

KIC 008123716

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})
008123716-01	OBS	No	473.531486	171.889060	178.5	4.102	7.6	6.9	2.17	6546	3.30	4.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008123716-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST

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

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

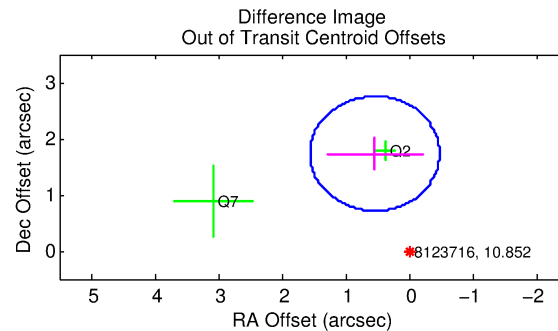
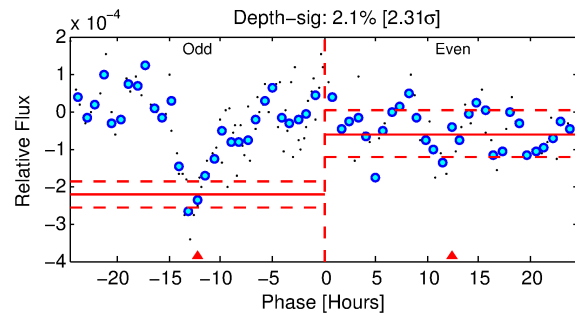
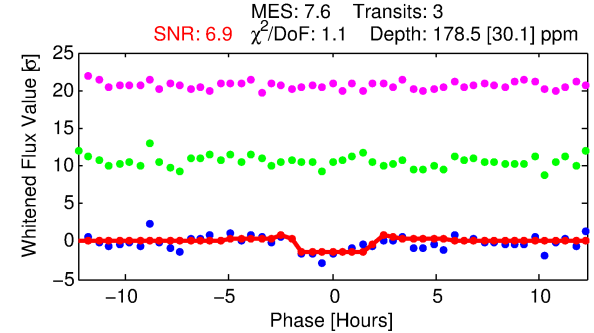
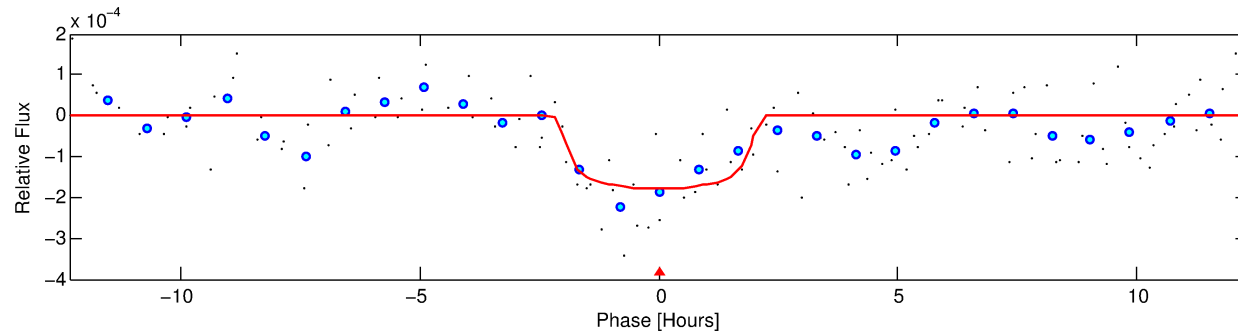
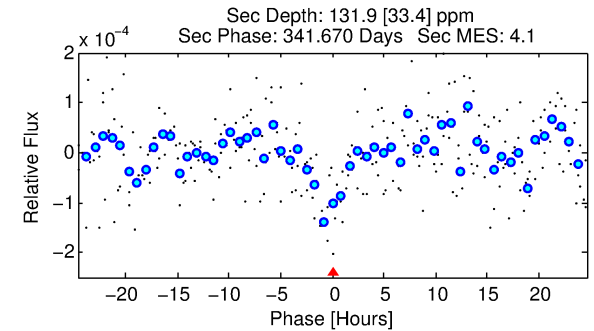
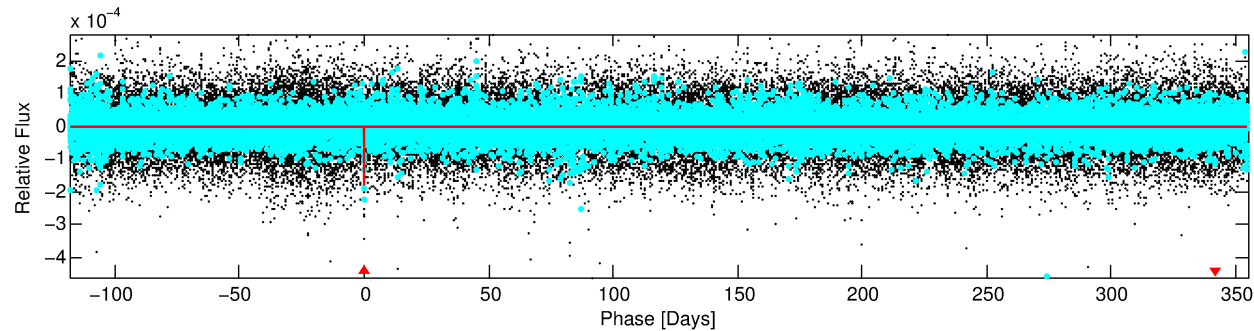
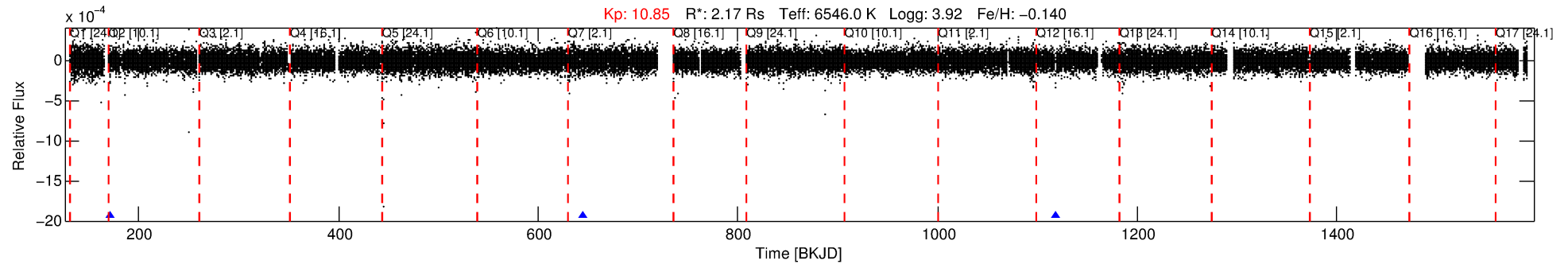
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008123716-01

No Significant Match Found

DV One-Page Summary

KIC: 8123716 Candidate: 1 of 1 Period: 473.531 d



DV Fit Results:

Period = 473.53149 [0.00566] d
Epoch = 171.8891 [0.0071] BKJD
Rp/R* = 0.0140 [0.0067]
a/R* = 466.84 [1228.07]
b = 0.86 [0.77]
Seff = 4.35 [2.10]
Teq = 368 [45] K
Rp = 3.30 [1.91] Re
a = 1.3330 [0.4014] AU
Ag = 11841.94 [12983.90] [0.91σ]
Teffp = 5939 [1479] K [3.77σ]

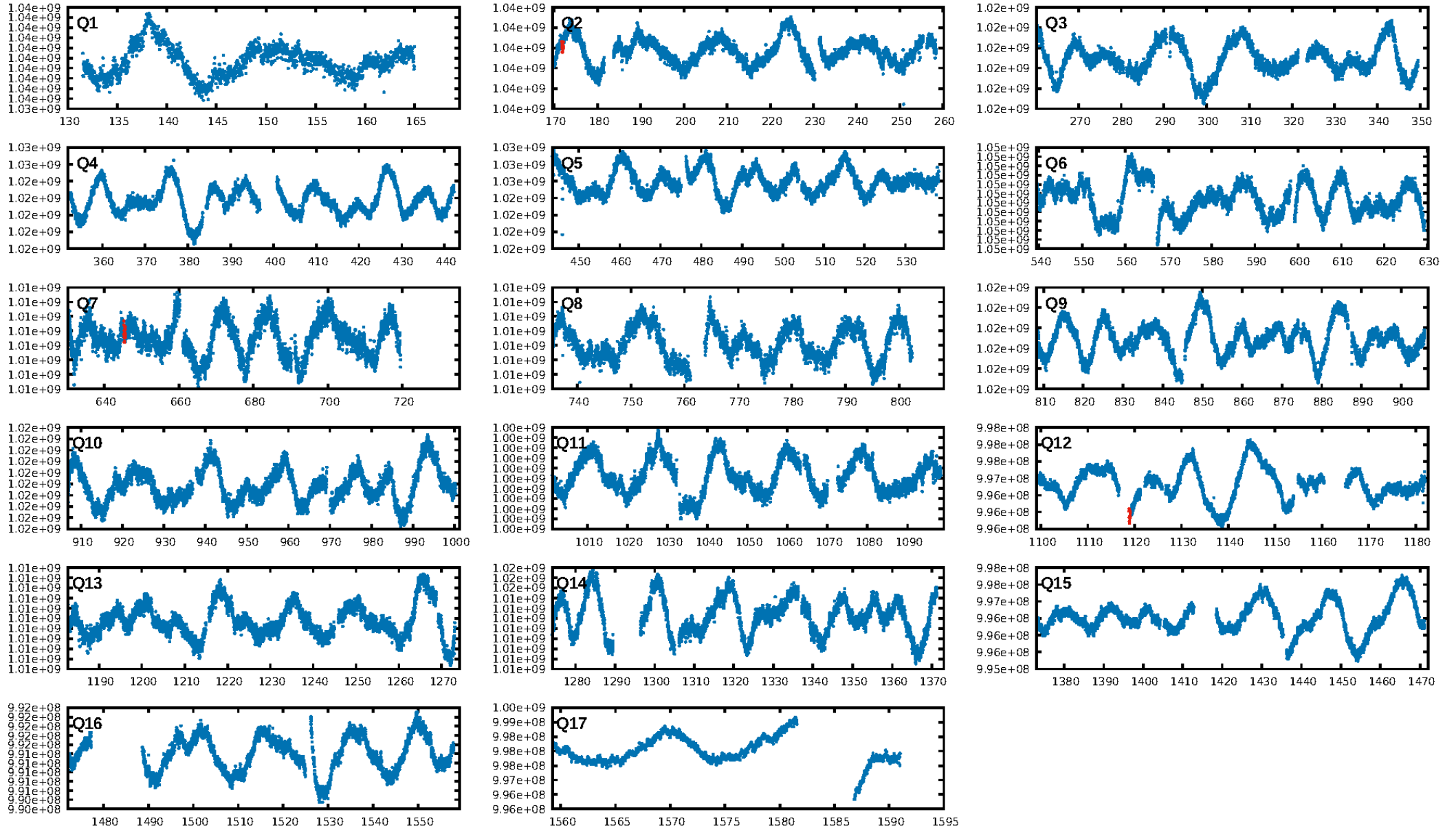
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.5%
ModelChiSquareGof-sig: 95.7%
Bootstrap-pfa: 2.09e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.08535
Centroid-sig: 44.3%
Centroid-so: 1.525 arcsec [0.48σ]
OotOffset-rm: 1.814 arcsec [5.34σ]
KicOffset-rm: 1.811 arcsec [5.08σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

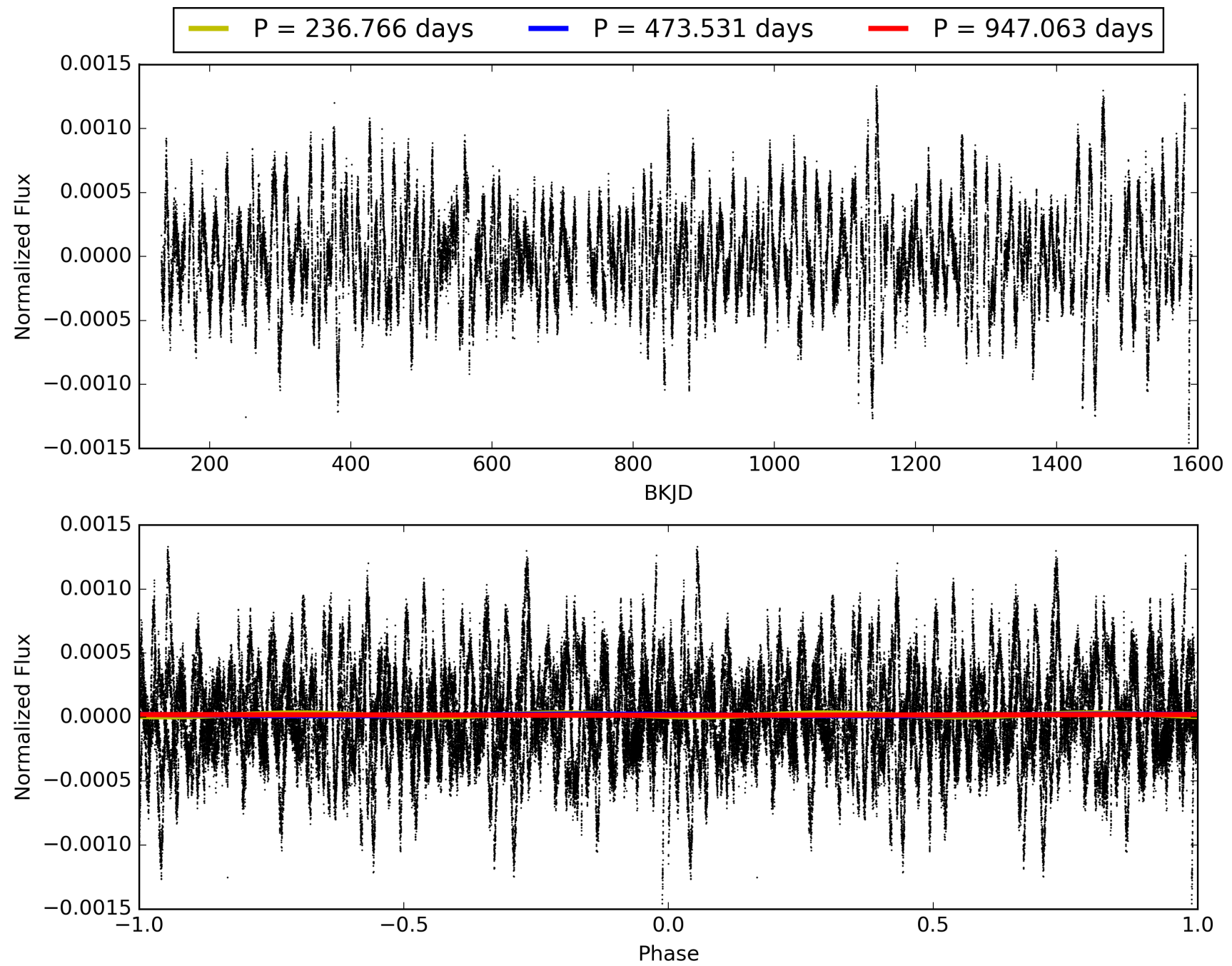
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:42:25 Z

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

TCE 008123716-01, PDC Light Curves

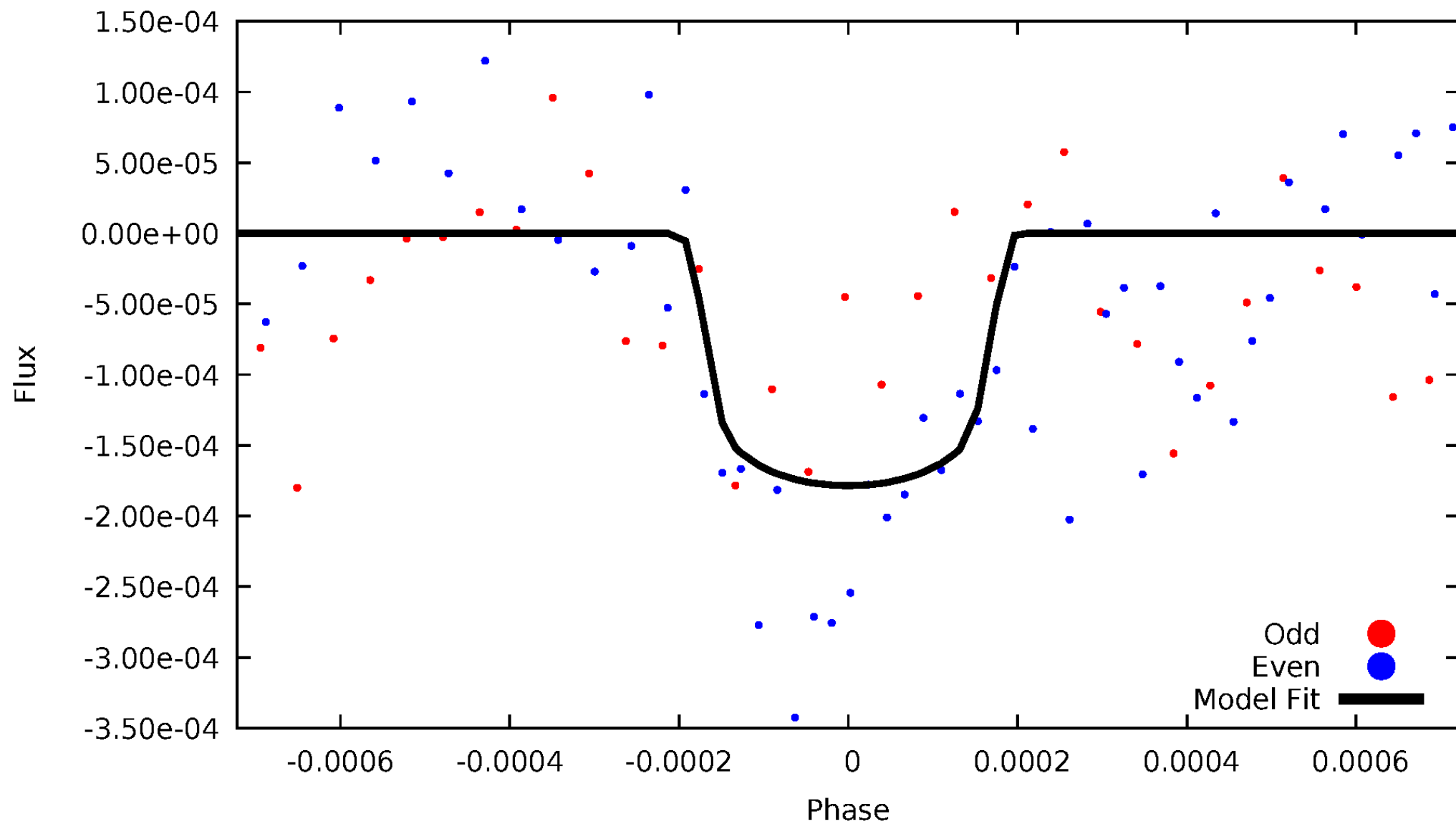


TCE 008123716-01



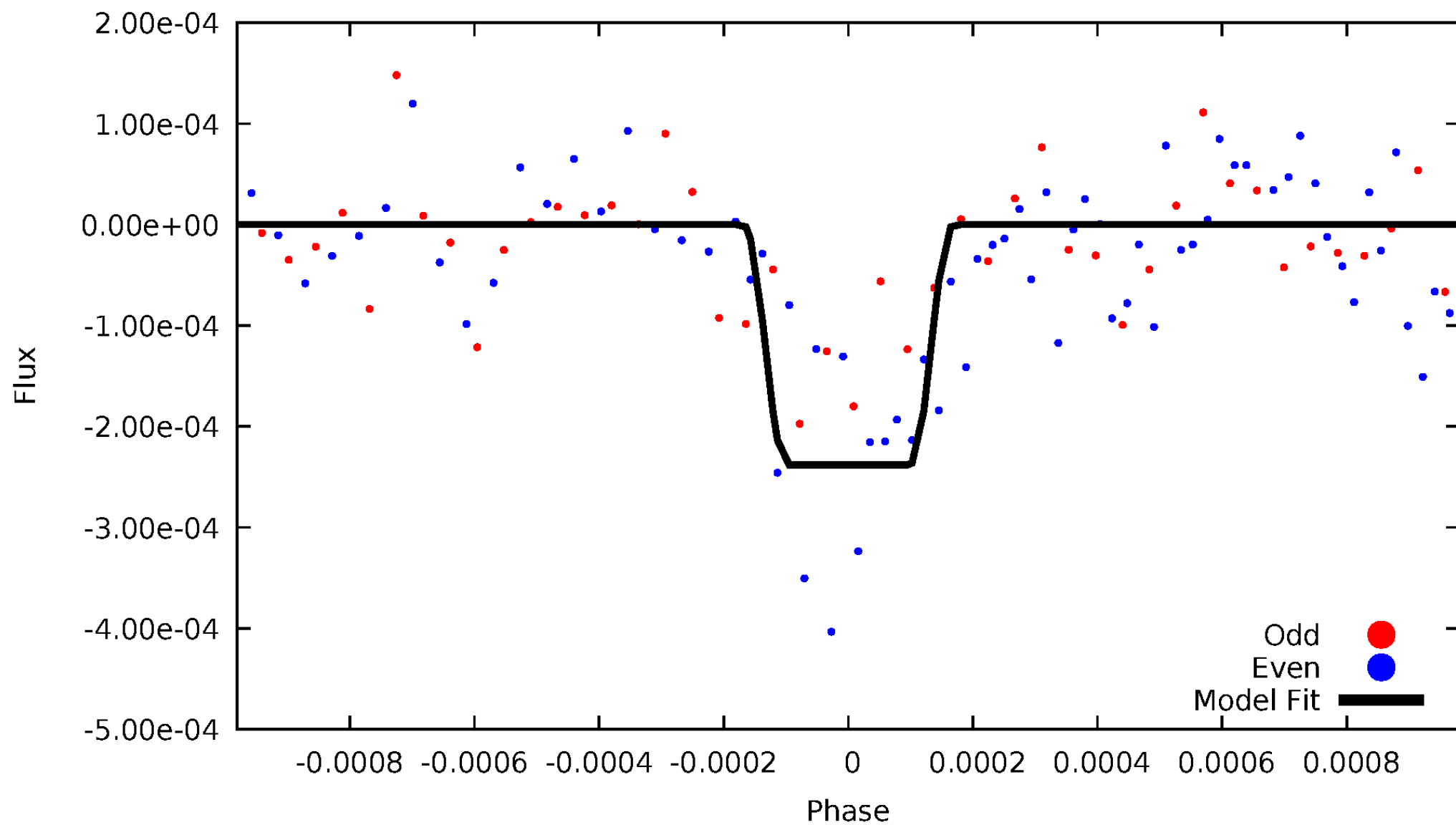
DV Odd/Even

TCE 008123716-01

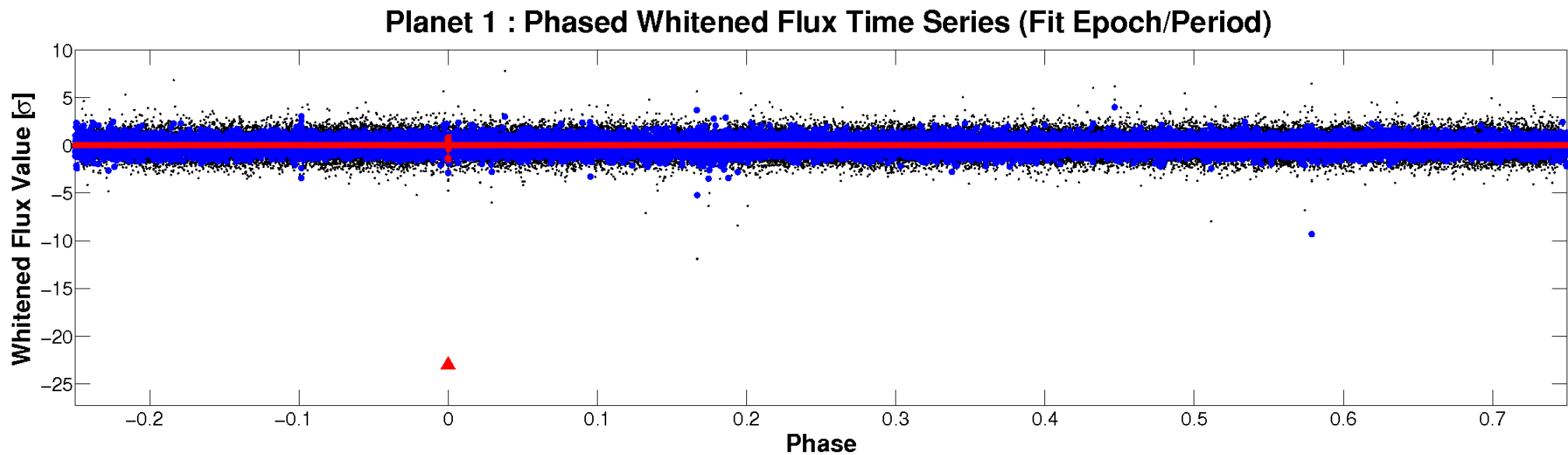
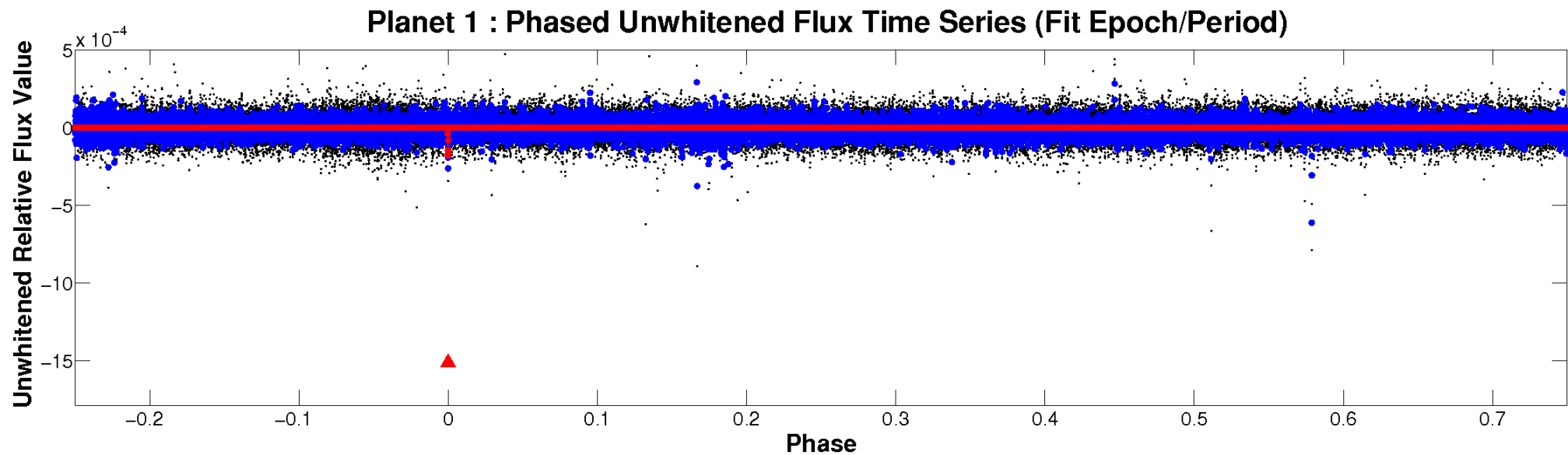


ALT Odd/Even

TCE 008123716-01

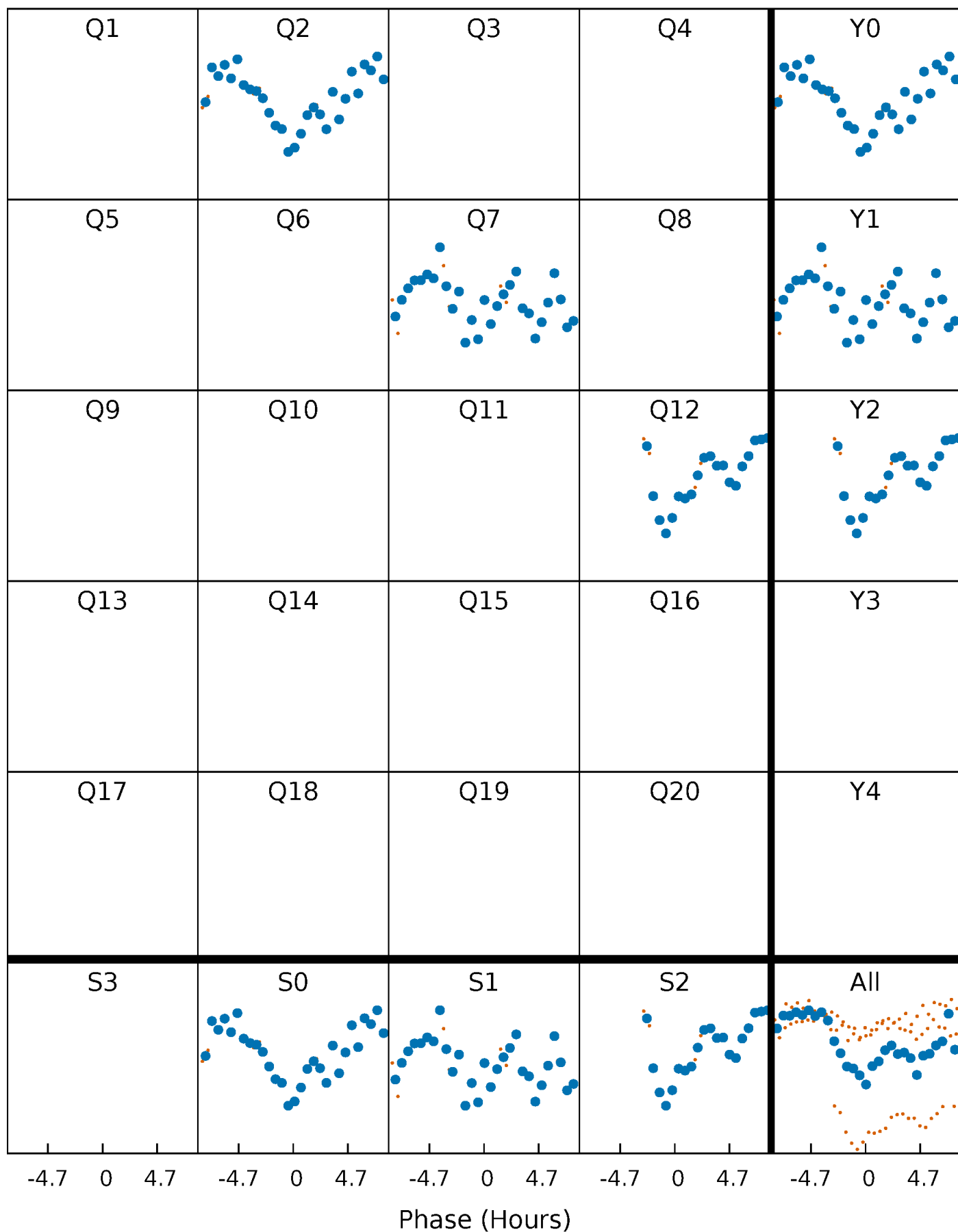


Non-Whitened Vs. Whitened Light Curve



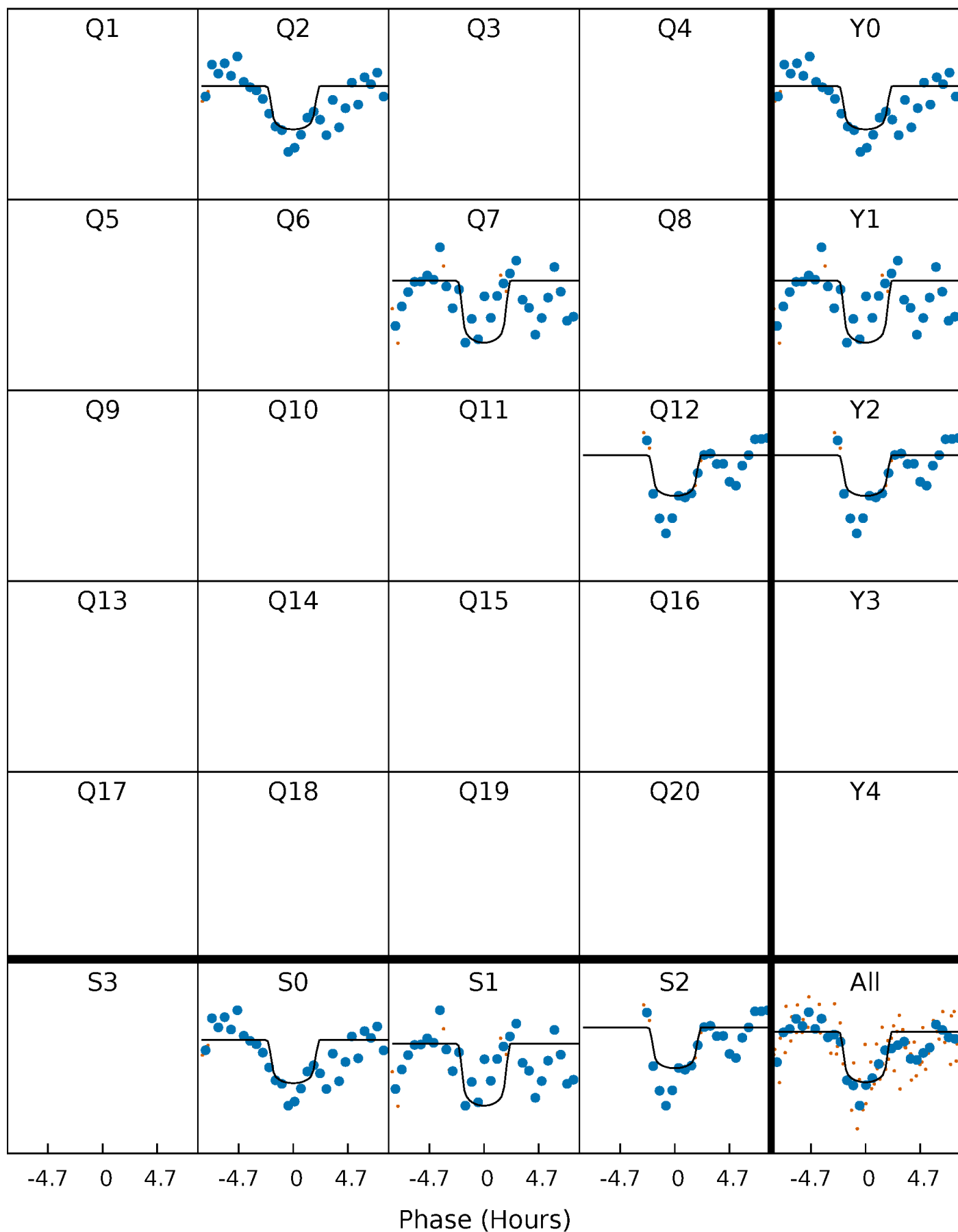
PDC Quarter-Phased Transit Curves

TCE 008123716-01 P=473.531486 Days $T_0=171.889060$ (BKJD)



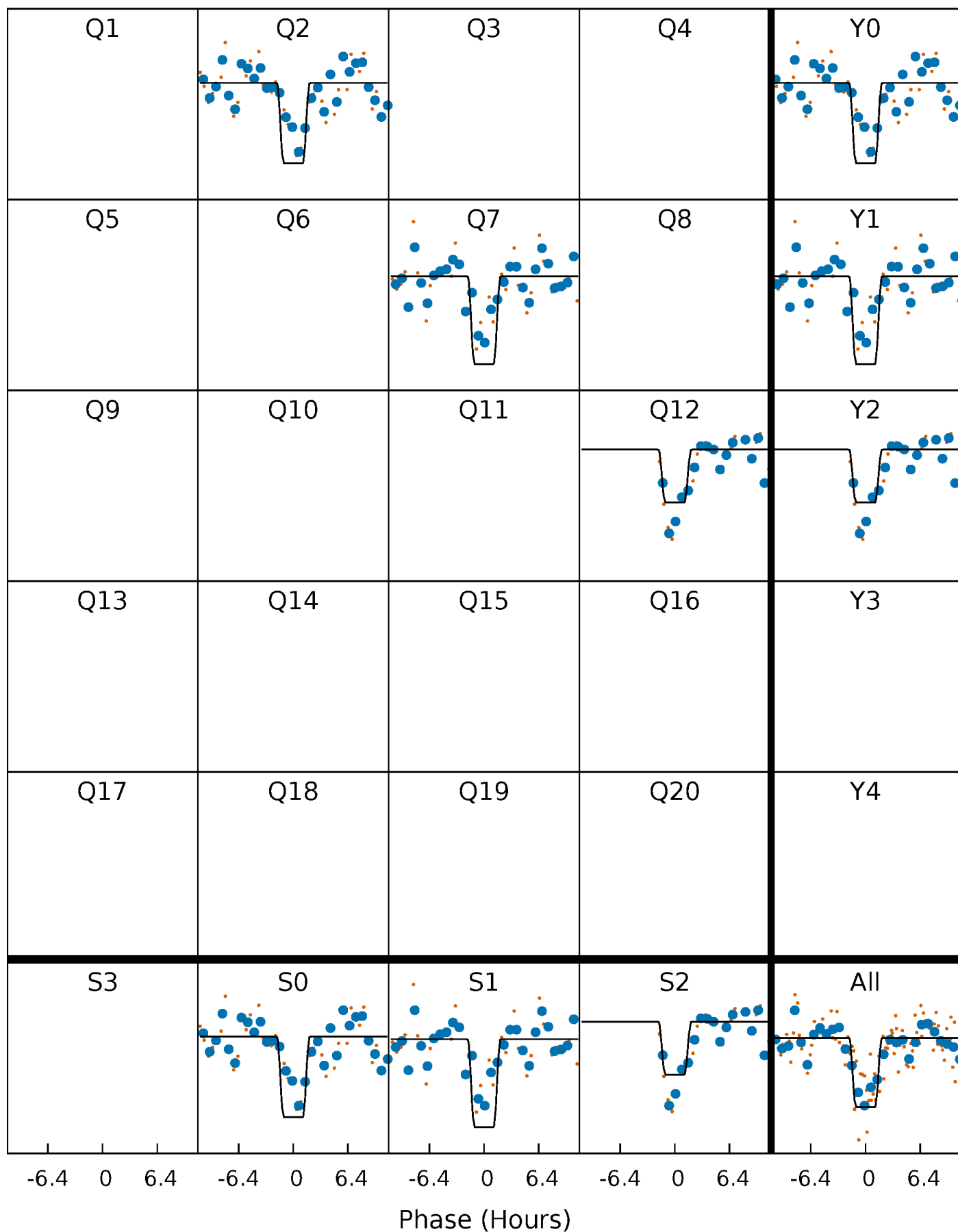
DV Quarter-Phased Transit Curves

TCE 008123716-01 P=473.531486 Days $T_0=171.889060$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

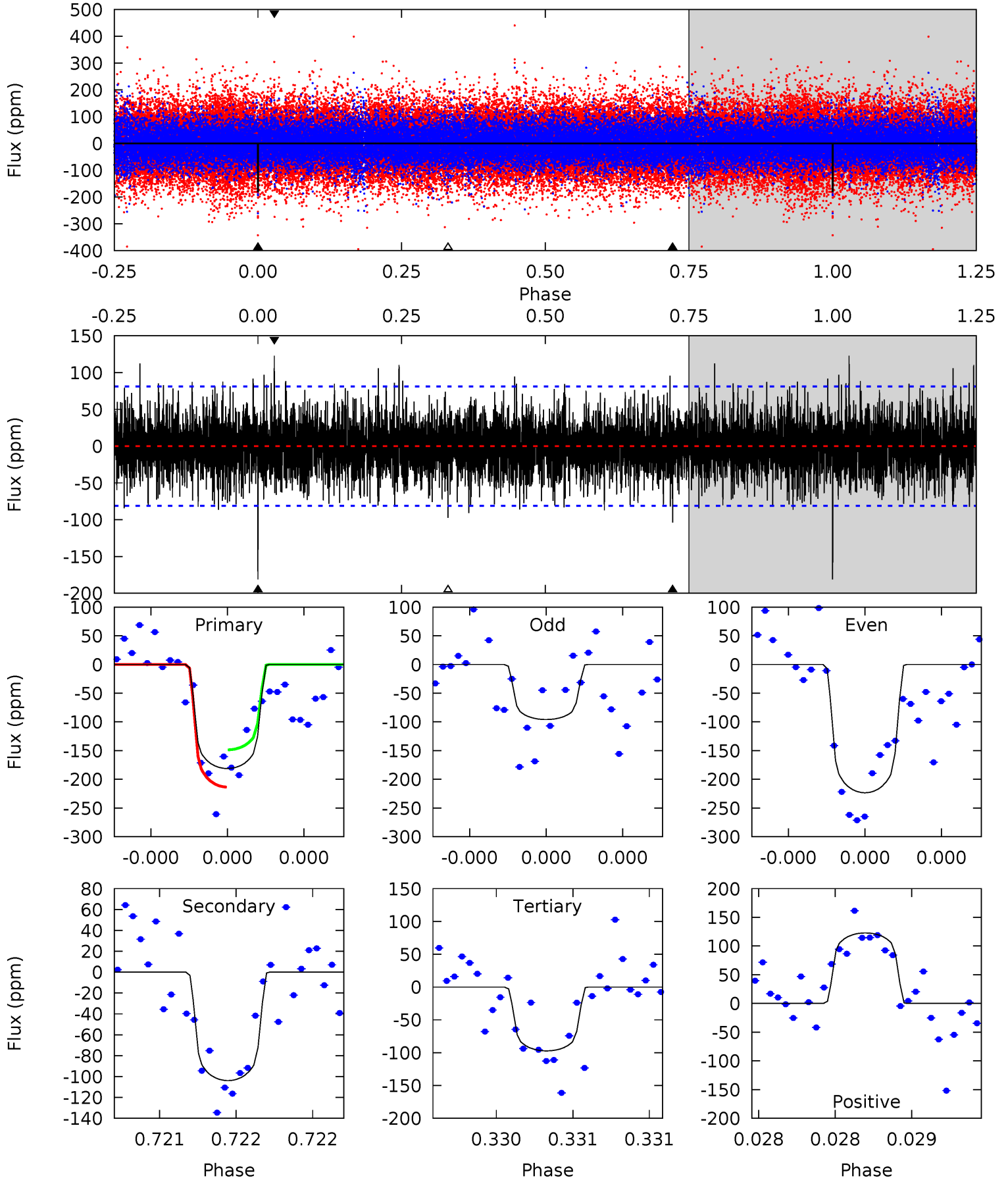
TCE 008123716-01 P=473.540942 Days $T_0=171.853343$ (BKJD)



DV Model-Shift Uniqueness Test

008123716-01, P = 473.531486 Days, E = 171.889060 Days

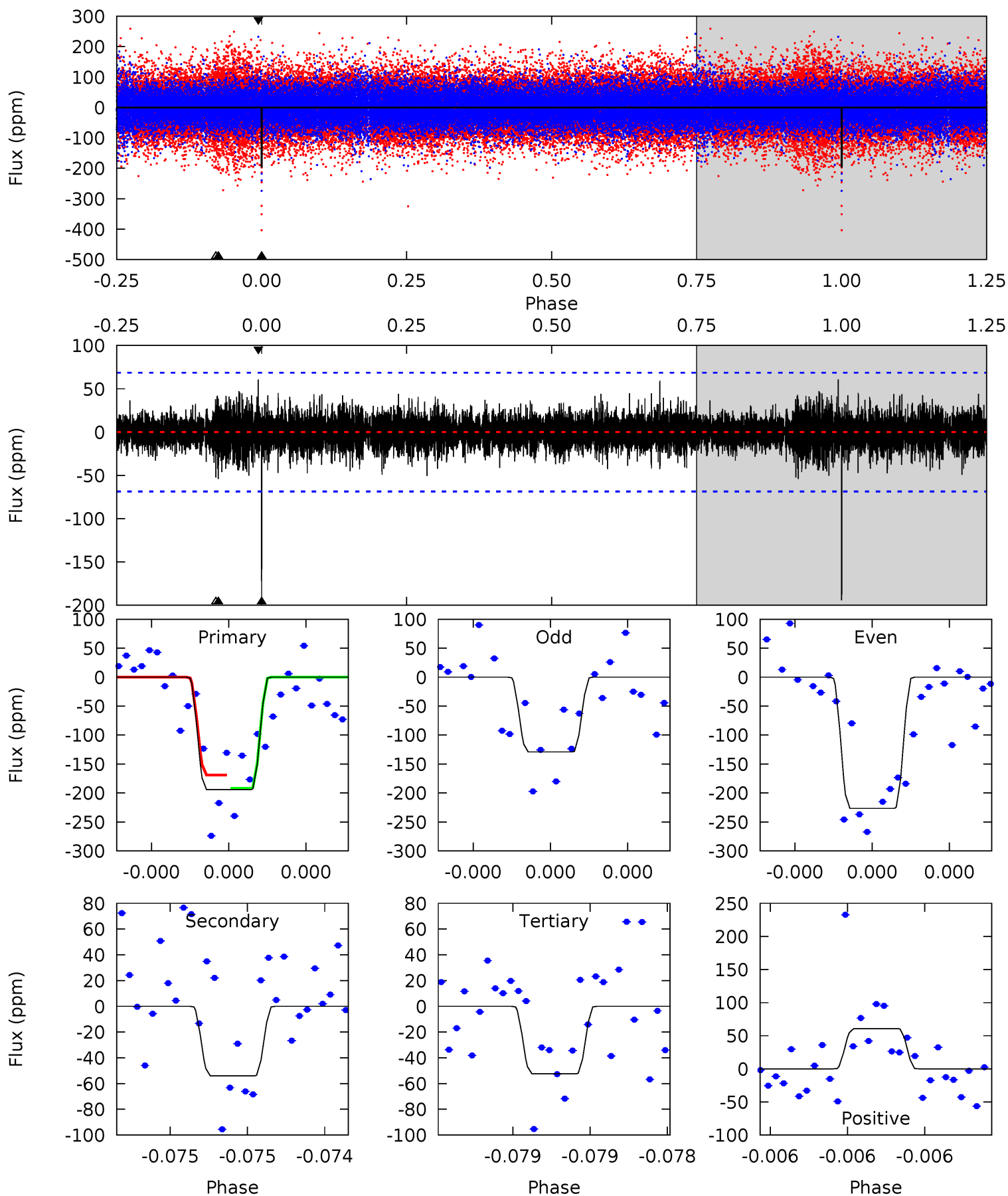
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	7.18	6.73	8.49	5.62	3.55	1.92	5.81	4.04	0.46	-1.31	4.26	0.88	0.40	2.25



Alt Model-Shift Uniqueness Test

008123716-01, P = 473.540942 Days, E = 171.853343 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	4.44	4.31	5.00	5.65	3.59	1.02	11.7	11.0	0.13	-0.56	3.79	1.30	0.24	0.93



Stellar Parameters For KIC 008123716

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6546^{+162}_{-179}	$3.915^{+0.273}_{-0.117}$	$-0.140^{+0.300}_{-0.250}$	$2.167^{+0.469}_{-0.703}$	$1.413^{+0.187}_{-0.280}$	$0.196^{+0.341}_{-0.068}$
	+2%/-3%	+7%/-3%	+214%/-179%	+22%/-32%	+13%/-20%	+174%/-35%
Source	PHO1	FLK73	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 008123716-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-104 \pm 14	$3.09^{+1.81}_{-1.49}$	508^{+32}_{-41}	5599^{+2308}_{-897}	10452^{+26876}_{-6201}
Alt.	-54 \pm 12	$3.44^{+1.75}_{-1.51}$	506^{+32}_{-42}	4644^{+1242}_{-657}	4318^{+9938}_{-2432}

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

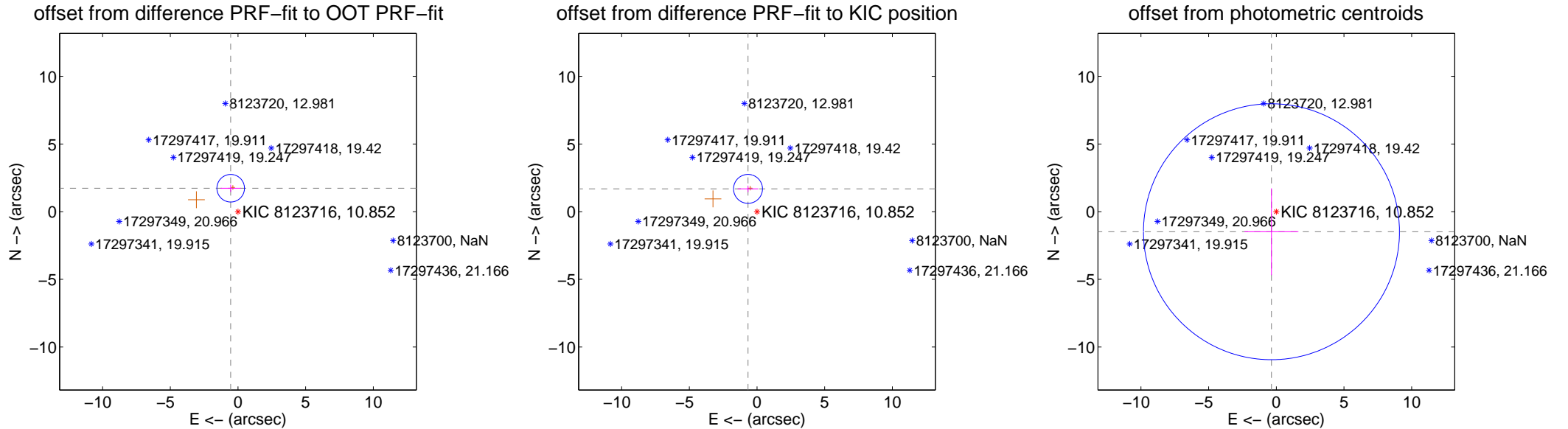
DV Centroid Data

Supplemental centroid analysis for 008123716-01. **Kepler magnitude: 10.85.** Transit SNR 6.89

There are 0 quarters with good PRF difference image offsets

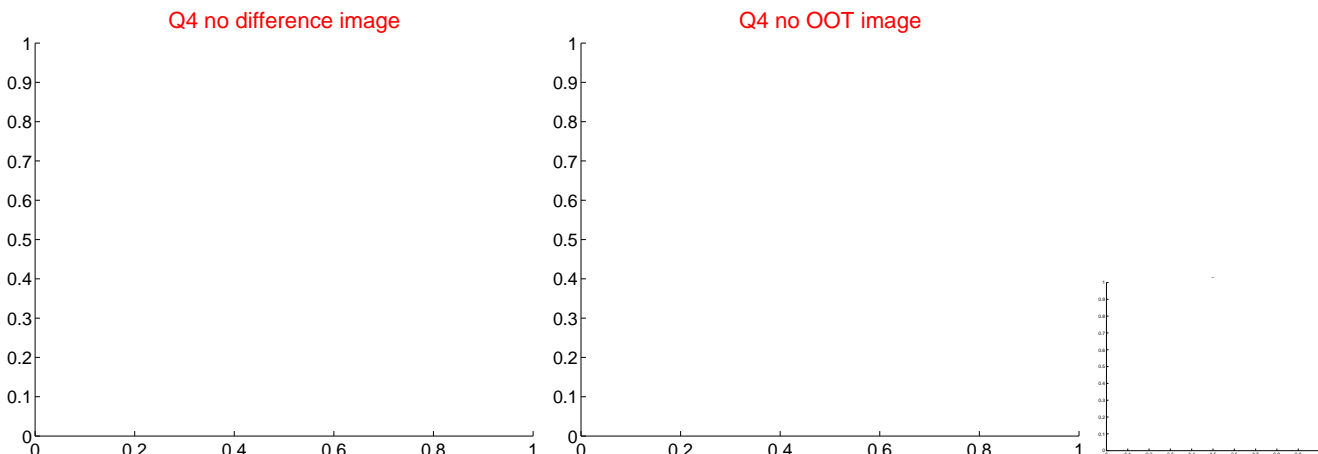
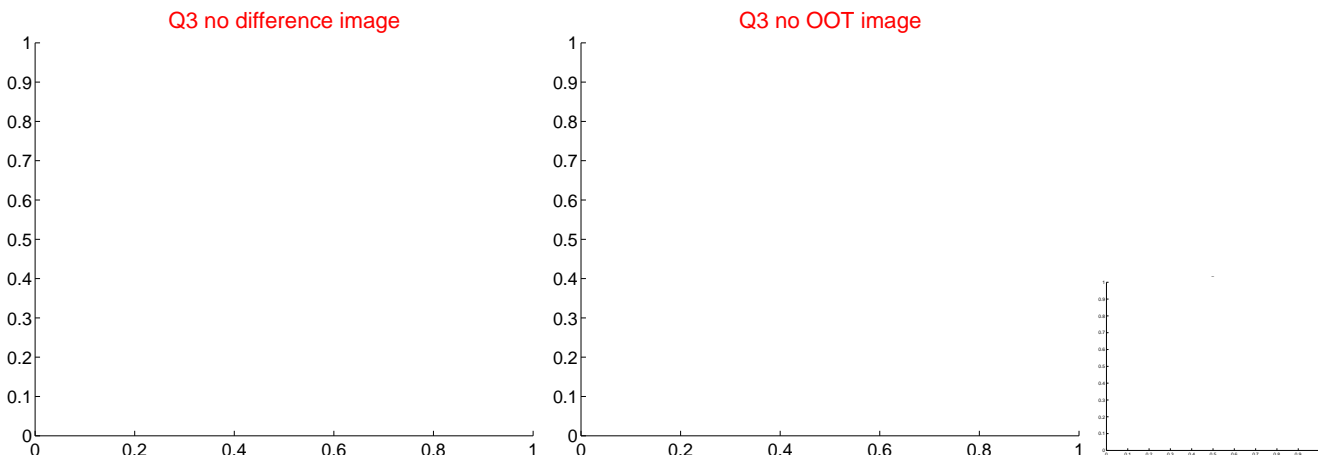
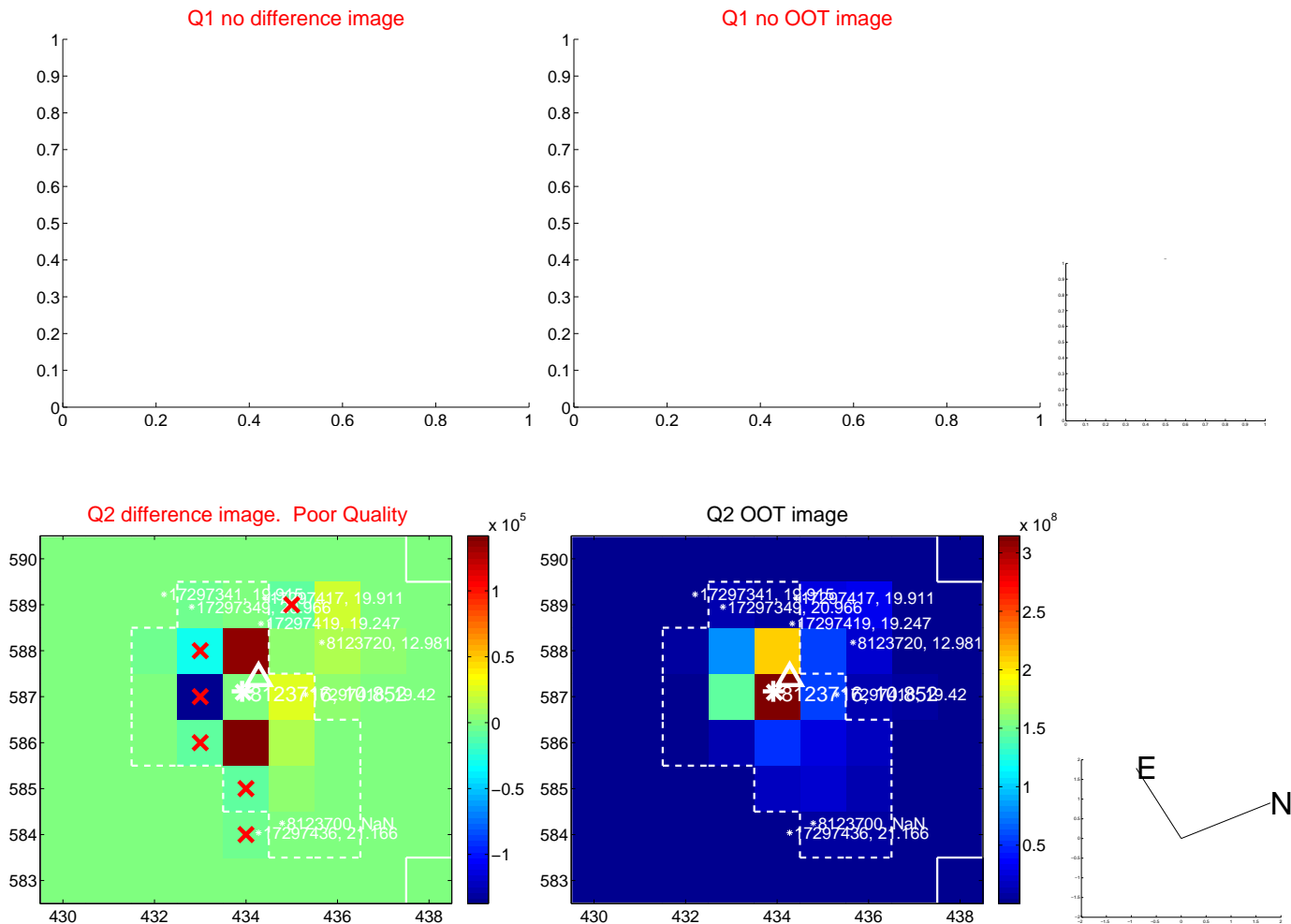
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.814 \pm 0.340	5.34	0.538 \pm 0.746	1.732 \pm 0.270
PRF-fit source offset from KIC position	1.811 \pm 0.356	5.08	0.665 \pm 0.762	1.685 \pm 0.238
photometric centroid source offset	1.53 \pm 3.15	0.48	0.36 \pm 1.99	-1.48 \pm 3.21

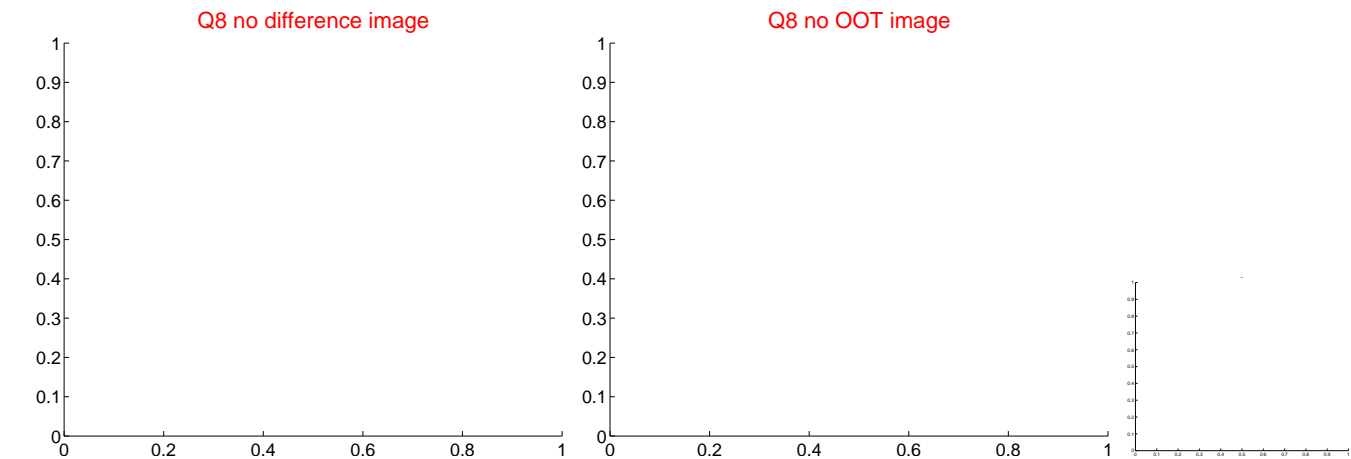
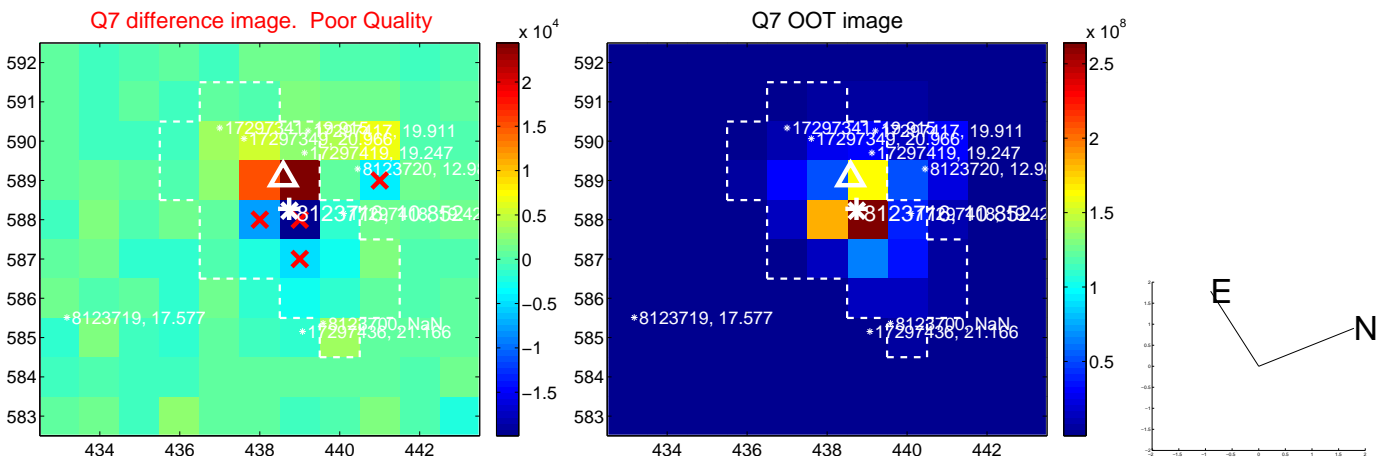
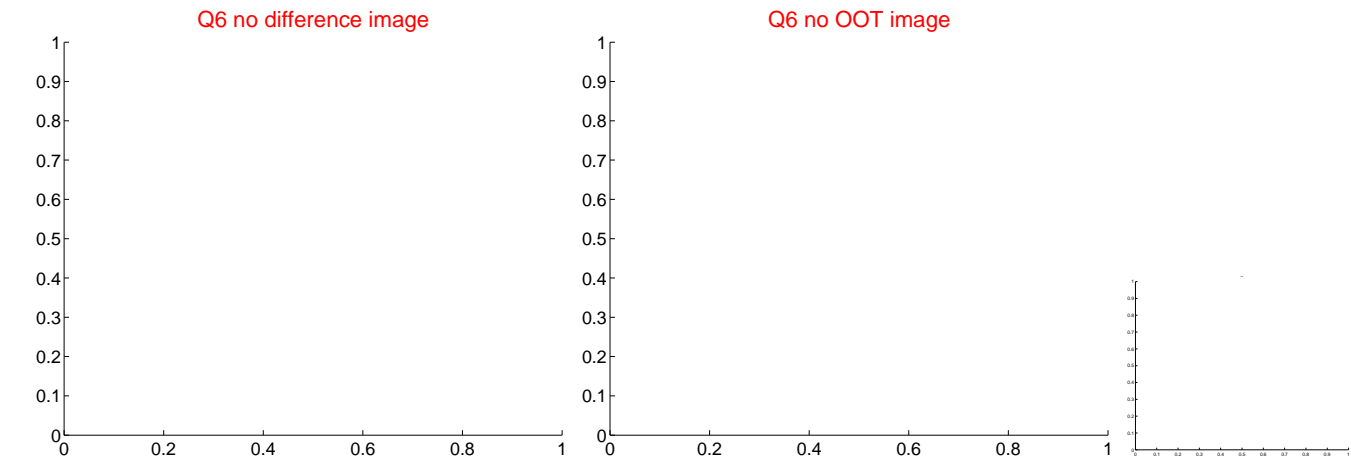
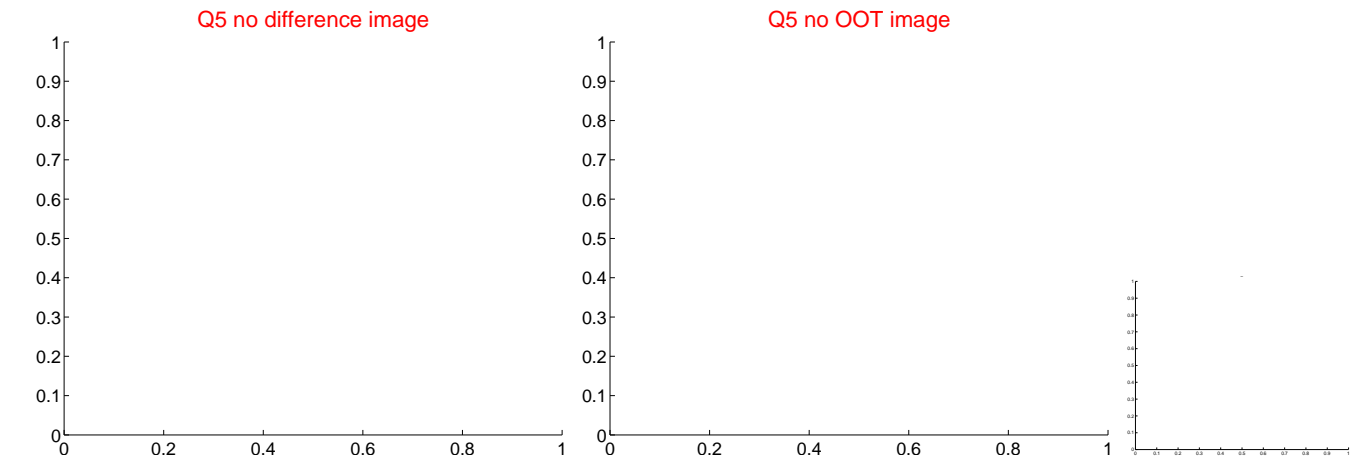


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



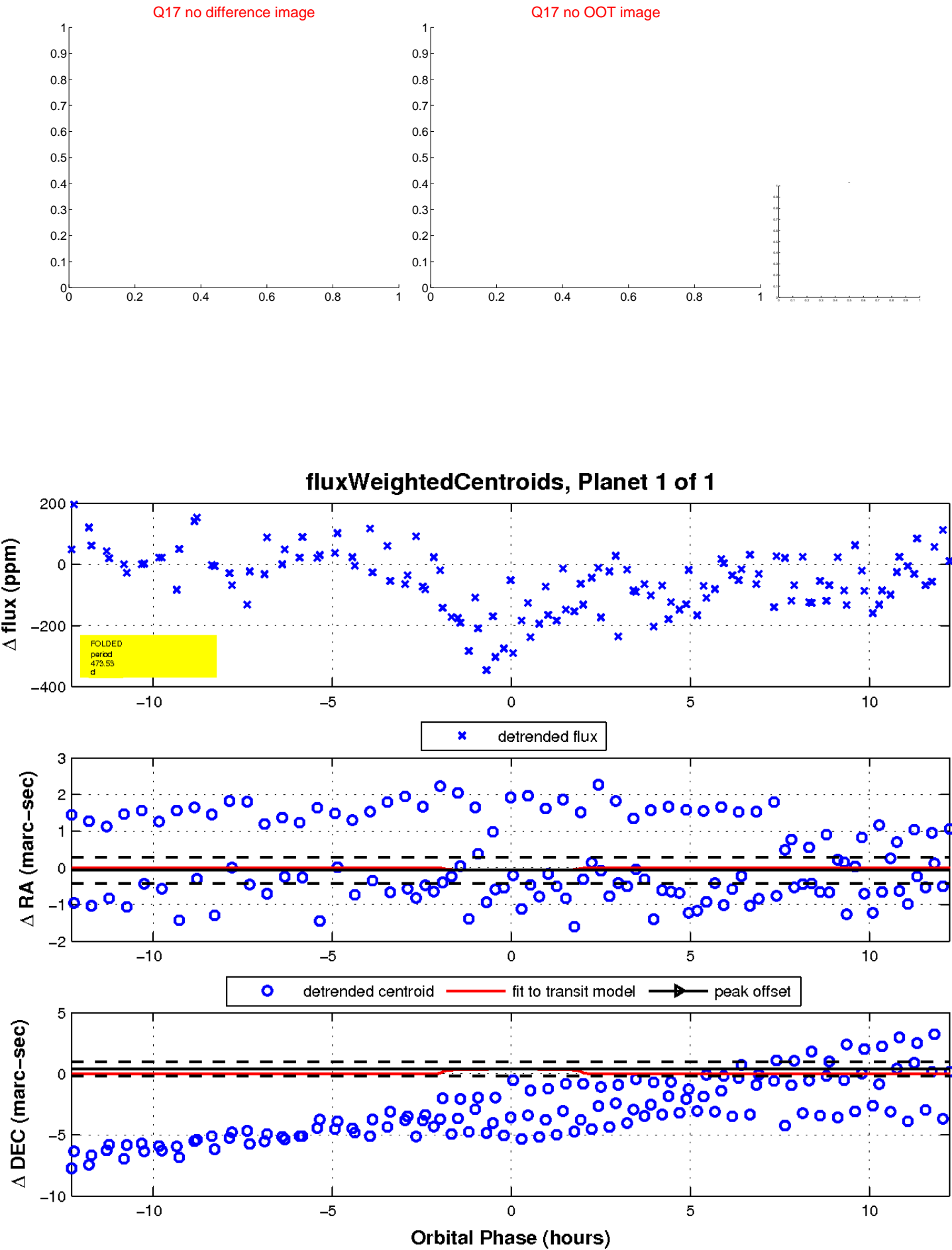
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

