

KIC 005613023

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})
005613023-01	OBS	No	372.241377	265.816782	768.3	27.748	7.7	7.4	1.00	5741	2.82	1.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005613023-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--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.

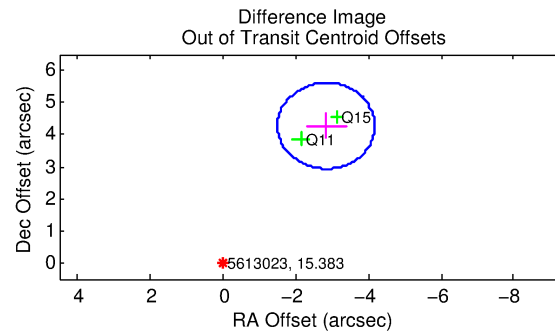
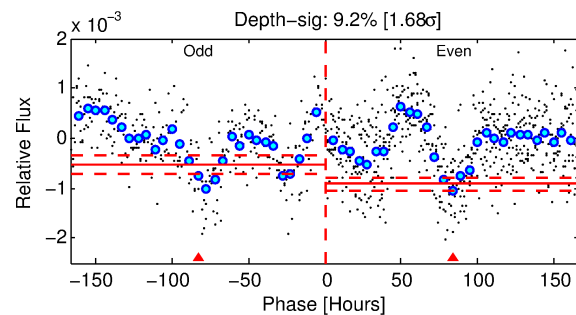
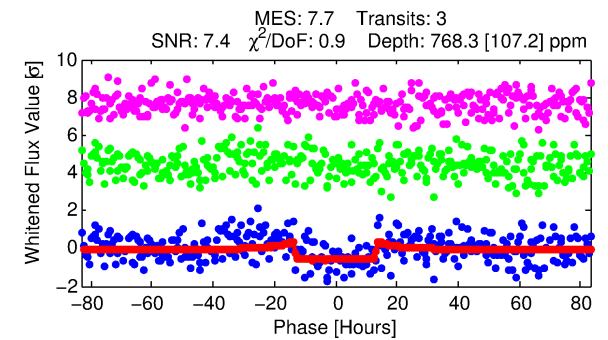
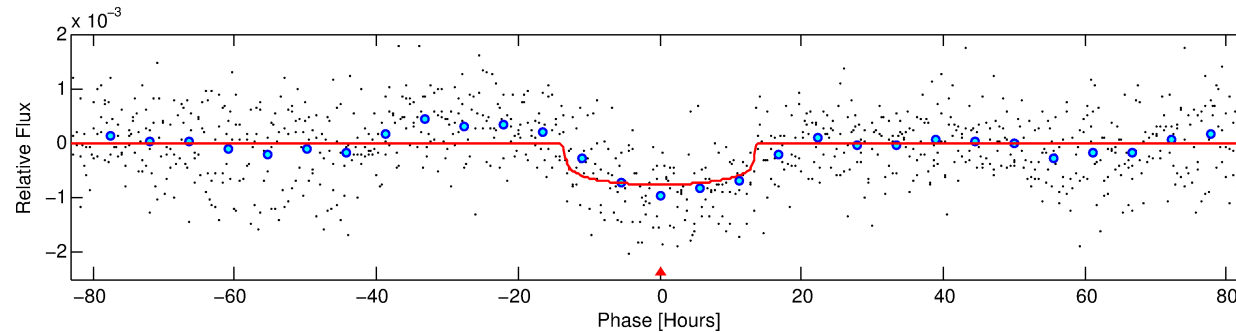
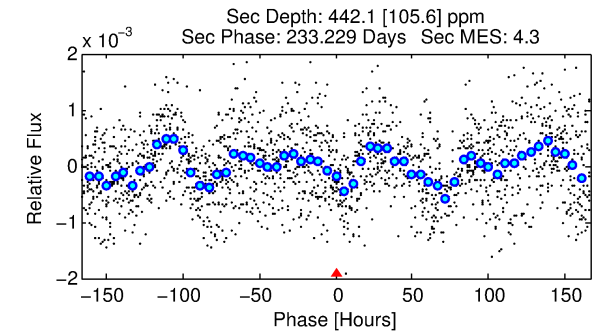
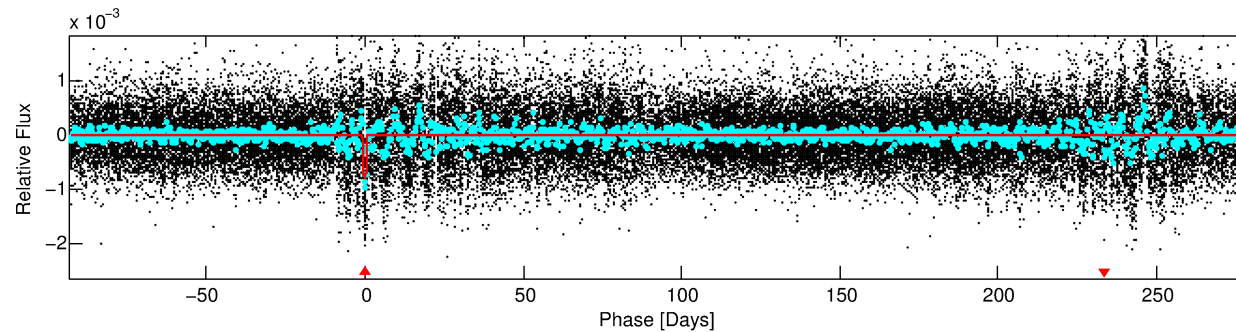
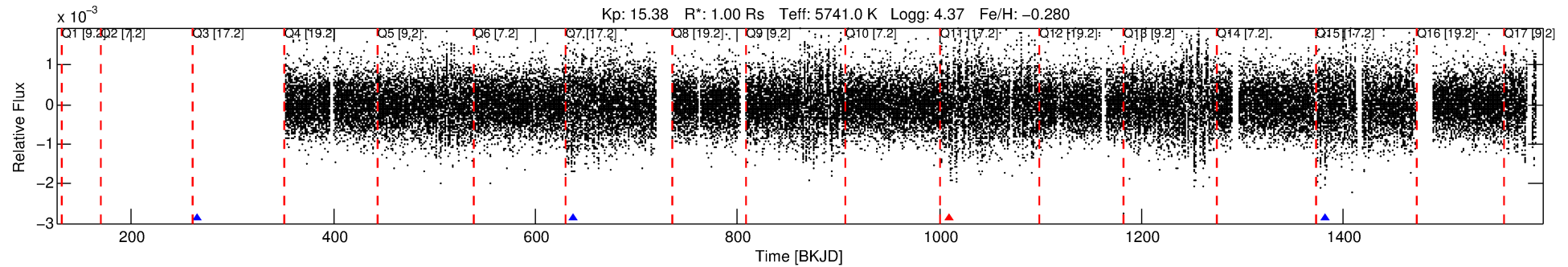
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005613023-01

No Significant Match Found

DV One-Page Summary

KIC: 5613023 Candidate: 1 of 1 Period: 372.241 d



DV Fit Results:

Period = 372.24138 [0.01764] d
Epoch = 265.8168 [0.0377] BKJD
Rp/R* = 0.0258 [0.0057]
a/R* = 94.14 [89.17]
b = 0.46 [1.64]
Seff = 1.06 [0.39]
Teq = 258 [24] K
Rp = 2.82 [1.01] Re
a = 0.9593 [0.2282] AU
Ag = 28188.71 [17294.56] [1.63σ]
Teff = 5178 [674] K [7.29σ]

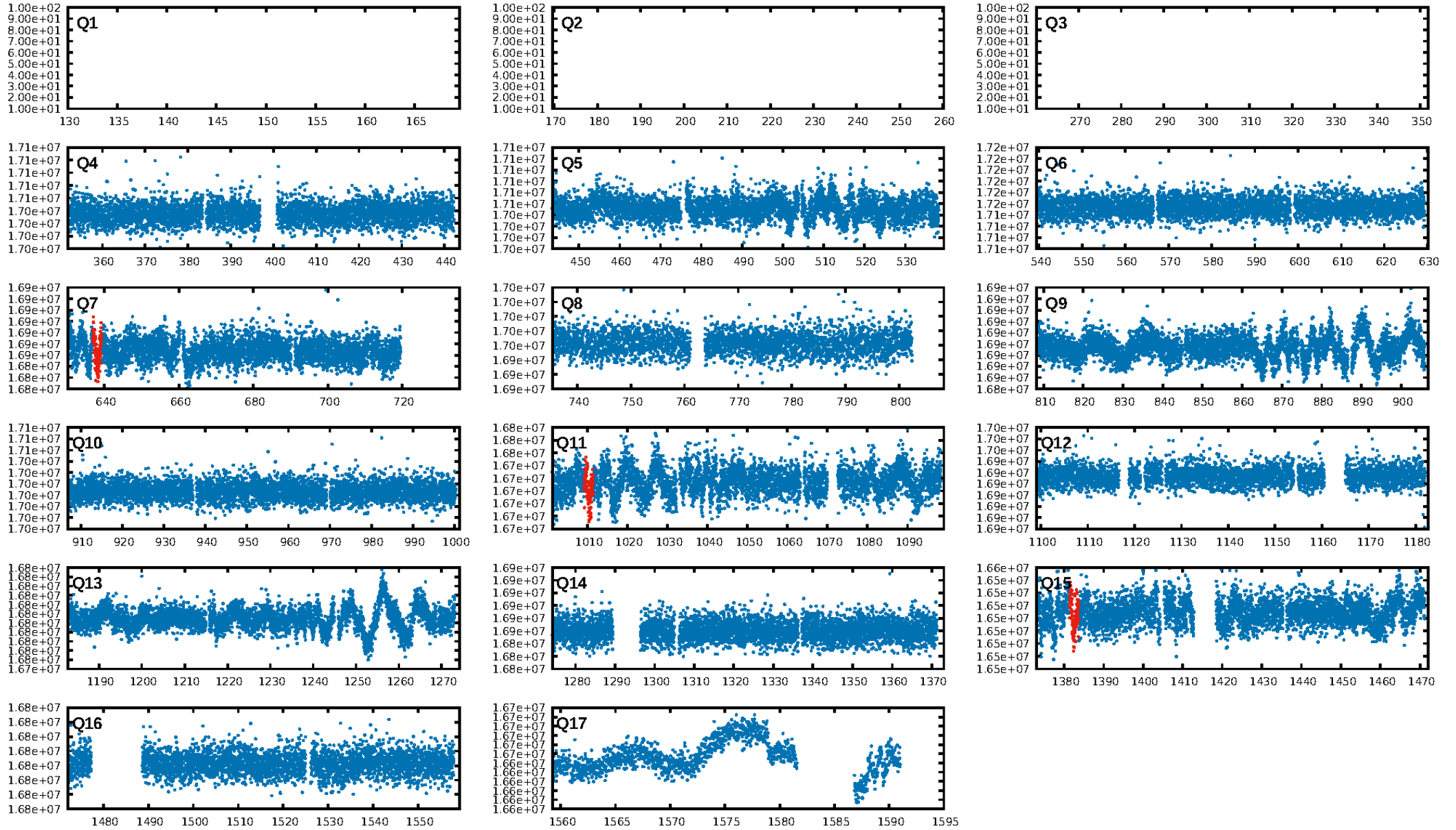
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 51.6%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.21e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 4.088
Centroid-sig: 36.2%
Centroid-so: 2.670 arcsec [1.02σ]
OotOffset-rm: 5.130 arcsec [11.49σ]
KicOffset-rm: 5.025 arcsec [11.16σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

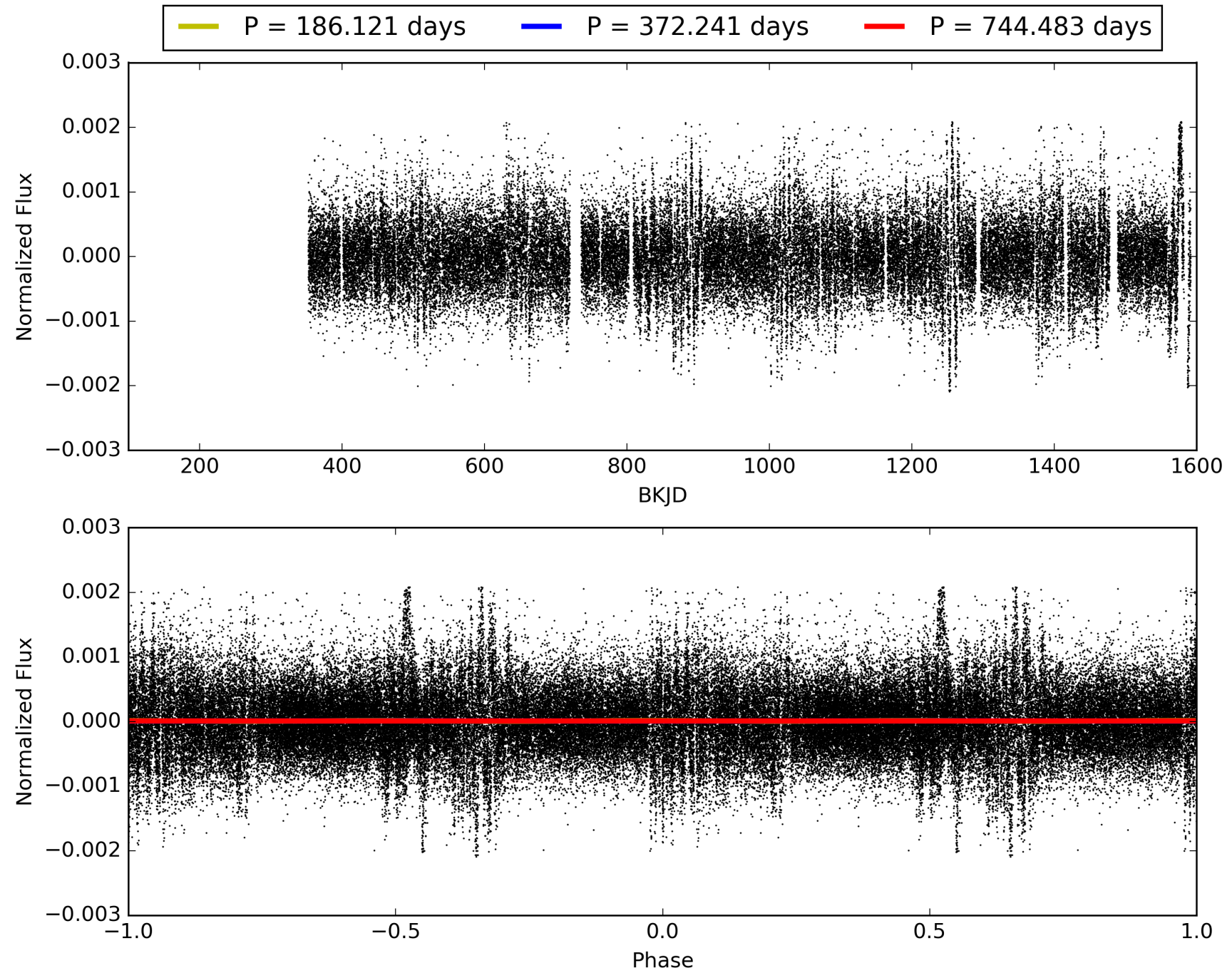
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:37:53 Z

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

TCE 005613023-01, PDC Light Curves

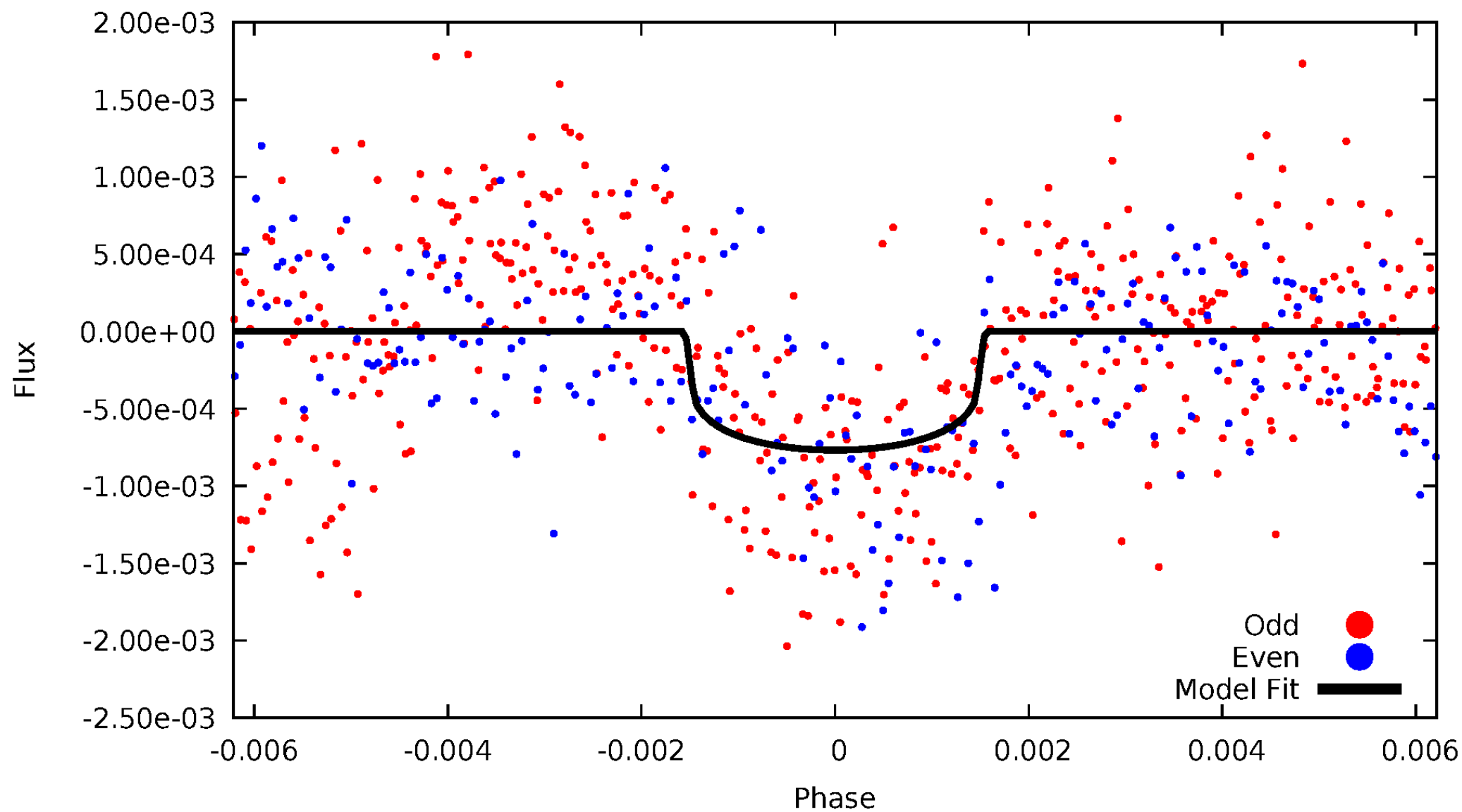


TCE 005613023-01



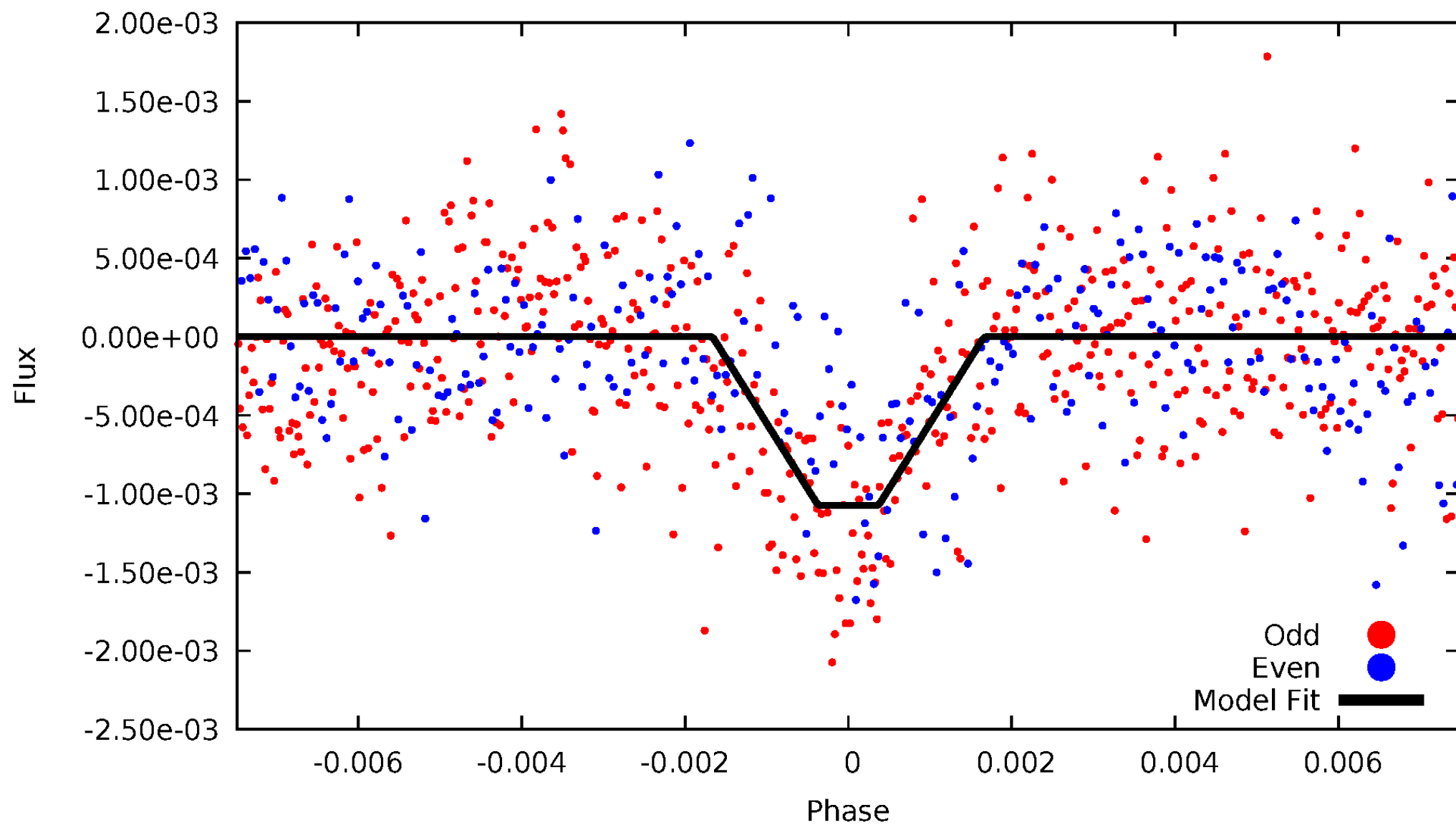
DV Odd/Even

TCE 005613023-01



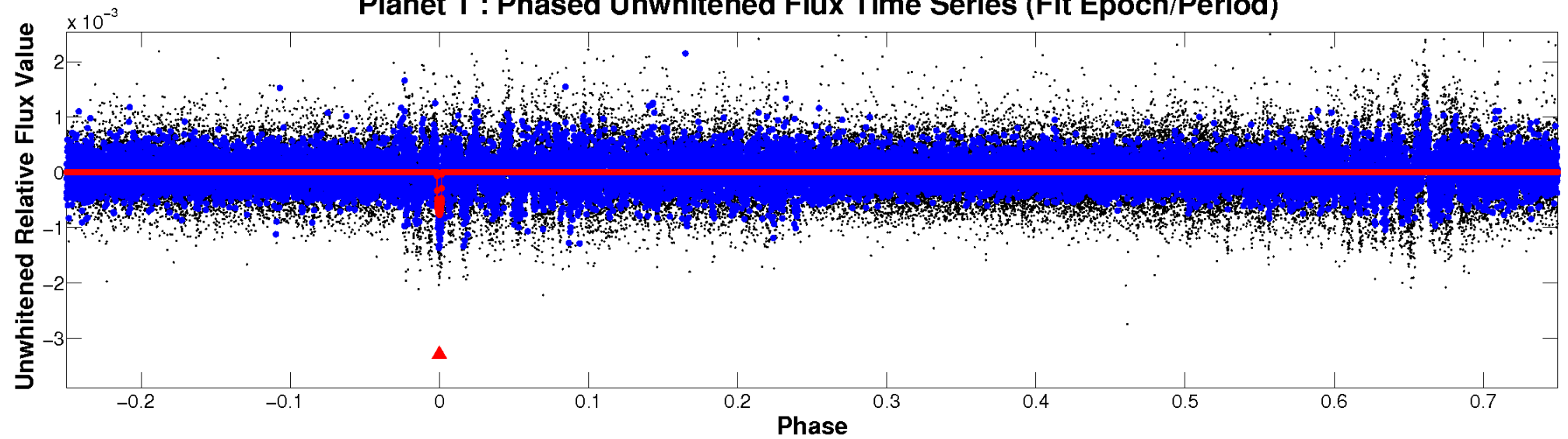
ALT Odd/Even

TCE 005613023-01

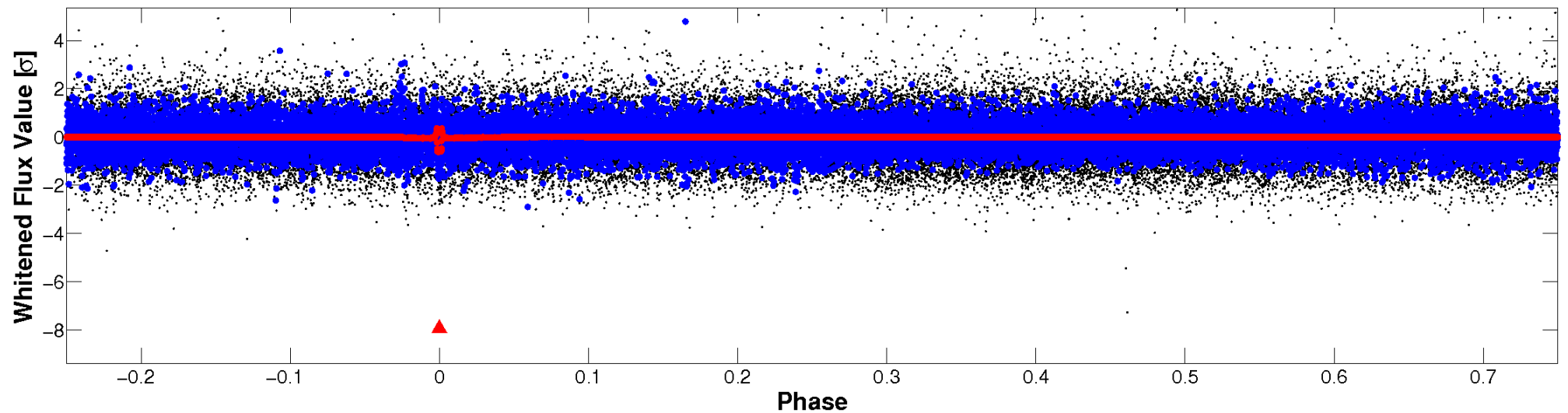


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



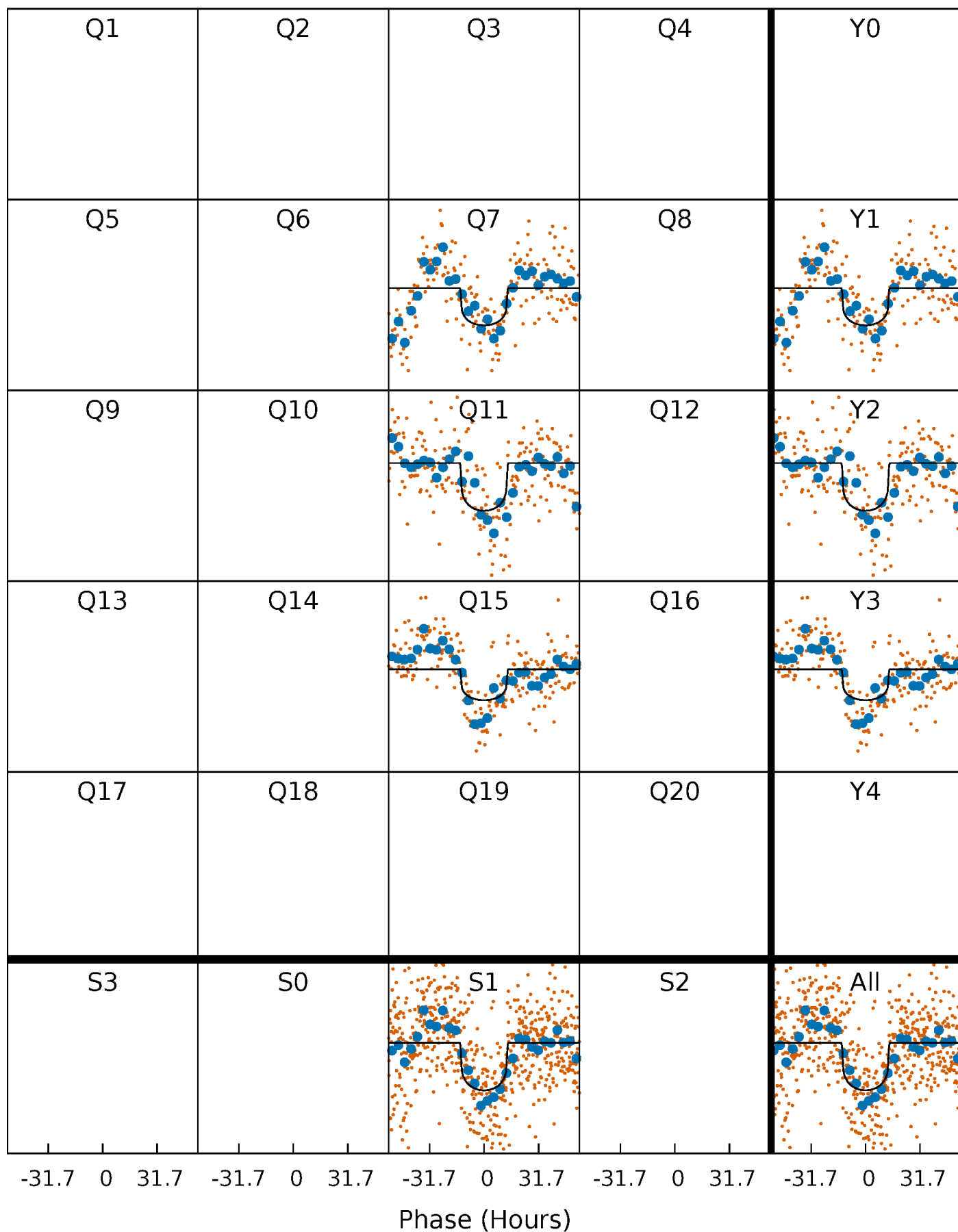
PDC Quarter-Phased Transit Curves

TCE 005613023-01 P=372.241377 Days $T_0=265.816782$ (BKJD)



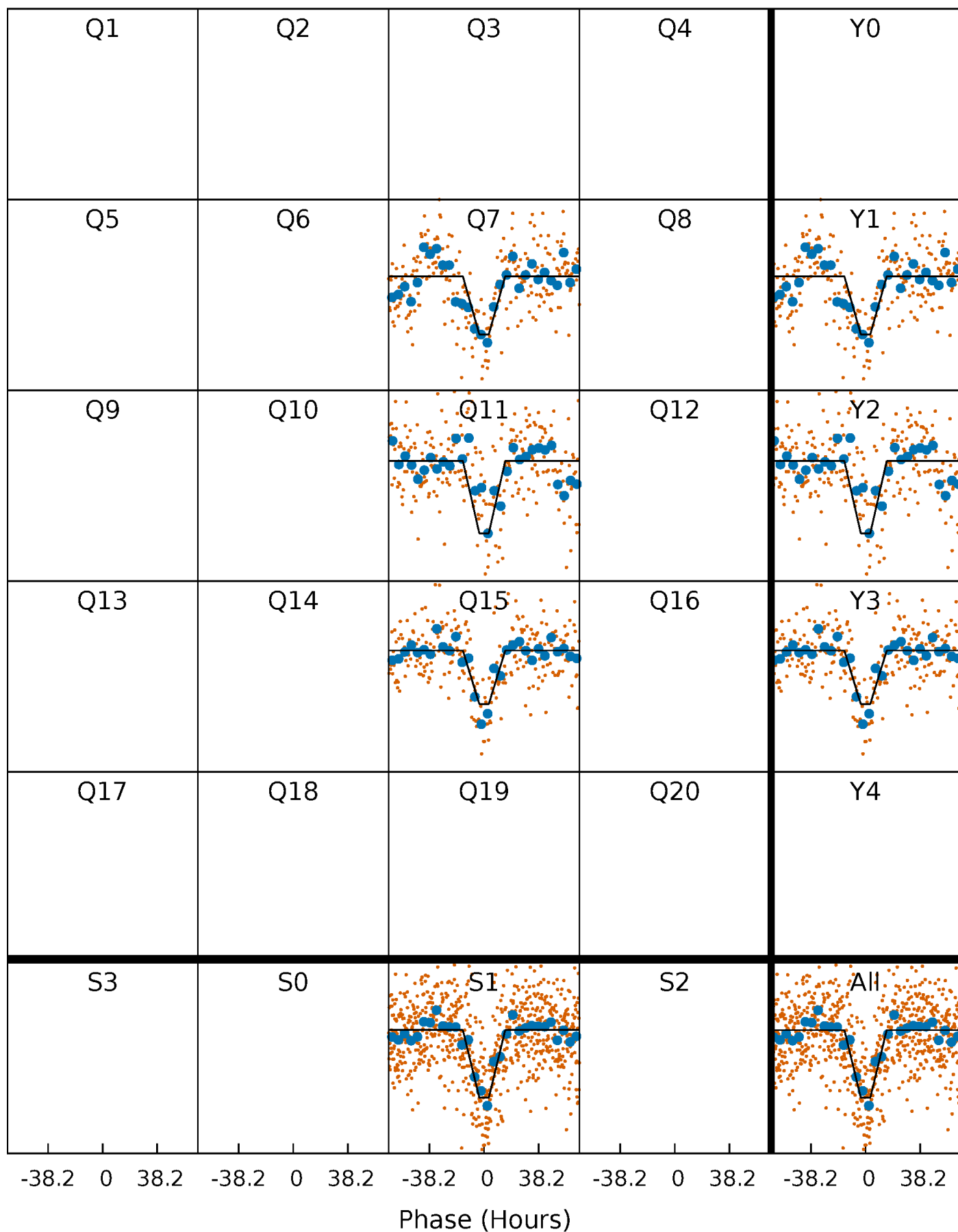
DV Quarter-Phased Transit Curves

TCE 005613023-01 P=372.241377 Days $T_0=265.816782$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

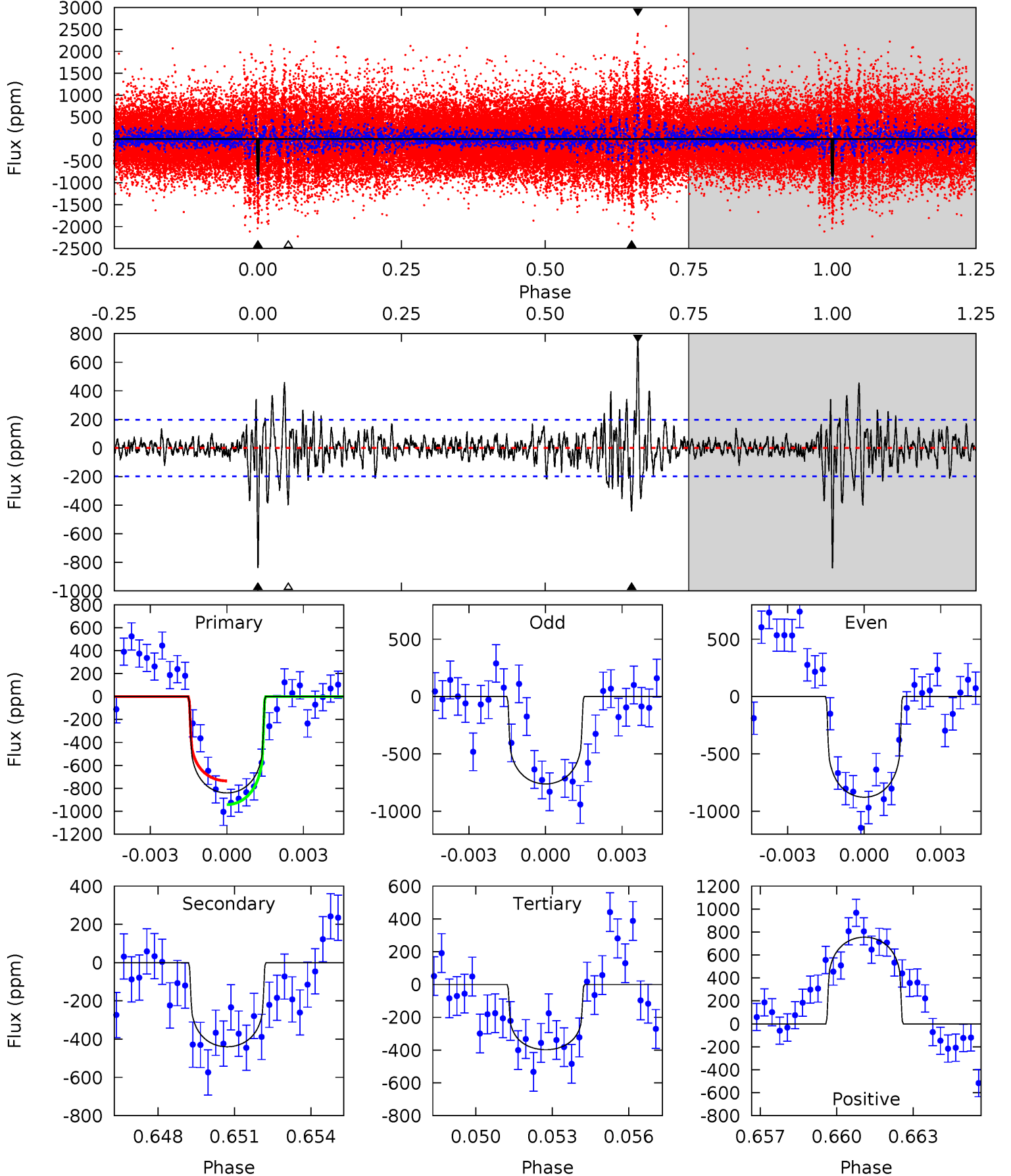
TCE 005613023-01 P=372.061072 Days $T_0=266.246637$ (BKJD)



DV Model-Shift Uniqueness Test

005613023-01, P = 372.241377 Days, E = 265.816782 Days

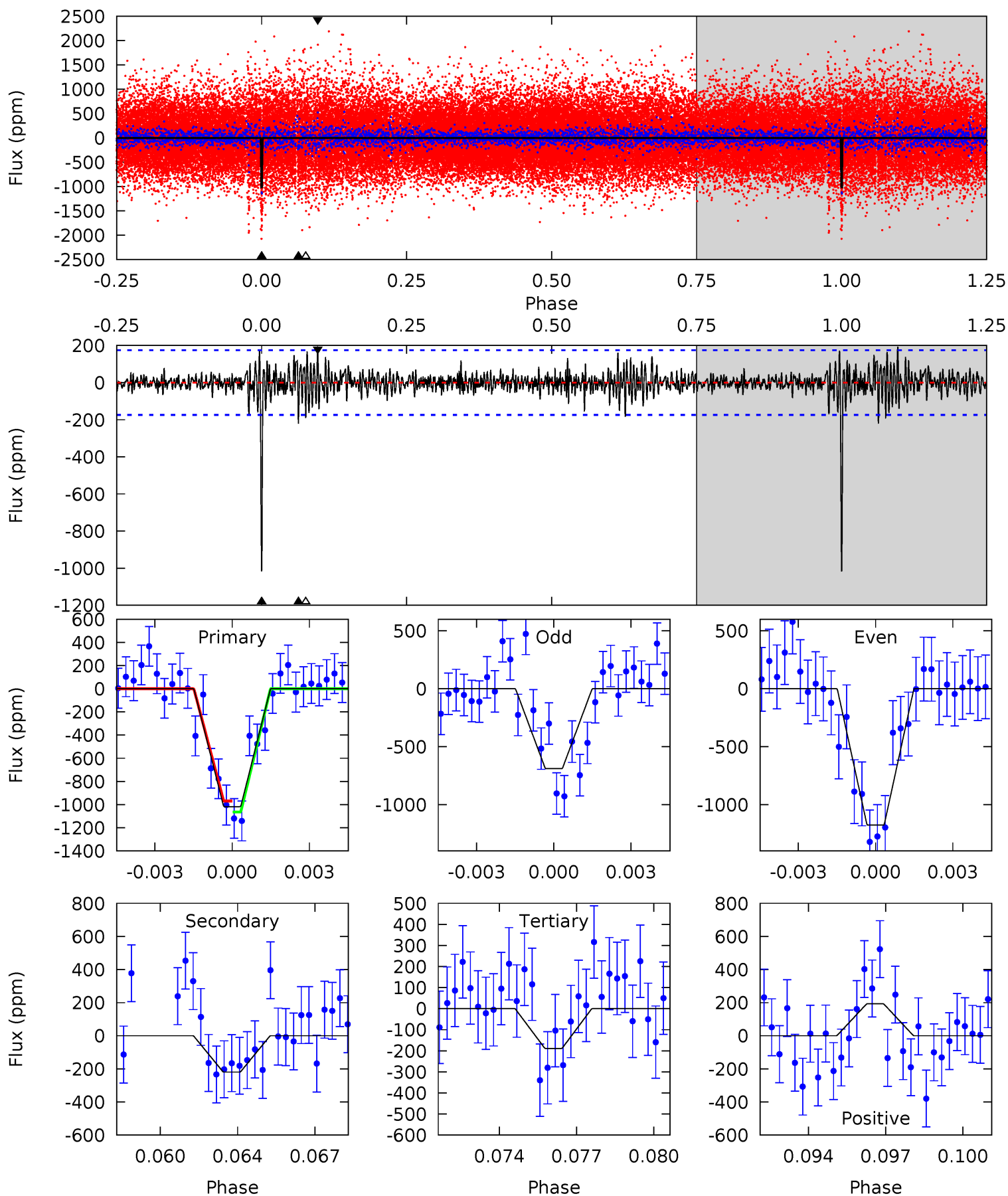
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.3	11.7	10.6	20.0	5.24	2.95	2.72	11.7	2.27	1.12	-8.35	1.45	1.10	0.47	2.73



Alt Model-Shift Uniqueness Test

005613023-01, P = 372.061072 Days, E = 266.246637 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	6.59	5.67	5.78	5.23	2.93	1.28	24.8	24.7	0.92	0.81	6.88	0.90	0.16	1.42



Stellar Parameters For KIC 005613023

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5741^{+189}_{-189}	$4.368^{+0.158}_{-0.193}$	$-0.280^{+0.300}_{-0.300}$	$0.999^{+0.279}_{-0.186}$	$0.849^{+0.130}_{-0.070}$	$1.201^{+0.938}_{-0.613}$
	+3%/-3%	+4%/-4%	+107%/-107%	+28%/-19%	+15%/-8%	+78%/-51%
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 005613023-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-440 ± 38	$2.86^{+0.83}_{-0.75}$	361^{+32}_{-23}	5221^{+656}_{-480}	27043^{+22966}_{-10521}
Alt.	-220 ± 33	$3.57^{+0.91}_{-0.71}$	363^{+28}_{-22}	4160^{+360}_{-276}	8714^{+5377}_{-3109}

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 $A_{obs} \gg 1.0$

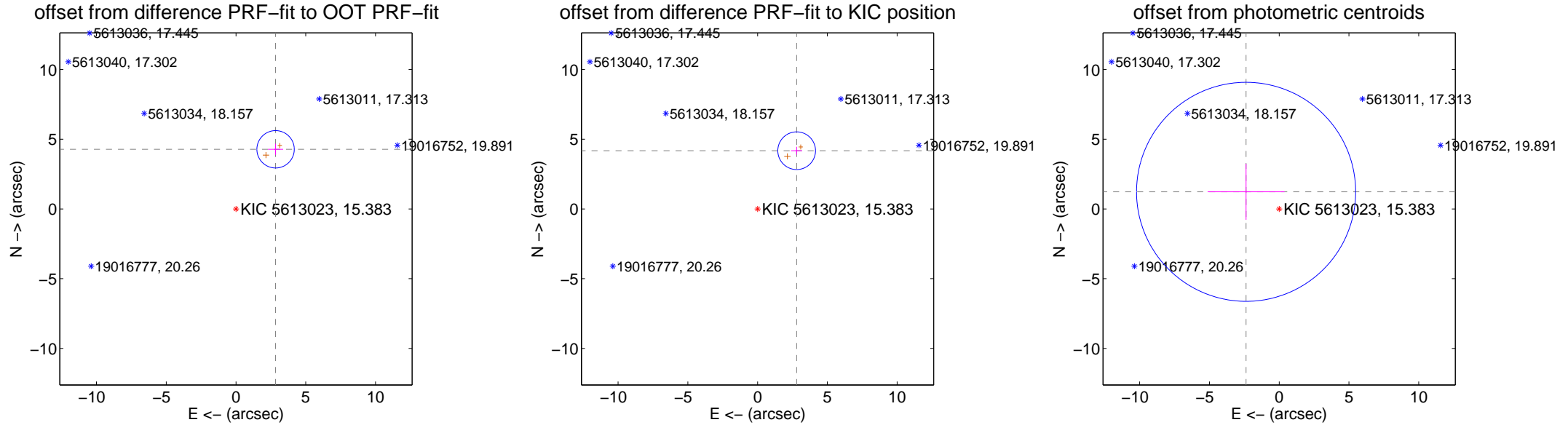
DV Centroid Data

Supplemental centroid analysis for 005613023-01. Kepler magnitude: 15.38. Transit SNR 7.37

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.130 ± 0.447	11.49	-2.837 ± 0.540	4.274 ± 0.398
PRF-fit source offset from KIC position	5.025 ± 0.450	11.16	-2.799 ± 0.396	4.174 ± 0.282
photometric centroid source offset	2.67 ± 2.62	1.02	2.37 ± 2.76	1.23 ± 2.01

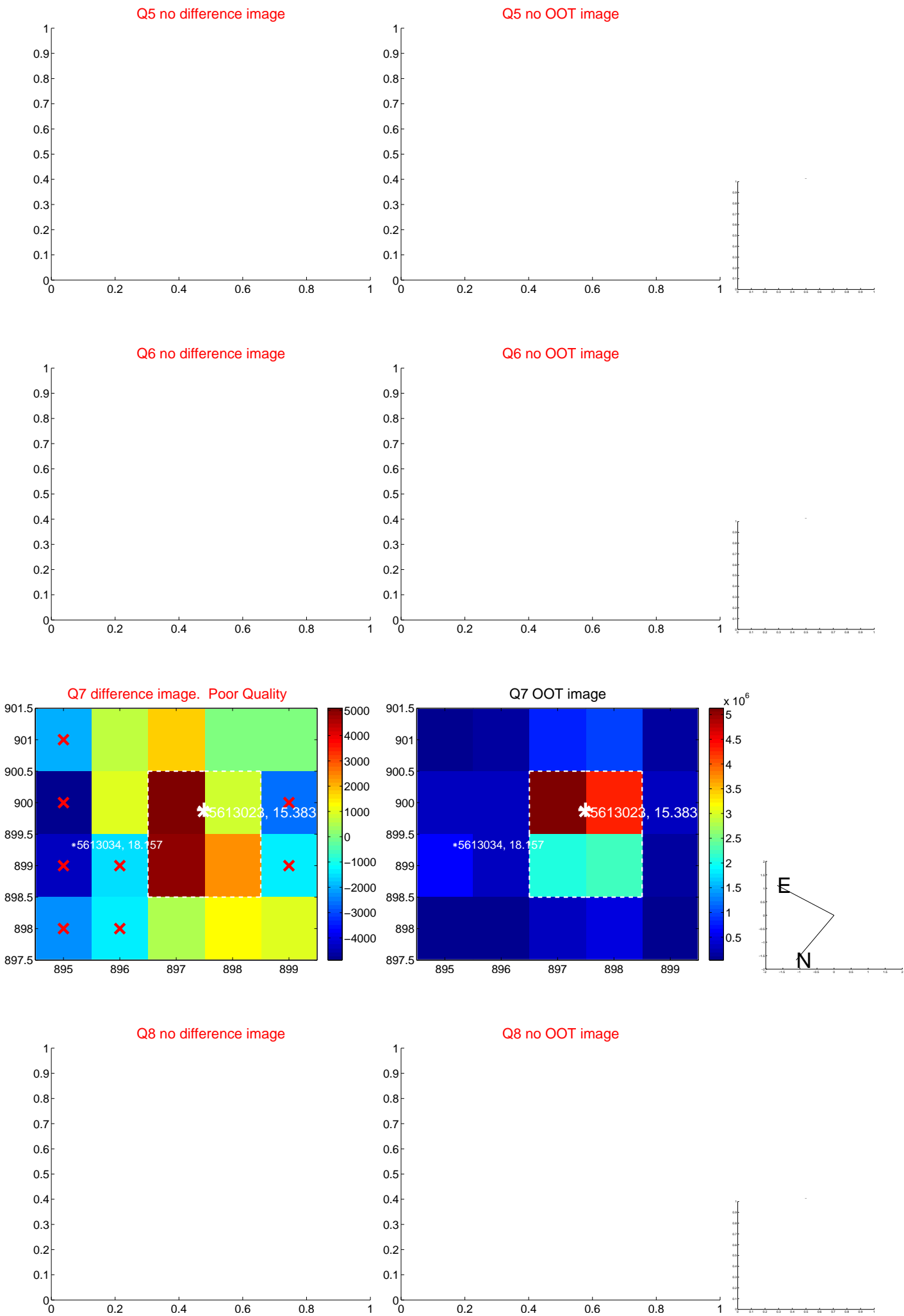


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

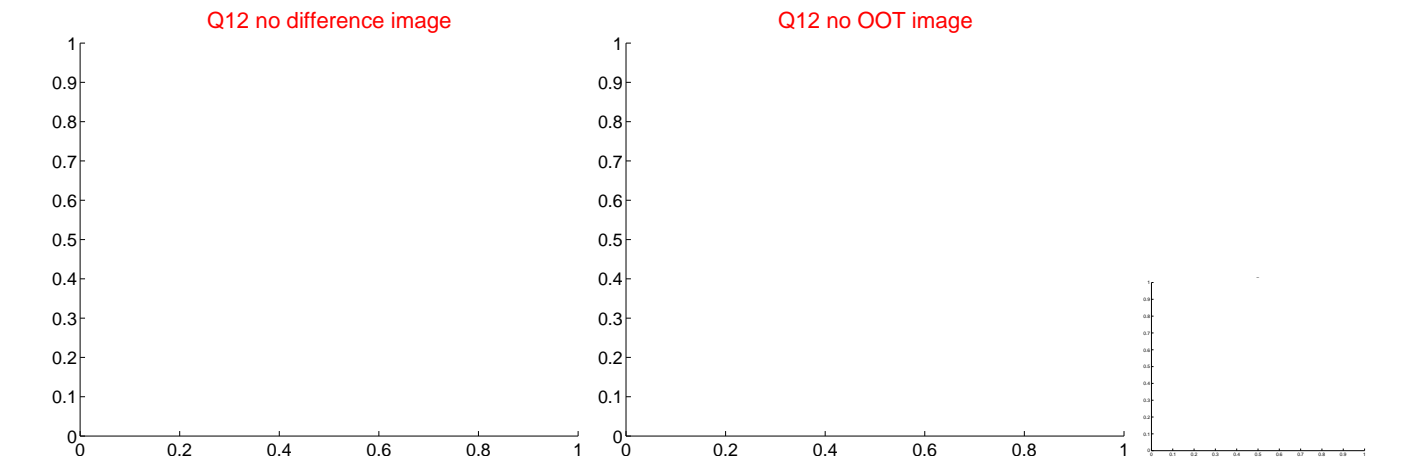
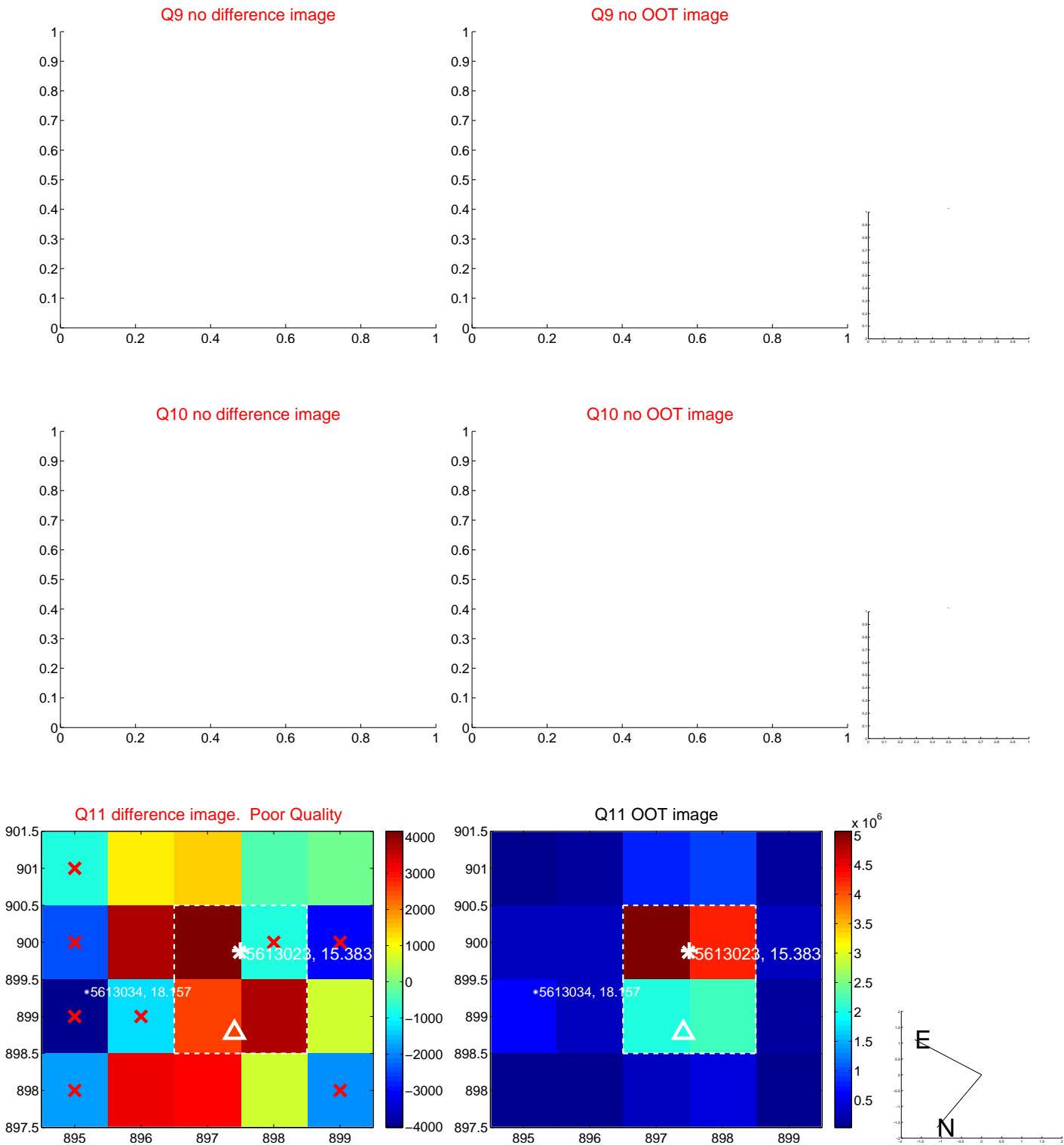
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



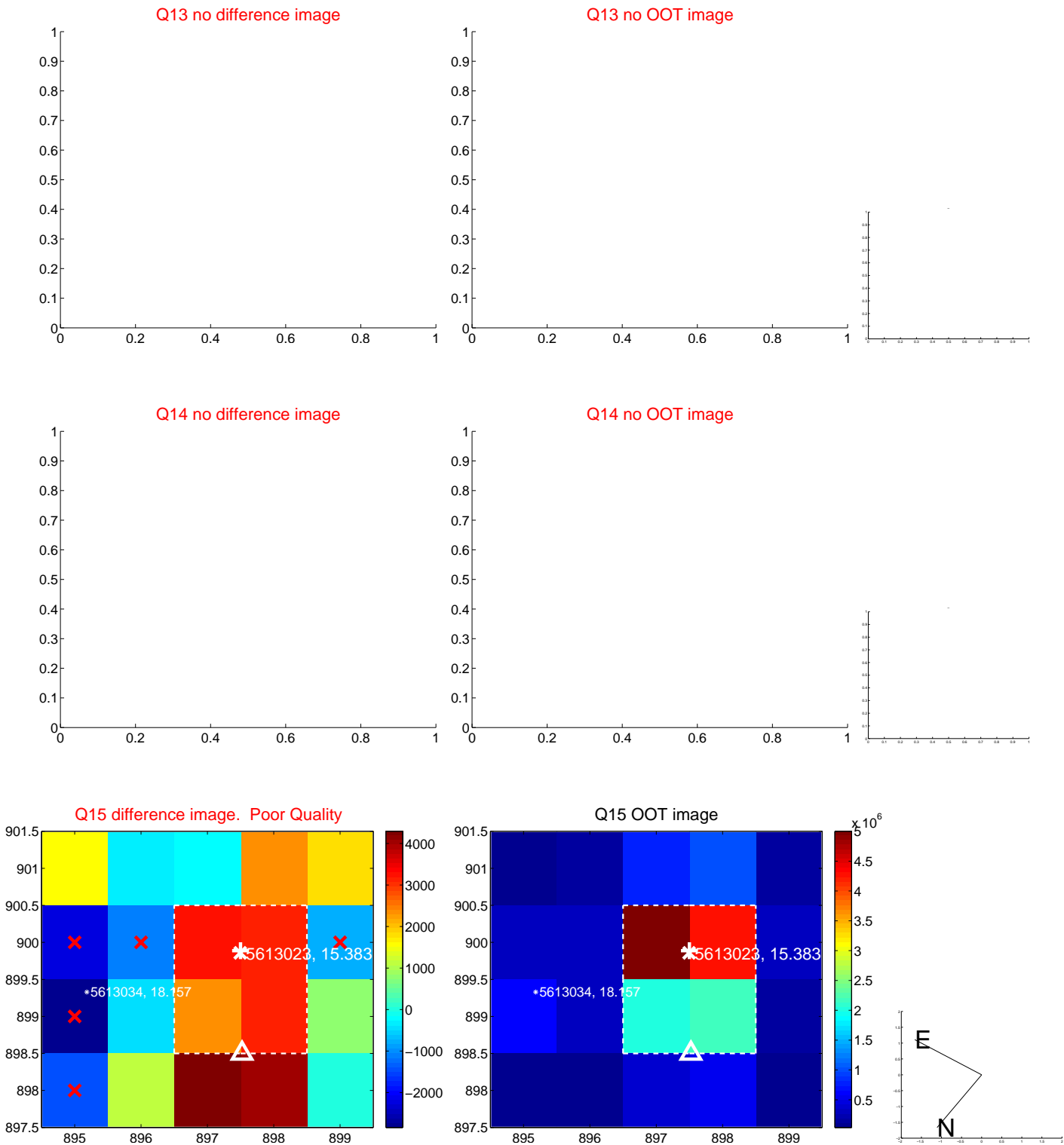
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



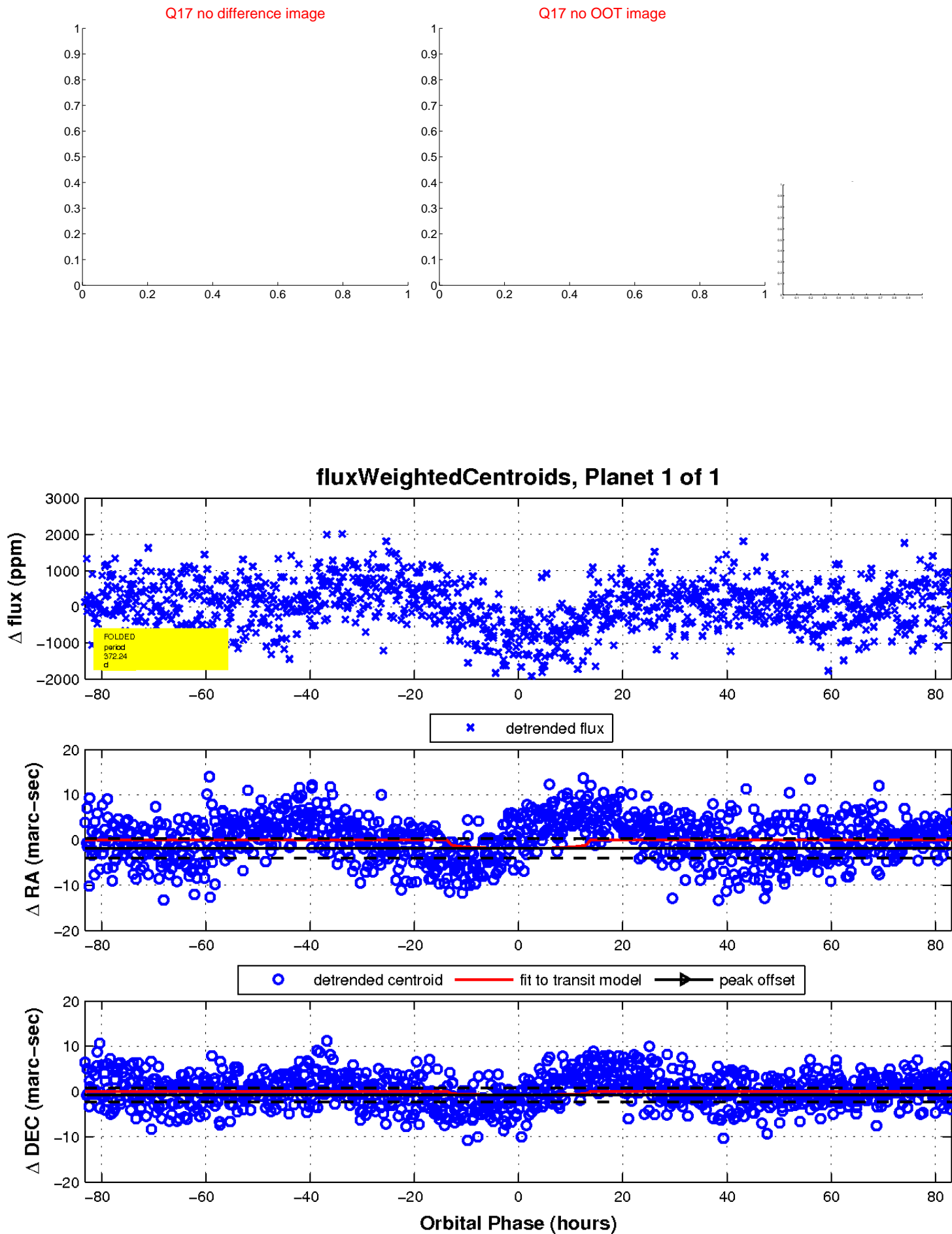
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

