

KIC 008817499

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})
008817499-01	OBS	No	375.394238	138.409301	1003.5	53.534	10.5	15.1	0.99	6153	3.84	1.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008817499-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

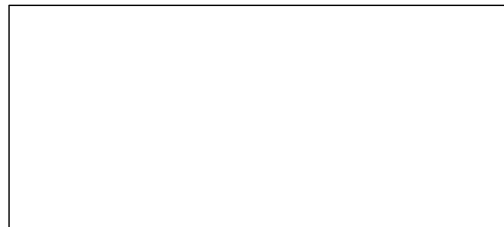
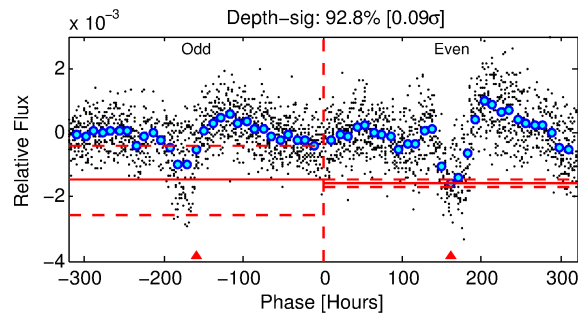
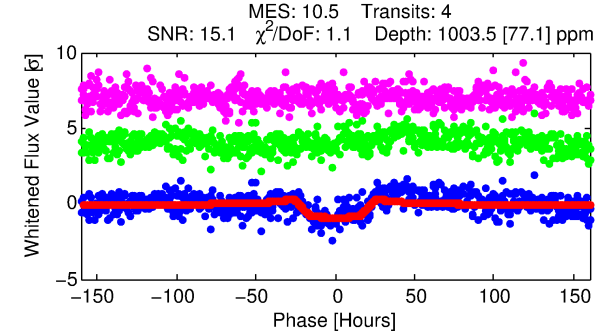
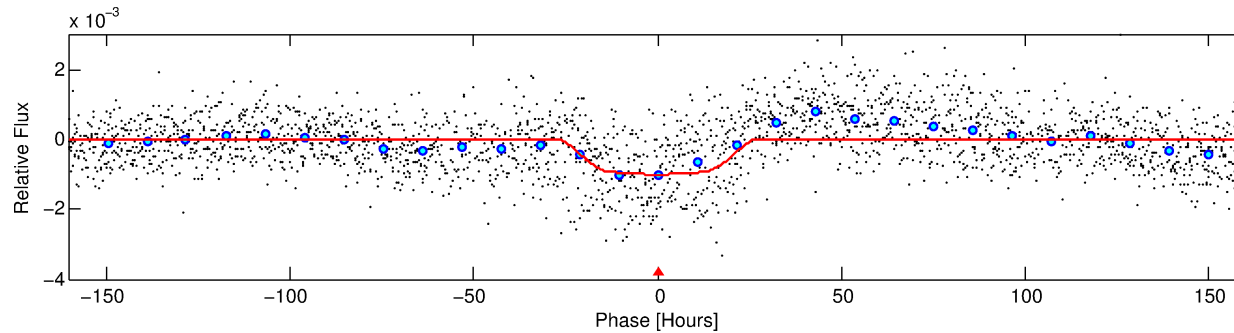
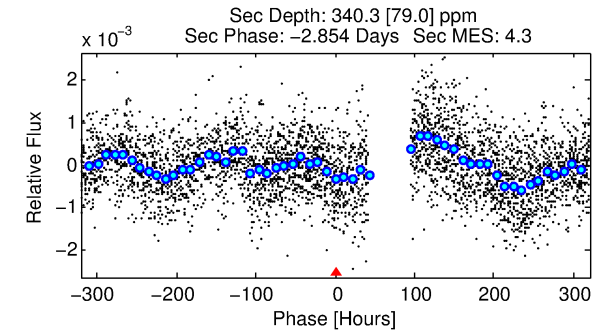
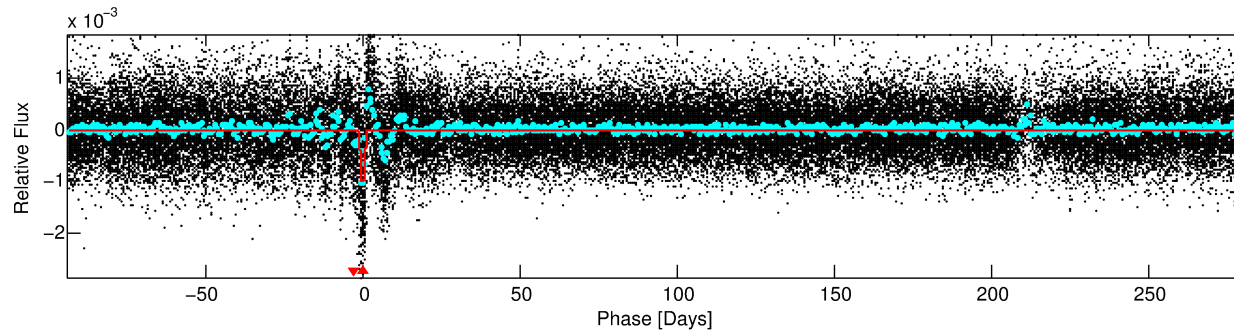
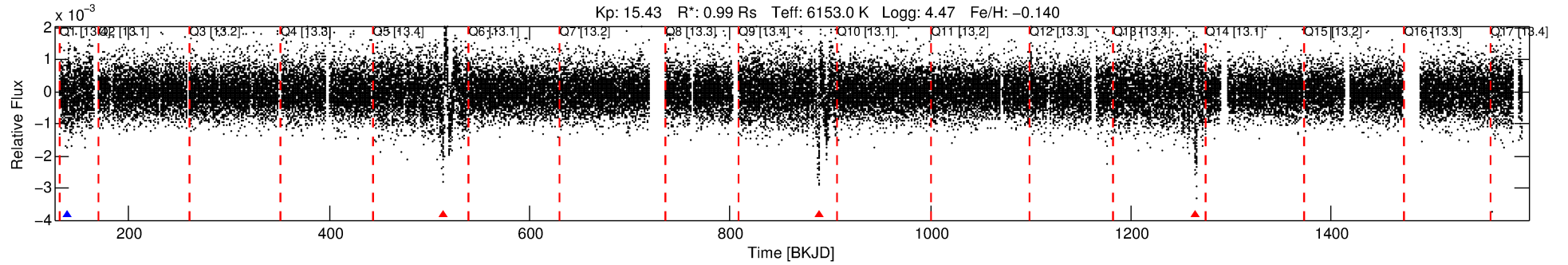
Ephemeris Match Information For 008817499-01

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
008817499-01	8817499	008751580-01	8751580	1:1	671.9	-169	4	15.97	15.43	1.49	Col-Anomaly	1	3.11	1.23

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: 8817499 Candidate: 1 of 1 Period: 375.394 d



DV Fit Results:

Period = 375.39424 [0.03195] d
Epoch = 138.4093 [0.0585] BKJD
Rp/R* = 0.0354 [0.0018]
a/R* = 23.97 [3.37]
b = 0.93 [0.02]
Seff = 1.17 [0.49]
Teq = 265 [28] K
Rp = 3.84 [1.24] Re
a = 1.0399 [0.2805] AU
Ag = 13728.80 [6438.19] [2.13σ]
Teffp = 4439 [321] K [12.95σ]

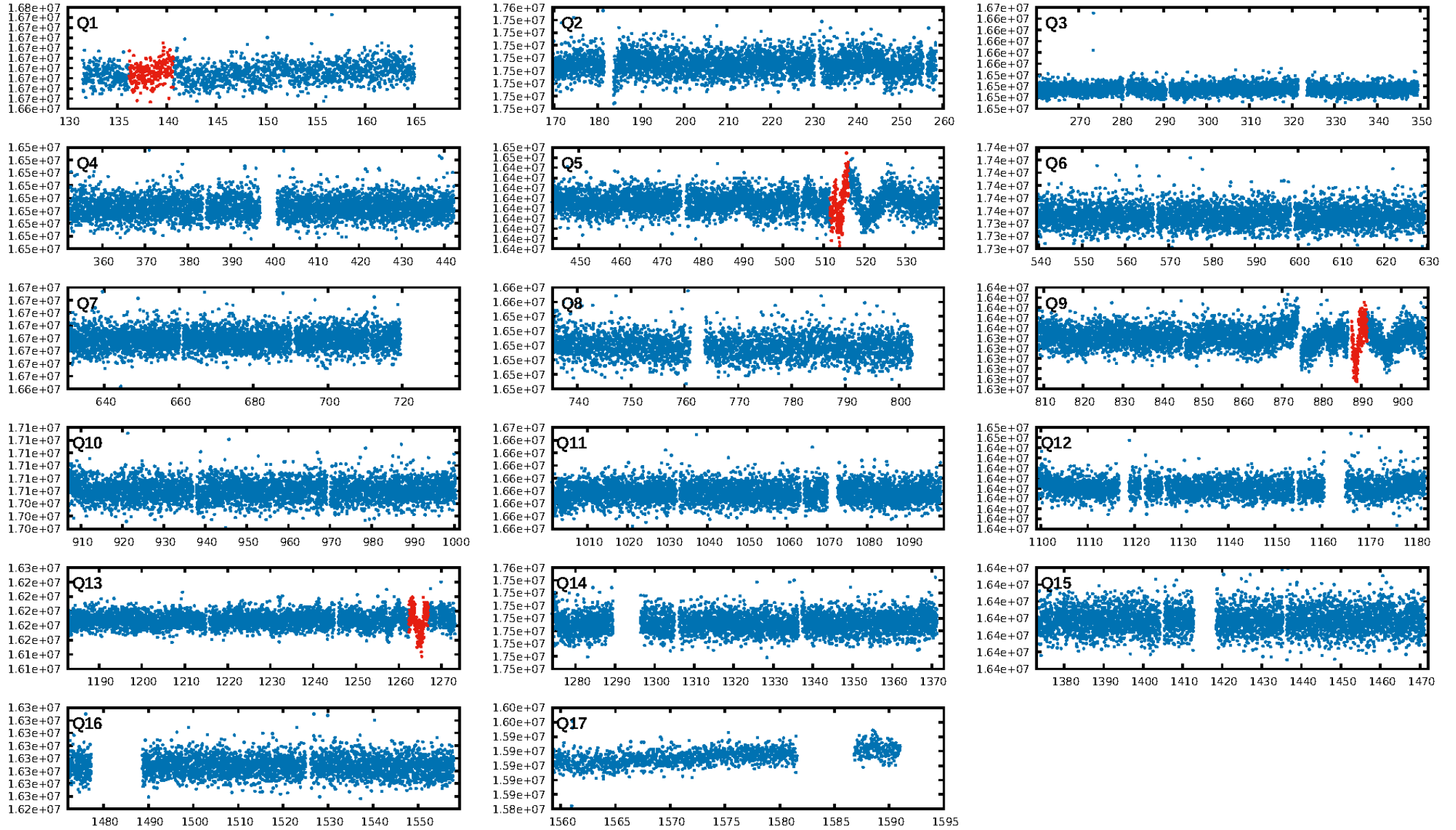
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 89.2%
Bootstrap-pfa: 1.07e-22
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: -4.289
Centroid-sig: 0.0%
Centroid-so: 4.841 arcsec [4.56σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

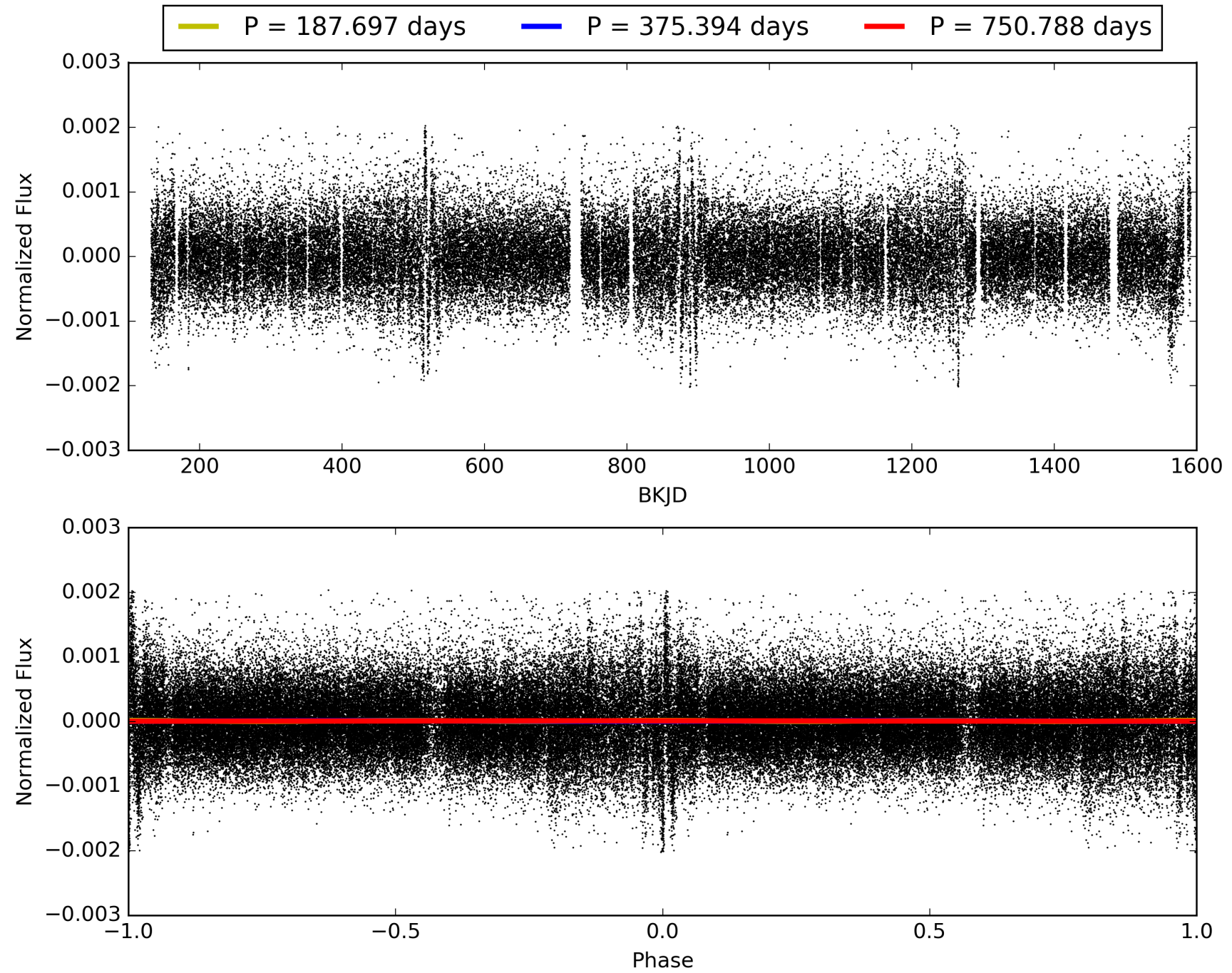
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:48:15 Z

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

TCE 008817499-01, PDC Light Curves

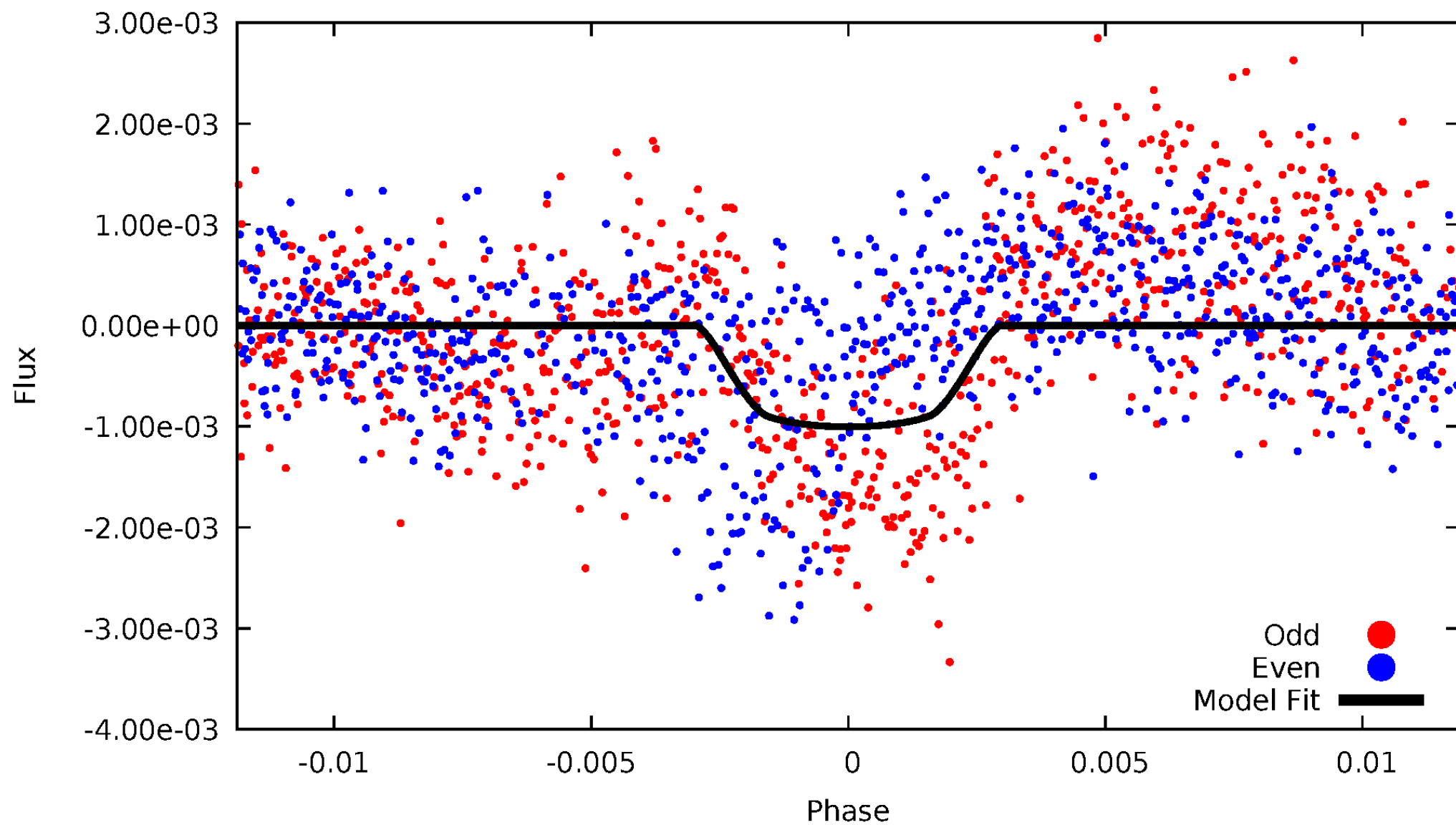


TCE 008817499-01



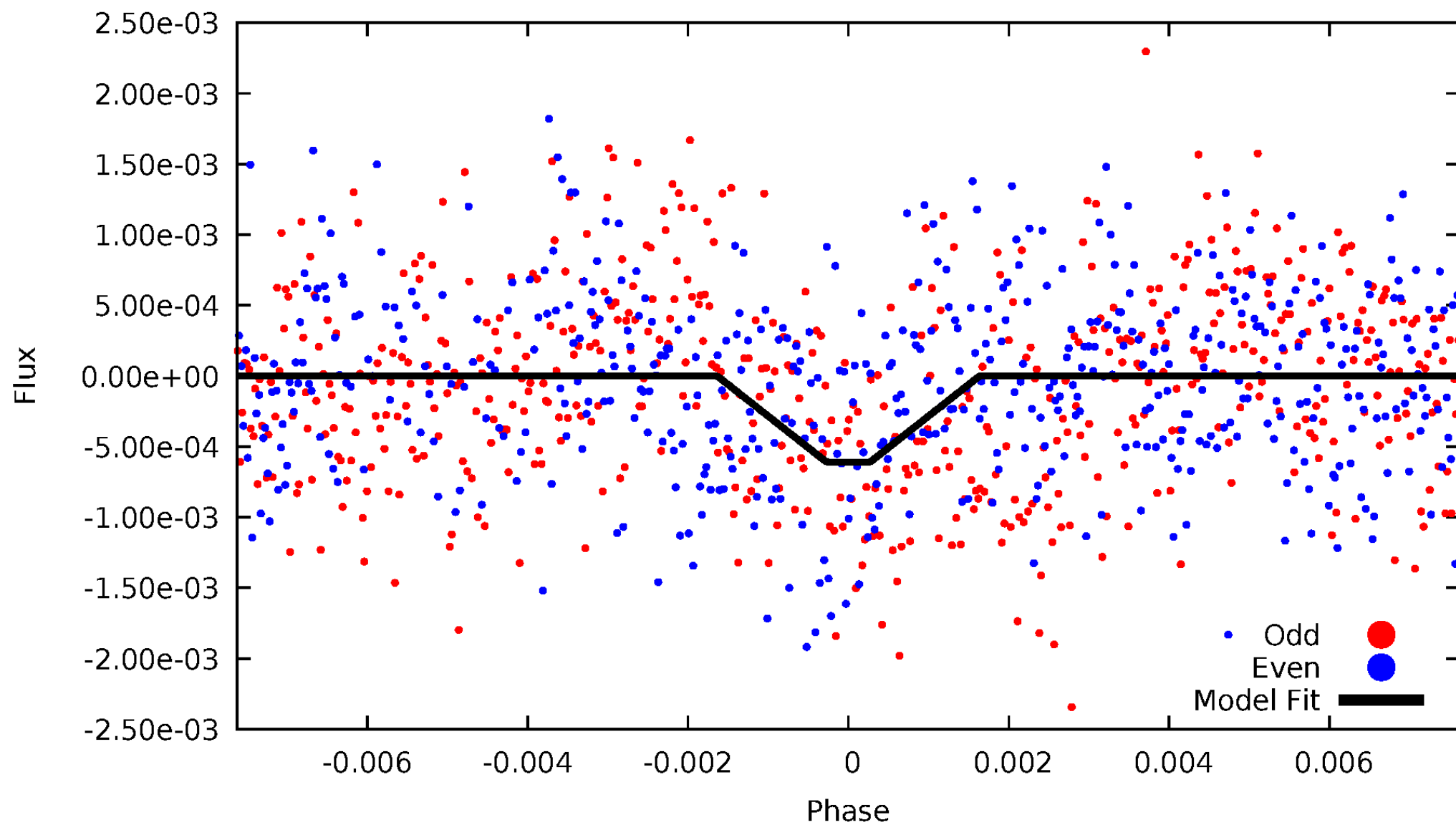
DV Odd/Even

TCE 008817499-01



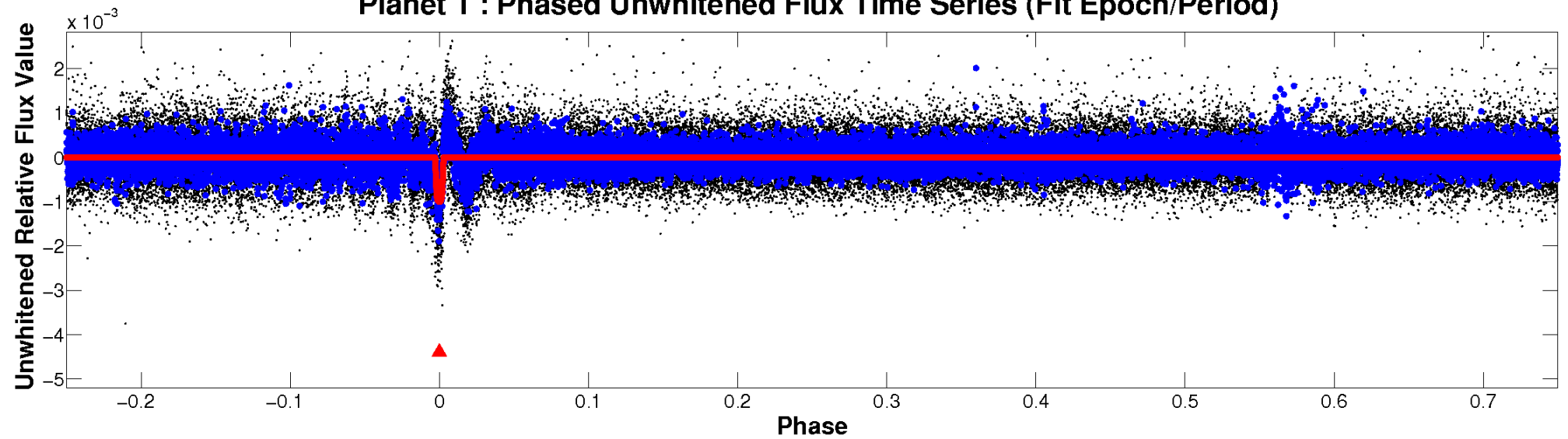
ALT Odd/Even

TCE 008817499-01

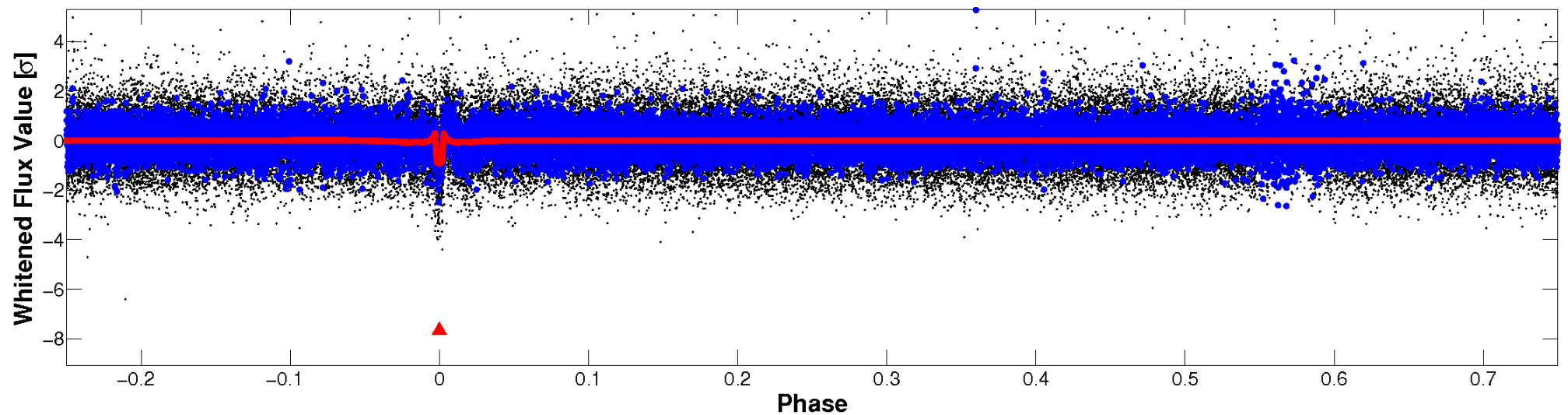


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

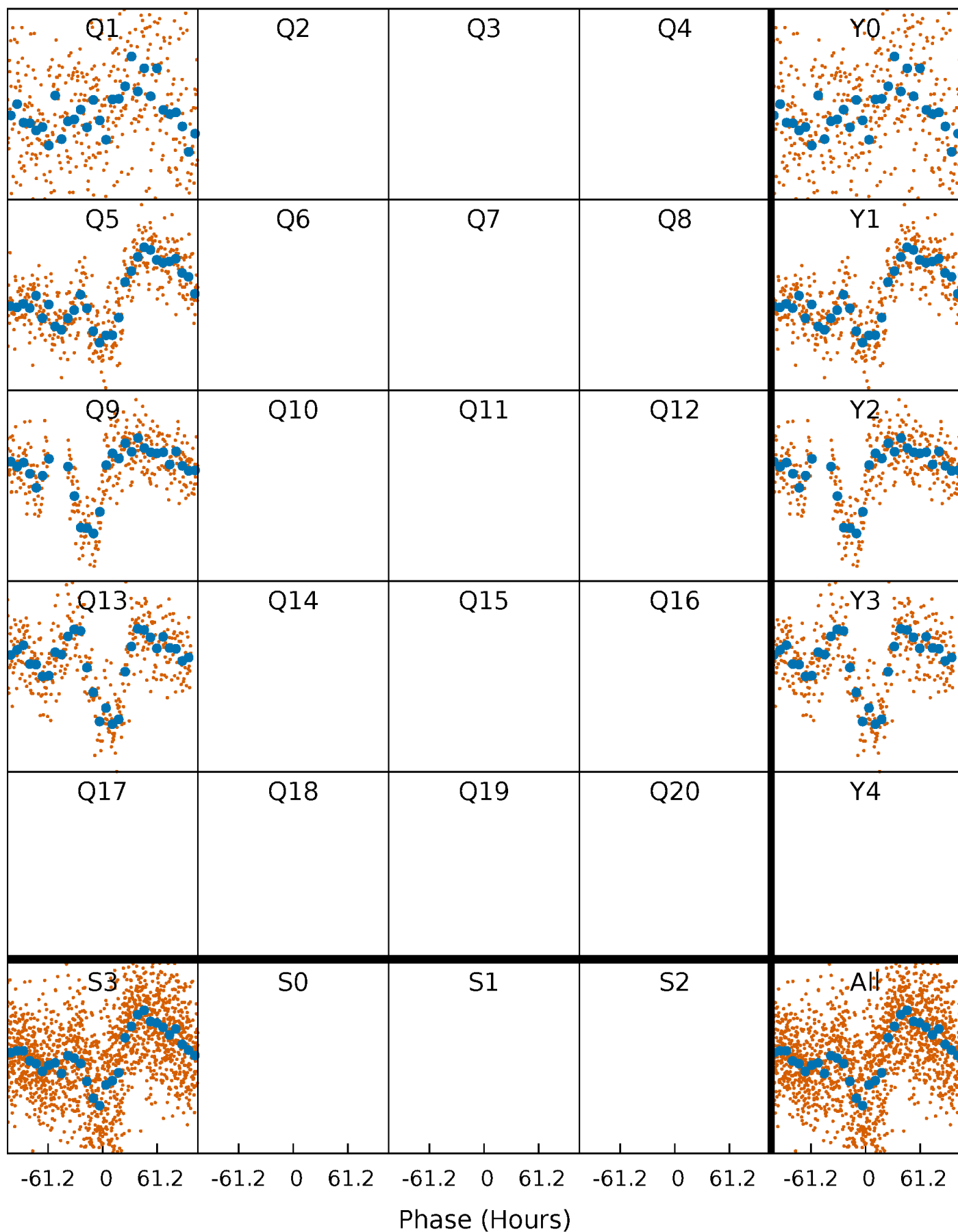


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



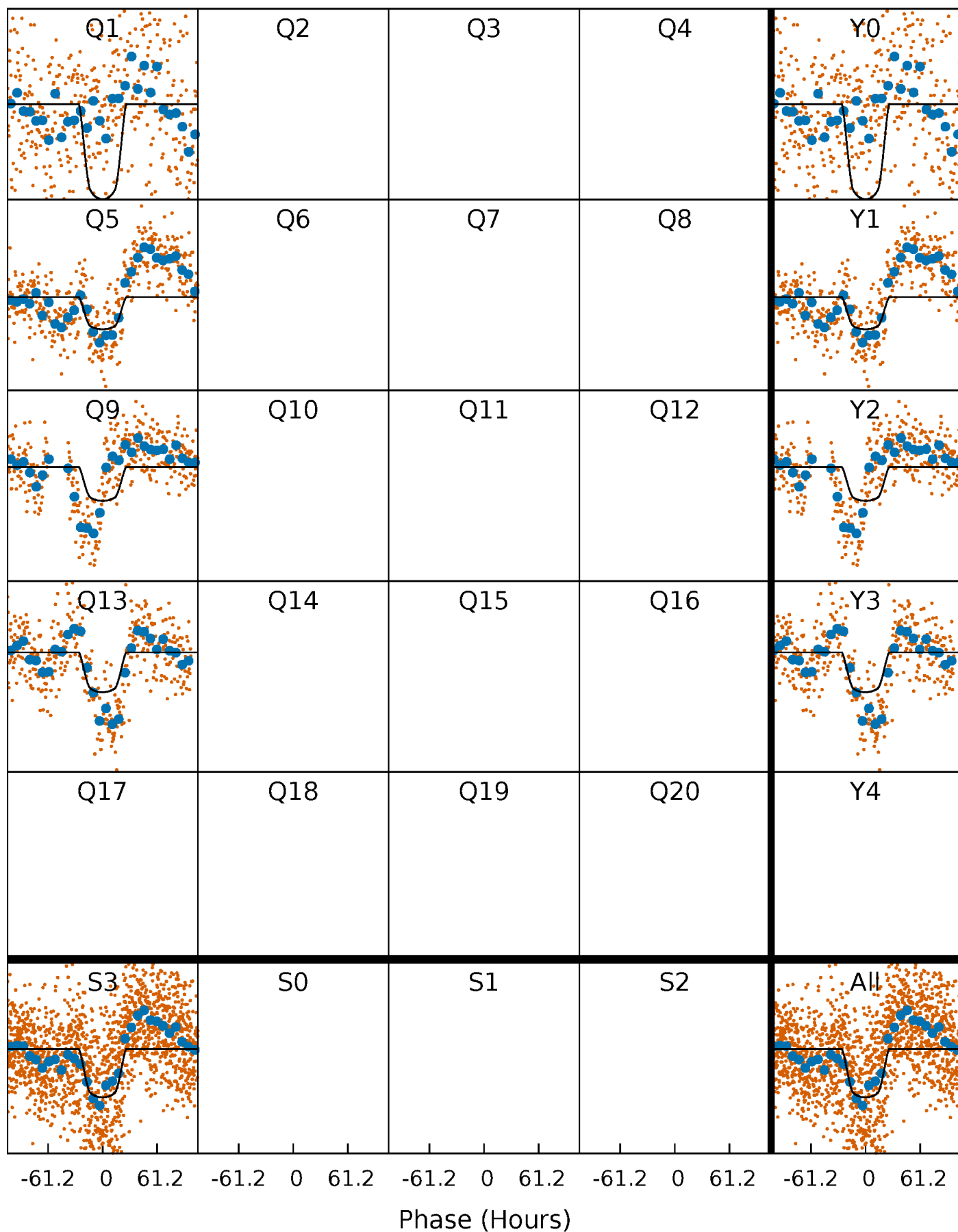
PDC Quarter-Phased Transit Curves

TCE 008817499-01 $P=375.394238$ Days $T_0=138.409301$ (BKJD)



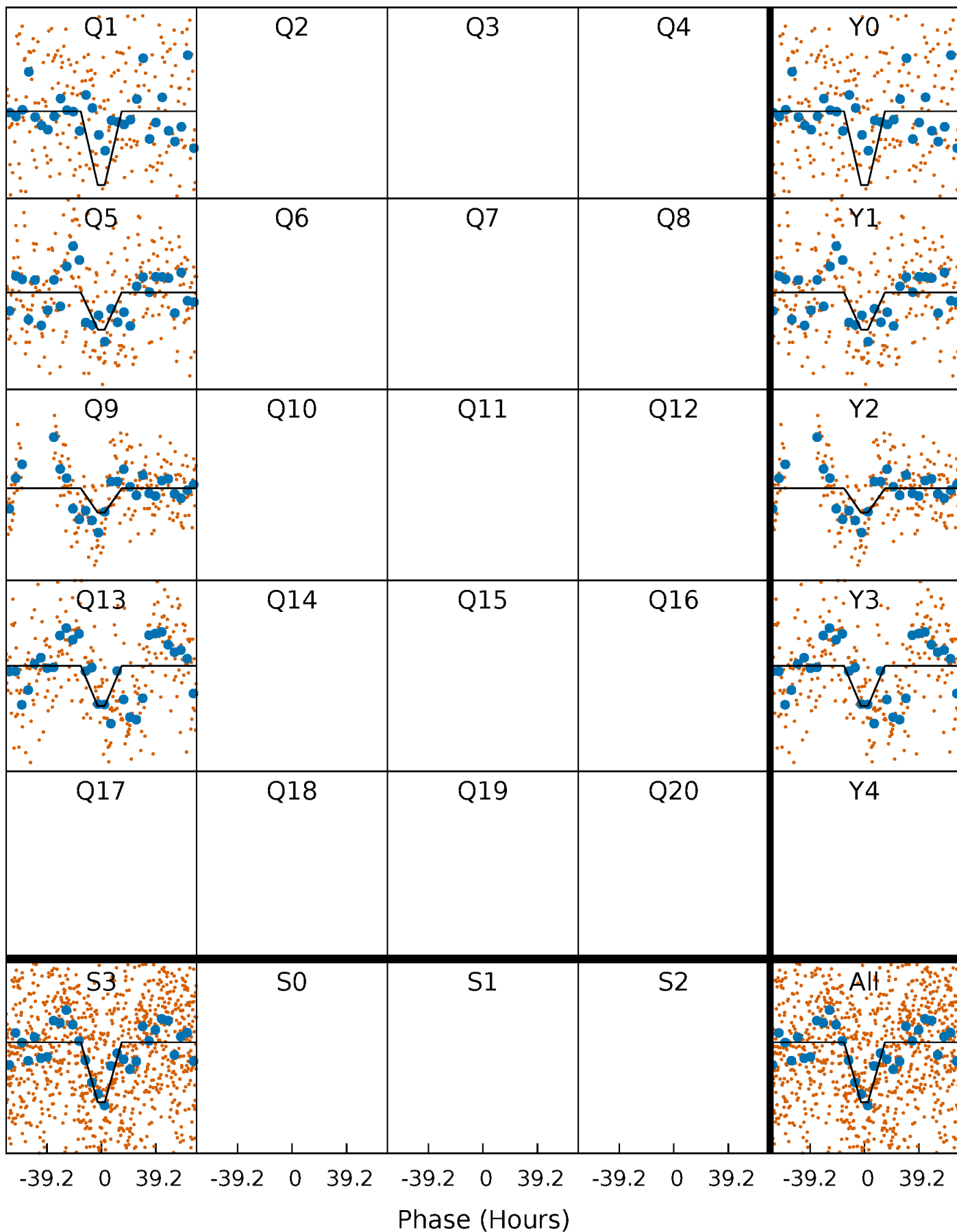
DV Quarter-Phased Transit Curves

TCE 008817499-01 $P=375.394238$ Days $T_0=138.409301$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

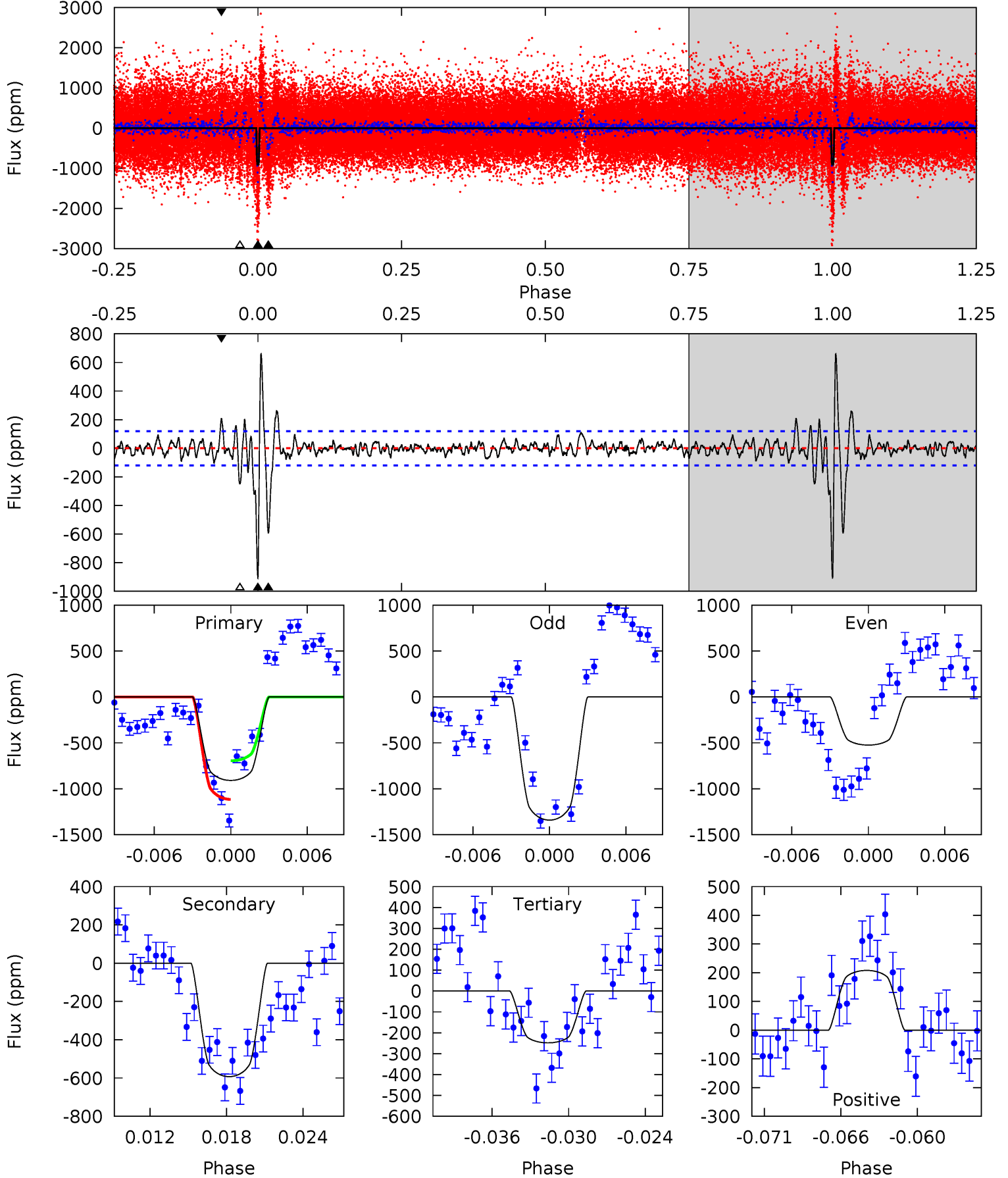
TCE 008817499-01 P=375.289574 Days $T_0=138.418356$ (BKJD)



DV Model-Shift Uniqueness Test

008817499-01, P = 375.394238 Days, E = 138.409301 Days

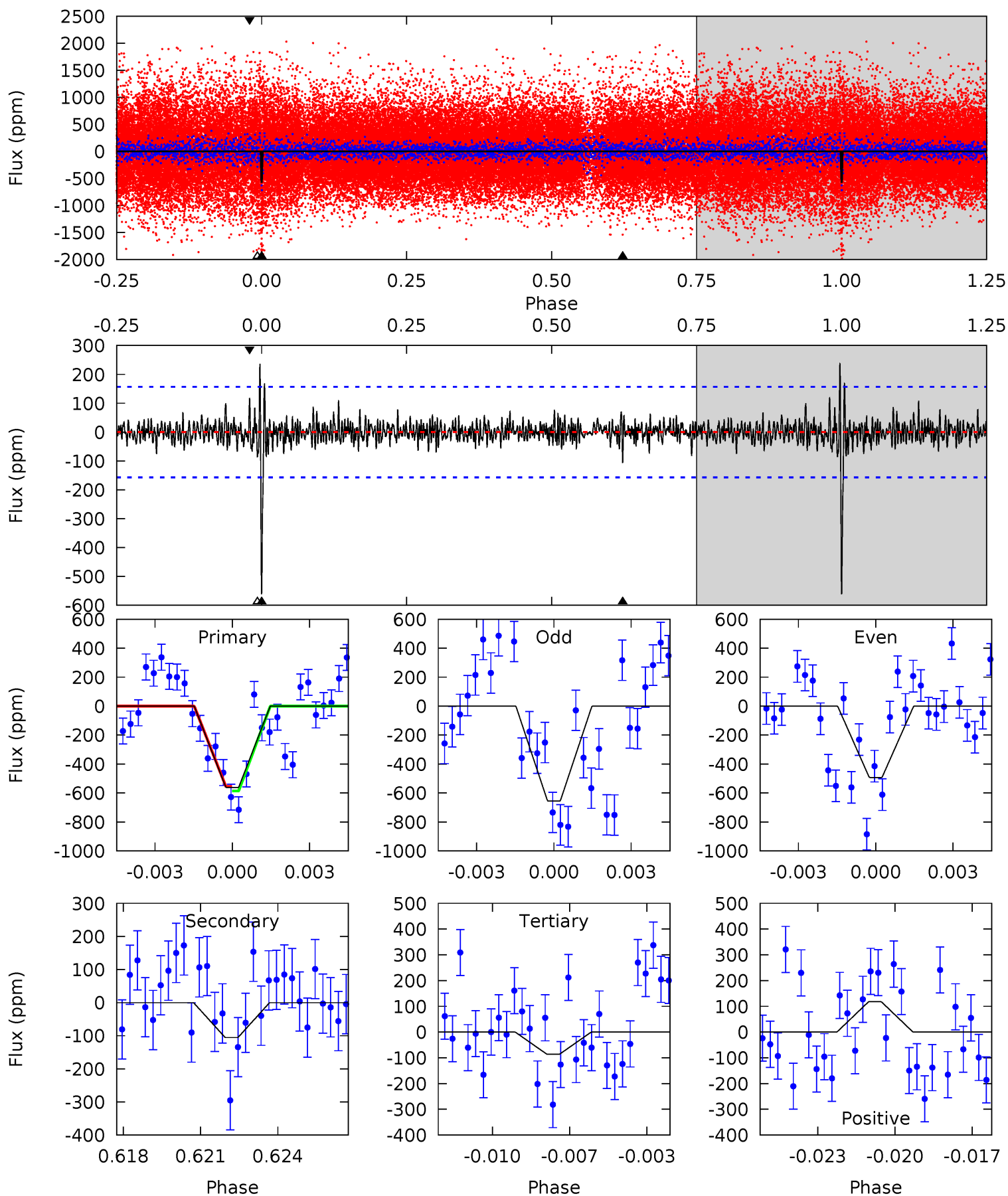
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.0	25.4	10.6	8.92	5.12	2.75	2.47	28.3	30.0	14.8	16.5	17.7	0.90	0.42	8.90



Alt Model-Shift Uniqueness Test

008817499-01, $P = 375.289574$ Days, $E = 138.418356$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	3.52	2.87	3.93	5.23	2.94	0.93	15.9	14.8	0.65	-0.41	2.72	0.86	0.30	0.51



Stellar Parameters For KIC 008817499

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6153^{+190}_{-212}	$4.471^{+0.054}_{-0.216}$	$-0.140^{+0.250}_{-0.350}$	$0.993^{+0.317}_{-0.106}$	$1.065^{+0.139}_{-0.153}$	$1.531^{+0.438}_{-0.852}$
	+3%/-3%	+1%/-5%	+179%/-250%	+32%/-11%	+13%/-14%	+29%/-56%
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 008817499-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-593 ± 23	$3.95^{+0.68}_{-0.37}$	380^{+27}_{-19}	5172^{+189}_{-185}	21820^{+4380}_{-5279}
Alt.	-106 ± 30	$2.76^{+0.48}_{-0.30}$	379^{+26}_{-20}	4202^{+273}_{-266}	7954^{+3091}_{-2921}

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

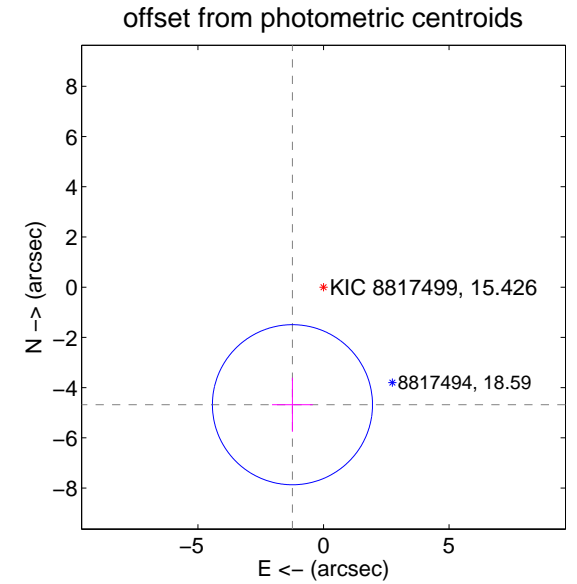
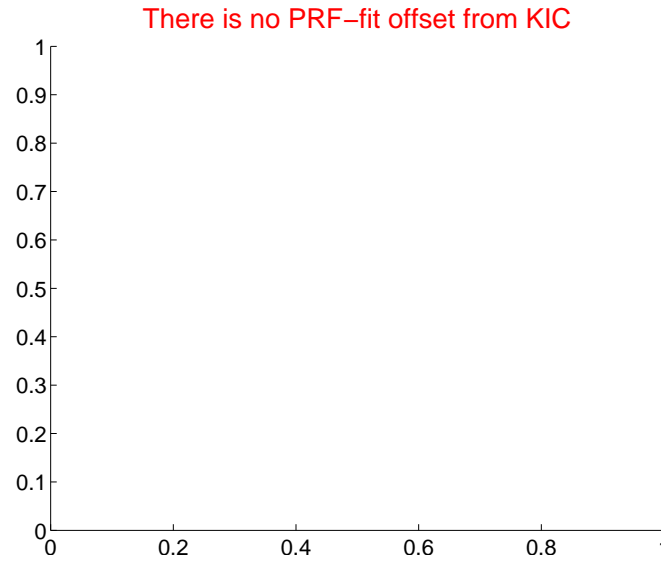
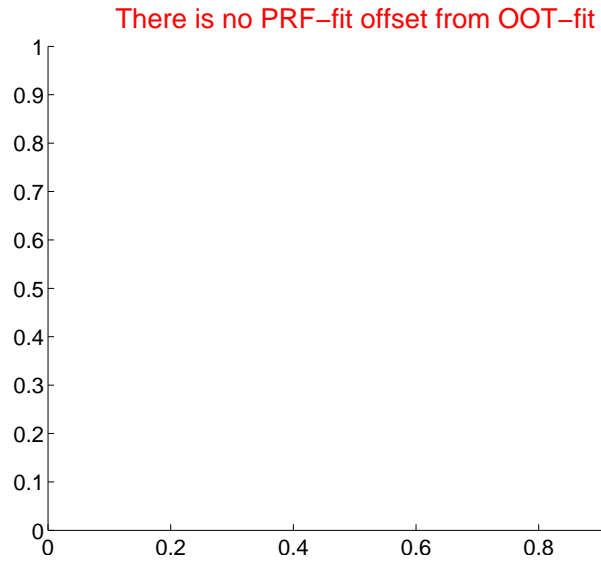
DV Centroid Data

Supplemental centroid analysis for 008817499-01. Kepler magnitude: 15.43. Transit SNR 15.12

There are 0 quarters with good PRF difference image offsets

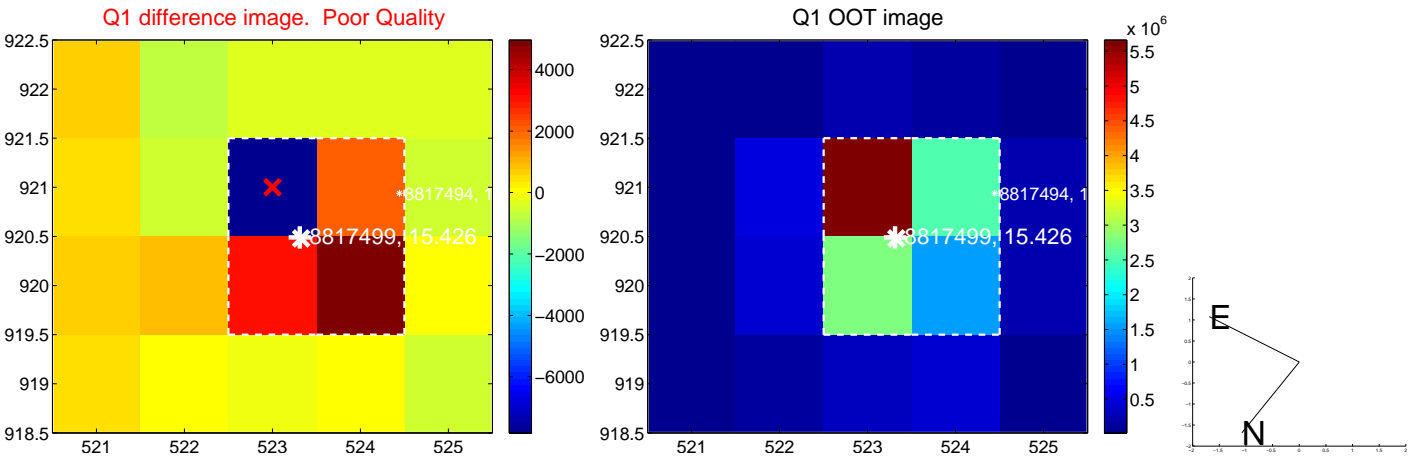
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	4.84 ± 1.06	4.56	1.24 ± 0.81	-4.68 ± 1.08

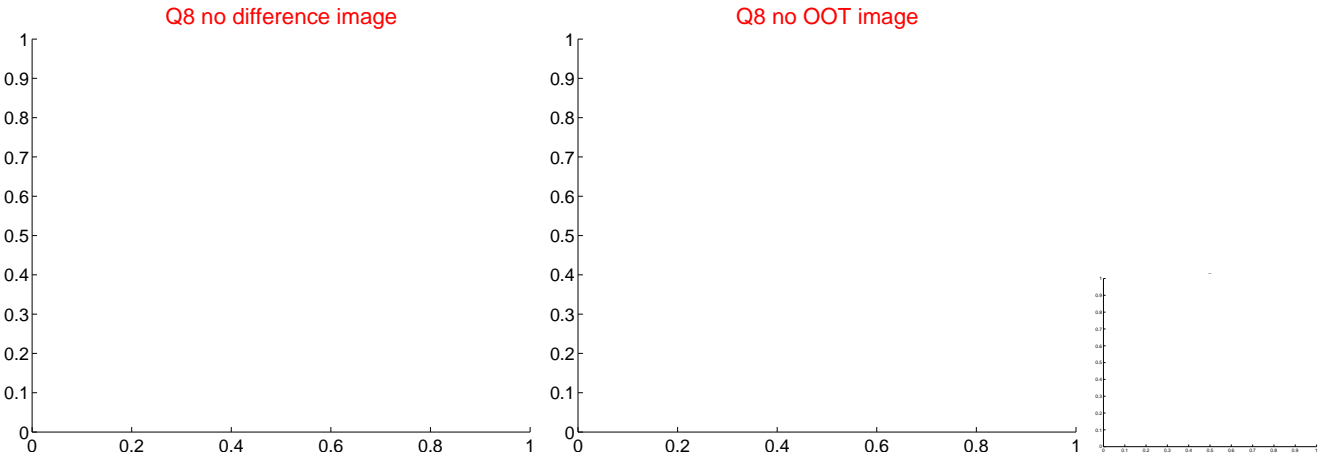
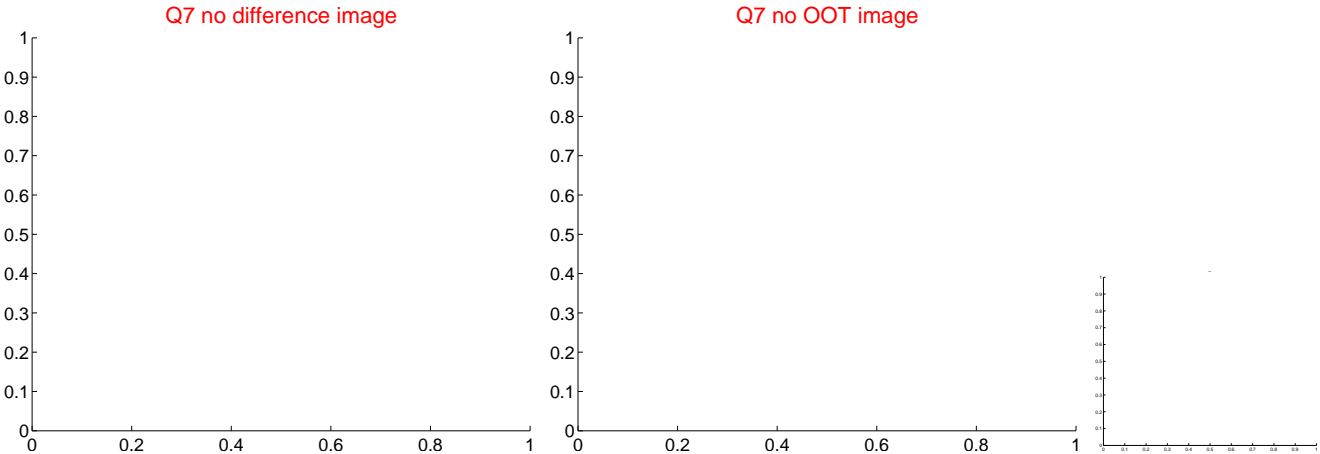
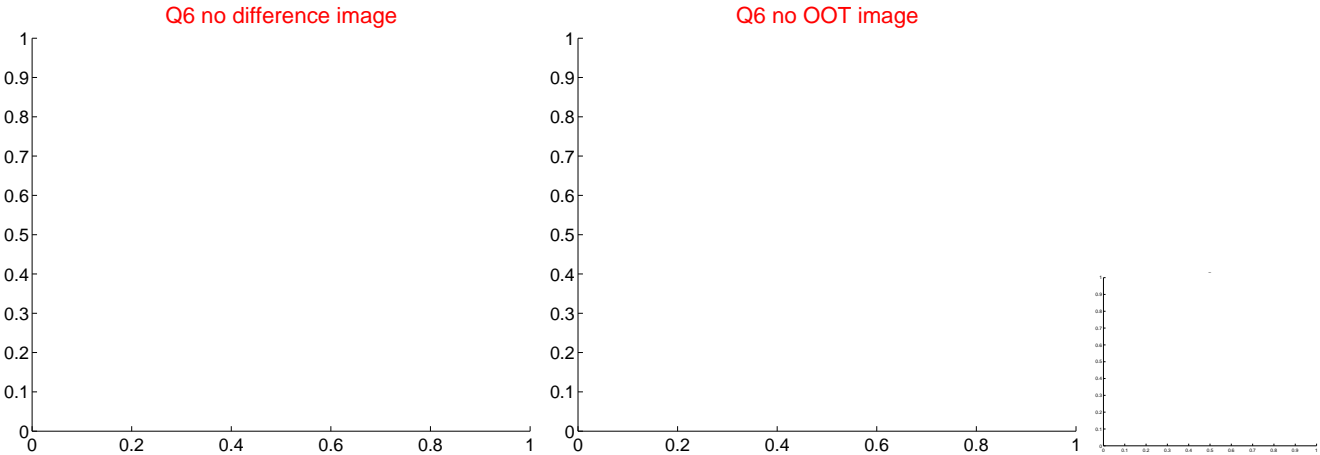
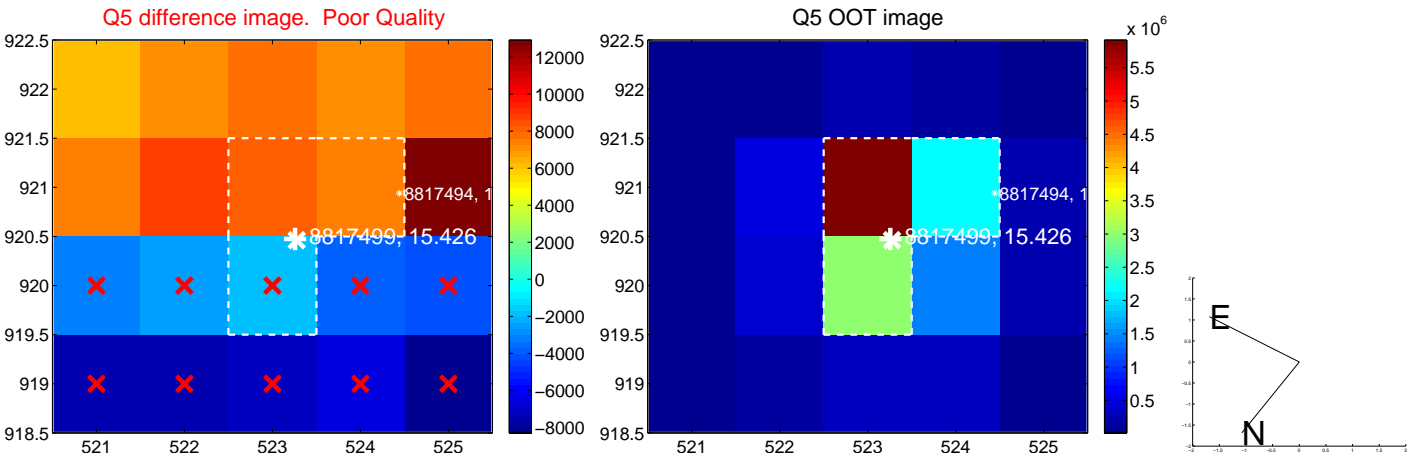


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



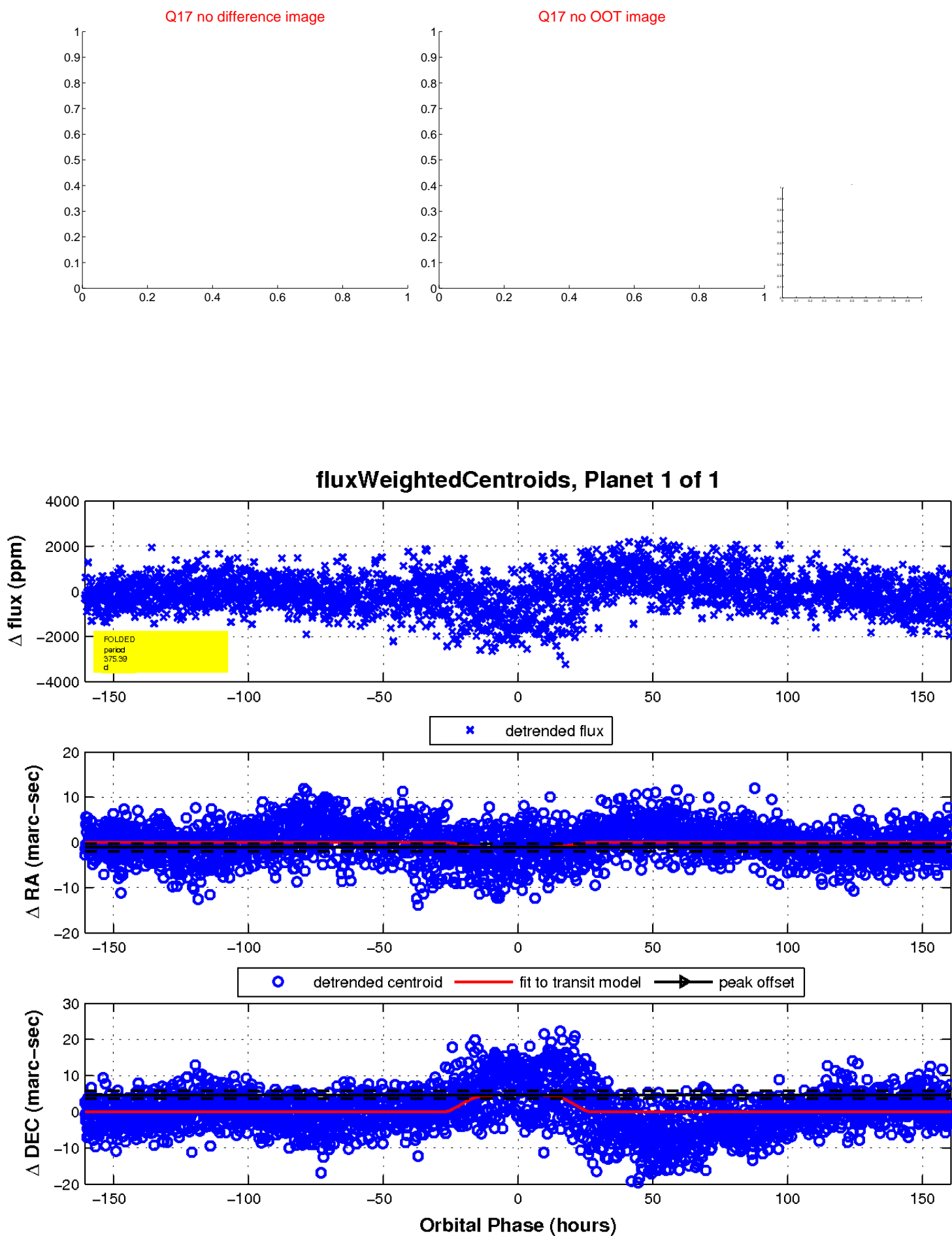
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

