

KIC 007751906

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})
007751906-01	OBS	No	488.486391	378.426676	268.9	7.642	10.3	7.0	1.45	6046	2.58	1.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007751906-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

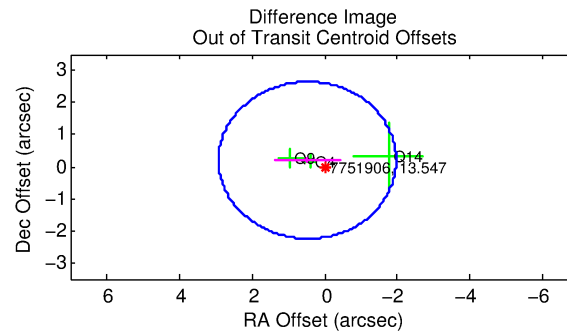
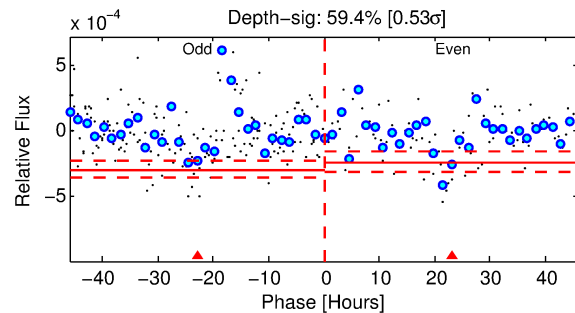
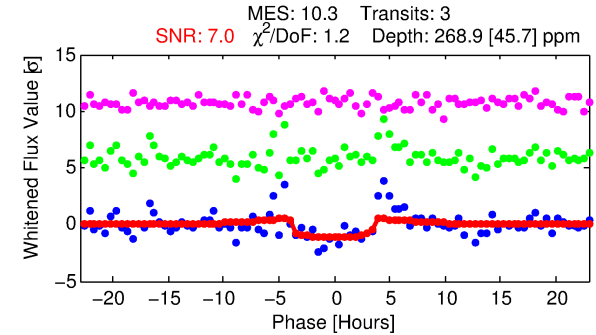
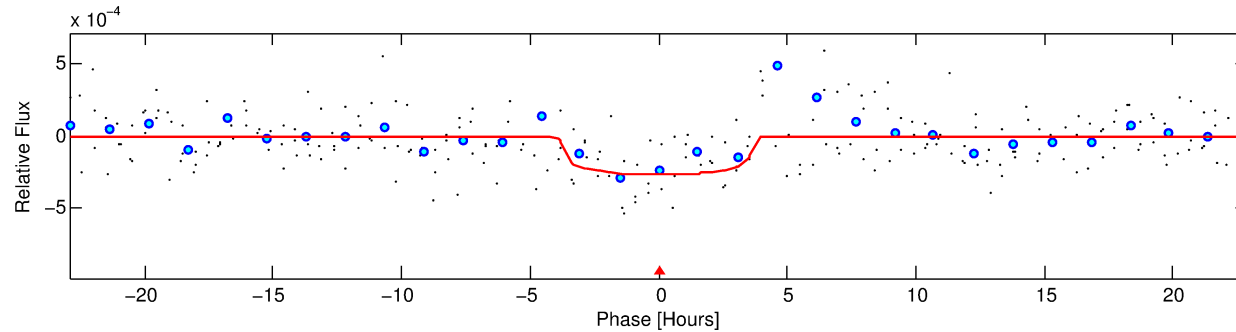
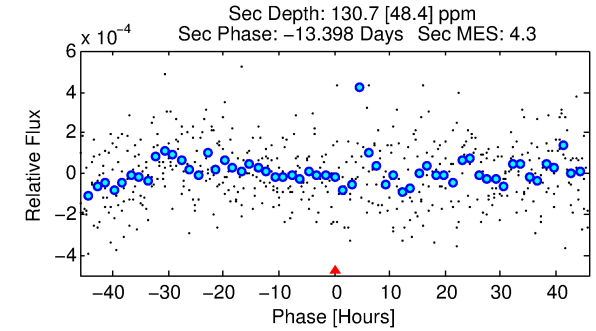
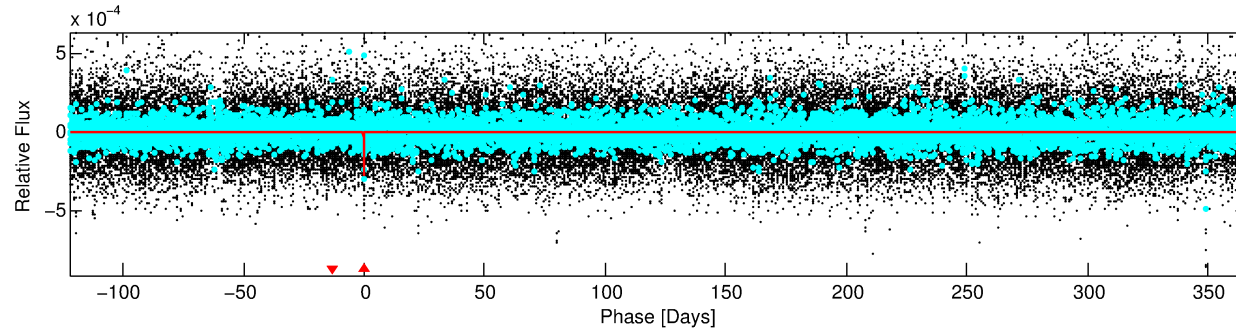
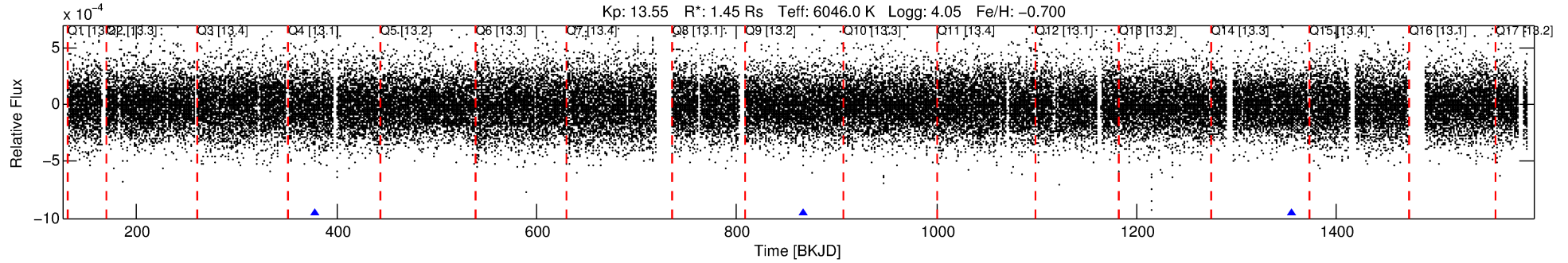
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007751906-01

No Significant Match Found

DV One-Page Summary

KIC: 7751906 Candidate: 1 of 1 Period: 488.486 d



DV Fit Results:

Period = 488.48639 [0.00997] d
Epoch = 378.4267 [0.0167] BKJD
Rp/R* = 0.0163 [0.0146]
a/R* = 331.61 [1549.28]
b = 0.76 [2.67]
Seff = 1.89 [1.38]
Teff = 299 [55] K
Rp = 2.58 [2.54] Re
a = 1.1537 [0.4989] AU
Ag = 14356.41 [28092.91] [0.51σ]
Teffp = 5057 [2305] K [2.06σ]

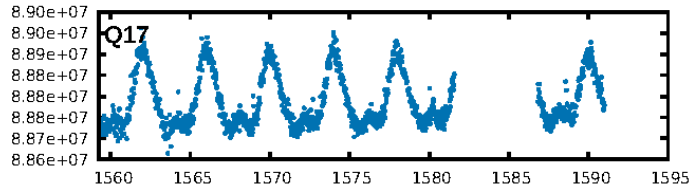
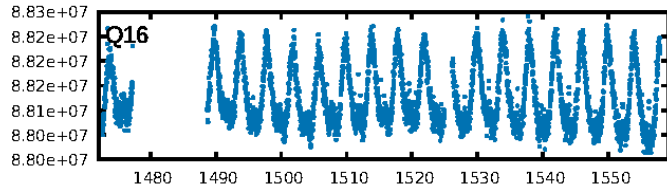
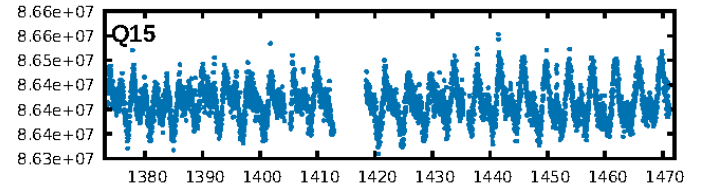
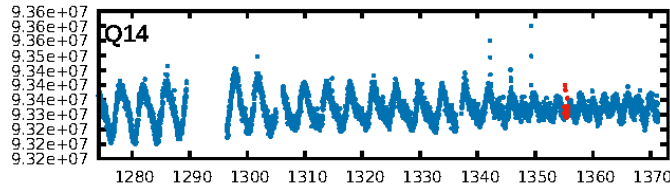
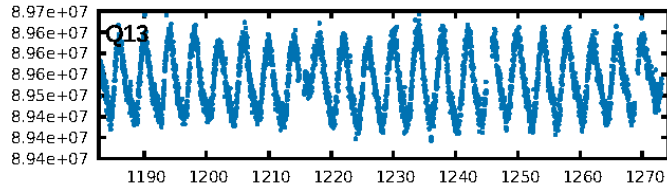
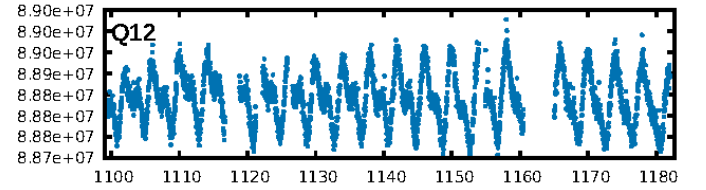
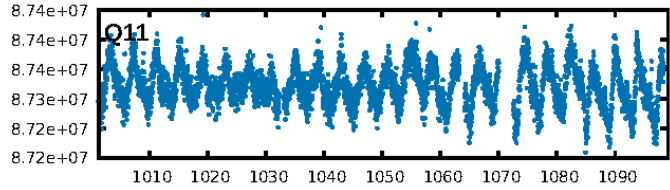
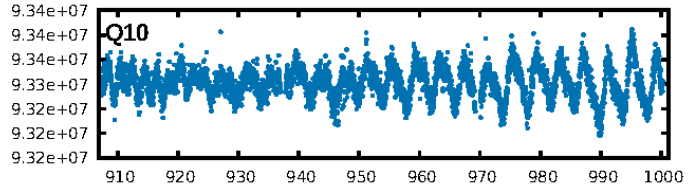
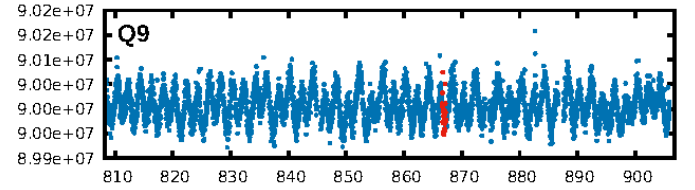
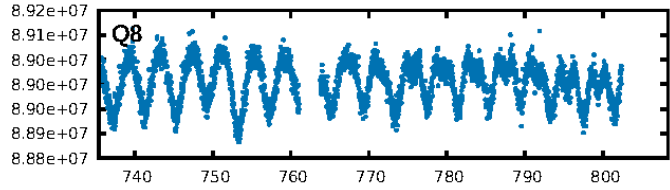
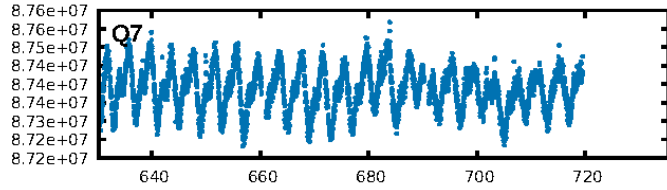
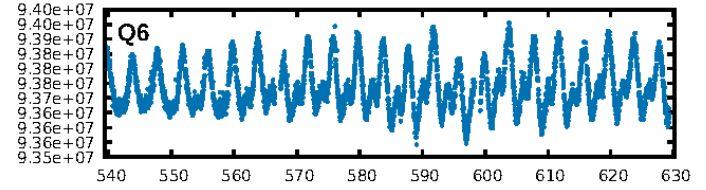
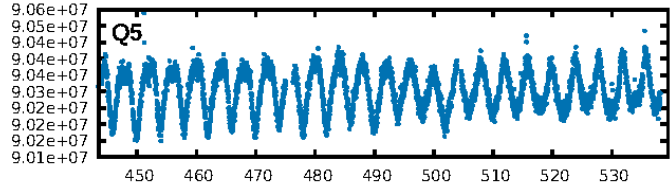
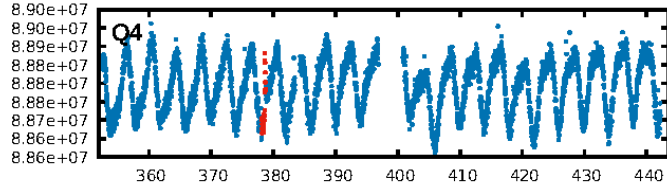
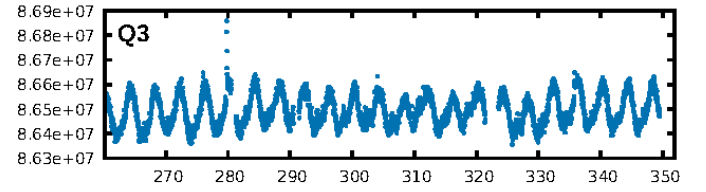
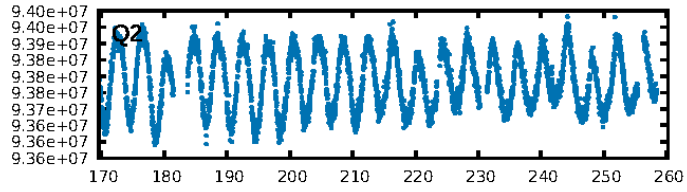
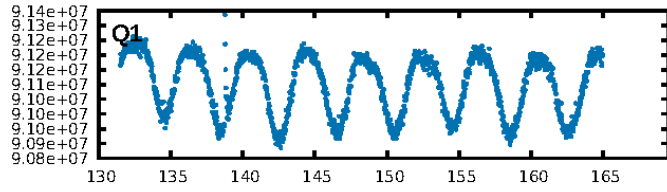
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.2%
ModelChiSquareGof-sig: 60.8%
Bootstrap-pfa: 2.72e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.673
Centroid-sig: 17.0%
Centroid-so: 1.722 arcsec [1.30σ]
OotOffset-rm: 0.514 arcsec [0.63σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.546 arcsec [0.96σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

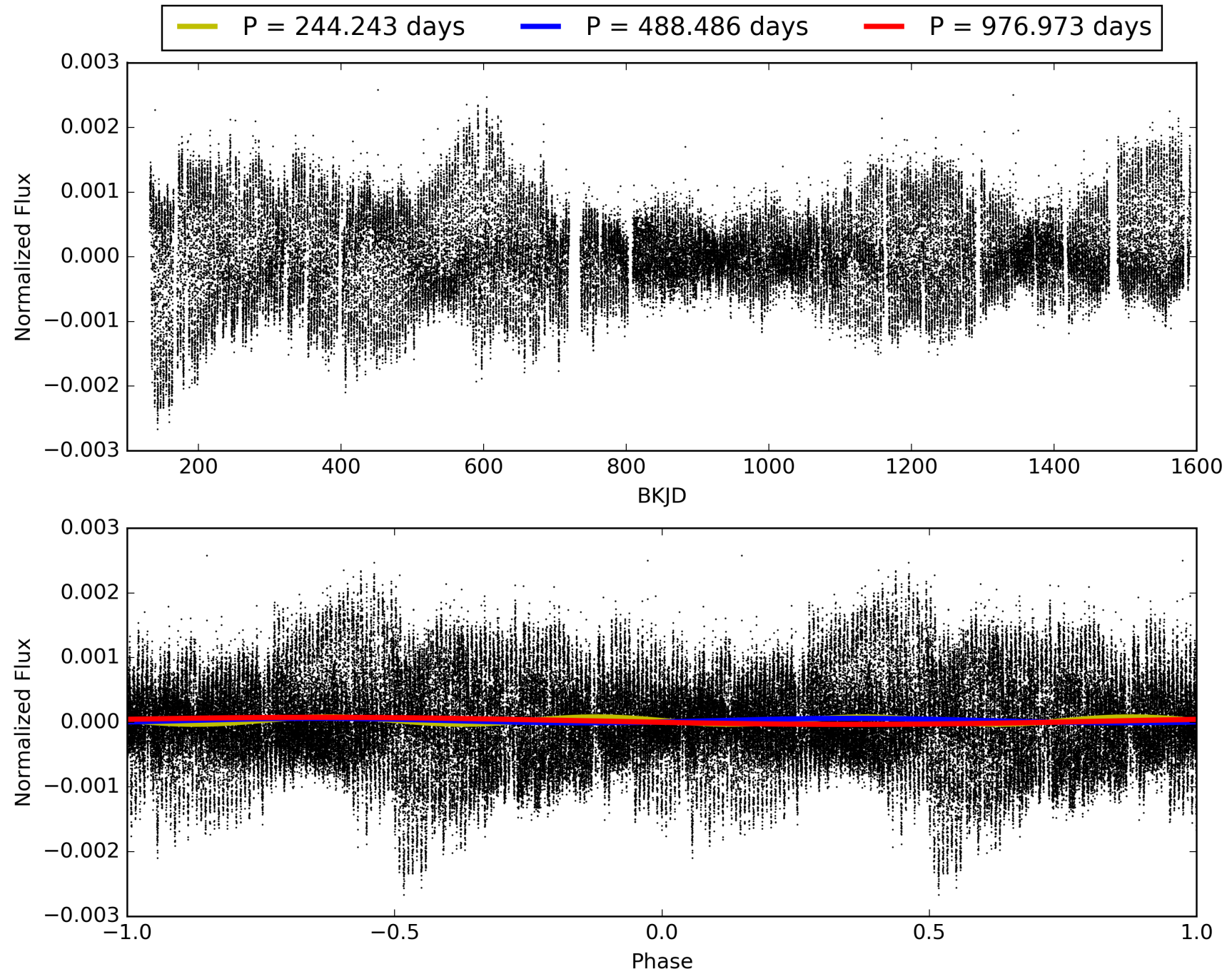
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:26:07 Z

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

TCE 007751906-01, PDC Light Curves

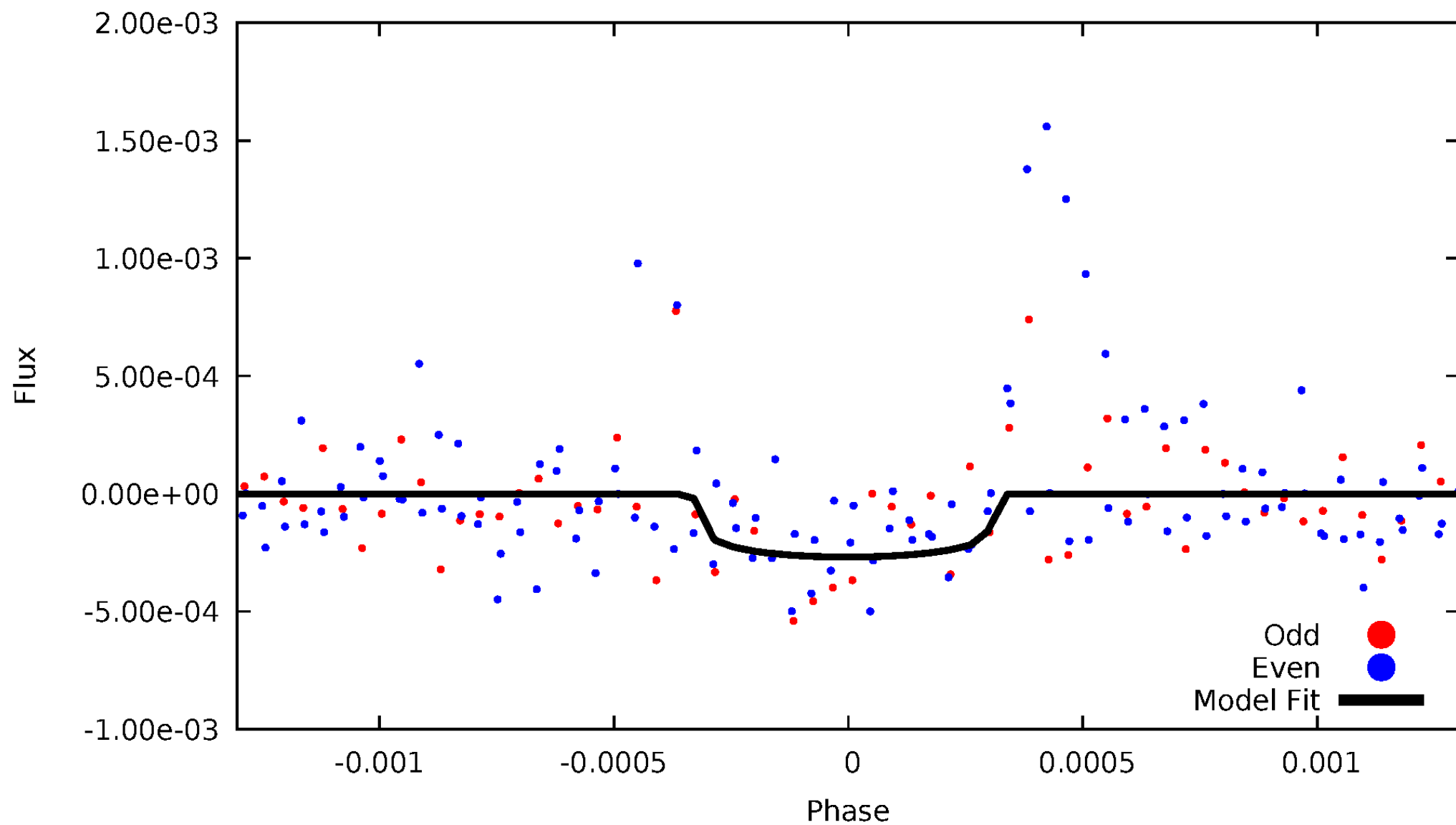


TCE 007751906-01



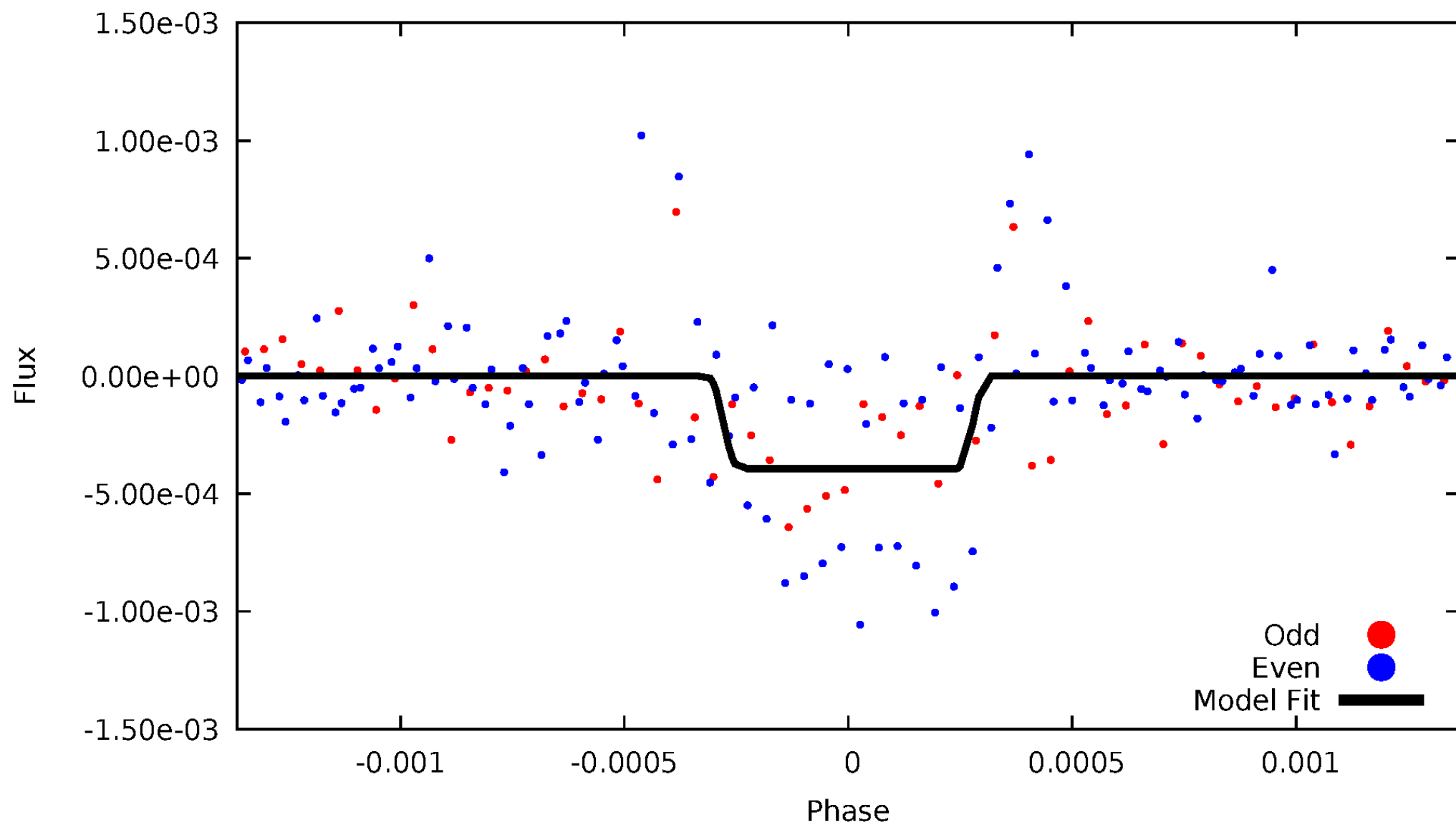
DV Odd/Even

TCE 007751906-01

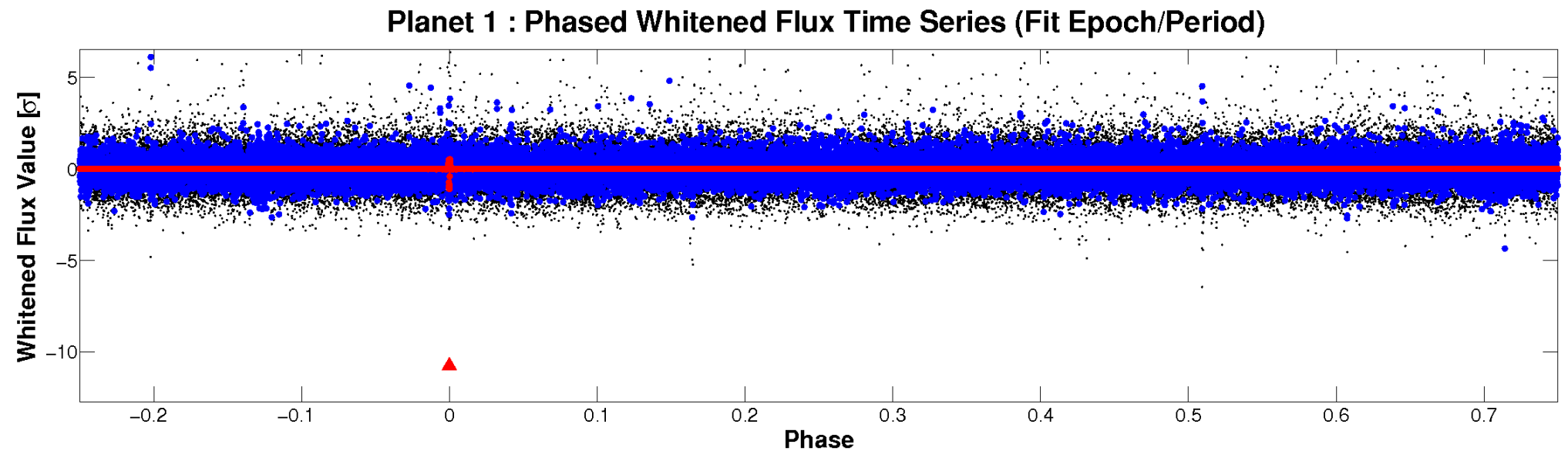
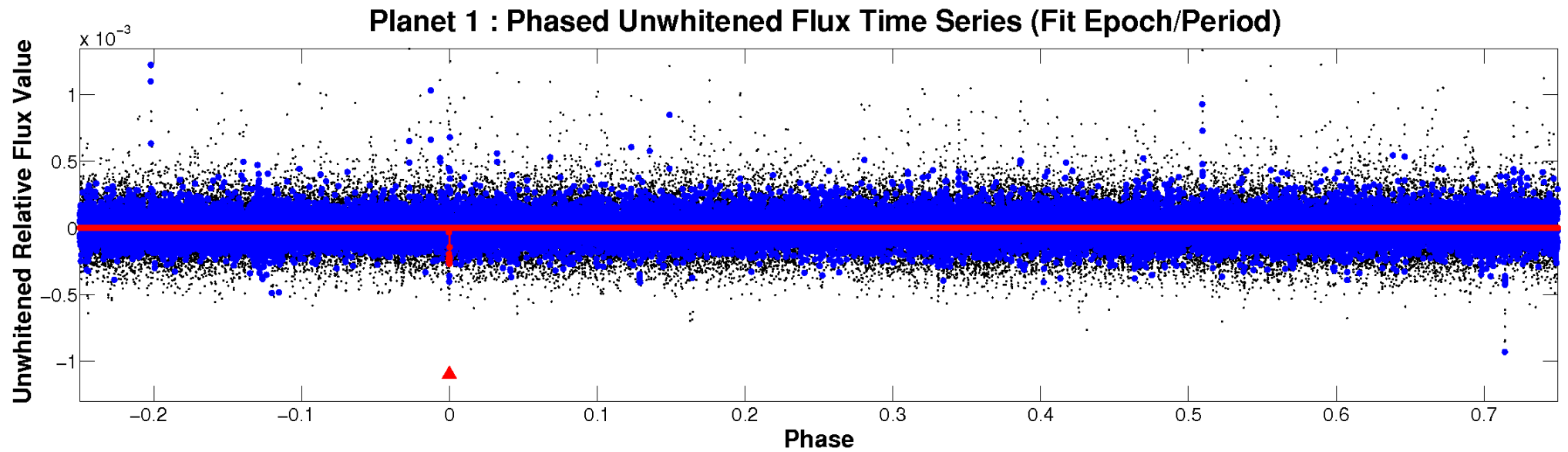


ALT Odd/Even

TCE 007751906-01

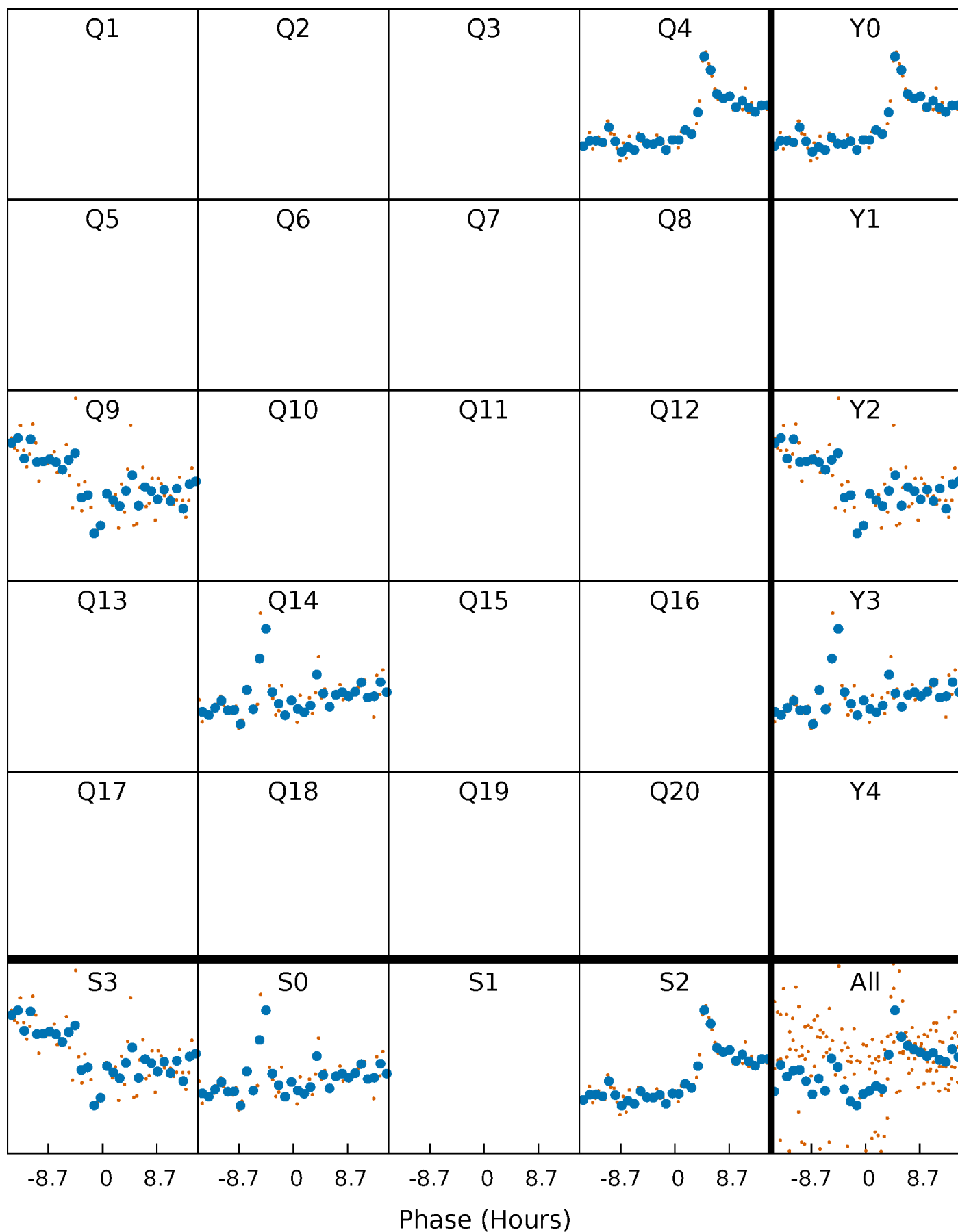


Non-Whitened Vs. Whitened Light Curve



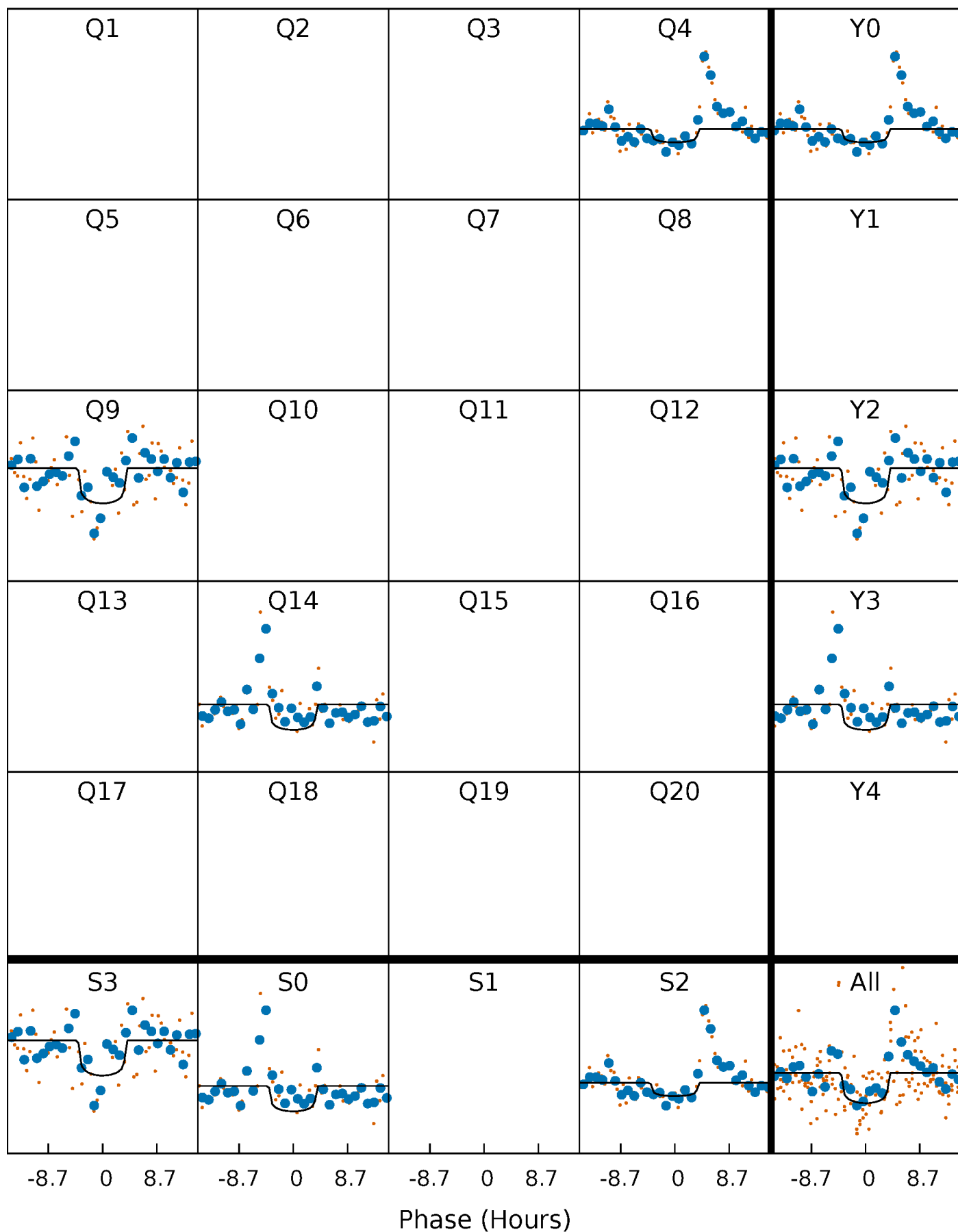
PDC Quarter-Phased Transit Curves

TCE 007751906-01 P=488.486391 Days $T_0=378.426676$ (BKJD)



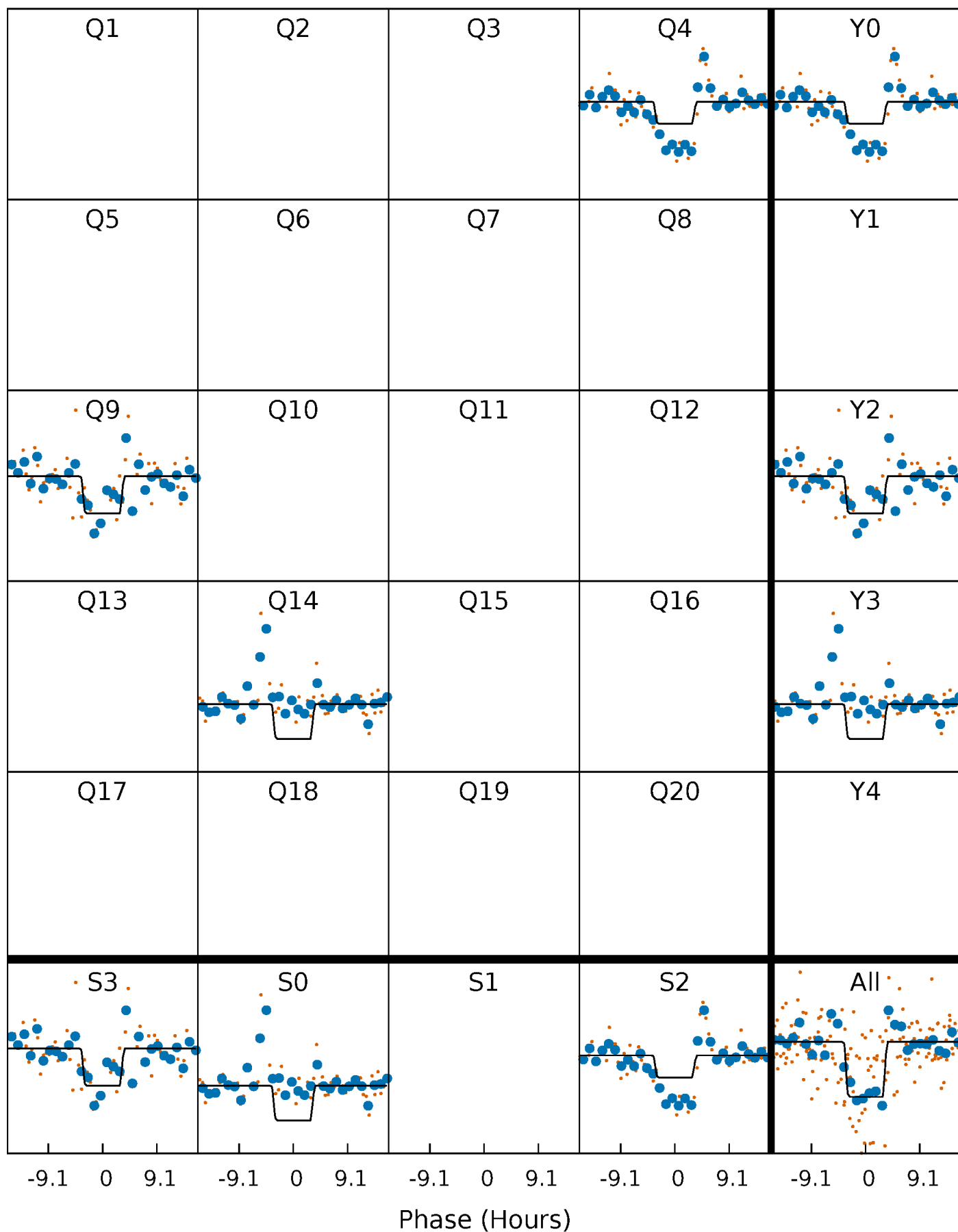
DV Quarter-Phased Transit Curves

TCE 007751906-01 P=488.486391 Days $T_0=378.426676$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

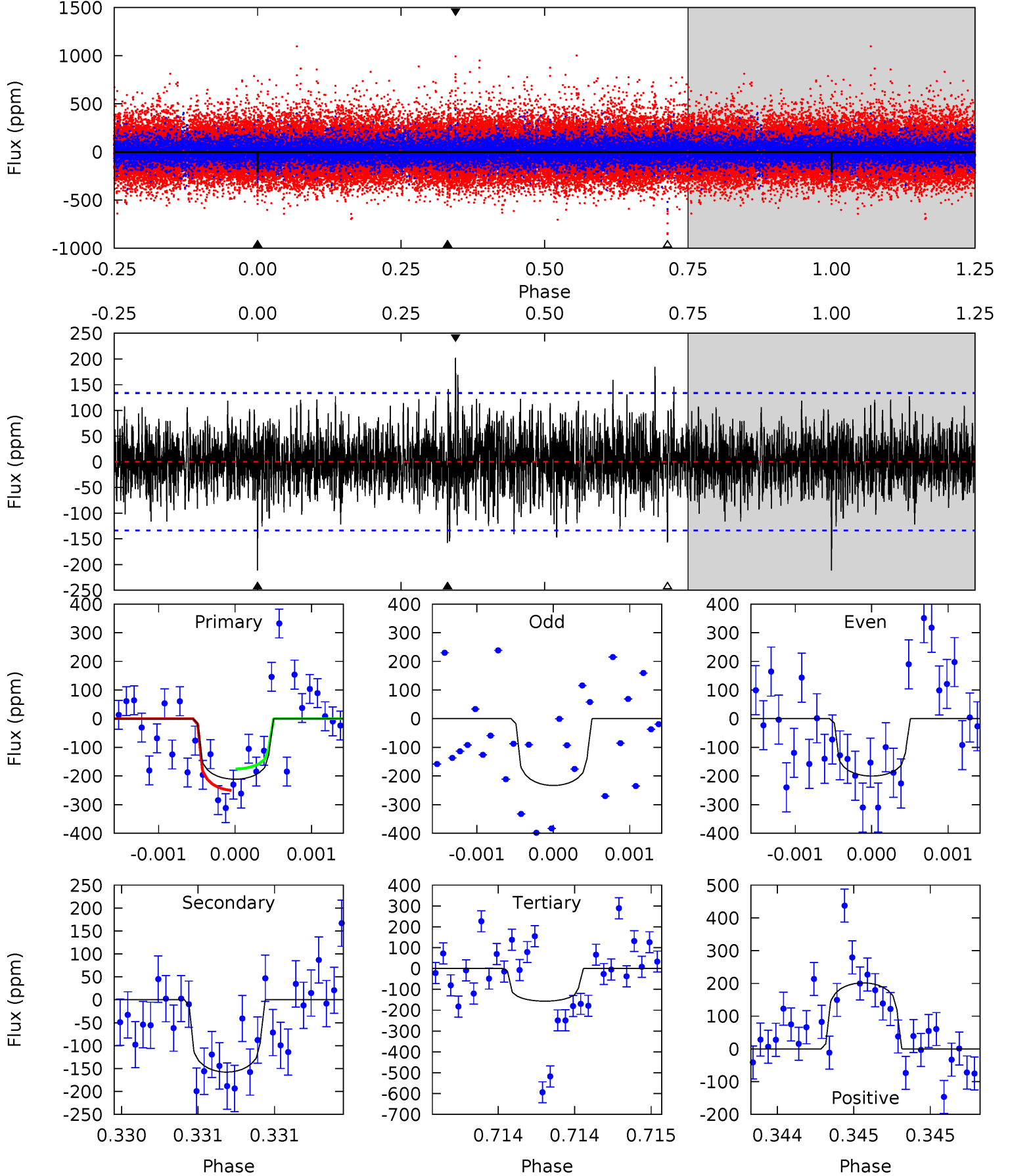
TCE 007751906-01 P=488.484685 Days $T_0=378.436517$ (BKJD)



DV Model-Shift Uniqueness Test

007751906-01, P = 488.486391 Days, E = 378.426676 Days

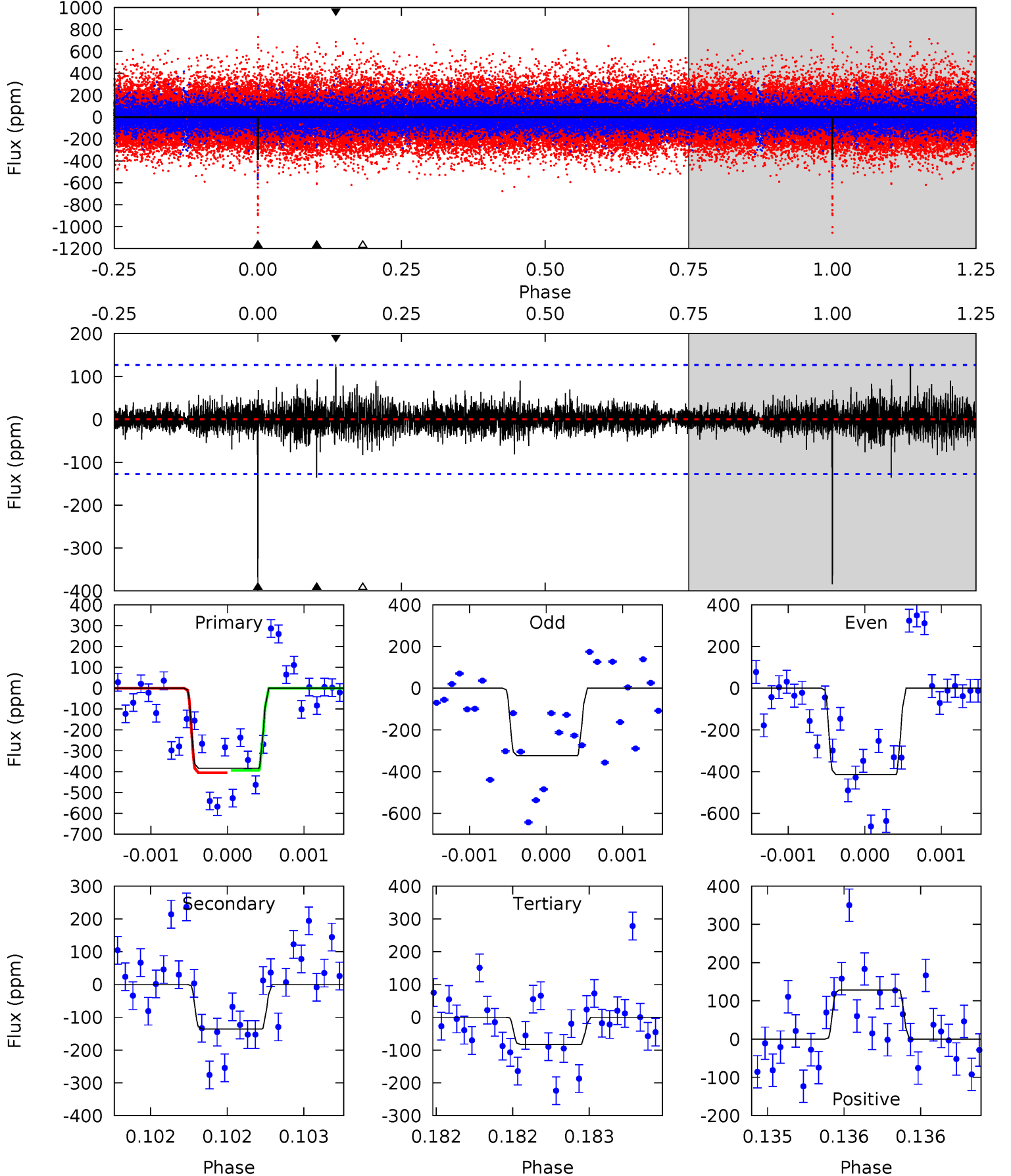
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.73	6.52	6.48	8.33	5.52	3.40	1.73	2.25	0.40	0.04	-1.81	0.64	0.91	0.49	1.55



Alt Model-Shift Uniqueness Test

007751906-01, P = 488.484685 Days, E = 378.436517 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	5.92	3.62	5.60	5.54	3.44	0.83	13.1	11.1	2.30	0.32	1.84	1.19	0.25	0.25



Stellar Parameters For KIC 007751906

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6046^{+181}_{-163}	$4.050^{+0.434}_{-0.186}$	$-0.700^{+0.300}_{-0.250}$	$1.448^{+0.399}_{-0.599}$	$0.858^{+0.107}_{-0.080}$	$0.398^{+1.523}_{-0.200}$
	+3%/-3%	+11%/-5%	+43%/-36%	+28%/-41%	+12%/-9%	+383%/-50%
Source	PHO1	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 007751906-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-158 ± 24	$2.80^{+2.14}_{-1.70}$	412^{+36}_{-46}	4952^{+2871}_{-922}	13916^{+76095}_{-9373}
Alt.	-136 ± 23	$3.15^{+2.28}_{-1.78}$	416^{+34}_{-45}	4629^{+2259}_{-776}	9711^{+43590}_{-6271}

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

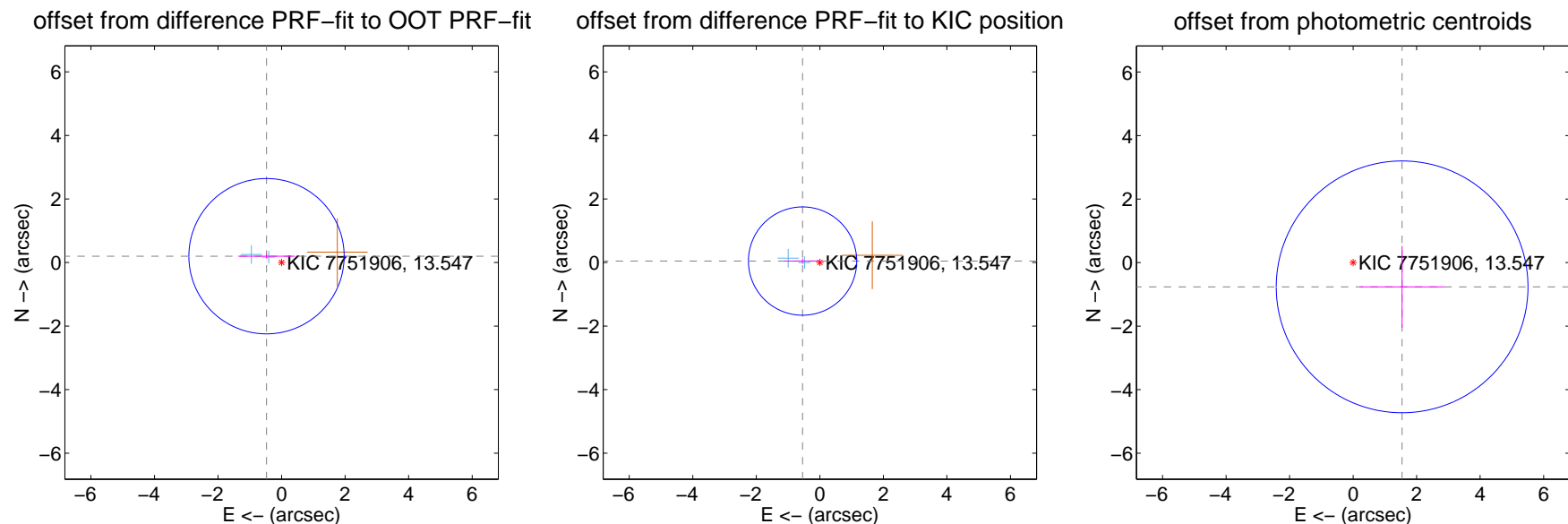
DV Centroid Data

Supplemental centroid analysis for 007751906-01. Kepler magnitude: 13.55. Transit SNR 6.96

There are 2 quarters with good PRF difference image offsets

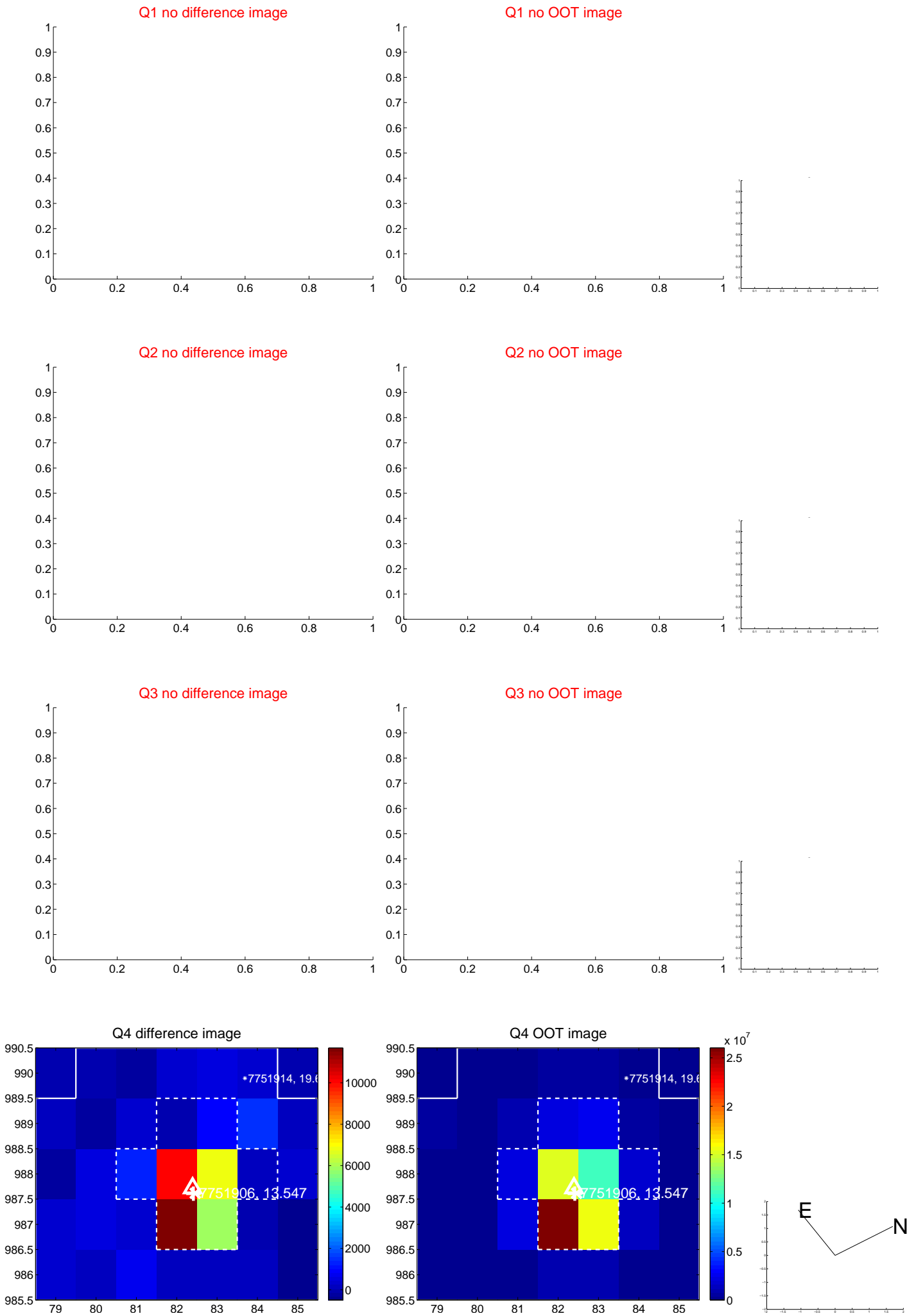
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.514 ± 0.815	0.63	0.474 ± 0.894	0.199 ± 0.073
PRF-fit source offset from KIC position	0.546 ± 0.568	0.96	0.544 ± 0.572	0.046 ± 0.079
photometric centroid source offset	1.72 ± 1.32	1.30	-1.54 ± 1.33	-0.76 ± 1.29



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.

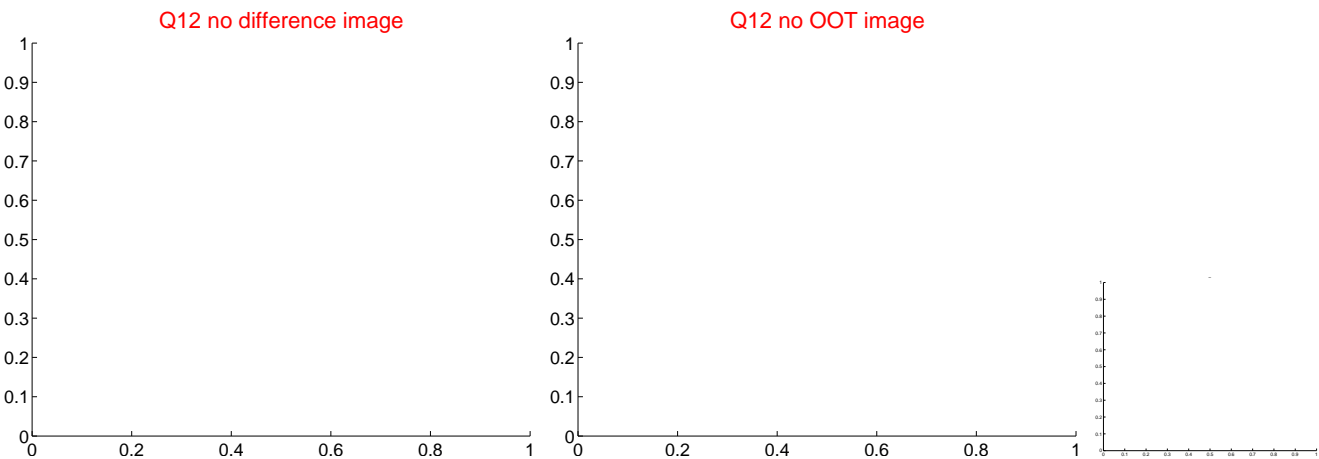
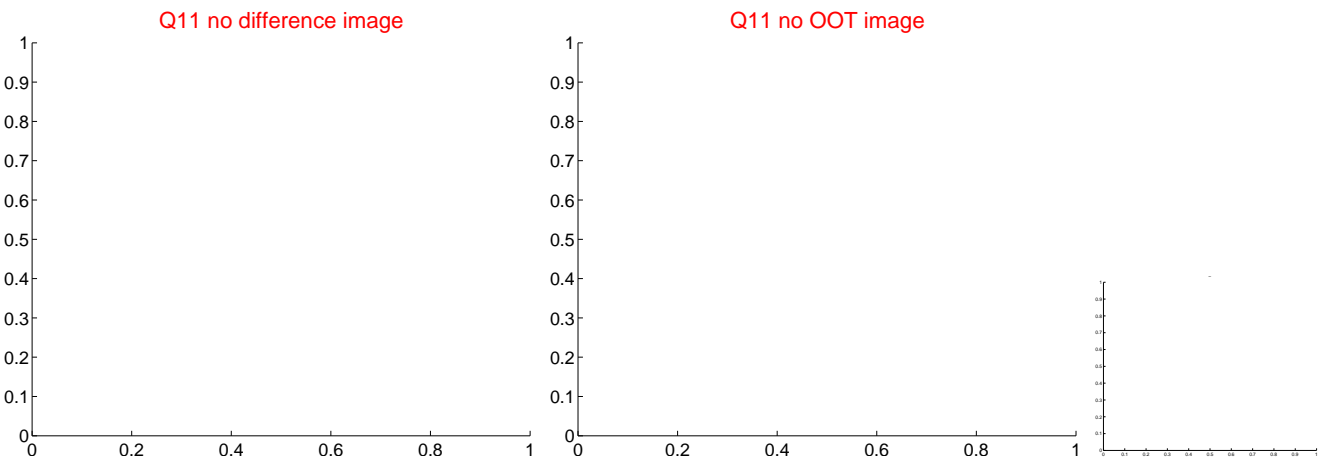
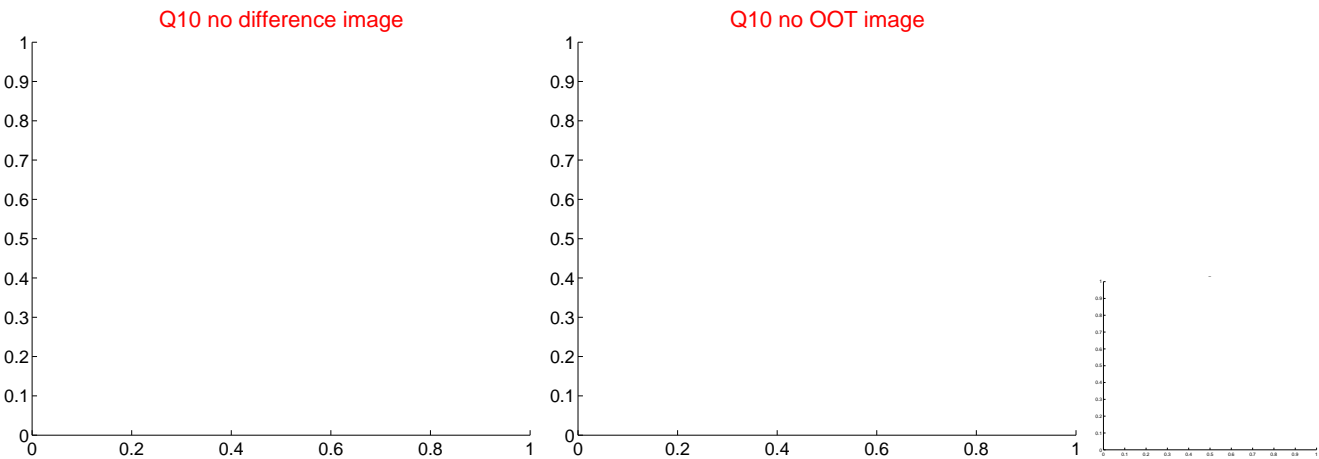
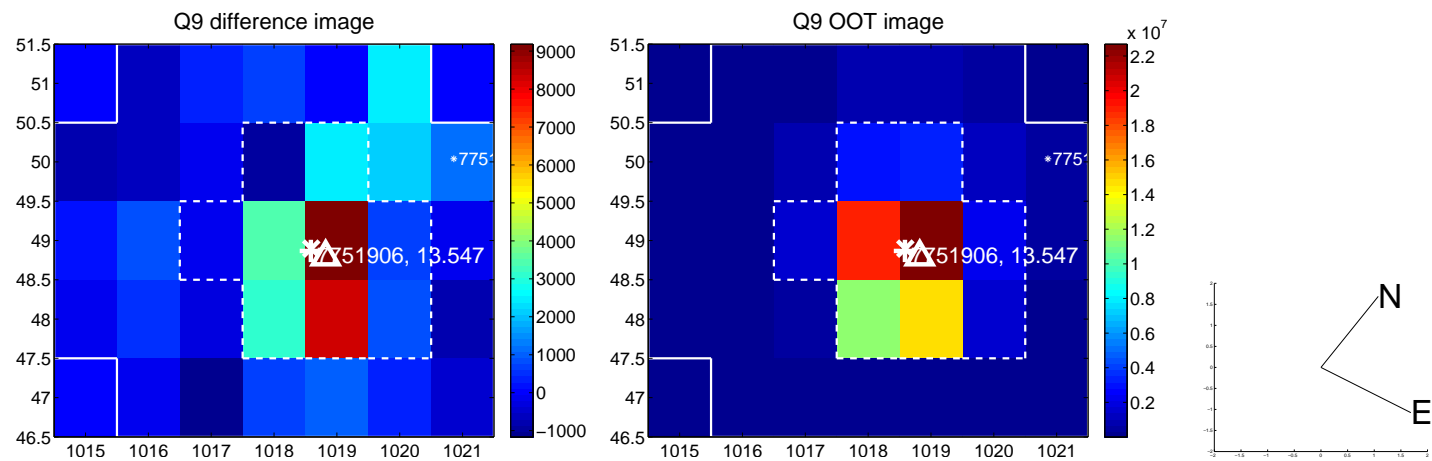
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



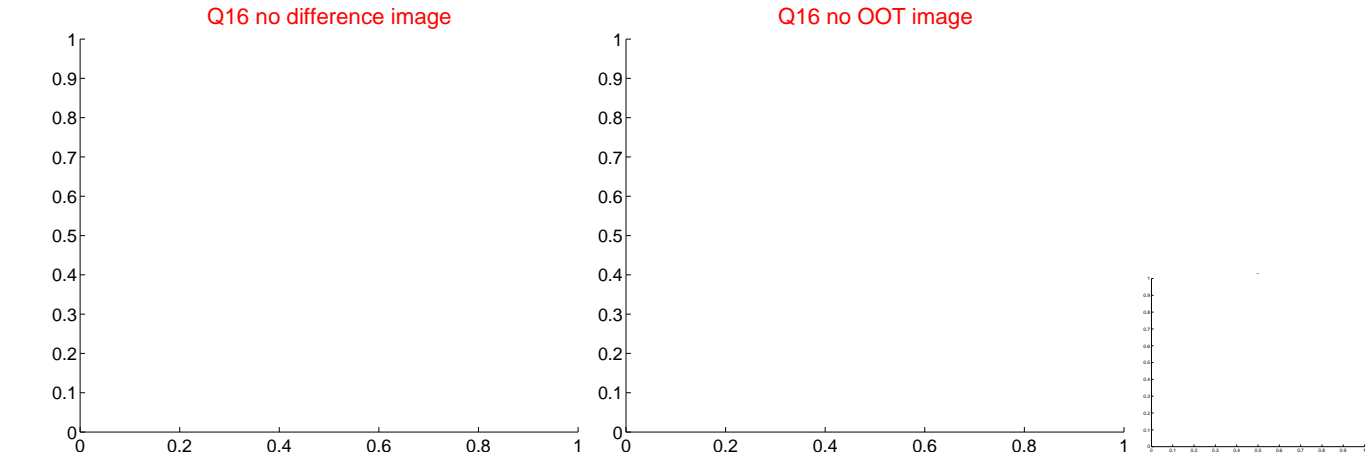
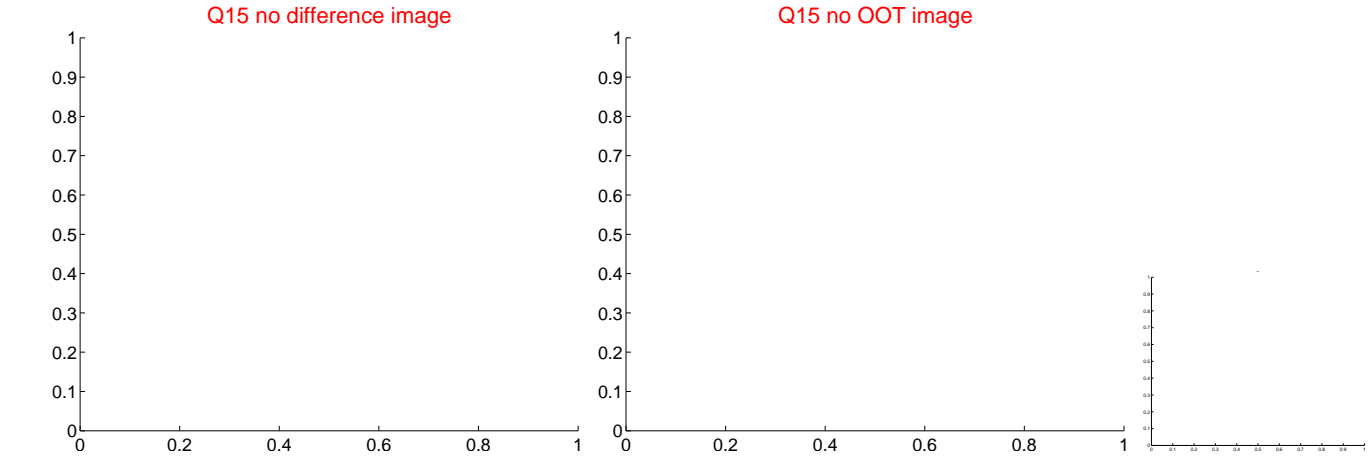
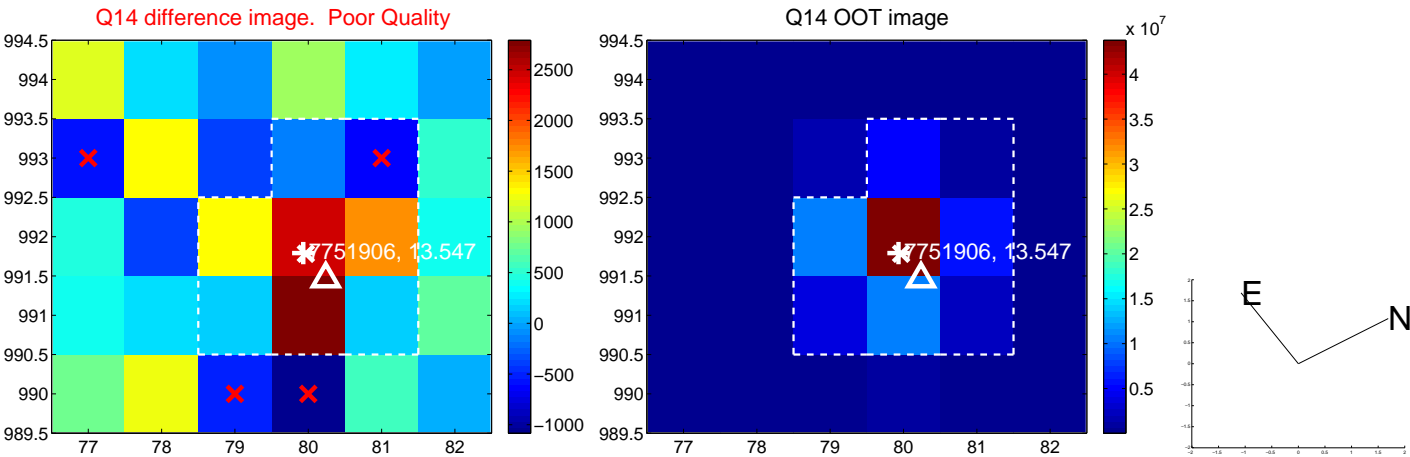
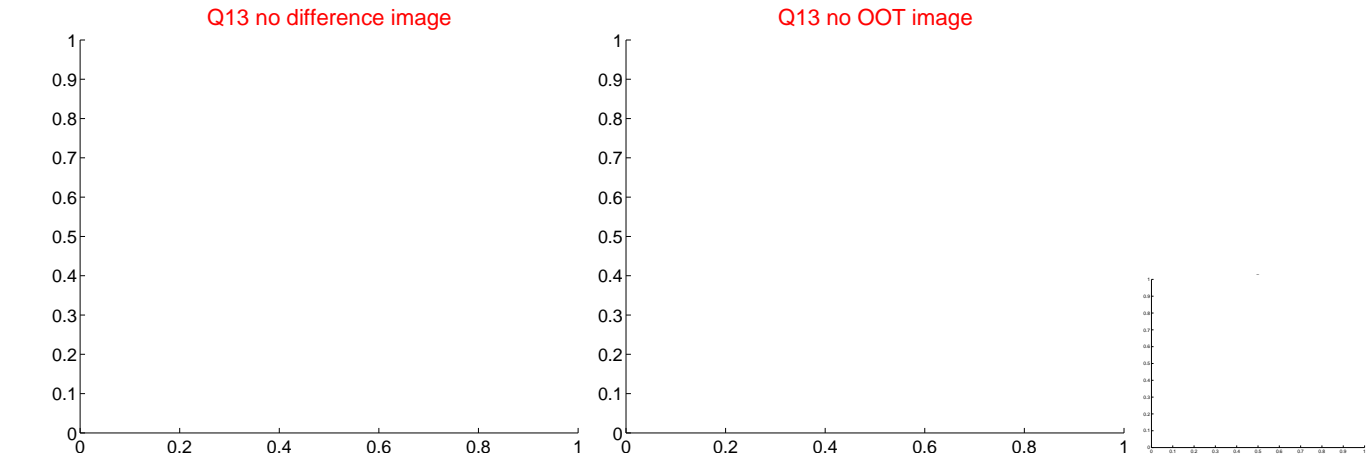
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



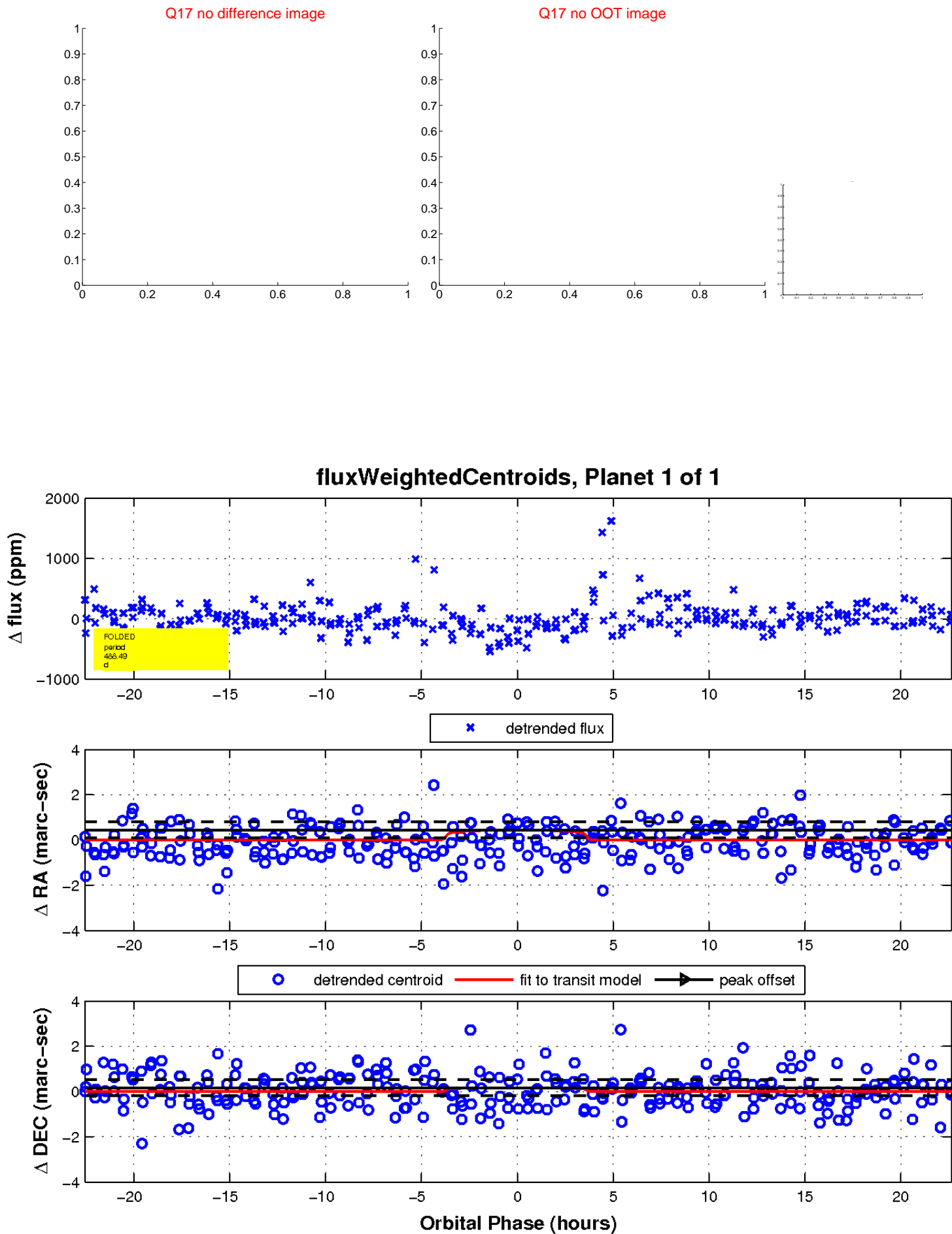
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

