

KIC 006616190

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})
006616190-01	OBS	No	339.106356	237.351109	1722.2	4.576	12.3	6.5	0.95	6045	4.11	1.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006616190-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

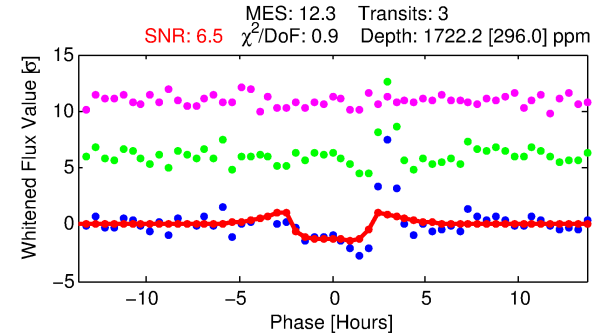
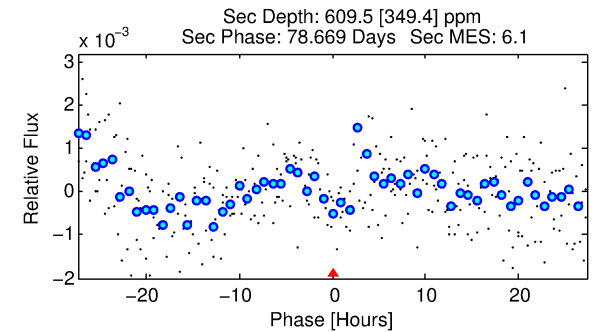
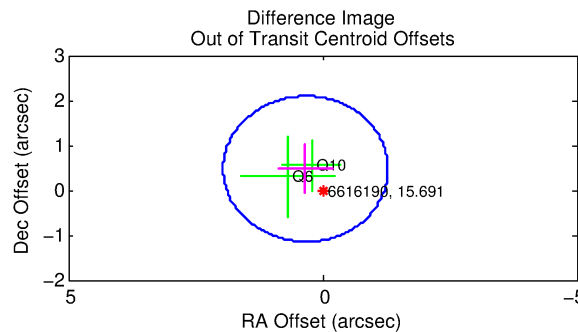
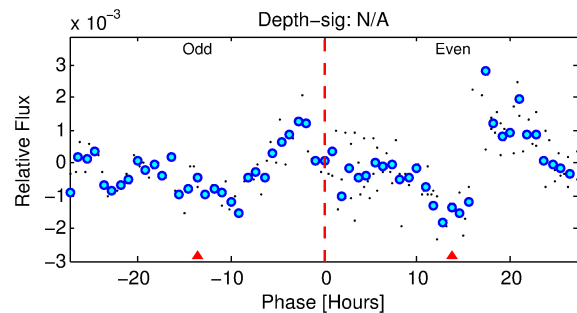
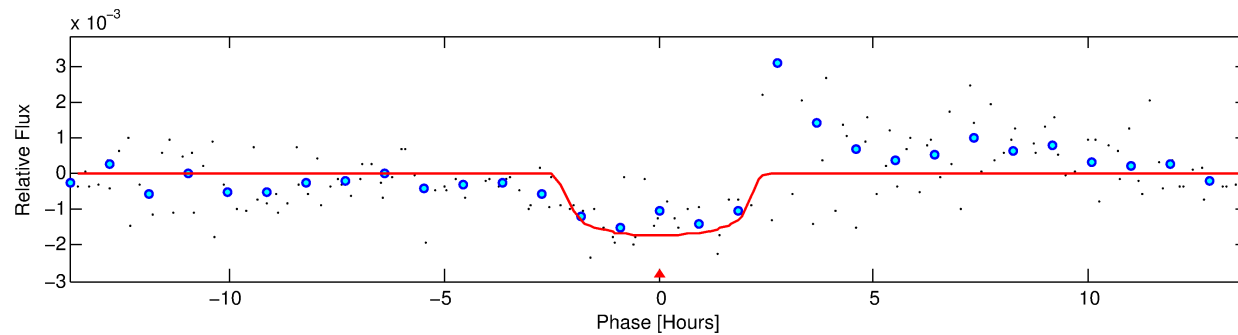
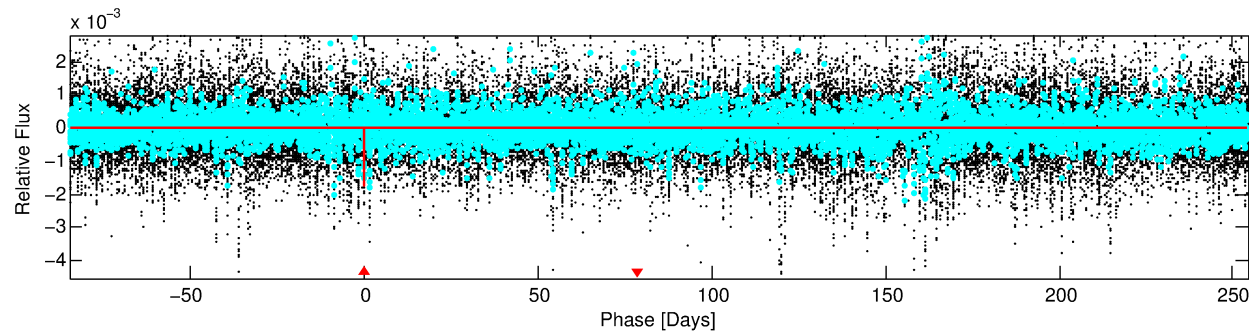
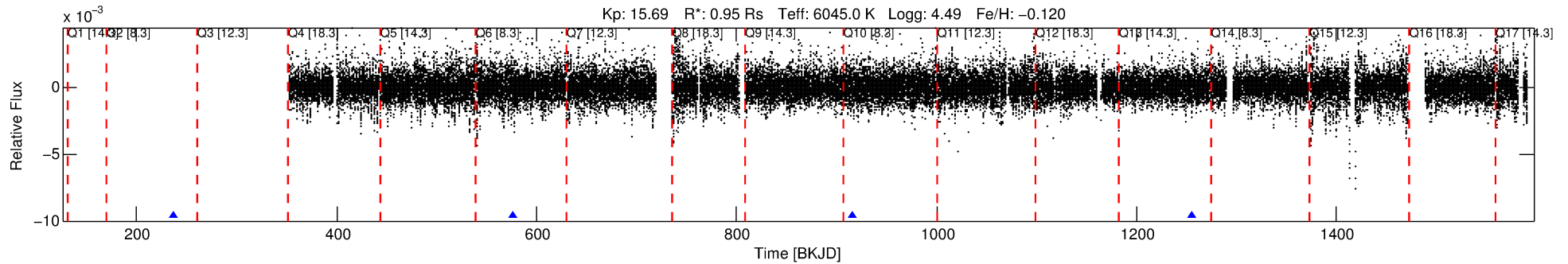
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006616190-01

No Significant Match Found

DV One-Page Summary

KIC: 6616190 Candidate: 1 of 1 Period: 339.106 d



DV Fit Results:

Period = 339.10636 [0.00555] d
Epoch = 237.3511 [0.0119] BKJD
Rp/R* = 0.0394 [0.0266]
a/R* = 496.45 [1546.14]
b = 0.56 [3.87]
Seff = 1.17 [0.46]
Teq = 265 [26] K
Rp = 4.11 [3.01] Re
a = 0.9637 [0.2358] AU
Ag = 18453.92 [27857.96] [0.66σ]
Teffp = 4784 [1762] K [2.56σ]

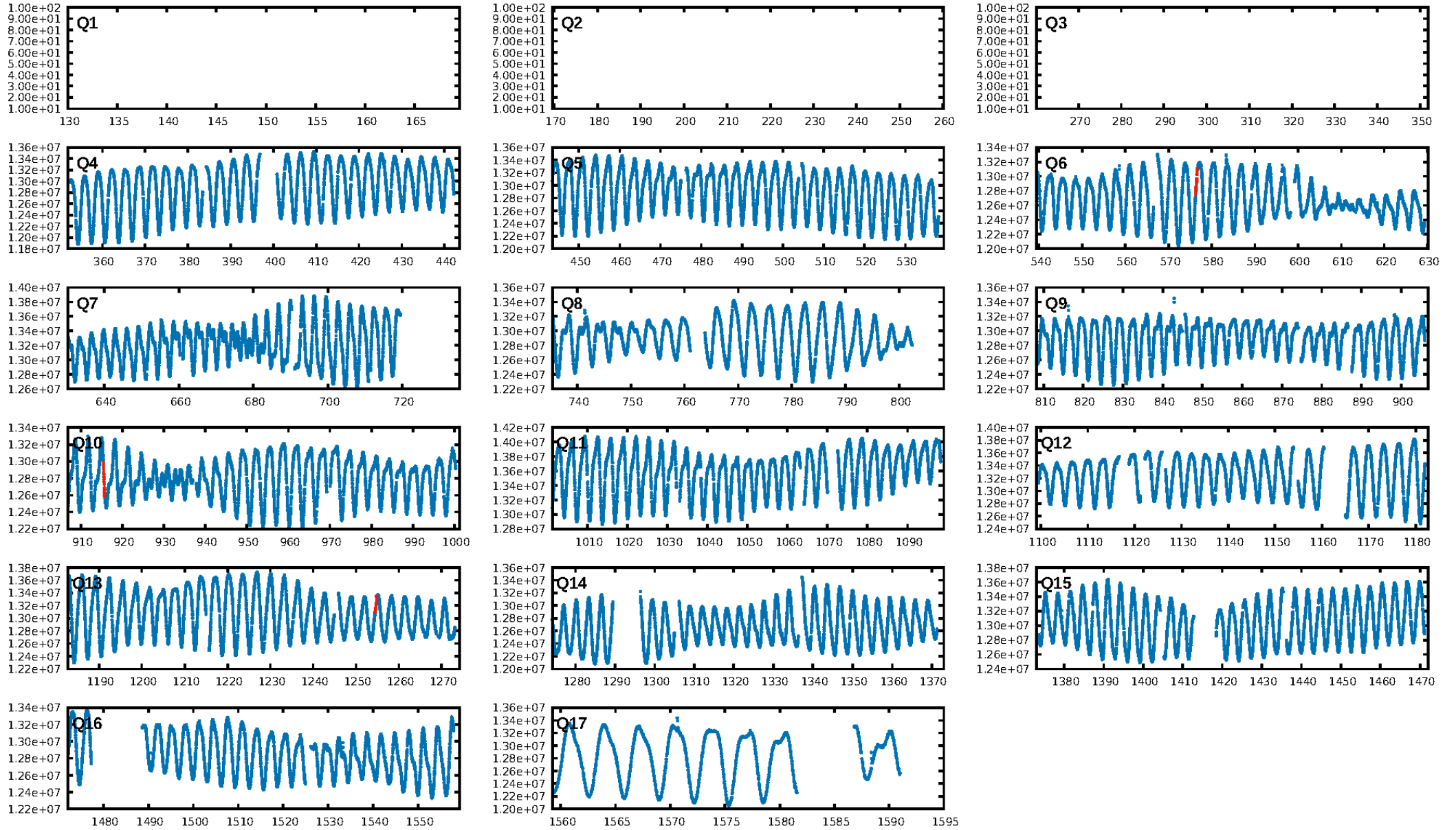
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 98.2%
Bootstrap-pfa: 1.91e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.645
Centroid-sig: 39.4%
Centroid-so: 0.740 arcsec [0.57σ]
OotOffset-rm: 0.579 arcsec [1.07σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 0.564 arcsec [1.04σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

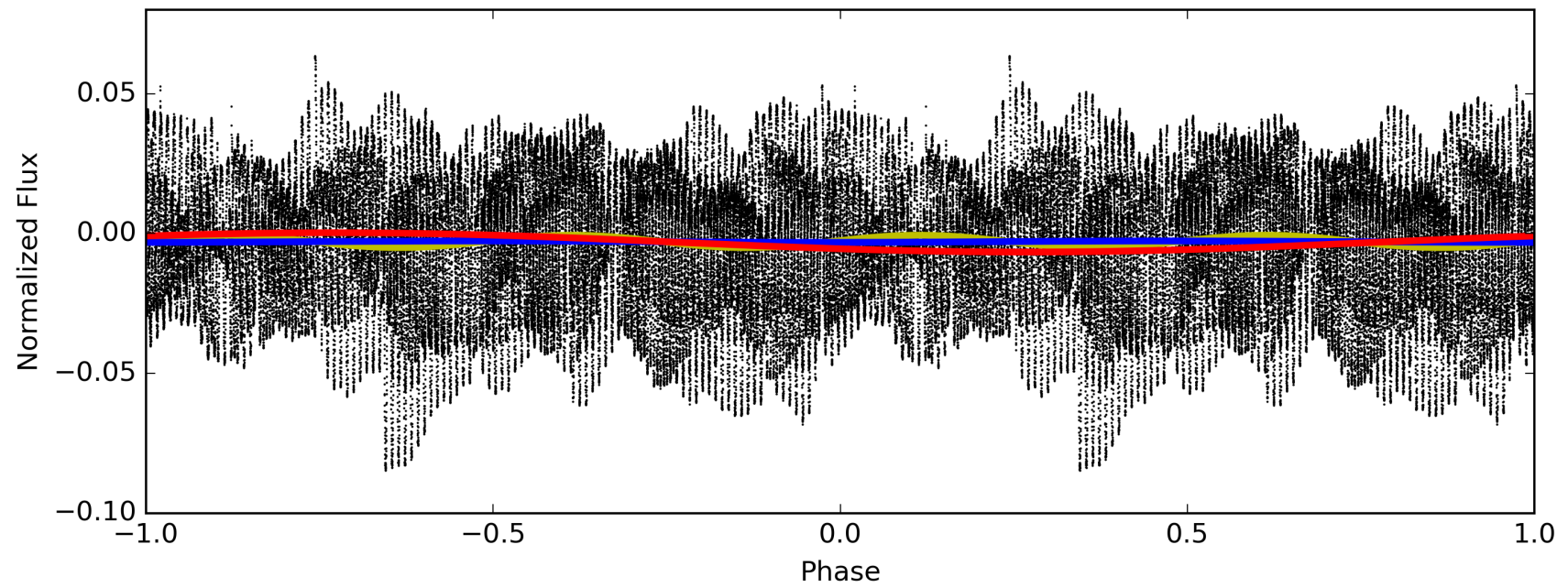
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:26:13 Z

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

TCE 006616190-01, PDC Light Curves

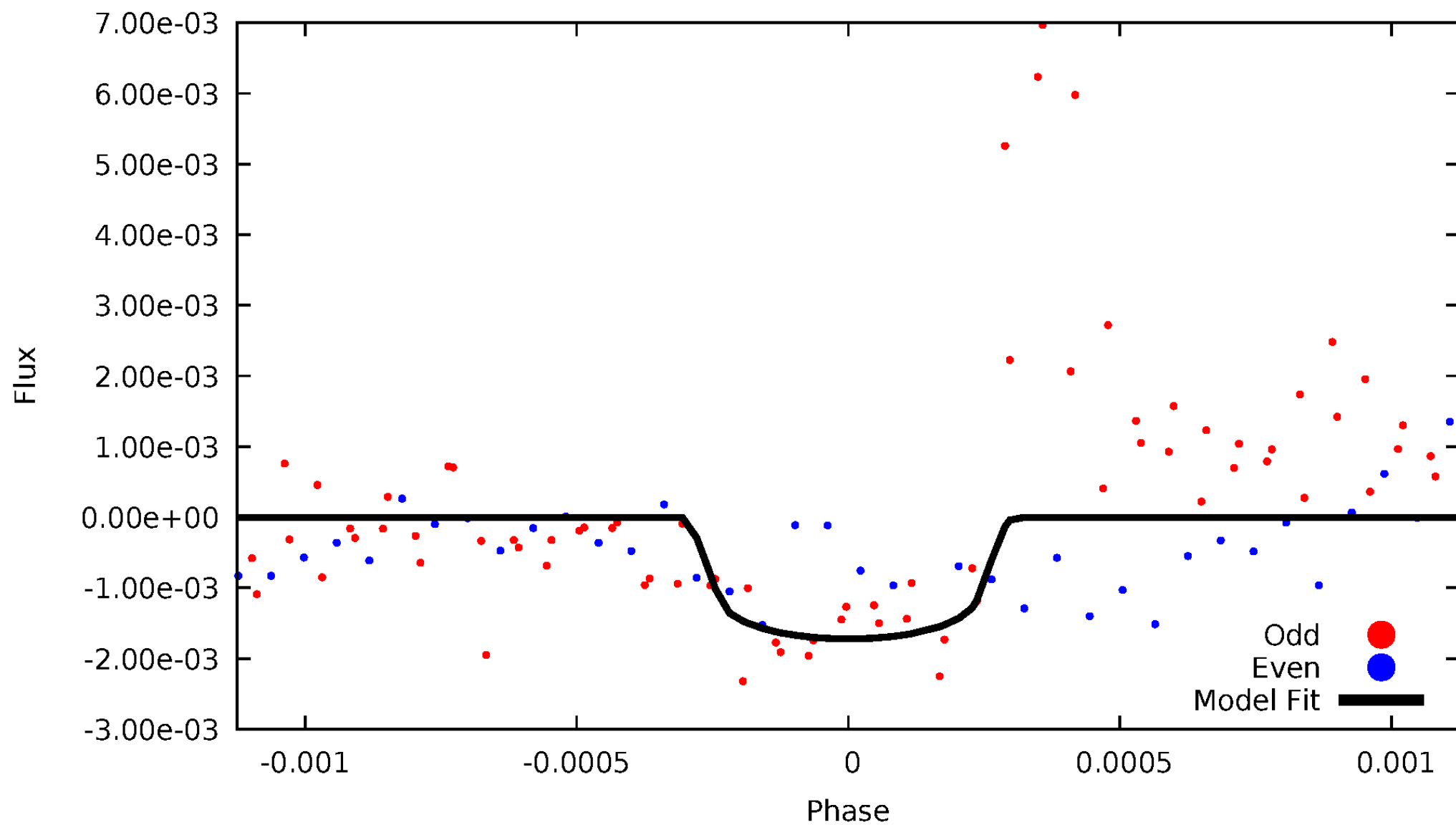


— P = 169.553 days — P = 339.106 days — P = 678.213 days



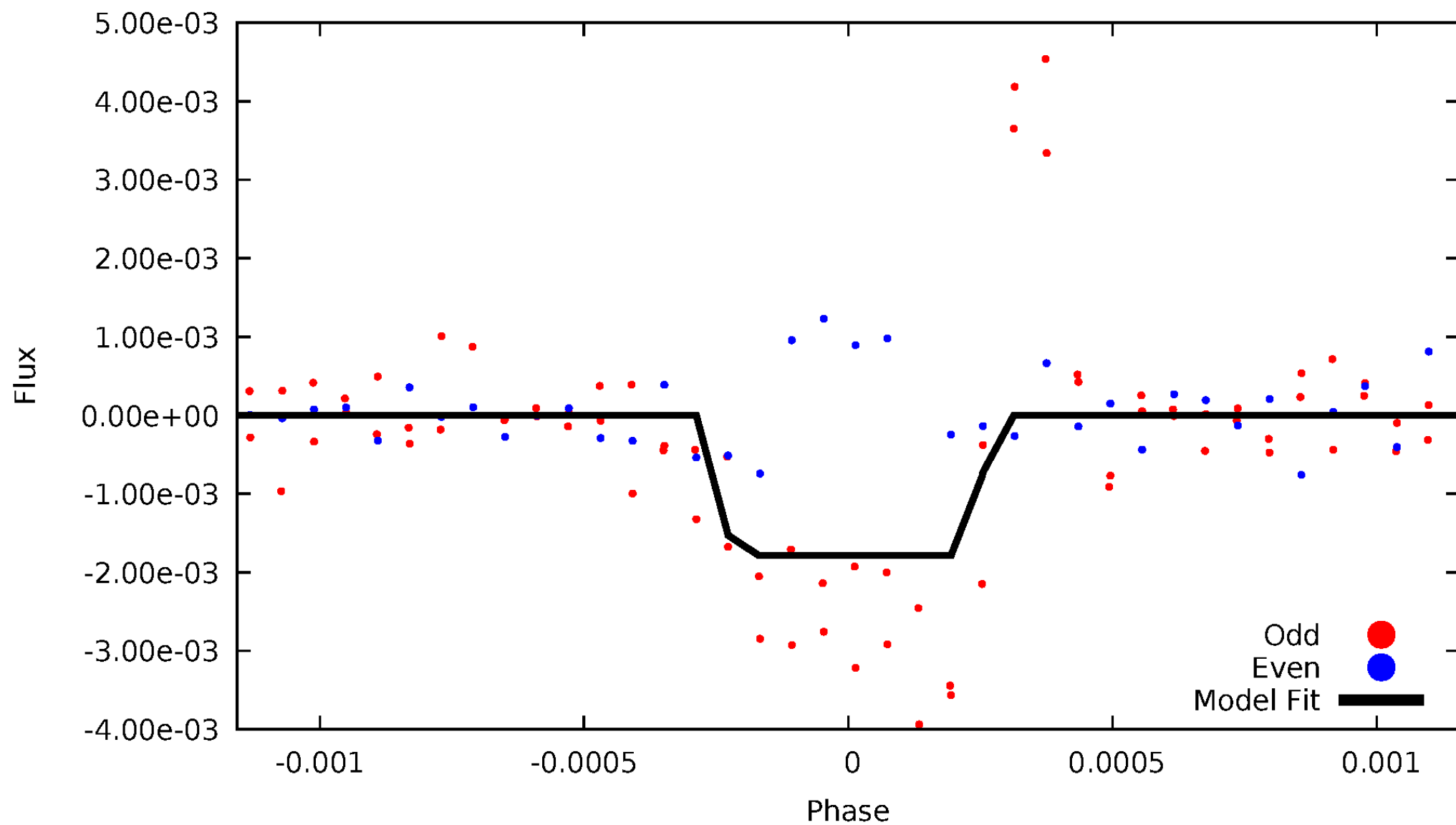
DV Odd/Even

TCE 006616190-01



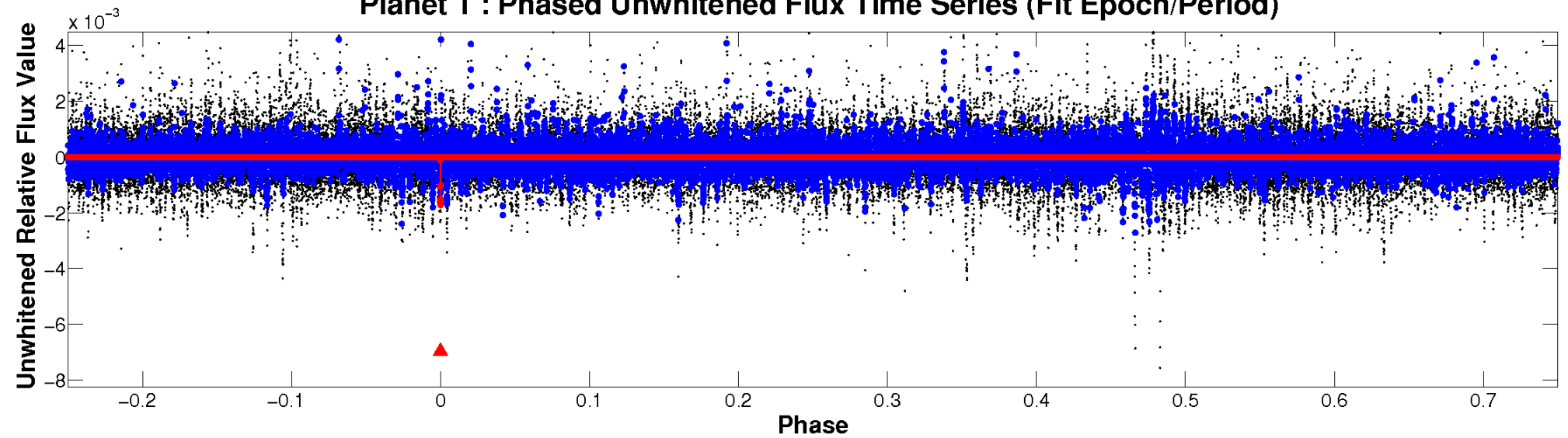
ALT Odd/Even

TCE 006616190-01

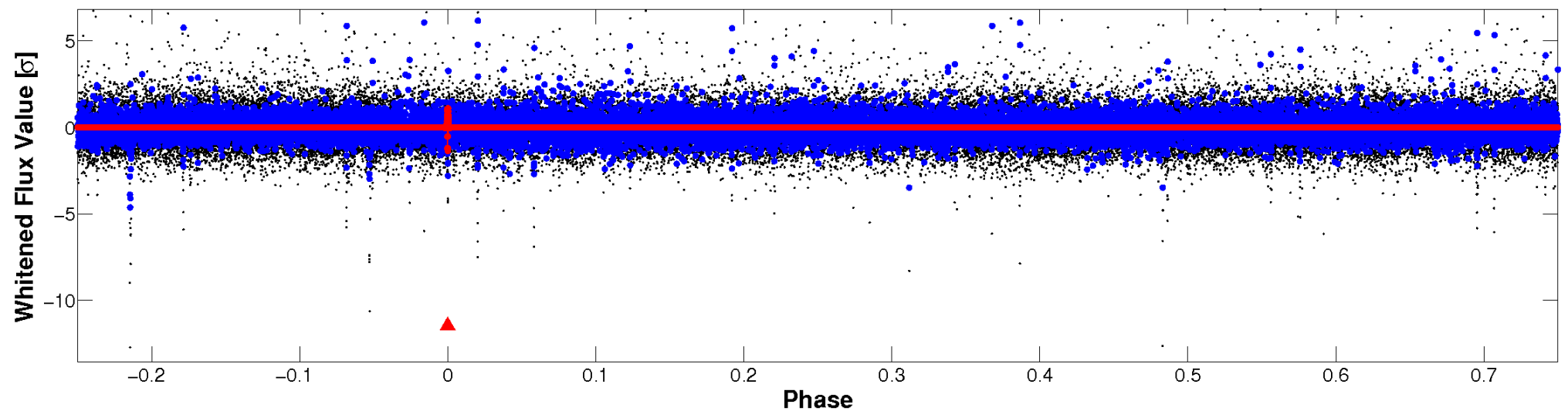


Non-Whitened Vs. Whitened Light Curve

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

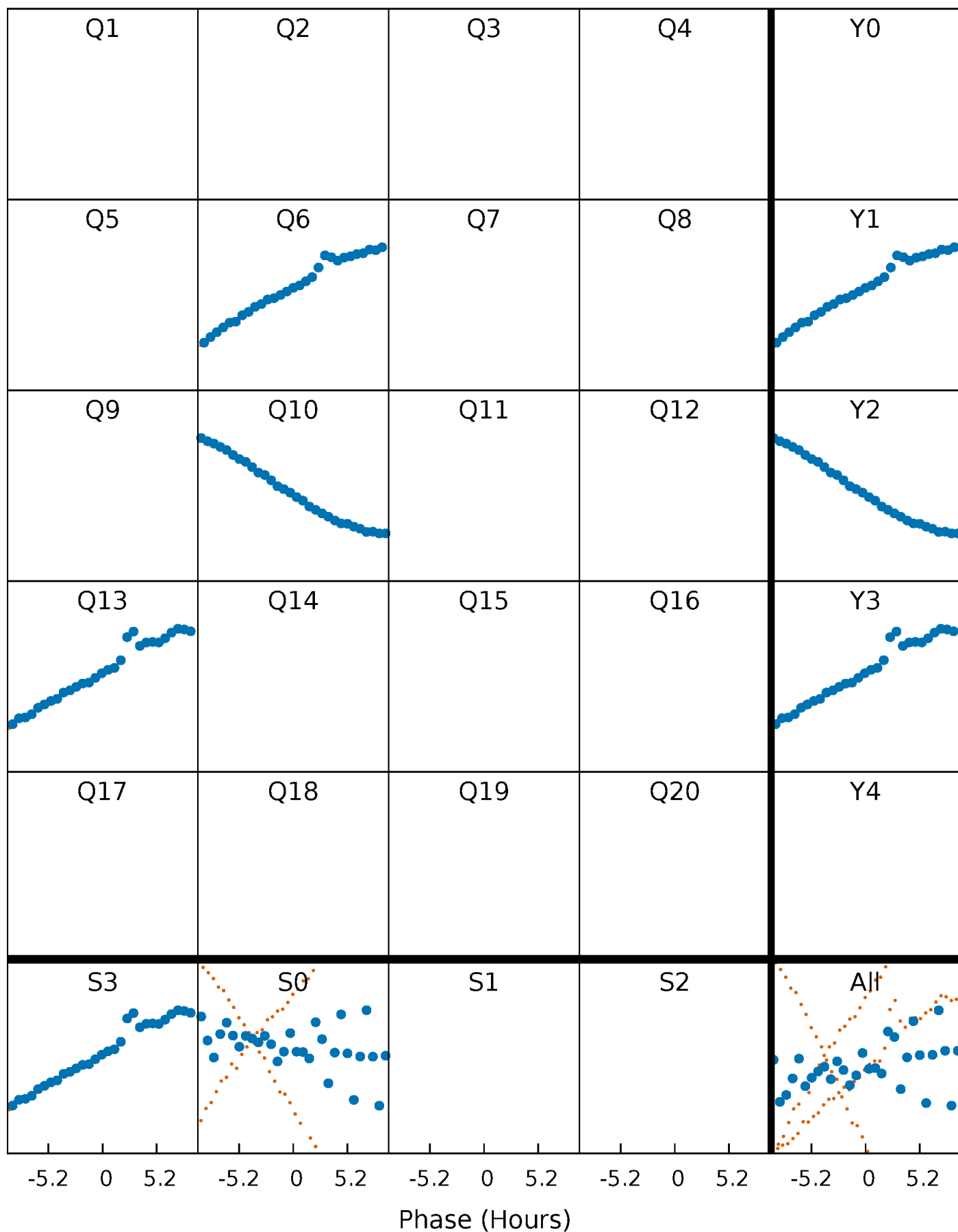


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



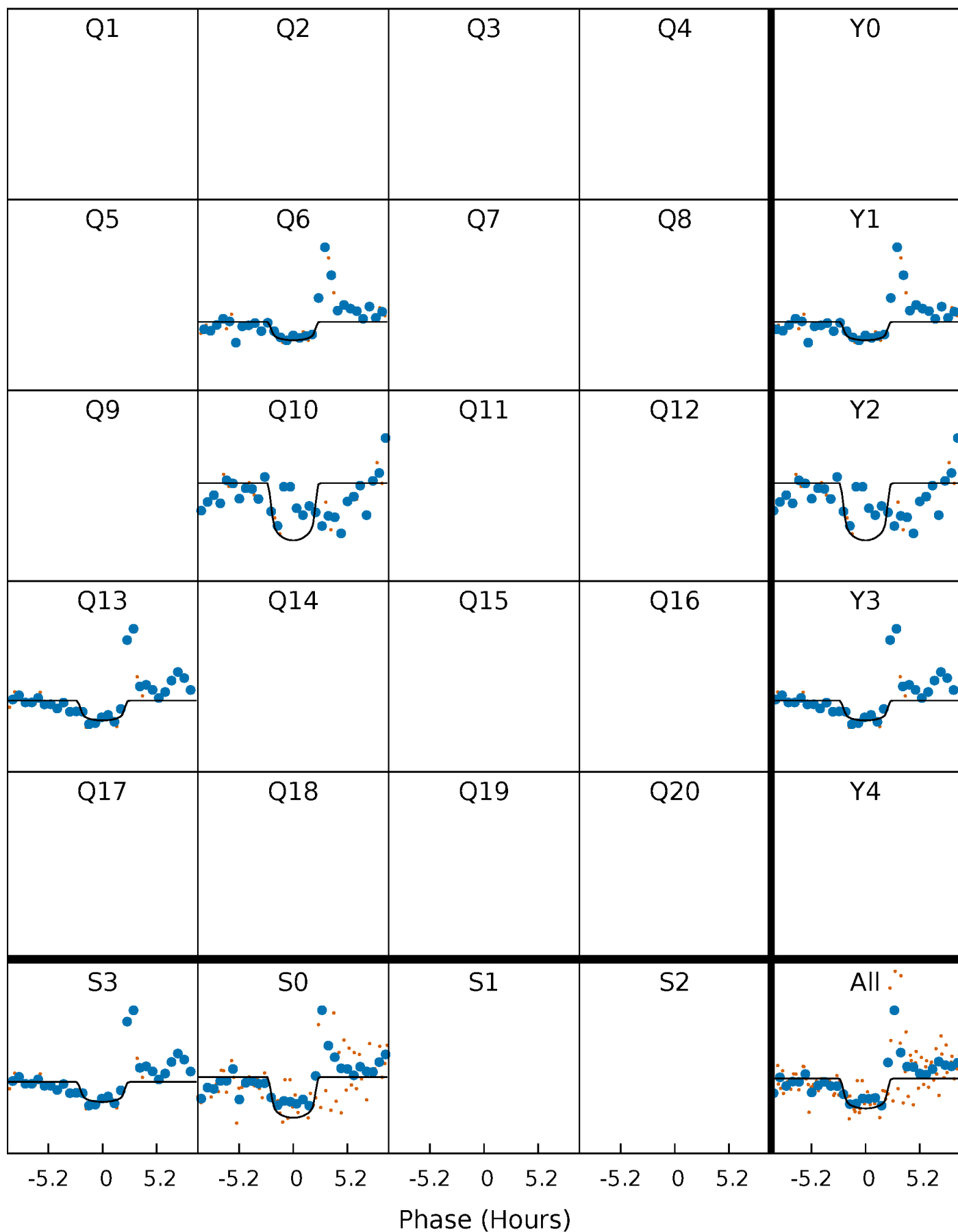
PDC Quarter-Phased Transit Curves

TCE 006616190-01 P=339.106356 Days $T_0=237.351109$ (BKJD)



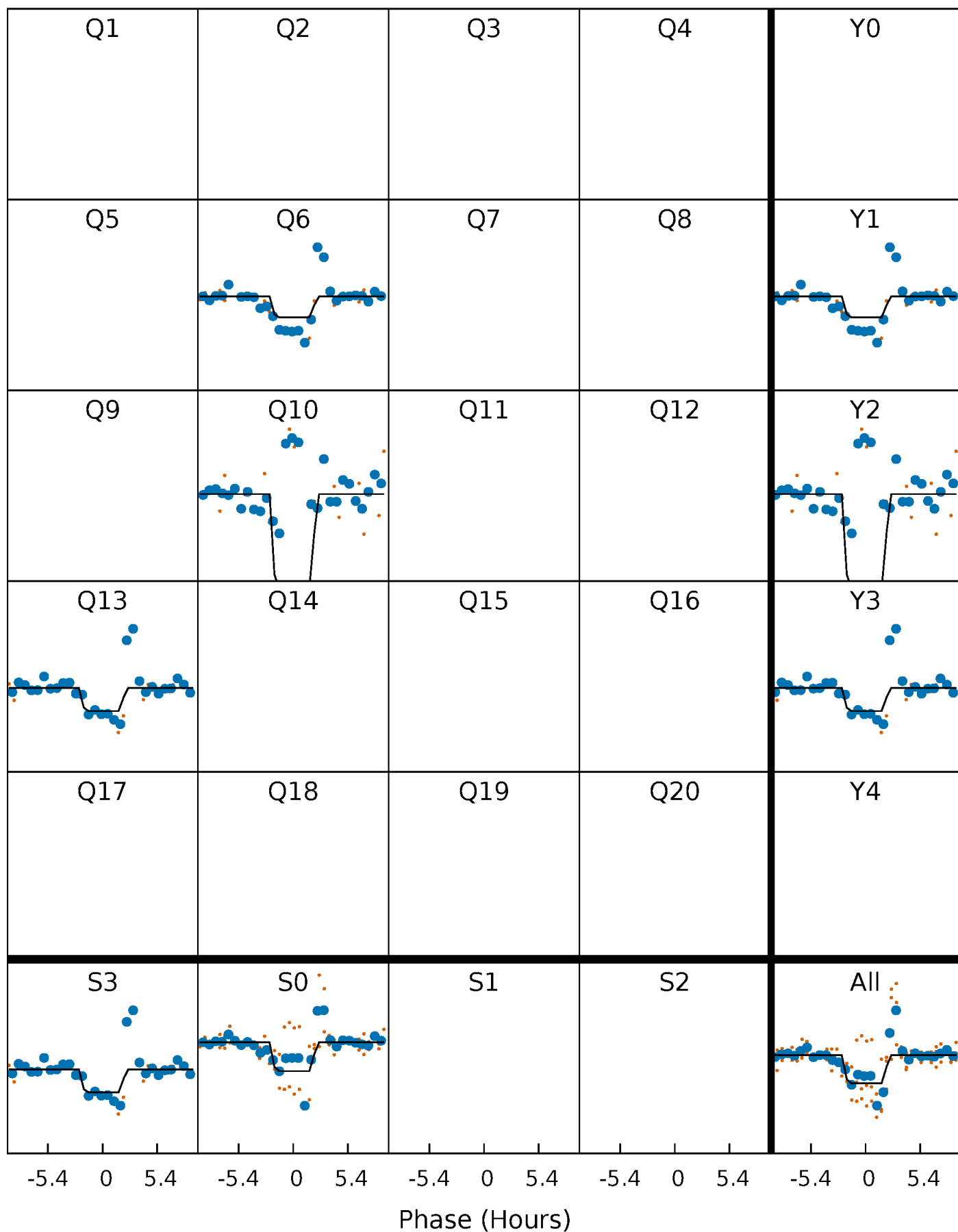
DV Quarter-Phased Transit Curves

TCE 006616190-01 P=339.106356 Days $T_0=237.351109$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

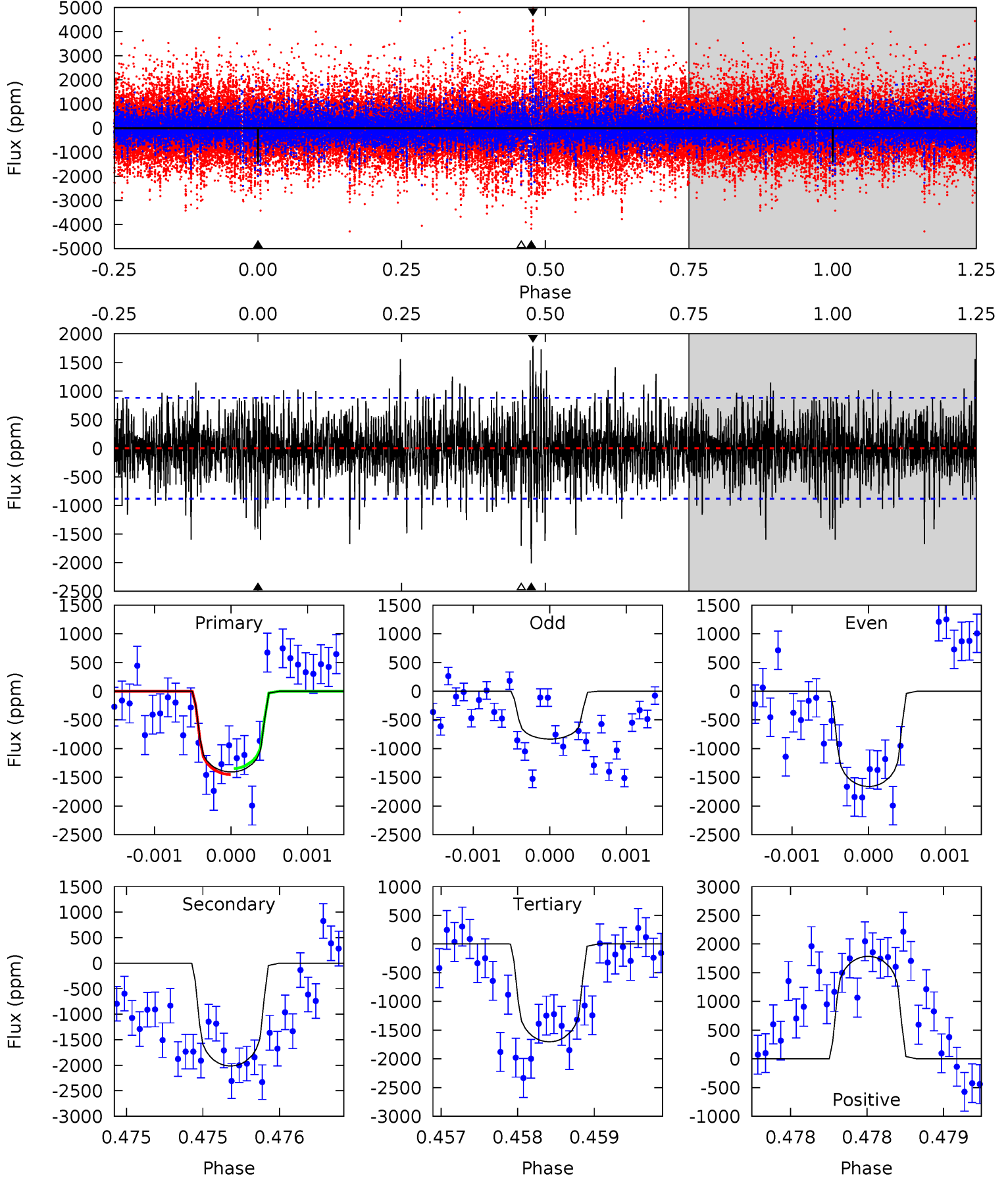
TCE 006616190-01 P=339.094928 Days $T_0=237.376995$ (BKJD)



DV Model-Shift Uniqueness Test

006616190-01, P = 339.106356 Days, E = 237.351109 Days

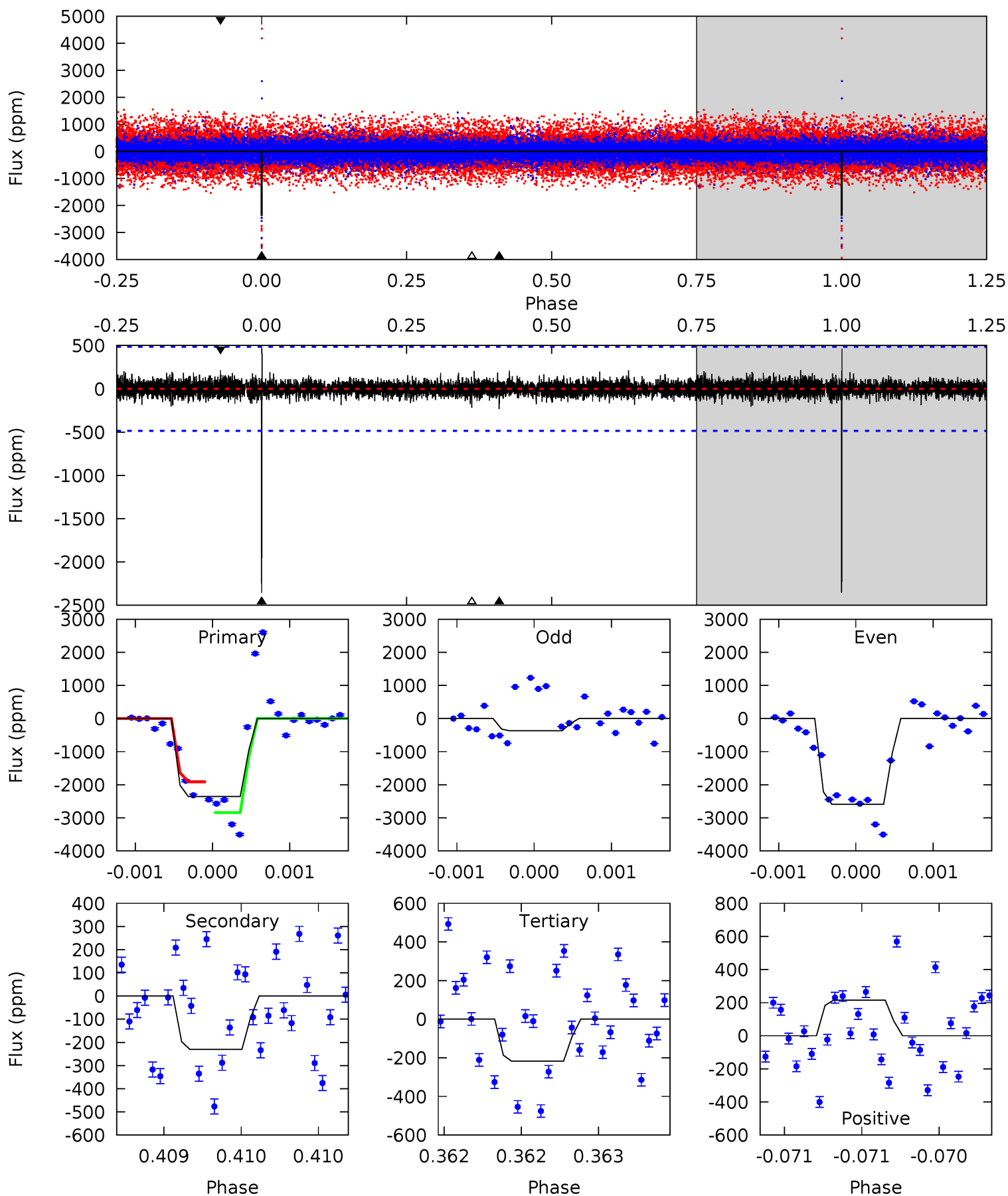
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.83	12.6	10.7	11.2	5.54	3.43	2.50	-1.85	-2.37	1.95	1.43	2.41	0.89	0.47	0.32



Alt Model-Shift Uniqueness Test

006616190-01, P = 339.094928 Days, E = 237.376995 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	2.65	2.50	2.46	5.56	3.46	0.54	24.5	24.6	0.15	0.19	13.4	0.74	0.16	5.35



Stellar Parameters For KIC 006616190

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6045^{+188}_{-230}	$4.494^{+0.050}_{-0.200}$	$-0.120^{+0.250}_{-0.350}$	$0.955^{+0.273}_{-0.098}$	$1.038^{+0.131}_{-0.144}$	$1.679^{+0.436}_{-0.840}$
	+3%/-4%	+1%/-4%	+208%/-292%	+29%/-10%	+13%/-14%	+26%/-50%
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 006616190-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2014 ± 159	$4.46^{+2.99}_{-2.25}$	379^{+25}_{-19}	6298^{+3344}_{-1277}	$49846^{+167492}_{-31742}$
Alt.	-231 ± 87	$4.81^{+3.02}_{-2.56}$	379^{+24}_{-19}	3848^{+1325}_{-592}	4735^{+16555}_{-3171}

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 $A_{\text{obs}} \gg 1.0$

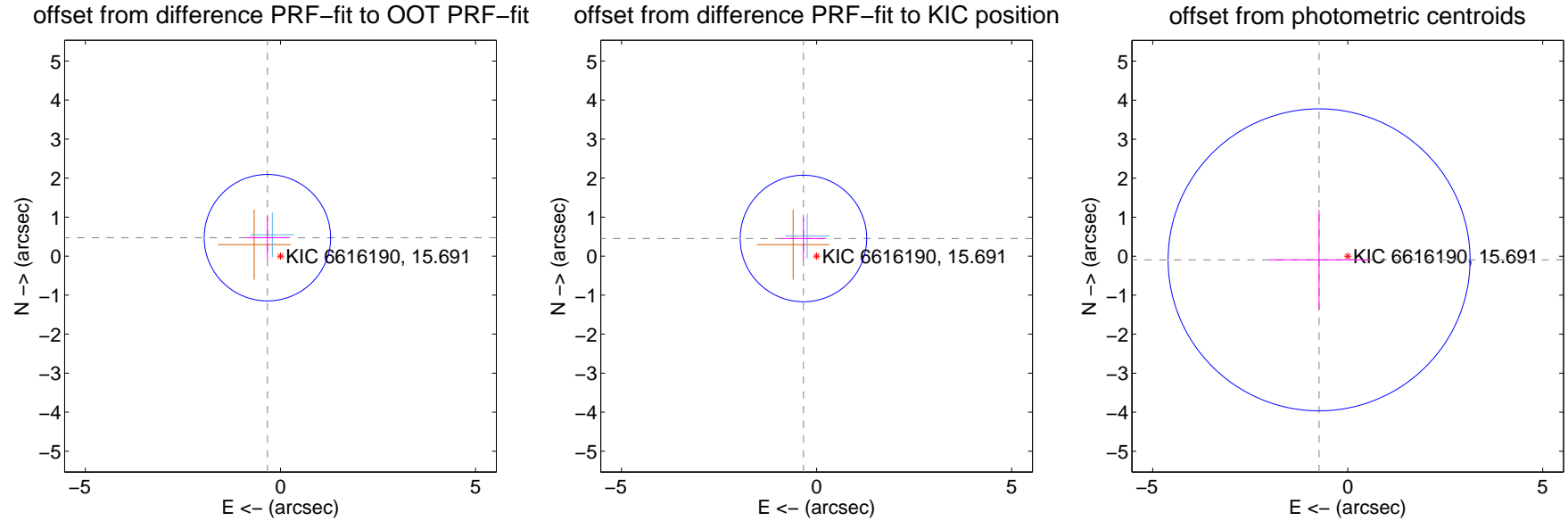
DV Centroid Data

Supplemental centroid analysis for 006616190-01. Kepler magnitude: 15.69. Transit SNR 6.53

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.579 ± 0.540	1.07	0.334 ± 0.547	0.473 ± 0.537
PRF-fit source offset from KIC position	0.564 ± 0.540	1.04	0.337 ± 0.547	0.452 ± 0.537
photometric centroid source offset	0.74 ± 1.29	0.57	0.73 ± 1.29	-0.09 ± 1.28

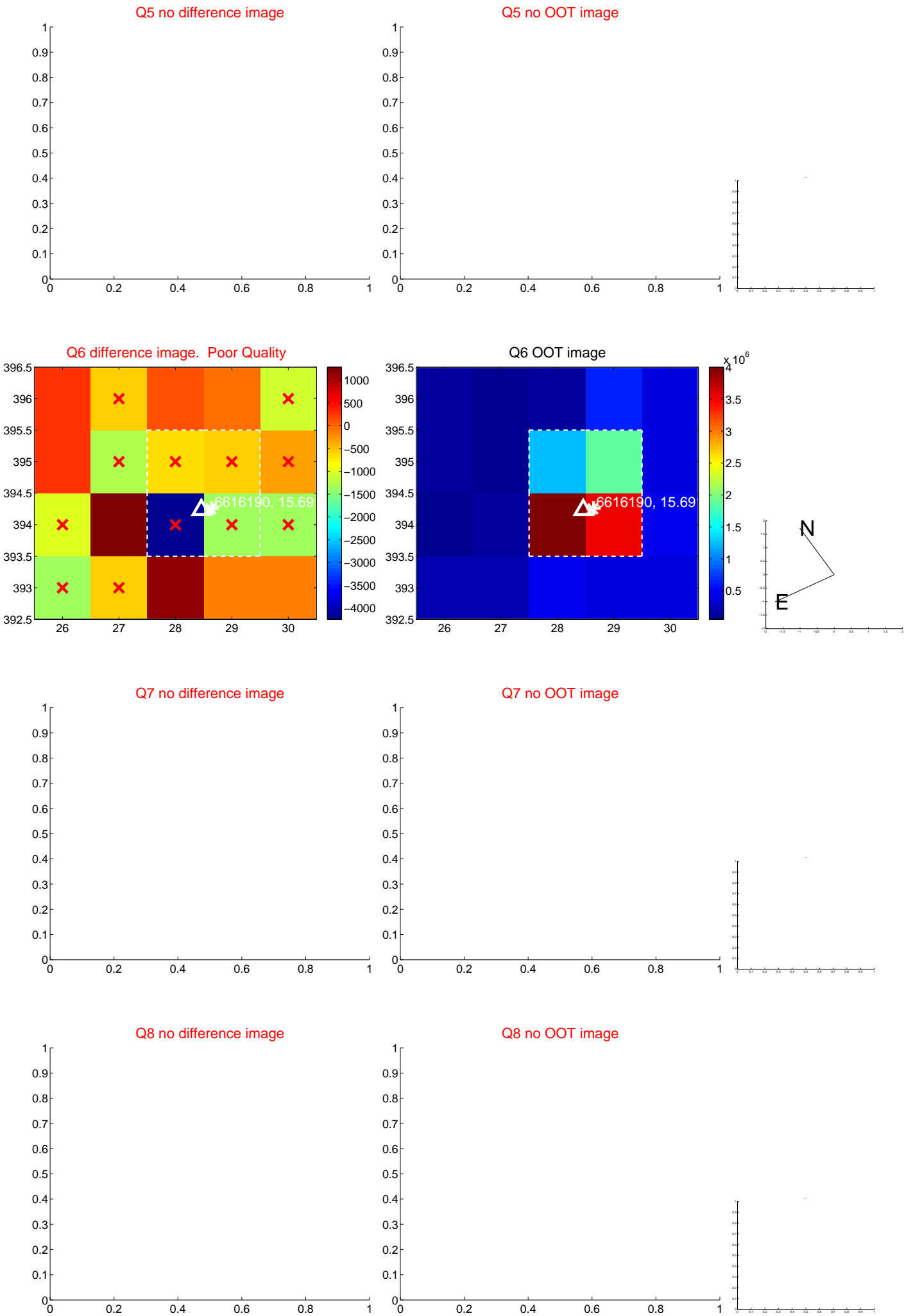


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

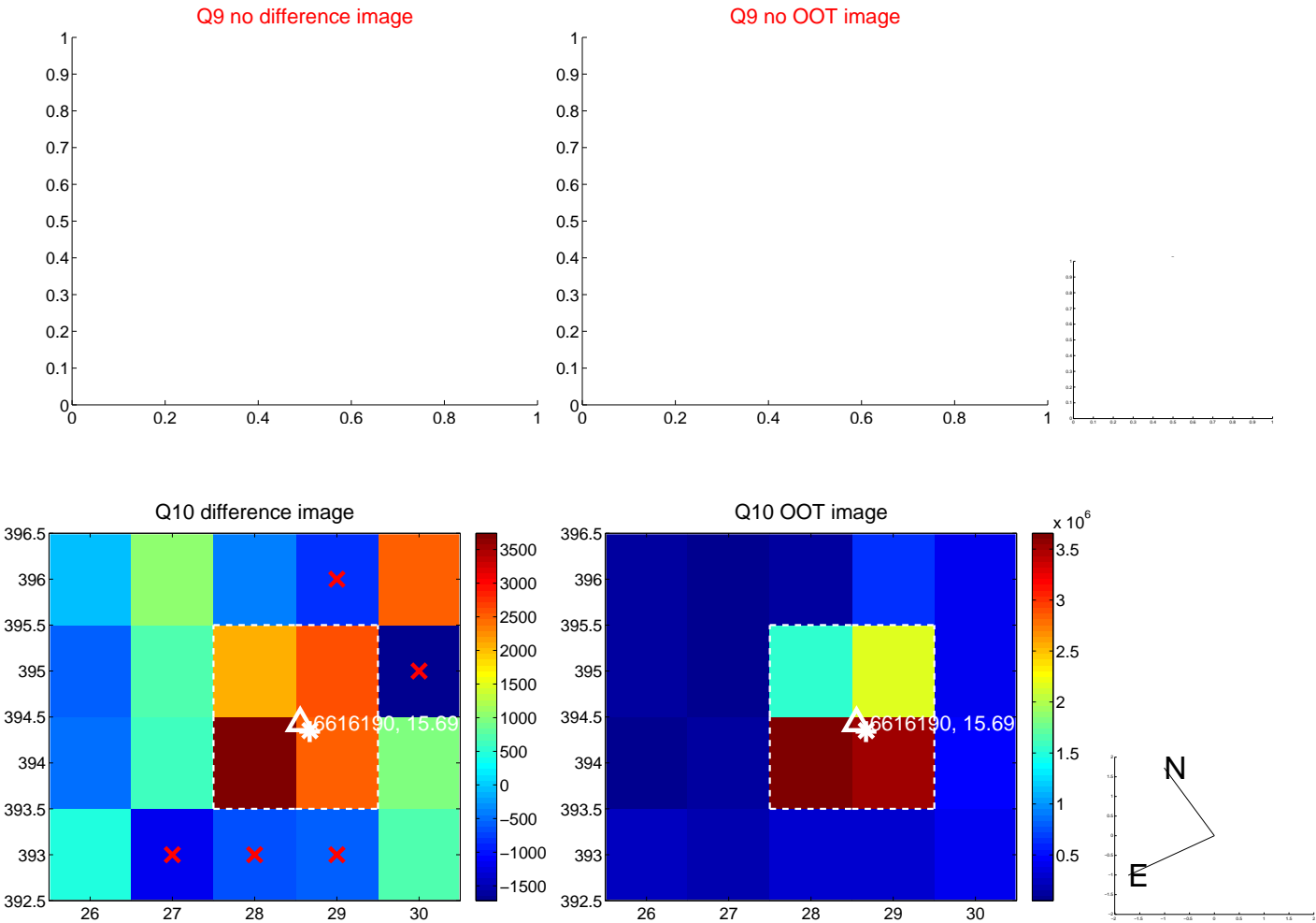
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



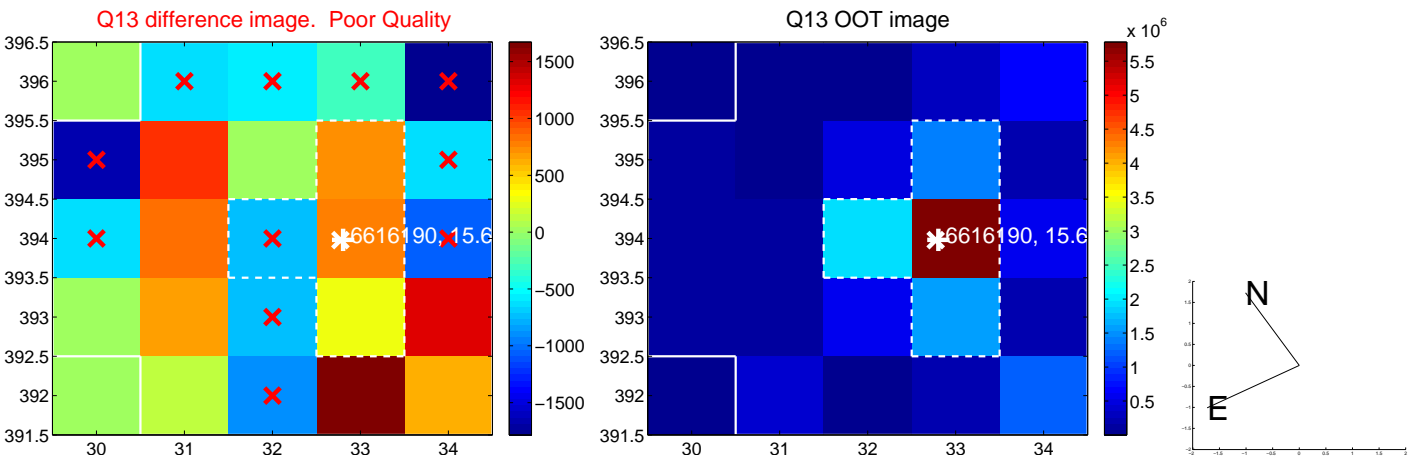
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



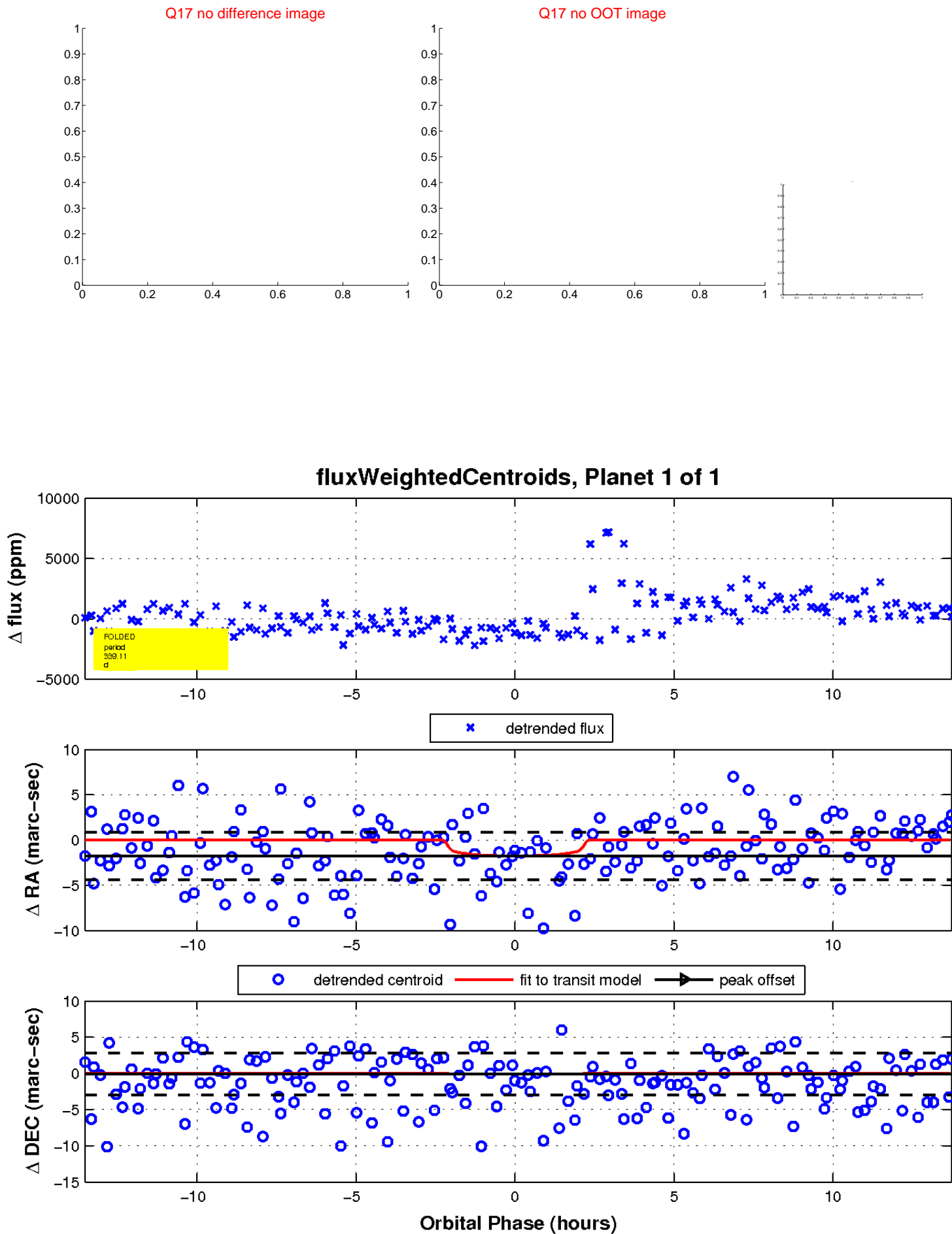
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

