

# KIC 007255336

## 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)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
007255336-01	OBS	0019.01	1.203205	131.521185	2695.5	1.878	1460.9	1208.8	1.35	6218	9.30	4820.06

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007255336-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—CENT_SATURATED

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

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

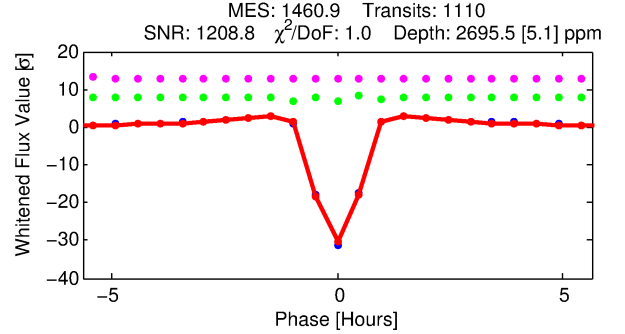
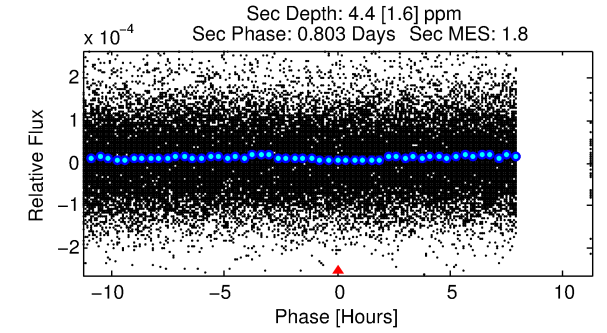
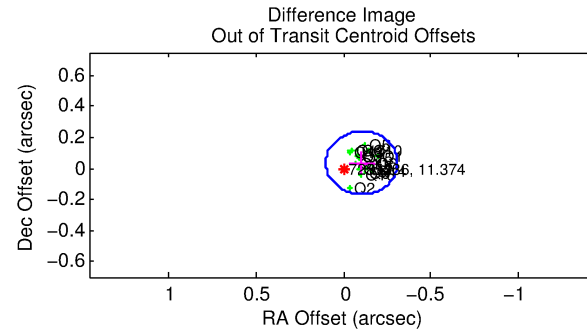
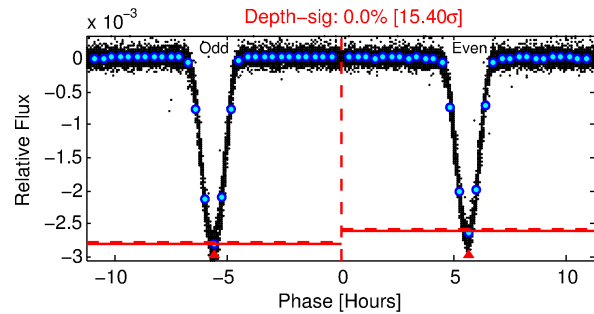
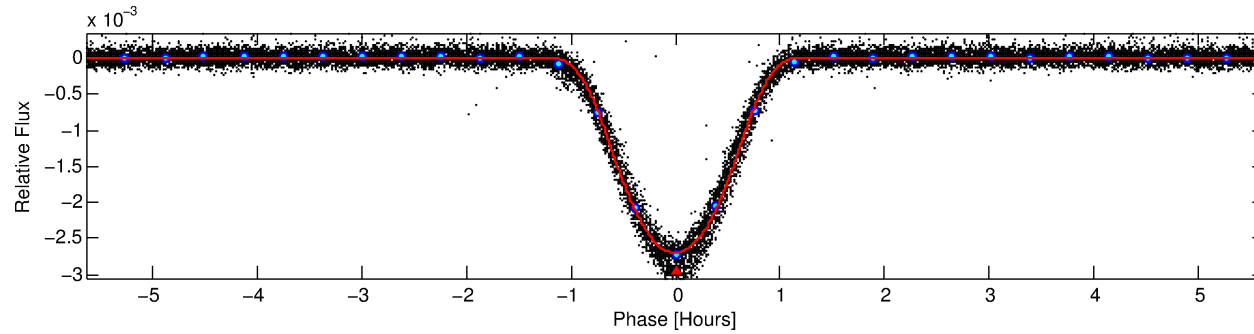
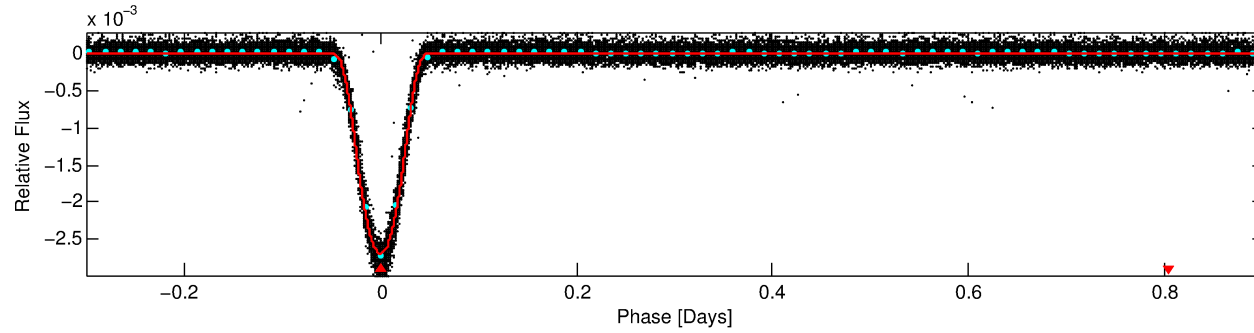
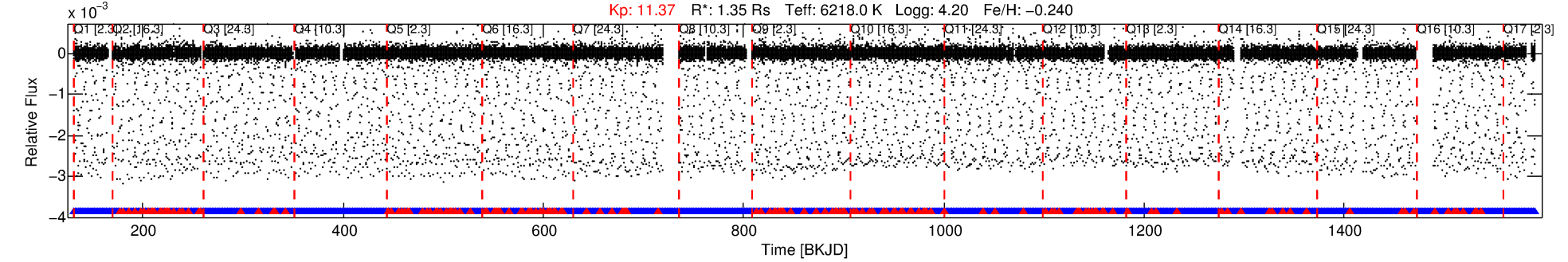
See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

## Ephemeris Match Information For 007255336-01

No Significant Match Found

# DV One-Page Summary

KIC: 7255336 Candidate: 1 of 1 Period: 1.203 d  
KOI: K00019.01 Corr: 0.982



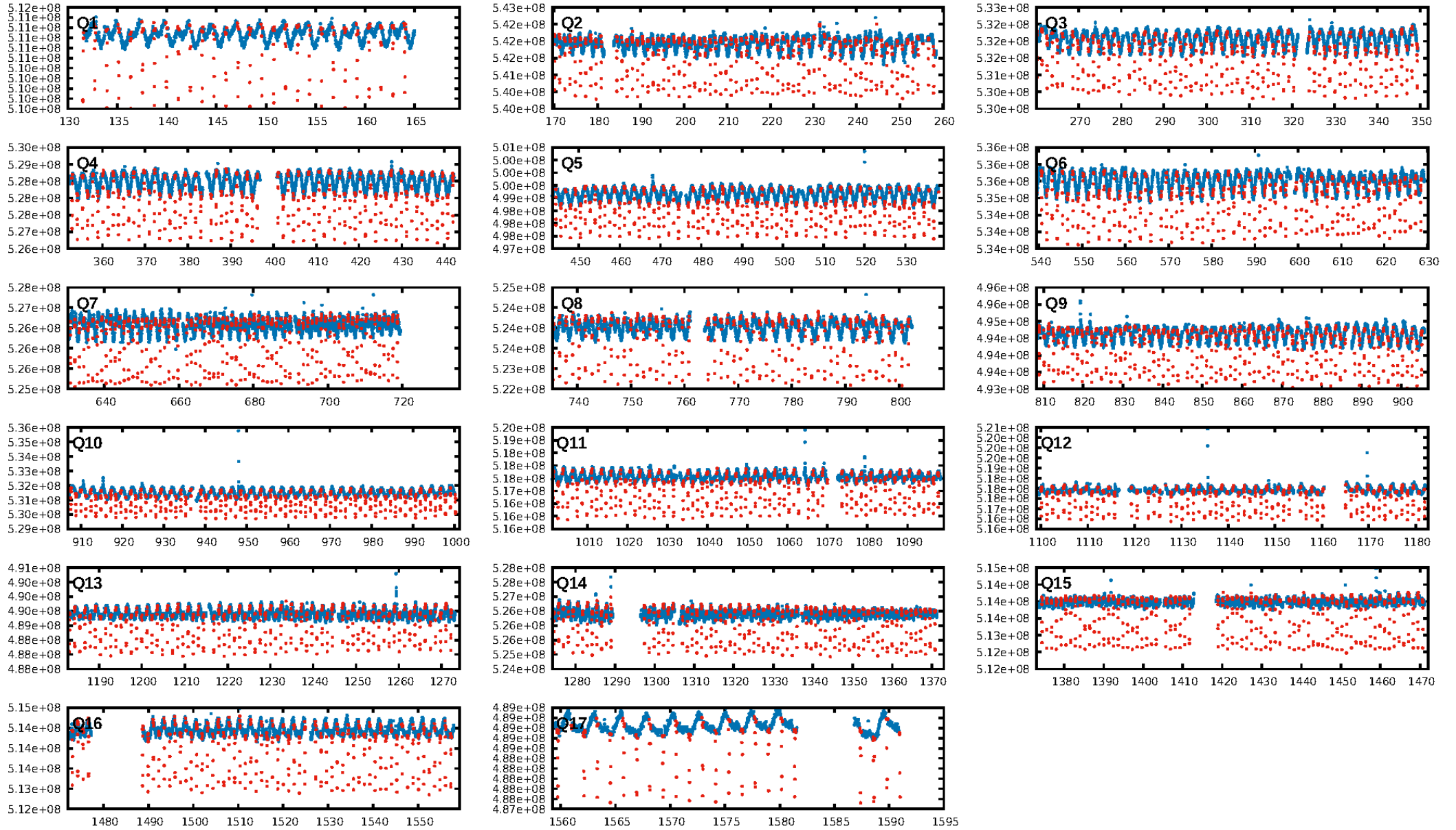
## DV Fit Results:

Period = 1.20321 [0.00000] d  
Epoch = 131.5212 [0.0000] BKJD  
Rp/R\* = 0.0631 [0.0005]  
a/R\* = 2.51 [0.01]  
b = 0.95 [0.00]  
Seff = 4820.06 [1396.25]  
Teff = 2125 [154] K  
Rp = 9.30 [1.67] Re  
a = 0.0225 [0.0039] AU  
Ag = 0.01 [0.01] [-151.04σ]  
Teffp = 1134 [107] K [-5.28σ]

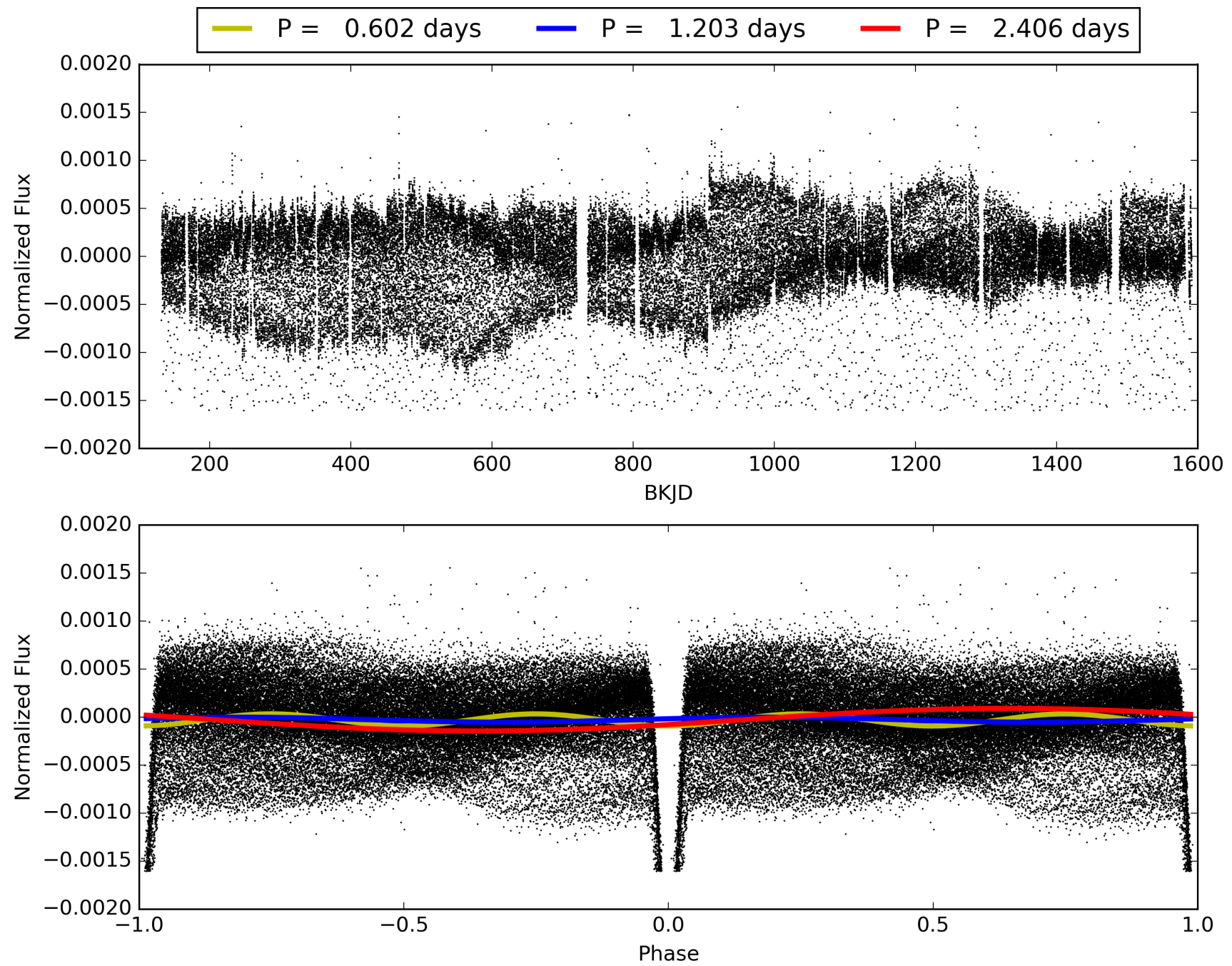
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: 0.00e+00  
RollingBand-fgt: 0.85 [895/1059]  
GhostDiagnostic-chr: 17.43  
Centroid-sig: 0.0%  
Centroid-so: 0.113 arcsec [12.61σ]  
OotOffset-rm: 0.109 arcsec [1.61σ]  
KicOffset-rm: 0.164 arcsec [2.26σ]  
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]

# TCE 007255336-01, PDC Light Curves

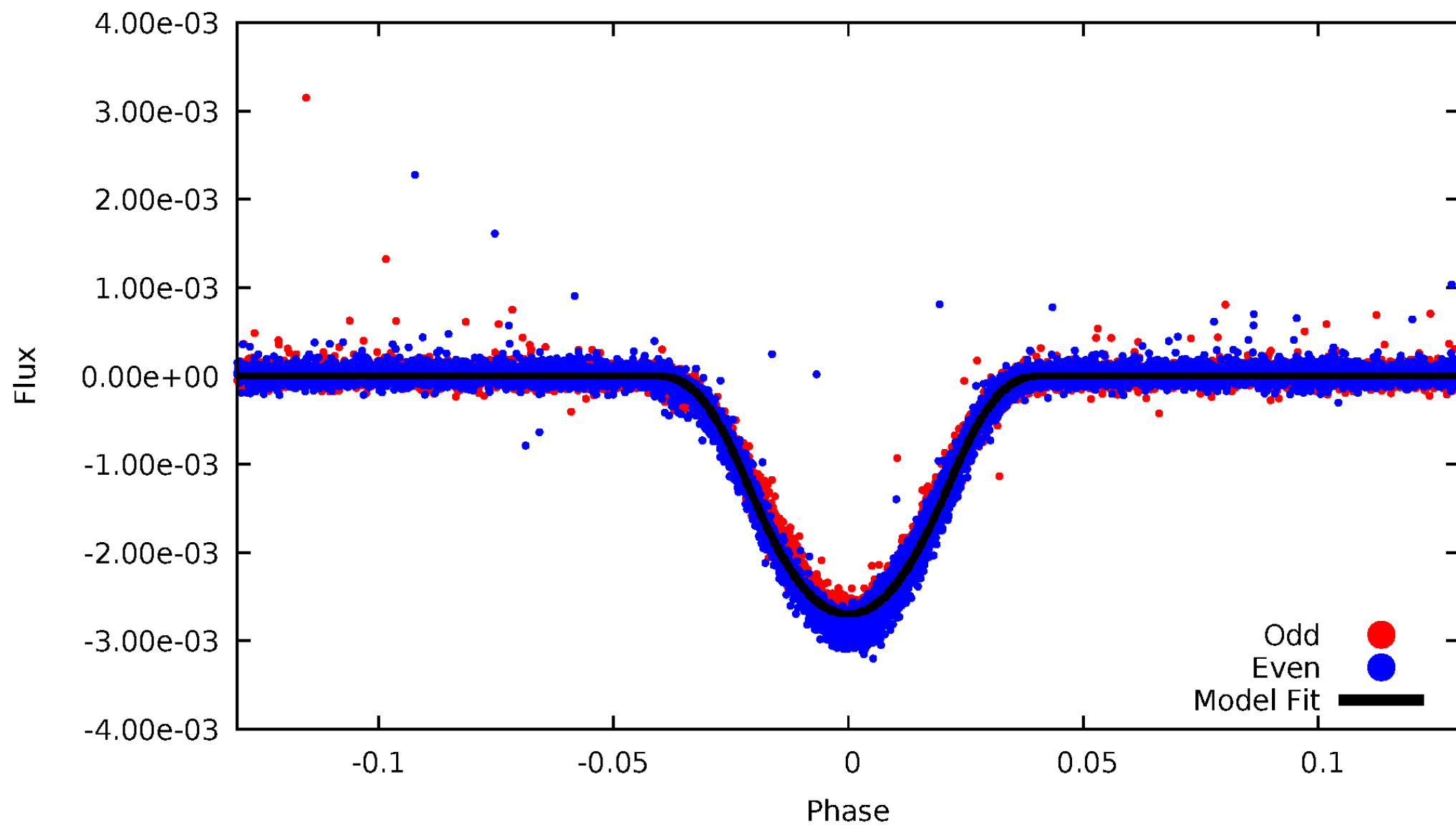


TCE 007255336-01



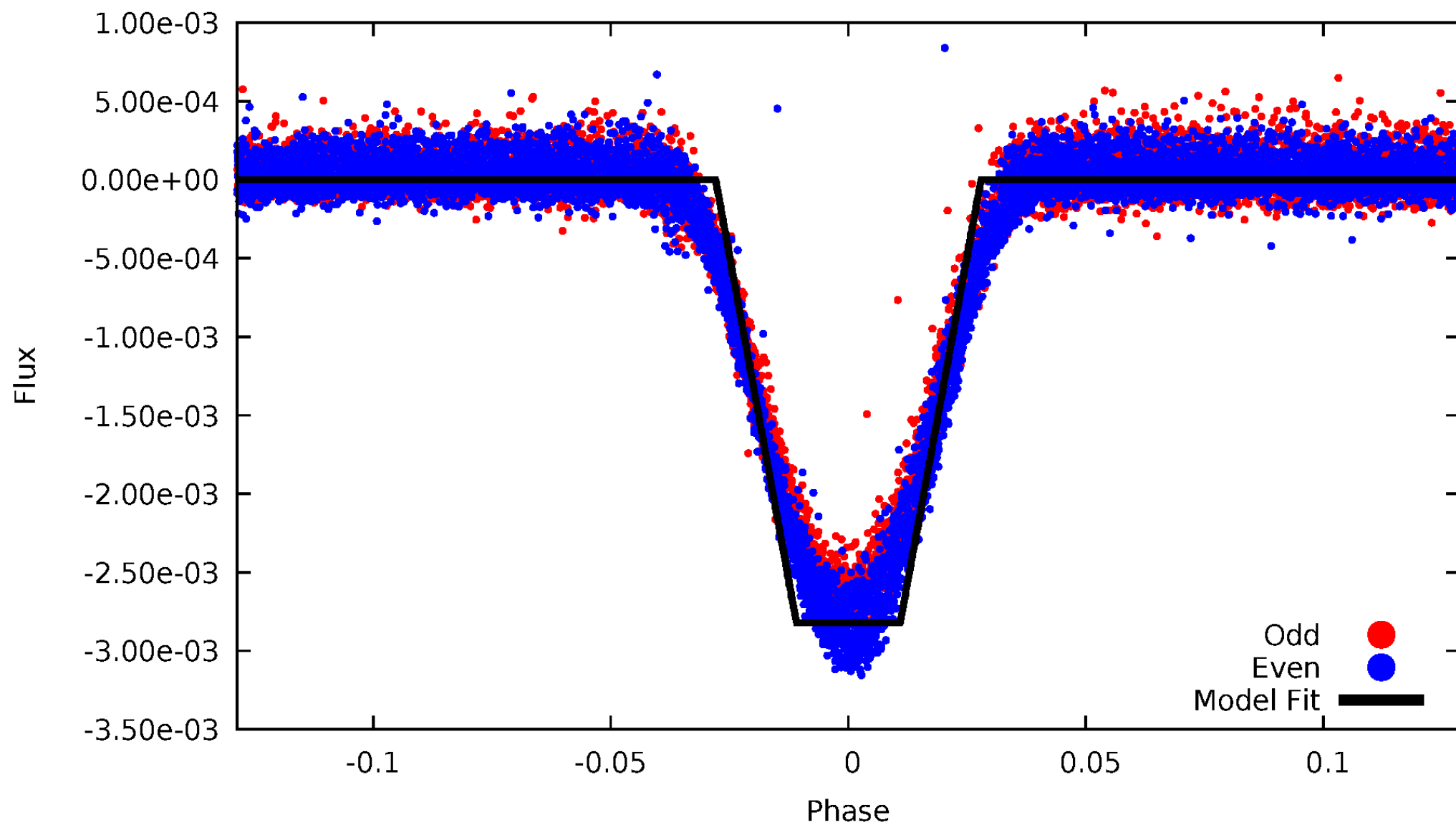
# DV Odd/Even

TCE 007255336-01



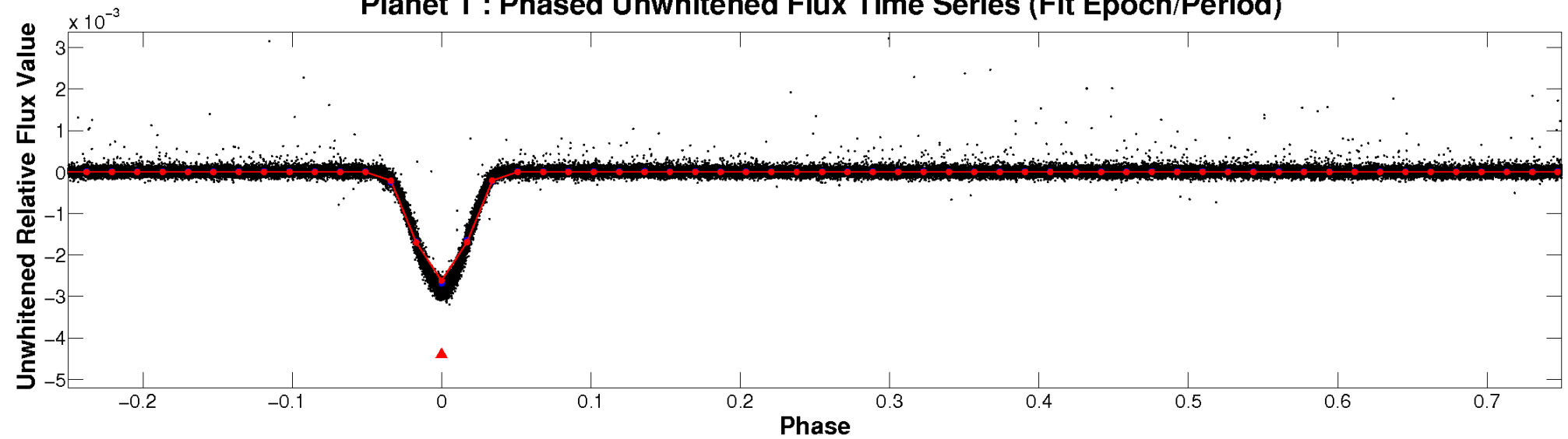
# ALT Odd/Even

TCE 007255336-01

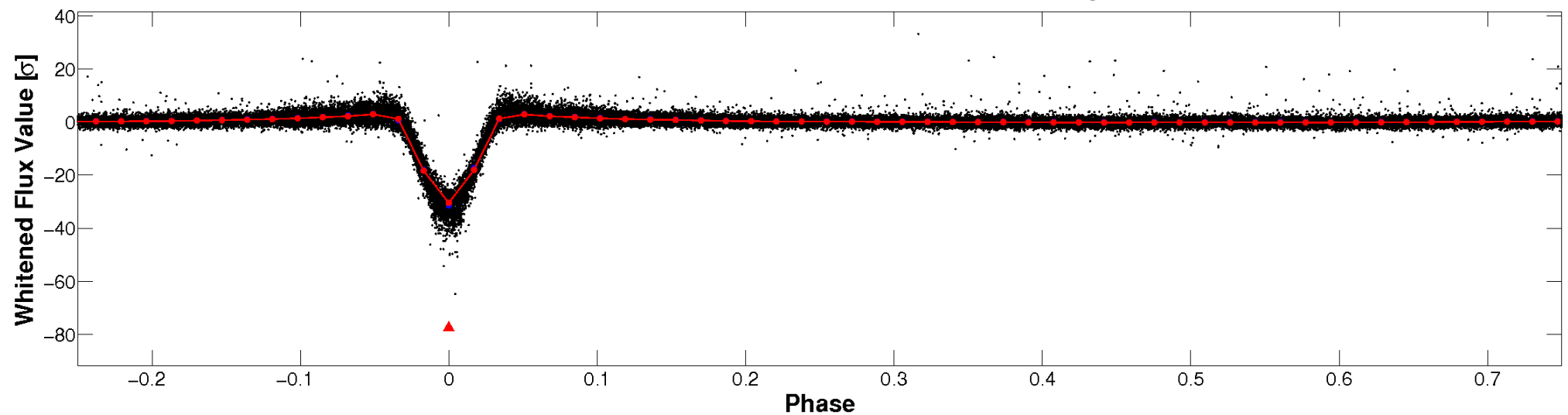


# Non-Whitened Vs. Whitened Light Curve

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



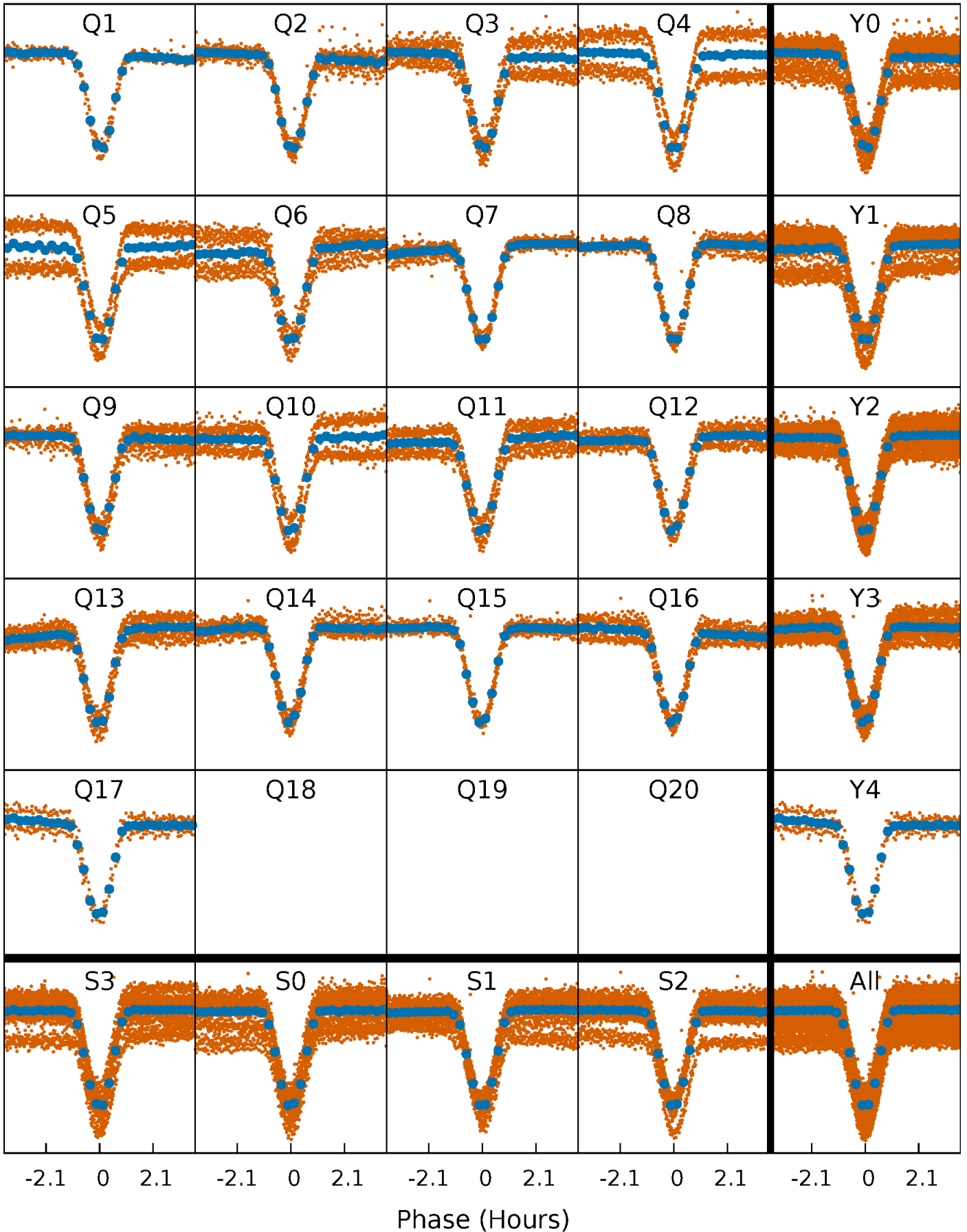
## Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)





# PDC Quarter-Phased Transit Curves

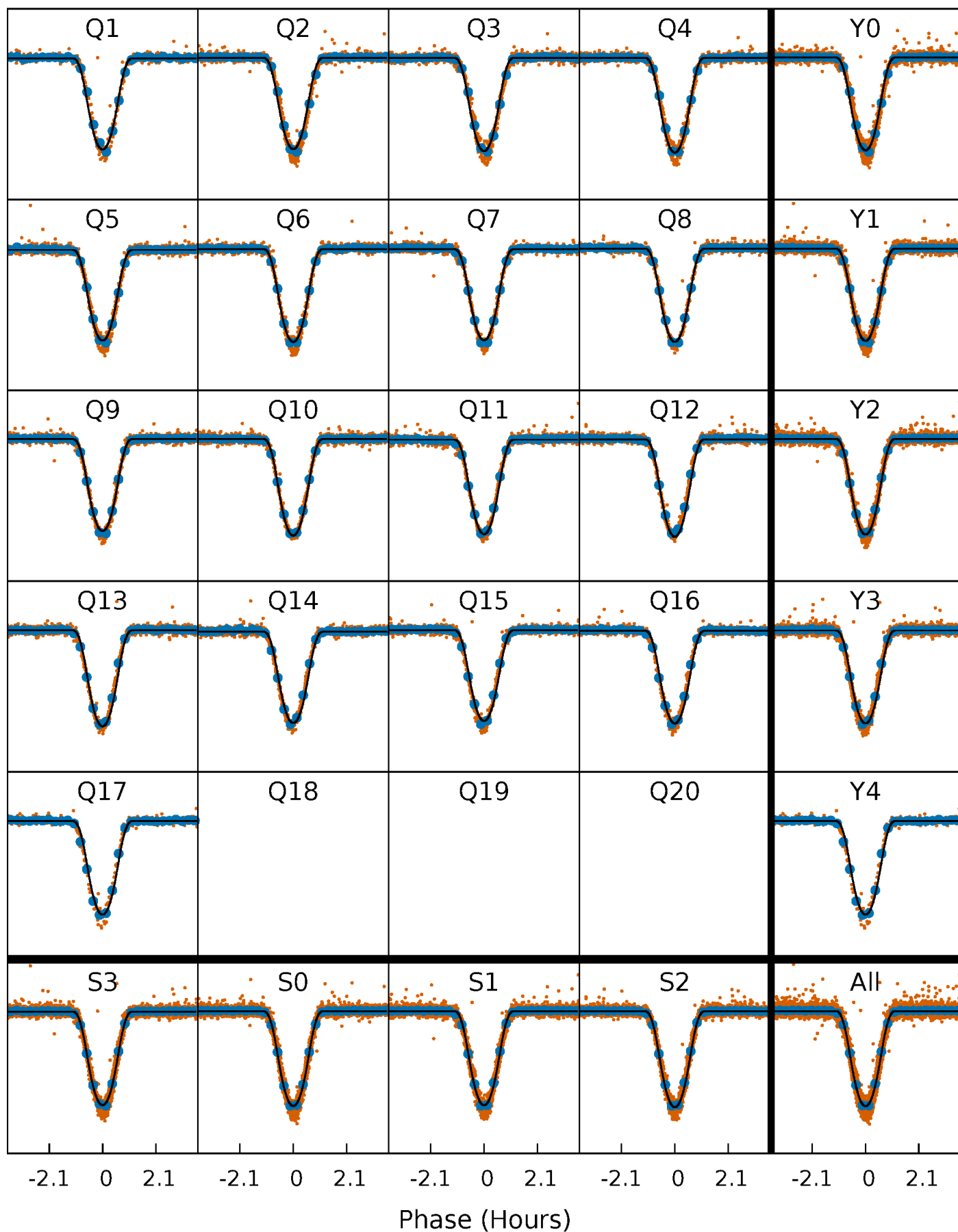
TCE 007255336-01 P= 1.203205 Days  $T_0=131.521185$  (BKJD)





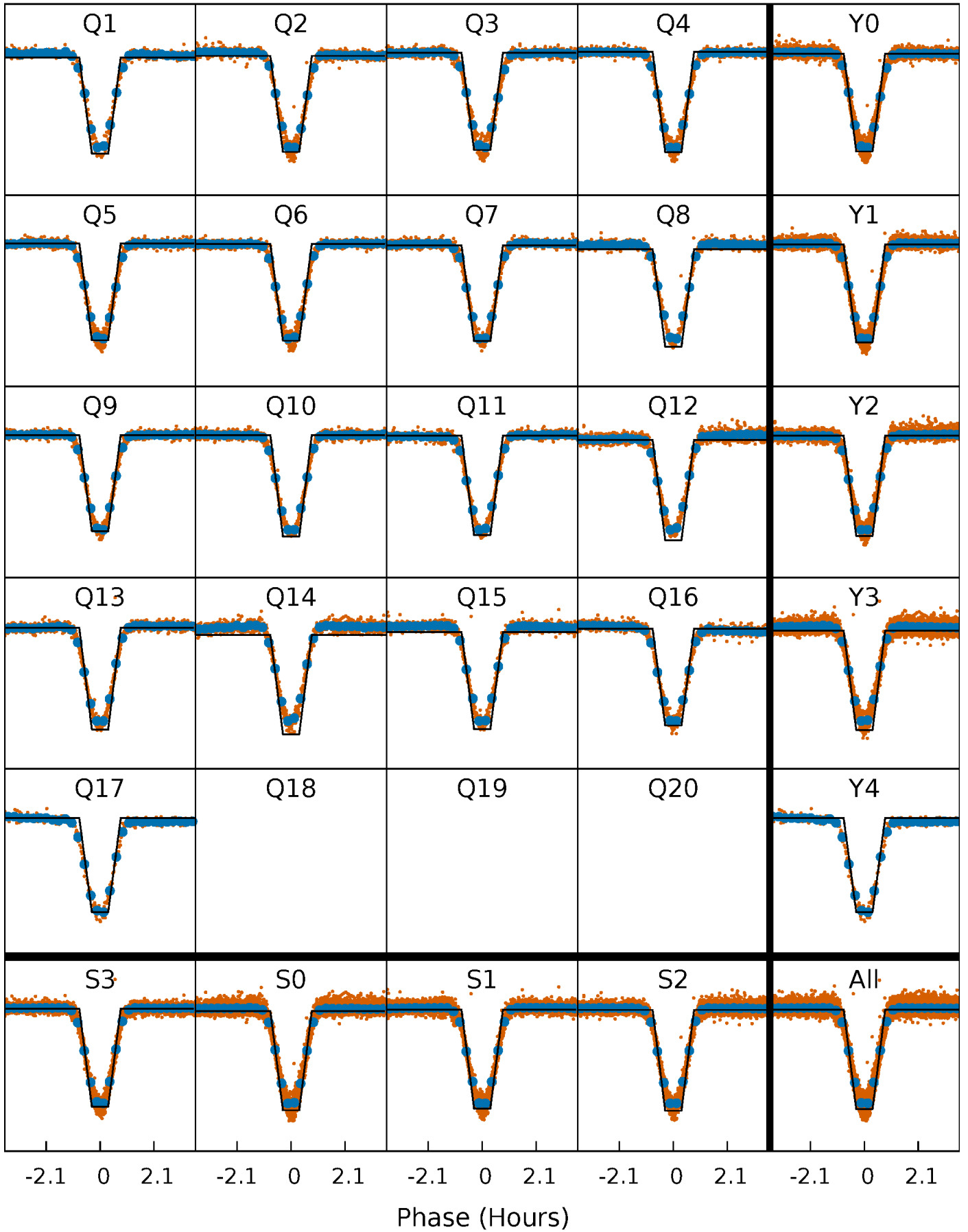
# DV Quarter-Phased Transit Curves

TCE 007255336-01 P= 1.203205 Days  $T_0=131.521185$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

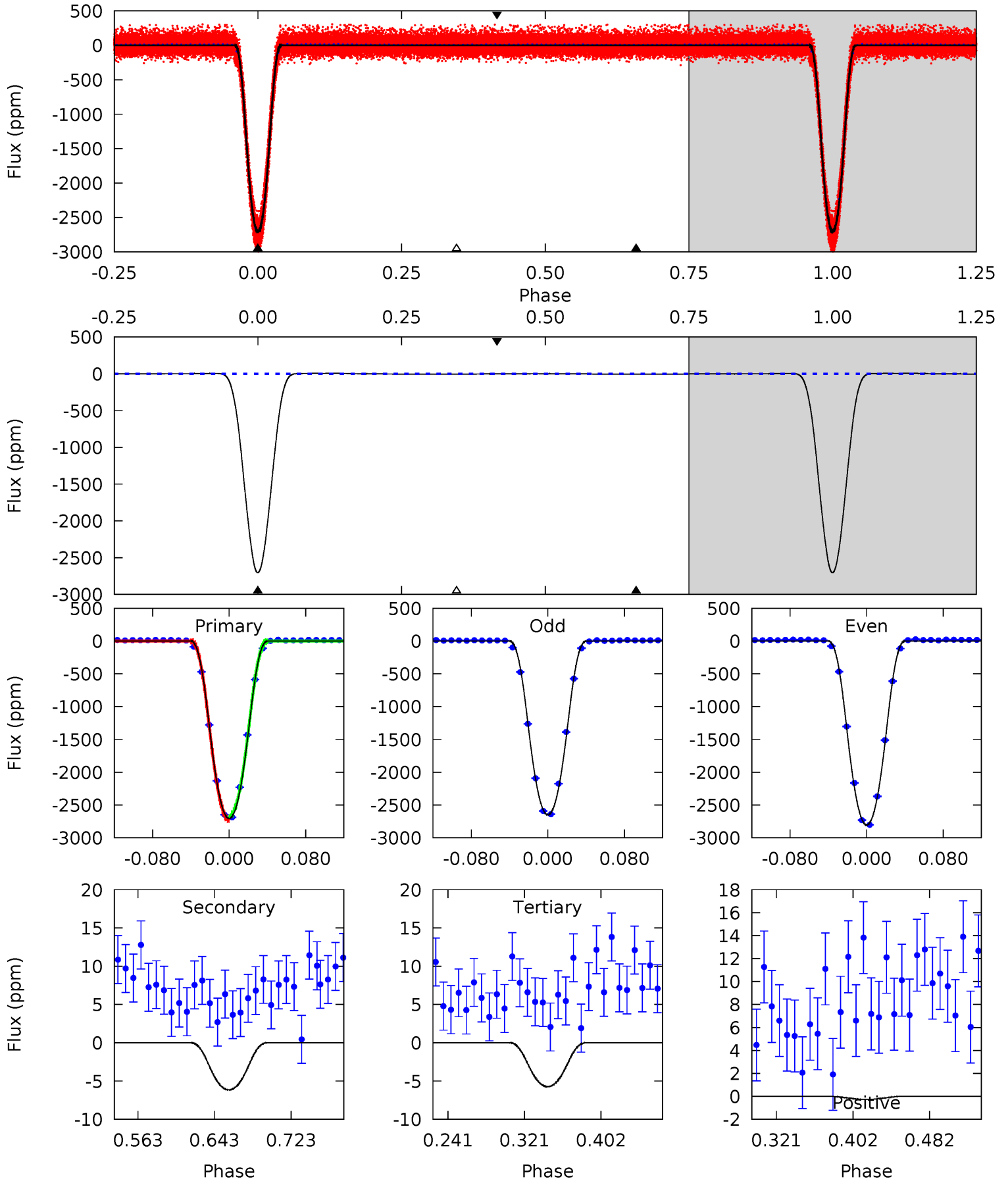
TCE 007255336-01 P= 1.203202 Days  $T_0=131.522754$  (BKJD)



# DV Model-Shift Uniqueness Test

007255336-01, P = 1.203205 Days, E = 130.317980 Days

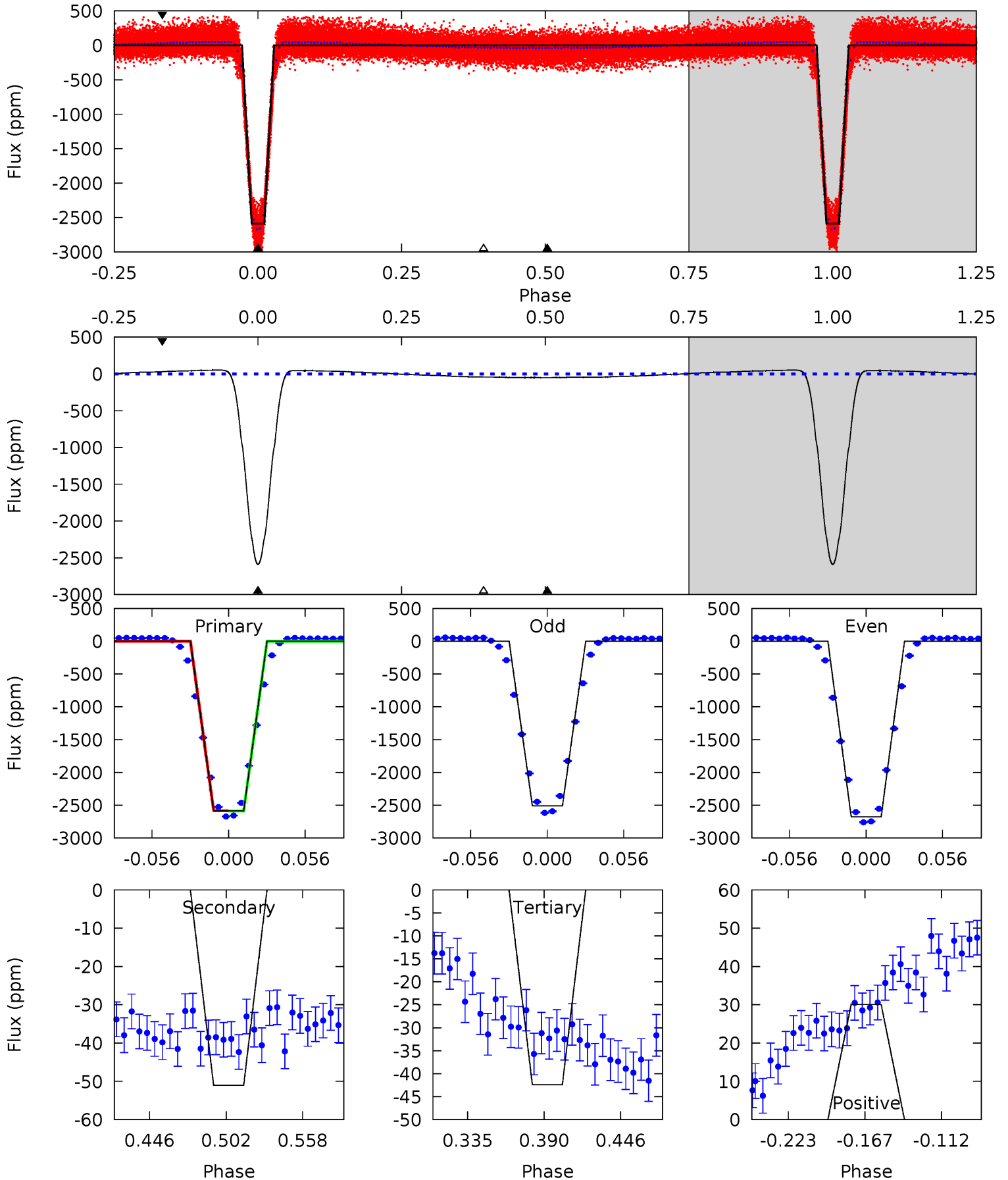
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2631	5.99	5.57	-0.25	4.61	1.75	3.16	2626	2631	0.42	6.24	75.7	1.00	0.00	29.6



# Alt Model-Shift Uniqueness Test

007255336-01, P = 1.203202 Days, E = 130.319552 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
1480	29.2	24.2	17.2	4.69	1.91	18.8	1455	1462	4.95	12.0	46.8	1.00	0.02	1.74



### Stellar Parameters For KIC 007255336

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$6218^{+124}_{-137}$	$4.198^{+0.162}_{-0.108}$	$-0.240^{+0.150}_{-0.150}$	$1.349^{+0.242}_{-0.242}$	$1.045^{+0.104}_{-0.078}$	$0.600^{+0.479}_{-0.193}$
	+2%/-2%	+4%/-3%	+62%/-62%	+18%/-18%	+10%/-7%	+80%/-32%
Source	SPE18	SPE18	SPE18	DSEP		

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

### Secondary Eclipse Parameters for KIC 007255336-01 / KOI 0019.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-6 \pm 1$	$9.18^{+0.90}_{-0.96}$	$2946^{+146}_{-162}$	$-3030^{+101}_{-88}$	$0.020^{+0.006}_{-0.004}$
Alt.	$-51 \pm 2$	$7.77^{+0.76}_{-0.81}$	$2953^{+135}_{-173}$	$-2503^{+527}_{-194}$	$0.236^{+0.055}_{-0.037}$

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

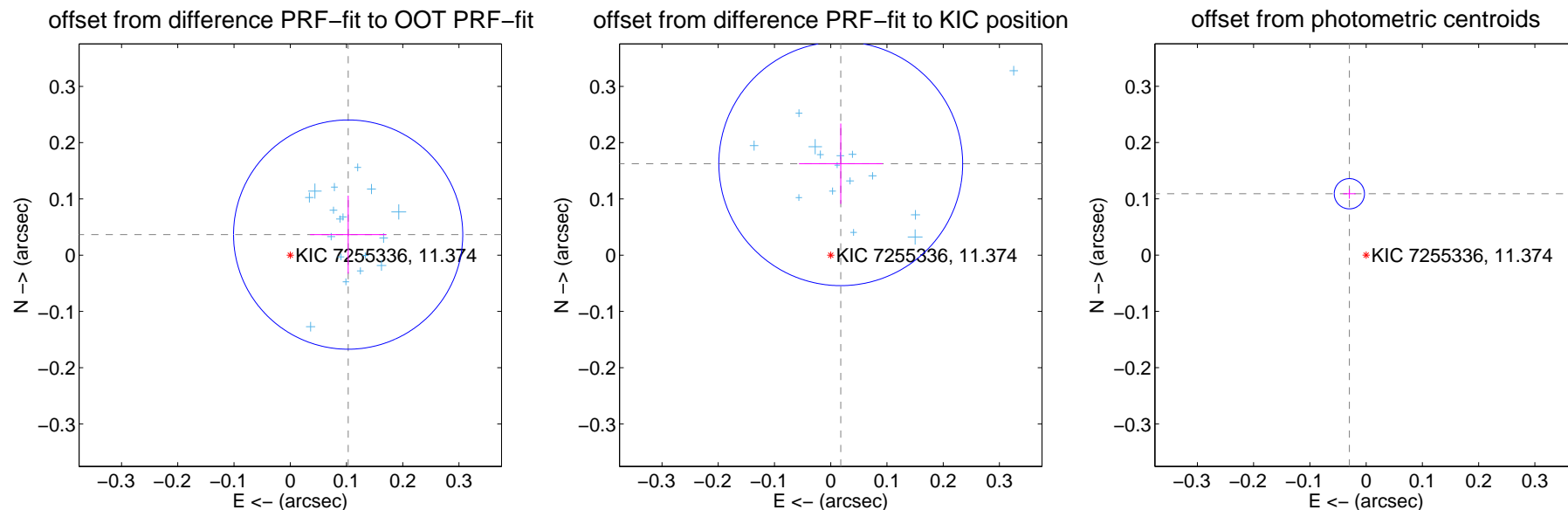
## DV Centroid Data

Supplemental centroid analysis for 007255336-01. **Kepler magnitude: 11.37.** Transit SNR 1208.80

There are 17 quarters with good PRF difference image offsets

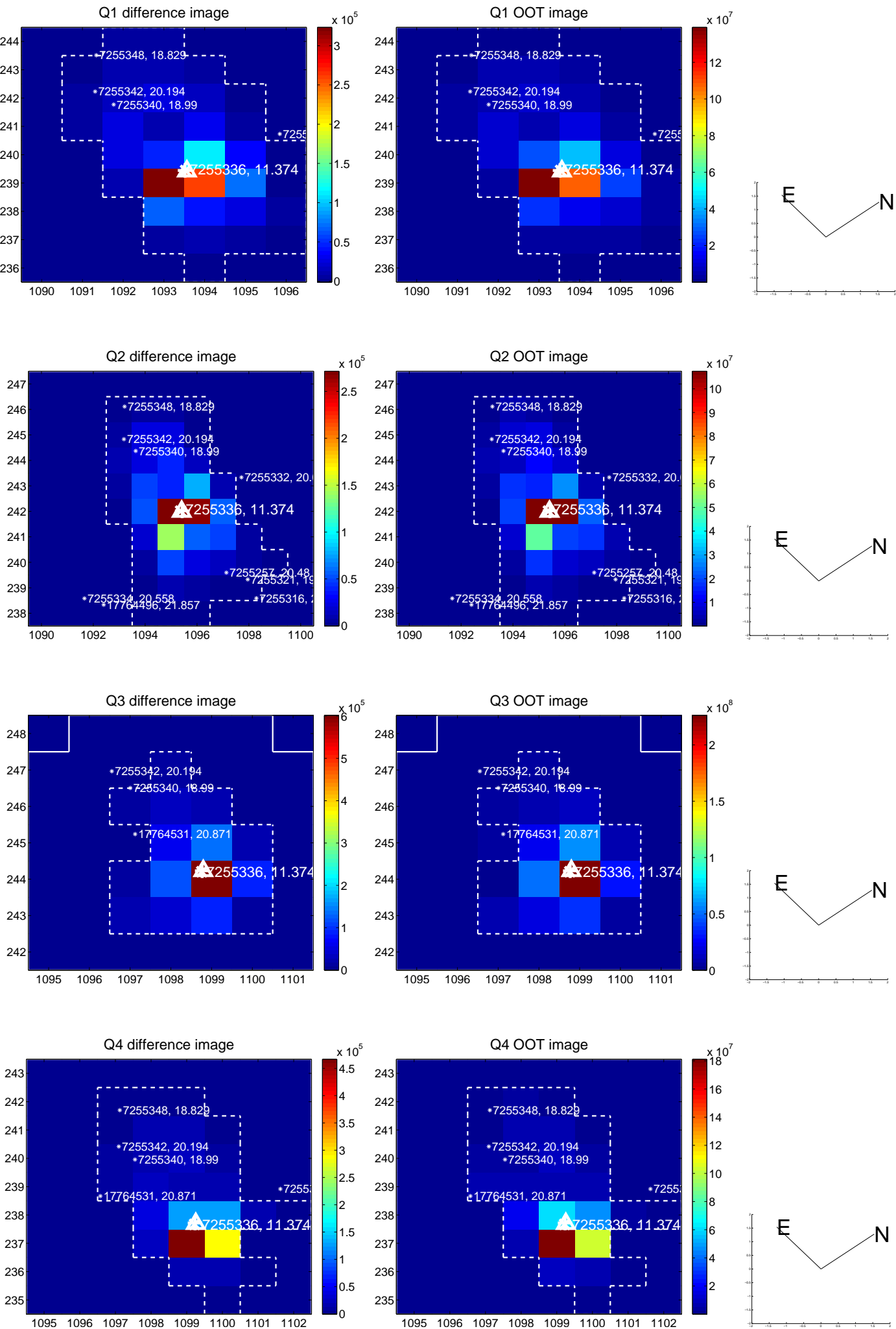
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	$0.109 \pm 0.068$	1.61	$-0.103 \pm 0.068$	$0.037 \pm 0.069$
PRF-fit source offset from KIC position	$0.164 \pm 0.072$	2.26	$-0.018 \pm 0.074$	$0.163 \pm 0.071$
photometric centroid source offset	<b><math>0.11 \pm 0.01</math></b>	<b>12.61</b>	$0.03 \pm 0.01$	$0.11 \pm 0.01$



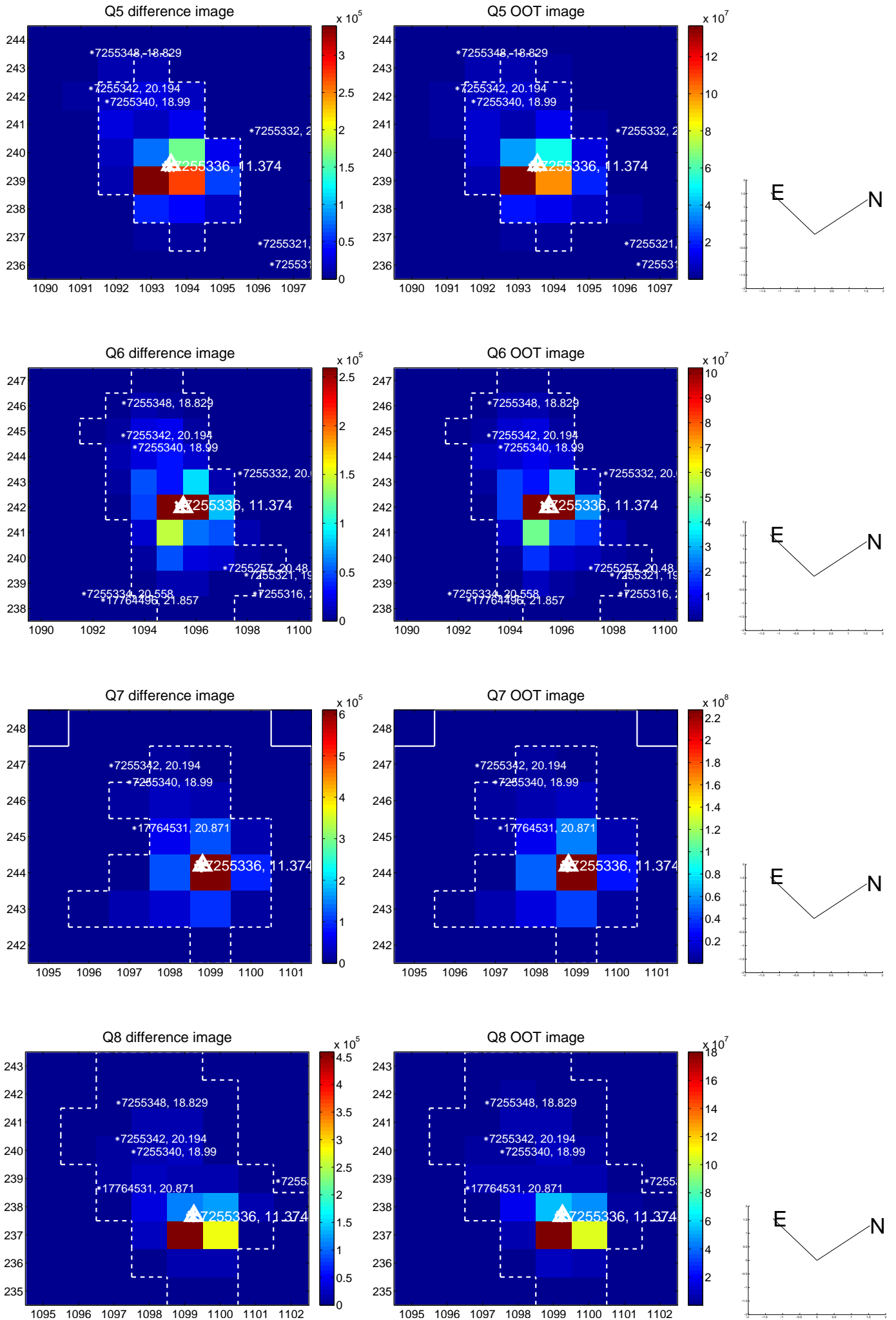
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: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

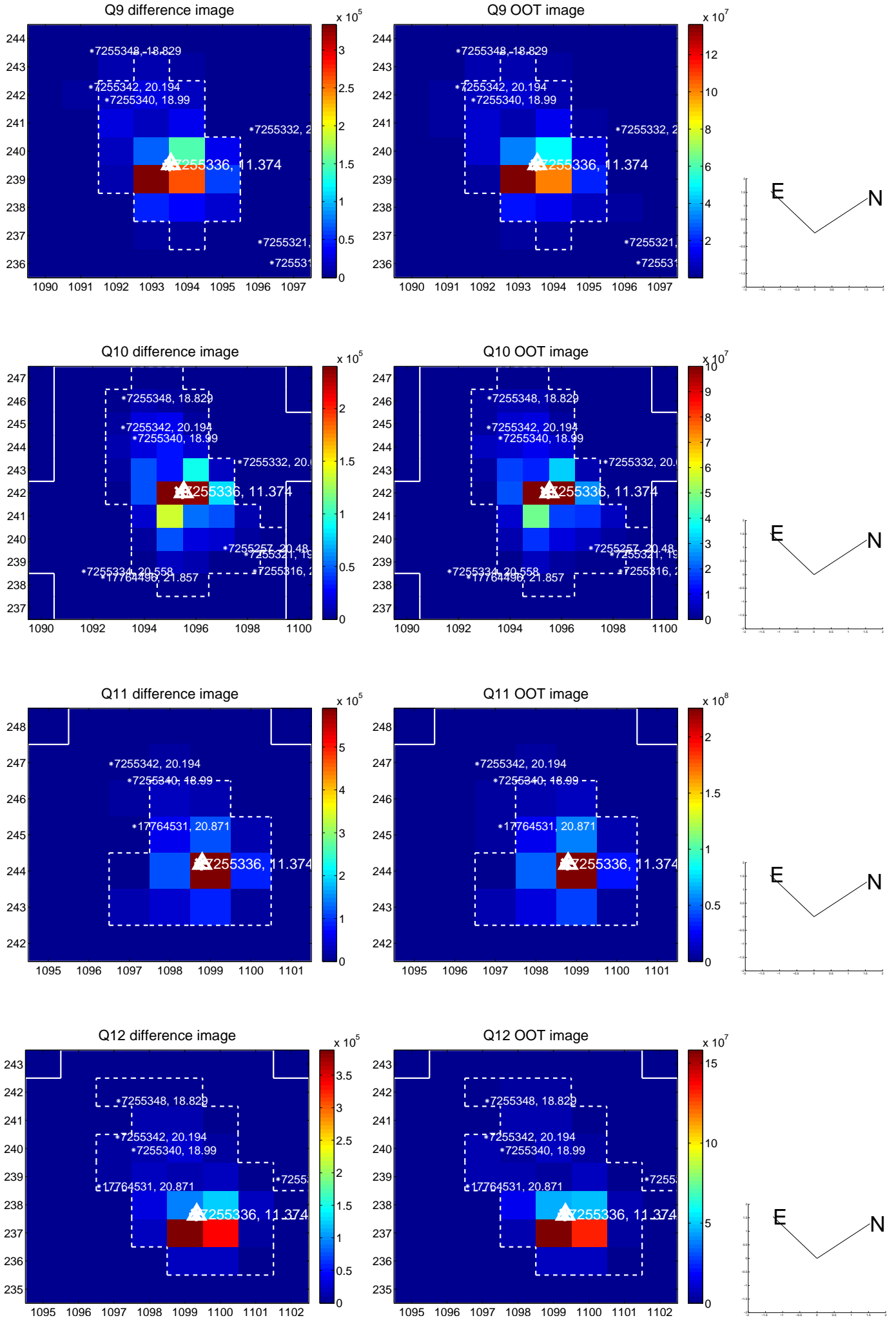




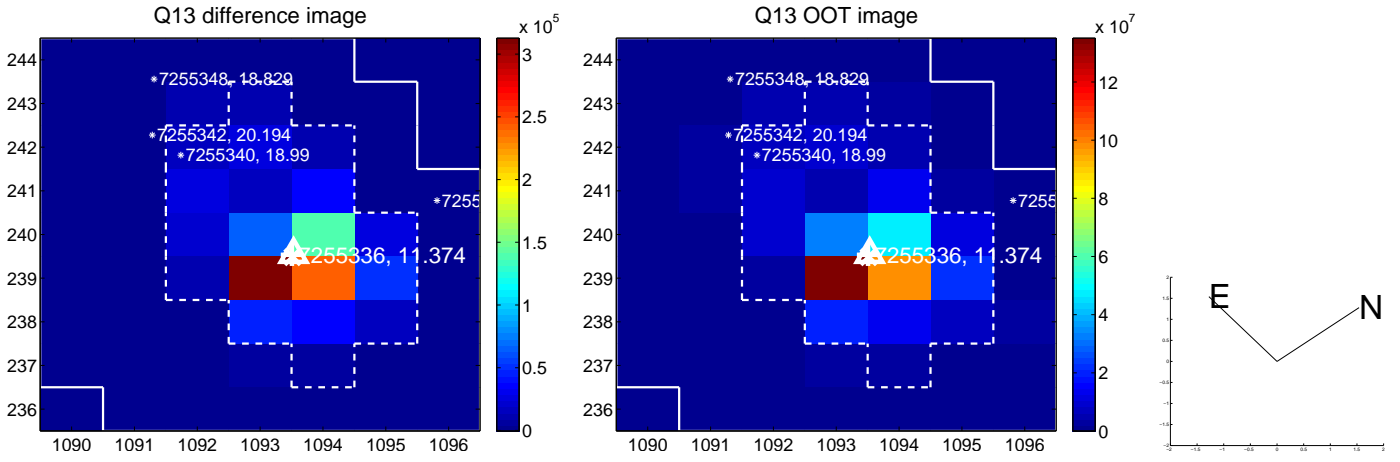
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



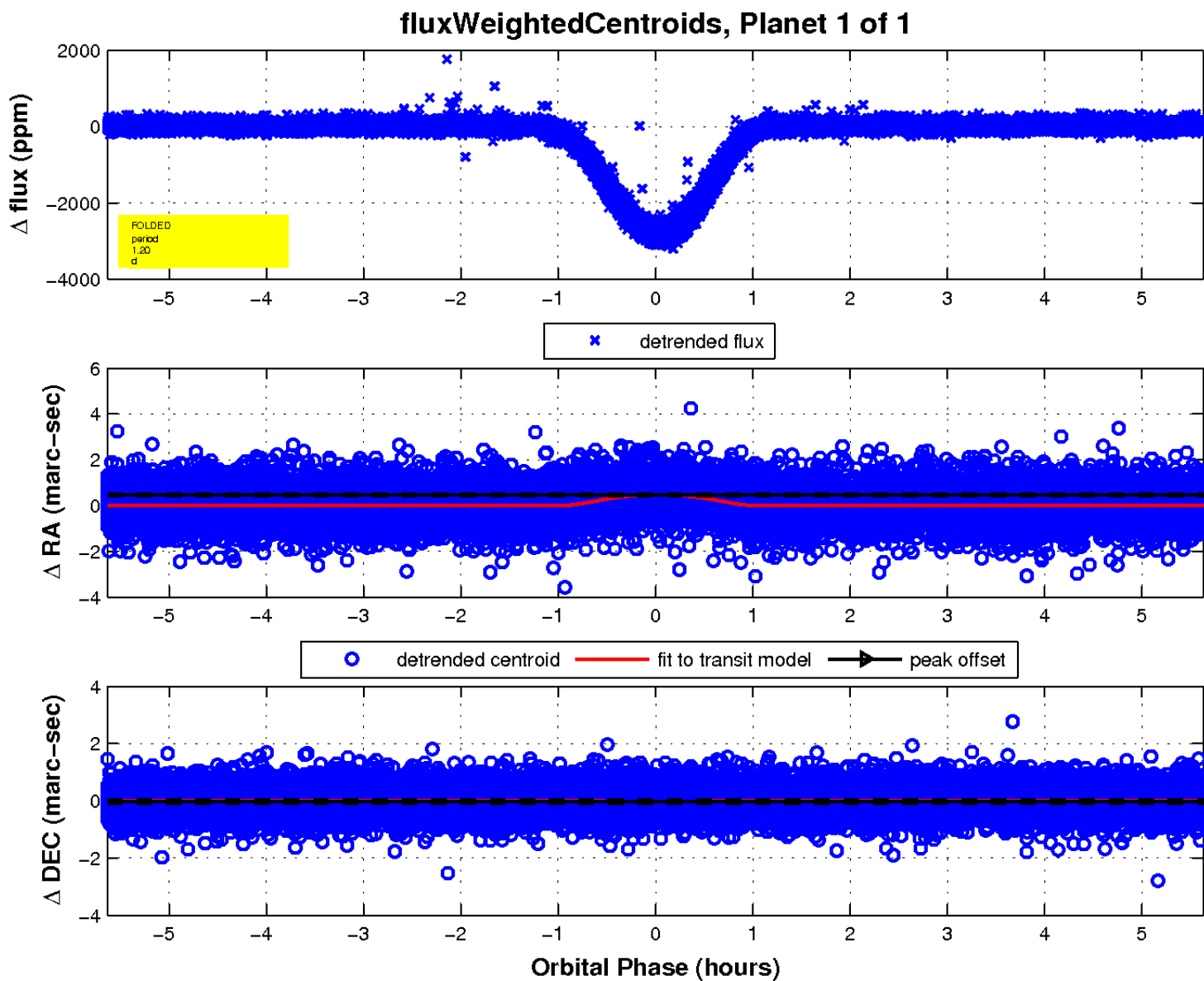
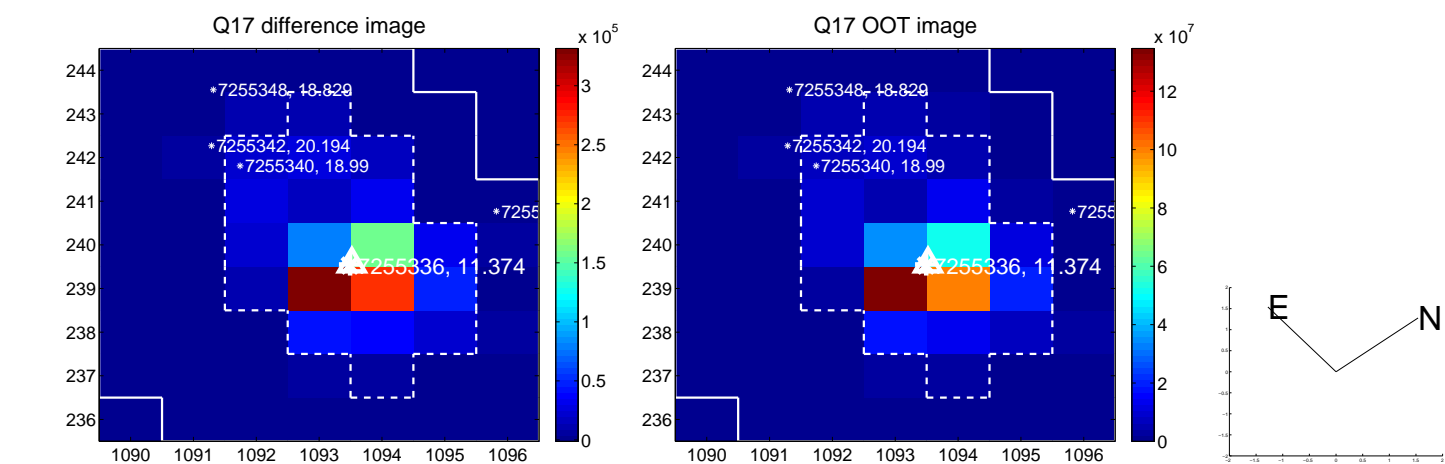
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



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



UKIRT Image

Declination

