

KIC 003730940

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})
003730940-01	OBS	No	332.605434	325.417384	175.9	16.943	10.4	7.1	2.48	6224	3.64	7.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003730940-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

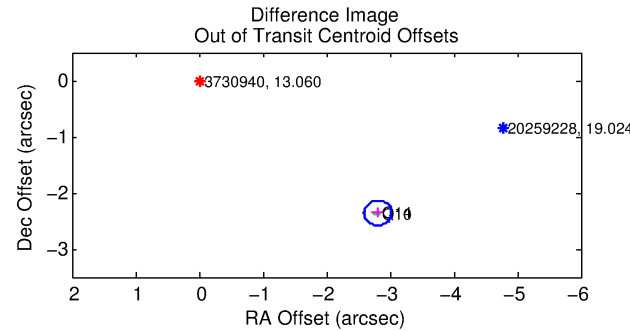
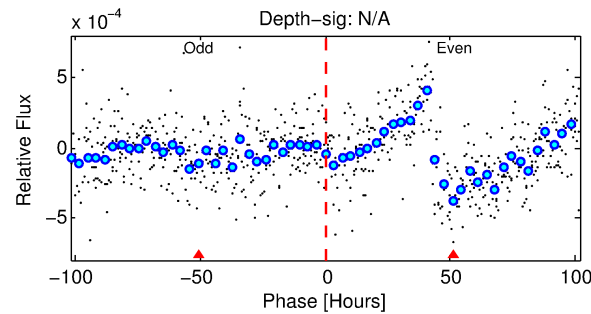
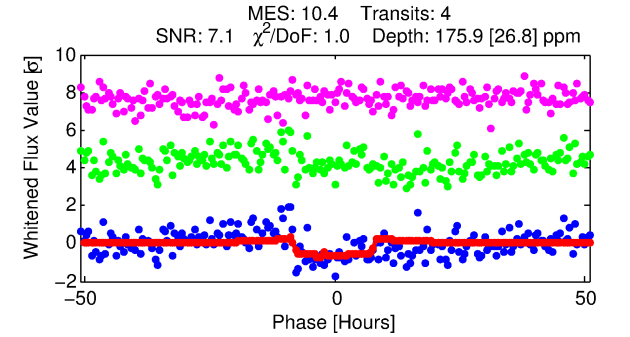
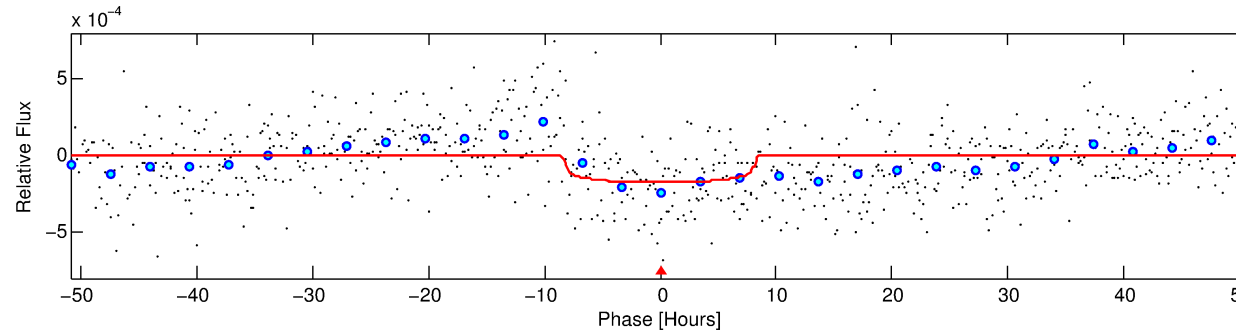
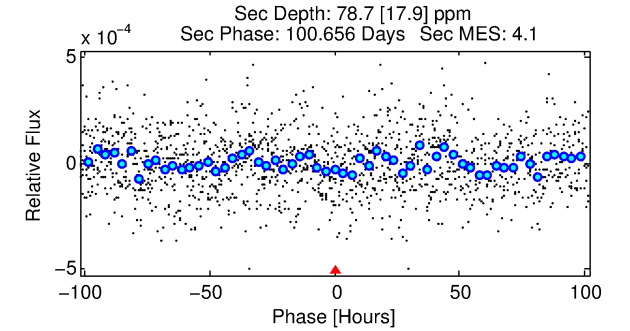
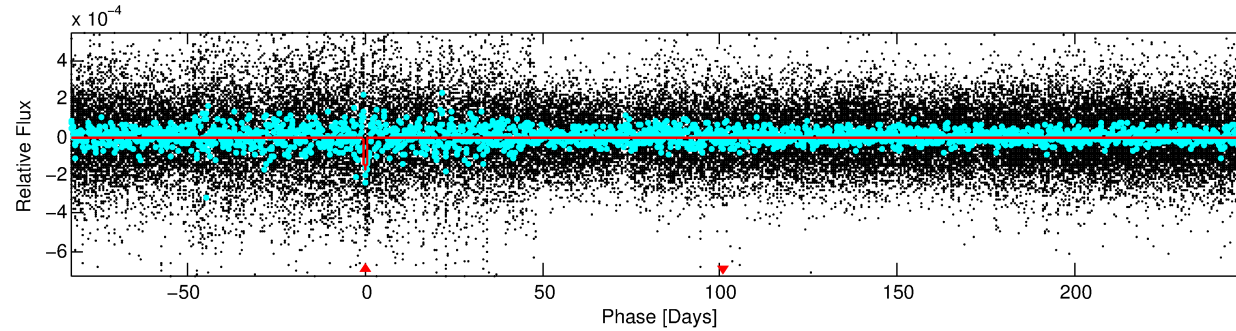
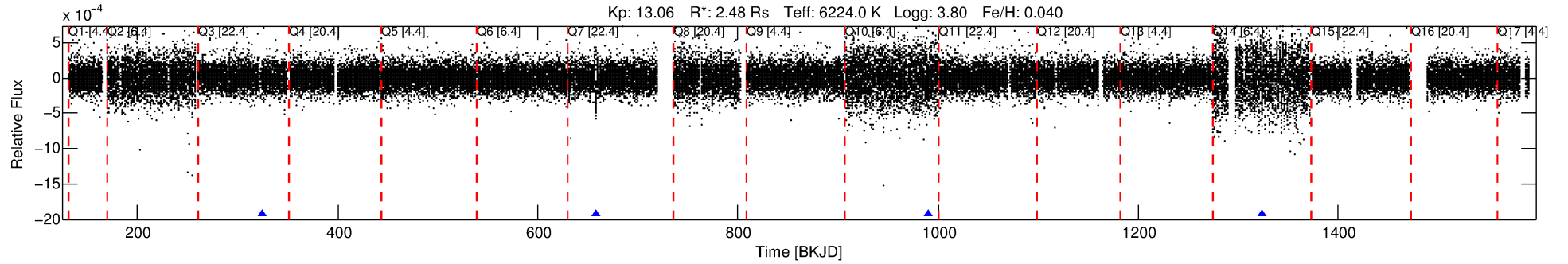
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003730940-01

No Significant Match Found

DV One-Page Summary

KIC: 3730940 Candidate: 1 of 1 Period: 332.605 d



DV Fit Results:

Period = 332.60543 [0.01280] d
Epoch = 325.4174 [0.0189] BKJD
Rp/R* = 0.0135 [0.0032]
a/R* = 91.83 [105.86]
b = 0.81 [0.50]
Seff = 7.41 [3.72]
Teq = 421 [53] K
Rp = 3.64 [1.49] Re
a = 1.0545 [0.3286] AU
Ag = 3631.03 [2617.73] [1.39σ]
Teffp = 5049 [681] K [6.78σ]

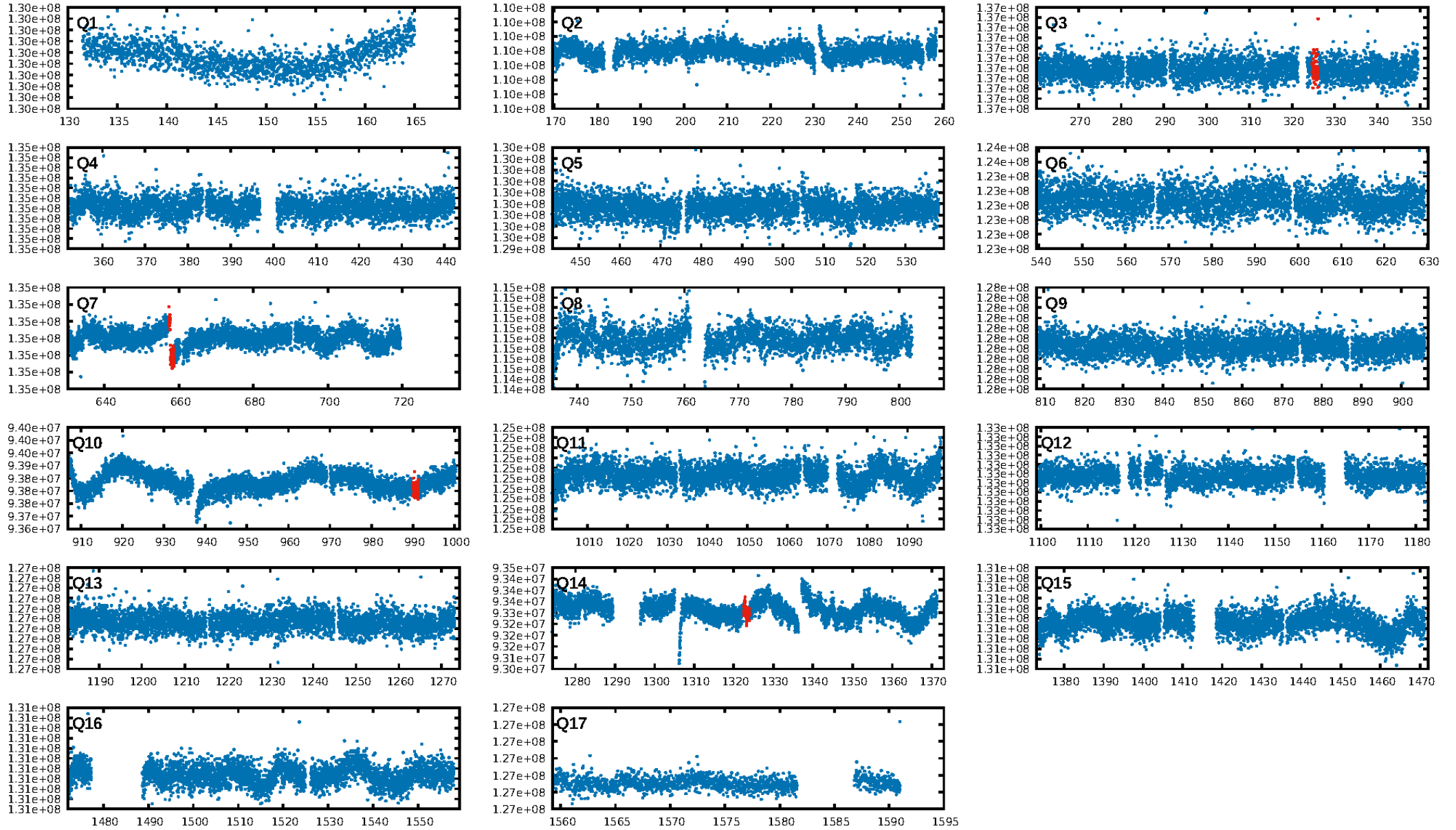
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 7.76e-26
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.208
Centroid-sig: 96.8%
Centroid-so: 5.661 arcsec [2.73σ]
OotOffset-rm: 3.667 arcsec [50.09σ]
KicOffset-rm: 9.072 arcsec [25.61σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

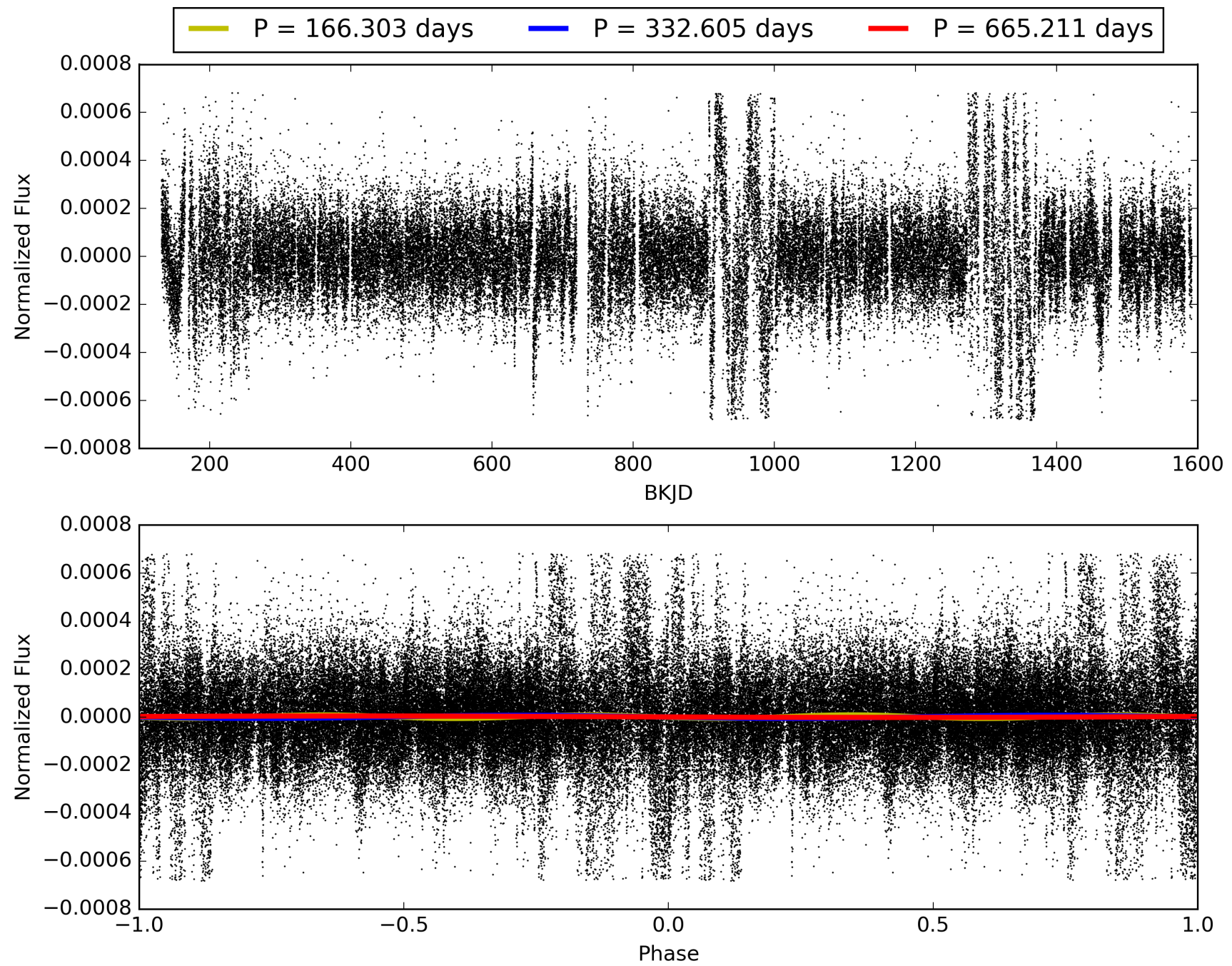
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:52:28 Z

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

TCE 003730940-01, PDC Light Curves

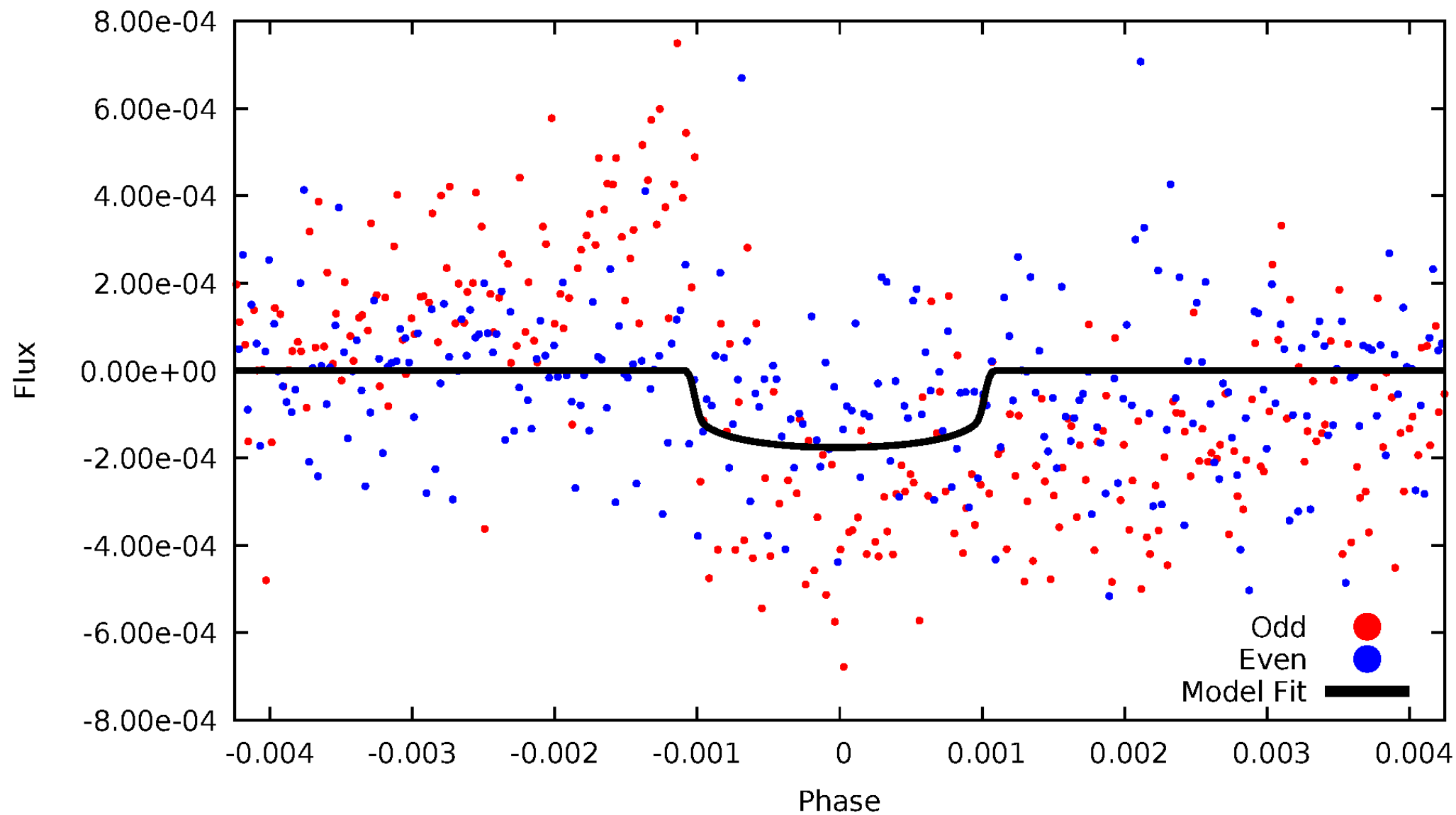


TCE 003730940-01



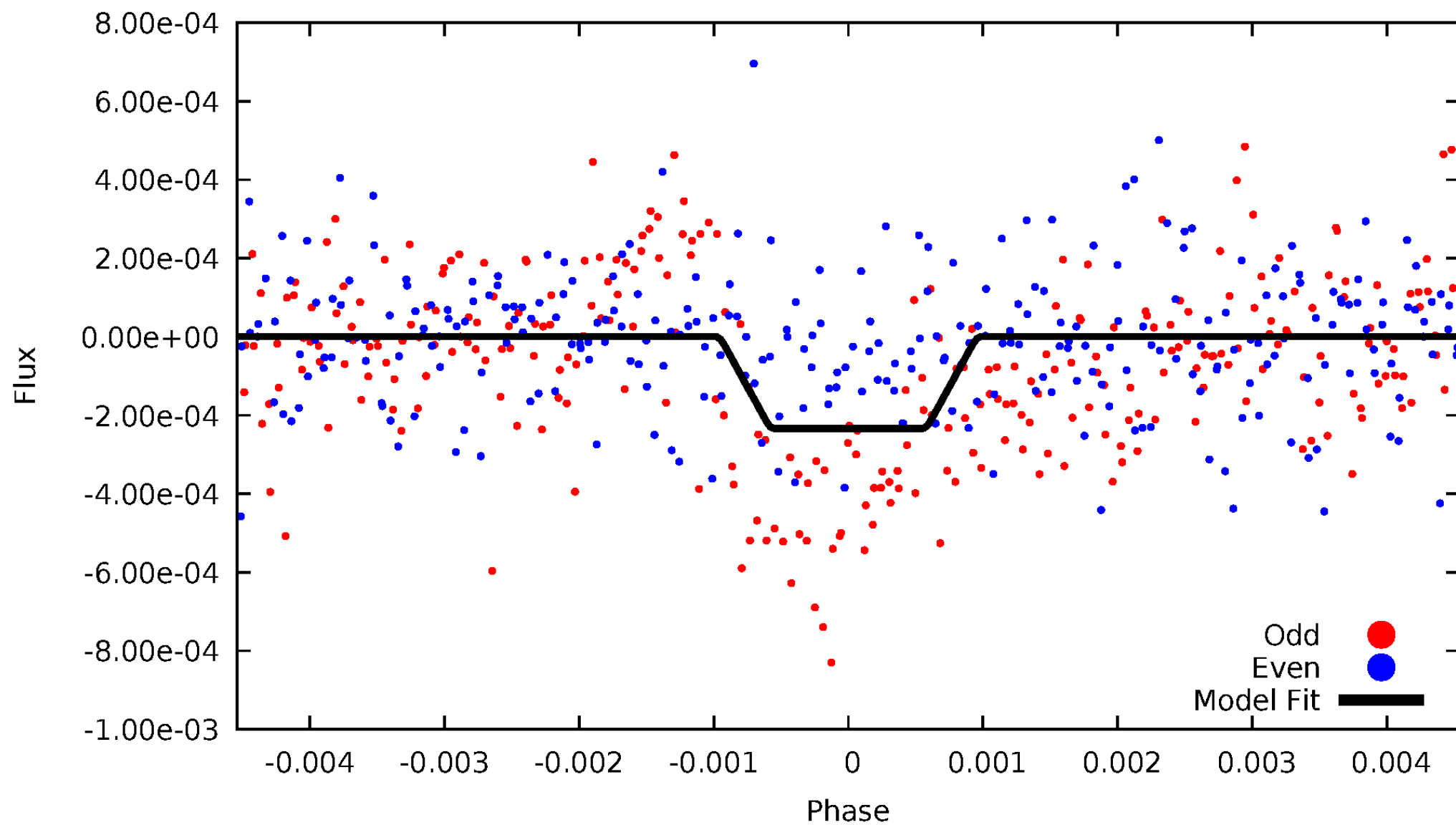
DV Odd/Even

TCE 003730940-01

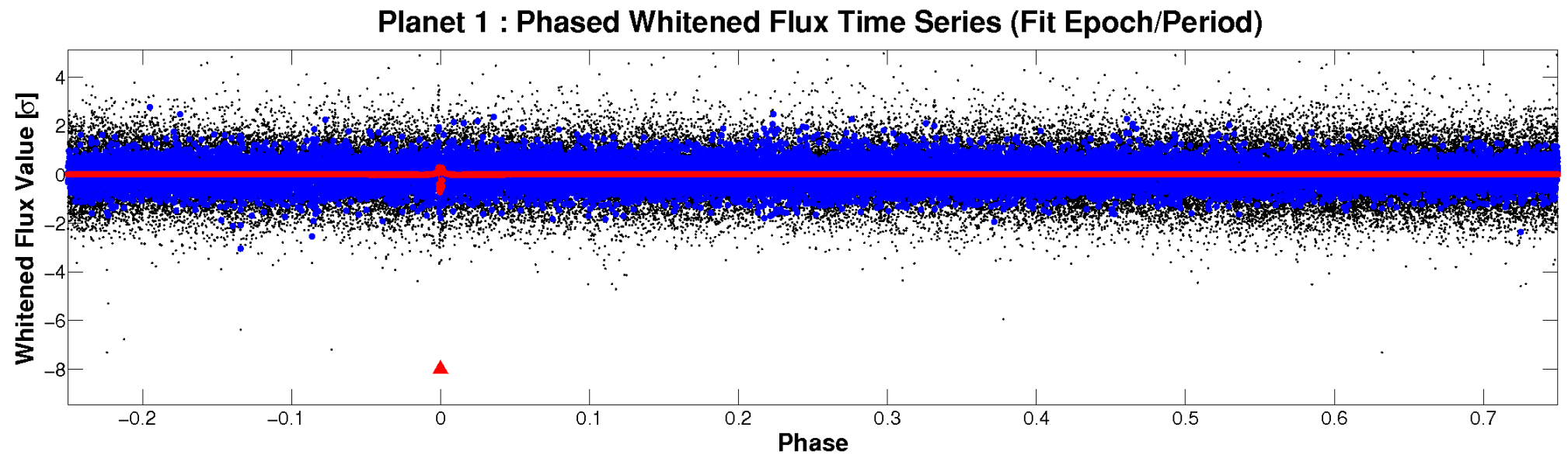
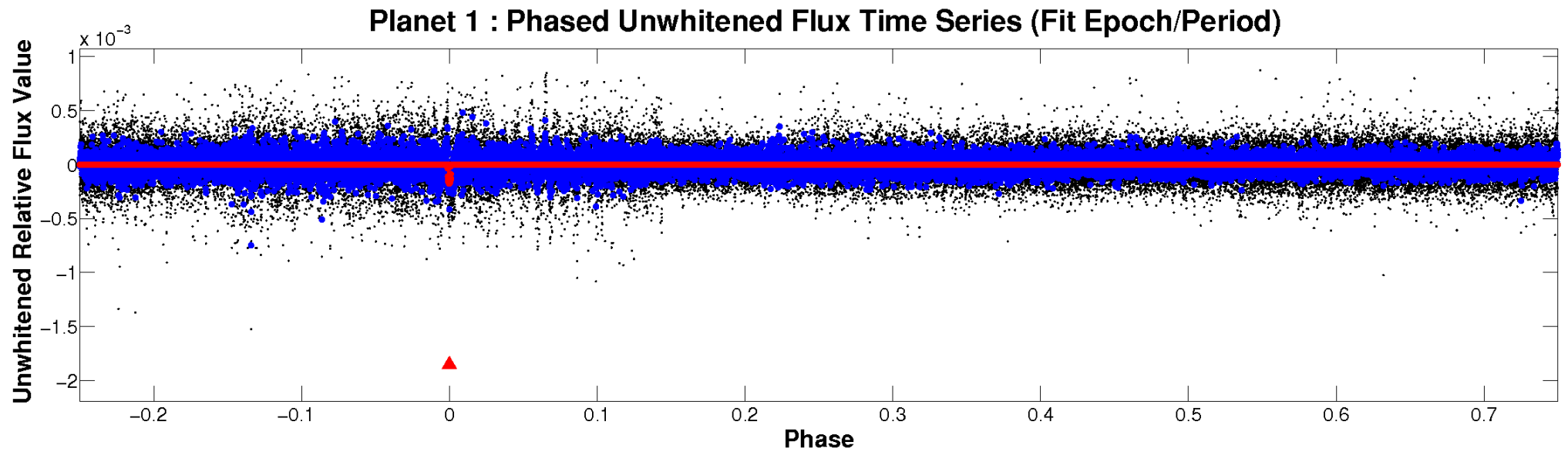


ALT Odd/Even

TCE 003730940-01

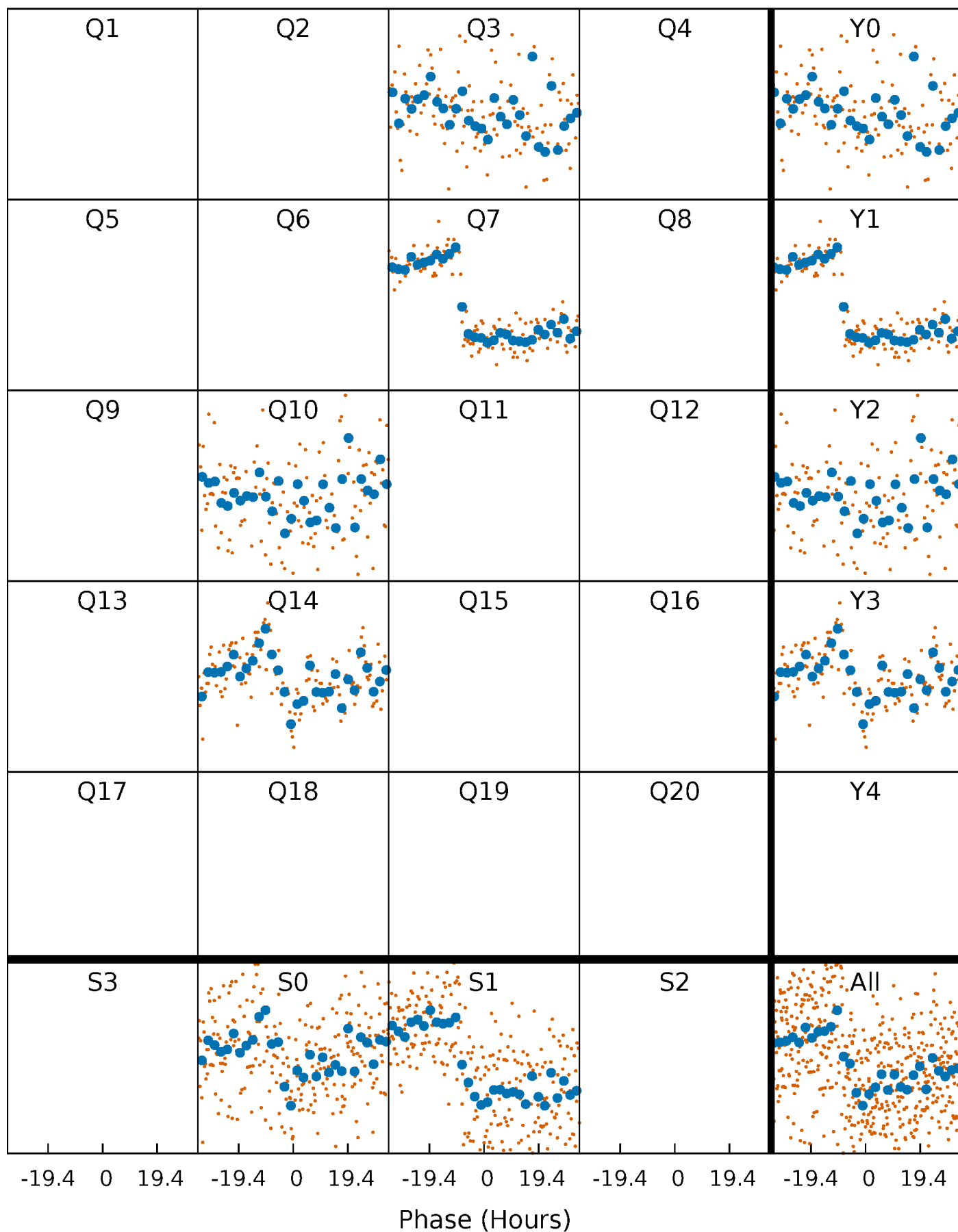


Non-Whitened Vs. Whitened Light Curve



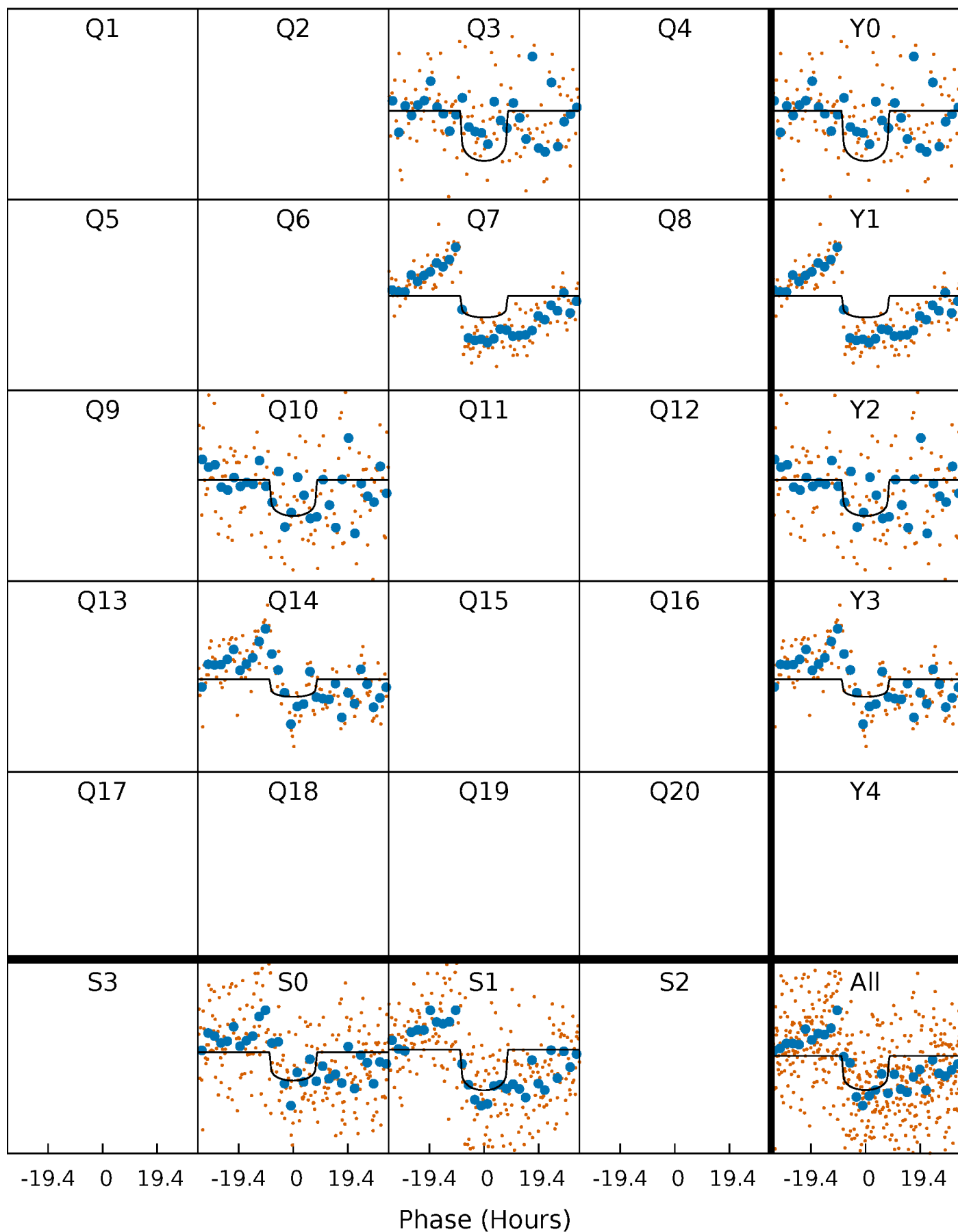
PDC Quarter-Phased Transit Curves

TCE 003730940-01 P=332.605434 Days $T_0=325.417384$ (BKJD)



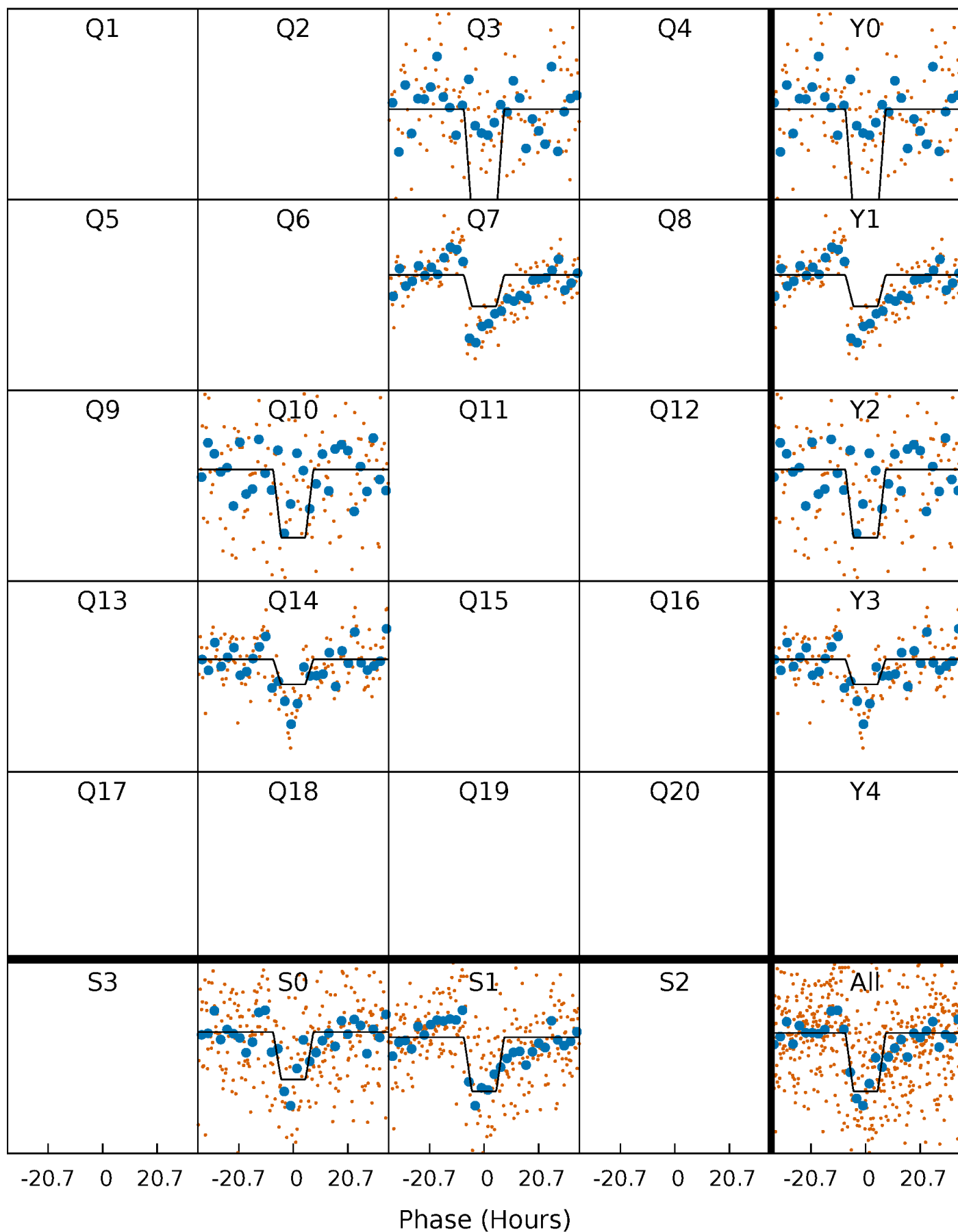
DV Quarter-Phased Transit Curves

TCE 003730940-01 P=332.605434 Days $T_0=325.417384$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

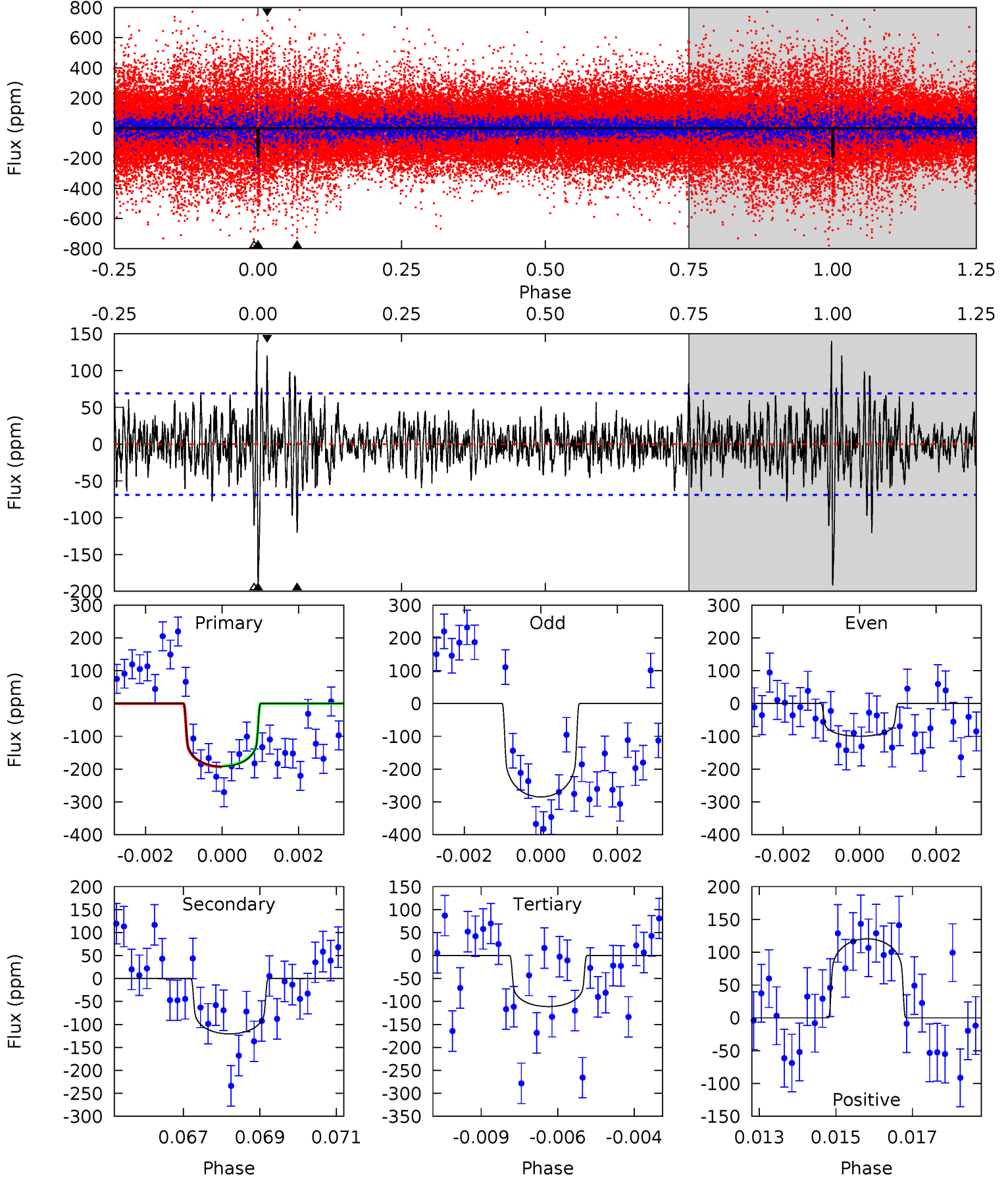
TCE 003730940-01 P=332.651546 Days $T_0=325.330199$ (BKJD)



DV Model-Shift Uniqueness Test

003730940-01, P = 332.605434 Days, E = 325.417384 Days

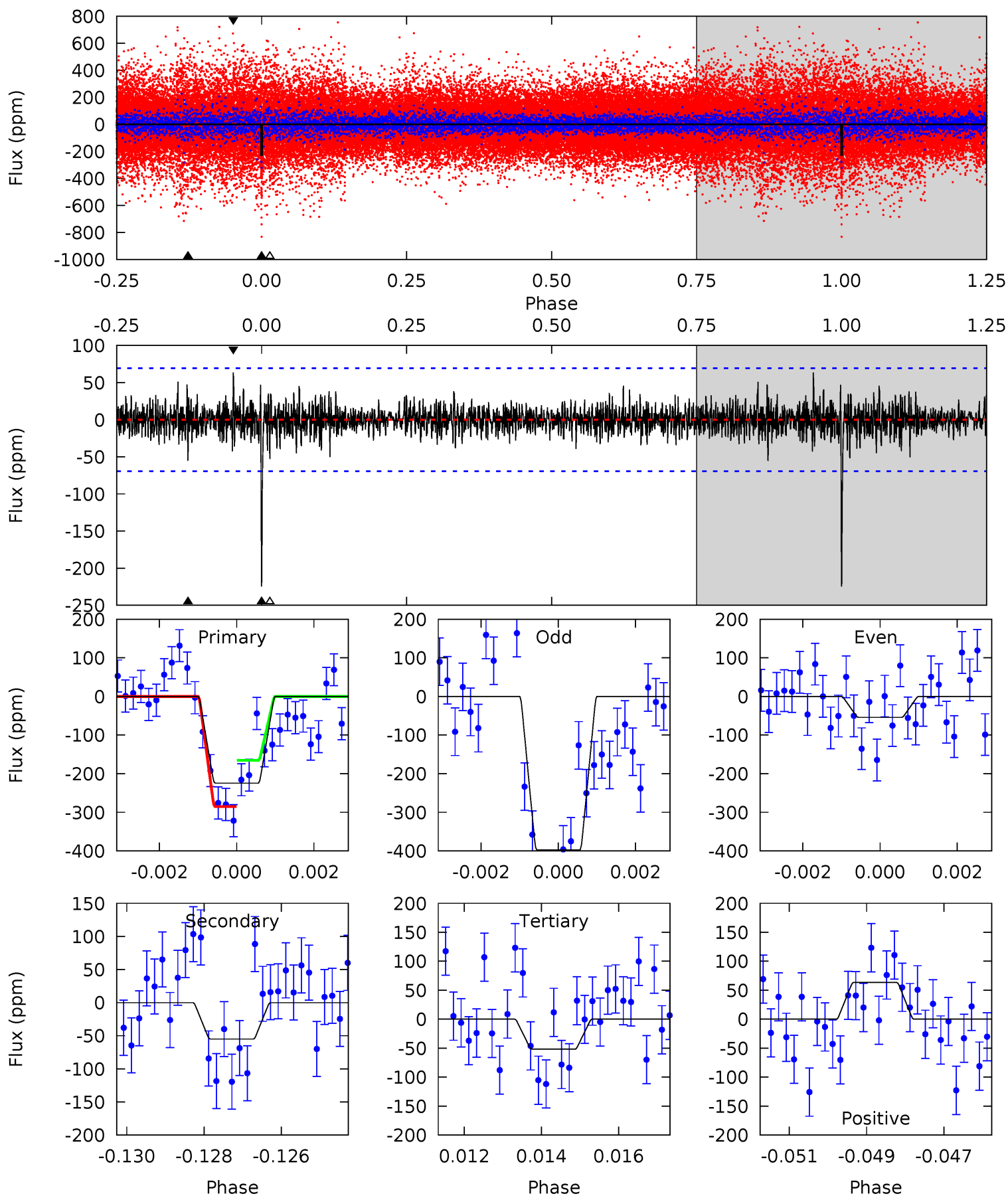
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	9.28	8.55	9.27	5.31	3.07	1.87	6.21	5.49	0.73	0.01	7.05	1.19	0.42	0.10



Alt Model-Shift Uniqueness Test

003730940-01, P = 332.651546 Days, E = 325.330199 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	4.23	3.98	4.87	5.33	3.10	1.01	13.3	12.4	0.25	-0.64	13.1	1.01	0.22	4.63



Stellar Parameters For KIC 003730940

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6224^{+168}_{-168}	$3.801^{+0.285}_{-0.095}$	$0.040^{+0.250}_{-0.250}$	$2.475^{+0.444}_{-0.824}$	$1.413^{+0.219}_{-0.267}$	$0.131^{+0.252}_{-0.039}$
	+3%/-3%	+7%/-2%	+625%/-625%	+18%/-33%	+15%/-19%	+192%/-30%
Source	PHO1	FLK73	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 003730940-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-121 ± 13	$3.49^{+0.94}_{-0.96}$	577^{+34}_{-47}	5643^{+840}_{-568}	6160^{+5867}_{-2371}
Alt.	-55 ± 13	$3.89^{+1.16}_{-1.00}$	579^{+35}_{-52}	4505^{+515}_{-379}	2192^{+1810}_{-920}

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

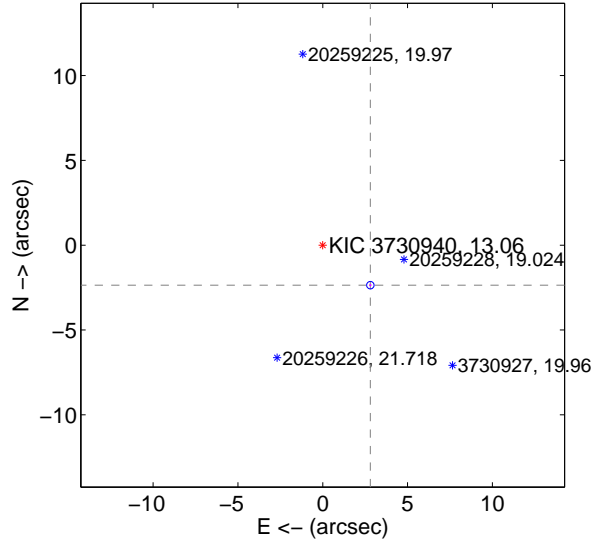
Supplemental centroid analysis for 003730940-01. Kepler magnitude: 13.06. Transit SNR 7.13

There are 2 quarters with good PRF difference image offsets

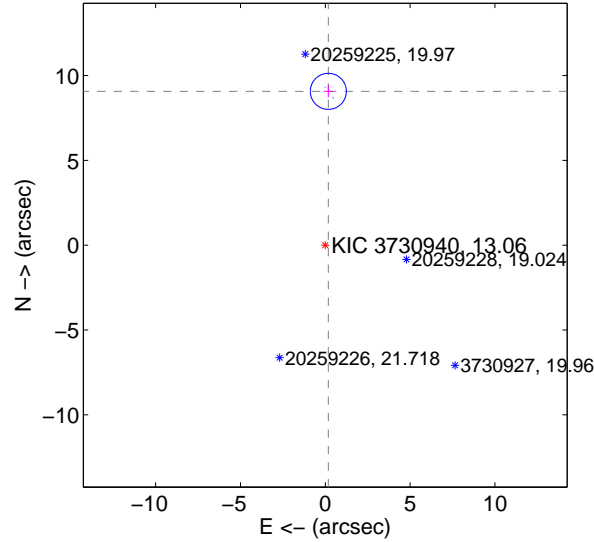
The OOT PRF centroid is offset from the target star catalog position by about 11.27 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.667 ± 0.073	50.09	-2.807 ± 0.075	-2.360 ± 0.071
PRF-fit source offset from KIC position	9.072 ± 0.354	25.61	-0.179 ± 0.276	9.070 ± 0.359
photometric centroid source offset	5.66 ± 2.08	2.73	2.08 ± 2.02	5.26 ± 2.08

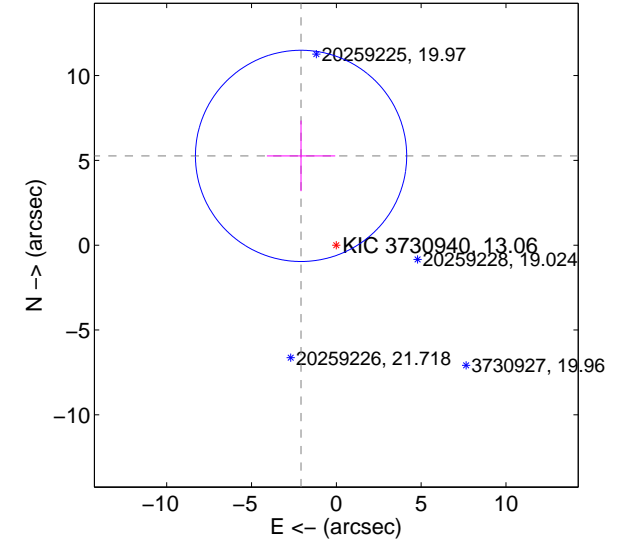
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

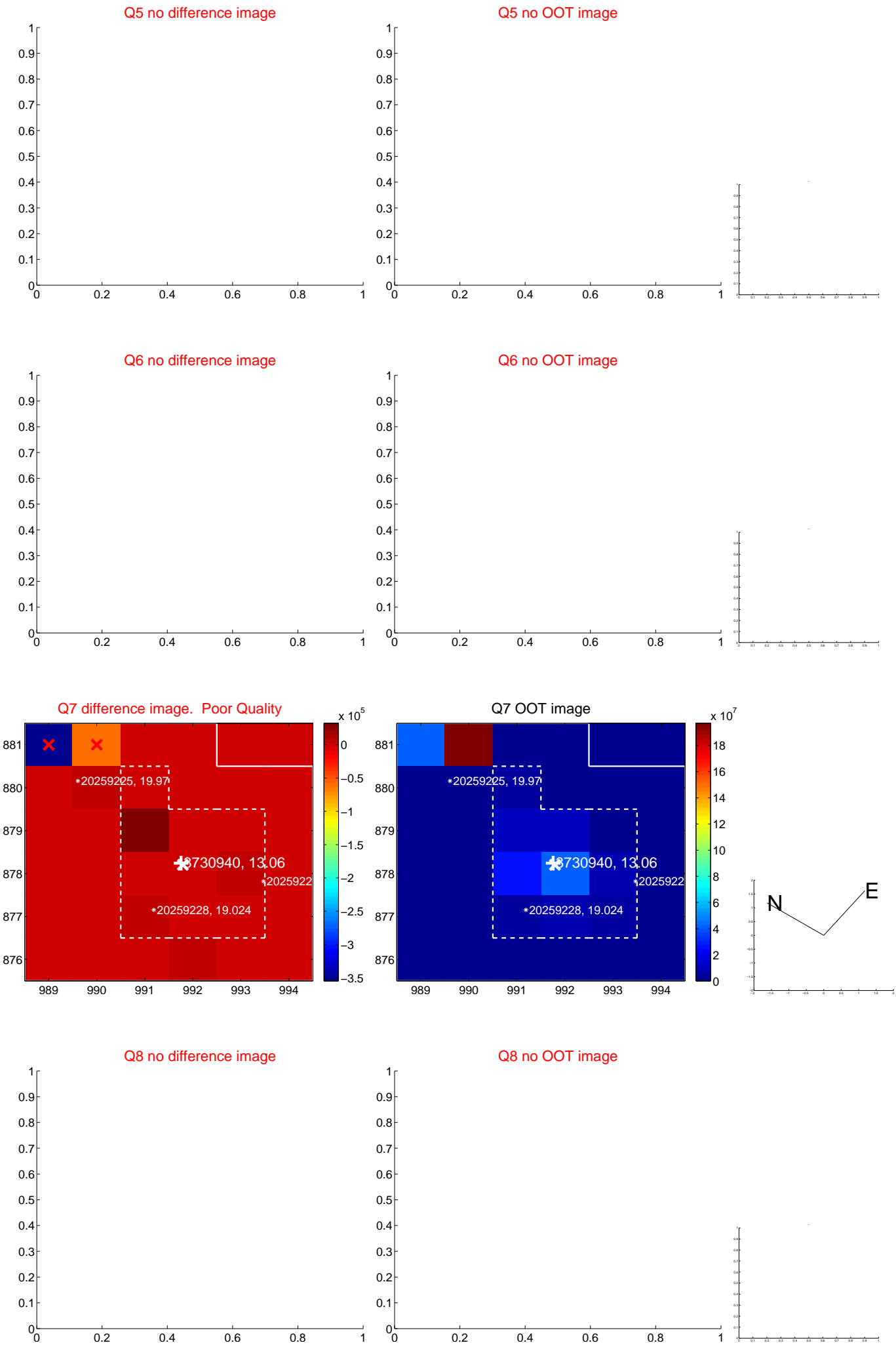


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

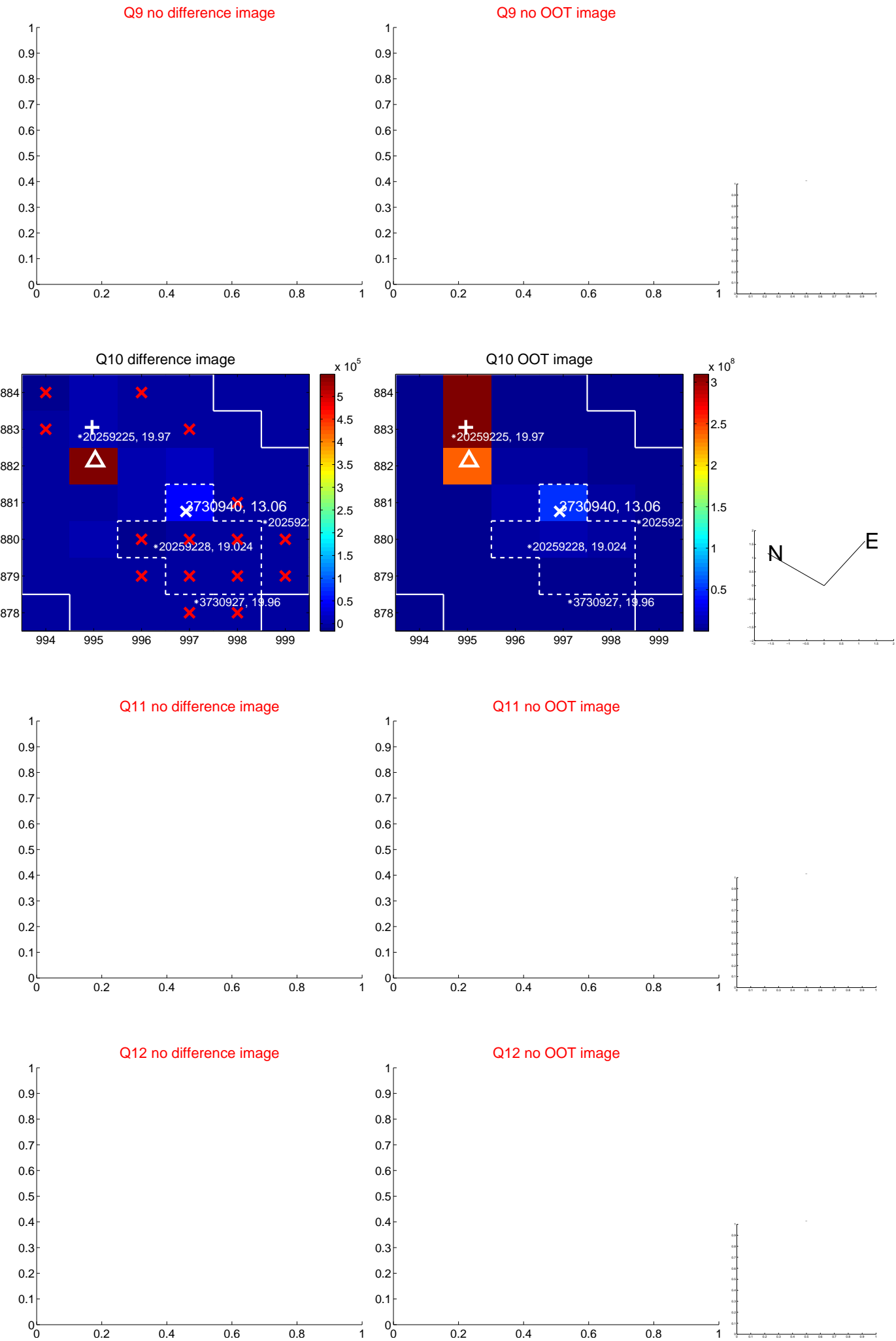
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



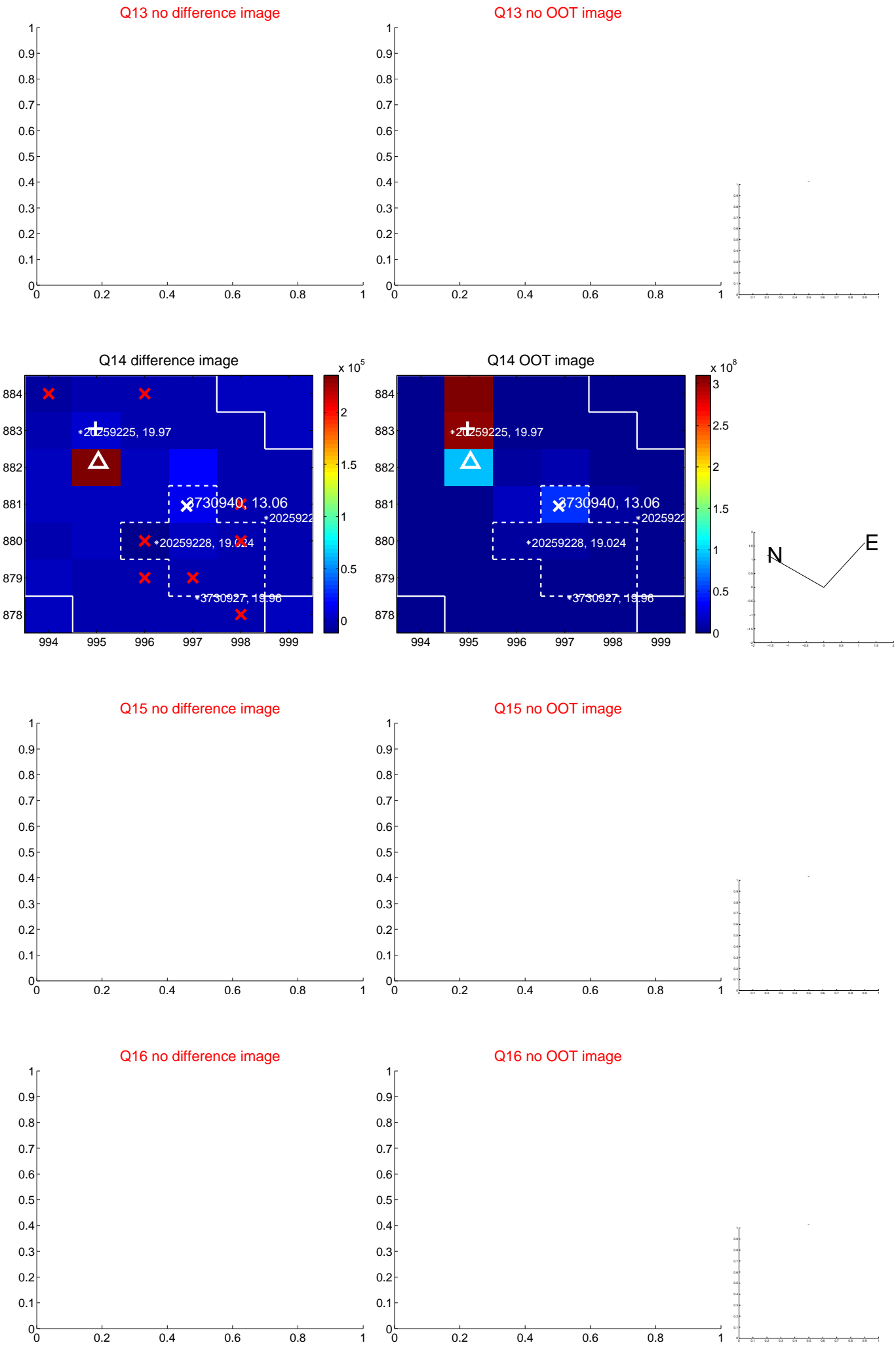
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



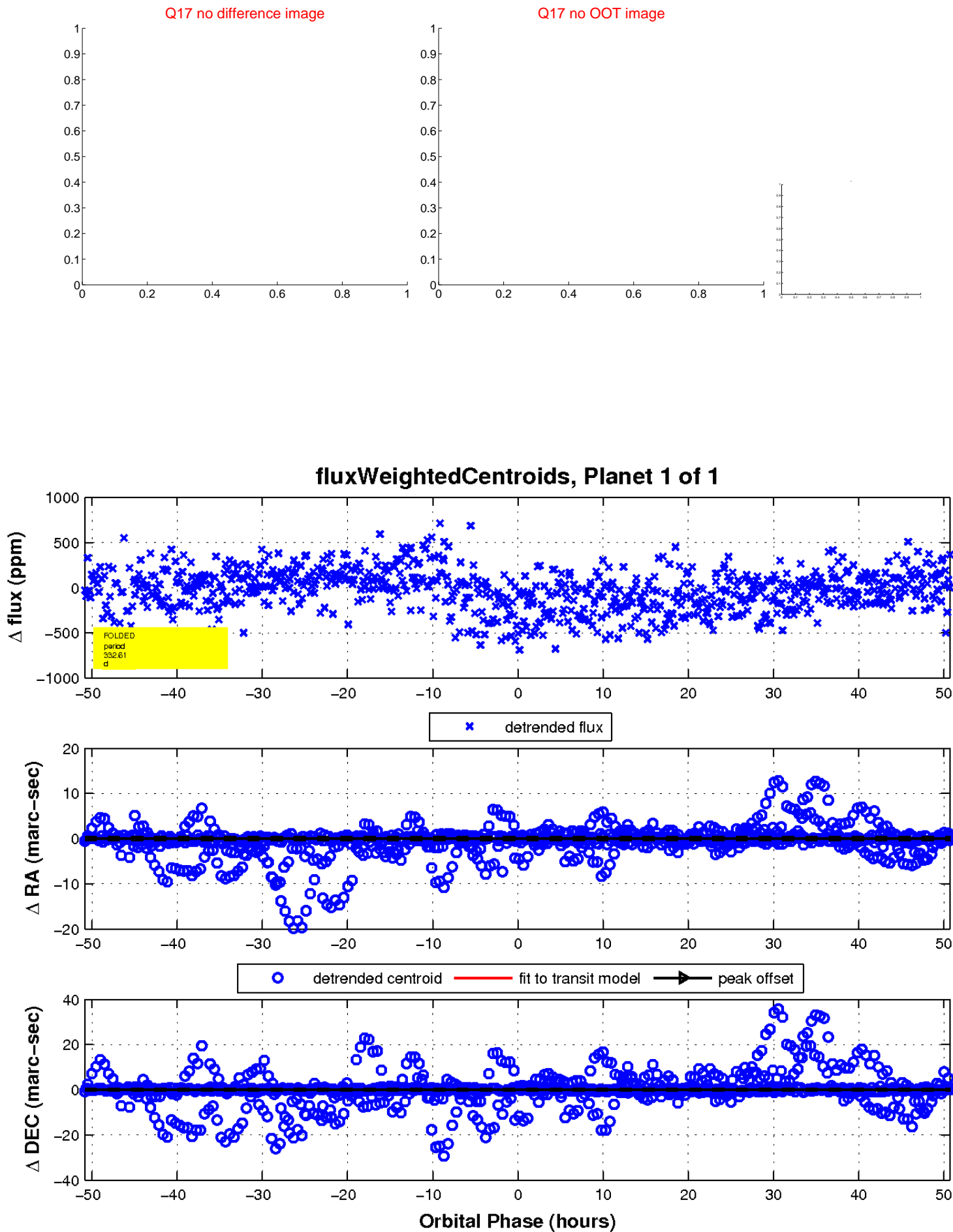
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

