

KIC 008817666

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})
008817666-01	OBS	No	369.064385	151.626551	732.5	10.464	8.4	6.8	0.94	6131	2.67	1.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008817666-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

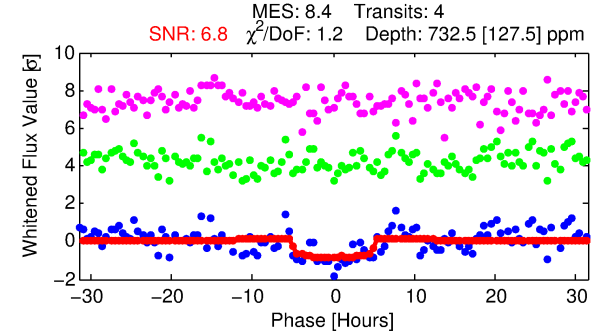
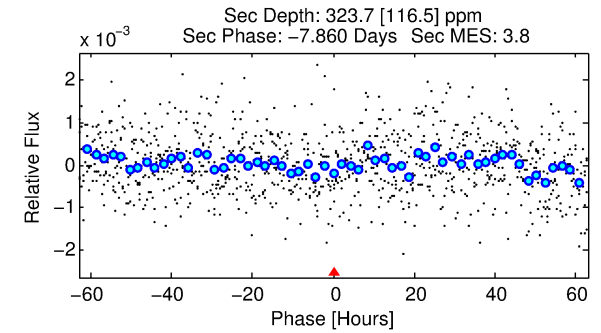
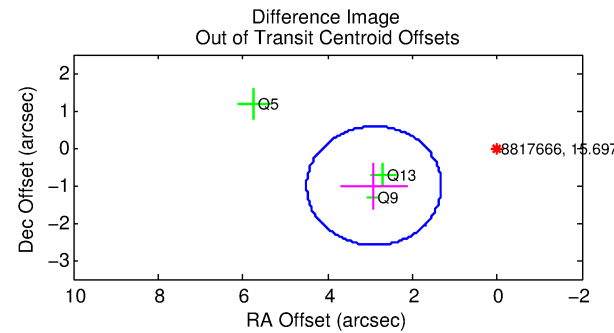
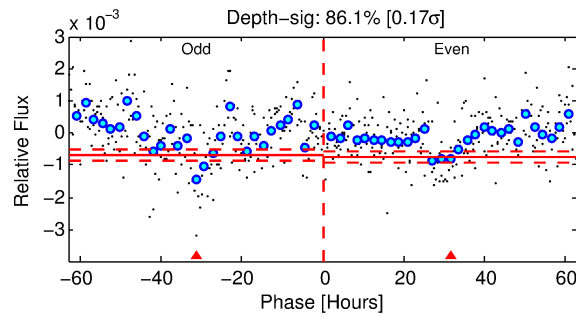
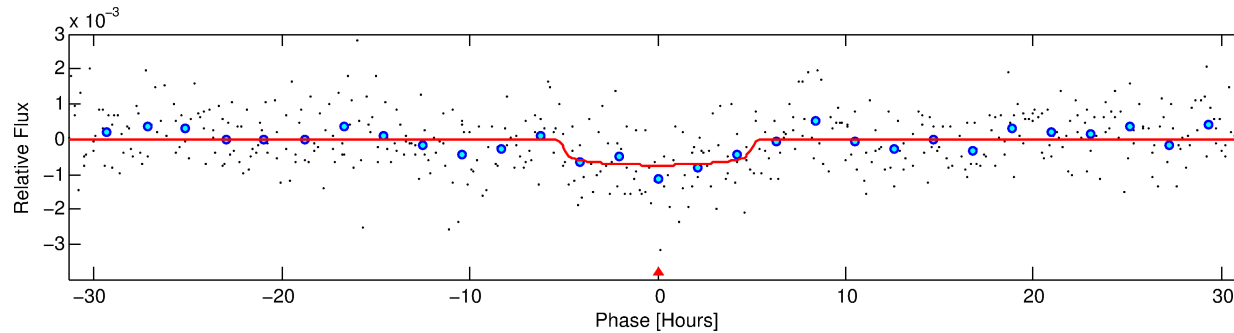
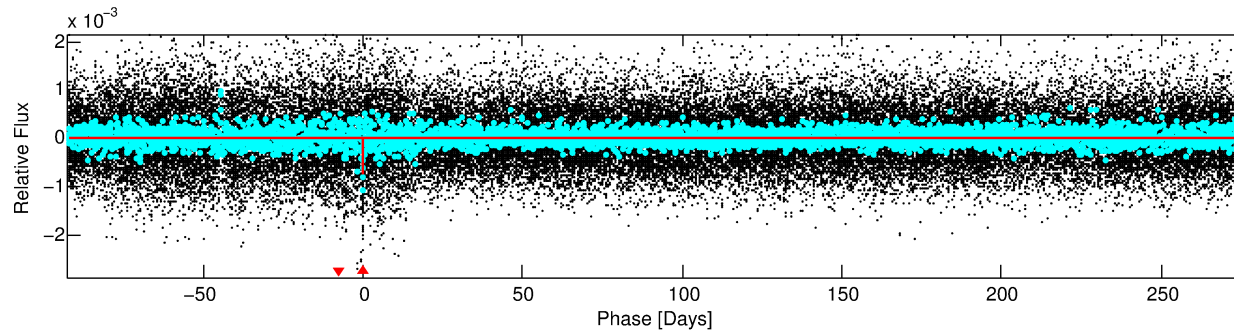
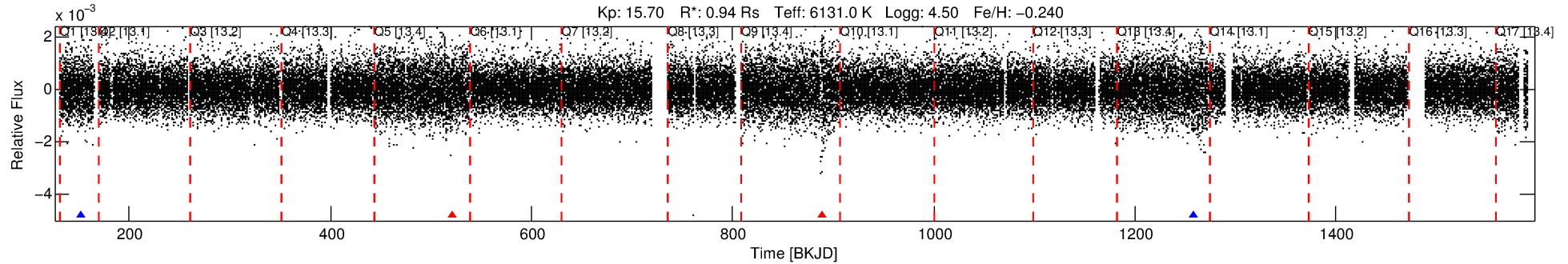
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008817666-01

No Significant Match Found

DV One-Page Summary

KIC: 8817666 Candidate: 1 of 1 Period: 369.064 d



DV Fit Results:

Period = 369.06438 [0.01189] d
Epoch = 151.6266 [0.0214] BKJD
Rp/R* = 0.0259 [0.0188]
a/R* = 225.70 [807.87]
b = 0.59 [3.96]
Seff = 1.10 [0.41]
Teq = 261 [24] K
Rp = 2.67 [2.07] Re
a = 1.0148 [0.2388] AU
Ag = 25739.65 [39506.11] [0.65 σ]
Teffp = 5111 [1919] K [2.53 σ]

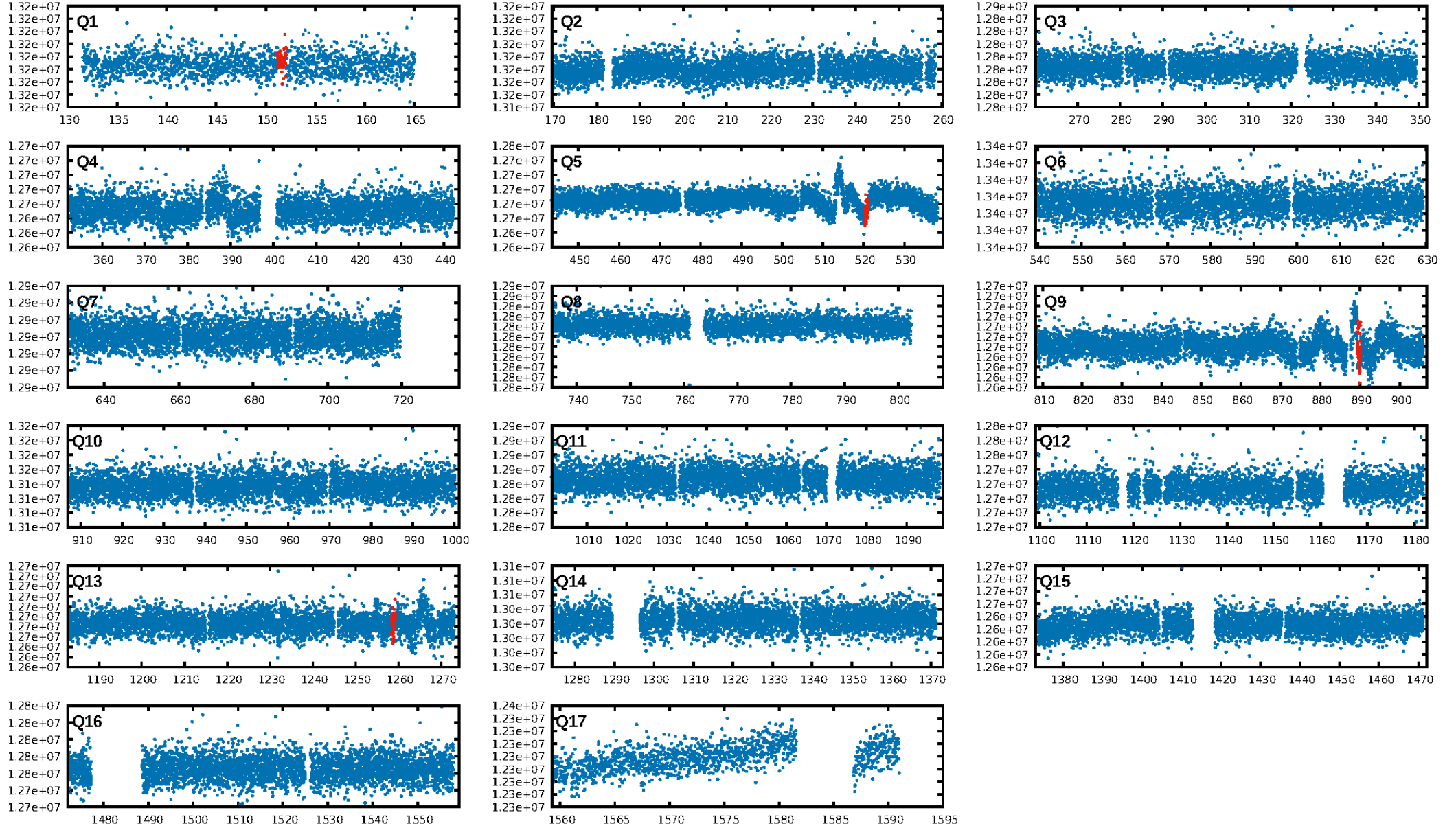
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 80.0%
Bootstrap-pfa: 9.09e-11
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 2.529
Centroid-sig: 4.9%
Centroid-so: 3.011 arcsec [1.12 σ]
OotOffset-rm: 3.073 arcsec [5.81 σ]
KicOffset-rm: 2.976 arcsec [7.64 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

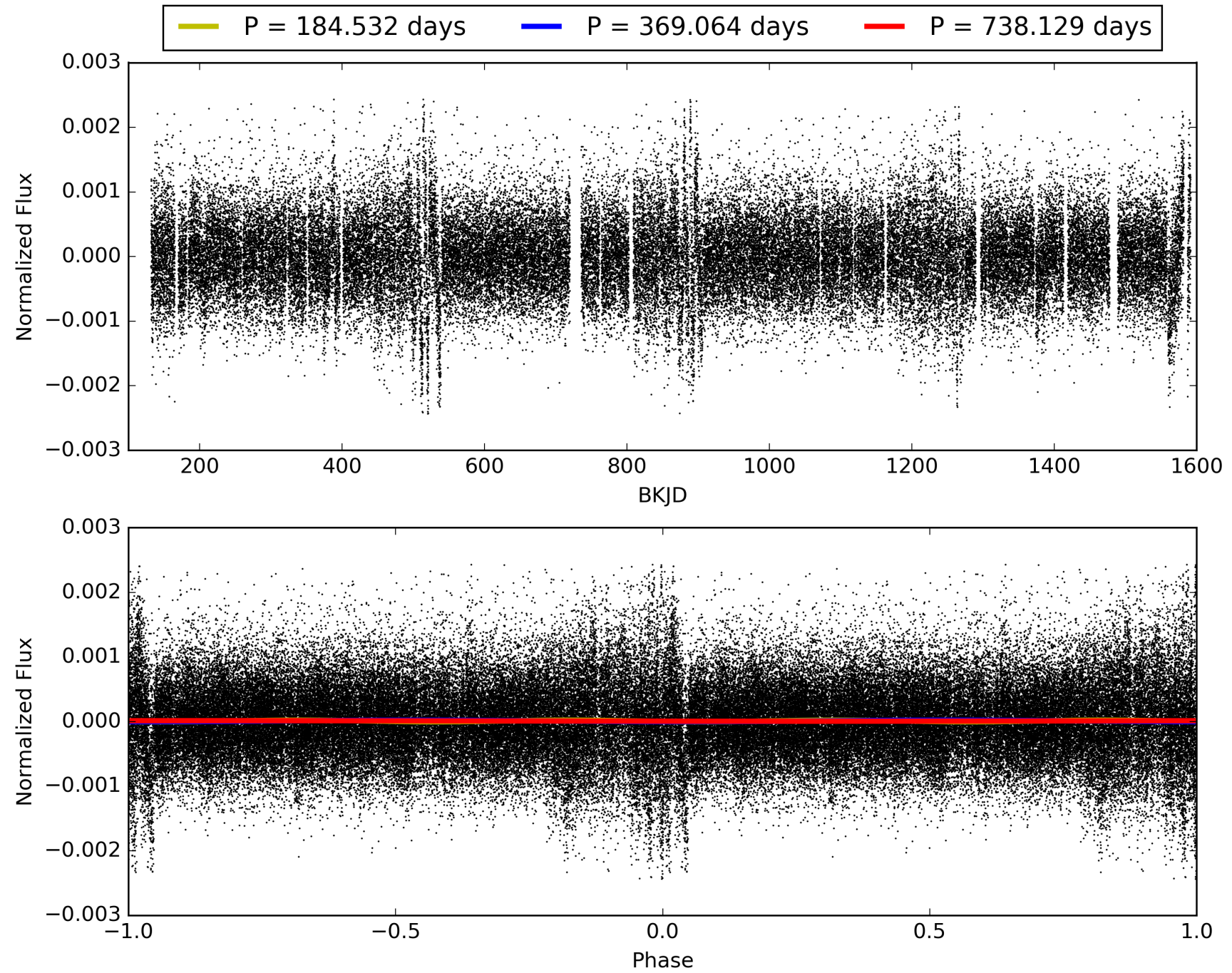
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:39:13 Z

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

TCE 008817666-01, PDC Light Curves

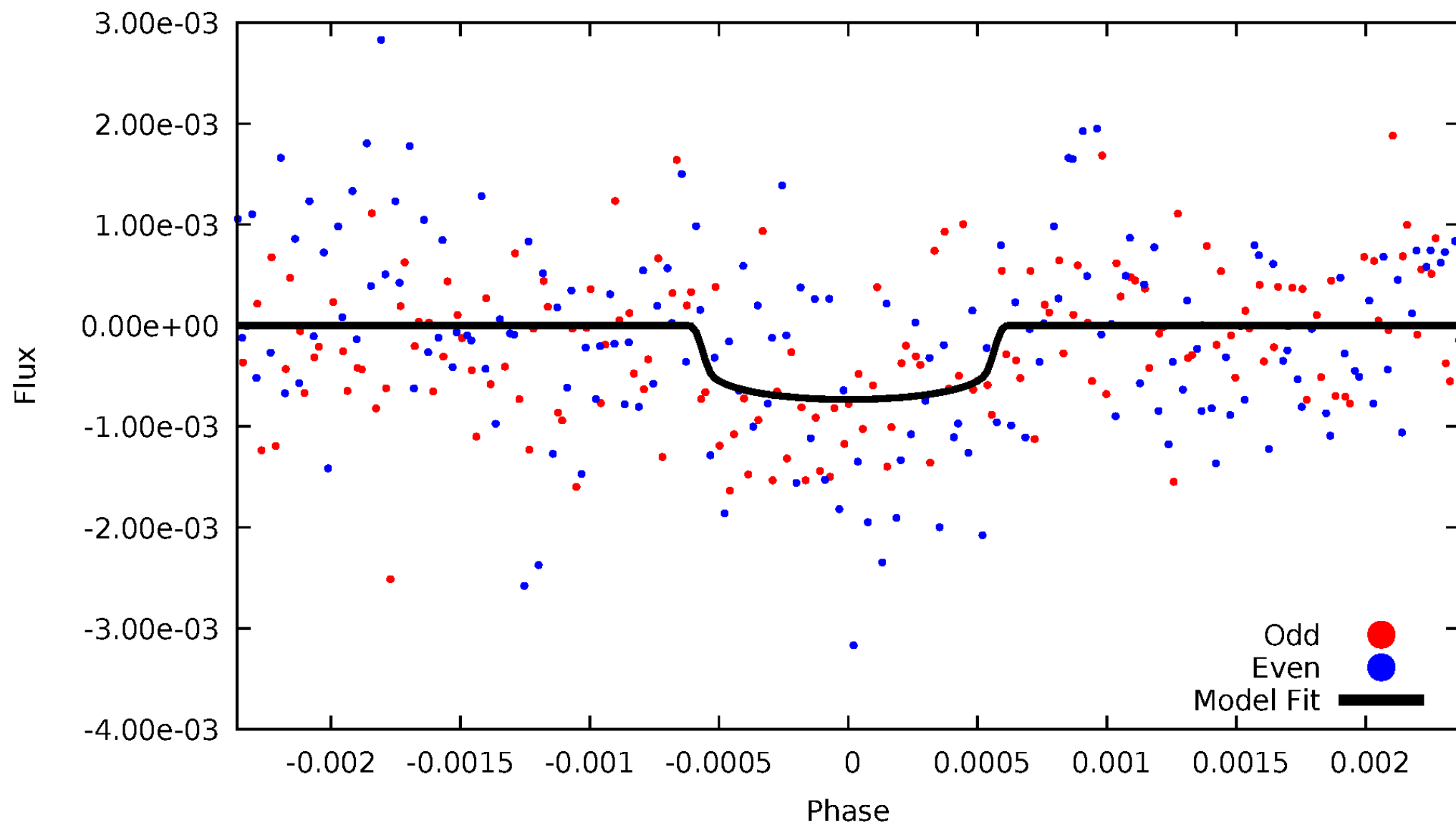


TCE 008817666-01



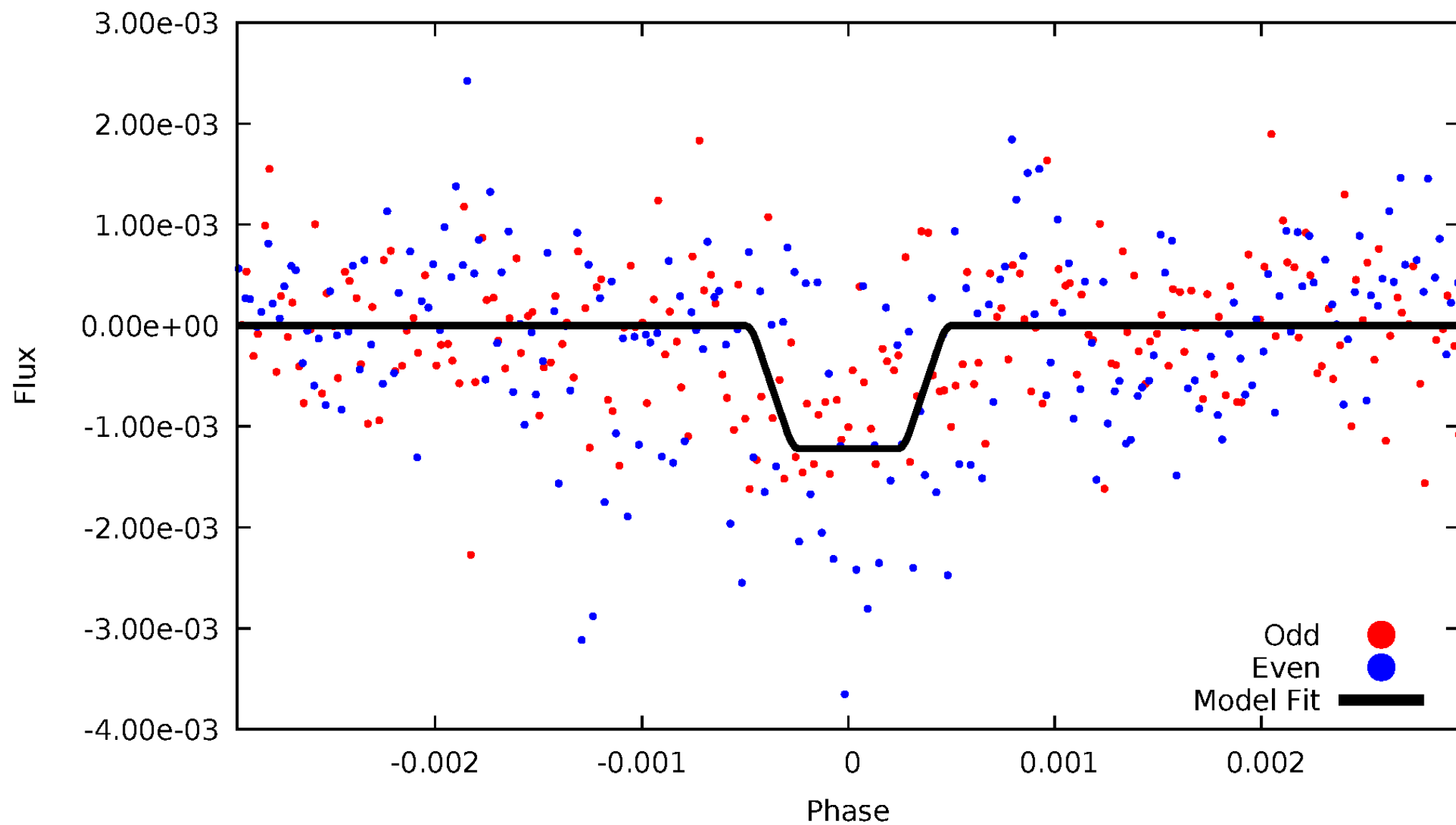
DV Odd/Even

TCE 008817666-01



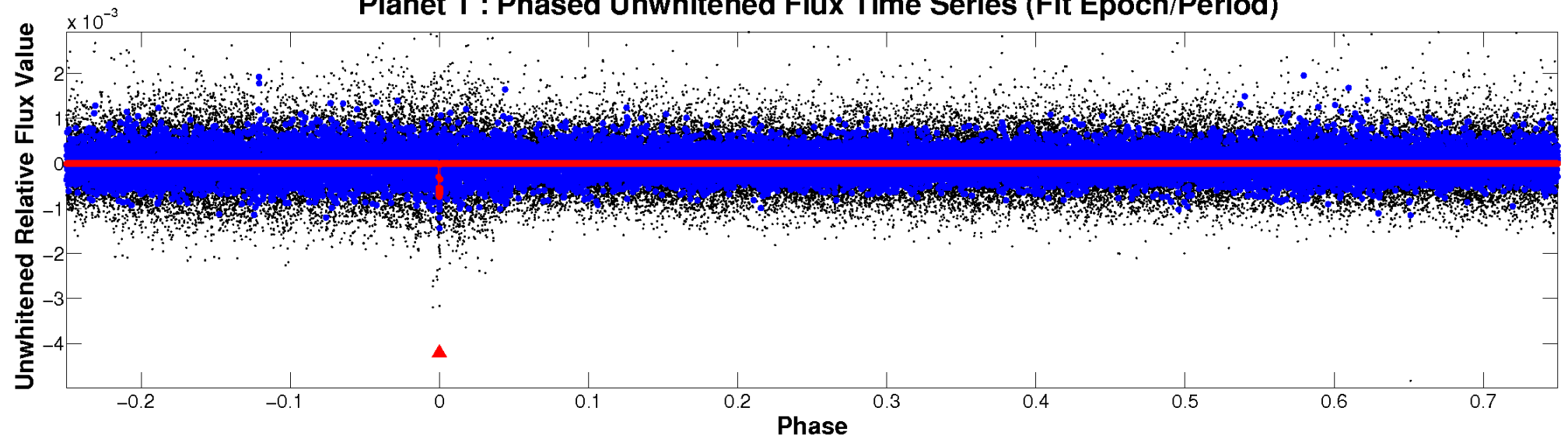
ALT Odd/Even

TCE 008817666-01

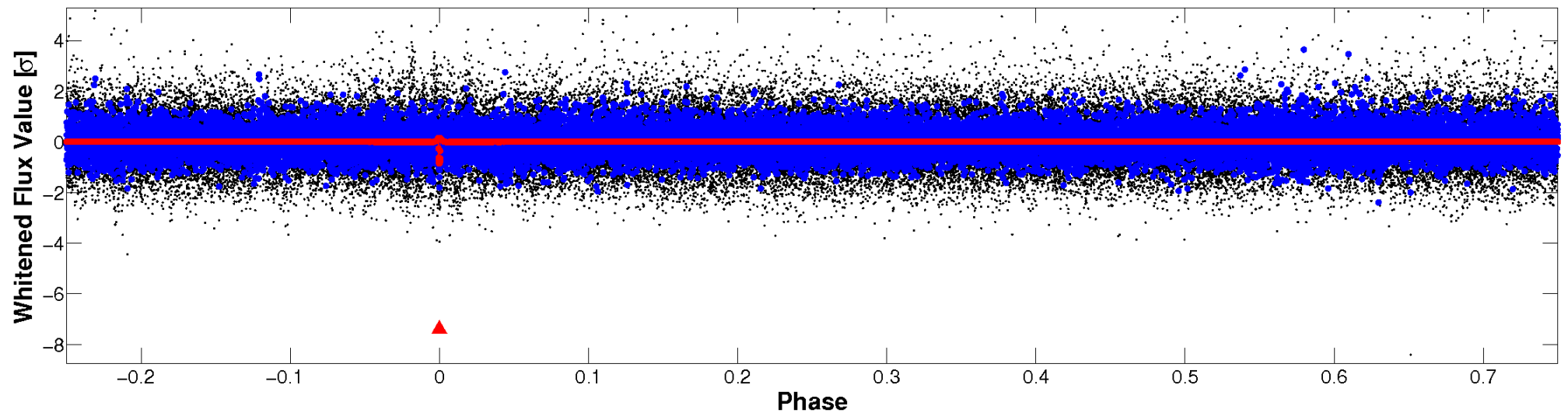


Non-Whitened Vs. Whitened Light Curve

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 008817666-01 P=369.064385 Days $T_0=151.626551$ (BKJD)



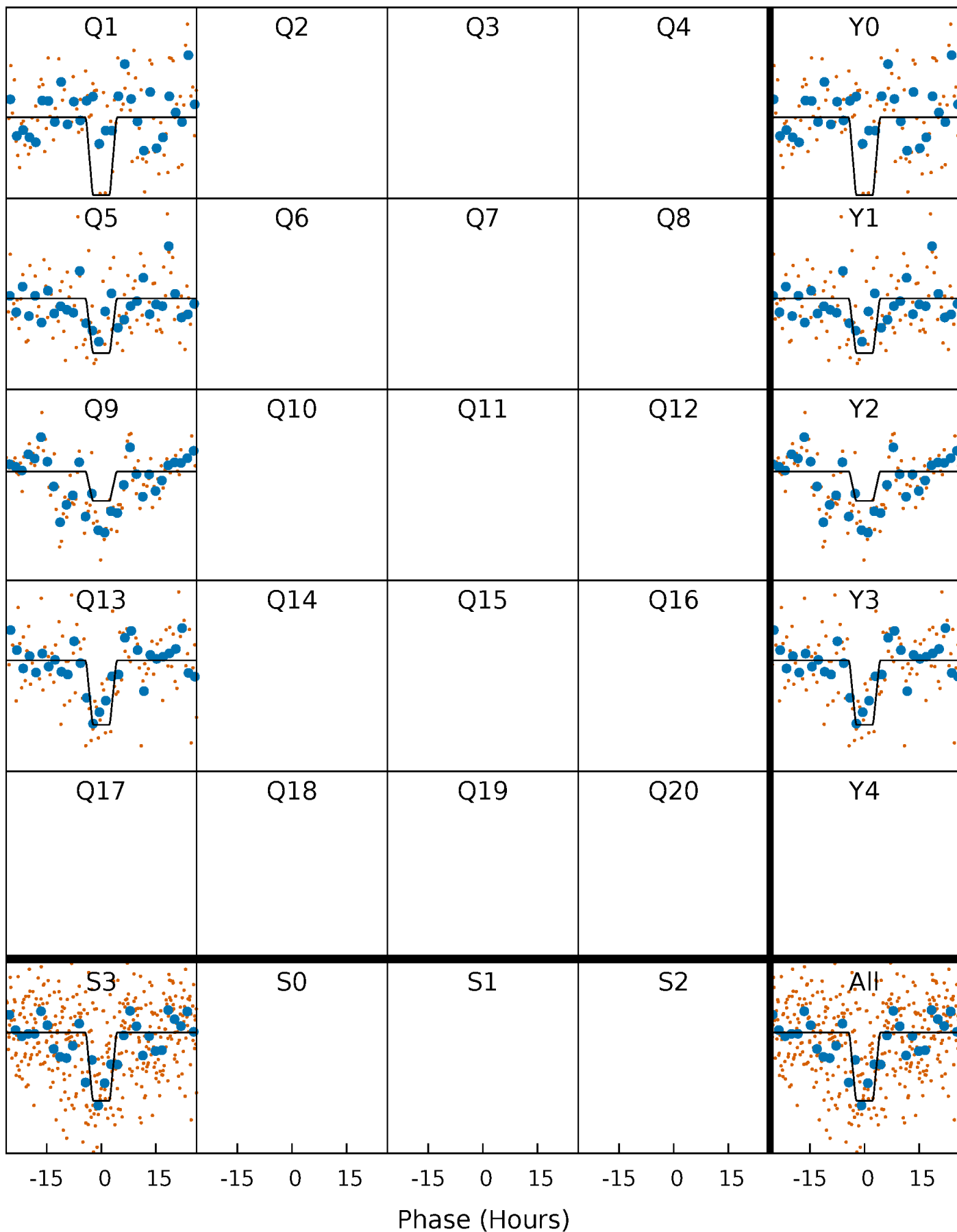
DV Quarter-Phased Transit Curves

TCE 008817666-01 P=369.064385 Days $T_0=151.626551$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

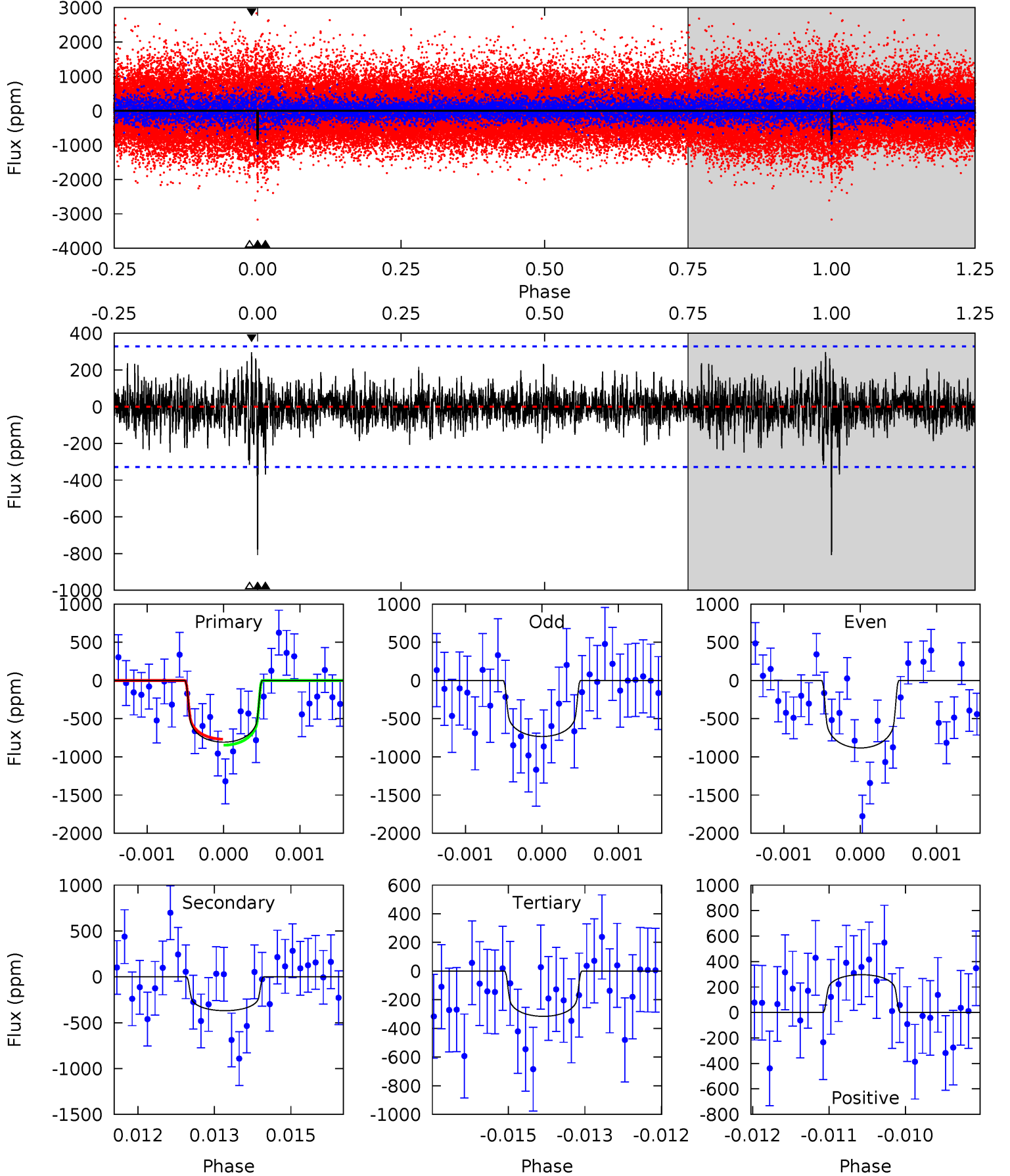
TCE 008817666-01 P=369.057338 Days $T_0=151.654531$ (BKJD)



DV Model-Shift Uniqueness Test

008817666-01, P = 369.064385 Days, E = 151.626551 Days

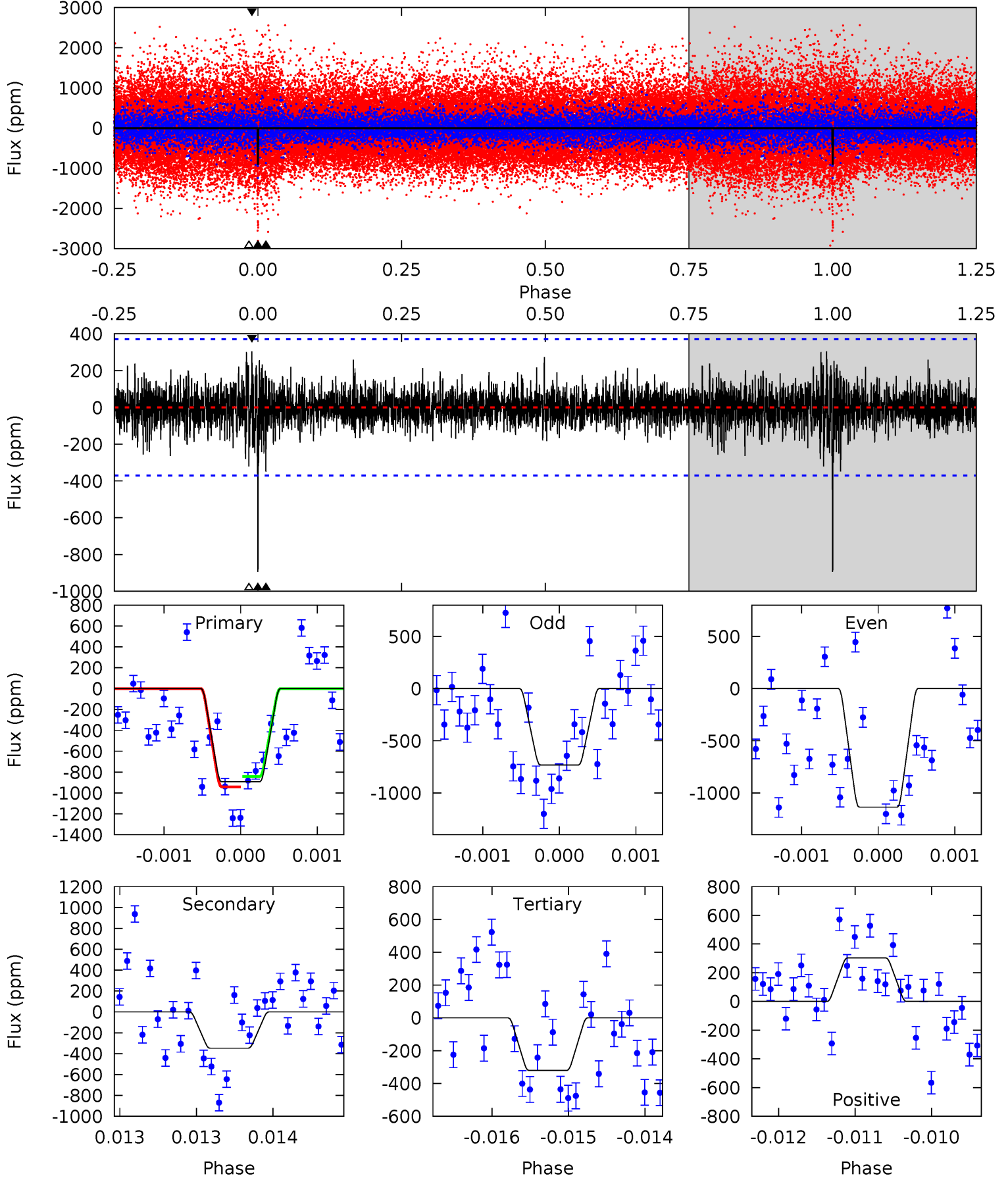
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	6.08	5.20	4.89	5.42	3.23	1.16	8.10	8.41	0.88	1.19	1.24	1.09	0.27	0.64



Alt Model-Shift Uniqueness Test

008817666-01, $P = 369.057338$ Days, $E = 151.654531$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	5.13	4.72	4.47	5.46	3.30	1.07	8.43	8.68	0.42	0.66	3.03	1.28	0.25	0.73



Stellar Parameters For KIC 008817666

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6131^{+164}_{-219}	$4.497^{+0.048}_{-0.192}$	$-0.240^{+0.250}_{-0.350}$	$0.945^{+0.260}_{-0.104}$	$1.023^{+0.128}_{-0.141}$	$1.707^{+0.431}_{-0.839}$
	+3%/-4%	+1%/-4%	+104%/-146%	+28%/-11%	+13%/-14%	+25%/-49%
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 008817666-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-369 ± 61	$3.08^{+2.05}_{-1.85}$	372^{+22}_{-17}	5061^{+2933}_{-904}	$21303^{+106688}_{-13742}$
Alt.	-349 ± 68	$3.88^{+2.01}_{-1.95}$	373^{+24}_{-18}	4557^{+1578}_{-671}	12690^{+37251}_{-7414}

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

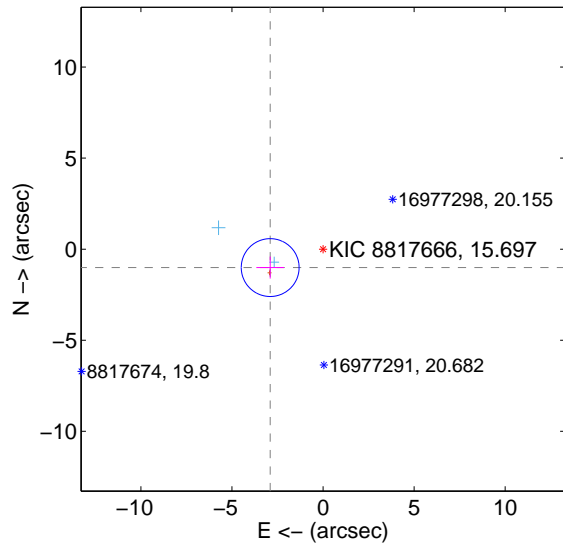
Supplemental centroid analysis for 008817666-01. Kepler magnitude: 15.70. Transit SNR 6.78

There are 2 quarters with good PRF difference image offsets

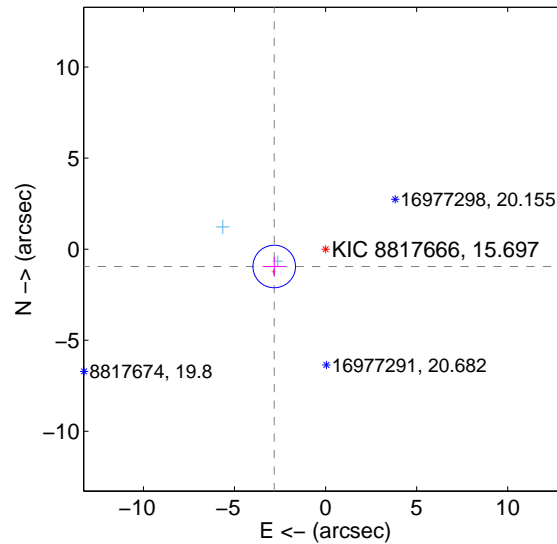
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.073 ± 0.529	5.81	2.902 ± 0.758	-1.010 ± 0.605
PRF-fit source offset from KIC position	2.976 ± 0.389	7.64	2.820 ± 0.564	-0.950 ± 0.525
photometric centroid source offset	3.01 ± 2.69	1.12	0.53 ± 1.98	-2.96 ± 2.71

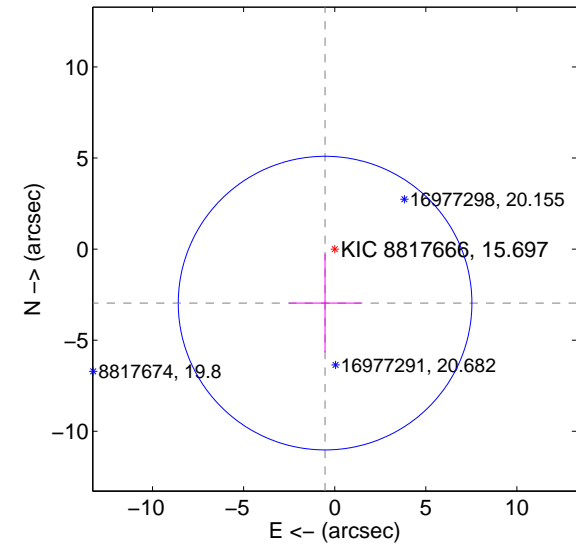
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

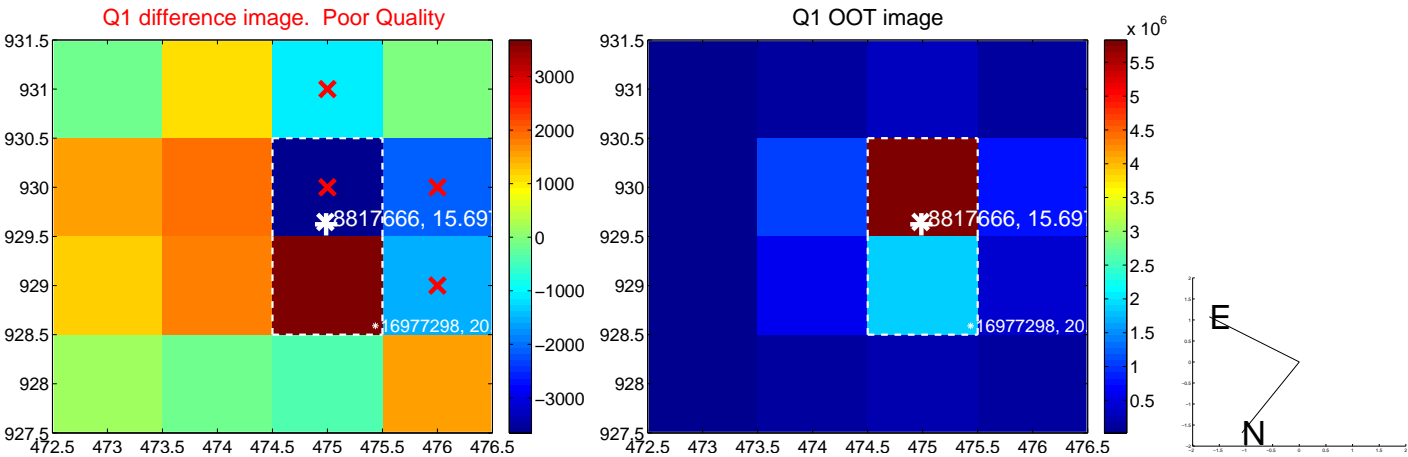


offset from photometric centroids

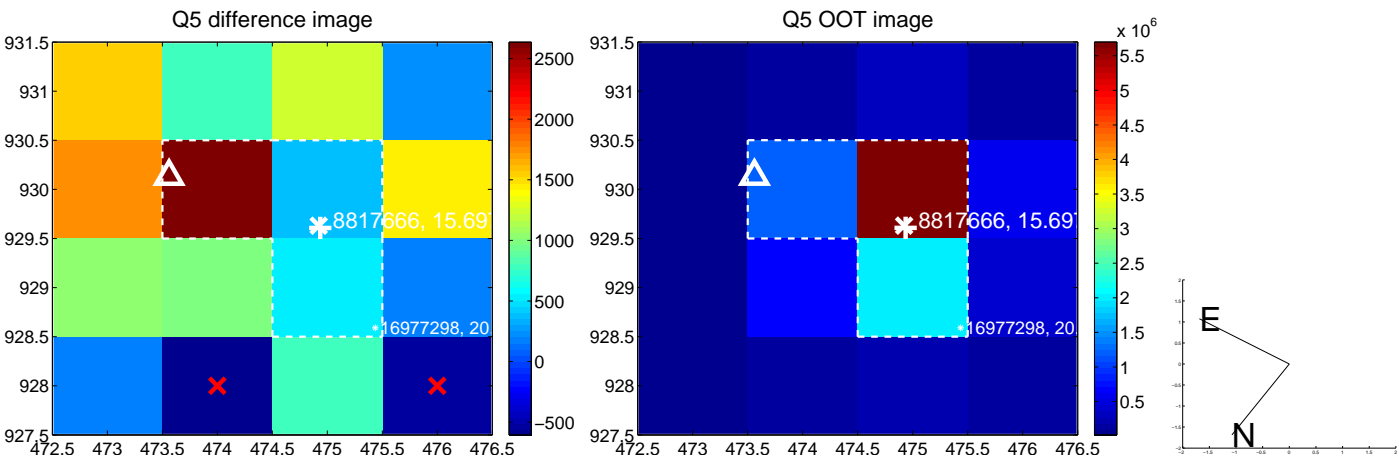


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

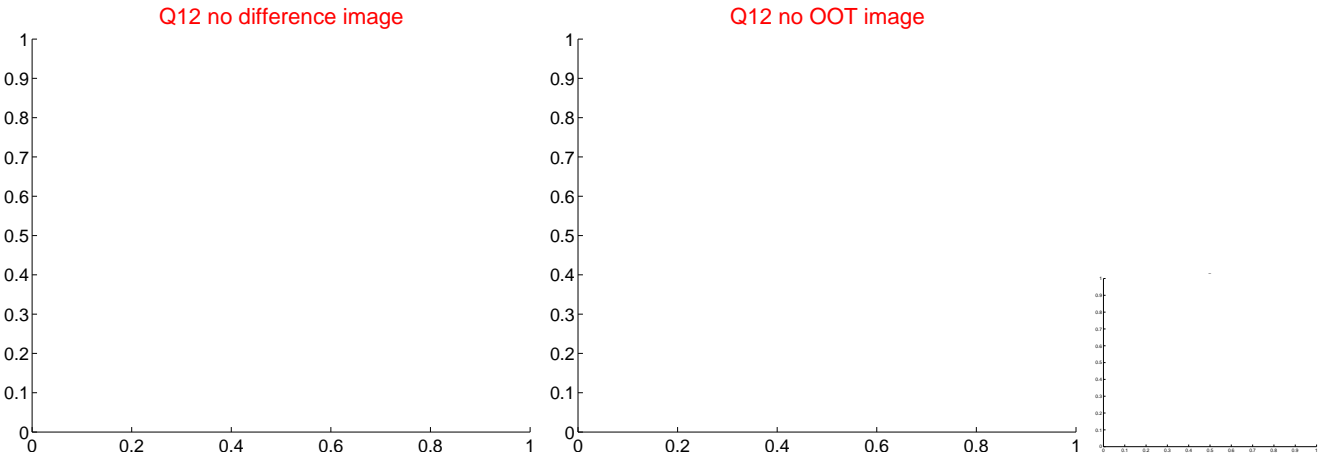
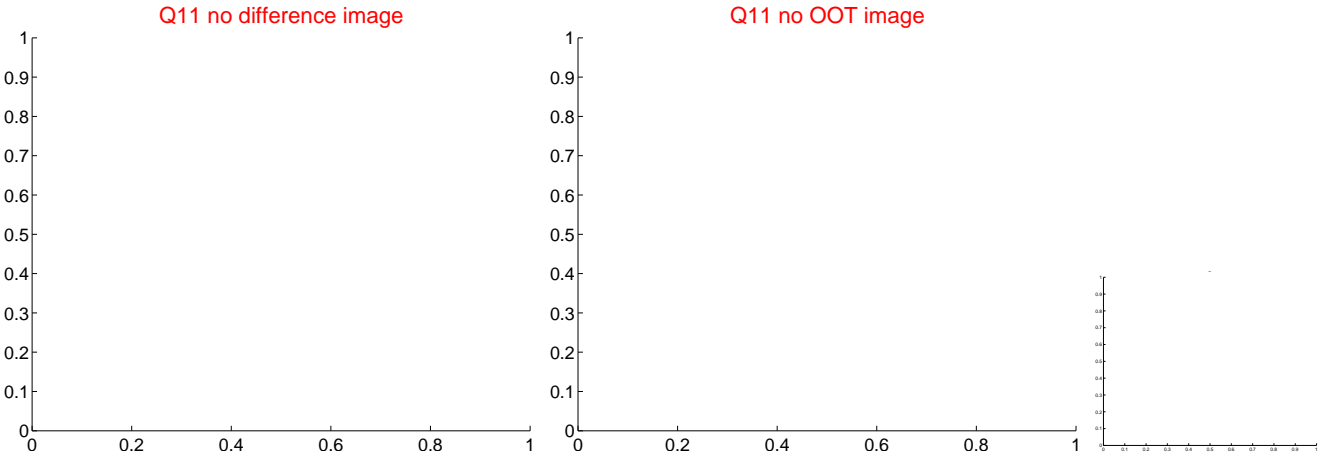
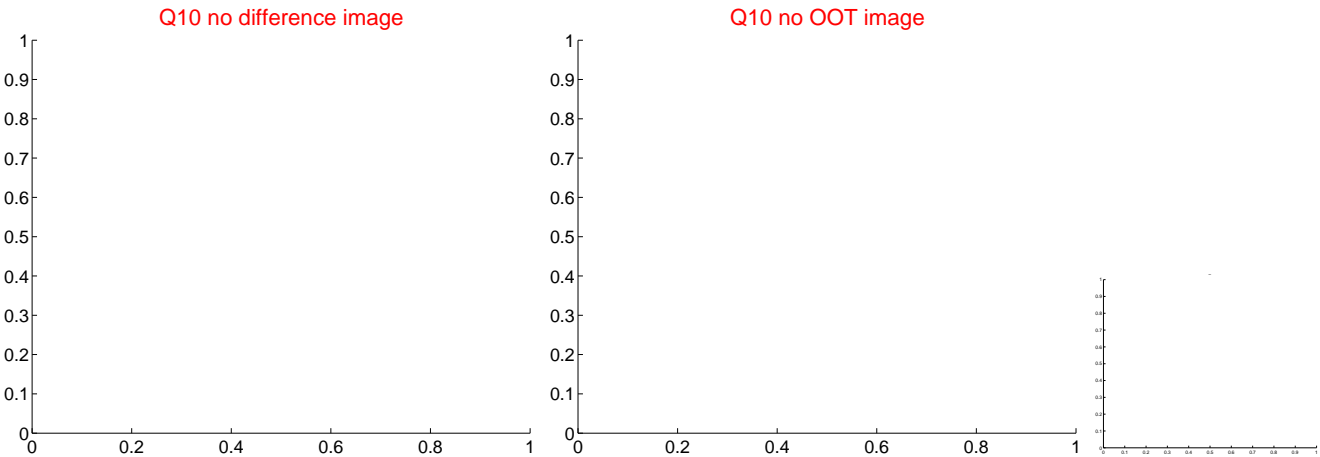
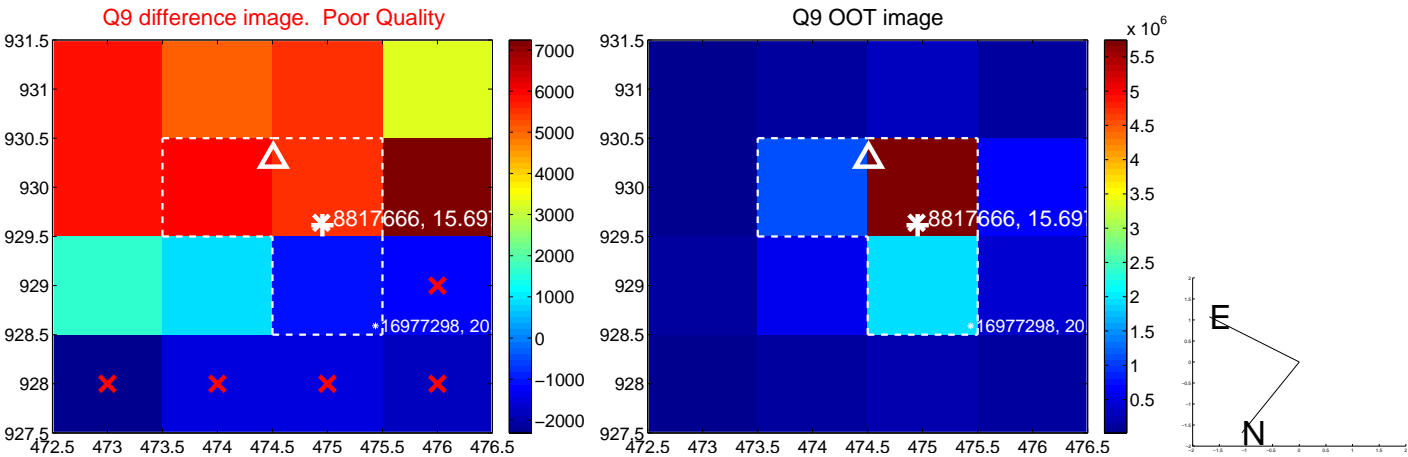
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



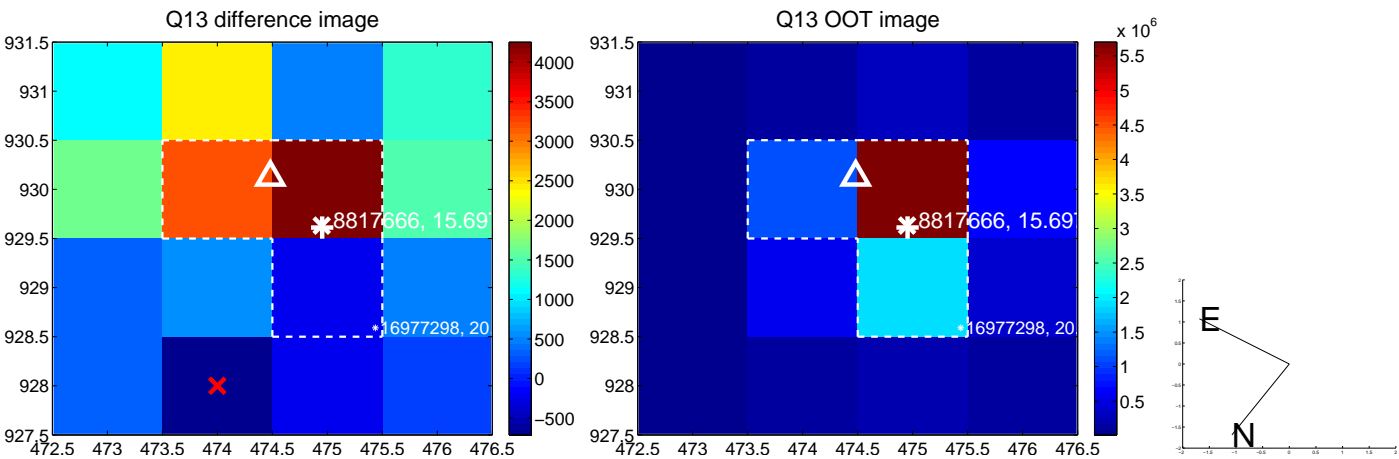
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



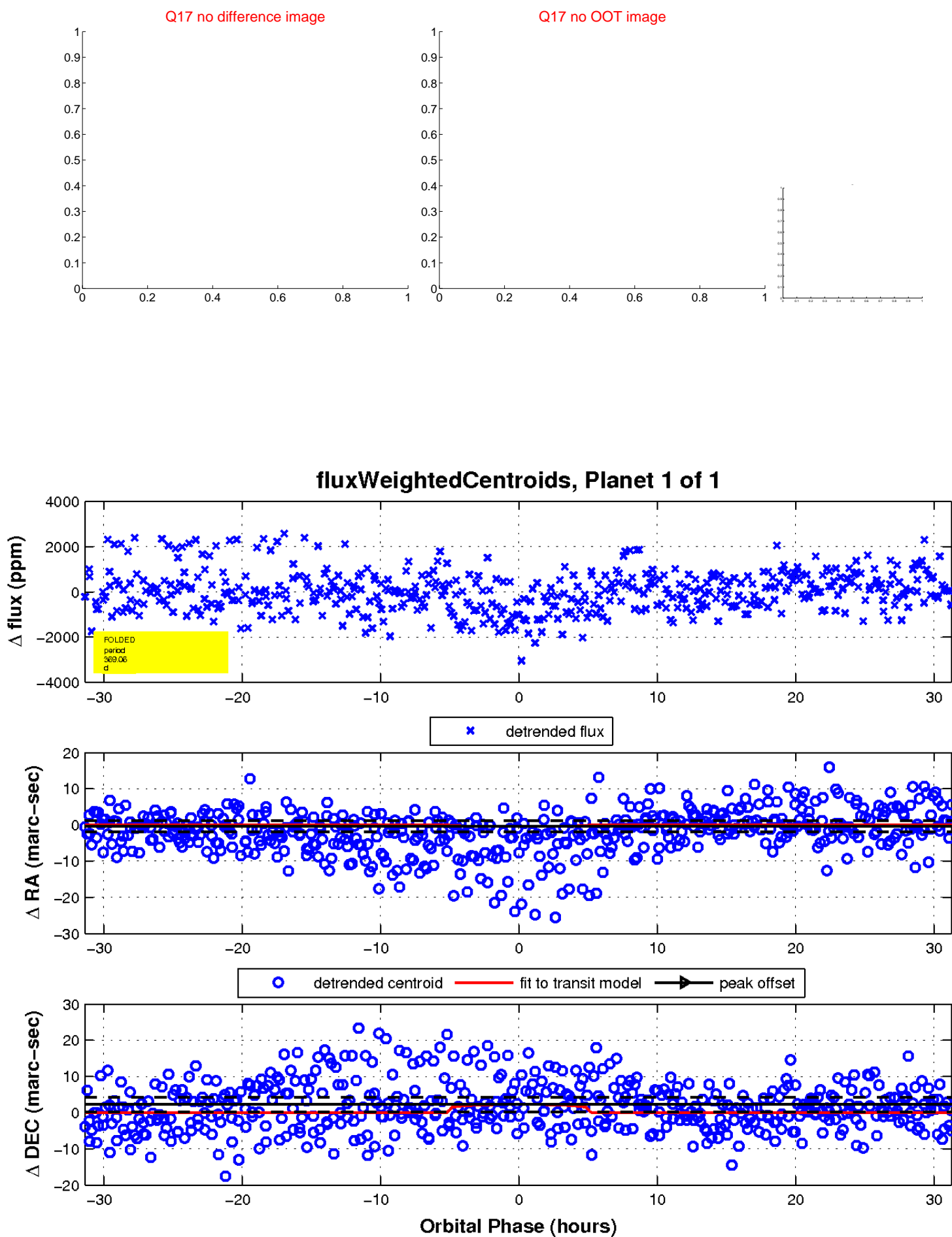
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

