

KIC 010519701

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})
010519701-01	OBS	8212.01	334.679041	426.608398	265.5	16.319	8.8	7.0	2.35	6122	4.00	6.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010519701-01	OBS	FP	0.08	1	0	0	0	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.

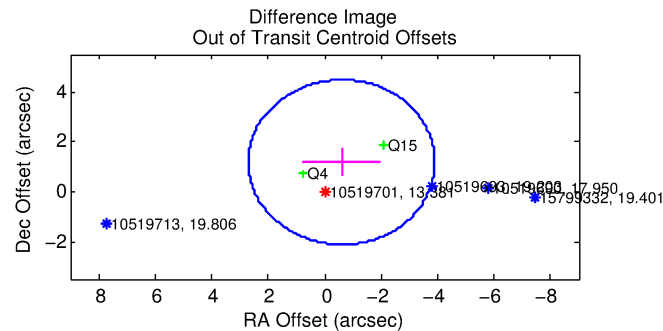
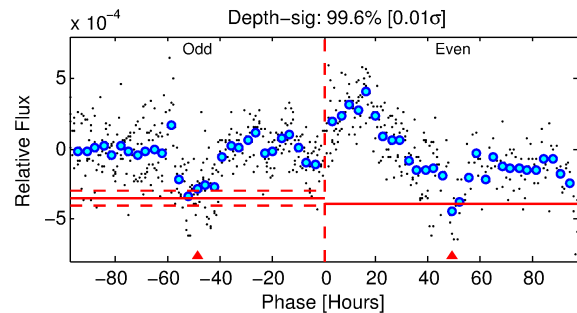
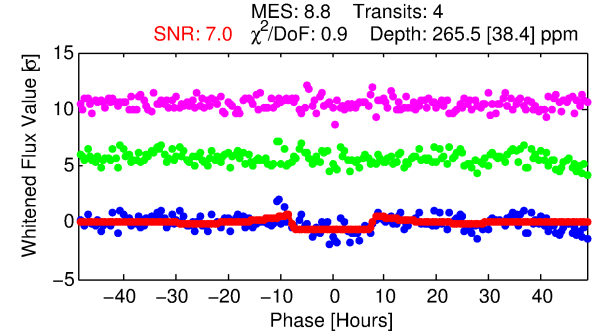
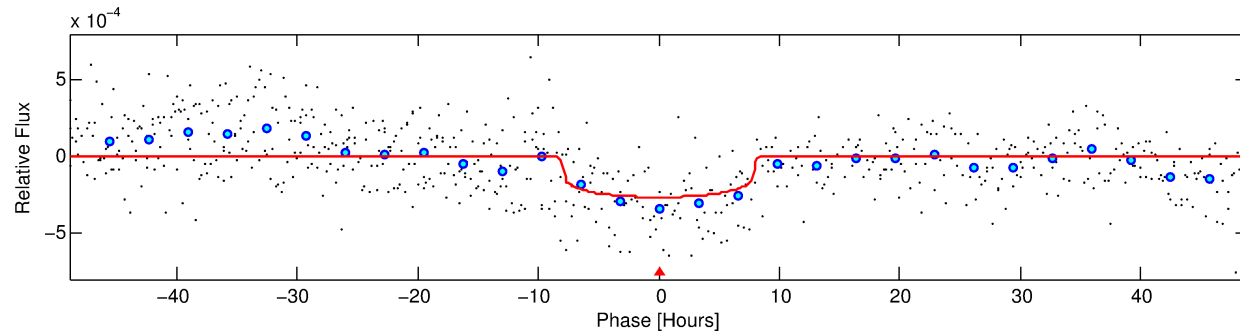
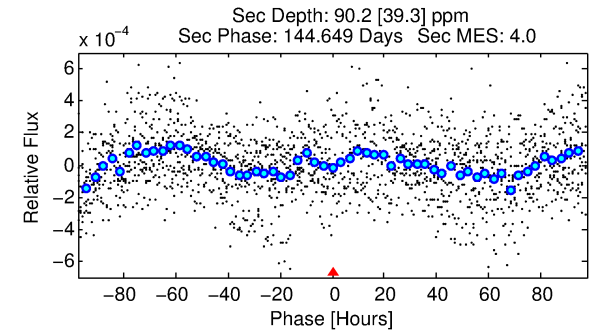
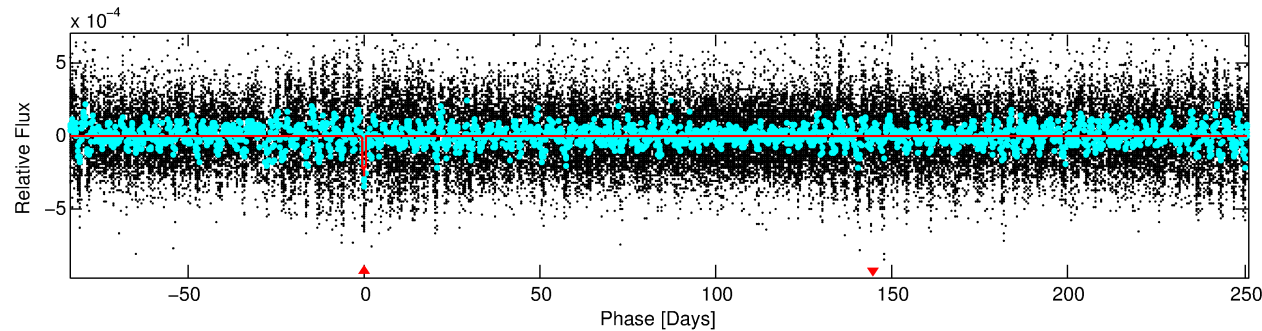
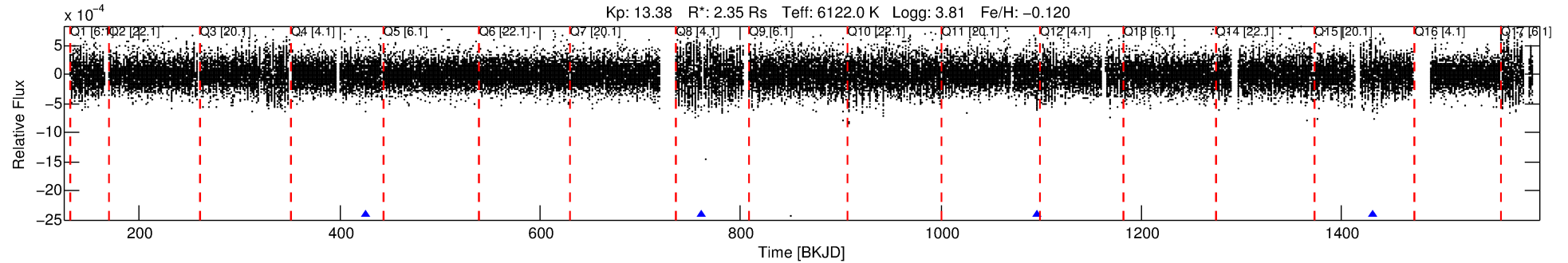
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010519701-01

No Significant Match Found

DV One-Page Summary

KIC: 10519701 Candidate: 1 of 1 Period: 334.679 d



DV Fit Results:

Period = 334.67904 [0.00741] d
Epoch = 426.6084 [0.0139] BKJD
Rp/R* = 0.0156 [0.0051]
a/R* = 128.52 [198.38]
b = 0.60 [1.67]
Seff = 6.54 [3.39]
Teq = 408 [53] K
Rp = 4.00 [1.89] Re
a = 1.0302 [0.3305] AU
Ag = 3293.68 [3062.89] [1.08σ]
Teffp = 4776 [943] K [4.62σ]

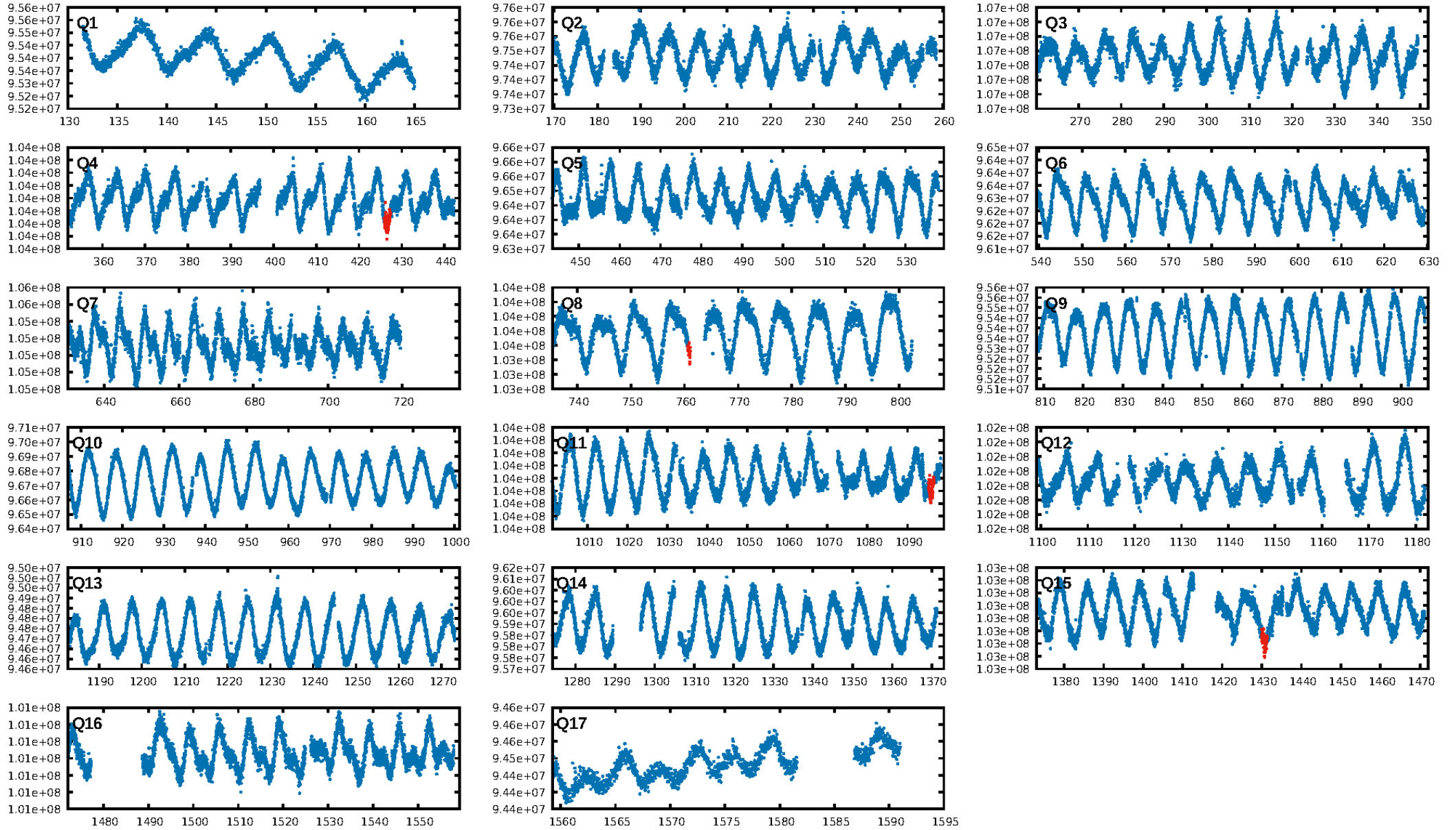
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 31.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.09e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -6.991
Centroid-sig: 0.0%
Centroid-so: 3.125 arcsec [3.40σ]
OotOffset-rm: 1.321 arcsec [1.20σ]
KicOffset-rm: 1.401 arcsec [1.41σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

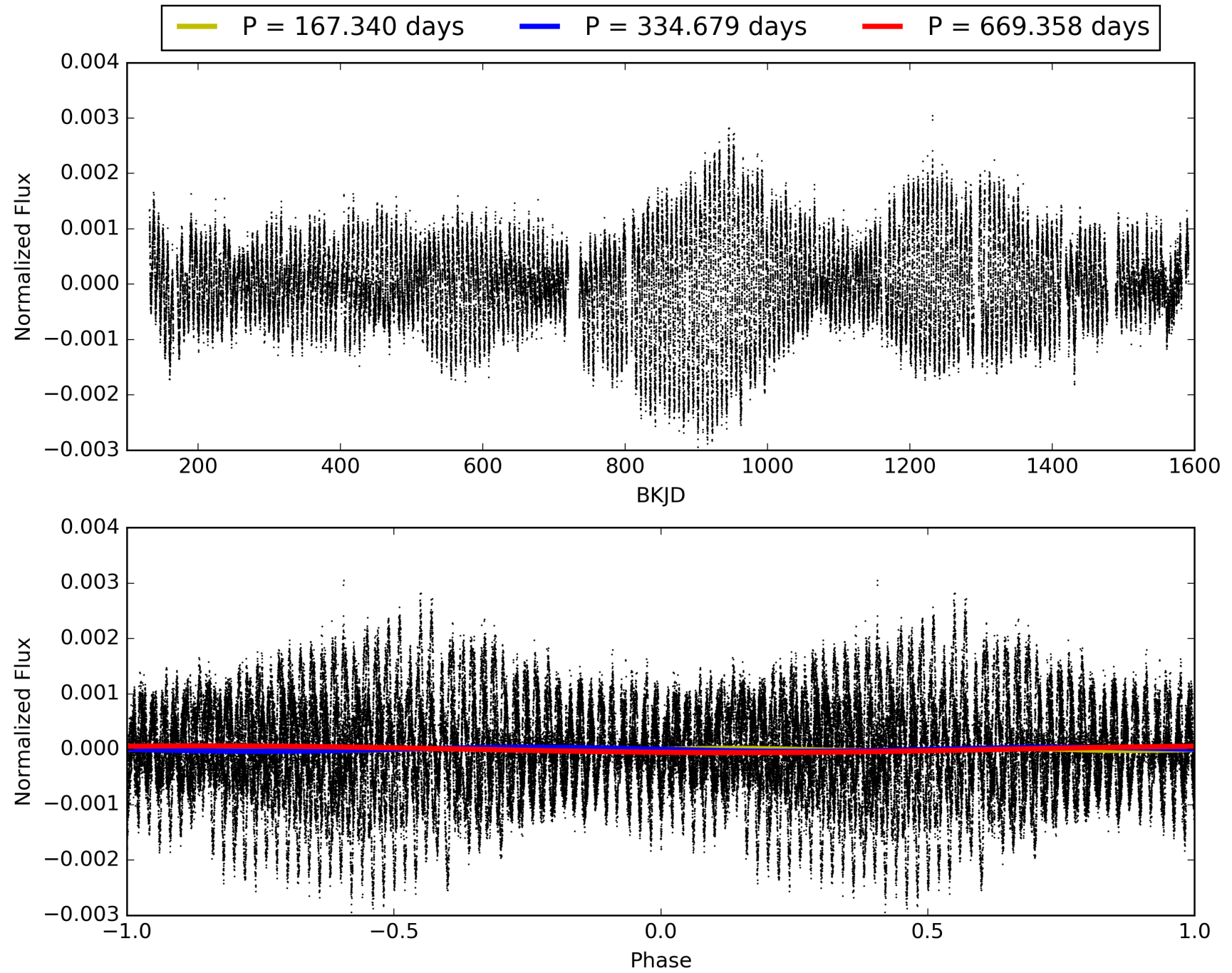
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:53:01 Z

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

TCE 010519701-01, PDC Light Curves

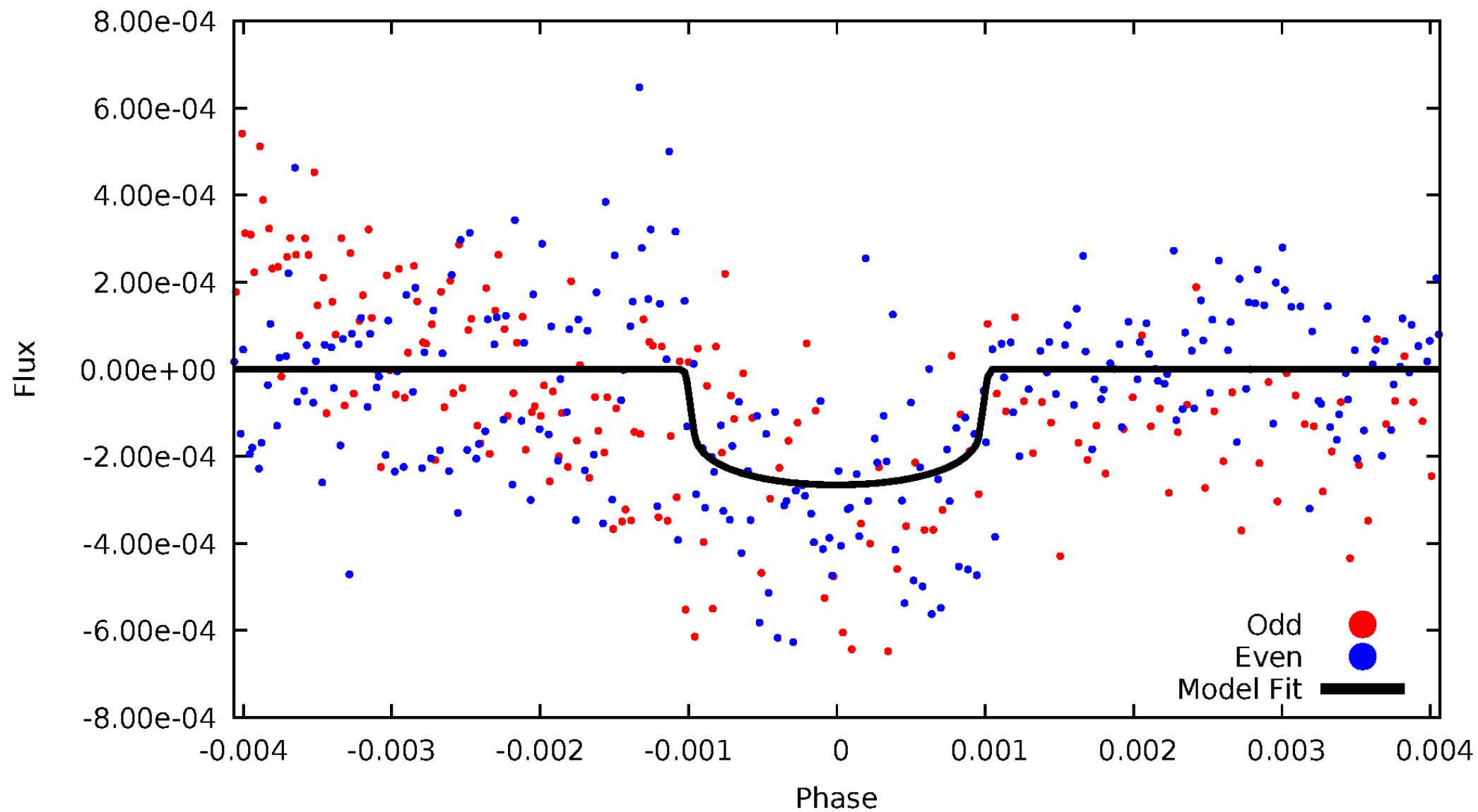


TCE 010519701-01



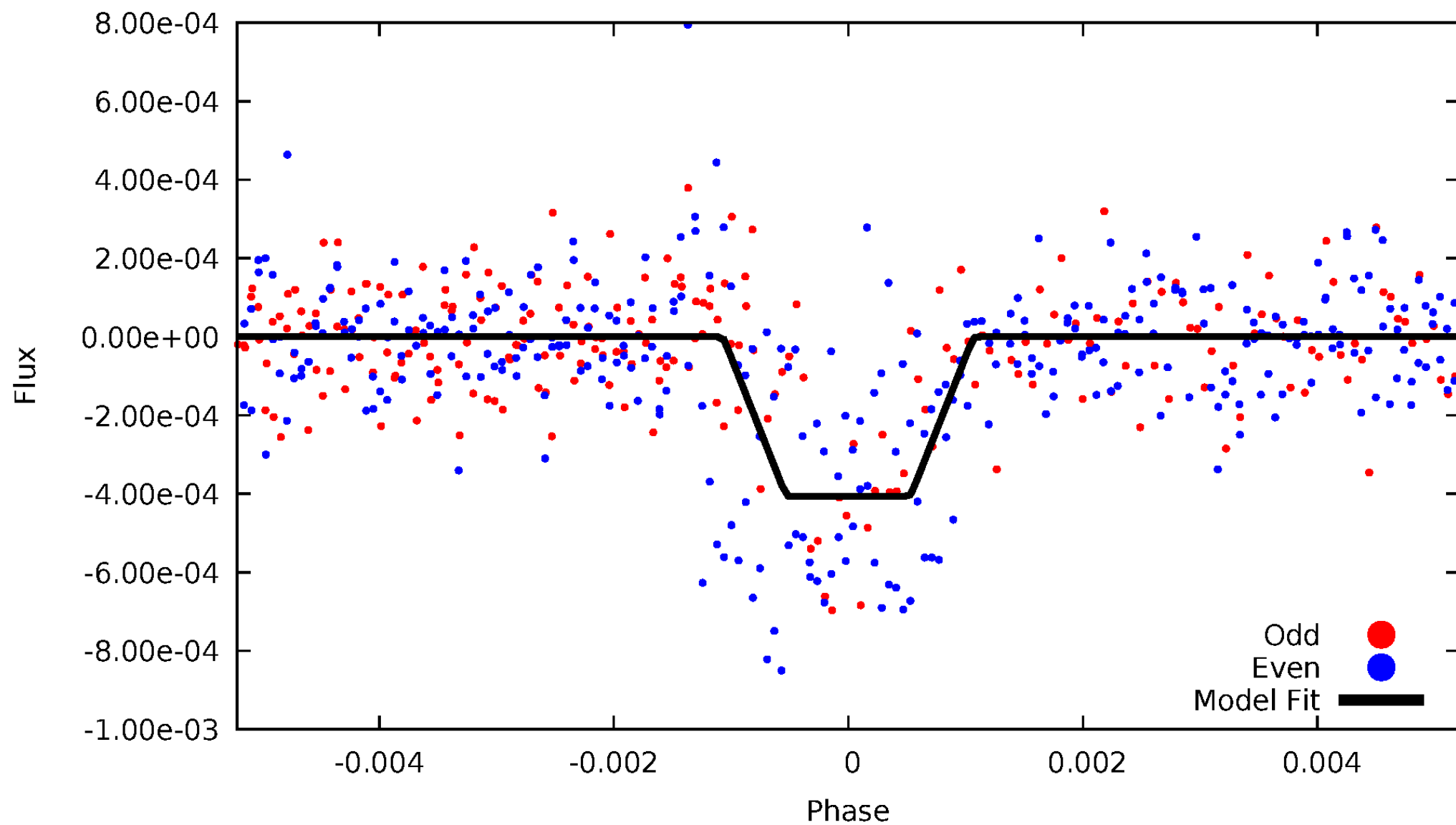
DV Odd/Even

TCE 010519701-01



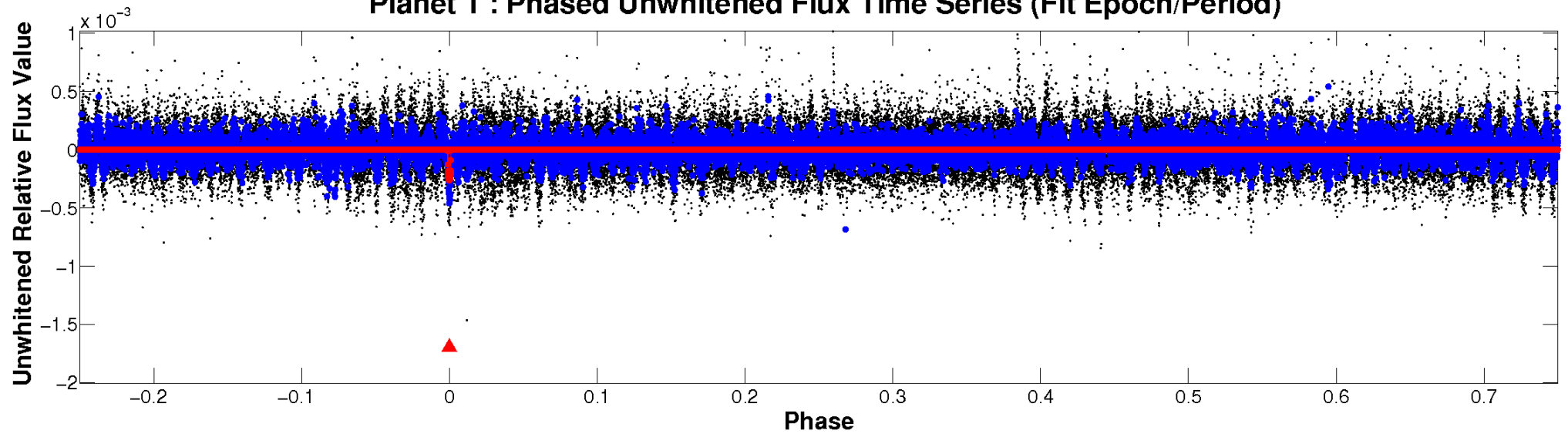
ALT Odd/Even

TCE 010519701-01

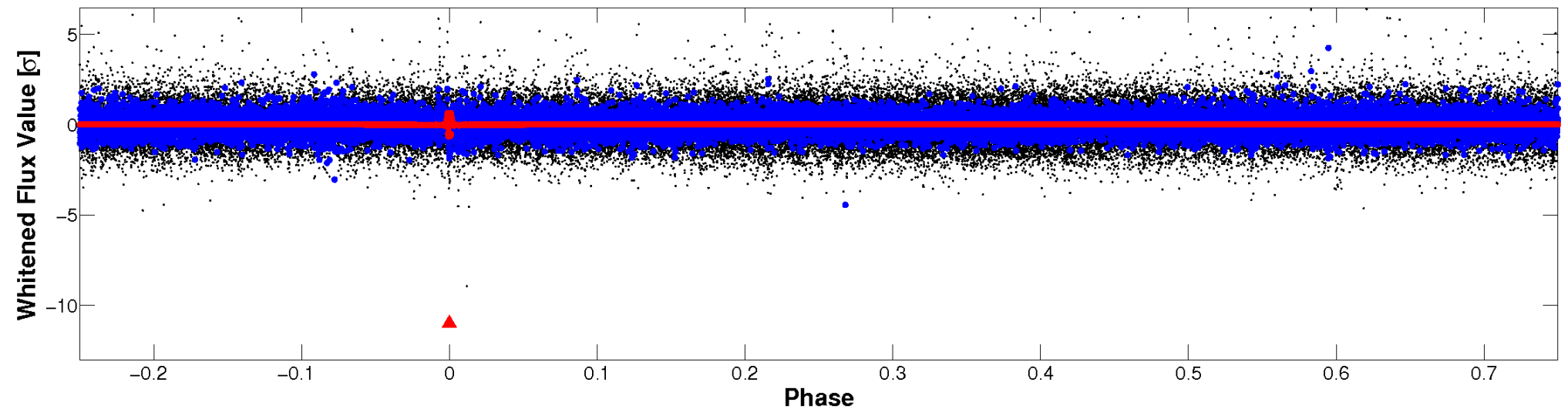


Non-Whitened Vs. Whitened Light Curve

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

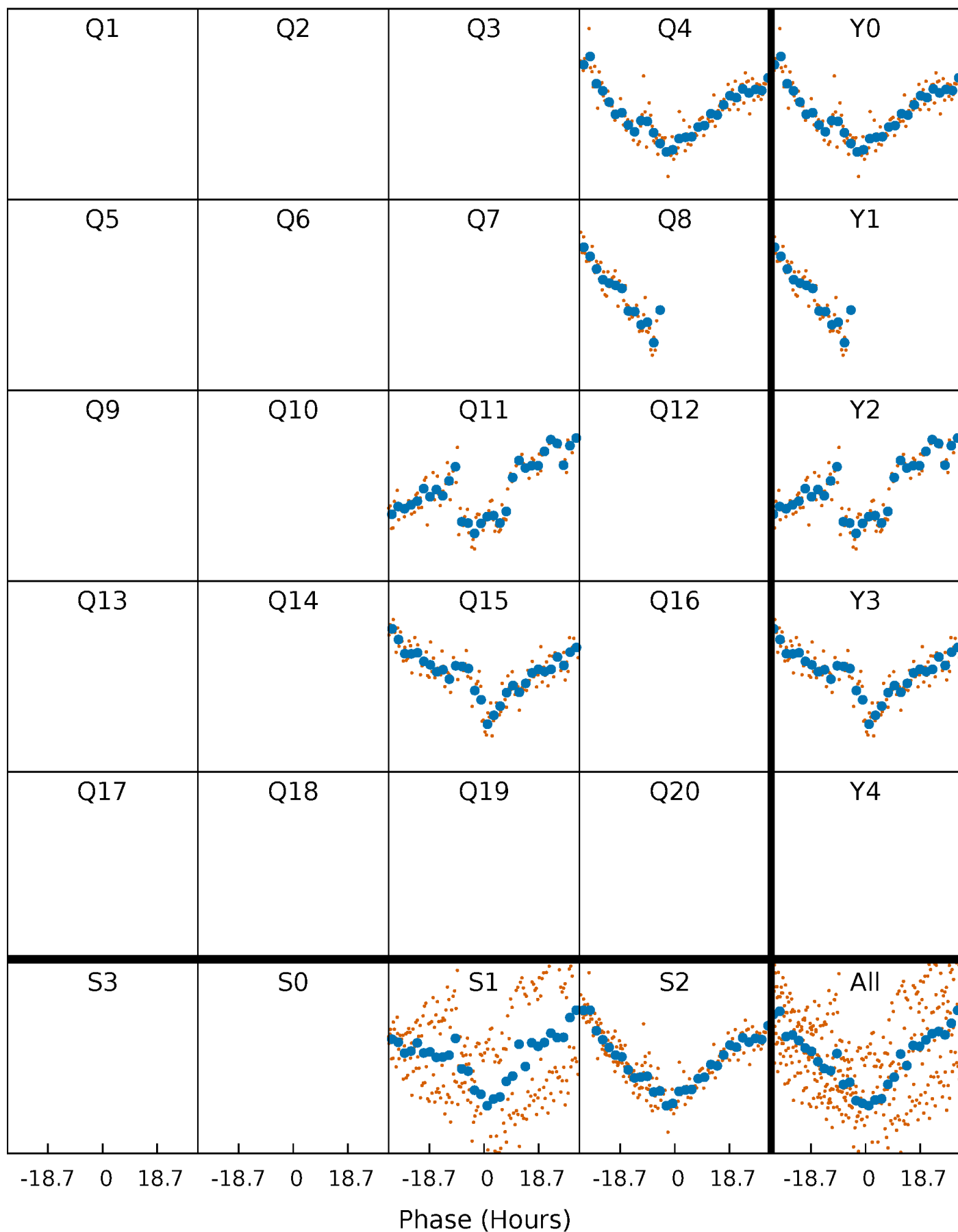


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 010519701-01 P=334.679041 Days $T_0=426.608398$ (BKJD)



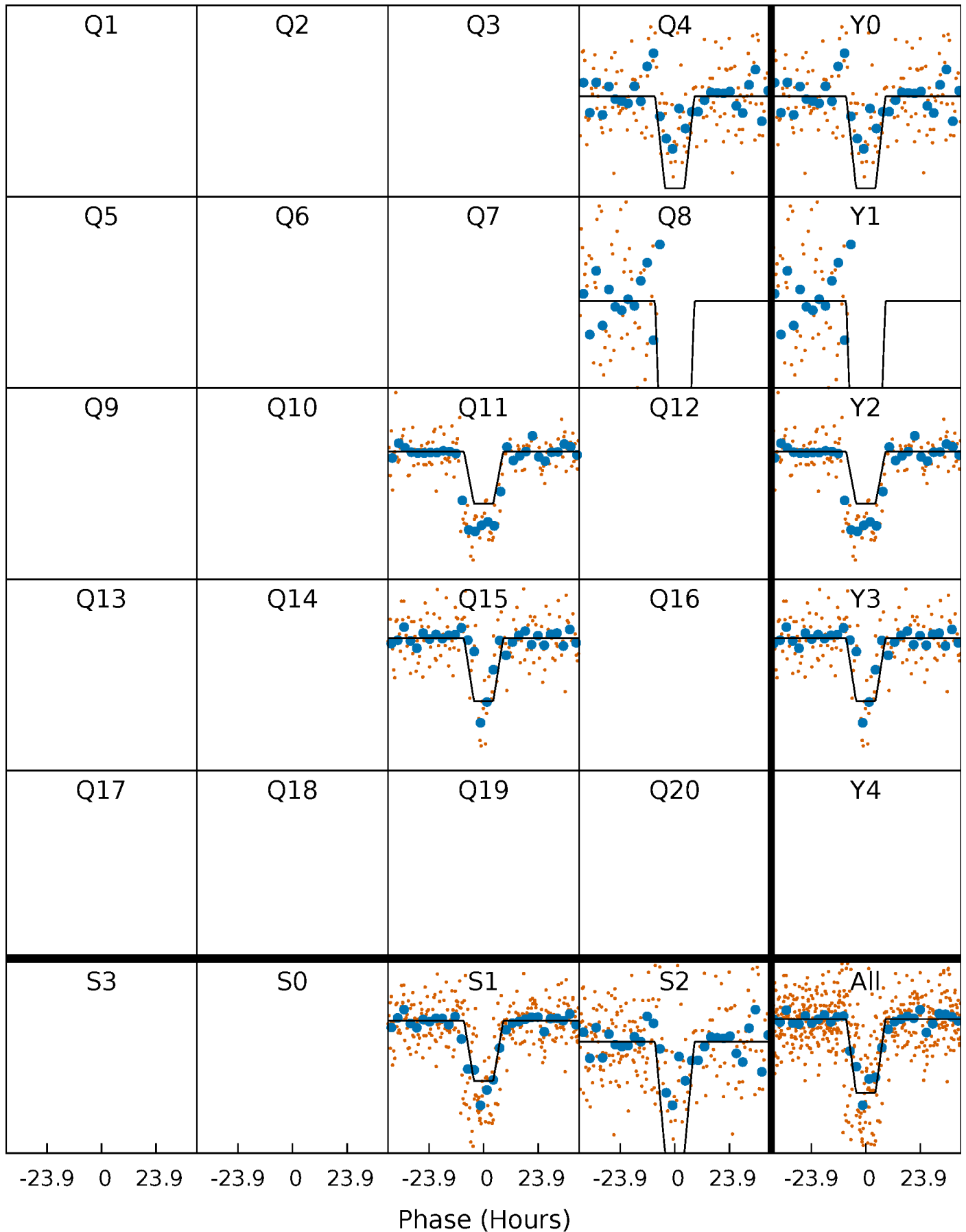
DV Quarter-Phased Transit Curves

TCE 010519701-01 P=334.679041 Days $T_0=426.608398$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

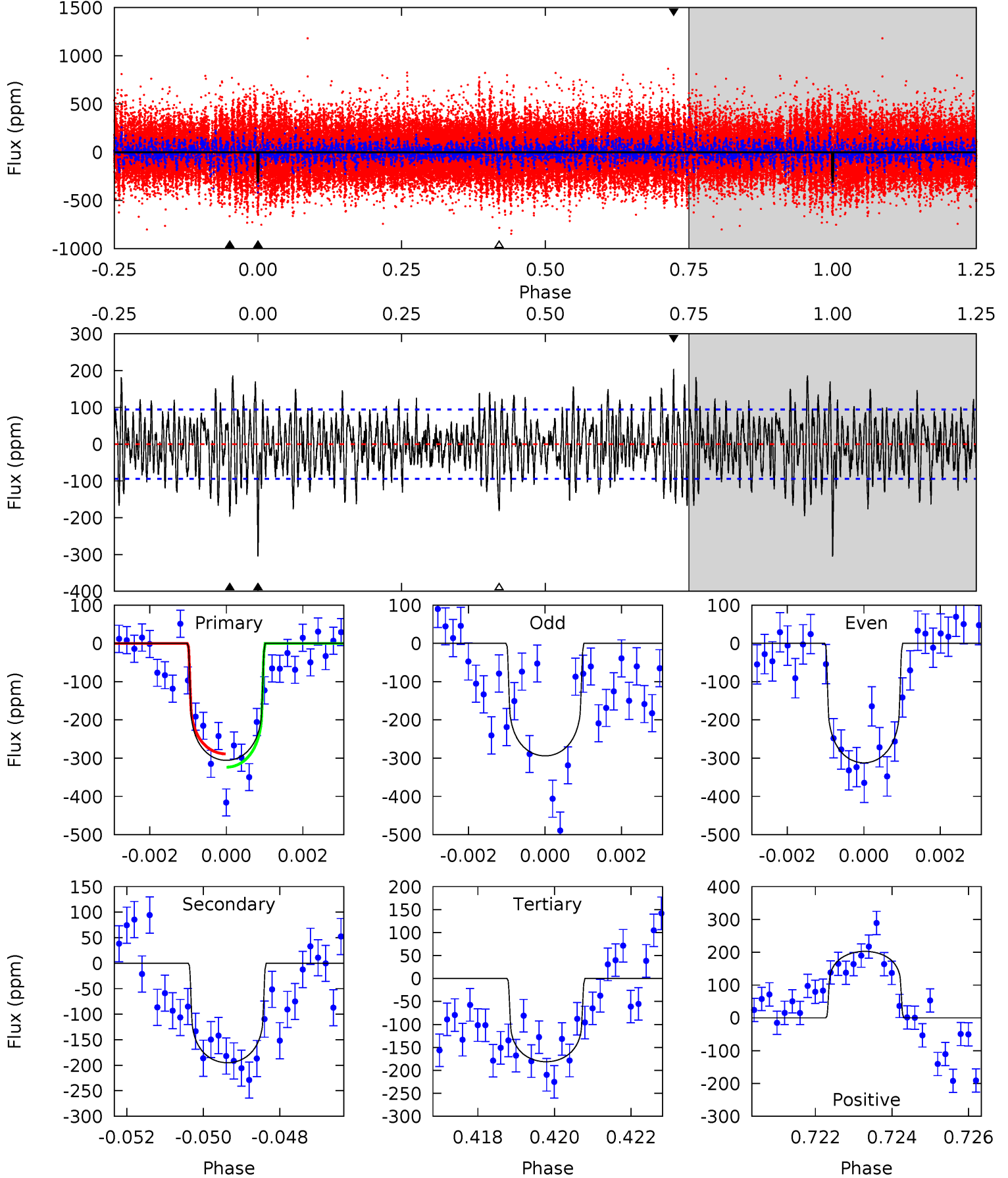
TCE 010519701-01 P=334.701713 Days $T_0=426.620345$ (BKJD)



DV Model-Shift Uniqueness Test

010519701-01, $P = 334.679041$ Days, $E = 91.929357$ Days

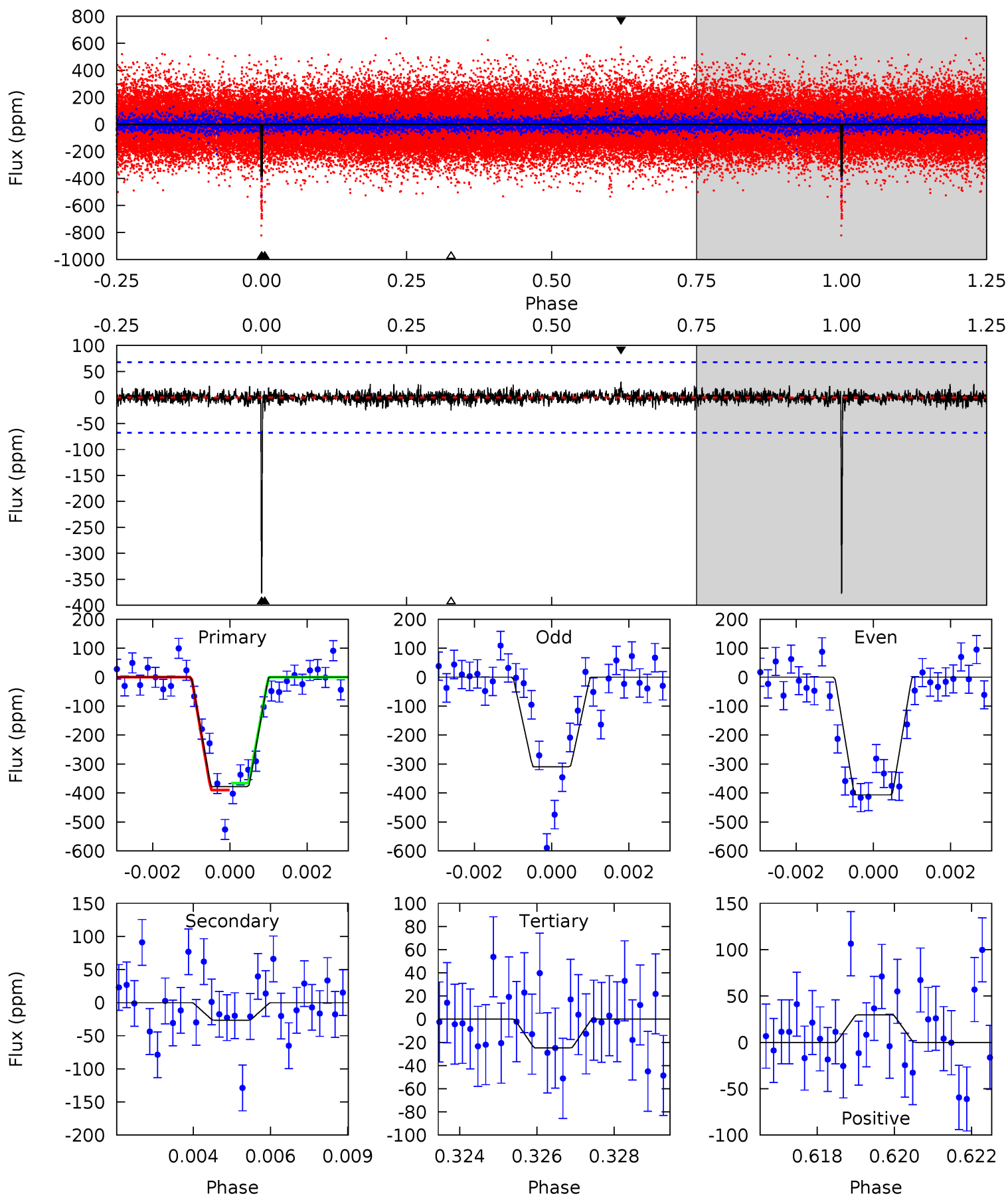
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	11.0	10.2	11.4	5.32	3.08	3.43	7.02	5.82	0.78	-0.42	0.49	0.96	0.40	0.98



Alt Model-Shift Uniqueness Test

010519701-01, $P = 334.701713$ Days, $E = 91.918632$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.6	2.07	1.93	2.31	5.31	3.07	0.52	27.6	27.3	0.13	-0.24	3.73	0.85	0.07	0.94



Stellar Parameters For KIC 010519701

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6122^{+183}_{-165}	$3.811^{+0.293}_{-0.098}$	$-0.120^{+0.300}_{-0.250}$	$2.348^{+0.434}_{-0.806}$	$1.299^{+0.240}_{-0.240}$	$0.141^{+0.289}_{-0.044}$
	+3%/-3%	+8%/-3%	+250%/-208%	+18%/-34%	+18%/-18%	+205%/-31%
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 010519701-01 / KOI 8212.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-195 ± 18	$3.71^{+1.40}_{-1.25}$	561^{+35}_{-51}	5862^{+1212}_{-719}	8524^{+9922}_{-4060}
Alt.	-26 ± 13	$4.93^{+1.55}_{-1.52}$	560^{+35}_{-47}	3541^{+440}_{-423}	628^{+746}_{-349}

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

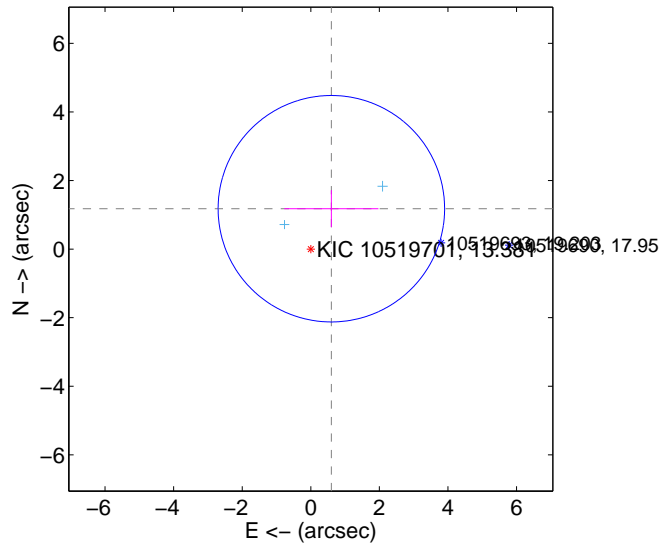
Supplemental centroid analysis for 010519701-01. Kepler magnitude: 13.38. Transit SNR 6.99

There are 2 quarters with good PRF difference image offsets

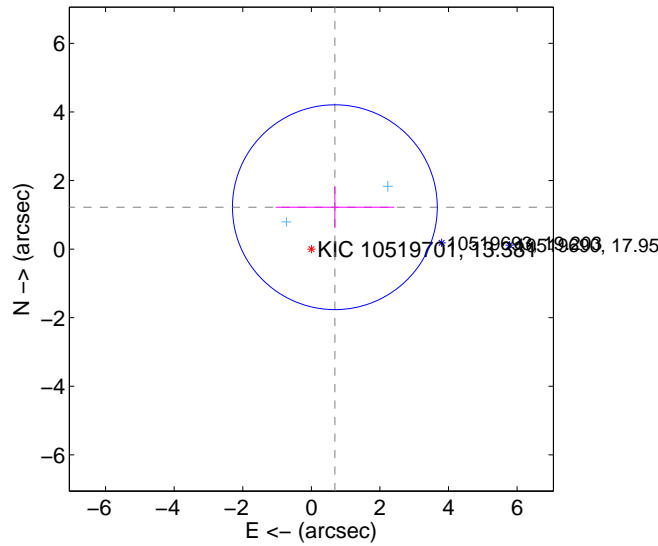
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.321 ± 1.101	1.20	-0.600 ± 1.371	1.177 ± 0.539
PRF-fit source offset from KIC position	1.401 ± 0.995	1.41	-0.686 ± 1.727	1.221 ± 0.602
photometric centroid source offset	3.13 ± 0.92	3.40	2.54 ± 0.89	-1.82 ± 0.98

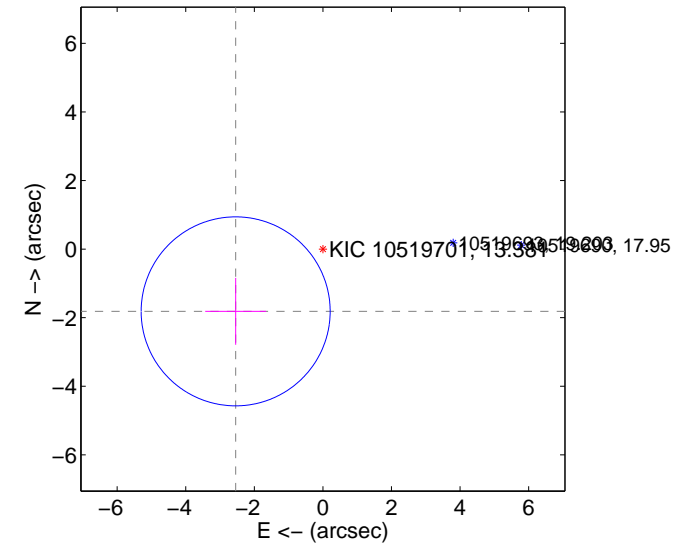
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

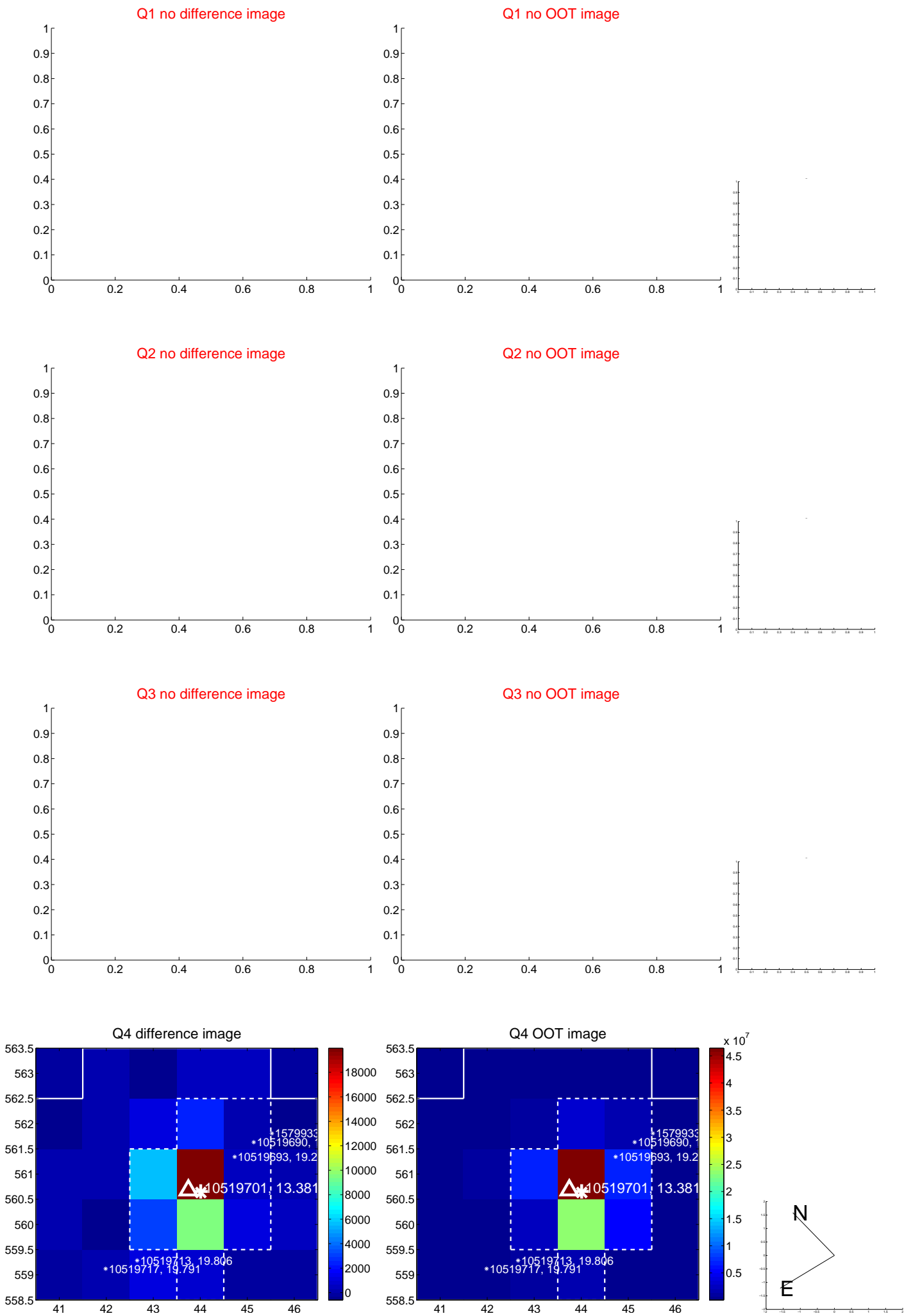


offset from photometric centroids



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.



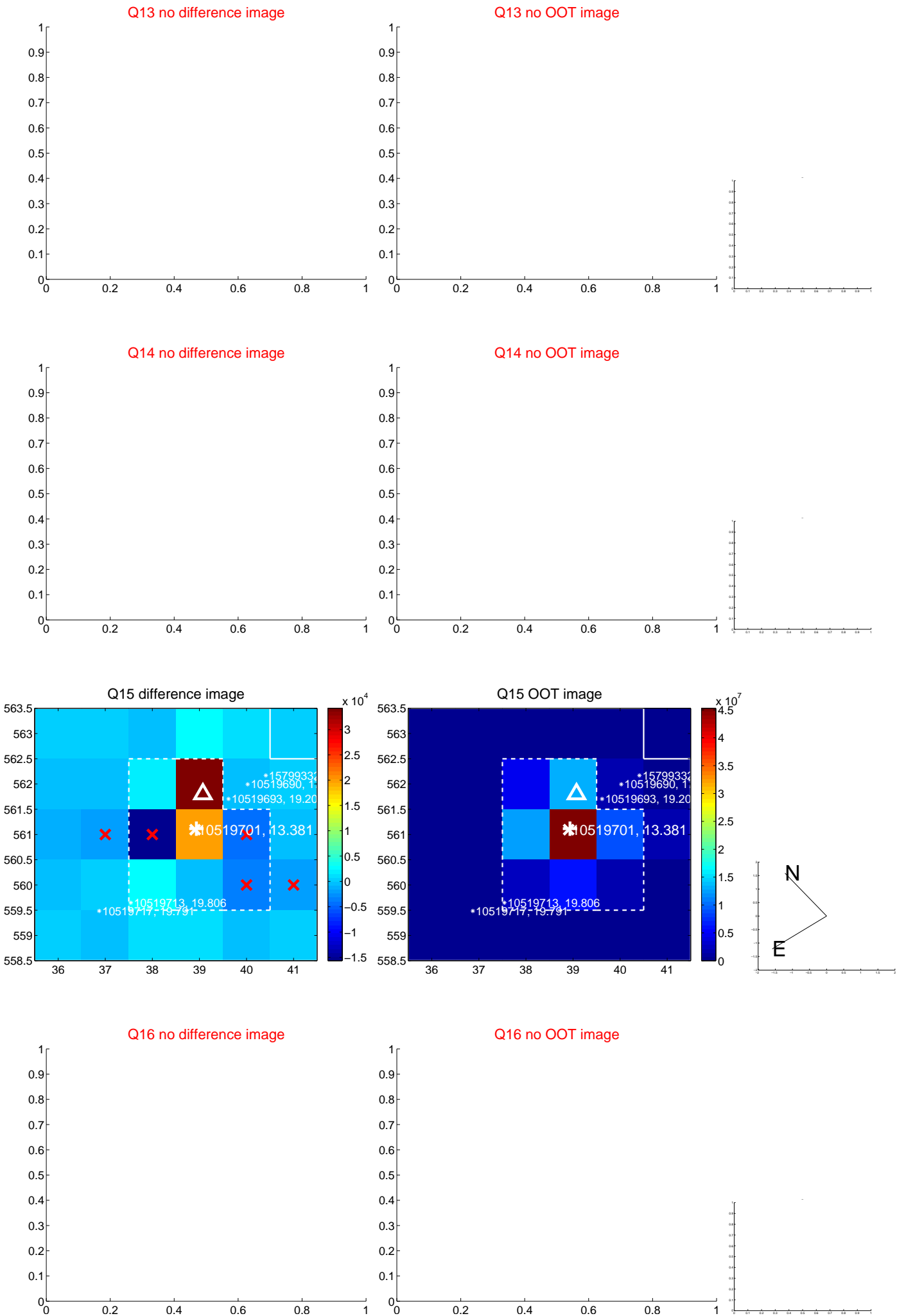
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



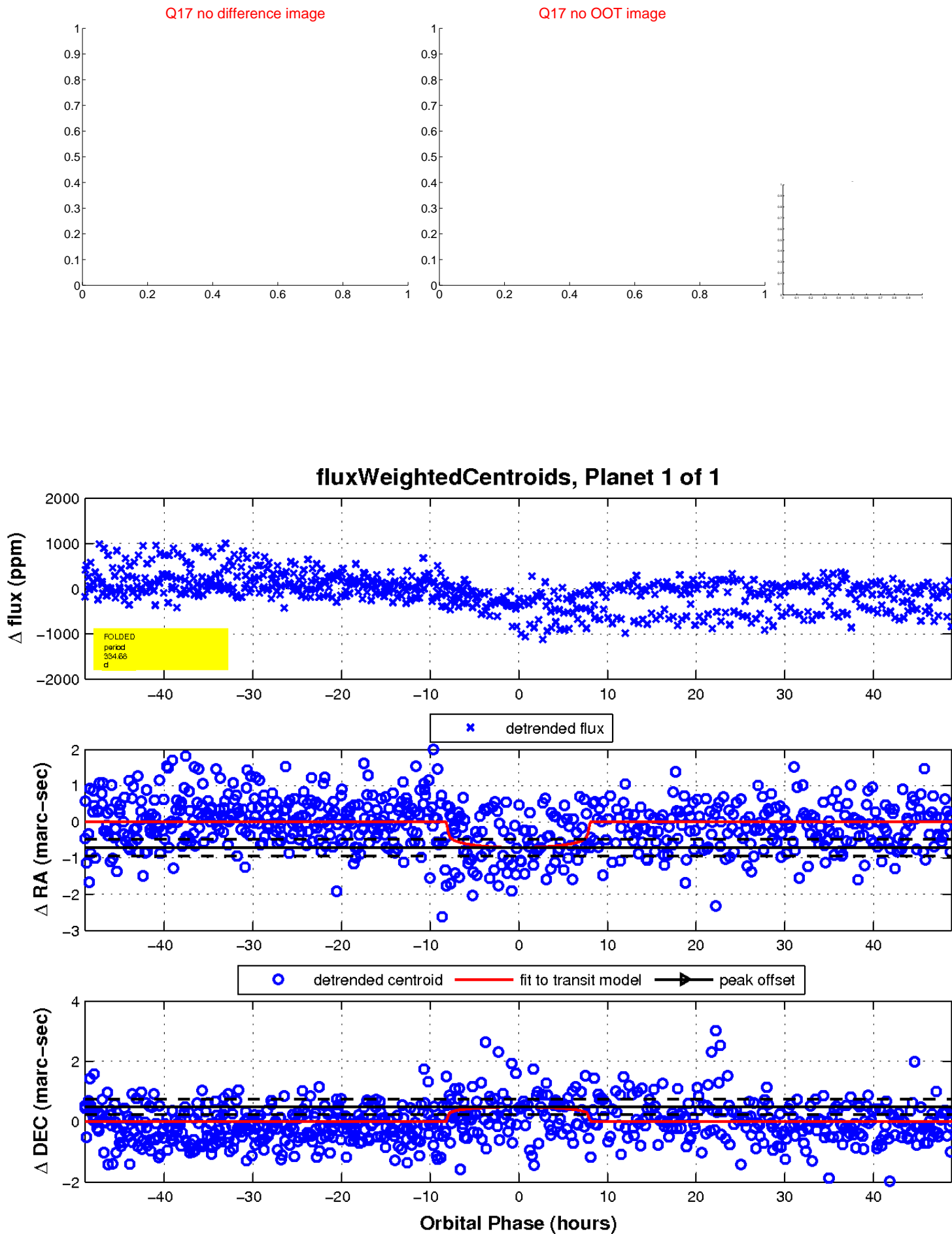
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

