

KIC 007618435

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})
007618435-01	OBS	No	283.682702	405.082696	545.4	12.575	9.9	7.0	0.96	5614	2.36	1.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007618435-01	OBS	FP	0.00	1	0	0	0	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.

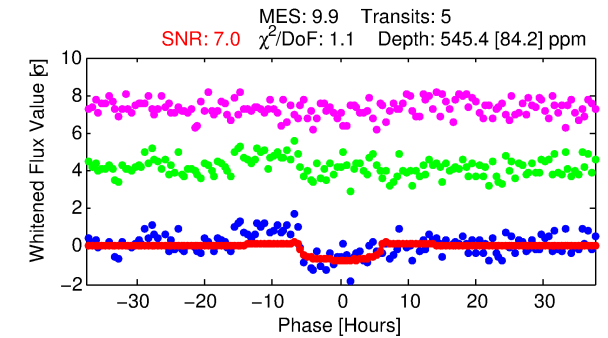
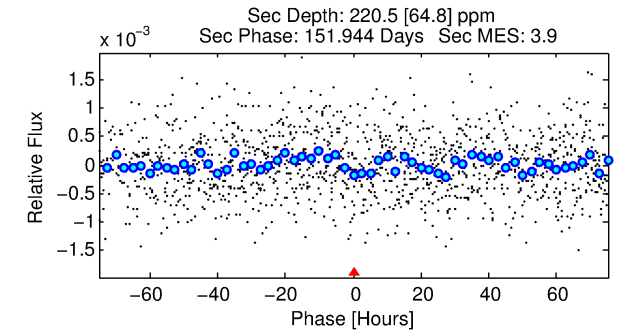
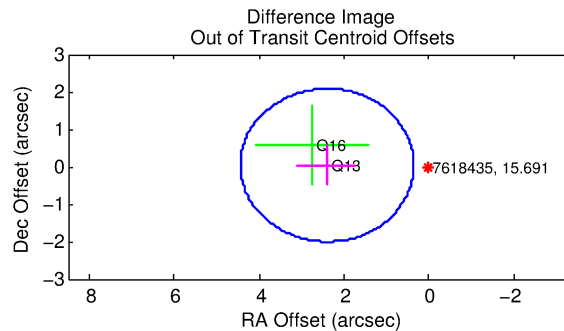
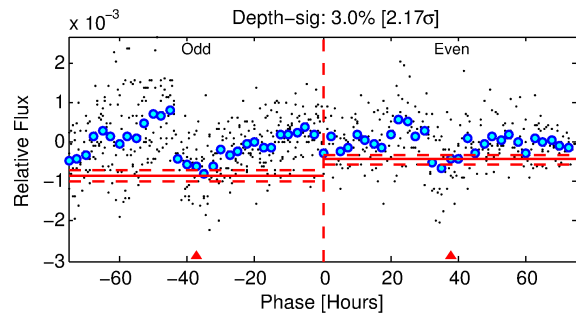
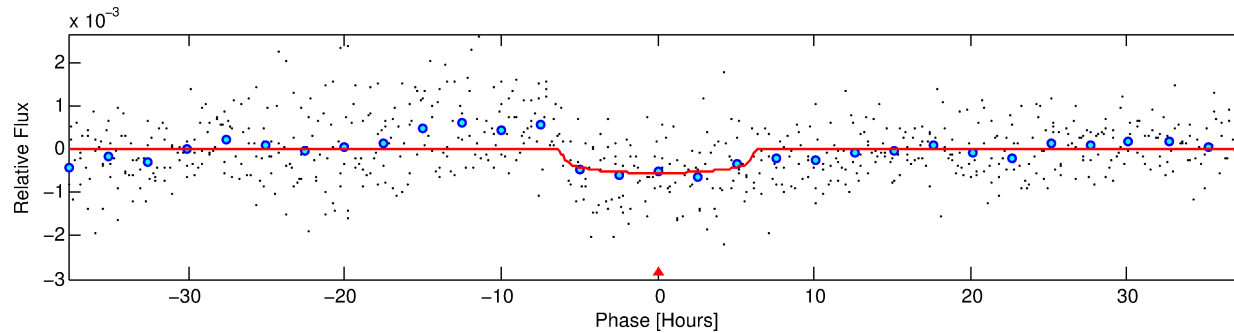
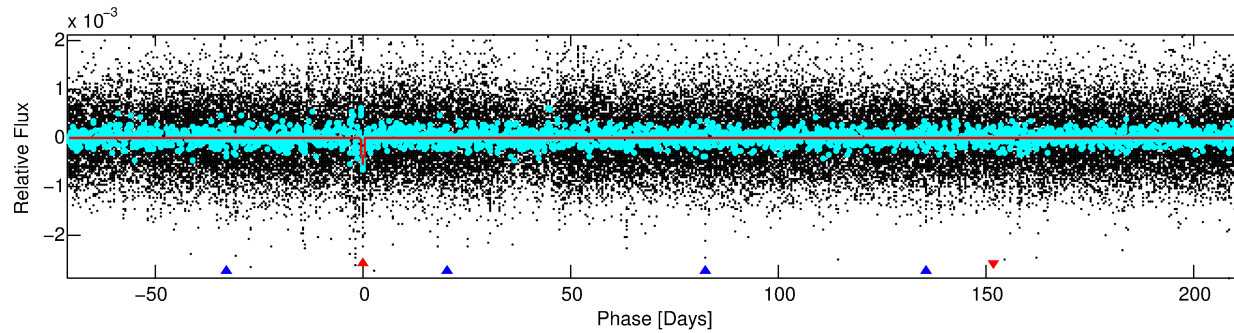
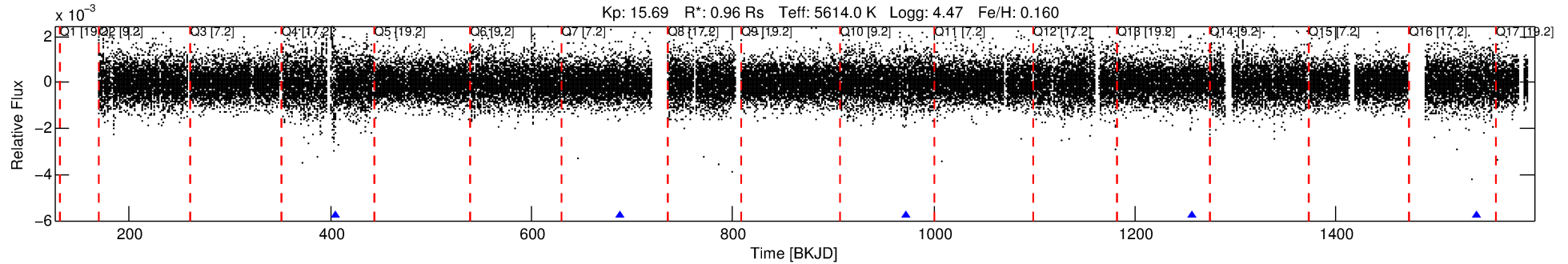
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007618435-01

No Significant Match Found

DV One-Page Summary

KIC: 7618435 Candidate: 1 of 2 Period: 283.683 d



DV Fit Results:

Period = 283.68270 [0.01016] d
Epoch = 405.0827 [0.0247] BKJD
Rp/R* = 0.0226 [0.0163]
a/R* = 133.72 [389.50]
b = 0.67 [2.47]
Seff = 1.16 [0.43]
Teq = 265 [25] K
Rp = 2.36 [1.82] Re
a = 0.8397 [0.1980] AU
Ag = 15308.82 [23165.45] [0.66 σ]
Teff = 4552 [1682] K [2.55 σ]

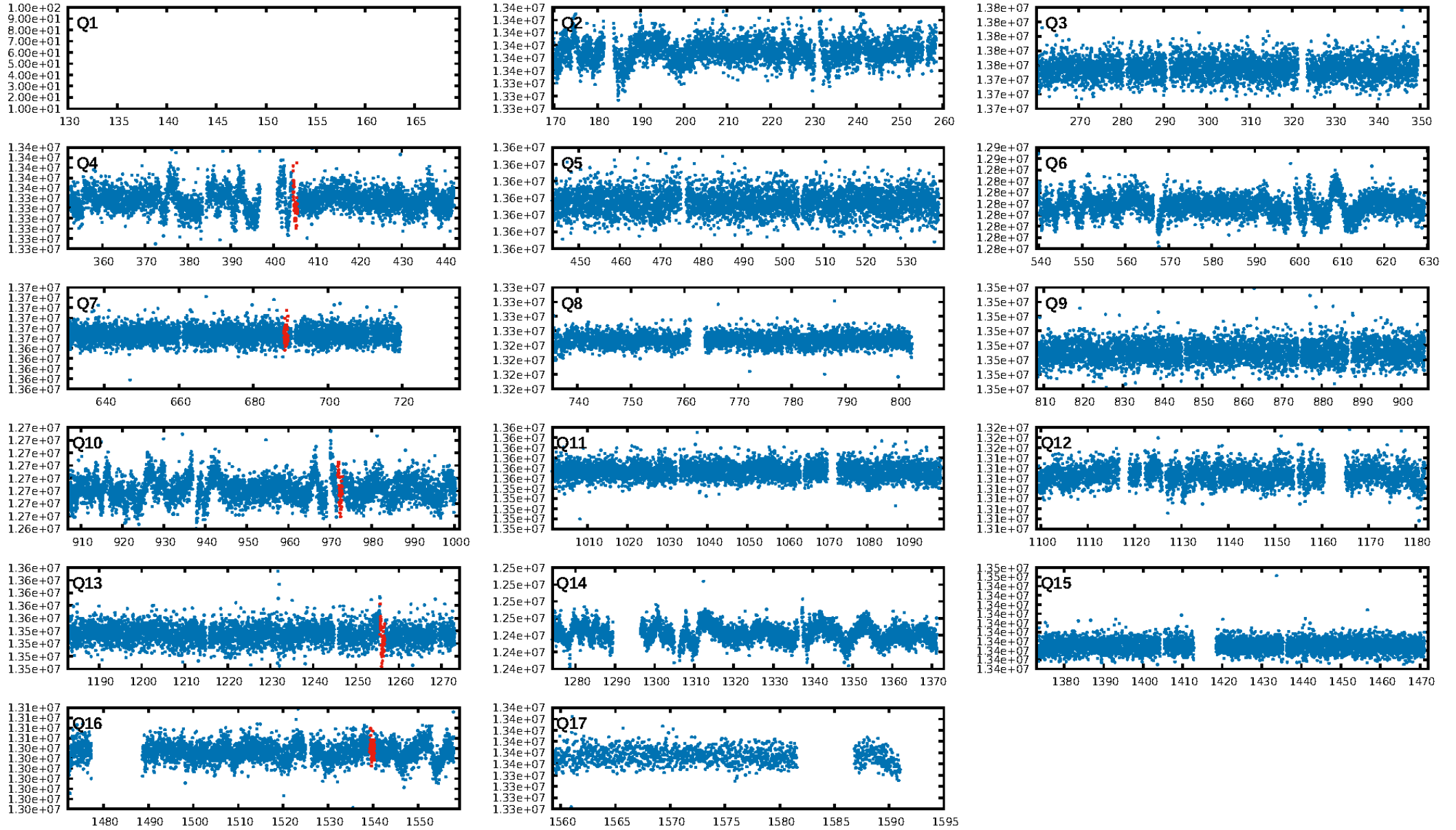
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [141.85 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 94.9%
Bootstrap-pfa: 2.35e-13
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.578
Centroid-sig: 85.4%
Centroid-so: 1.111 arcsec [0.55 σ]
OotOffset-rm: 2.393 arcsec [3.51 σ]
KicOffset-rm: 2.403 arcsec [3.54 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [5/5]

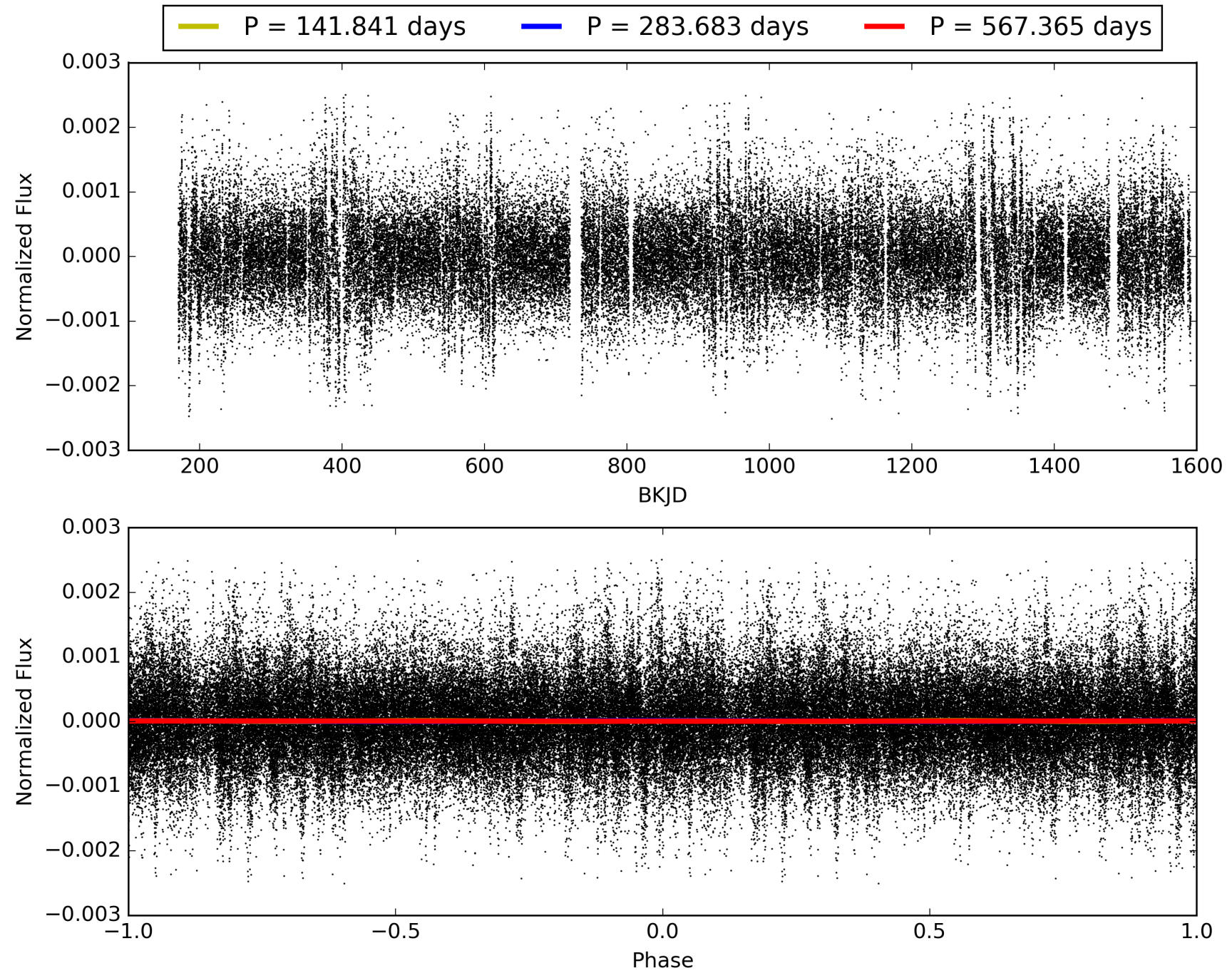
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:42:06 Z

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

TCE 007618435-01, PDC Light Curves

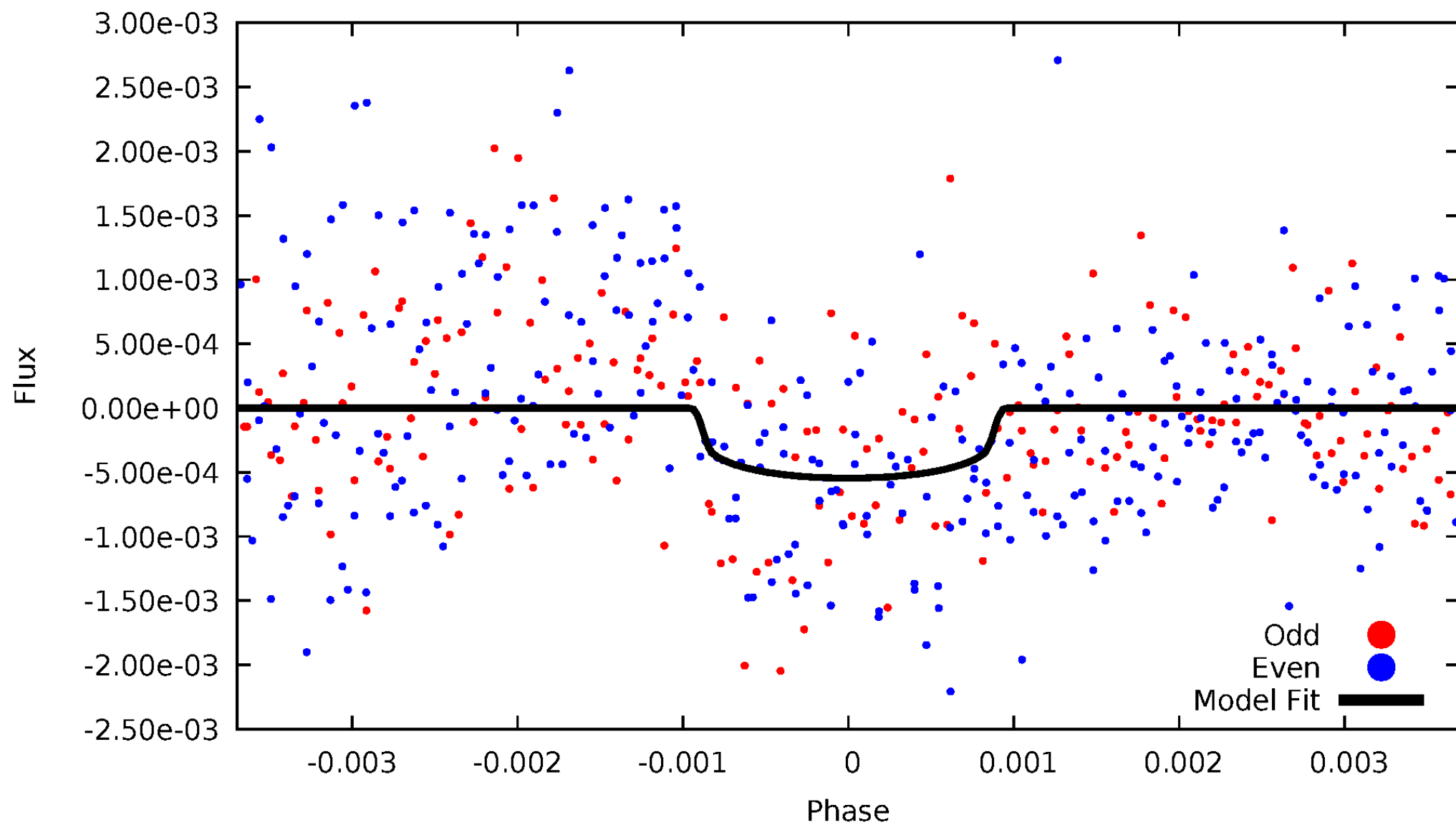


TCE 007618435-01



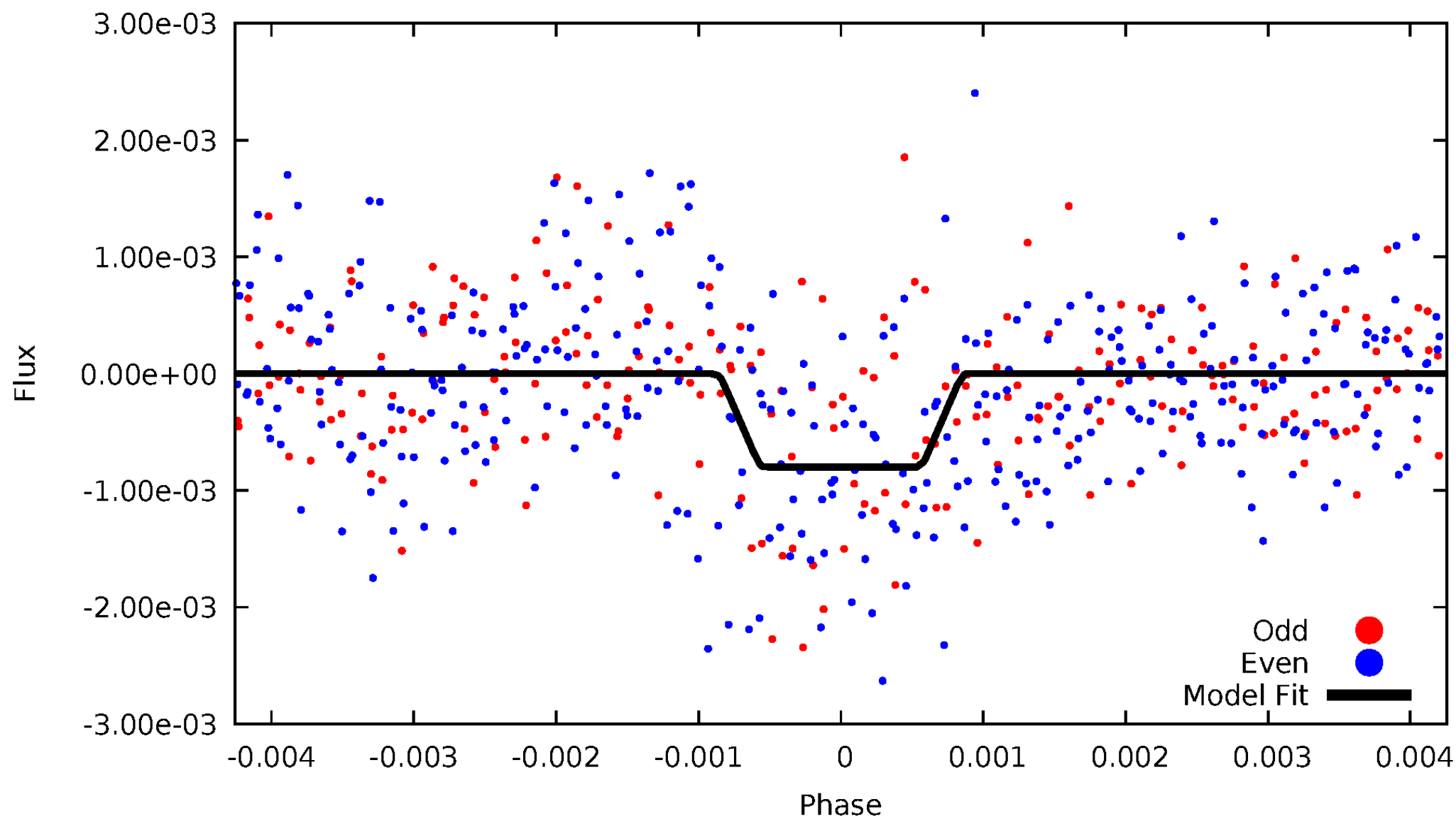
DV Odd/Even

TCE 007618435-01



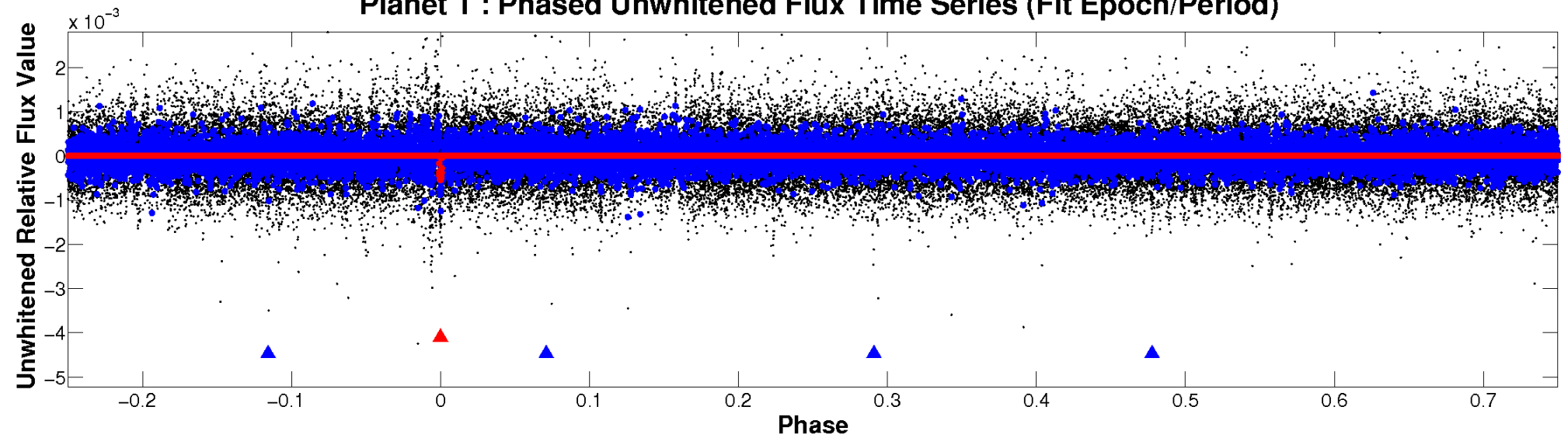
ALT Odd/Even

TCE 007618435-01

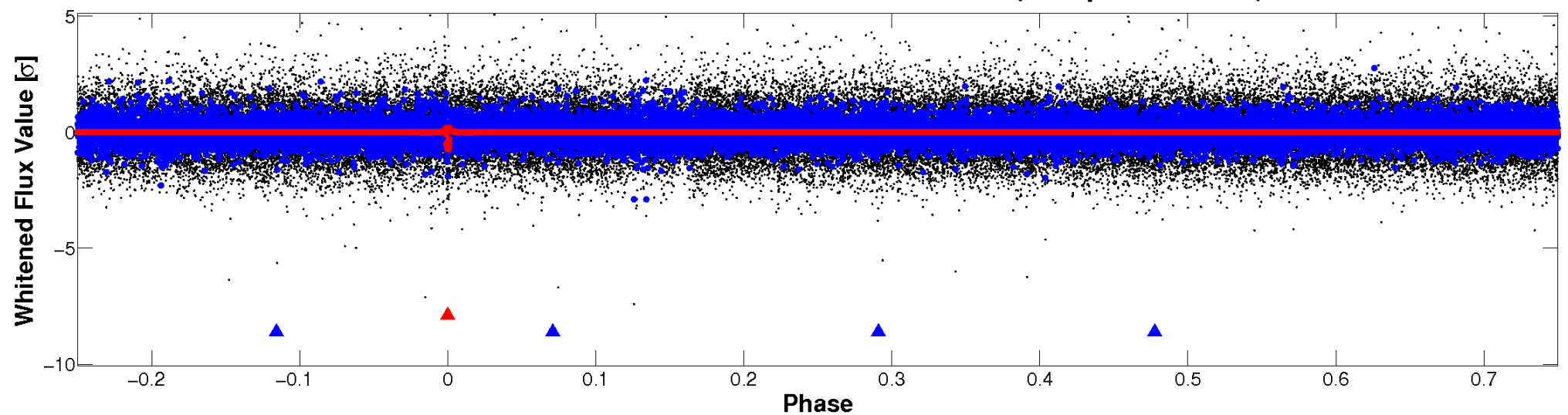


Non-Whitened Vs. Whitened Light Curve

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

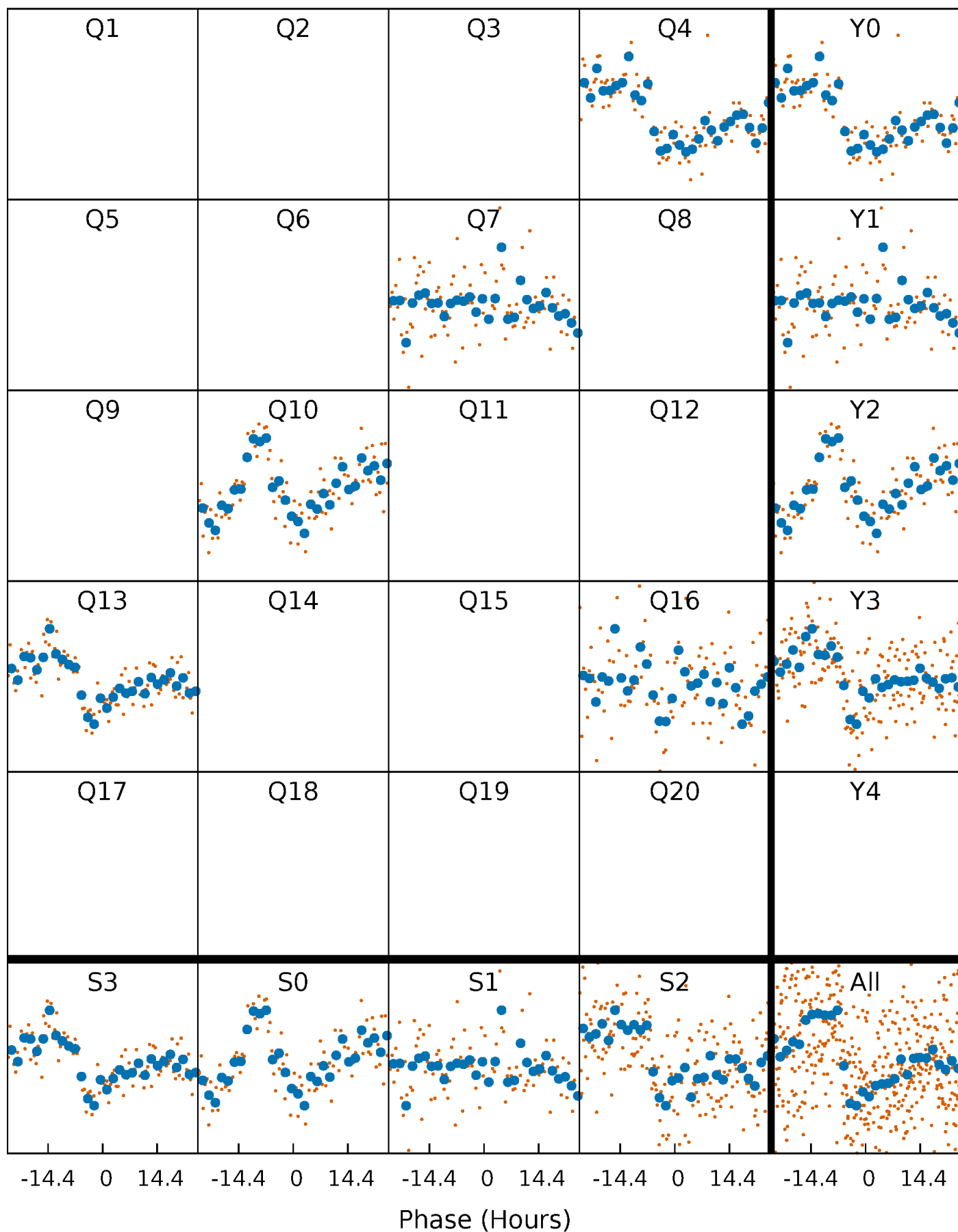


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 007618435-01 P=283.682702 Days $T_0=405.082696$ (BKJD)



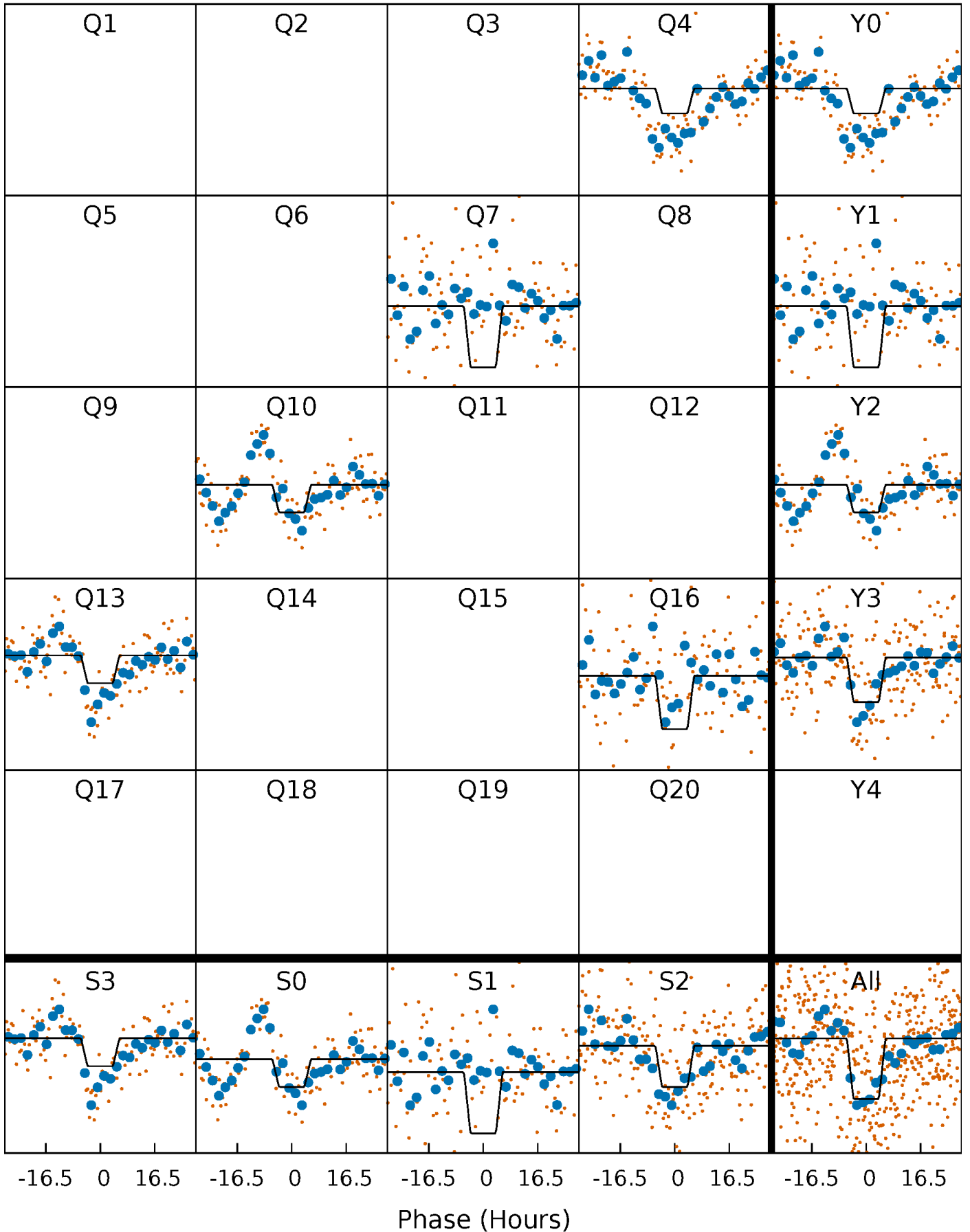
DV Quarter-Phased Transit Curves

TCE 007618435-01 P=283.682702 Days $T_0=405.082696$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

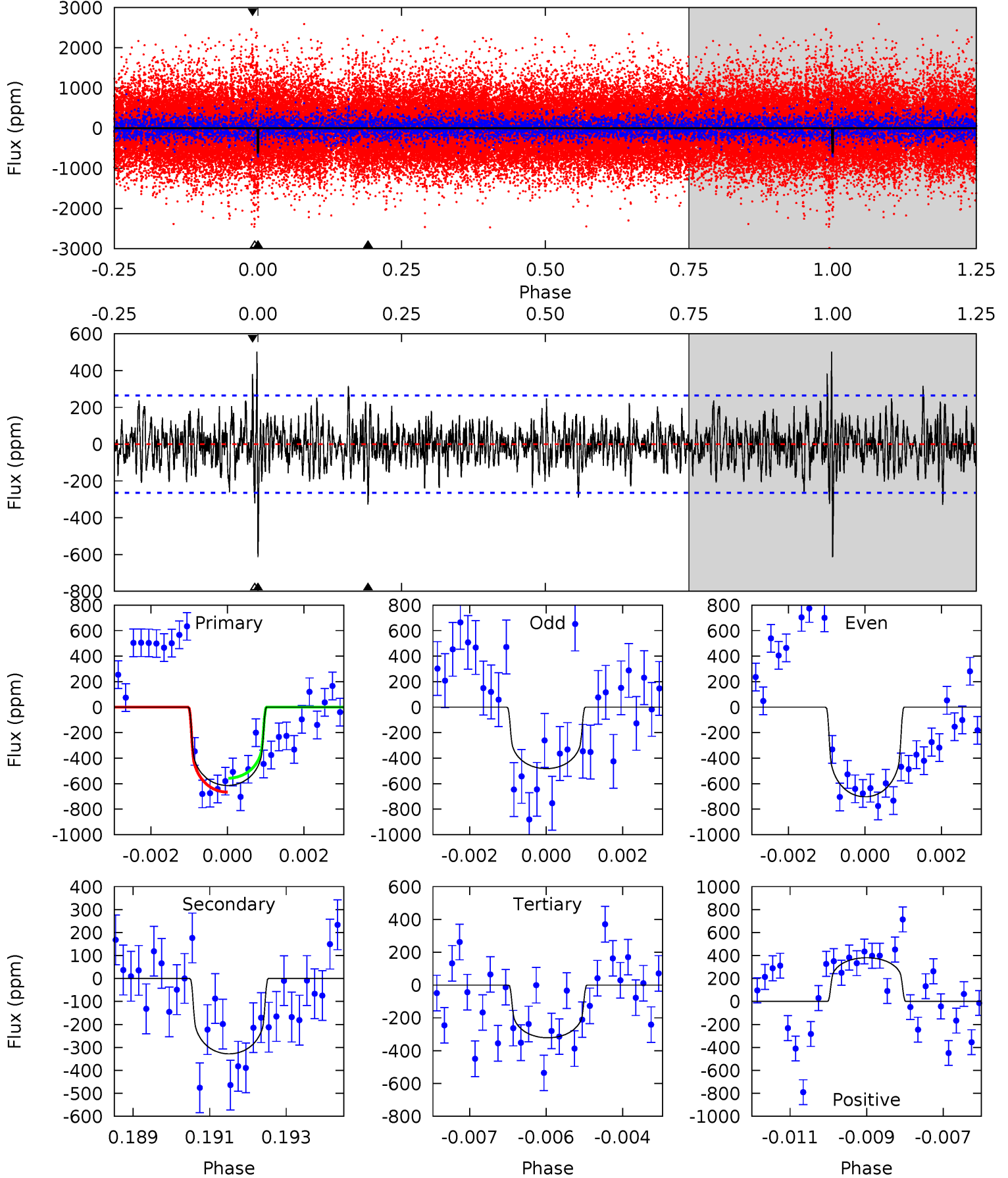
TCE 007618435-01 P=283.638246 Days $T_0=405.175129$ (BKJD)



DV Model-Shift Uniqueness Test

007618435-01, P = 283.682702 Days, E = 121.399994 Days

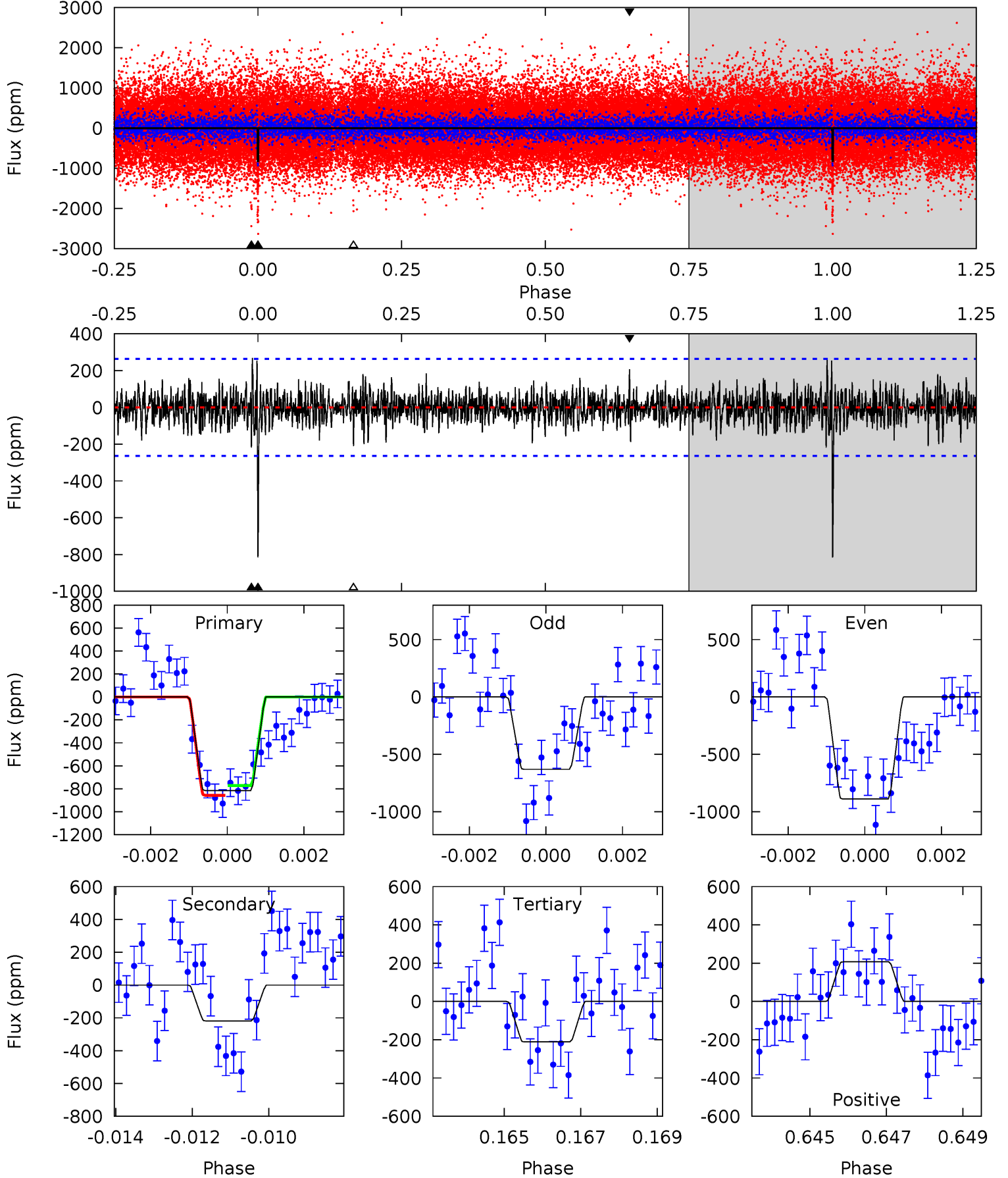
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	6.62	6.49	7.68	5.34	3.11	1.69	5.91	4.71	0.14	-1.06	2.19	0.80	0.45	1.10



Alt Model-Shift Uniqueness Test

007618435-01, P = 283.638246 Days, E = 121.536883 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	4.43	4.28	4.20	5.35	3.13	1.18	12.2	12.3	0.15	0.23	2.57	1.01	0.25	0.86



Stellar Parameters For KIC 007618435

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5614^{+166}_{-183}	$4.466^{+0.065}_{-0.195}$	$0.160^{+0.200}_{-0.300}$	$0.959^{+0.262}_{-0.112}$	$0.980^{+0.094}_{-0.105}$	$1.565^{+0.502}_{-0.741}$
	+3%/-3%	+1%/-4%	+125%/-188%	+27%/-12%	+10%/-11%	+32%/-47%
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 007618435-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-328 ± 50	$2.69^{+1.74}_{-1.58}$	376^{+28}_{-18}	4959^{+2718}_{-936}	17437^{+81633}_{-11180}
Alt.	-218 ± 49	$3.13^{+1.85}_{-1.67}$	376^{+25}_{-19}	4280^{+1538}_{-649}	8465^{+30472}_{-5120}

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

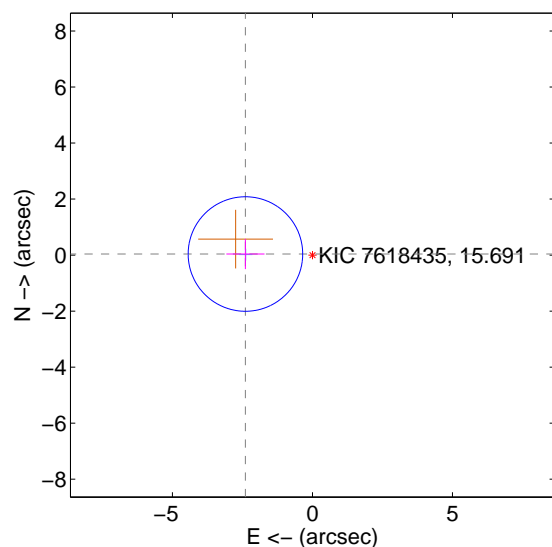
Supplemental centroid analysis for 007618435-01. Kepler magnitude: 15.69. Transit SNR 7.03

There are 1 quarters with good PRF difference image offsets

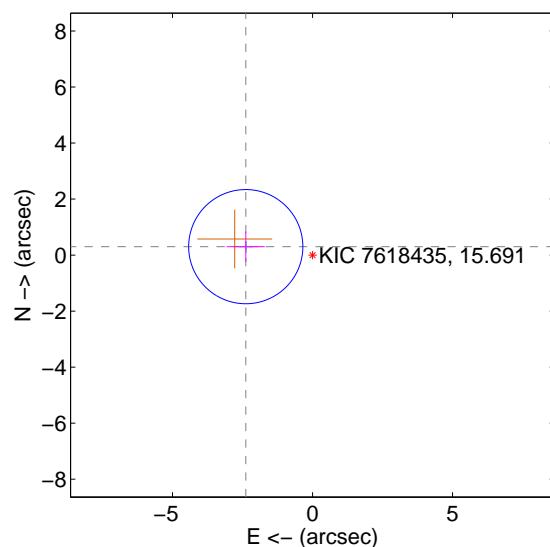
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.393 \pm 0.682	3.51	2.393 \pm 0.682	0.039 \pm 0.539
PRF-fit source offset from KIC position	2.403 \pm 0.680	3.54	2.384 \pm 0.682	0.302 \pm 0.539
photometric centroid source offset	1.11 \pm 2.03	0.55	-1.11 \pm 2.03	0.05 \pm 2.21

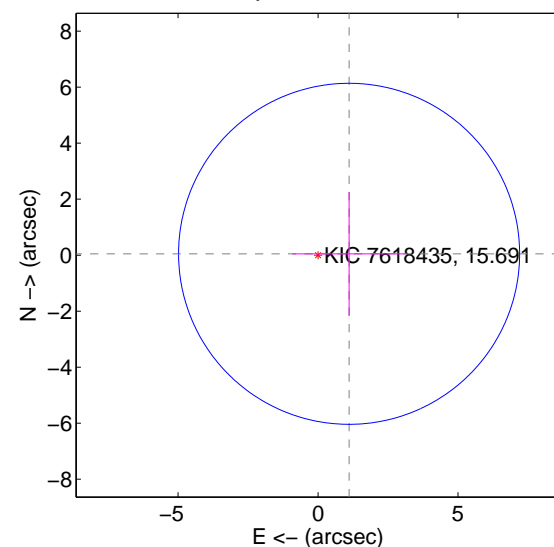
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

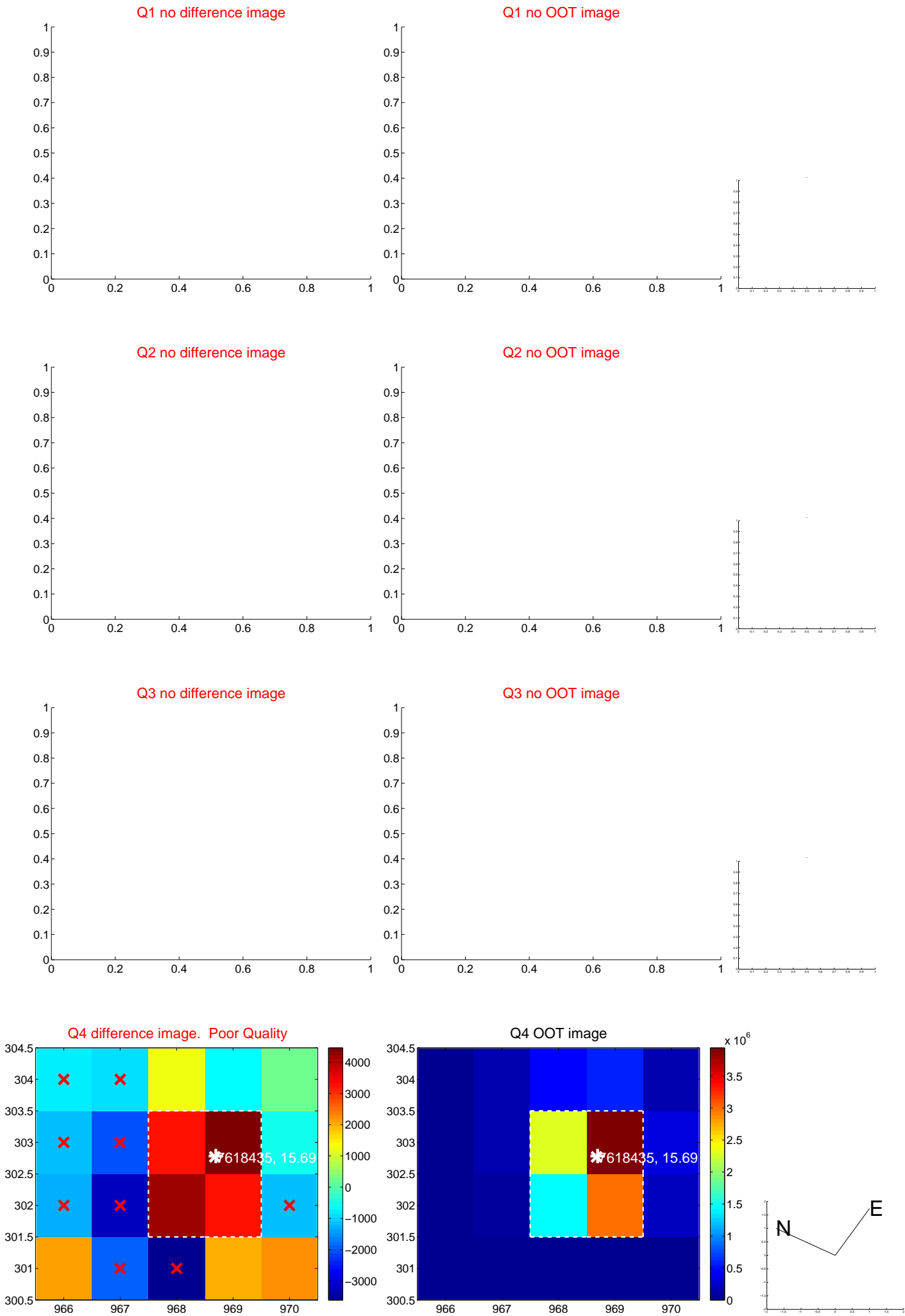


offset from photometric centroids

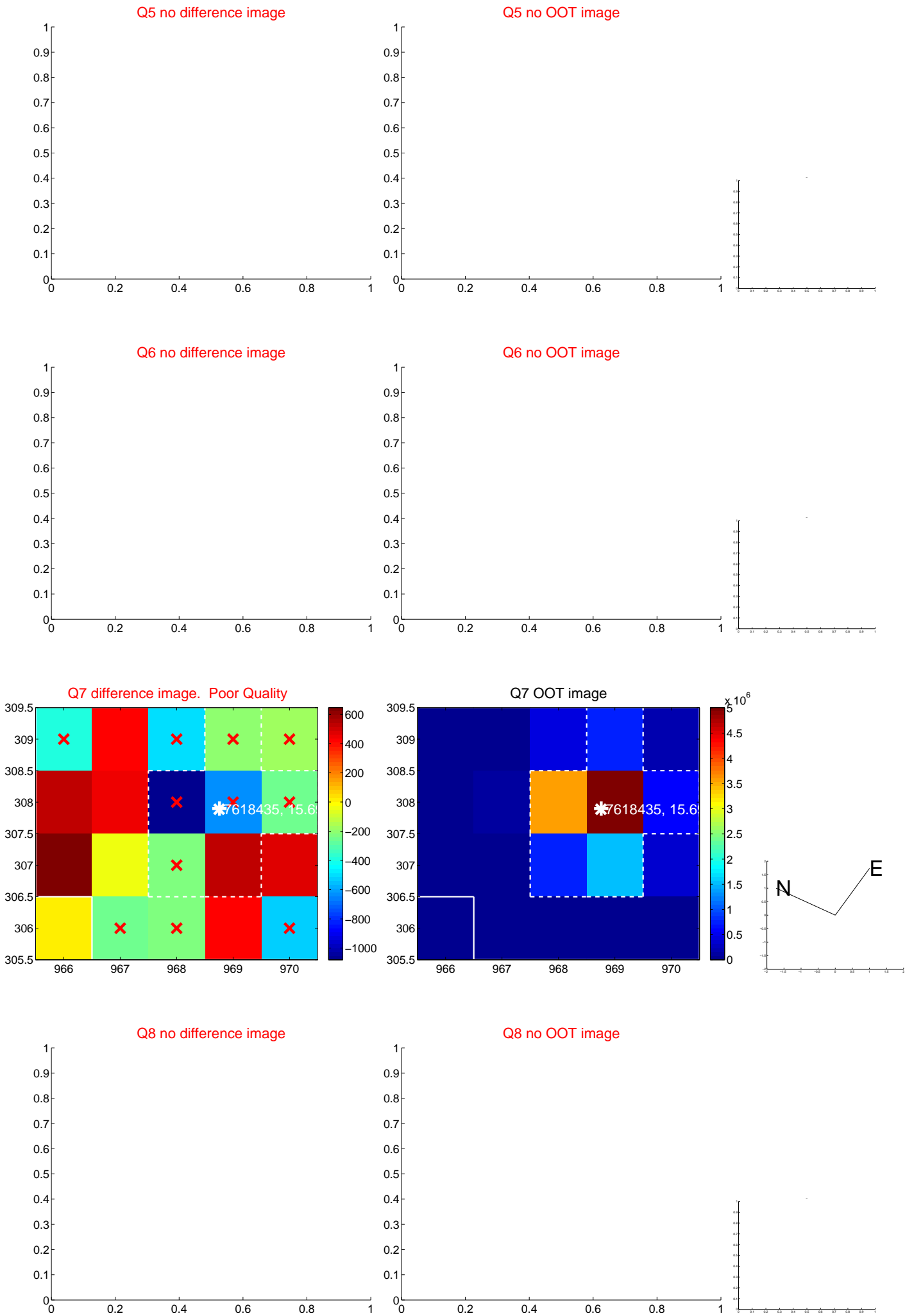


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

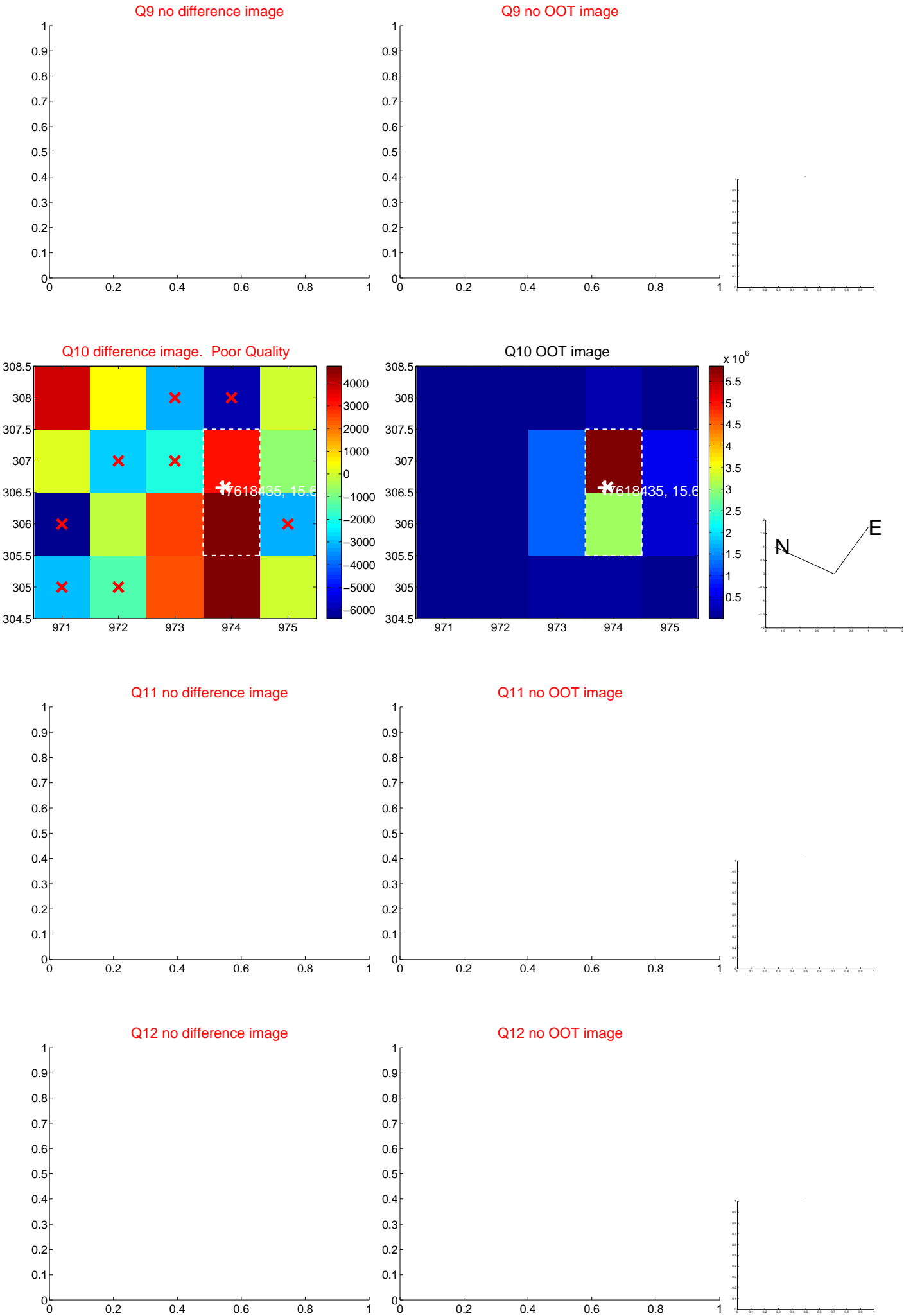
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



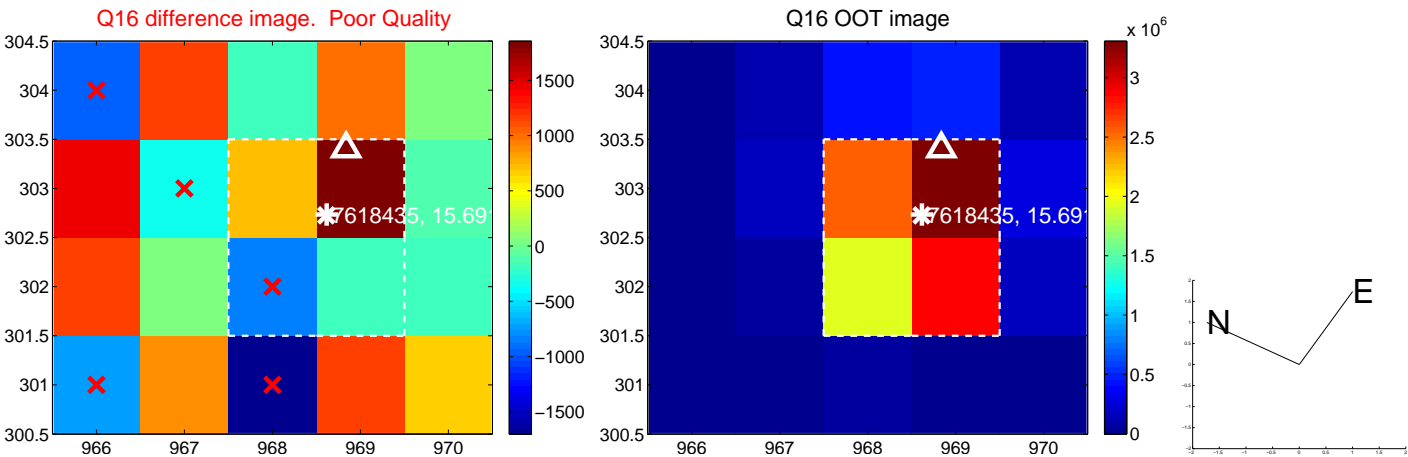
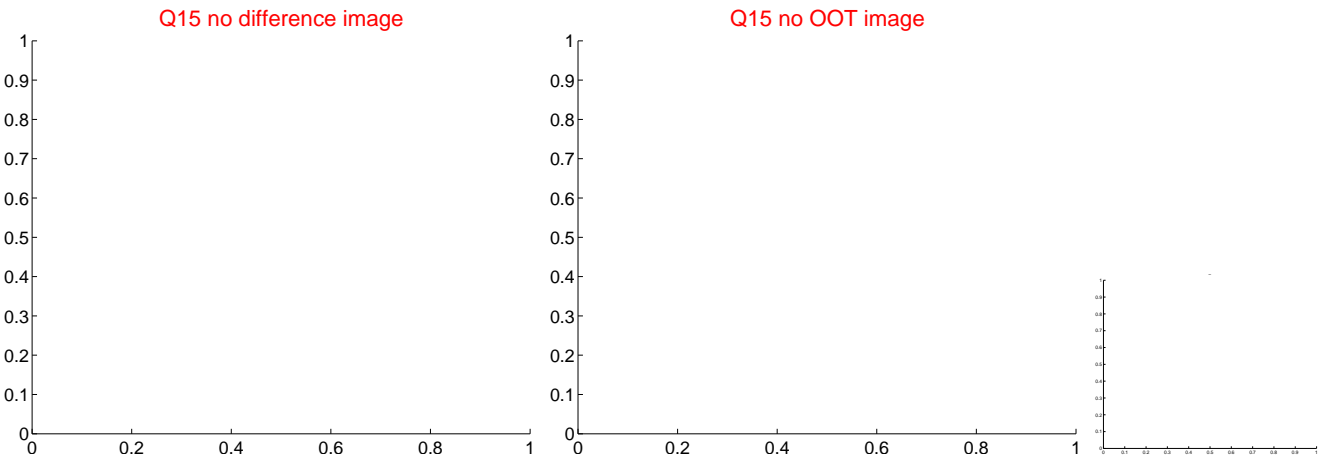
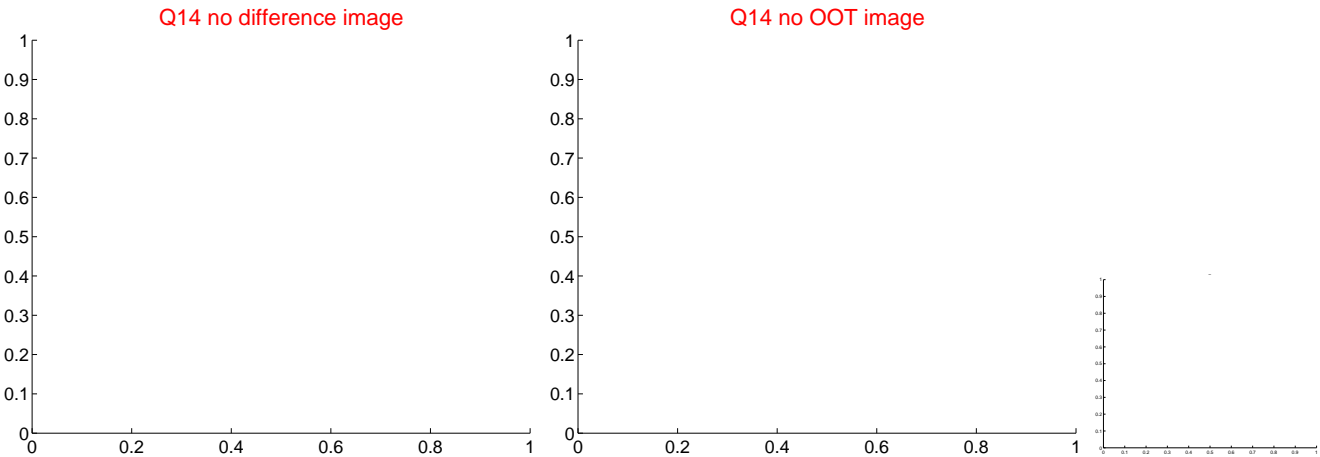
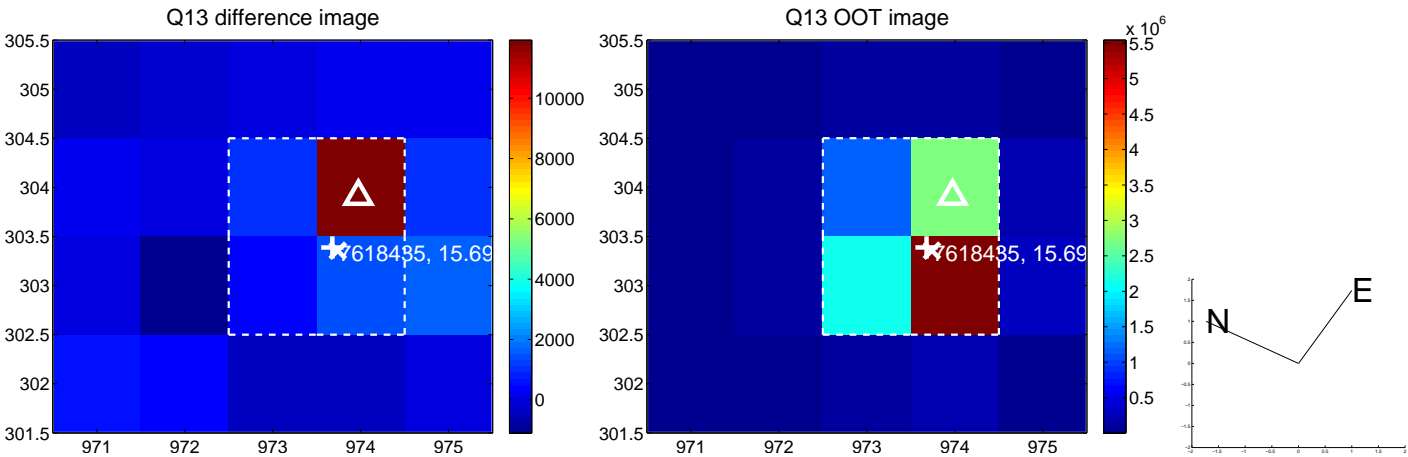
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



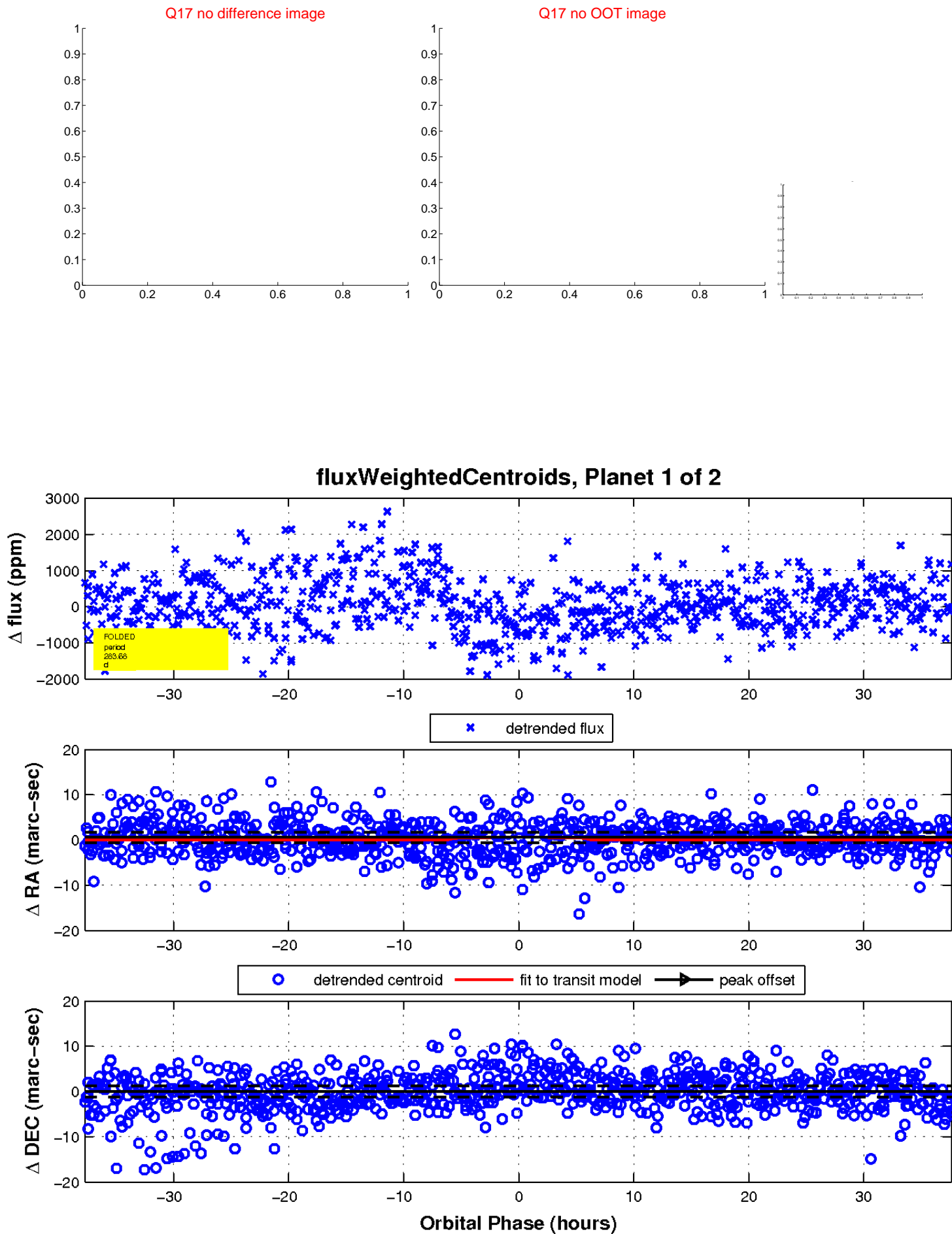
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

