

KIC 008733439

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})
008733439-01	OBS	No	417.196877	424.737587	134.5	15.270	7.4	8.2	1.21	5842	1.59	1.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008733439-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

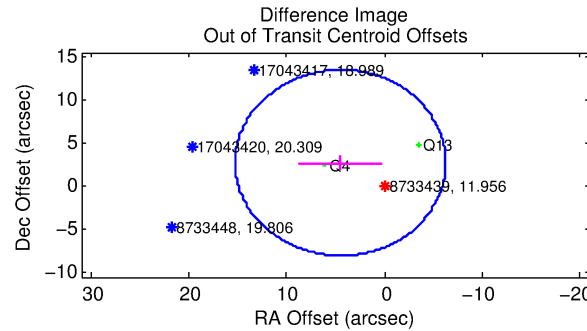
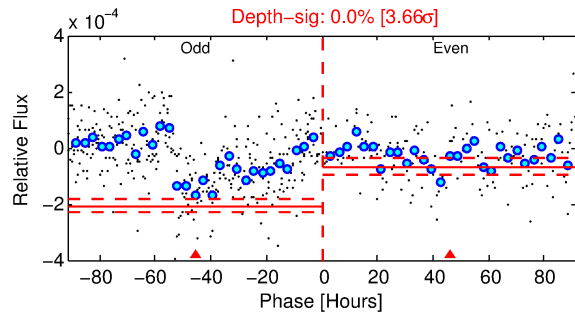
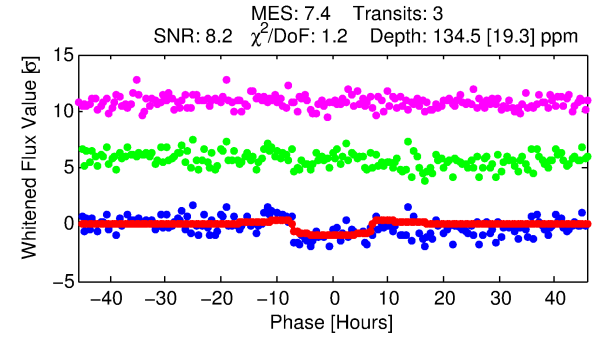
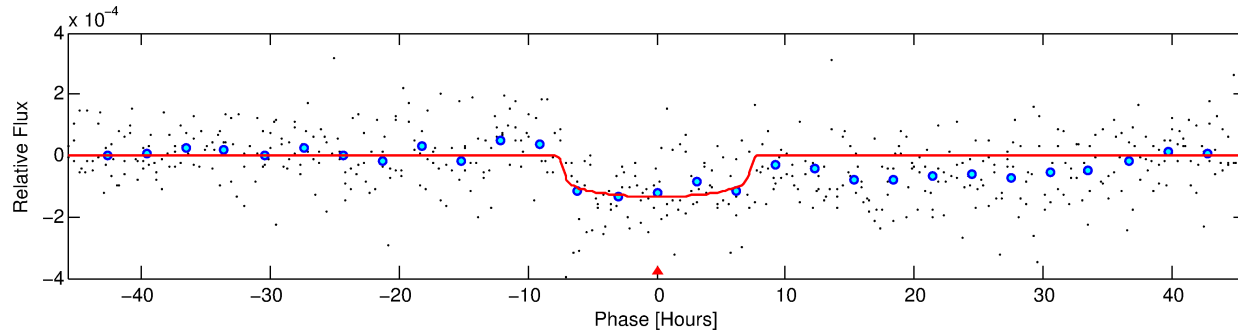
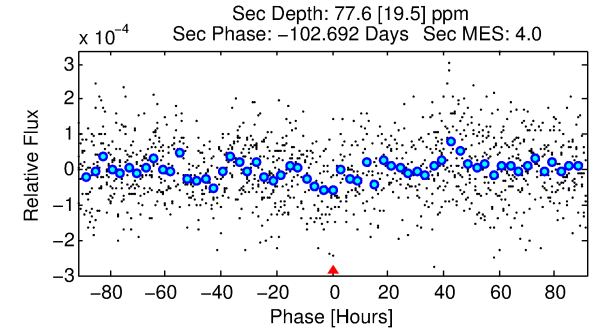
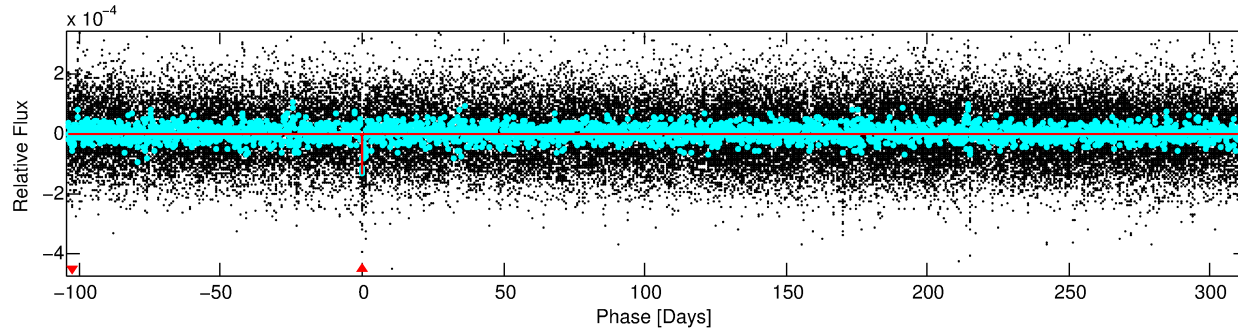
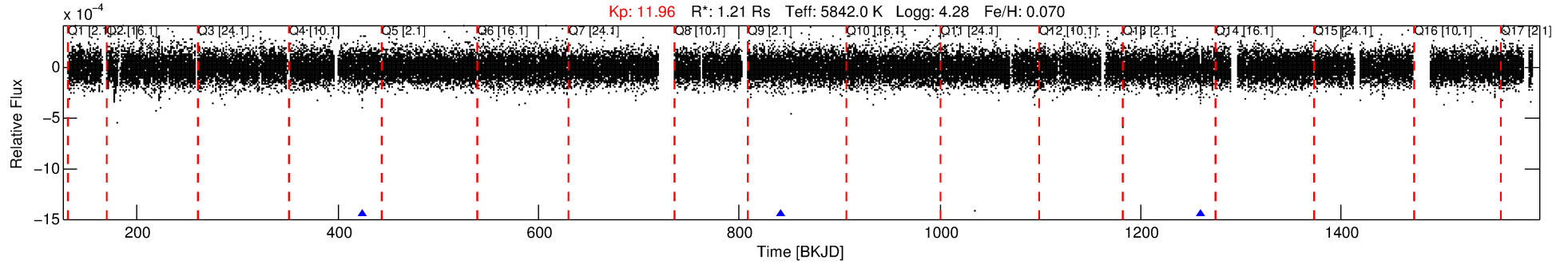
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008733439-01

No Significant Match Found

DV One-Page Summary

KIC: 8733439 Candidate: 1 of 1 Period: 417.197 d



DV Fit Results:

Period = 417.19688 [0.01513] d
Epoch = 424.7376 [0.0201] BKJD
Rp/R* = 0.0121 [0.0025]
a/R* = 117.04 [103.11]
b = 0.84 [0.30]
Seff = 1.26 [0.46]
Teff = 270 [25] K
Rp = 1.59 [0.57] Re
a = 1.1004 [0.2646] AU
Ag = 20387.15 [11943.76] [1.71σ]
Teffp = 4991 [621] K [7.59σ]

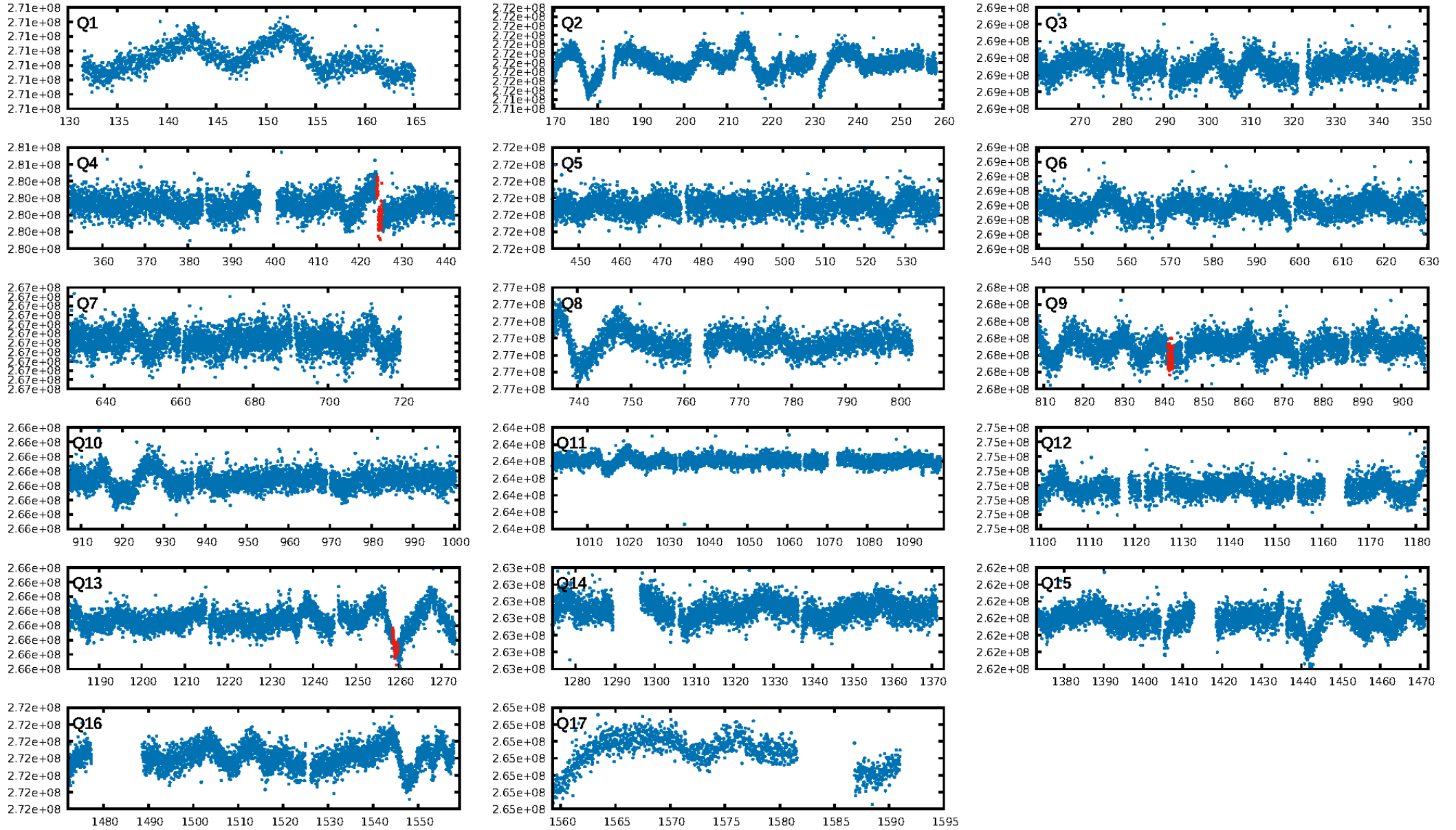
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 95.7%
Bootstrap-pfa: 8.17e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.538
Centroid-sig: N/A
Centroid-so: 1.771 arcsec [1.15σ]
OotOffset-rm: 5.265 arcsec [1.47σ]
KicOffset-rm: 5.482 arcsec [1.57σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

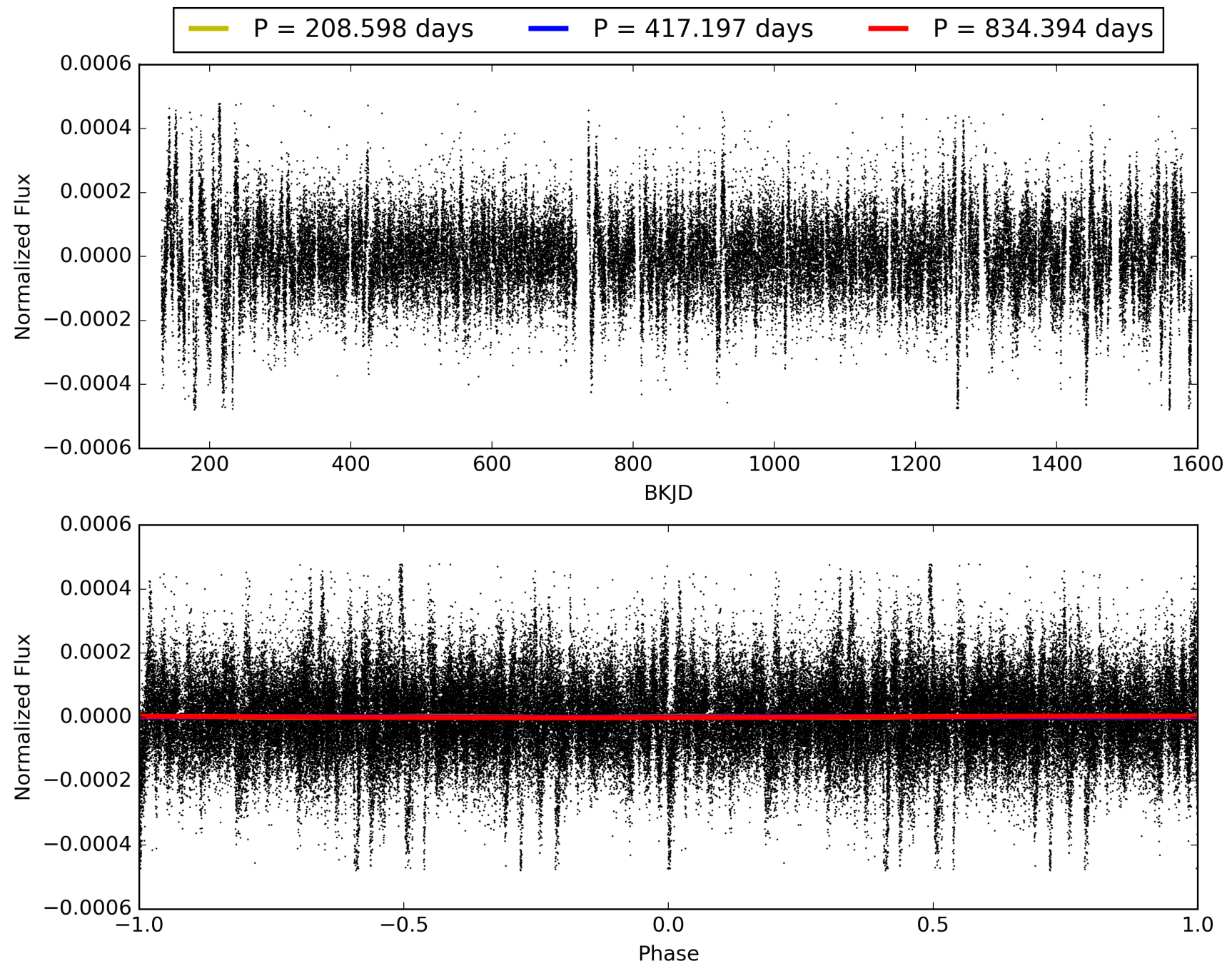
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:41:13 Z

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

TCE 008733439-01, PDC Light Curves

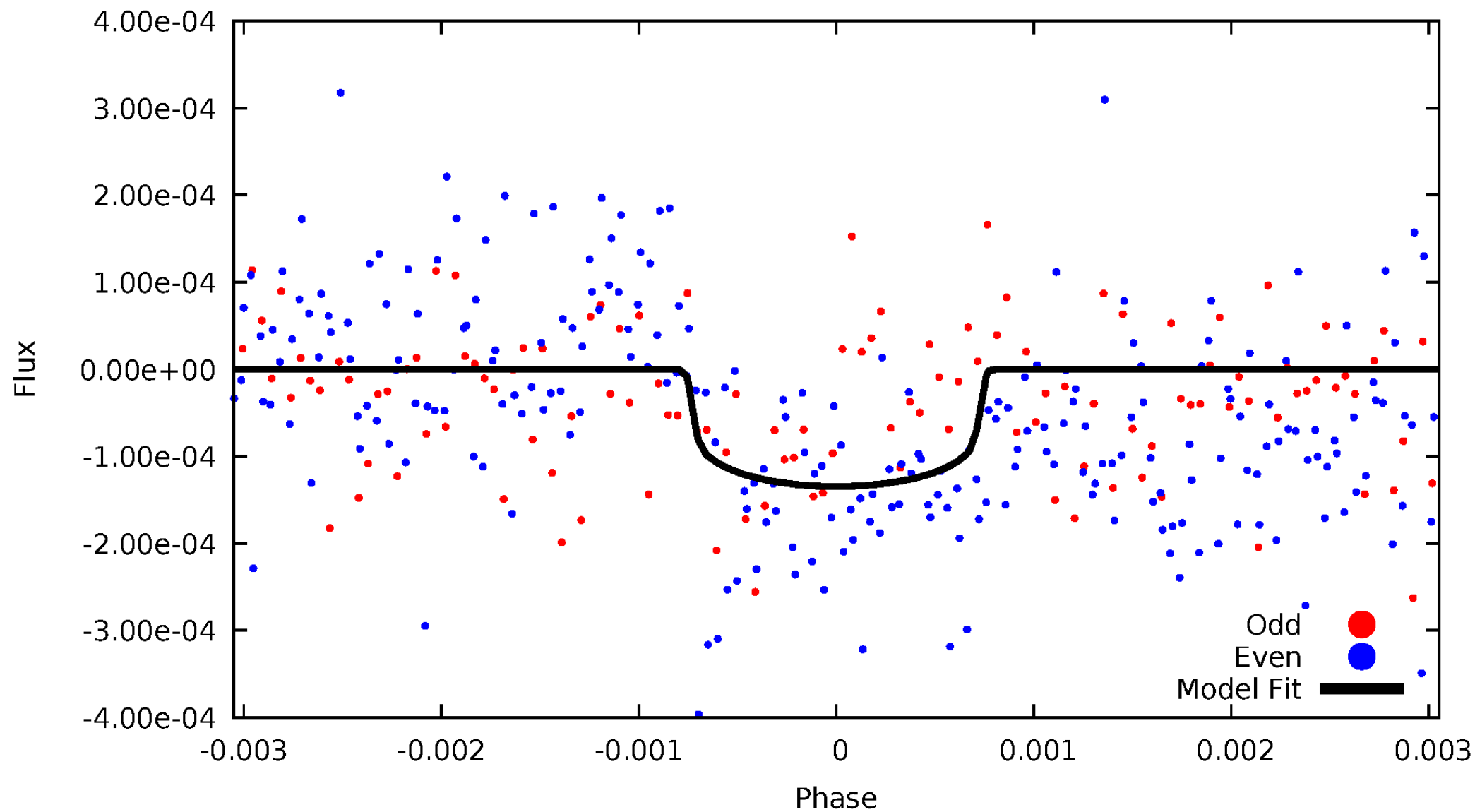


TCE 008733439-01



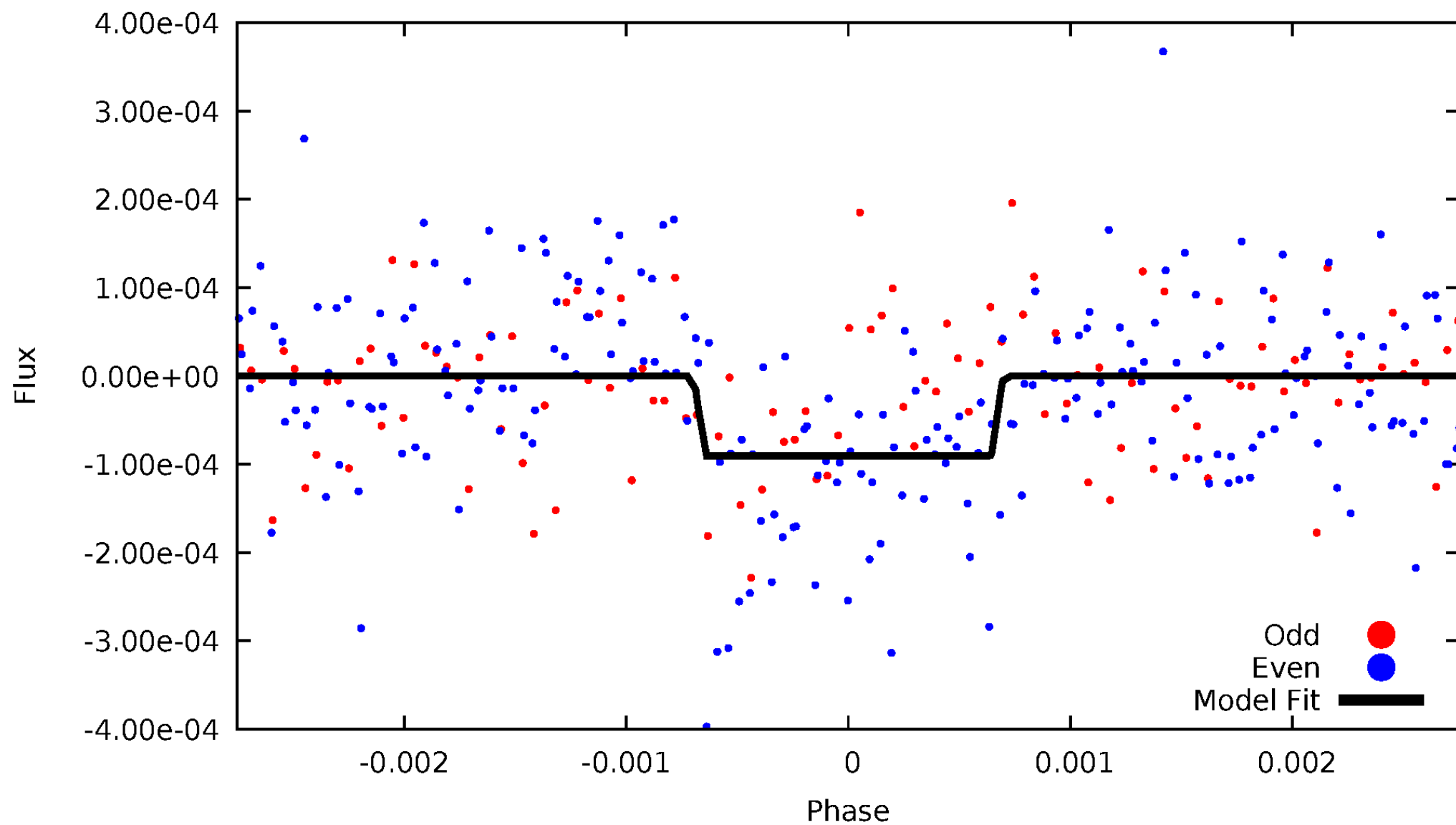
DV Odd/Even

TCE 008733439-01

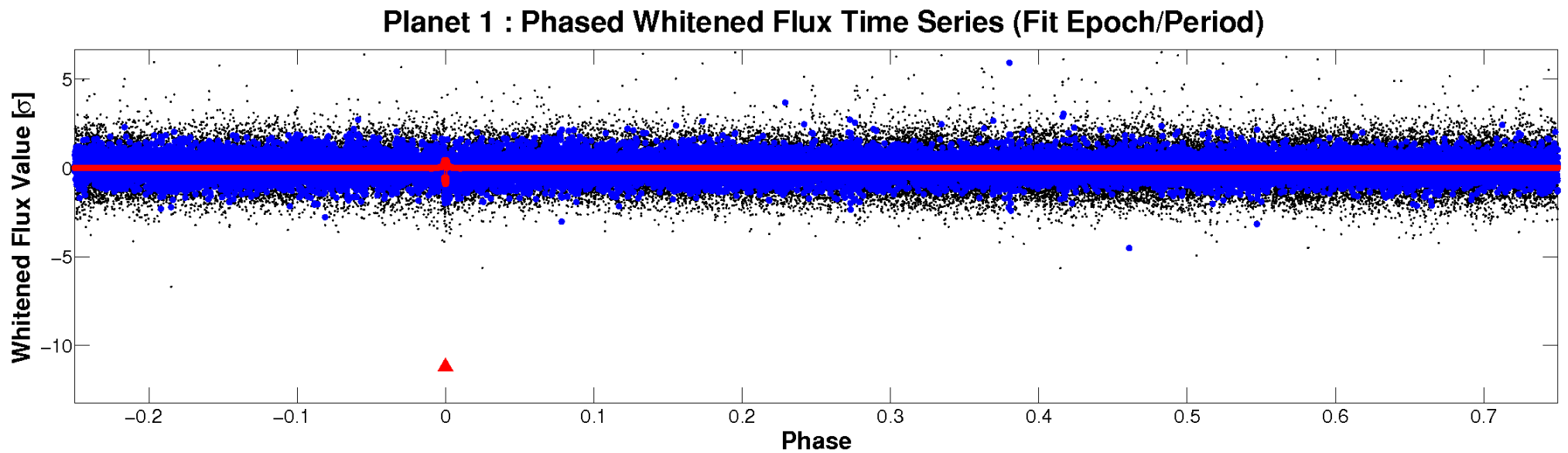
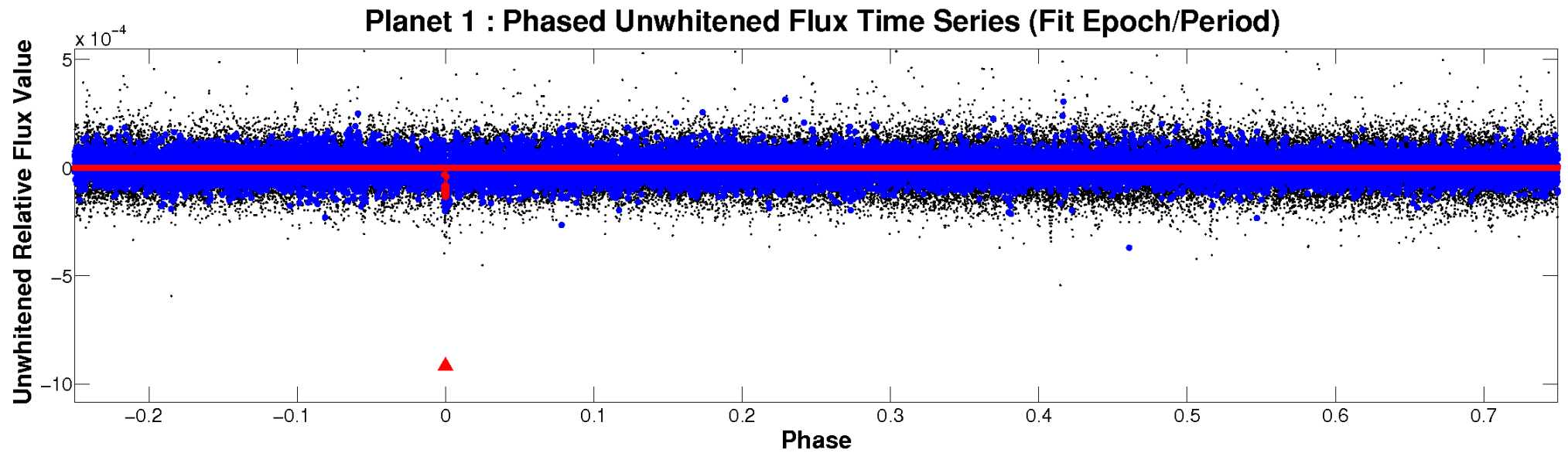


ALT Odd/Even

TCE 008733439-01

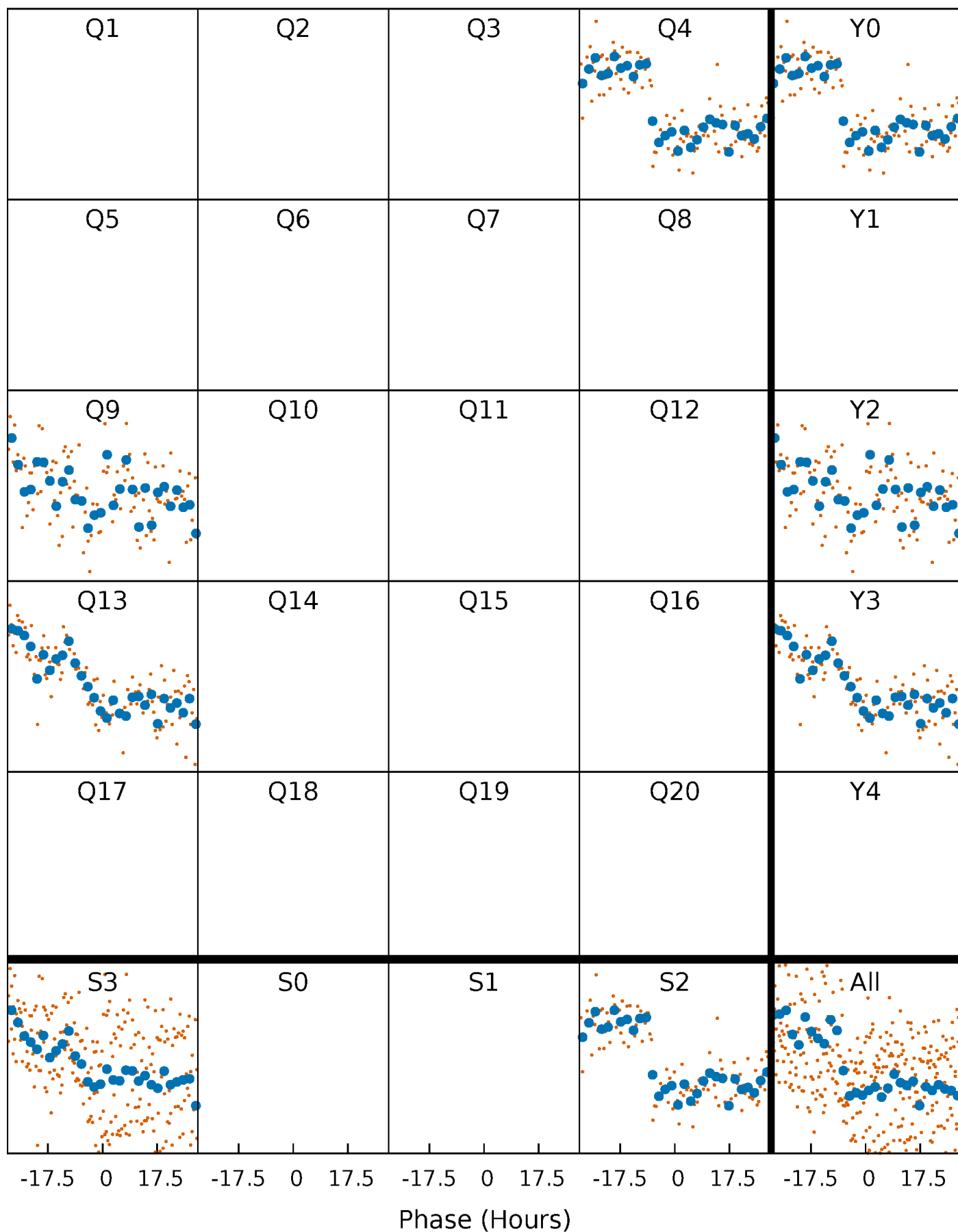


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 008733439-01 P=417.196877 Days $T_0=424.737587$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008733439-01 P=417.196877 Days $T_0=424.737587$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

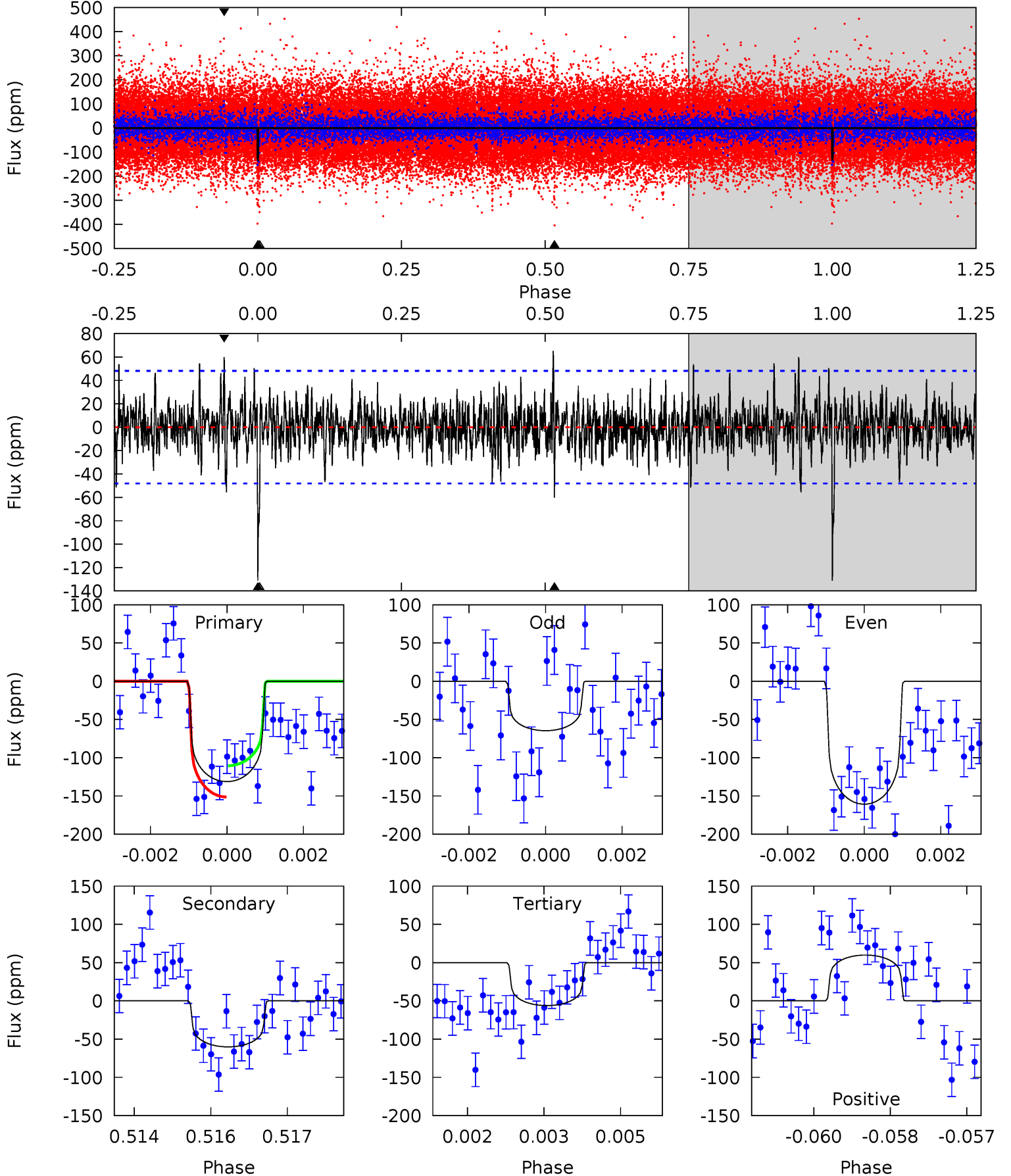
TCE 008733439-01 P=417.232862 Days $T_0=424.712698$ (BKJD)



DV Model-Shift Uniqueness Test

008733439-01, P = 417.196877 Days, E = 7.540710 Days

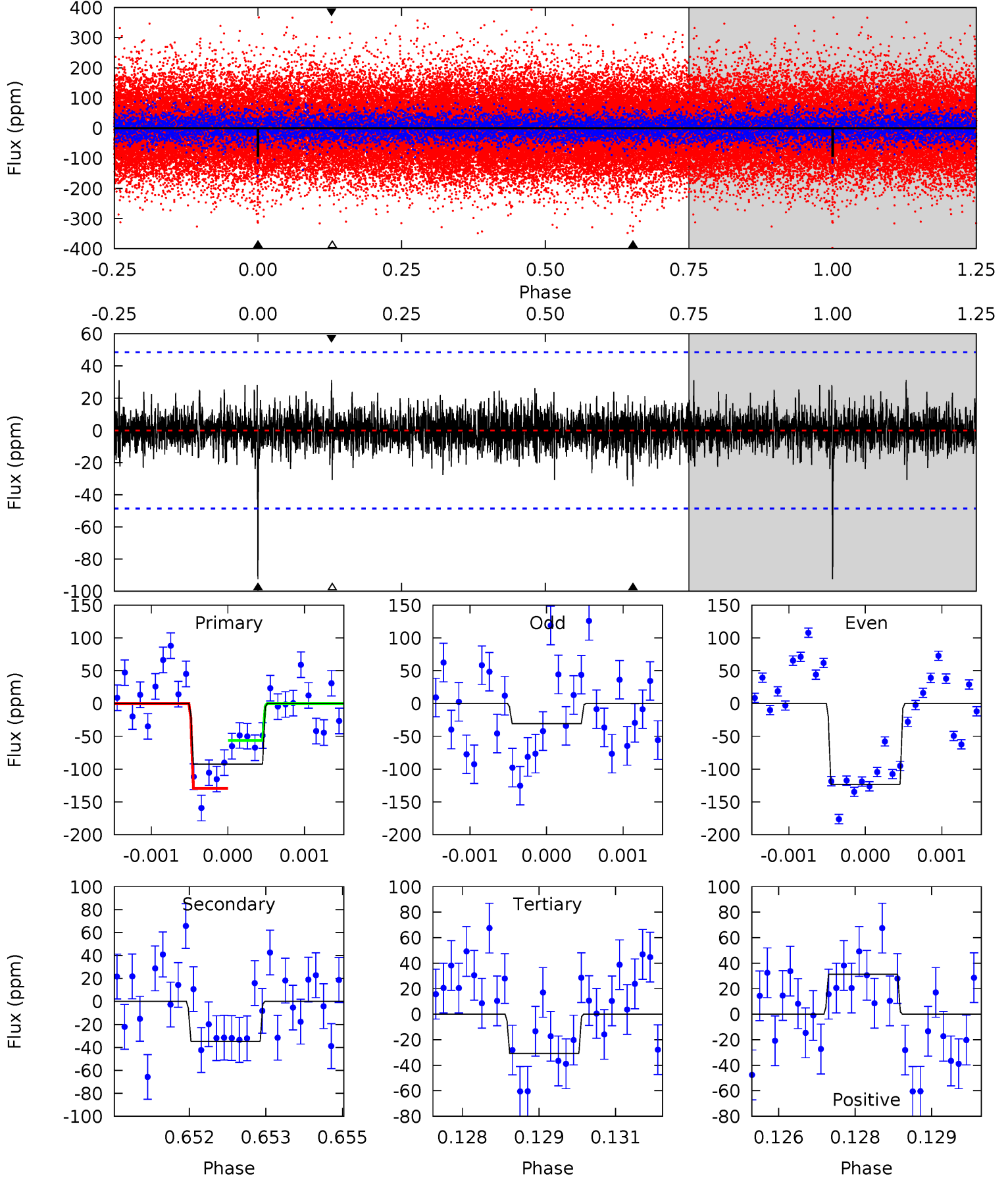
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	6.71	6.26	6.68	5.38	3.17	1.63	8.37	7.96	0.44	0.03	5.12	0.97	0.33	2.28



Alt Model-Shift Uniqueness Test

008733439-01, $P = 417.232862$ Days, $E = 7.479836$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	3.85	3.41	3.48	5.39	3.19	0.85	6.85	6.78	0.44	0.38	4.92	1.37	0.25	4.07



Stellar Parameters For KIC 008733439

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5842^{+164}_{-205}	$4.282^{+0.180}_{-0.180}$	$0.070^{+0.250}_{-0.300}$	$1.209^{+0.357}_{-0.268}$	$1.021^{+0.140}_{-0.115}$	$0.814^{+0.735}_{-0.381}$
	+3%/-4%	+4%/-4%	+357%/-429%	+30%/-22%	+14%/-11%	+90%/-47%
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 008733439-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-60 ± 9	$1.59^{+0.45}_{-0.37}$	376^{+29}_{-27}	4775^{+557}_{-374}	15901^{+12065}_{-6268}
Alt.	-35 ± 9	$1.24^{+0.39}_{-0.33}$	377^{+28}_{-27}	4729^{+697}_{-533}	14848^{+13567}_{-6995}

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

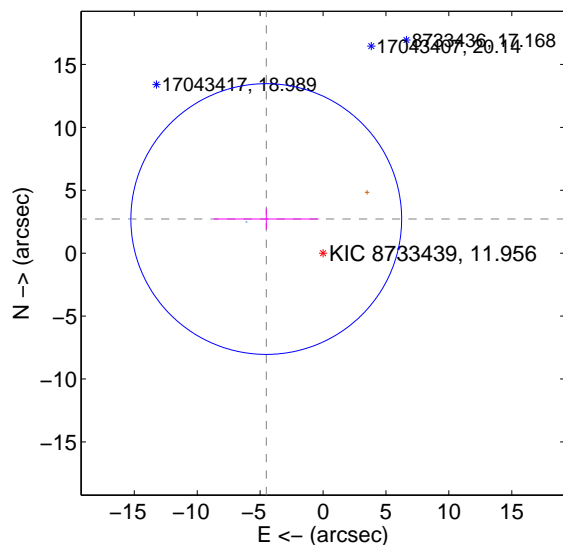
Supplemental centroid analysis for 008733439-01. **Kepler magnitude: 11.96.** Transit SNR 8.20

There are 1 quarters with good PRF difference image offsets

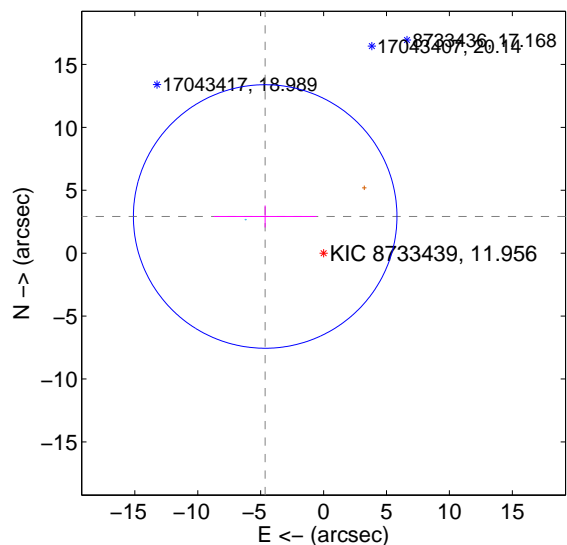
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.265 ± 3.586	1.47	4.512 ± 4.155	2.713 ± 0.817
PRF-fit source offset from KIC position	5.482 ± 3.490	1.57	4.642 ± 4.085	2.916 ± 0.877
photometric centroid source offset	1.77 ± 1.54	1.15	0.94 ± 2.01	1.50 ± 1.30

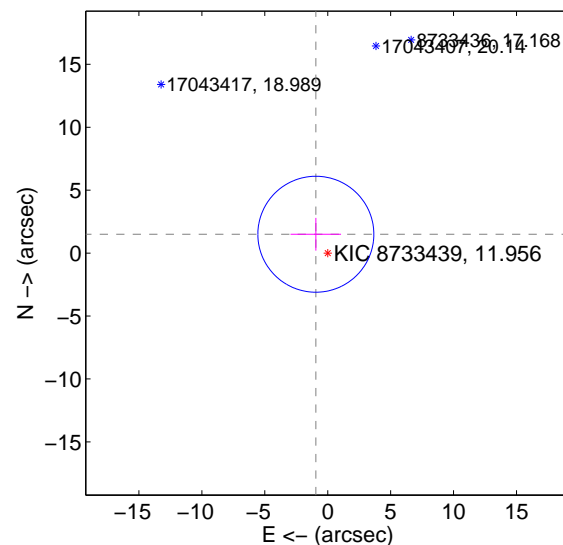
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

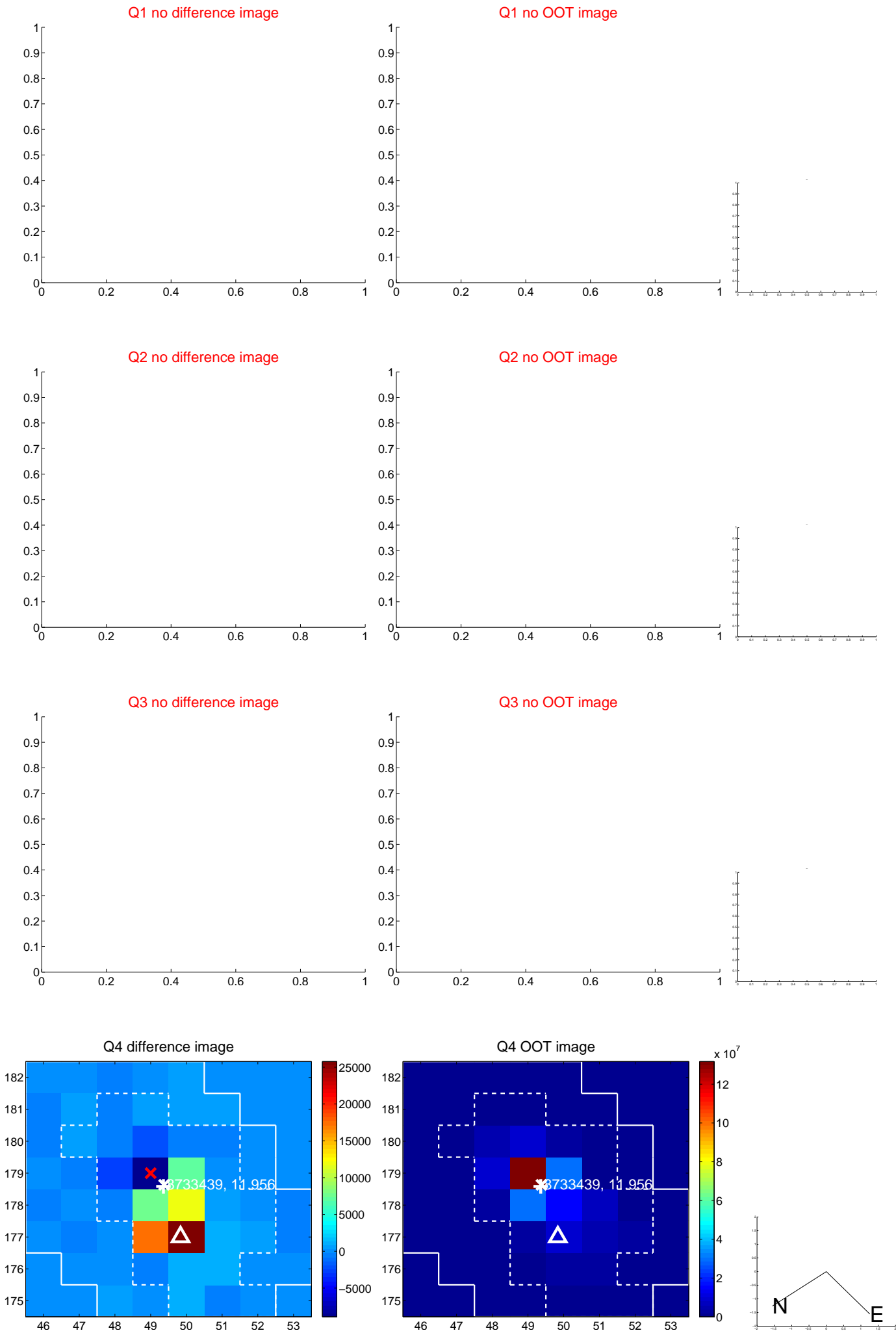


offset from photometric centroids



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.

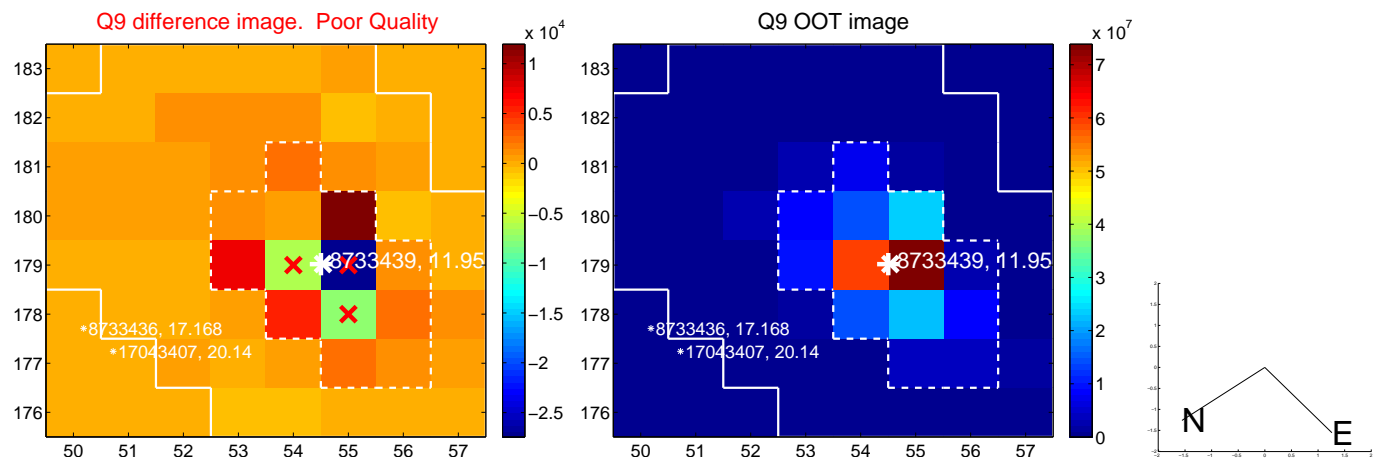
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



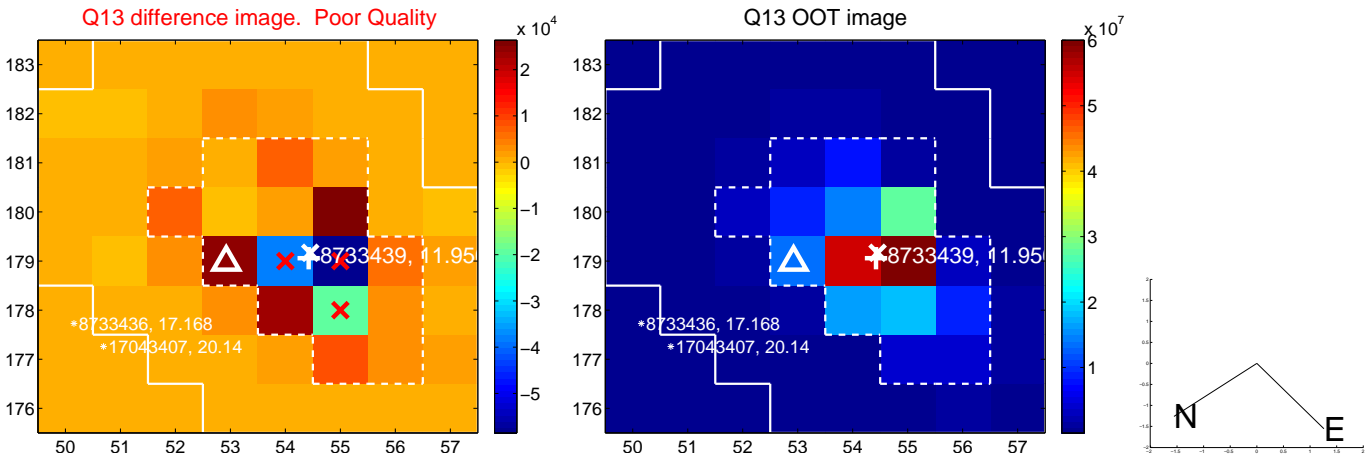
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



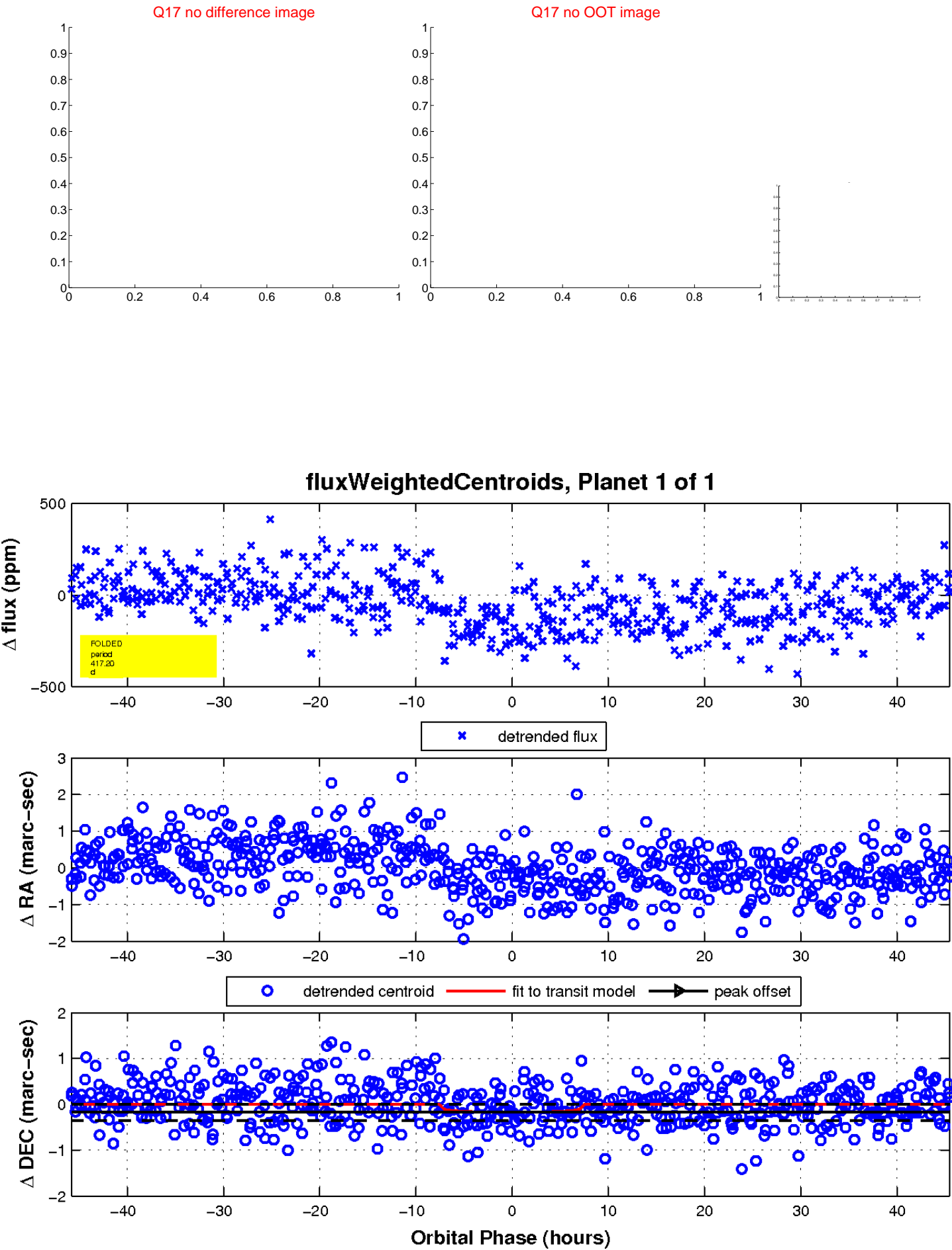
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

