

KIC 007618540

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})
007618540-01	OBS	No	370.585072	231.095427	694.0	15.248	9.6	9.2	0.94	6061	2.82	1.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007618540-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

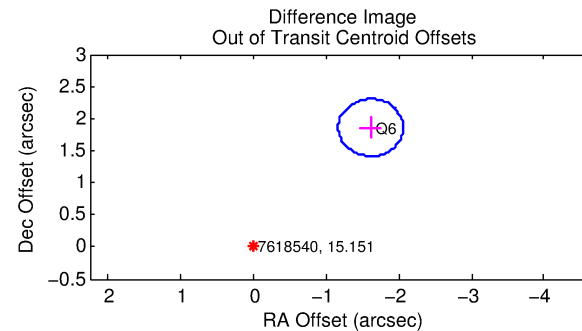
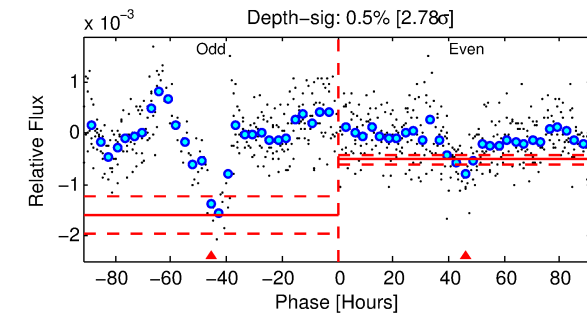
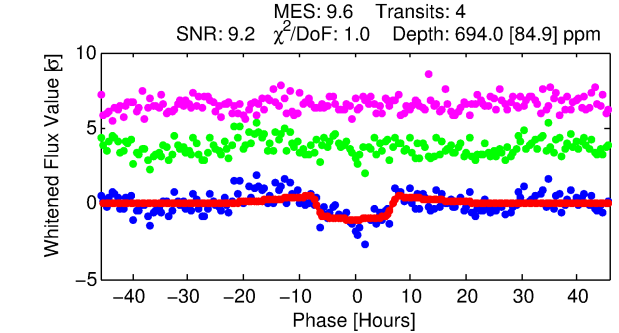
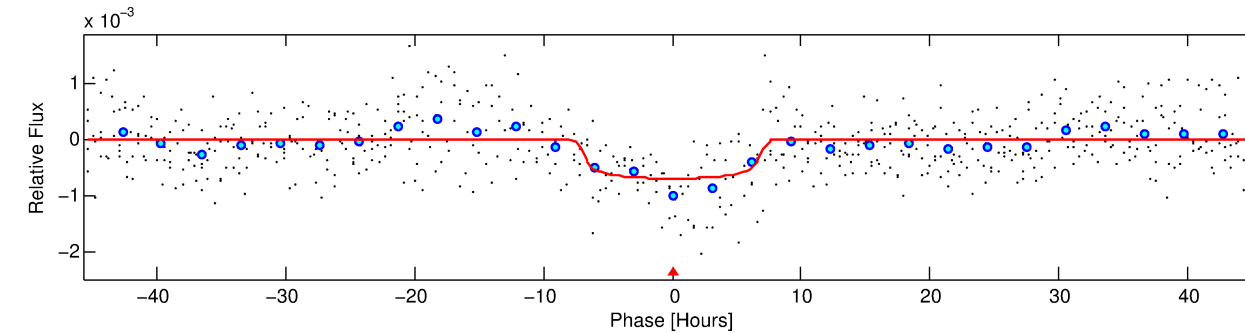
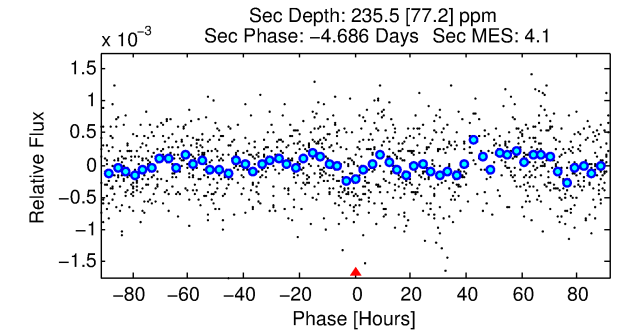
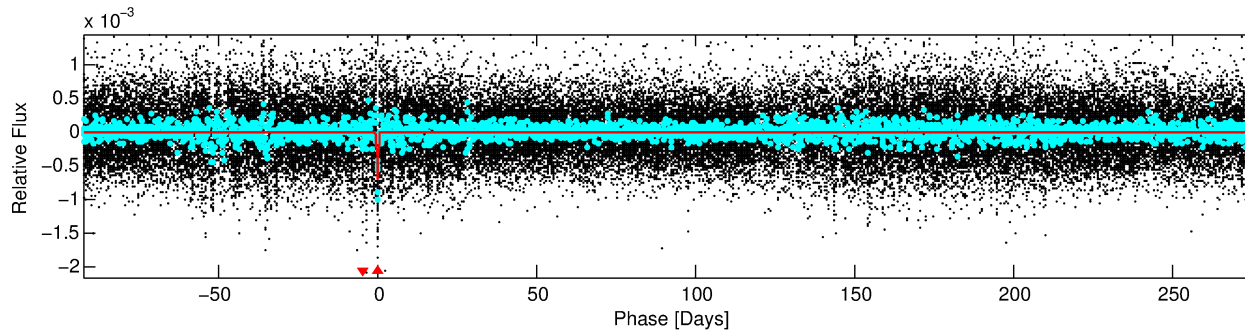
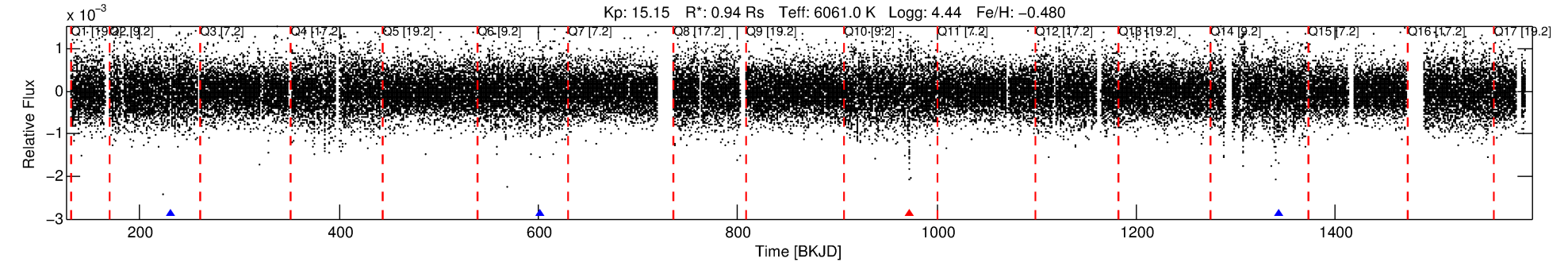
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007618540-01

No Significant Match Found

DV One-Page Summary

KIC: 7618540 Candidate: 1 of 1 Period: 370.585 d



DV Fit Results:

Period = 370.58507 [0.01324] d
Epoch = 231.0954 [0.0272] BKJD
Rp/R* = 0.0274 [0.0036]
a/R* = 105.99 [59.39]
b = 0.85 [0.18]
Seff = 1.13 [0.42]
Teq = 263 [25] K
Rp = 2.82 [0.85] Re
a = 0.9743 [0.2301] AU
Ag = 15508.07 [8471.15] [1.83σ]
Teffp = 4534 [497] K [8.59σ]

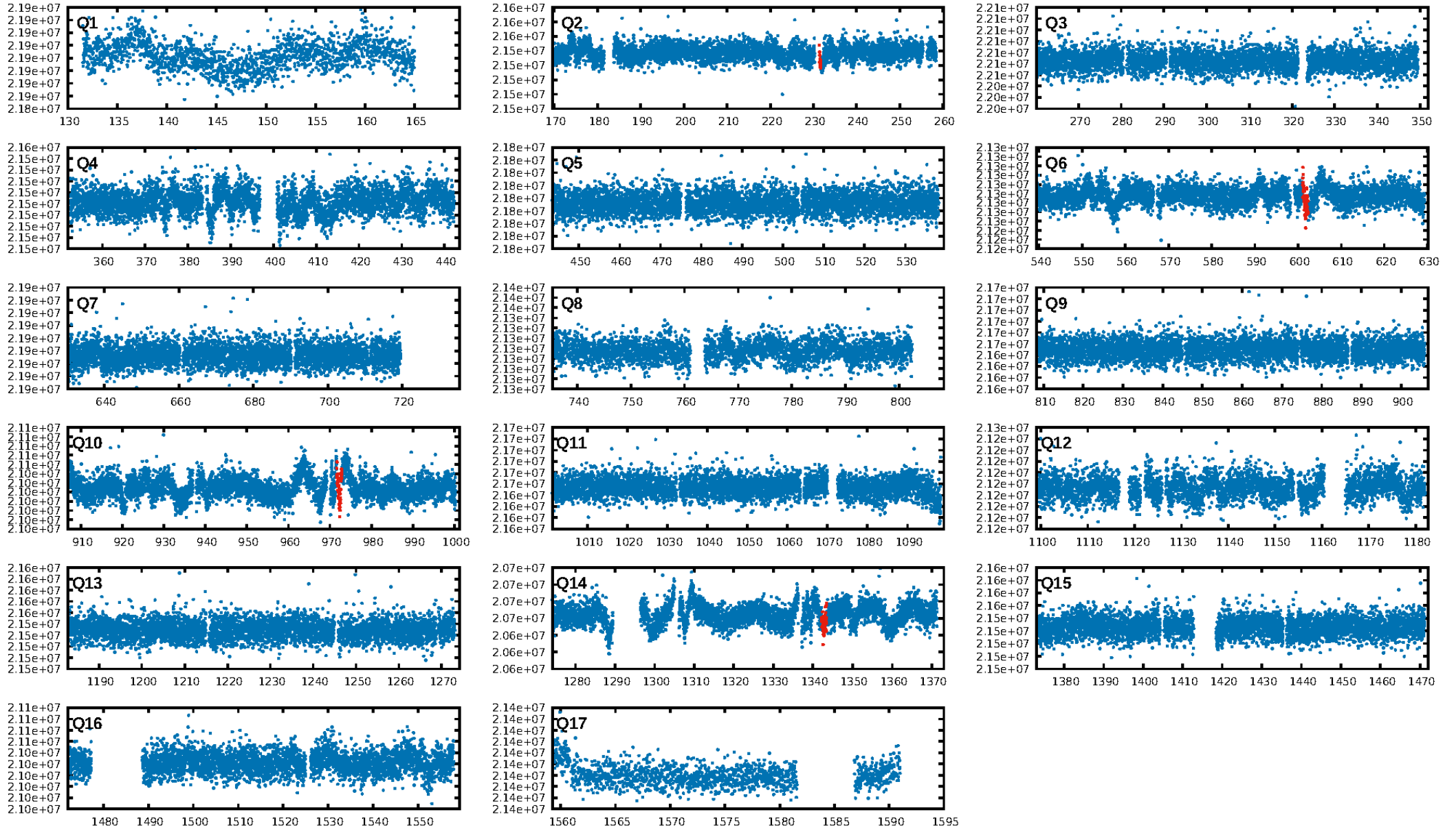
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.32e-12
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: -41.89
Centroid-sig: 54.3%
Centroid-so: 1.775 arcsec [0.71σ]
OotOffset-rm: 2.461 arcsec [16.54σ]
KicOffset-rm: 2.342 arcsec [15.67σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

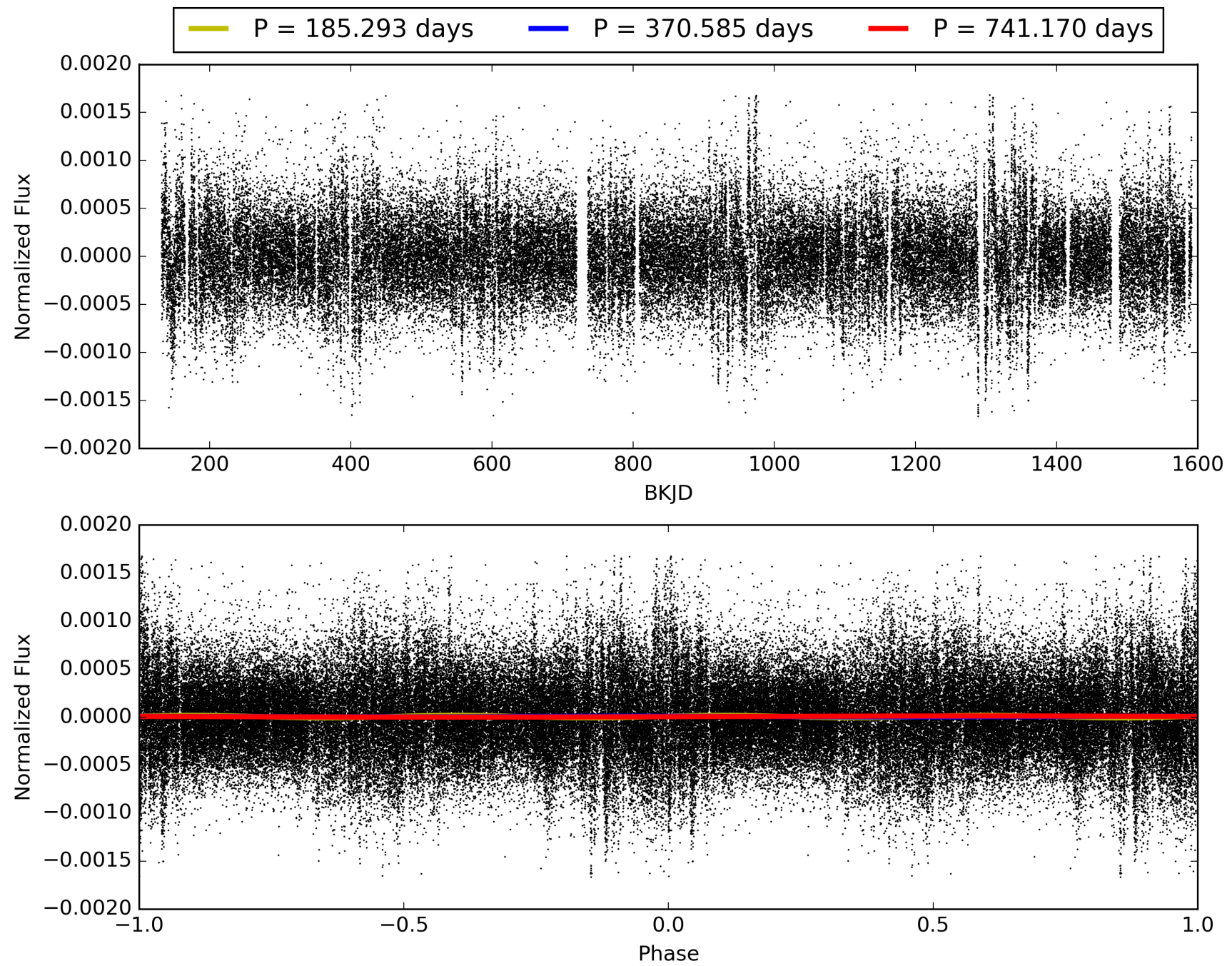
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:37:27 Z

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

TCE 007618540-01, PDC Light Curves

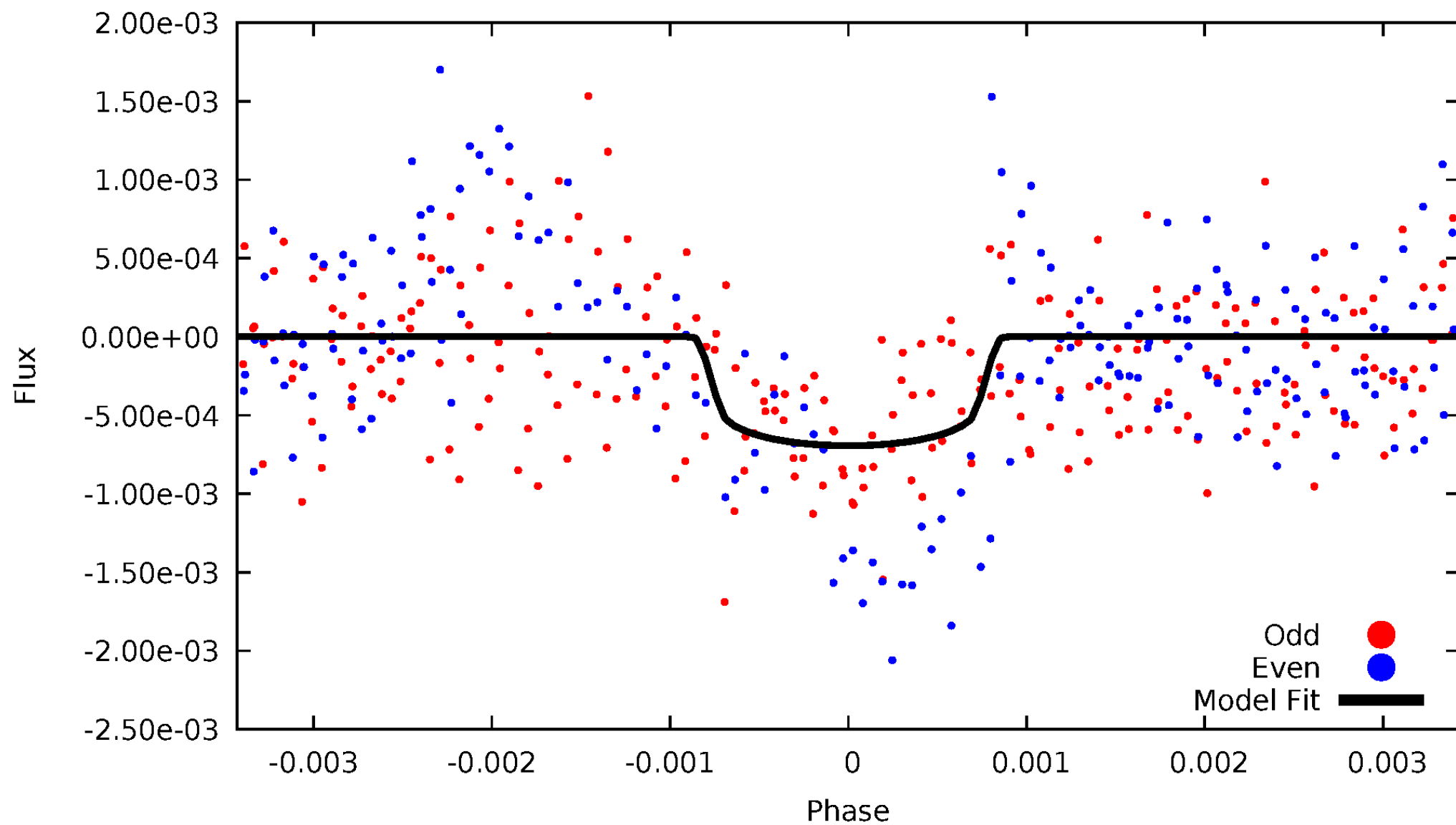


TCE 007618540-01



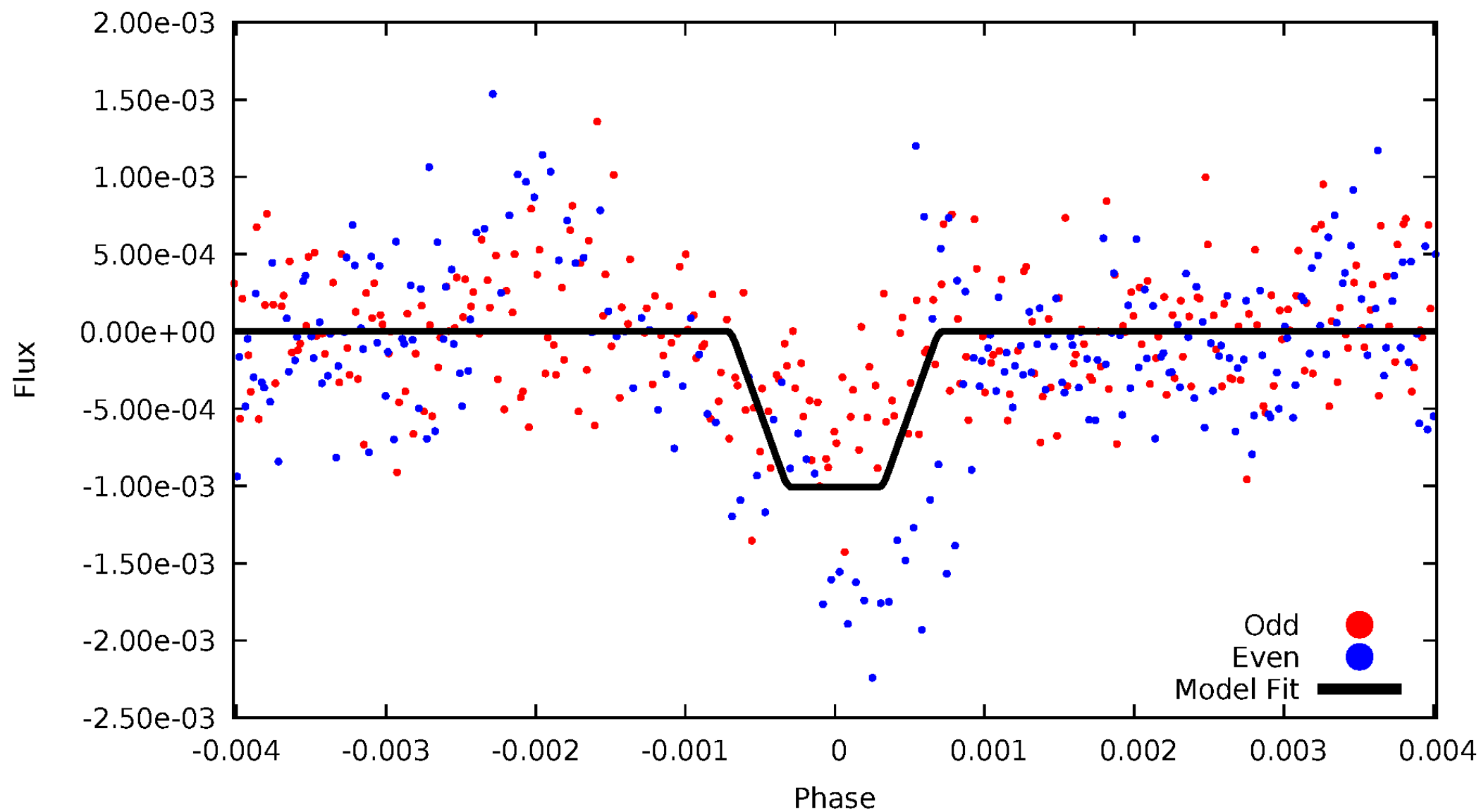
DV Odd/Even

TCE 007618540-01



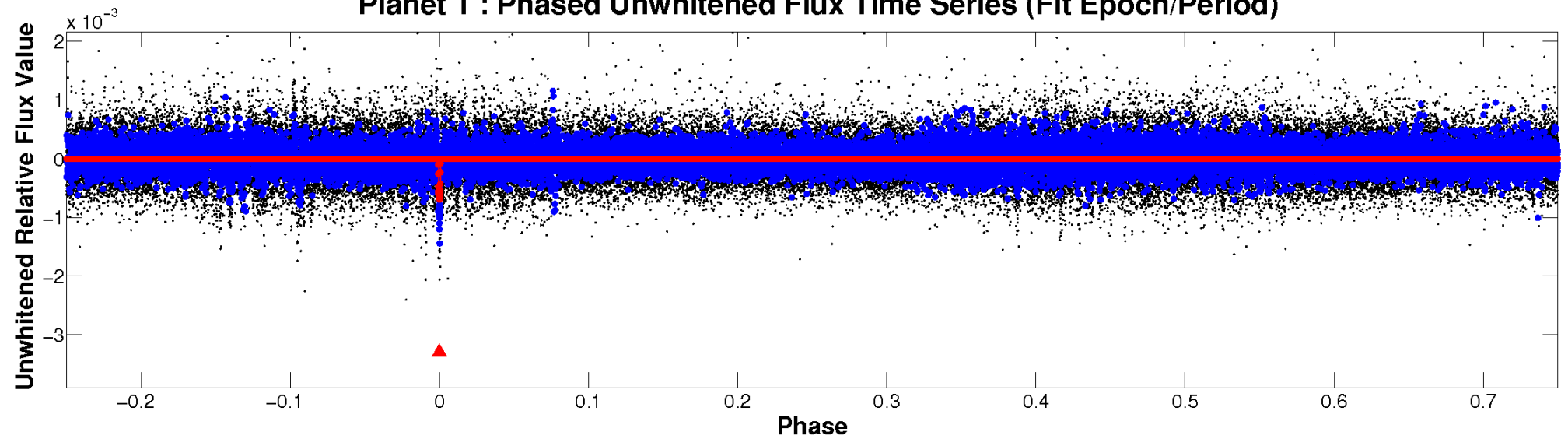
ALT Odd/Even

TCE 007618540-01

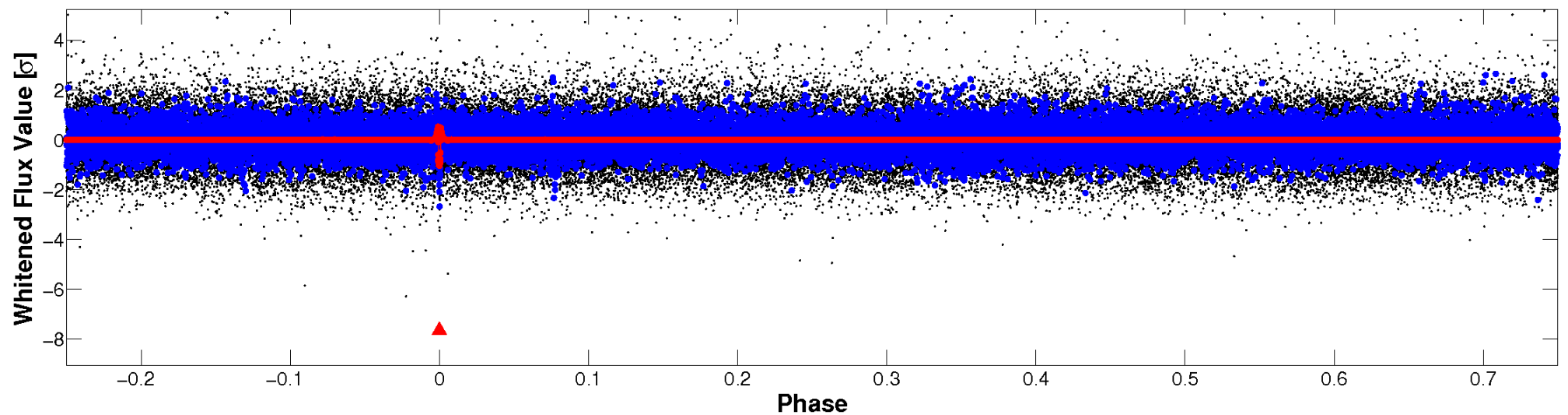


Non-Whitened Vs. Whitened Light Curve

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

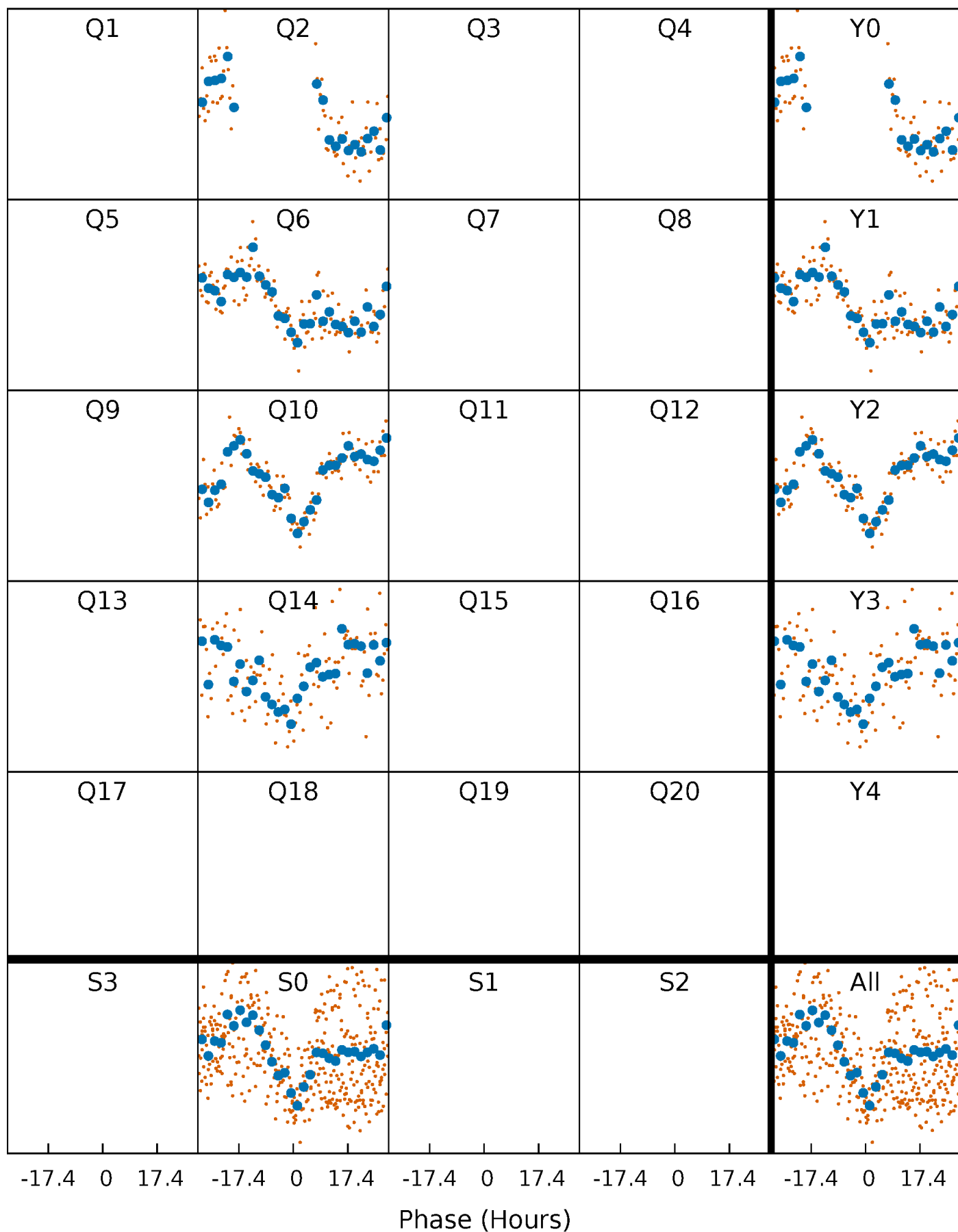


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



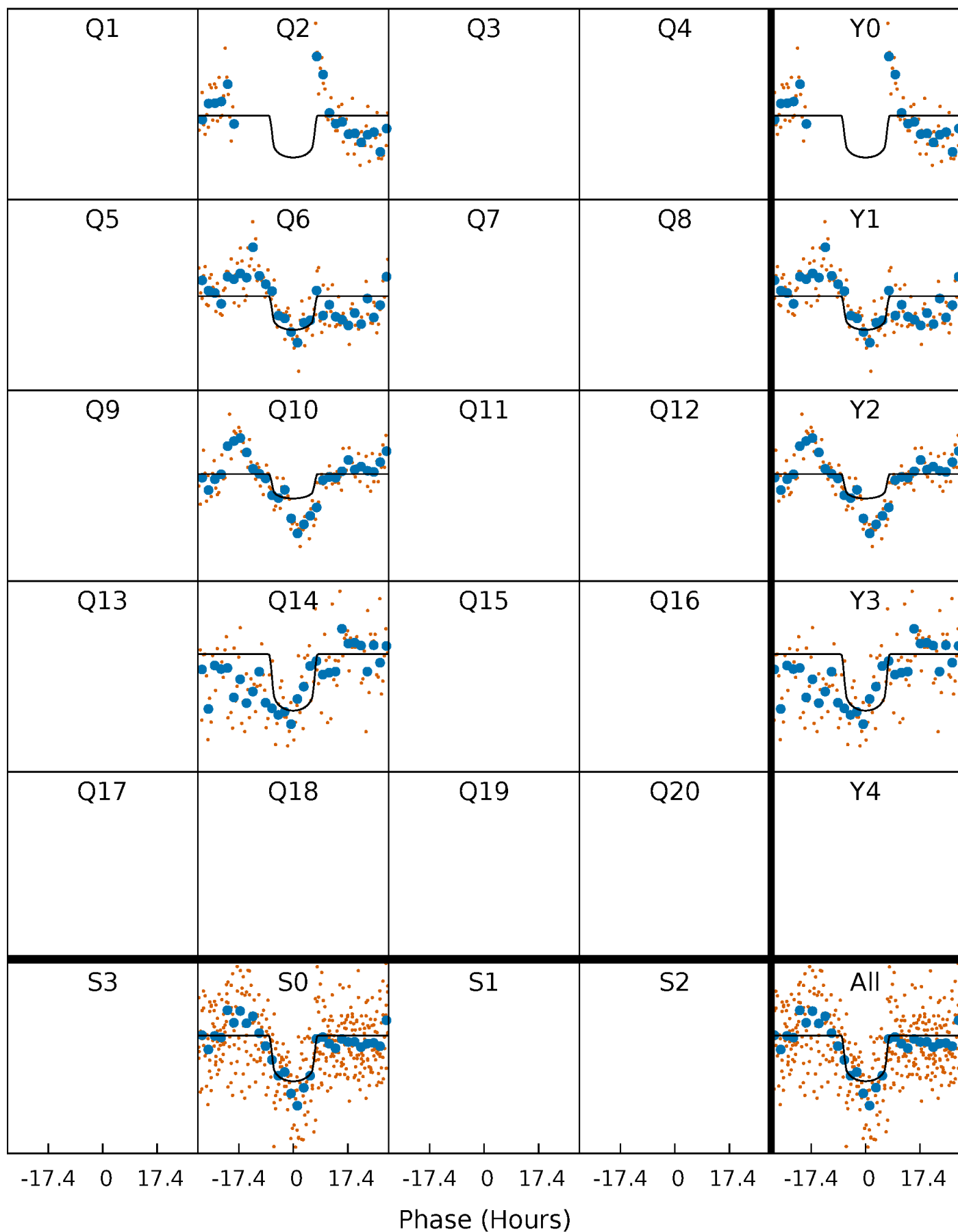
PDC Quarter-Phased Transit Curves

TCE 007618540-01 P=370.585072 Days $T_0=231.095427$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007618540-01 P=370.585072 Days $T_0=231.095427$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

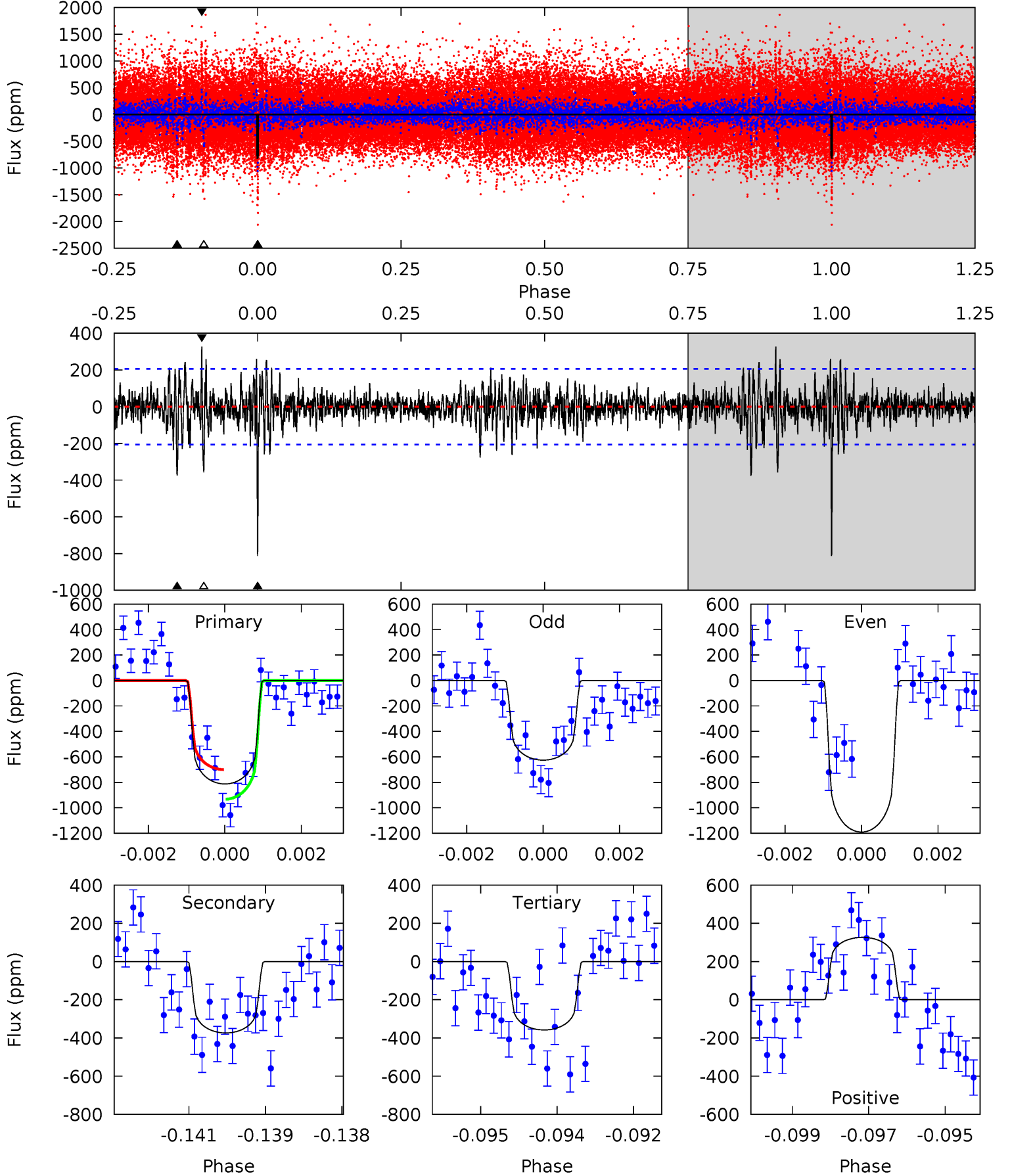
TCE 007618540-01 P=370.535366 Days $T_0=231.193429$ (BKJD)



DV Model-Shift Uniqueness Test

007618540-01, P = 370.585072 Days, E = 231.095427 Days

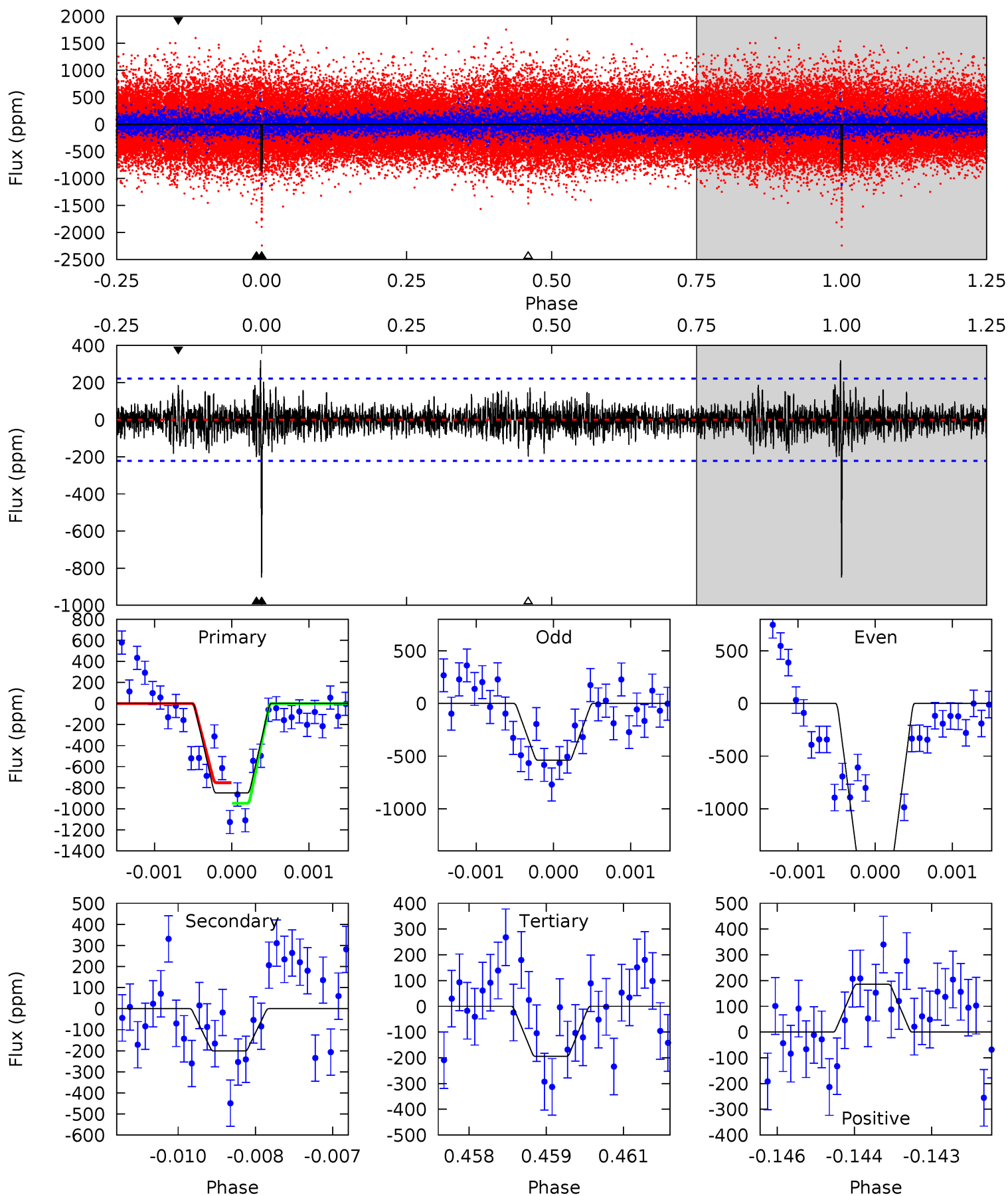
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.1	9.70	9.29	8.47	5.35	3.13	1.71	11.8	12.6	0.40	1.22	6.94	-2.30	0.29	2.99



Alt Model-Shift Uniqueness Test

007618540-01, P = 370.535366 Days, E = 231.193429 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	4.87	4.71	4.51	5.39	3.19	1.23	15.9	16.1	0.16	0.36	11.2	-0.10	0.27	2.37



Stellar Parameters For KIC 007618540

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6061^{+181}_{-199}	$4.444^{+0.098}_{-0.196}$	$-0.480^{+0.300}_{-0.300}$	$0.941^{+0.257}_{-0.129}$	$0.898^{+0.109}_{-0.089}$	$1.517^{+0.661}_{-0.749}$
	+3%/-3%	+2%/-4%	+62%/-62%	+27%/-14%	+12%/-10%	+44%/-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 007618540-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-374 ± 39	$2.90^{+0.57}_{-0.50}$	371^{+26}_{-21}	5146^{+403}_{-318}	23048^{+10934}_{-6789}
Alt.	-201 ± 41	$3.35^{+0.55}_{-0.48}$	371^{+26}_{-20}	4291^{+261}_{-248}	9237^{+4304}_{-2906}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

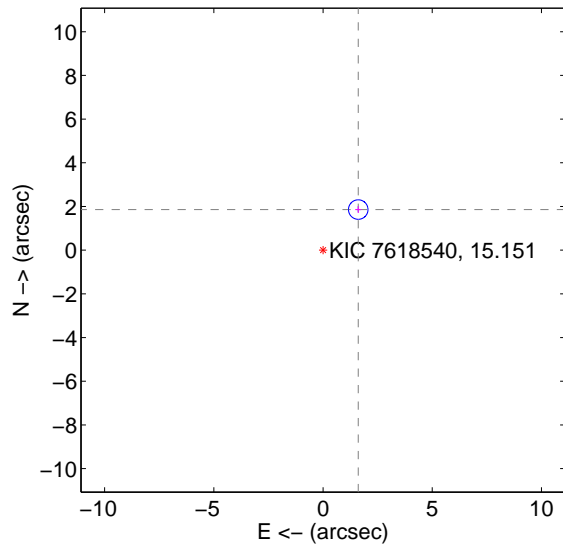
Supplemental centroid analysis for 007618540-01. Kepler magnitude: 15.15. Transit SNR 9.18

There are 1 quarters with good PRF difference image offsets

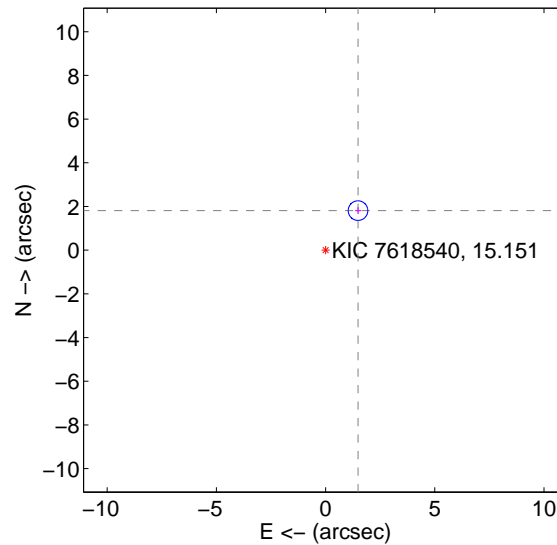
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.461 ± 0.149	16.54	-1.612 ± 0.135	1.859 ± 0.158
PRF-fit source offset from KIC position	2.342 ± 0.149	15.67	-1.485 ± 0.135	1.812 ± 0.158
photometric centroid source offset	1.78 ± 2.49	0.71	1.39 ± 2.47	1.10 ± 2.51

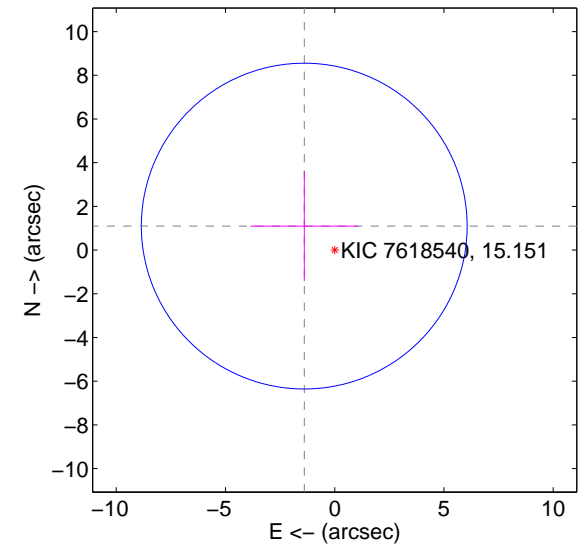
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

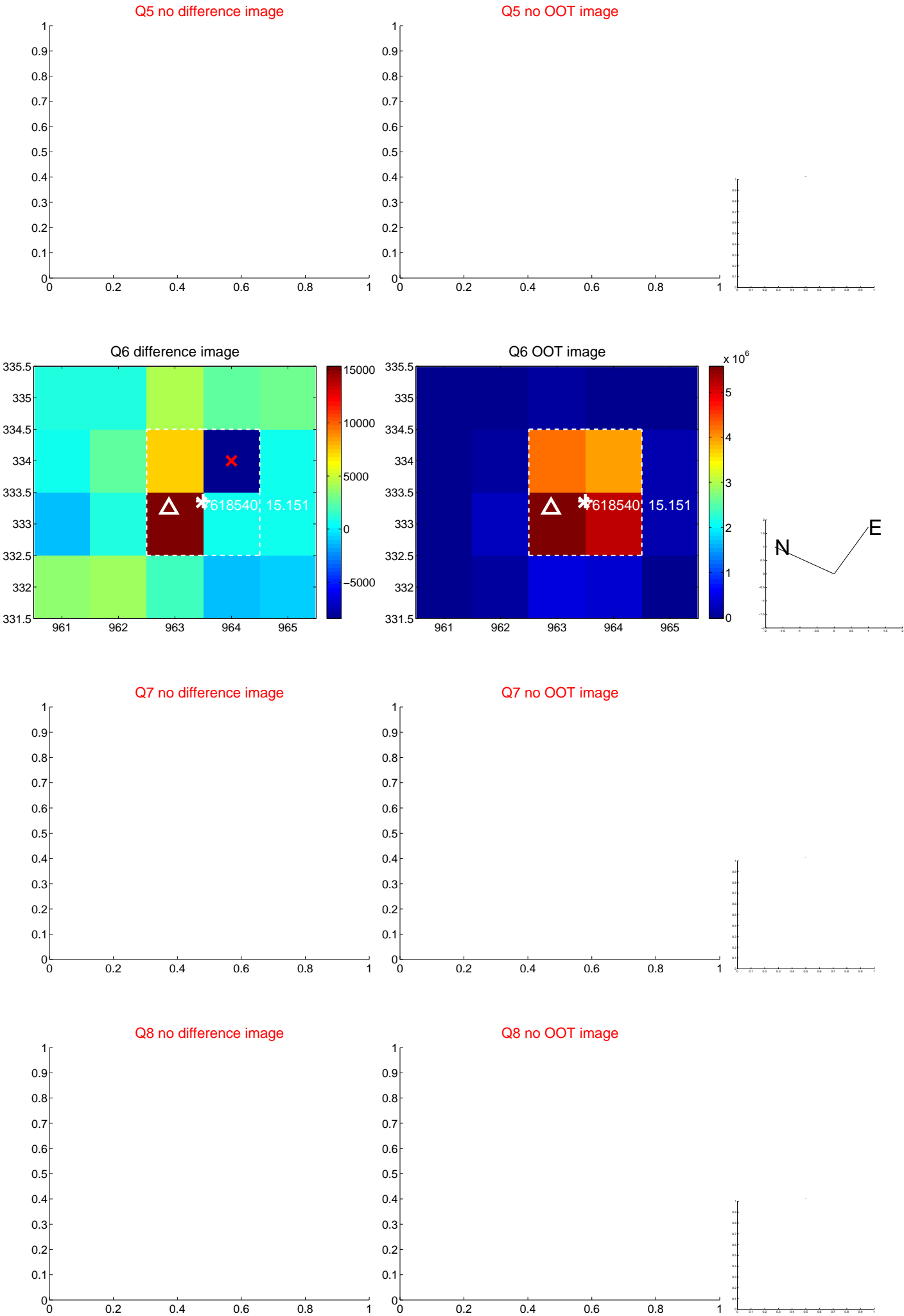


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

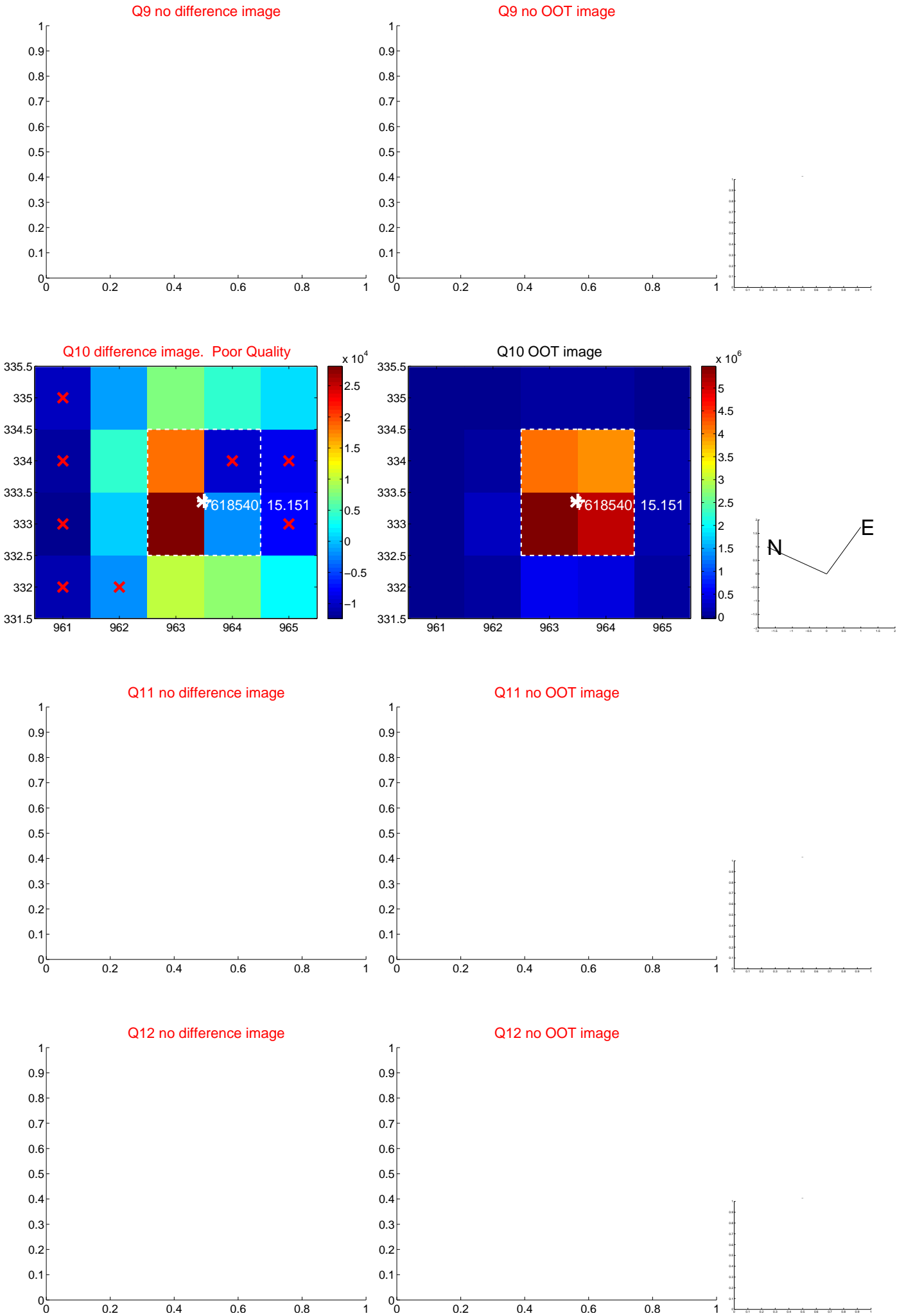
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



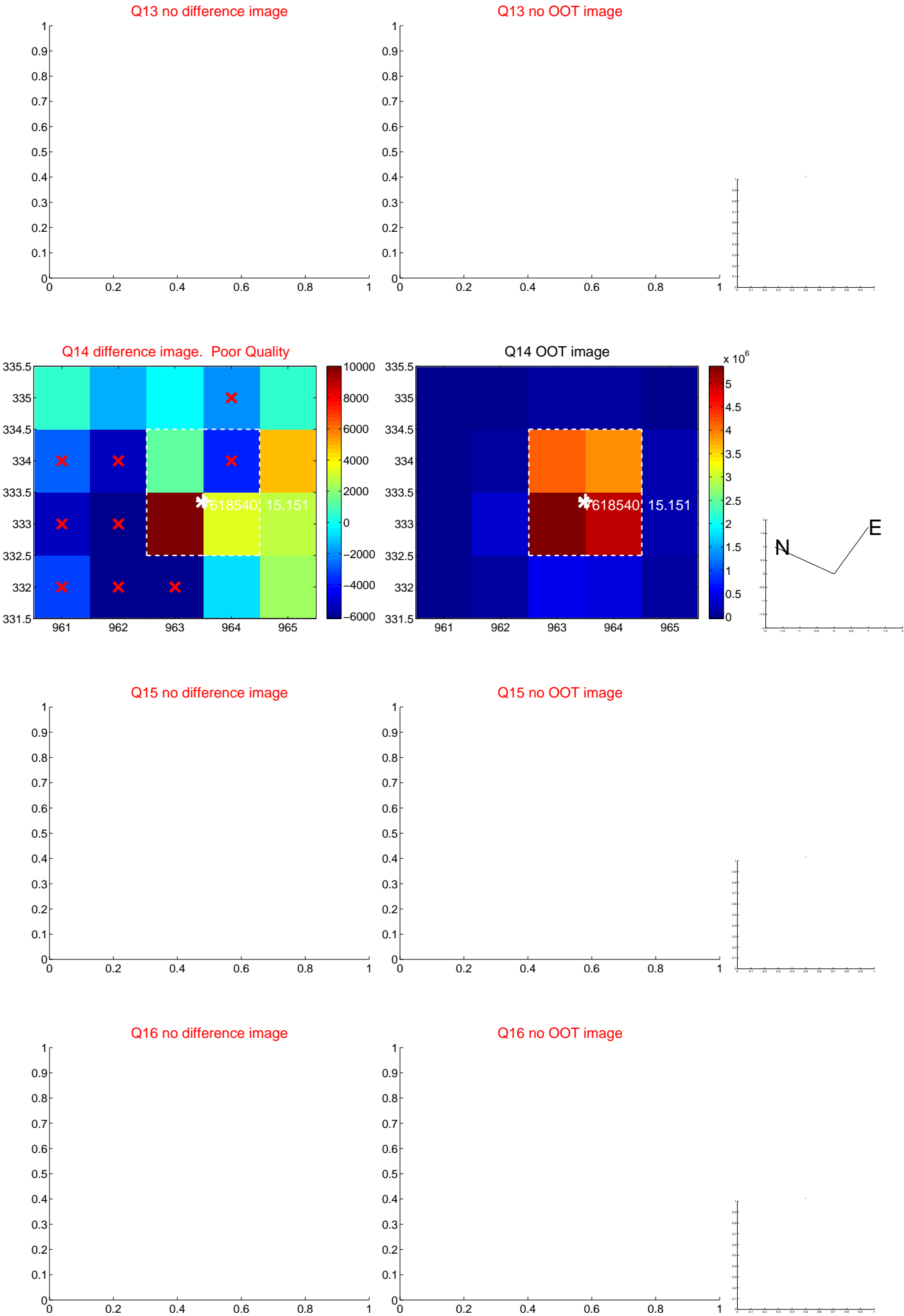
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



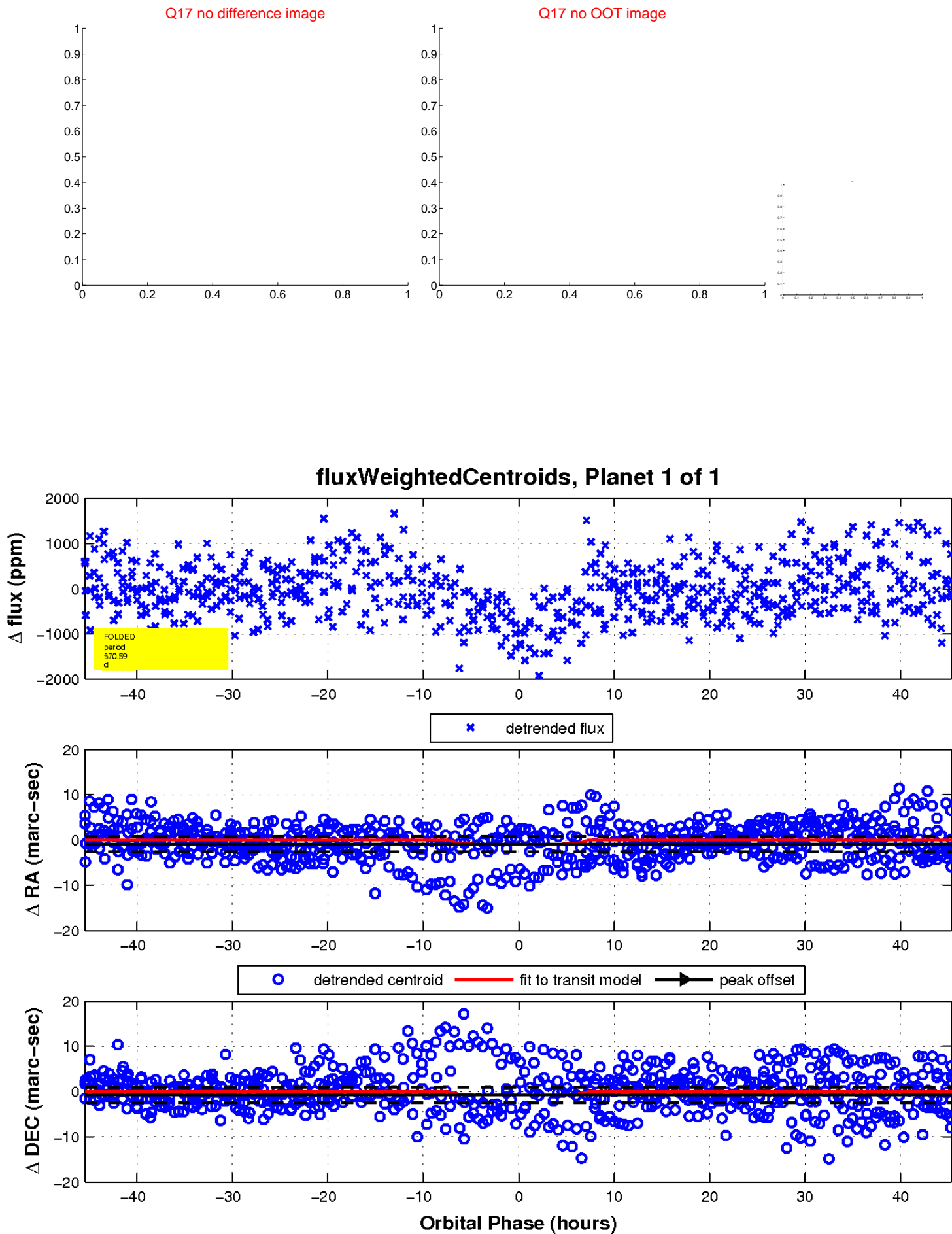
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

