

KIC 003216449

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})
003216449-01	OBS	No	529.120225	480.509387	331.5	7.500	16.7	-1.0	2.23	10443	4.18	17.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003216449-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_NOFITS

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

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

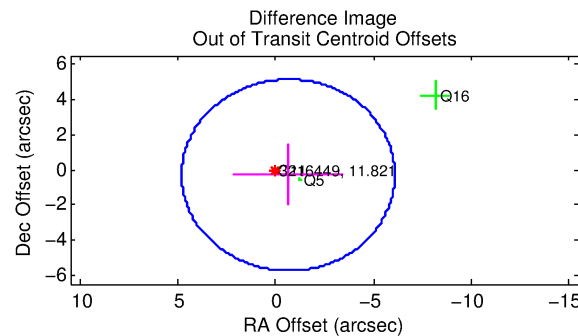
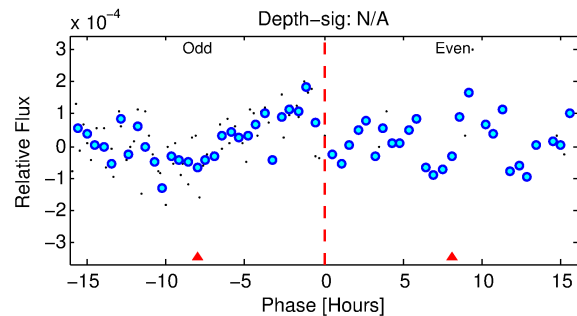
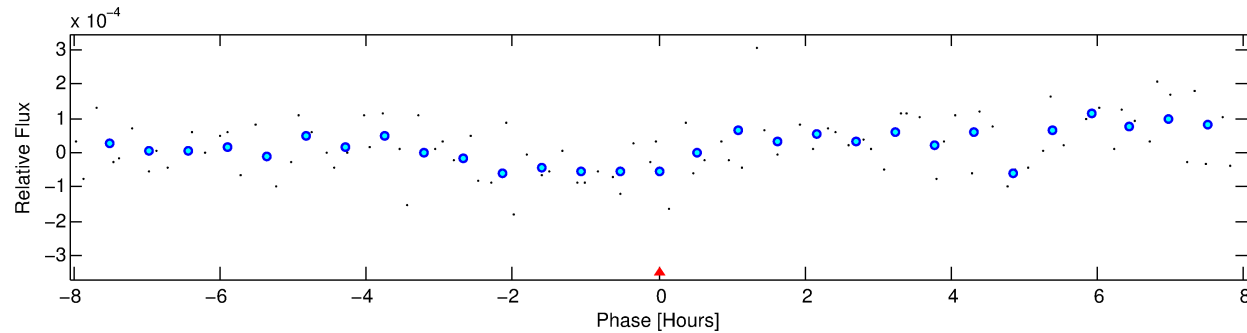
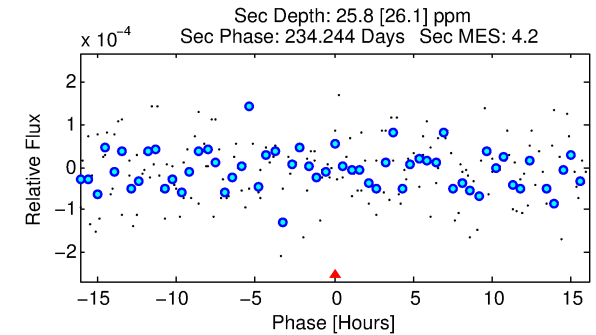
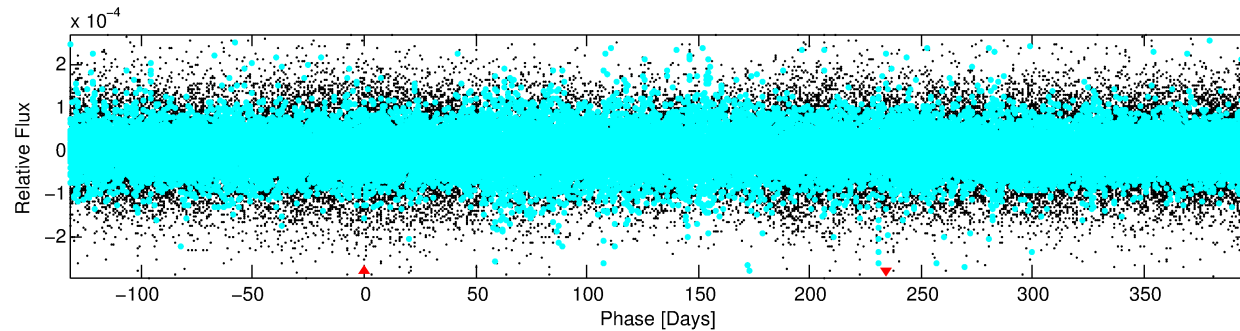
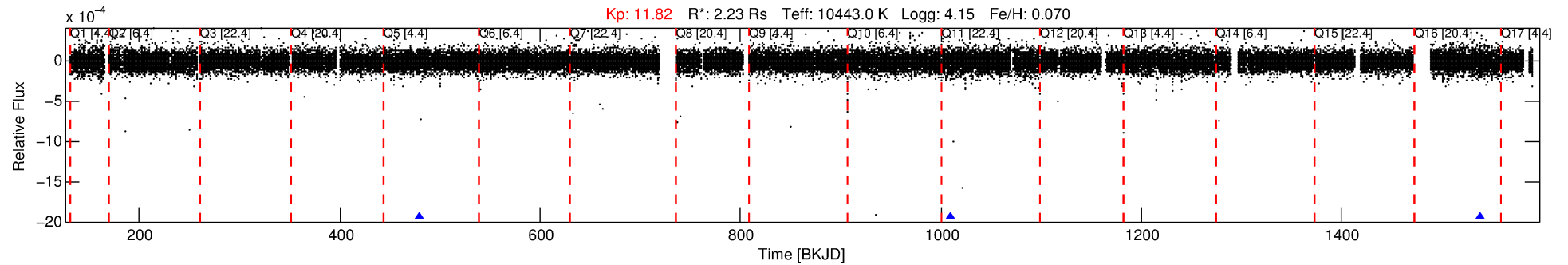
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003216449-01

No Significant Match Found

DV One-Page Summary

KIC: 3216449 Candidate: 1 of 1 Period: 529.120 d



TPS TCE Results:

Period = 529.12022 d
Epoch = 480.5094 BKJD

DV fit results are unavailable

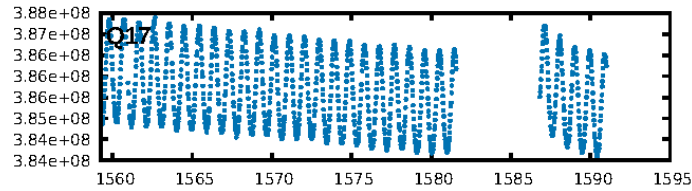
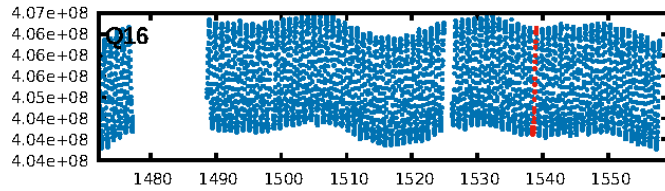
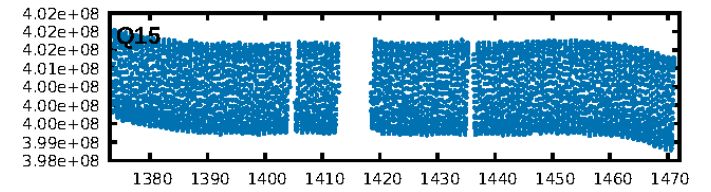
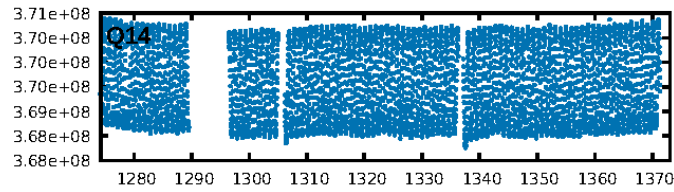
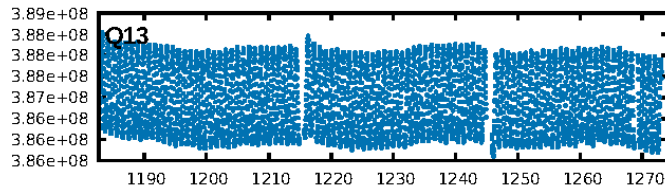
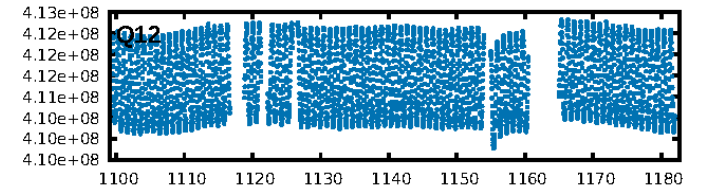
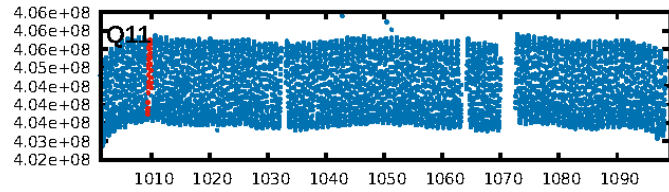
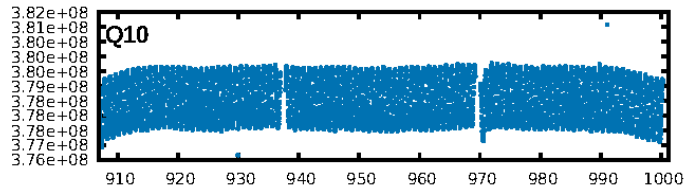
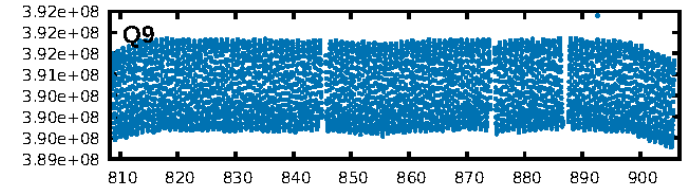
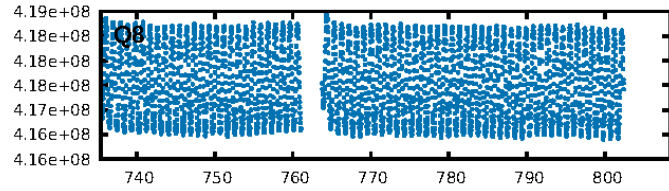
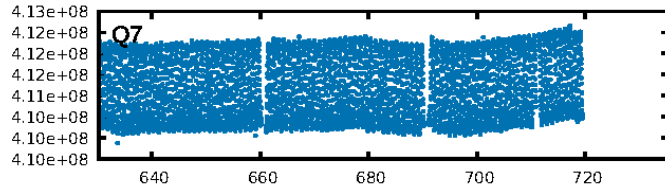
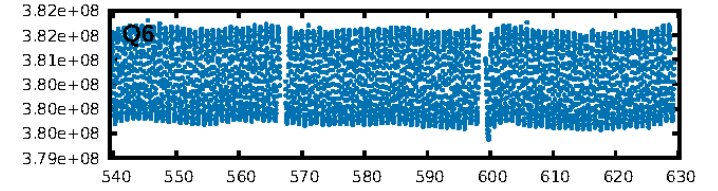
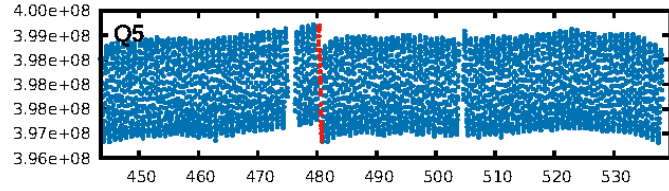
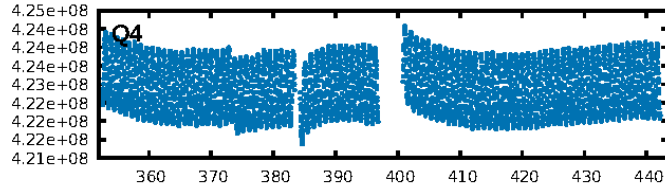
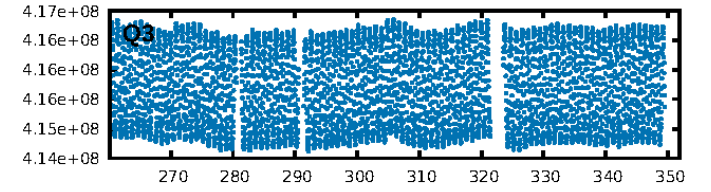
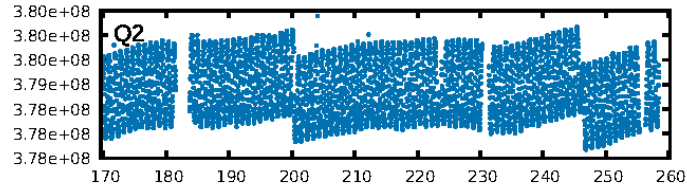
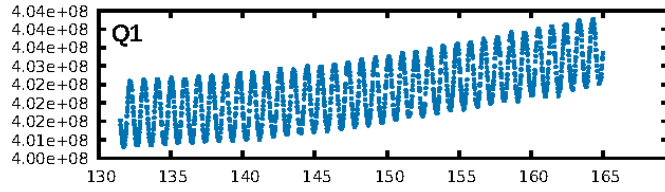
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.39e-27
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.374
Centroid-sig: 96.7%
Centroid-so: 2.528 arcsec [0.14 σ]
OotOffset-rm: 0.708 arcsec [0.39 σ]
KicOffset-rm: 0.567 arcsec [0.23 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

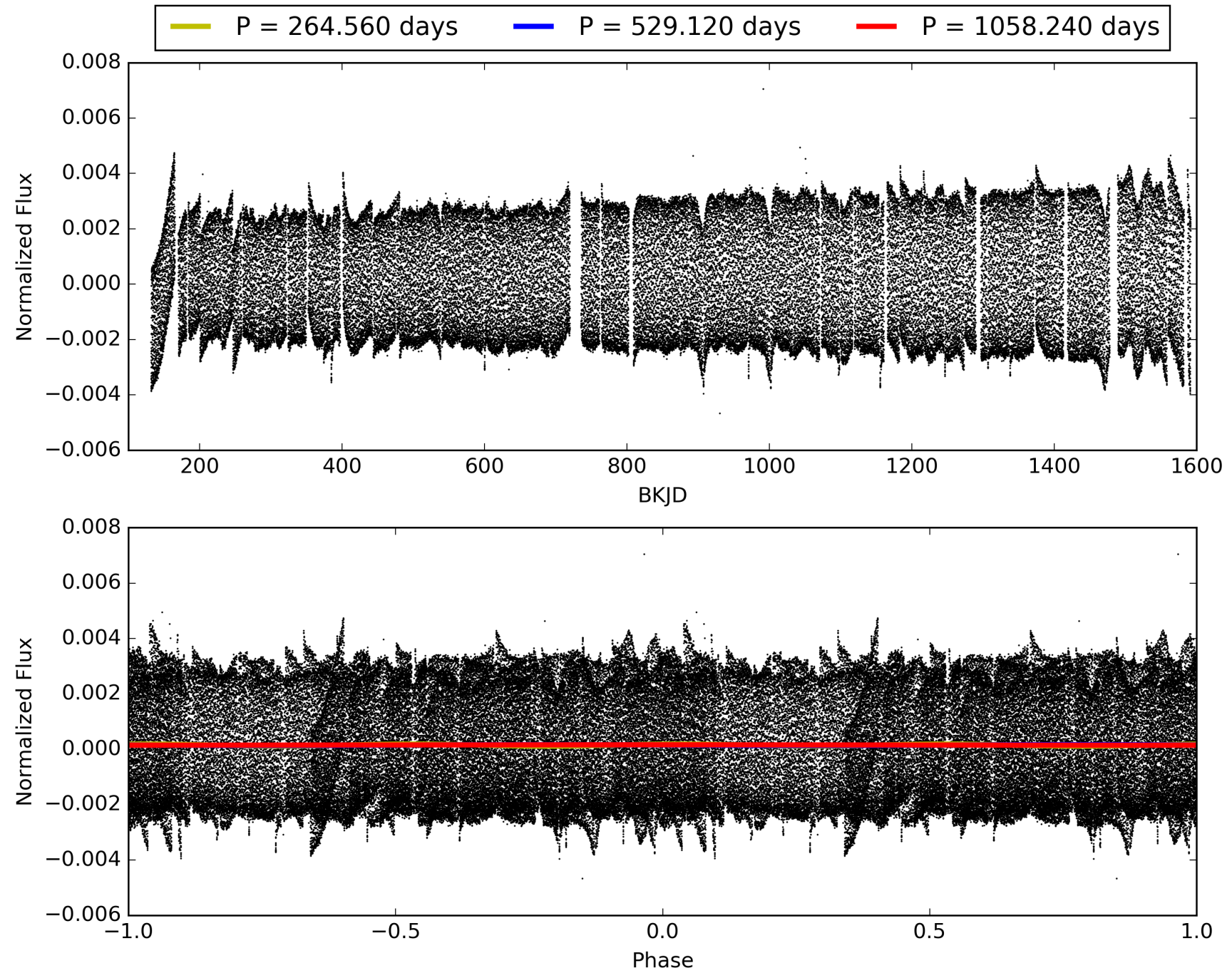
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:30:56 Z

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

TCE 003216449-01, PDC Light Curves

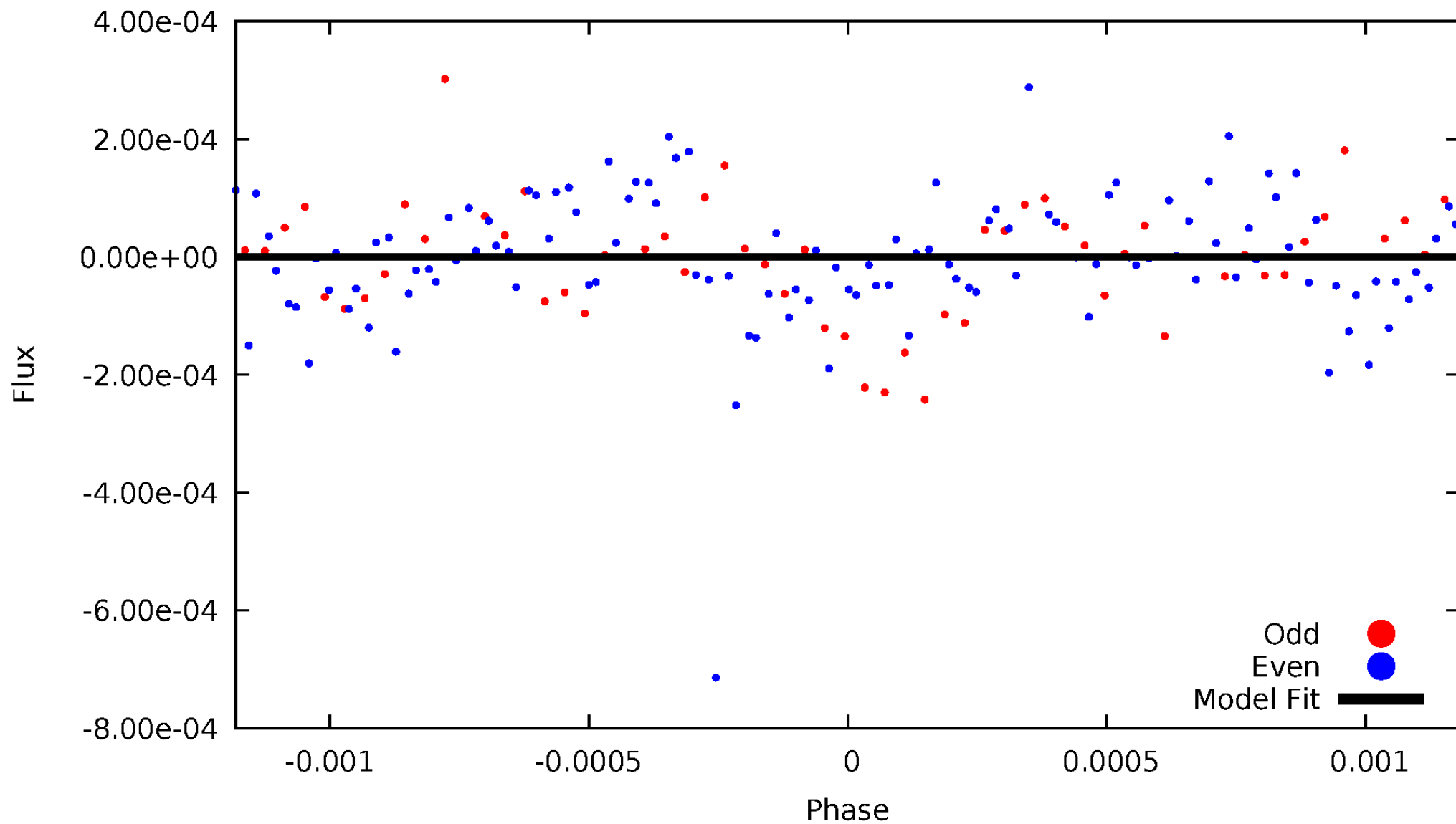


TCE 003216449-01



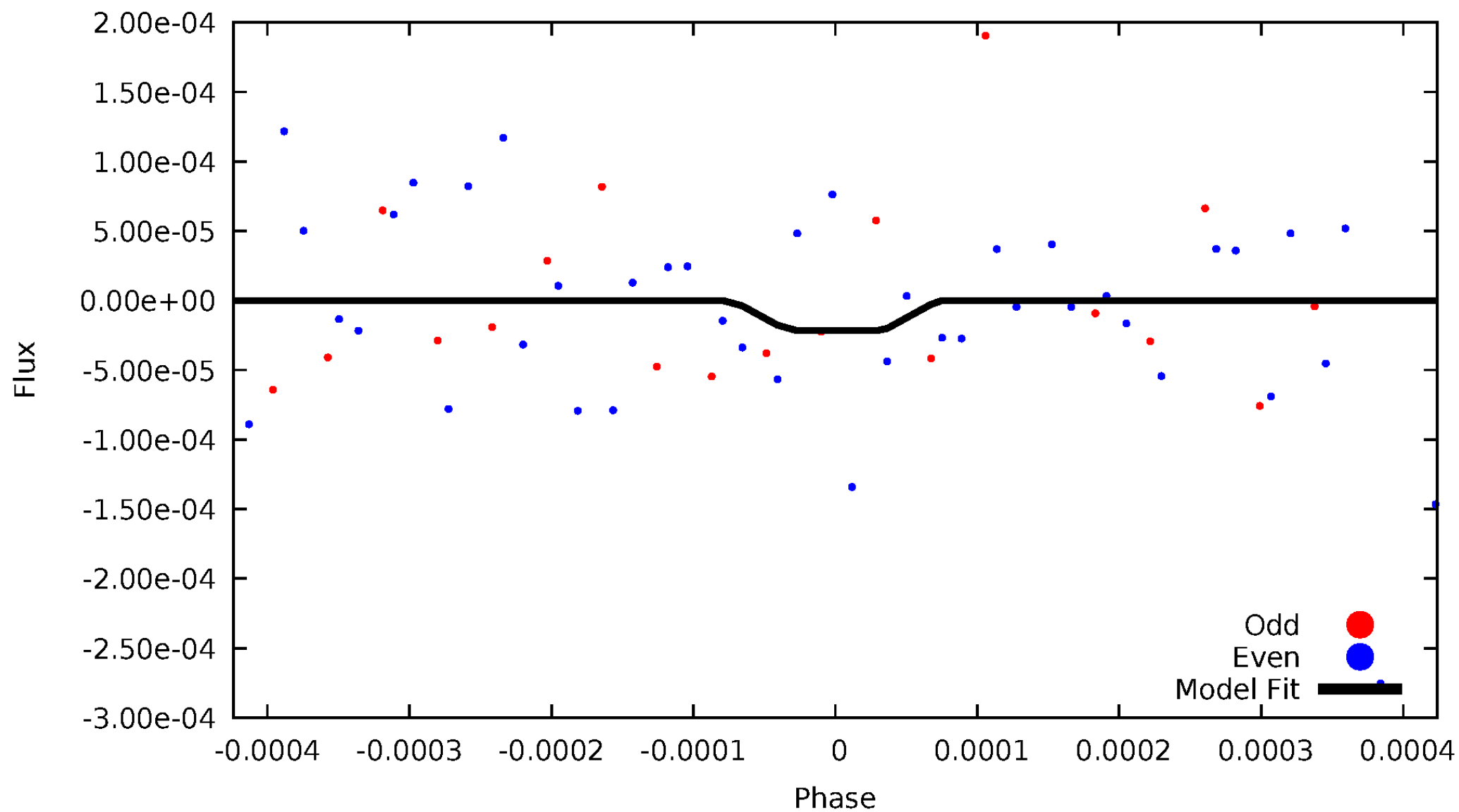
DV Odd/Even

TCE 003216449-01

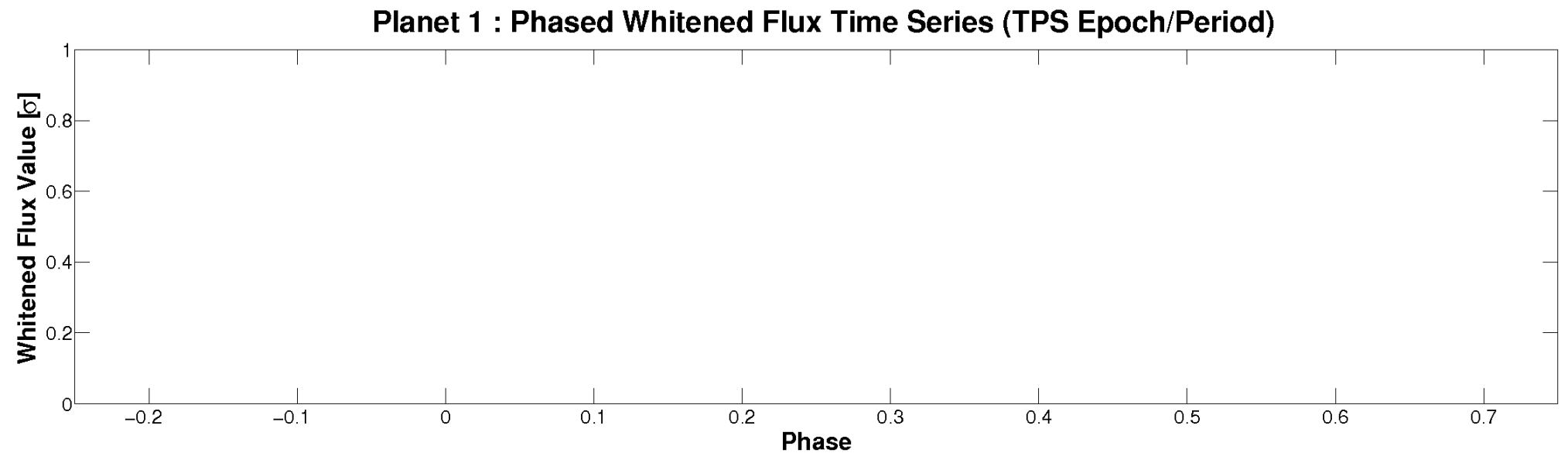
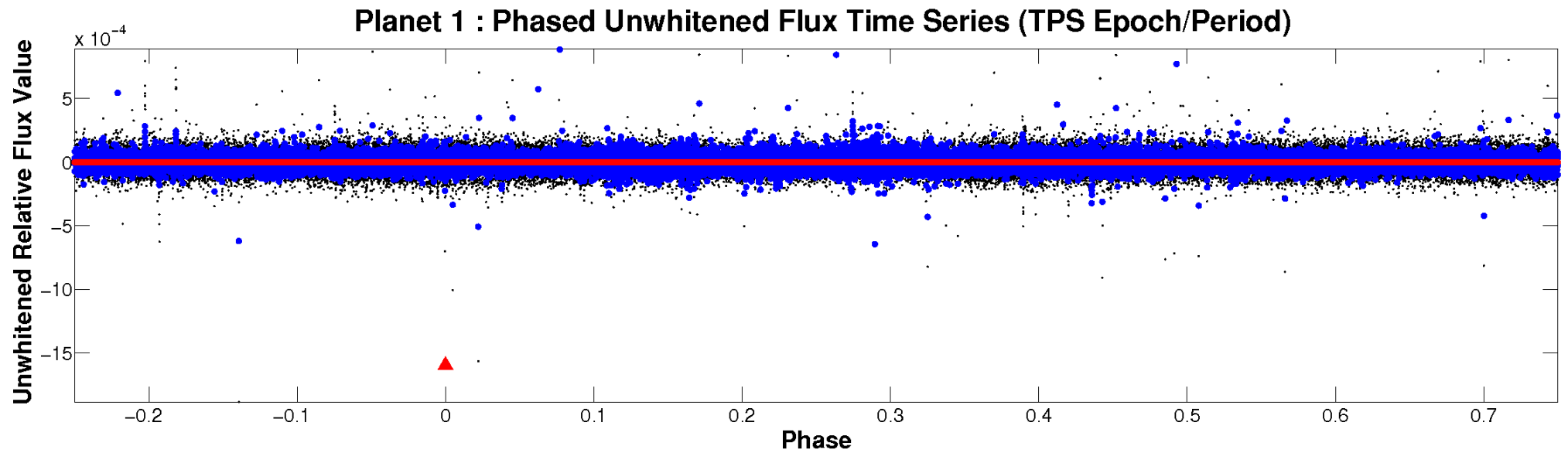


ALT Odd/Even

TCE 003216449-01

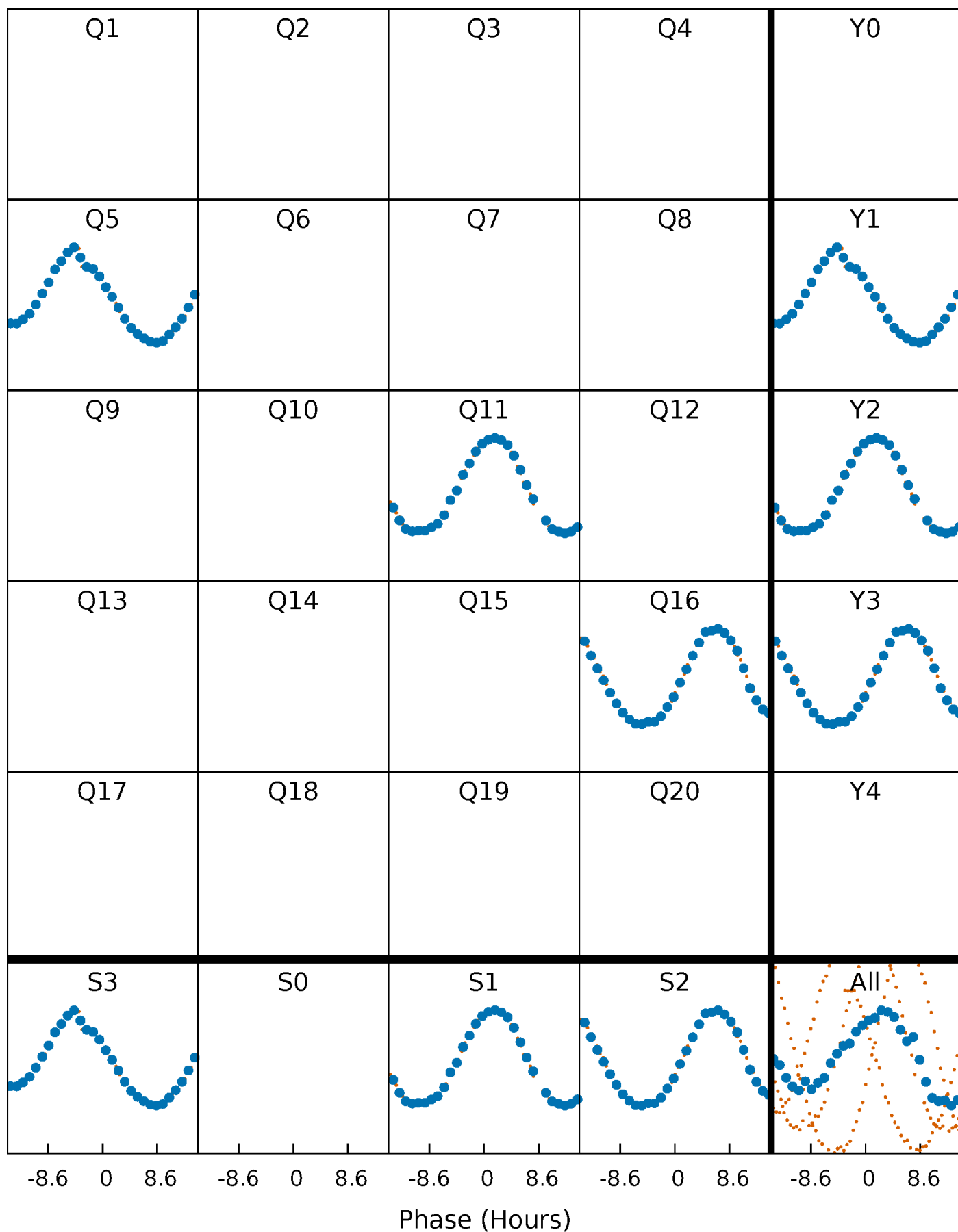


Non-Whitened Vs. Whitened Light Curve



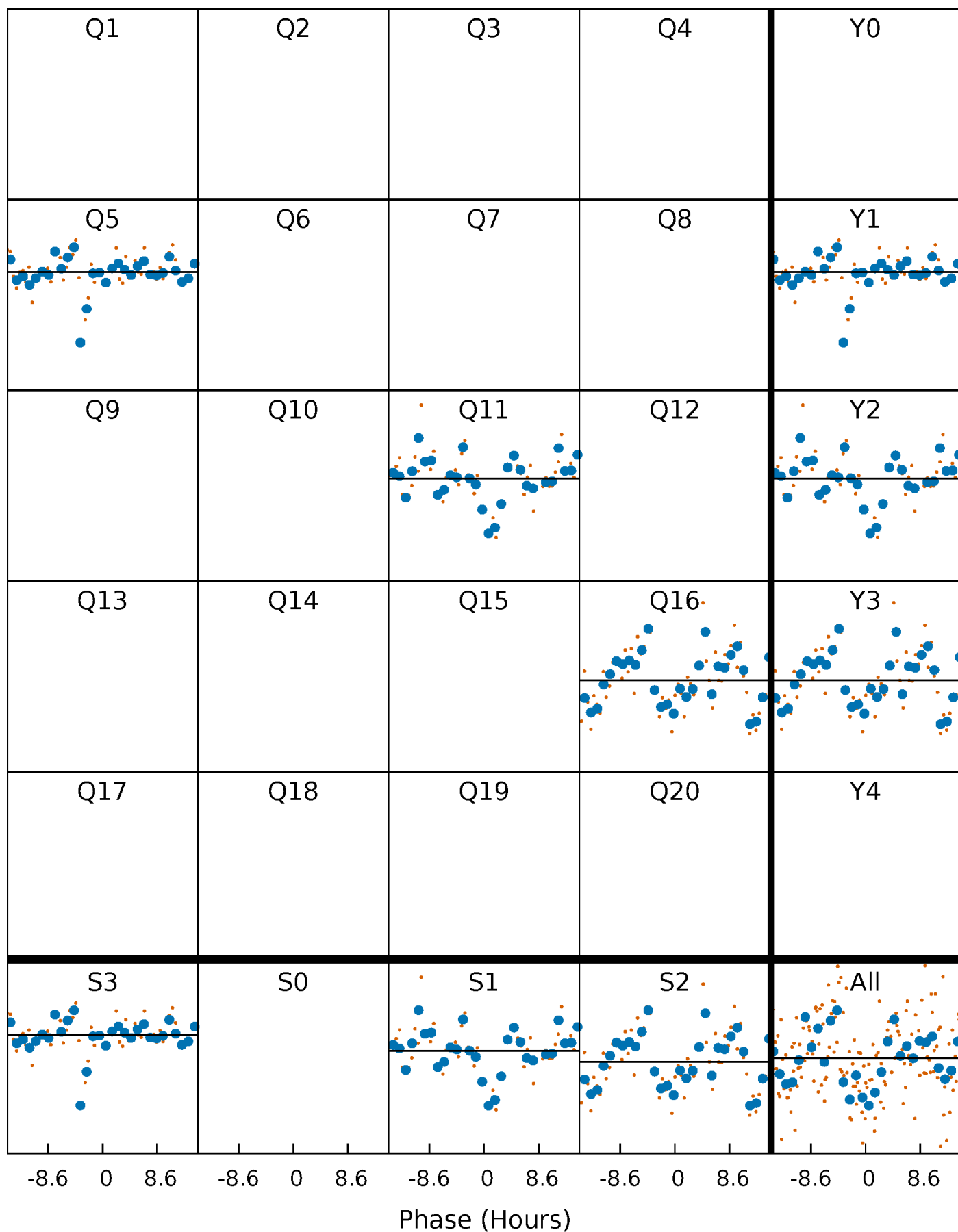
PDC Quarter-Phased Transit Curves

TCE 003216449-01 P=529.120225 Days $T_0=480.509387$ (BKJD)



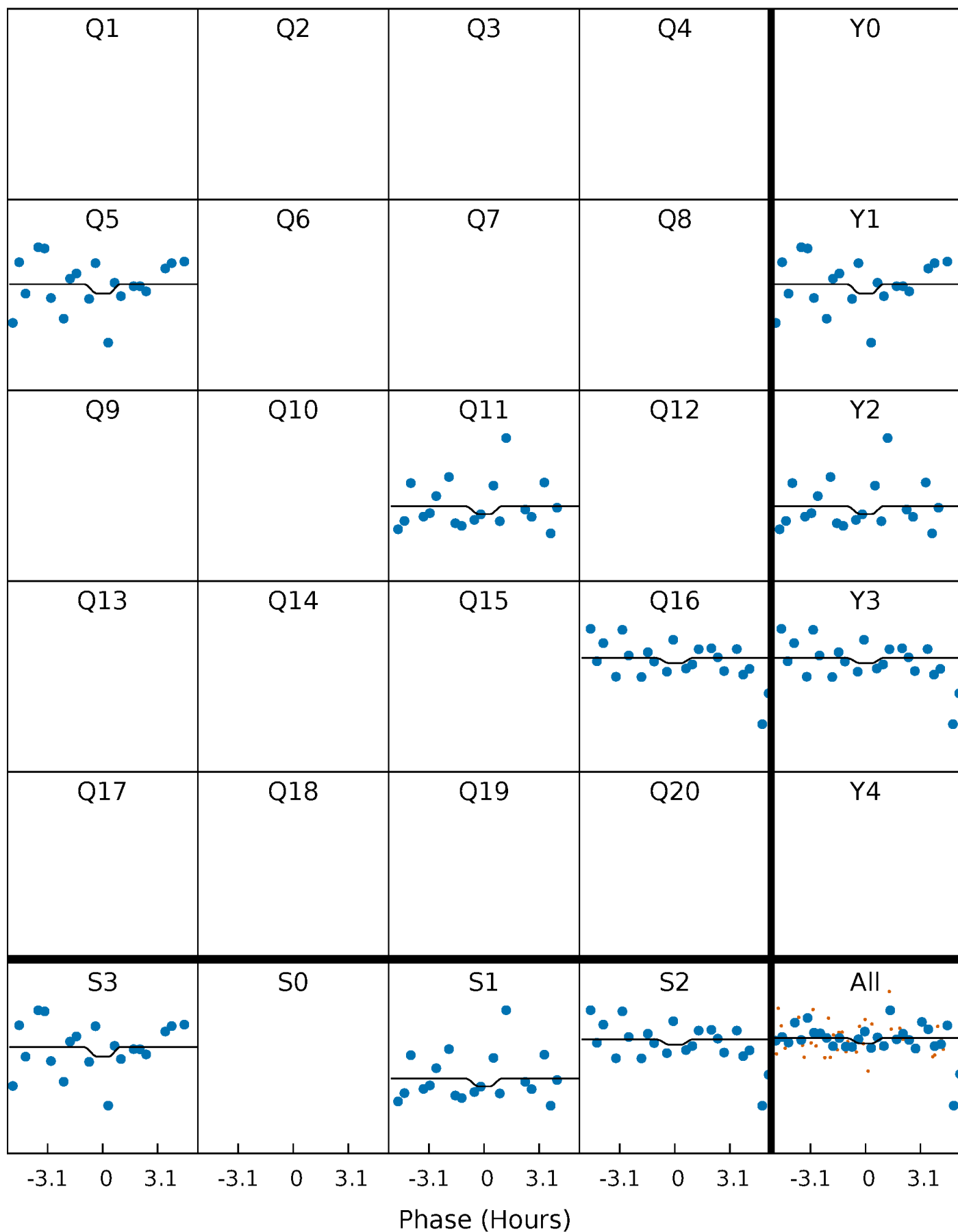
DV Quarter-Phased Transit Curves

TCE 003216449-01 P=529.120225 Days $T_0=480.509387$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

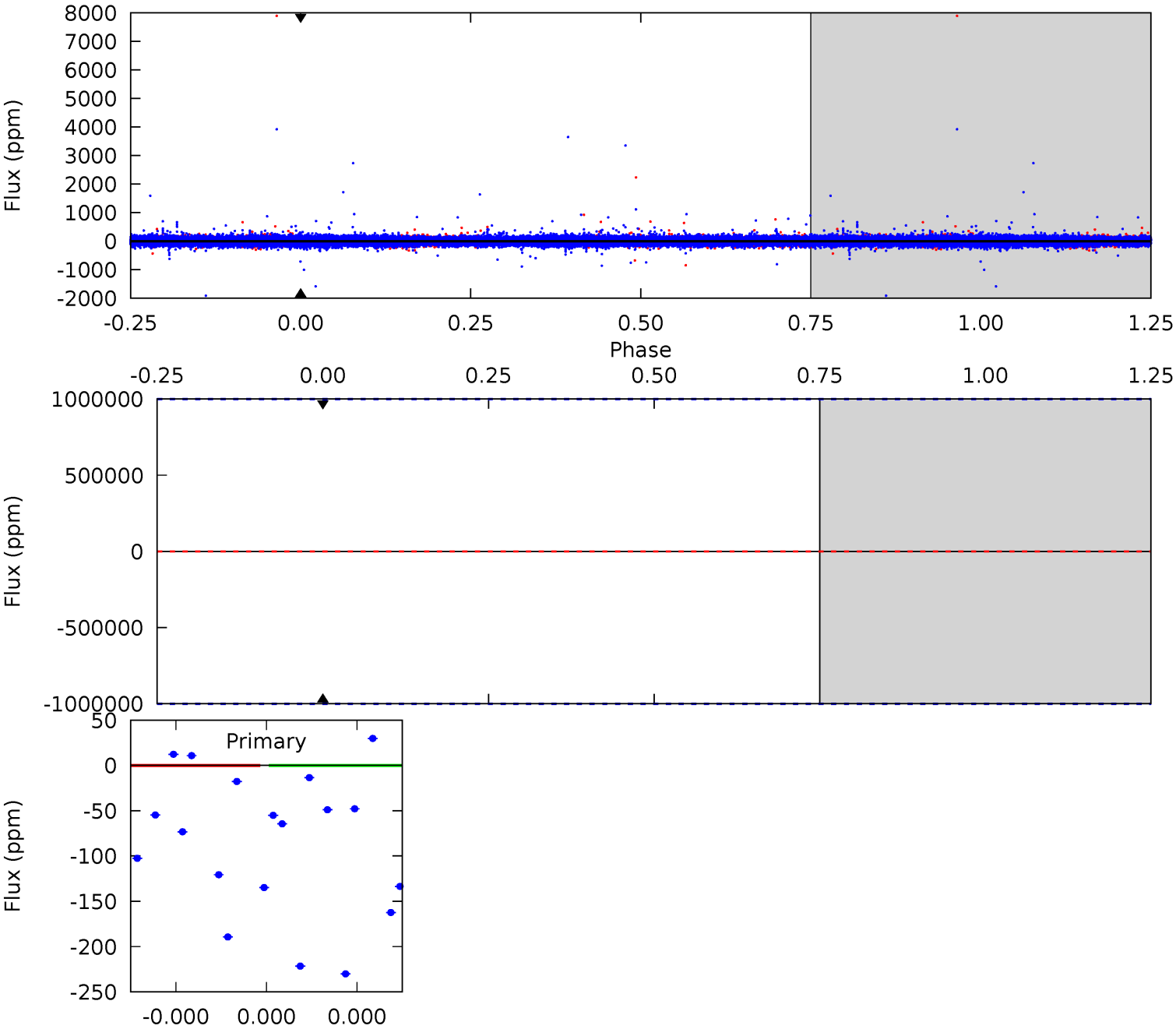
TCE 003216449-01 P=529.120225 Days $T_0=480.041672$ (BKJD)



DV Model-Shift Uniqueness Test

003216449-01, P = 529.120225 Days, E = 480.509387 Days

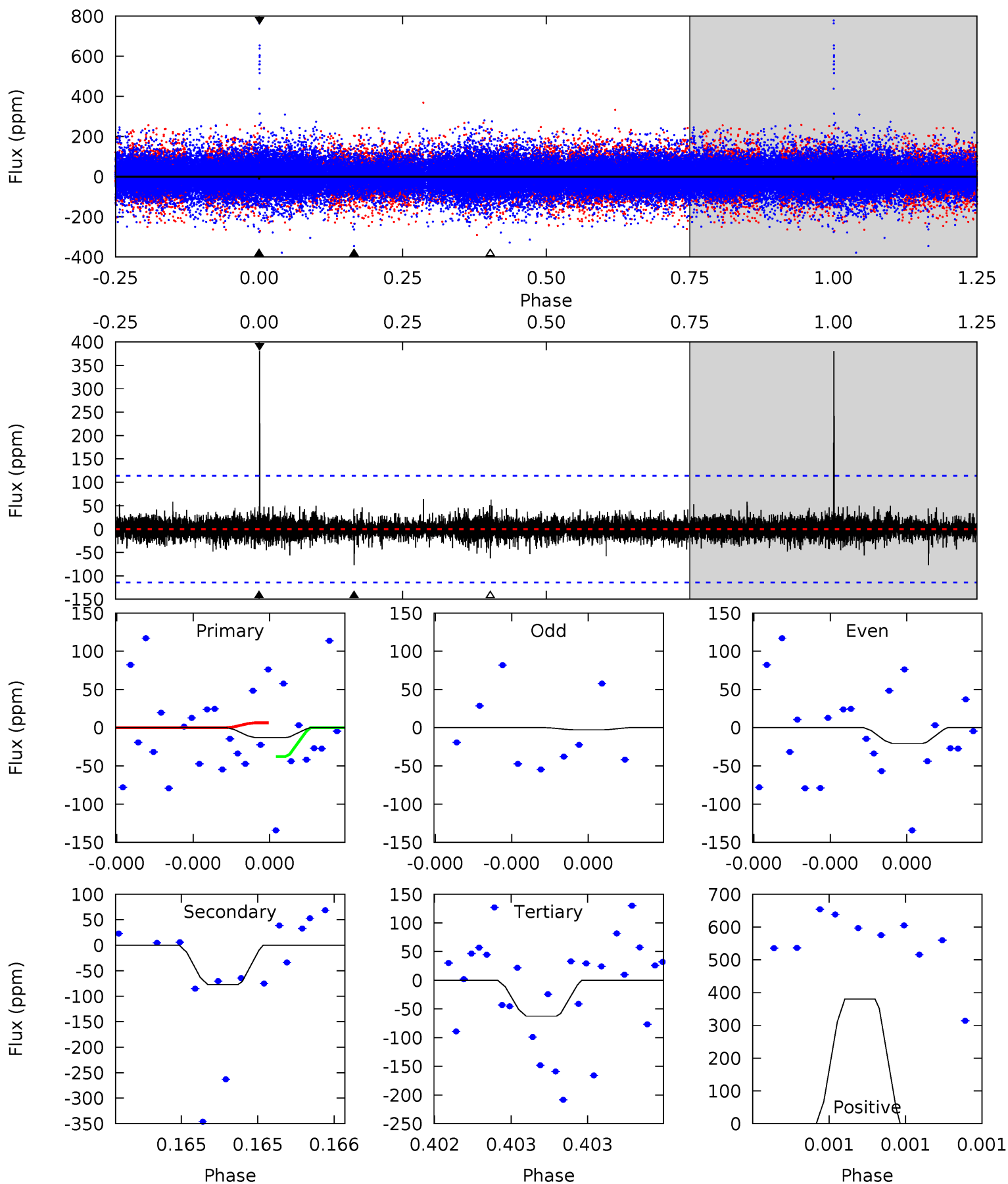
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

003216449-01, P = 529.120225 Days, E = 480.041672 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.66	3.91	3.17	19.3	5.79	3.81	0.61	-2.51	-18.6	0.74	-15.4	0.39	3.13	0.83	0.79



Stellar Parameters For KIC 003216449

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	10443^{+250}_{-429}	$4.149^{+0.184}_{-0.205}$	$0.070^{+0.200}_{-0.600}$	$2.231^{+0.866}_{-0.650}$	$2.558^{+0.364}_{-0.546}$	$0.325^{+0.383}_{-0.175}$
	+2%/-4%	+4%/-5%	+286%/-857%	+39%/-29%	+14%/-21%	+118%/-54%
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 003216449-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$18.50^{+19.16}_{-13.34}$	726^{+60}_{-58}	5375^{+98270}_{-76693}	$2712^{+1104540}_{-746168}$
Alt.	-77 ± 20	$17.63^{+17.80}_{-11.91}$	728^{+63}_{-56}	3687^{+2185}_{-710}	383^{+3734}_{-291}

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

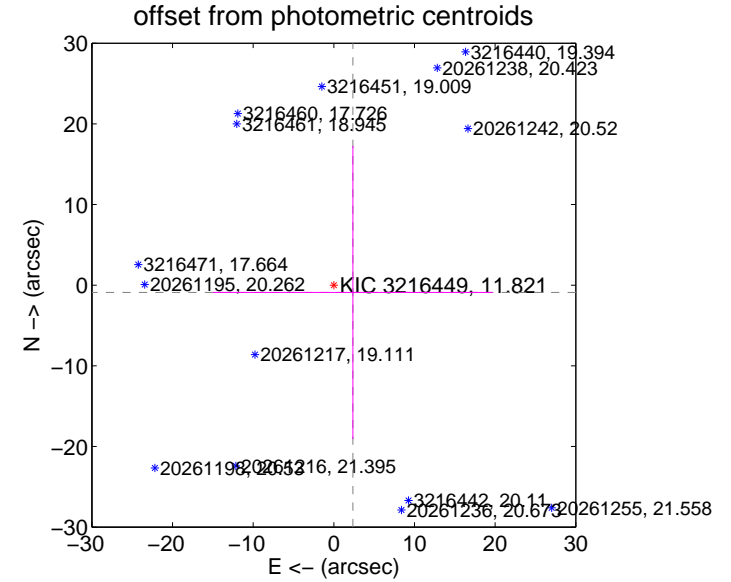
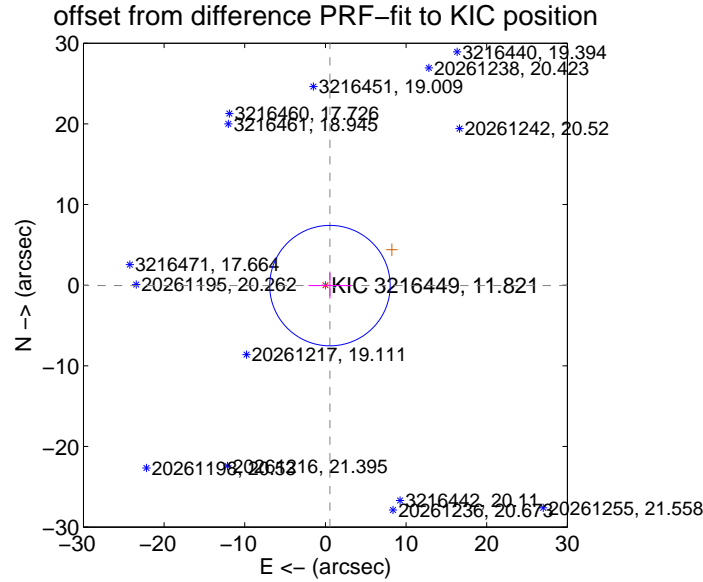
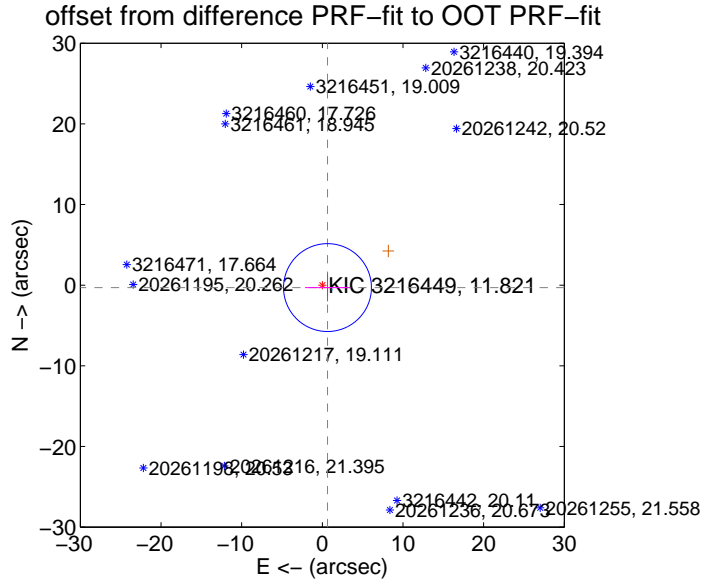
DV Centroid Data

Supplemental centroid analysis for 003216449-01. **Kepler magnitude: 11.82.** Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.708 ± 1.816	0.39	-0.642 ± 2.795	-0.299 ± 1.713
PRF-fit source offset from KIC position	0.567 ± 2.489	0.23	-0.565 ± 2.660	-0.057 ± 1.592
photometric centroid source offset	2.53 ± 17.46	0.14	-2.36 ± 17.34	-0.91 ± 18.18

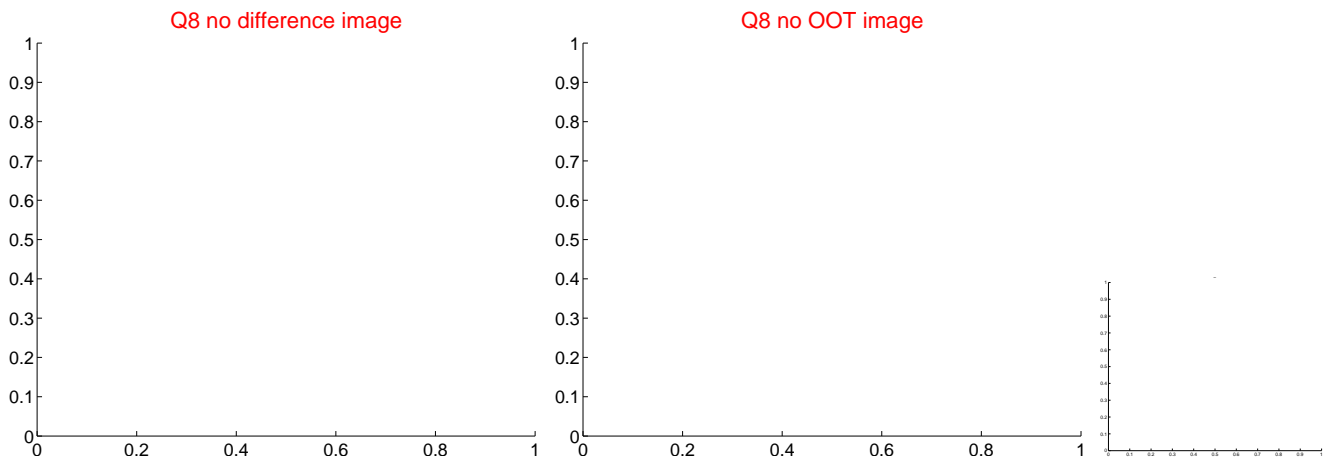
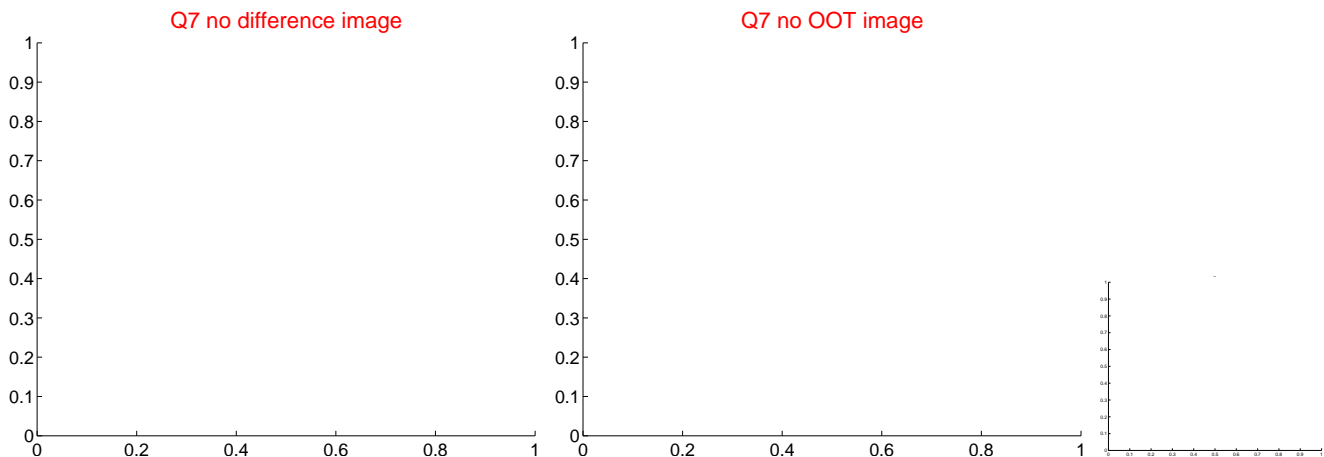
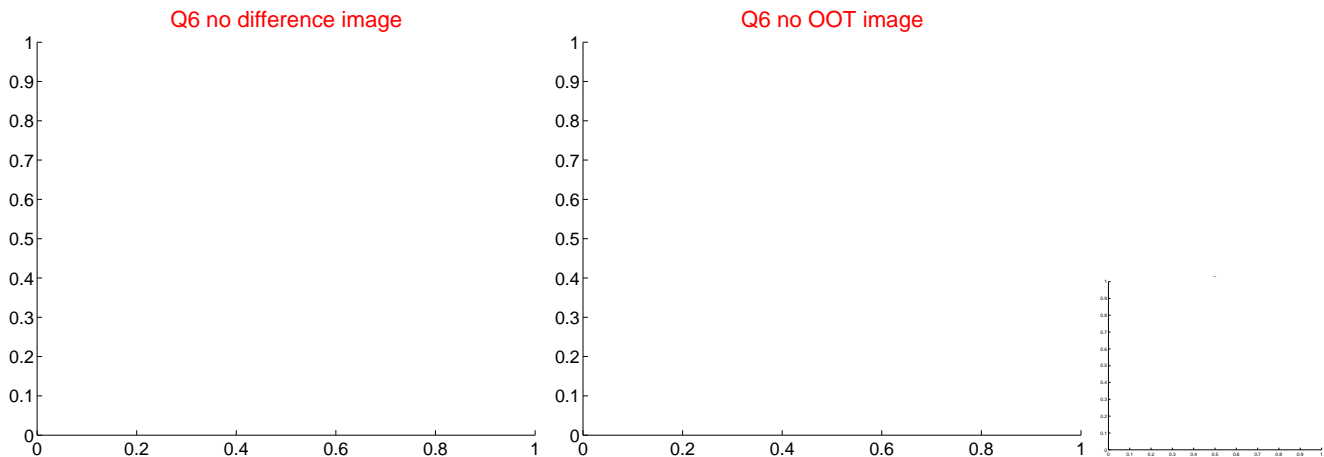
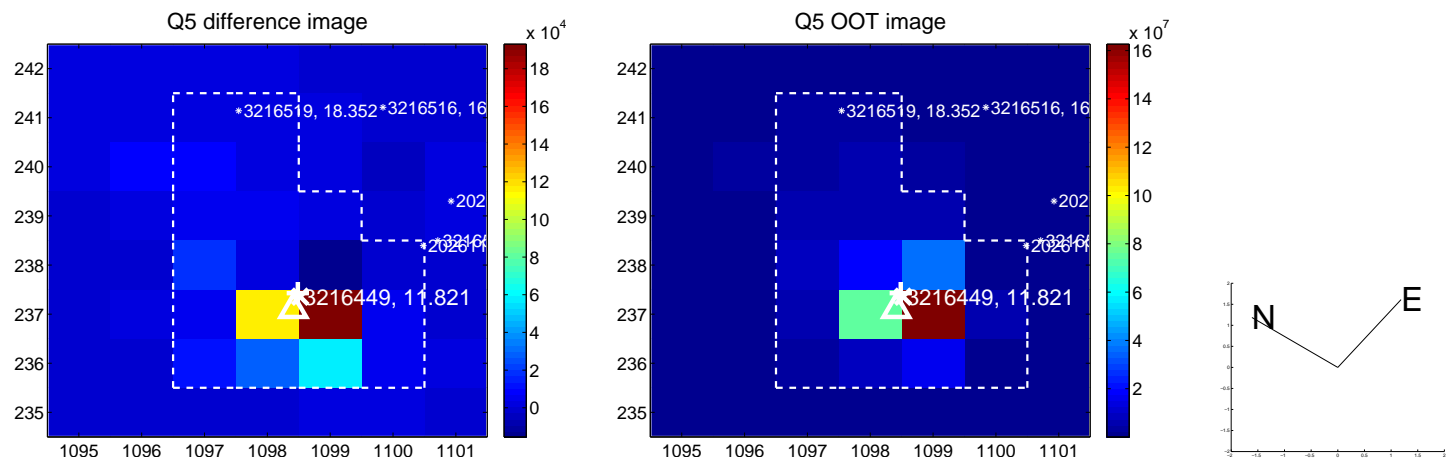


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

Q9 no difference image



Q9 no OOT image



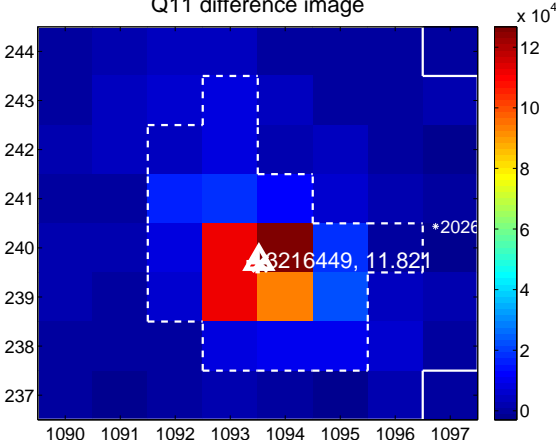
Q10 no difference image



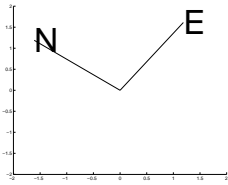
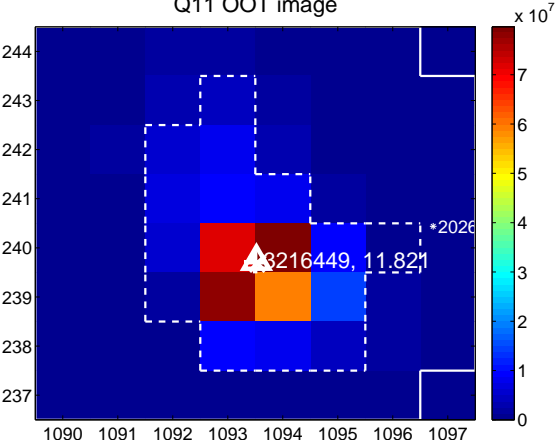
Q10 no OOT image



Q11 difference image



Q11 OOT image



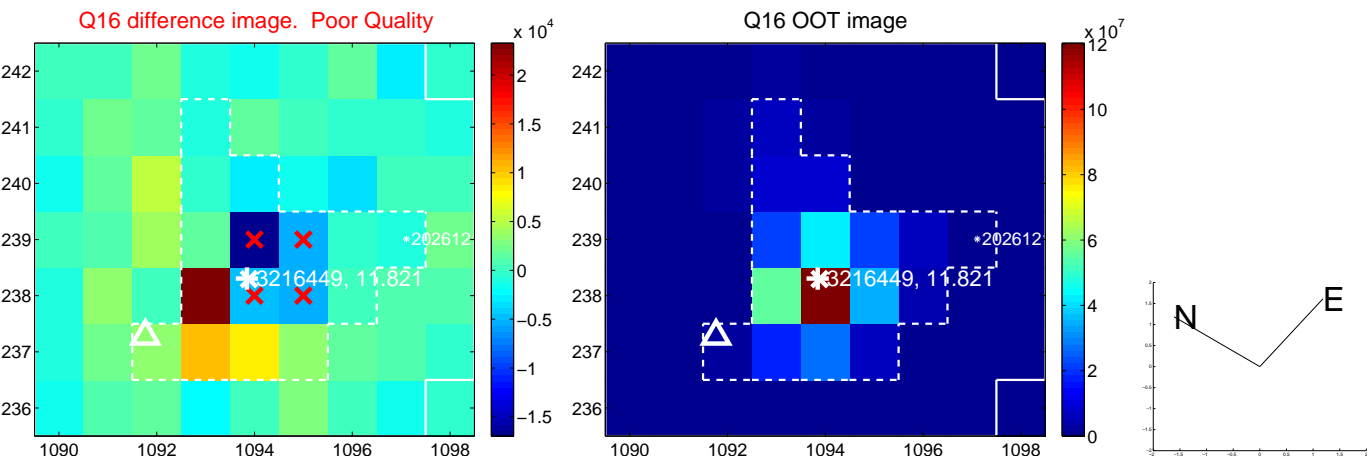
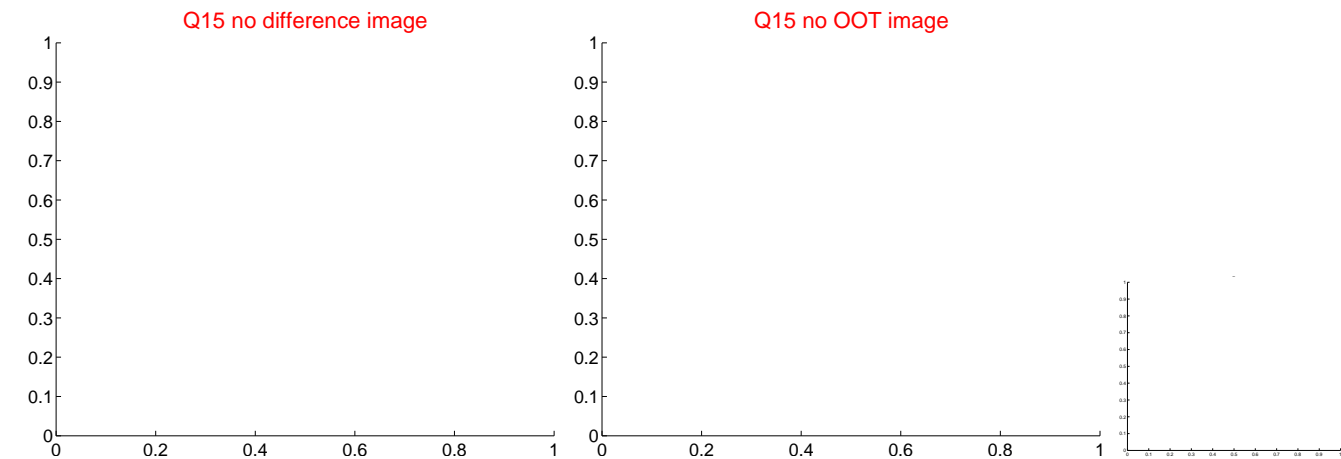
Q12 no difference image



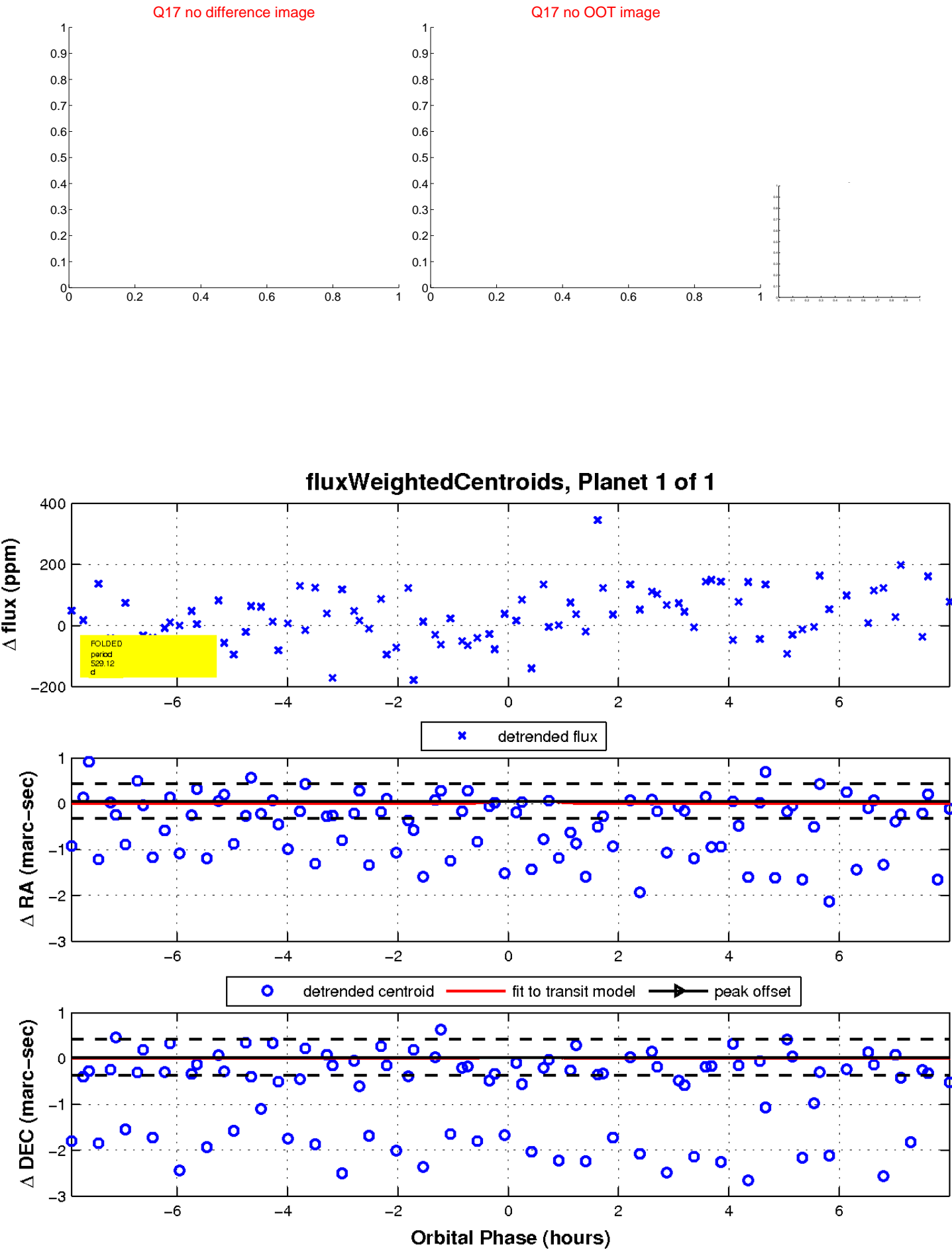
Q12 no OOT image



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

