

KIC 010934674

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})
010934674-01	OBS	0477.01	16.542967	136.562382	699.4	3.985	30.5	32.9	0.87	5215	2.61	32.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010934674-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

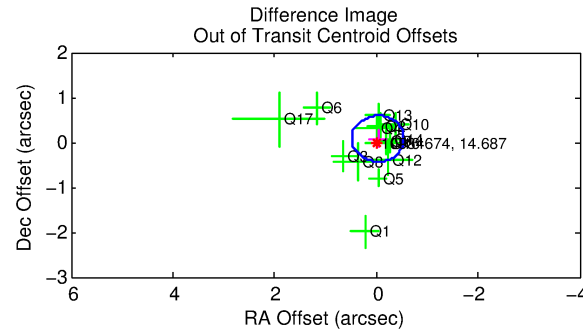
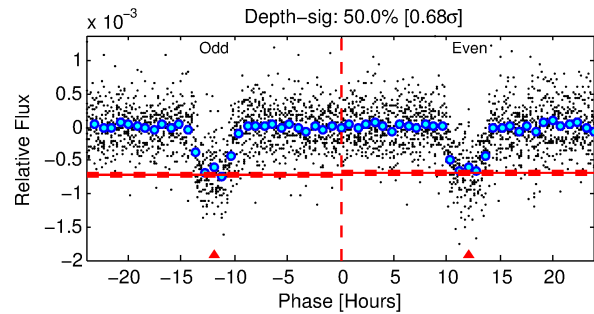
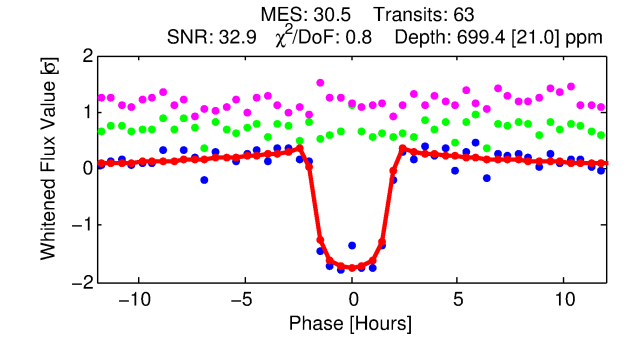
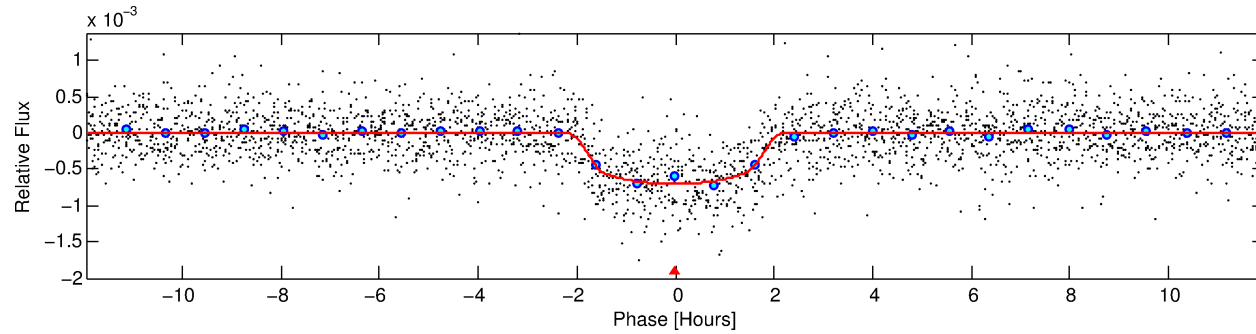
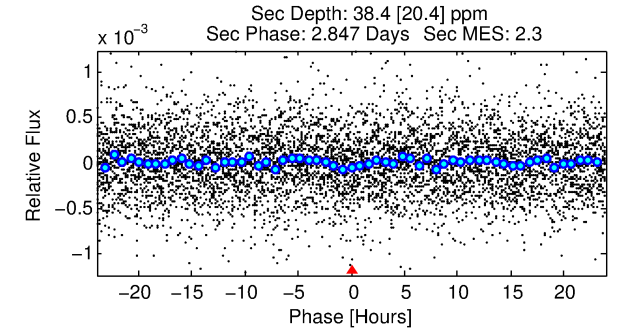
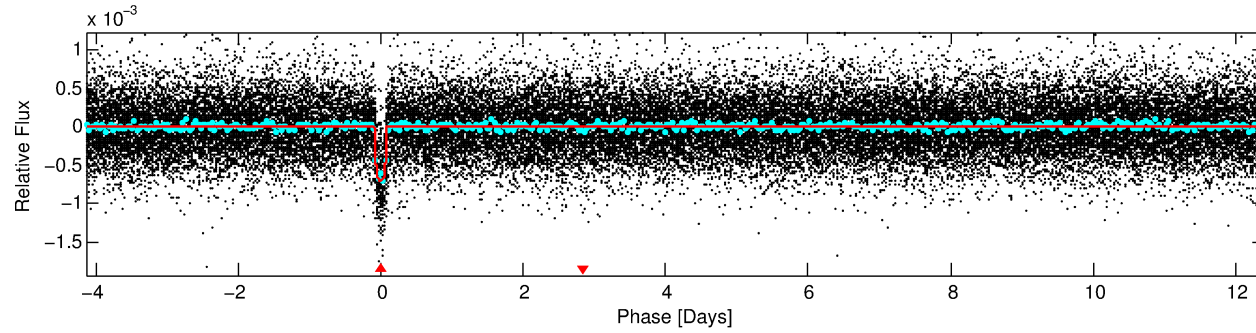
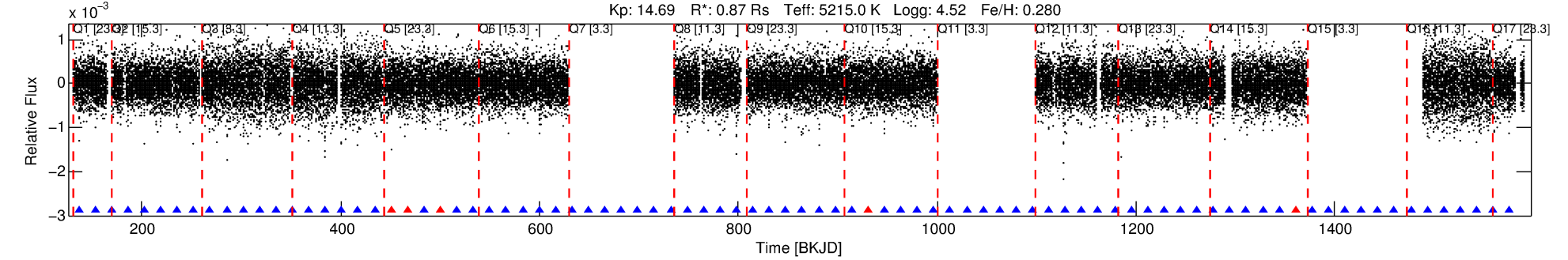
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010934674-01

No Significant Match Found

DV One-Page Summary

KIC: 10934674 Candidate: 1 of 1 Period: 16.543 d
KOI: K00477.01 Corr: 0.985



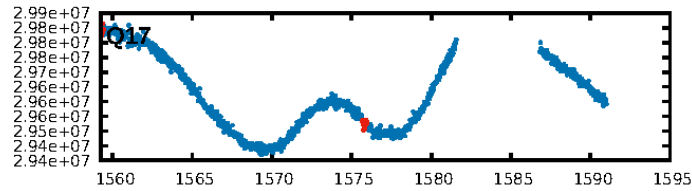
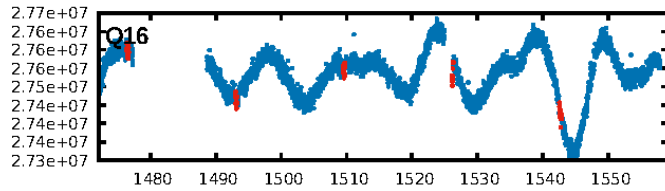
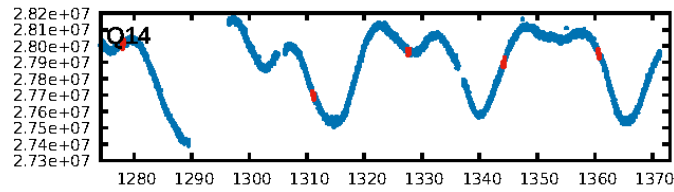
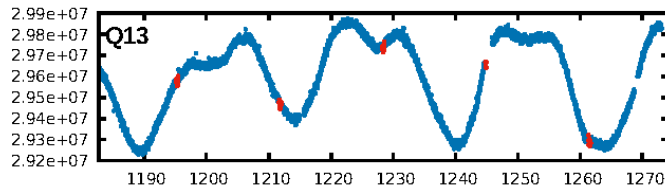
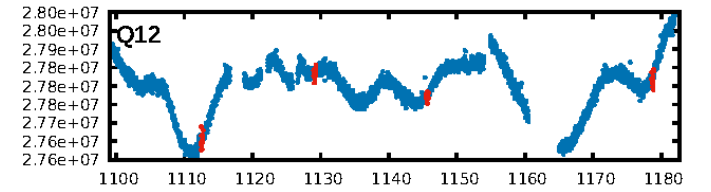
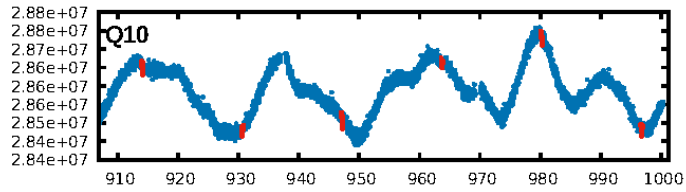
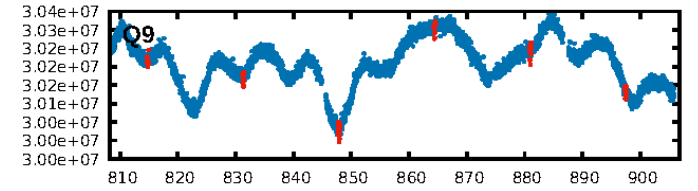
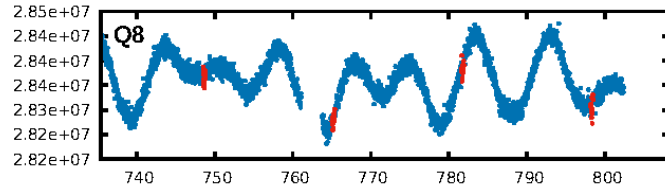
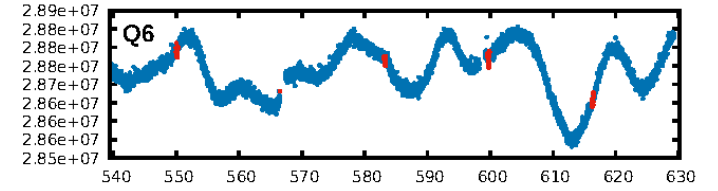
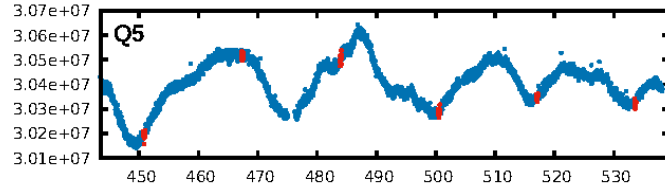
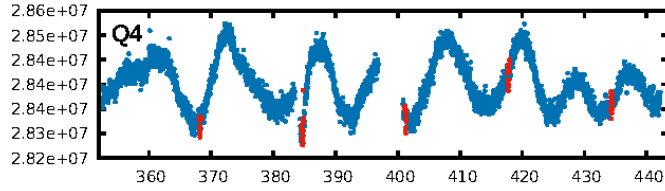
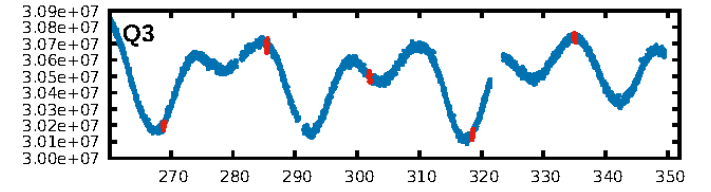
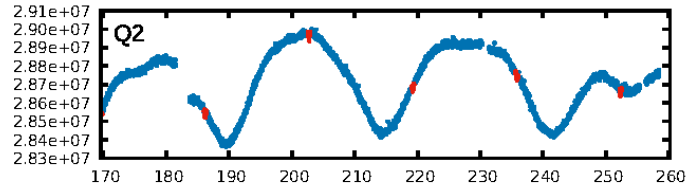
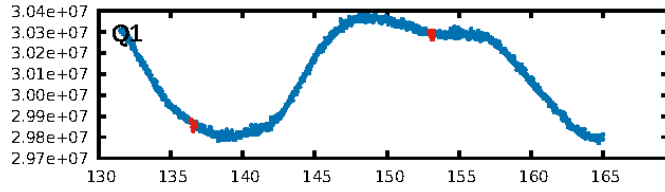
DV Fit Results:

Period = 16.54297 [0.00005] d
Epoch = 136.5624 [0.0022] BKJD
Rp/R* = 0.0275 [0.0045]
a/R* = 19.47 [11.77]
b = 0.82 [0.24]
Seff = 32.99 [7.65]
Teff = 611 [35] K
Rp = 2.61 [0.59] Re
a = 0.1229 [0.0160] AU
Ag = 47.00 [30.60] [1.50 σ]
Teffp = 2474 [394] K [4.71 σ]

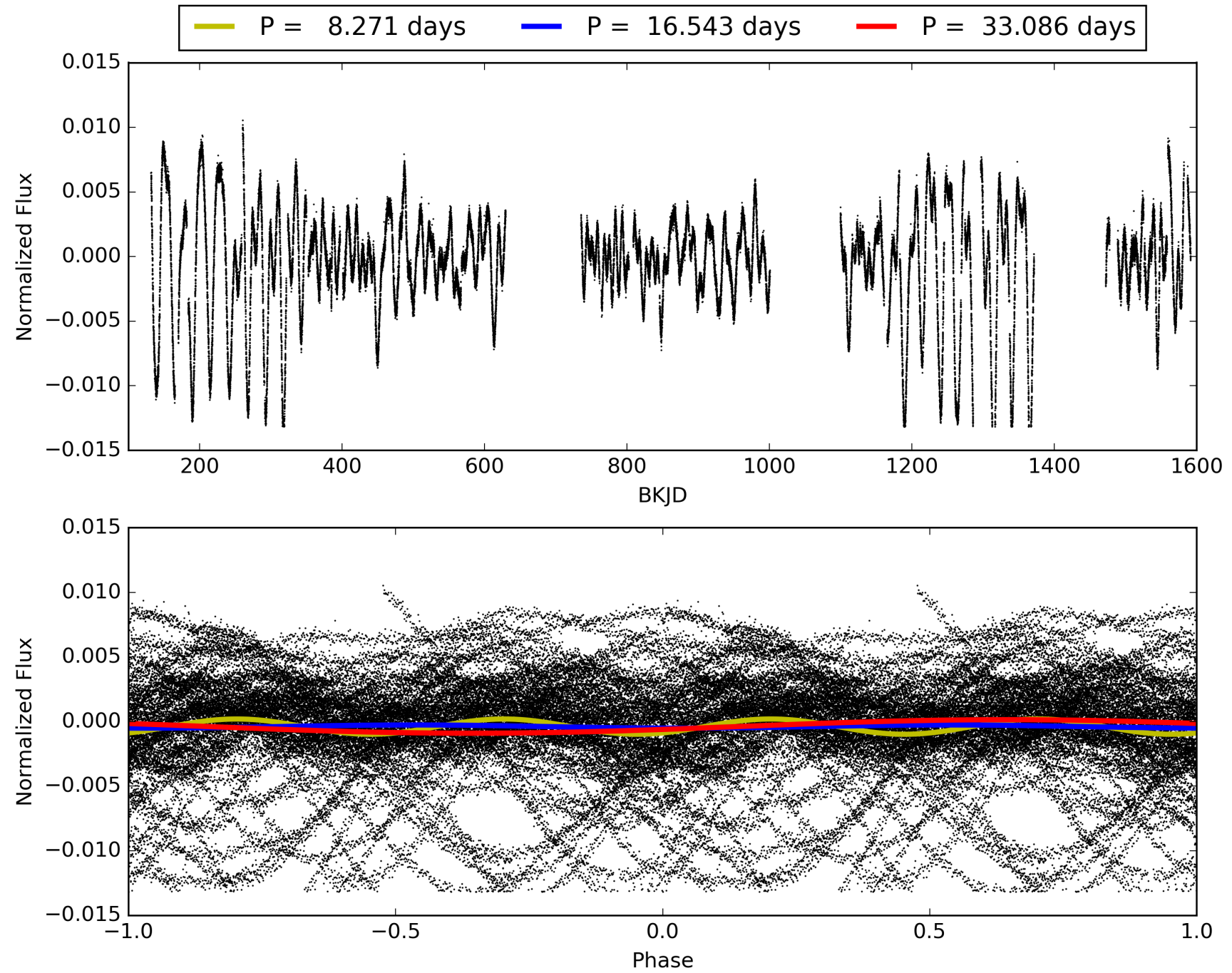
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 85.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.66e-204
RollingBand-fgt: 0.92 [54/59]
GhostDiagnostic-chr: 3.85
Centroid-sig: 63.9%
Centroid-so: 0.176 arcsec [0.47 σ]
OotOffset-rm: 0.082 arcsec [0.48 σ]
KicOffset-rm: 0.192 arcsec [0.96 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010934674-01, PDC Light Curves

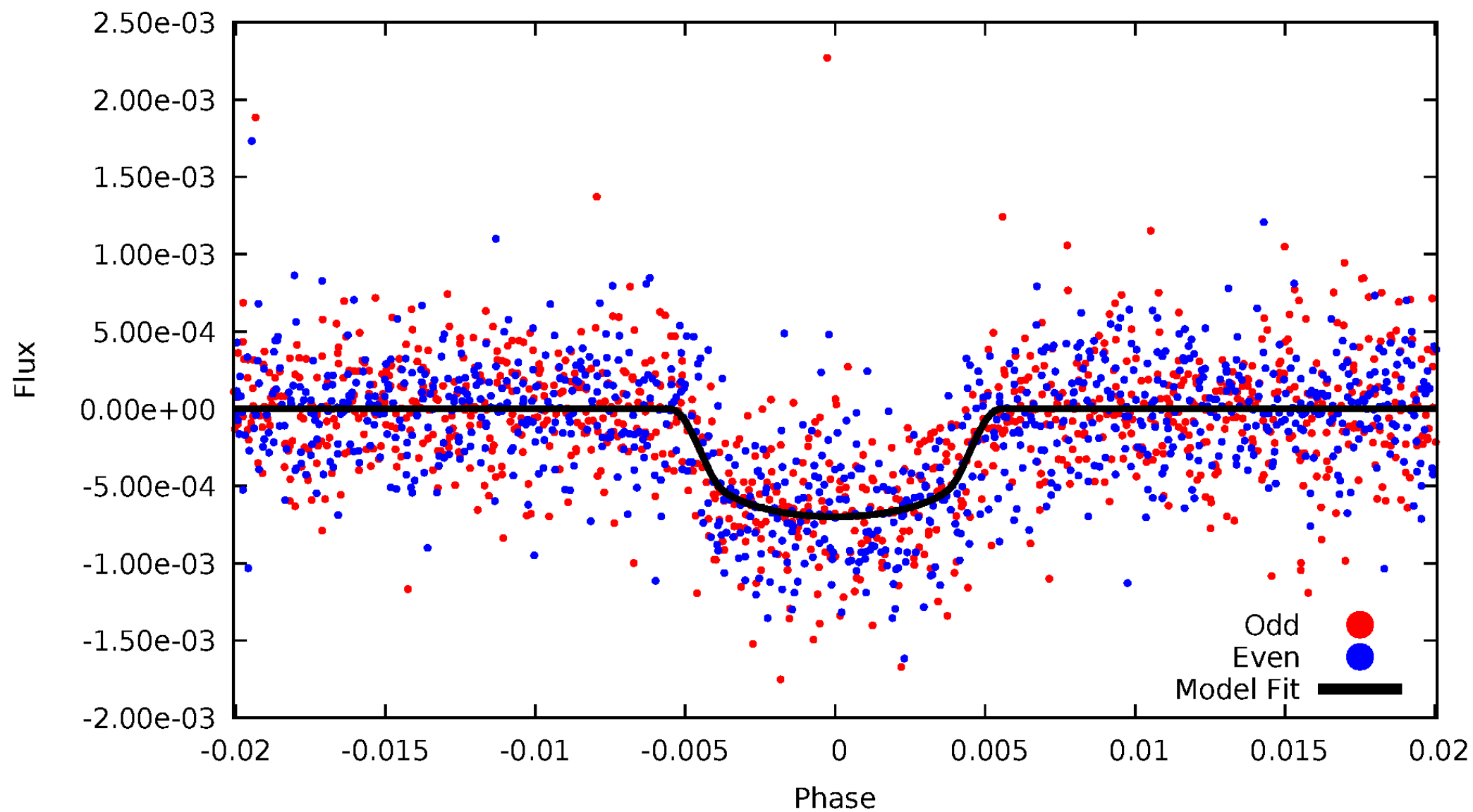


TCE 010934674-01



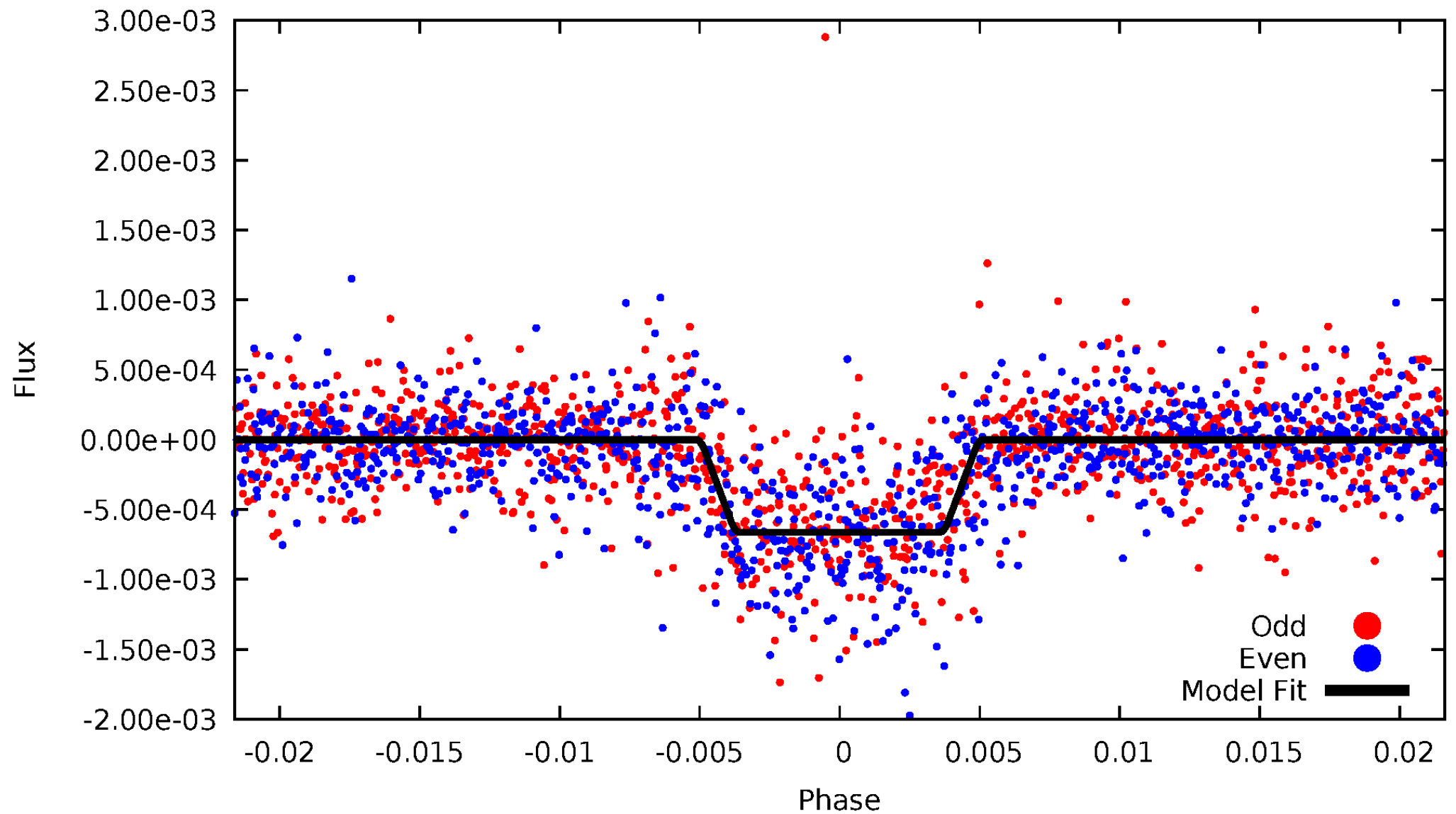
DV Odd/Even

TCE 010934674-01

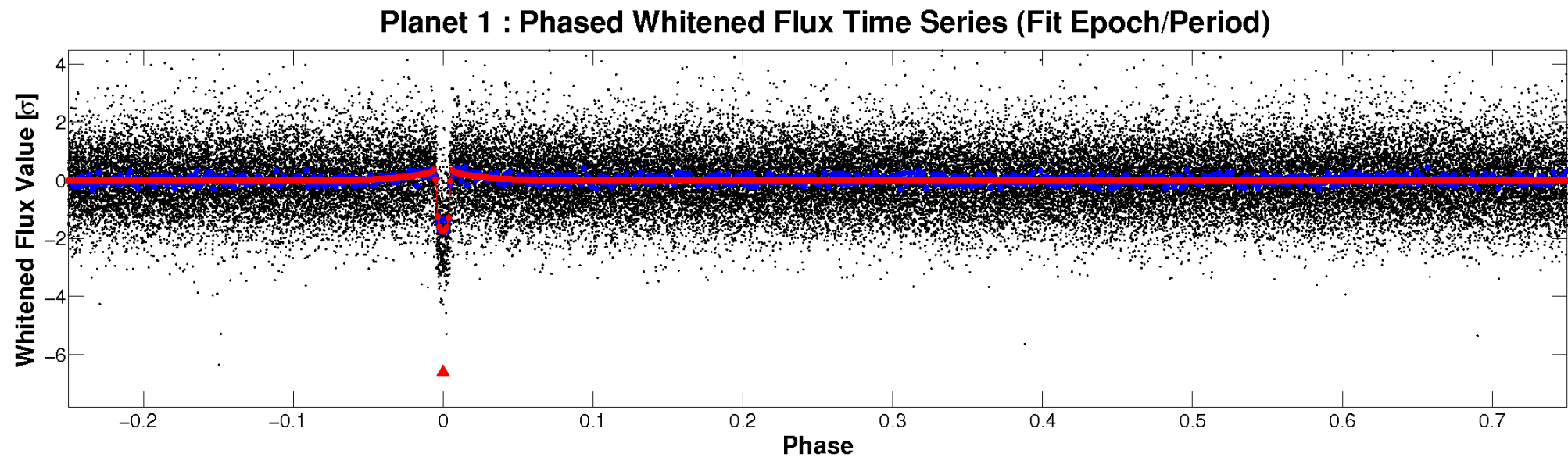
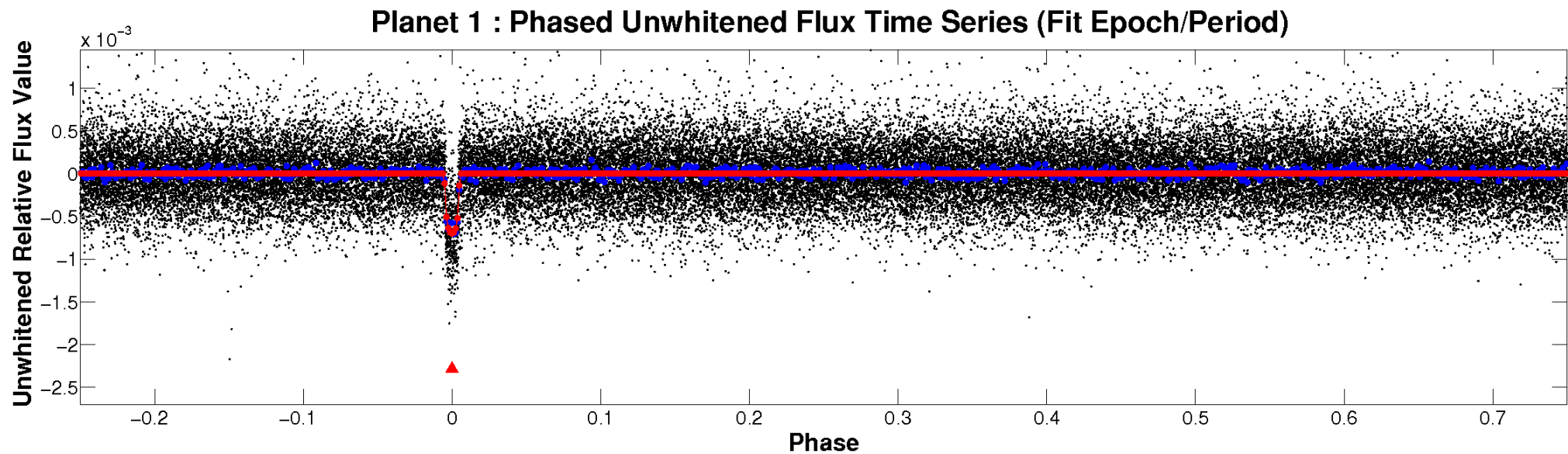


ALT Odd/Even

TCE 010934674-01

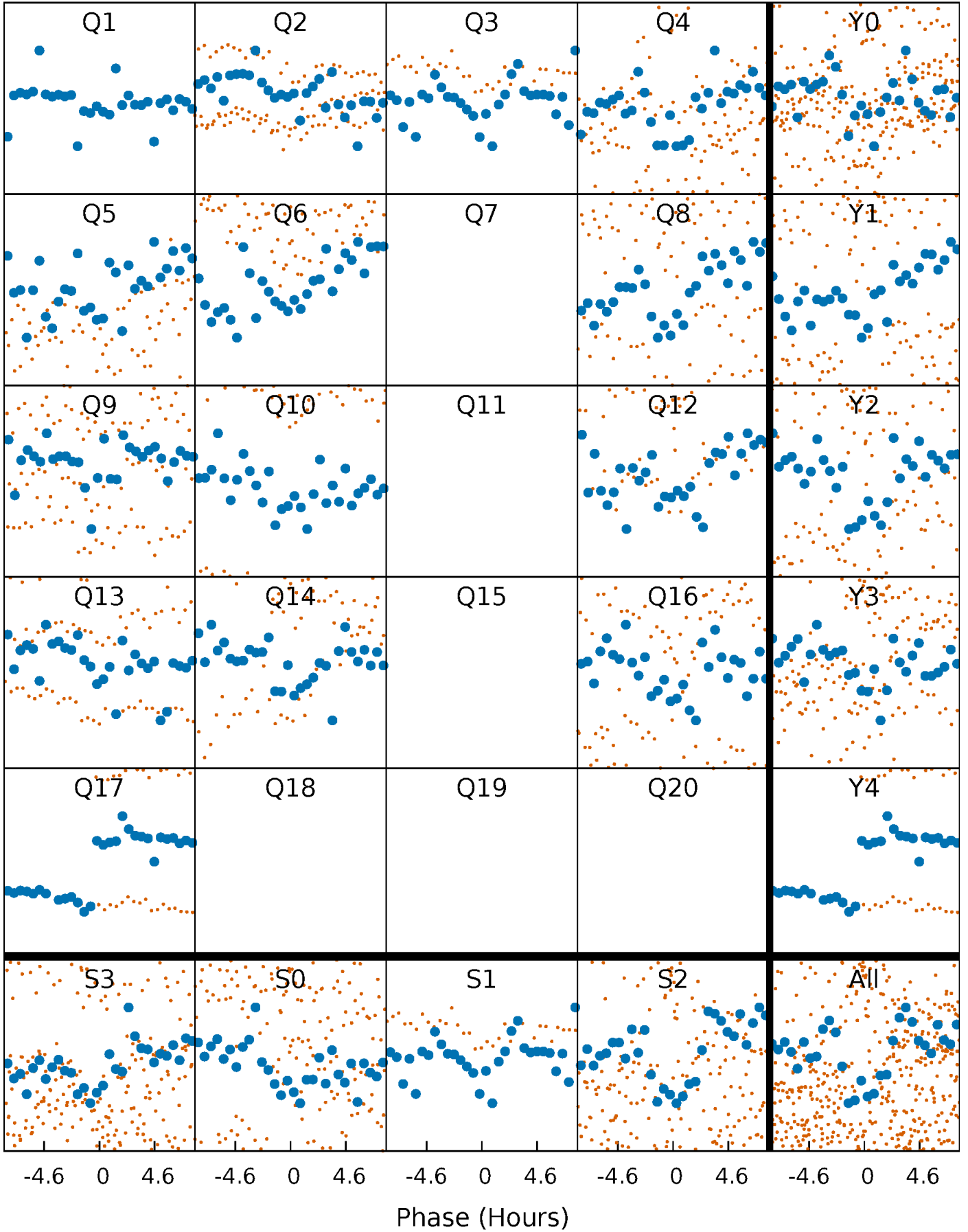


Non-Whitened Vs. Whitened Light Curve



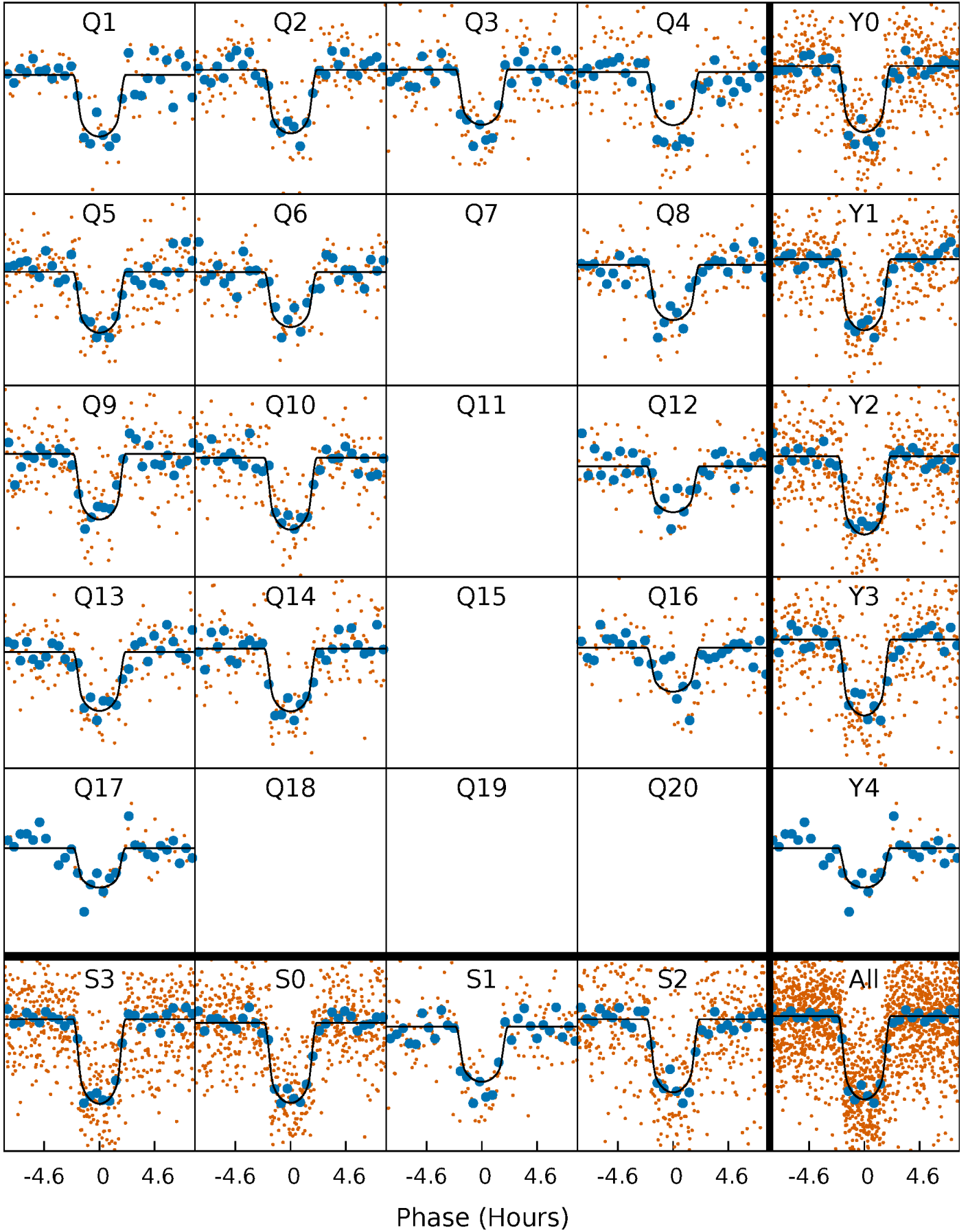
PDC Quarter-Phased Transit Curves

TCE 010934674-01 $P = 16.542967$ Days $T_0 = 136.562382$ (BKJD)



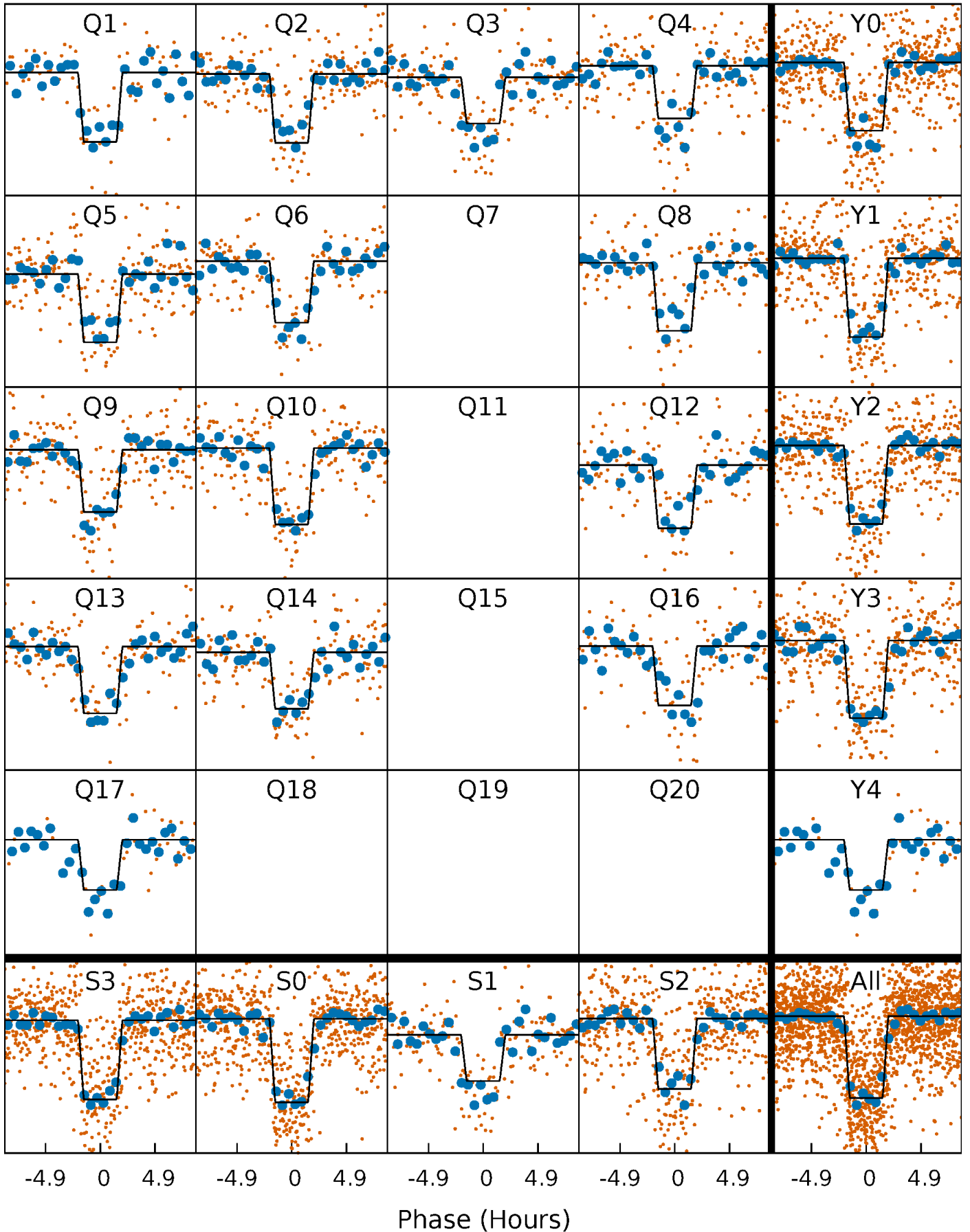
DV Quarter-Phased Transit Curves

TCE 010934674-01 P= 16.542967 Days $T_0=136.562382$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

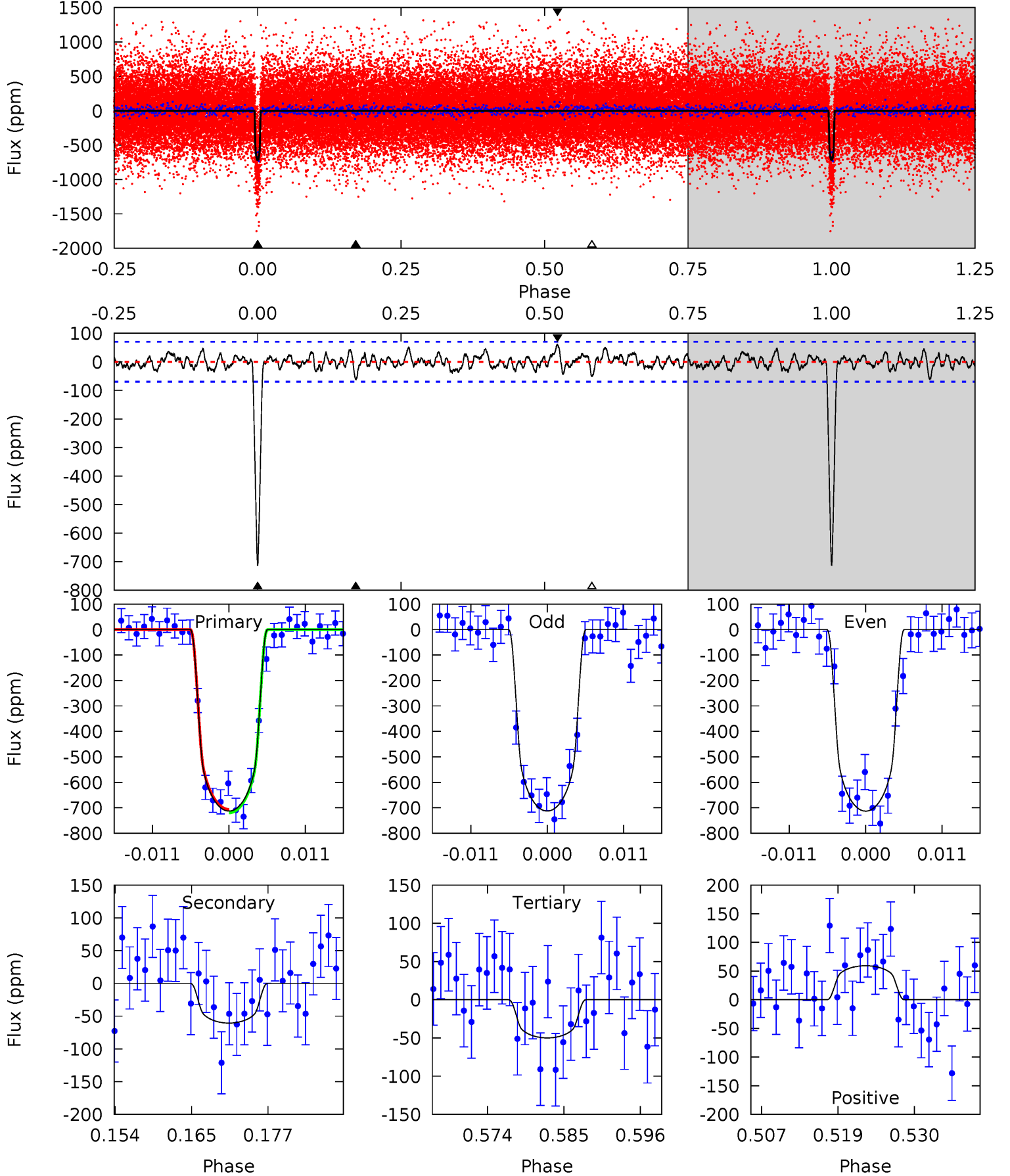
TCE 010934674-01 P= 16.542788 Days $T_0=136.569082$ (BKJD)



DV Model-Shift Uniqueness Test

010934674-01, P = 16.542967 Days, E = 120.019415 Days

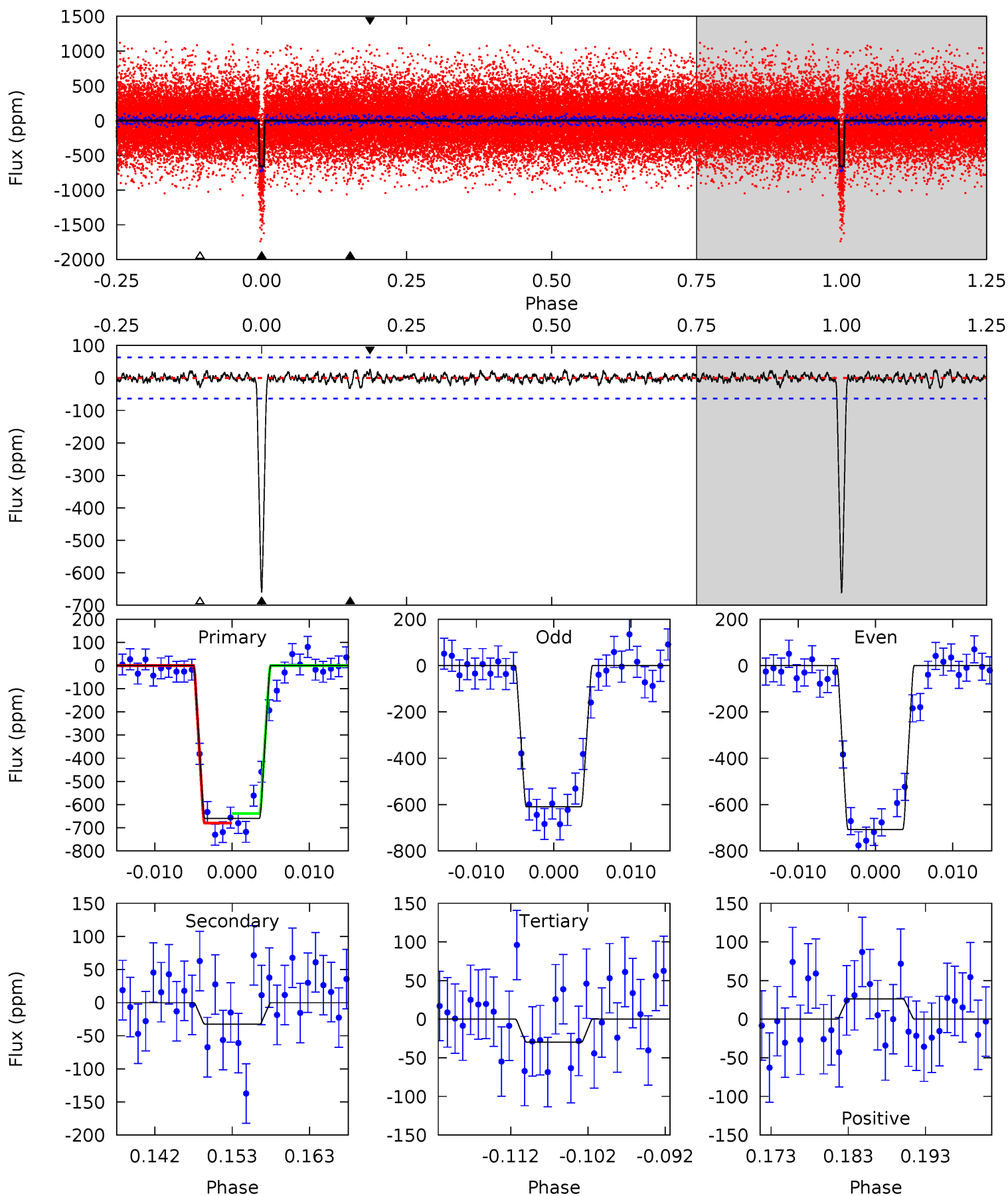
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.0	4.34	3.57	4.24	5.01	2.54	1.32	47.4	46.8	0.76	0.09	0.01	0.99	0.08	0.48



Alt Model-Shift Uniqueness Test

010934674-01, P = 16.542788 Days, E = 120.026294 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.4	2.59	2.37	2.07	5.02	2.57	0.70	50.0	50.3	0.22	0.51	3.90	1.04	0.04	1.64



Stellar Parameters For KIC 010934674

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5215^{+173}_{-157}	$4.518^{+0.048}_{-0.104}$	$0.280^{+0.150}_{-0.300}$	$0.867^{+0.134}_{-0.077}$	$0.904^{+0.054}_{-0.074}$	$1.953^{+0.457}_{-0.631}$
	+3%/-3%	+1%/-2%	+54%/-107%	+15%/-9%	+6%/-8%	+23%/-32%
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 010934674-01 / KOI 0477.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-61 ± 14	$2.66^{+0.49}_{-0.45}$	863^{+42}_{-34}	3298^{+237}_{-212}	70^{+38}_{-24}
Alt.	-33 ± 13	$2.45^{+0.50}_{-0.42}$	865^{+37}_{-36}	3069^{+253}_{-249}	44^{+29}_{-20}

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

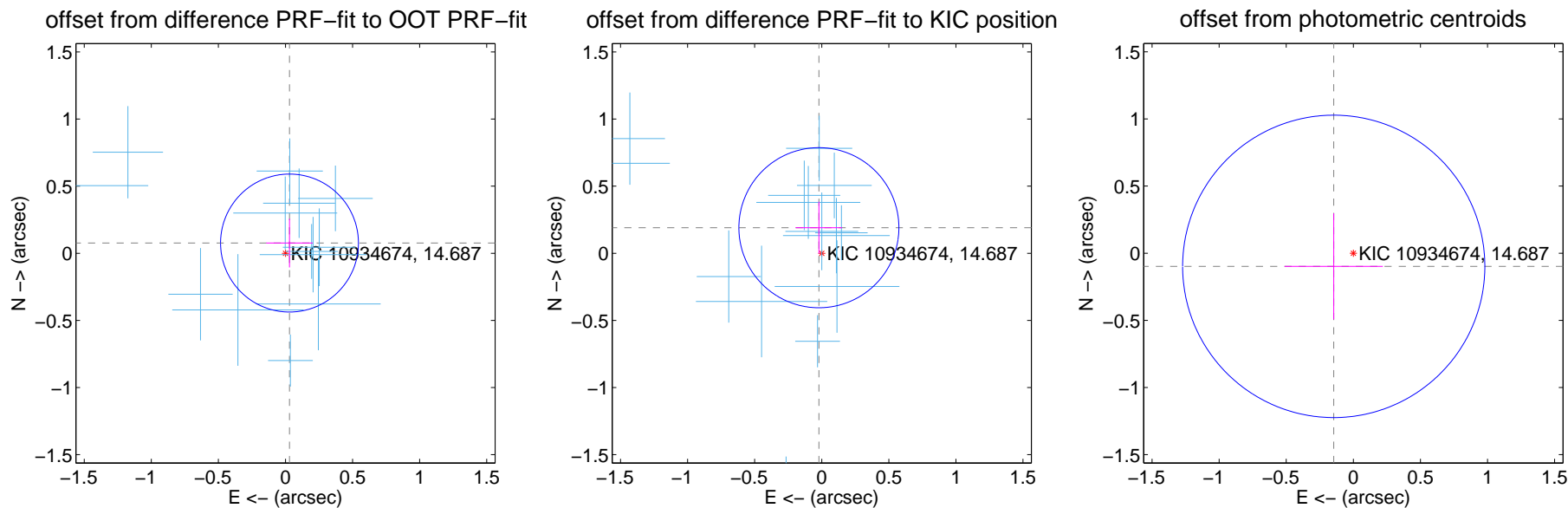
DV Centroid Data

Supplemental centroid analysis for 010934674-01. Kepler magnitude: 14.69. Transit SNR 32.91

There are 14 quarters with good PRF difference image offsets

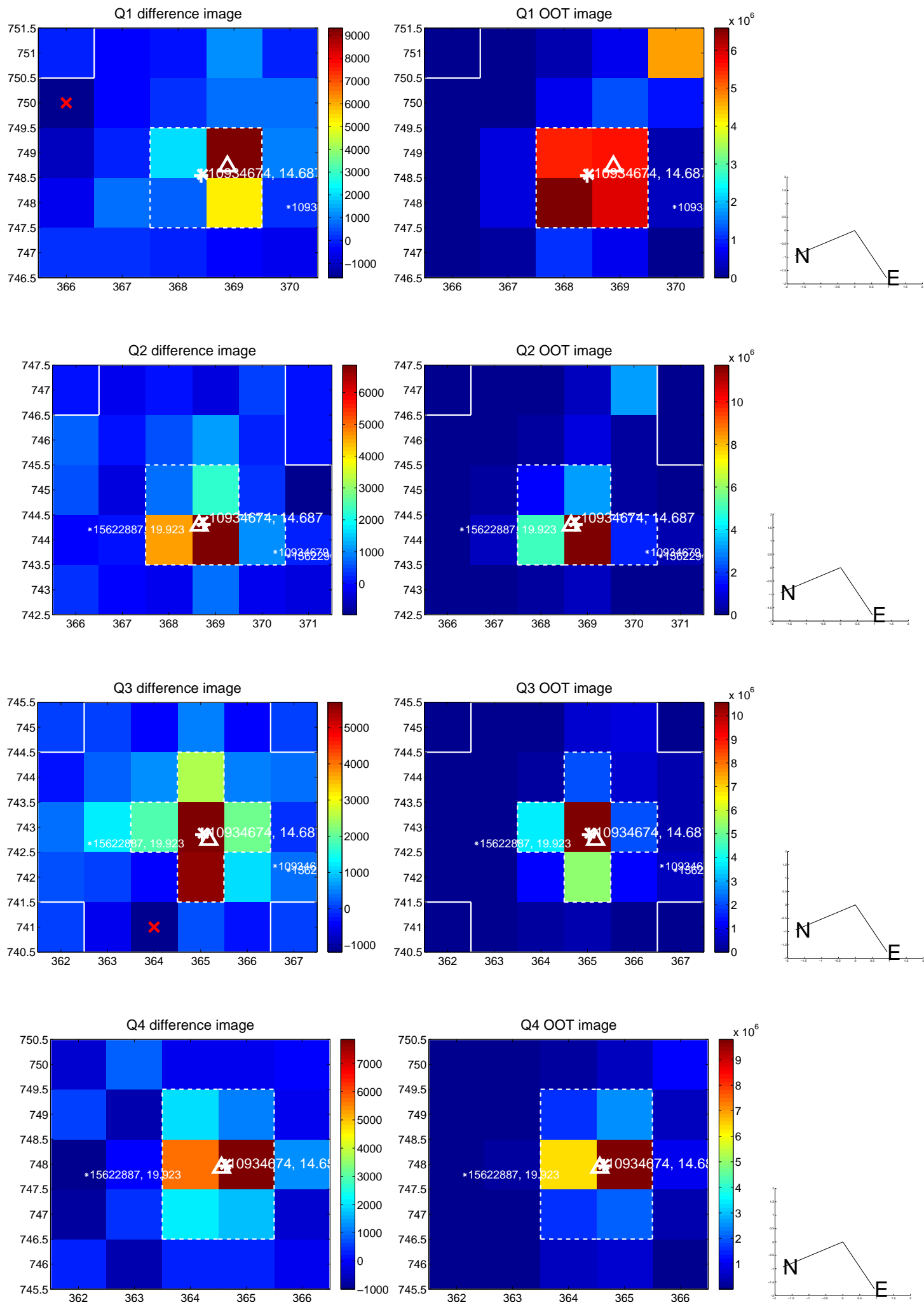
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.082 ± 0.171	0.48	-0.030 ± 0.173	0.076 ± 0.182
PRF-fit source offset from KIC position	0.192 ± 0.199	0.96	0.021 ± 0.173	0.191 ± 0.193
photometric centroid source offset	0.18 ± 0.38	0.47	0.15 ± 0.37	-0.10 ± 0.39

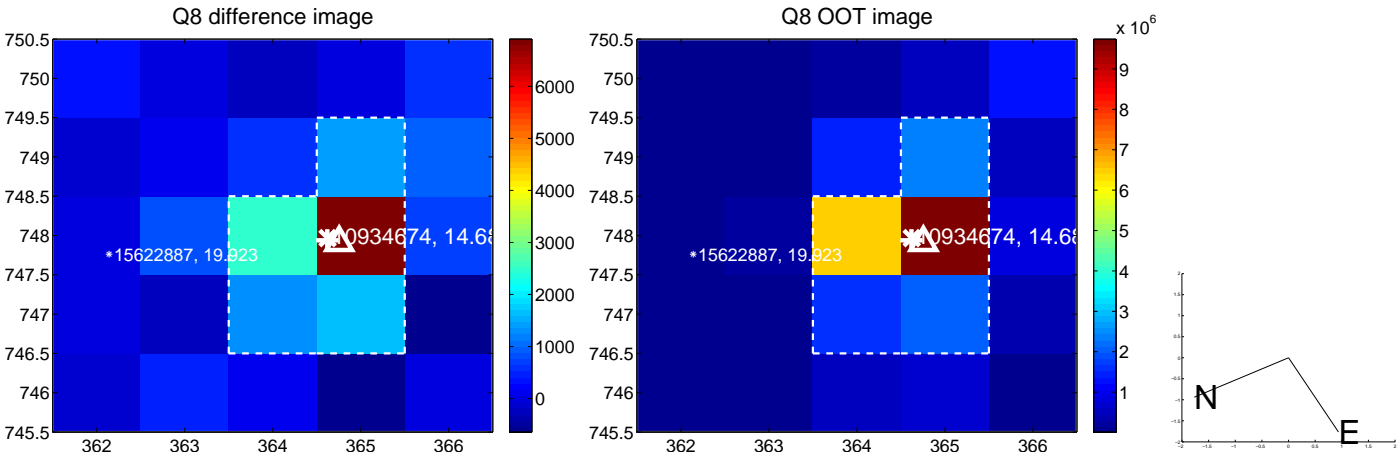
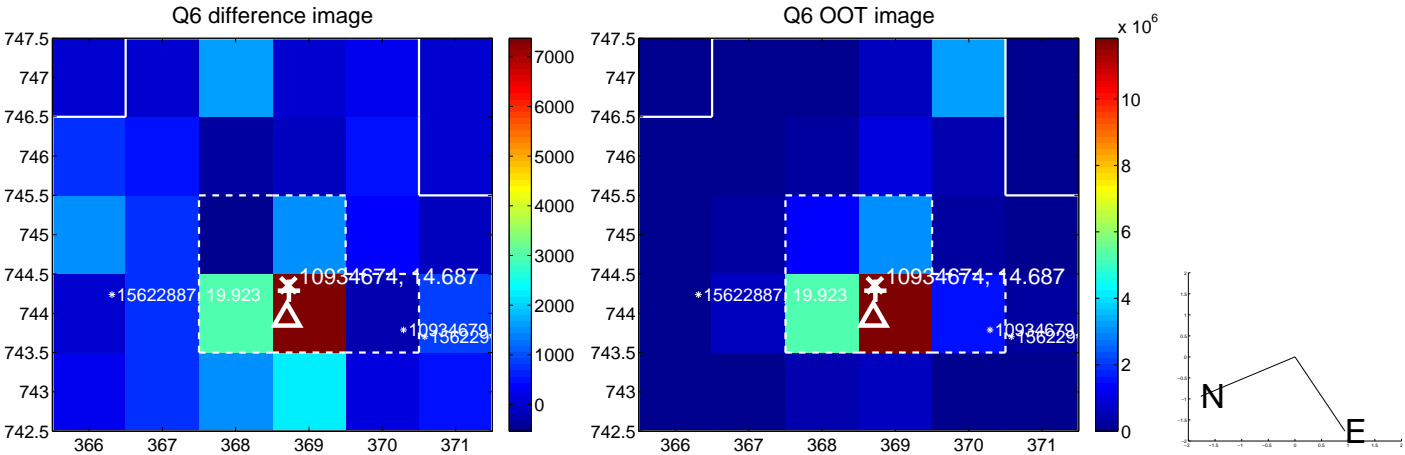
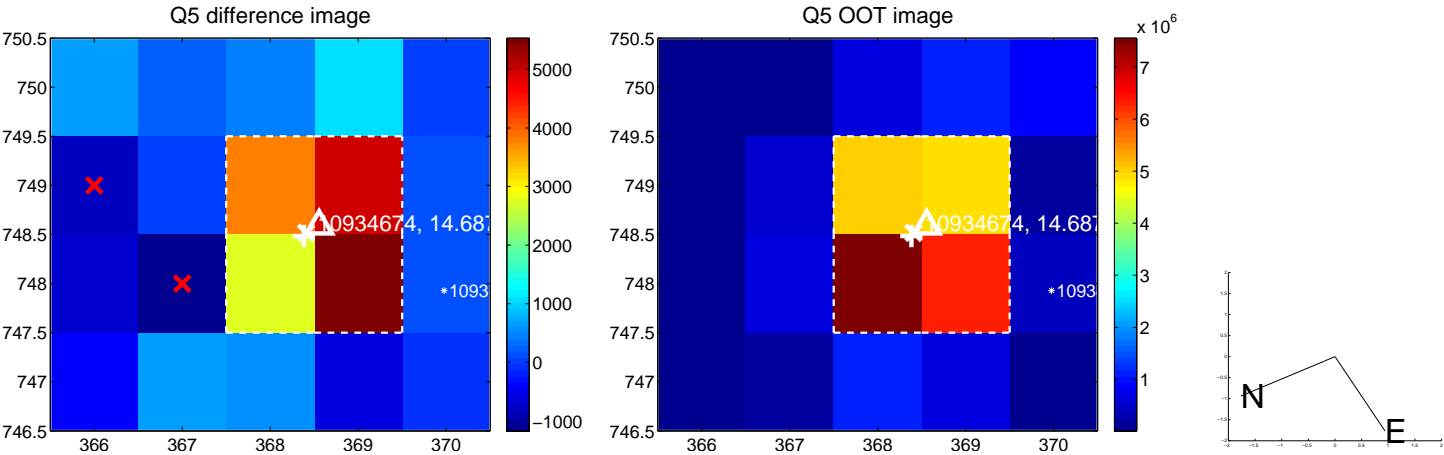


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

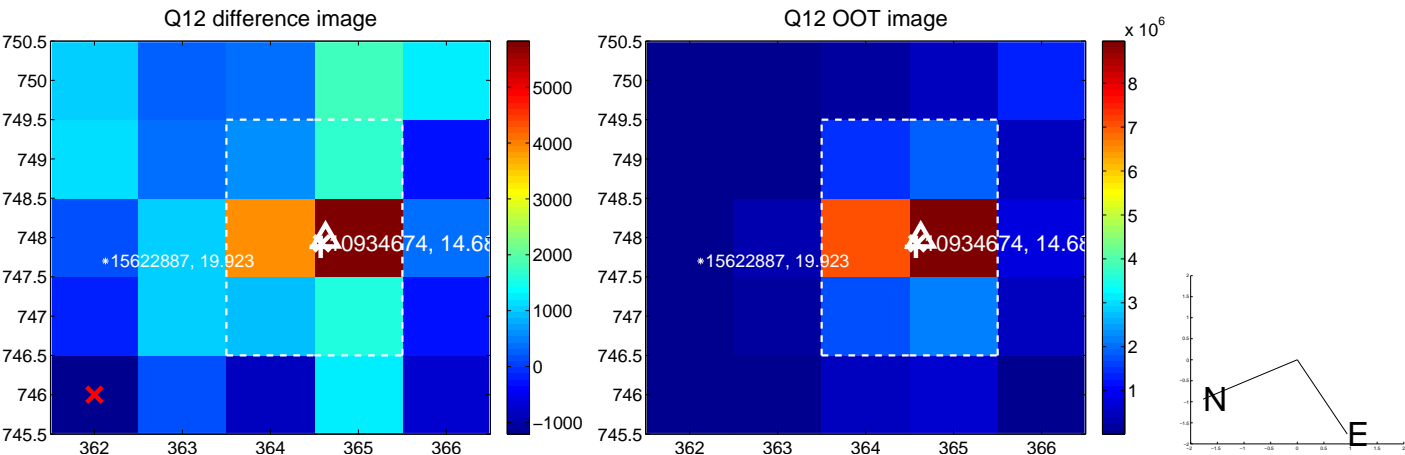
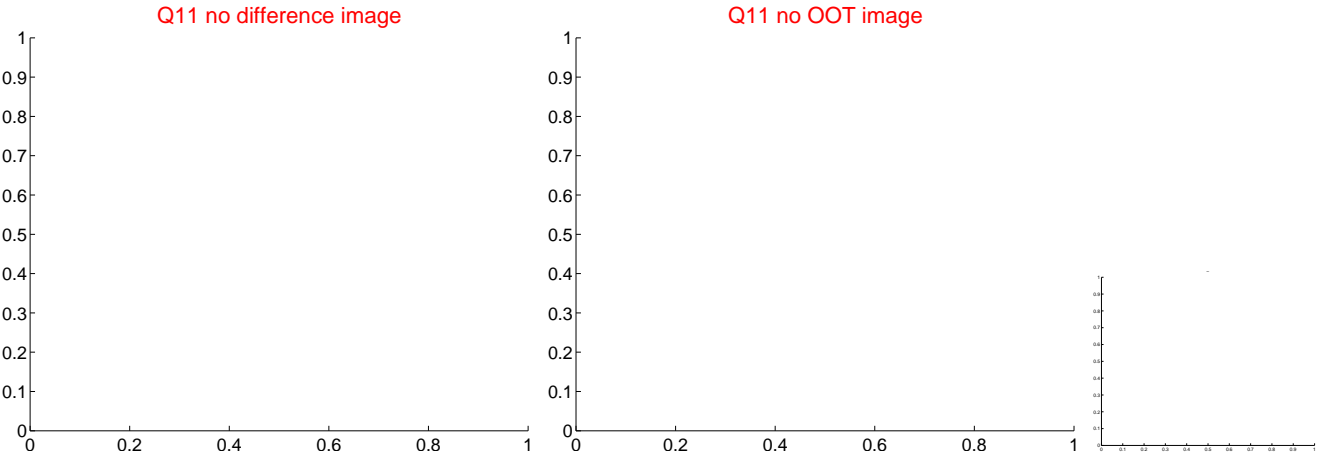
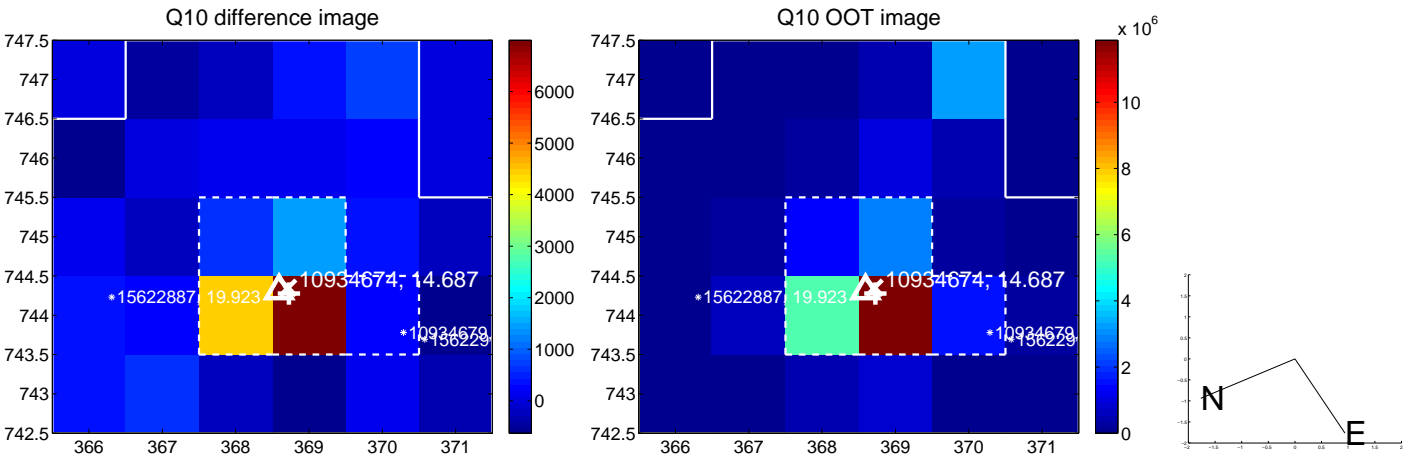
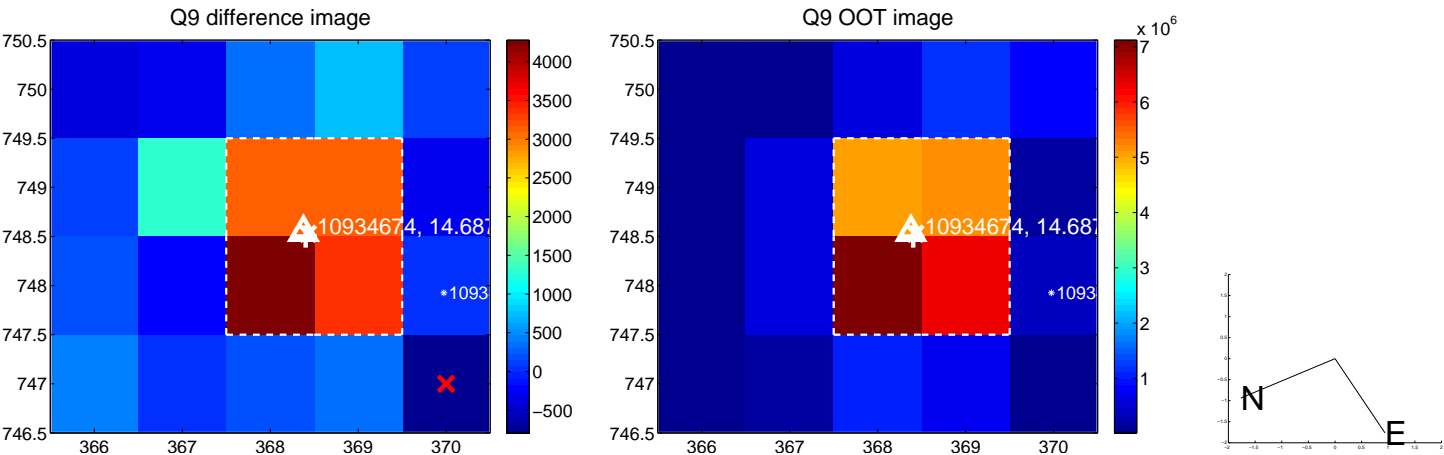
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



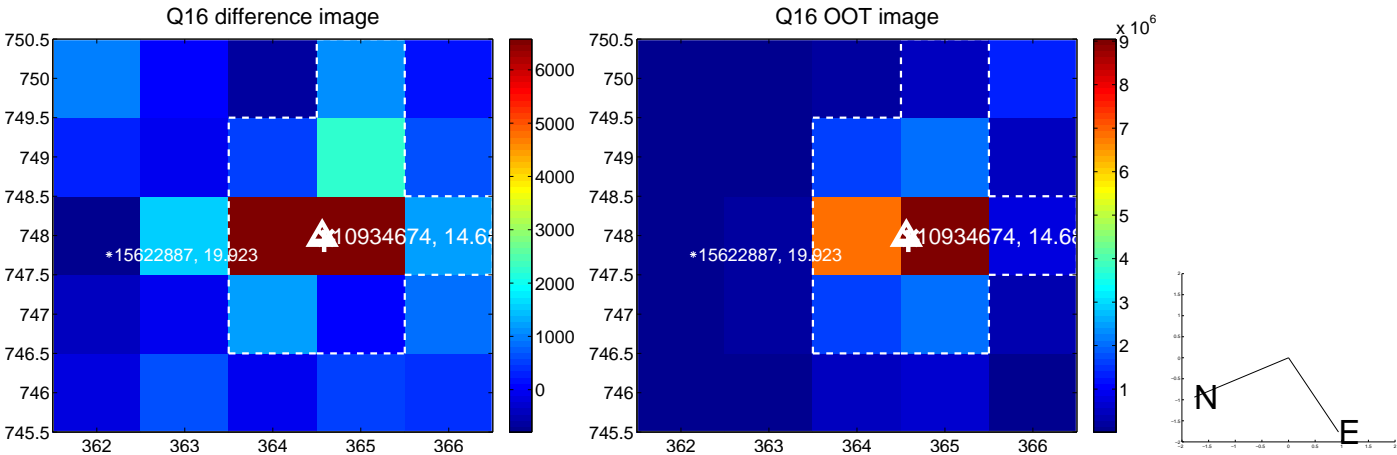
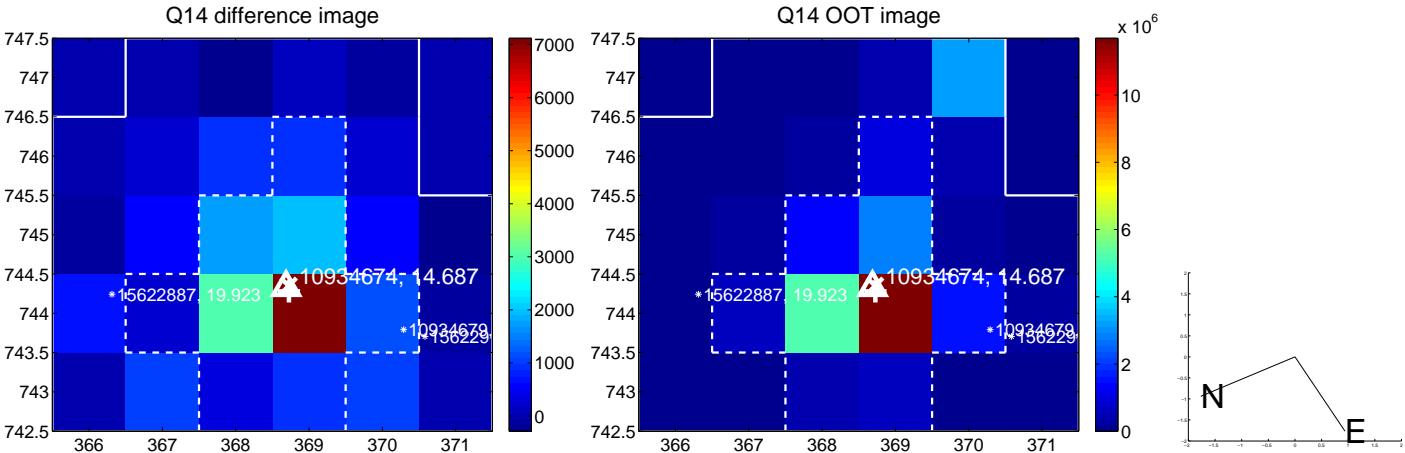
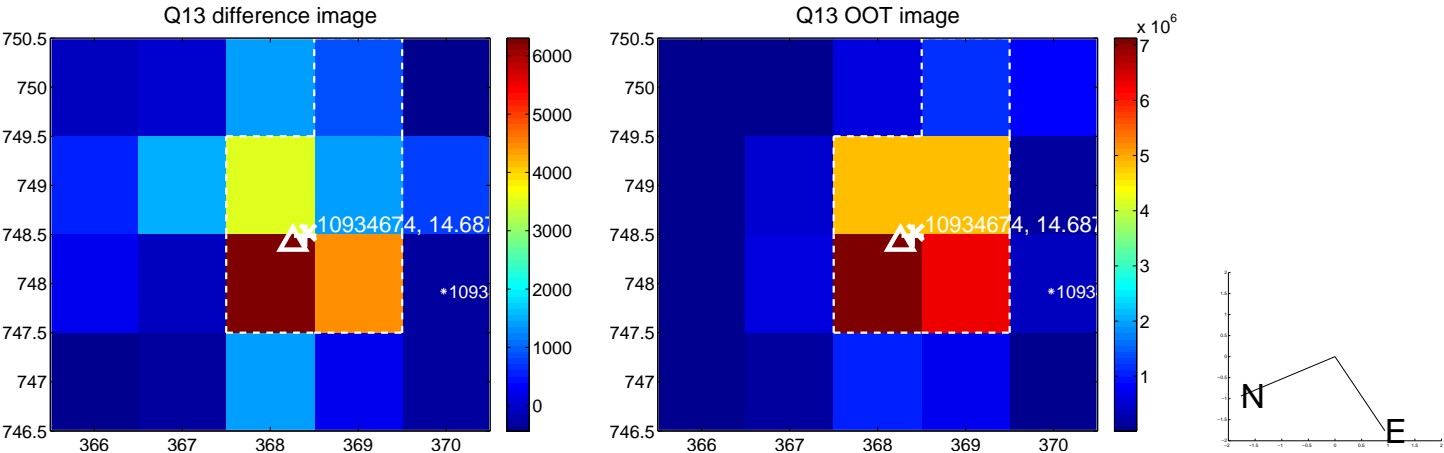
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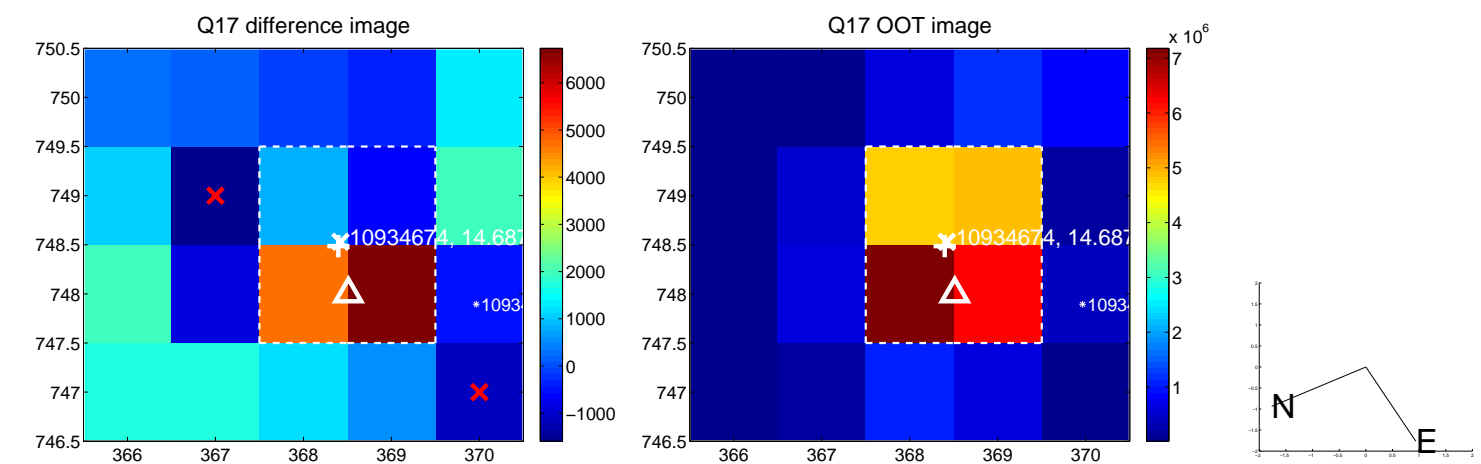
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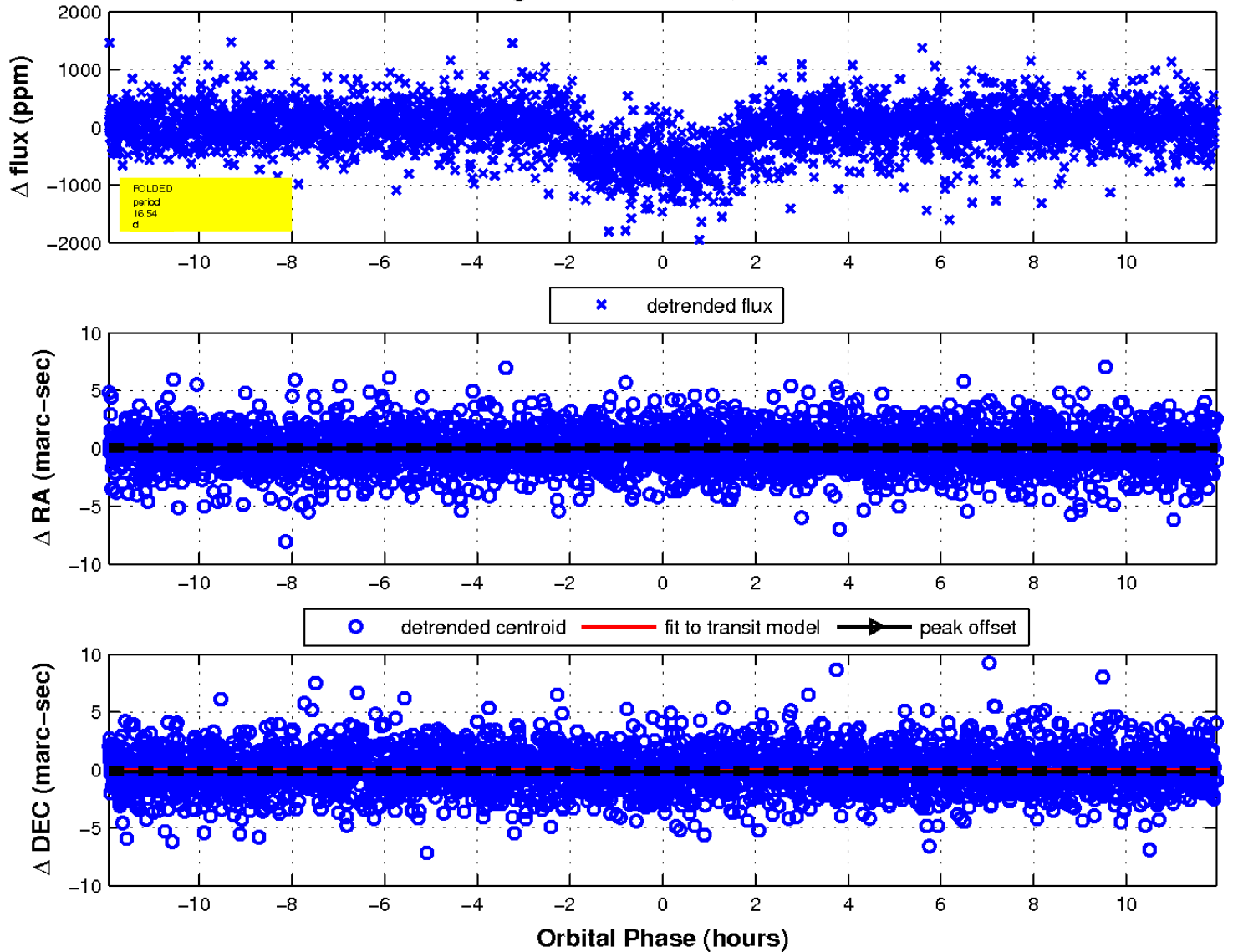
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

