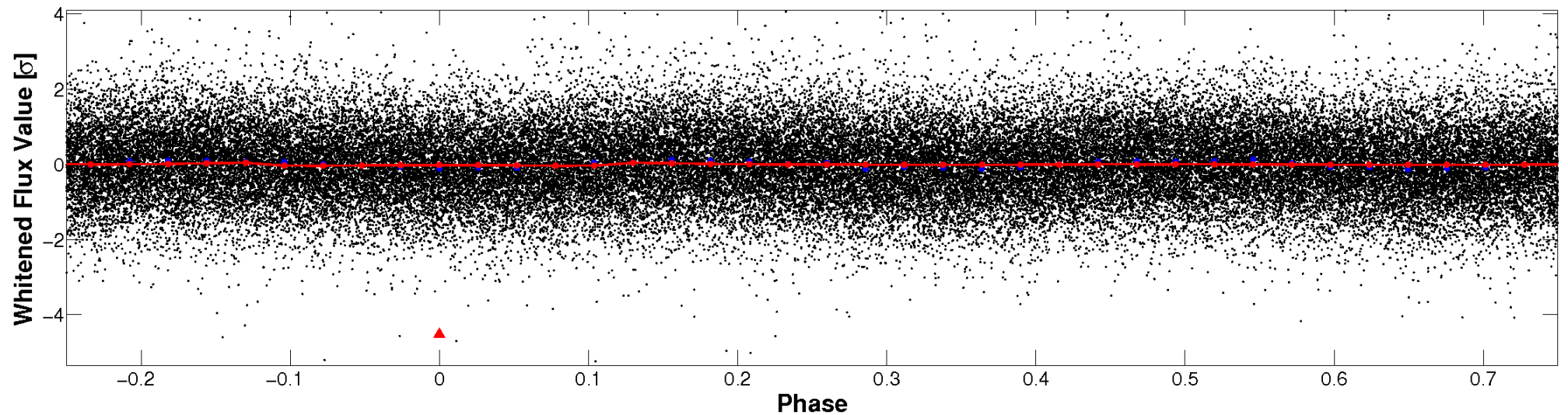


# Non-Whitened Vs. Whitened Light Curve

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



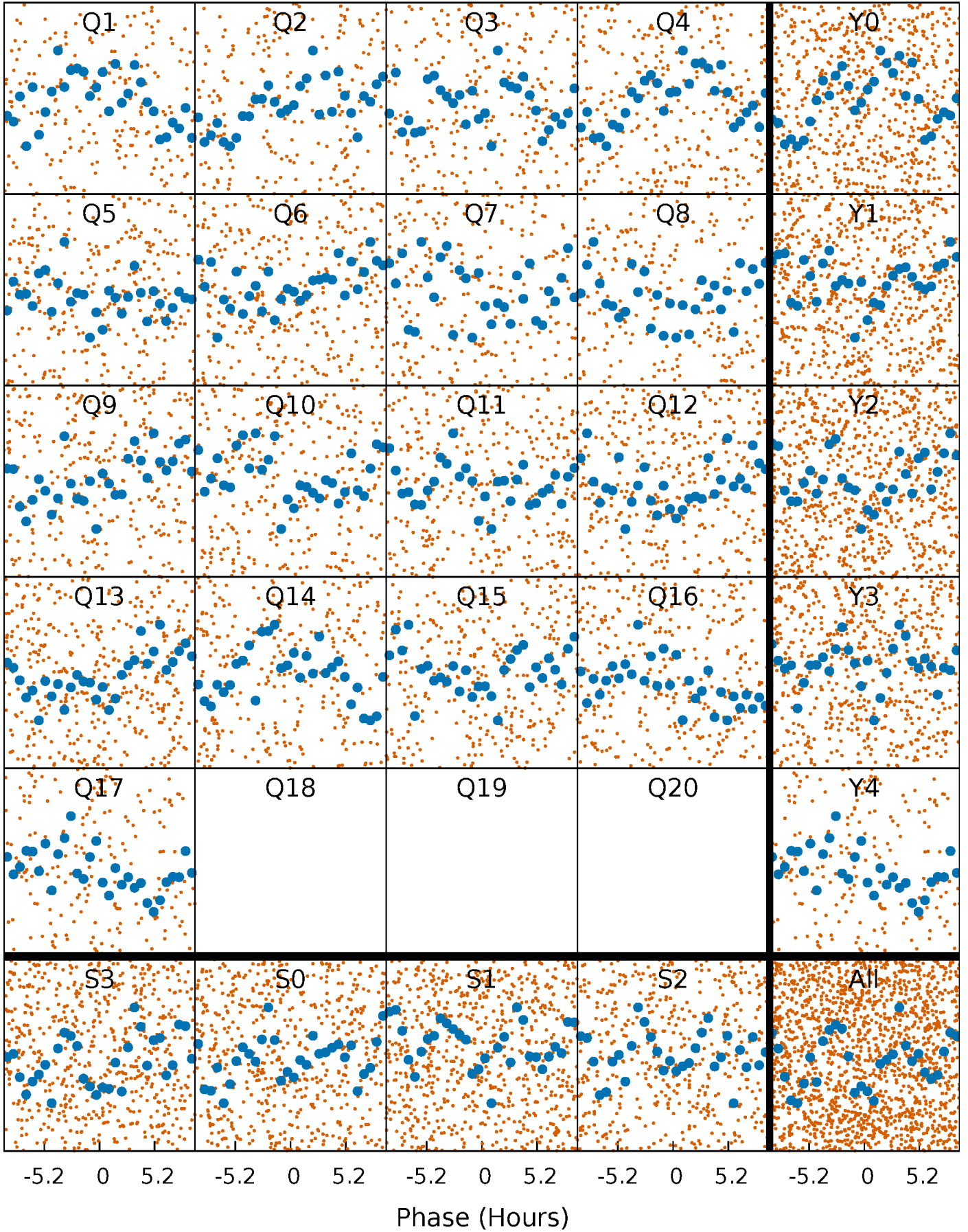
**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**





# PDC Quarter-Phased Transit Curves

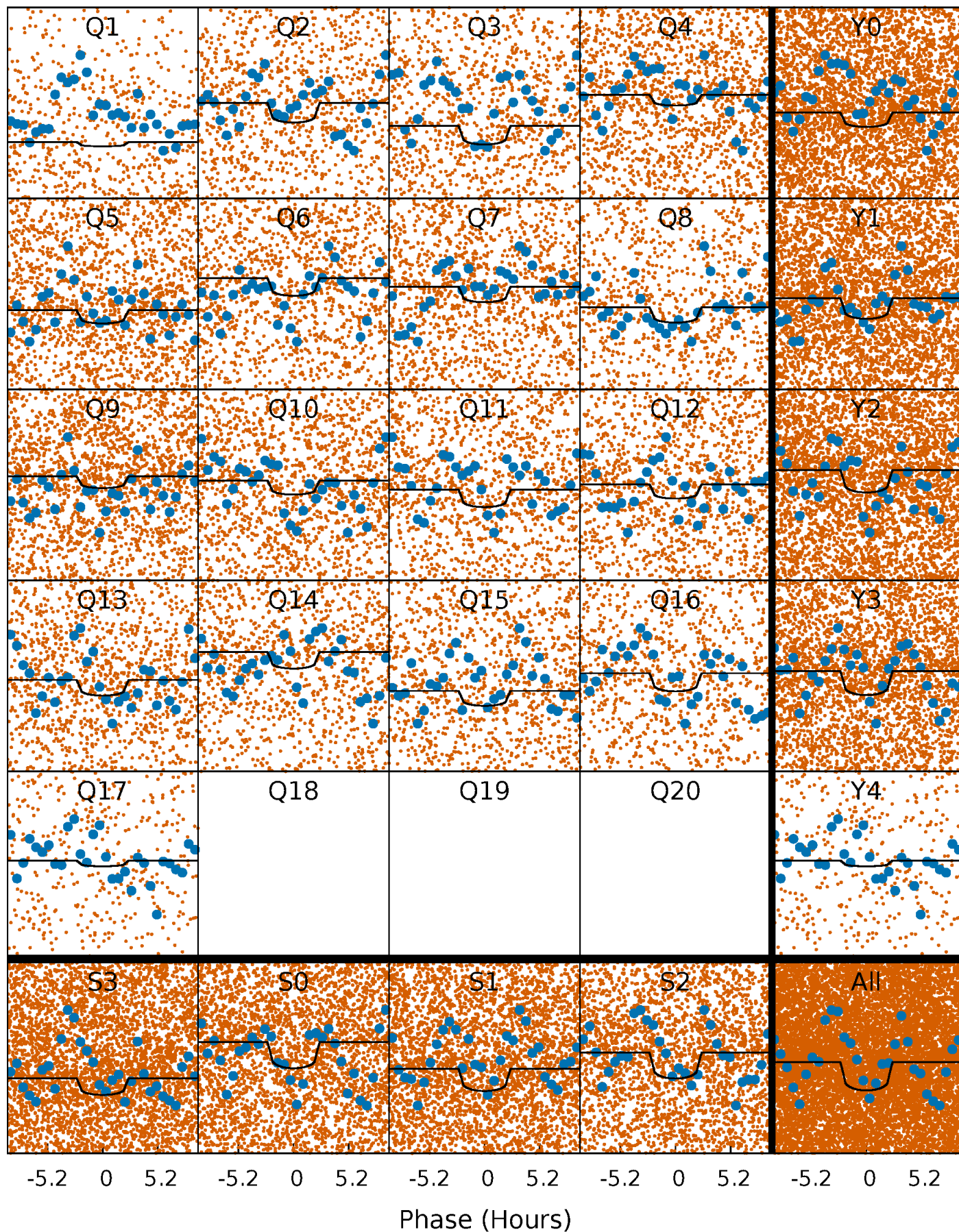
TCE 007035394-01   P= 0.786418 Days    $T_0=132.012584$  (BKJD)





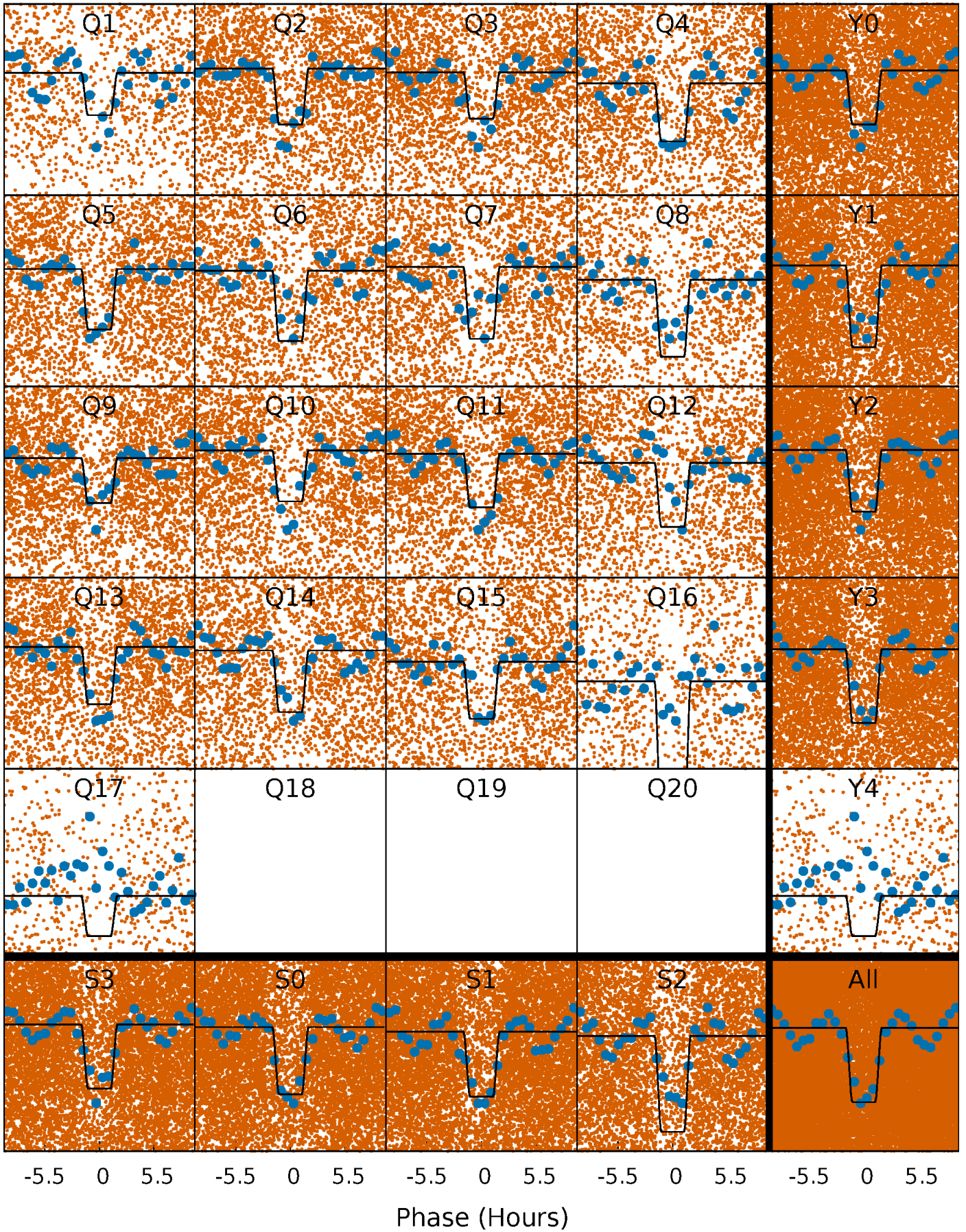
# DV Quarter-Phased Transit Curves

TCE 007035394-01   P= 0.786418 Days    $T_0=132.012584$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

TCE 007035394-01 P= 0.786445 Days  $T_0=131.991235$  (BKJD)

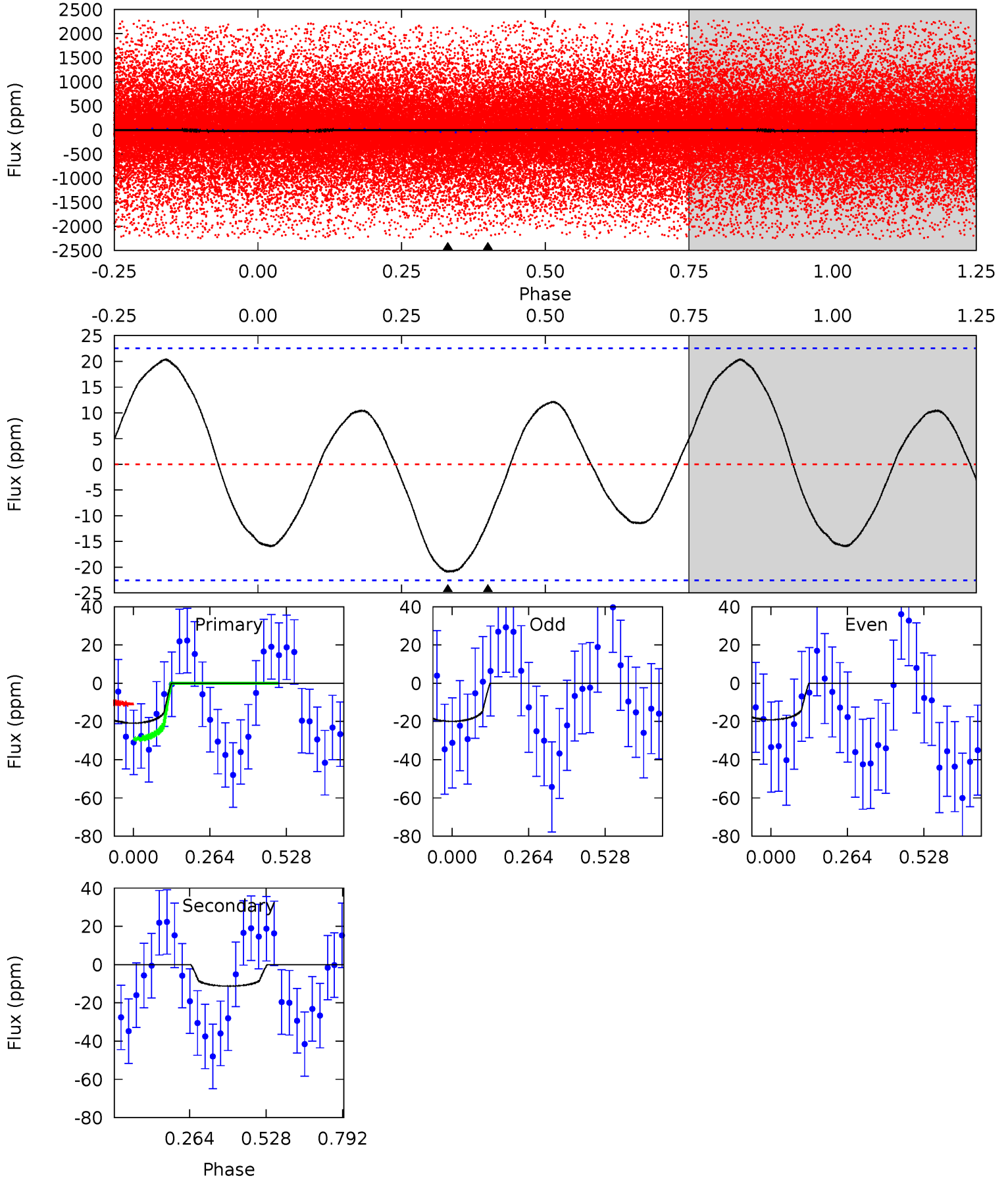




# DV Model-Shift Uniqueness Test

007035394-01, P = 0.786418 Days, E = 131.226166 Days

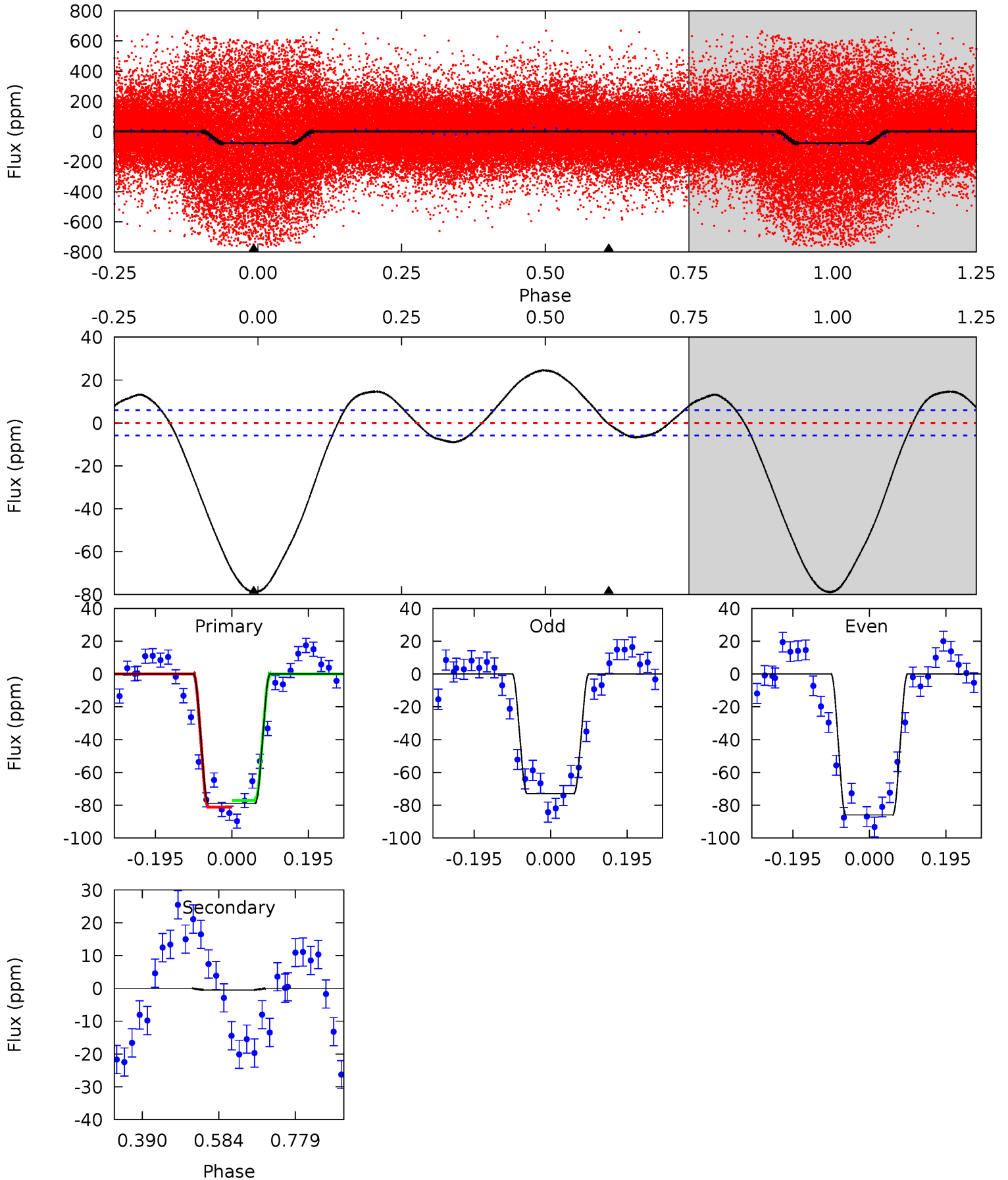
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.04	2.18	0	0	4.36	1.12	2.45	4.04	4.04	2.18	2.18	0.08	0.08	0.49	1.83



# Alt Model-Shift Uniqueness Test

007035394-01, P = 0.786445 Days, E = 131.204790 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
59.0	0.37	0	0	4.42	1.30	6.19	59.0	59.0	0.37	0.37	4.85	0.82	0.24	1.50





### Stellar Parameters For KIC 007035394

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	$7214^{+205}_{-308}$	$3.970^{+0.420}_{-0.140}$	$-1.120^{+0.300}_{-0.300}$	$1.777^{+0.387}_{-0.719}$	$1.077^{+0.110}_{-0.121}$	$0.270^{+0.946}_{-0.108}$
	+3%/-4%	+11%/-4%	+27%/-27%	+22%/-40%	+10%/-11%	+350%/-40%
Source	KIC0	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 007035394-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	$A_{obs}$
DV	$-11 \pm 5$	$0.88^{+0.39}_{-0.38}$	$4421^{+379}_{-497}$	$5617^{+1856}_{-1192}$	$2.163^{+4.724}_{-1.336}$
Alt.	$-1 \pm 1$	$1.64^{+0.48}_{-0.46}$	$4440^{+318}_{-496}$	$-3865^{+436}_{-286}$	$0.024^{+0.100}_{-0.080}$

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

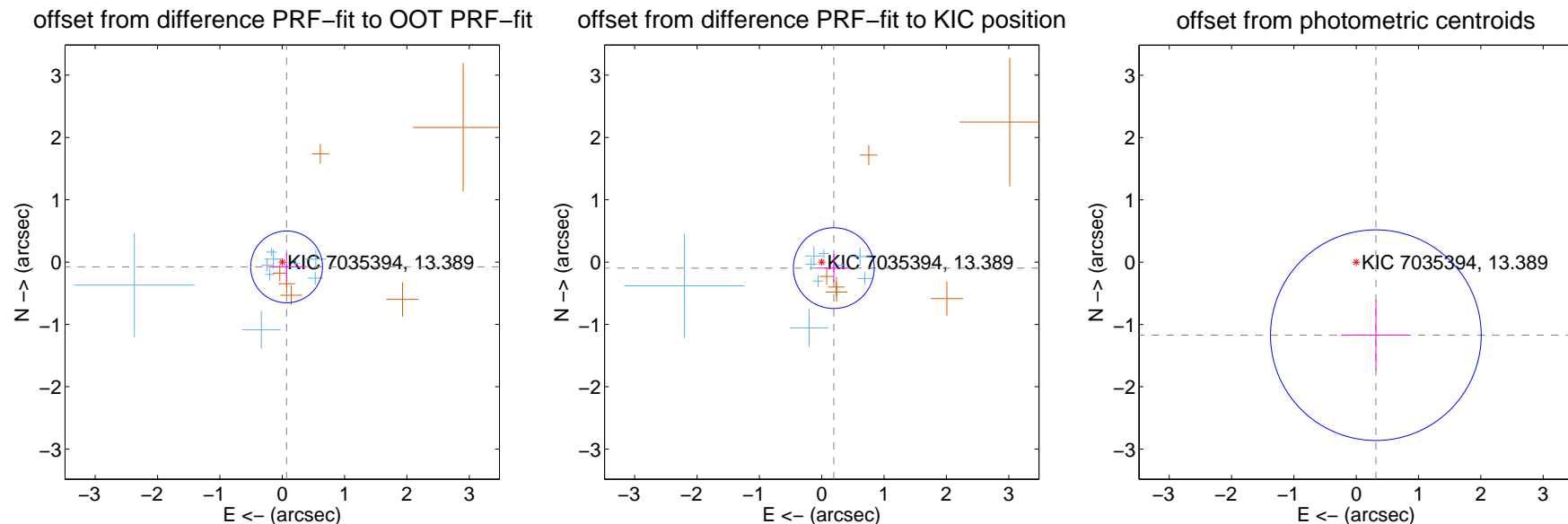
## DV Centroid Data

Supplemental centroid analysis for 007035394-01. Kepler magnitude: 13.39. Transit SNR 4.91

There are 9 quarters with good PRF difference image offsets

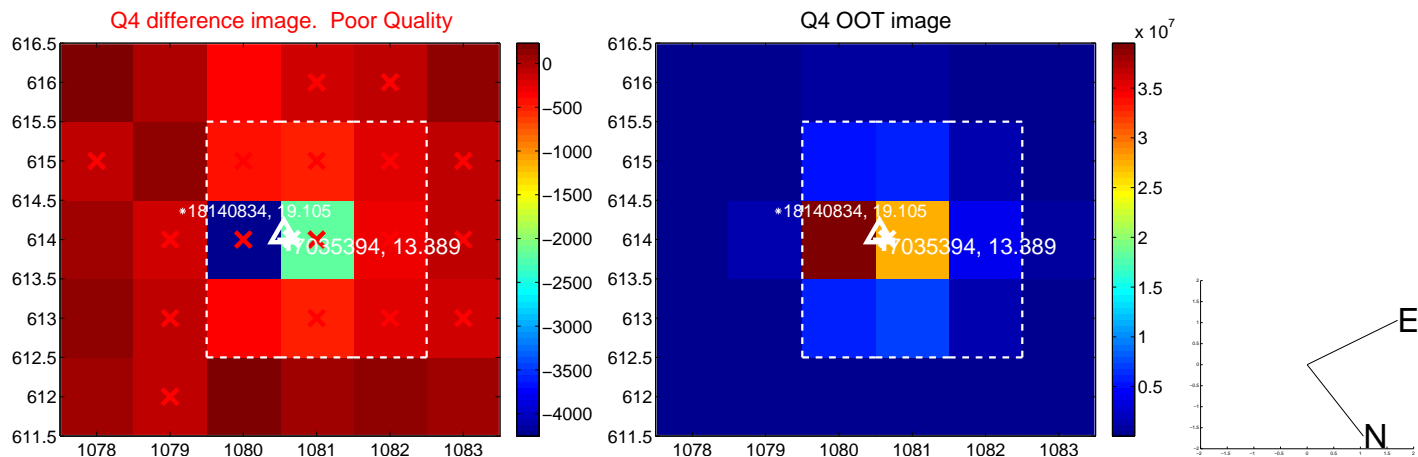
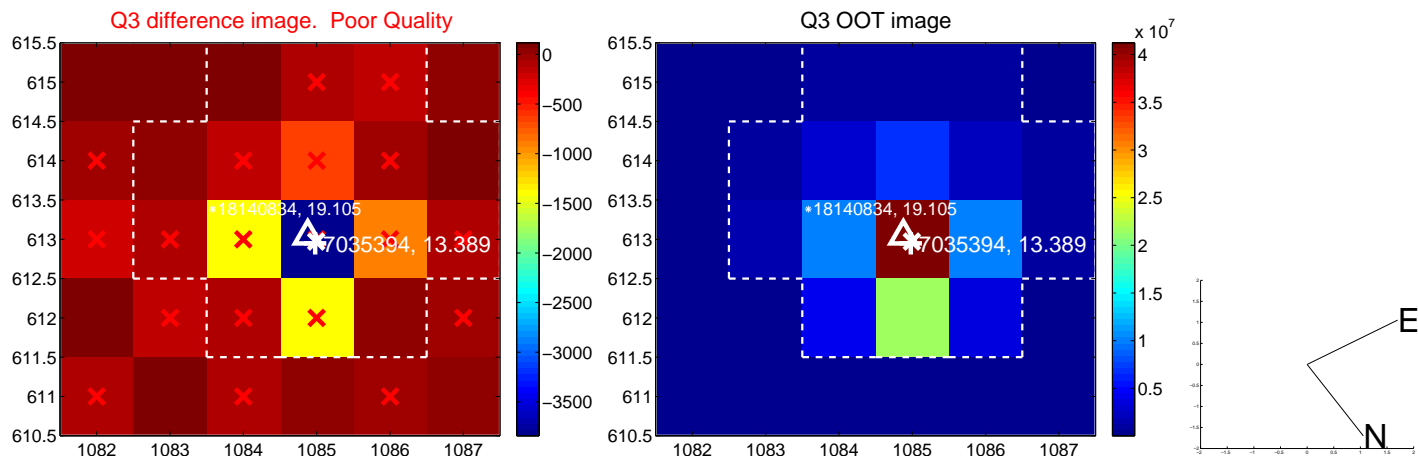
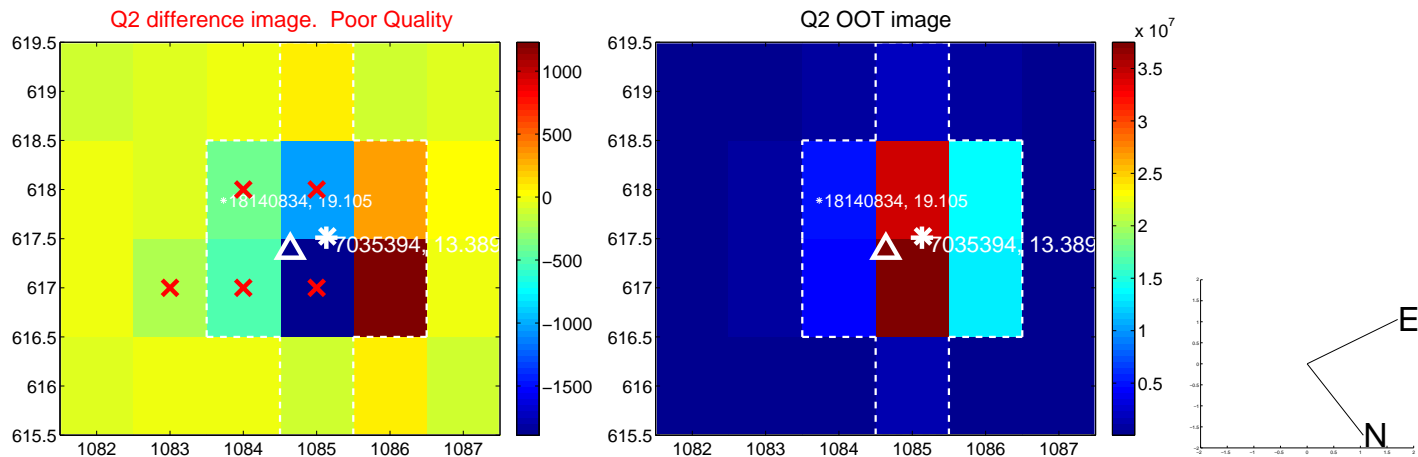
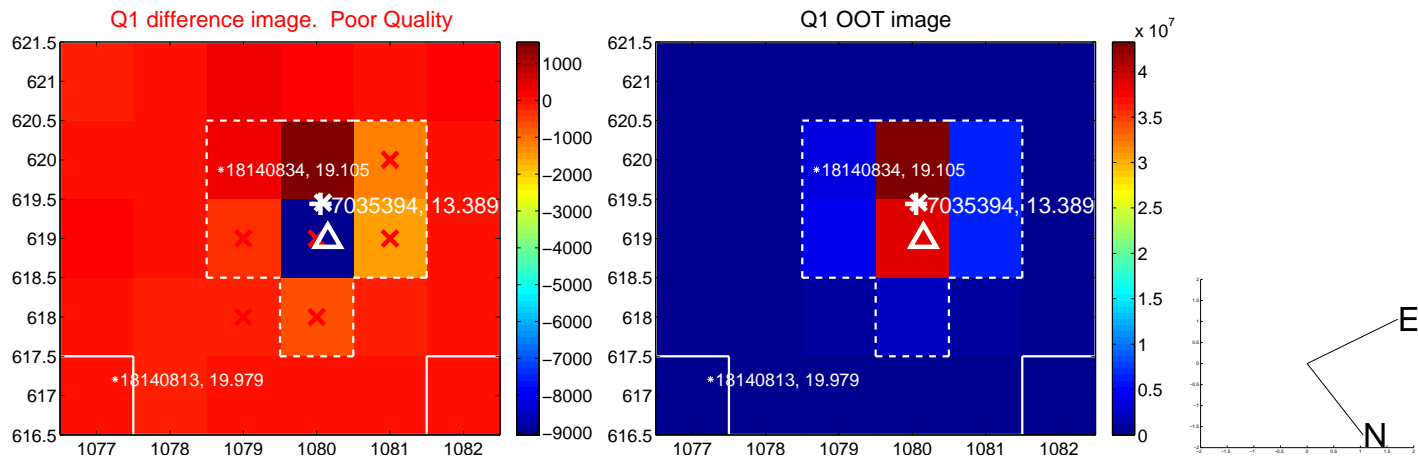
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.104 \pm 0.192$	0.54	$-0.070 \pm 0.295$	$-0.077 \pm 0.218$
PRF-fit source offset from KIC position	$0.216 \pm 0.216$	1.00	$-0.193 \pm 0.272$	$-0.097 \pm 0.228$
photometric centroid source offset	$1.21 \pm 0.56$	2.15	$-0.32 \pm 0.56$	$-1.17 \pm 0.56$

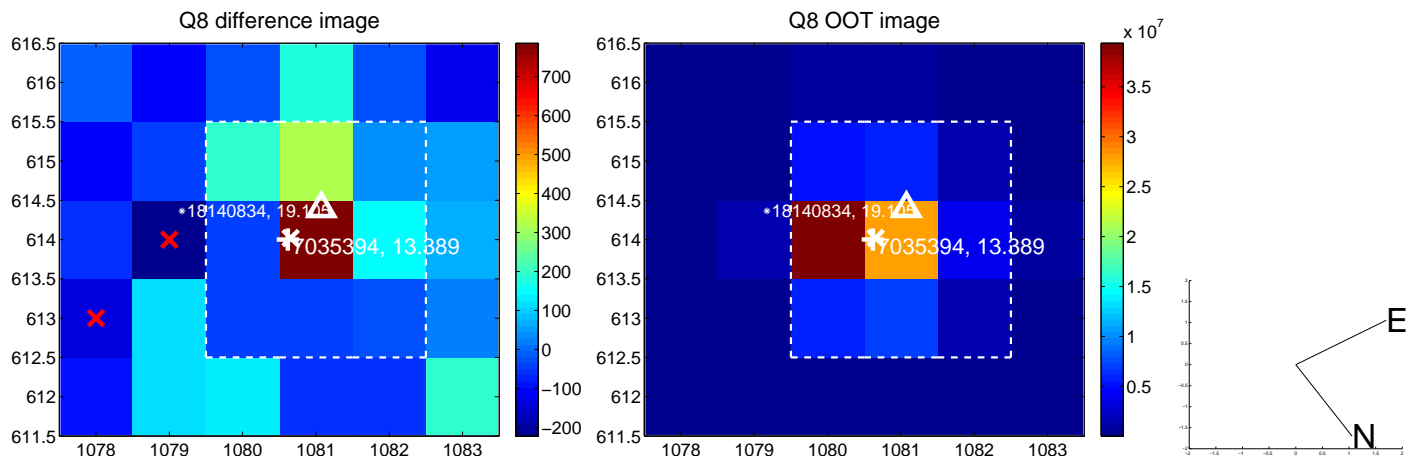
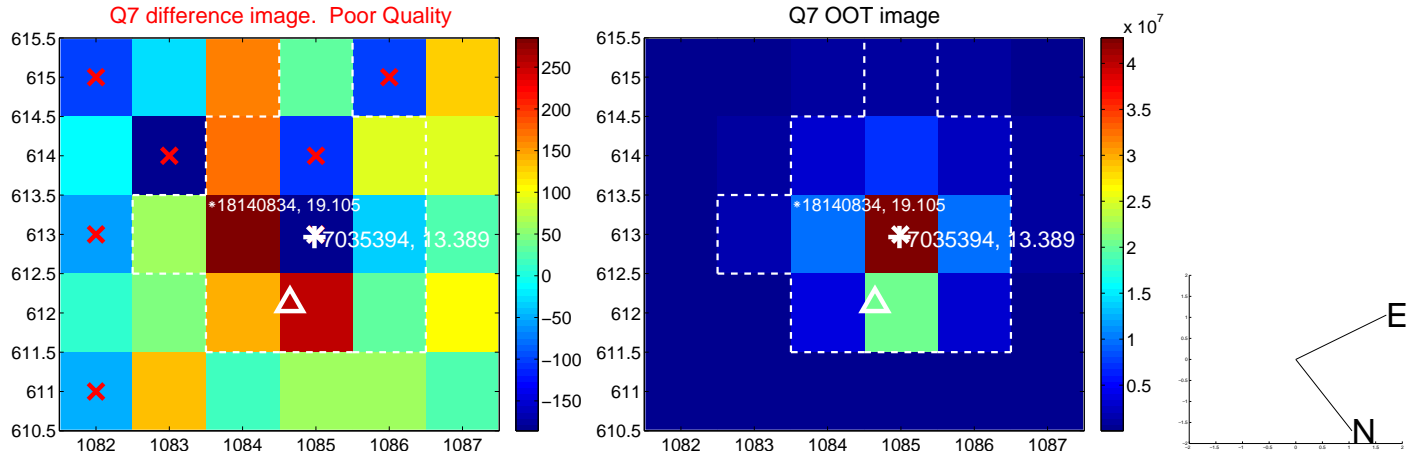
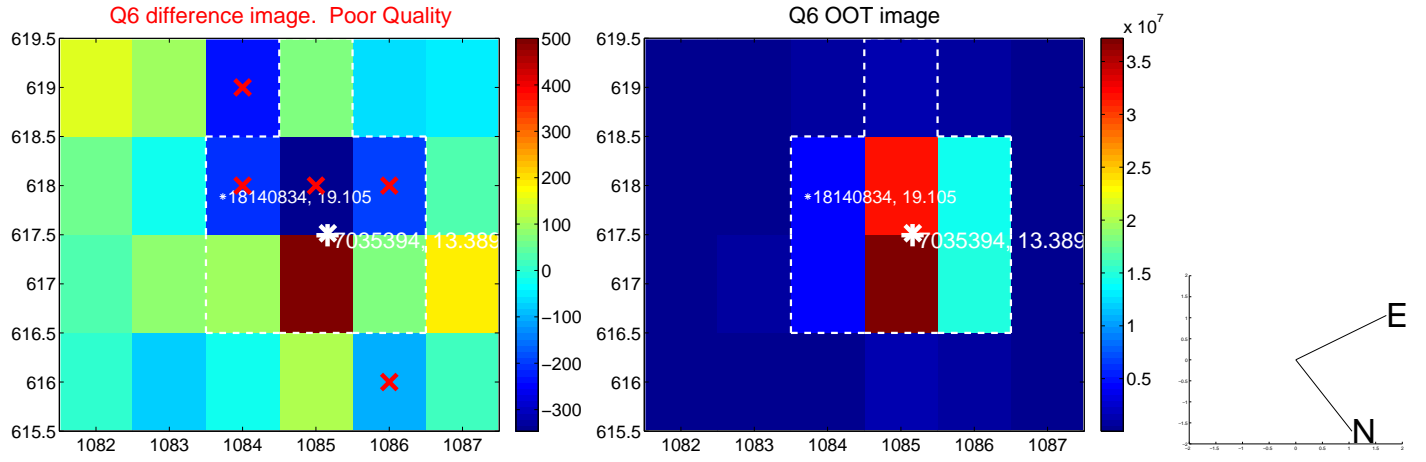
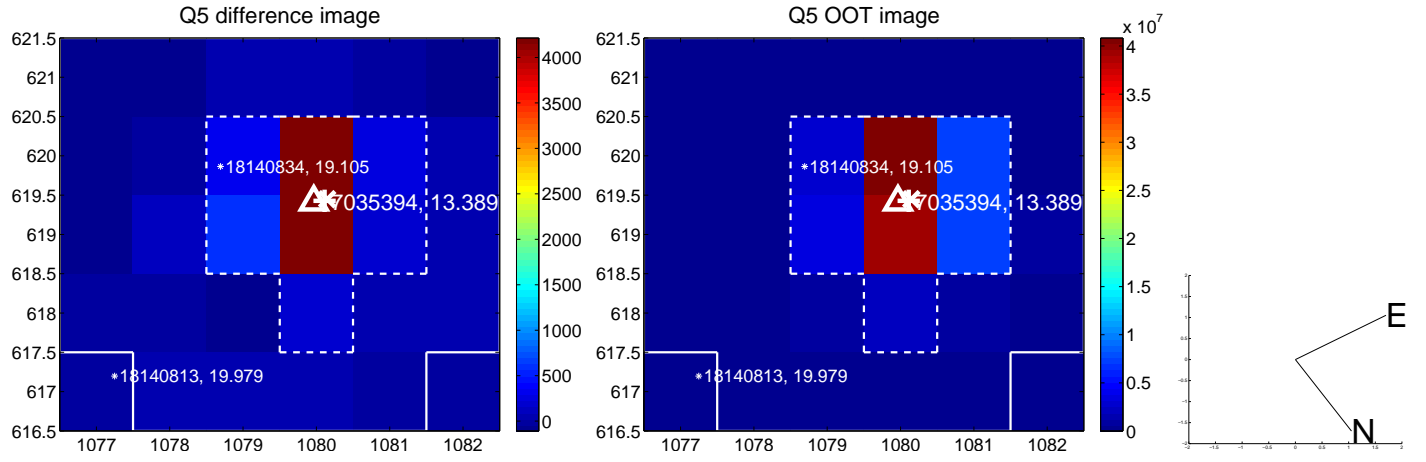


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

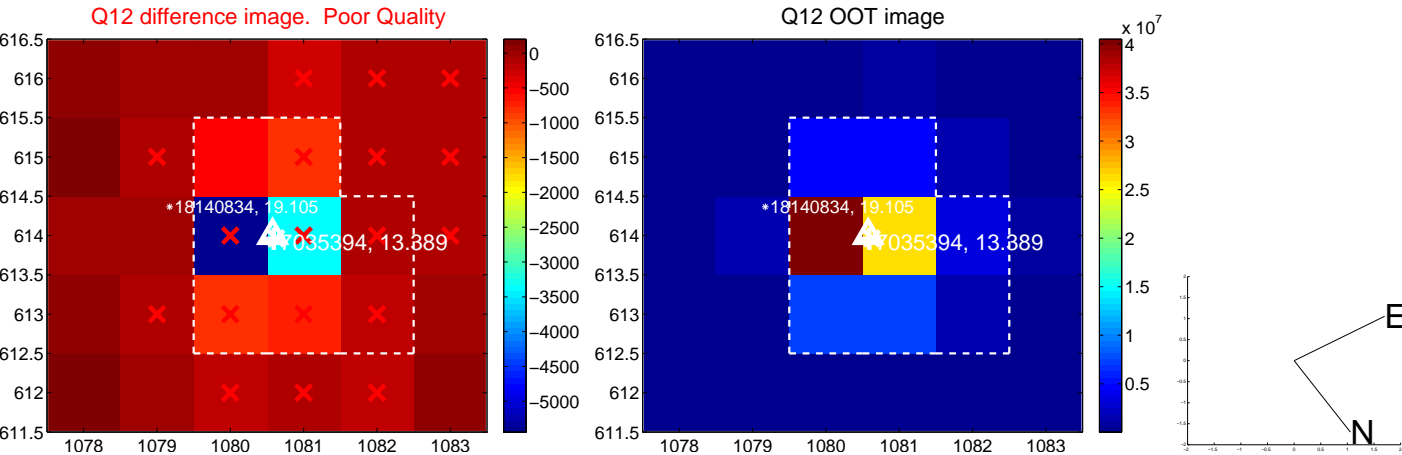
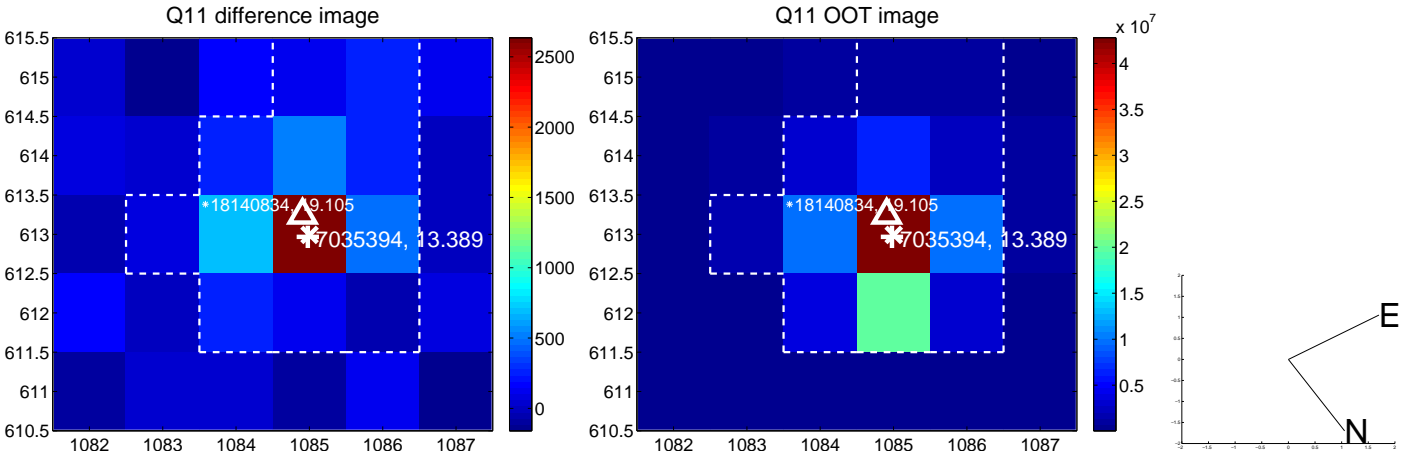
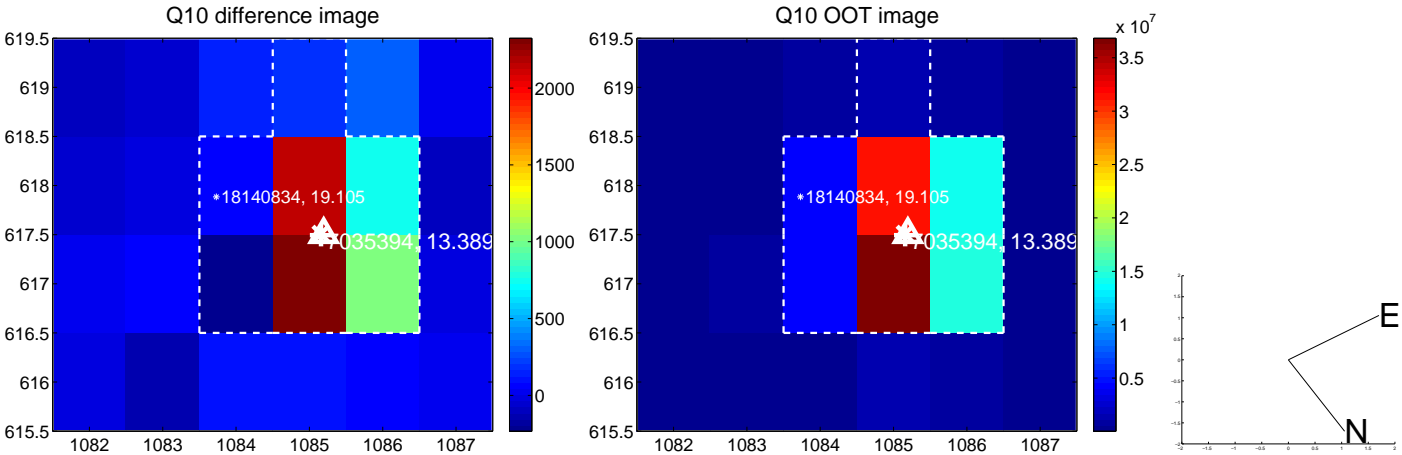
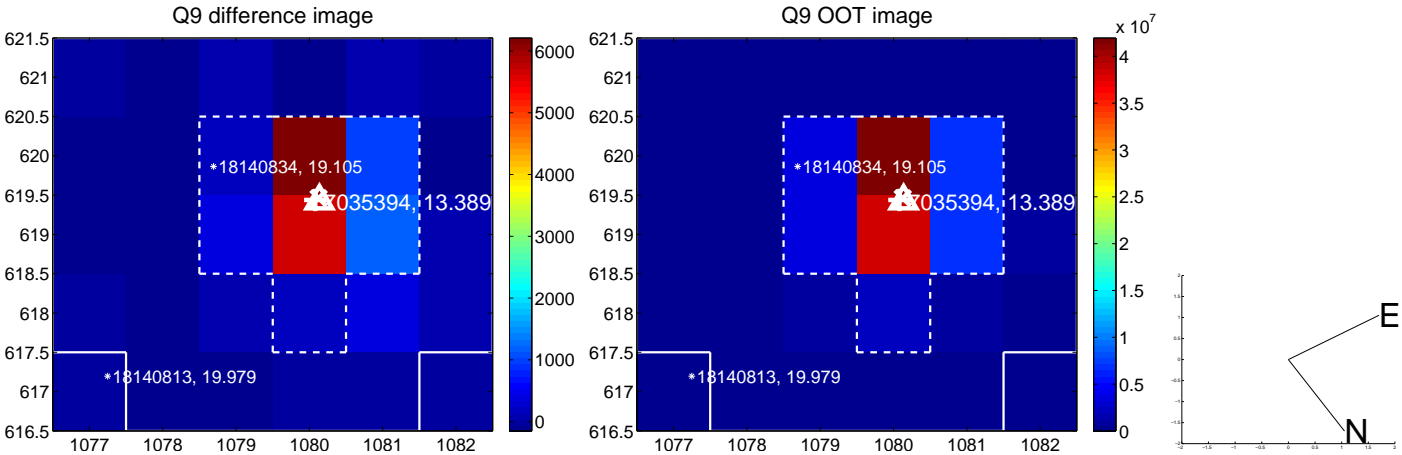


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

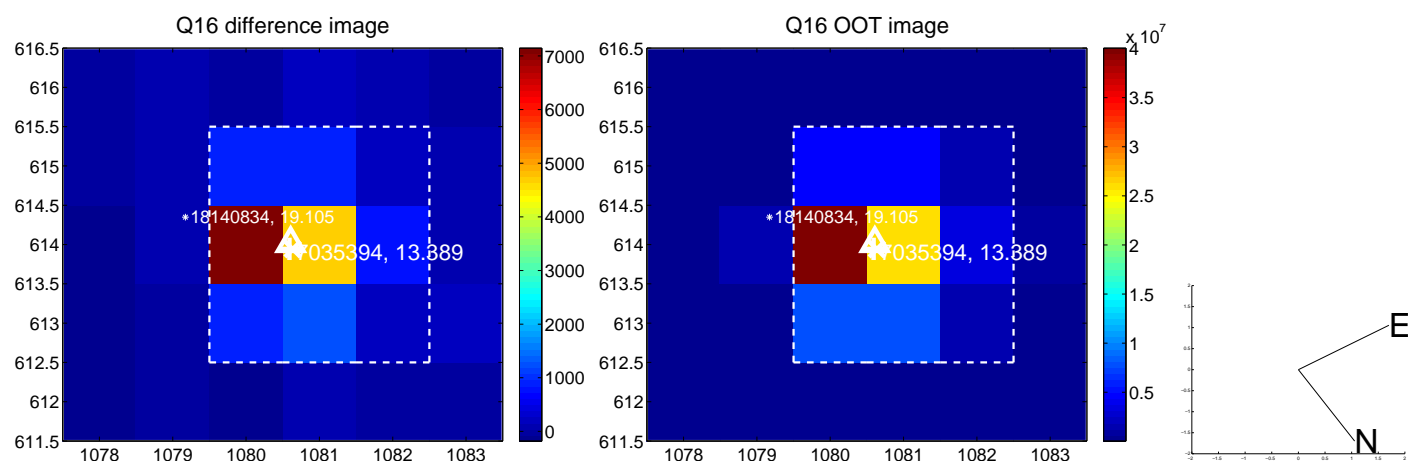
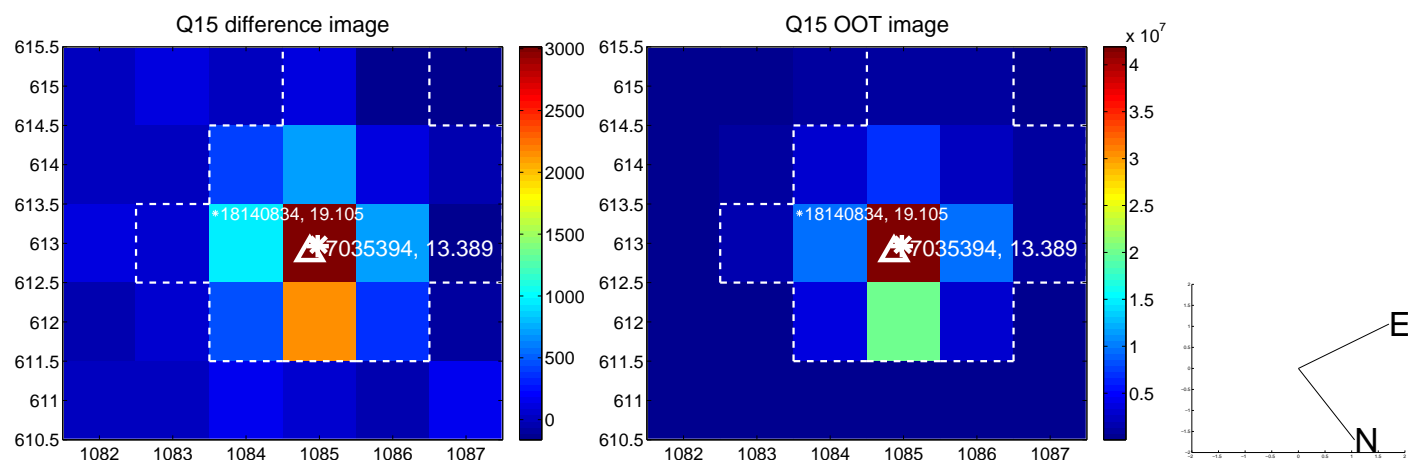
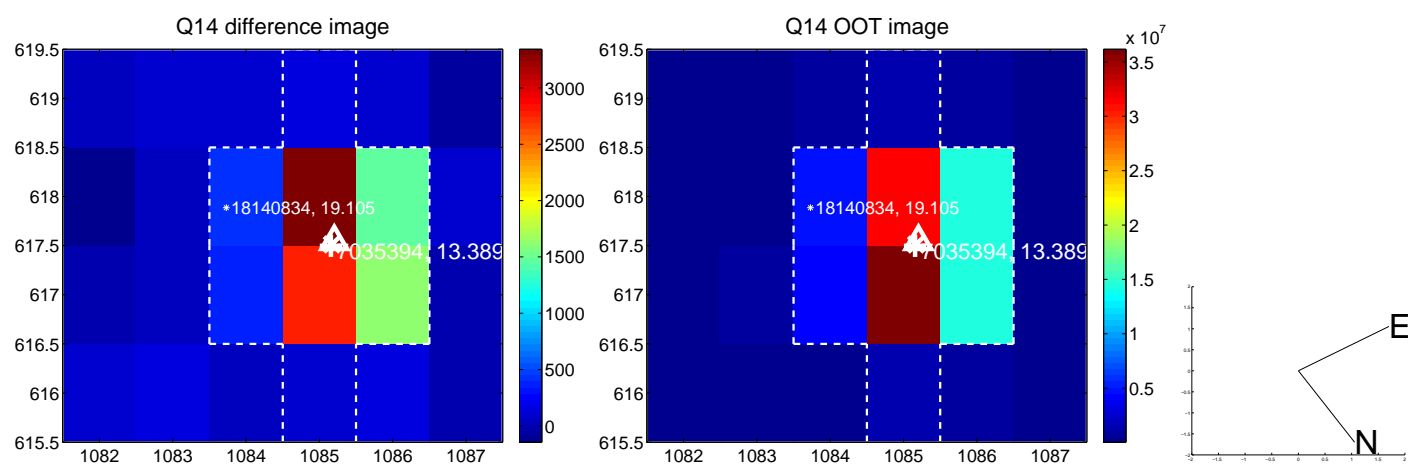
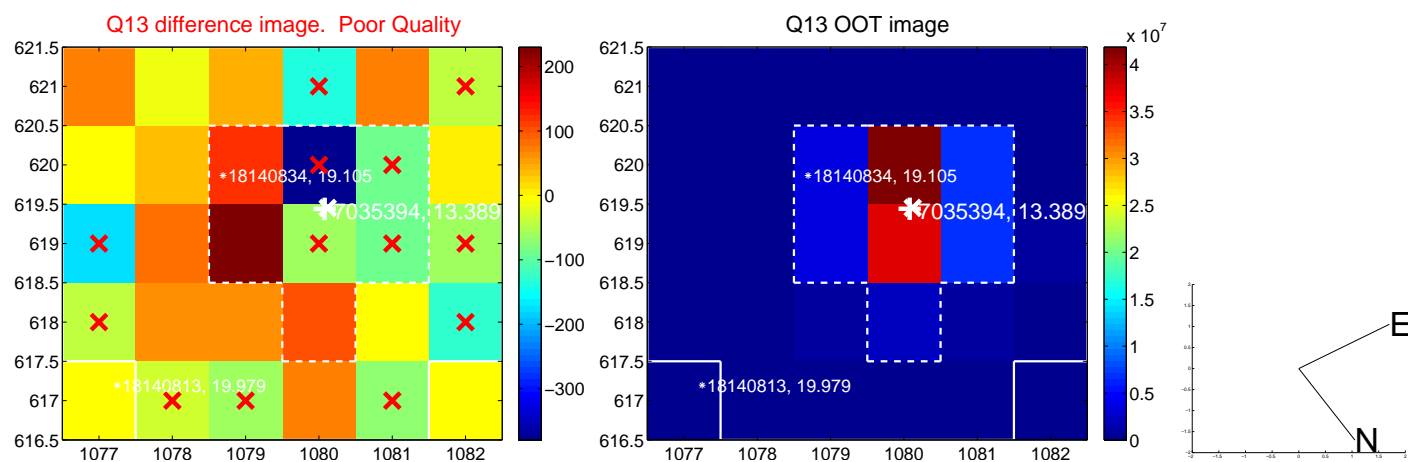




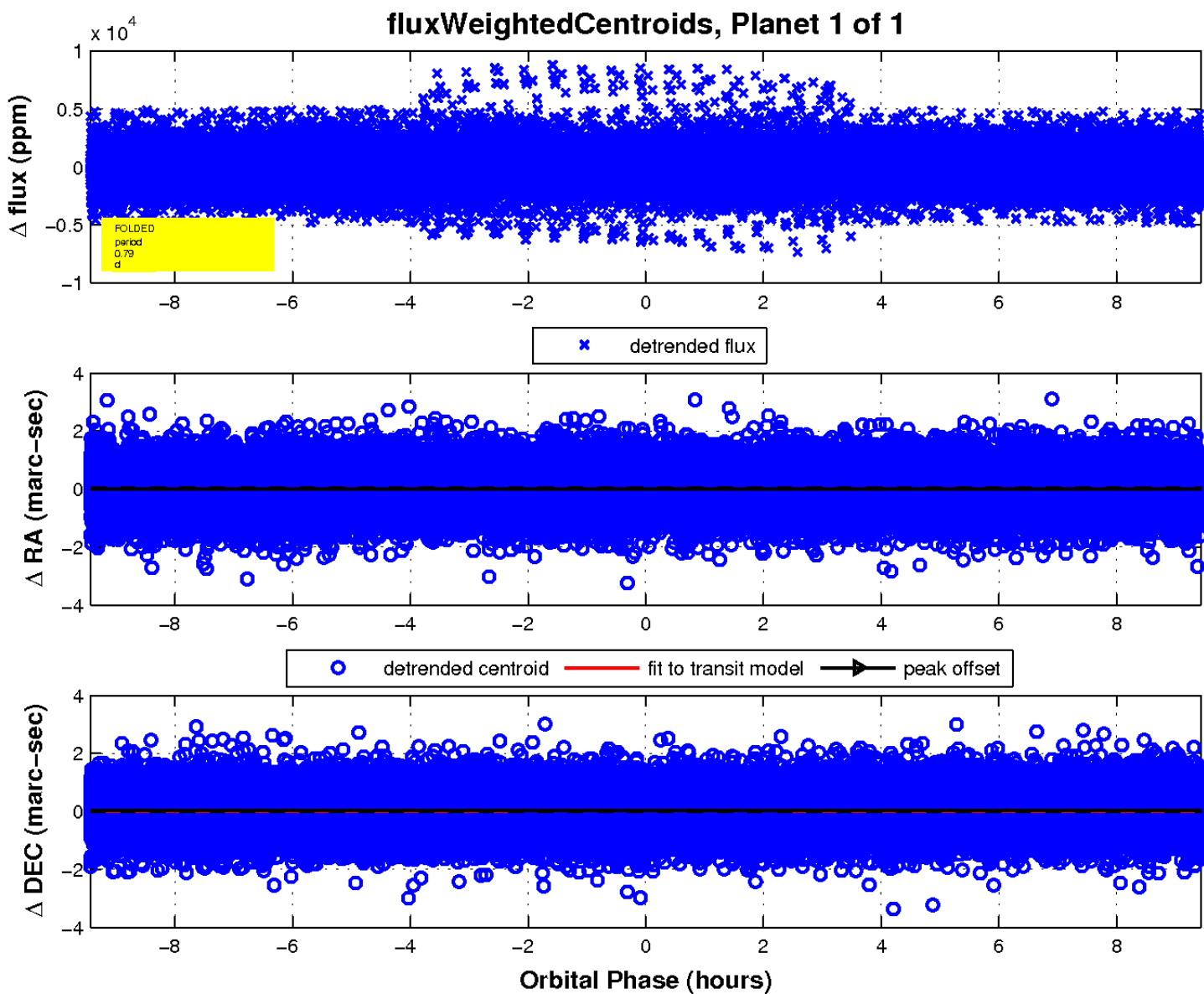
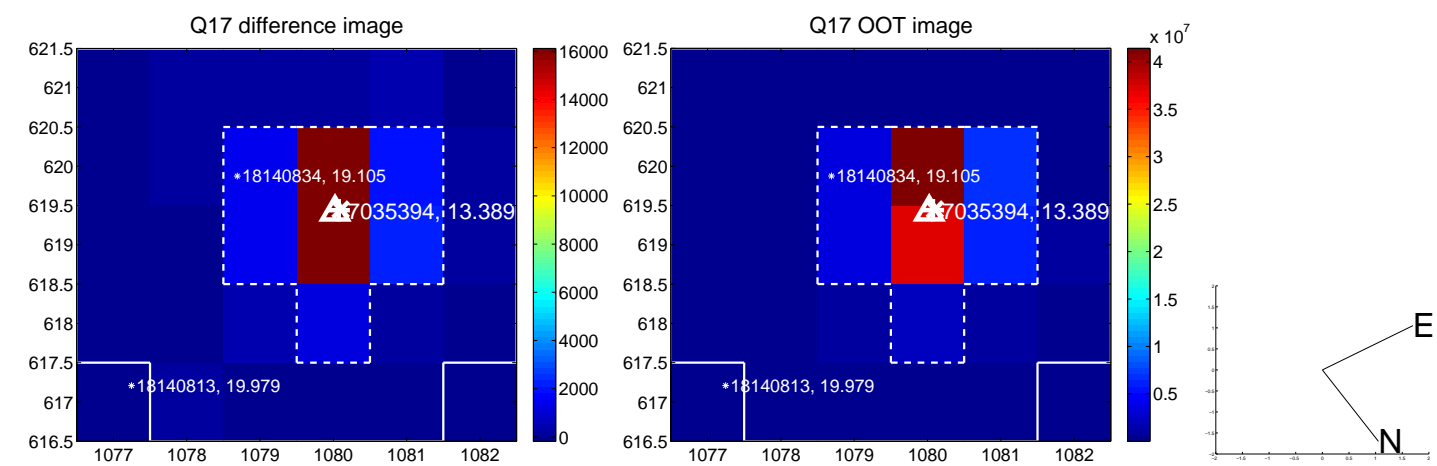
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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UKIRT Image

Declination

