

KIC 011868122

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})
011868122-01	OBS	8231.01	384.916240	238.718118	197.0	8.694	8.1	6.3	1.19	6070	1.93	1.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011868122-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

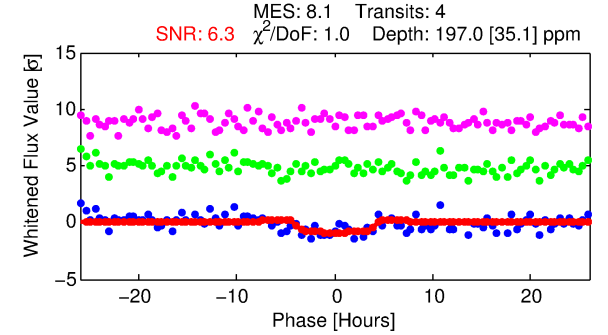
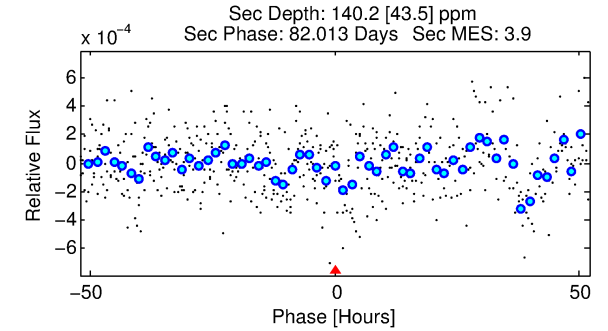
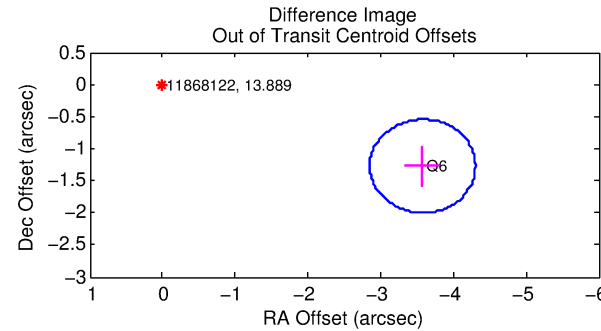
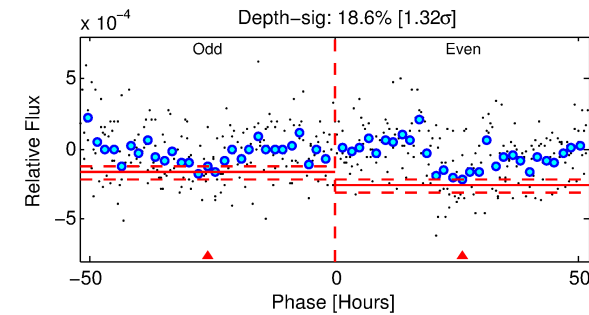
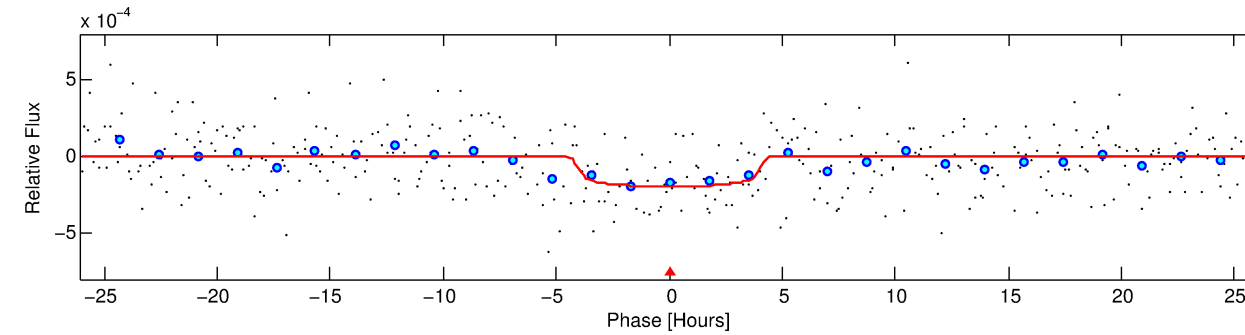
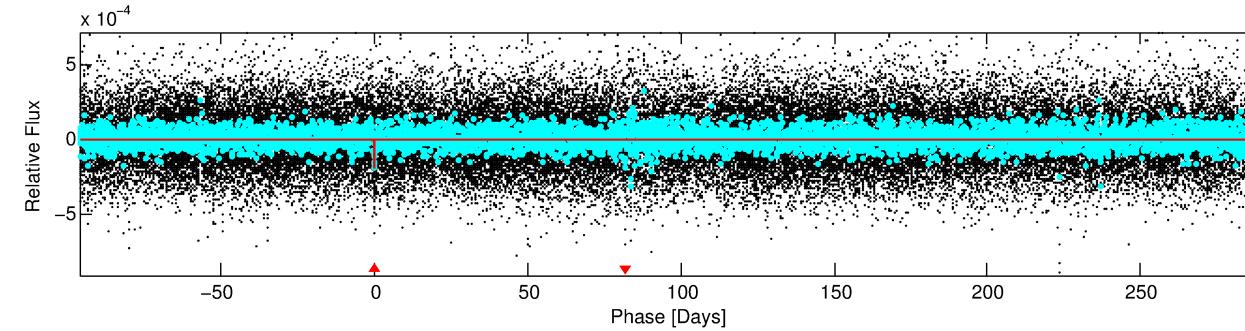
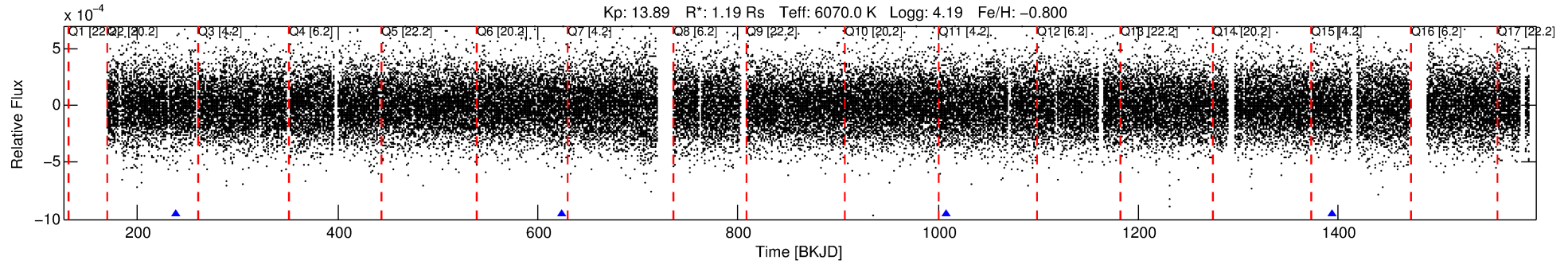
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011868122-01

No Significant Match Found

DV One-Page Summary

KIC: 11868122 Candidate: 1 of 1 Period: 384.916 d



DV Fit Results:

Period = 384.91624 [0.01057] d
Epoch = 238.7181 [0.0202] BKJD
Rp/R* = 0.0149 [0.0048]
a/R* = 167.87 [285.68]
b = 0.89 [0.42]
Seff = 1.88 [1.11]
Teq = 298 [44] K
Rp = 1.93 [0.86] Re
a = 0.9591 [0.3224] AU
Ag = 18974.83 [17505.27] [1.08 σ]
Teffp = 5415 [993] K [5.15 σ]

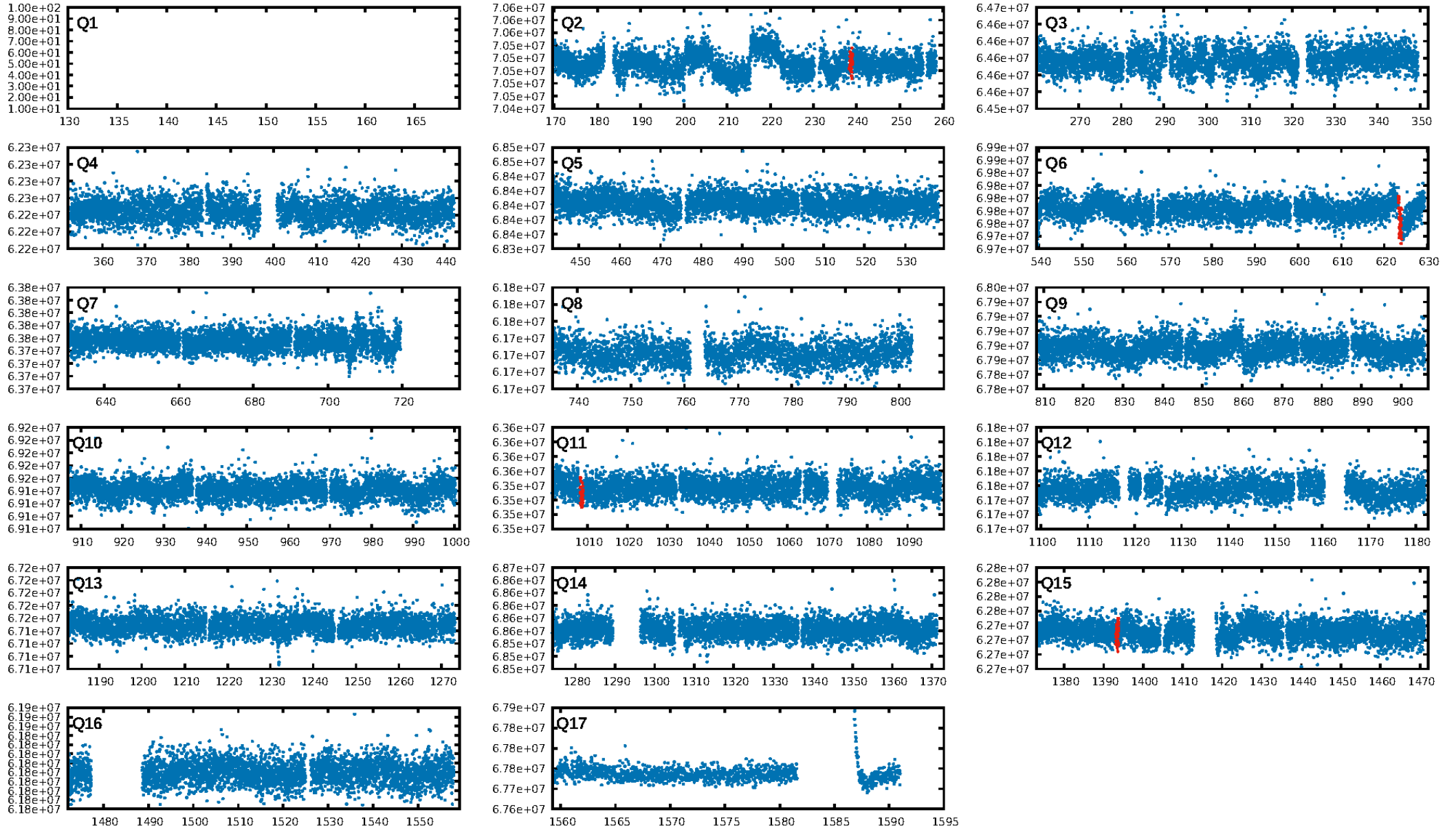
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.5%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.87e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.676
Centroid-sig: 81.6%
Centroid-so: 1.073 arcsec [0.51 σ]
OotOffset-rm: 3.795 arcsec [15.65 σ]
KicOffset-rm: 3.866 arcsec [15.79 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

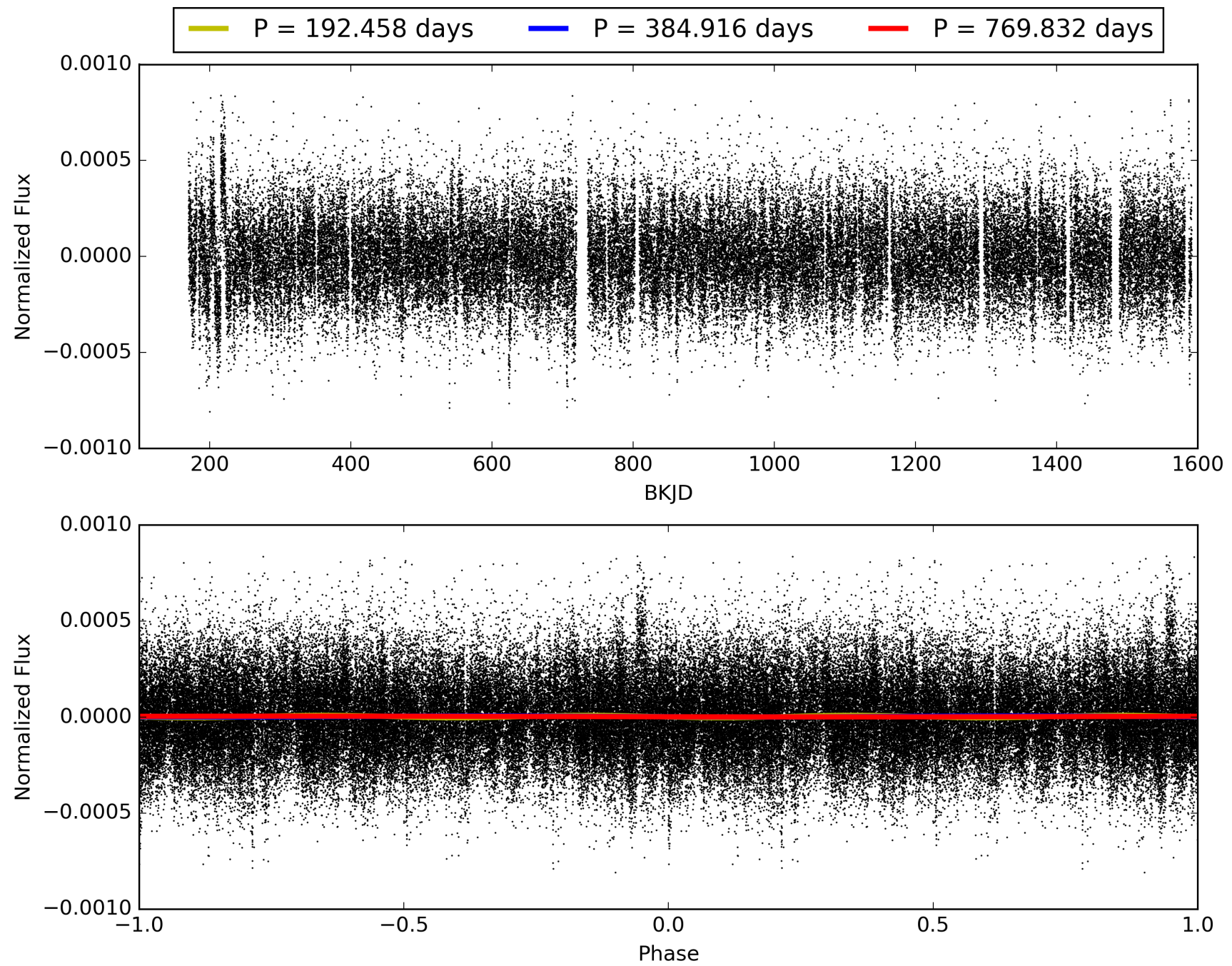
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:57:35 Z

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

TCE 011868122-01, PDC Light Curves

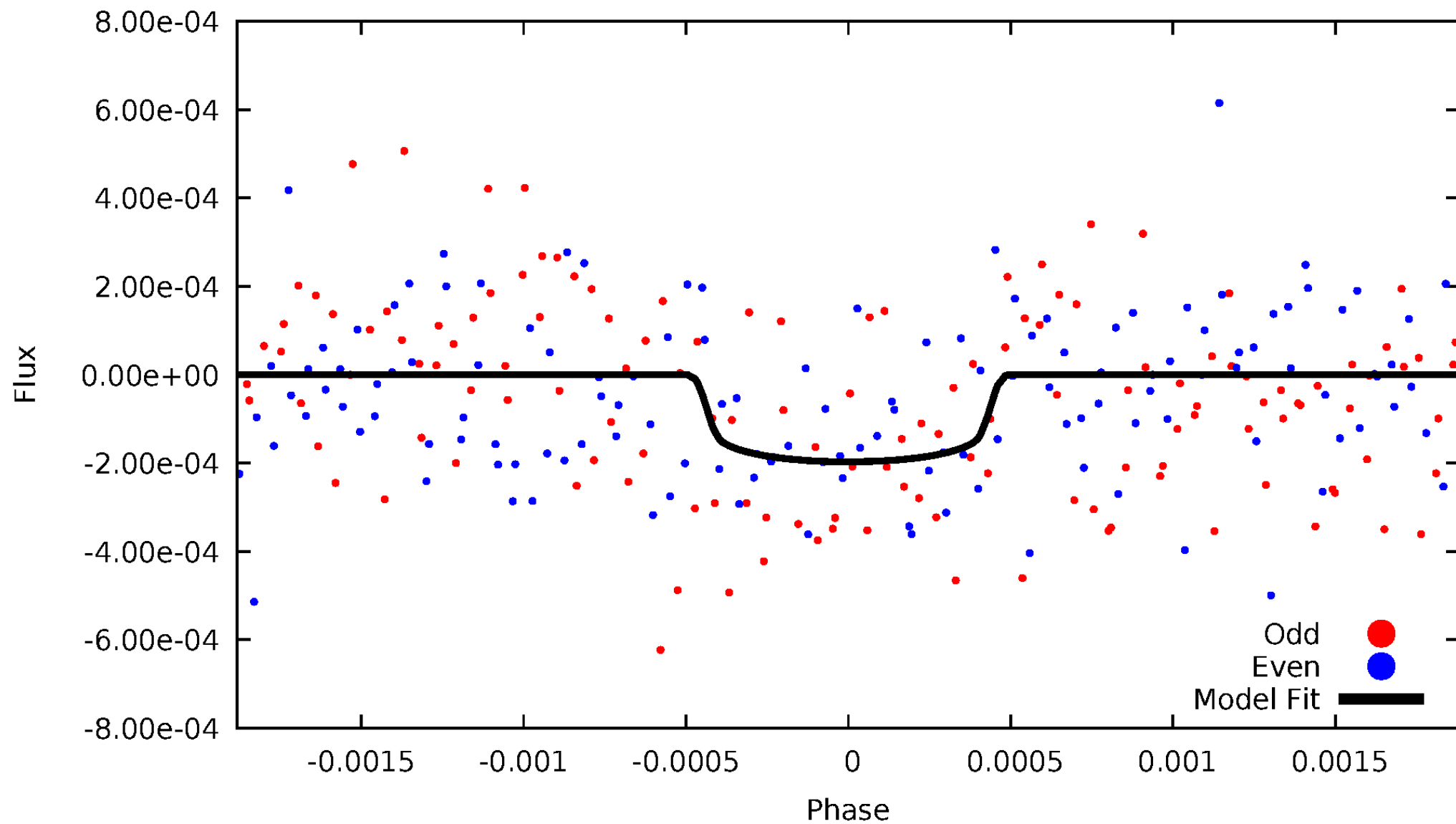


TCE 011868122-01



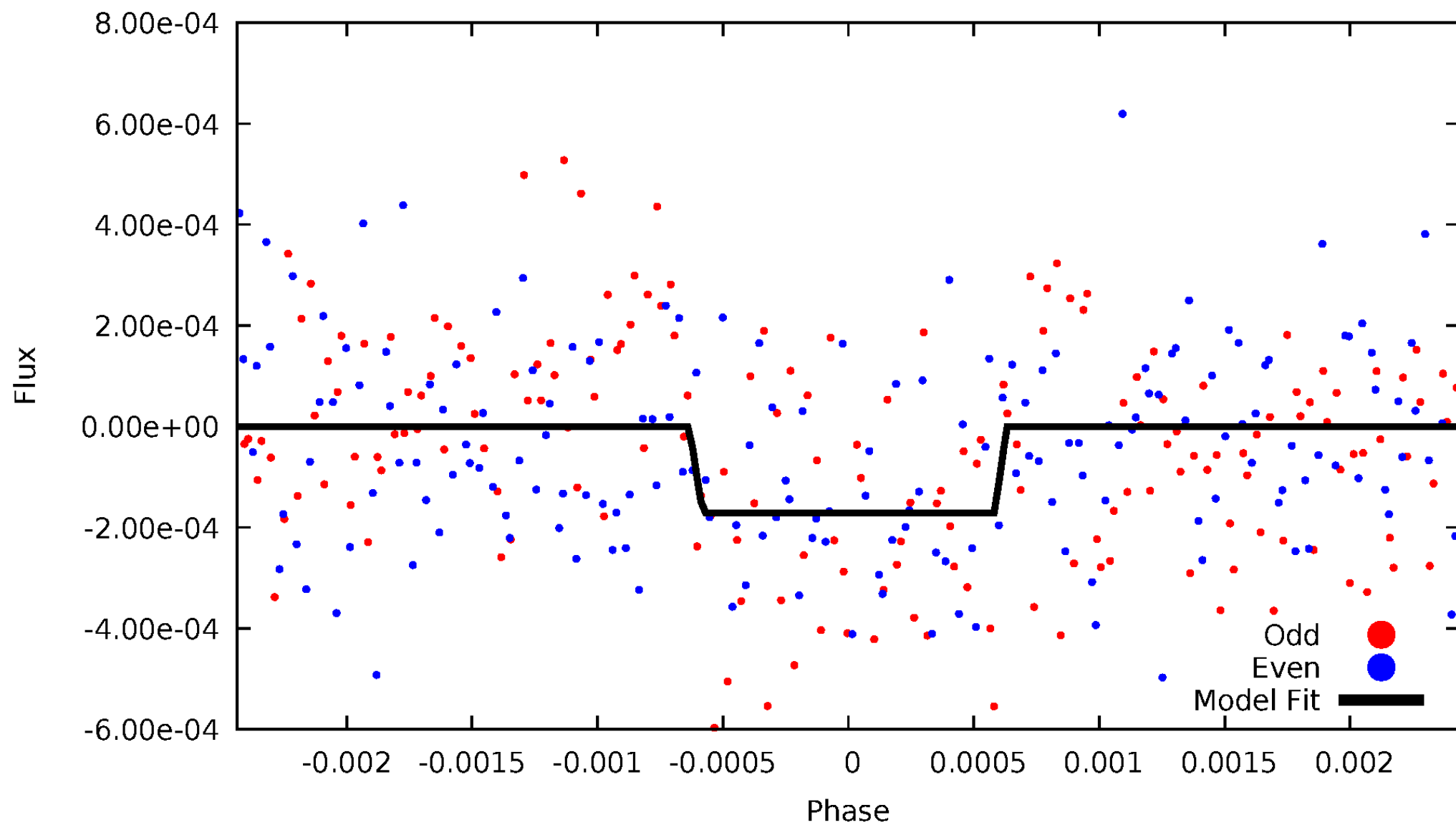
DV Odd/Even

TCE 011868122-01

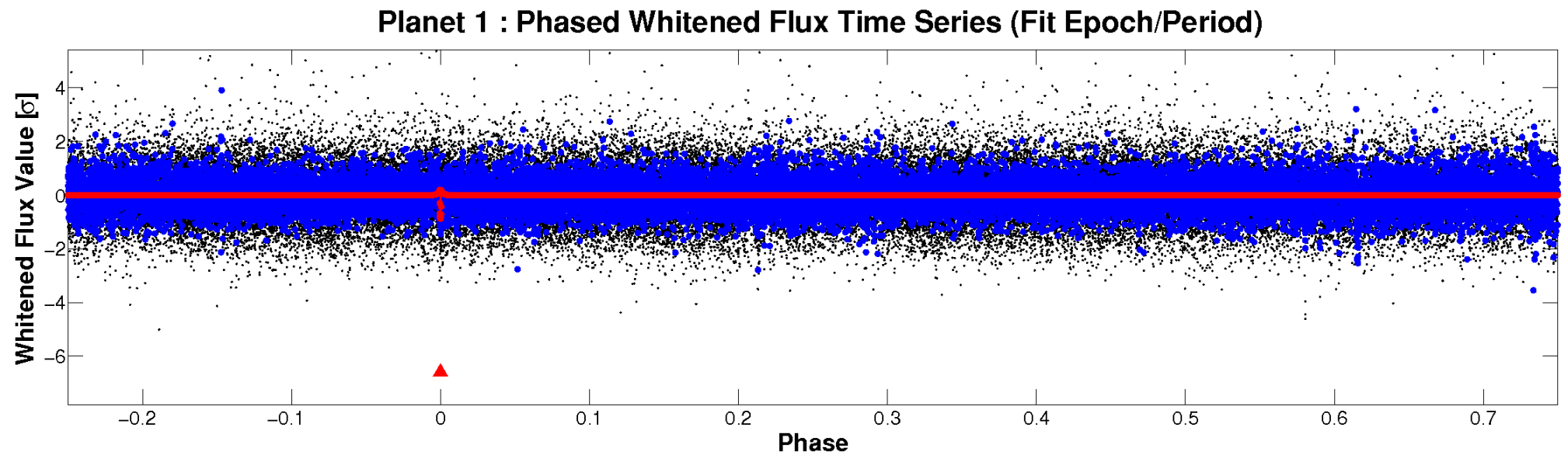
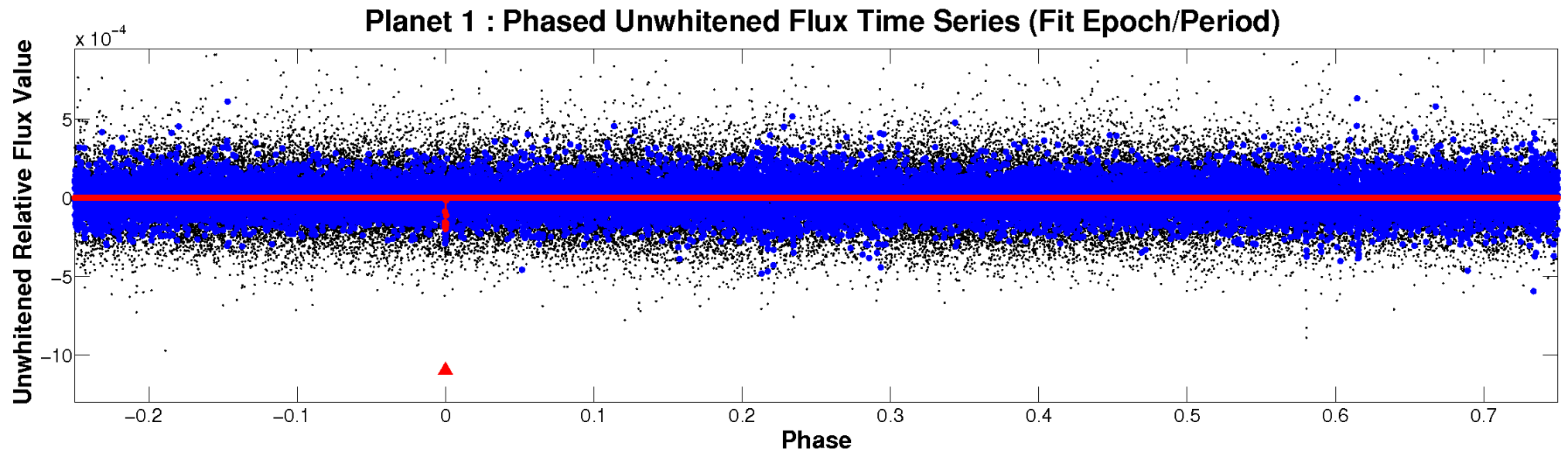


ALT Odd/Even

TCE 011868122-01

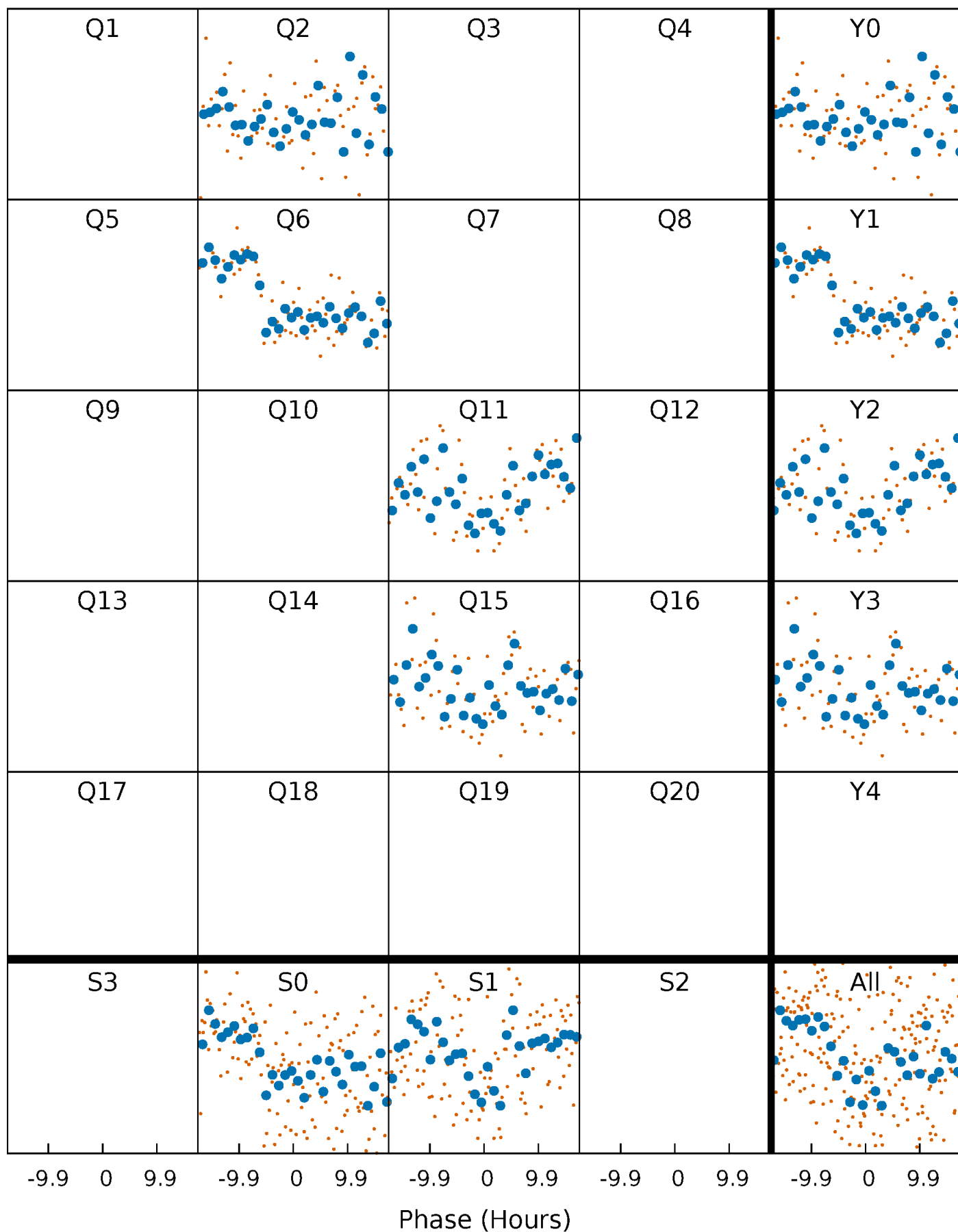


Non-Whitened Vs. Whitened Light Curve



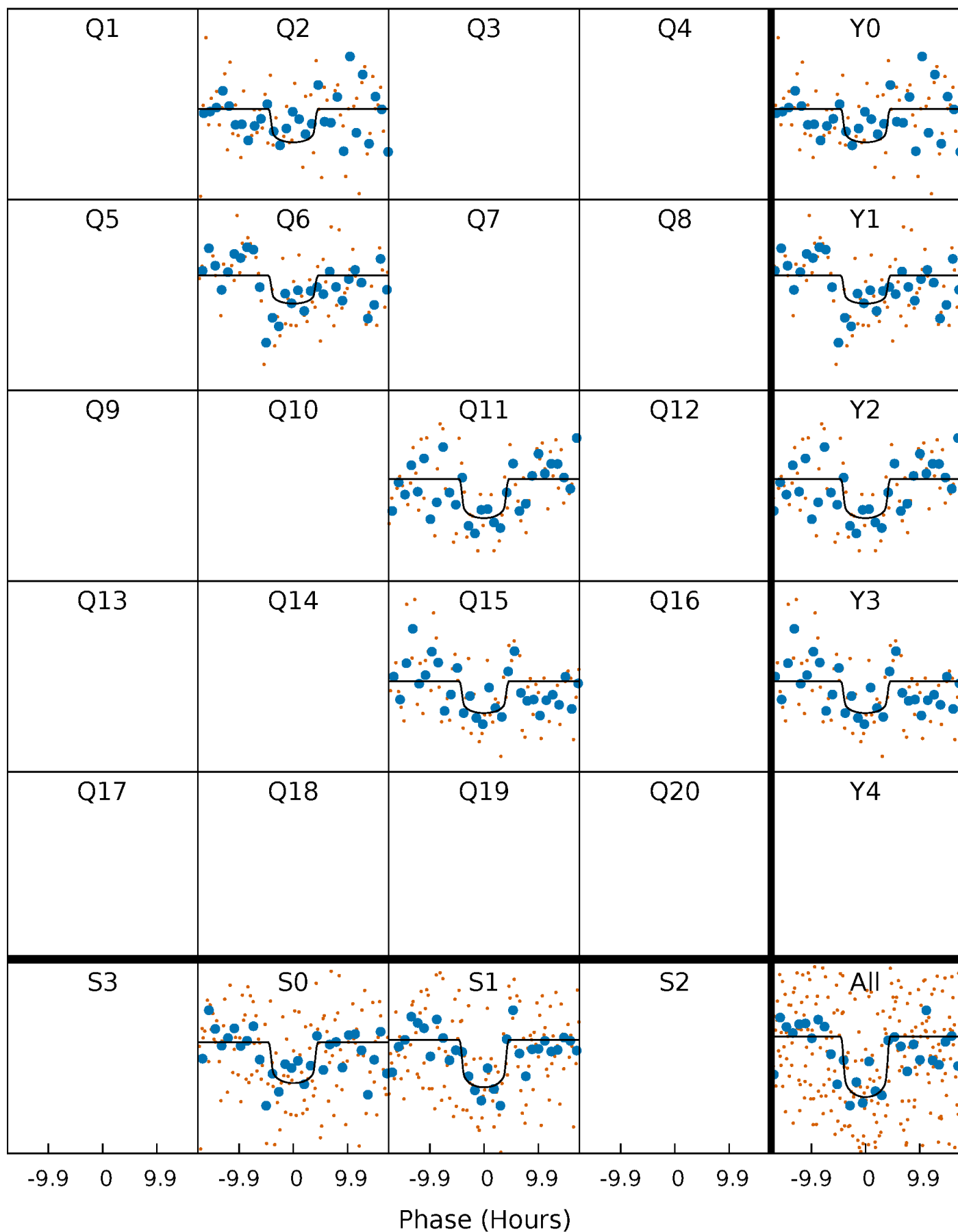
PDC Quarter-Phased Transit Curves

TCE 011868122-01 P=384.916240 Days $T_0=238.718118$ (BKJD)



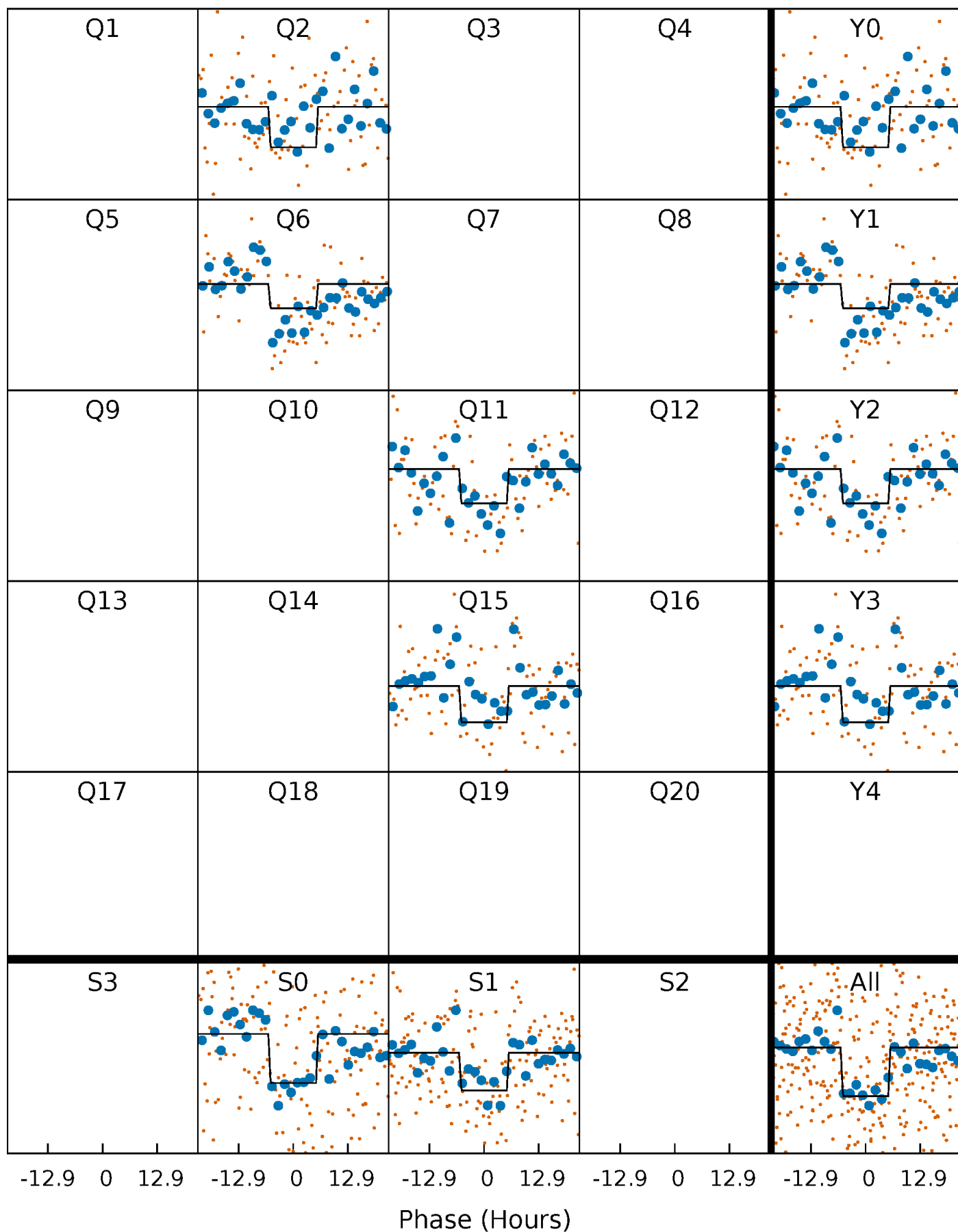
DV Quarter-Phased Transit Curves

TCE 011868122-01 P=384.916240 Days $T_0=238.718118$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

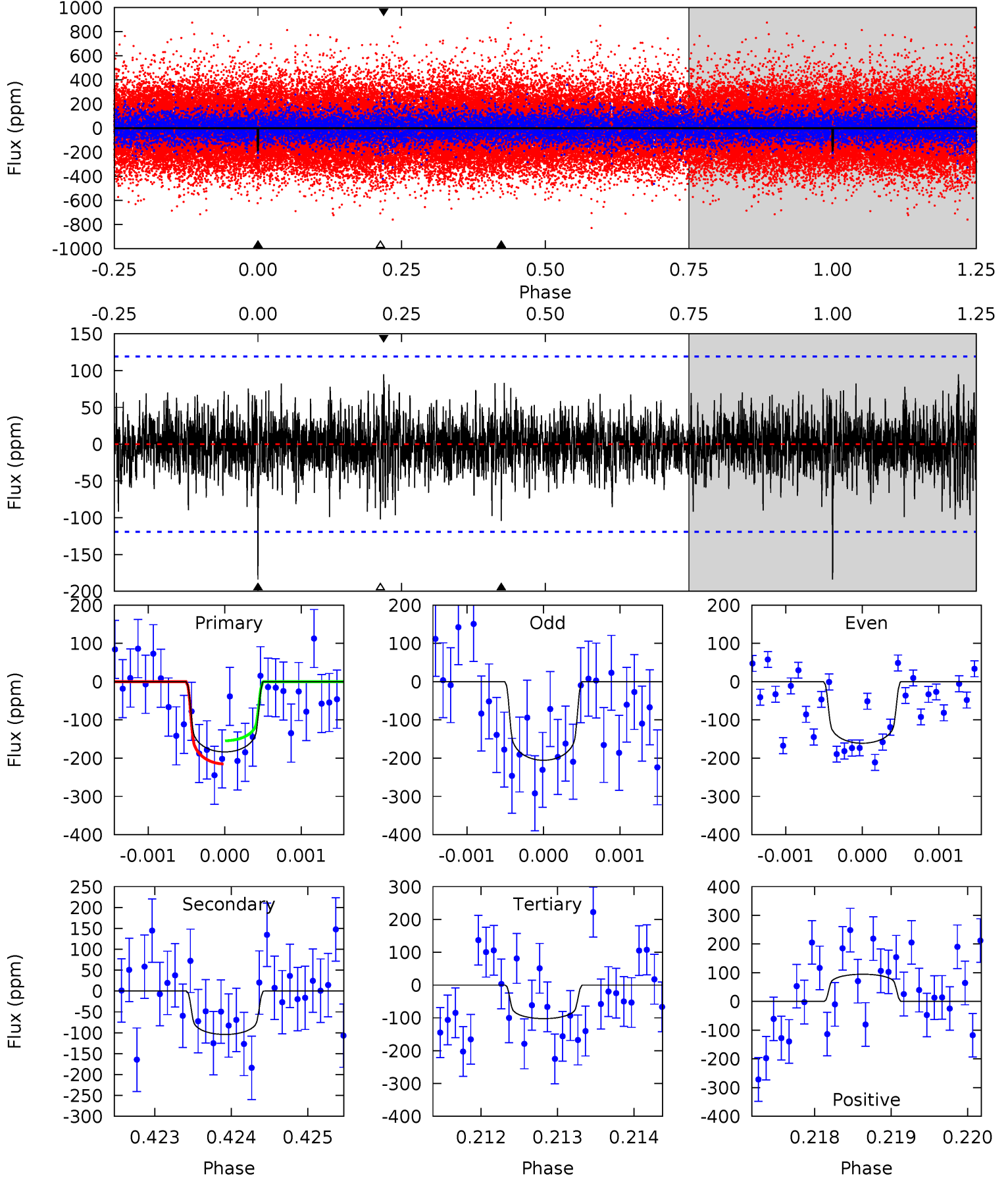
TCE 011868122-01 P=384.879725 Days $T_0=238.737414$ (BKJD)



DV Model-Shift Uniqueness Test

011868122-01, P = 384.916240 Days, E = 238.718118 Days

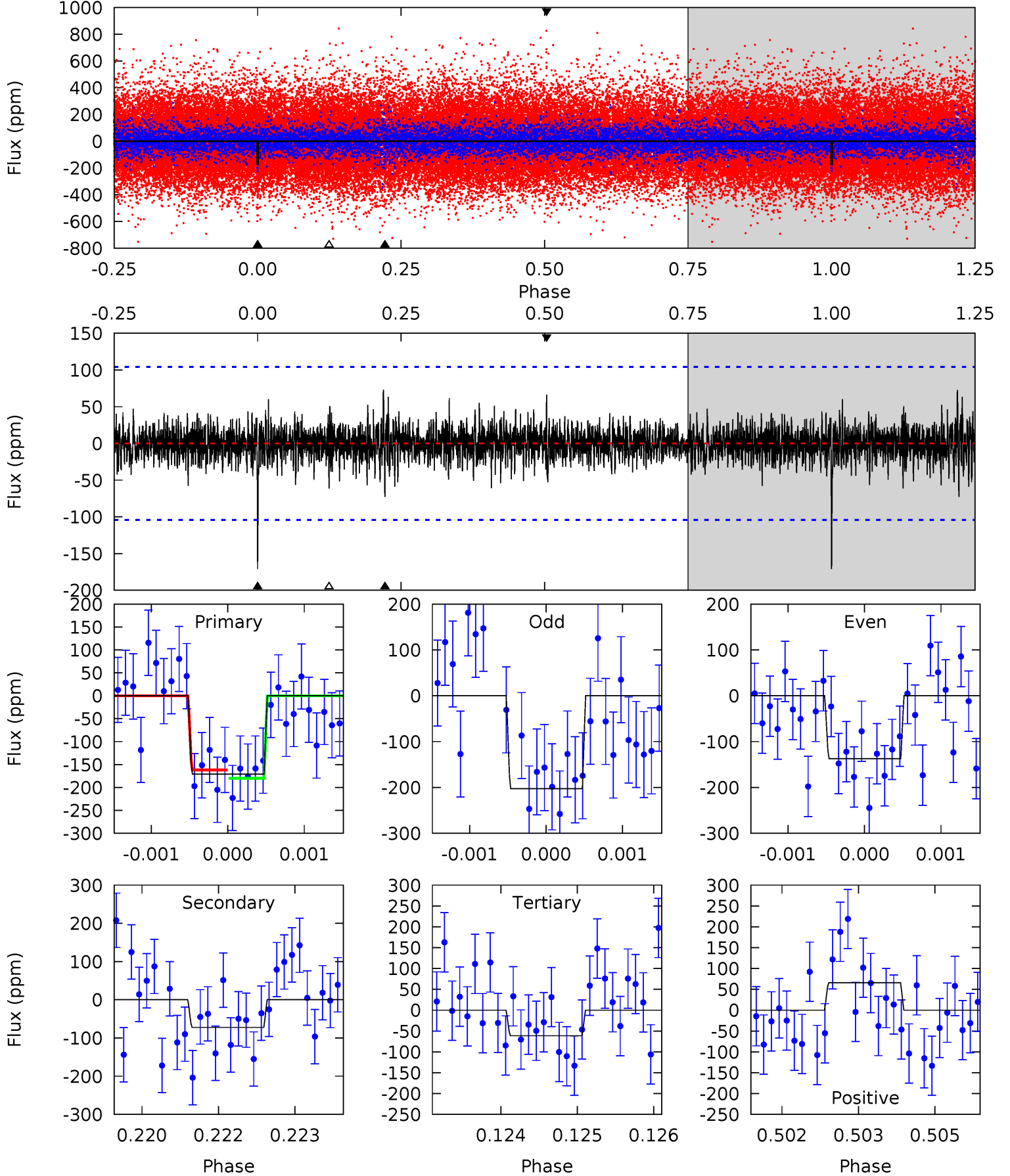
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.41	4.76	4.68	4.34	5.46	3.30	1.19	3.73	4.07	0.08	0.42	1.02	0.93	0.34	1.39



Alt Model-Shift Uniqueness Test

011868122-01, $P = 384.879725$ Days, $E = 238.737414$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.89	3.76	3.19	3.45	5.42	3.23	0.84	5.70	5.44	0.58	0.32	1.71	1.09	0.30	0.47



Stellar Parameters For KIC 011868122

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6070^{+199}_{-199}	$4.186^{+0.351}_{-0.189}$	$-0.800^{+0.300}_{-0.300}$	$1.191^{+0.359}_{-0.359}$	$0.794^{+0.104}_{-0.048}$	$0.661^{+1.473}_{-0.332}$
	+3%/-3%	+8%/-5%	+37%/-37%	+30%/-30%	+13%/-6%	+223%/-50%
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 011868122-01 / KOI 8231.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-104 ± 22	$1.84^{+0.80}_{-0.66}$	412^{+38}_{-42}	5080^{+1127}_{-588}	15173^{+23777}_{-7675}
Alt.	-72 ± 19	$1.64^{+0.75}_{-0.62}$	411^{+36}_{-38}	4985^{+1127}_{-676}	13936^{+23302}_{-7855}

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 $A_{obs} \gg 1.0$

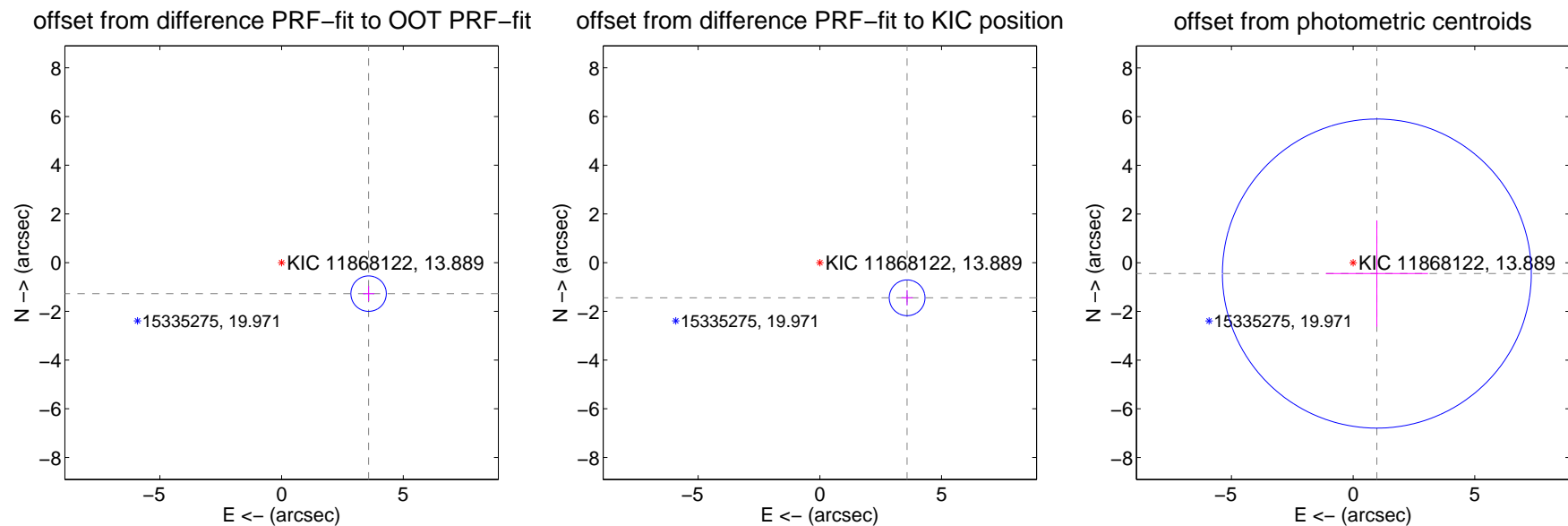
DV Centroid Data

Supplemental centroid analysis for 011868122-01. Kepler magnitude: 13.89. Transit SNR 6.35

There are 1 quarters with good PRF difference image offsets

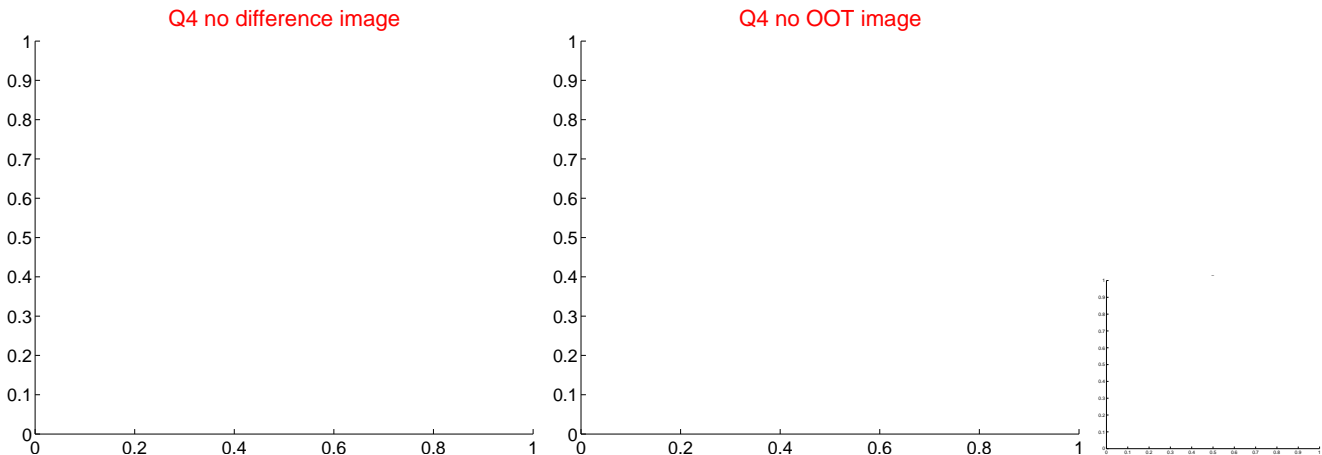
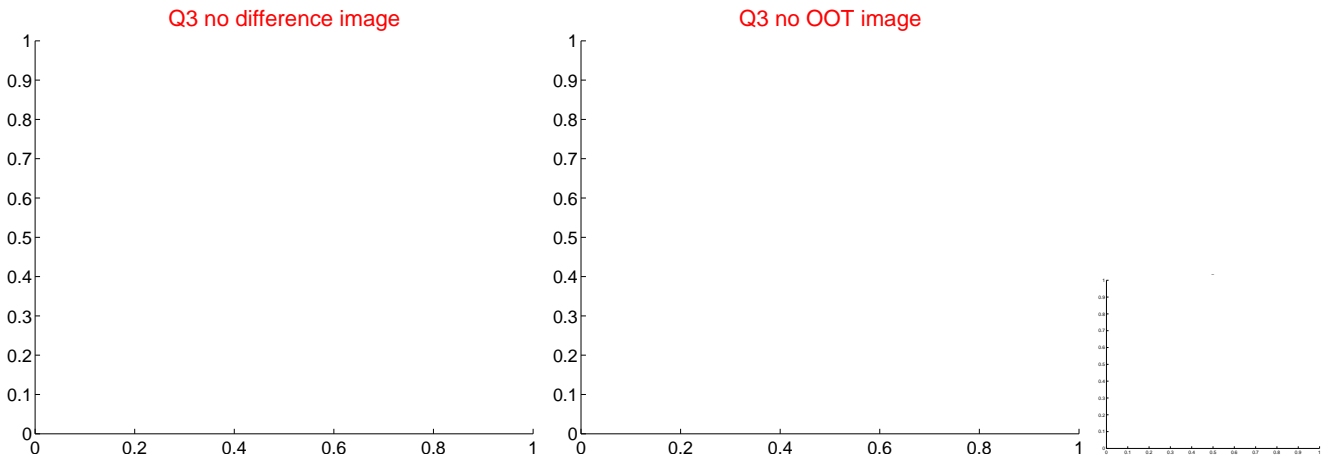
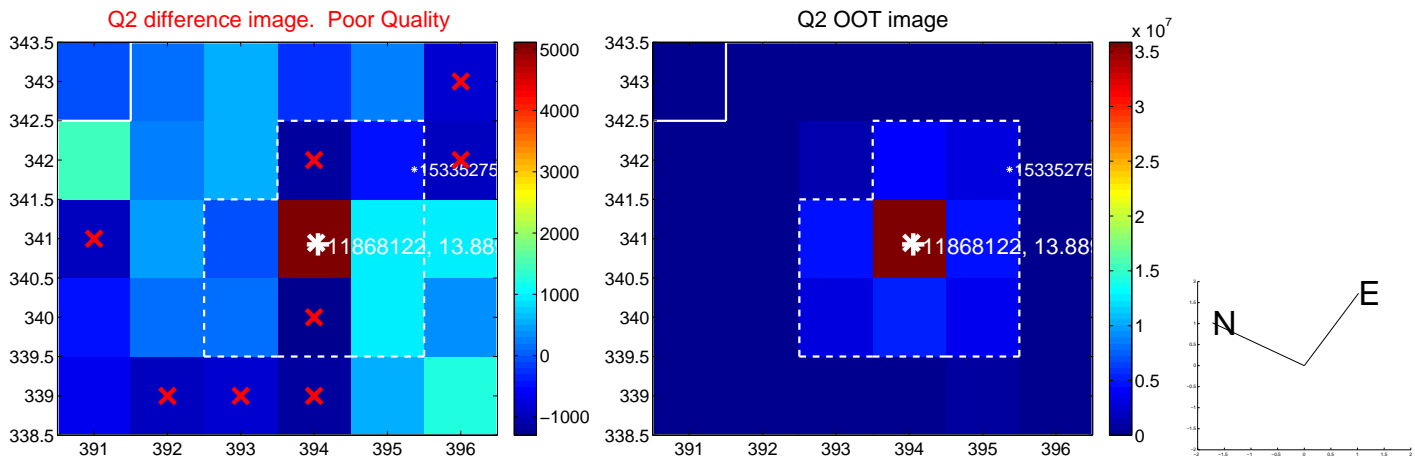
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.795 ± 0.243	15.65	-3.575 ± 0.232	-1.273 ± 0.311
PRF-fit source offset from KIC position	3.866 ± 0.245	15.79	-3.586 ± 0.232	-1.444 ± 0.311
photometric centroid source offset	1.07 ± 2.12	0.51	-0.98 ± 2.10	-0.45 ± 2.19

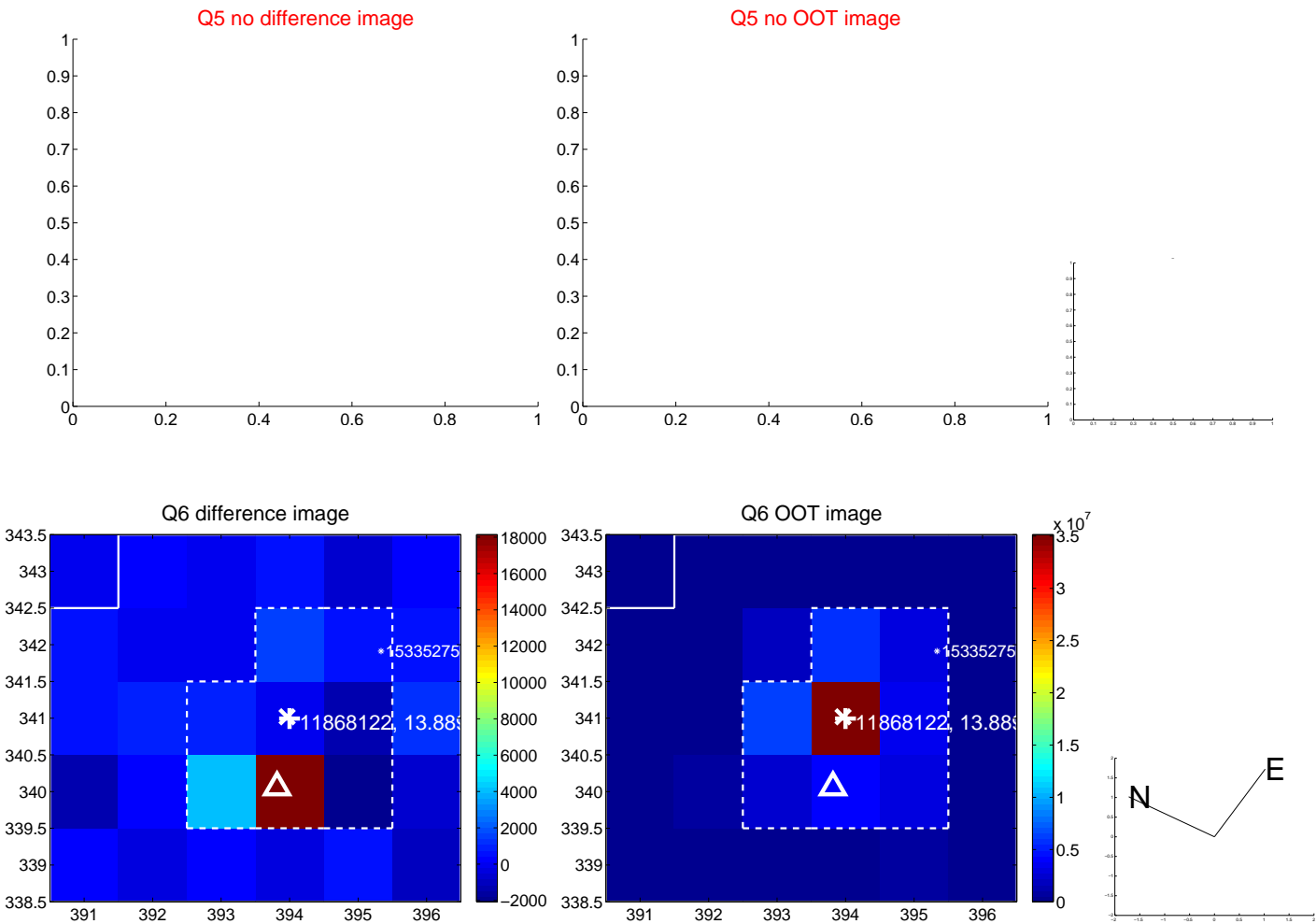


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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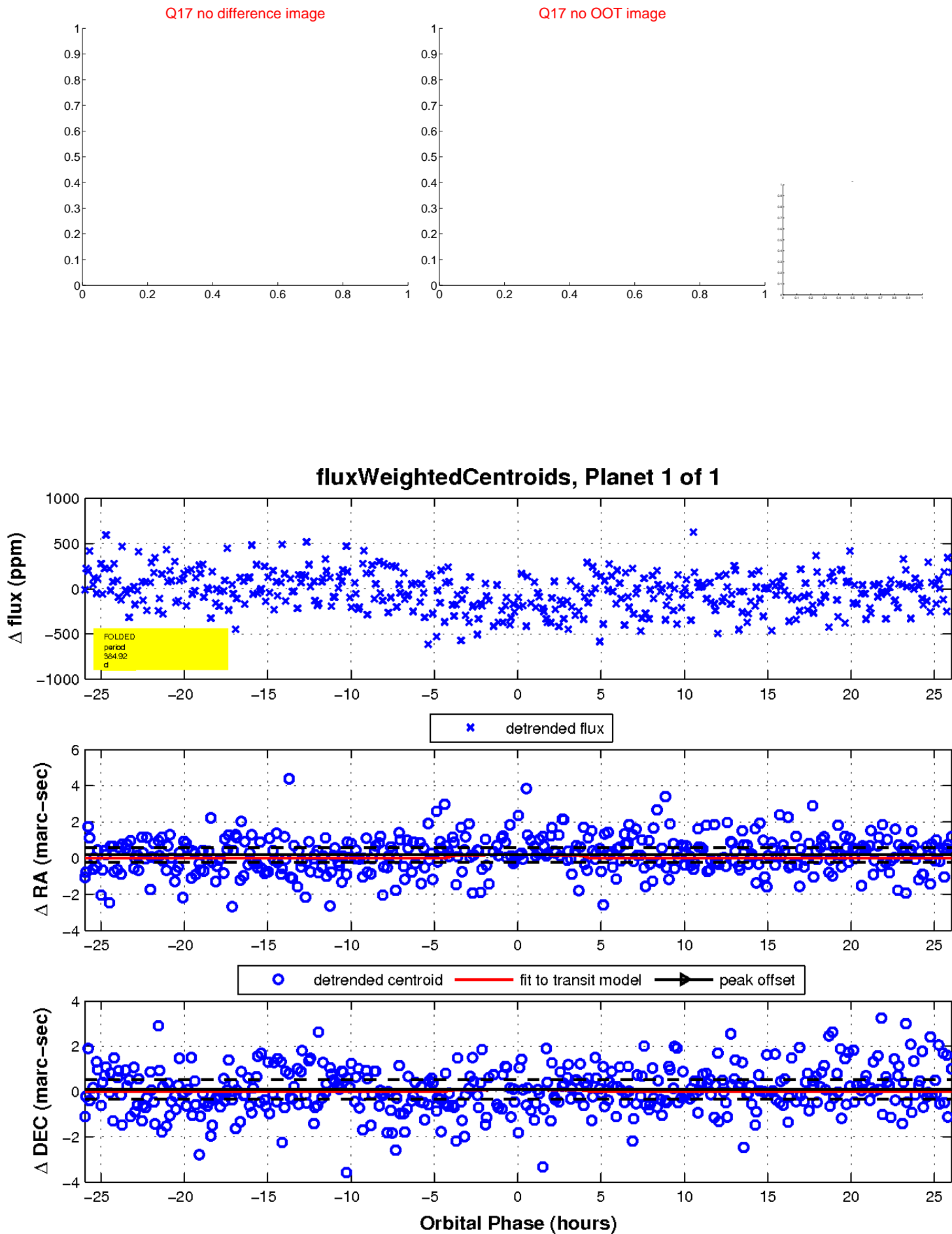
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

