

KIC 007602309

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})
007602309-01	OBS	No	373.941682	259.949437	762.6	49.307	7.2	12.0	0.93	6046	3.14	0.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007602309-01	OBS	FP	0.00	1	0	1	1	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST—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.

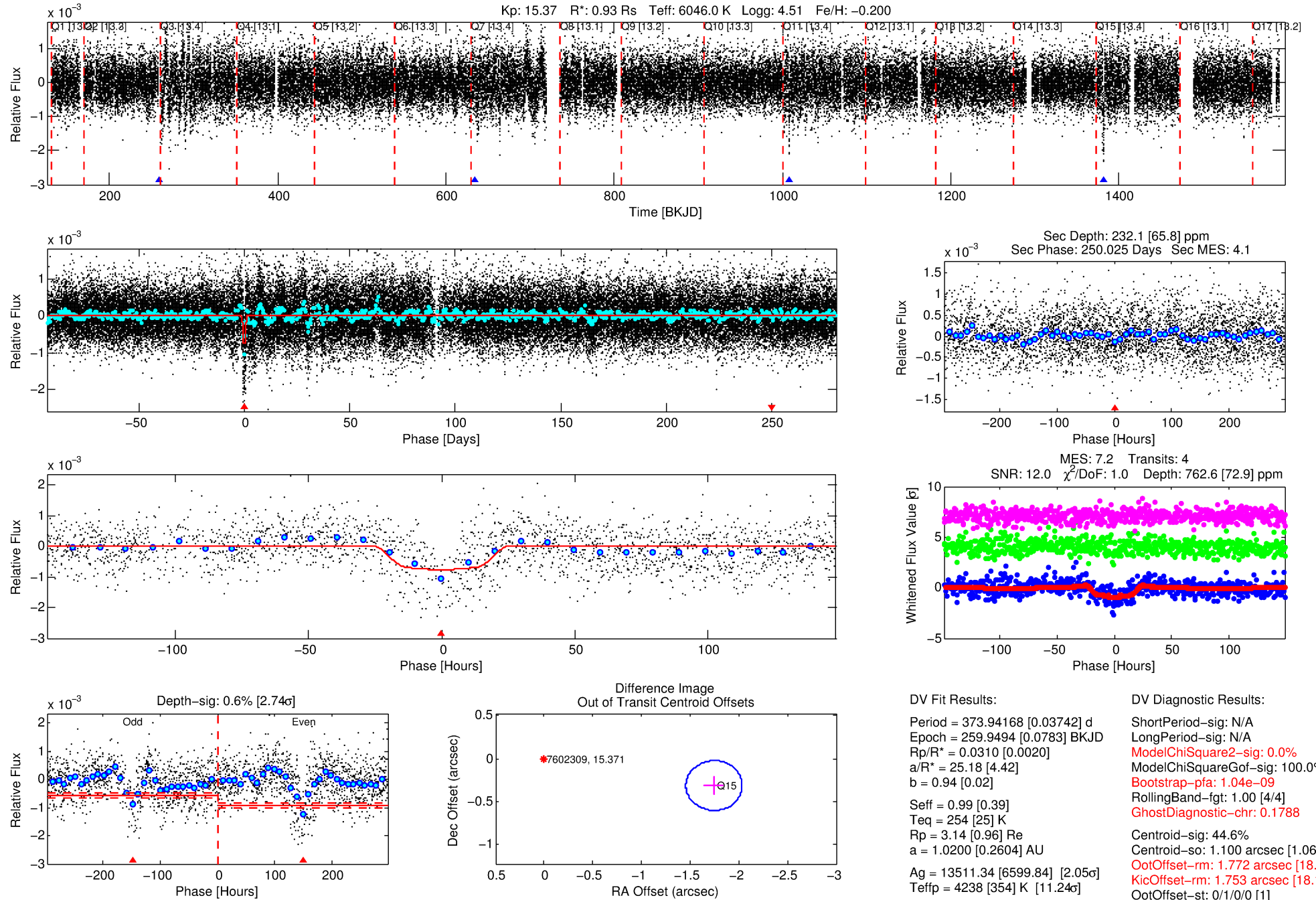
Ephemeris Match Information For 007602309-01

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
007602309-01	7602309	007440062-01	7440062	1:1	1082.4	3	272	12.76	15.37	3.40	Col-Anomaly	1	2.85	1.35

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

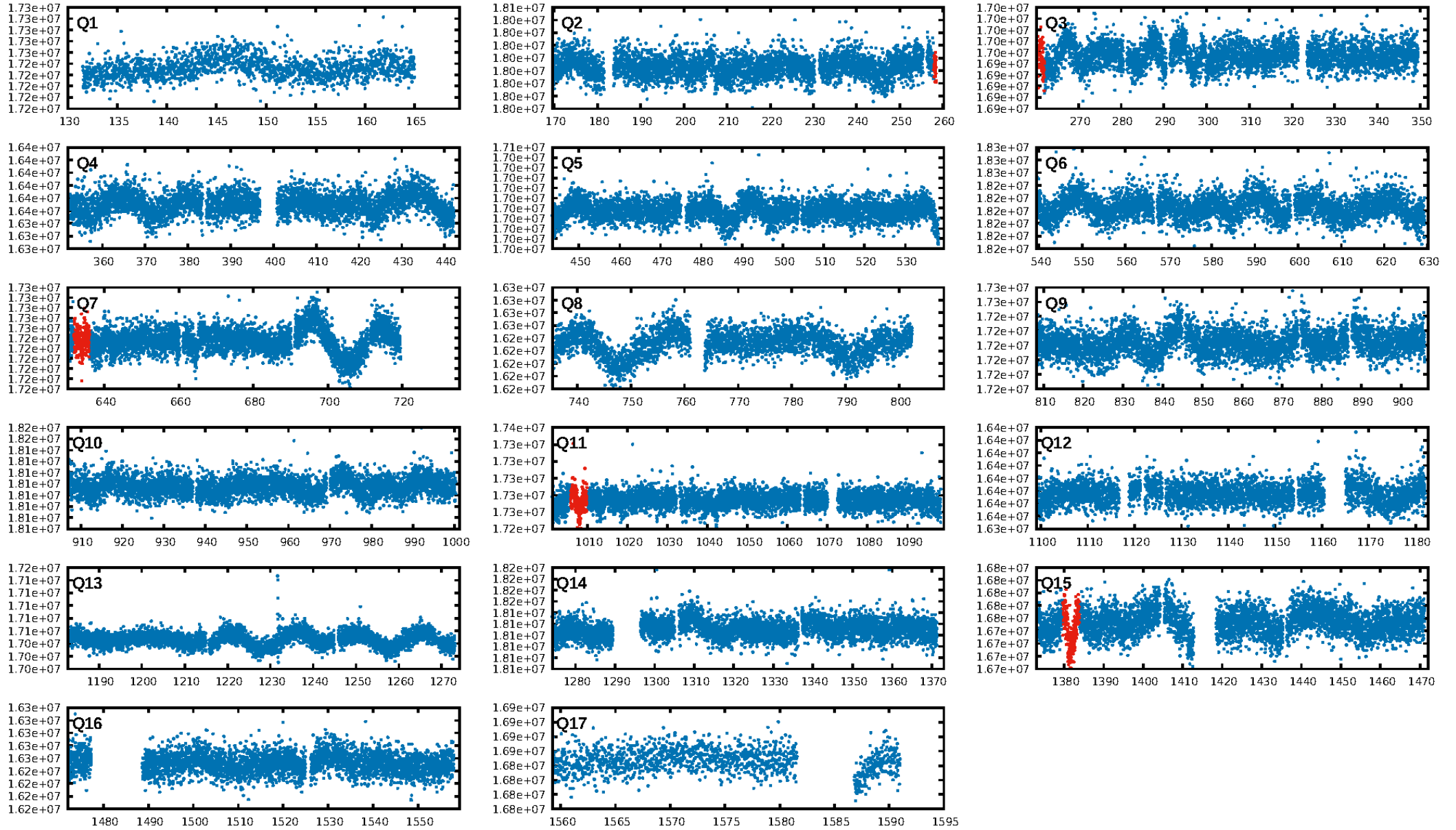
KIC: 7602309 Candidate: 1 of 1 Period: 373.942 d



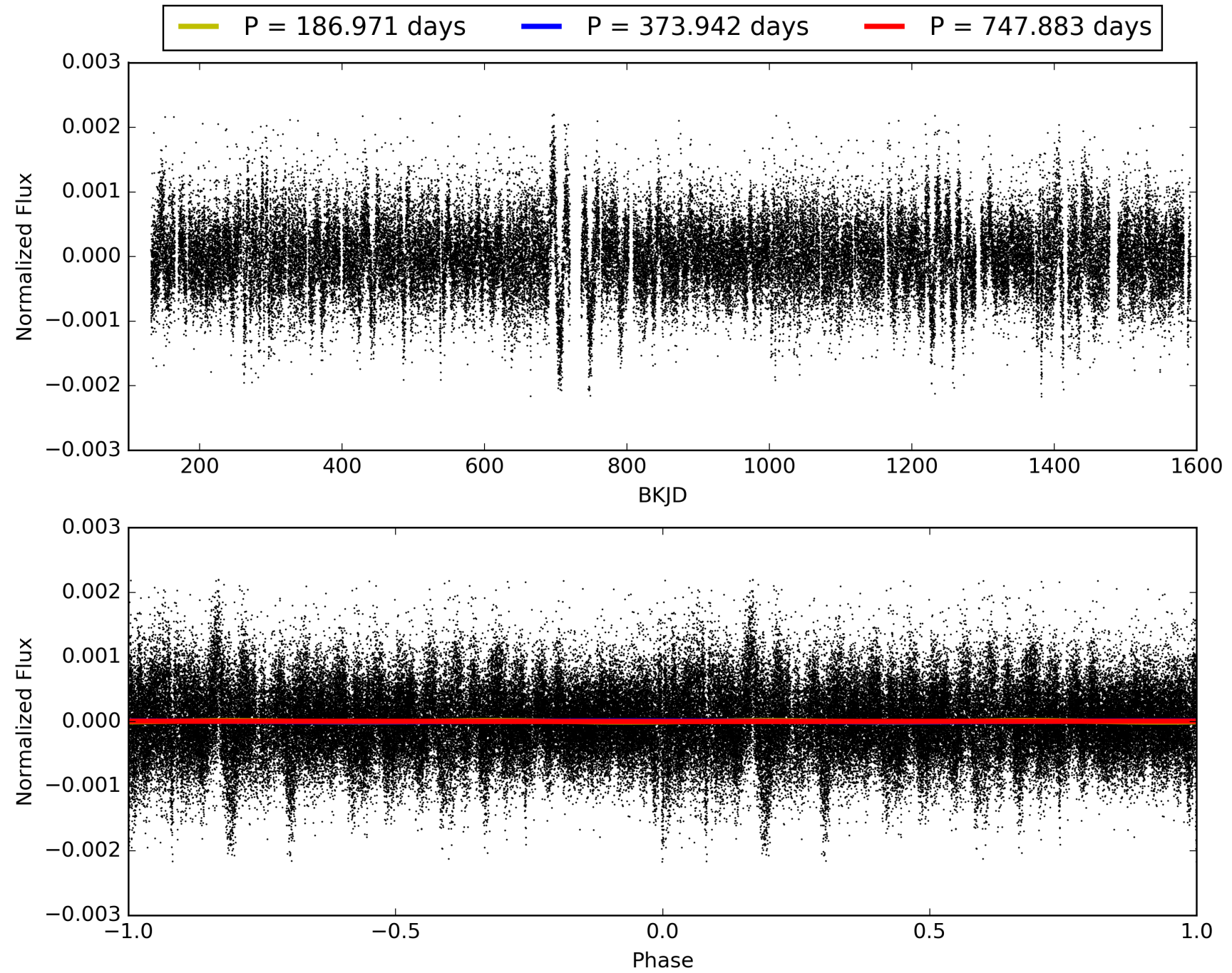
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:48:02 Z

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

TCE 007602309-01, PDC Light Curves

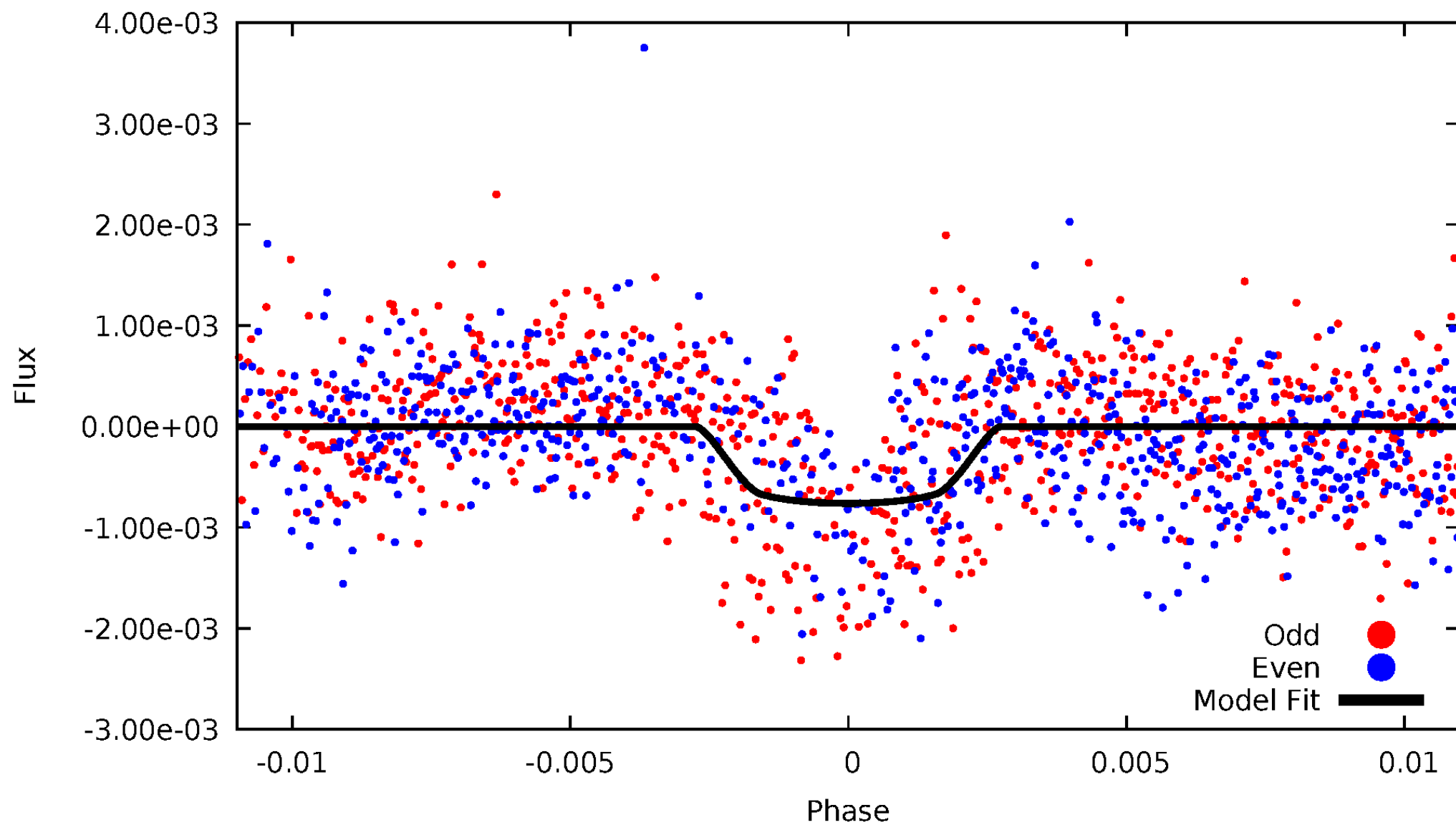


TCE 007602309-01



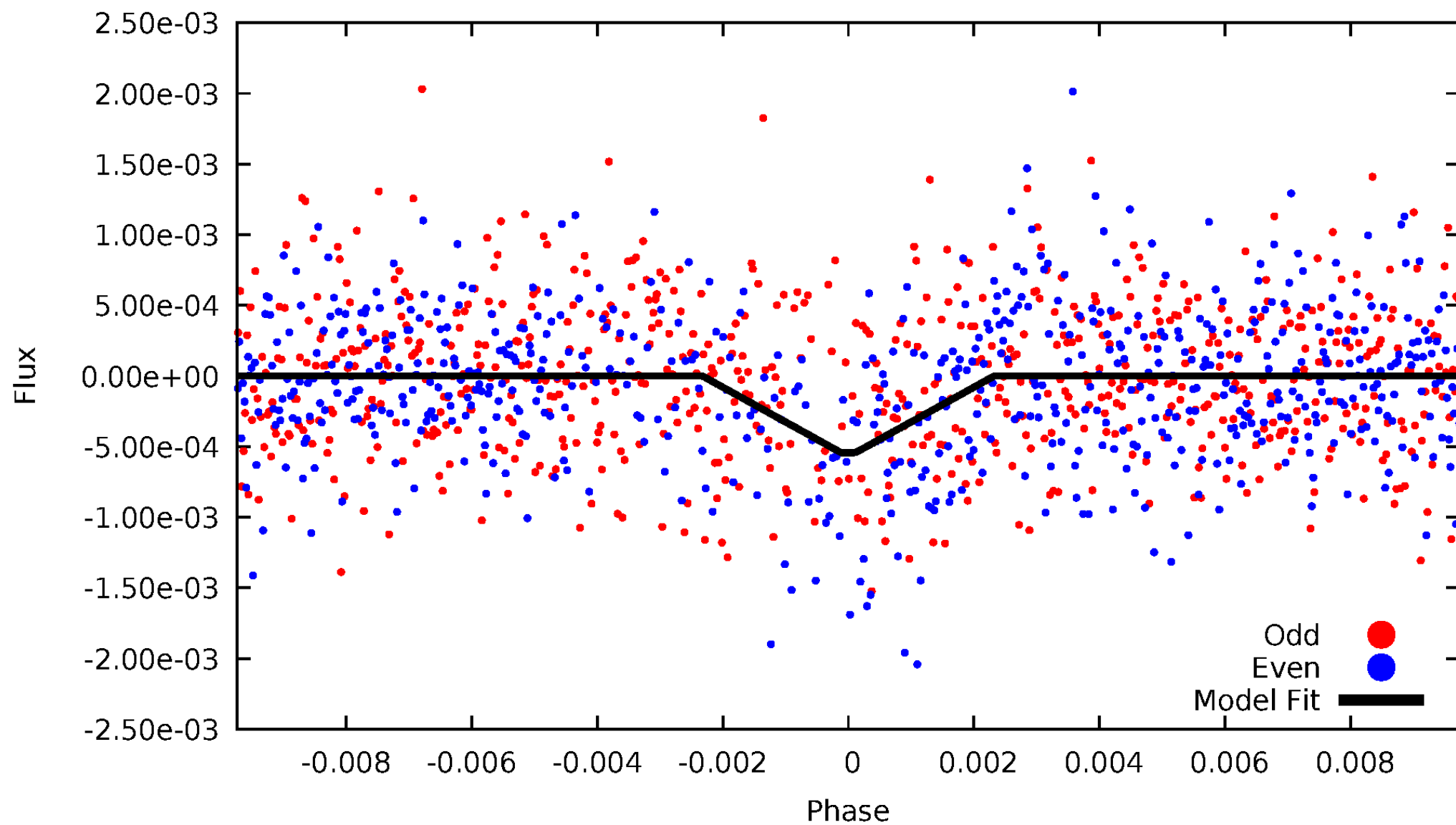
DV Odd/Even

TCE 007602309-01

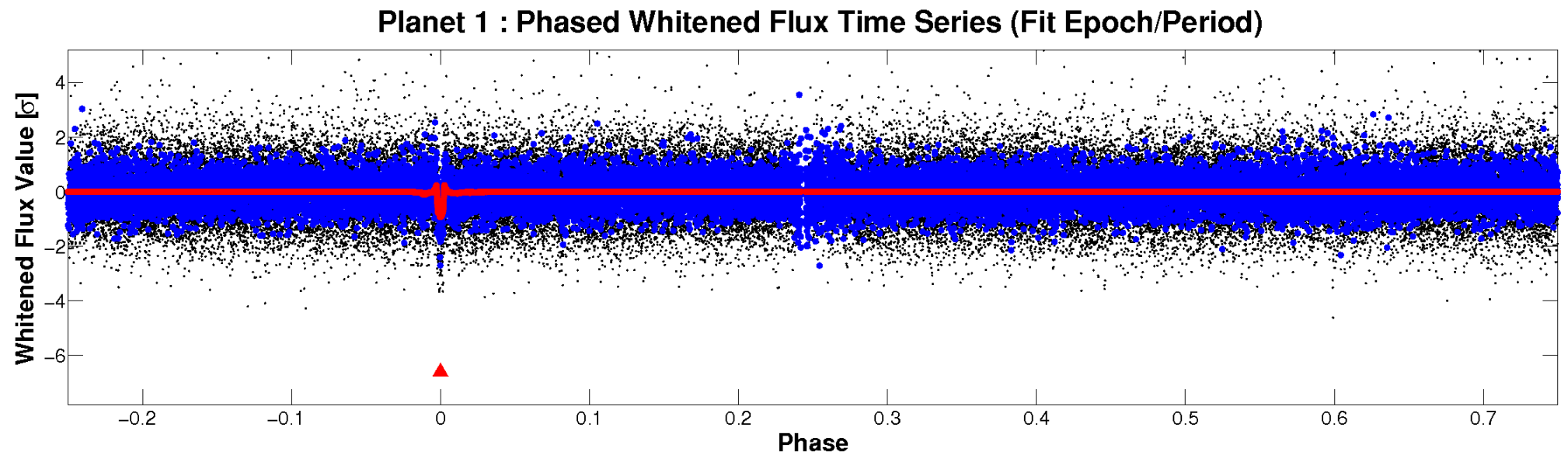
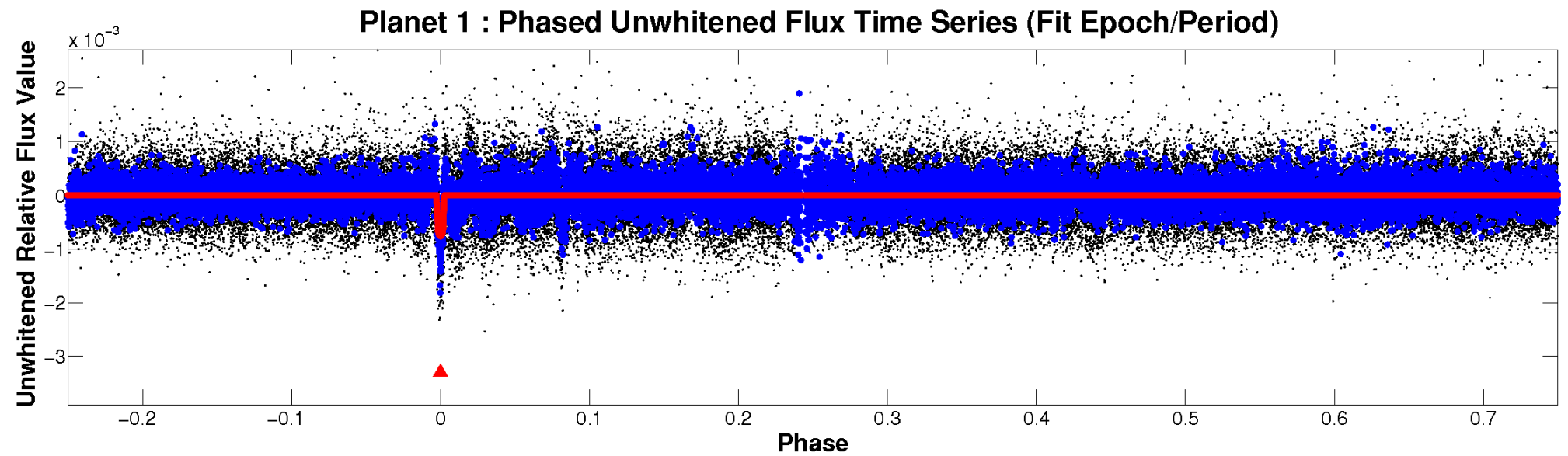


ALT Odd/Even

TCE 007602309-01

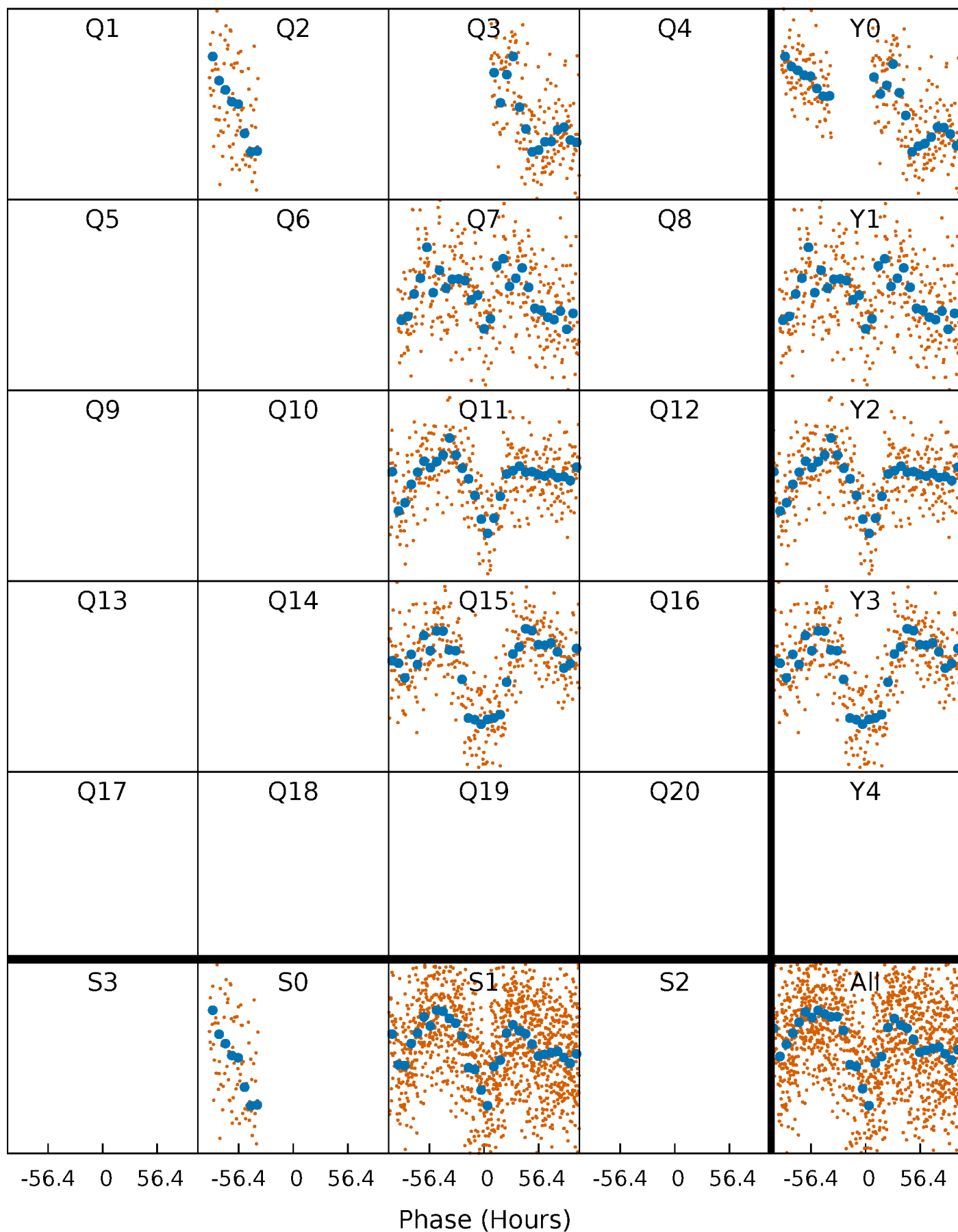


Non-Whitened Vs. Whitened Light Curve



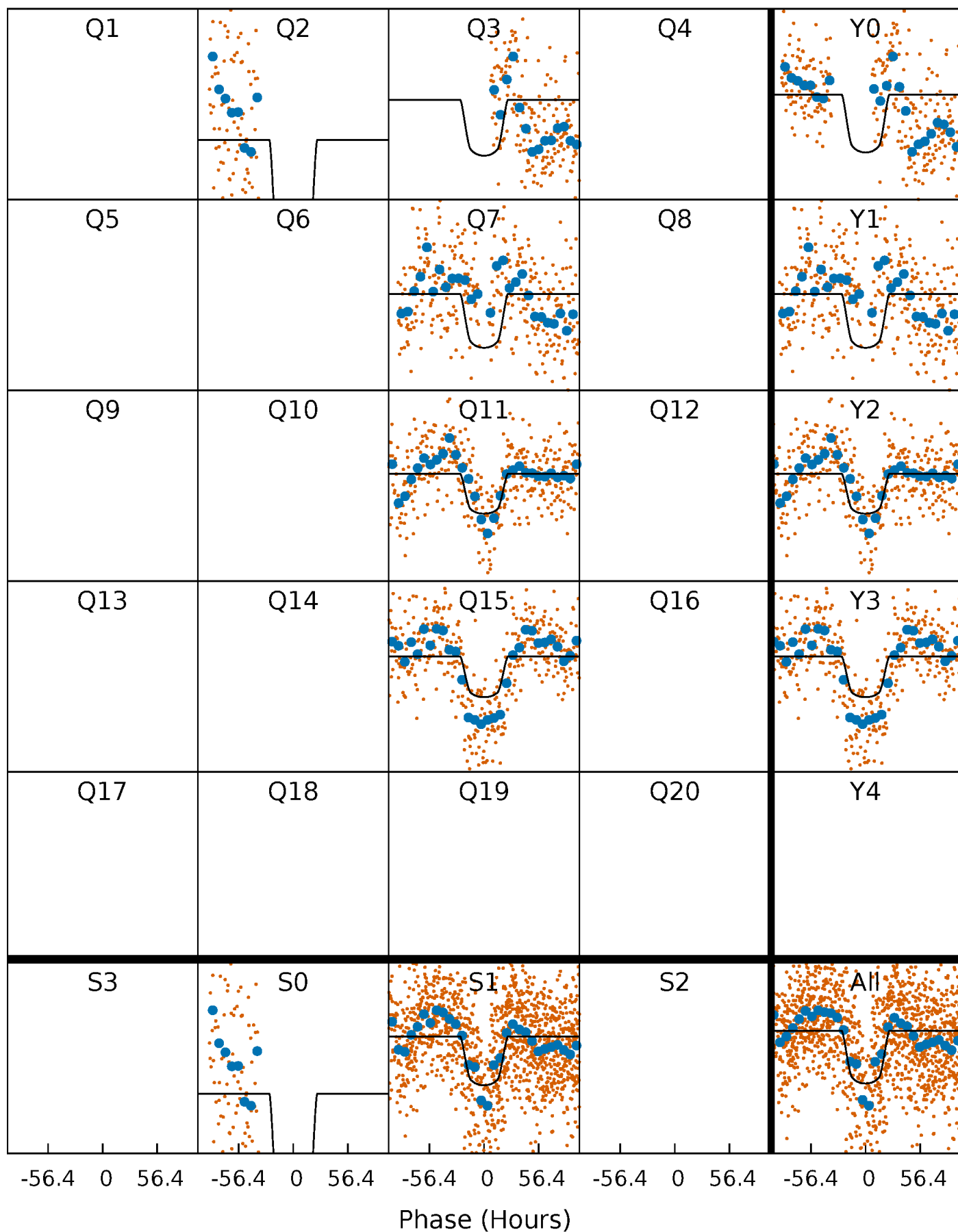
PDC Quarter-Phased Transit Curves

TCE 007602309-01 P=373.941682 Days $T_0=259.949437$ (BKJD)



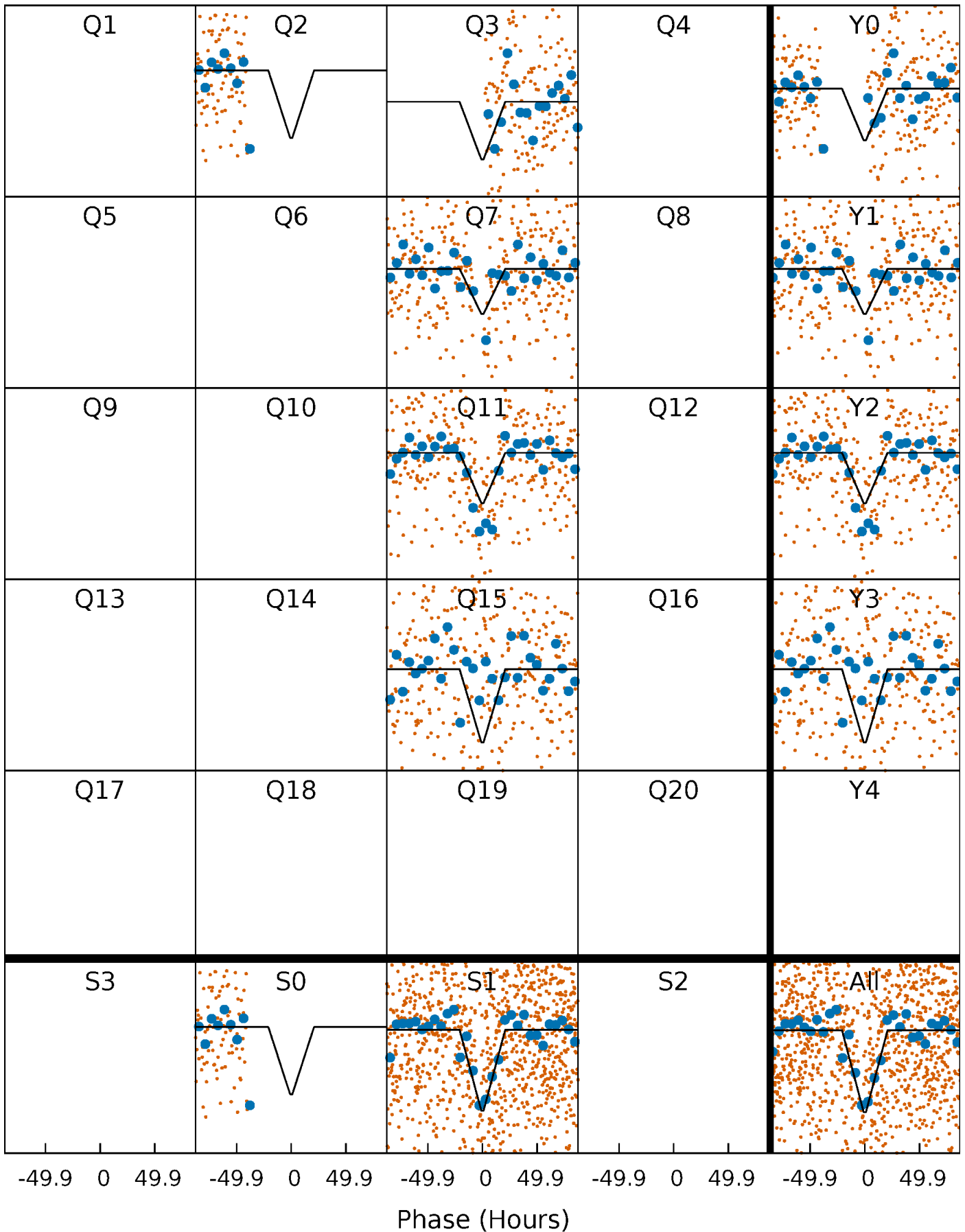
DV Quarter-Phased Transit Curves

TCE 007602309-01 P=373.941682 Days $T_0=259.949437$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

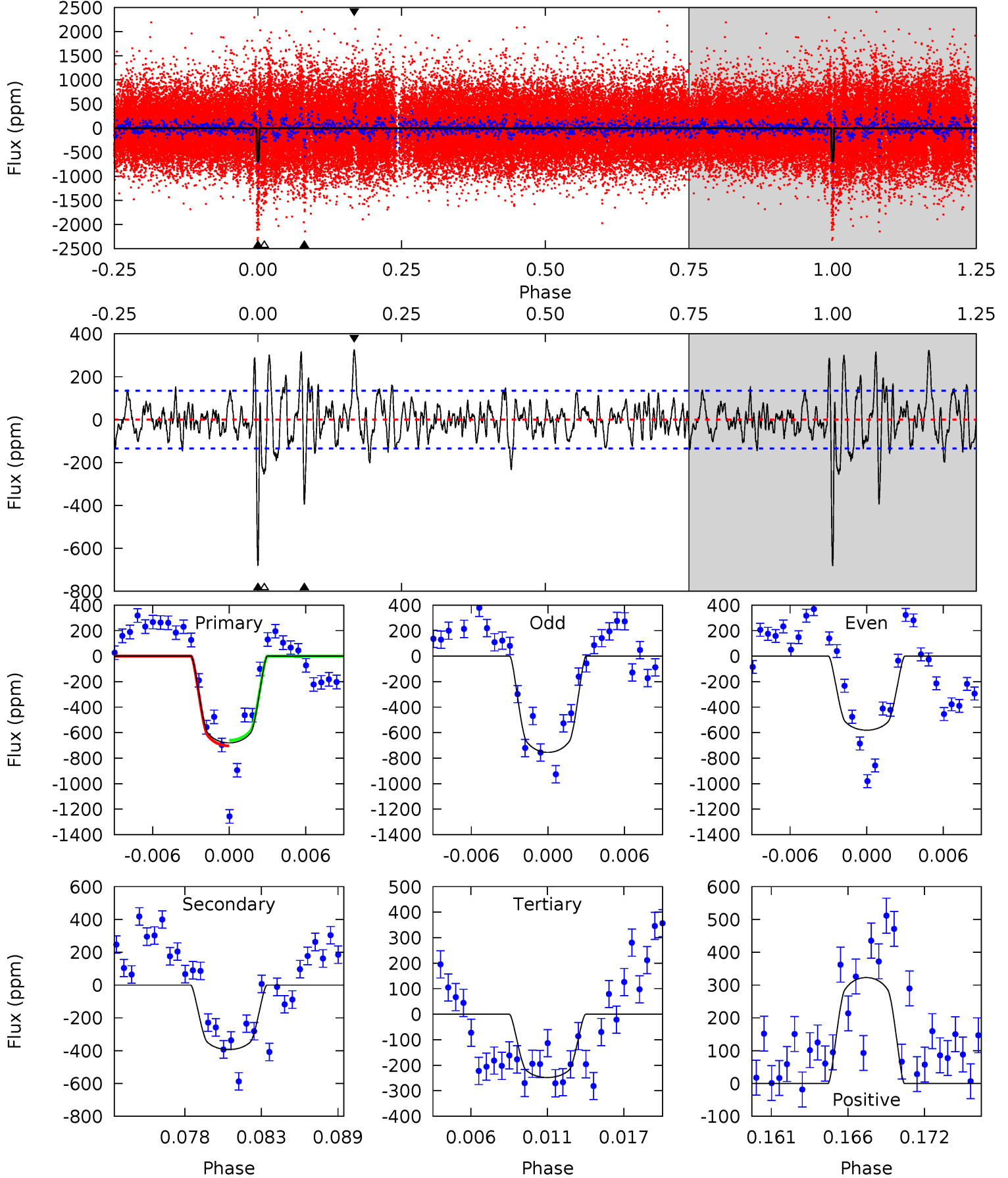
TCE 007602309-01 P=373.920526 Days $T_0=260.141336$ (BKJD)



DV Model-Shift Uniqueness Test

007602309-01, P = 373.941682 Days, E = 259.949437 Days

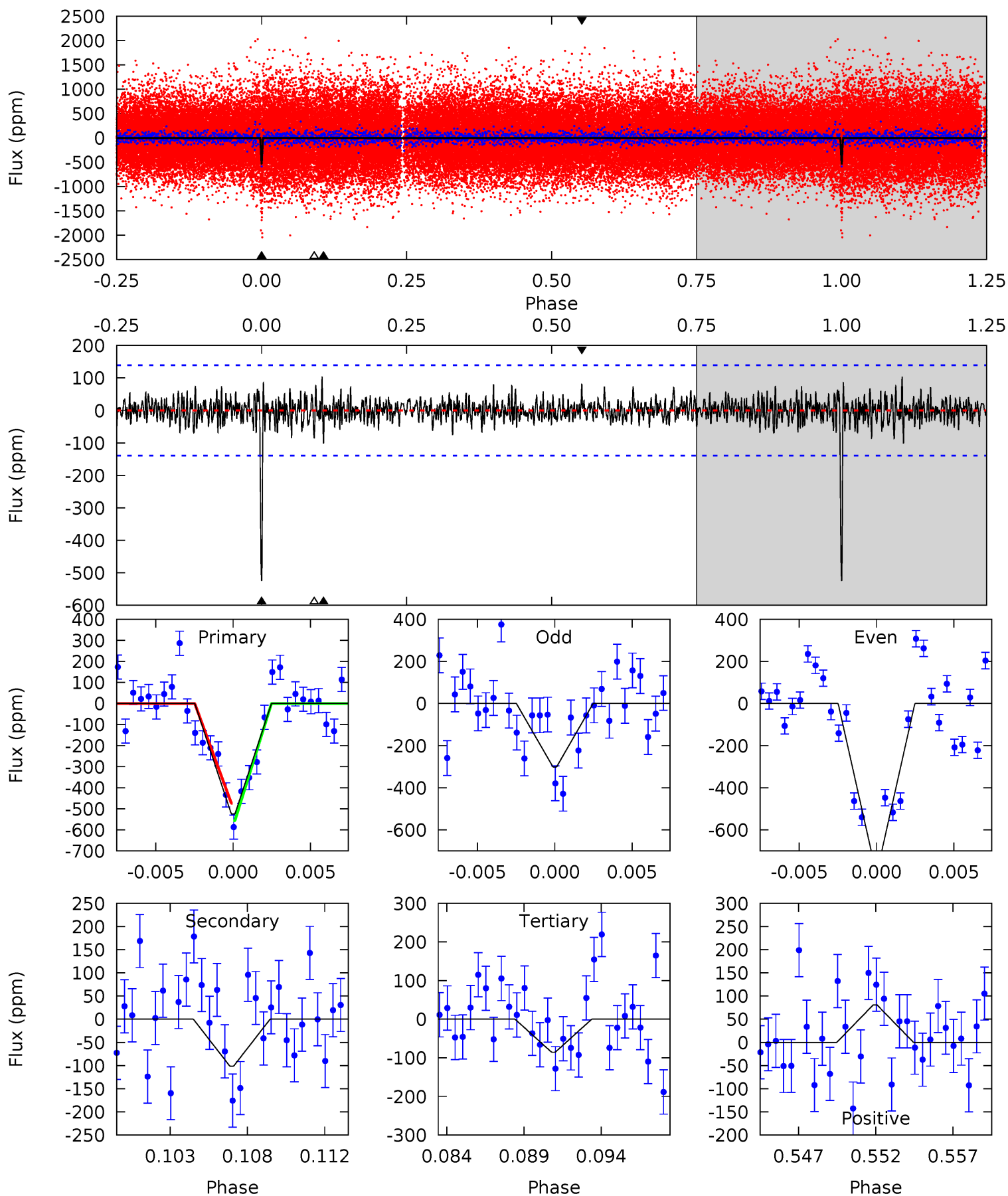
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	15.0	9.48	12.3	5.14	2.77	2.96	16.5	13.7	5.56	2.69	3.29	1.30	0.32	0.83



Alt Model-Shift Uniqueness Test

007602309-01, P = 373.920526 Days, E = 260.141336 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	3.77	3.18	3.01	5.17	2.83	0.94	16.3	16.5	0.59	0.76	8.69	1.04	0.17	1.53



Stellar Parameters For KIC 007602309

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6046^{+181}_{-181}	$4.509^{+0.039}_{-0.208}$	$-0.200^{+0.300}_{-0.300}$	$0.927^{+0.277}_{-0.092}$	$1.011^{+0.126}_{-0.140}$	$1.789^{+0.466}_{-0.887}$
	+3%/-3%	+1%/-5%	+150%/-150%	+30%/-10%	+12%/-14%	+26%/-50%
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 007602309-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-393 ± 26	$3.26^{+0.53}_{-0.35}$	365^{+24}_{-17}	4944^{+184}_{-199}	20505^{+4924}_{-4666}
Alt.	-101 ± 27	$2.46^{+0.44}_{-0.33}$	365^{+27}_{-17}	4225^{+269}_{-287}	8922^{+4329}_{-3212}

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

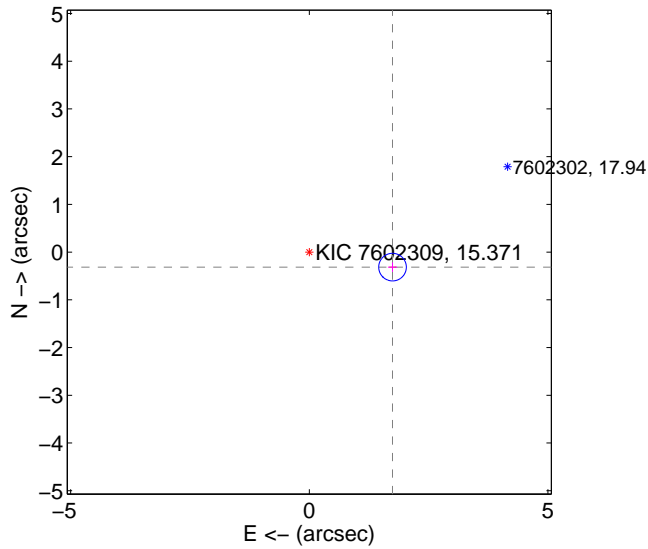
Supplemental centroid analysis for 007602309-01. Kepler magnitude: 15.37. Transit SNR 11.97

There are 0 quarters with good PRF difference image offsets

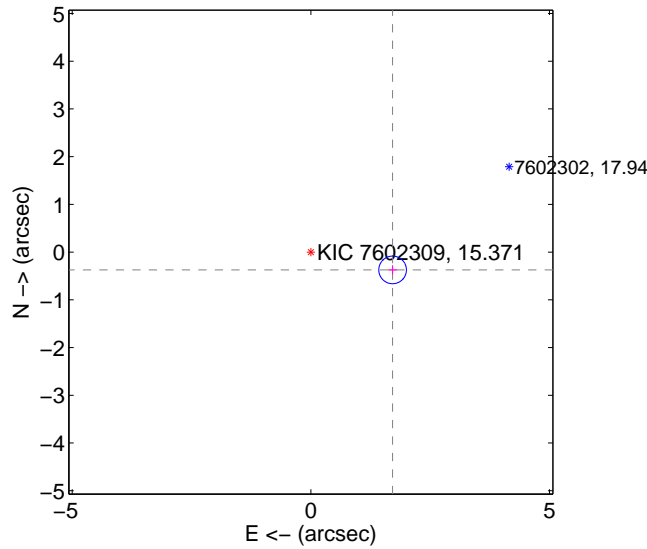
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.772 ± 0.096	18.38	-1.744 ± 0.096	-0.315 ± 0.098
PRF-fit source offset from KIC position	1.753 ± 0.096	18.17	-1.713 ± 0.096	-0.373 ± 0.098
photometric centroid source offset	1.10 ± 1.04	1.06	-1.04 ± 1.05	-0.35 ± 0.98

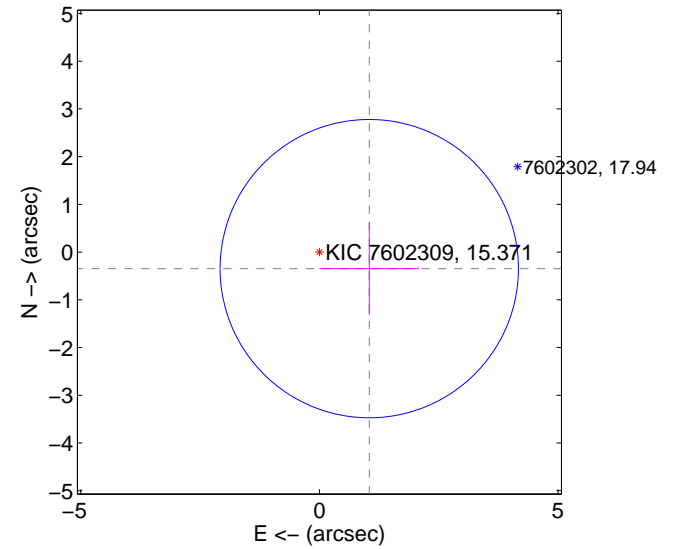
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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.



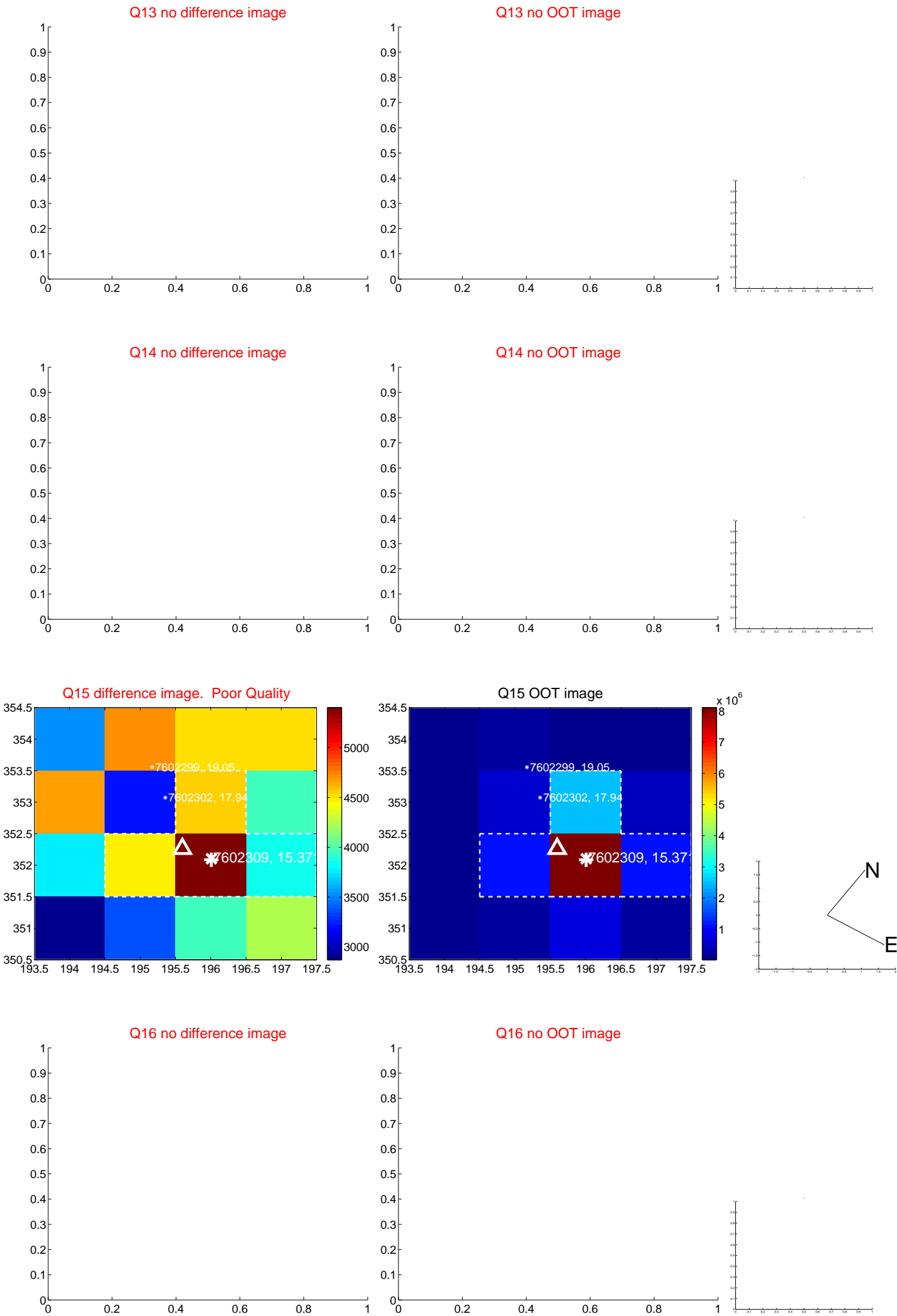
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



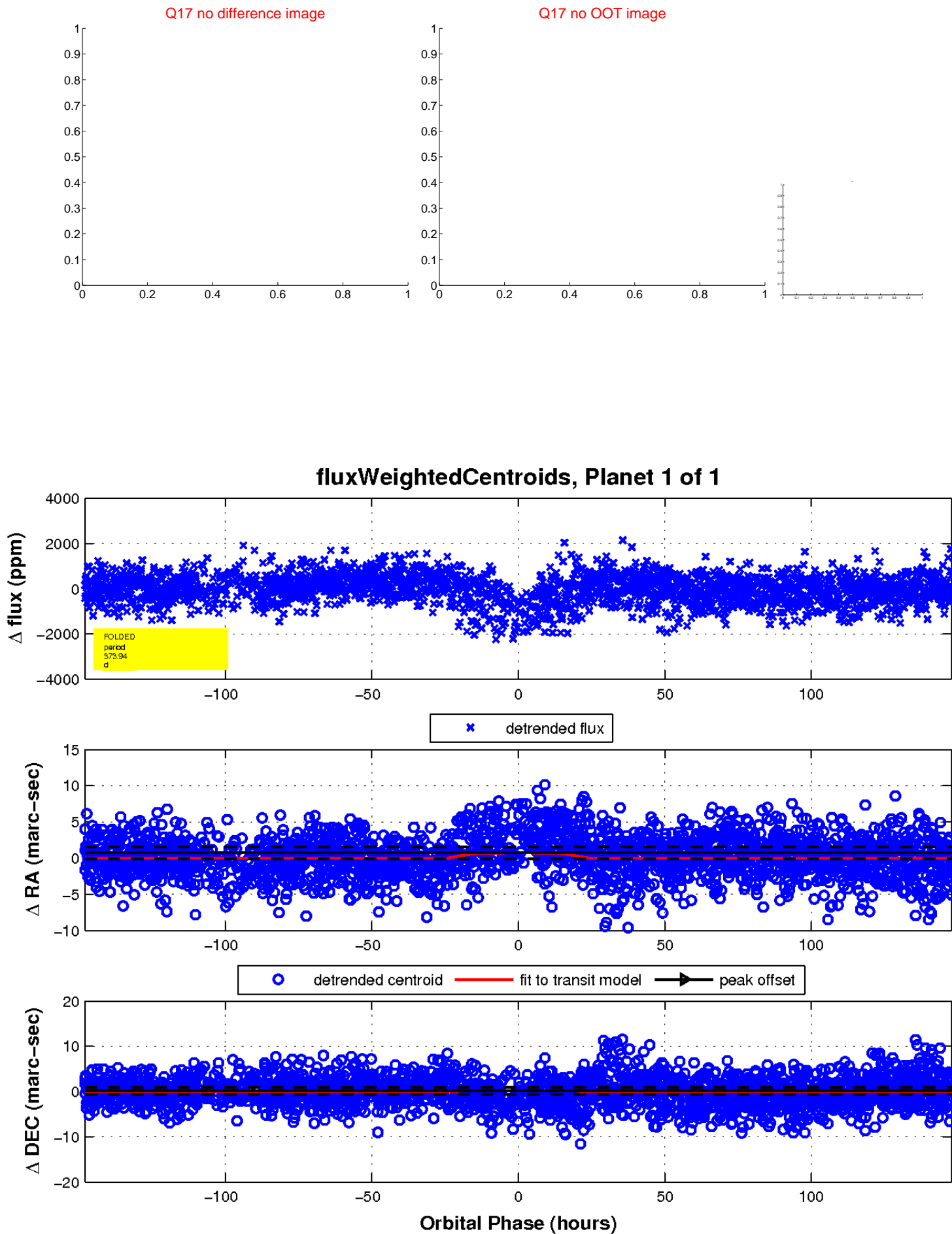
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

