

KIC 006198999

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})
006198999-01	OBS	1687.01	3.932471	132.552048	445.7	2.327	26.0	29.5	0.78	4841	2.01	151.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006198999-01	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.

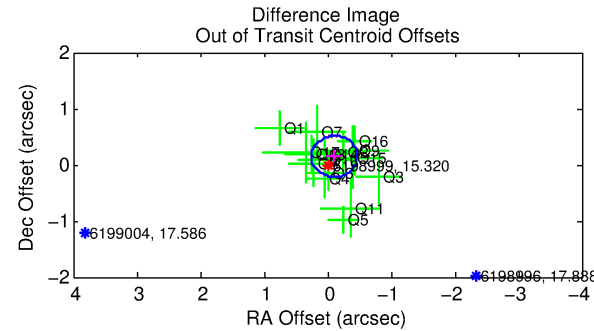
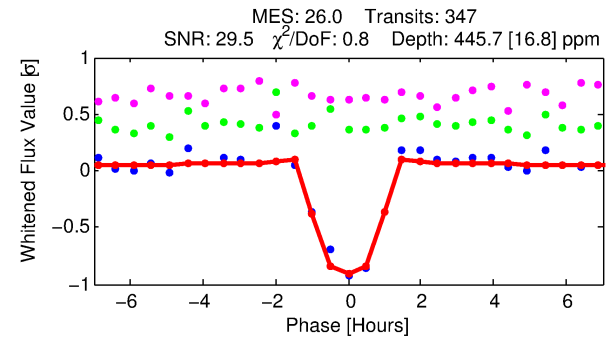
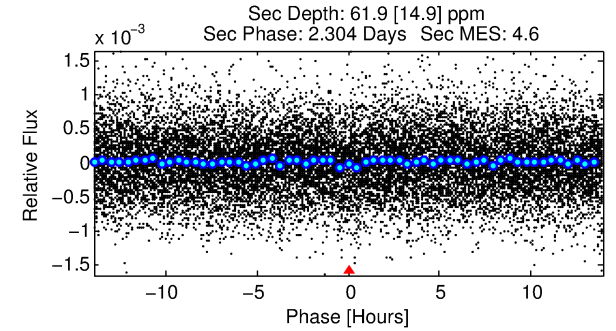
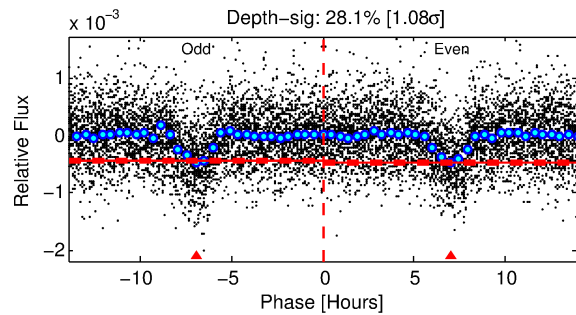
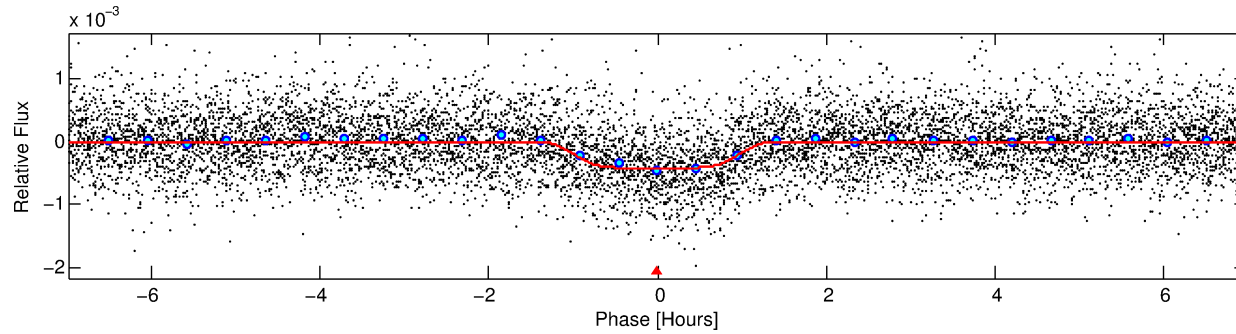
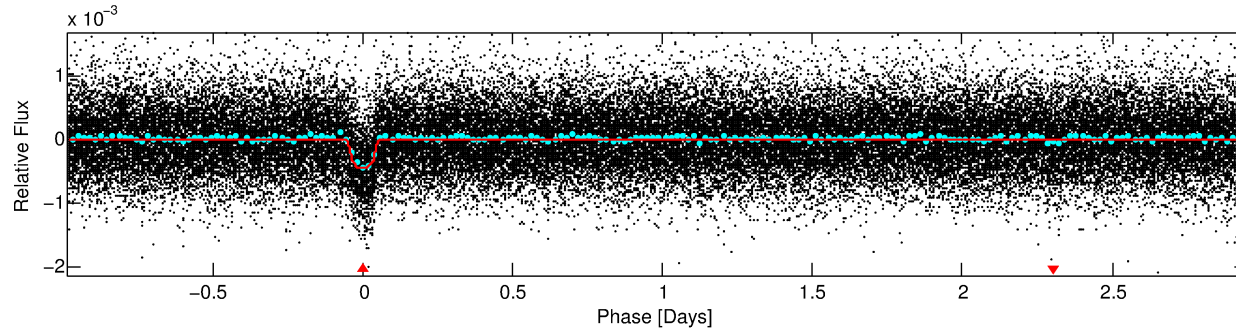
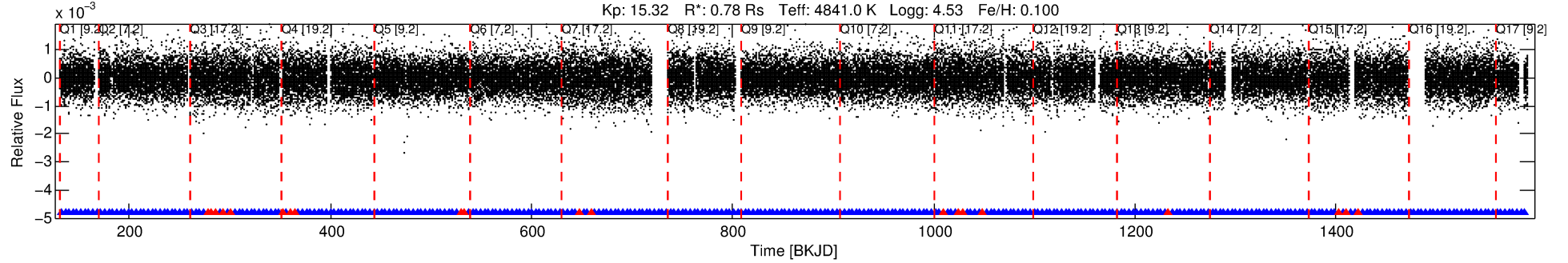
Ephemeris Match Information For 006198999-01

No Significant Match Found

DV One-Page Summary

KIC: 6198999 Candidate: 1 of 1 Period: 3.932 d
KOI: K01687.01 Corr: 0.972

Kp: 15.32 R*: 0.78 Rs Teff: 4841.0 K Logg: 4.53 Fe/H: 0.100



DV Fit Results:

Period = 3.93247 [0.00001] d
Epoch = 132.5520 [0.0013] BKJD
Rp/R* = 0.0237 [0.0048]
a/R* = 6.43 [4.73]
b = 0.90 [0.17]
Seff = 151.39 [26.39]
Teq = 894 [39] K
Rp = 2.01 [0.45] Re
a = 0.0444 [0.0037] AU
Ag = 16.59 [8.04] [1.94σ]
Teff = 2791 [337] K [5.59σ]

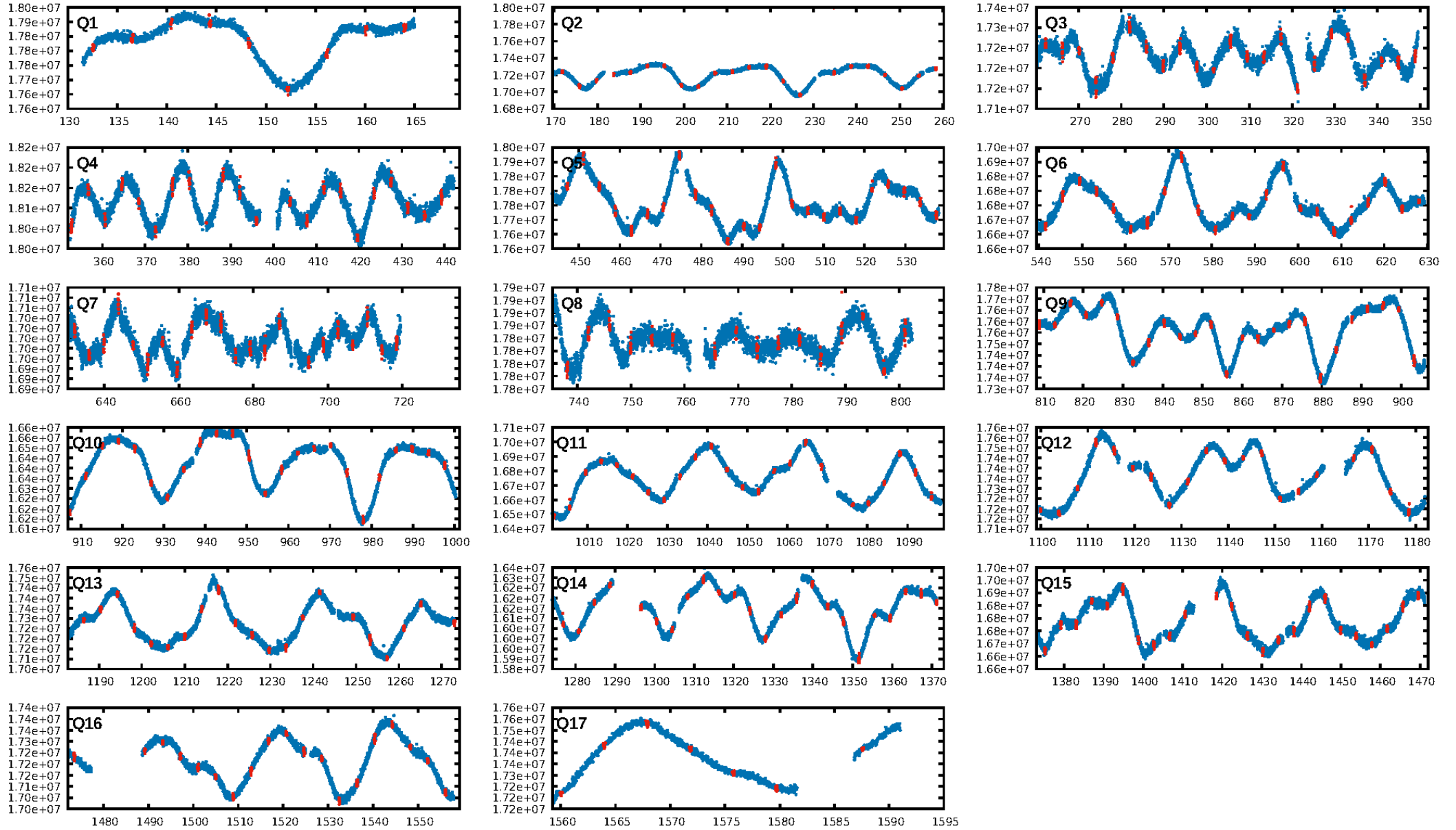
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.09e-145
RollingBand-fgt: 0.94 [311/331]
GhostDiagnostic-chr: 8.542
Centroid-sig: 51.2%
Centroid-so: 0.422 arcsec [0.93σ]
OotOffset-rm: 0.181 arcsec [1.49σ]
KicOffset-rm: 0.292 arcsec [2.32σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

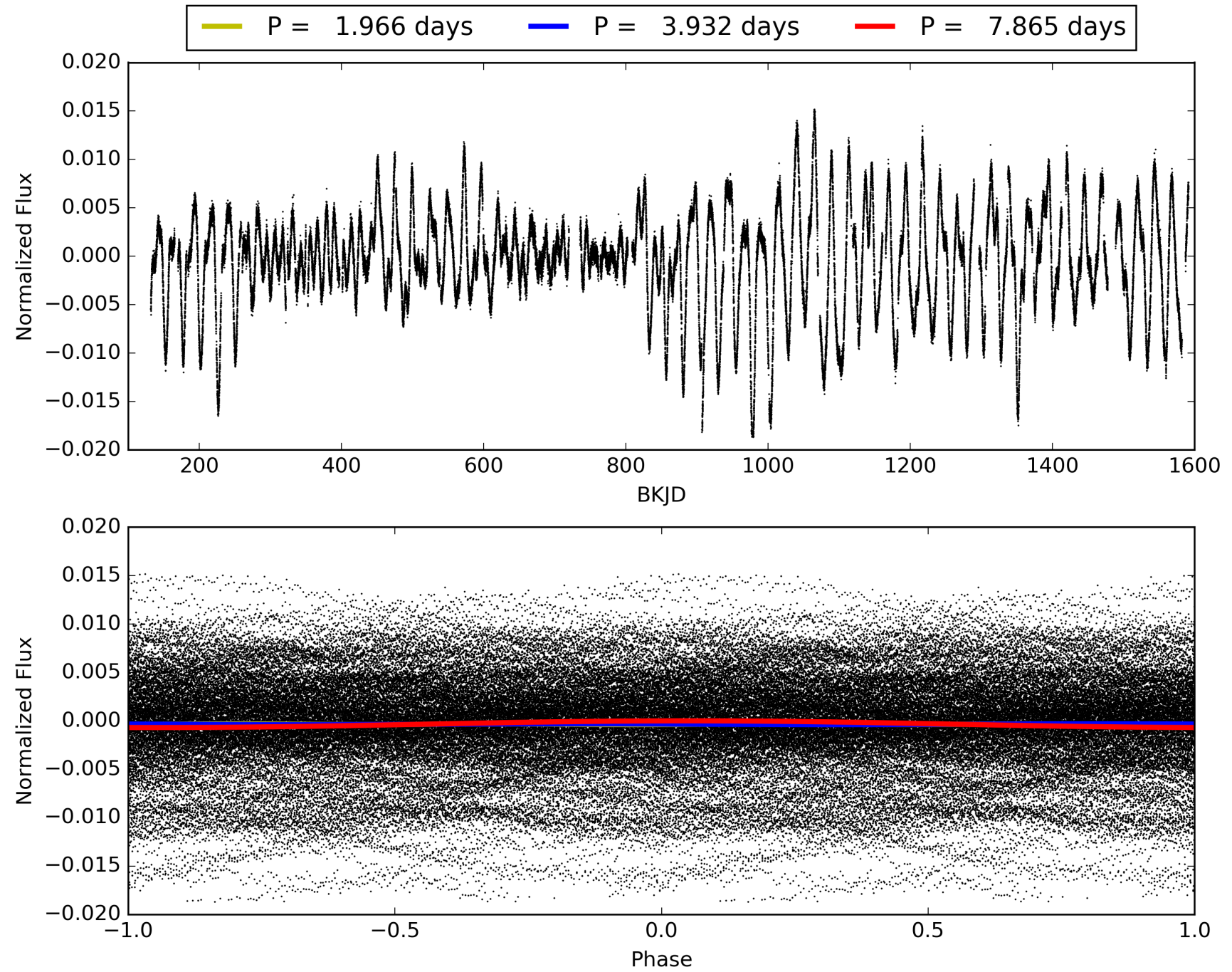
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 18:09:35 Z

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

TCE 006198999-01, PDC Light Curves

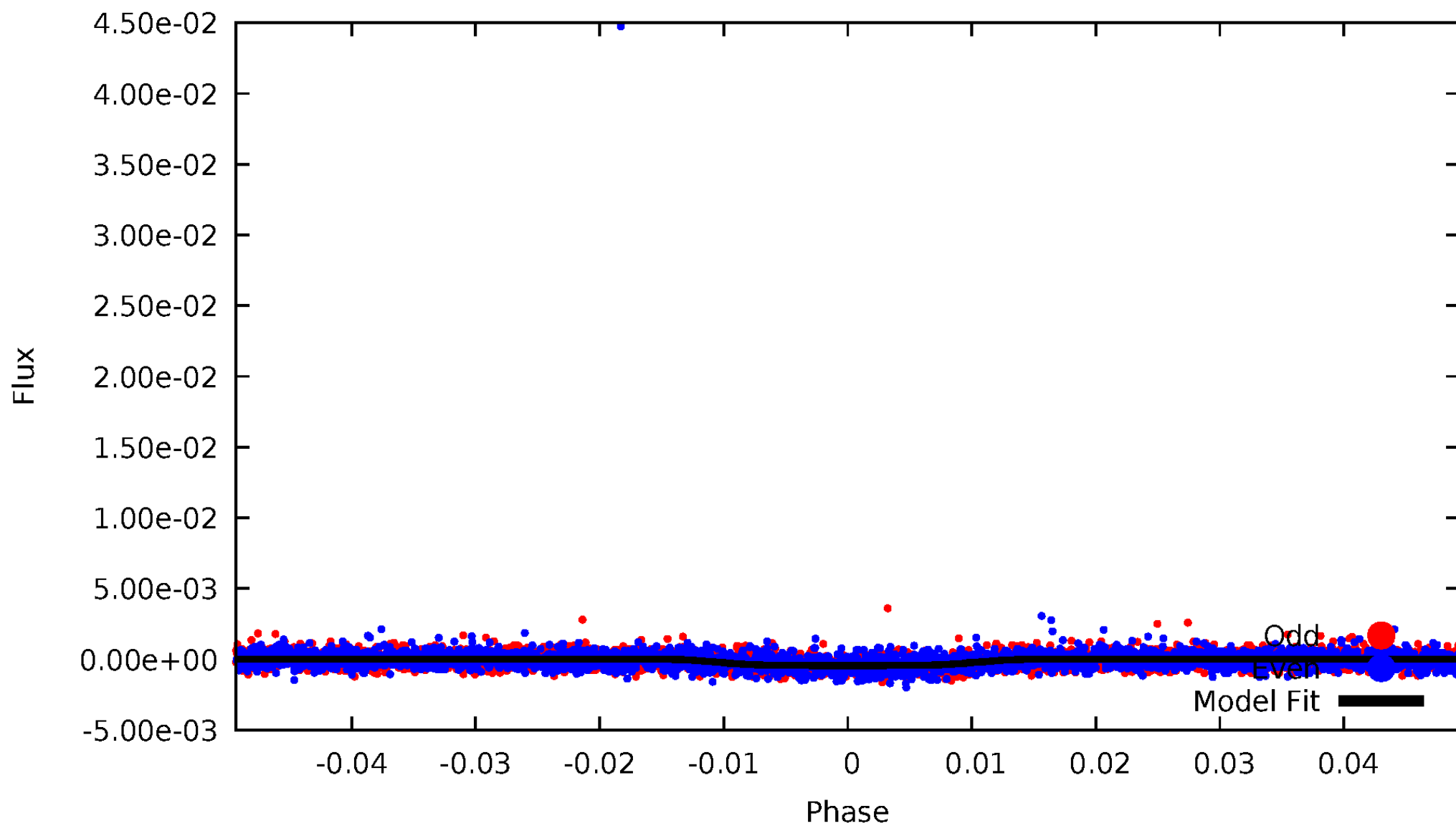


TCE 006198999-01



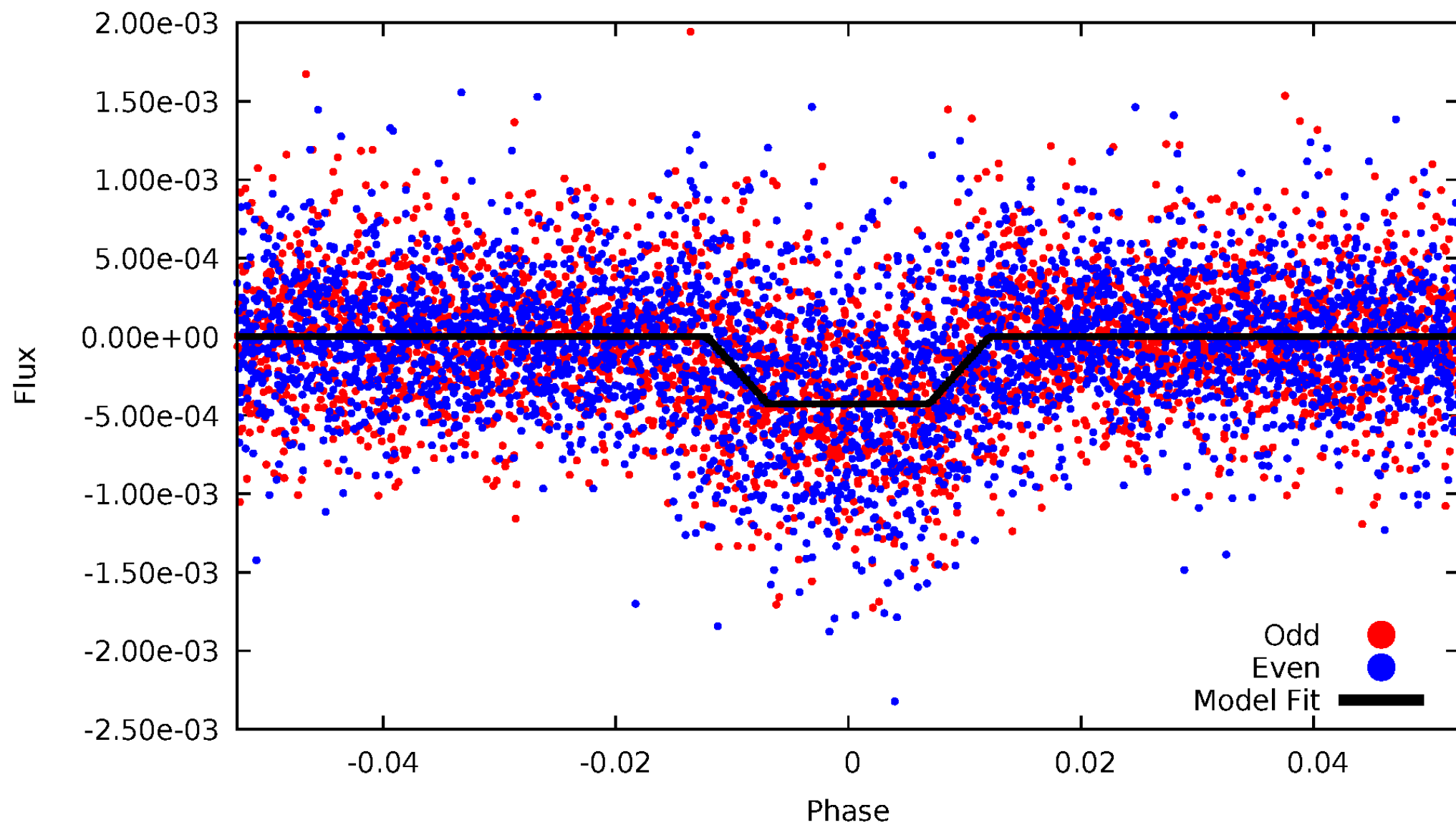
DV Odd/Even

TCE 006198999-01

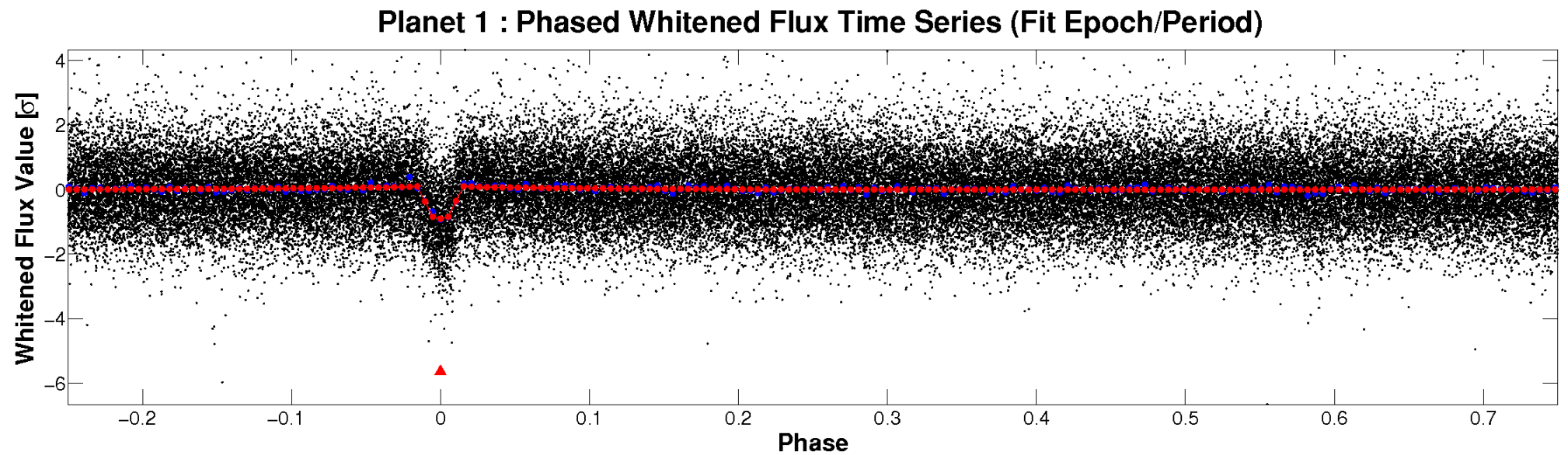
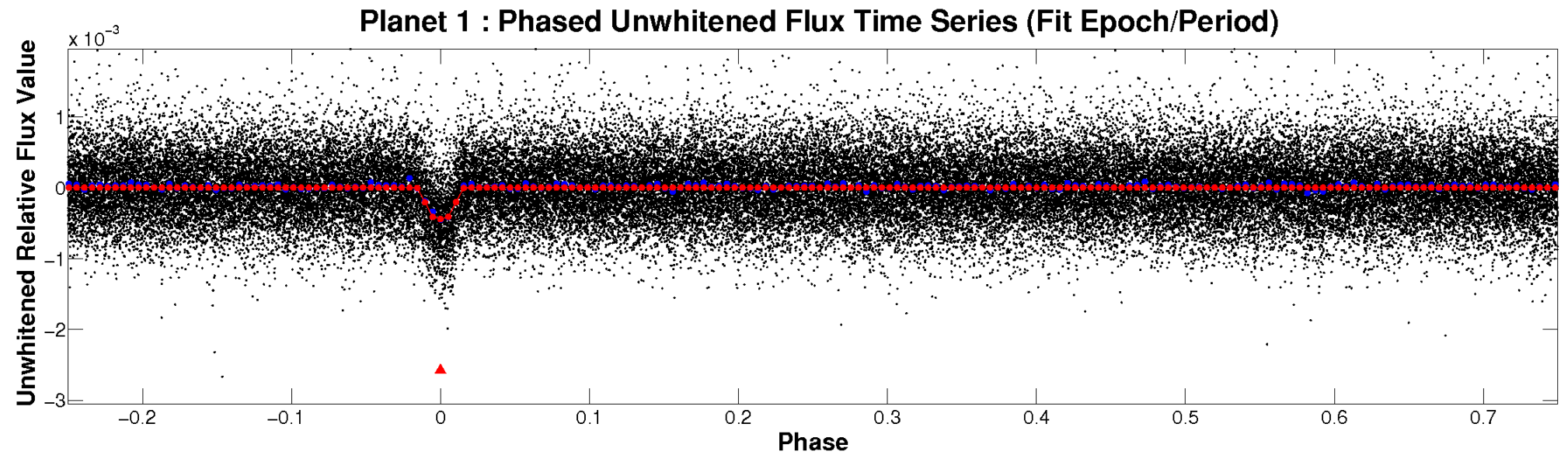


ALT Odd/Even

TCE 006198999-01

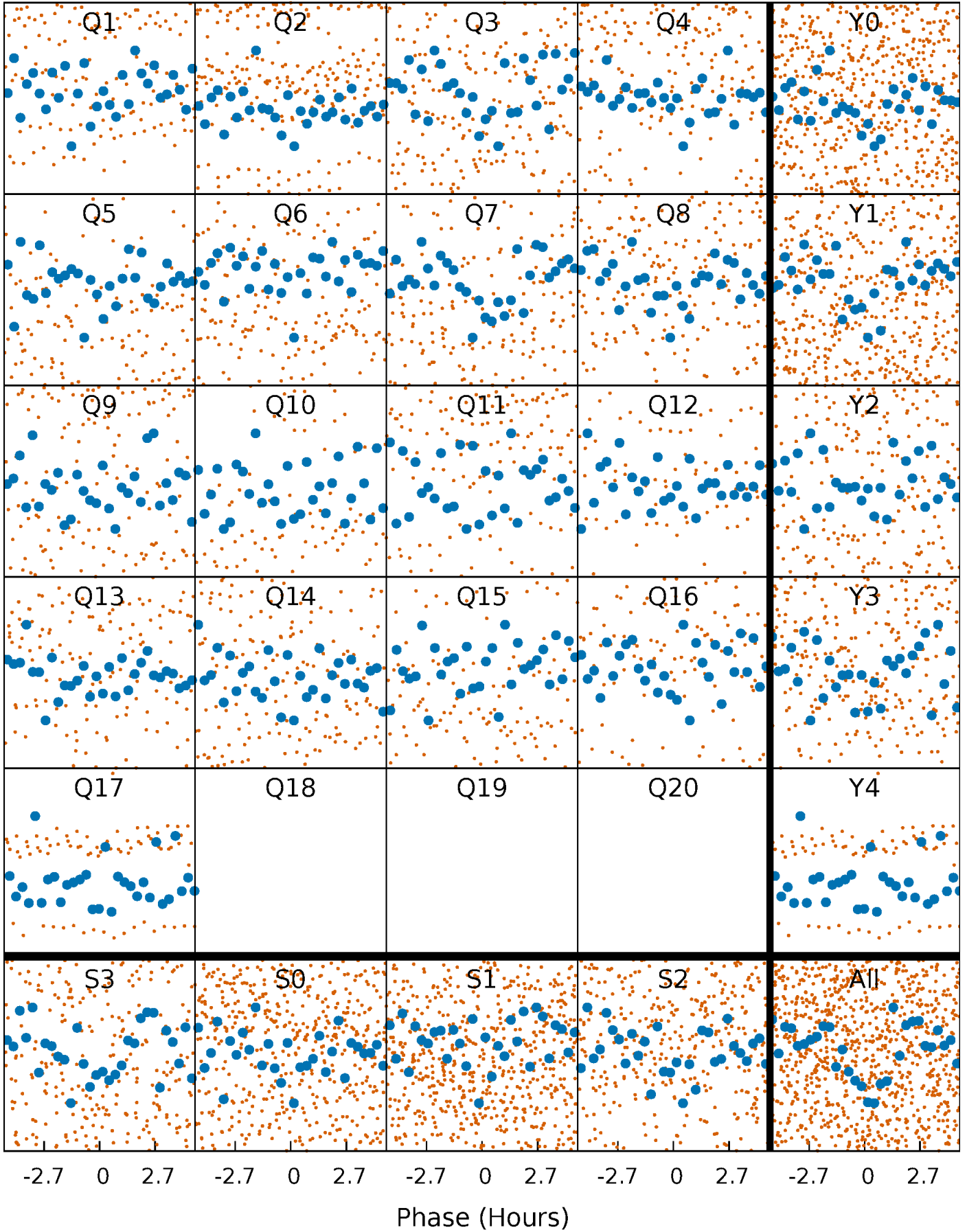


Non-Whitened Vs. Whitened Light Curve



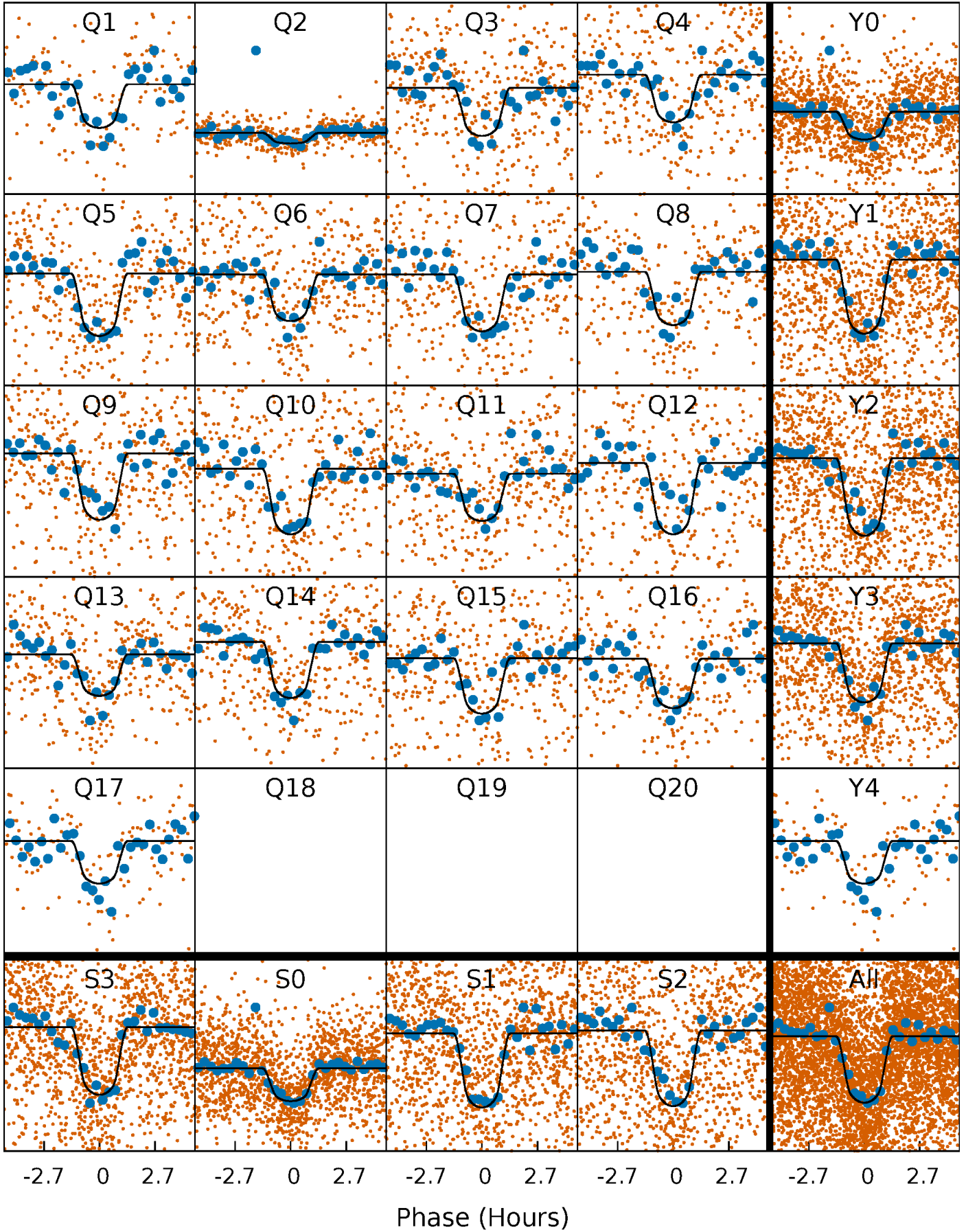
PDC Quarter-Phased Transit Curves

TCE 006198999-01 P= 3.932471 Days $T_0=132.552048$ (BKJD)



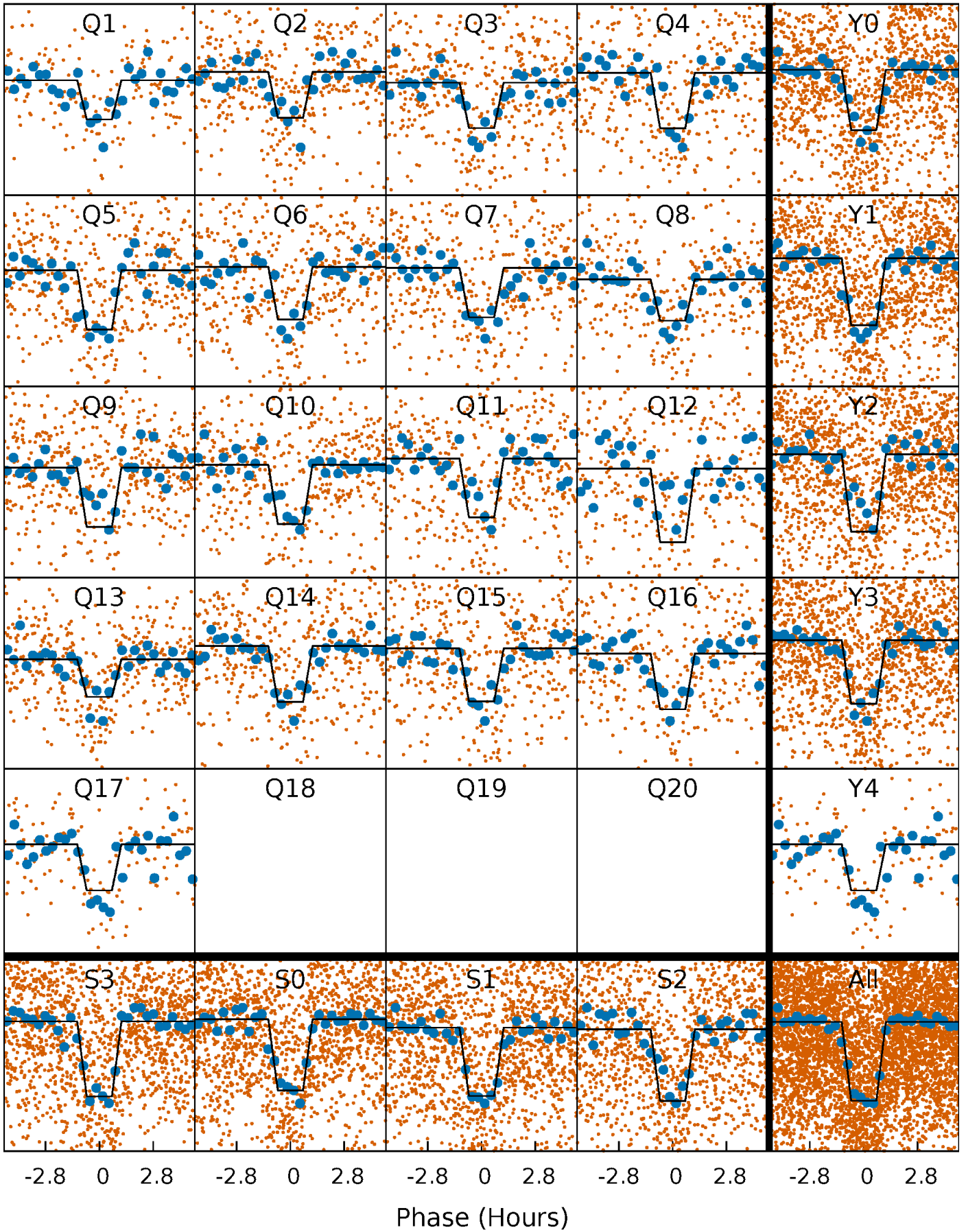
DV Quarter-Phased Transit Curves

TCE 006198999-01 P= 3.932471 Days $T_0=132.552048$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

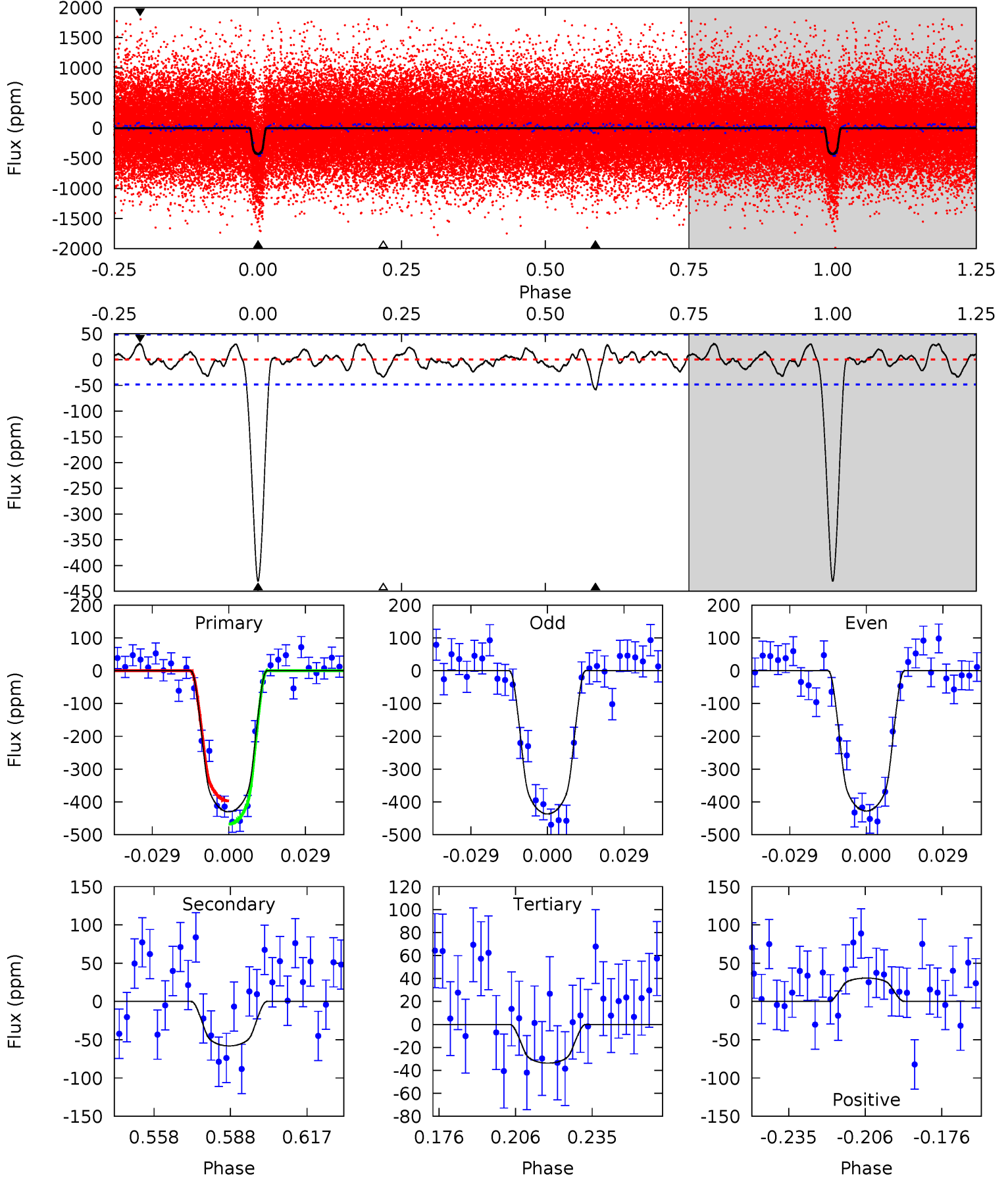
TCE 006198999-01 P= 3.932463 Days $T_0=132.555185$ (BKJD)



DV Model-Shift Uniqueness Test

006198999-01, P = 3.932471 Days, E = 128.619577 Days

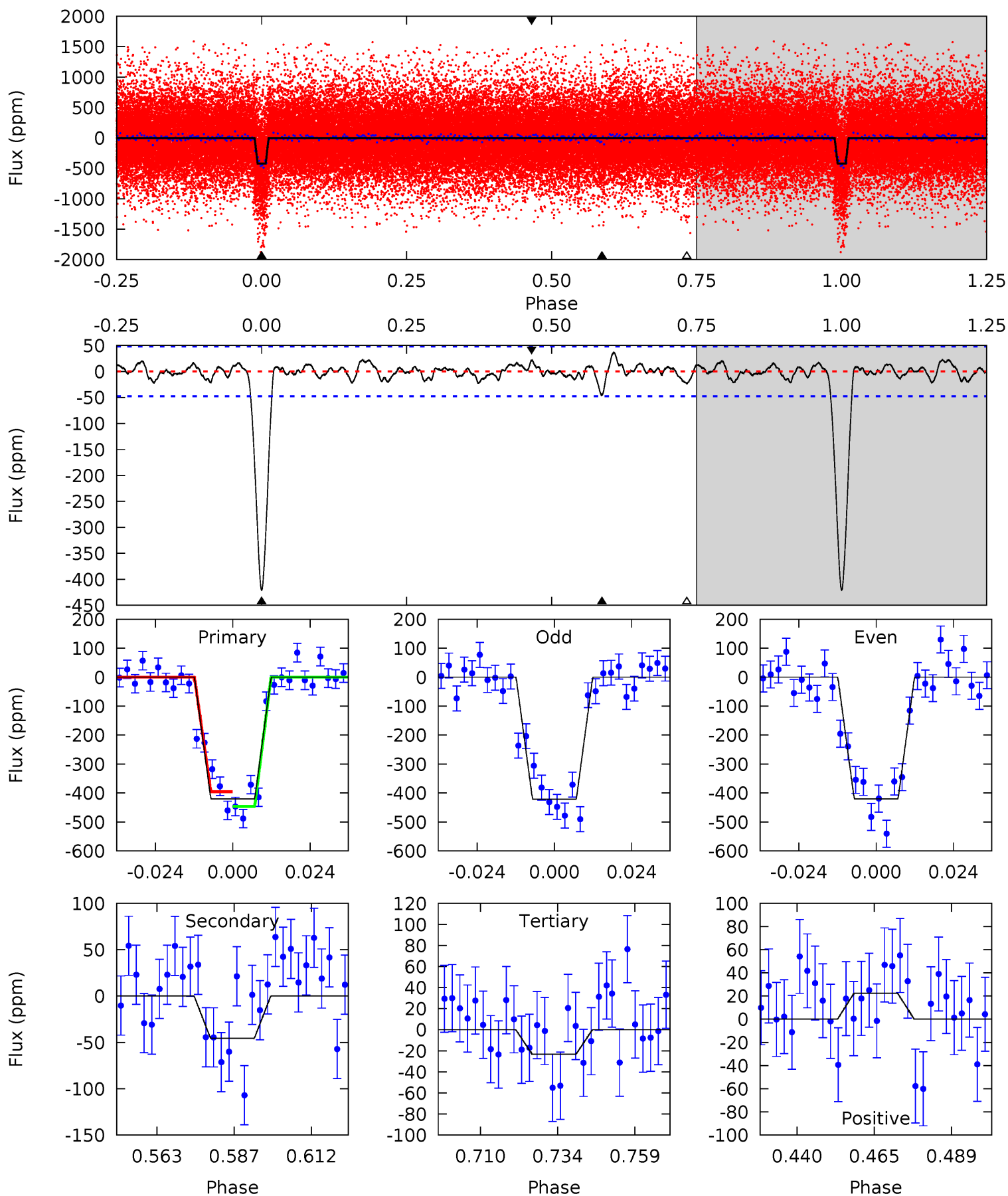
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.9	5.78	3.36	3.04	4.82	2.18	1.32	39.5	39.8	2.42	2.75	0.44	0.97	0.07	3.52



Alt Model-Shift Uniqueness Test

006198999-01, P = 3.932463 Days, E = 128.622722 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.5	4.61	2.36	2.26	4.85	2.25	1.00	40.2	40.3	2.25	2.36	0.04	0.96	0.08	2.59



Stellar Parameters For KIC 006198999

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4841^{+144}_{-129}	$4.533^{+0.072}_{-0.044}$	$0.100^{+0.250}_{-0.300}$	$0.779^{+0.049}_{-0.074}$	$0.756^{+0.072}_{-0.054}$	$2.249^{+0.682}_{-0.323}$
	+3%/-3%	+2%/-1%	+250%/-300%	+6%/-9%	+10%/-7%	+30%/-14%
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 006198999-01 / KOI 1687.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-58 ± 10	$2.02^{+0.41}_{-0.40}$	1246^{+43}_{-43}	3241^{+255}_{-203}	16^{+10}_{-6}
Alt.	-46 ± 10	$1.76^{+0.37}_{-0.37}$	1250^{+42}_{-44}	3270^{+280}_{-234}	16^{+12}_{-6}

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

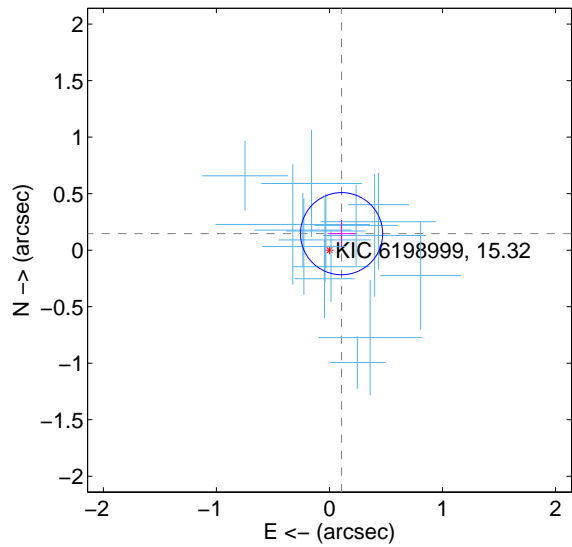
Supplemental centroid analysis for 006198999-01. Kepler magnitude: 15.32. Transit SNR 29.51

There are 16 quarters with good PRF difference image offsets

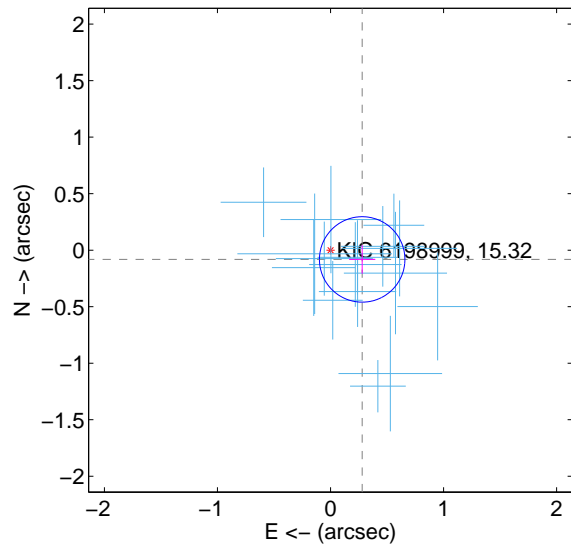
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.181 ± 0.121	1.49	-0.107 ± 0.122	0.146 ± 0.121
PRF-fit source offset from KIC position	0.292 ± 0.126	2.32	-0.280 ± 0.116	-0.082 ± 0.126
photometric centroid source offset	0.42 ± 0.45	0.93	-0.39 ± 0.46	-0.16 ± 0.40

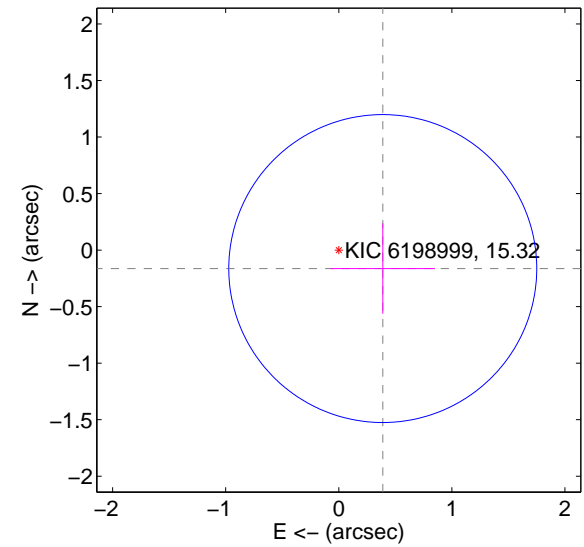
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

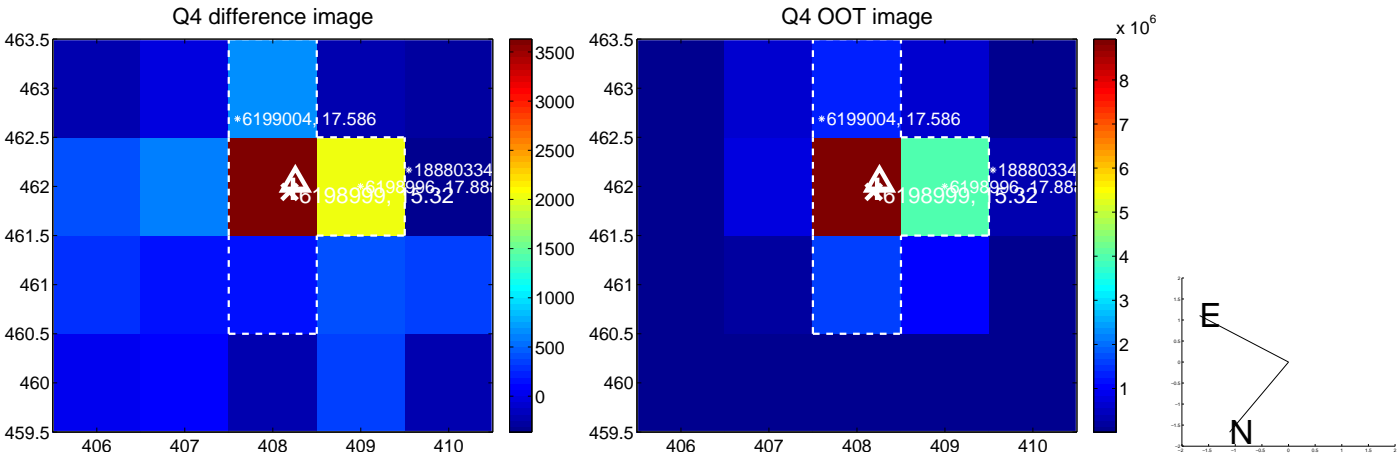
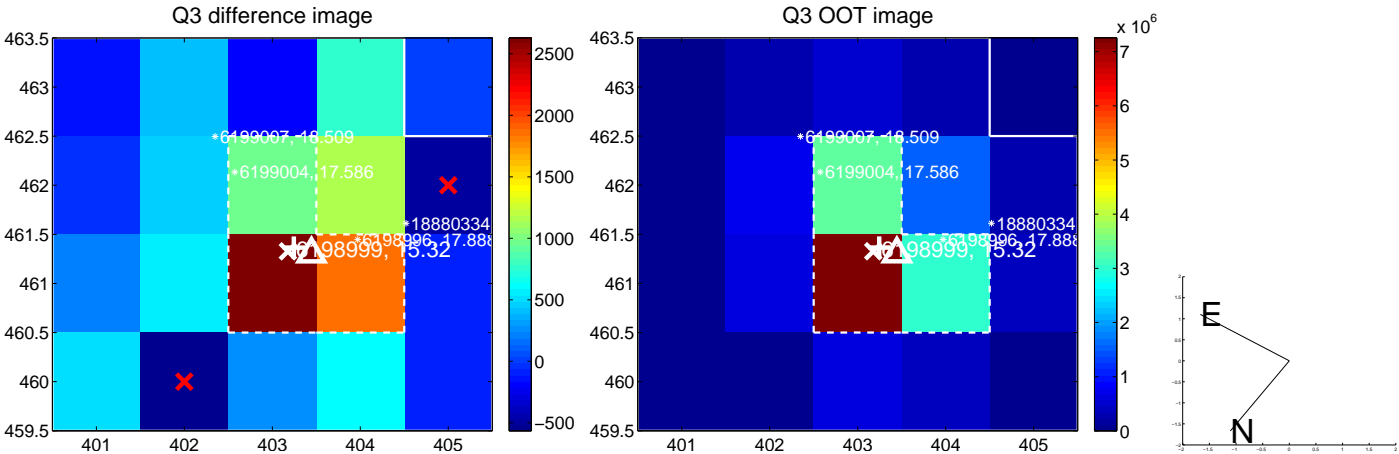
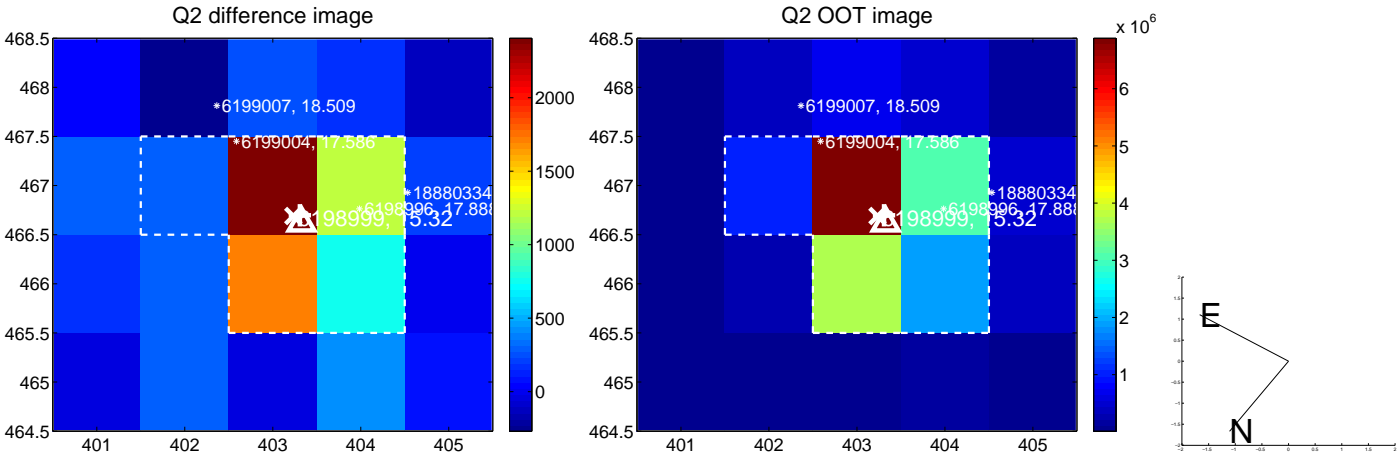
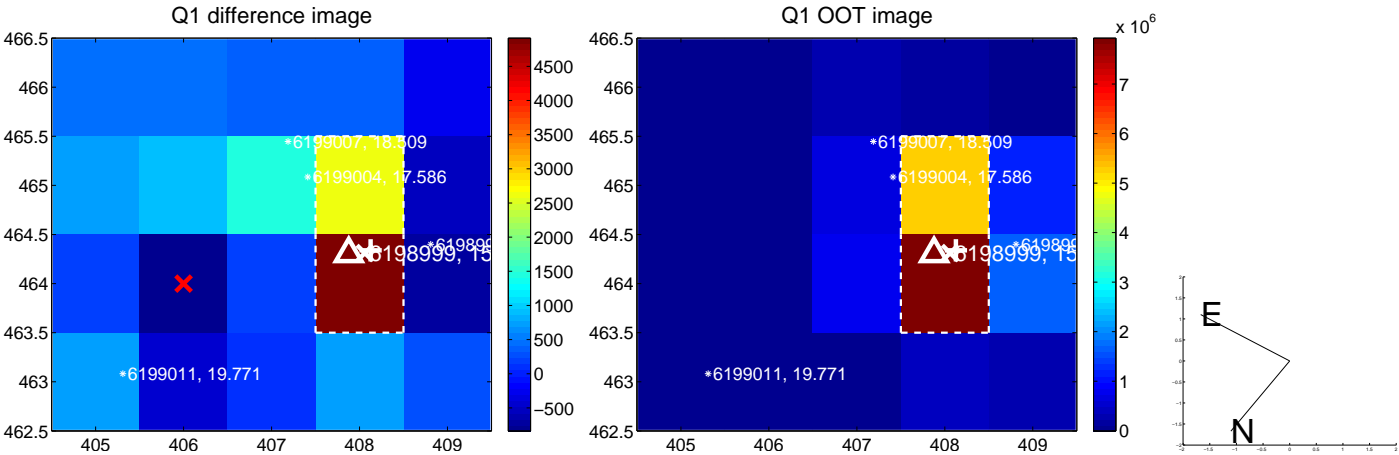


offset from photometric centroids

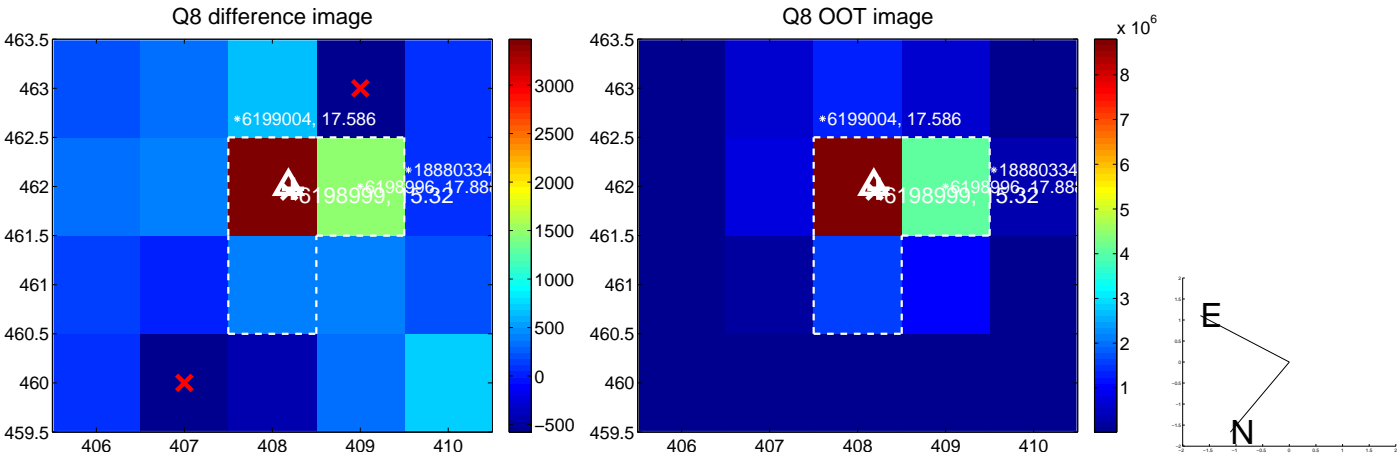
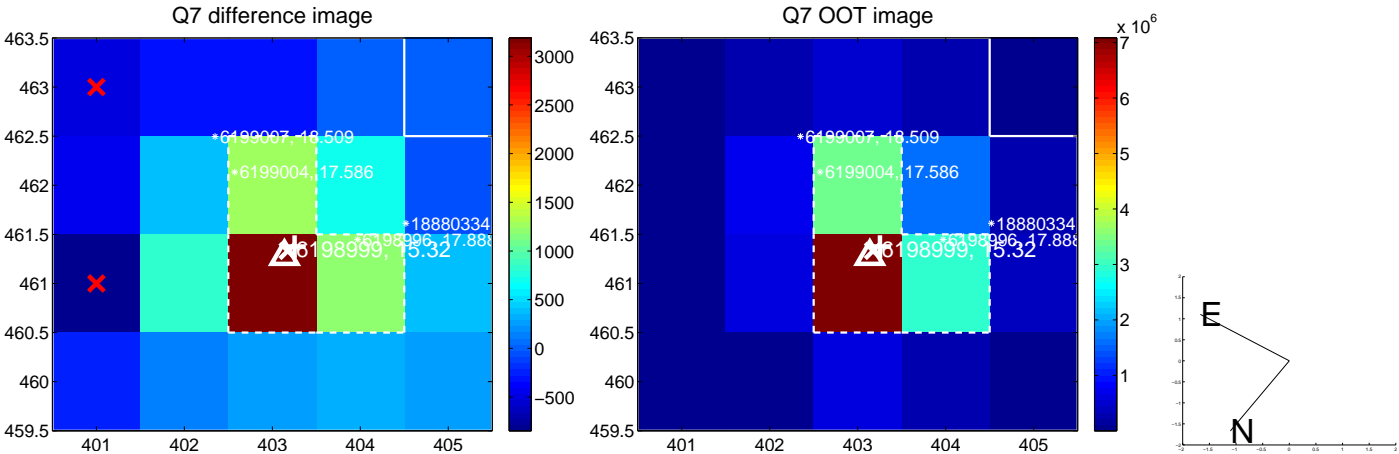
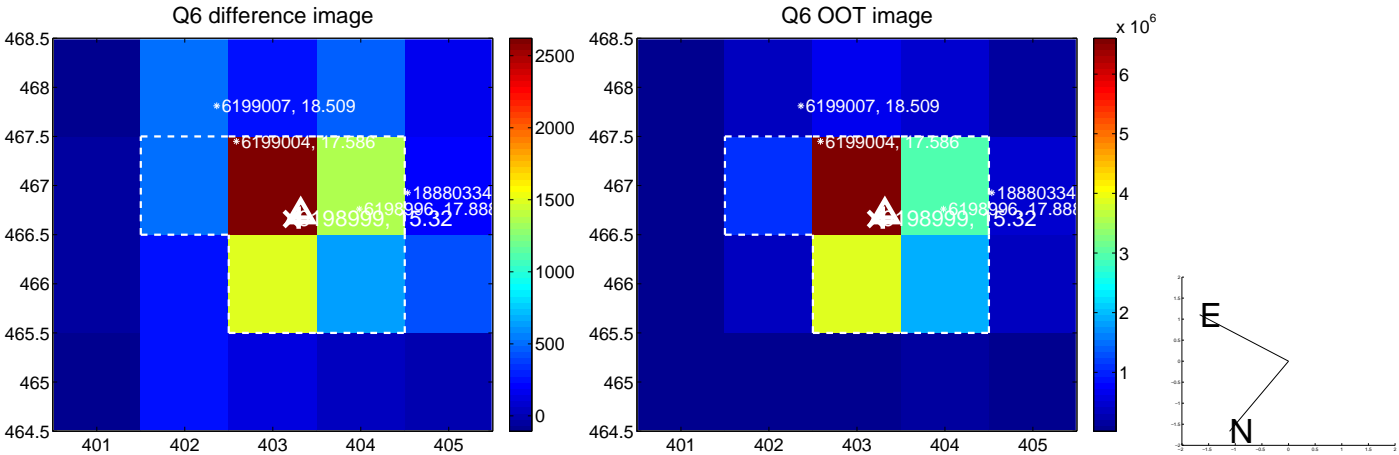
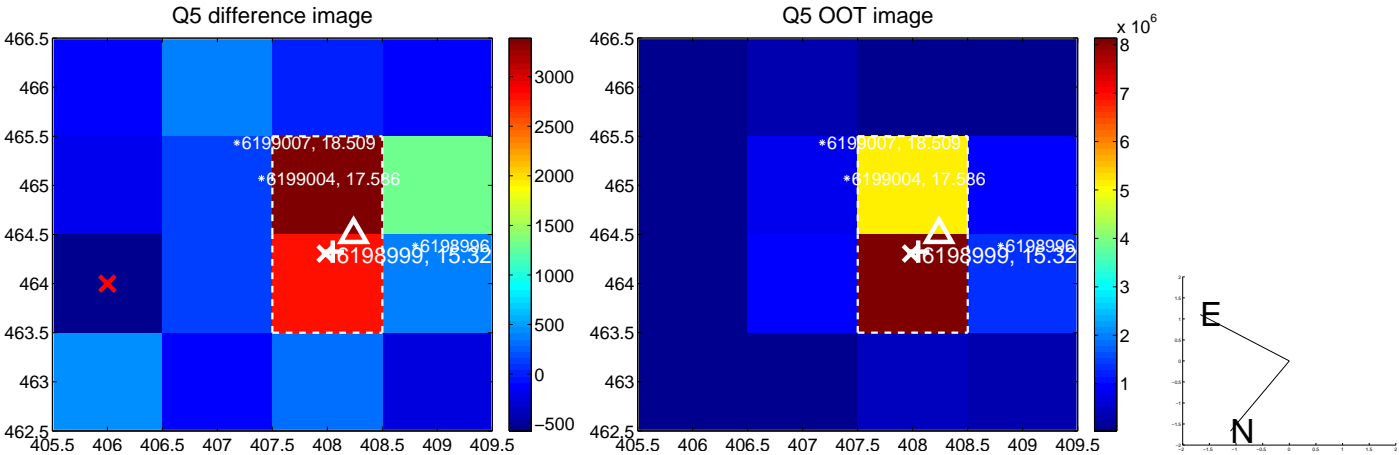


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

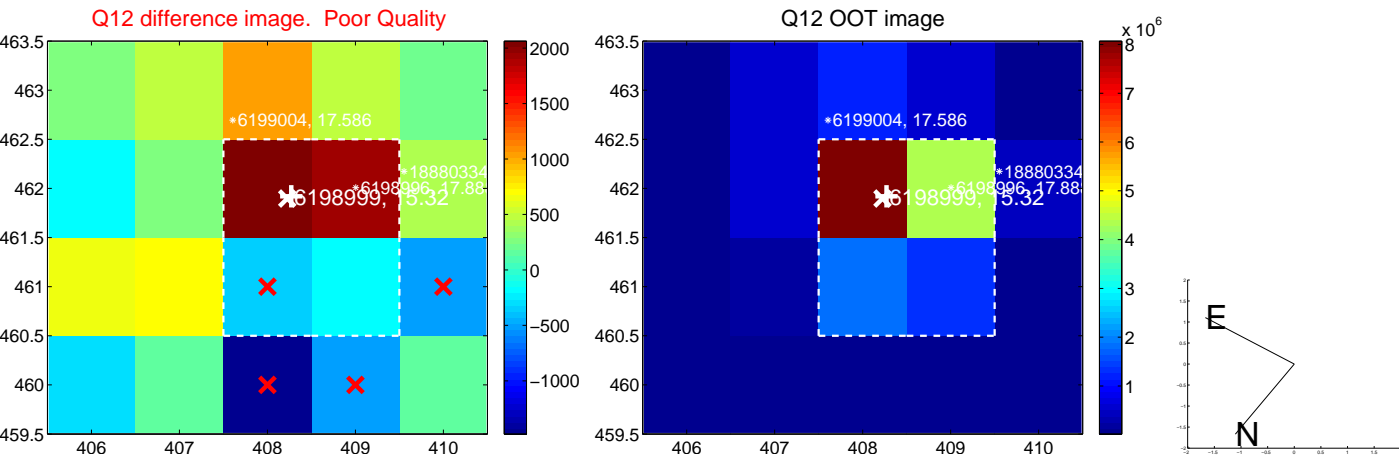
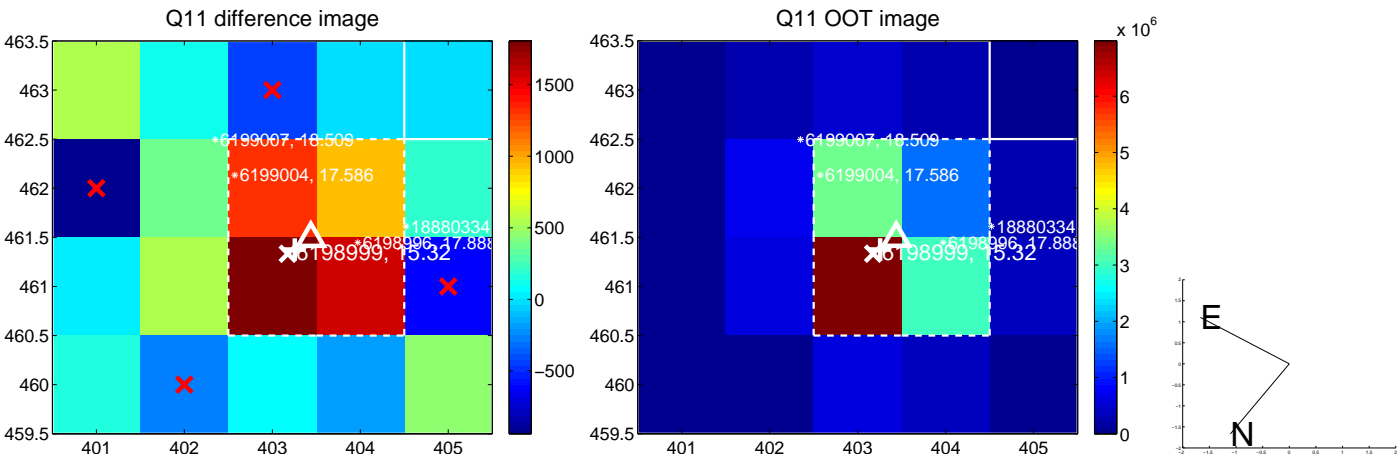
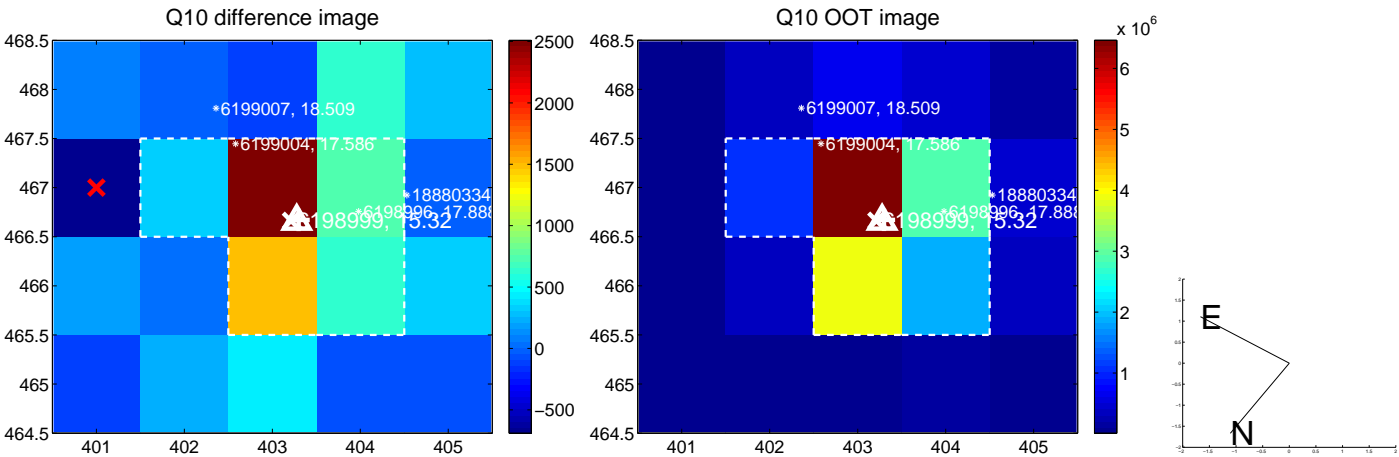
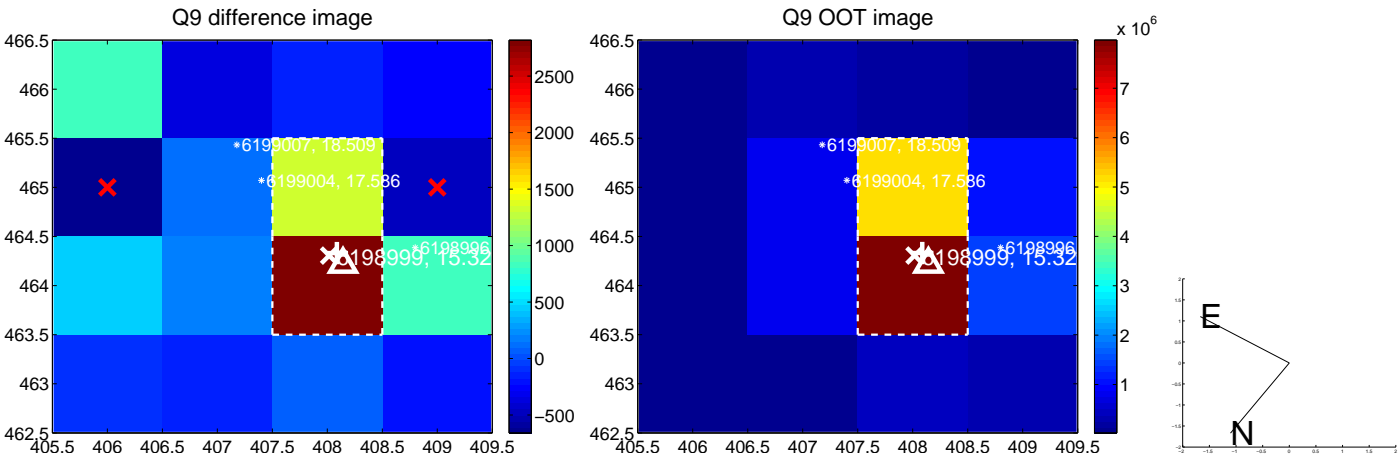
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



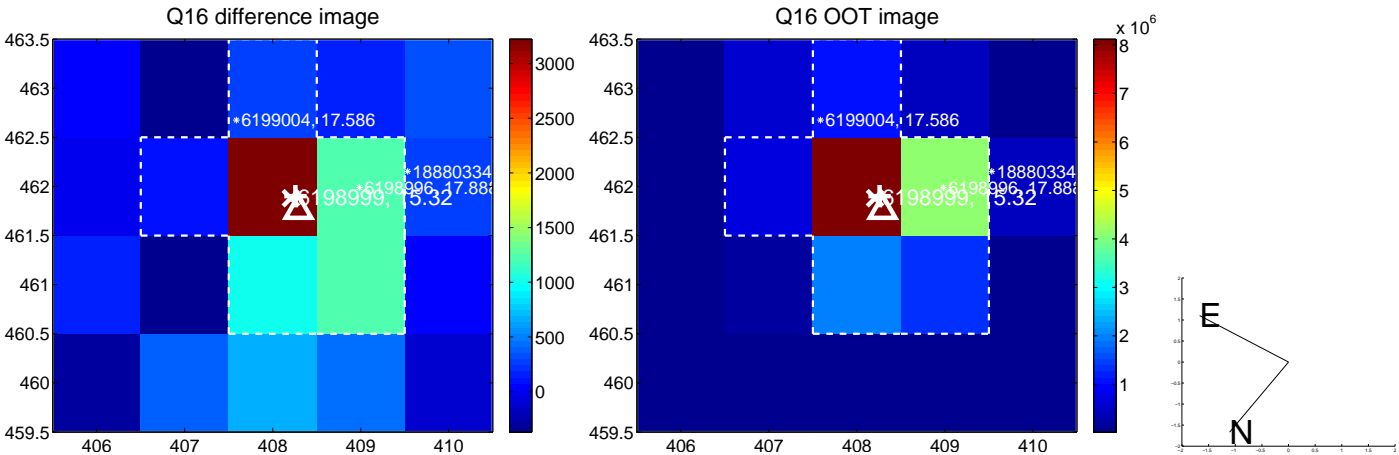
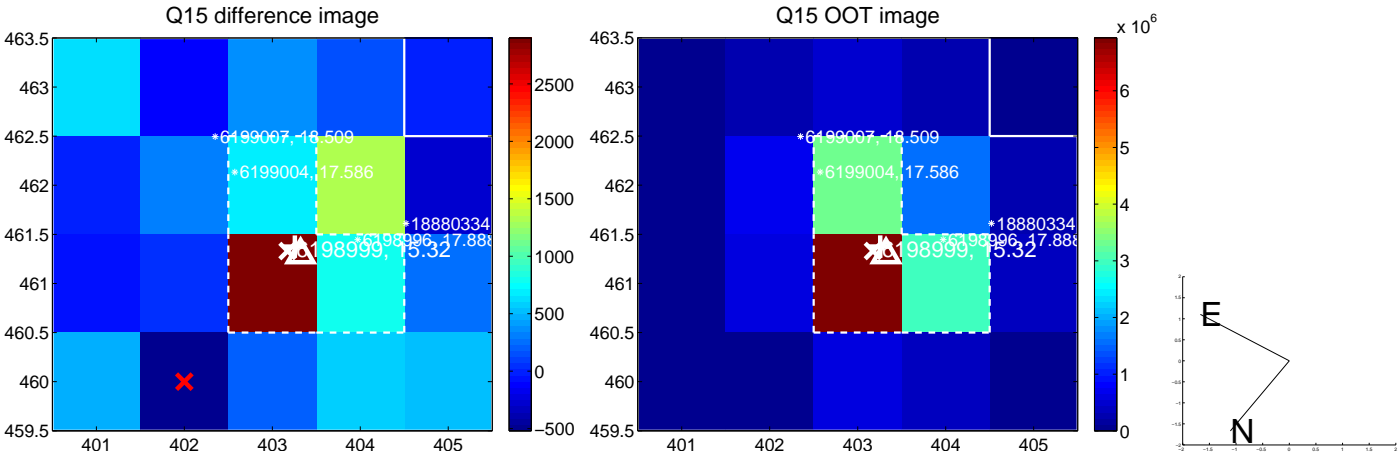
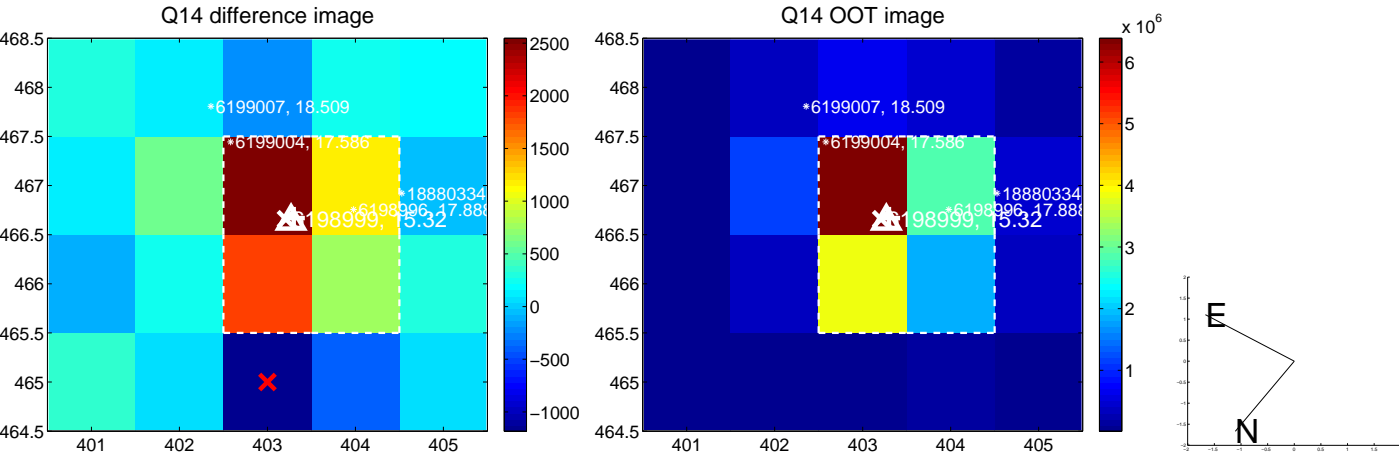
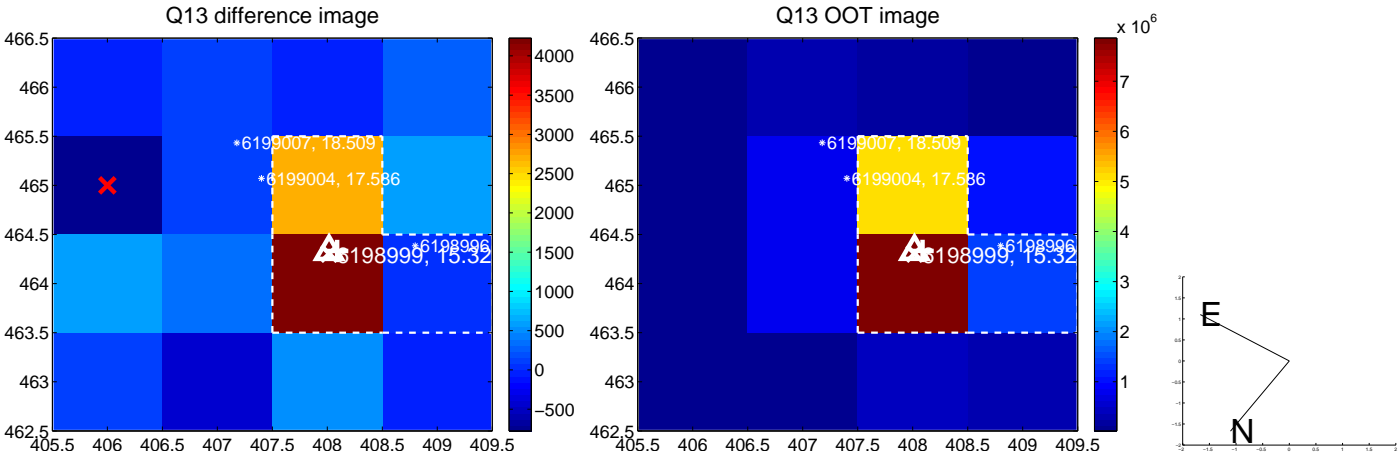
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



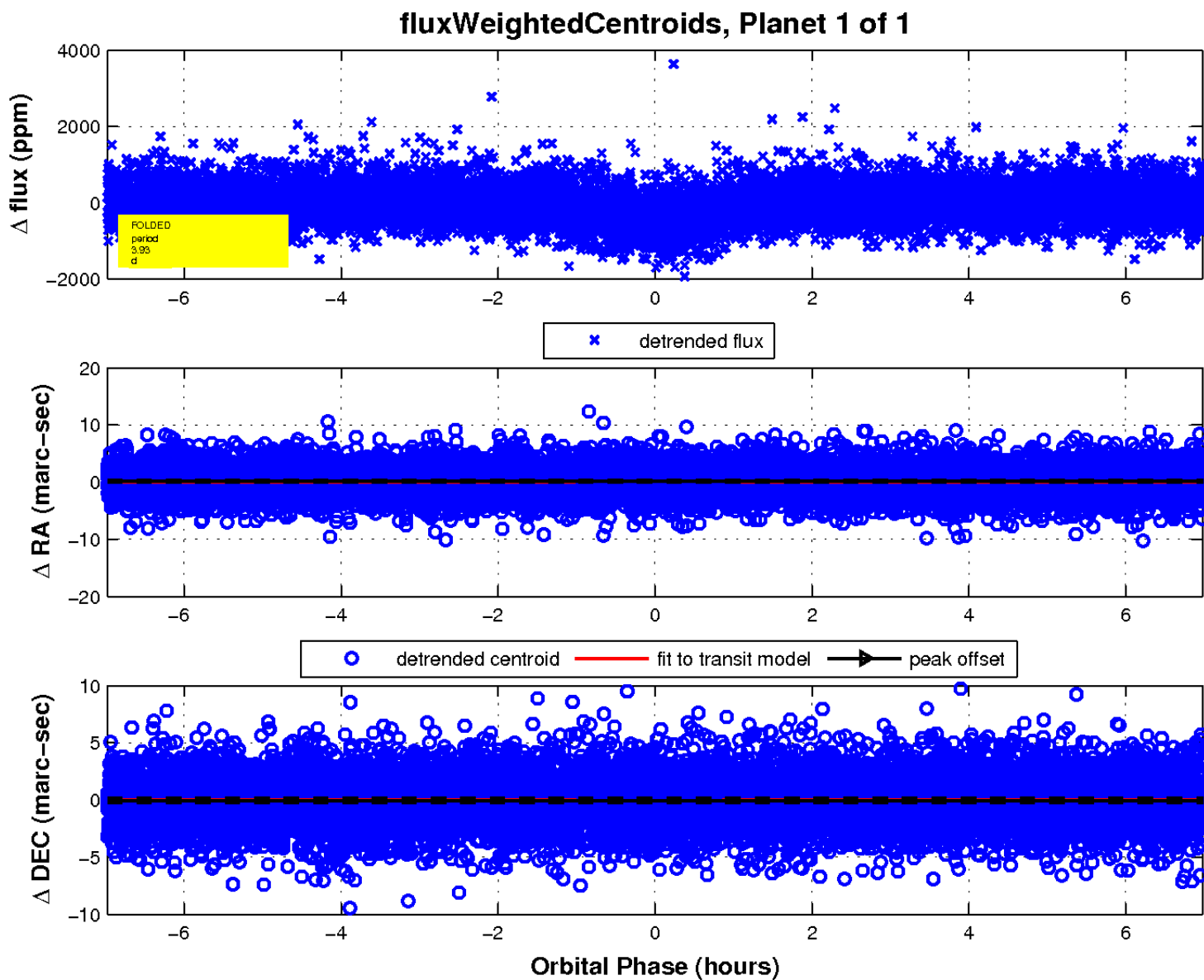
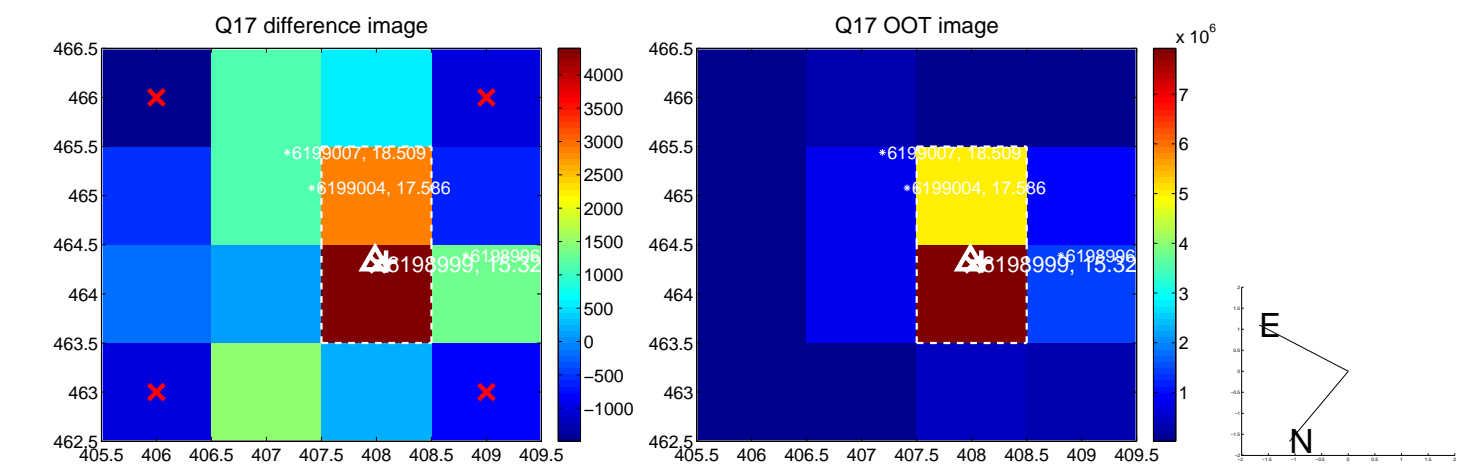
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

