

KIC 008007174

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})
008007174-01	OBS	5458.01	56.648812	168.466938	681.4	4.372	9.1	10.2	0.78	5023	2.27	4.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008007174-01	OBS	PC	0.99	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.

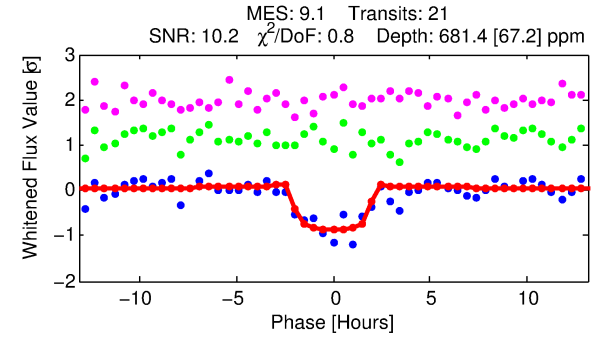
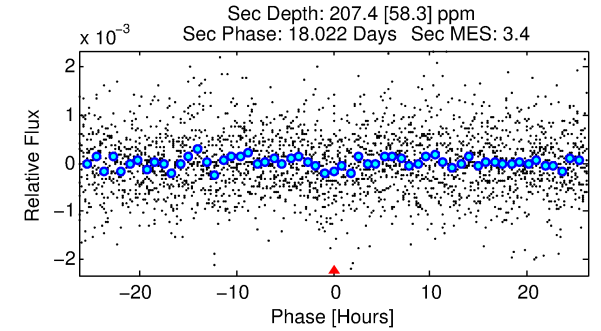
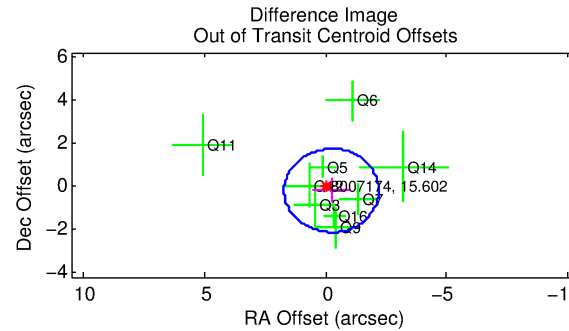
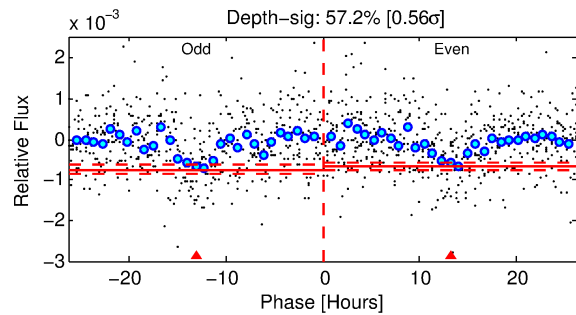
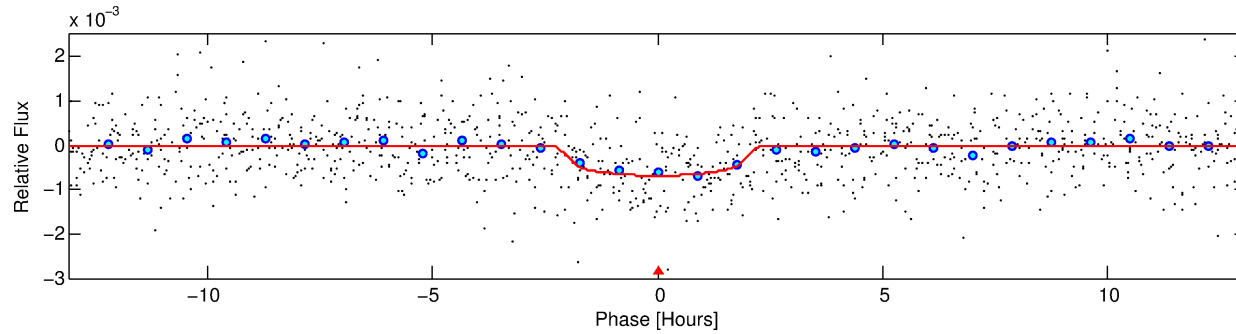
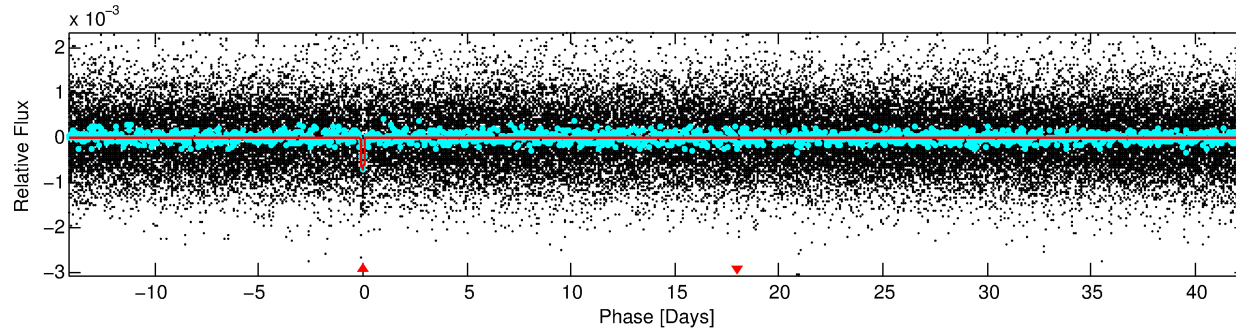
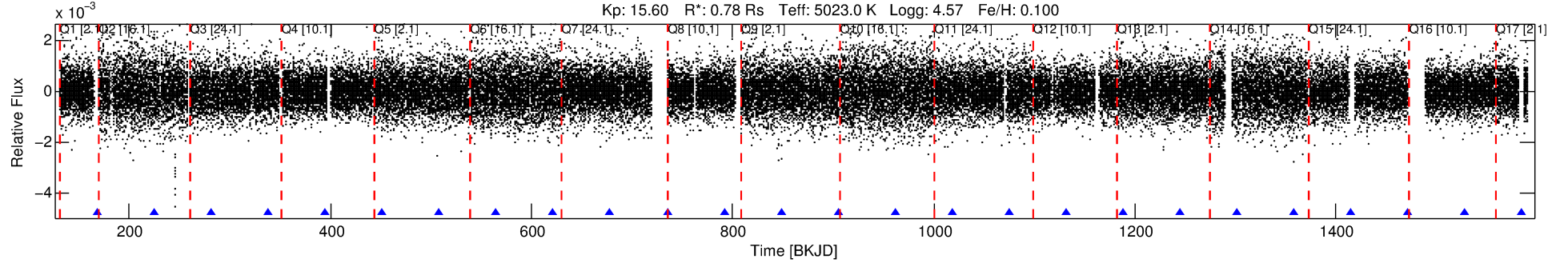
Ephemeris Match Information For 008007174-01

No Significant Match Found

DV One-Page Summary

KIC: 8007174 Candidate: 1 of 1 Period: 56.649 d
KOI: K05458.01 Corr: 0.912

Kp: 15.60 R*: 0.78 Rs Teff: 5023.0 K Logg: 4.57 Fe/H: 0.100



DV Fit Results:

Period = 56.64881 [0.00062] d
Epoch = 168.4669 [0.0085] BKJD
Rp/R* = 0.0266 [0.0183]
a/R* = 65.40 [161.04]
b = 0.79 [1.23]
Seff = 4.78 [0.86]
Teq = 377 [17] K
Rp = 2.27 [1.58] Re
a = 0.2702 [0.0226] AU
Ag = 1618.71 [2288.99] [0.71σ]
Teffp = 3697 [1308] K [2.54σ]

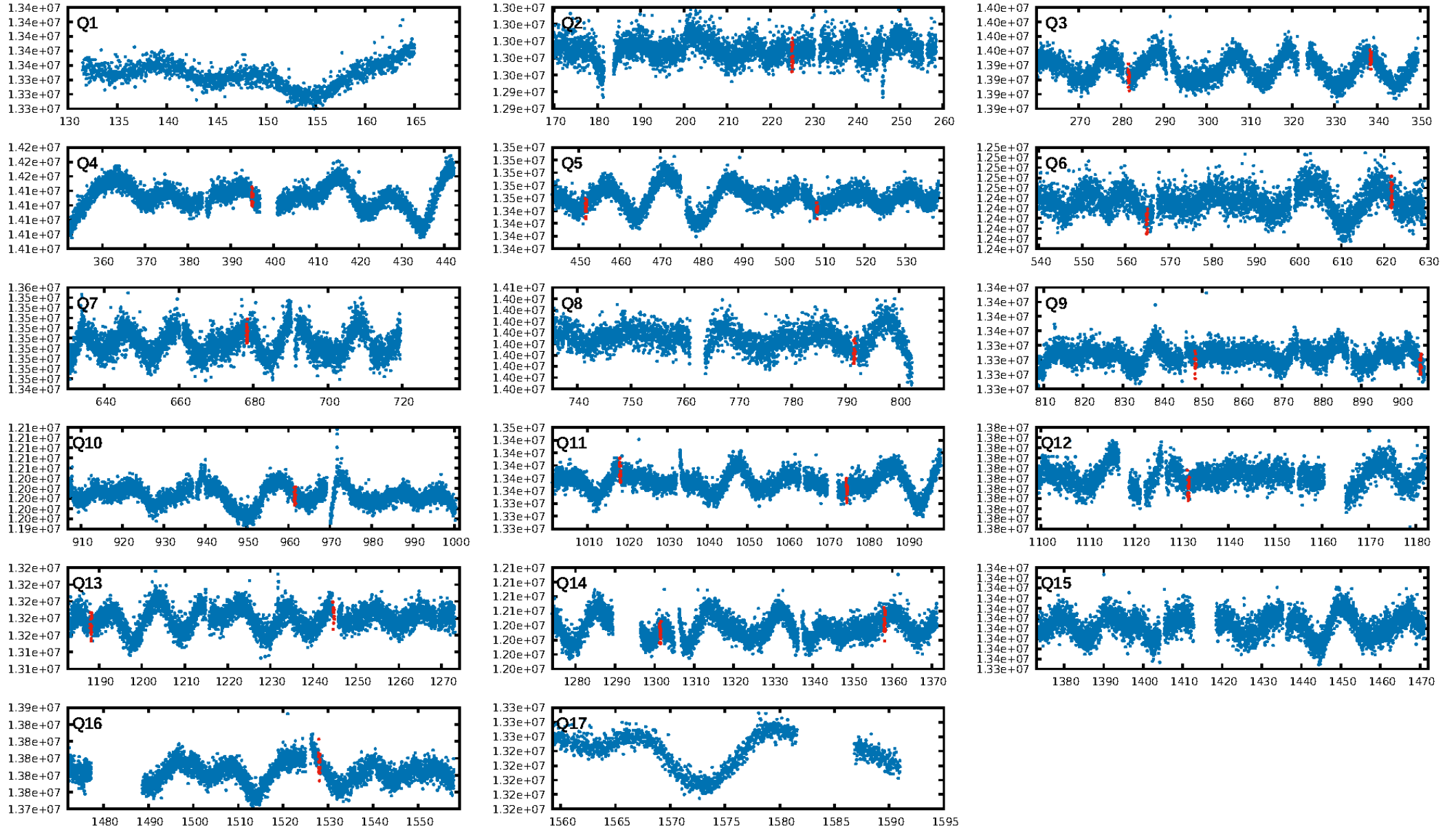
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.39e-18
RollingBand-fgt: 1.00 [21/21]
GhostDiagnostic-chr: 2.151
Centroid-sig: 0.3%
Centroid-so: 3.126 arcsec [2.33σ]
OotOffset-rm: 0.321 arcsec [0.49σ]
KicOffset-rm: 0.160 arcsec [0.23σ]
OotOffset-st: 2/3/2/2 [9]
KicOffset-st: 2/3/2/2 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [13/13]

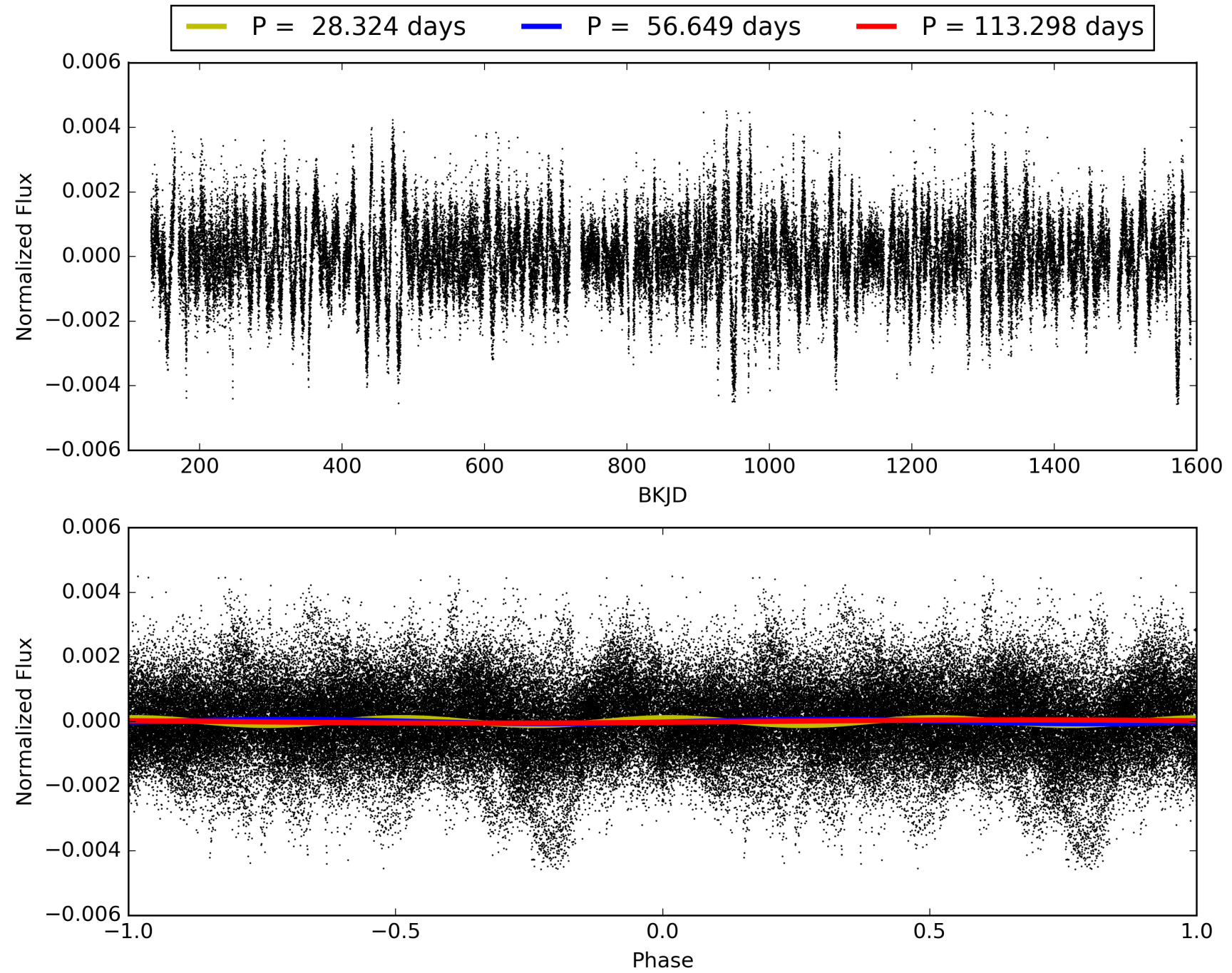
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:19:06 Z

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

TCE 008007174-01, PDC Light Curves

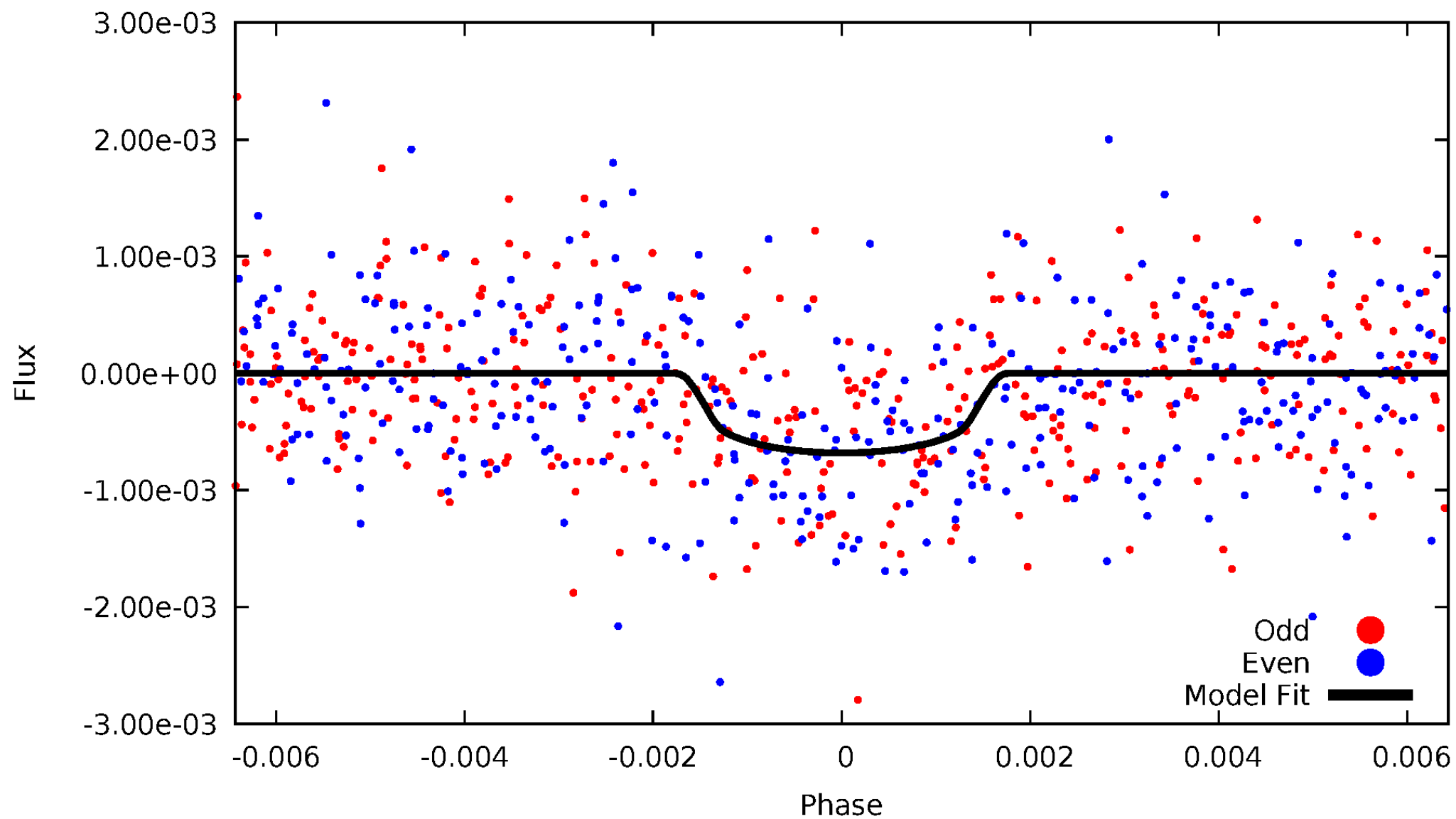


TCE 008007174-01



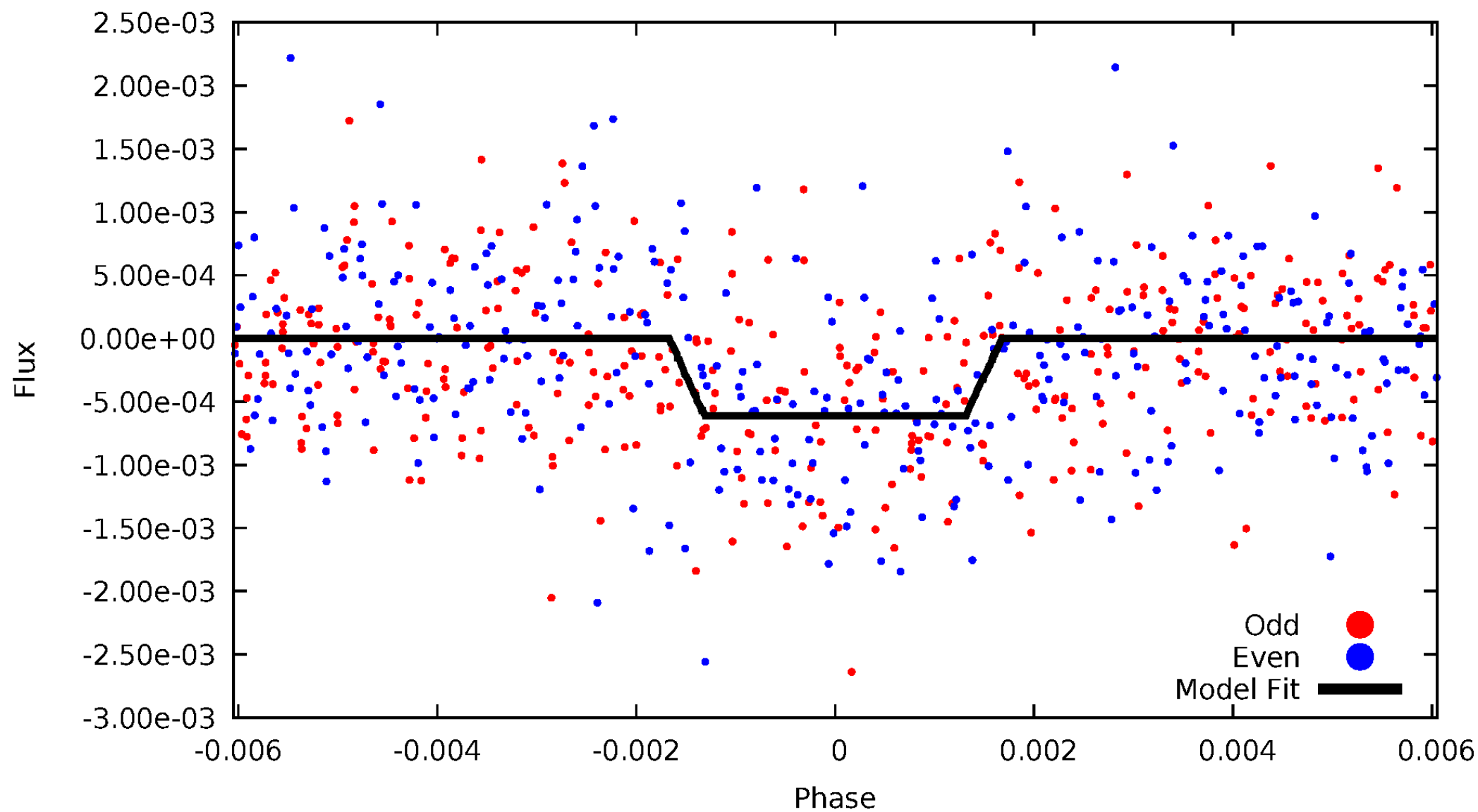
DV Odd/Even

TCE 008007174-01

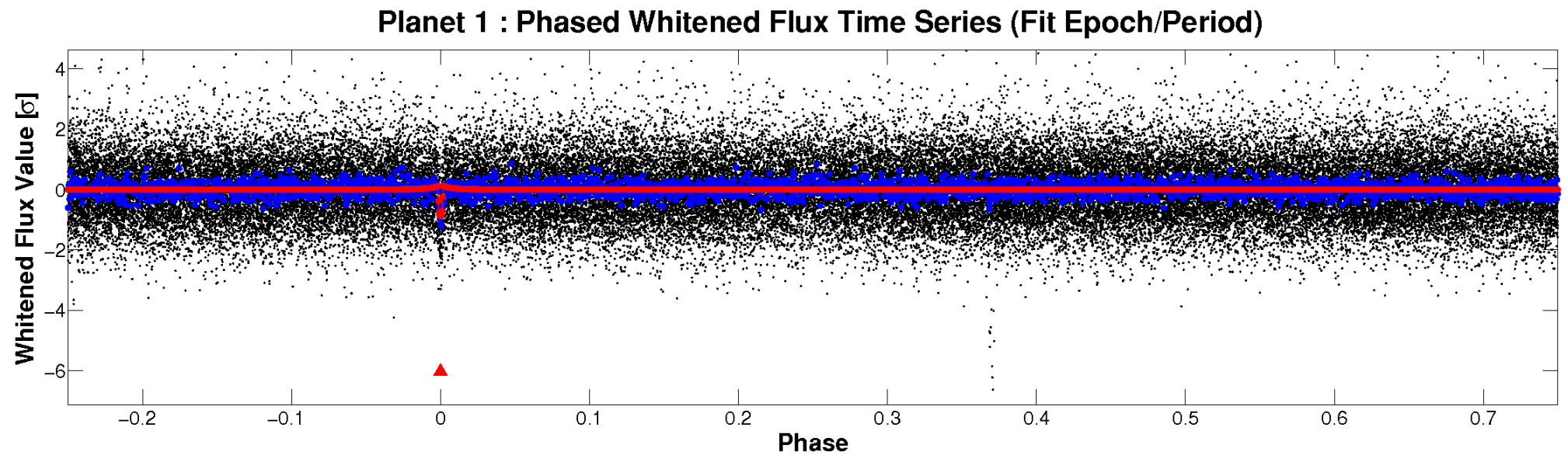
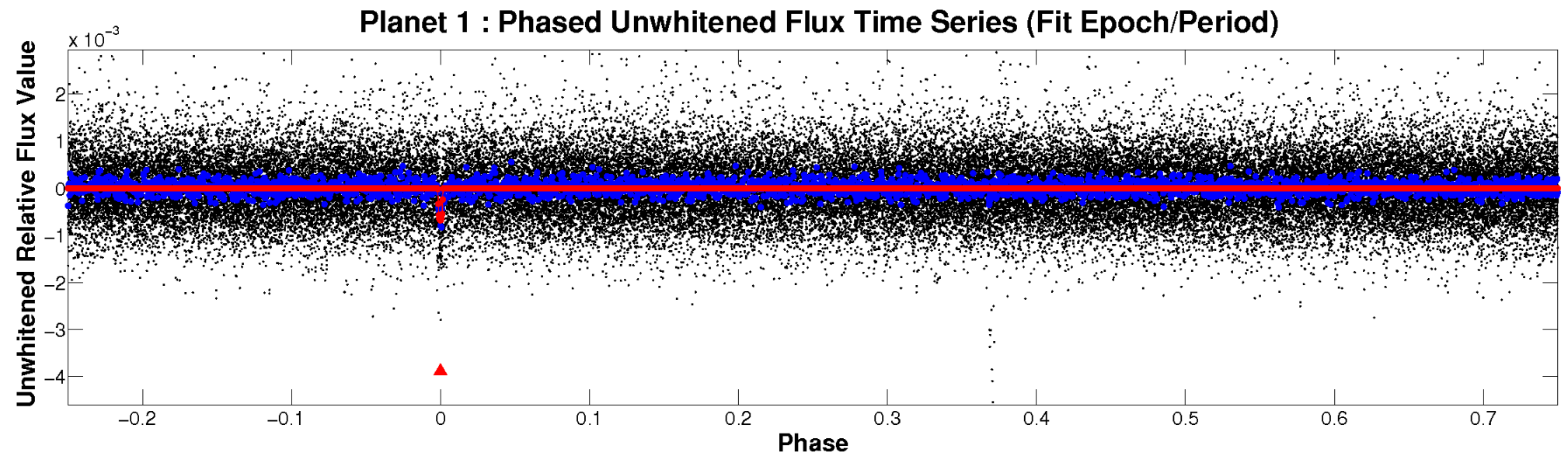


ALT Odd/Even

TCE 008007174-01

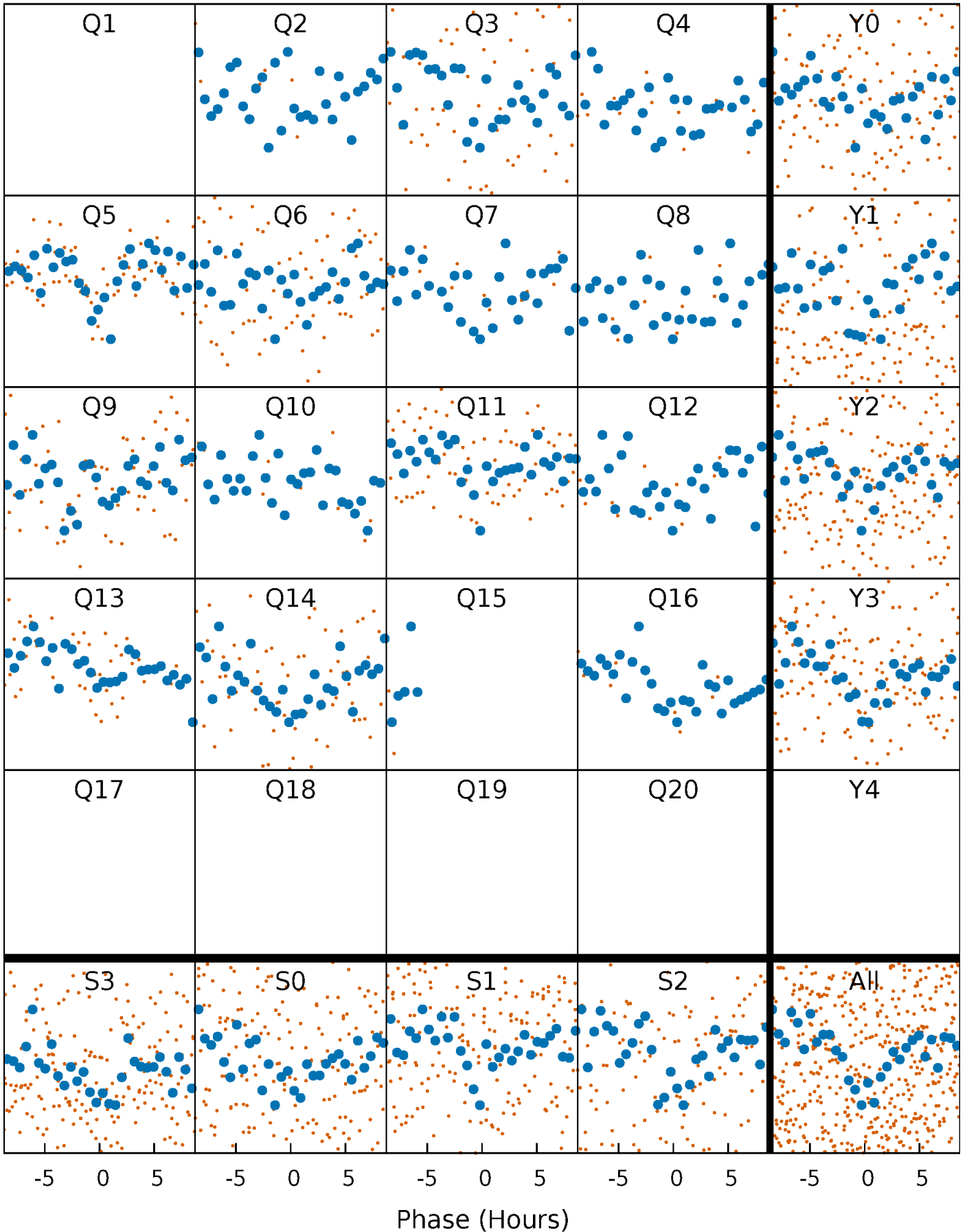


Non-Whitened Vs. Whitened Light Curve



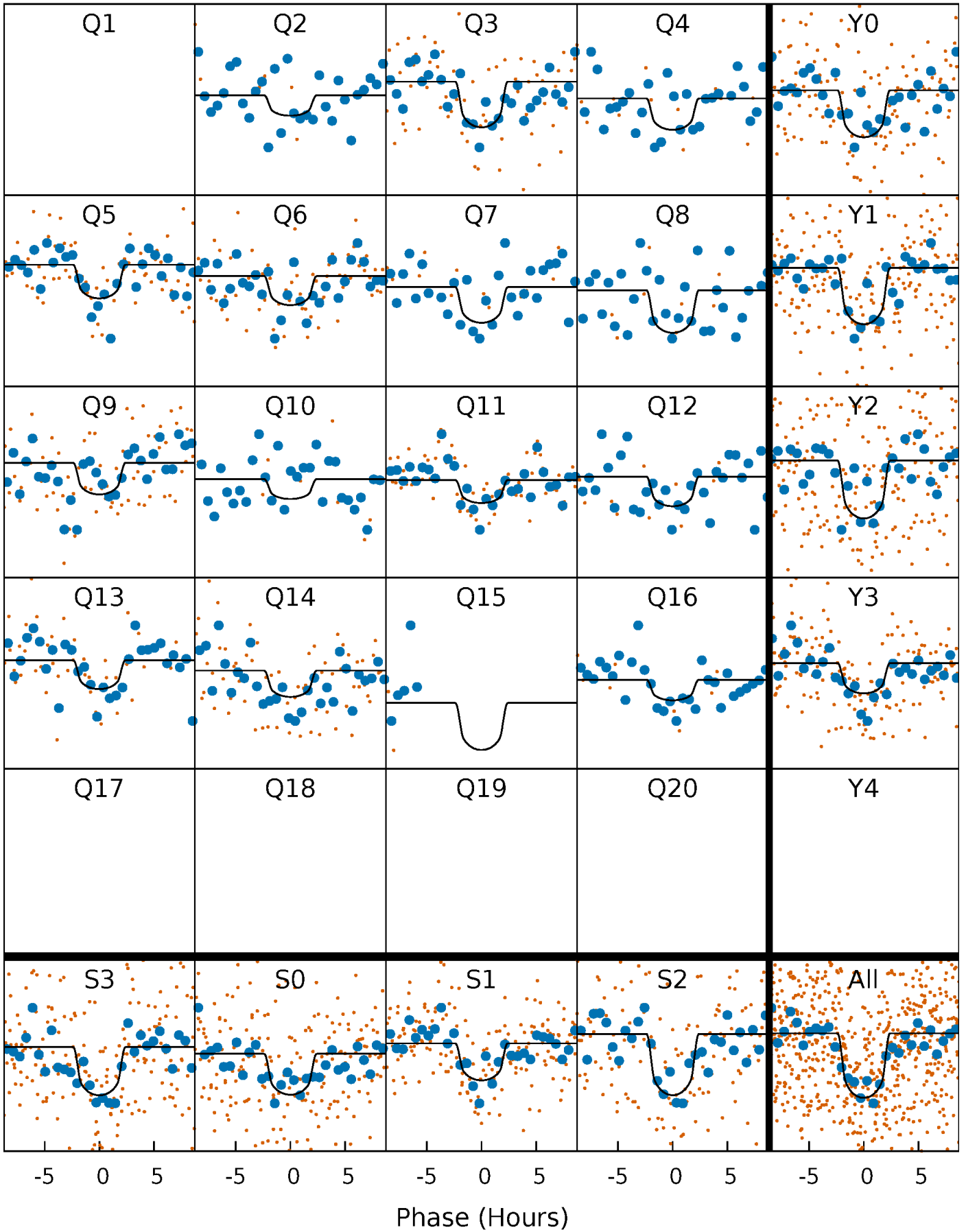
PDC Quarter-Phased Transit Curves

TCE 008007174-01 P= 56.648812 Days $T_0=168.466938$ (BKJD)



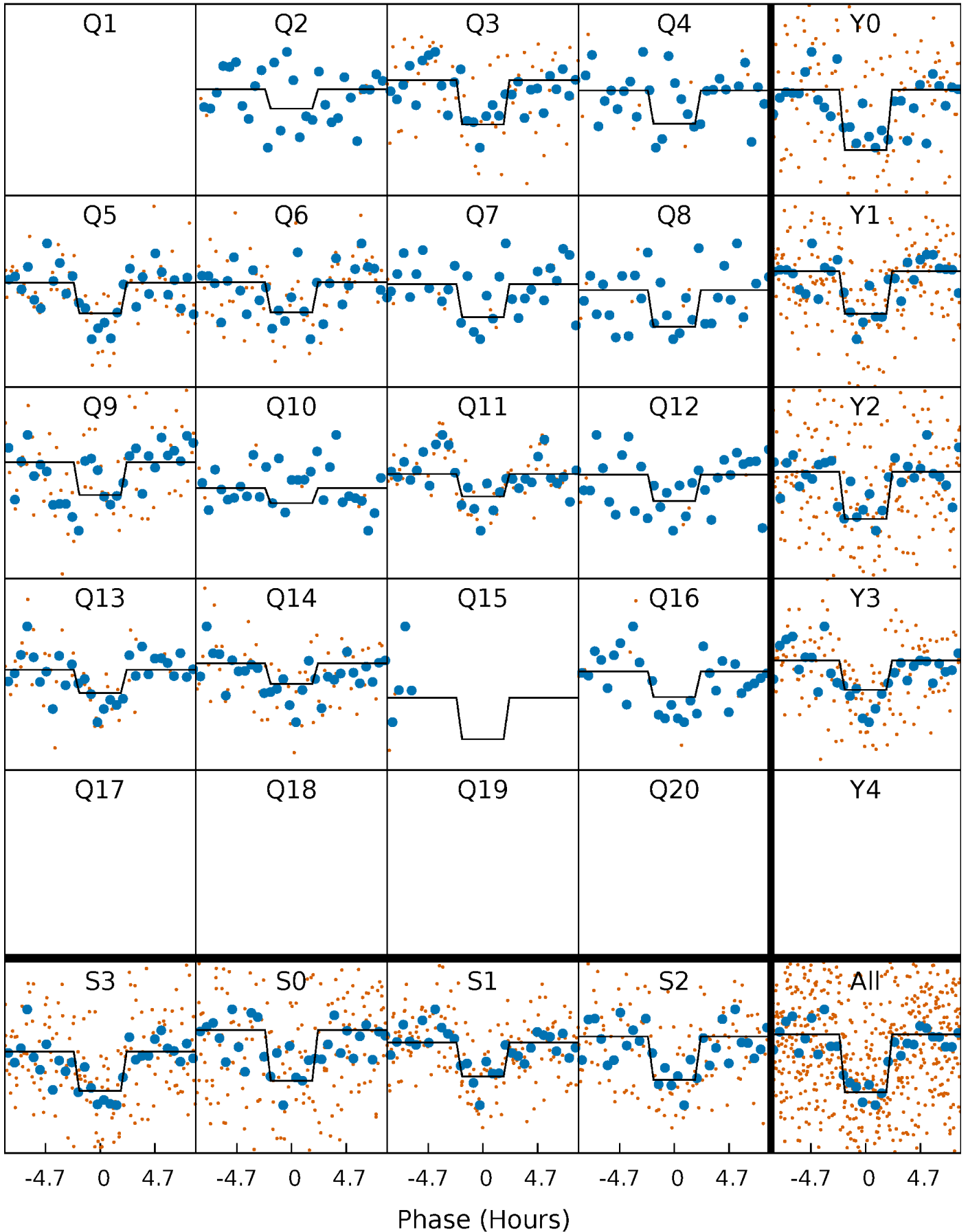
DV Quarter-Phased Transit Curves

TCE 008007174-01 P= 56.648812 Days $T_0=168.466938$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

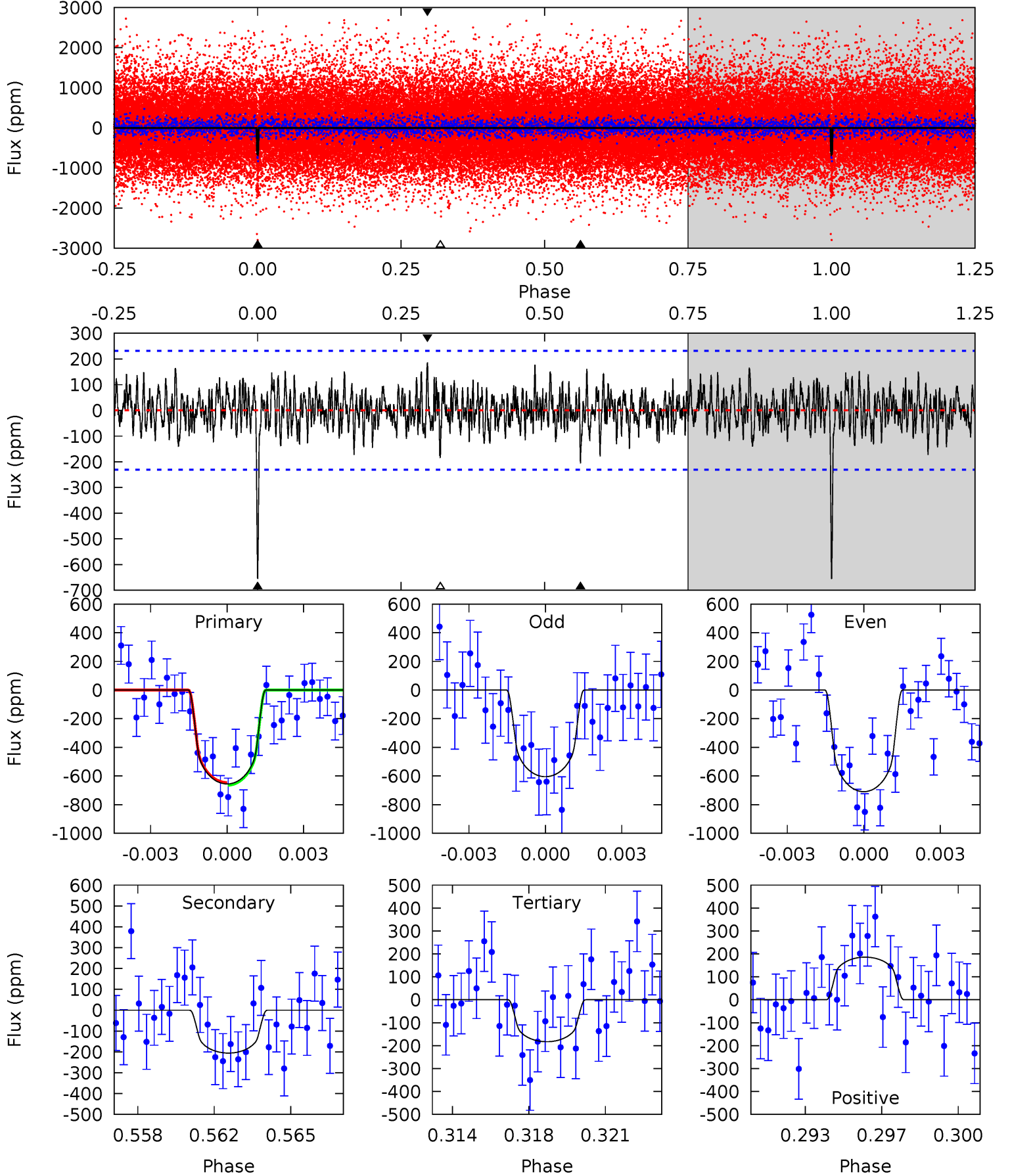
TCE 008007174-01 P= 56.648724 Days $T_0=168.469079$ (BKJD)



DV Model-Shift Uniqueness Test

008007174-01, P = 56.648812 Days, E = 111.818126 Days

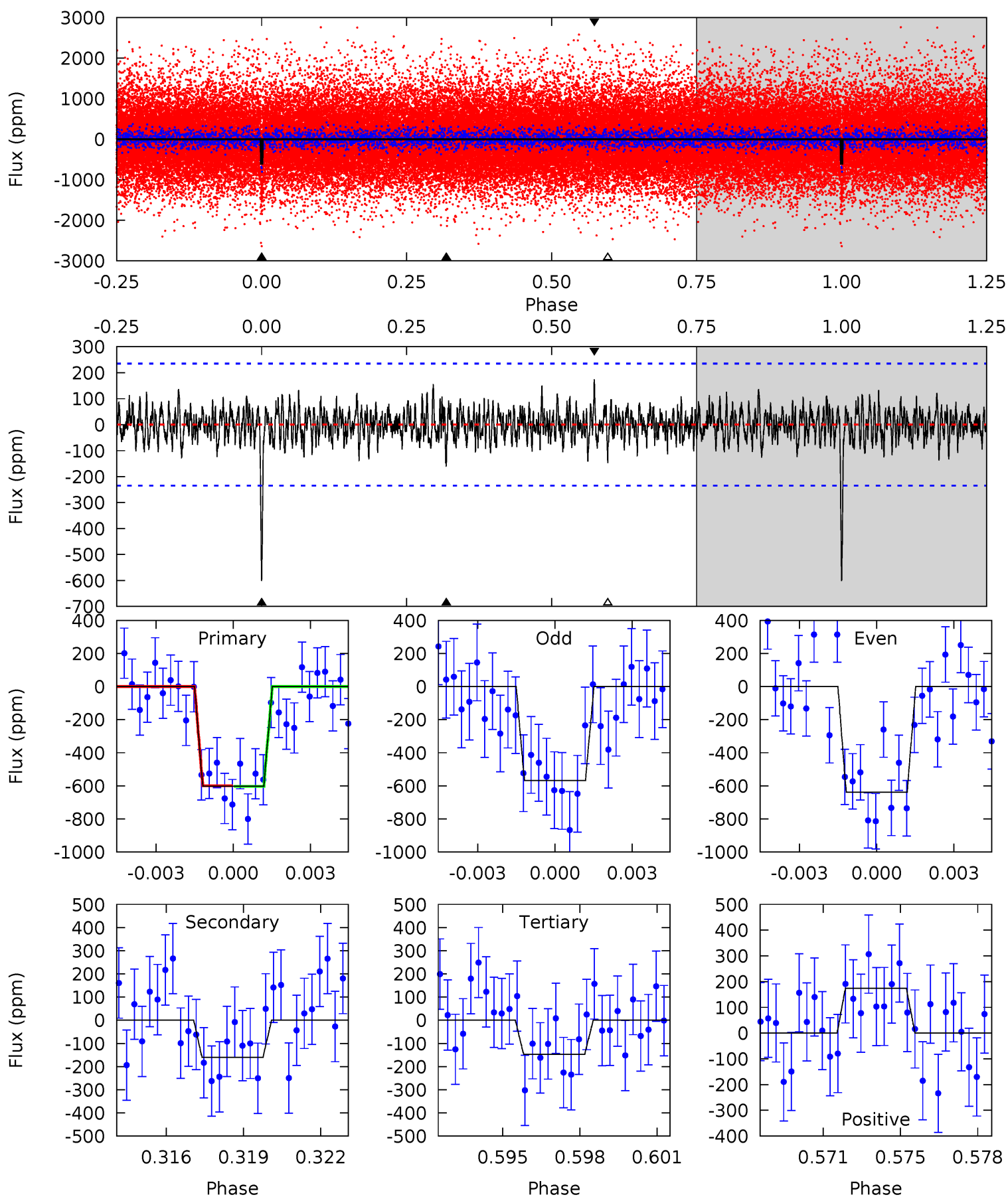
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	4.65	4.14	4.20	5.22	2.92	1.30	10.7	10.6	0.52	0.45	1.19	0.95	0.22	0.21



Alt Model-Shift Uniqueness Test

008007174-01, P = 56.648724 Days, E = 111.820355 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	3.57	3.29	3.87	5.23	2.94	1.06	10.1	9.54	0.28	-0.30	0.79	0.97	0.22	0.05



Stellar Parameters For KIC 008007174

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5023^{+166}_{-151}	$4.565^{+0.039}_{-0.066}$	$0.100^{+0.250}_{-0.300}$	$0.782^{+0.078}_{-0.064}$	$0.821^{+0.064}_{-0.071}$	$2.414^{+0.496}_{-0.493}$
	+3%/-3%	+1%/-1%	+250%/-300%	+10%/-8%	+8%/-9%	+21%/-20%
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 008007174-01 / KOI 5458.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-206 ± 44	$2.45^{+1.53}_{-1.32}$	531^{+21}_{-20}	3855^{+1410}_{-572}	1338^{+4957}_{-839}
Alt.	-160 ± 45	$2.29^{+1.51}_{-1.33}$	531^{+21}_{-20}	3776^{+1479}_{-592}	1197^{+5591}_{-791}

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

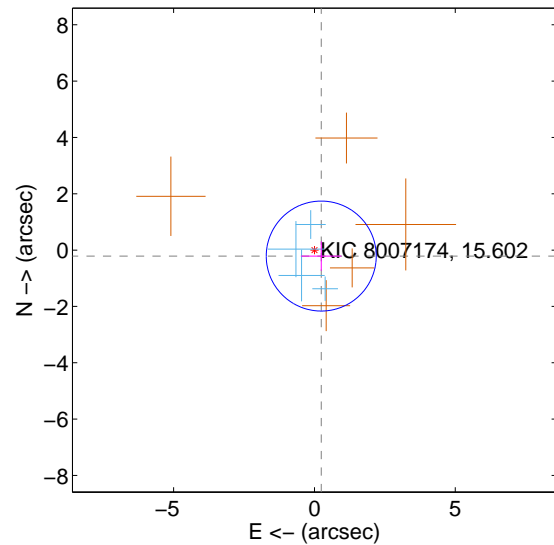
Supplemental centroid analysis for 008007174-01. Kepler magnitude: 15.60. Transit SNR 10.18

There are 4 quarters with good PRF difference image offsets

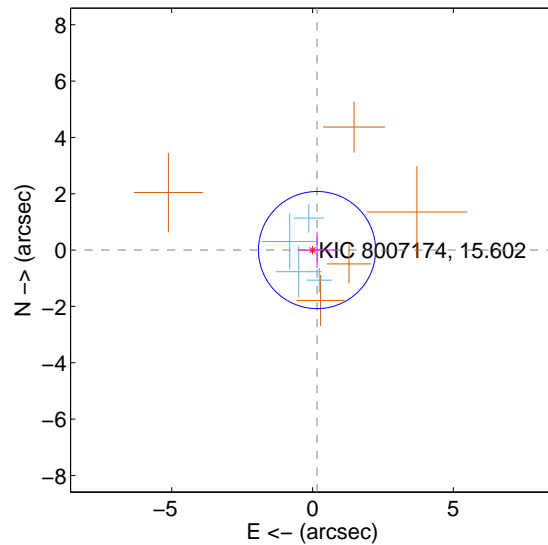
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.321 ± 0.651	0.49	-0.242 ± 0.717	-0.212 ± 0.521
PRF-fit source offset from KIC position	0.160 ± 0.693	0.23	-0.160 ± 0.692	0.001 ± 0.635
photometric centroid source offset	3.13 ± 1.34	2.33	2.69 ± 1.37	1.59 ± 1.28

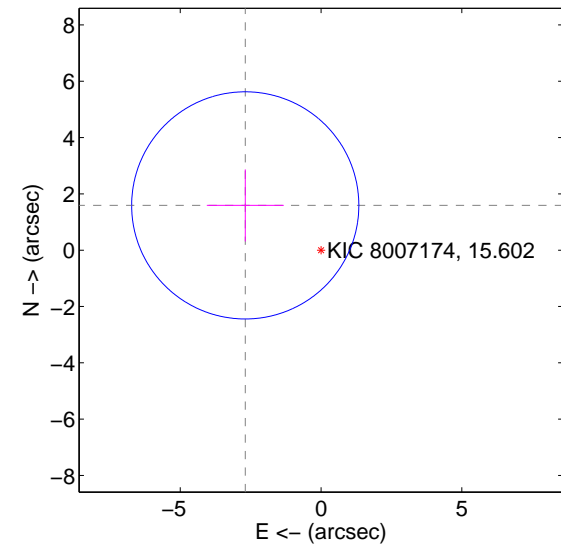
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

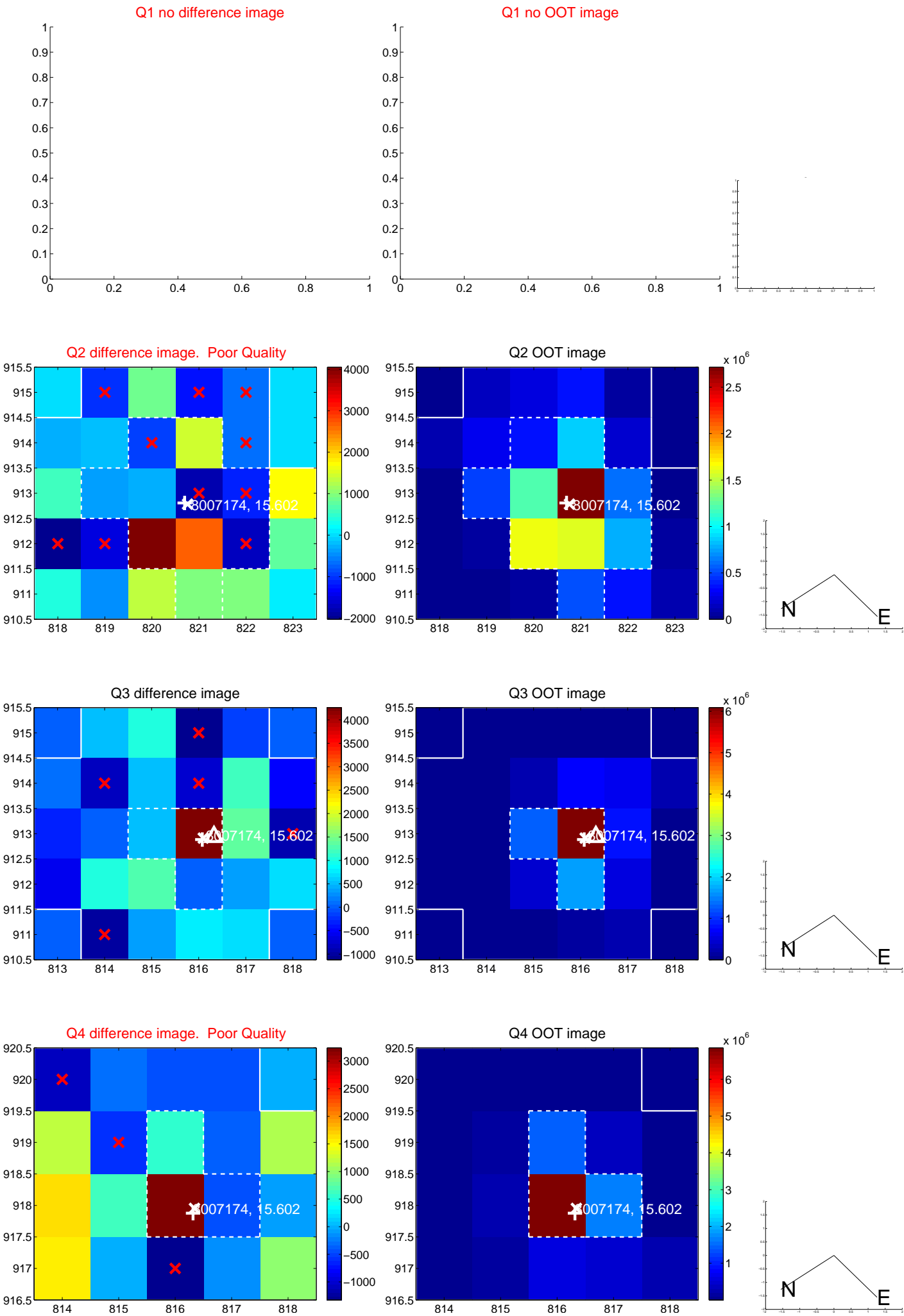


offset from photometric centroids

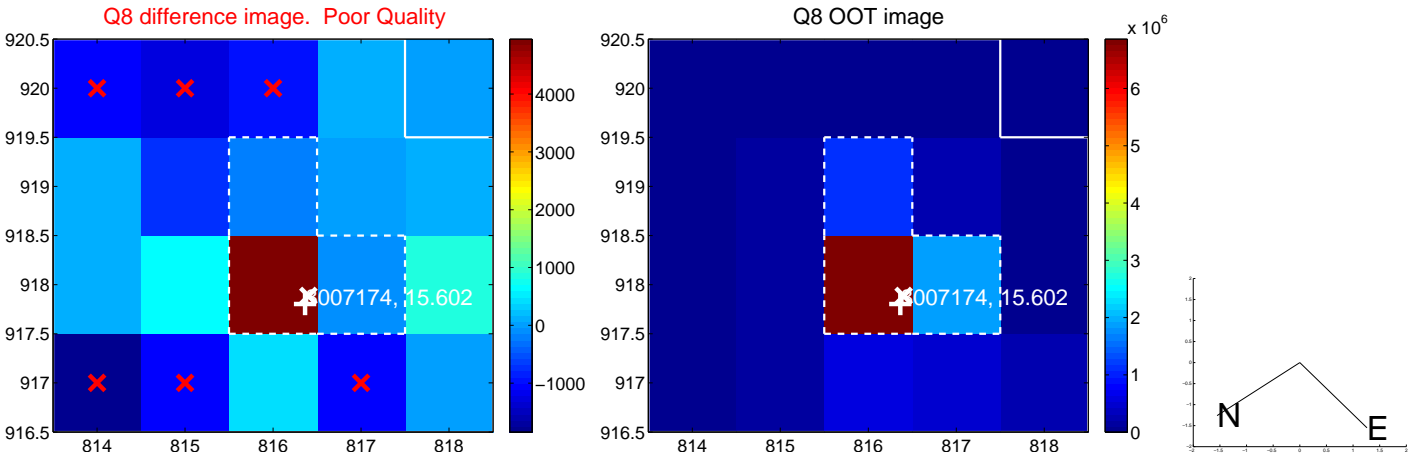
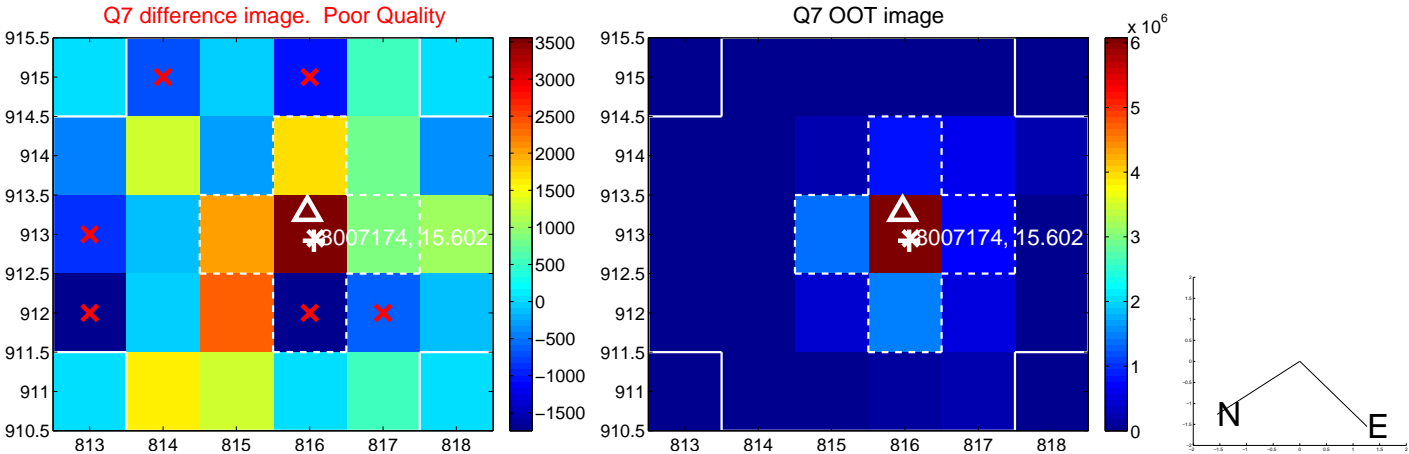
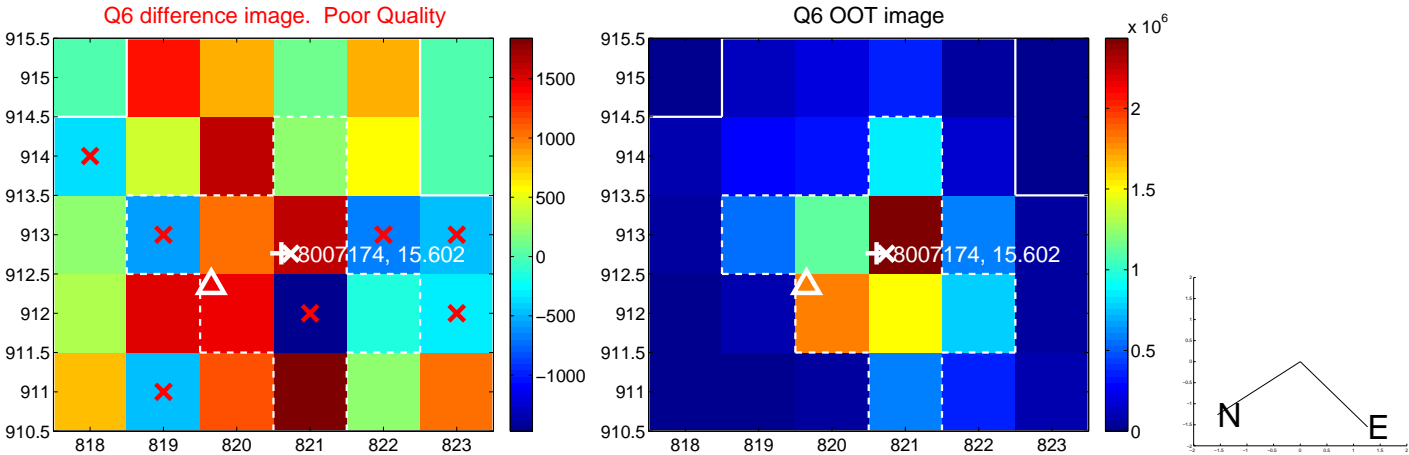
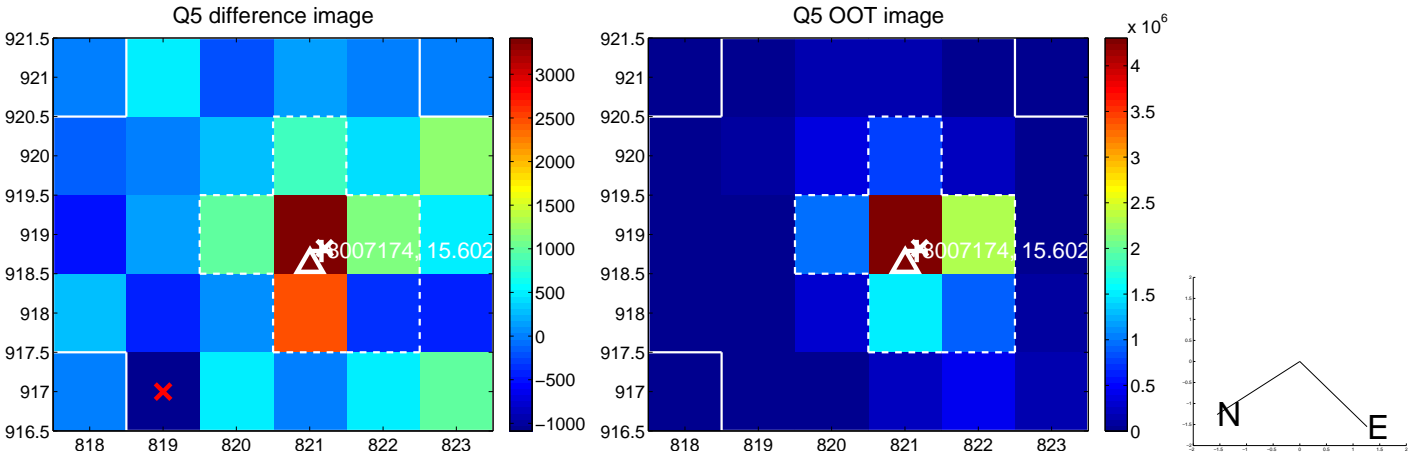


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

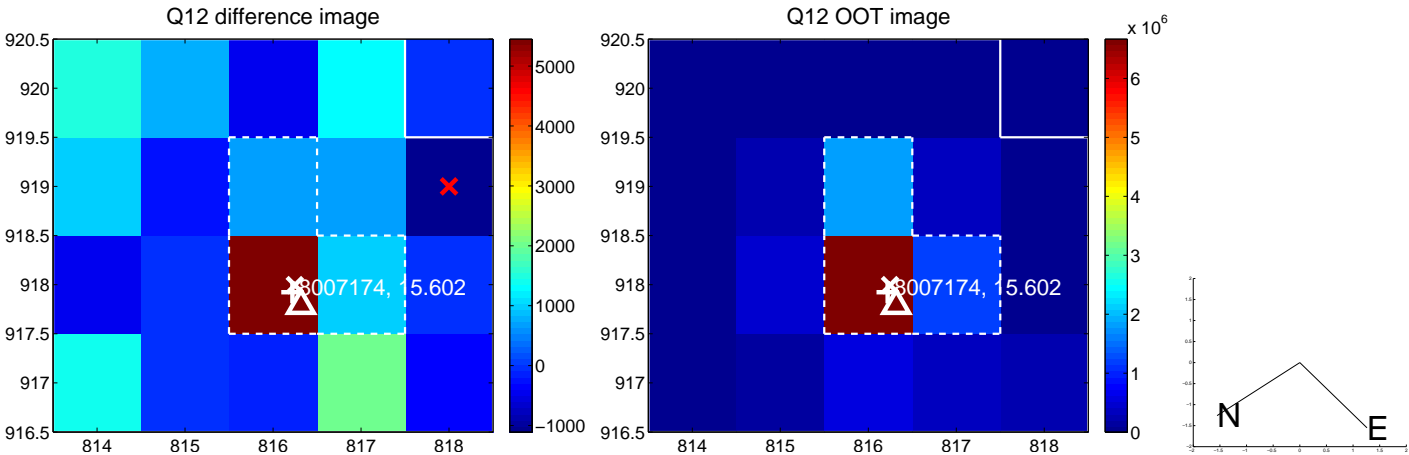
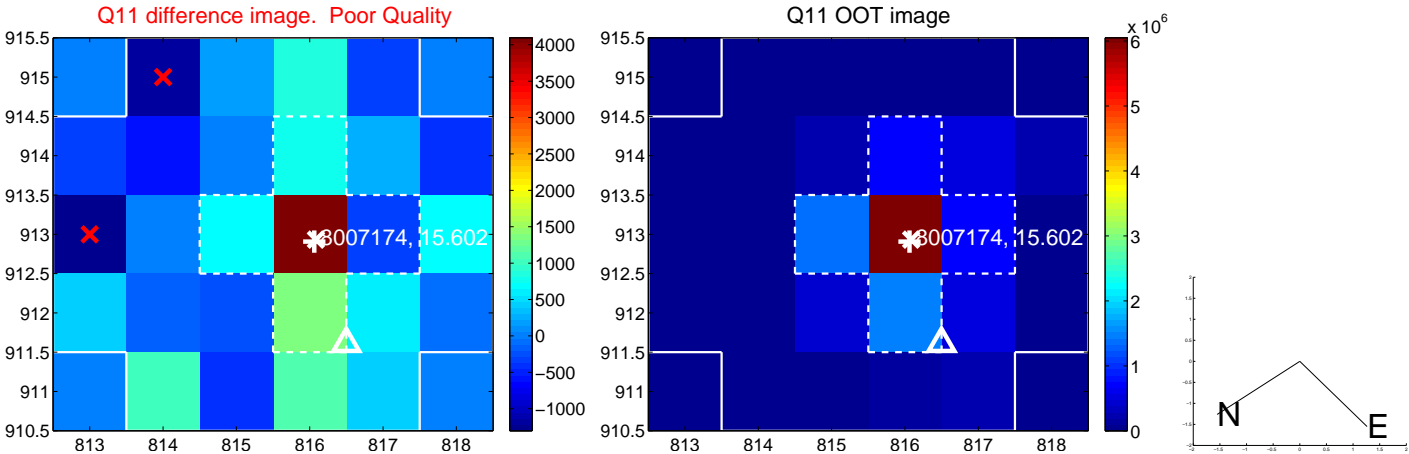
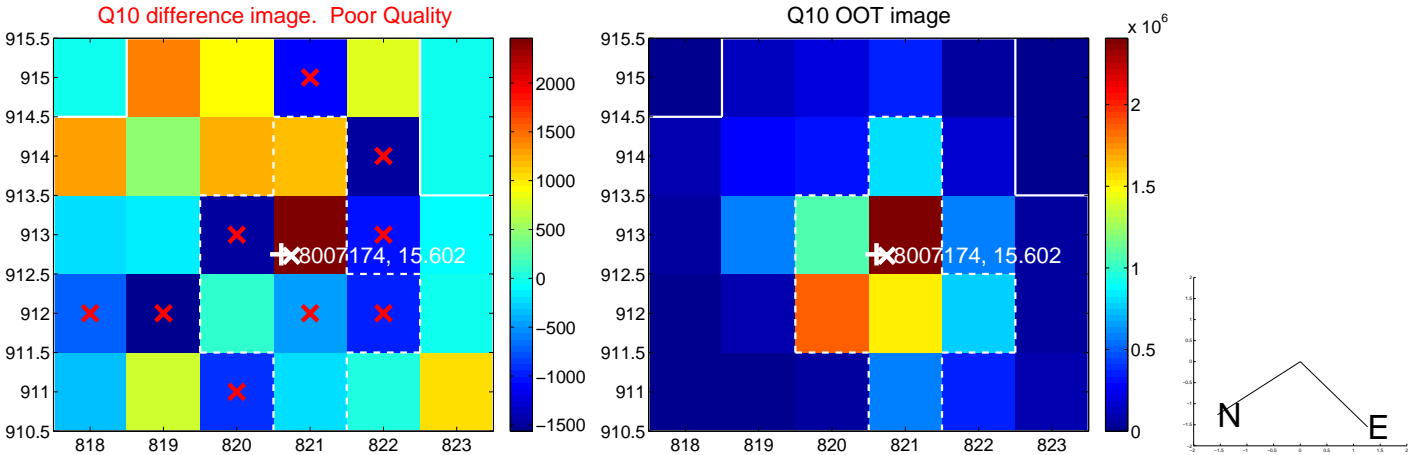
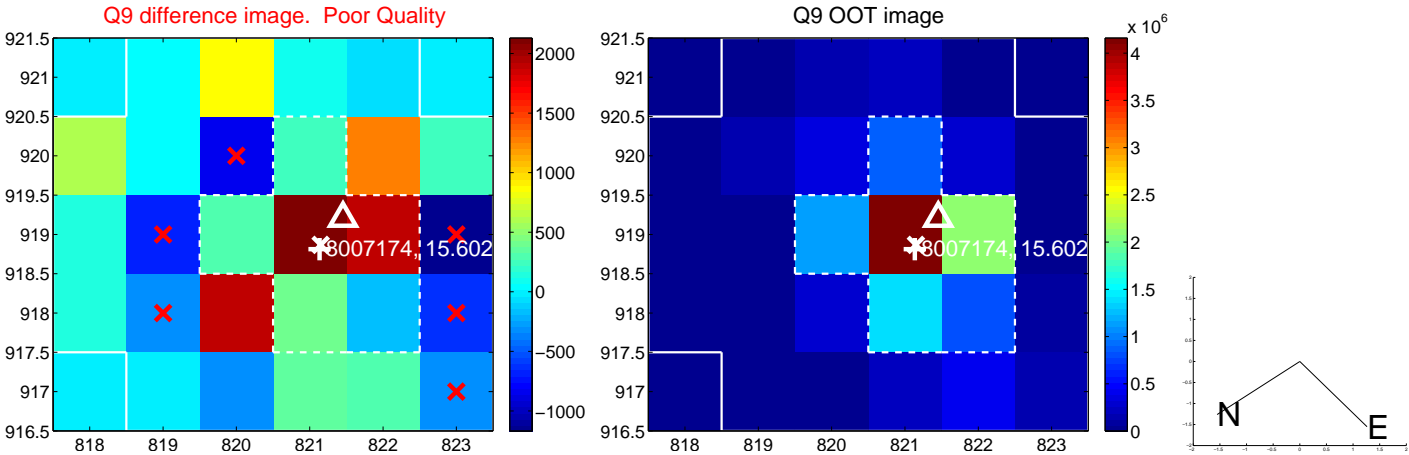
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



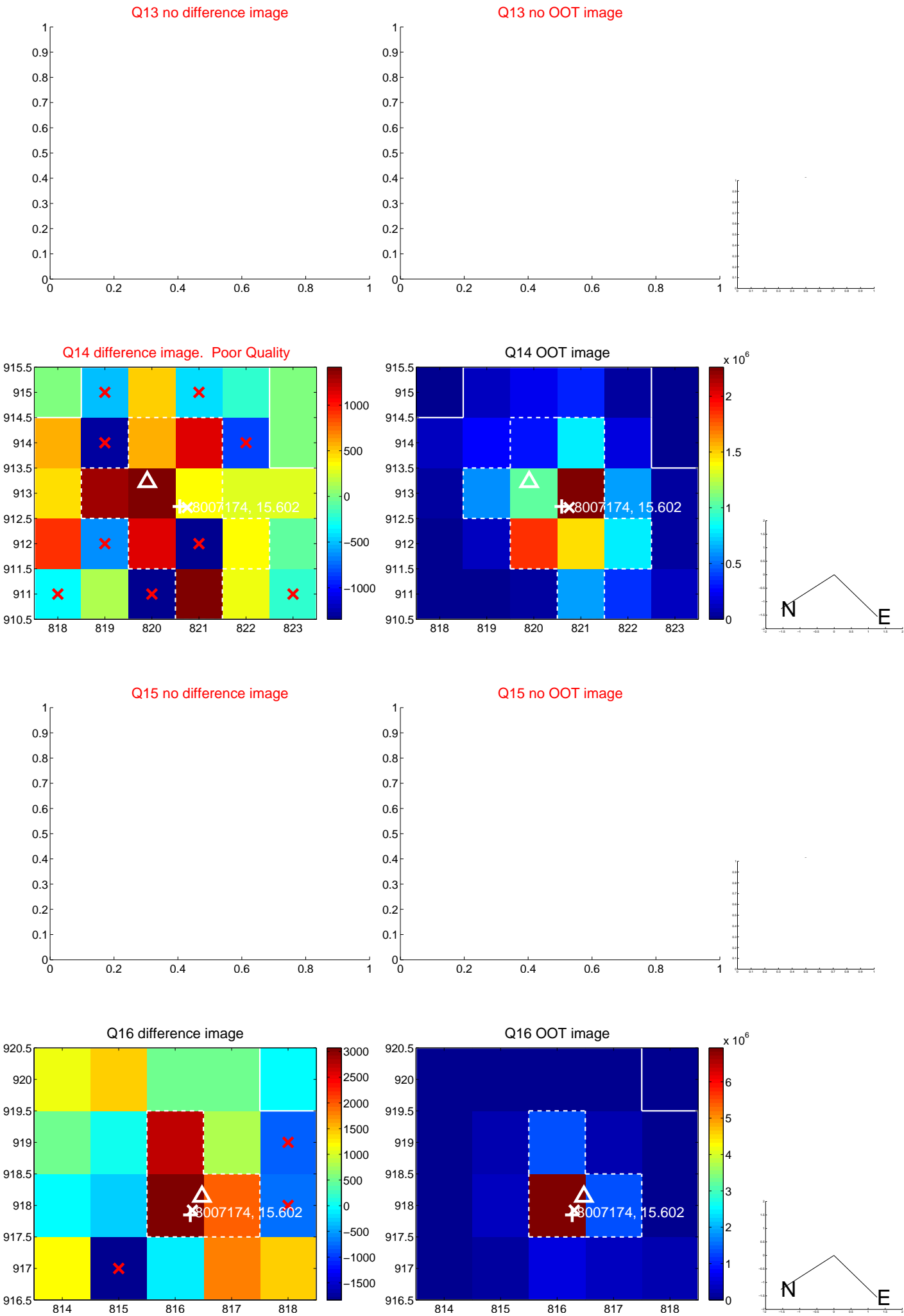
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



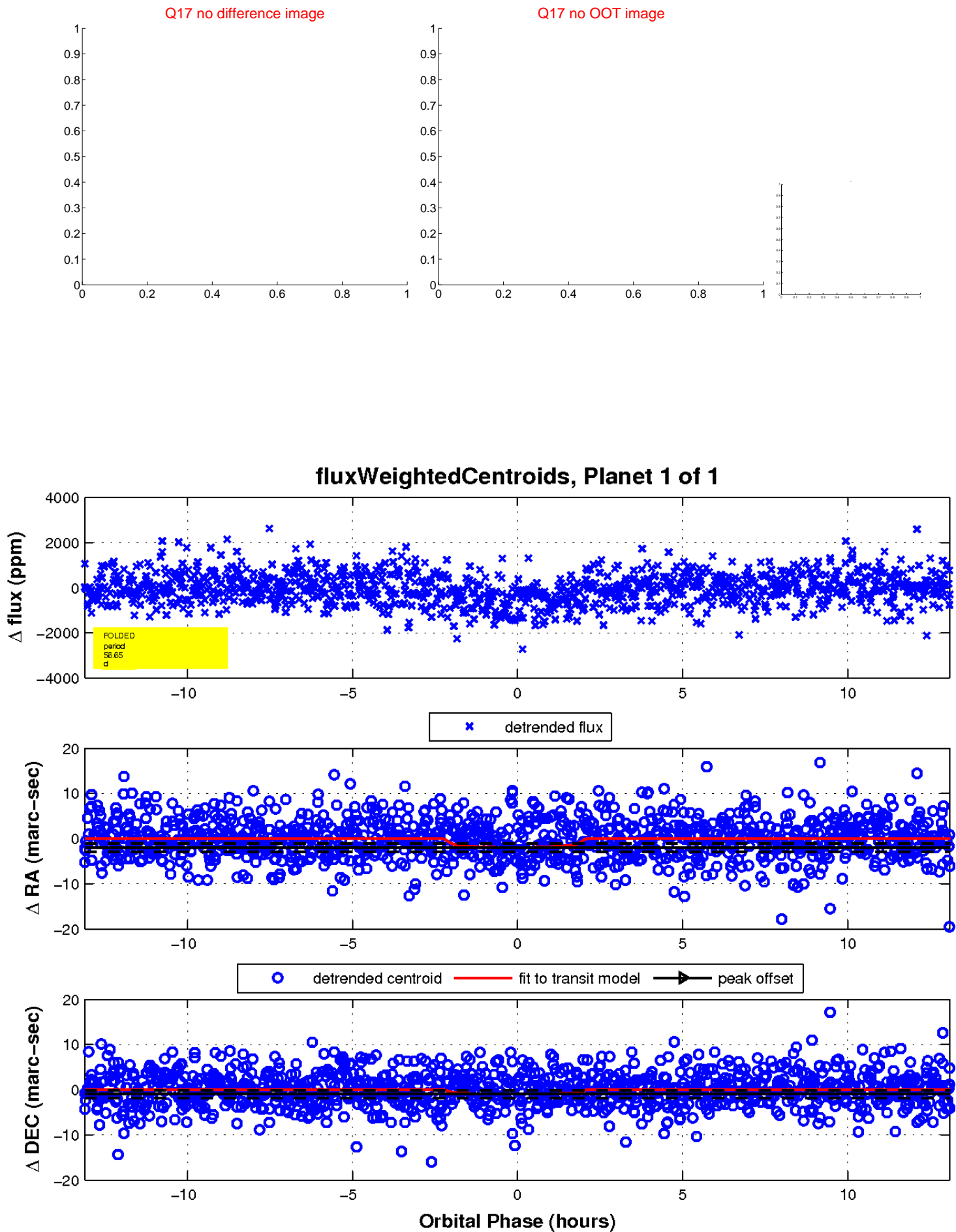
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

