

KIC 012691412

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})
012691412-01	OBS	1983.01	6.905302	137.010940	389.6	3.050	31.1	25.3	1.72	6596	4.00	769.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012691412-01	OBS	FP	0.01	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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.

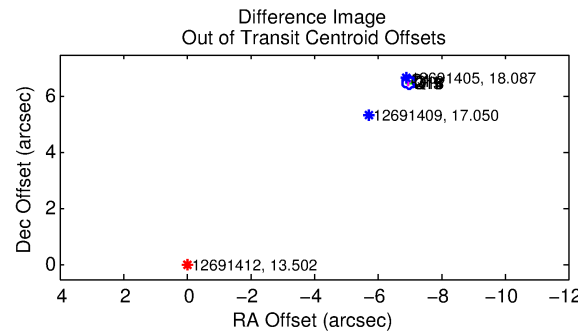
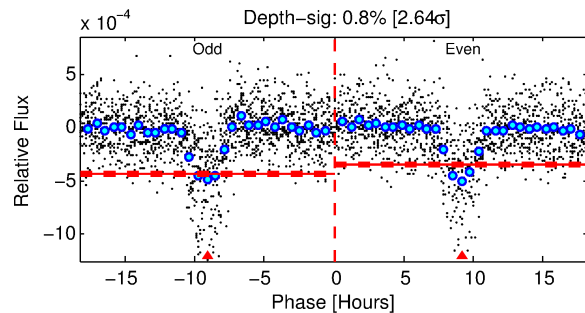
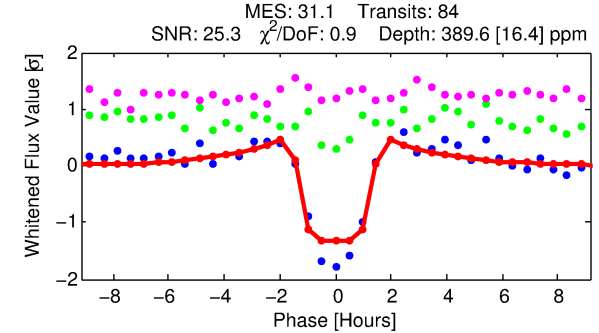
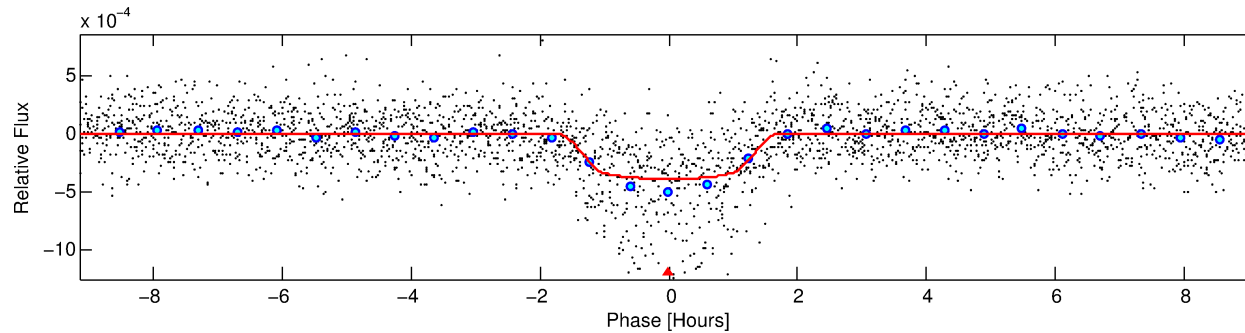
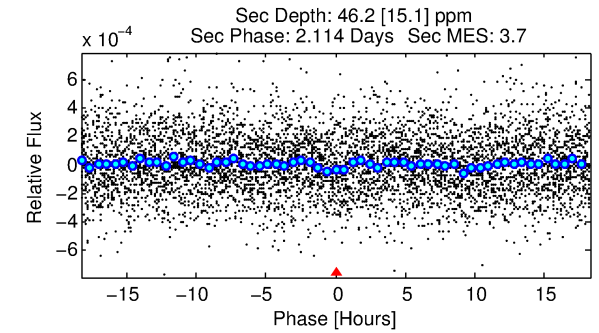
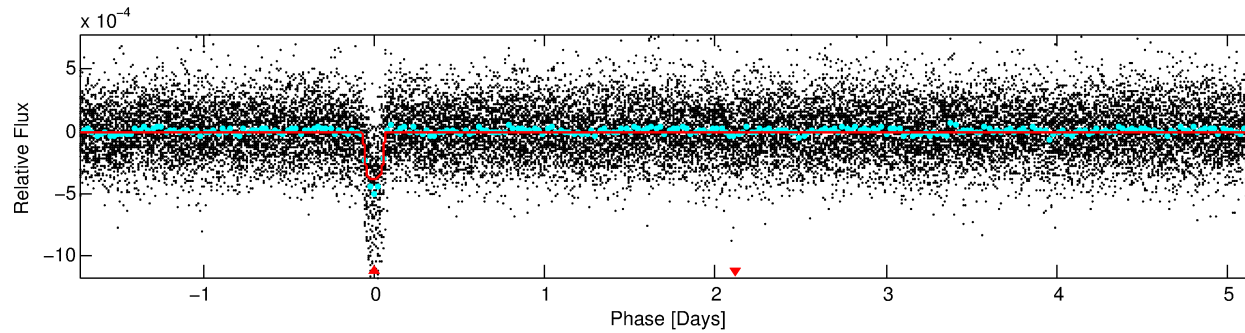
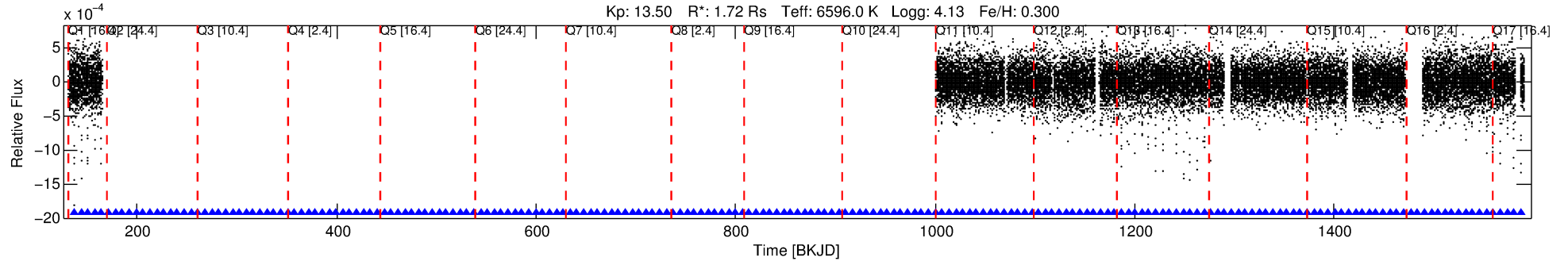
Ephemeris Match Information For 012691412-01

No Significant Match Found

DV One-Page Summary

KIC: 12691412 Candidate: 1 of 1 Period: 6.905 d
KOI: K01983 Corr: No Ephemeris Match

Kp: 13.50 R*: 1.72 Rs Teff: 6596.0 K Logg: 4.13 Fe/H: 0.300



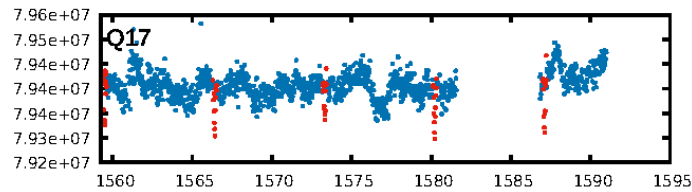
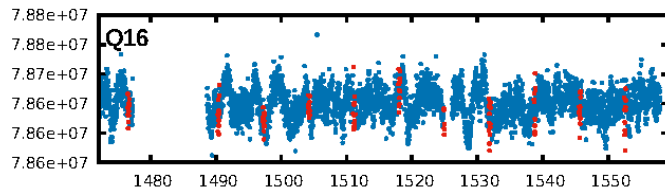
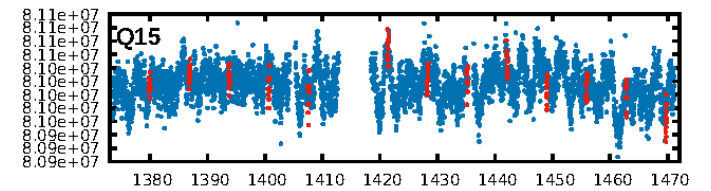
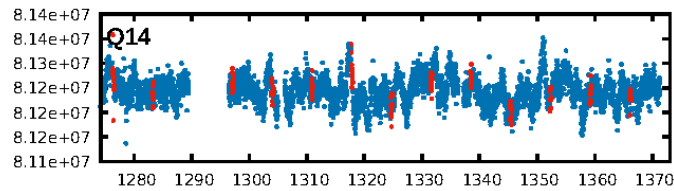
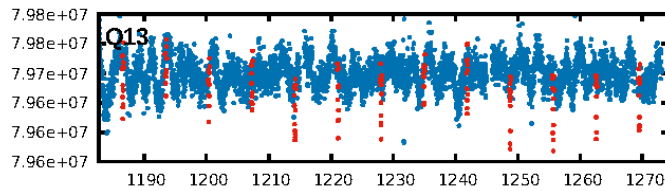
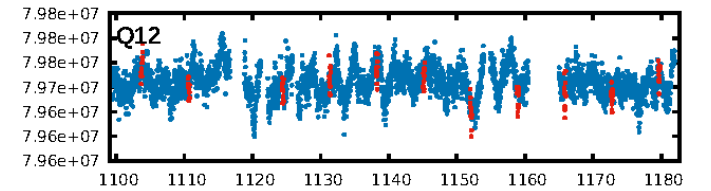
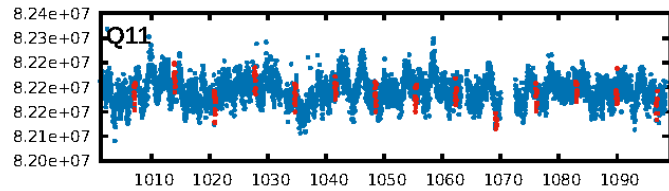
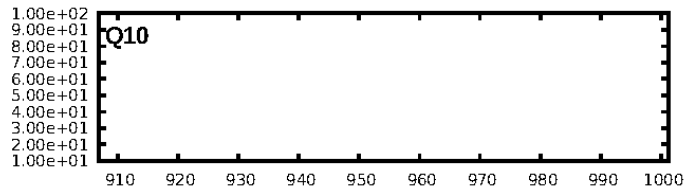
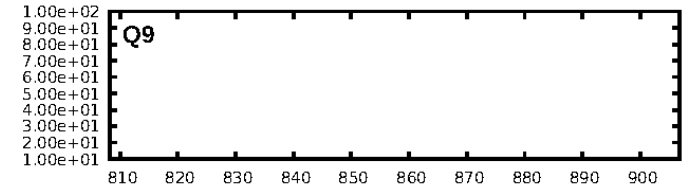
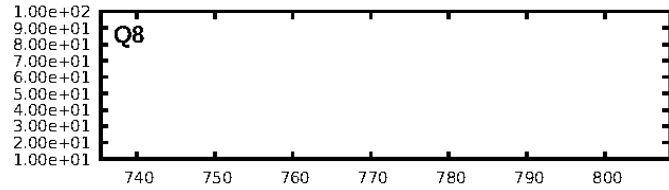
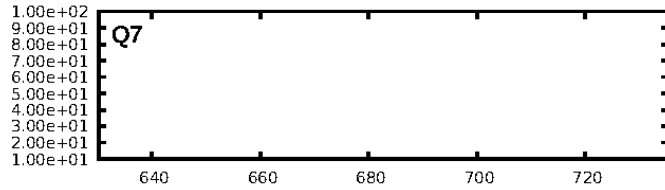
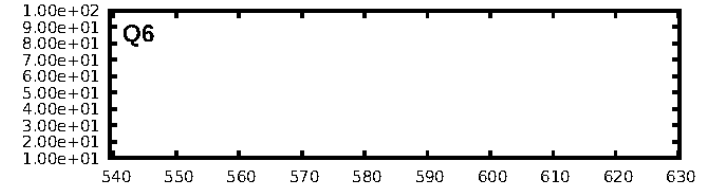
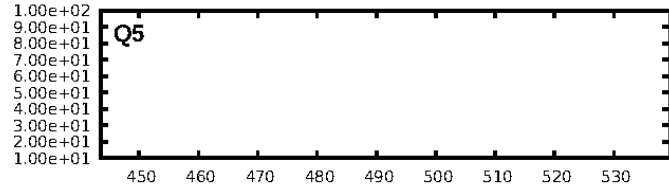
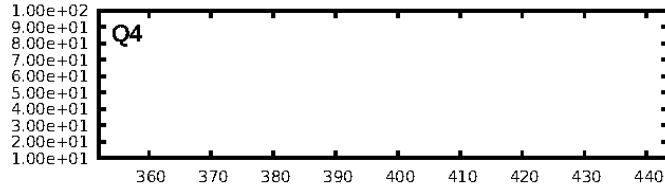
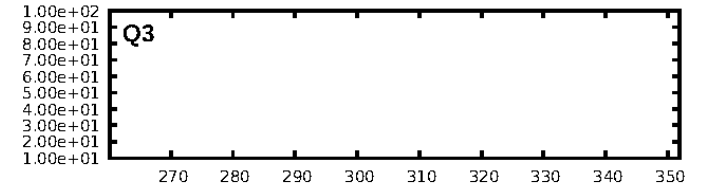
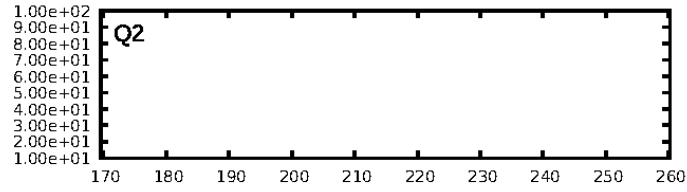
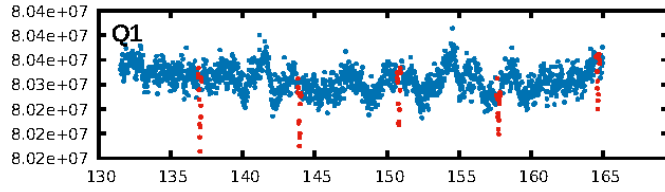
DV Fit Results:

Period = 6.90530 [0.00002] d
Epoch = 137.0109 [0.0021] BKJD
Rp/R* = 0.0213 [0.0019]
a/R* = 8.22 [3.94]
b = 0.91 [0.10]
Seff = 769.65 [302.23]
Teq = 1343 [132] K
Rp = 4.00 [1.36] Re
a = 0.0808 [0.0212] AU
Ag = 10.38 [5.40] [1.74σ]
Teff = 3727 [377] K [5.97σ]

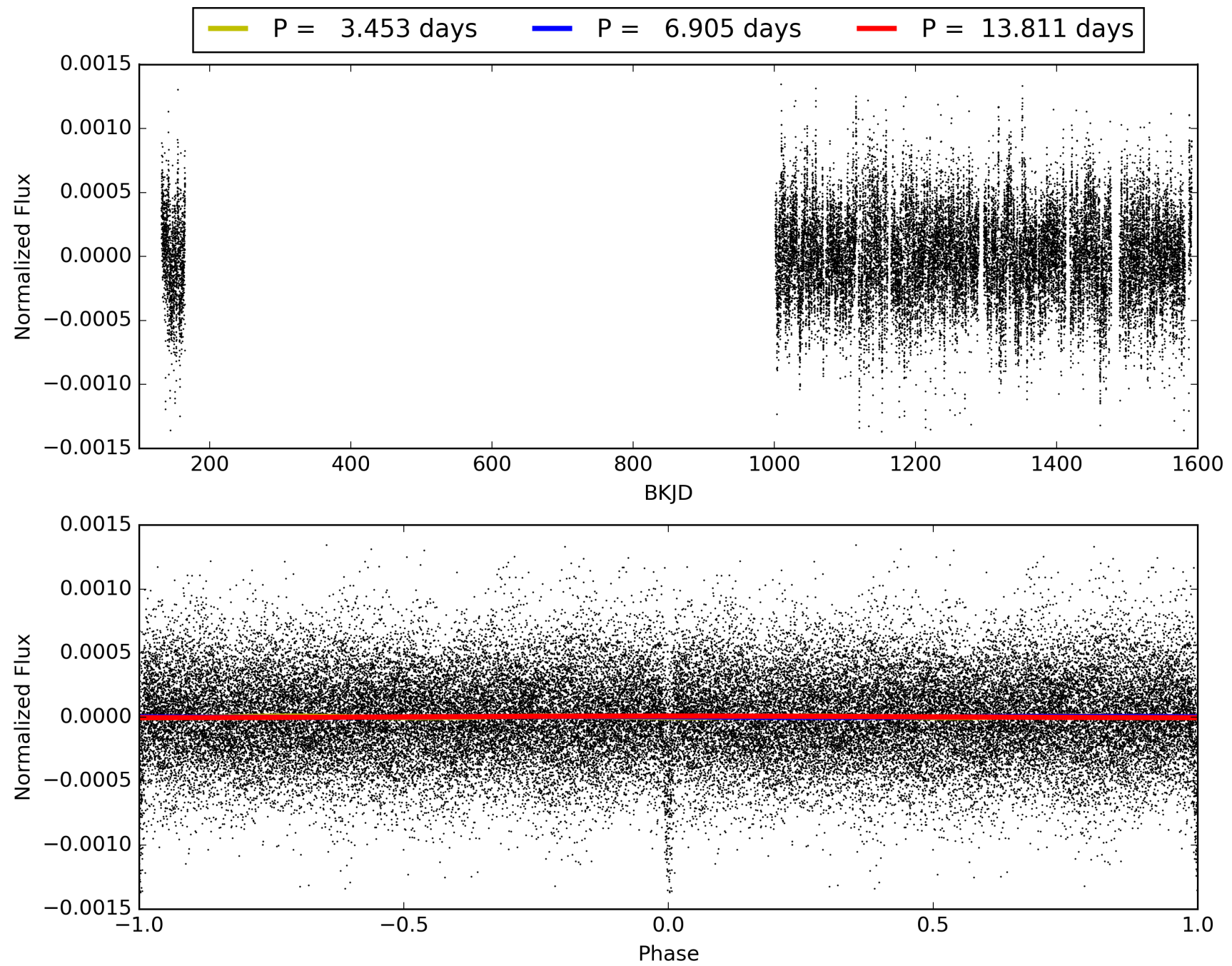
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.55e-205
RollingBand-fgt: 1.00 [74/74]
GhostDiagnostic-chr: -0.2463
Centroid-sig: 0.0%
Centroid-so: 28.005 arcsec [76.34σ]
OotOffset-rm: 9.535 arcsec [138.37σ]
KicOffset-rm: 9.636 arcsec [132.55σ]
OotOffset-st: 1/2/2/3 [8]
KicOffset-st: 1/2/2/3 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 012691412-01, PDC Light Curves

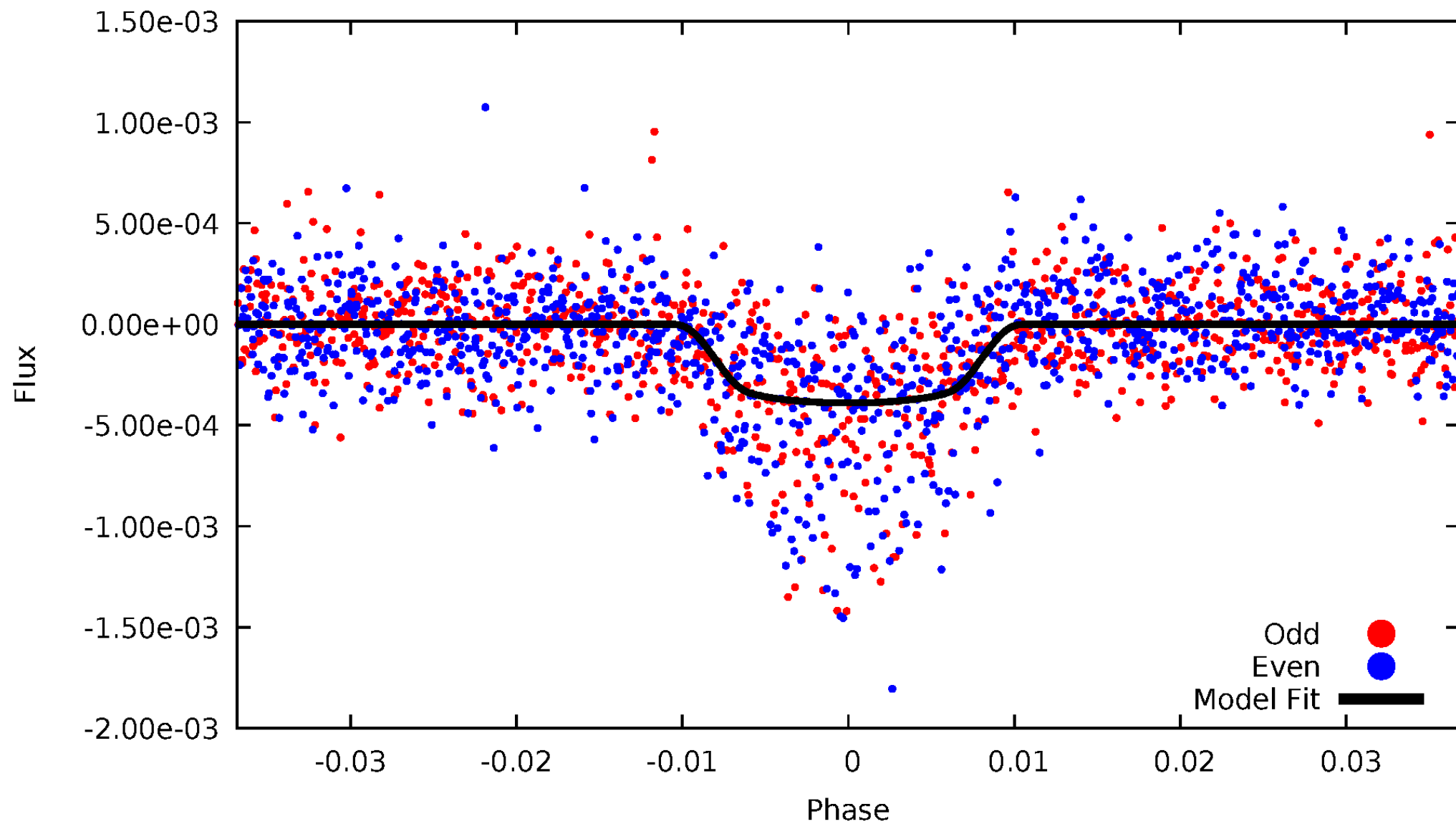


TCE 012691412-01



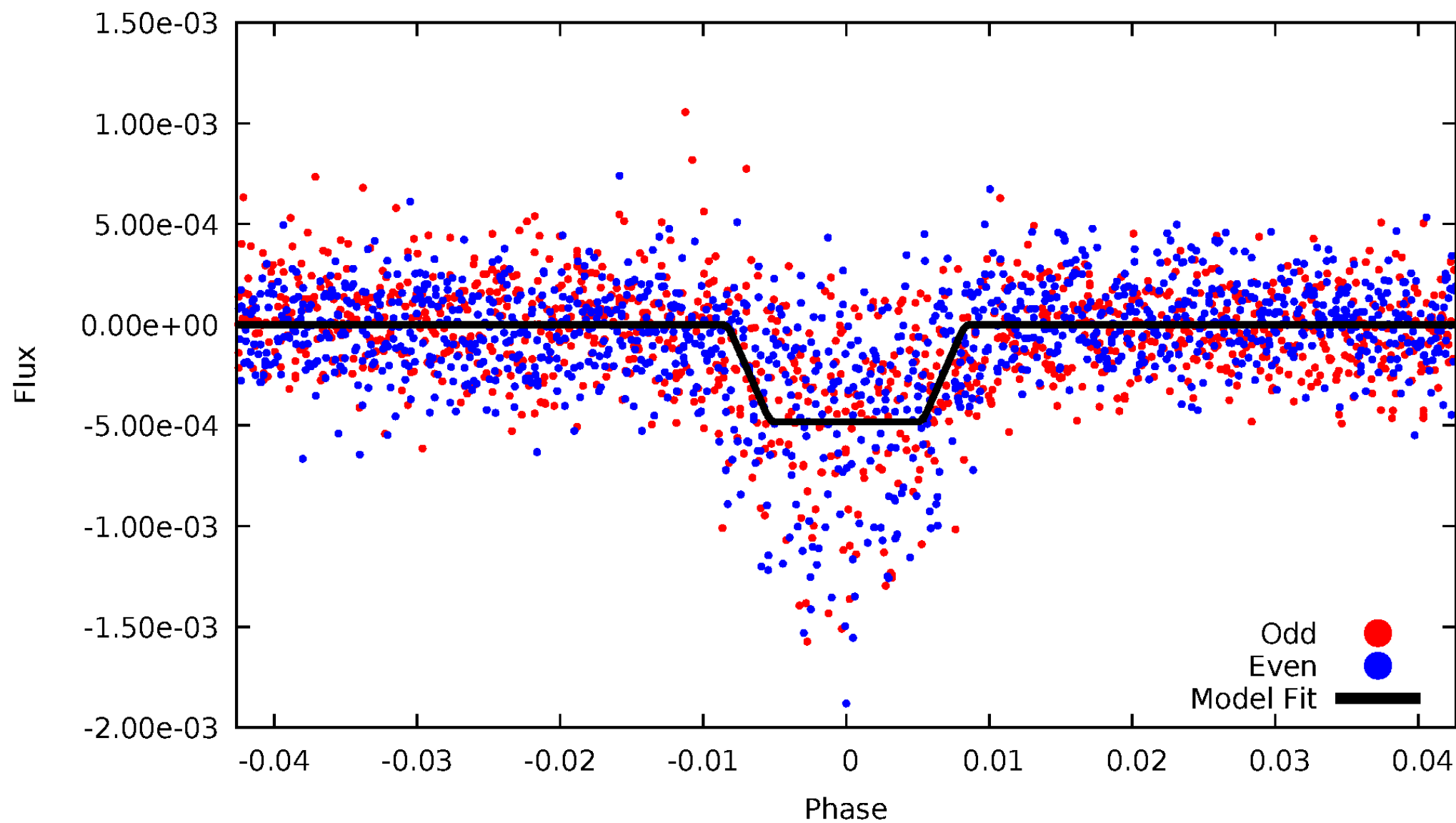
DV Odd/Even

TCE 012691412-01

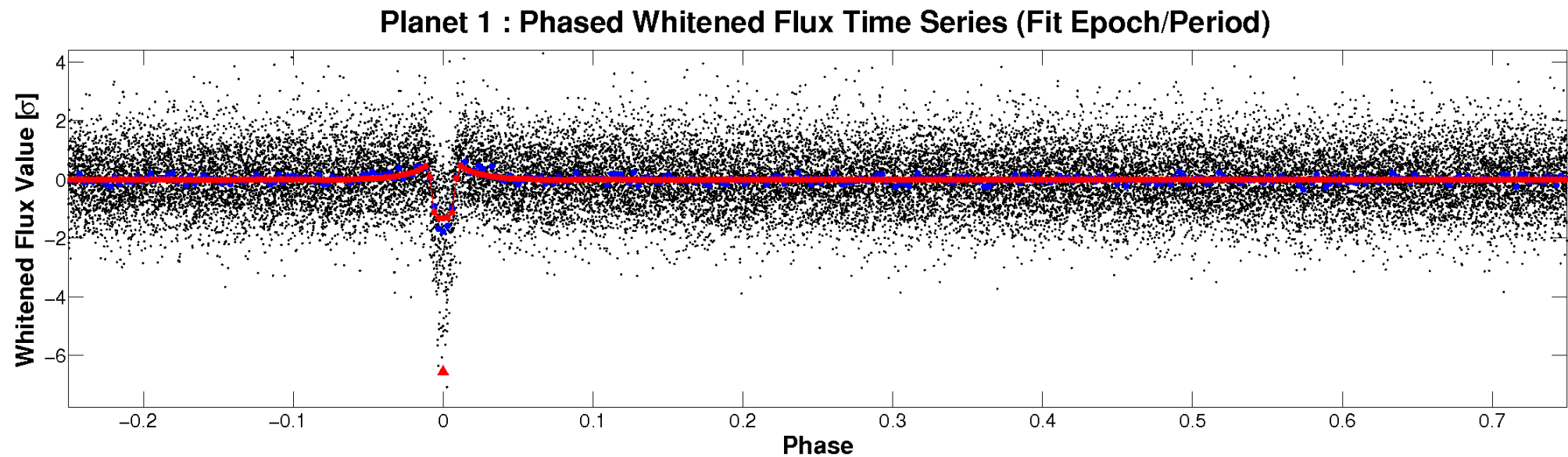
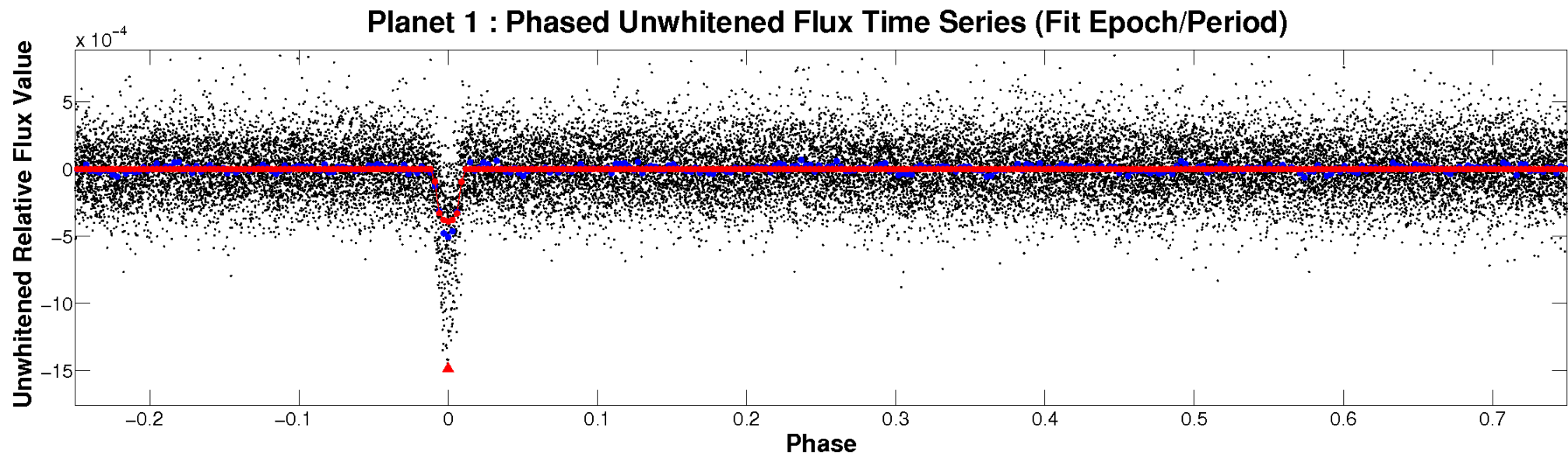


ALT Odd/Even

TCE 012691412-01

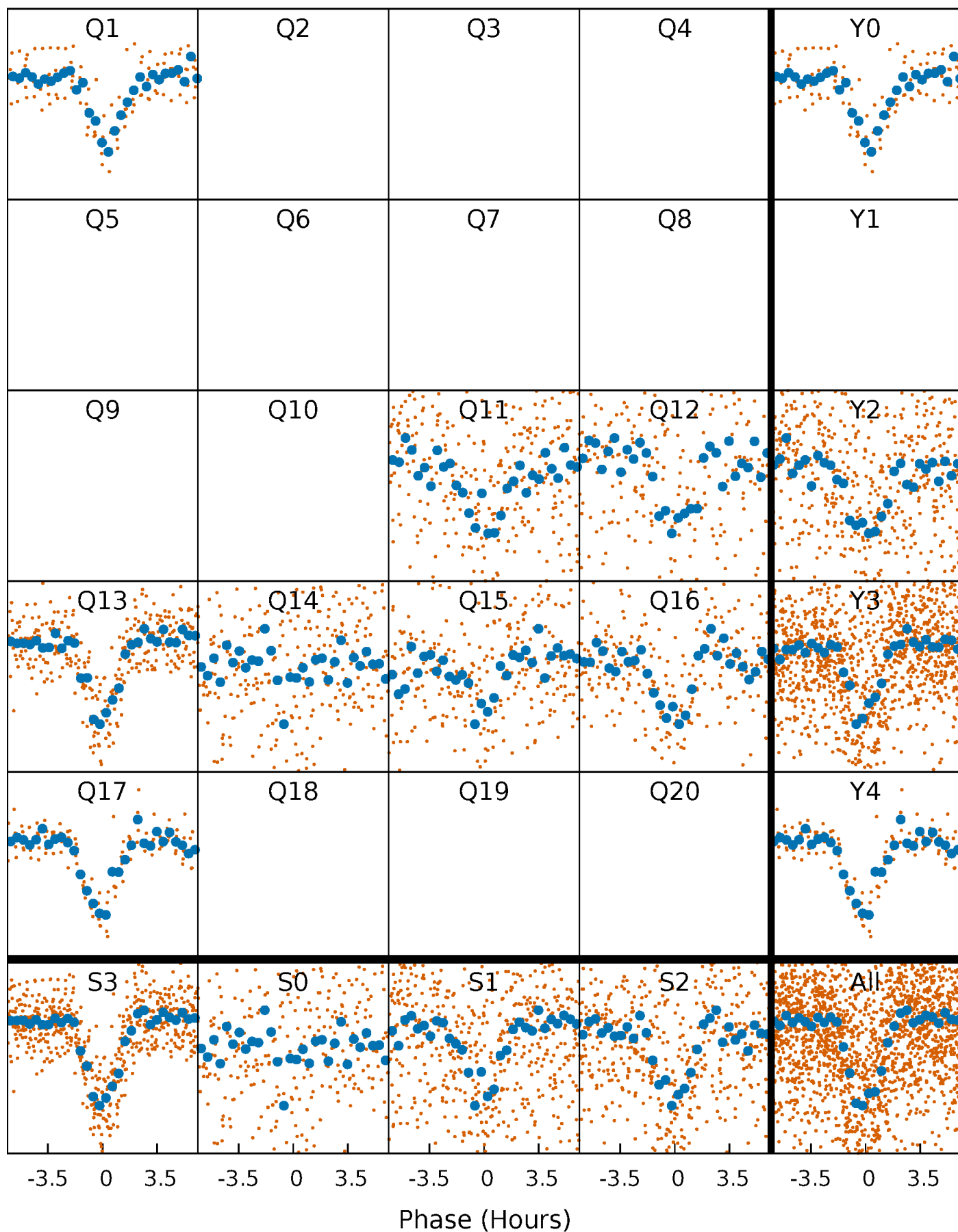


Non-Whitened Vs. Whitened Light Curve



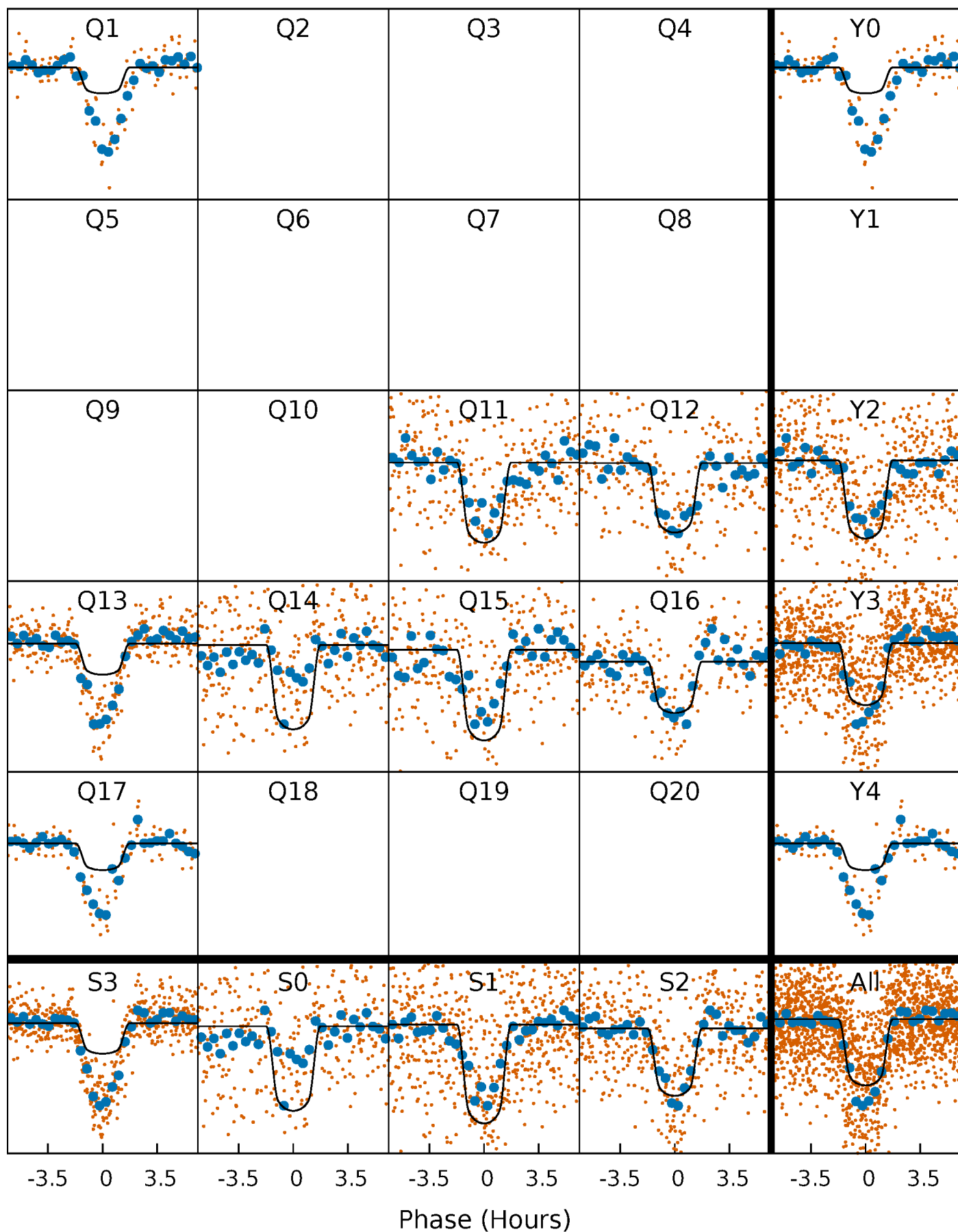
PDC Quarter-Phased Transit Curves

TCE 012691412-01 P= 6.905302 Days $T_0=137.010940$ (BKJD)



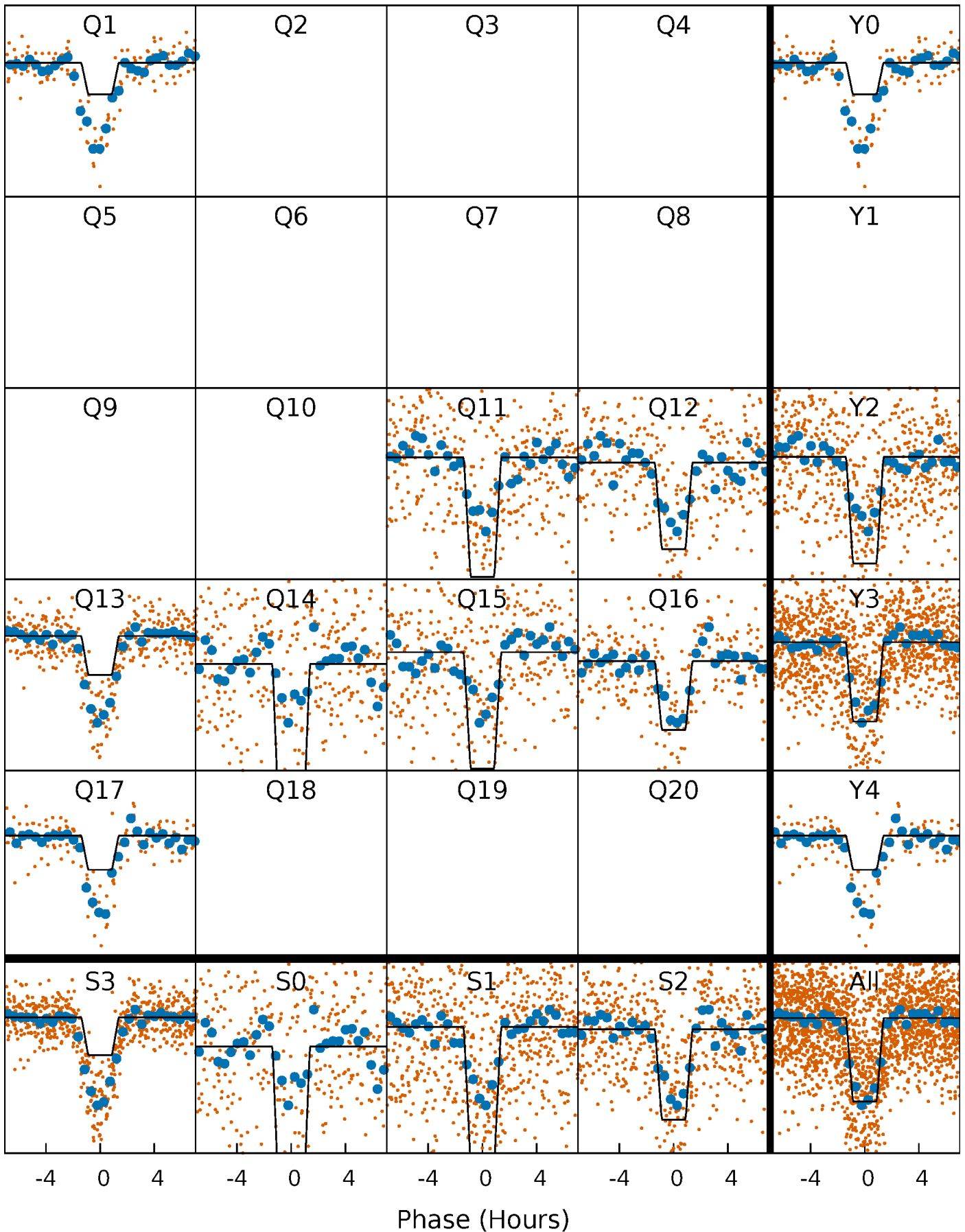
DV Quarter-Phased Transit Curves

TCE 012691412-01 P= 6.905302 Days $T_0=137.010940$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

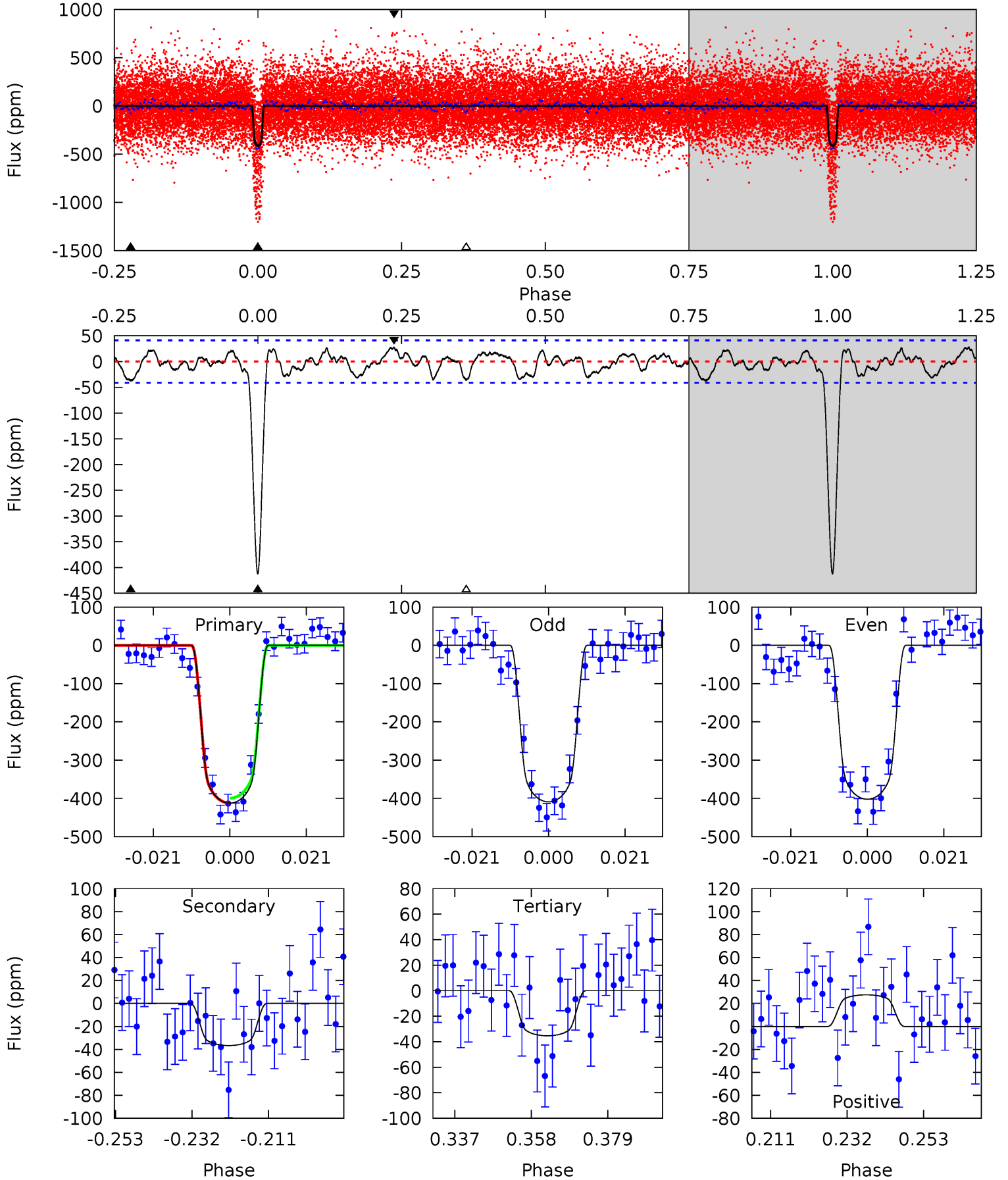
TCE 012691412-01 P= 6.905173 Days $T_0=137.029219$ (BKJD)



DV Model-Shift Uniqueness Test

012691412-01, P = 6.905302 Days, E = 130.105638 Days

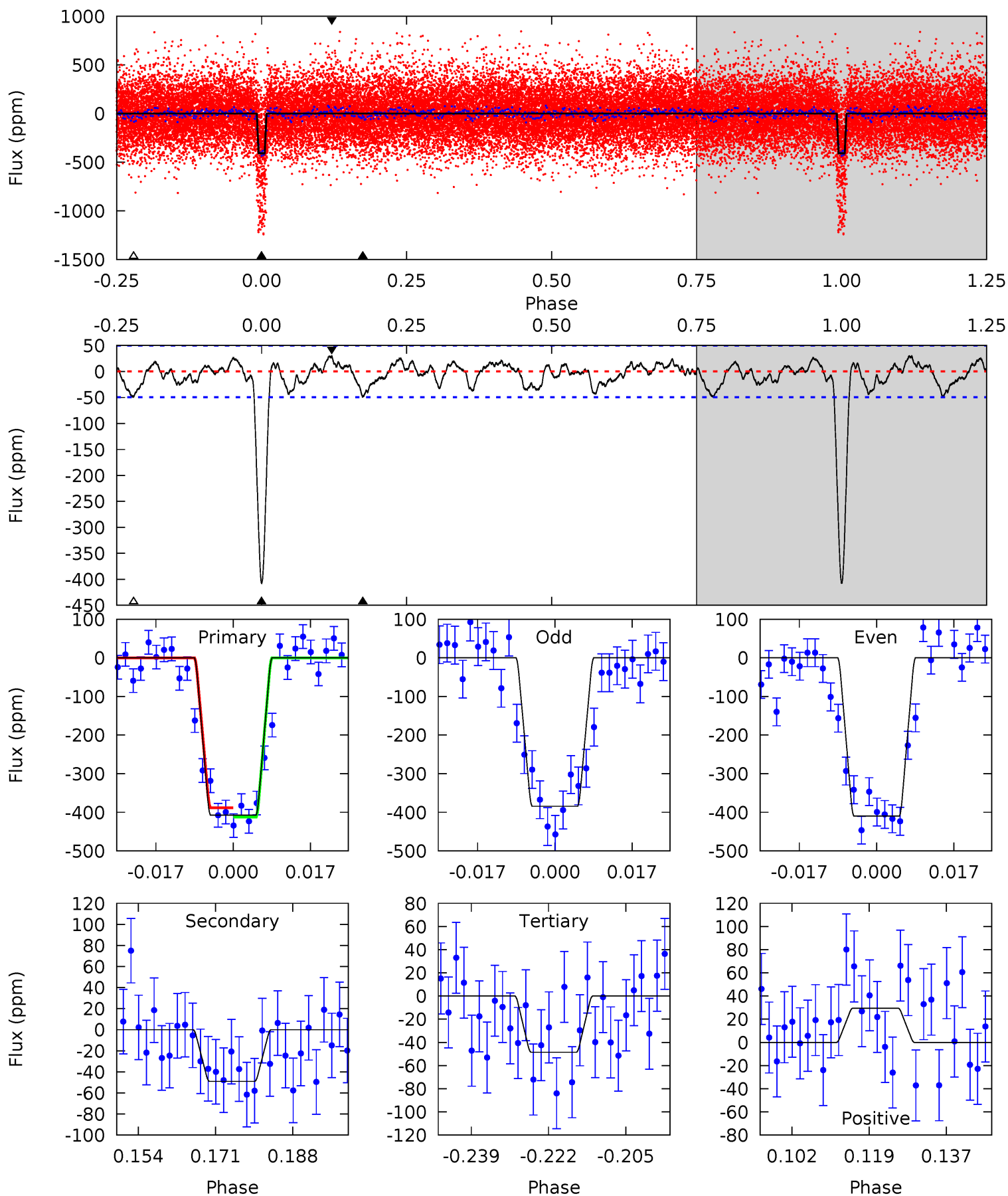
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.8	4.34	4.18	3.26	4.88	2.31	1.68	44.6	45.5	0.16	1.08	0.40	1.32	0.06	0.76



Alt Model-Shift Uniqueness Test

012691412-01, P = 6.905173 Days, E = 130.124046 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.5	4.88	4.82	2.93	4.92	2.39	1.64	35.7	37.6	0.06	1.95	1.25	1.32	0.07	0



Stellar Parameters For KIC 012691412

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6596^{+184}_{-254}	$4.135^{+0.153}_{-0.187}$	$0.300^{+0.150}_{-0.350}$	$1.721^{+0.566}_{-0.377}$	$1.474^{+0.199}_{-0.239}$	$0.407^{+0.342}_{-0.216}$
	+3%/-4%	+4%/-5%	+50%/-117%	+33%/-22%	+14%/-16%	+84%/-53%
Source	PHO54	PHO54	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 012691412-01 / KOI 1983.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-37 ± 8	$4.07^{+0.78}_{-0.67}$	1886^{+158}_{-130}	3828^{+223}_{-235}	$7.742^{+3.698}_{-2.652}$
Alt.	-49 ± 10	$4.15^{+0.75}_{-0.61}$	1876^{+142}_{-134}	3980^{+221}_{-206}	$9.943^{+4.283}_{-3.527}$

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 $A_{obs} \gg 1.0$

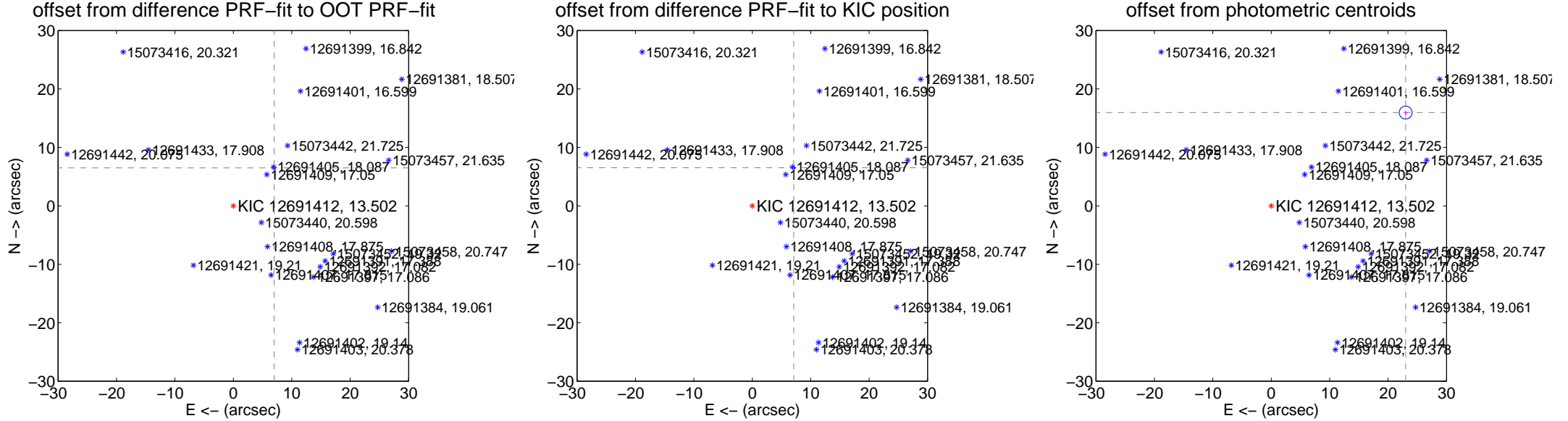
DV Centroid Data

Supplemental centroid analysis for 012691412-01. Kepler magnitude: 13.50. Transit SNR 25.33

There are 8 quarters with good PRF difference image offsets

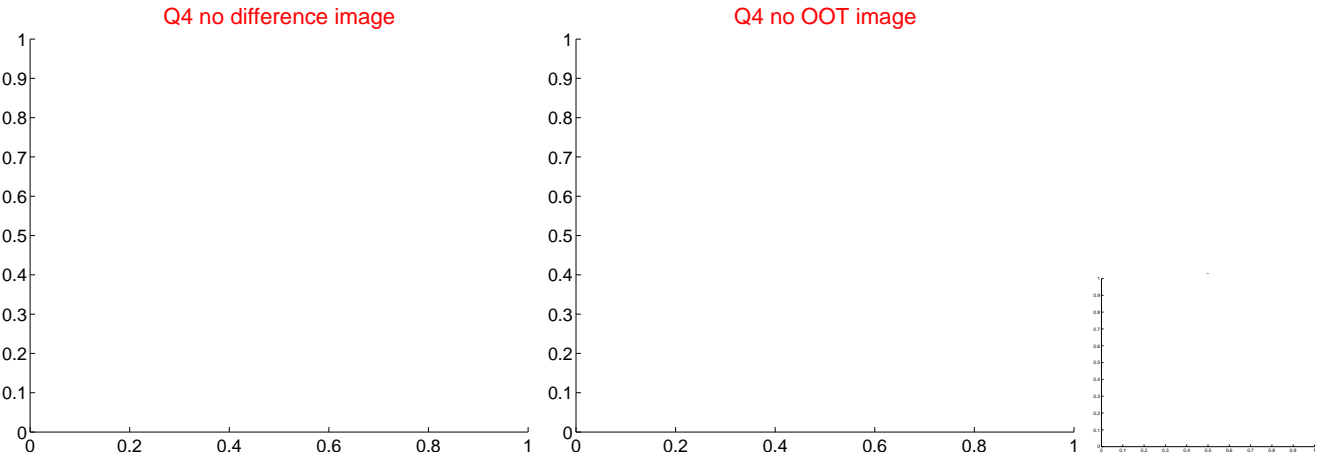
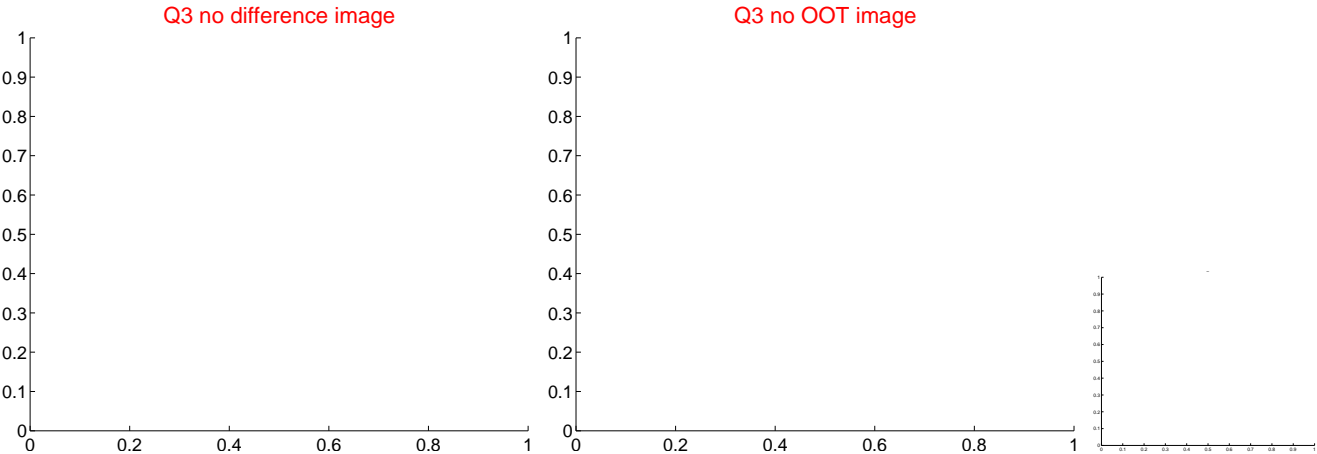
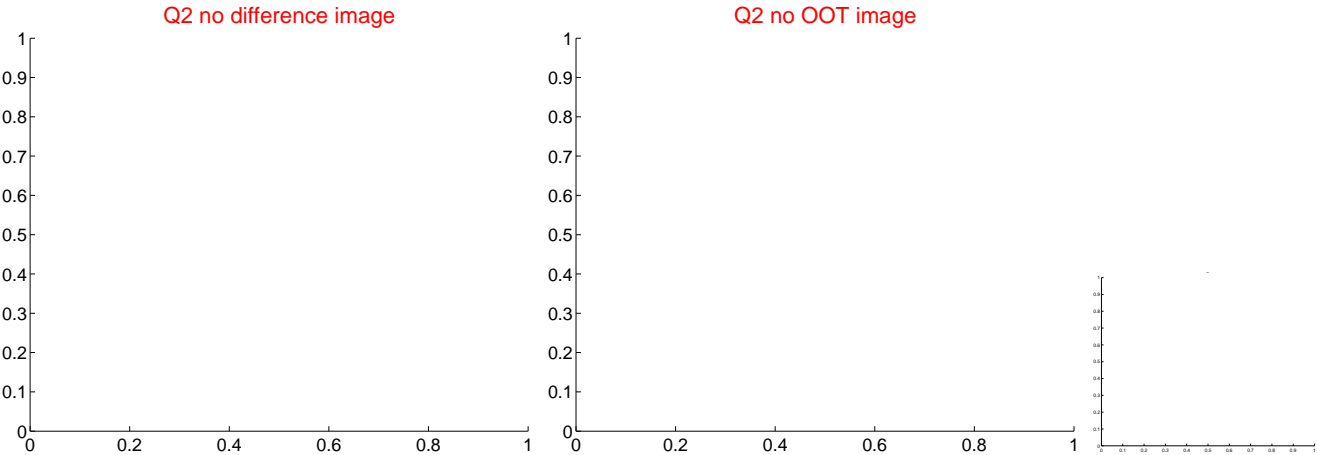
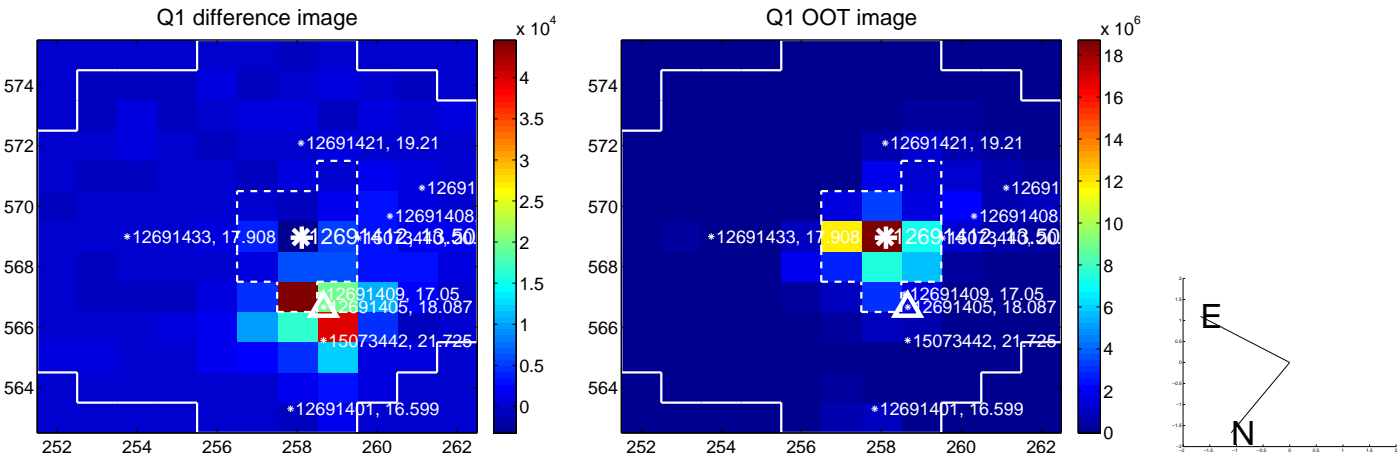
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.535 \pm 0.069	138.37	-6.976 \pm 0.070	6.501 \pm 0.068
PRF-fit source offset from KIC position	9.636 \pm 0.073	132.55	-7.096 \pm 0.076	6.519 \pm 0.068
photometric centroid source offset	28.00 \pm 0.37	76.34	-23.01 \pm 0.36	15.96 \pm 0.37

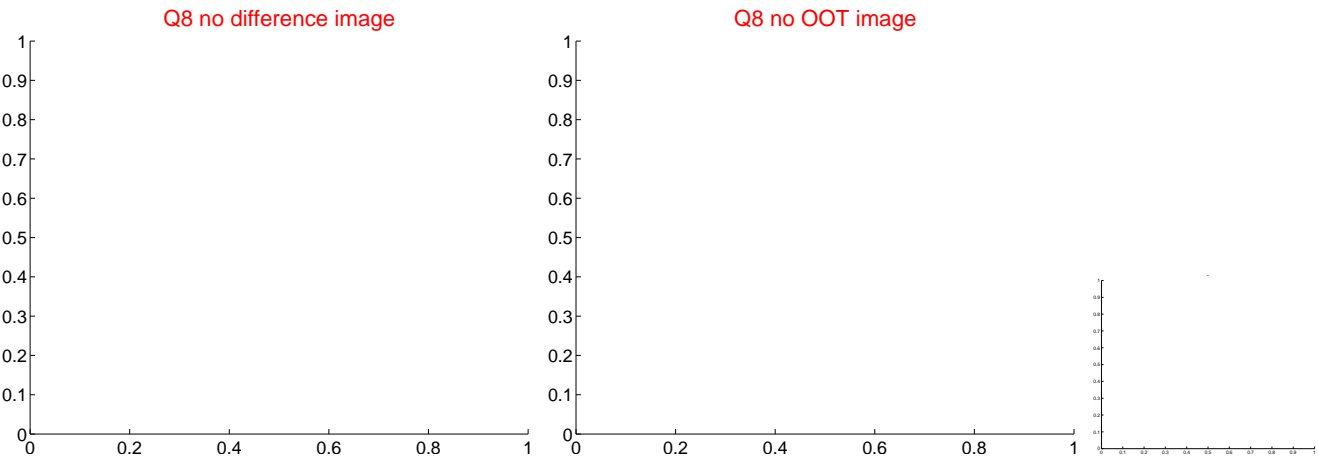
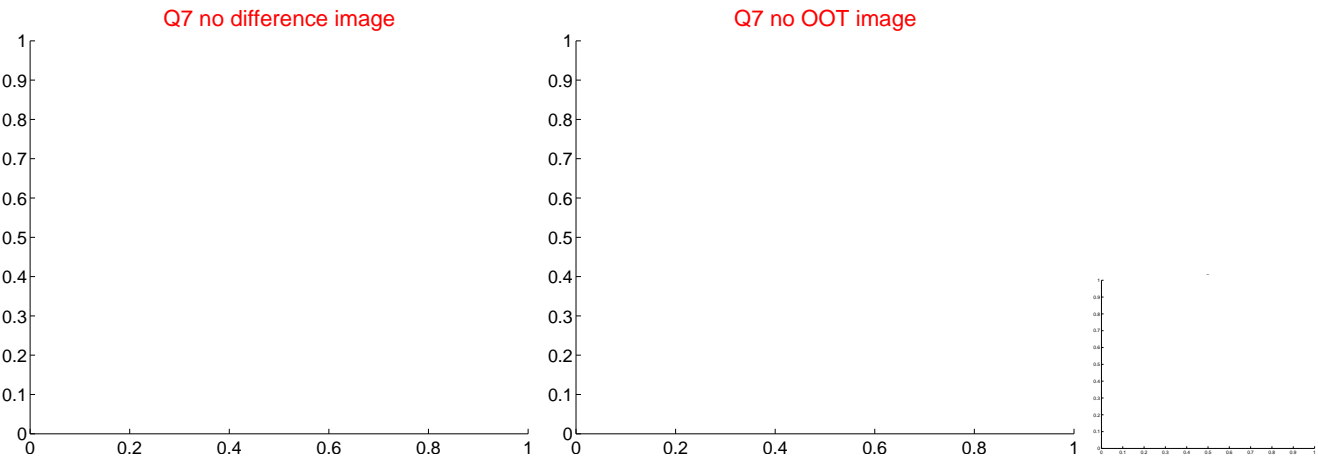
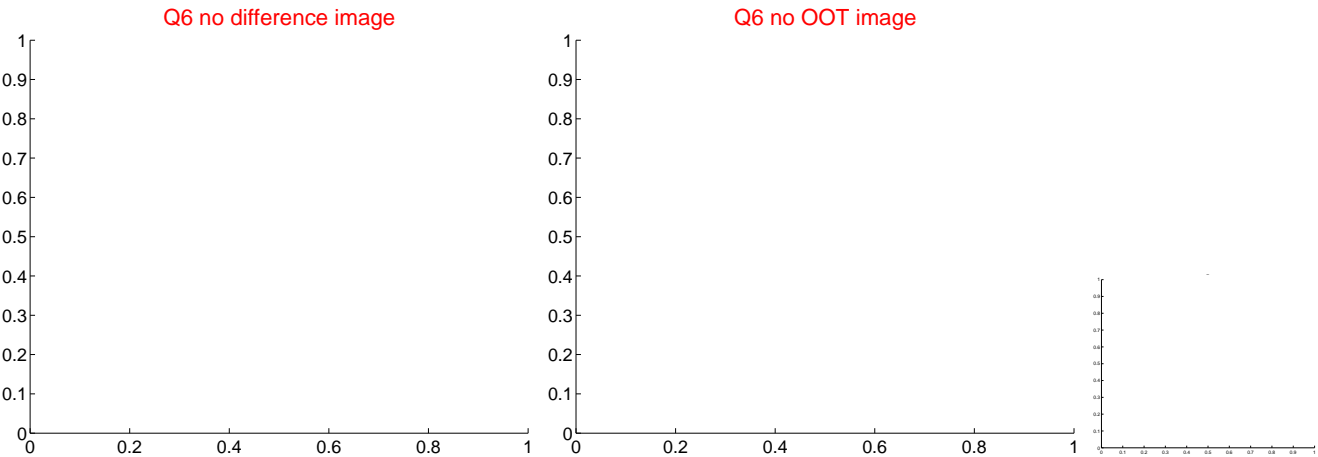
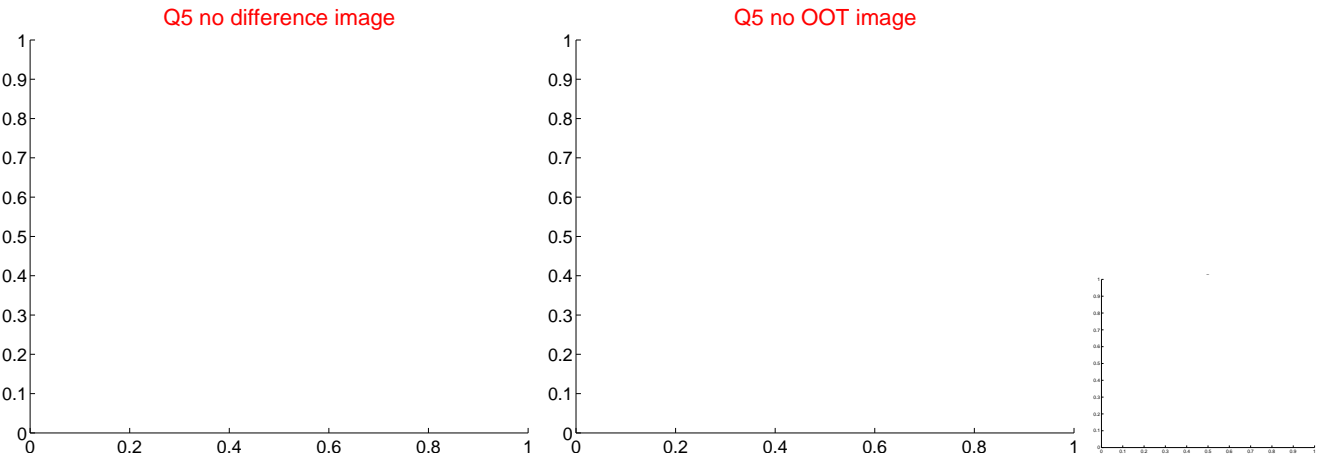


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

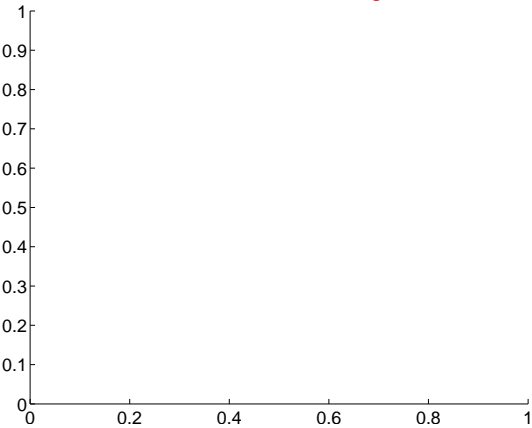


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

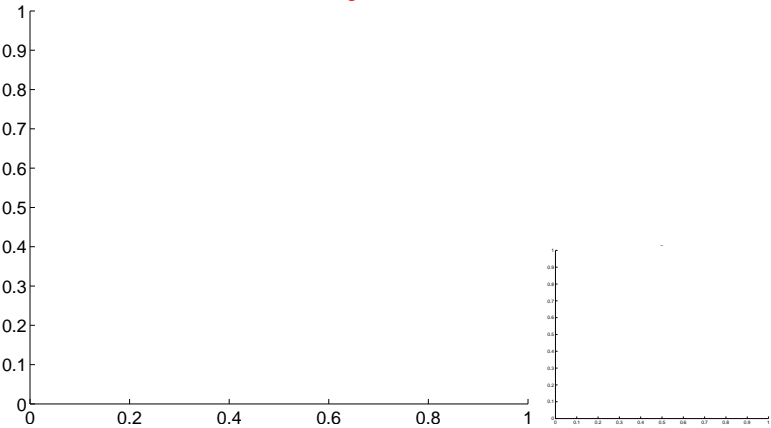


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

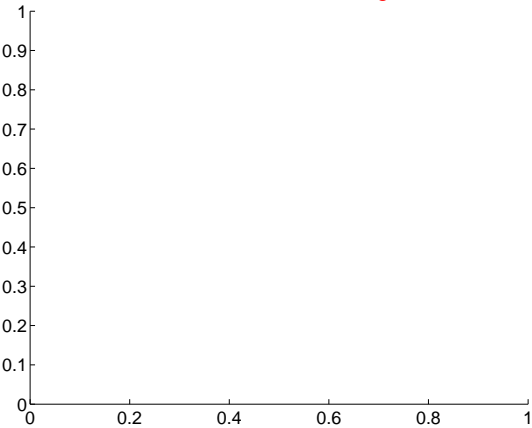
Q9 no difference image



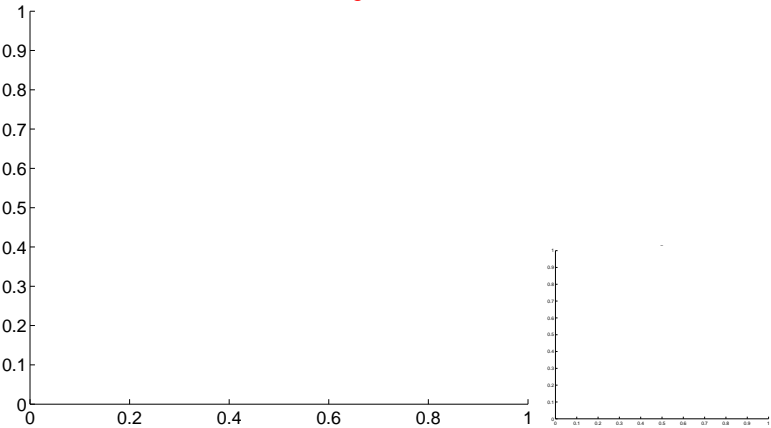
Q9 no OOT image



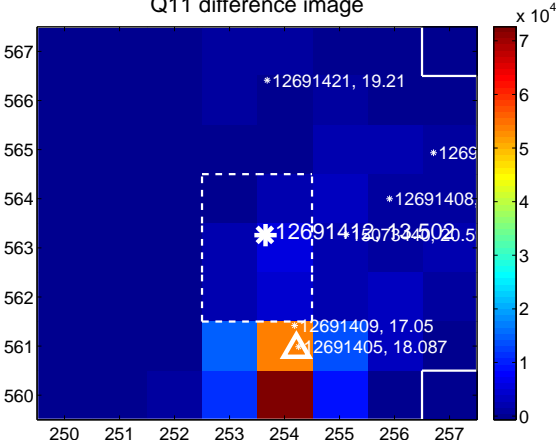
Q10 no difference image



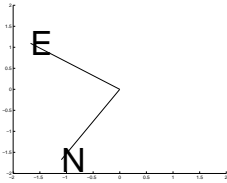
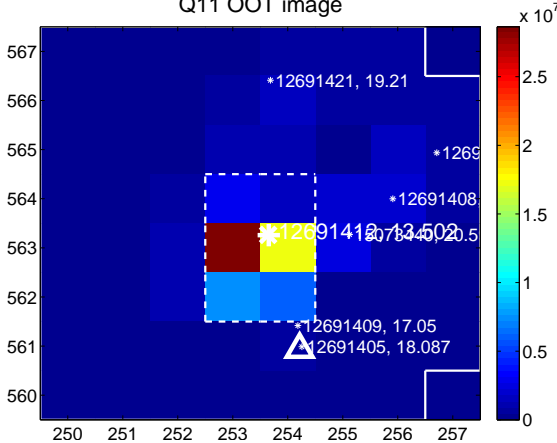
Q10 no OOT image



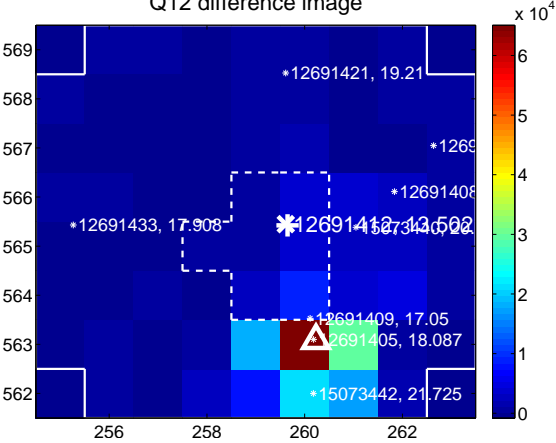
Q11 difference image



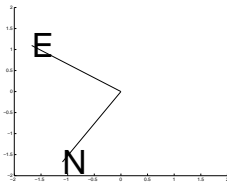
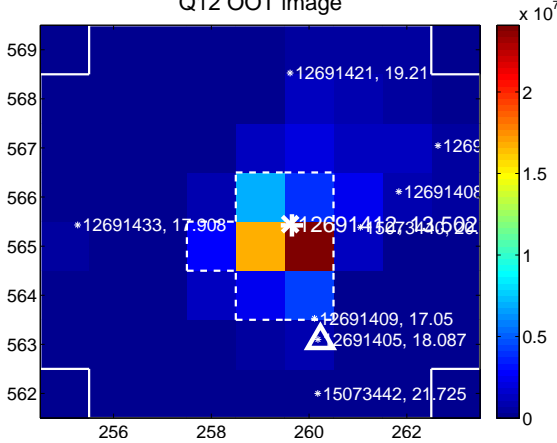
Q11 OOT image



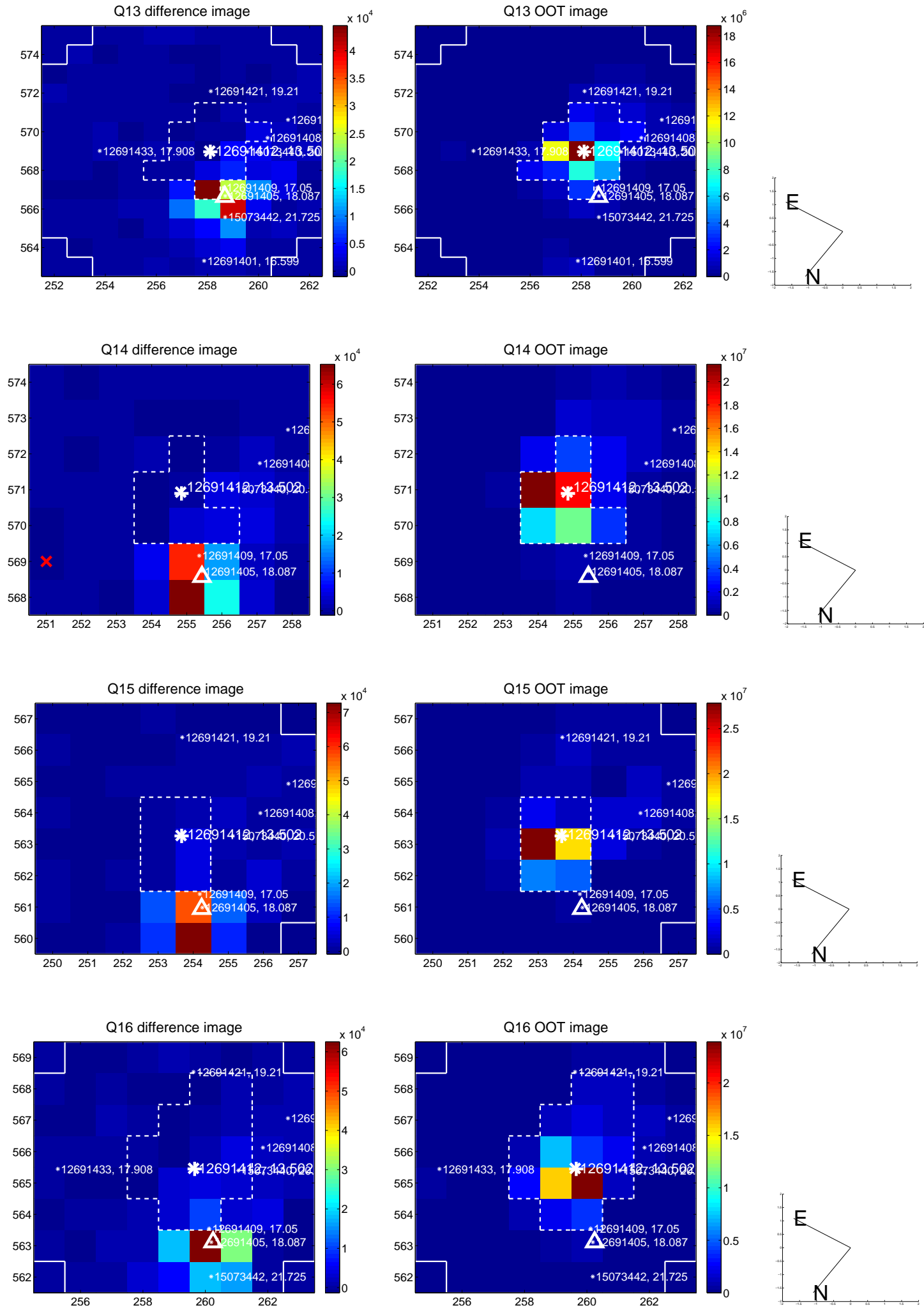
Q12 difference image



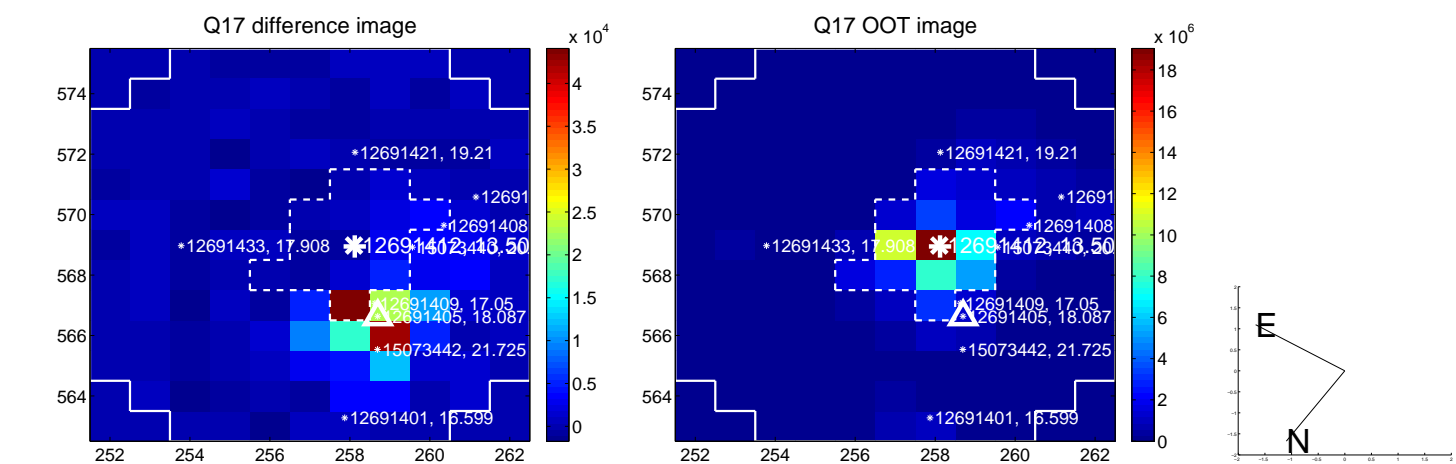
Q12 OOT image



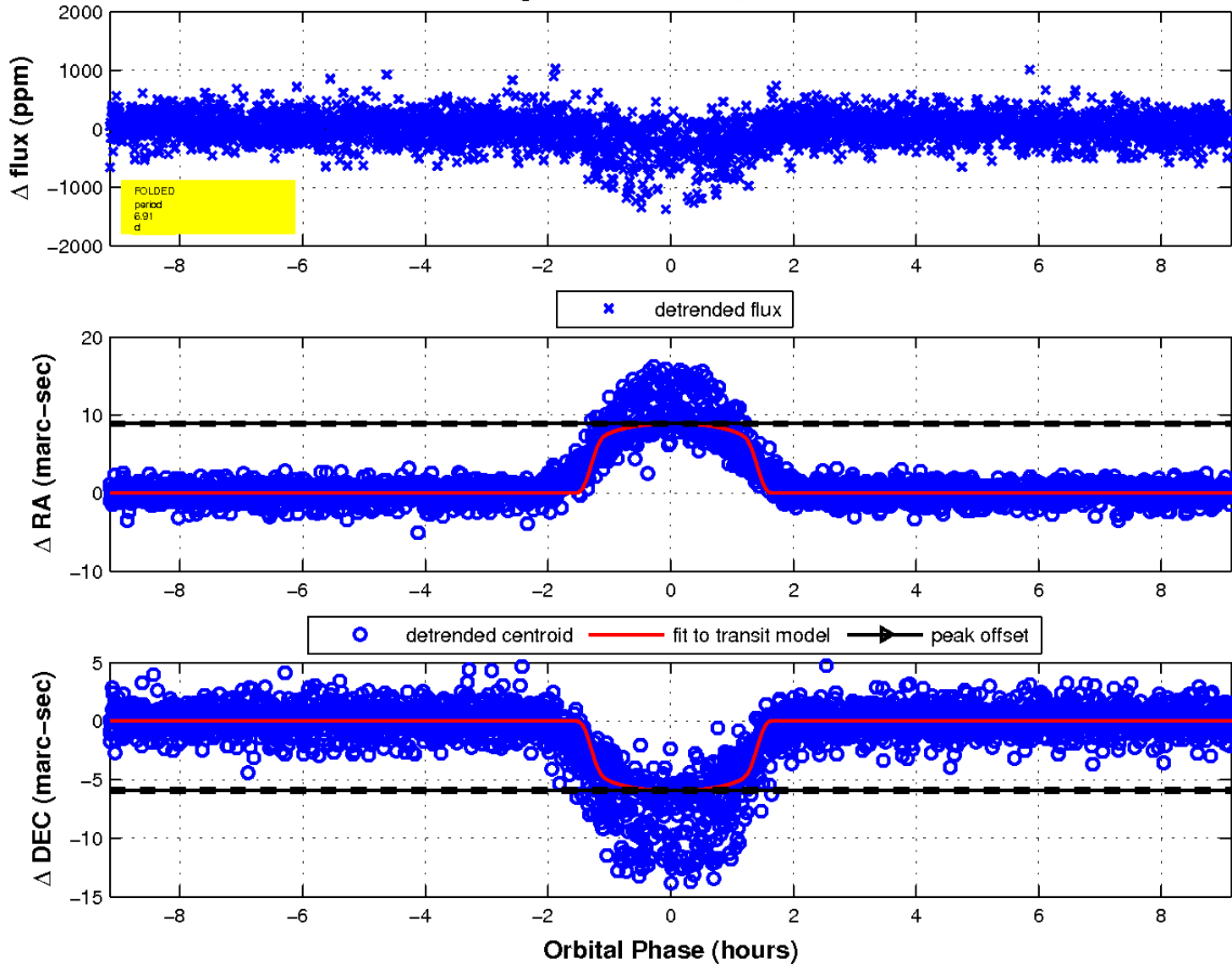
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

