

KIC 010748390

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})
010748390-01	OBS	0003.01	4.887803	134.588814	4364.7	2.406	2034.6	1792.0	0.76	4778	5.07	96.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010748390-01	OBS	PC	0.91	0	0	0	0	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 for comment definitions.

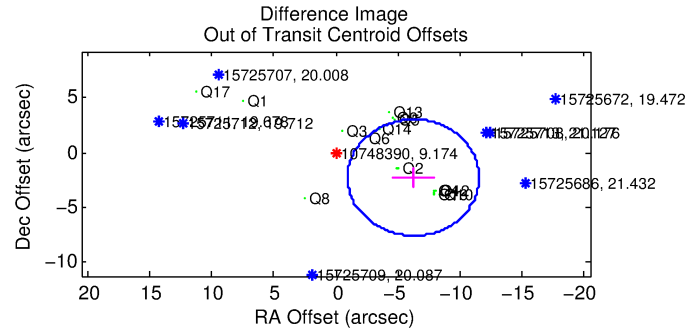
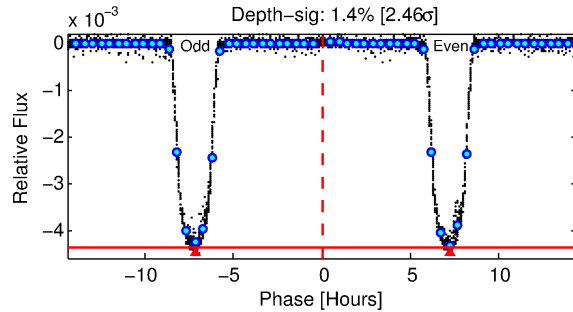
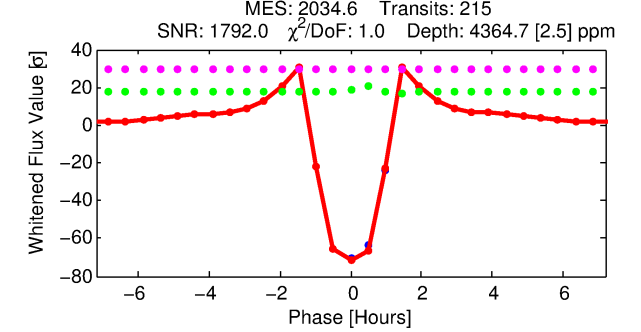
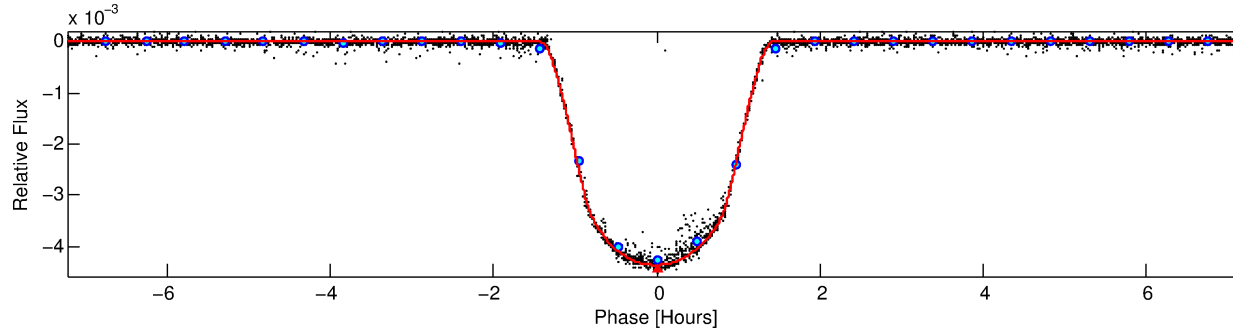
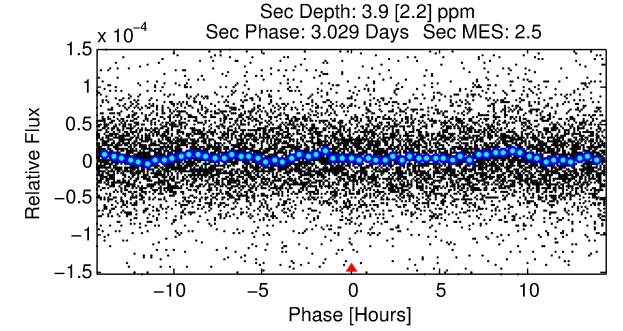
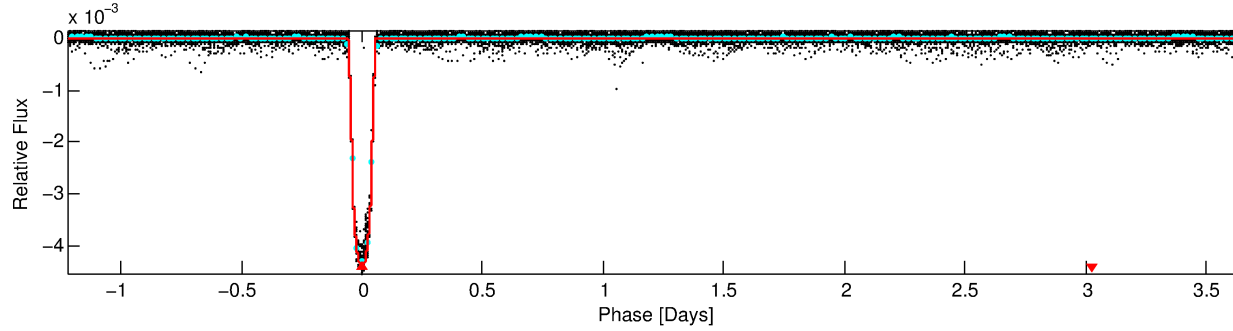
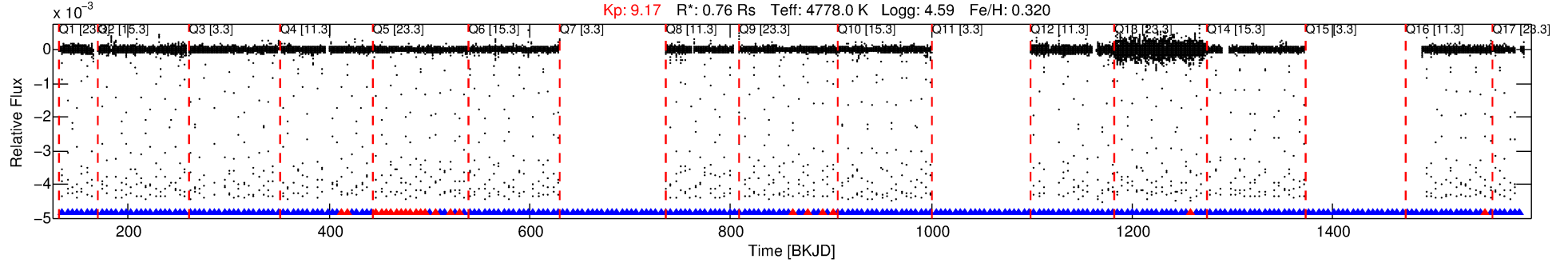
Ephemeris Match Information For 010748390-01

No Significant Match Found

DV One-Page Summary

KIC: 10748390 Candidate: 1 of 1 Period: 4.888 d
KOI: K00003.01 Name: Kepler-3b Corr: 0.991

Kp: 9.17 R*: 0.76 Rs Teff: 4778.0 K Logg: 4.59 Fe/H: 0.320



DV Fit Results:

Period = 4.88780 [0.00000] d
Epoch = 134.5888 [0.0000] BKJD
Rp/R* = 0.0609 [0.0004]
a/R* = 14.52 [0.27]
b = 0.50 [0.03]
Seff = 96.99 [9.69]
Teq = 800 [20] K
Rp = 5.07 [0.19] Re
a = 0.0529 [0.0020] AU
Ag = 0.23 [0.13] [-5.86σ]
Teff = 860 [121] K [0.48σ]

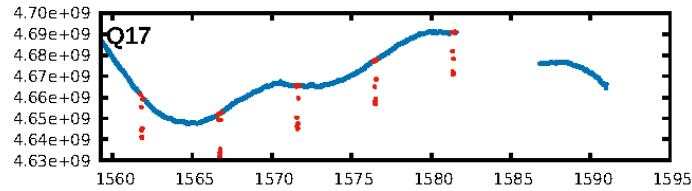
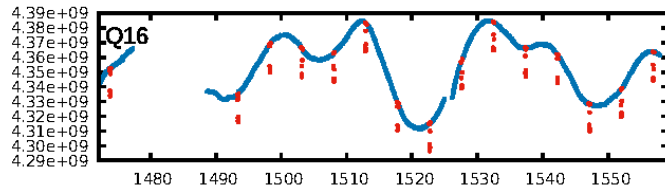
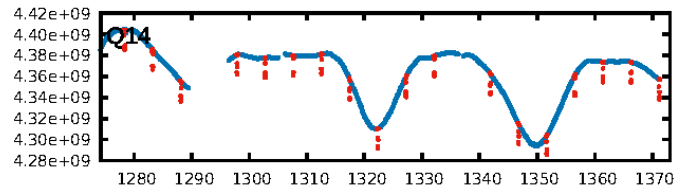
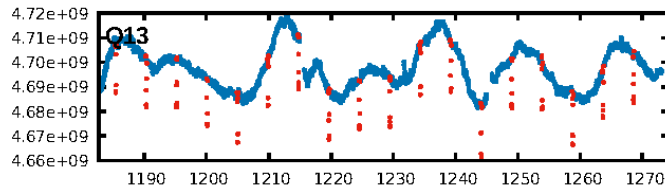
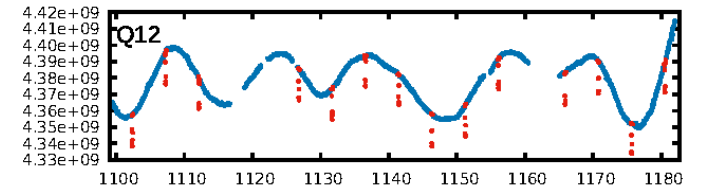
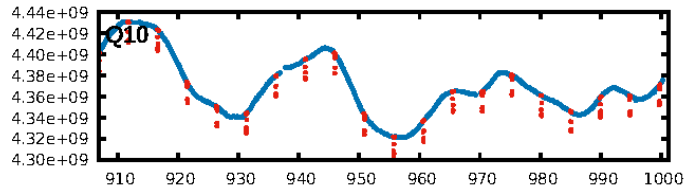
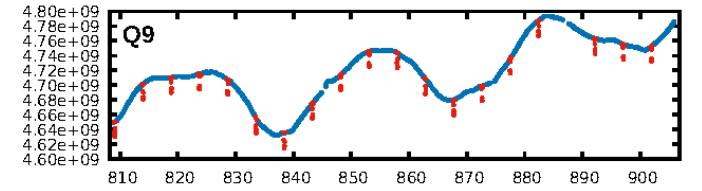
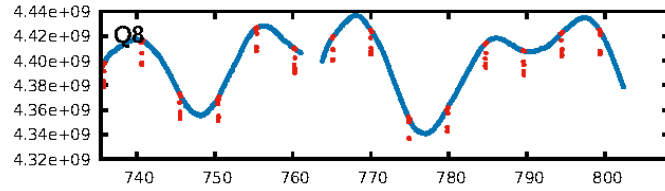
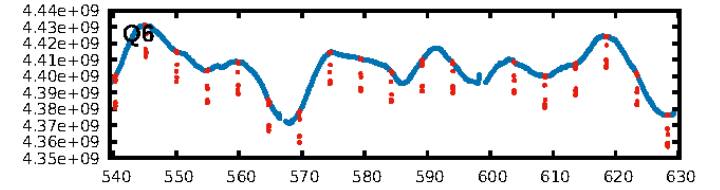
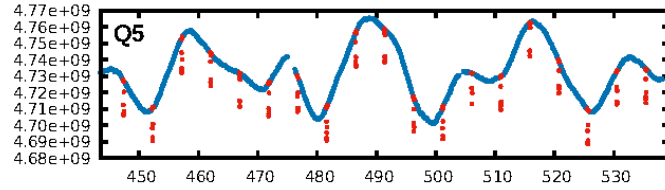
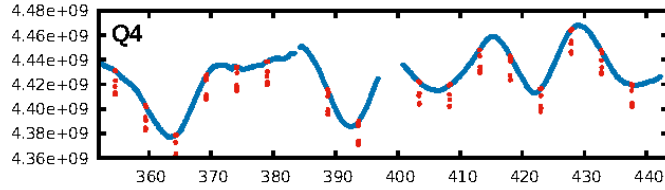
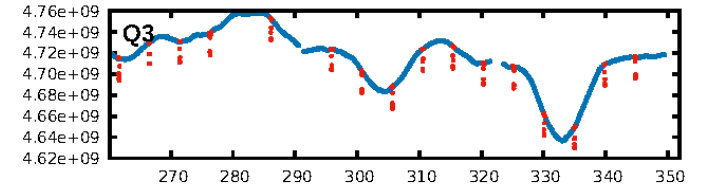
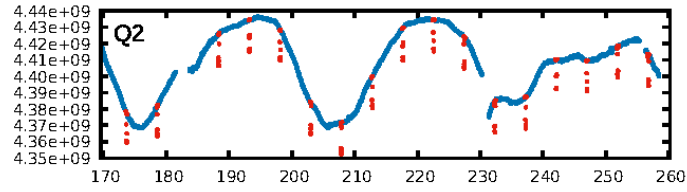
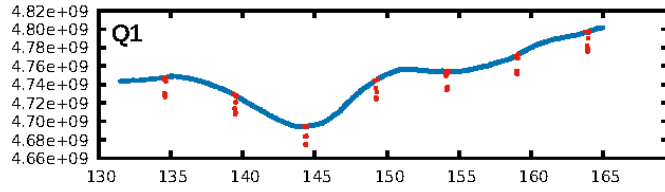
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.89 [181/203]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 3.471 arcsec [439.67σ]
OotOffset-rm: 6.642 arcsec [3.76σ]
KicOffset-rm: 4.294 arcsec [3.70σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [14/14]

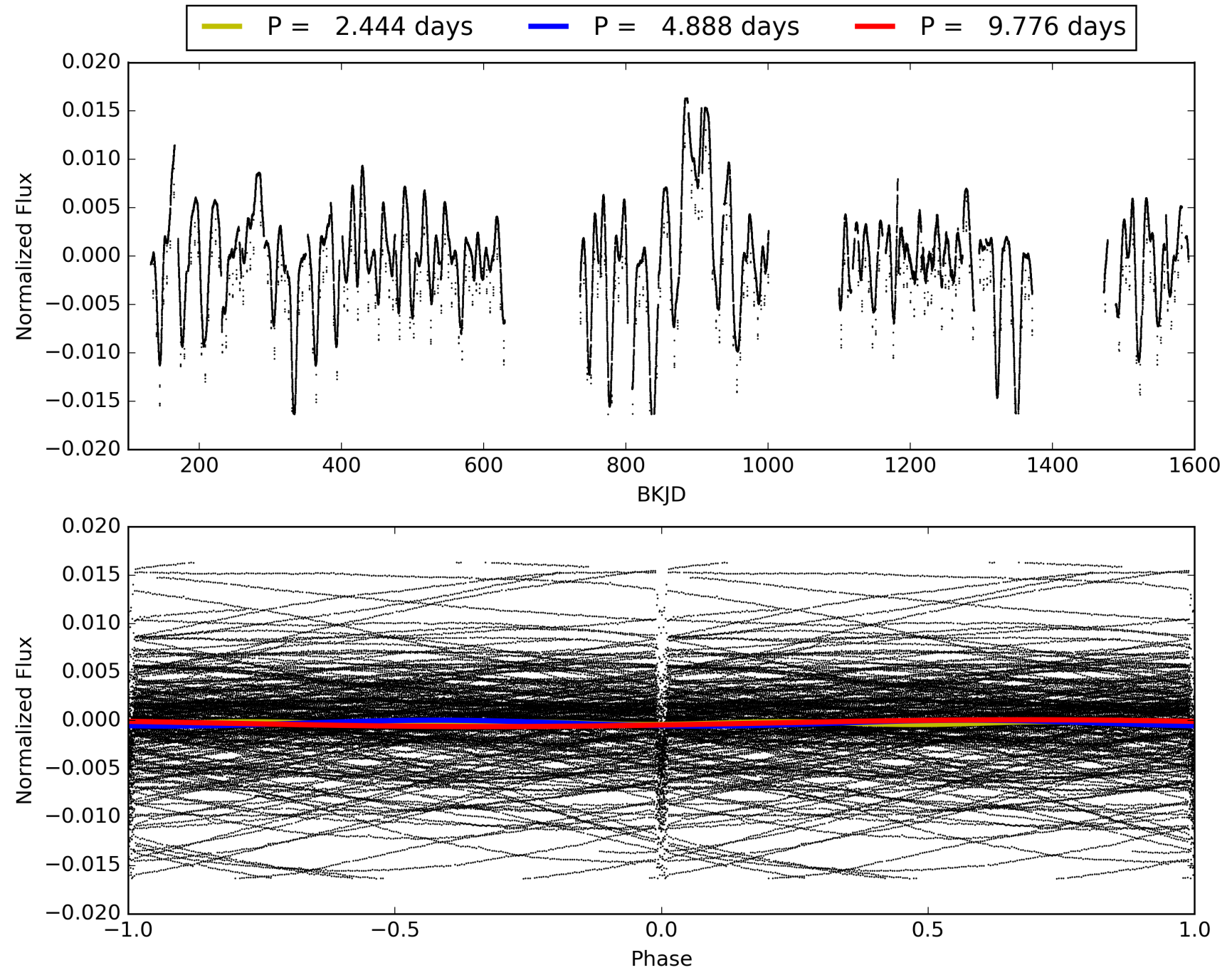
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:43:52 Z

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

TCE 010748390-01, PDC Light Curves

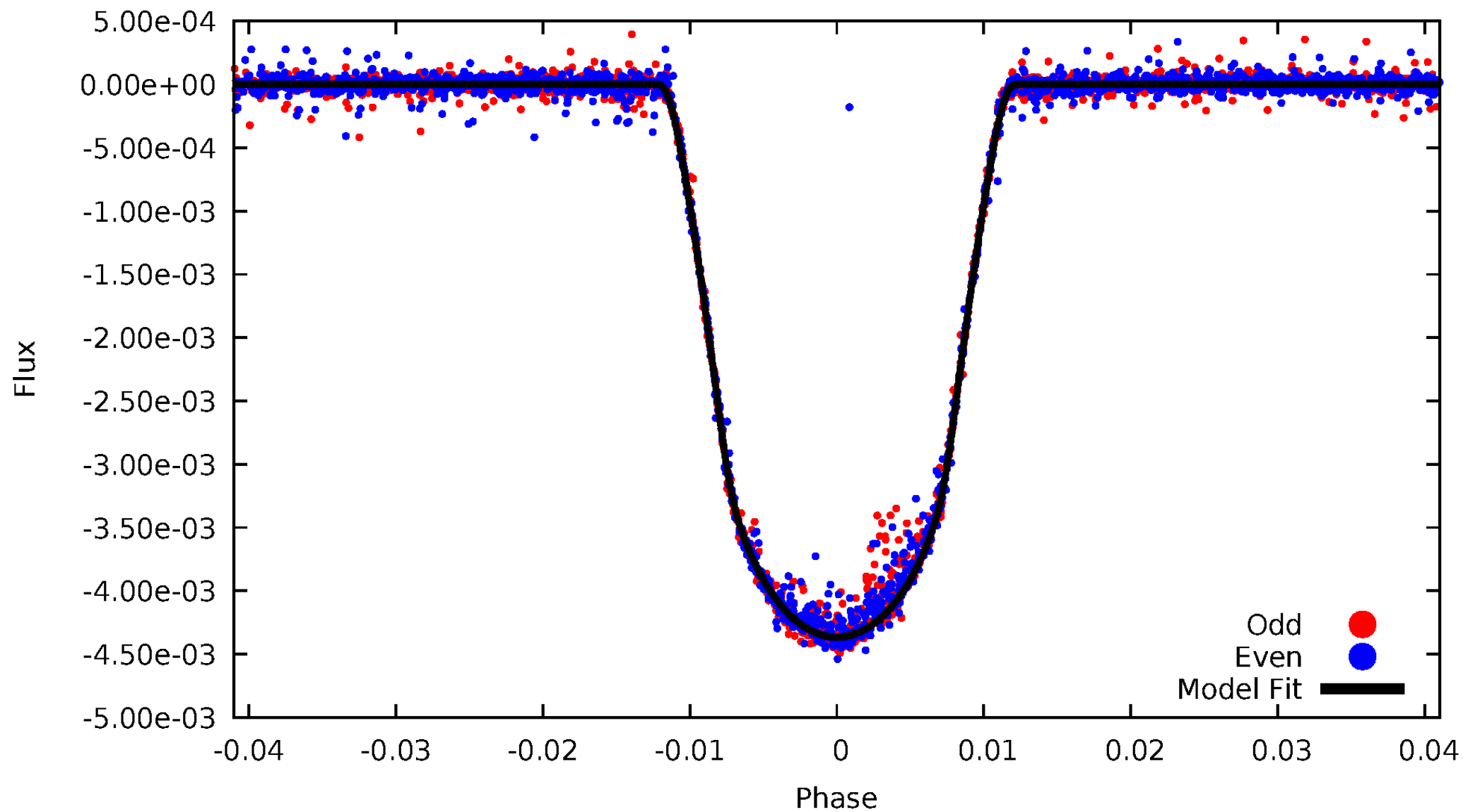


TCE 010748390-01



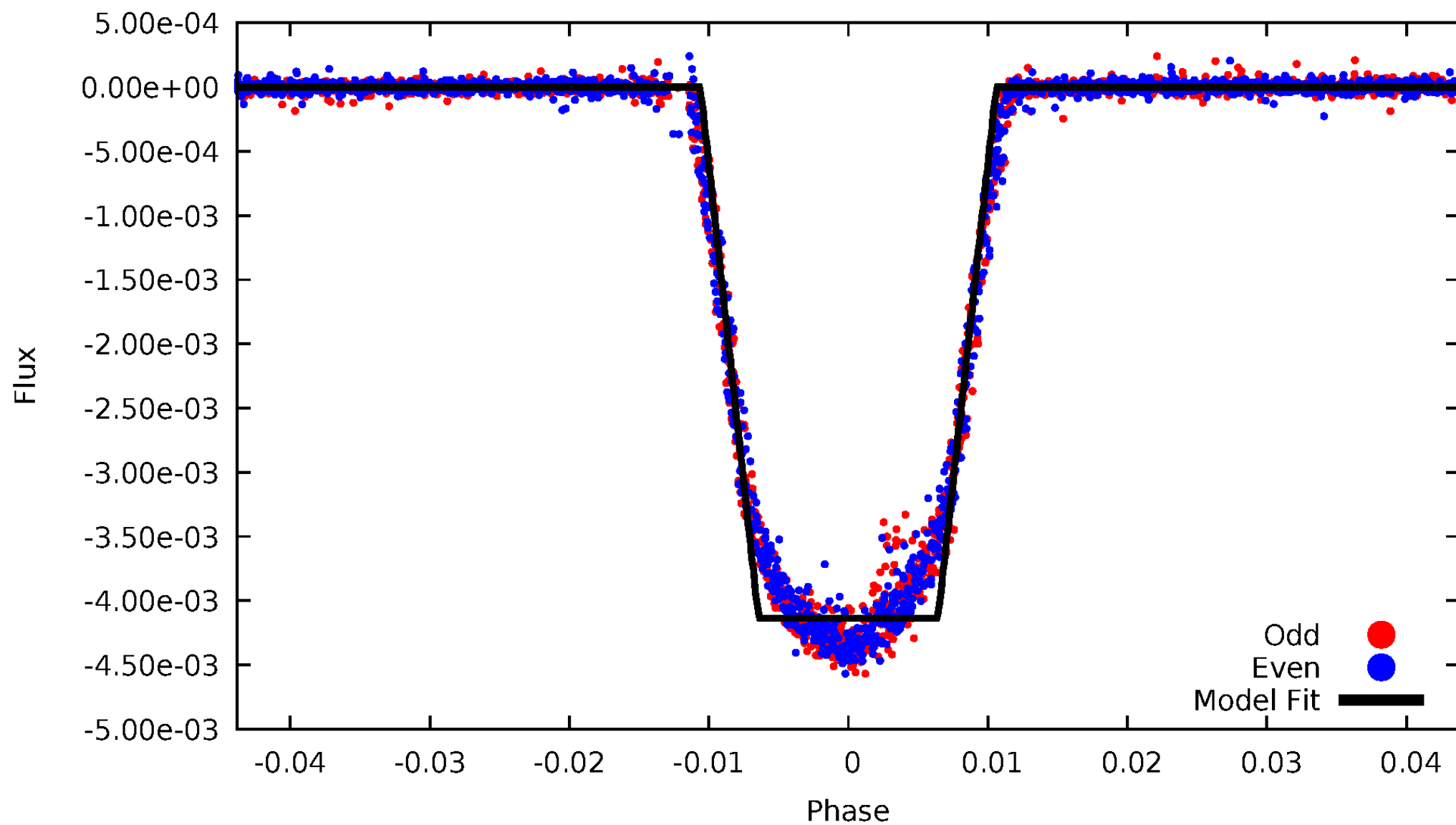
DV Odd/Even

TCE 010748390-01



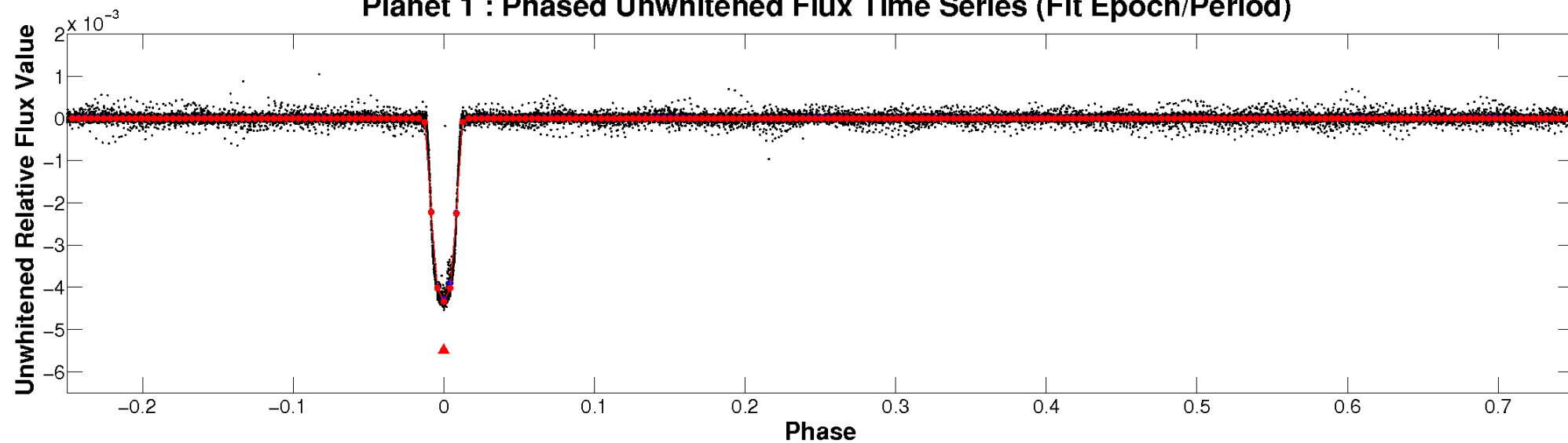
ALT Odd/Even

TCE 010748390-01

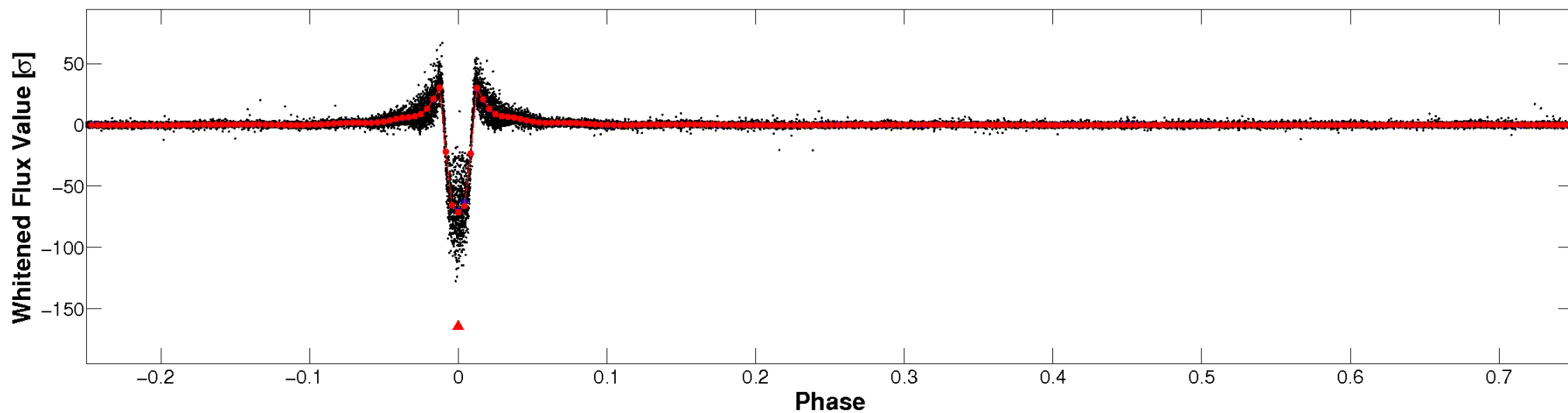


Non-Whitened Vs. Whitened Light Curve

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

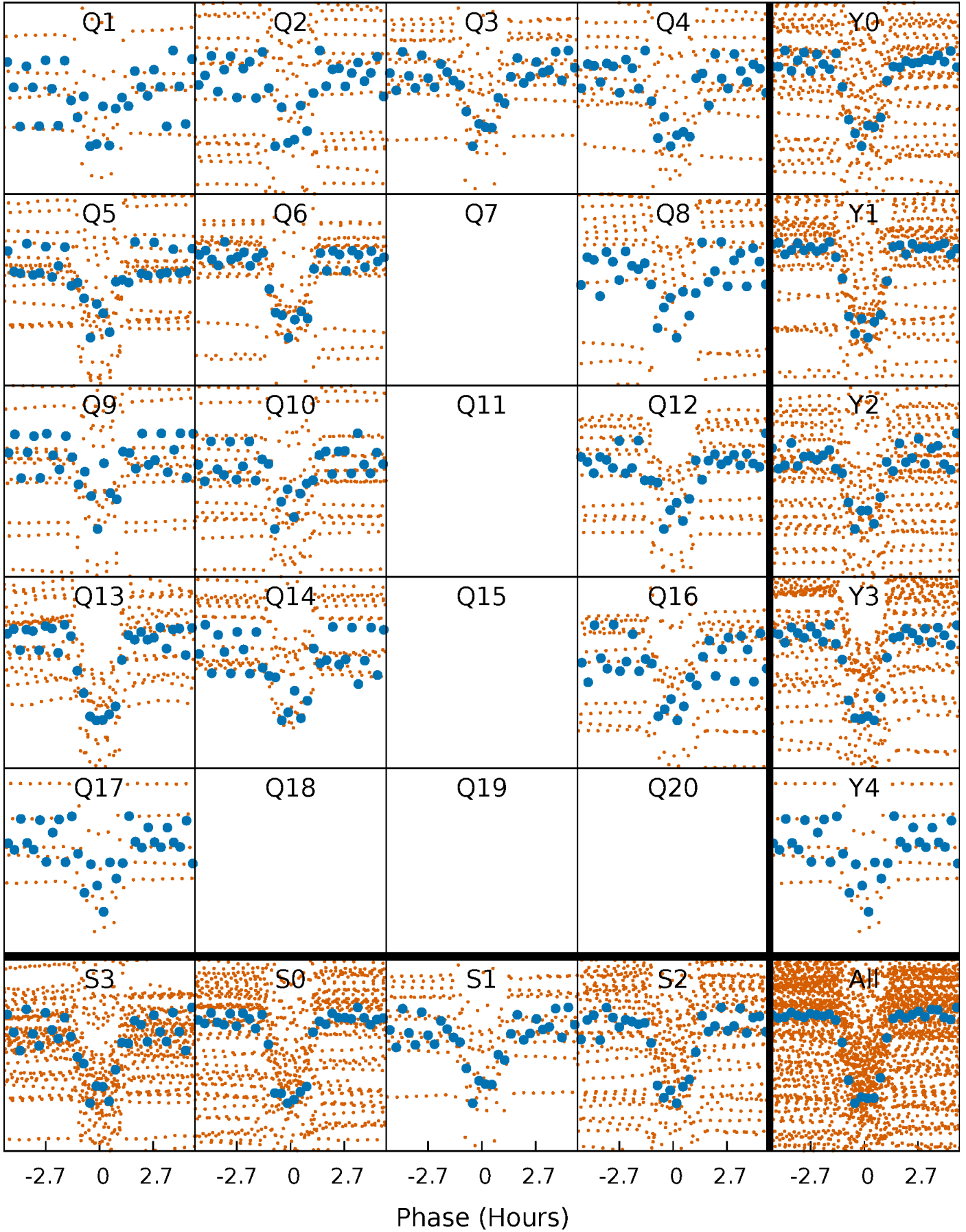


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



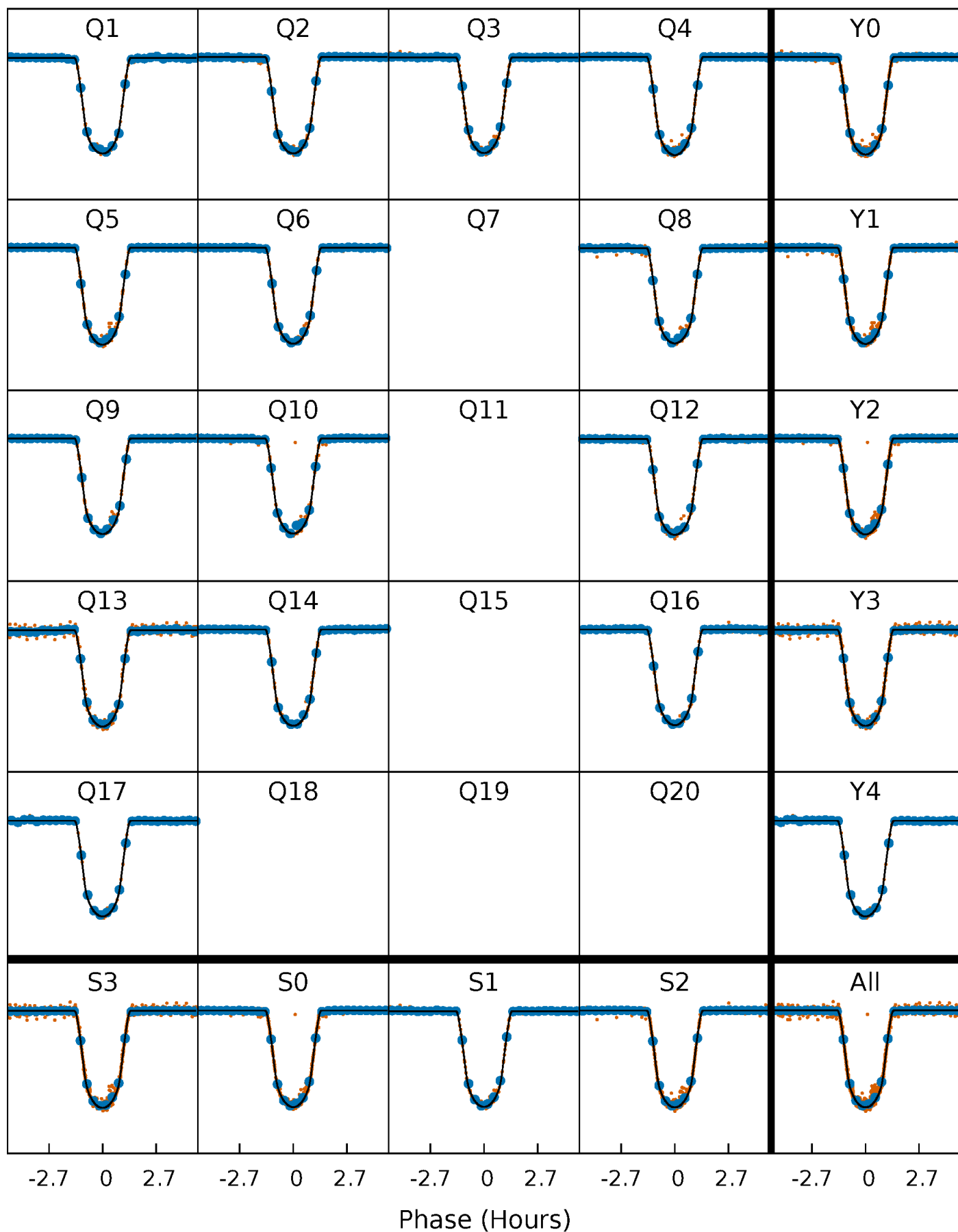
PDC Quarter-Phased Transit Curves

TCE 010748390-01 P= 4.887803 Days $T_0=134.588814$ (BKJD)



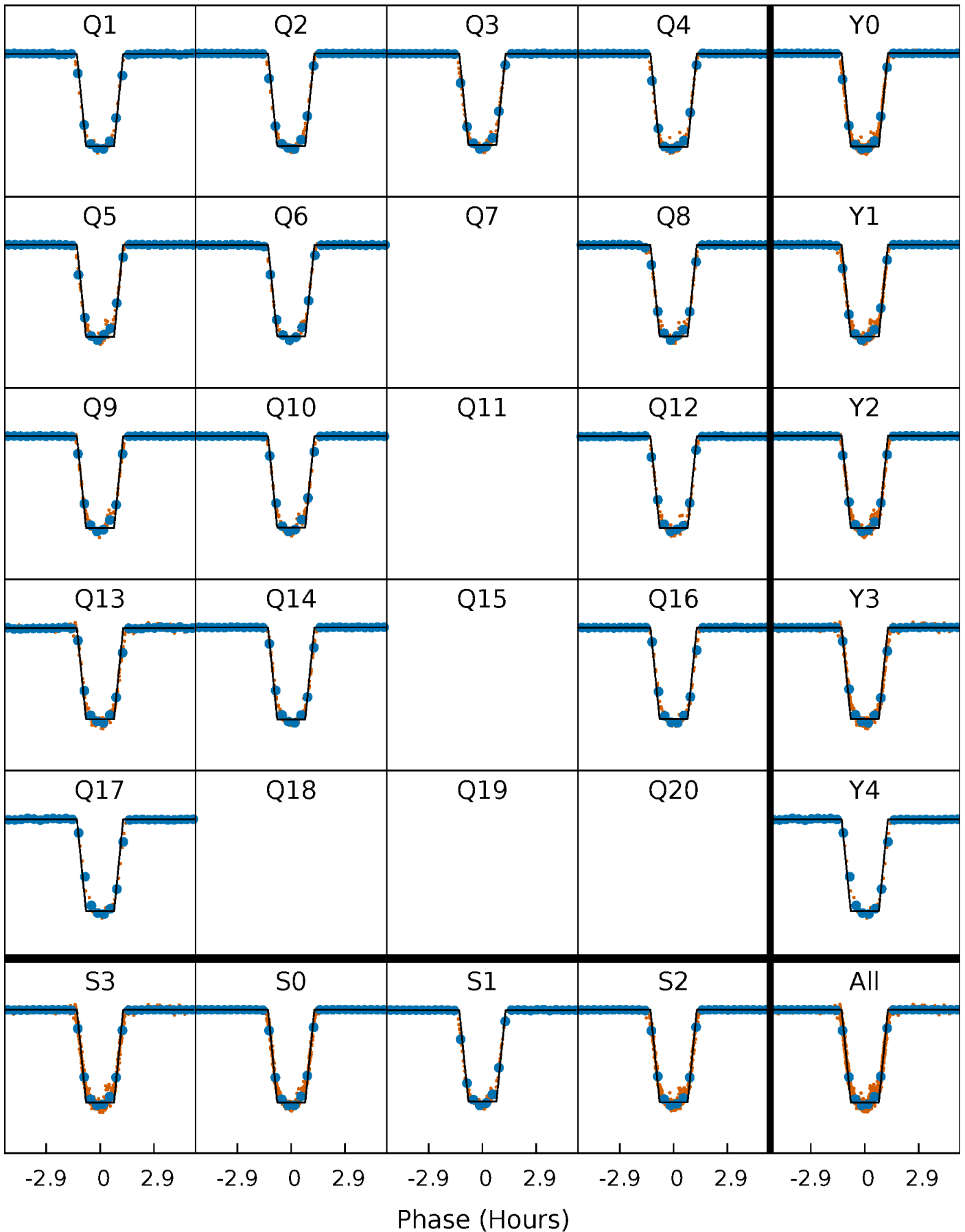
DV Quarter-Phased Transit Curves

TCE 010748390-01 P= 4.887803 Days $T_0=134.588814$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

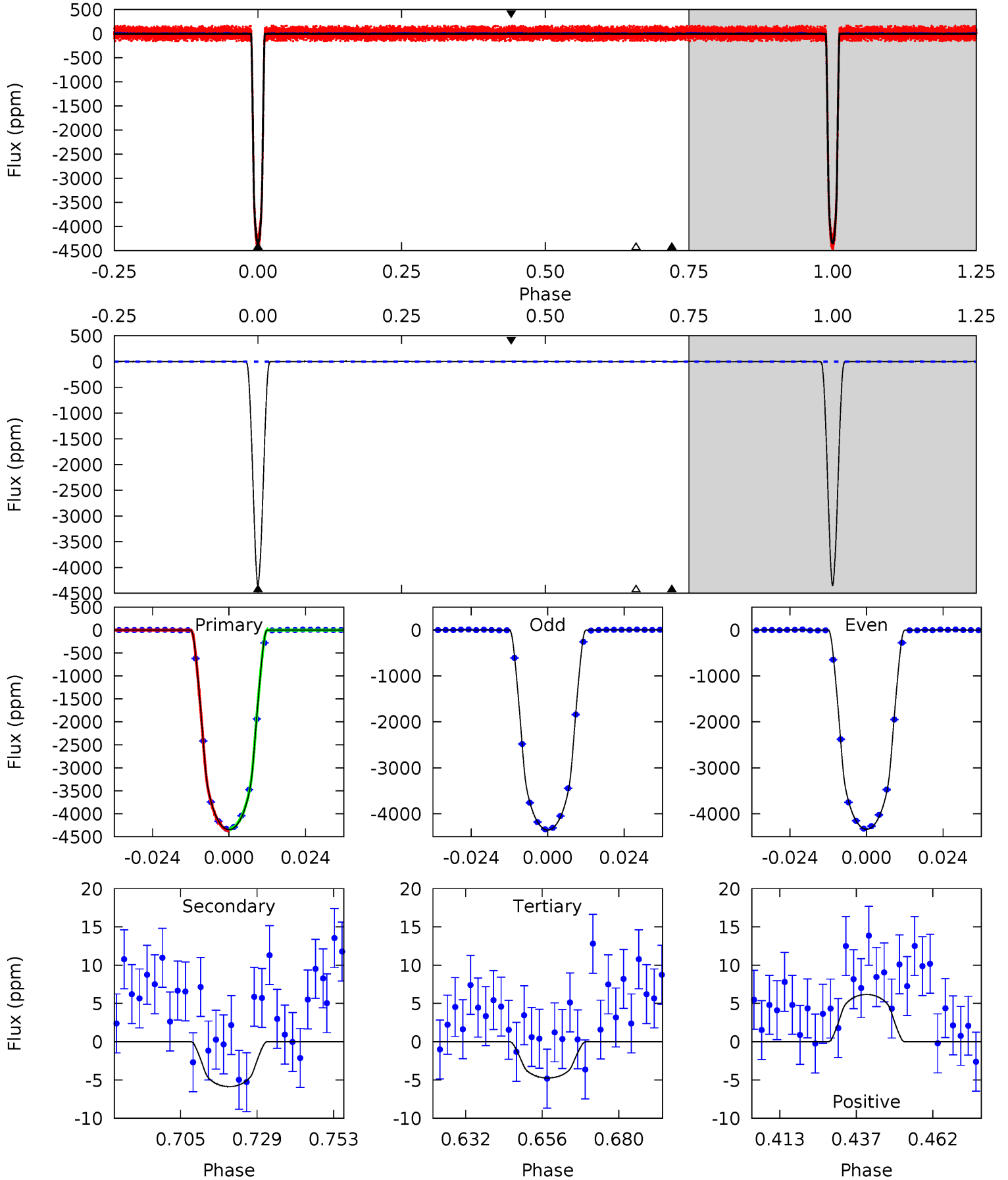
TCE 010748390-01 P= 4.887787 Days $T_0=134.590936$ (BKJD)



DV Model-Shift Uniqueness Test

010748390-01, P = 4.887803 Days, E = 129.701011 Days

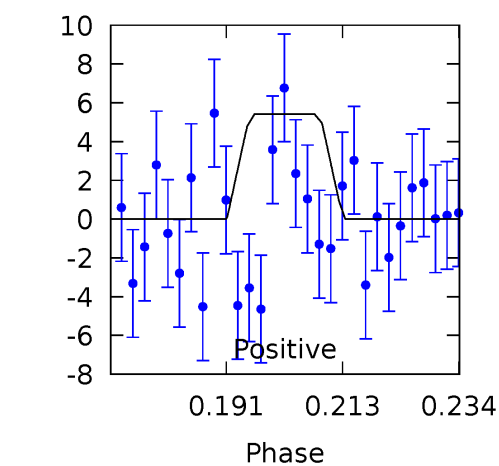
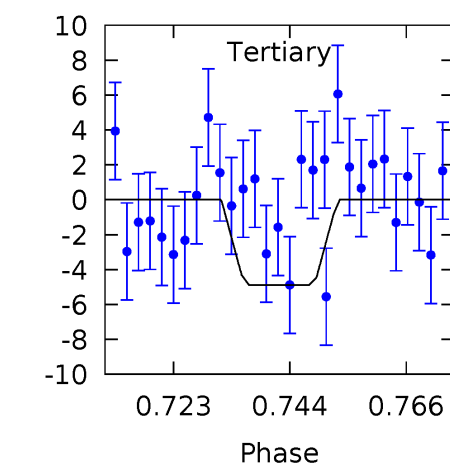
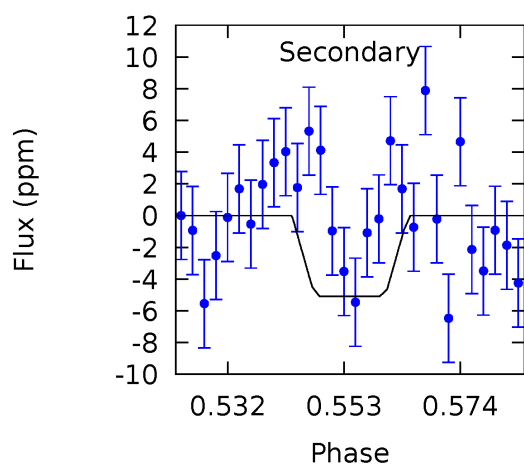
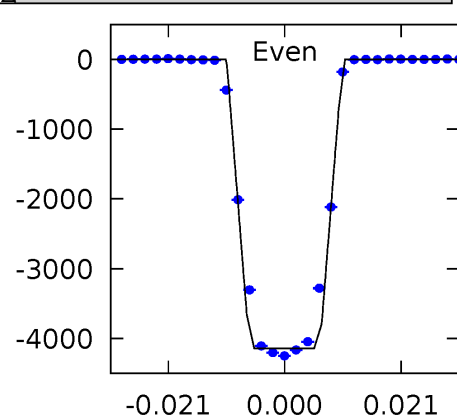
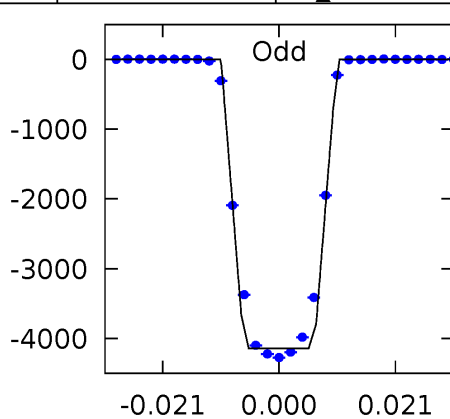
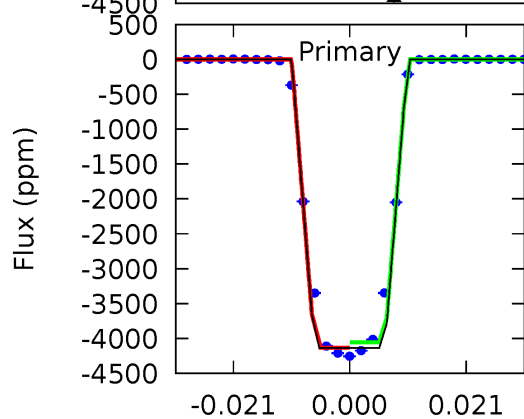
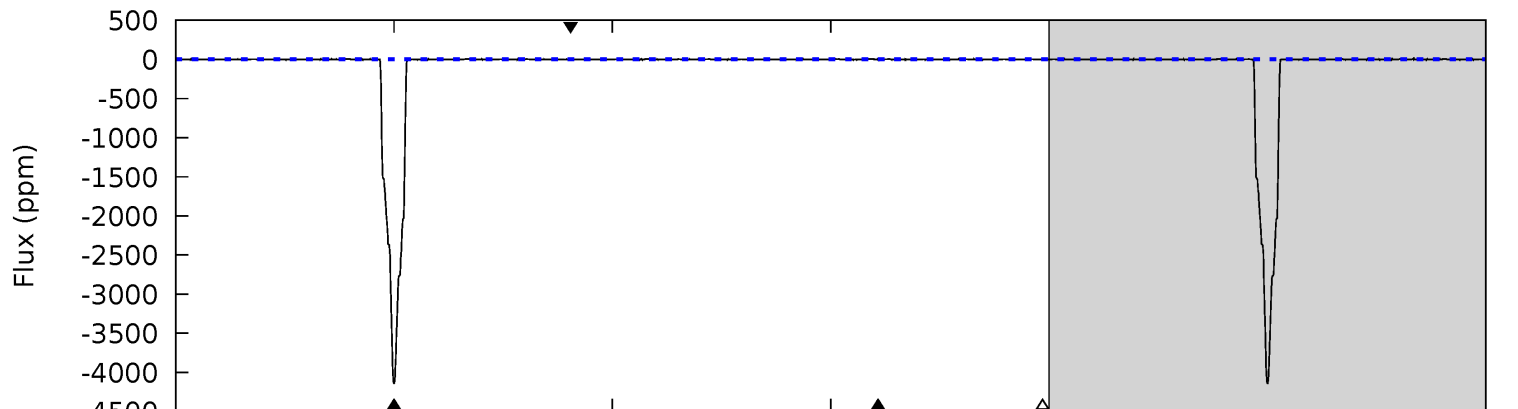
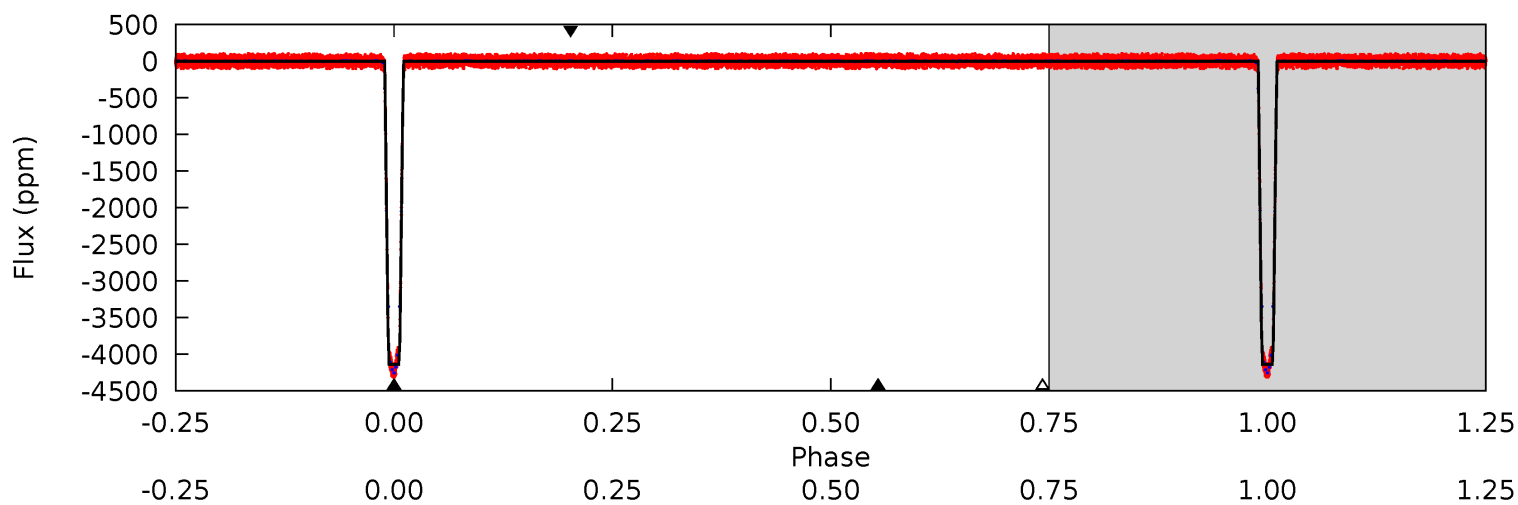
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3370	4.55	3.67	4.79	4.85	2.25	1.92	3366	3365	0.87	-0.24	6.38	0.99	0.00	11.8



Alt Model-Shift Uniqueness Test

010748390-01, P = 4.887787 Days, E = 129.703149 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2722	3.35	3.21	3.56	4.88	2.30	1.06	2718	2718	0.14	-0.21	0.90	1.00	0.00	0



Stellar Parameters For KIC 010748390

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4778^{+86}_{-95}	$4.591^{+0.015}_{-0.036}$	$0.320^{+0.150}_{-0.150}$	$0.763^{+0.028}_{-0.028}$	$0.830^{+0.020}_{-0.047}$	$2.626^{+0.200}_{-0.274}$
	+2%/-2%	+0%/-1%	+47%/-47%	+4%/-4%	+2%/-6%	+8%/-10%
Source	SPE20	TRA20	SPE20	DSEP		

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

Secondary Eclipse Parameters for KIC 010748390-01 / KOI 0003.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 1	$5.11^{+0.12}_{-0.12}$	1125^{+22}_{-26}	1611^{+132}_{-3171}	$0.345^{+0.066}_{-0.076}$
Alt.	-5 ± 2	$5.39^{+0.13}_{-0.14}$	1124^{+23}_{-26}	-1559^{+3176}_{-183}	$0.271^{+0.077}_{-0.079}$

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

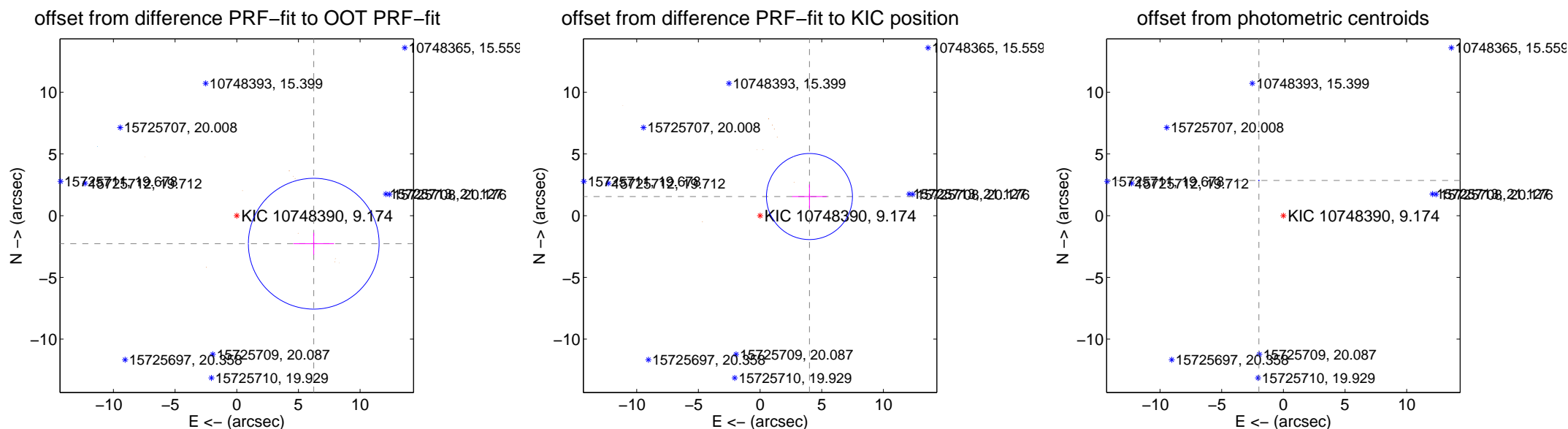
DV Centroid Data

Supplemental centroid analysis for 010748390-01. **Kepler magnitude: 9.17.** Transit SNR 1791.96

There are 1 quarters with good PRF difference image offsets

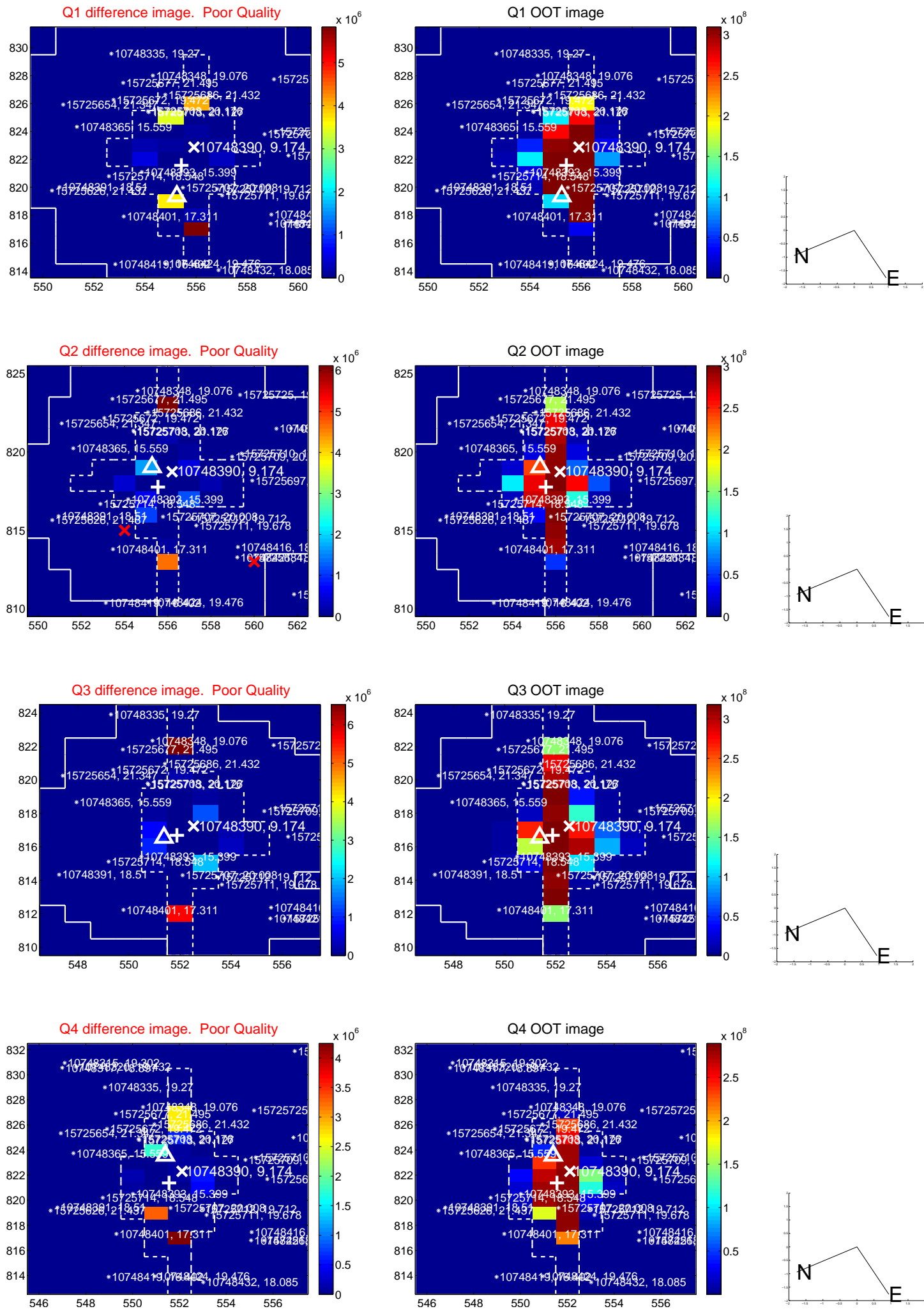
The OOT PRF centroid is offset from the target star catalog position by about 5.45 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.642 \pm 1.767	3.76	-6.241 \pm 1.652	-2.271 \pm 0.885
PRF-fit source offset from KIC position	4.294 \pm 1.162	3.70	-4.004 \pm 1.401	1.551 \pm 0.974
photometric centroid source offset	3.47 \pm 0.01	439.67	1.98 \pm 0.01	2.85 \pm 0.01

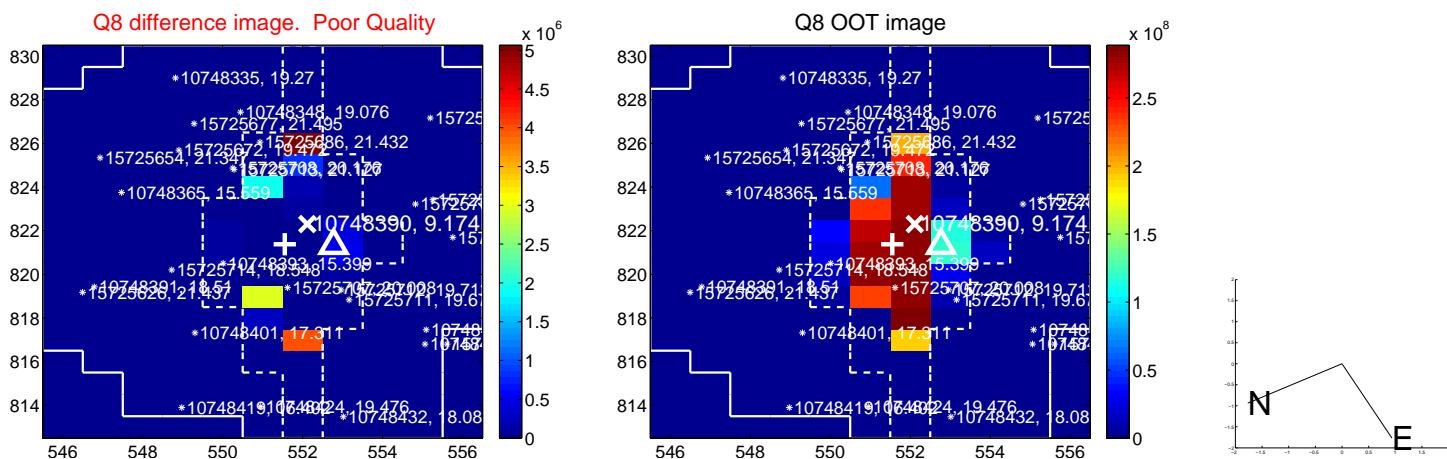
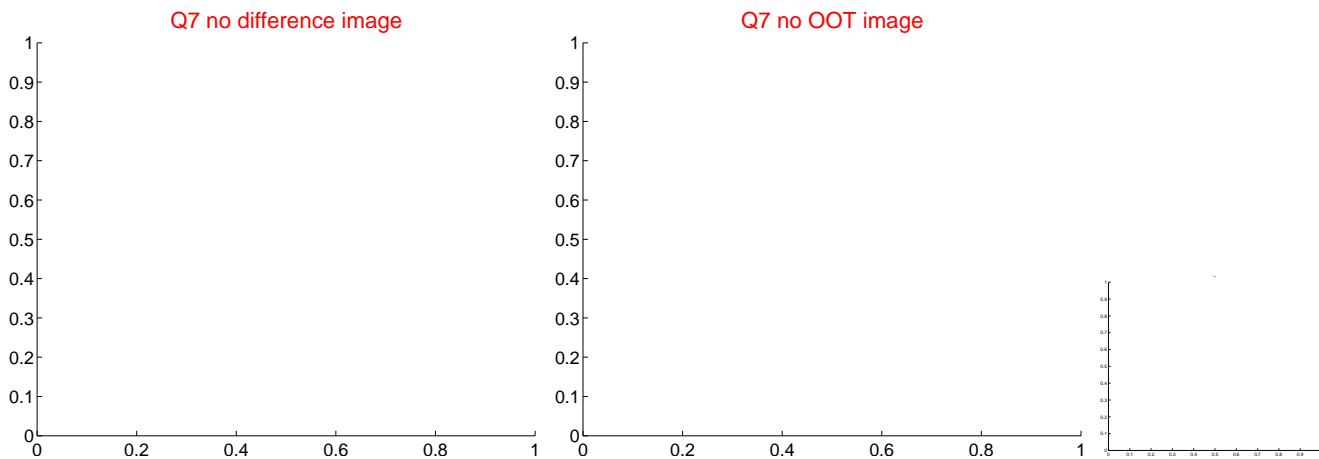
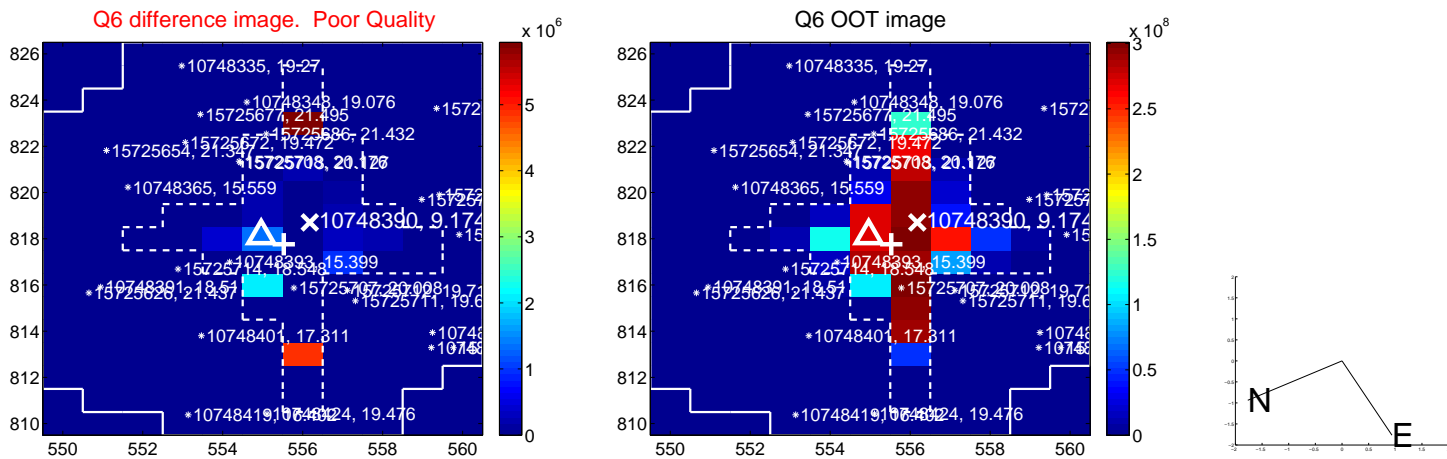
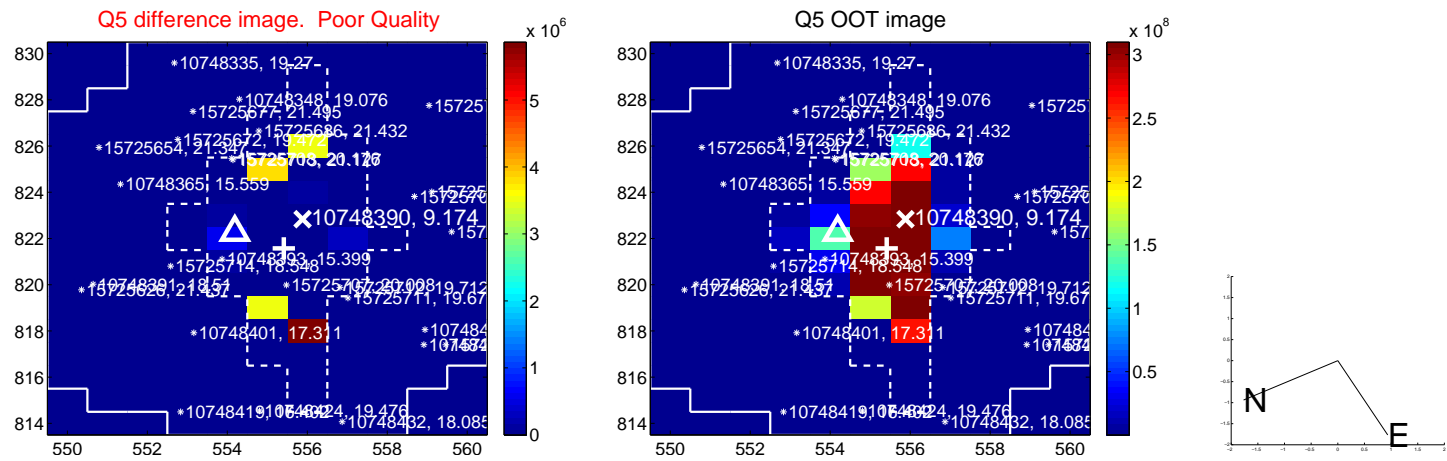


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

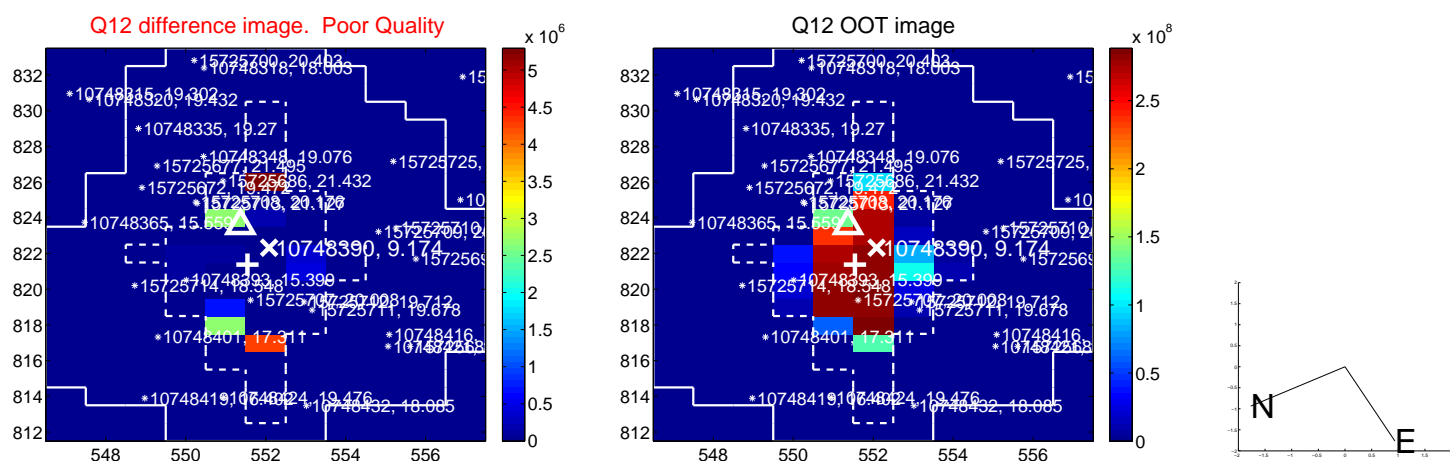
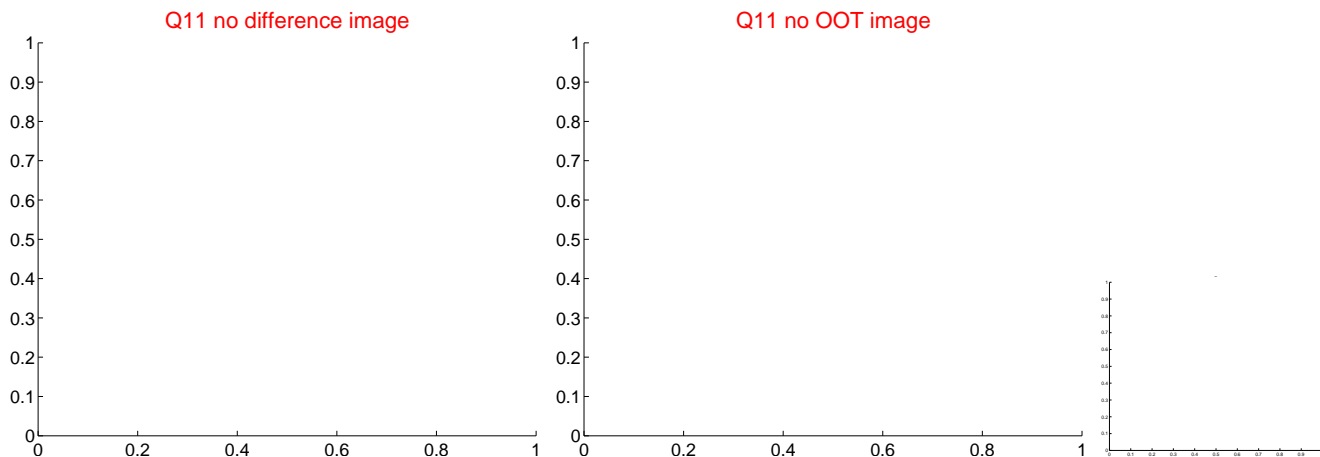
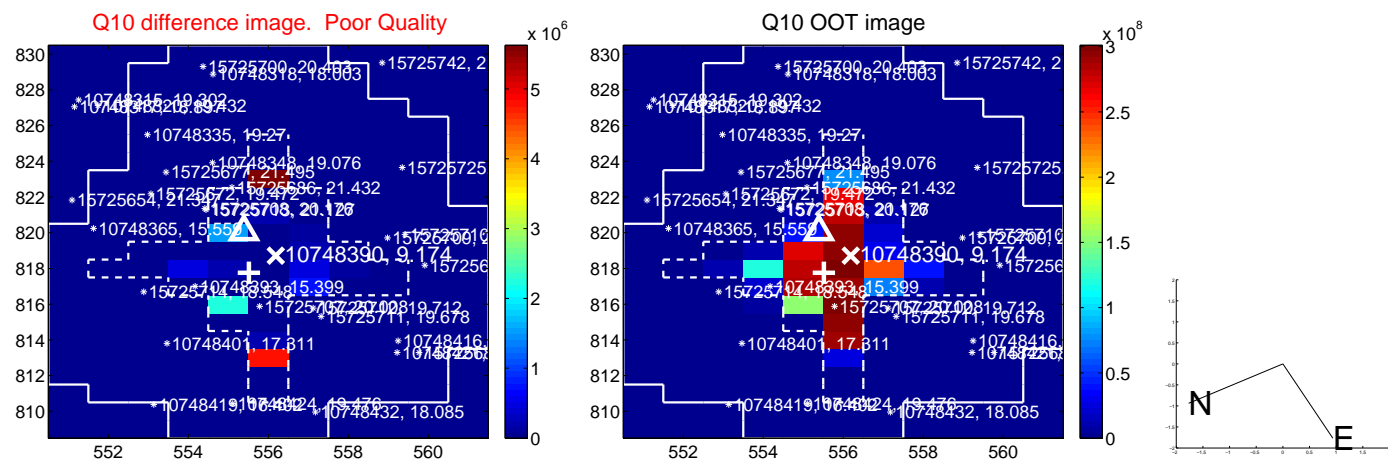
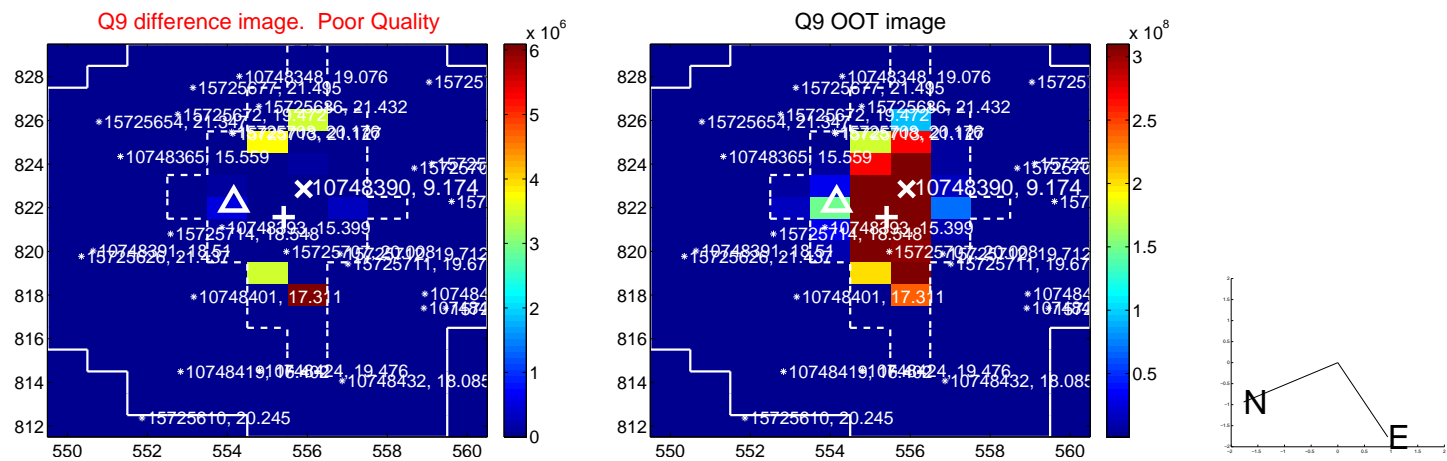
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



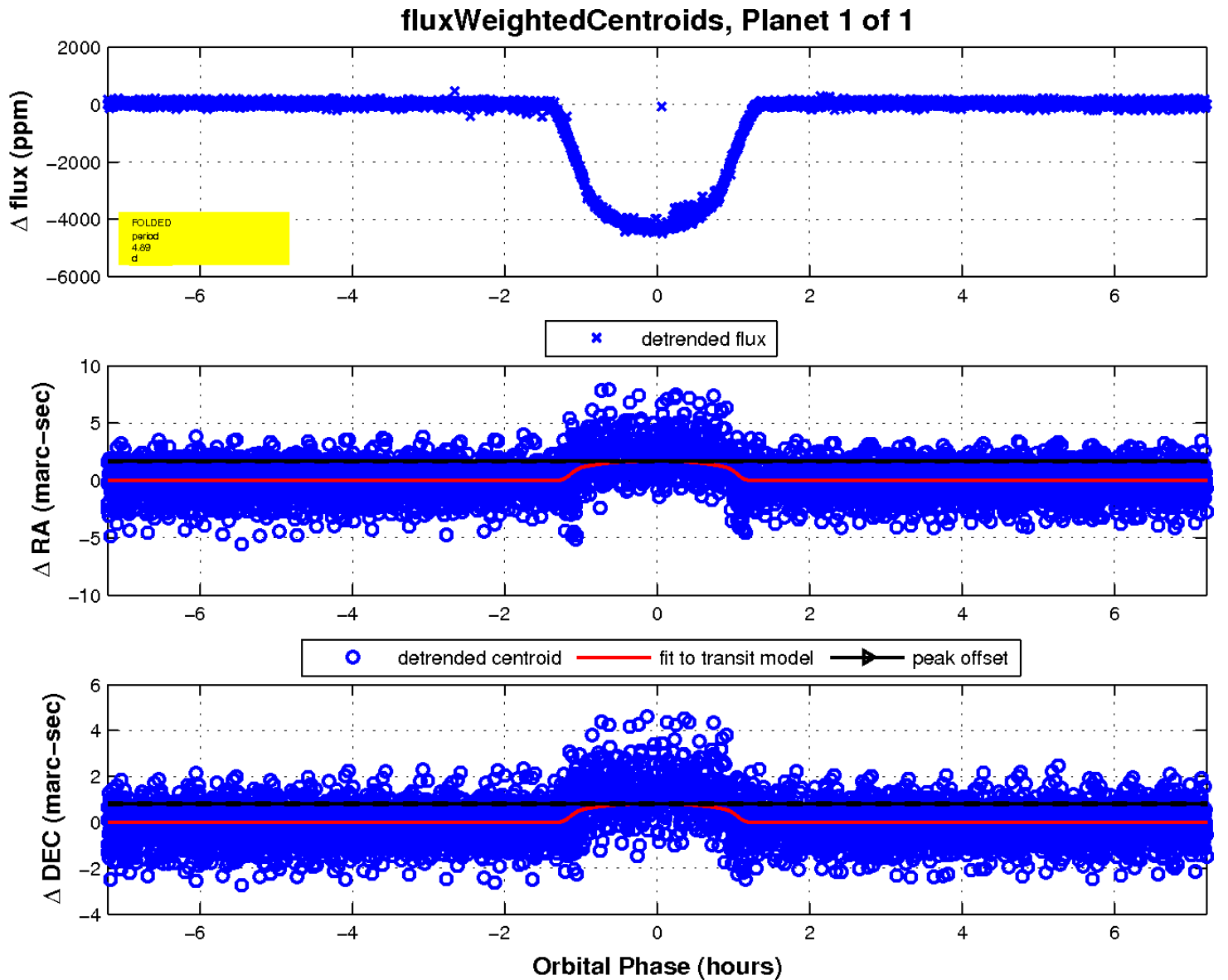
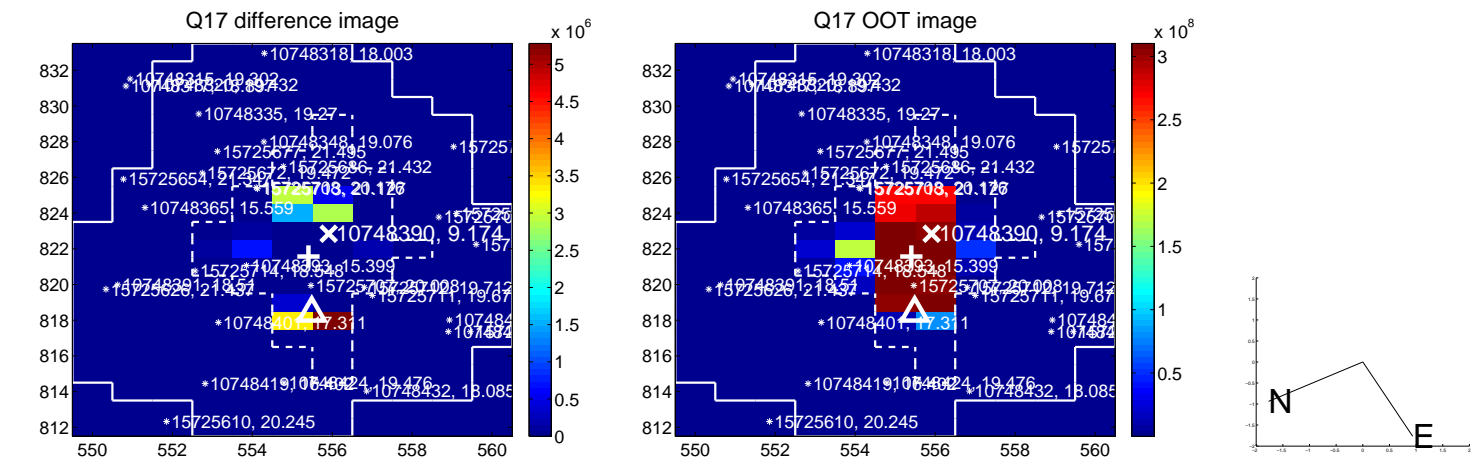
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

