

KIC 008307165

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})
008307165-01	OBS	No	369.075644	234.010113	437.9	15.165	9.1	9.5	2.31	7926	6.32	12.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008307165-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

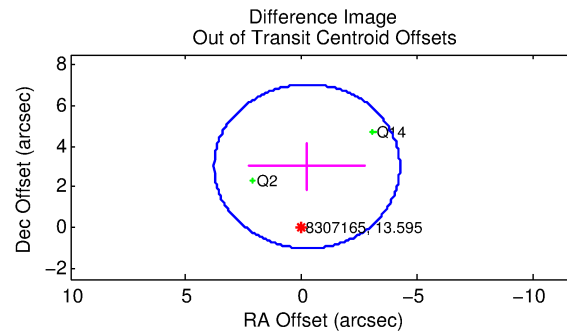
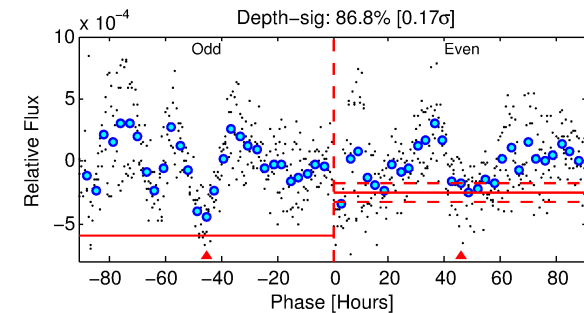
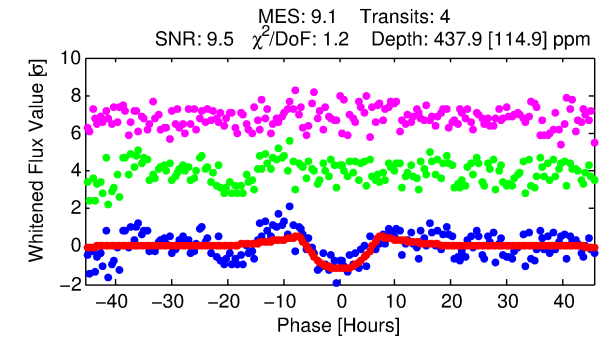
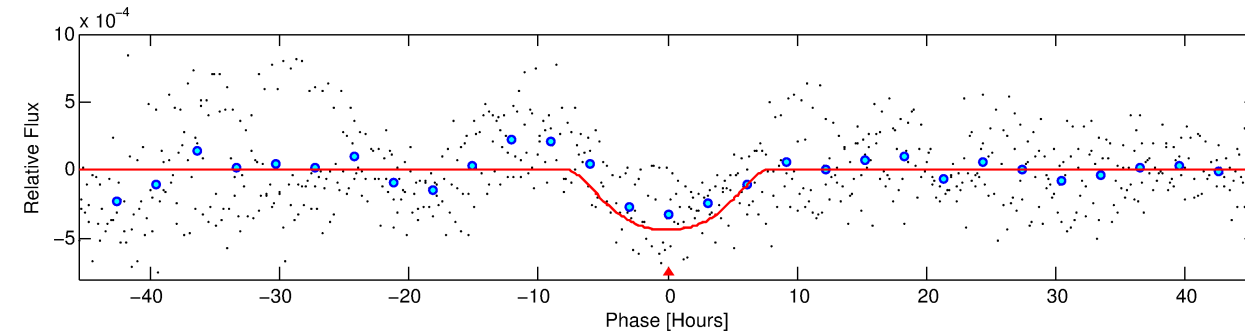
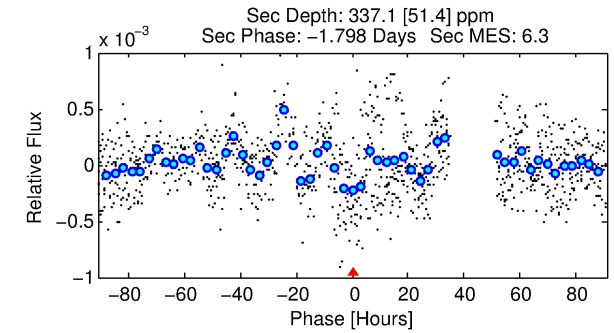
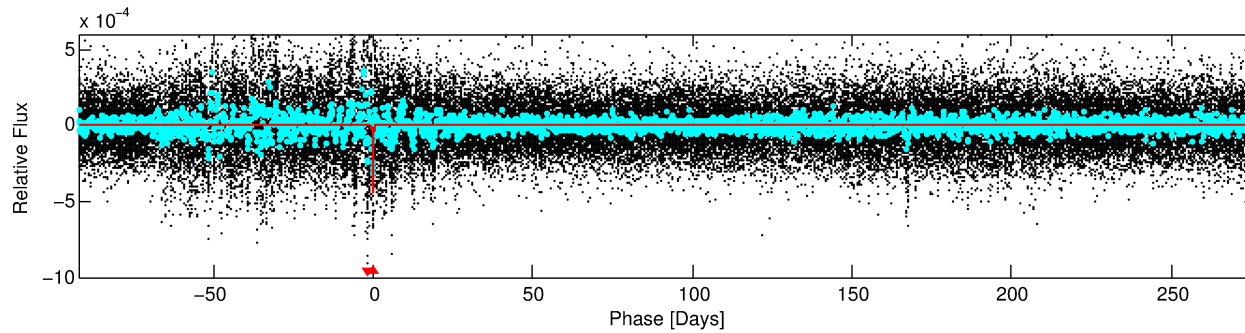
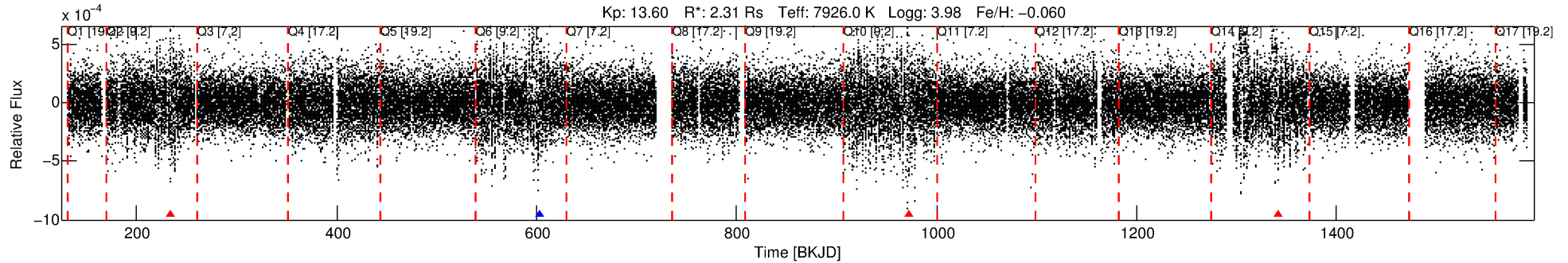
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008307165-01

No Significant Match Found

DV One-Page Summary

KIC: 8307165 Candidate: 1 of 1 Period: 369.076 d



DV Fit Results:

Period = 369.07564 [0.01443] d
Epoch = 234.0101 [0.0270] BKJD
Rp/R* = 0.0250 [0.0053]
a/R* = 57.70 [11.64]
b = 0.98 [0.02]
Seff = 12.36 [5.46]
Teq = 478 [53] K
Rp = 6.32 [2.32] Re
a = 1.2379 [0.3316] AU
Ag = 7115.74 [4352.41] [1.63σ]
Teffp = 6789 [818] K [7.70σ]

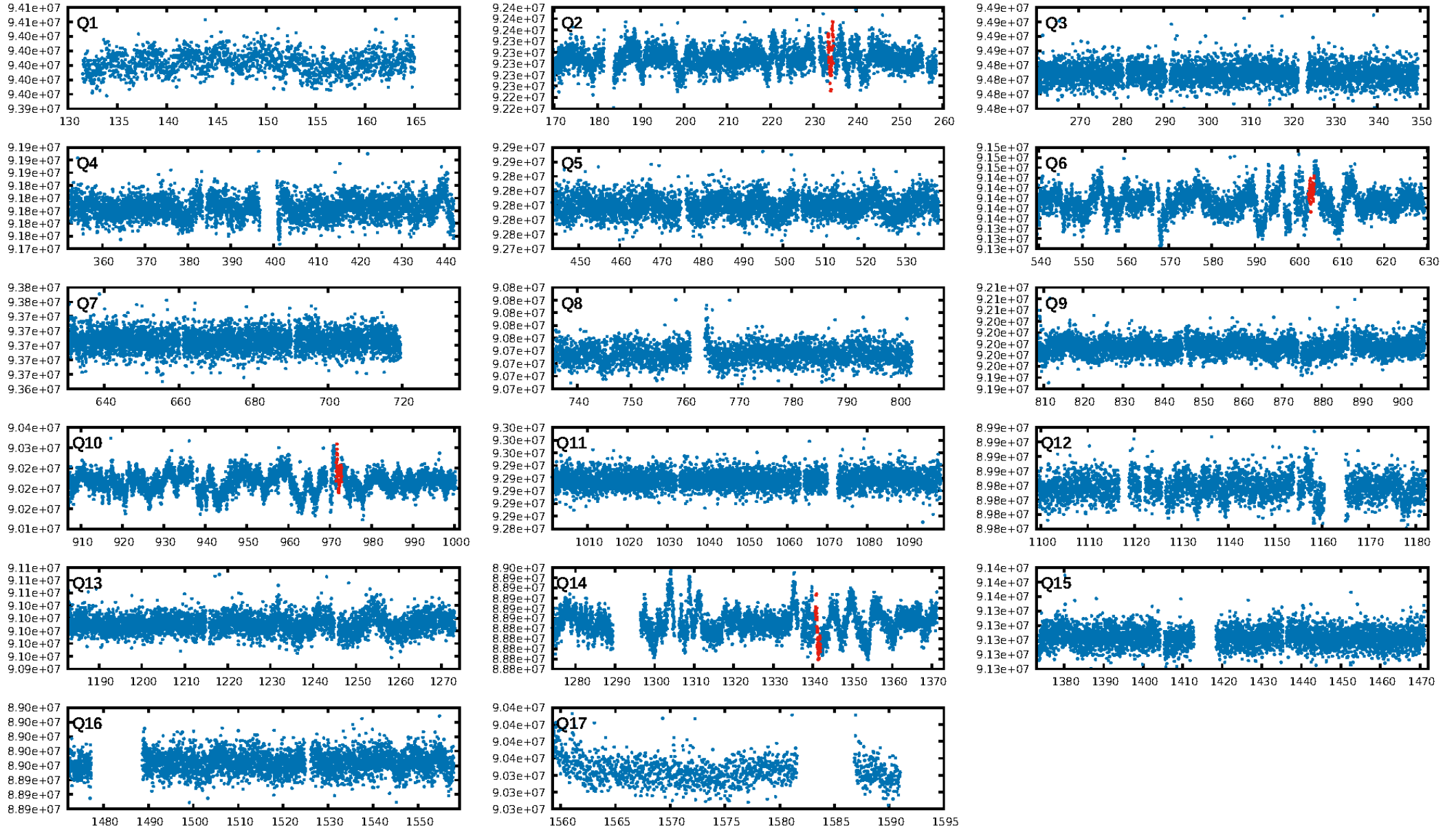
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.3%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 4.21e-13
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 0.4894
Centroid-sig: 14.7%
Centroid-so: 1.715 arcsec [1.13σ]
OotOffset-rm: 3.020 arcsec [2.26σ]
KicOffset-rm: 2.875 arcsec [2.25σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [4/4]

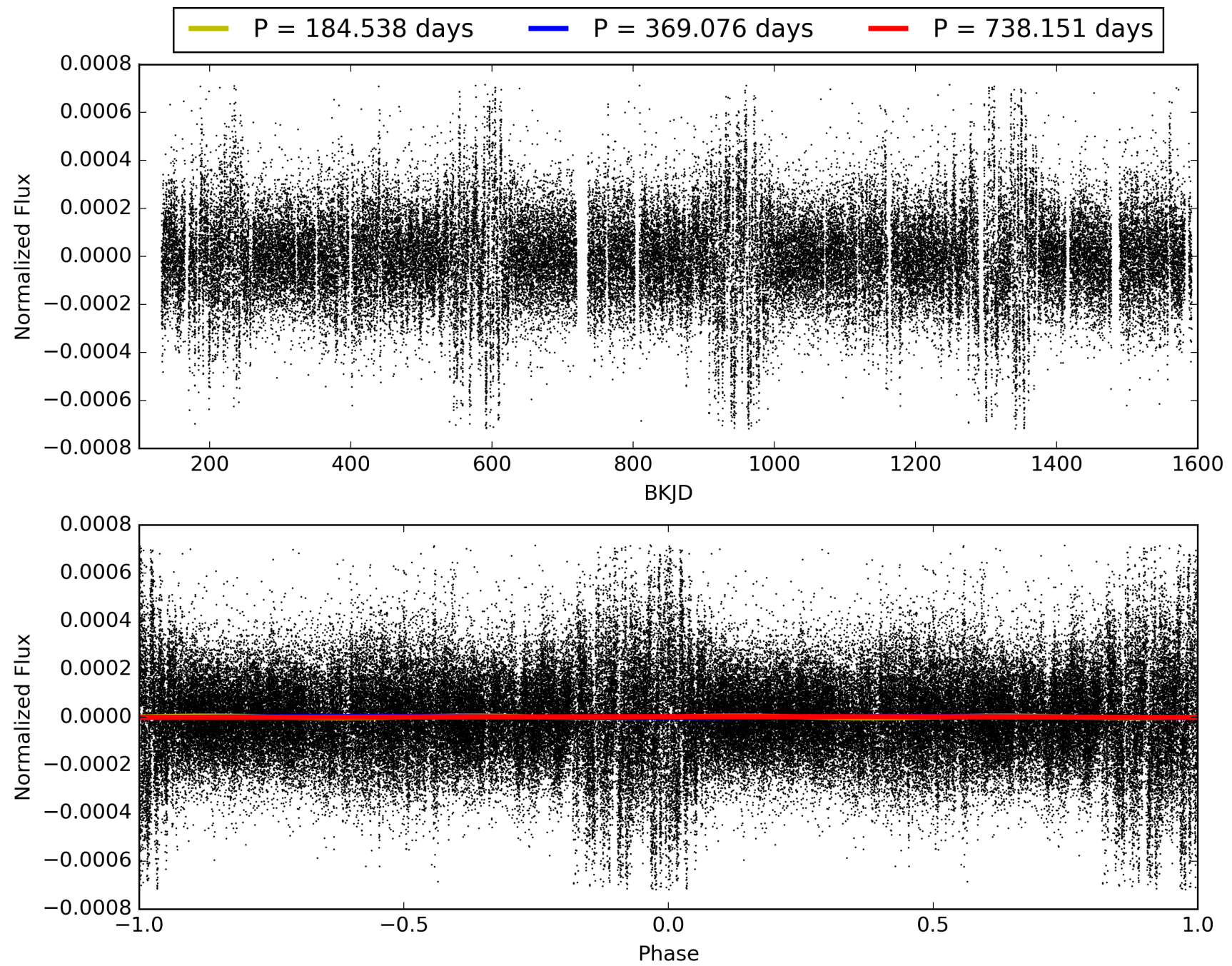
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:03:05 Z

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

TCE 008307165-01, PDC Light Curves

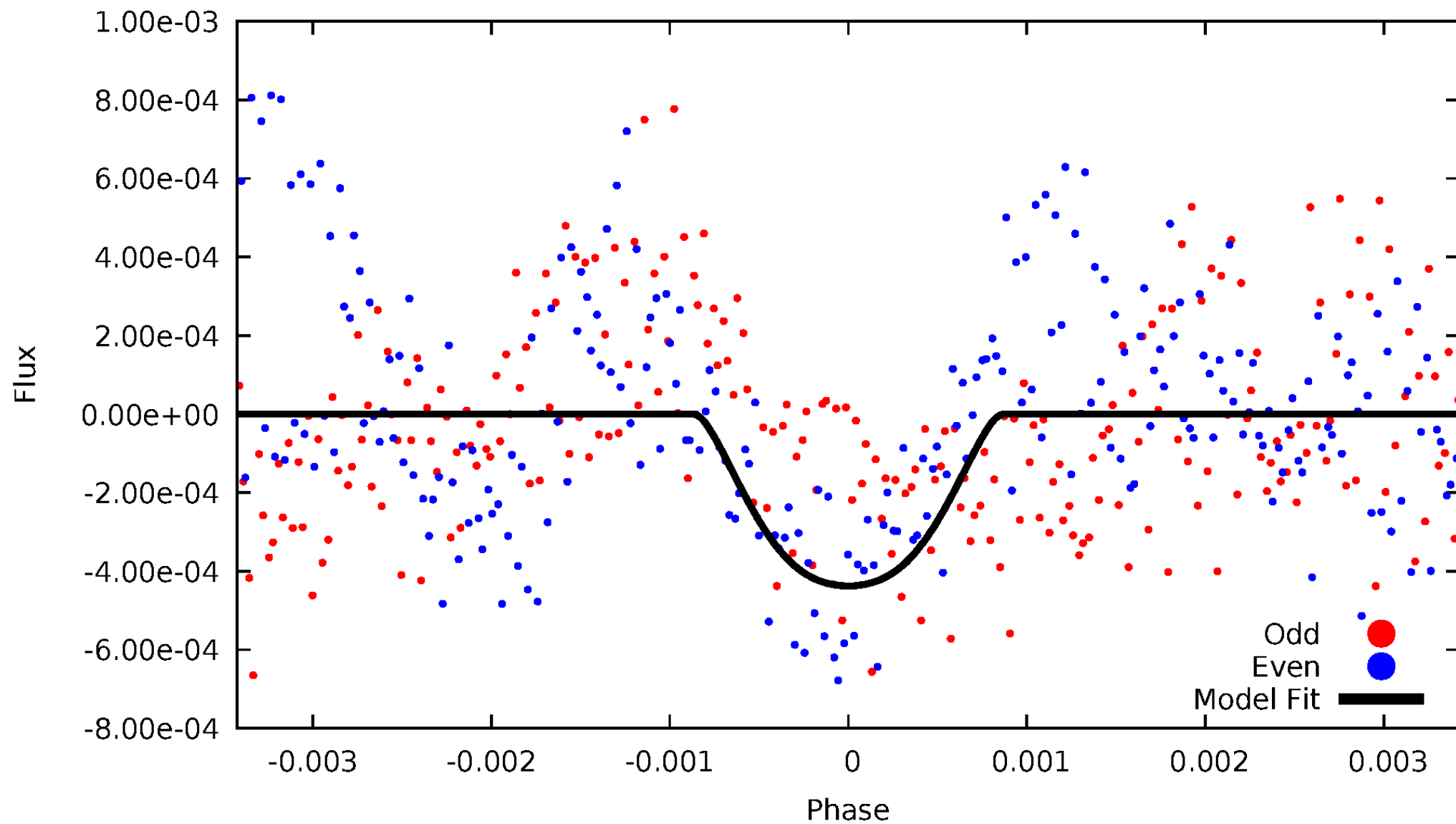


TCE 008307165-01



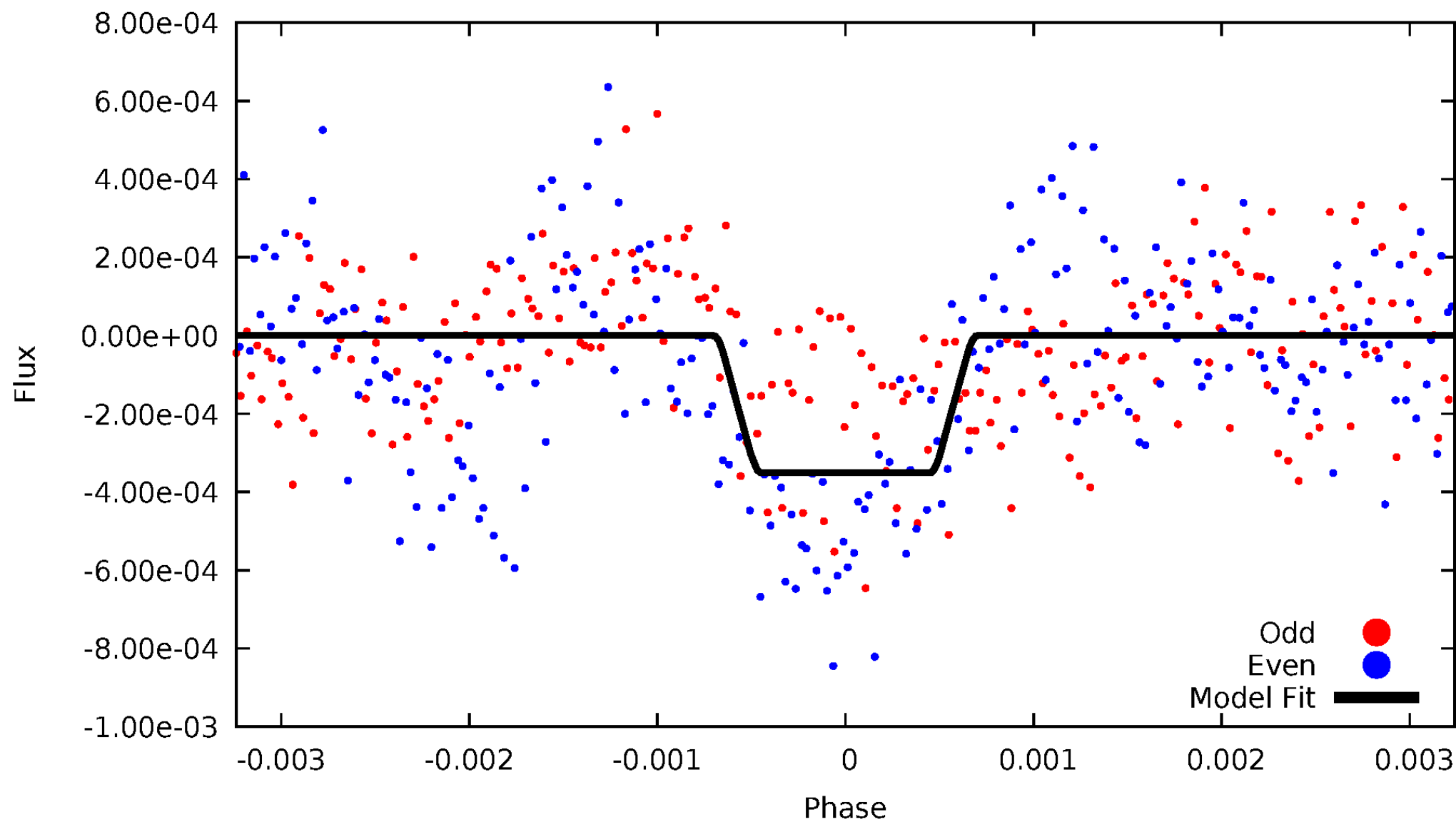
DV Odd/Even

TCE 008307165-01

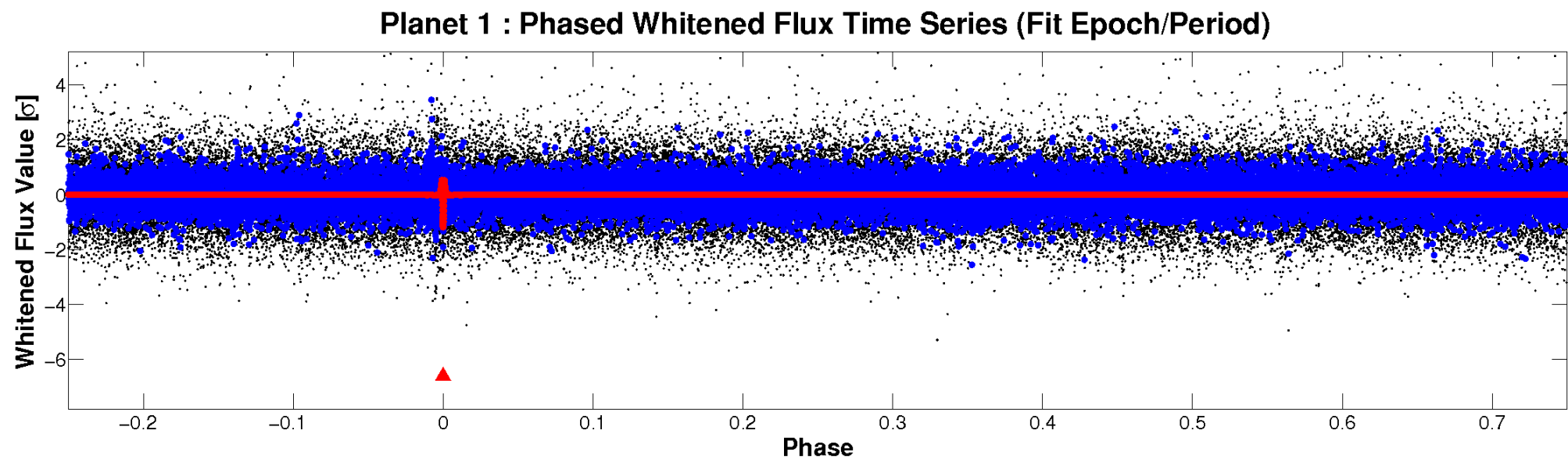
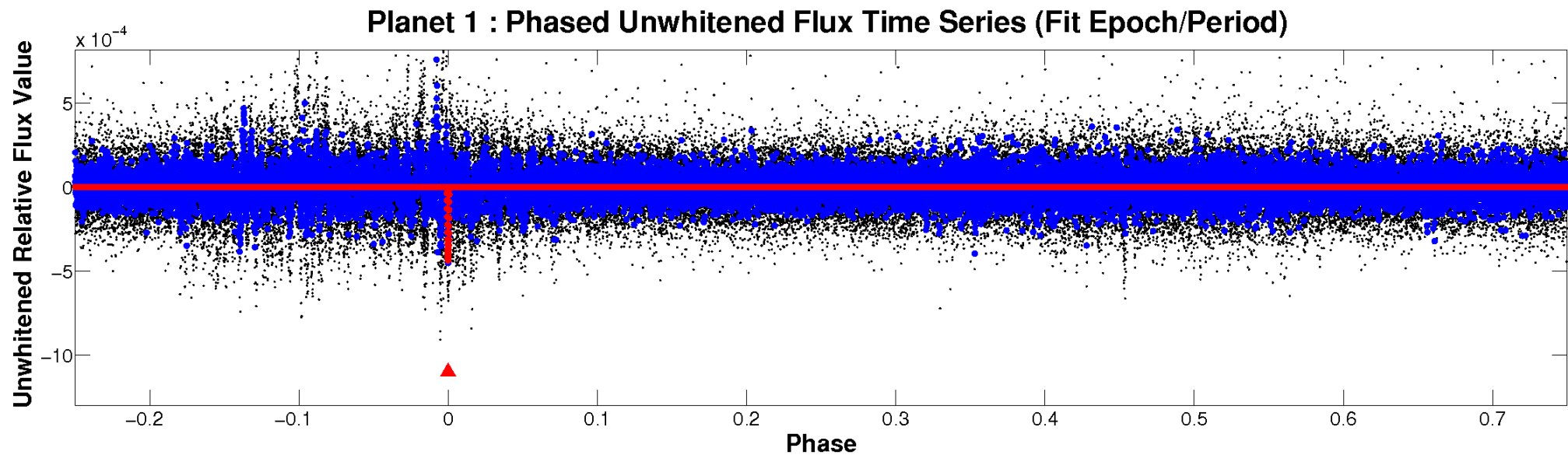


ALT Odd/Even

TCE 008307165-01

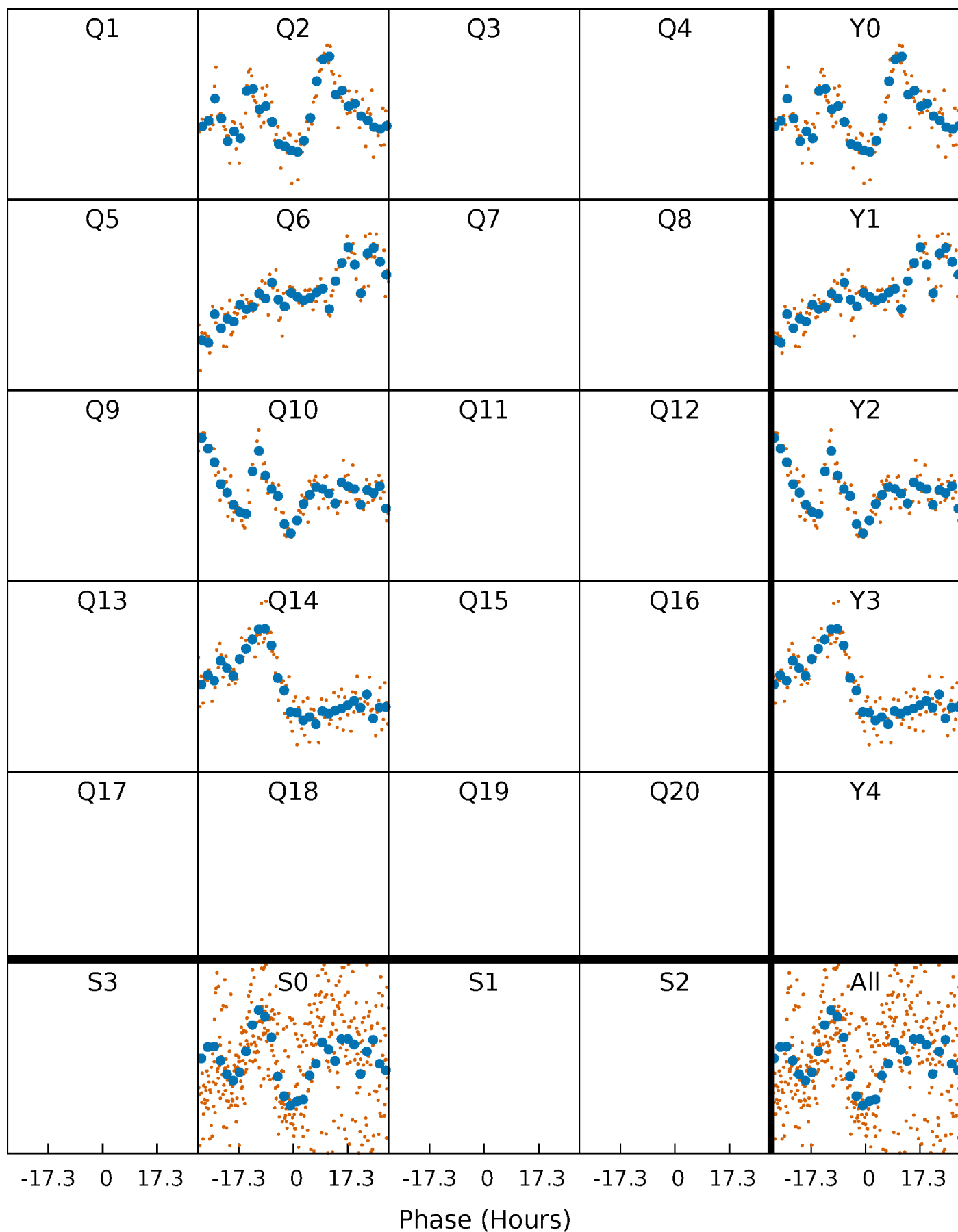


Non-Whitened Vs. Whitened Light Curve



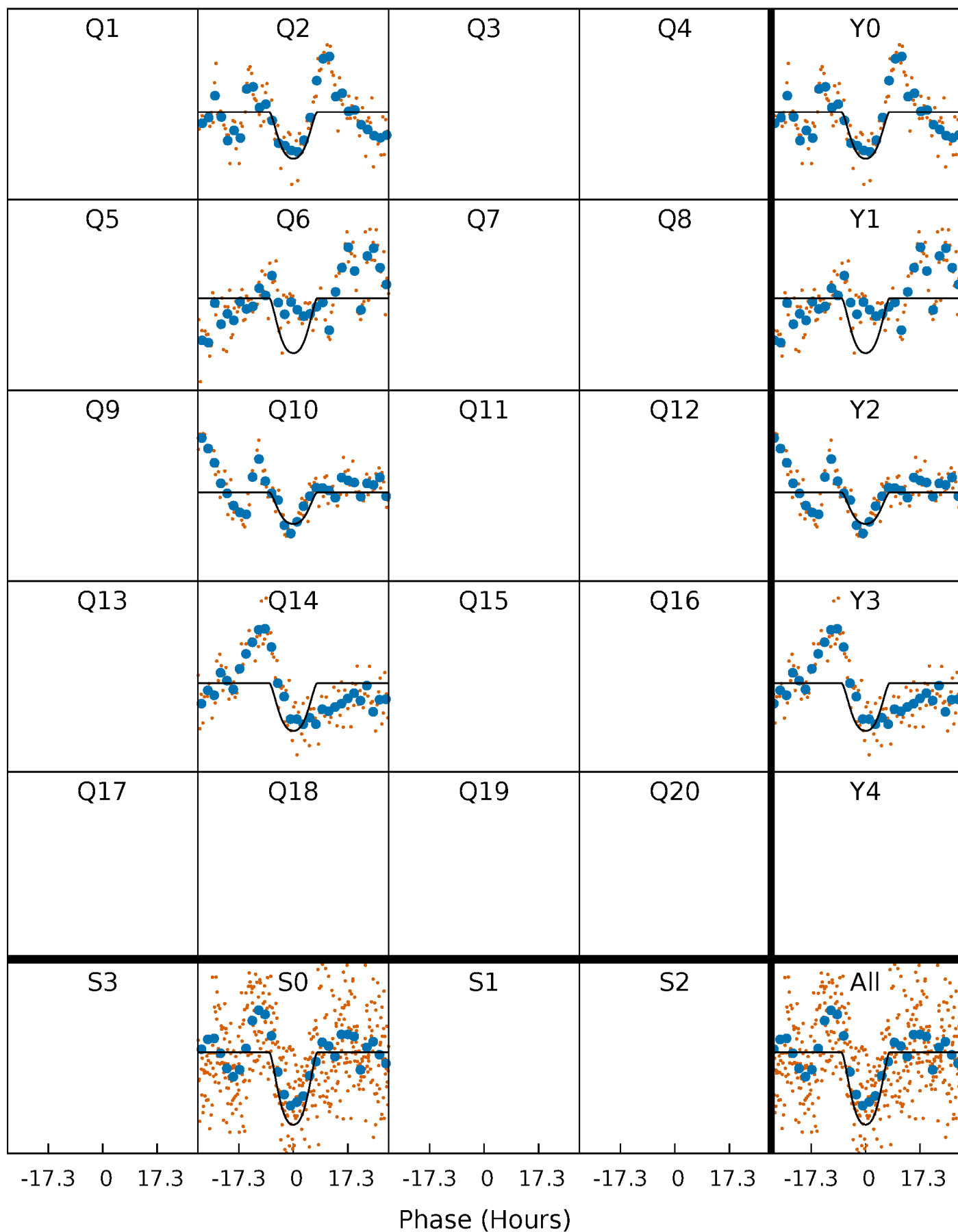
PDC Quarter-Phased Transit Curves

TCE 008307165-01 P=369.075644 Days $T_0=234.010113$ (BKJD)



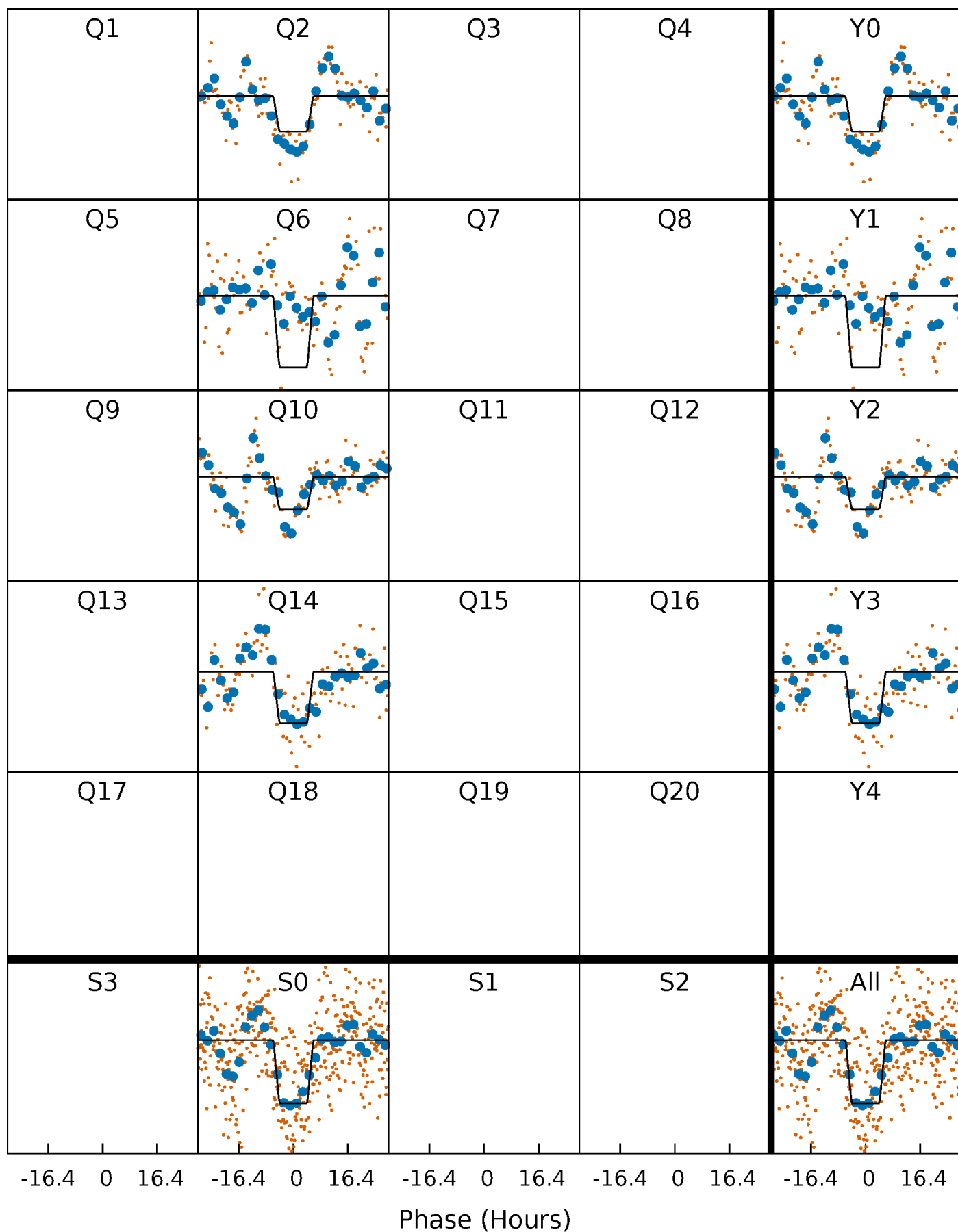
DV Quarter-Phased Transit Curves

TCE 008307165-01 P=369.075644 Days $T_0=234.010113$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

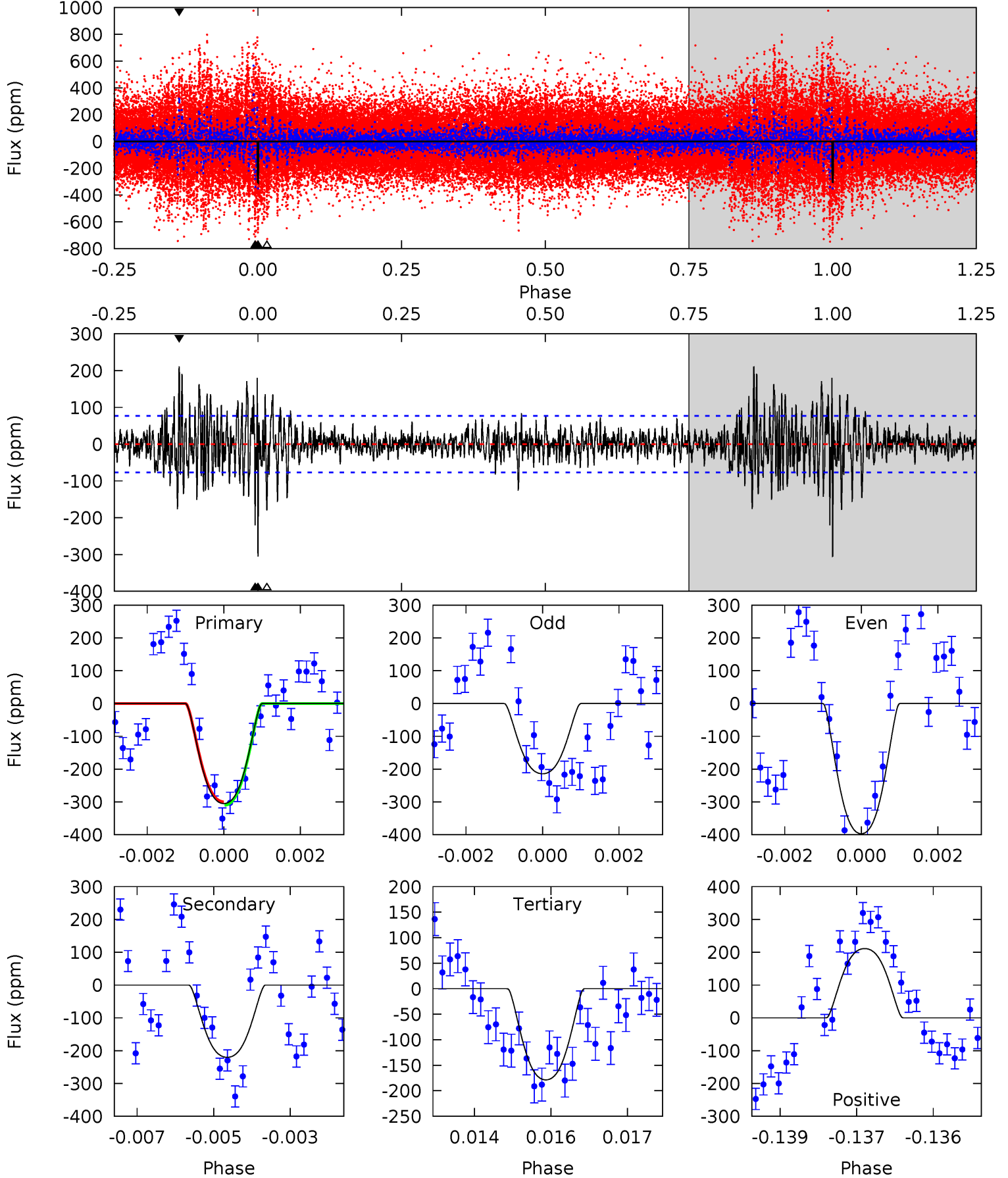
TCE 008307165-01 P=369.077772 Days $T_0=234.012817$ (BKJD)



DV Model-Shift Uniqueness Test

008307165-01, P = 369.075644 Days, E = 234.010113 Days

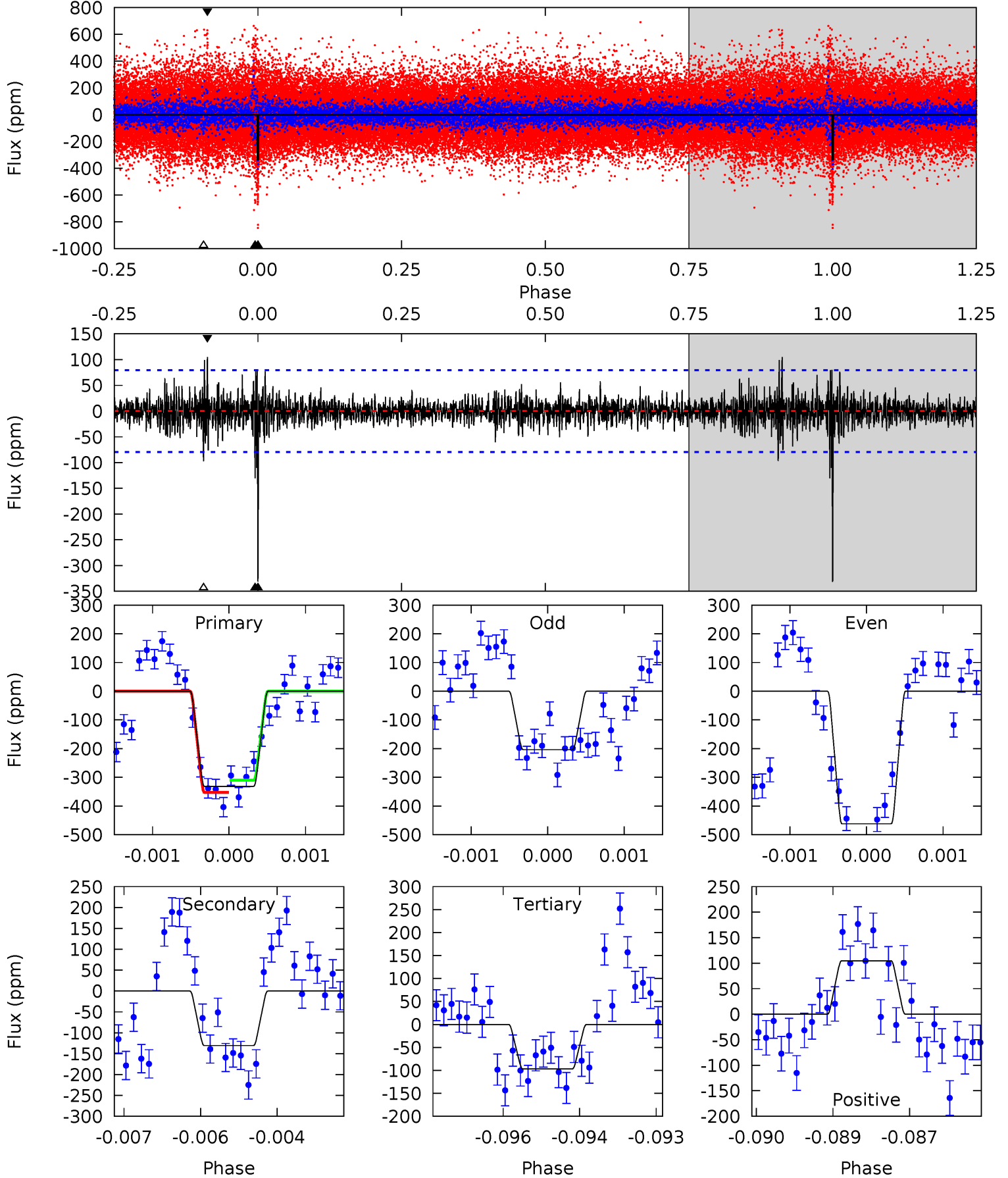
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	15.3	12.4	14.7	5.35	3.13	2.77	8.81	6.55	2.90	0.63	6.28	0.88	0.41	0.38



Alt Model-Shift Uniqueness Test

008307165-01, P = 369.077772 Days, E = 234.012817 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.5	8.85	6.58	7.10	5.39	3.20	1.21	15.9	15.4	2.27	1.75	8.74	0.92	0.24	1.43



Stellar Parameters For KIC 008307165

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7926^{+216}_{-325}	$3.978^{+0.234}_{-0.126}$	$-0.060^{+0.150}_{-0.400}$	$2.314^{+0.460}_{-0.690}$	$1.853^{+0.098}_{-0.393}$	$0.211^{+0.305}_{-0.080}$
	+3%/-4%	+6%/-3%	+250%/-667%	+20%/-30%	+5%/-21%	+145%/-38%
Source	KIC0	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 008307165-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-220 ± 14	$6.07^{+1.57}_{-1.52}$	659^{+46}_{-51}	5930^{+765}_{-527}	4953^{+3646}_{-1815}
Alt.	-131 ± 15	$4.46^{+1.39}_{-1.40}$	657^{+42}_{-55}	6047^{+1230}_{-712}	5446^{+6252}_{-2355}

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

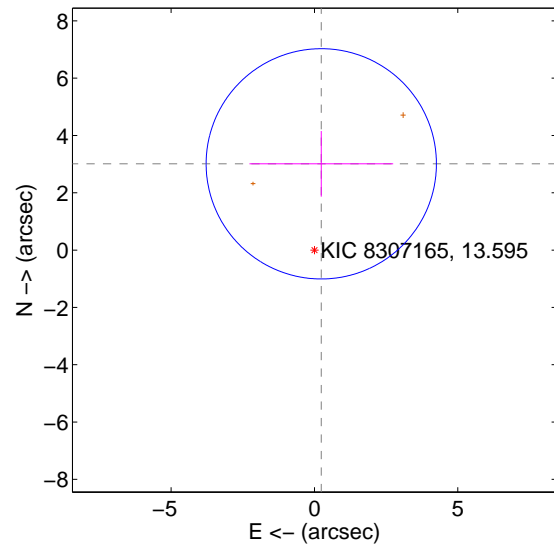
Supplemental centroid analysis for 008307165-01. Kepler magnitude: 13.60. Transit SNR 9.54

There are 0 quarters with good PRF difference image offsets

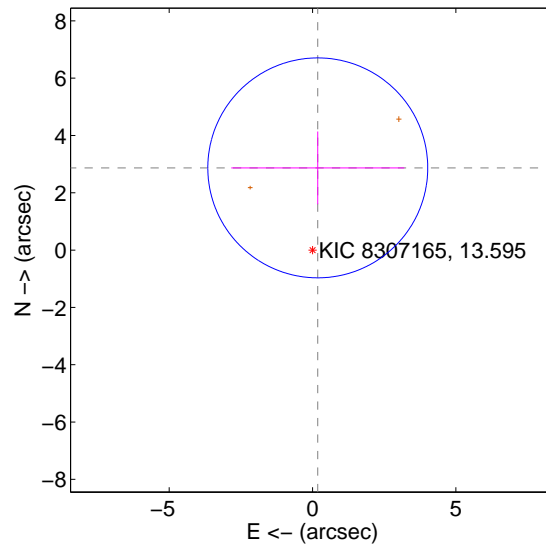
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.020 ± 1.339	2.26	-0.239 ± 2.508	3.010 ± 1.145
PRF-fit source offset from KIC position	2.875 ± 1.279	2.25	-0.183 ± 3.019	2.869 ± 1.267
photometric centroid source offset	1.71 ± 1.51	1.13	-1.07 ± 1.29	1.34 ± 1.64

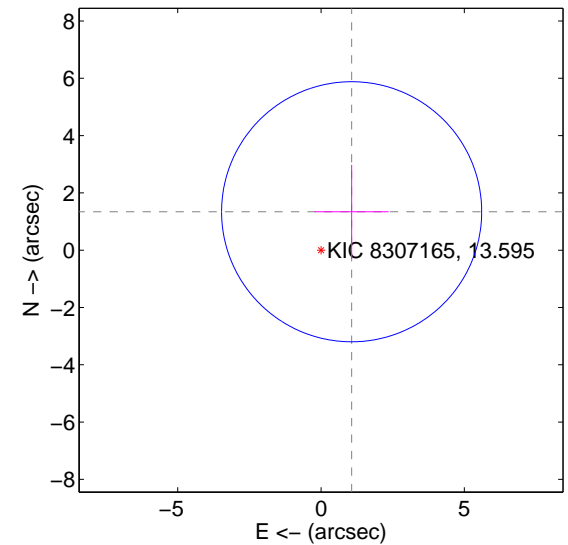
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

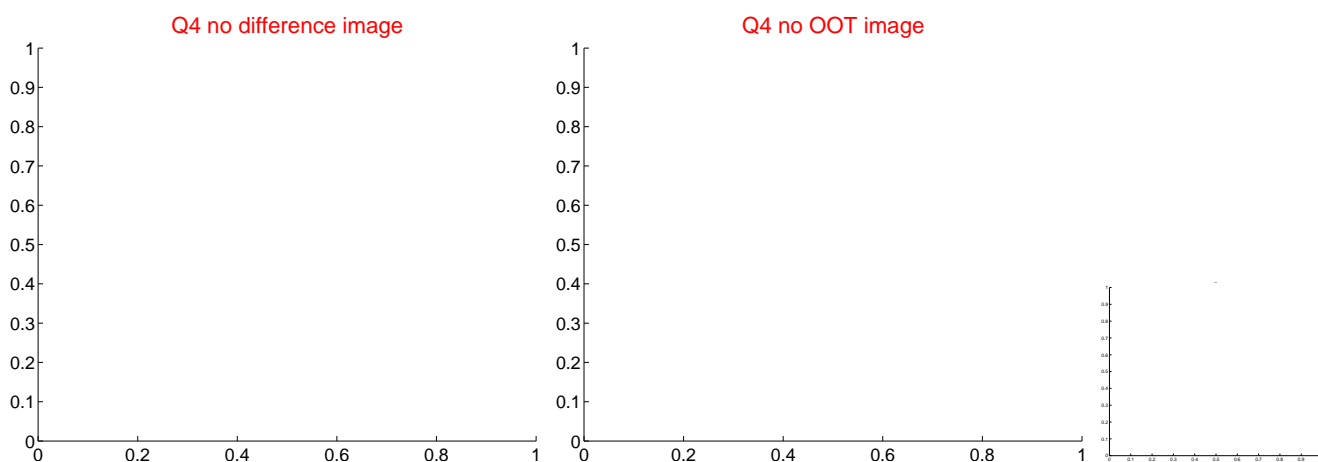
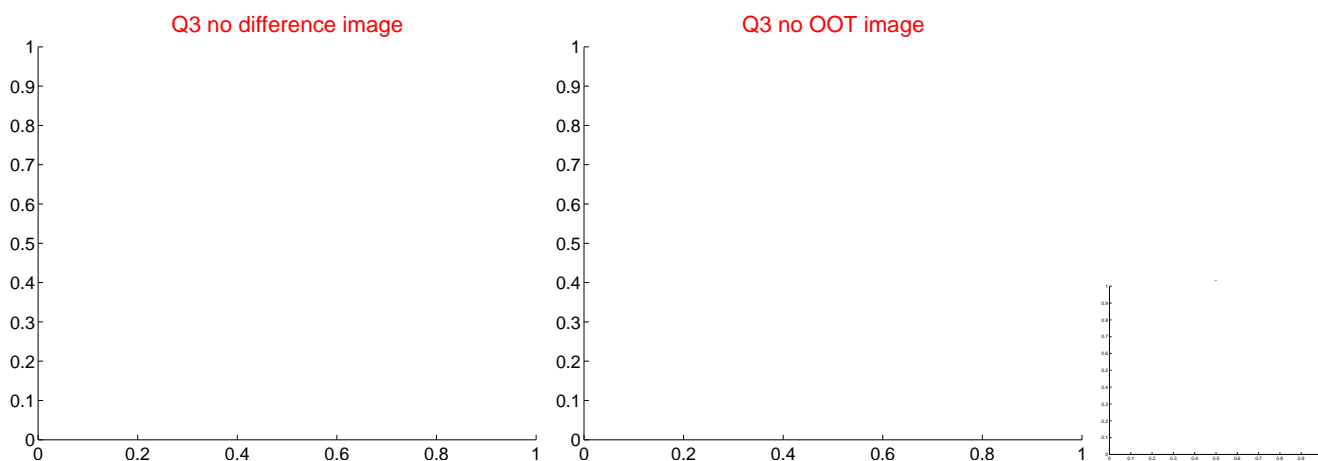
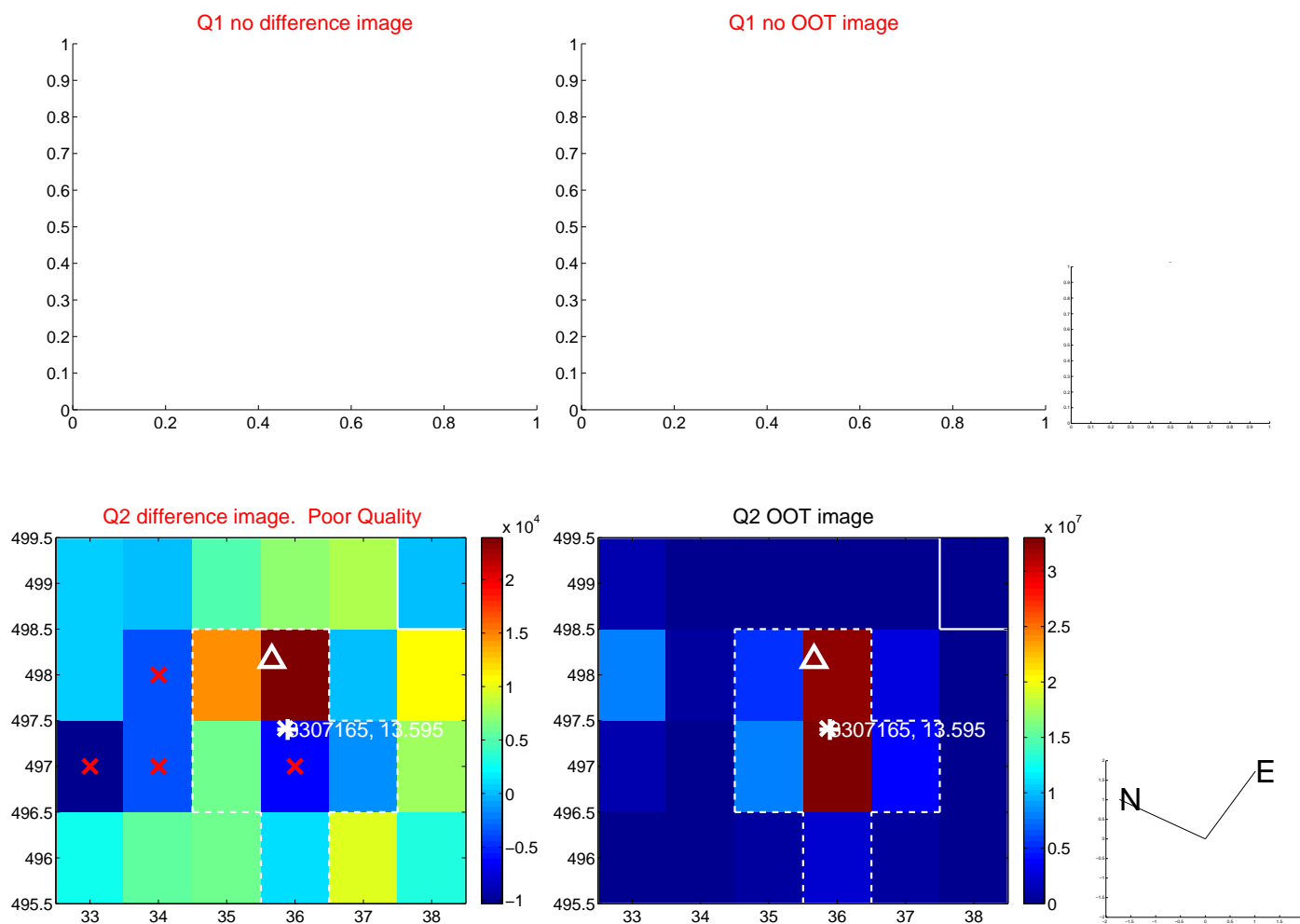


offset from photometric centroids

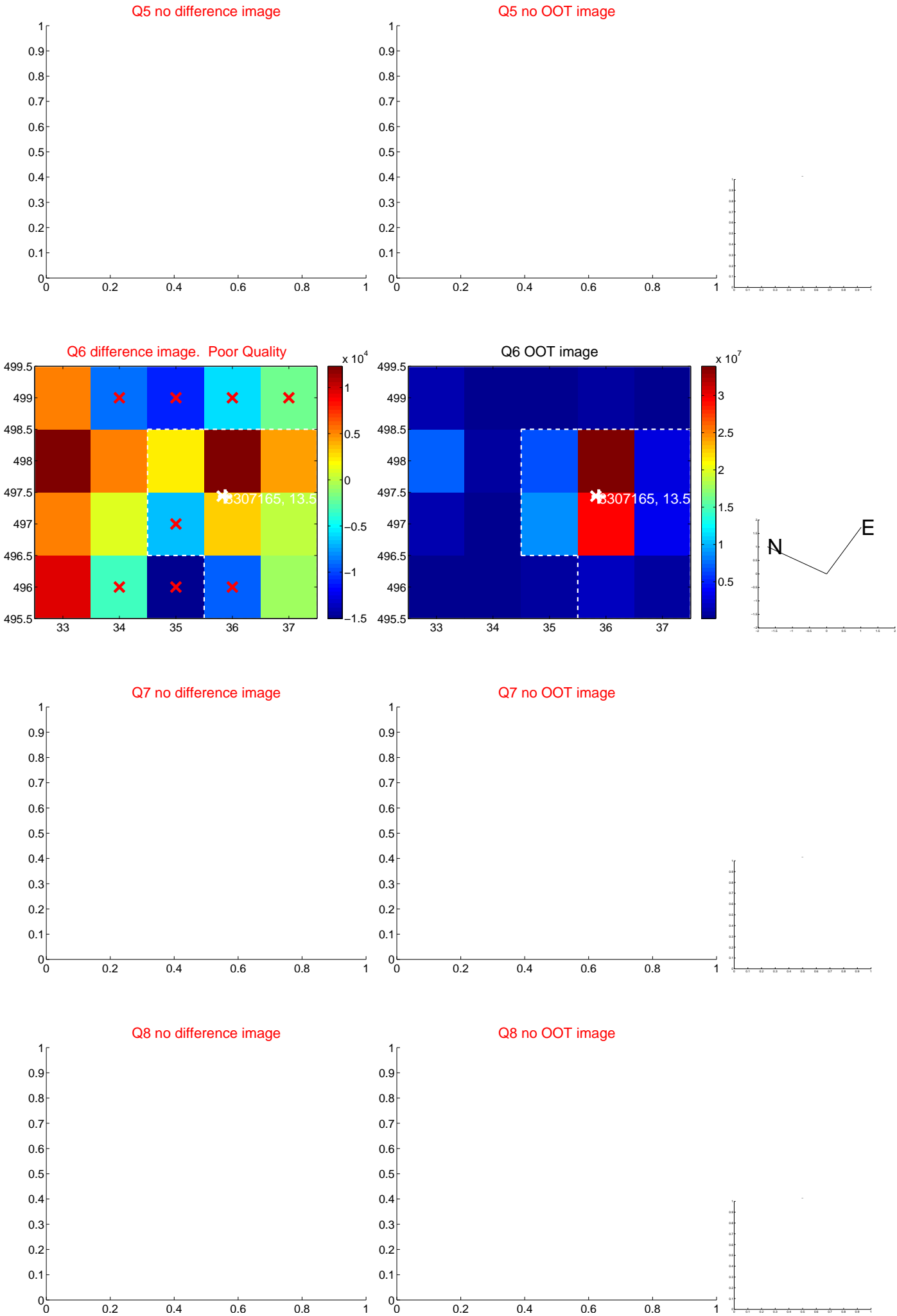


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

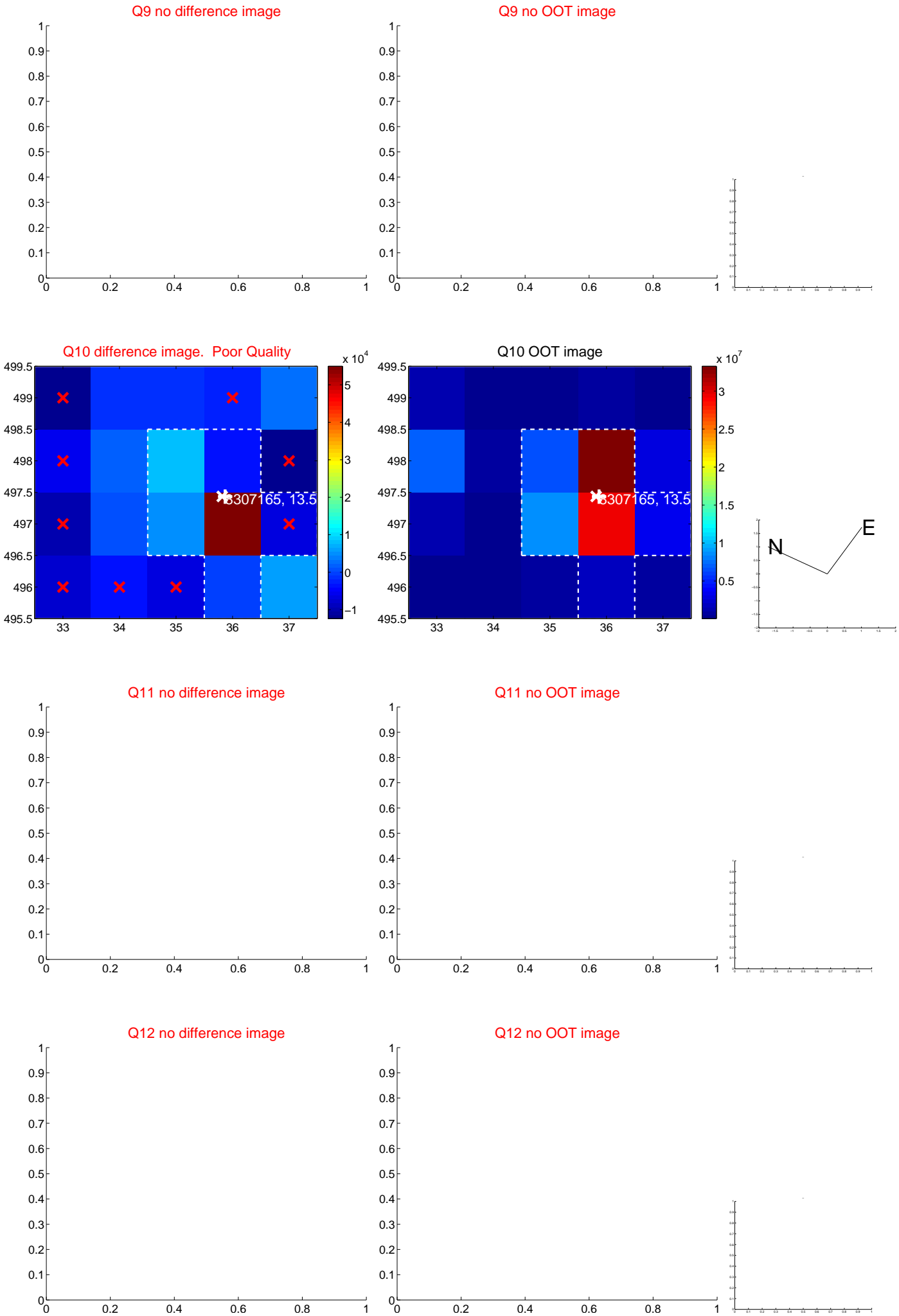
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



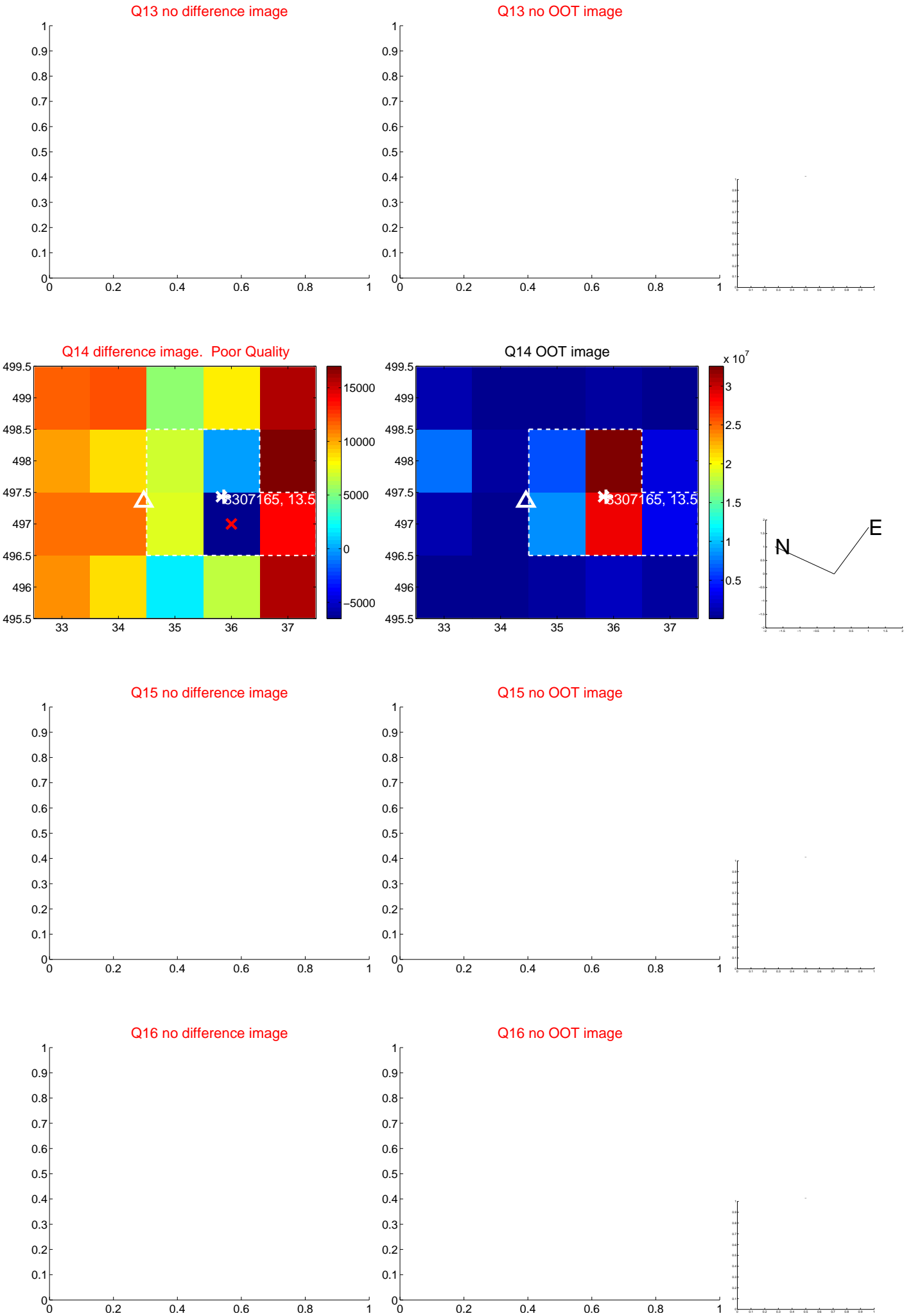
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



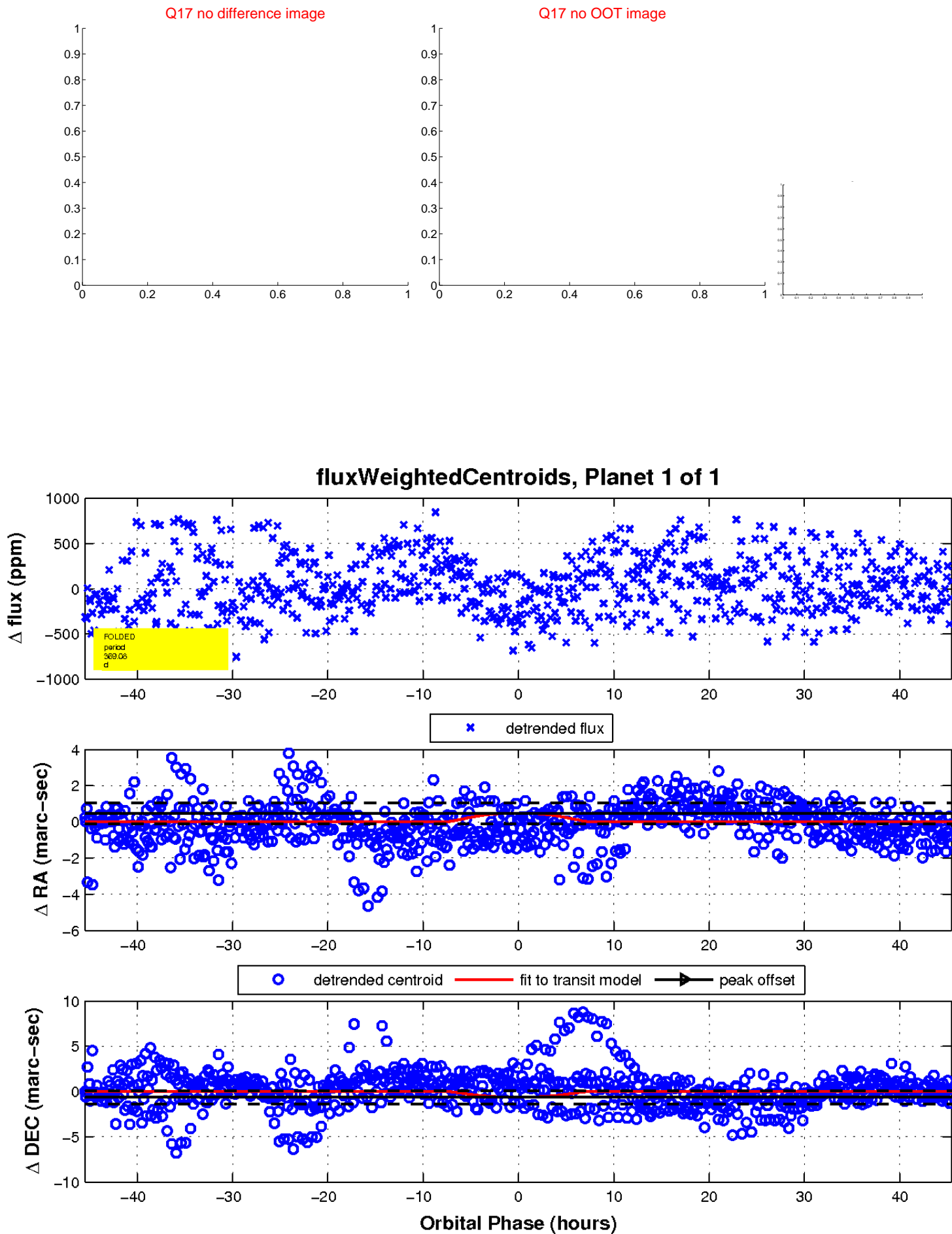
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

