

KIC 005818102

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})
005818102-01	OBS	No	510.964498	533.291171	183.3	2.310	11.1	7.4	52.20	4045	68.41	283.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005818102-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED

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

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

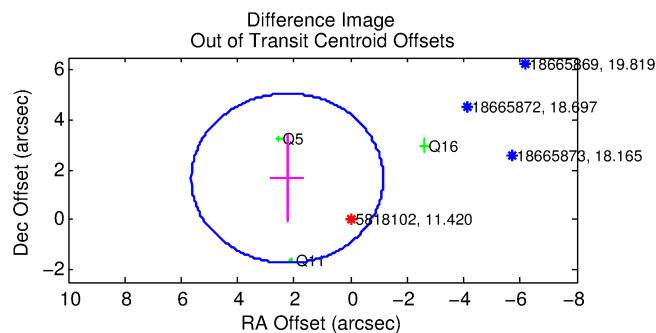
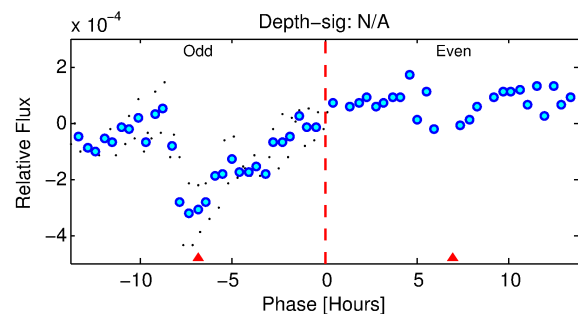
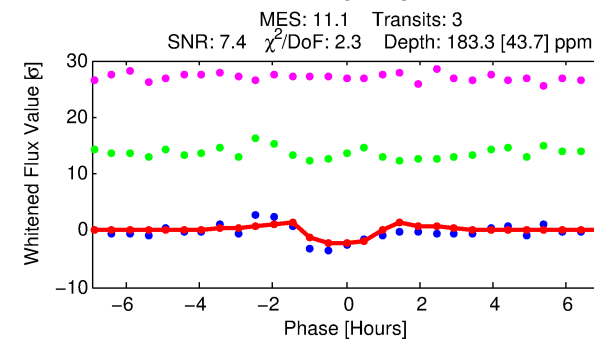
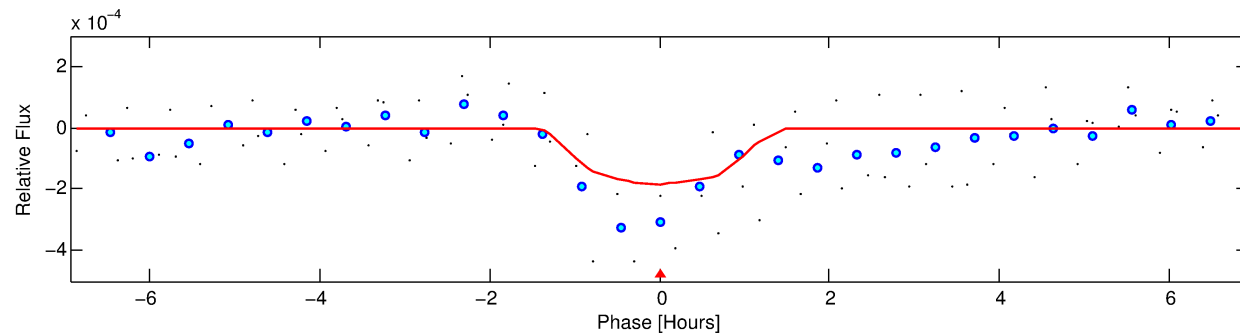
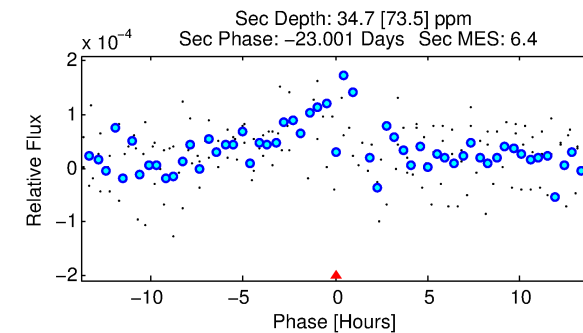
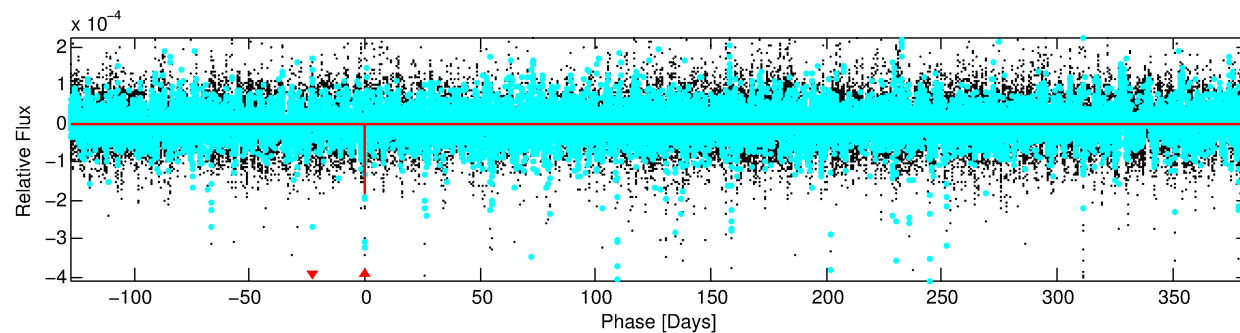
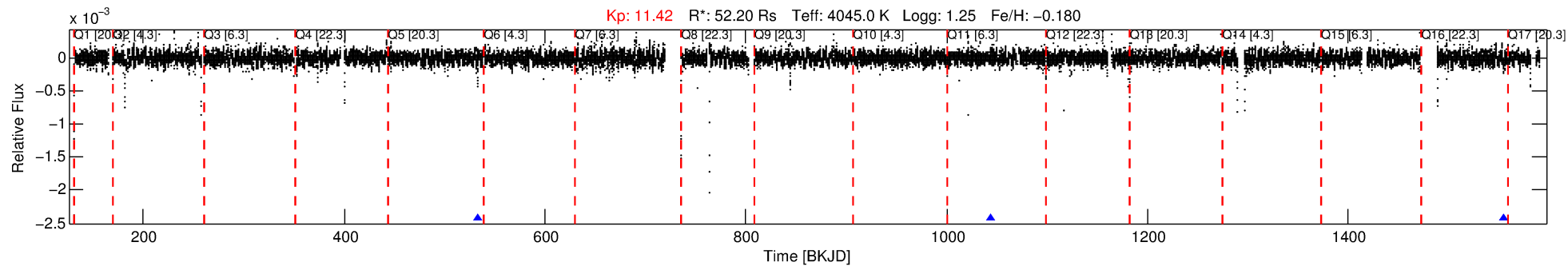
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005818102-01

No Significant Match Found

DV One-Page Summary

KIC: 5818102 Candidate: 1 of 1 Period: 510.964 d



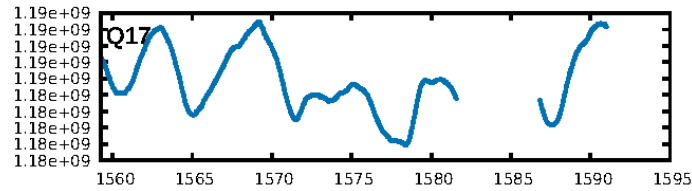
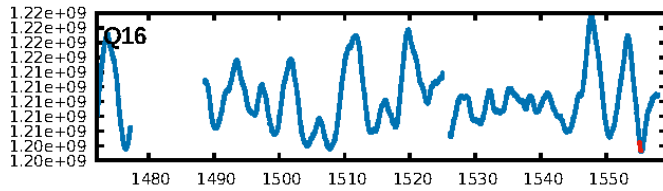
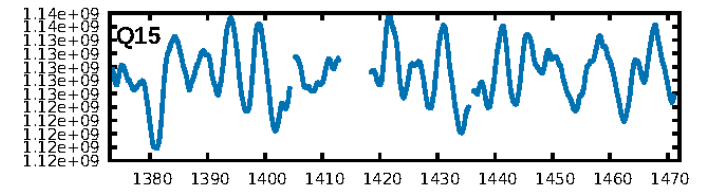
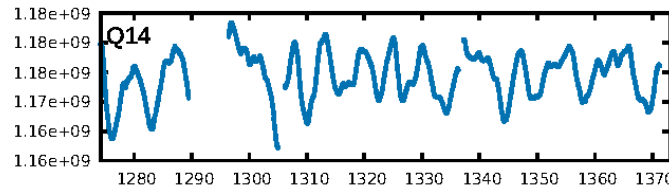
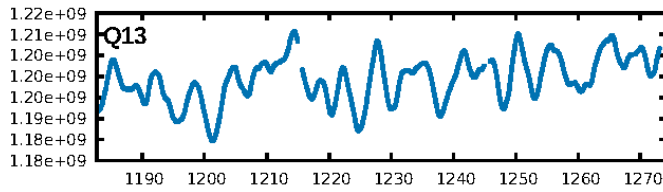
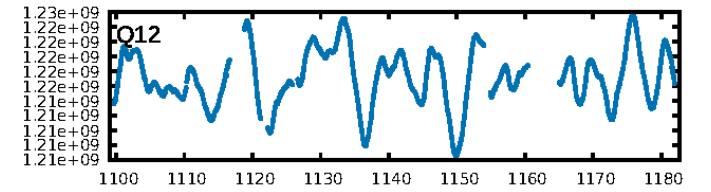
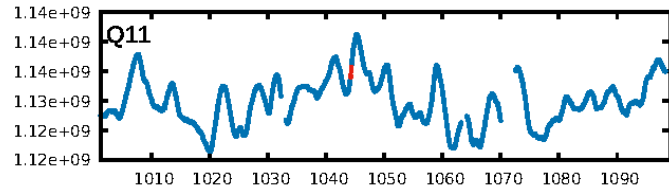
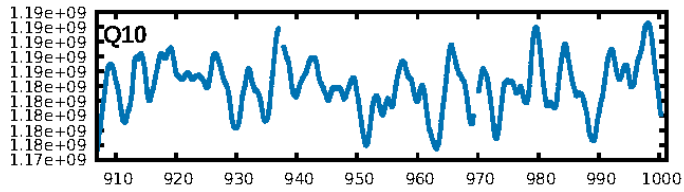
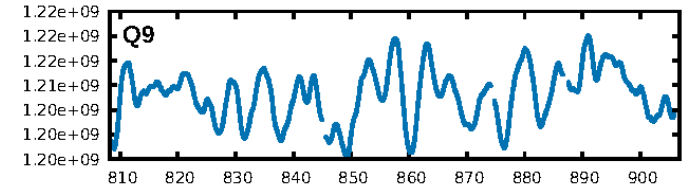
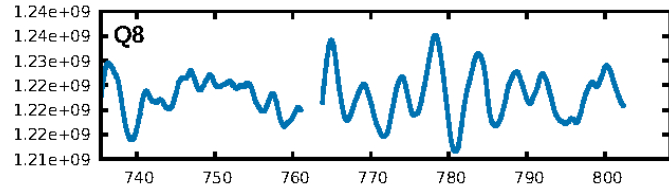
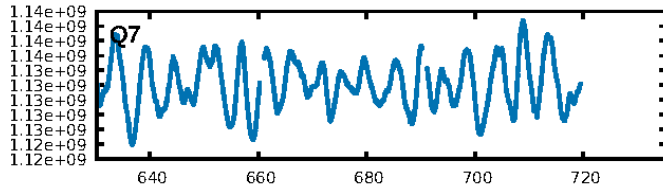
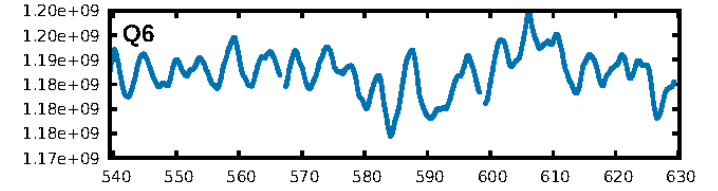
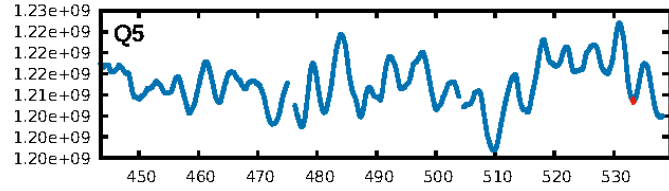
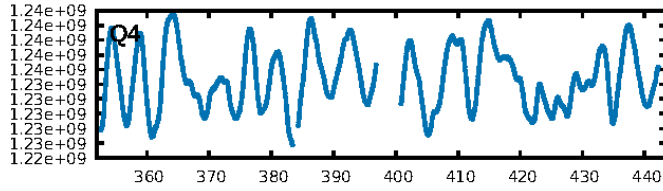
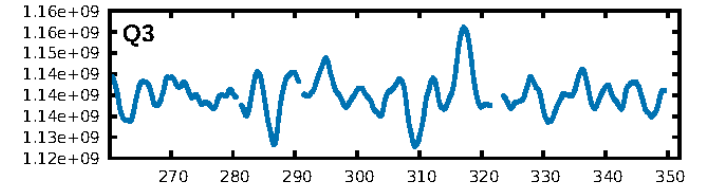
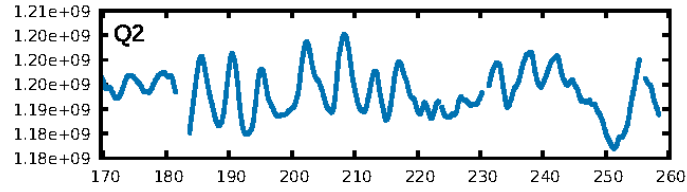
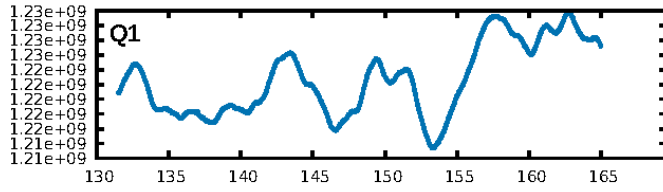
DV Fit Results:

Period = 510.96450 [0.00813] d
Epoch = 533.2912 [0.0080] BKJD
Rp/R* = 0.0120 [0.0199]
a/R* = 1591.81 [6626.95]
b = 0.37 [10.16]
Seff = 283.89 [51.66]
Teff = 1047 [48] K
Rp = 68.41 [114.26] Re
a = 1.5173 [0.2099] AU
Ag = 9.39 [36.98] [0.23σ]
Teffp = 2833 [2788] K [0.64σ]

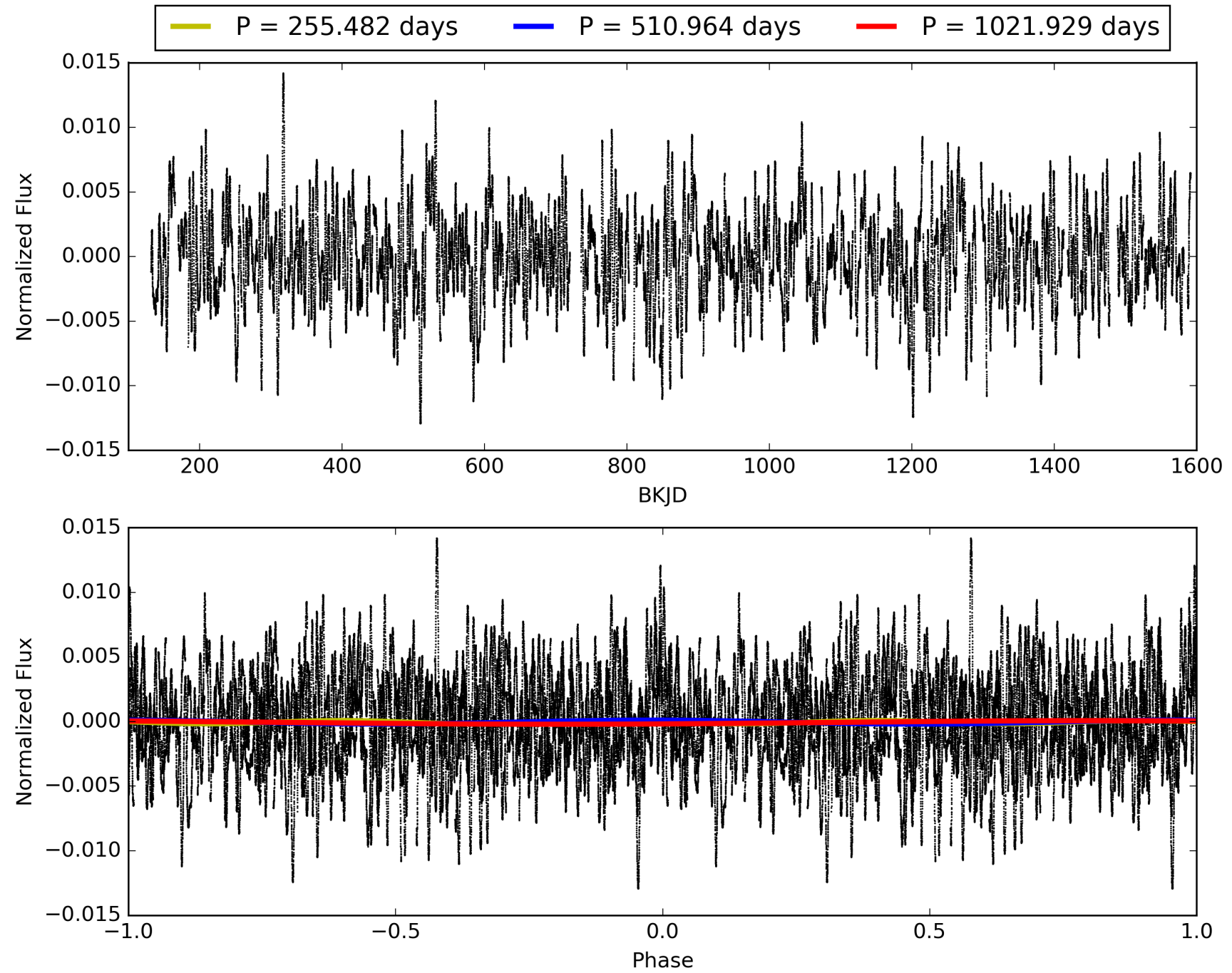
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 16.4%
Bootstrap-pfa: 8.71e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.724
Centroid-sig: 0.1%
Centroid-so: 6.385 arcsec [3.22σ]
OotOffset-rm: 2.786 arcsec [2.46σ]
KicOffset-rm: 2.879 arcsec [2.99σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 005818102-01, PDC Light Curves

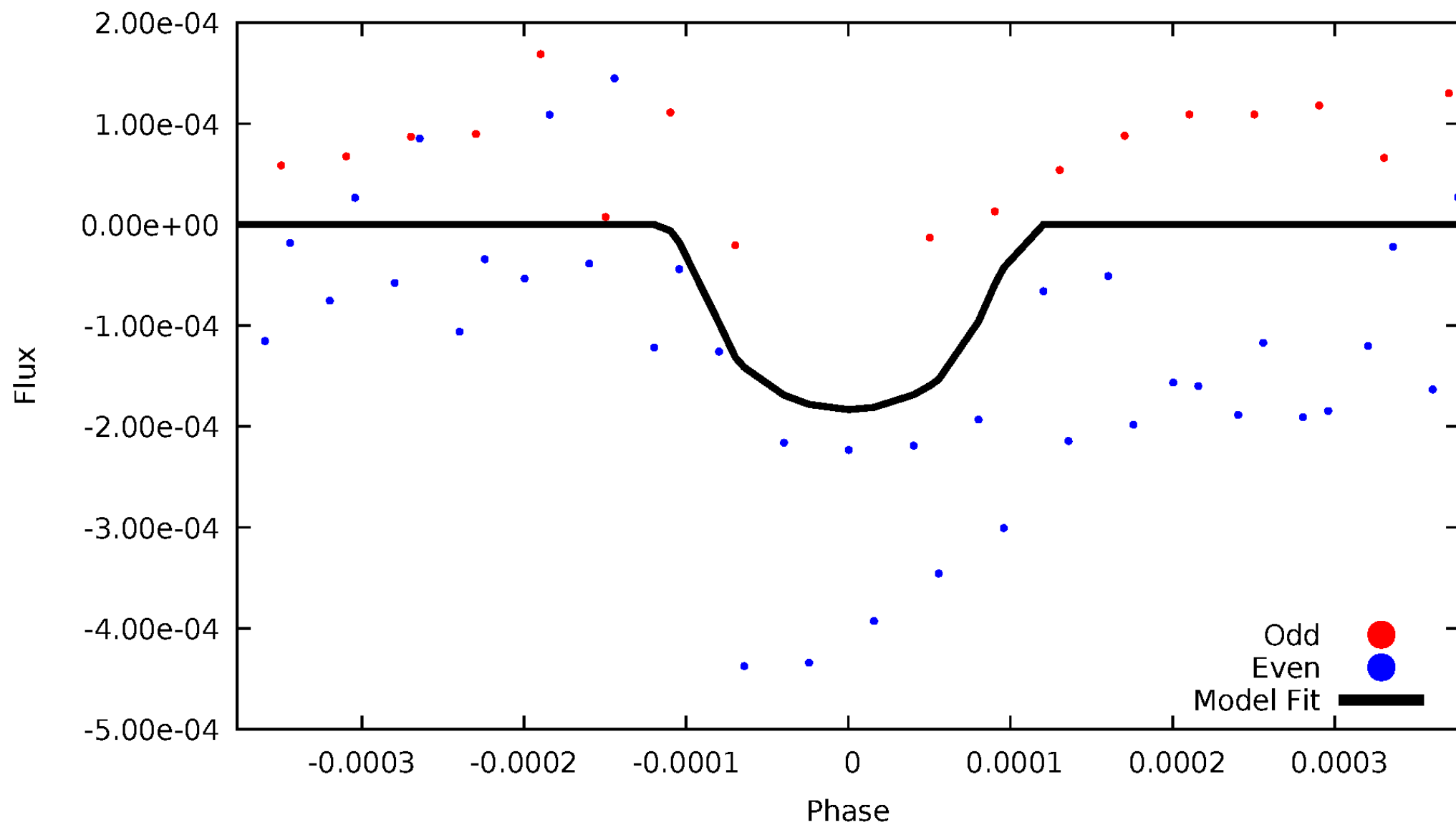


TCE 005818102-01



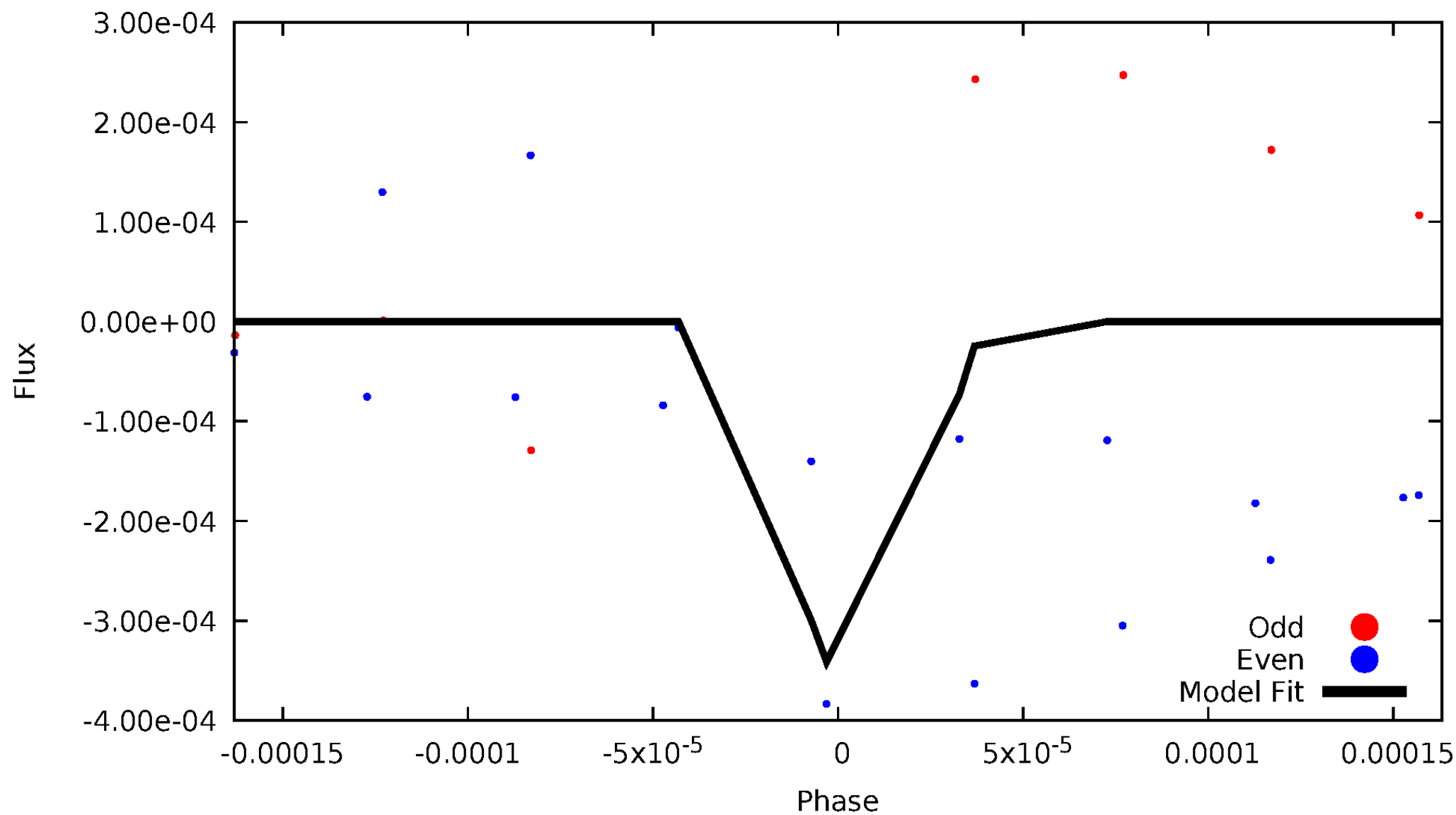
DV Odd/Even

TCE 005818102-01

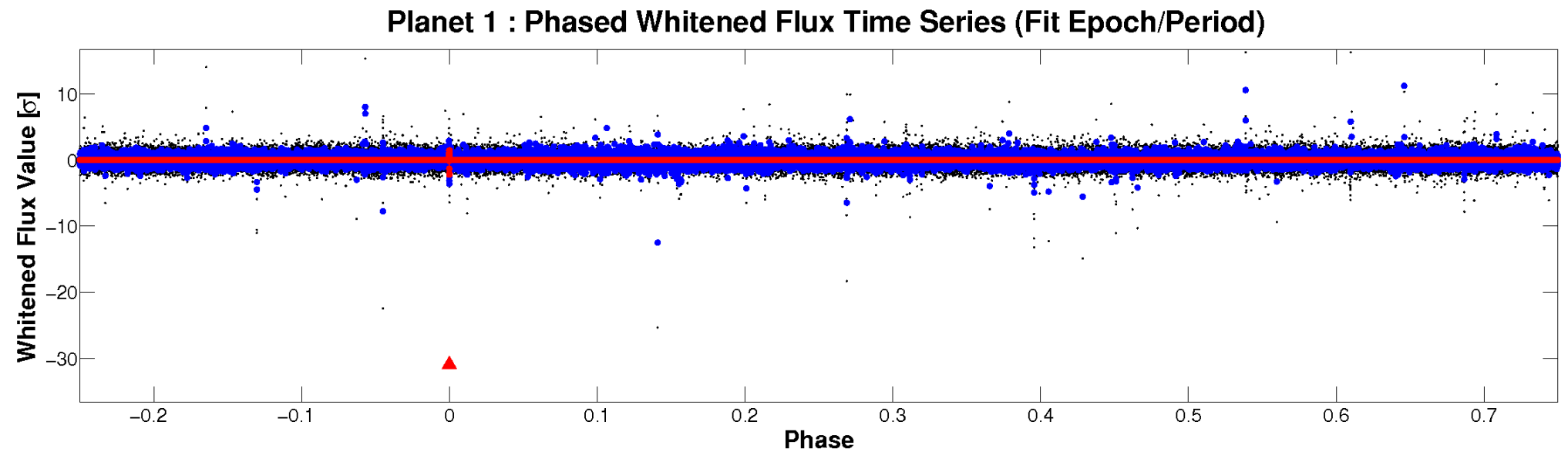
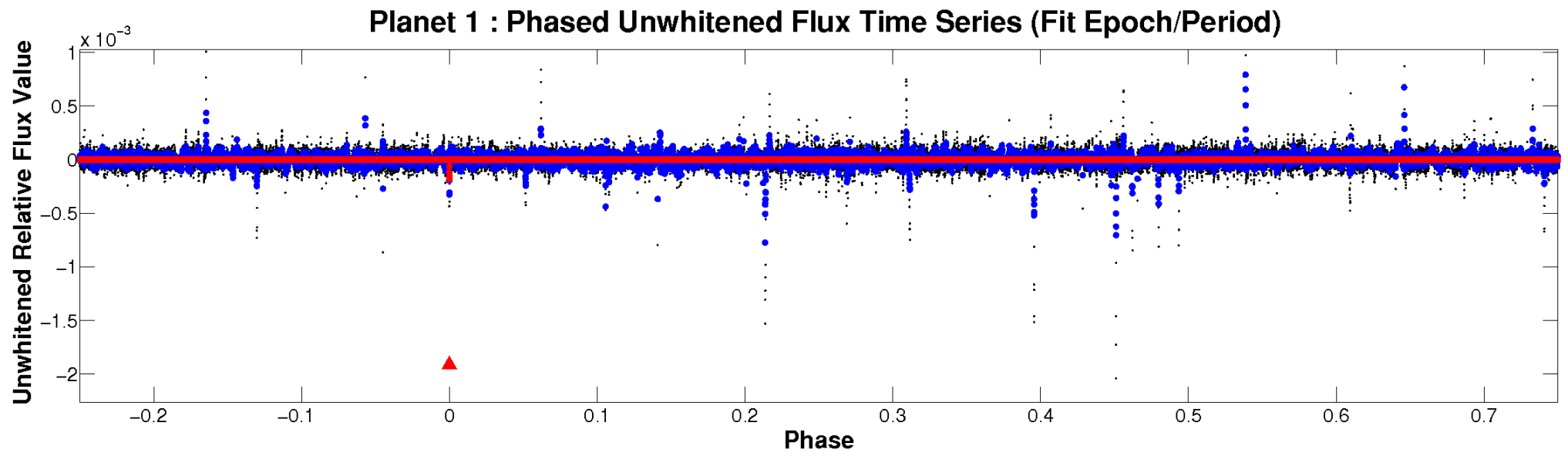


ALT Odd/Even

TCE 005818102-01

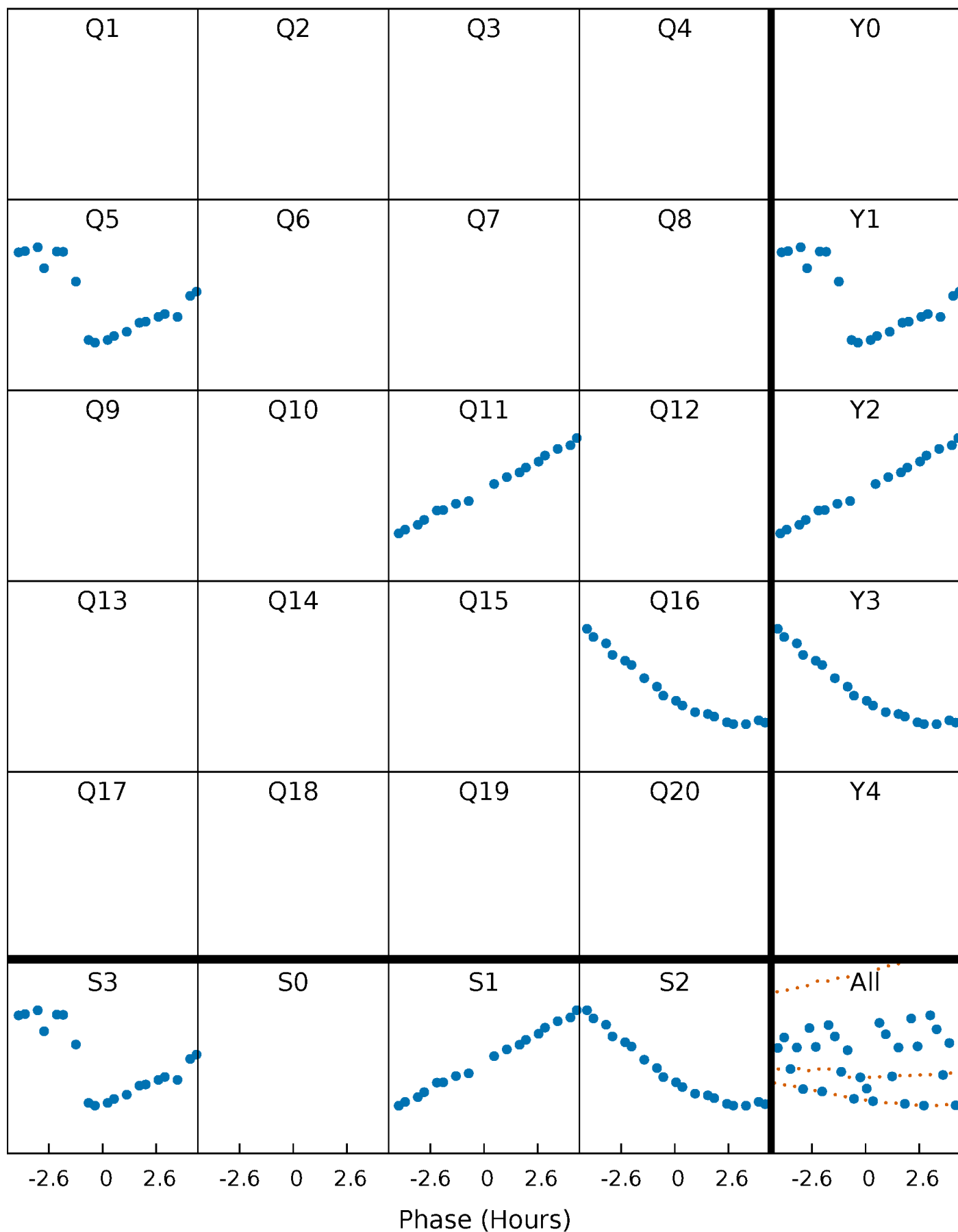


Non-Whitened Vs. Whitened Light Curve



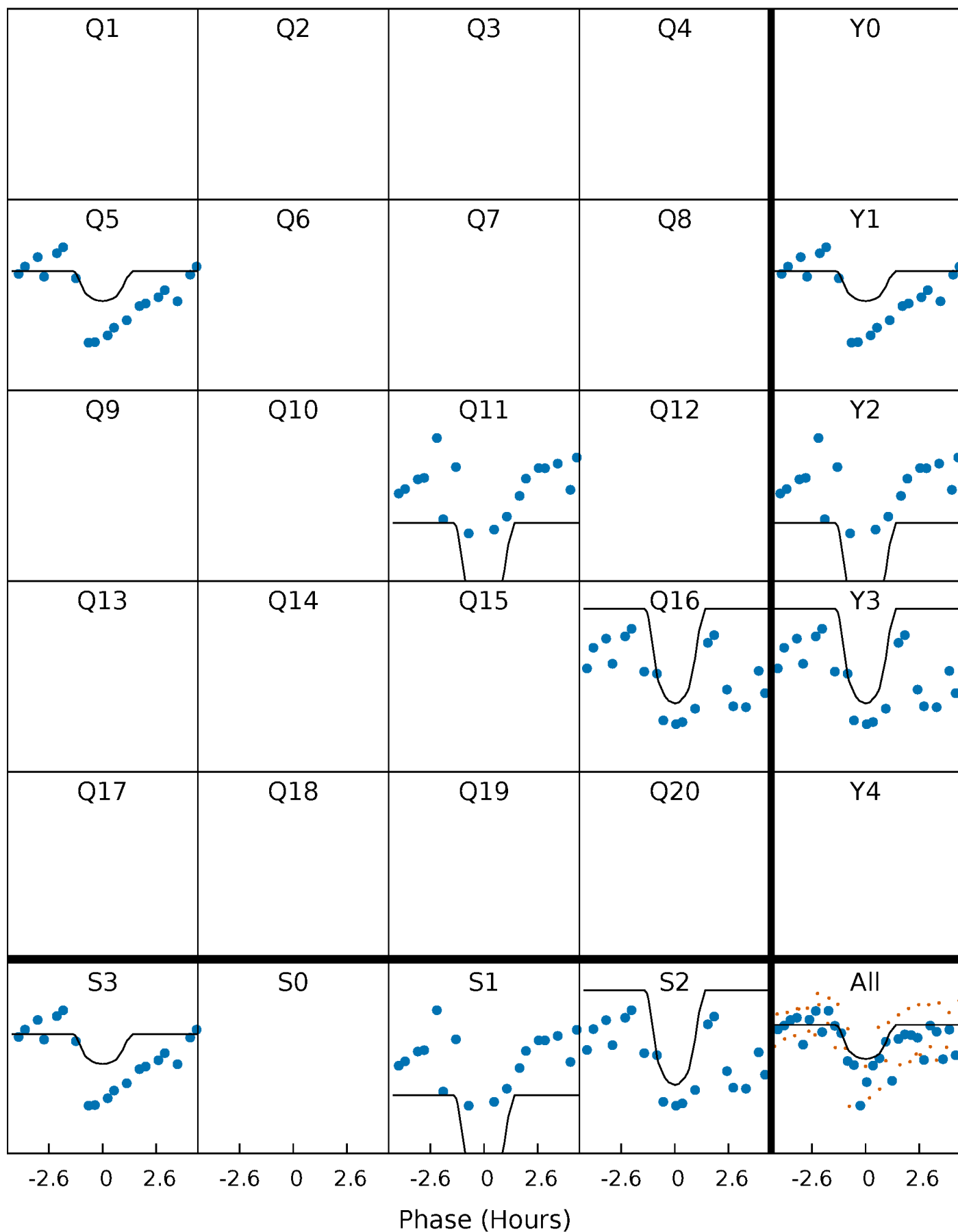
PDC Quarter-Phased Transit Curves

TCE 005818102-01 P=510.964498 Days $T_0=533.291171$ (BKJD)



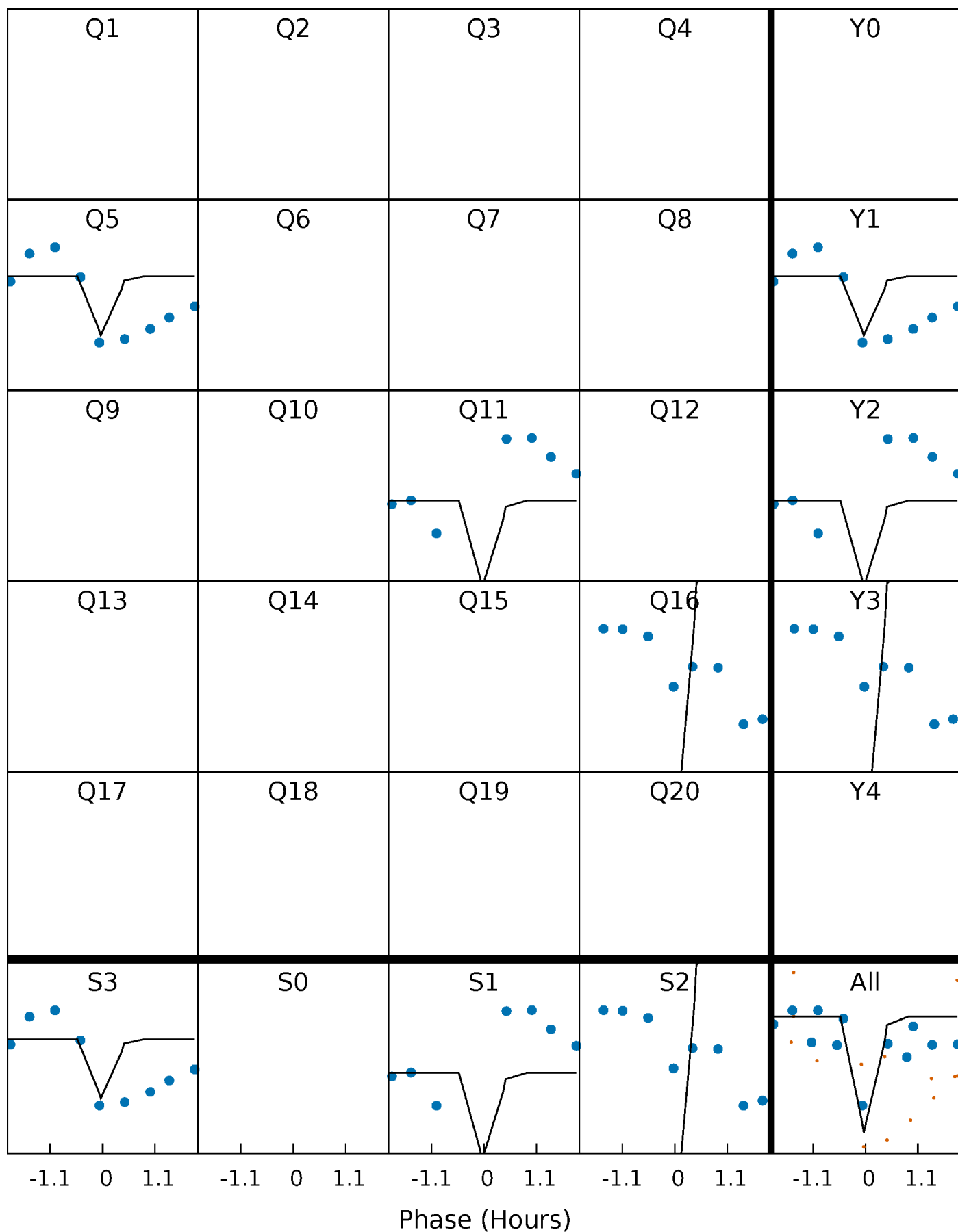
DV Quarter-Phased Transit Curves

TCE 005818102-01 P=510.964498 Days $T_0=533.291171$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

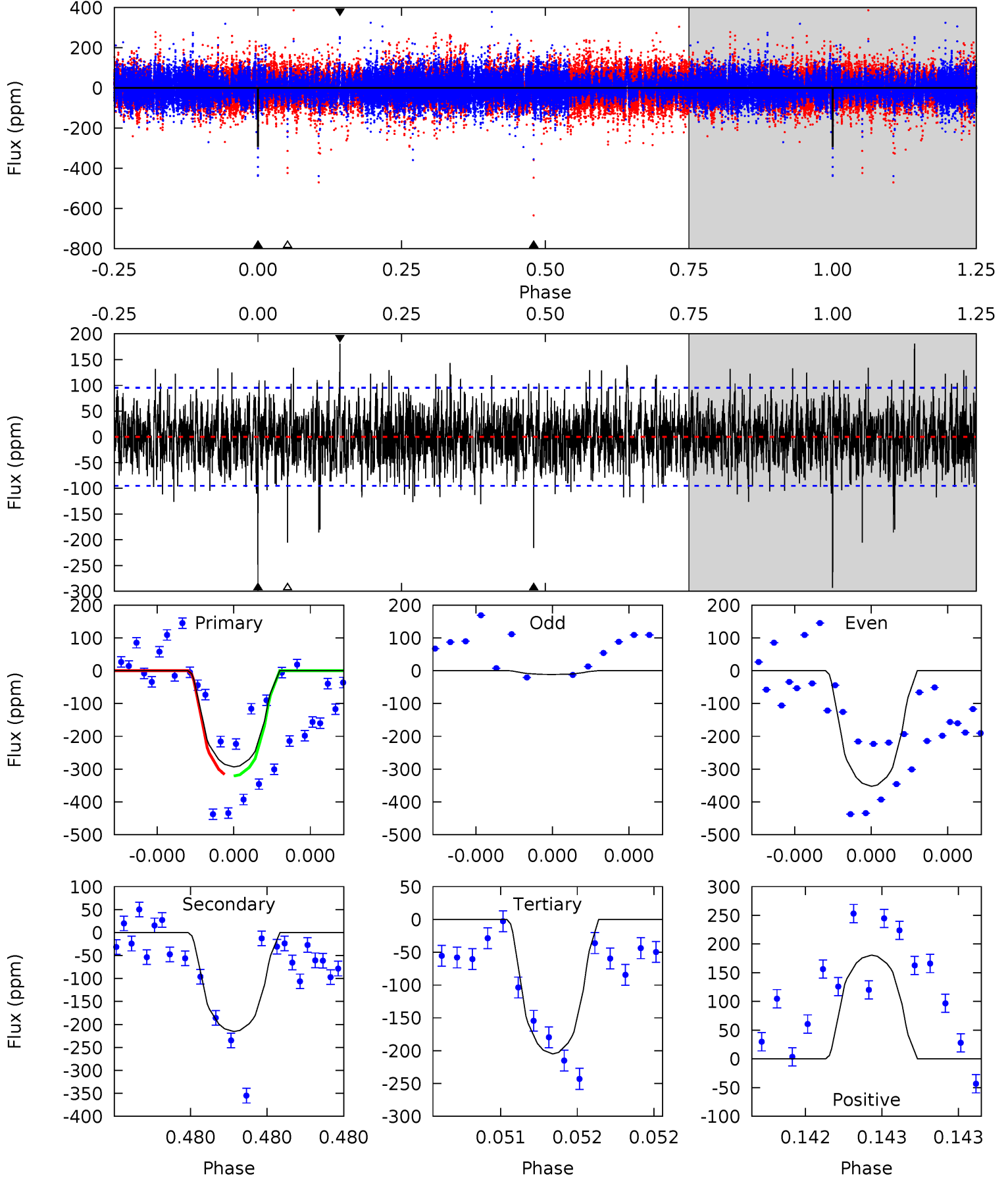
TCE 005818102-01 P=511.002469 Days $T_0=533.259958$ (BKJD)



DV Model-Shift Uniqueness Test

005818102-01, $P = 510.964498$ Days, $E = 22.326673$ Days

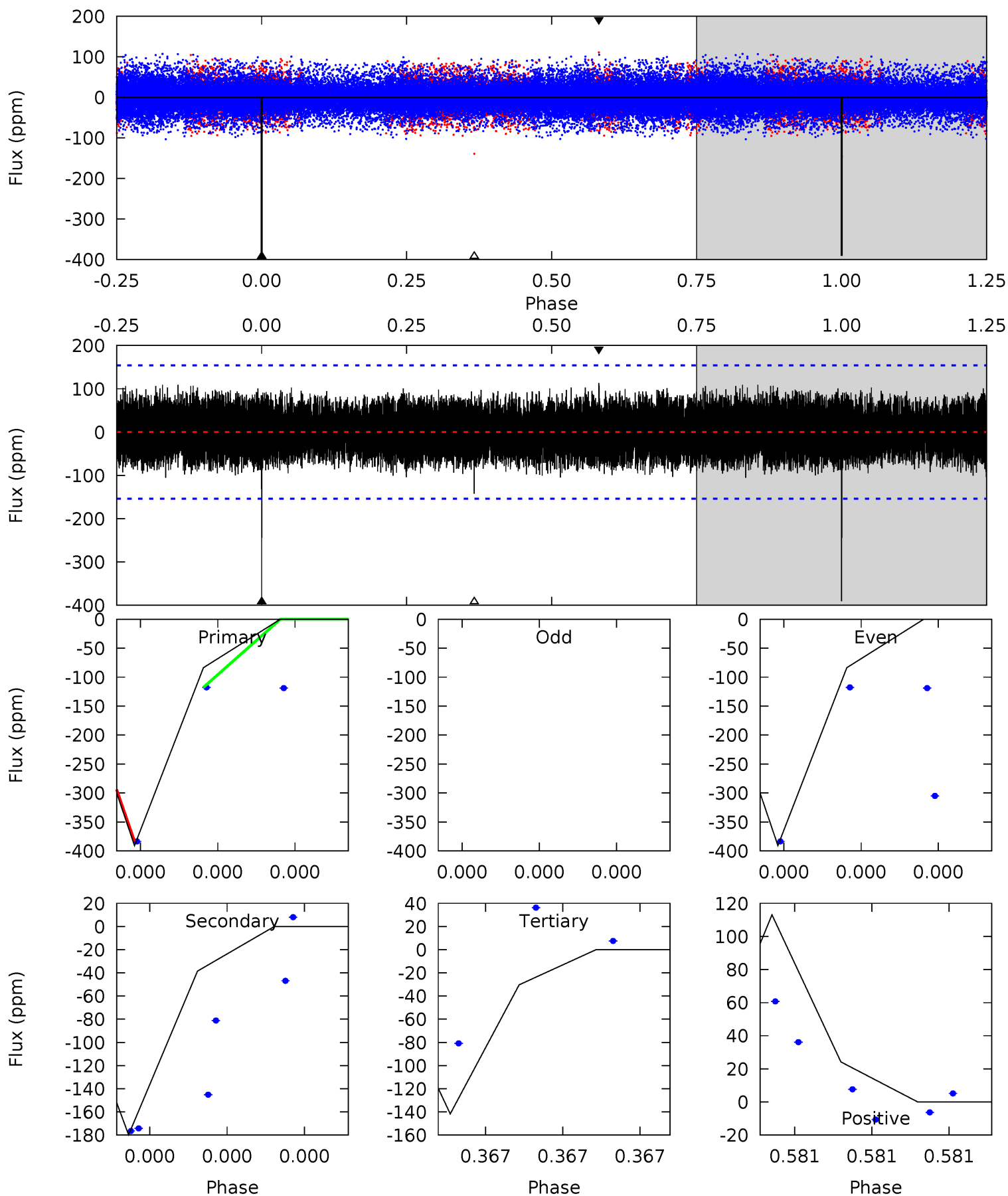
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	13.0	12.3	10.9	5.73	3.72	2.09	5.32	6.78	0.64	2.10	8.19	0.98	0.38	0.14



Alt Model-Shift Uniqueness Test

005818102-01, P = 511.002469 Days, E = 22.257489 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	7.00	5.52	4.40	6.00	4.11	1.02	9.70	10.8	1.48	2.60	0	1.00	0.22	0.00



Stellar Parameters For KIC 005818102

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4045^{+91}_{-111}	$1.254^{+0.033}_{-0.030}$	$-0.180^{+0.200}_{-0.250}$	$52.198^{+1.879}_{-10.648}$	$1.784^{+0.071}_{-0.642}$	$0.000^{+0.000}_{-0.000}$
	+2%/-3%	+3%/-2%	+111%/-139%	+4%/-20%	+4%/-36%	+30%/-8%
Source	PHO54	AST54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 005818102-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-216 ± 17	$107.74^{+92.16}_{-71.73}$	1463^{+36}_{-45}	3728^{+1912}_{-692}	24^{+171}_{-17}
Alt.	-180 ± 26	$139.54^{+98.23}_{-90.04}$	1462^{+37}_{-44}	3292^{+1401}_{-488}	11^{+74}_{-7}

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 $A_{obs} \gg 1.0$

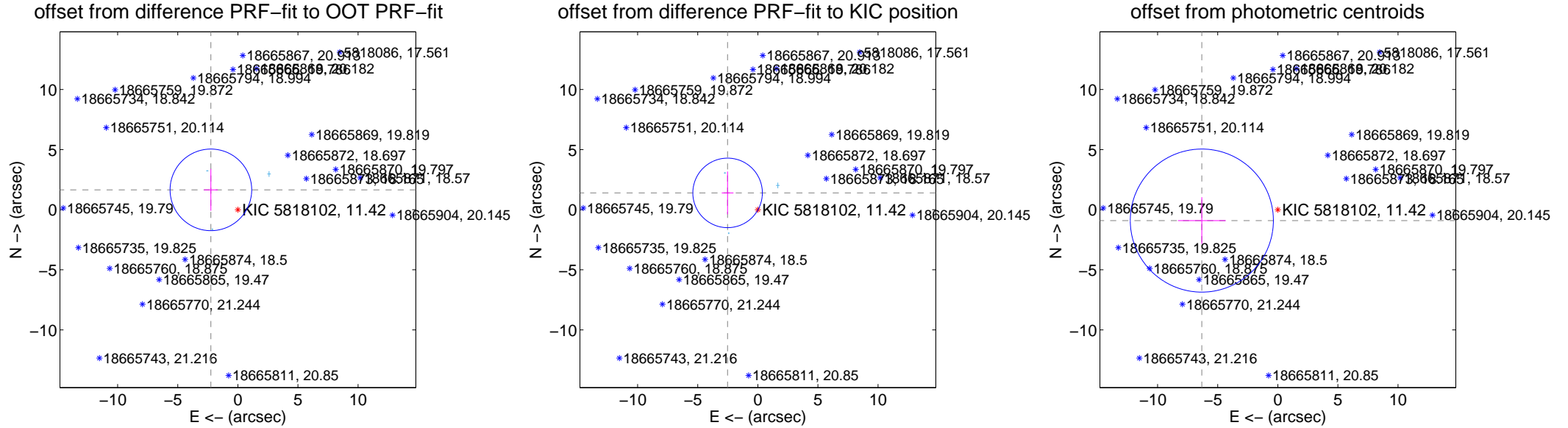
DV Centroid Data

Supplemental centroid analysis for 005818102-01. **Kepler magnitude: 11.42.** Transit SNR 7.43

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.786 ± 1.132	2.46	2.244 ± 0.576	1.652 ± 1.742
PRF-fit source offset from KIC position	2.879 ± 0.964	2.99	2.516 ± 0.488	1.399 ± 1.779
photometric centroid source offset	6.39 ± 1.98	3.22	6.32 ± 1.98	-0.90 ± 1.94

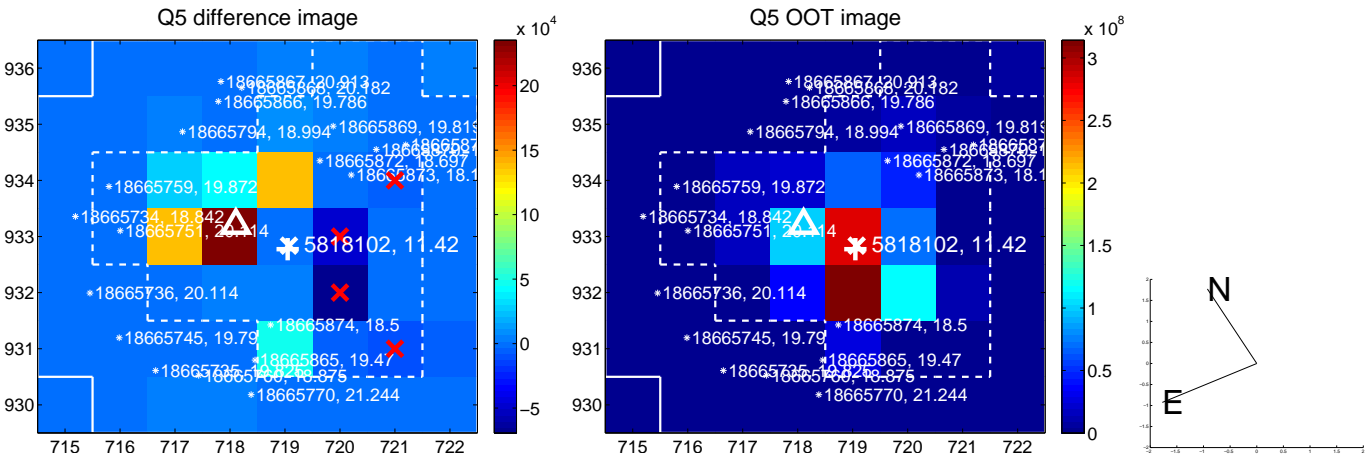


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

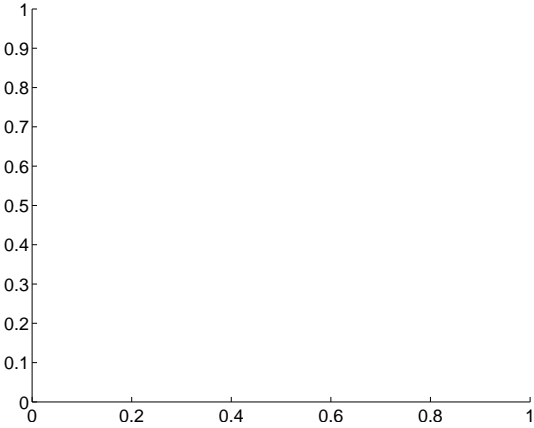


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

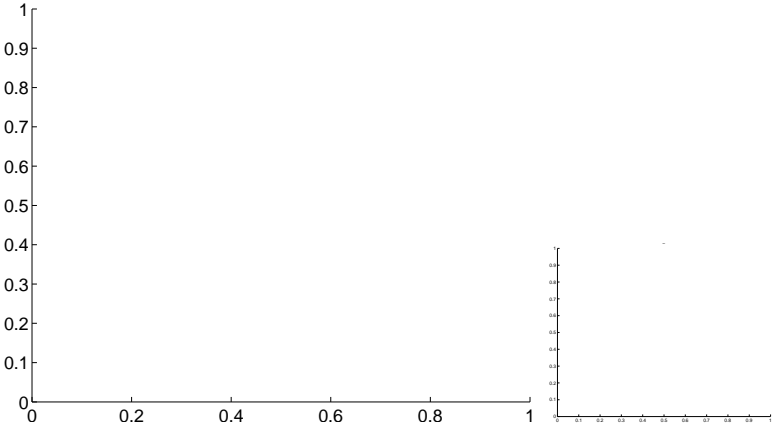


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q9 no difference image



Q9 no OOT image



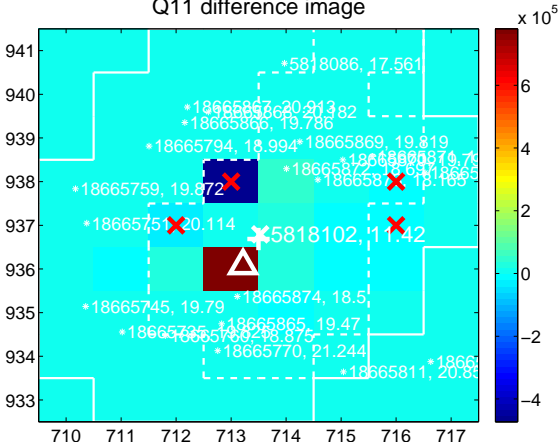
Q10 no difference image



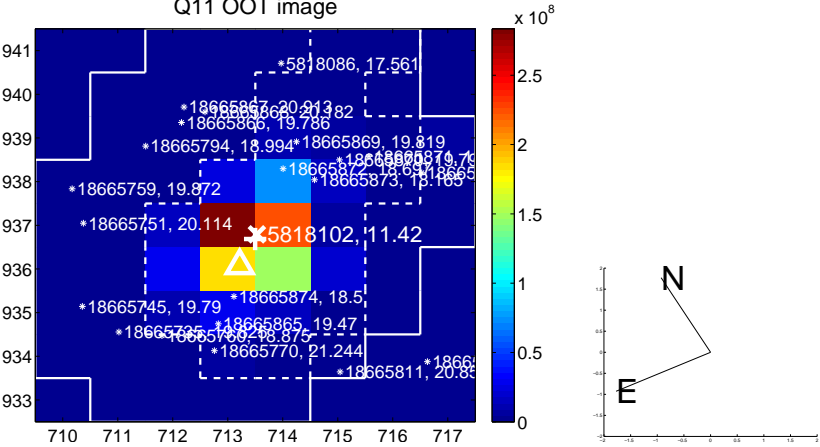
Q10 no OOT image



Q11 difference image



Q11 OOT image



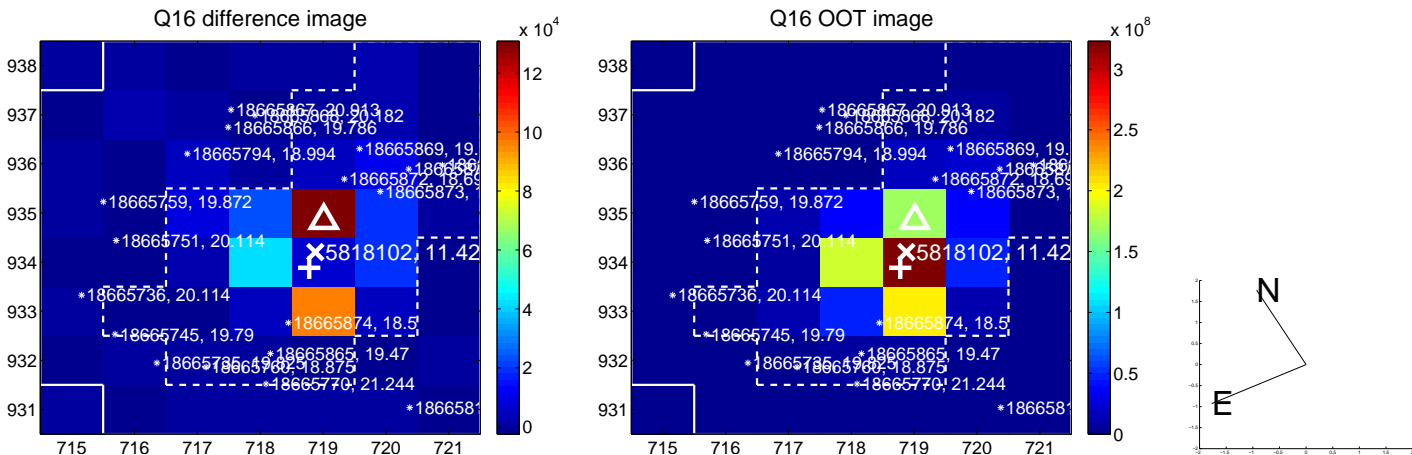
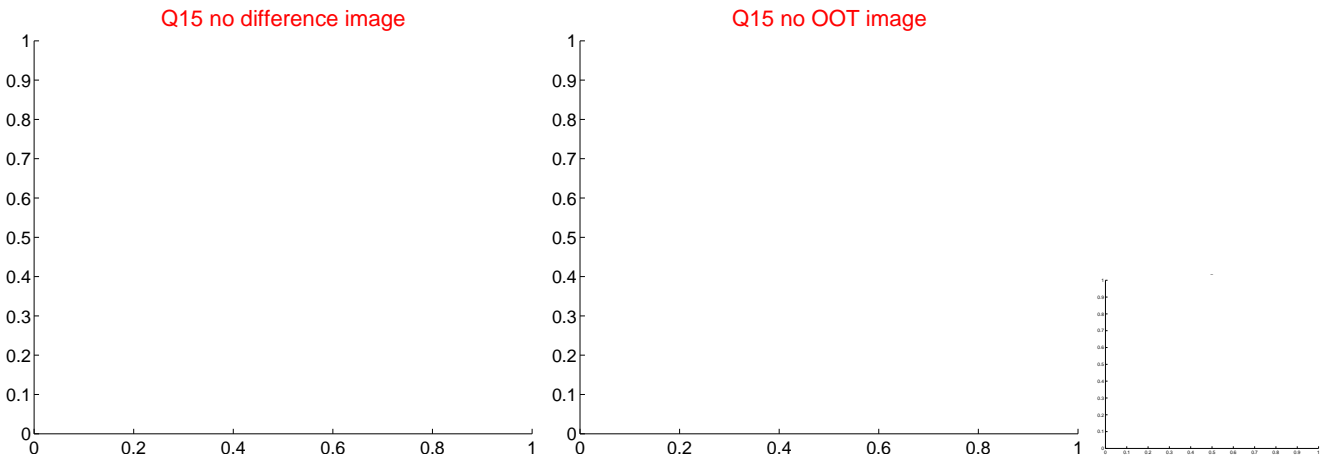
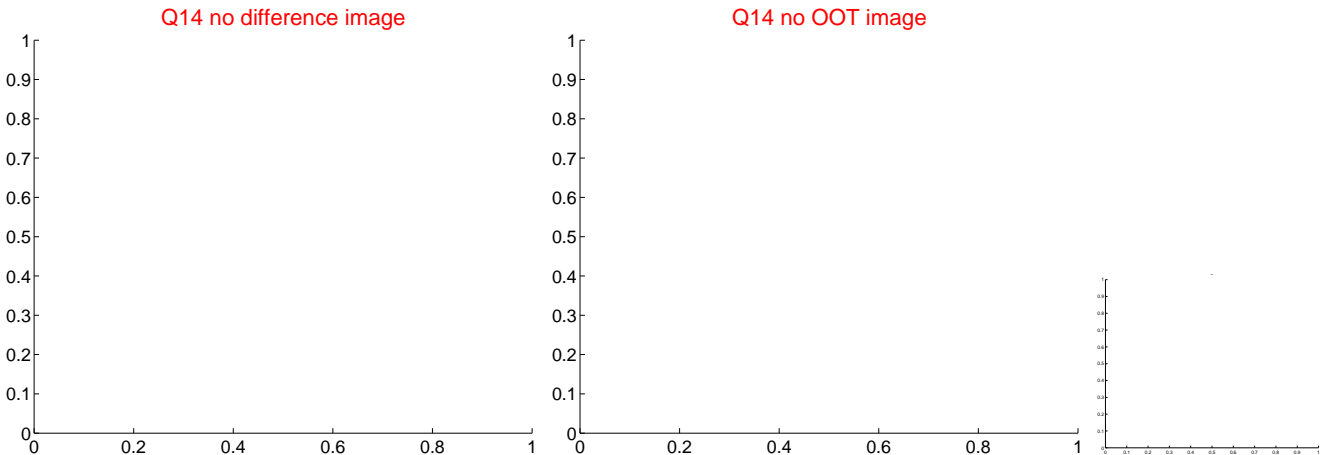
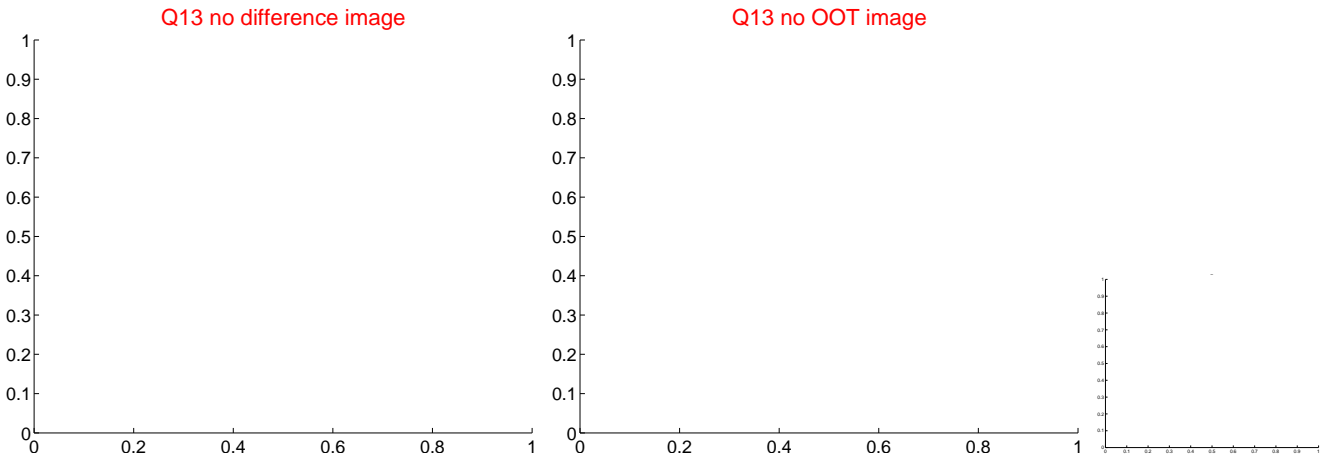
Q12 no difference image



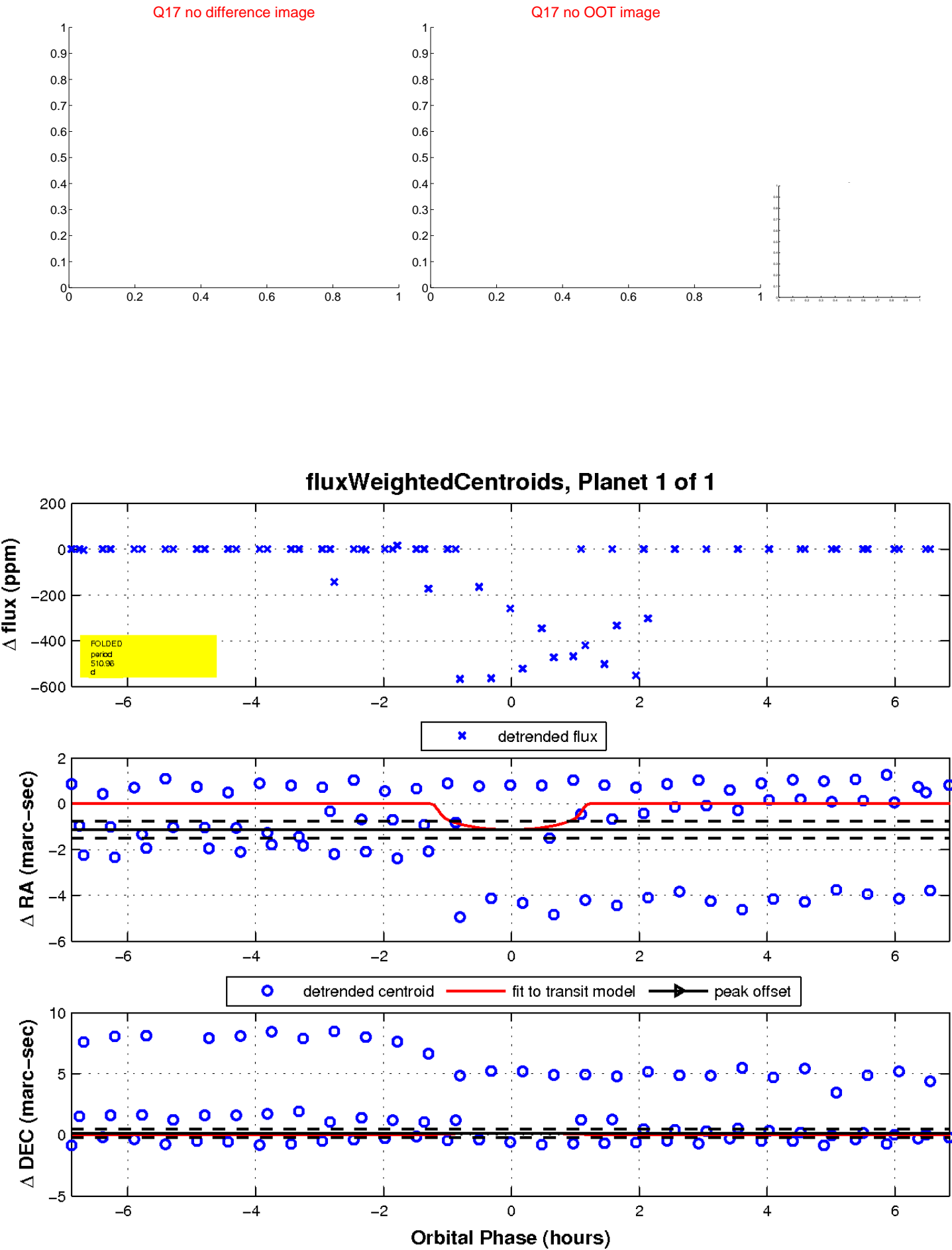
Q12 no OOT image



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

