

KIC 008494617

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})
008494617-01	OBS	2389.01	22.922037	133.670152	129.8	8.423	20.1	20.5	1.08	5897	1.44	51.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008494617-01	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.

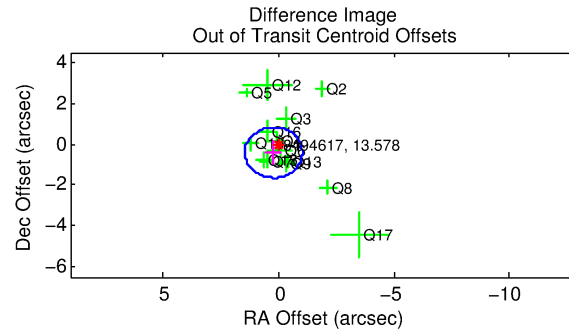
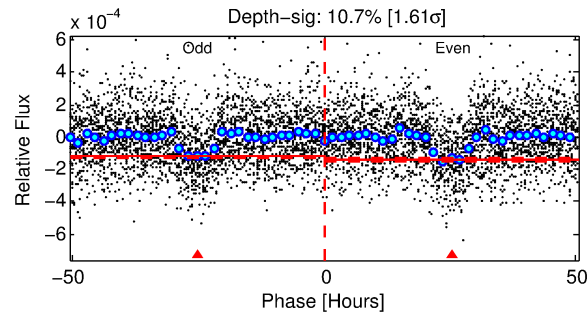
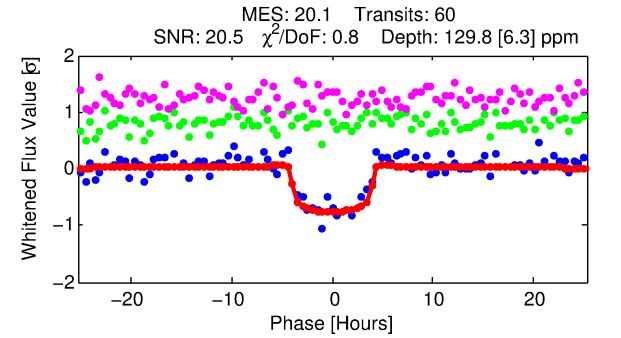
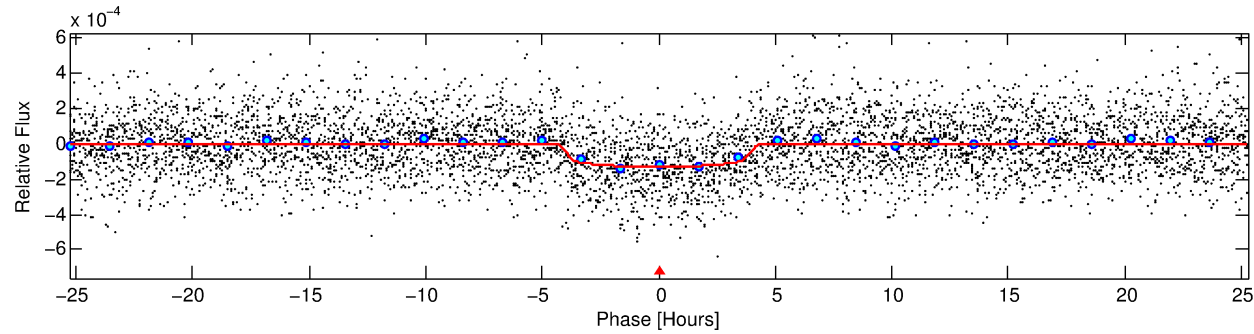
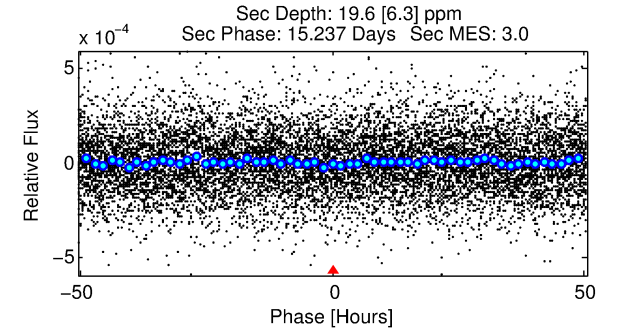
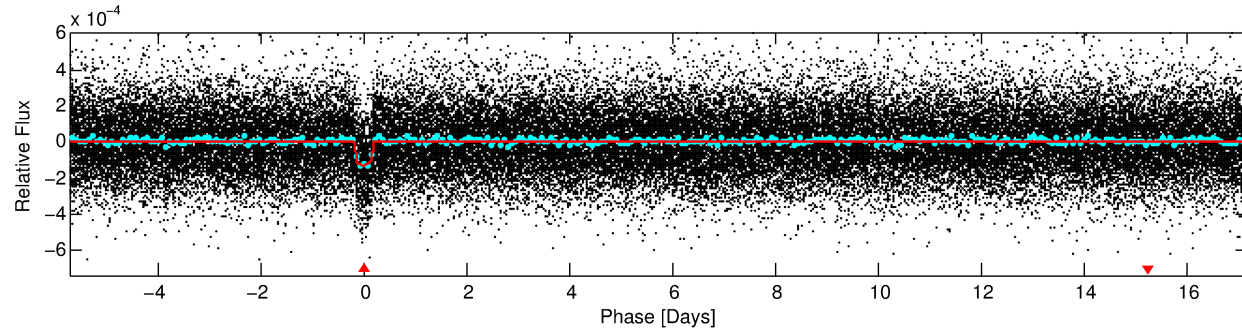
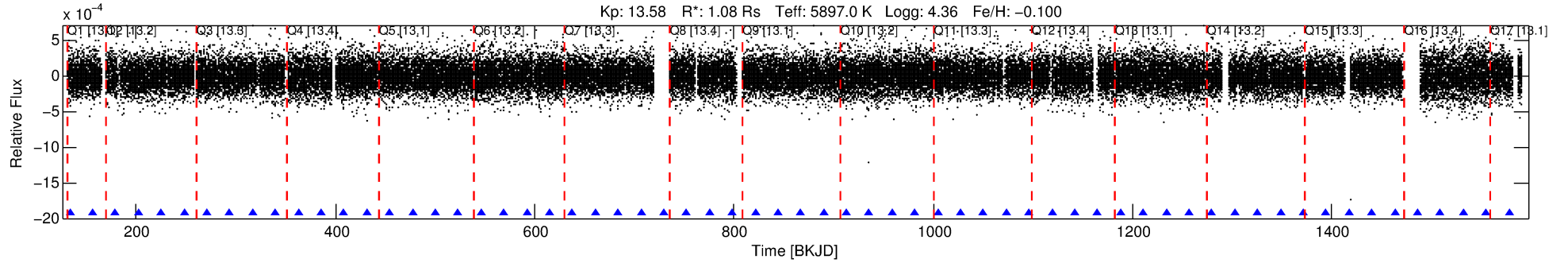
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008494617-01

No Significant Match Found

DV One-Page Summary

KIC: 8494617 Candidate: 1 of 1 Period: 22.922 d
KOI: K02389.01 Corr: 0.990



DV Fit Results:

Period = 22.92204 [0.00020] d
Epoch = 133.6702 [0.0071] BKJD
Rp/R* = 0.0122 [0.0017]
a/R* = 10.34 [6.87]
b = 0.88 [0.17]
Seff = 51.80 [11.02]
Teq = 684 [36] K
Rp = 1.43 [0.29] Re
a = 0.1563 [0.0207] AU
Ag = 127.96 [59.87] [2.12σ]
Teffp = 3557 [384] K [7.45σ]

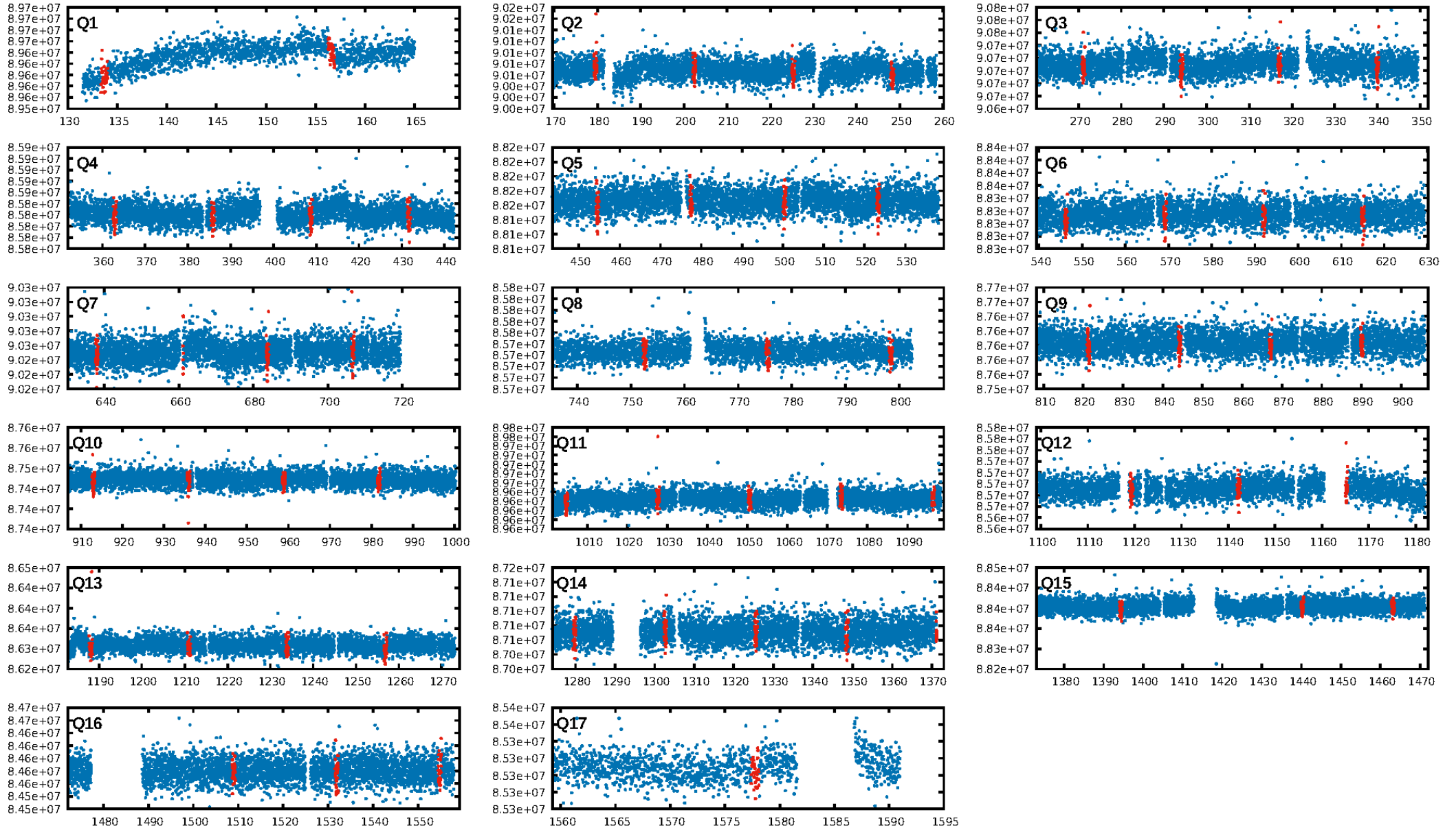
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 93.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.65e-88
RollingBand-fgt: 1.00 [57/57]
GhostDiagnostic-chr: 3.606
Centroid-sig: 0.4%
Centroid-so: 1.846 arcsec [2.64σ]
OotOffset-rm: 0.456 arcsec [1.10σ]
KicOffset-rm: 0.484 arcsec [0.95σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [17/17]

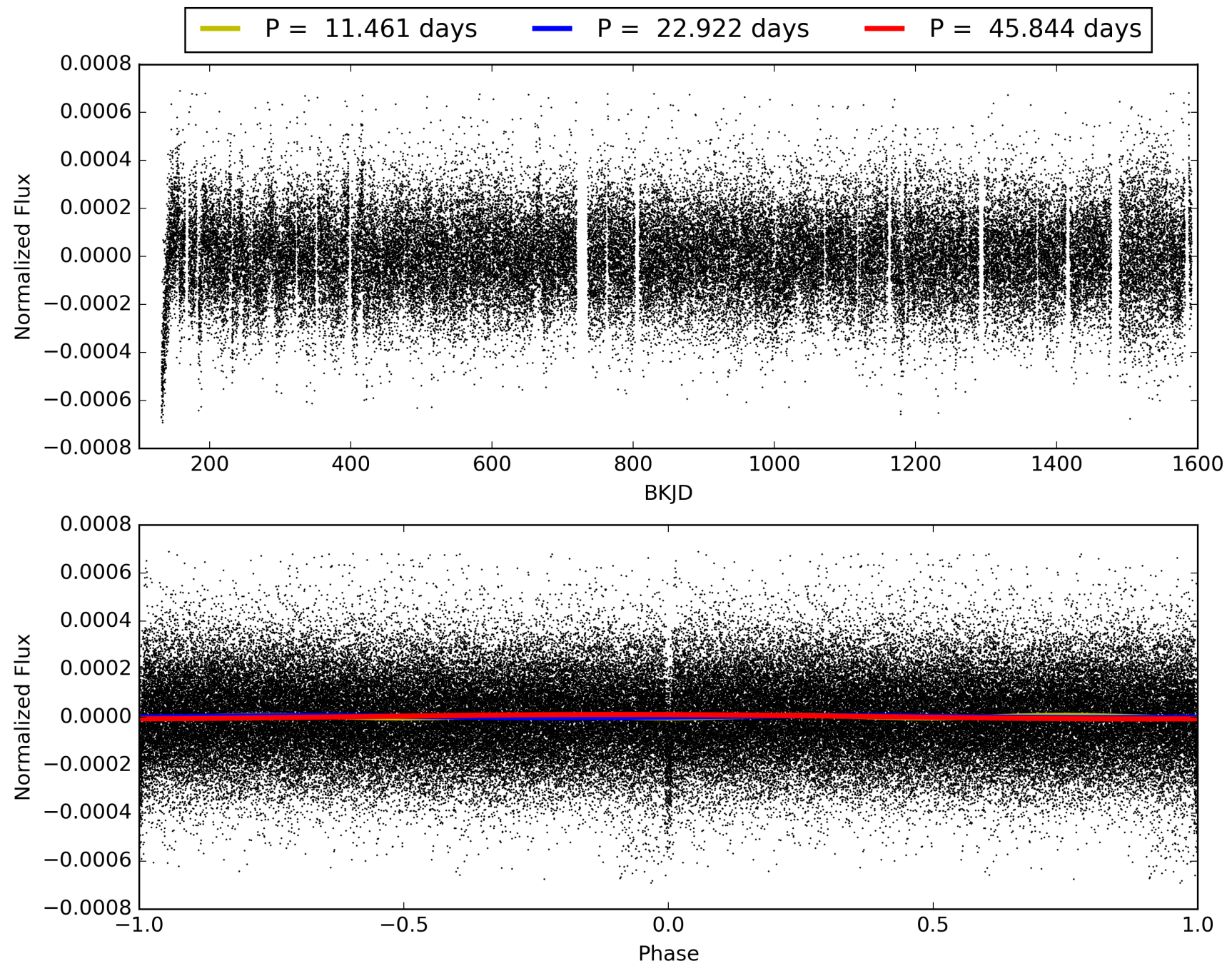
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:43:43 Z

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

TCE 008494617-01, PDC Light Curves

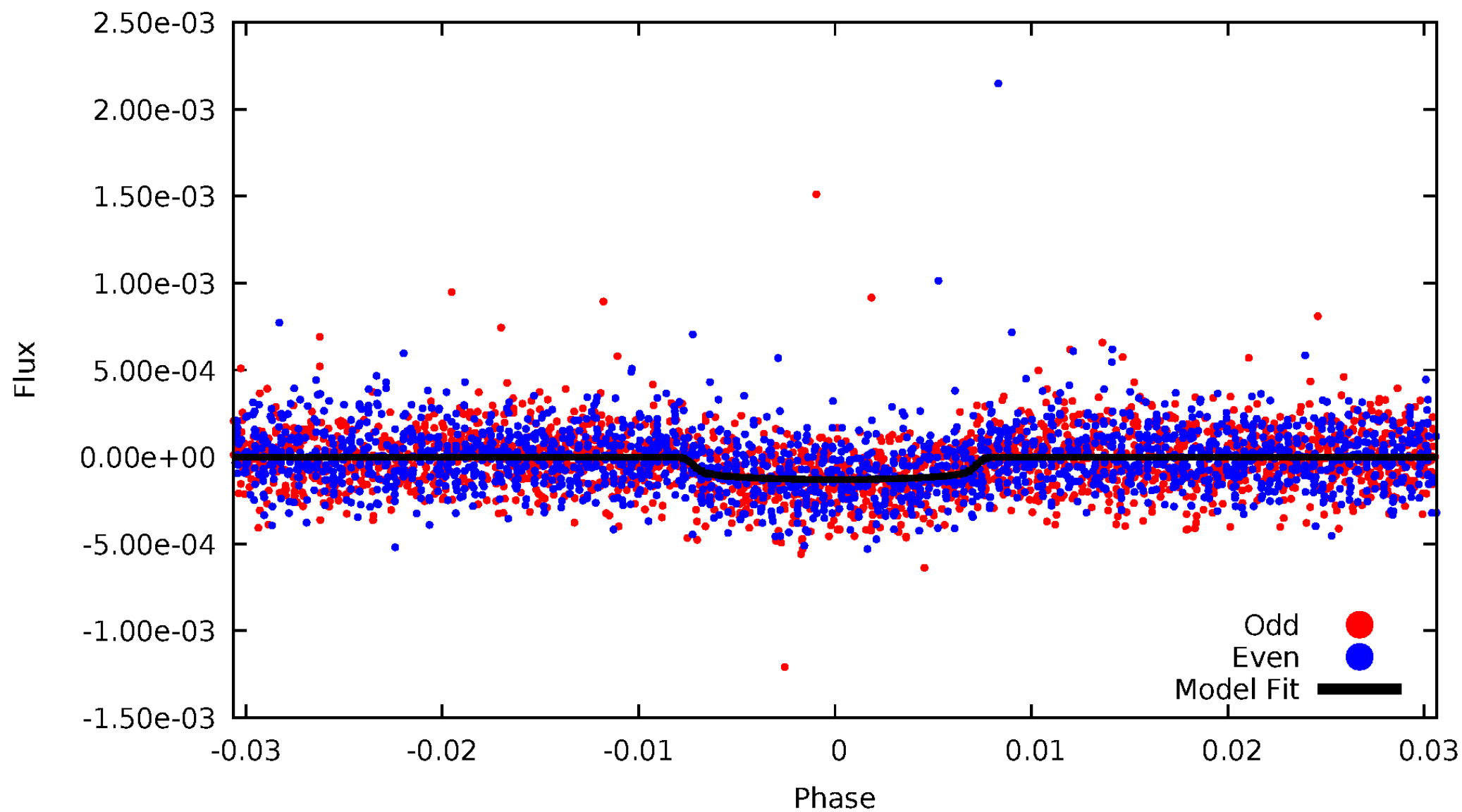


TCE 008494617-01



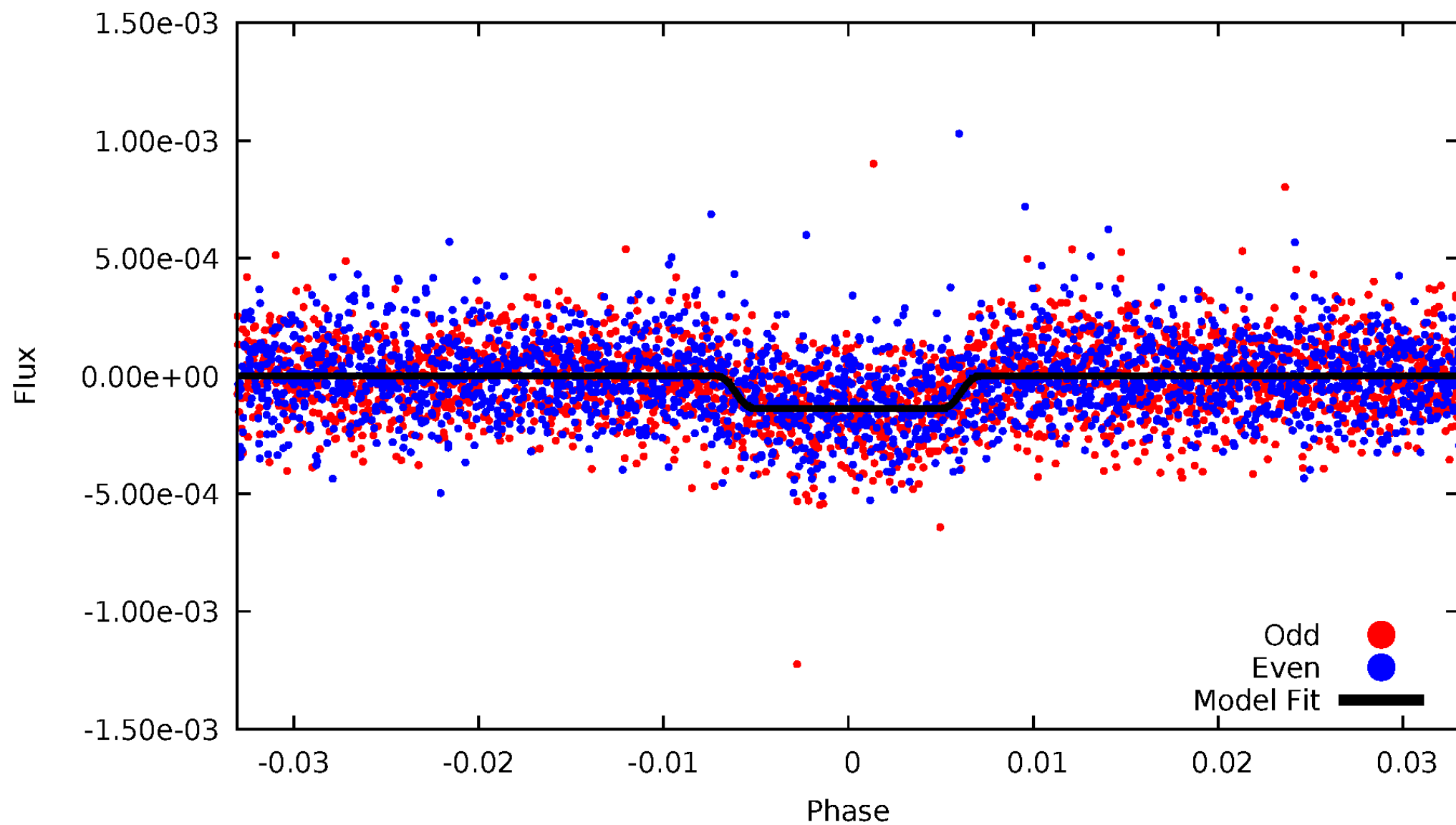
DV Odd/Even

TCE 008494617-01

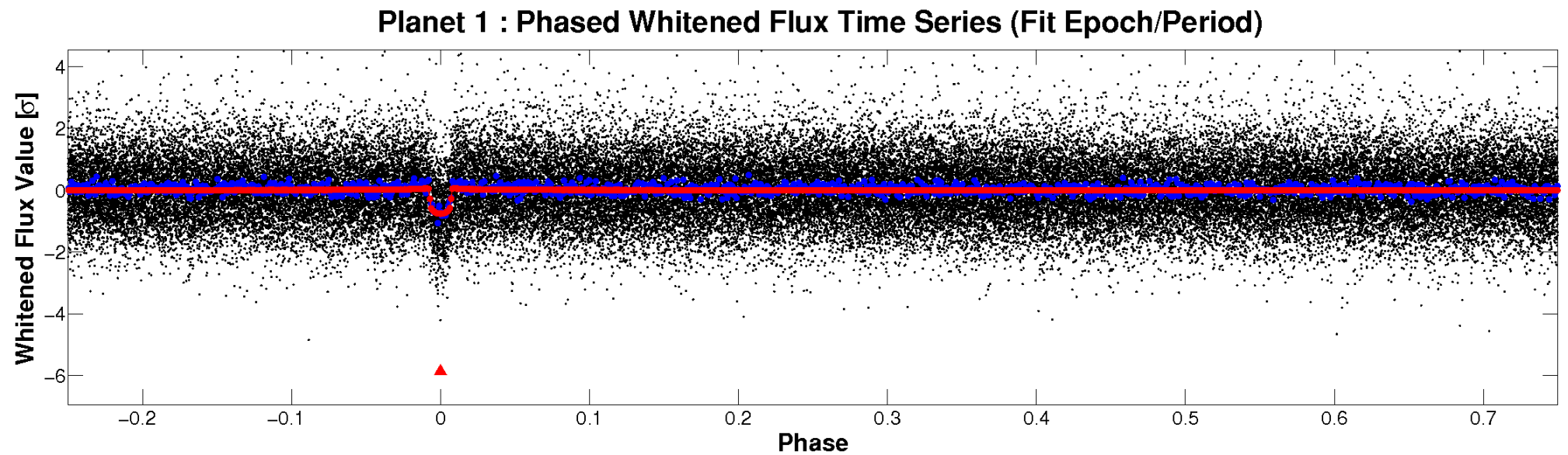
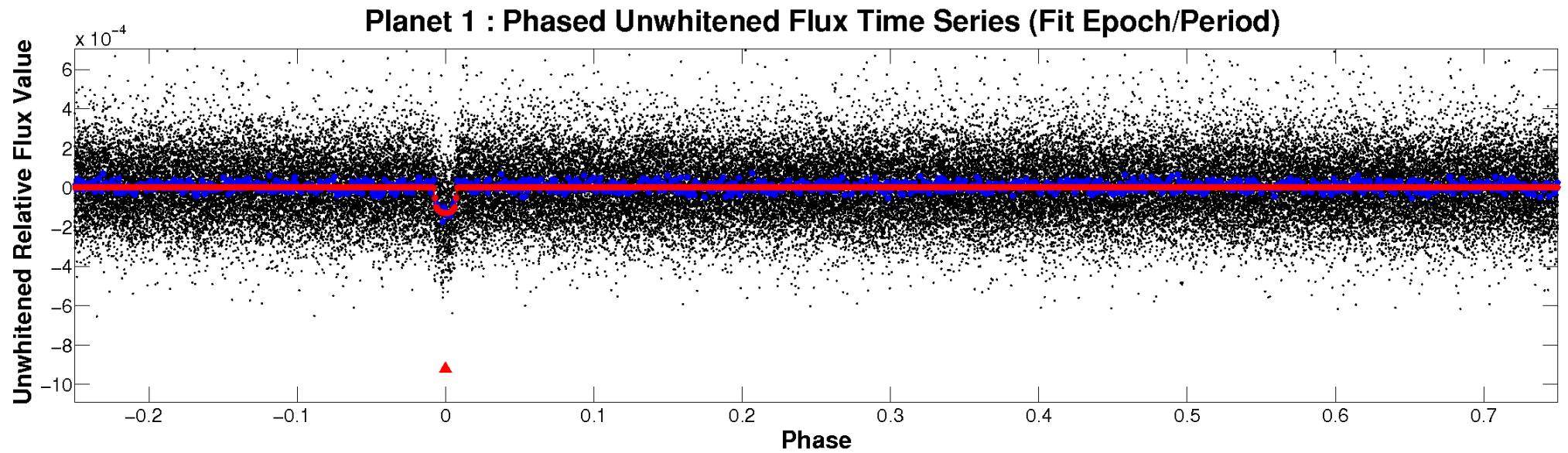


ALT Odd/Even

TCE 008494617-01

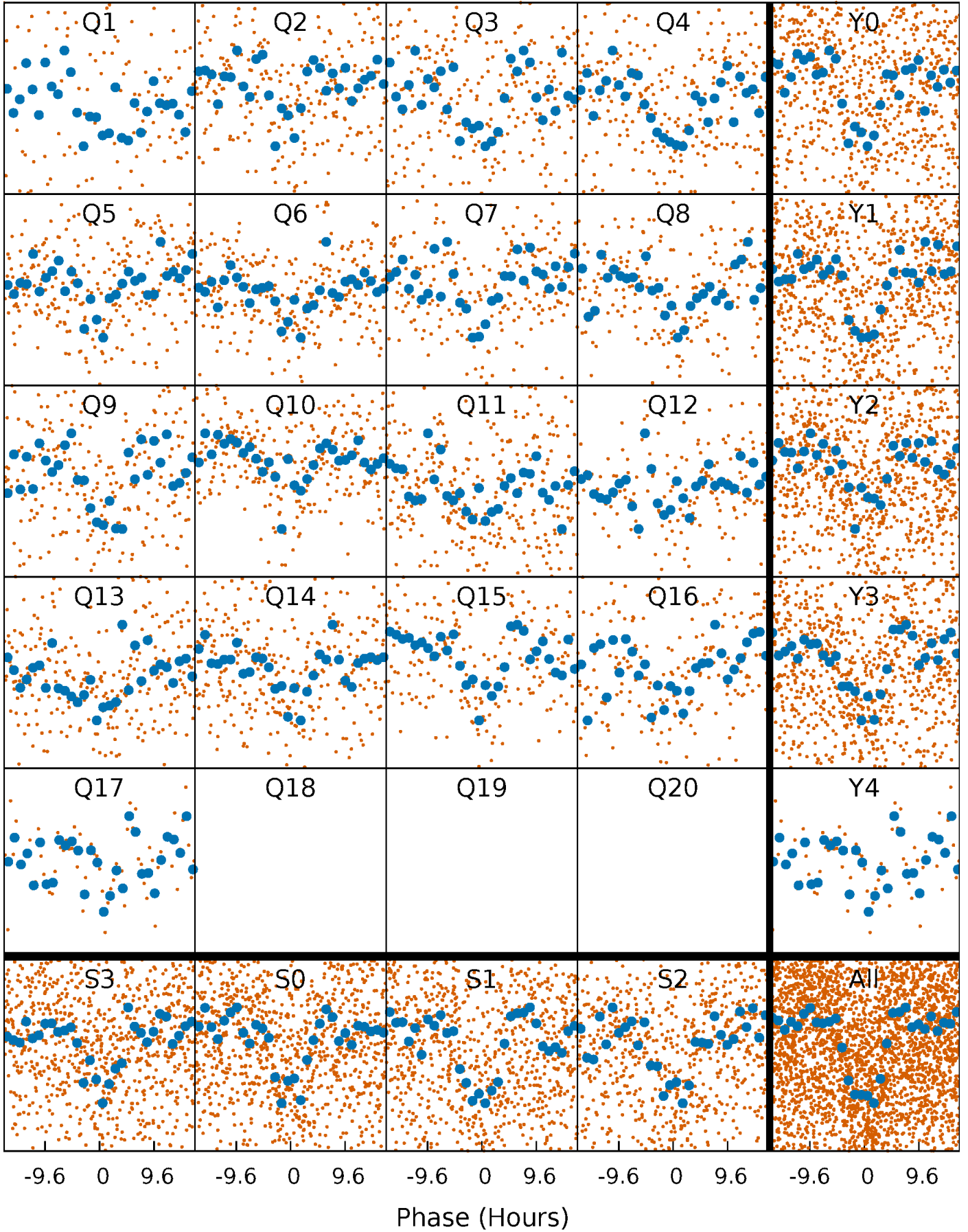


Non-Whitened Vs. Whitened Light Curve



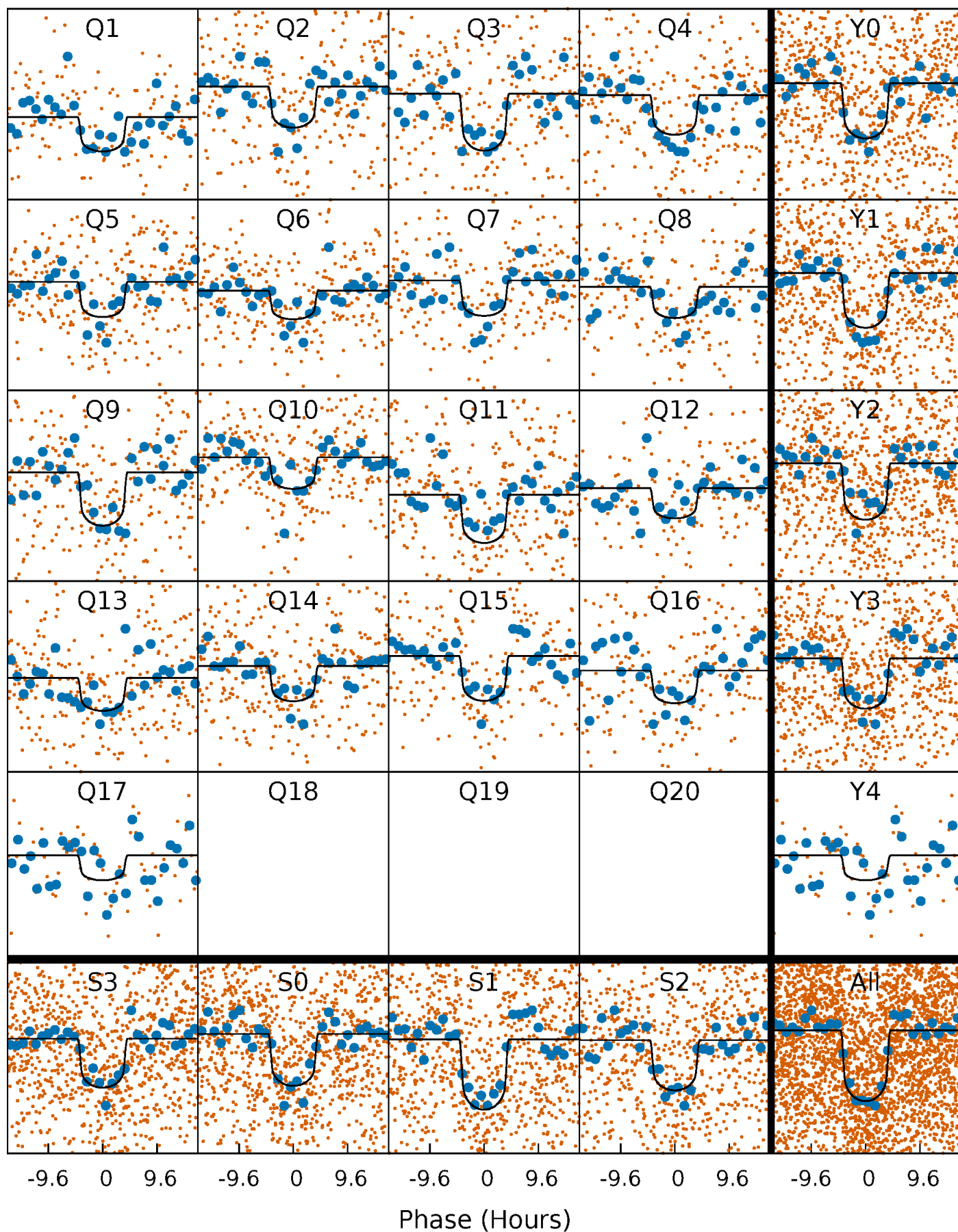
PDC Quarter-Phased Transit Curves

TCE 008494617-01 P= 22.922037 Days $T_0=133.670152$ (BKJD)



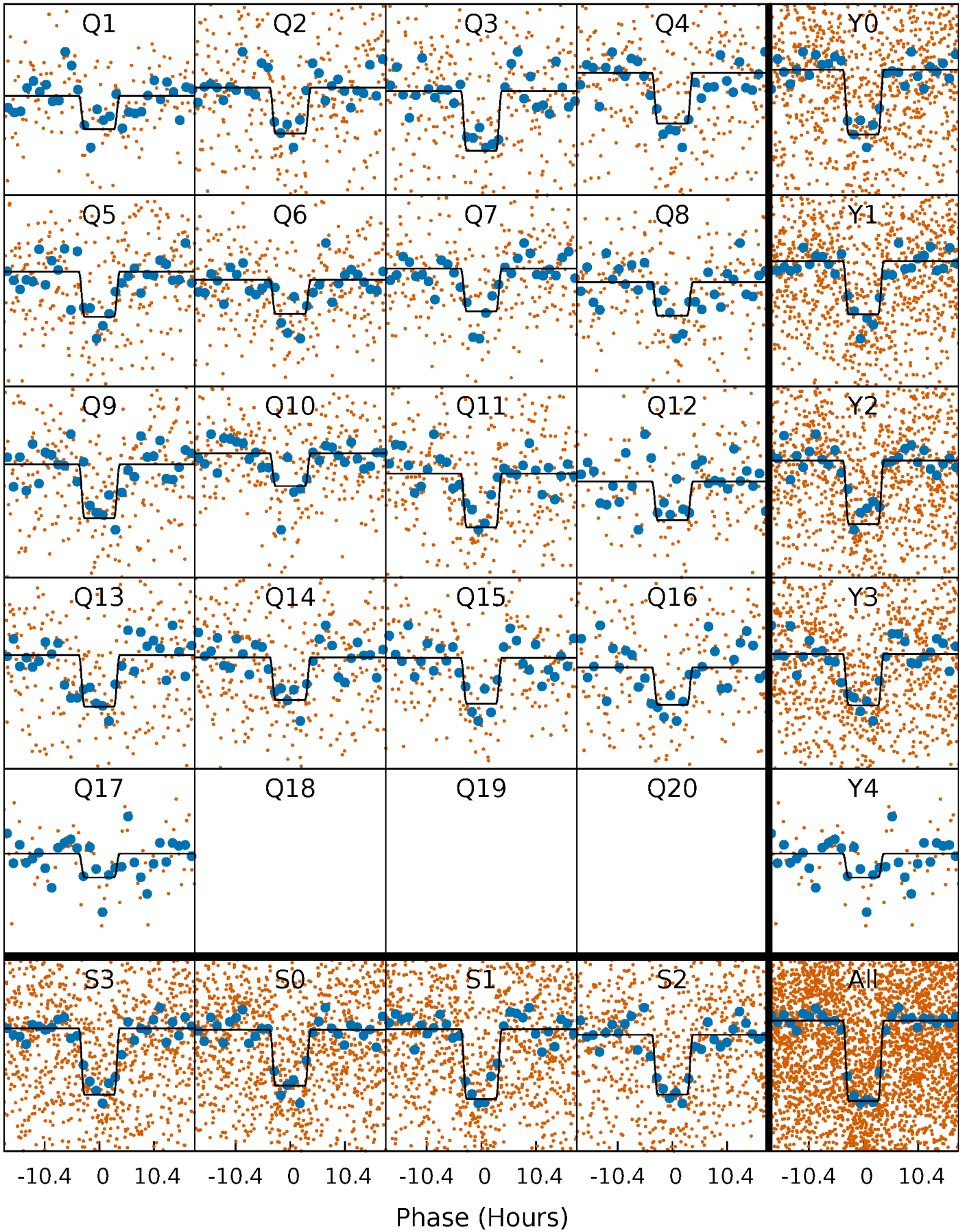
DV Quarter-Phased Transit Curves

TCE 008494617-01 P= 22.922037 Days $T_0=133.670152$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

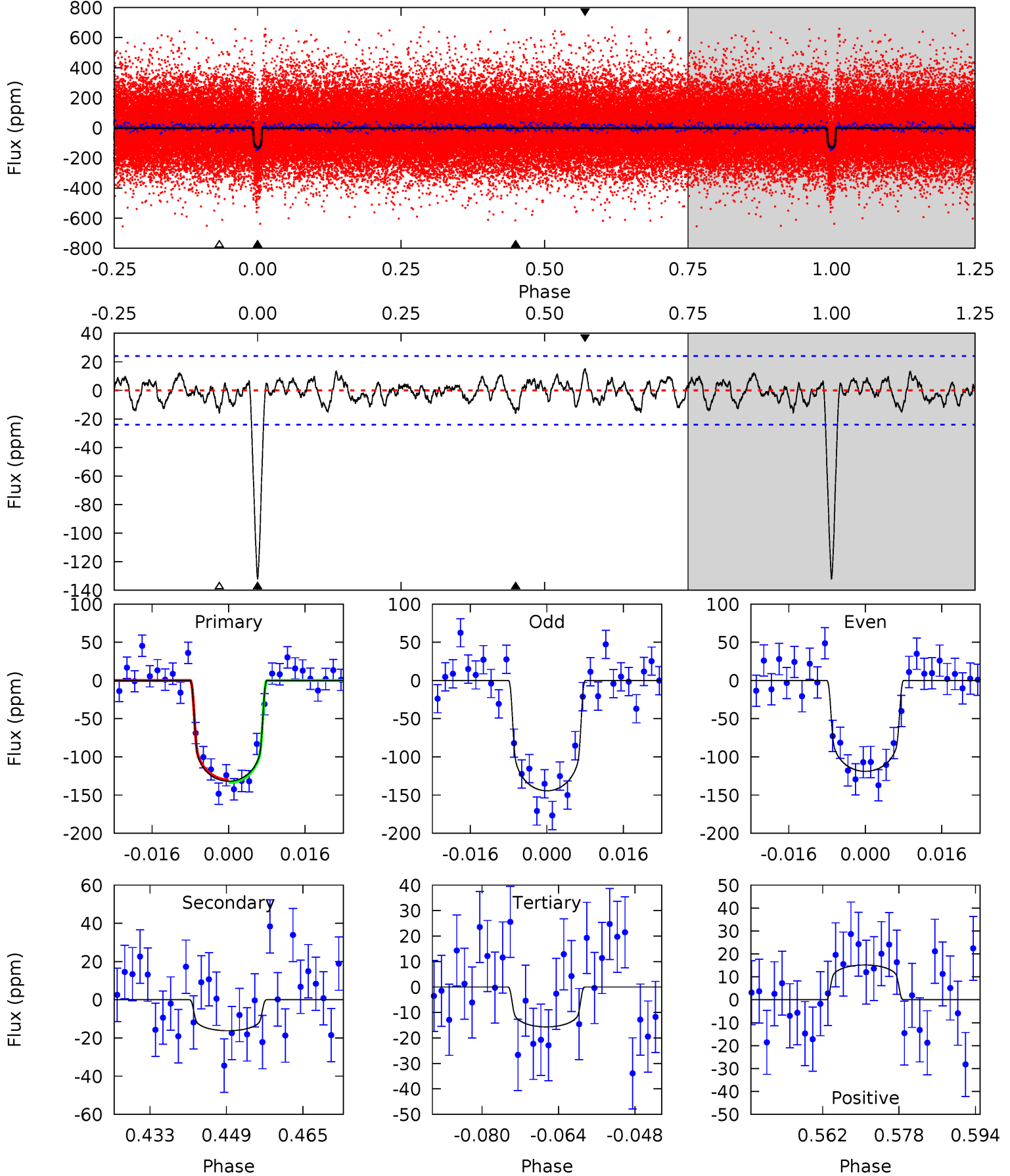
TCE 008494617-01 P= 22.922690 Days $T_0=133.652102$ (BKJD)



DV Model-Shift Uniqueness Test

008494617-01, P = 22.922037 Days, E = 110.748115 Days

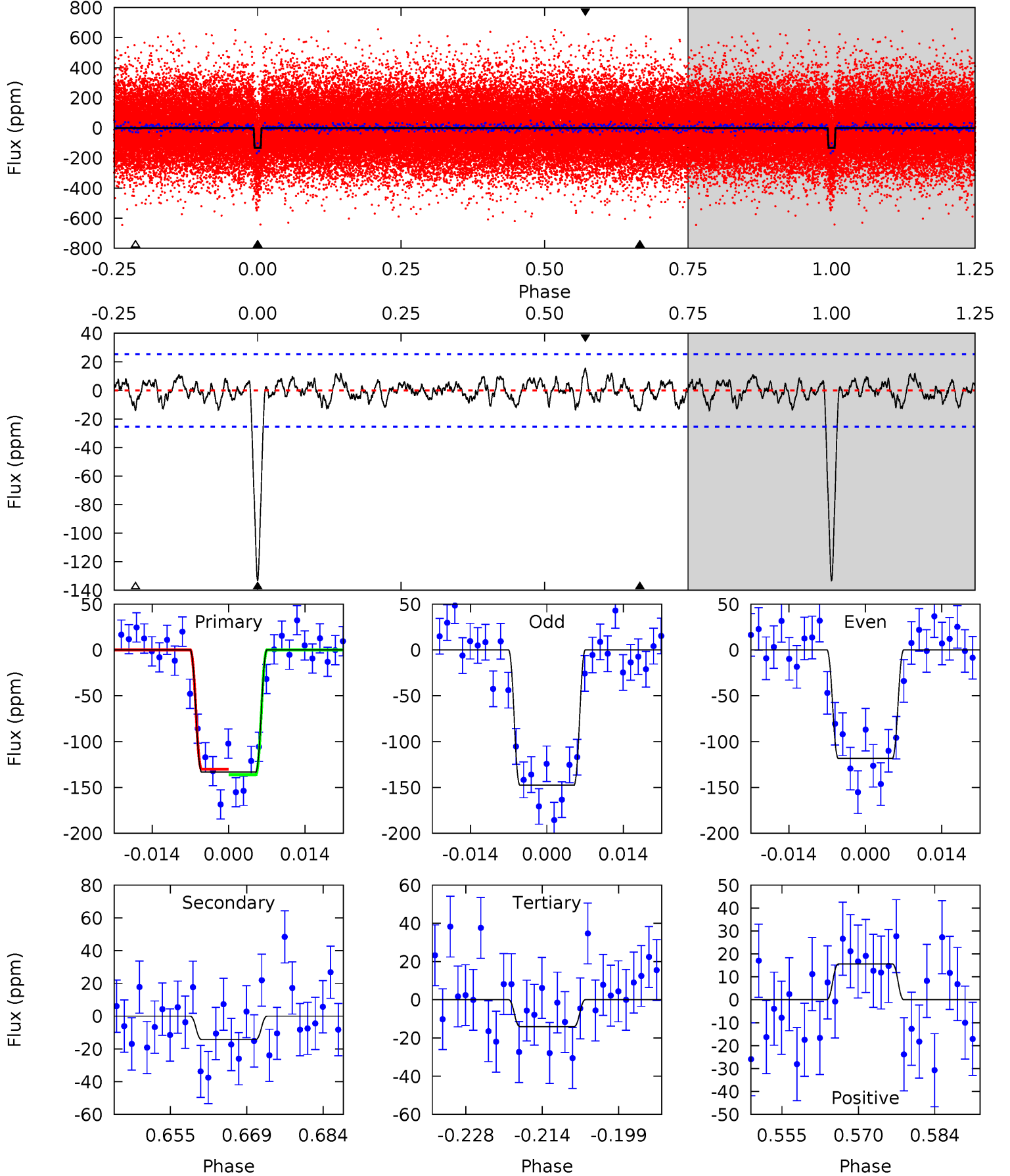
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.1	3.33	3.22	3.12	4.93	2.41	1.22	23.9	24.0	0.11	0.21	2.62	0.96	0.10	0.38



Alt Model-Shift Uniqueness Test

008494617-01, $P = 22.922690$ Days, $E = 110.729412$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	2.80	2.75	3.05	4.96	2.45	1.06	23.3	23.0	0.05	-0.25	2.86	1.05	0.10	0.58



Stellar Parameters For KIC 008494617

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5897^{+106}_{-118}	$4.357^{+0.110}_{-0.110}$	$-0.100^{+0.150}_{-0.150}$	$1.081^{+0.165}_{-0.135}$	$0.970^{+0.071}_{-0.064}$	$1.081^{+0.513}_{-0.347}$
	+2%/-2%	+3%/-3%	+150%/-150%	+15%/-12%	+7%/-7%	+48%/-32%
Source	SPE12	SPE12	SPE12	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008494617-01 / KOI 2389.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-16 ± 5	$1.42^{+0.23}_{-0.21}$	954^{+41}_{-37}	3779^{+255}_{-278}	104^{+56}_{-38}
Alt.	-14 ± 5	$1.37^{+0.23}_{-0.22}$	957^{+44}_{-42}	3731^{+321}_{-287}	99^{+59}_{-41}

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

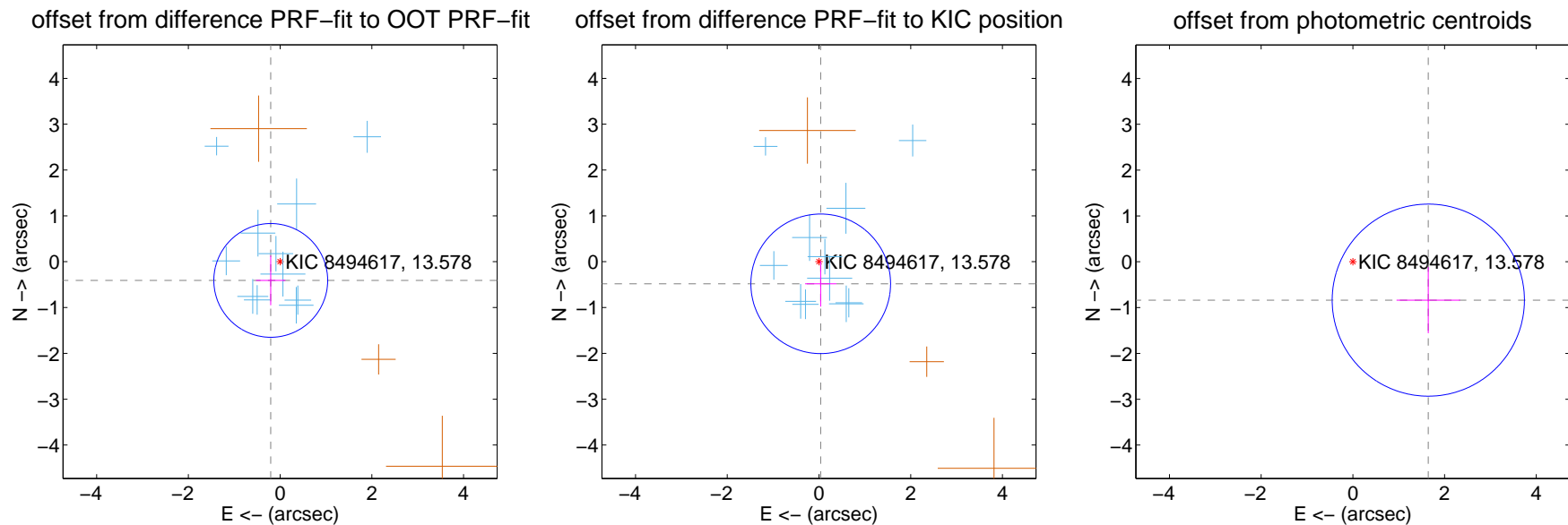
DV Centroid Data

Supplemental centroid analysis for 008494617-01. Kepler magnitude: 13.58. Transit SNR 20.47

There are 11 quarters with good PRF difference image offsets

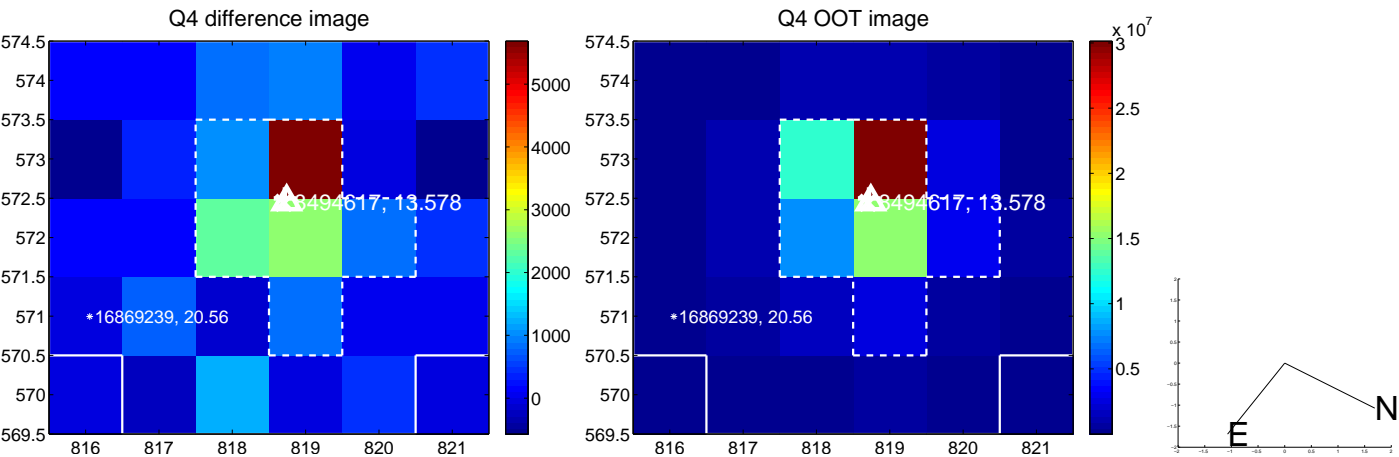
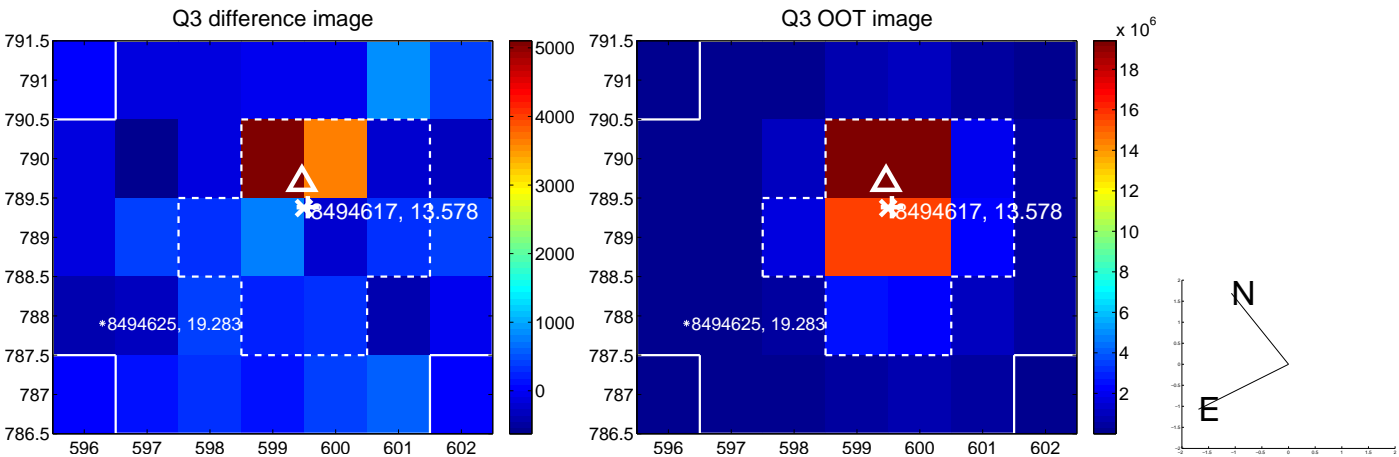
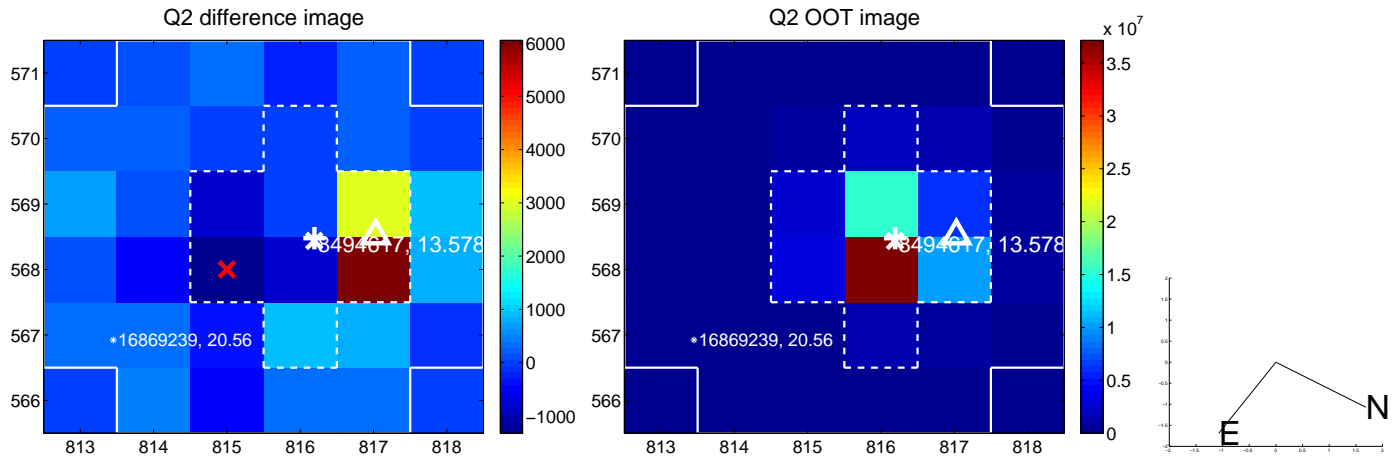
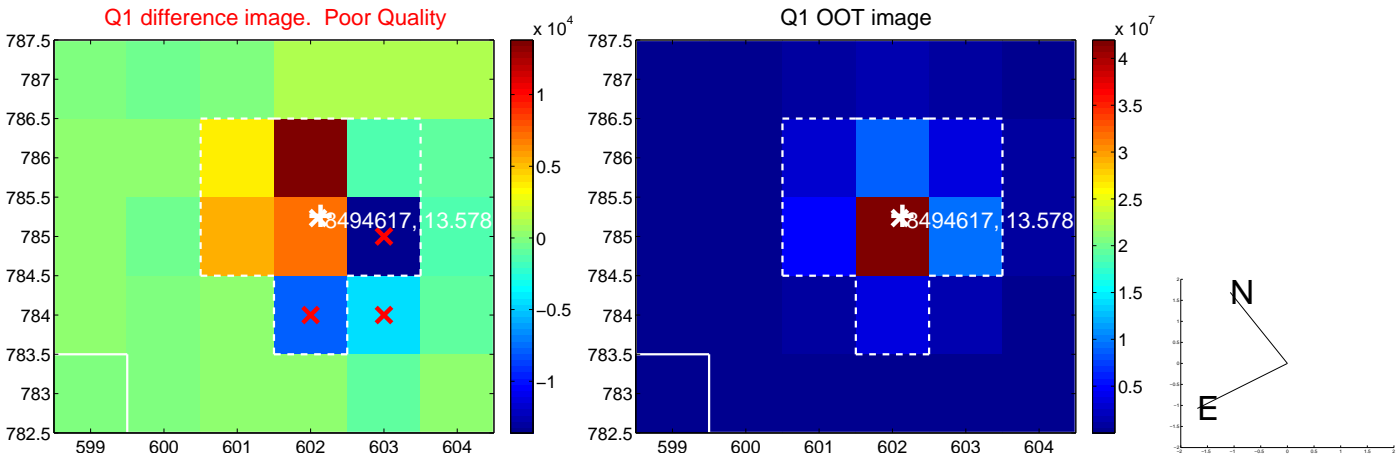
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.456 ± 0.414	1.10	0.204 ± 0.320	-0.408 ± 0.542
PRF-fit source offset from KIC position	0.484 ± 0.508	0.95	-0.038 ± 0.342	-0.483 ± 0.496
photometric centroid source offset	1.85 ± 0.70	2.64	-1.65 ± 0.69	-0.84 ± 0.72

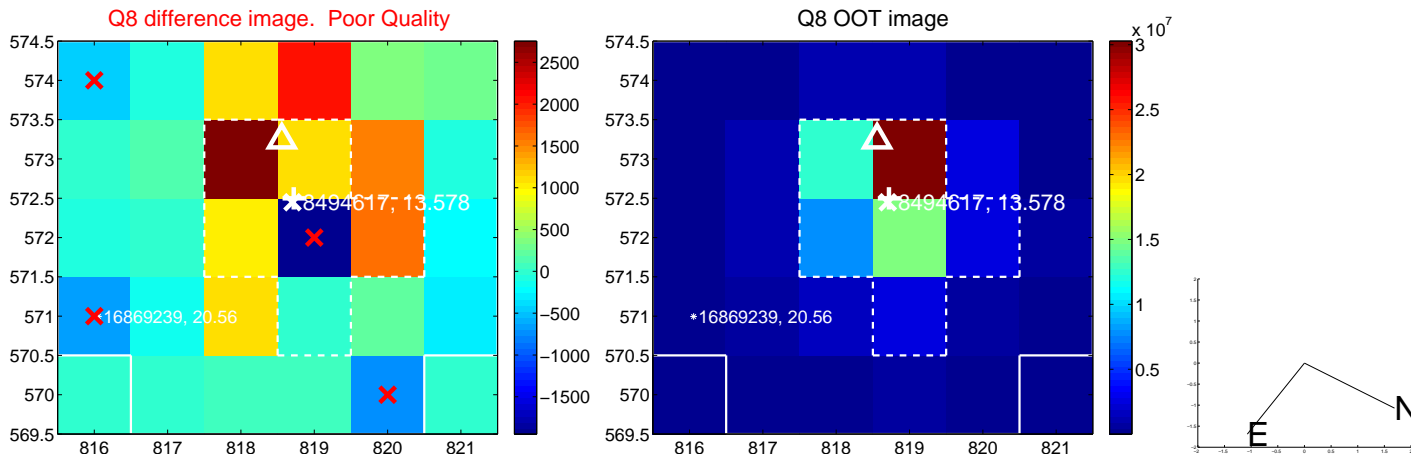
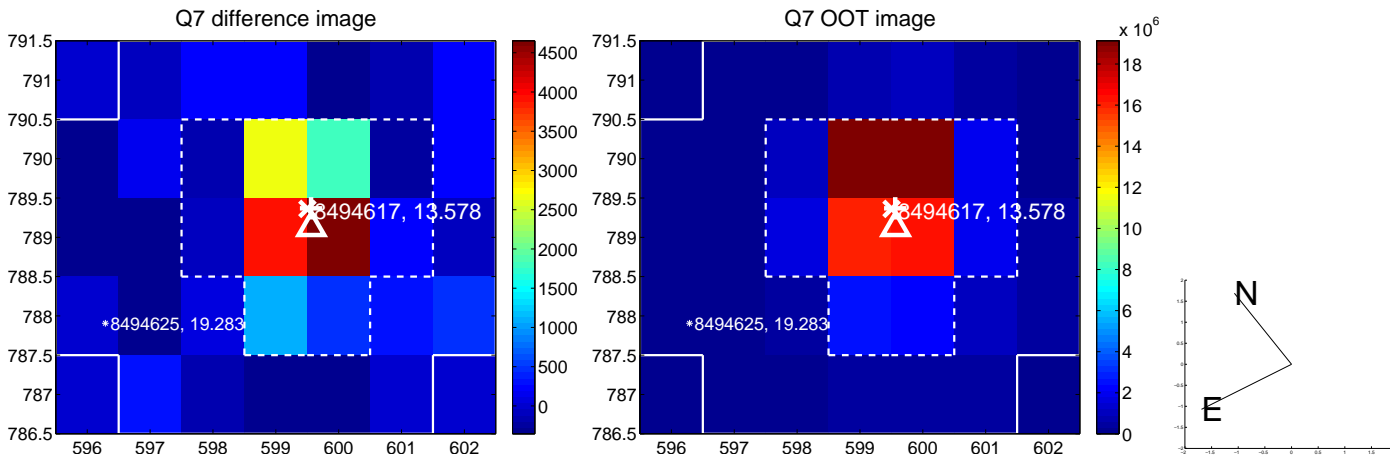
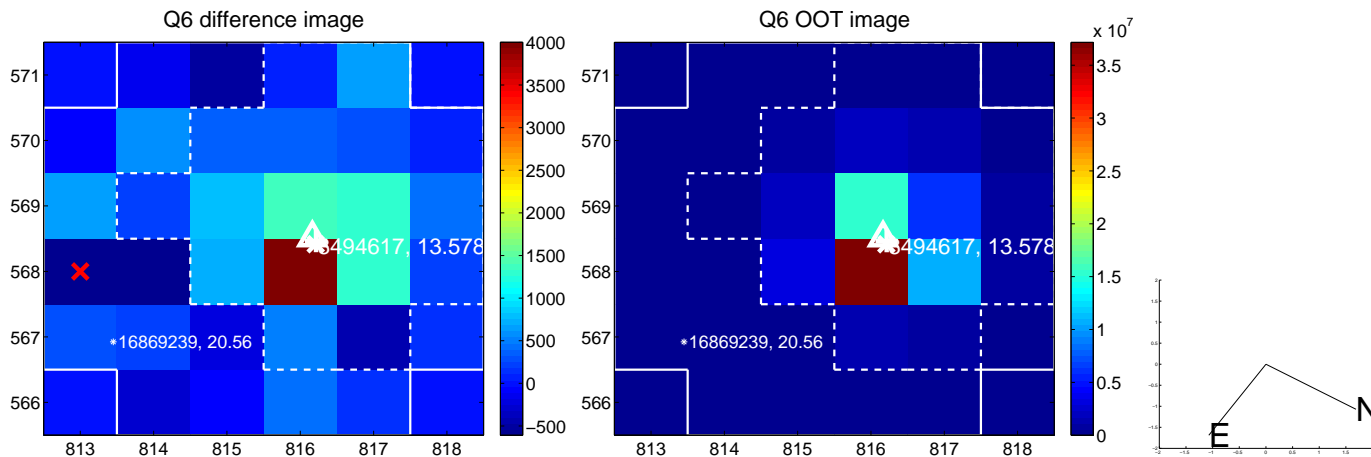
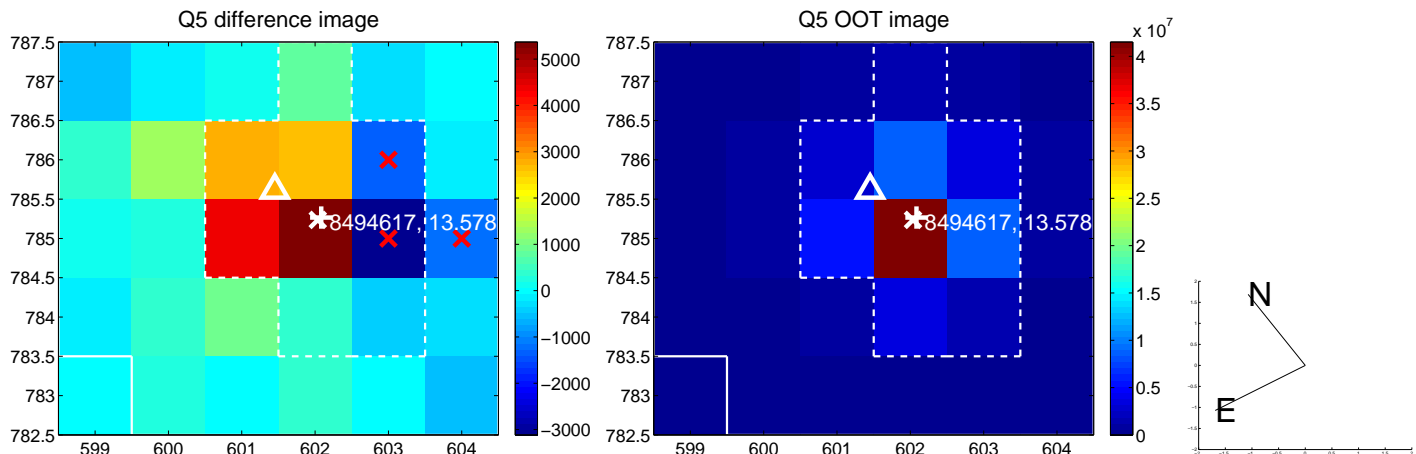


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

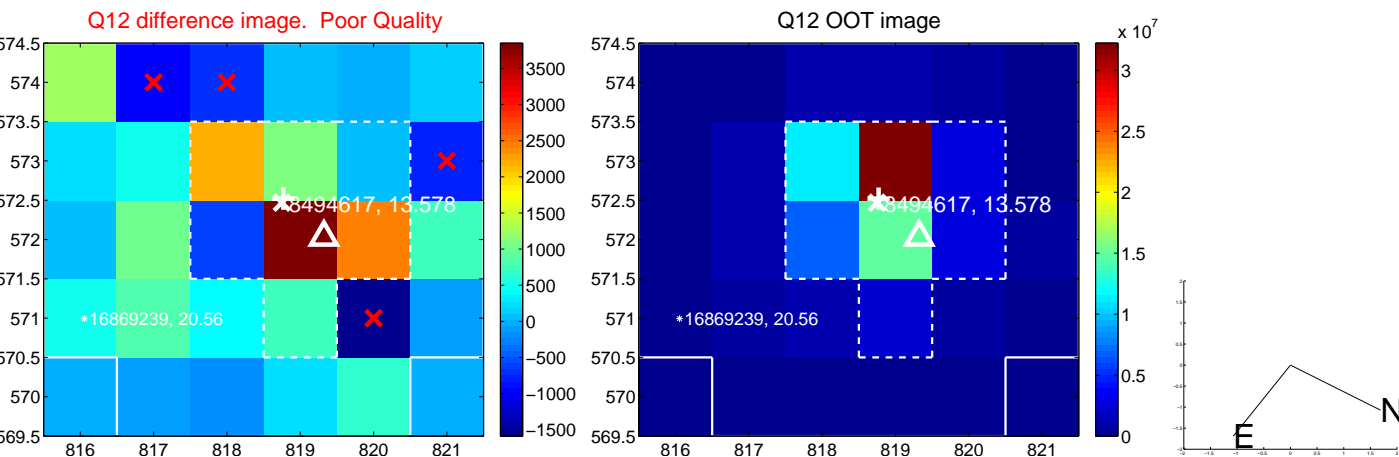
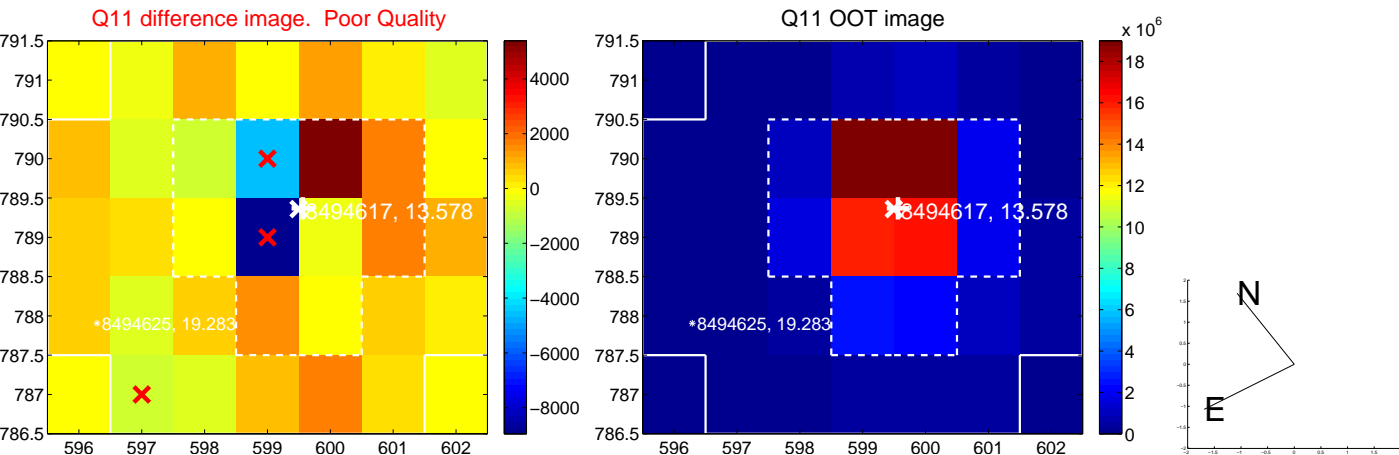
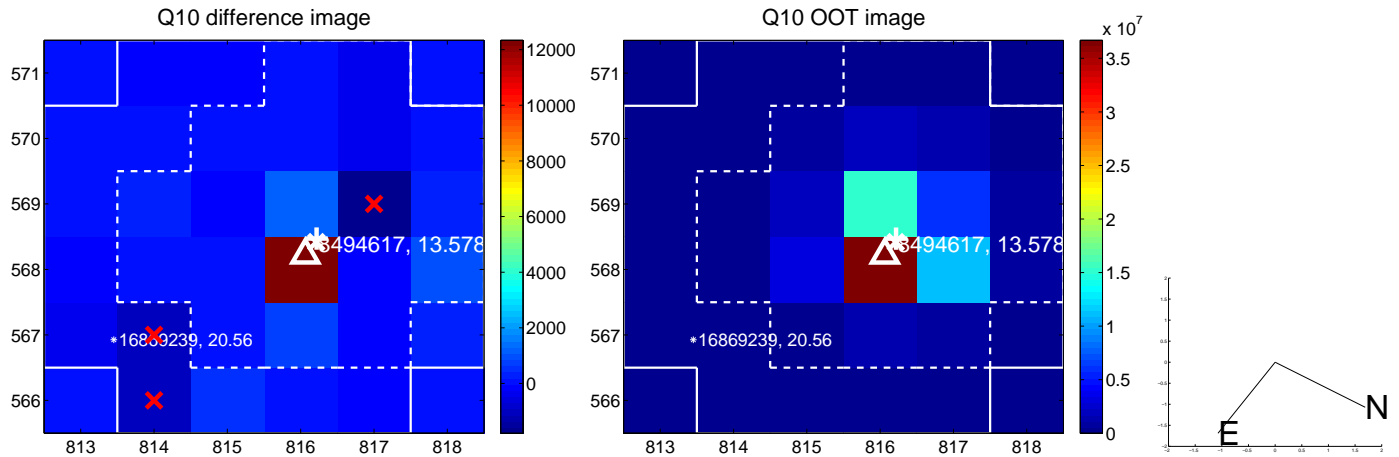
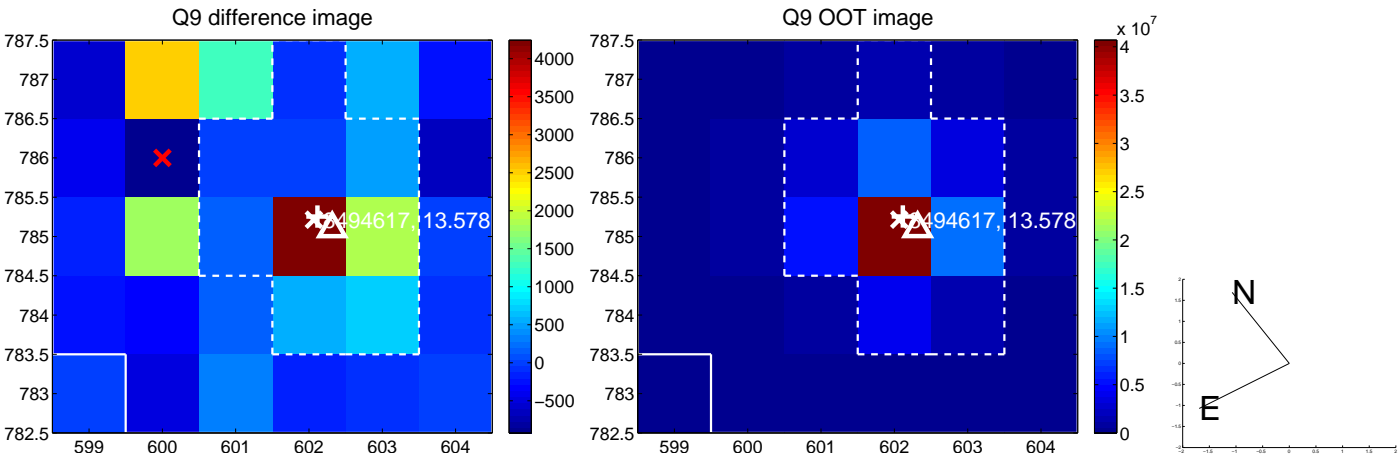
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



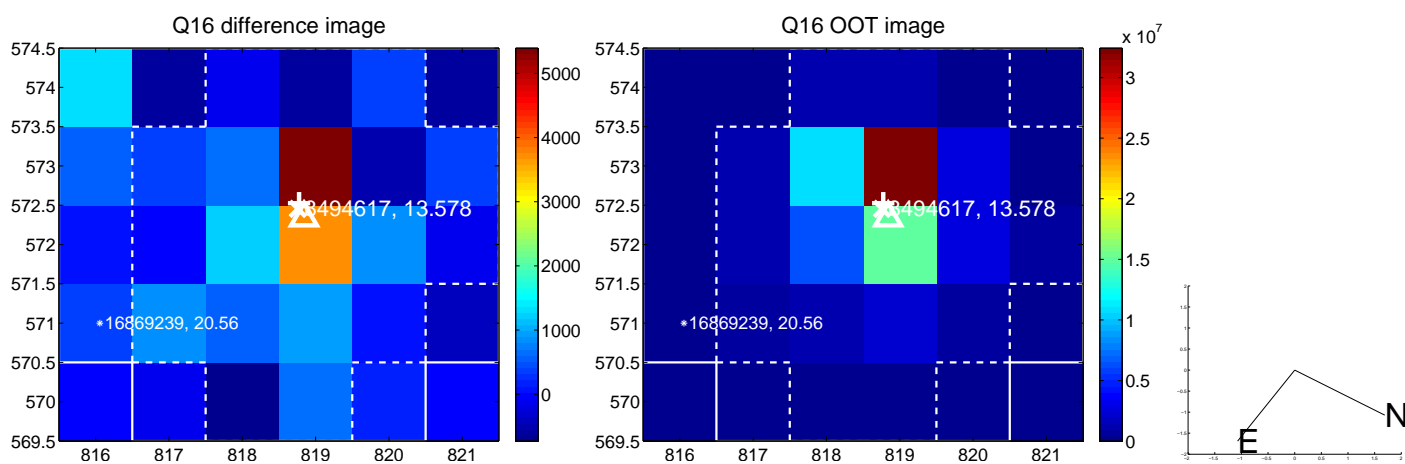
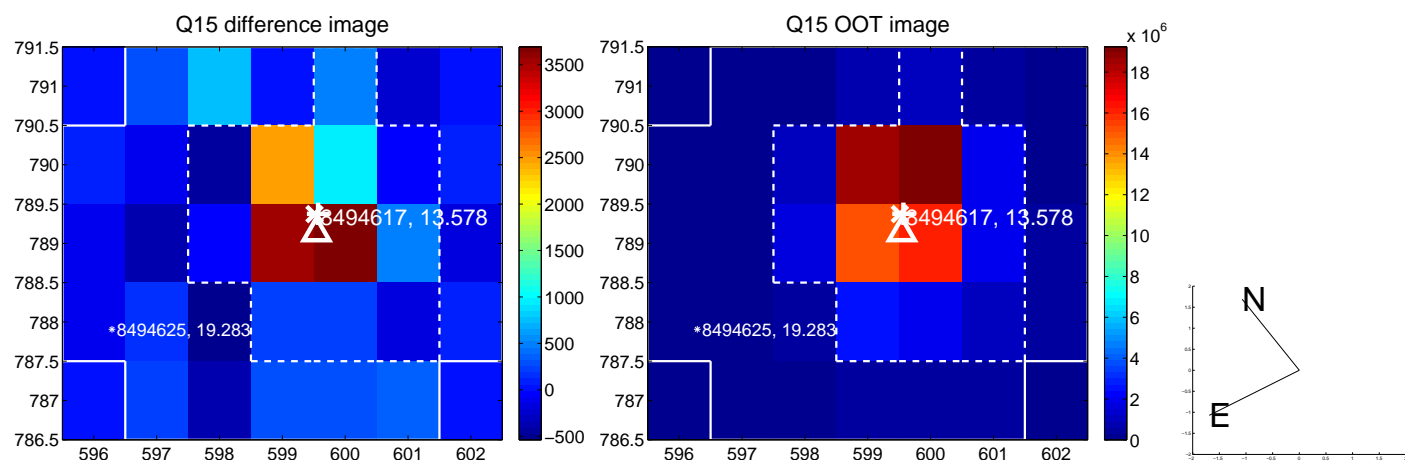
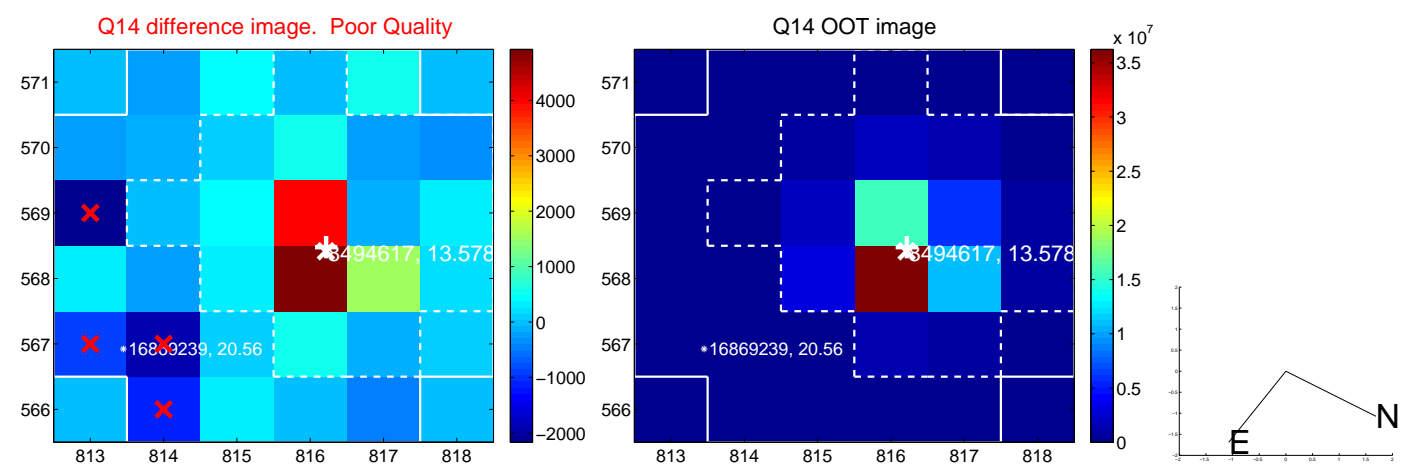
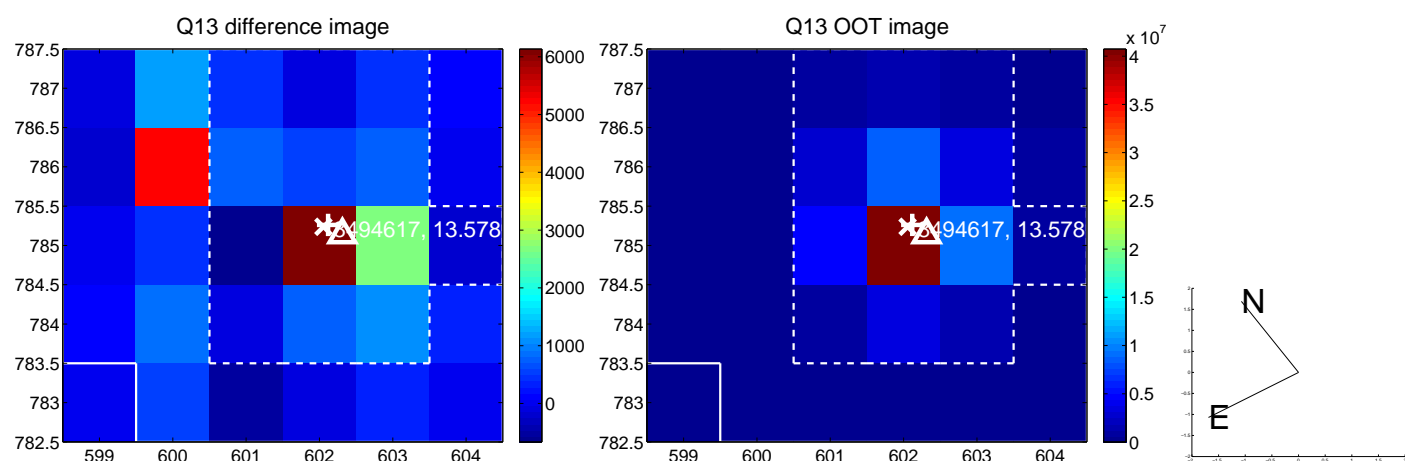
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



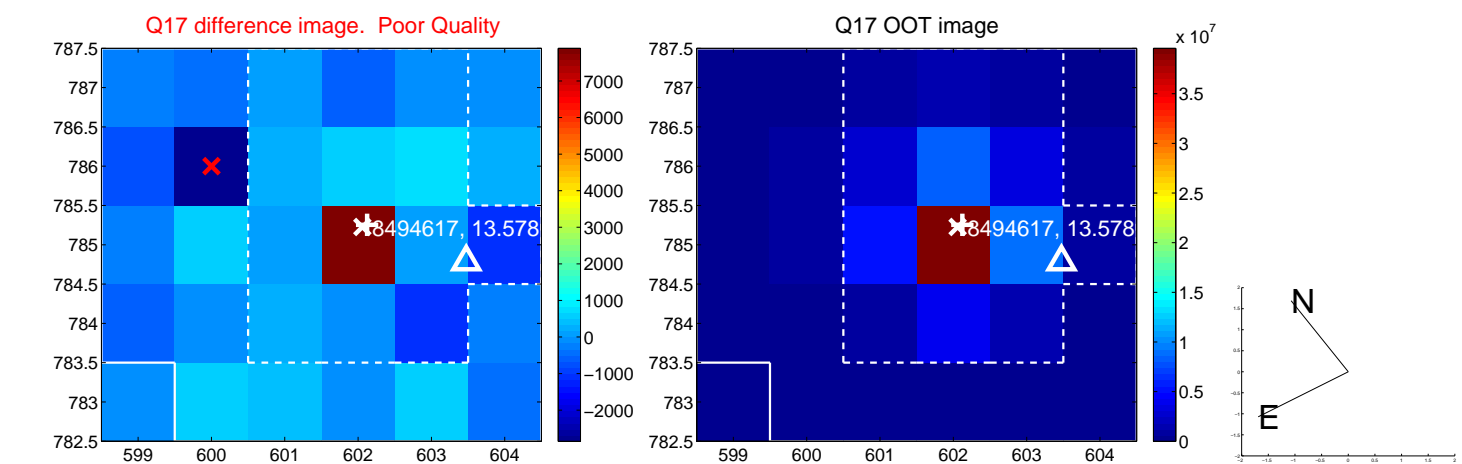
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



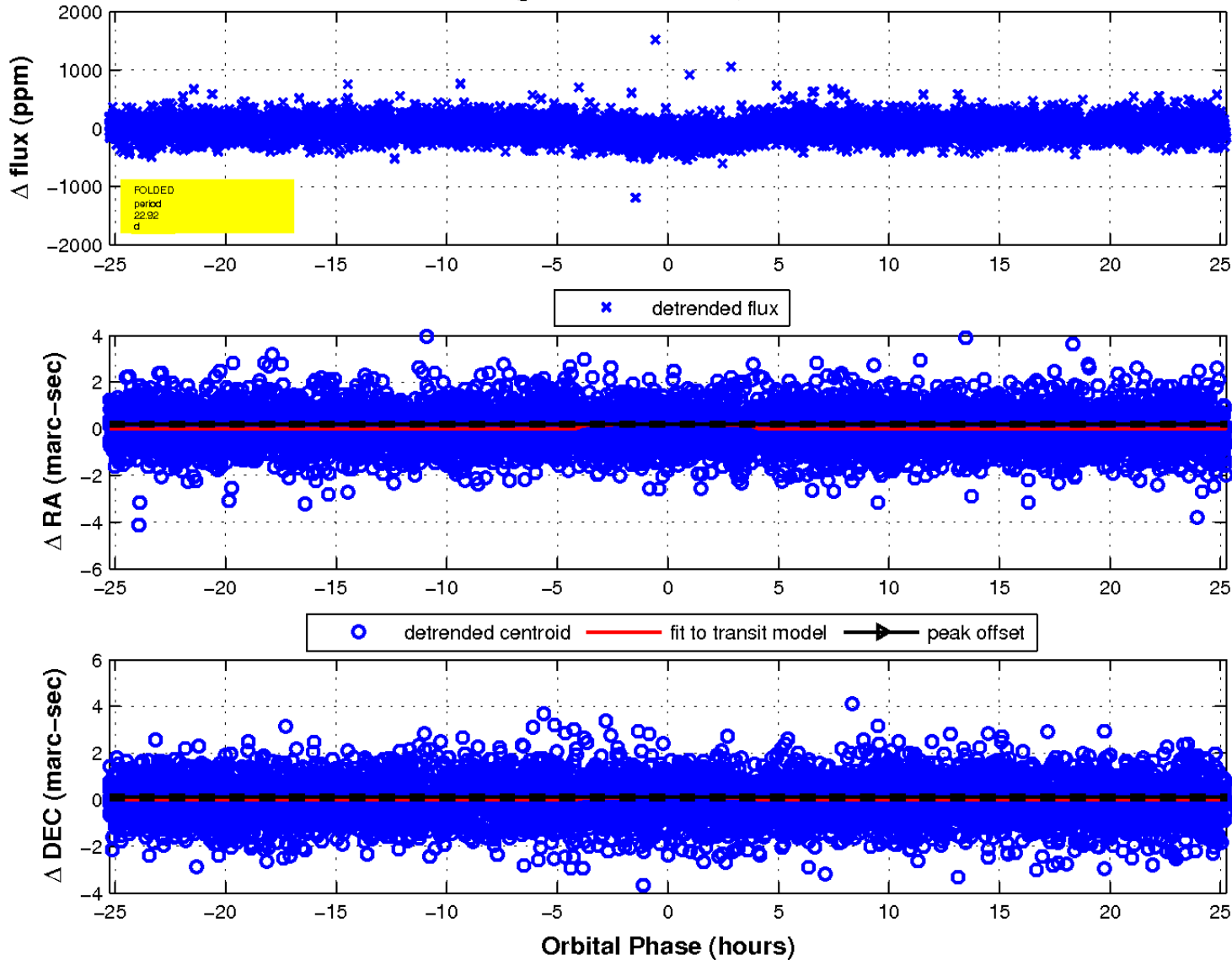
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

