

KIC 008752590

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})
008752590-01	OBS	No	375.156724	132.249041	1983.8	50.668	12.4	17.9	0.95	5750	6.24	0.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008752590-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—CENT_FEW_DIFFS—EPHEM_MATCH

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.

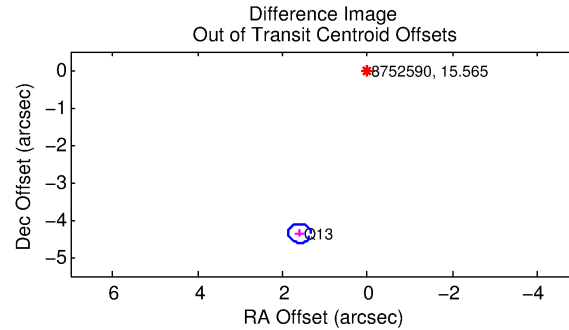
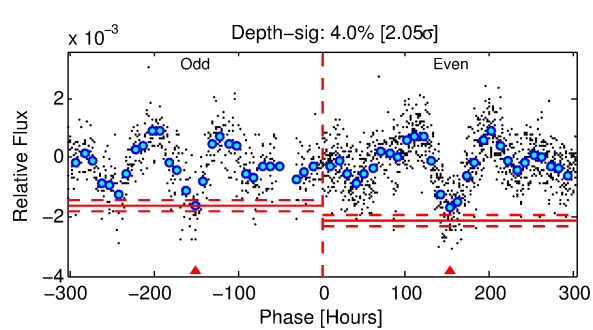
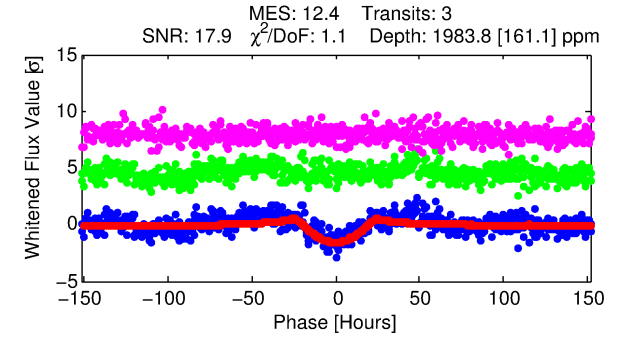
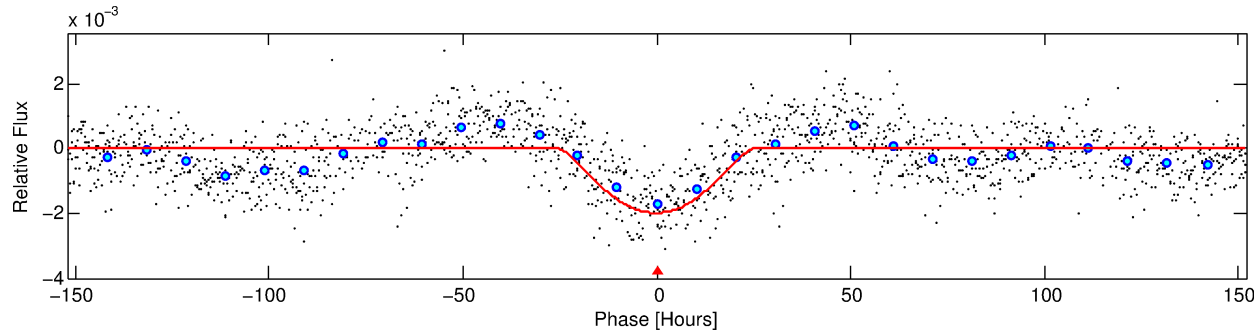
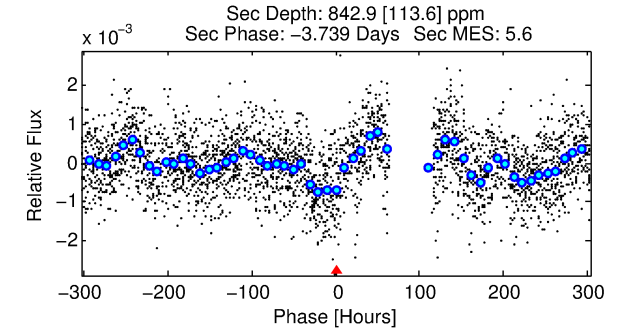
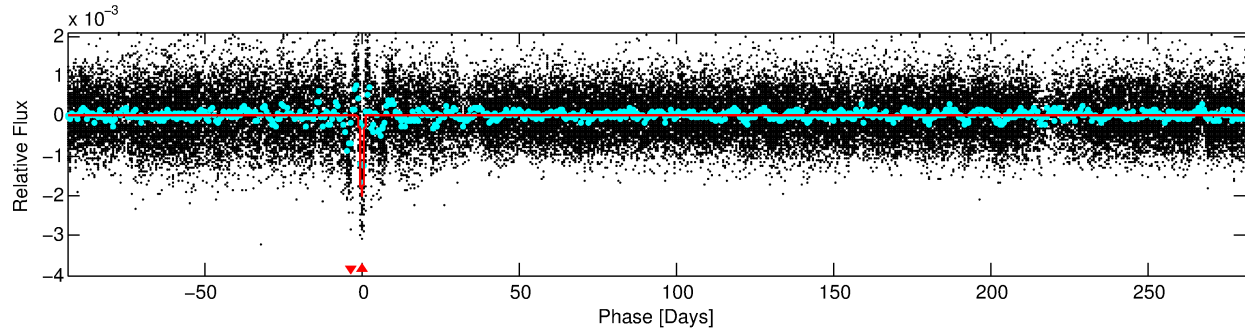
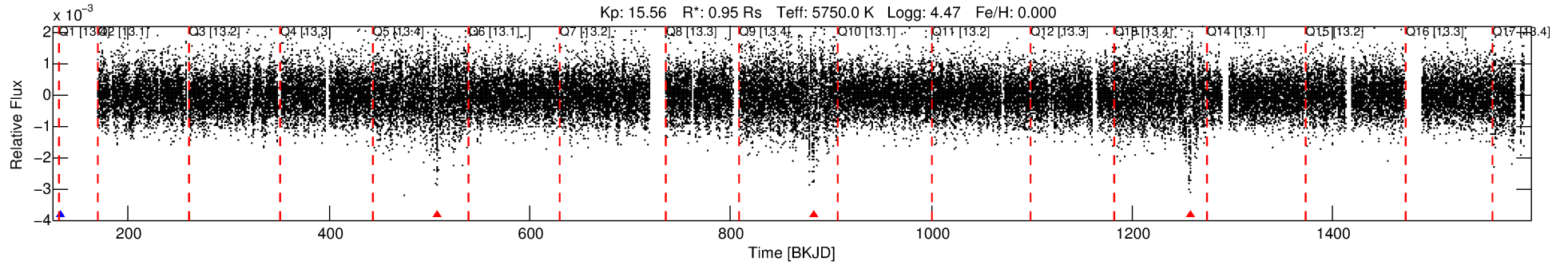
Ephemeris Match Information For 008752590-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (\prime)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008752590-01	8752590	008687499-01	8687499	1:1	923.3	-232	-3	15.72	15.56	0.87	Col-Anomaly	1	2.29	1.98

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8752590 Candidate: 1 of 1 Period: 375.157 d



DV Fit Results:

Period = 375.15672 [0.03654] d
Epoch = 132.2490 [0.0810] BKJD
Rp/R* = 0.0600 [0.0270]
a/R* = 24.20 [4.24]
b = 0.97 [0.05]
Seff = 0.88 [0.32]
Teq = 247 [23] K
Rp = 6.24 [3.36] Re
a = 1.0082 [0.2461] AU
Ag = 12090.40 [11789.46] [1.03σ]
Teff = 4001 [918] K [4.09σ]

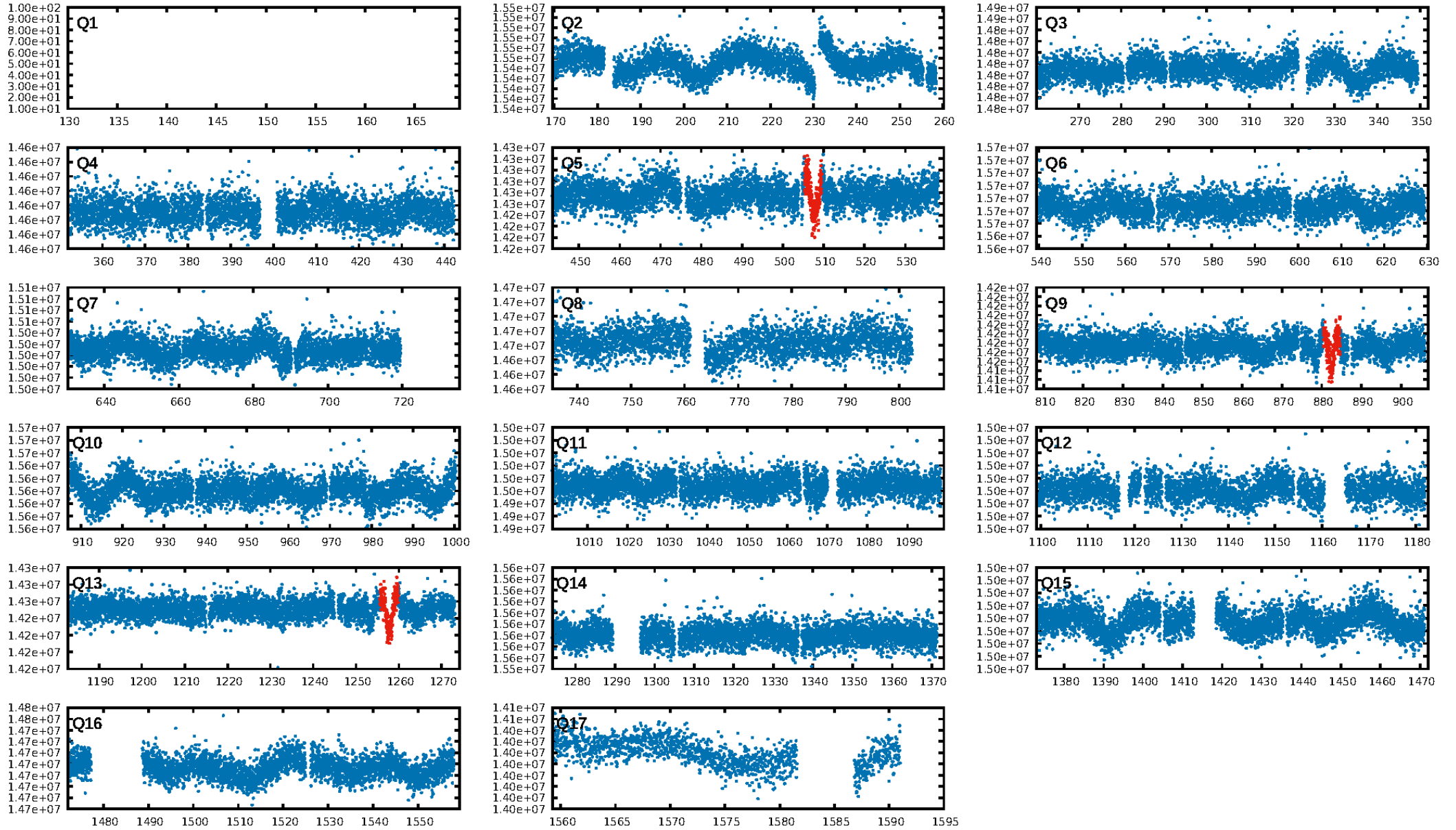
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.7%
ModelChiSquareGoF-sig: 99.7%
Bootstrap-pfa: 1.74e-26
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: -16.2
Centroid-sig: 0.0%
Centroid-so: 6.049 arcsec [6.61σ]
OotOffset-rm: 4.643 arcsec [54.00σ]
KicOffset-rm: 4.742 arcsec [55.14σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

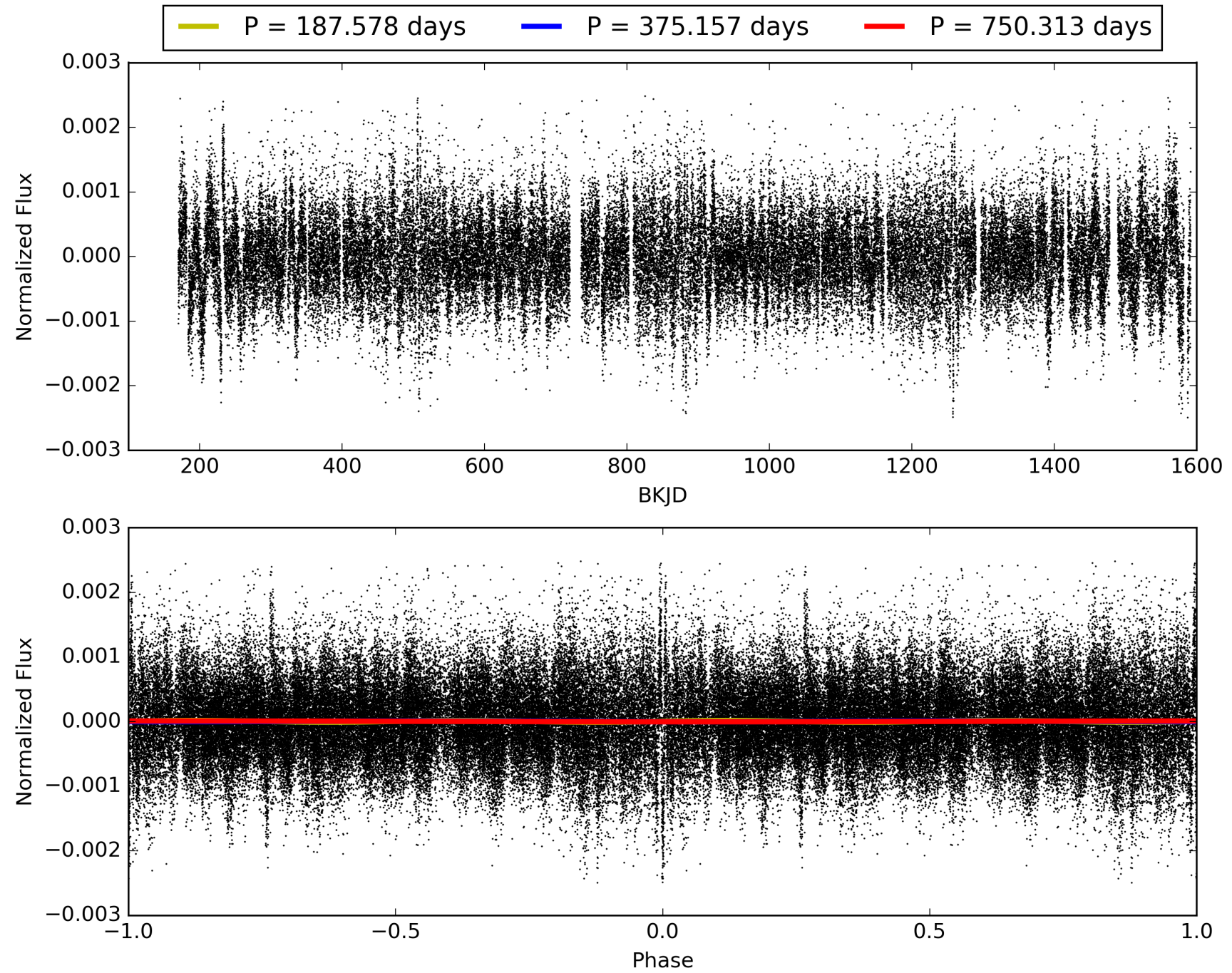
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:22:09 Z

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

TCE 008752590-01, PDC Light Curves

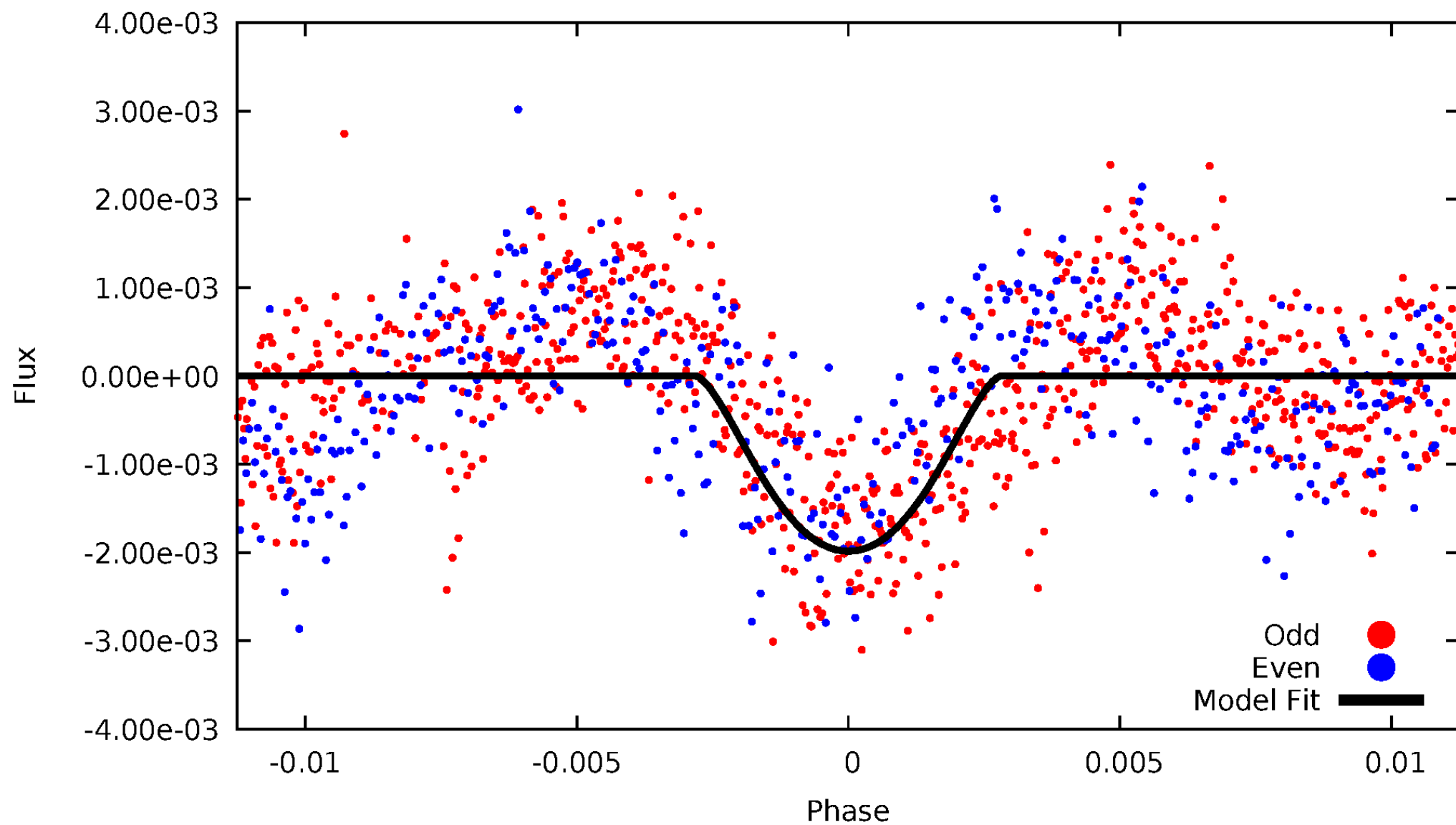


TCE 008752590-01



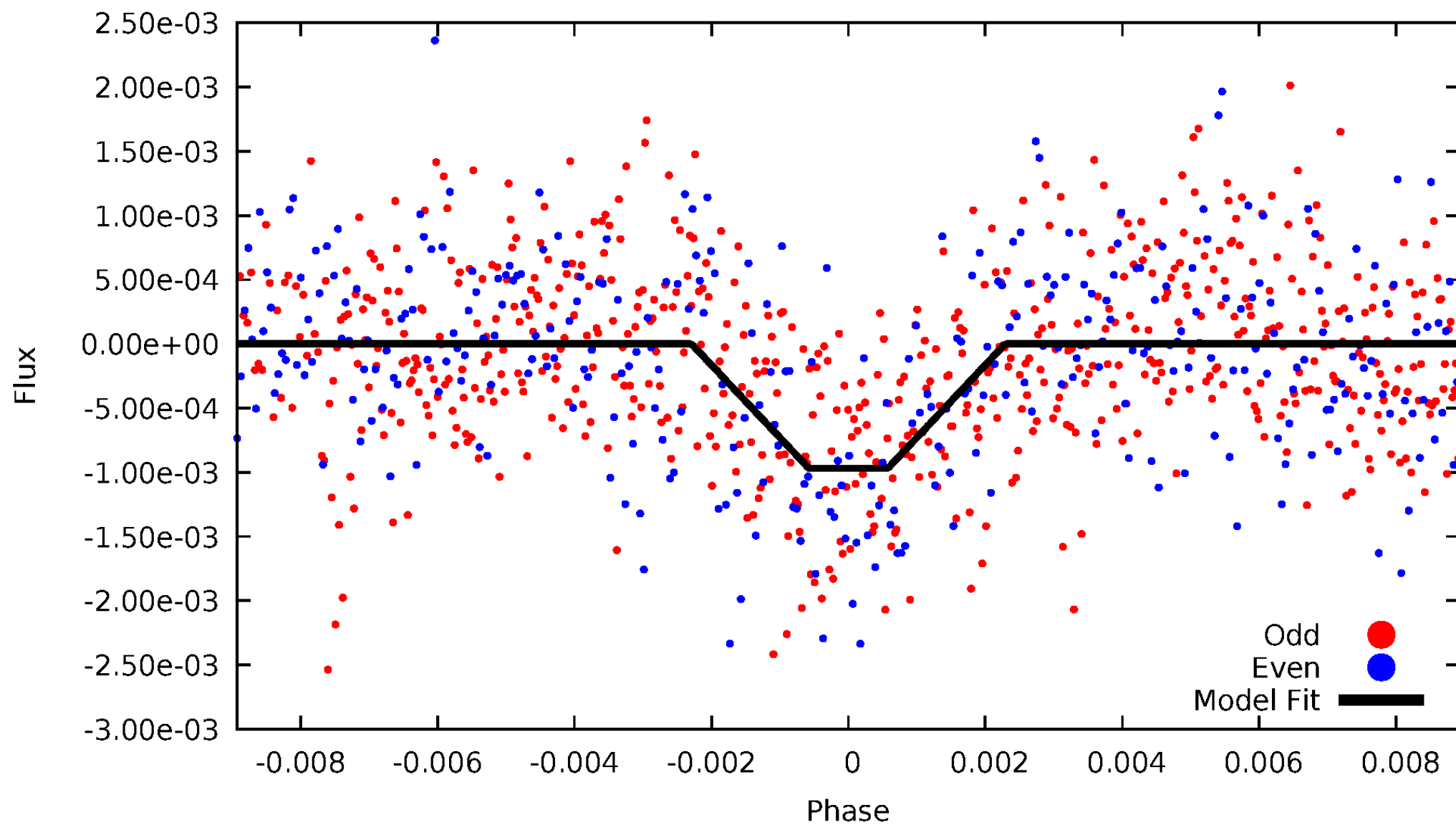
DV Odd/Even

TCE 008752590-01

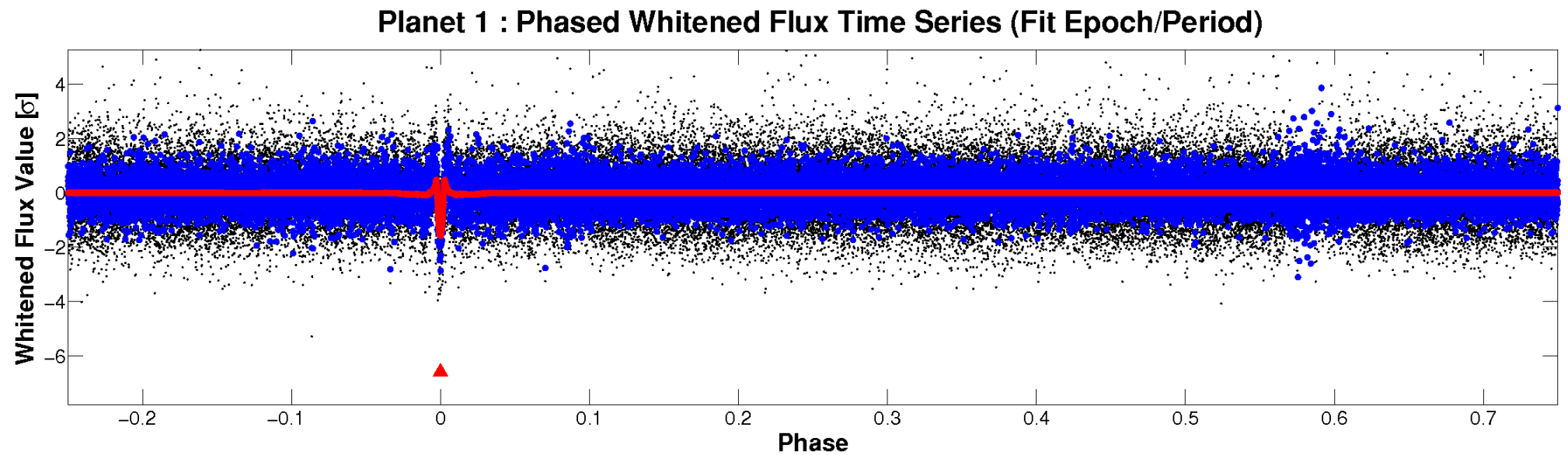
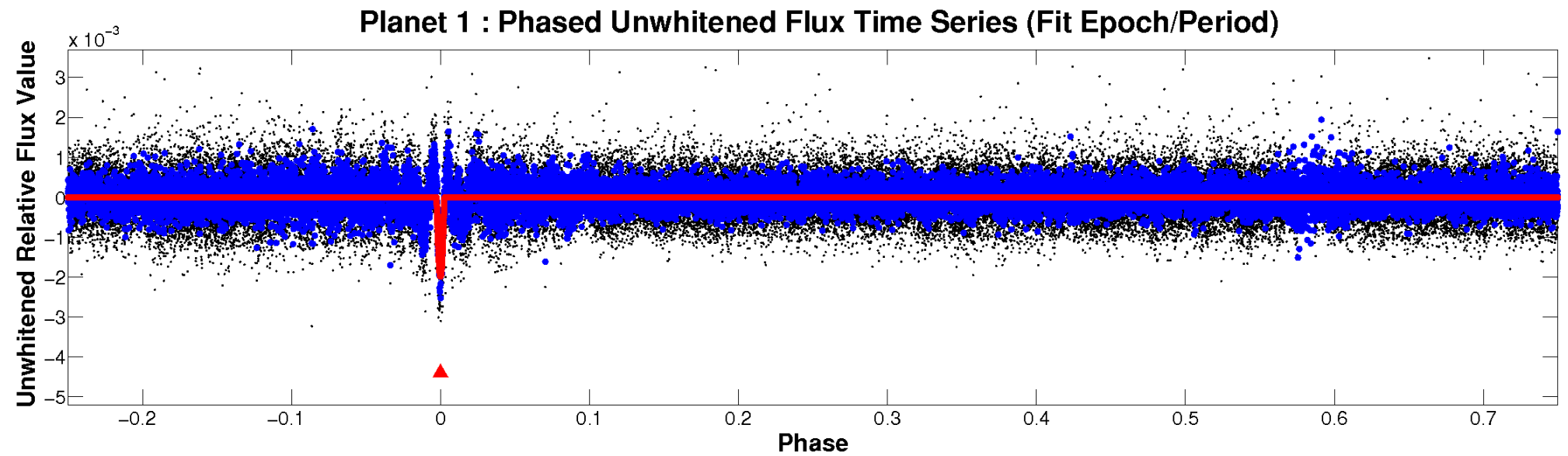


ALT Odd/Even

TCE 008752590-01

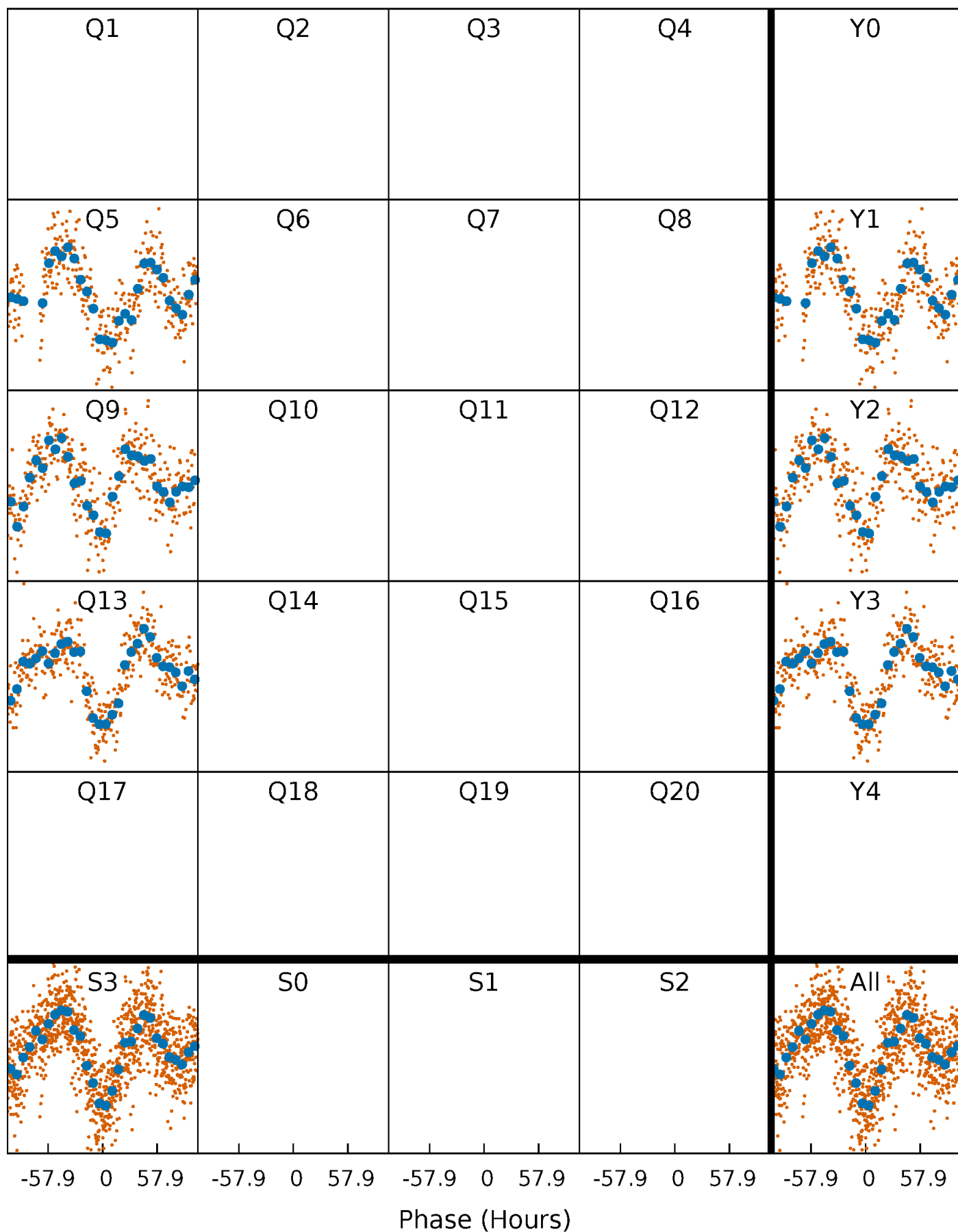


Non-Whitened Vs. Whitened Light Curve



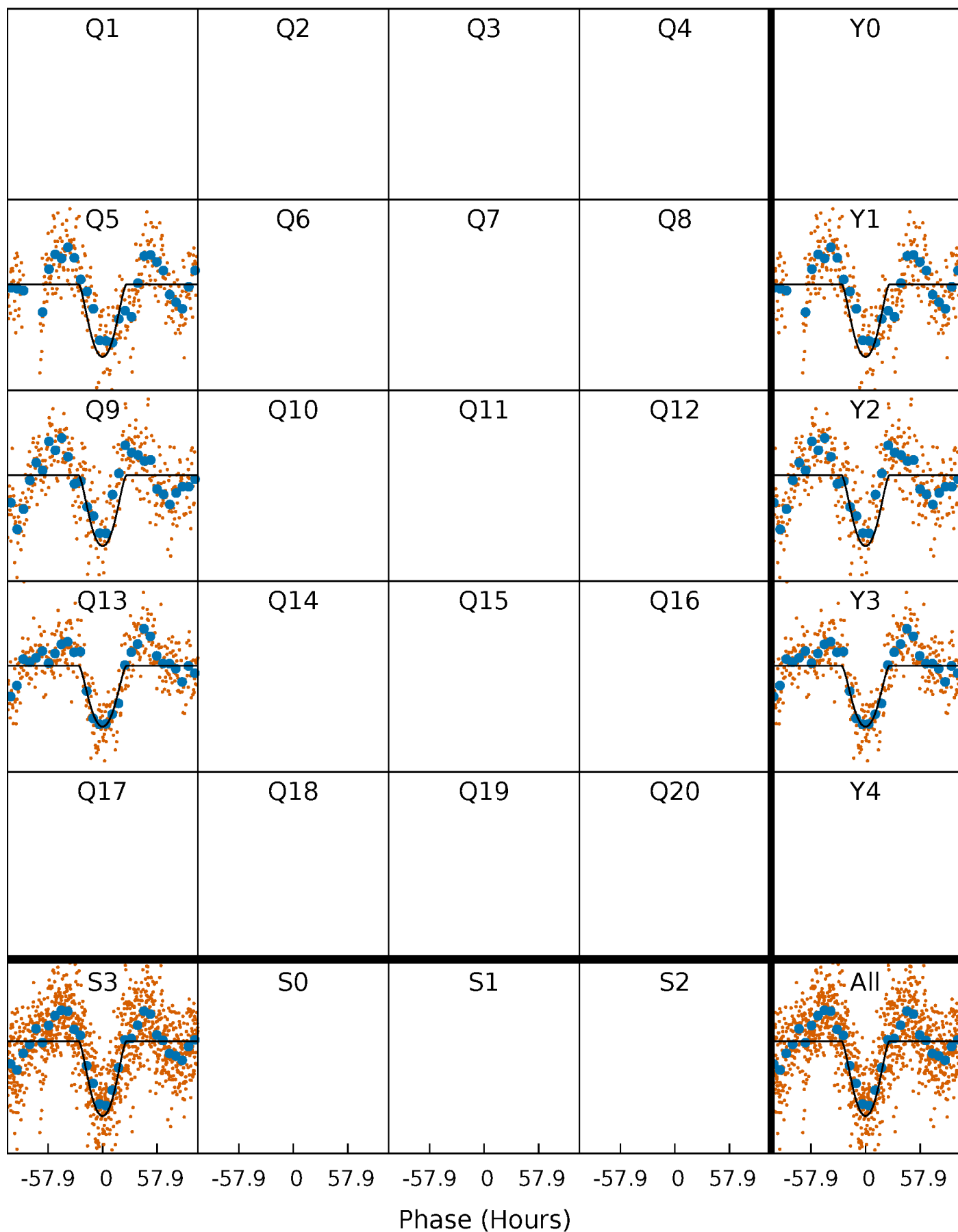
PDC Quarter-Phased Transit Curves

TCE 008752590-01 $P=375.156724$ Days $T_0=132.249041$ (BKJD)



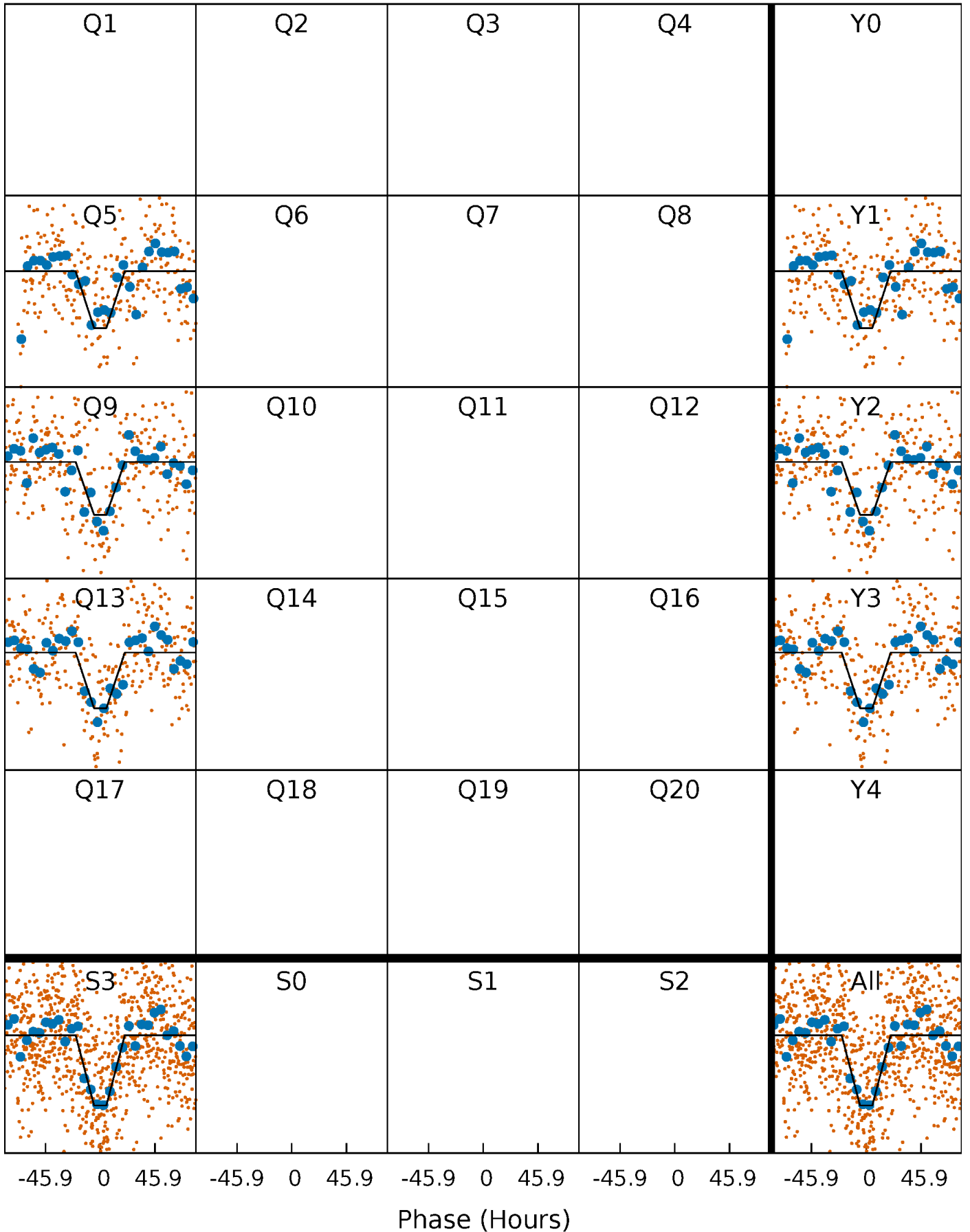
DV Quarter-Phased Transit Curves

TCE 008752590-01 $P=375.156724$ Days $T_0=132.249041$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

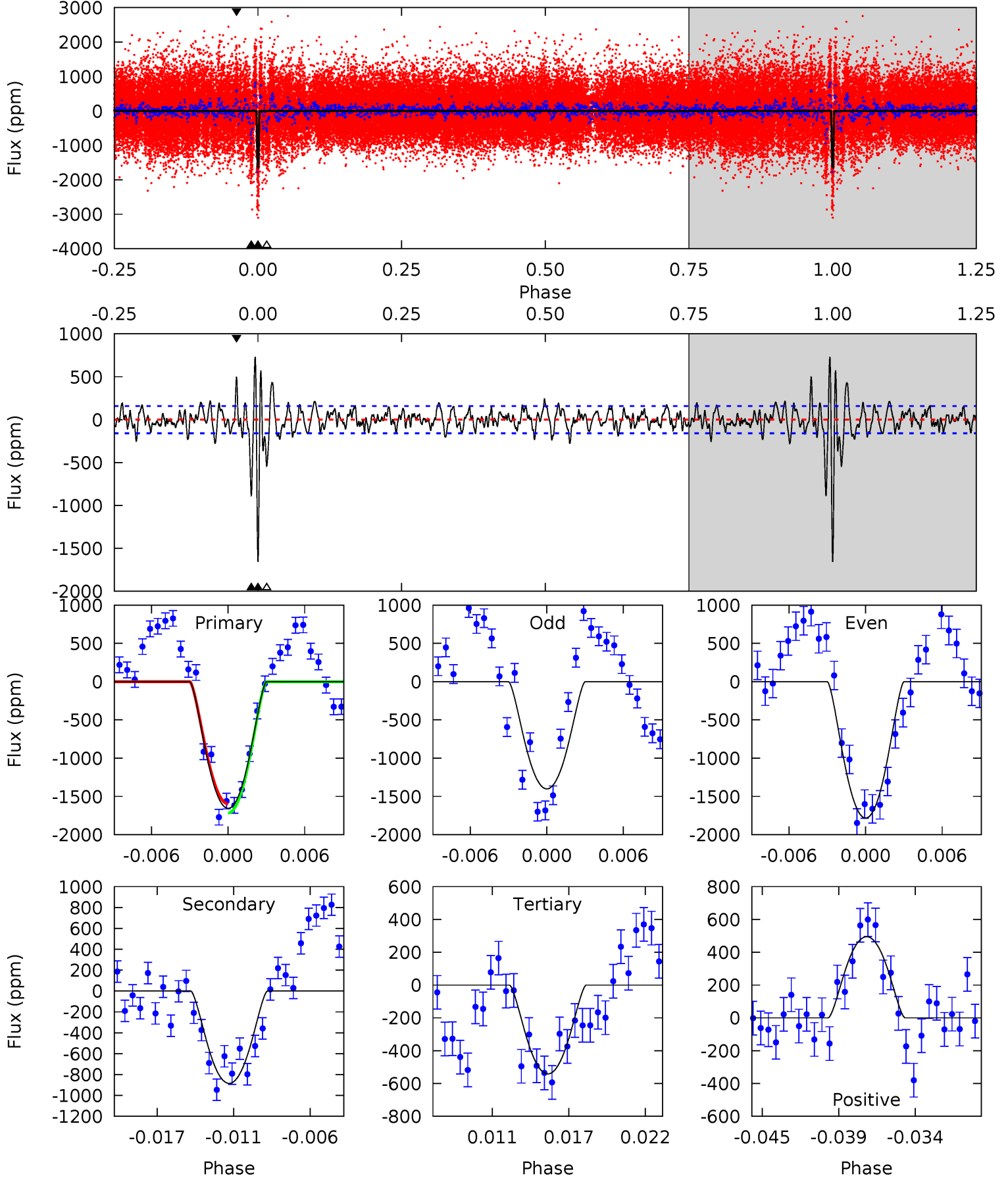
TCE 008752590-01 P=375.064805 Days $T_0=132.415642$ (BKJD)



DV Model-Shift Uniqueness Test

008752590-01, P = 375.156724 Days, E = 132.249041 Days

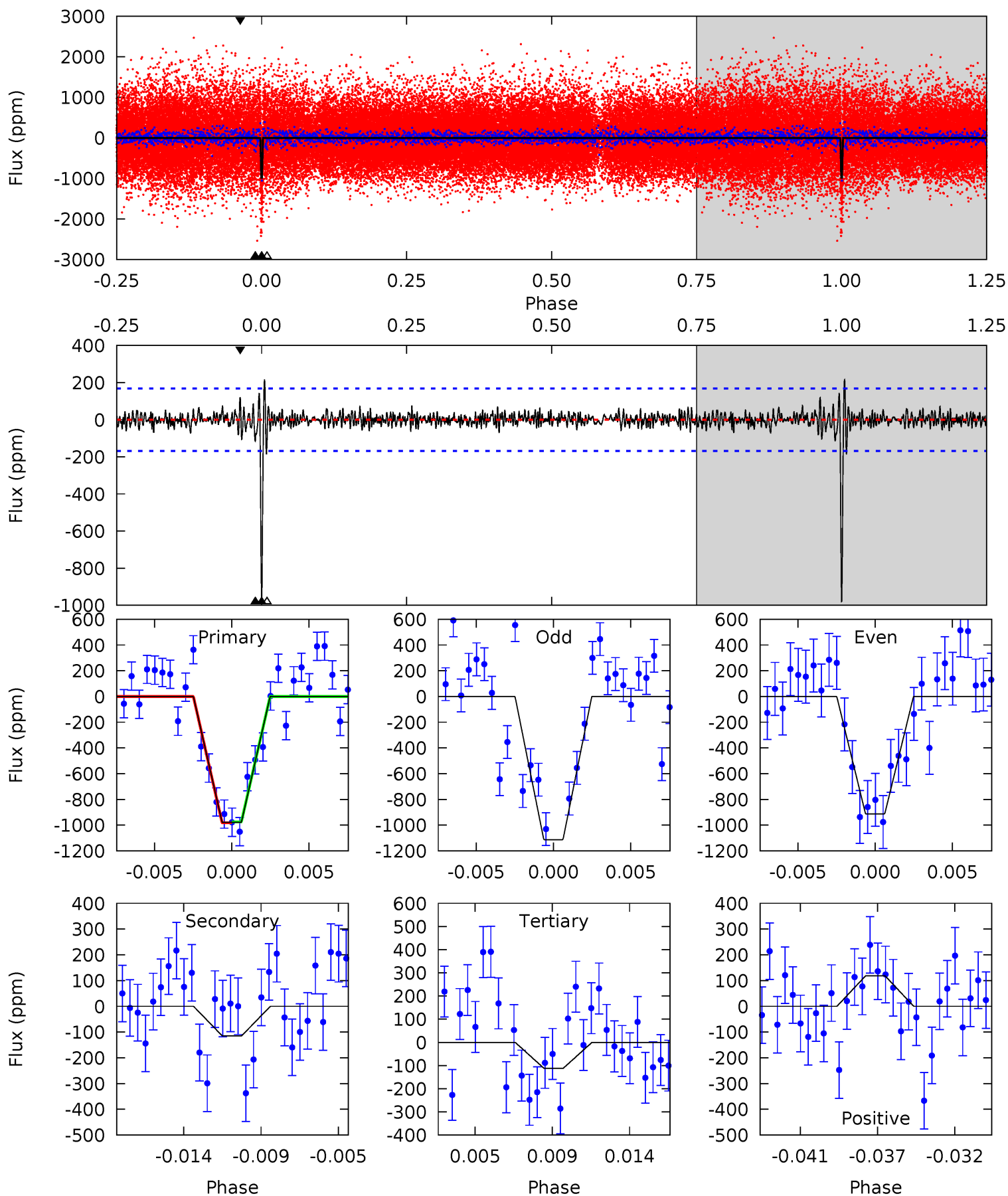
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.6	28.6	17.5	16.0	5.14	2.77	3.30	36.1	37.6	11.1	12.6	5.86	1.09	0.31	1.94



Alt Model-Shift Uniqueness Test

008752590-01, P = 375.064805 Days, E = 132.415642 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.1	3.54	3.44	3.65	5.17	2.83	0.83	26.6	26.4	0.10	-0.11	2.91	0.91	0.18	0.11



Stellar Parameters For KIC 008752590

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5750^{+173}_{-173}	$4.466^{+0.067}_{-0.189}$	$0.000^{+0.250}_{-0.300}$	$0.954^{+0.281}_{-0.100}$	$0.970^{+0.114}_{-0.102}$	$1.574^{+0.452}_{-0.804}$
	+3%/-3%	+2%/-4%	+inf%/-inf%	+29%/-10%	+12%/-11%	+29%/-51%
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 008752590-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-885 ± 31	$6.48^{+2.85}_{-2.69}$	350^{+22}_{-16}	4275^{+1047}_{-515}	11858^{+22333}_{-6120}
Alt.	-115 ± 33	$3.68^{+2.89}_{-2.32}$	351^{+25}_{-16}	3657^{+1635}_{-606}	4614^{+28774}_{-3210}

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 $A_{obs} \gg 1.0$

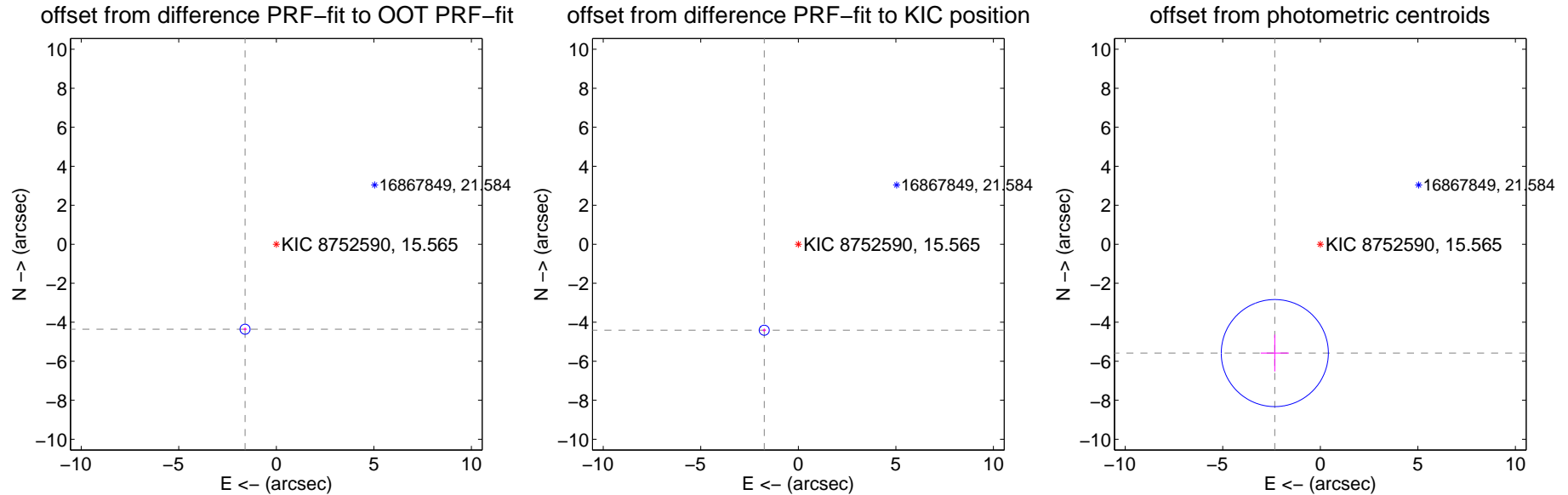
DV Centroid Data

Supplemental centroid analysis for 008752590-01. Kepler magnitude: 15.56. Transit SNR 17.93

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.643 \pm 0.086	54.00	1.603 \pm 0.088	-4.358 \pm 0.086
PRF-fit source offset from KIC position	4.742 \pm 0.086	55.14	1.748 \pm 0.088	-4.409 \pm 0.086
photometric centroid source offset	6.05 \pm 0.92	6.61	2.33 \pm 0.72	-5.58 \pm 0.95



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.

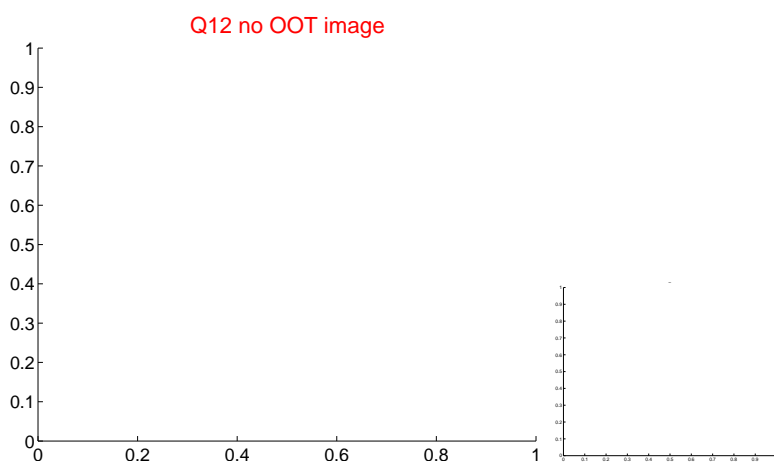
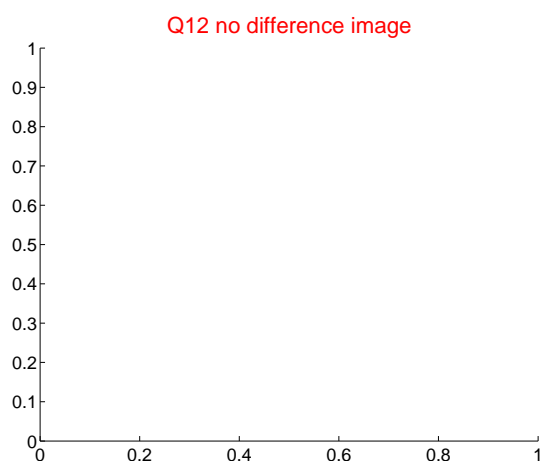
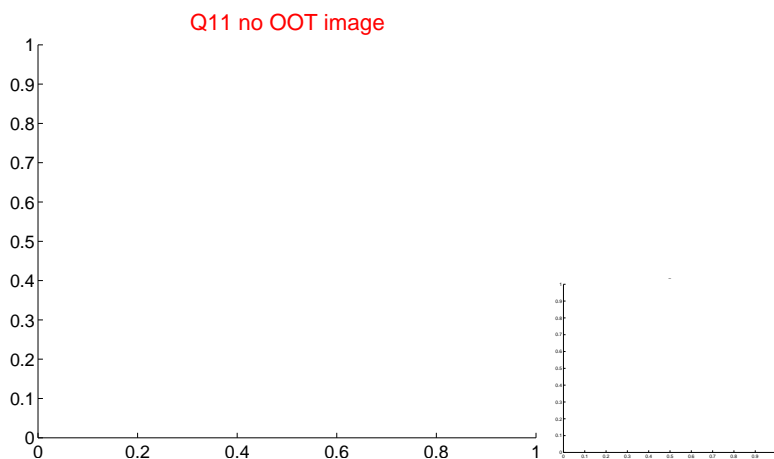
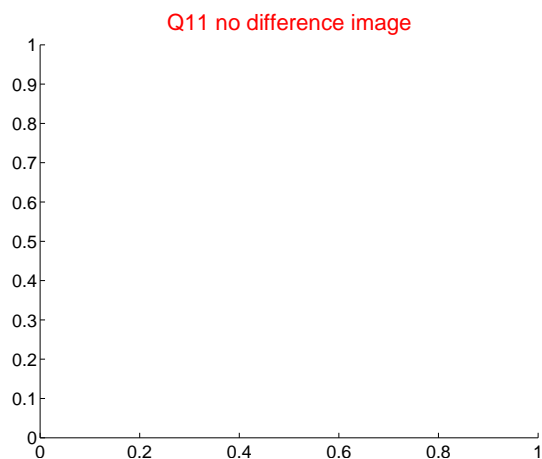
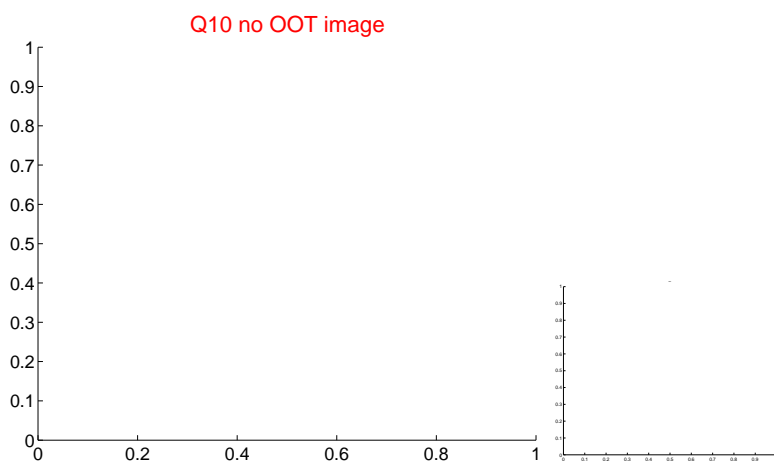
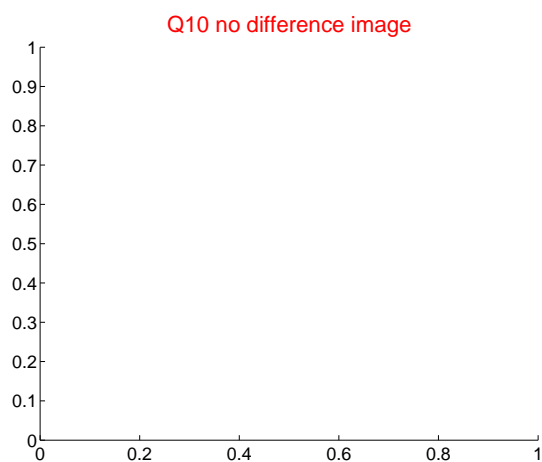
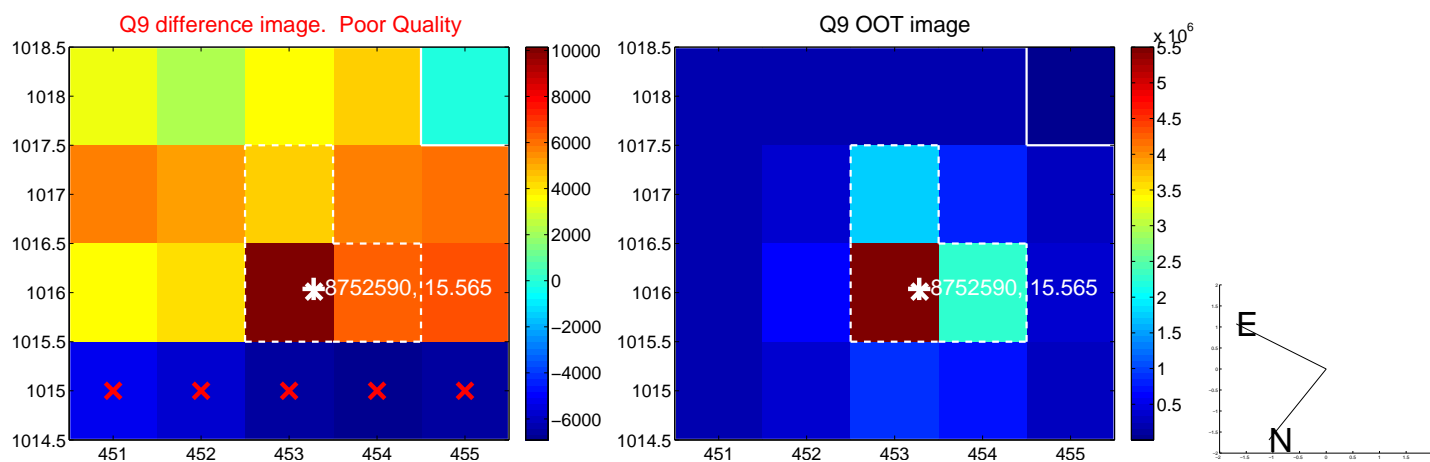
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



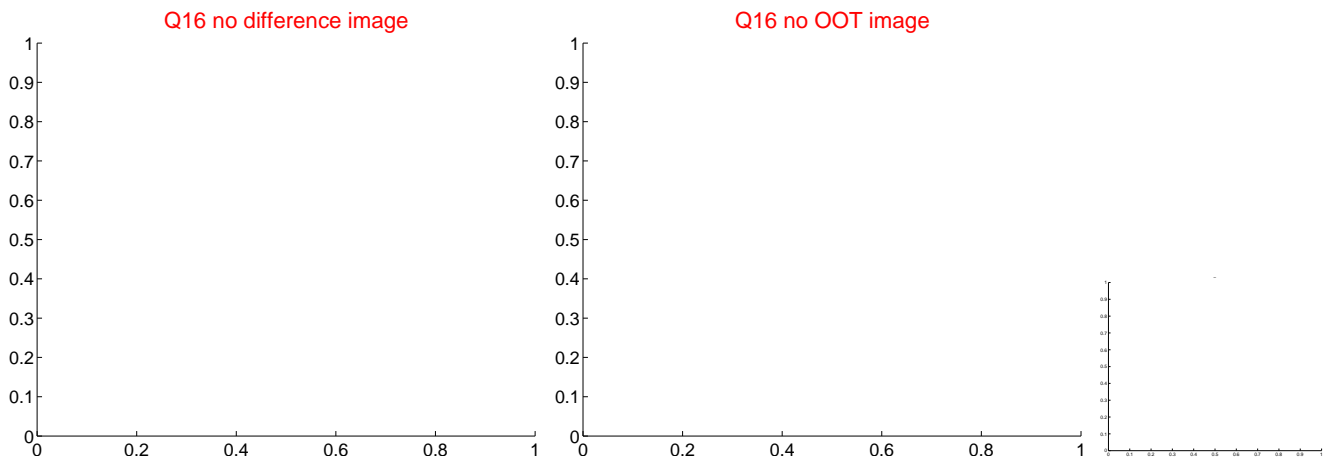
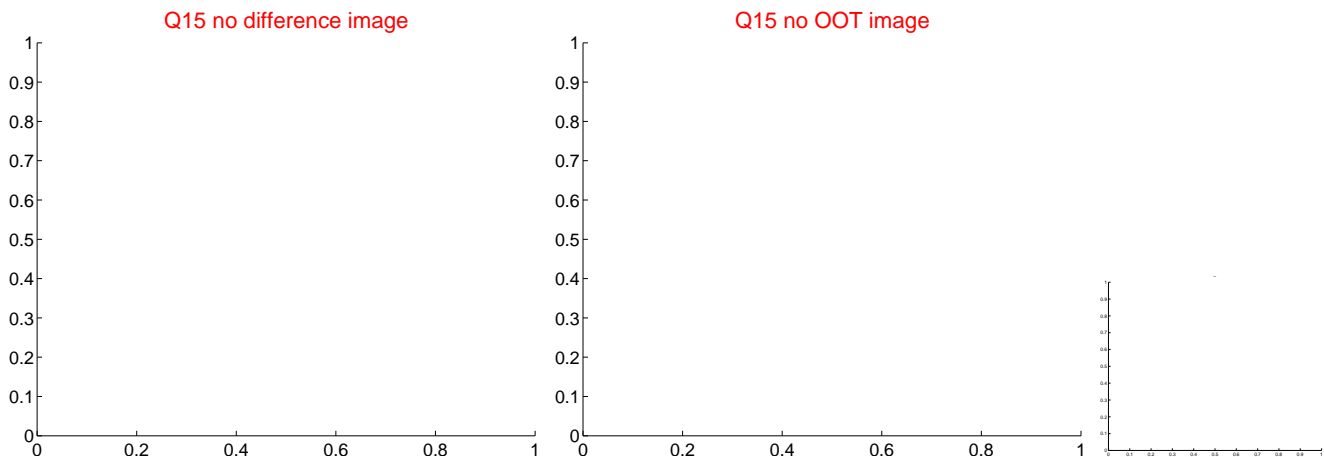
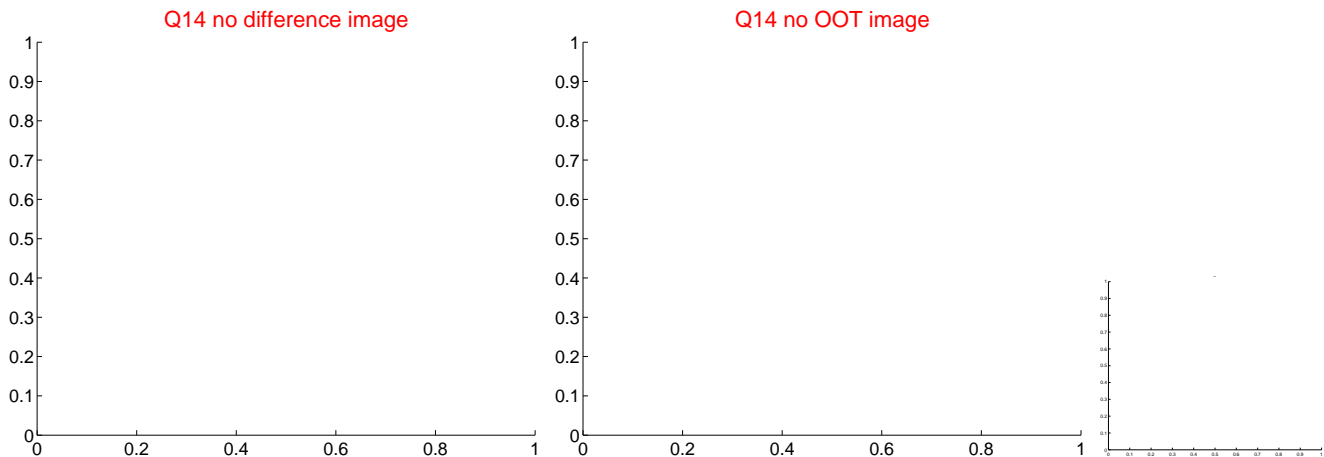
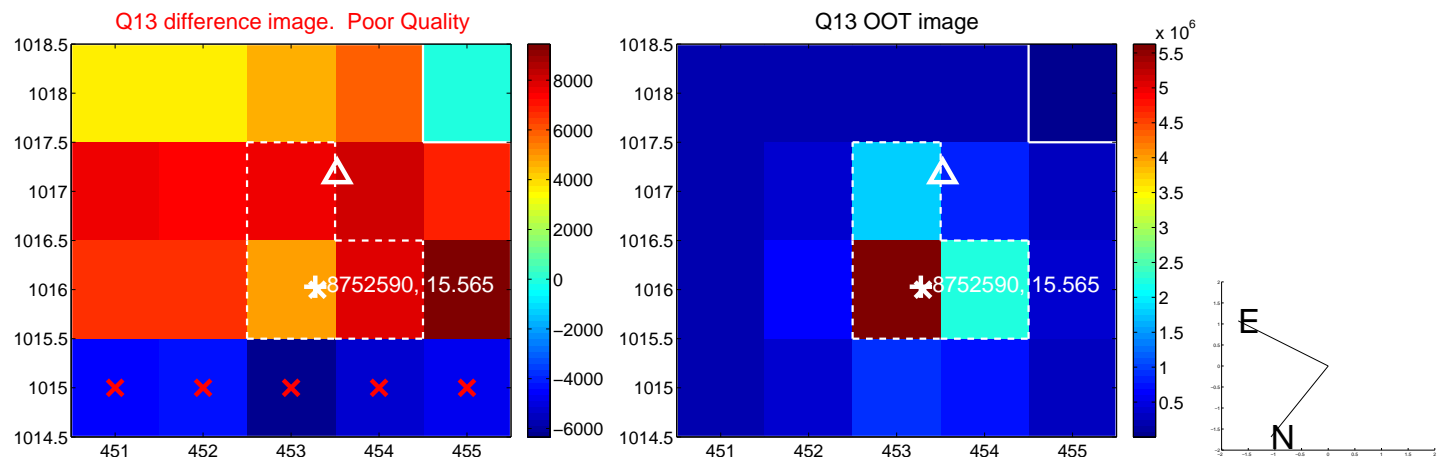
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



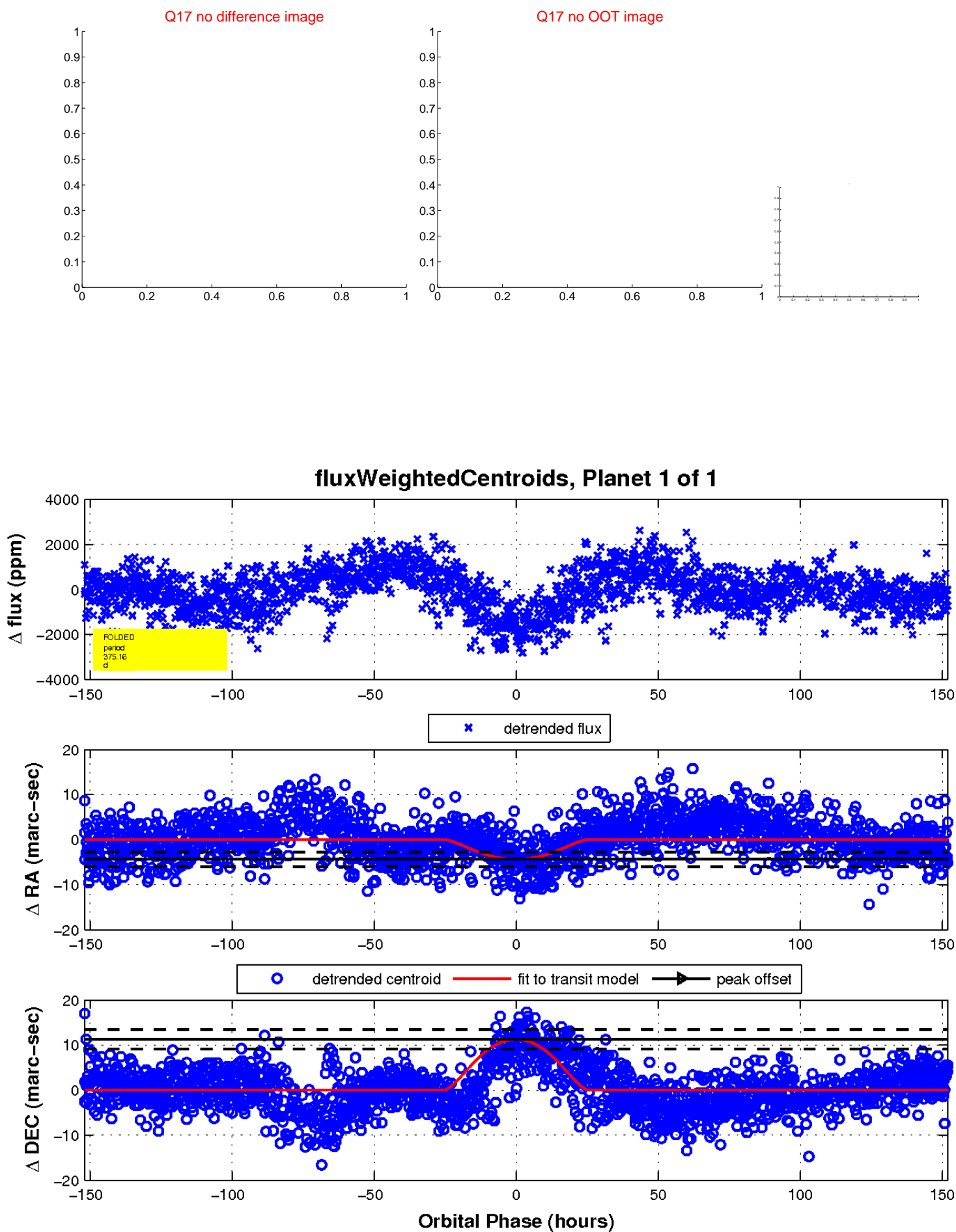
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UKIRT Image

Declination

