

KIC 010797088

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})
010797088-01	OBS	No	493.831025	186.307597	320.9	22.445	7.3	8.1	0.92	5701	1.99	0.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010797088-01	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.

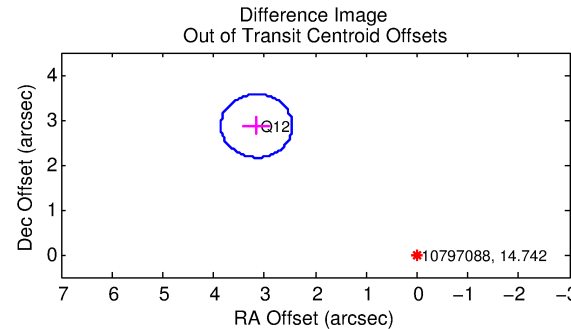
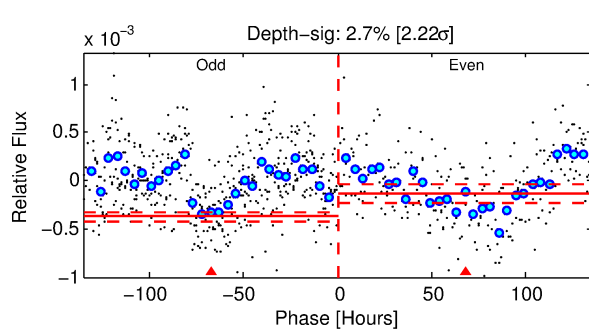
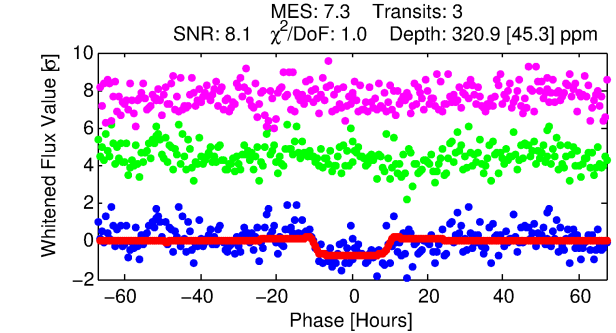
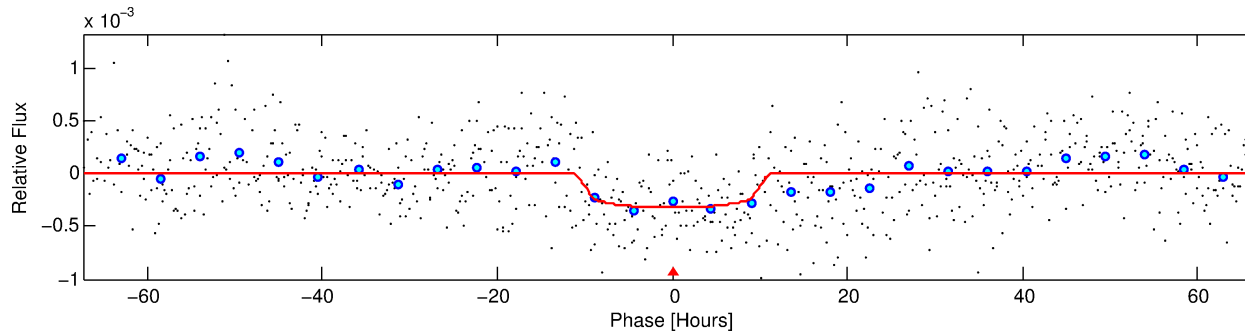
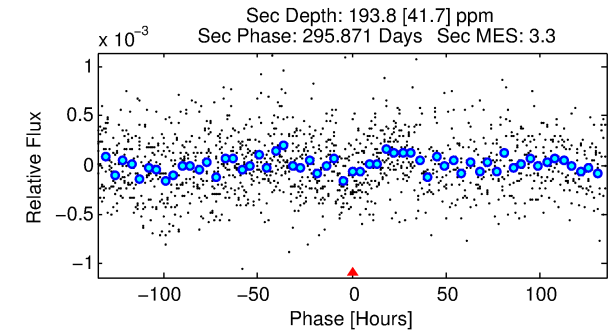
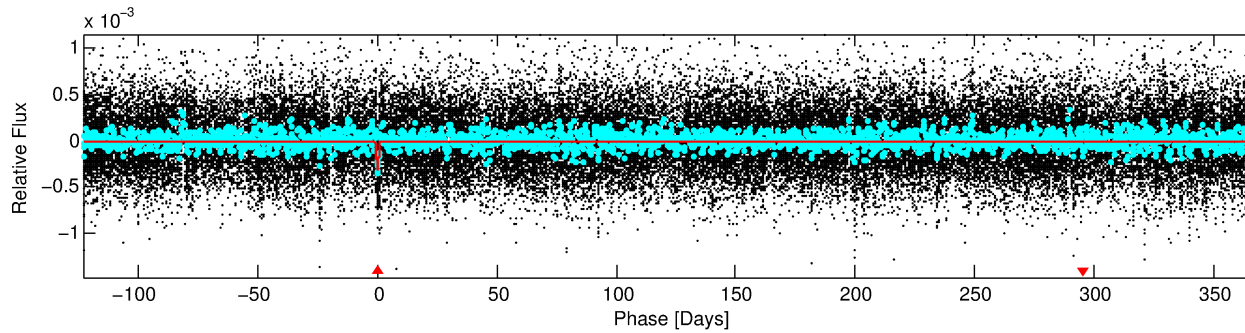
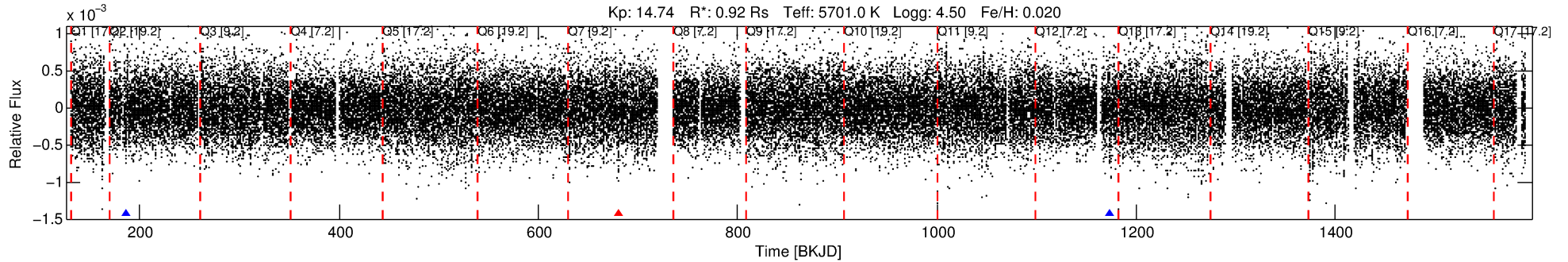
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010797088-01

No Significant Match Found

DV One-Page Summary

KIC: 10797088 Candidate: 1 of 1 Period: 493.831 d



DV Fit Results:

Period = 493.83102 [0.03018] d
Epoch = 186.3076 [0.0396] BKJD
Rp/R* = 0.0198 [0.0028]
a/R* = 76.26 [41.93]
b = 0.91 [0.10]
Seff = 0.54 [0.20]
Teq = 219 [21] K
Rp = 1.99 [0.65] Re
a = 1.2097 [0.2990] AU
Ag = 39584.25 [19891.12] [1.99σ]
Teffp = 4776 [448] K [10.15σ]

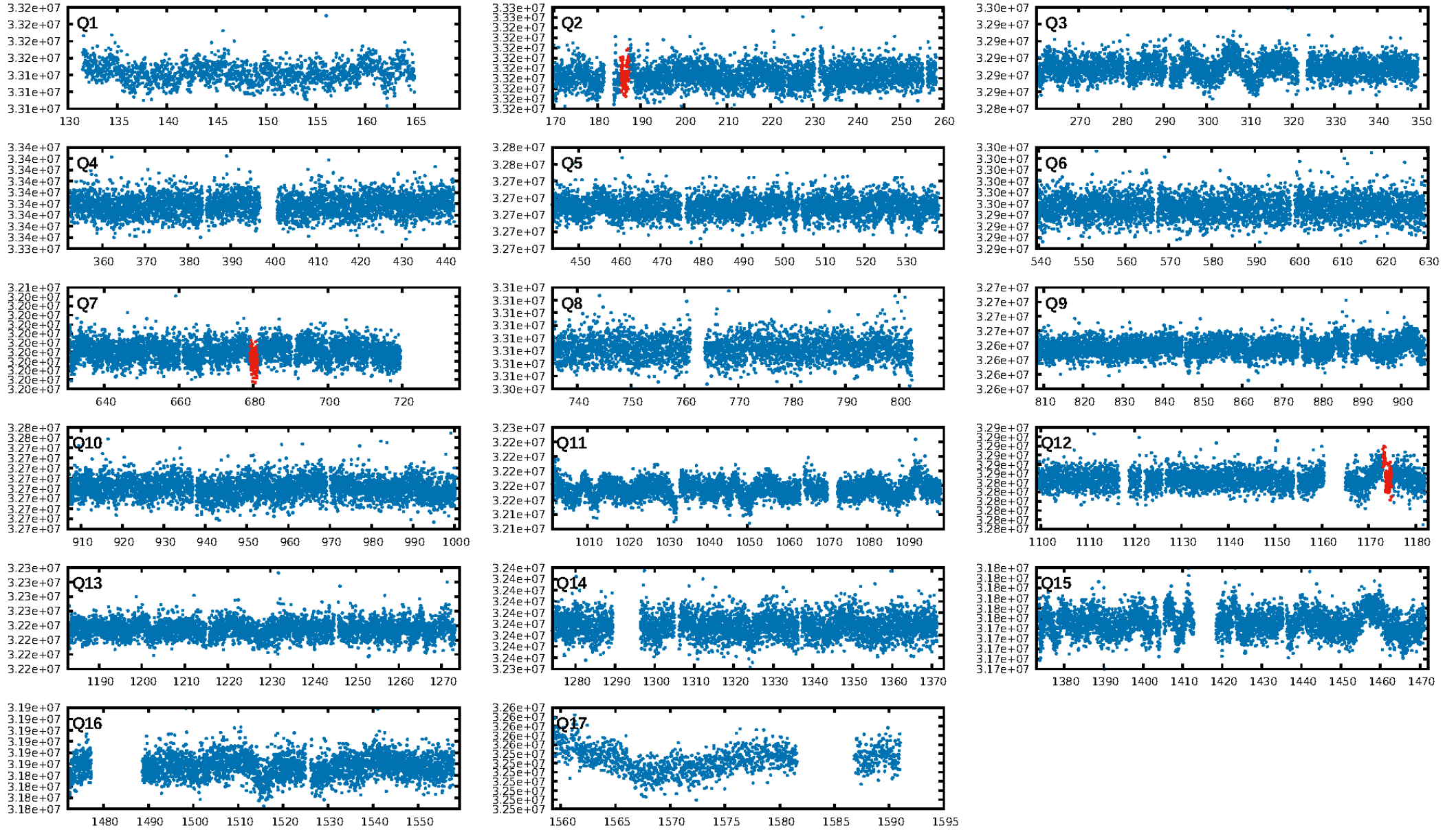
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 27.5%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.30e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 1.084
Centroid-sig: 92.9%
Centroid-so: 0.771 arcsec [0.40σ]
OotOffset-rm: 4.259 arcsec [18.20σ]
KicOffset-rm: 4.568 arcsec [19.78σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

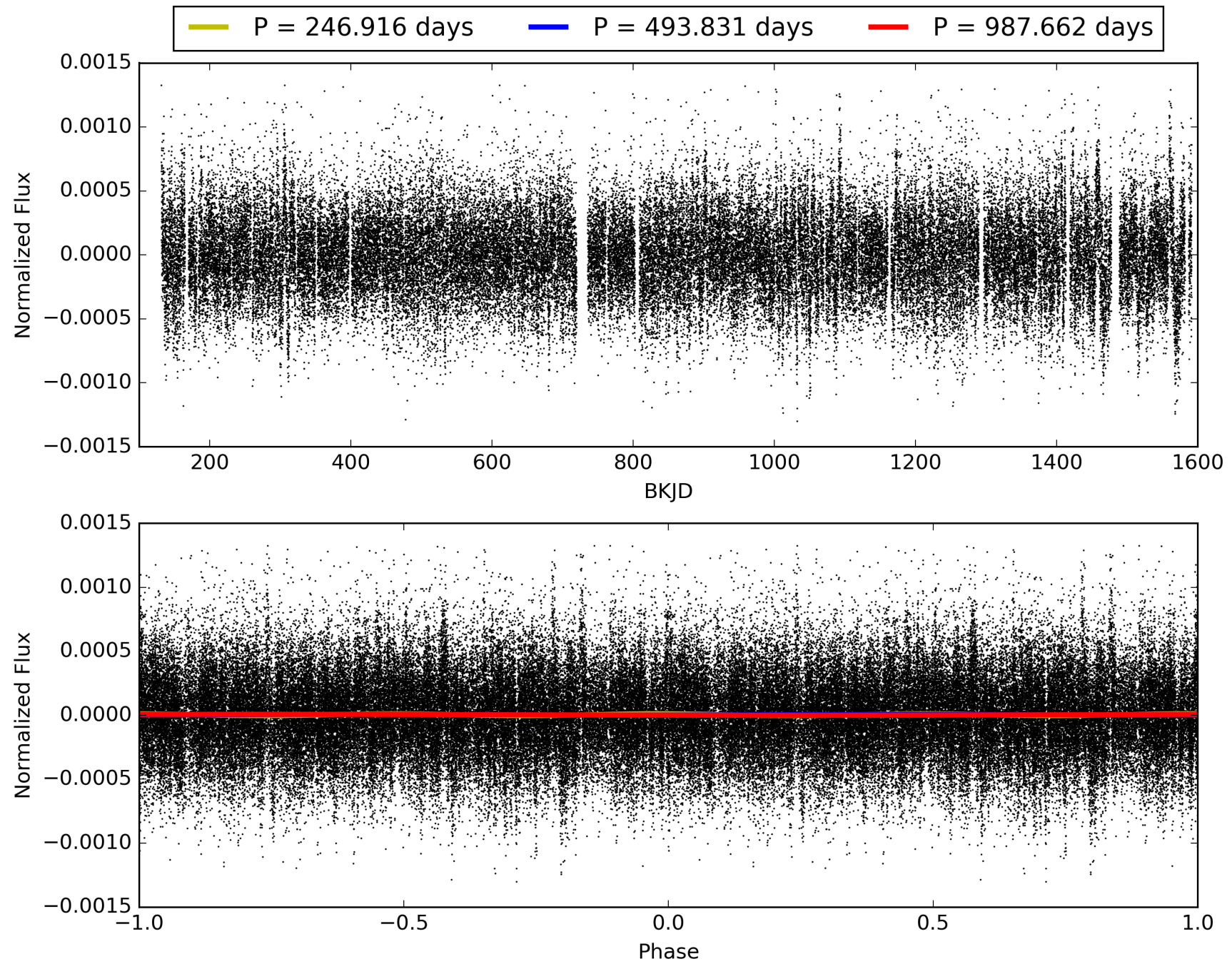
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:14:04 Z

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

TCE 010797088-01, PDC Light Curves

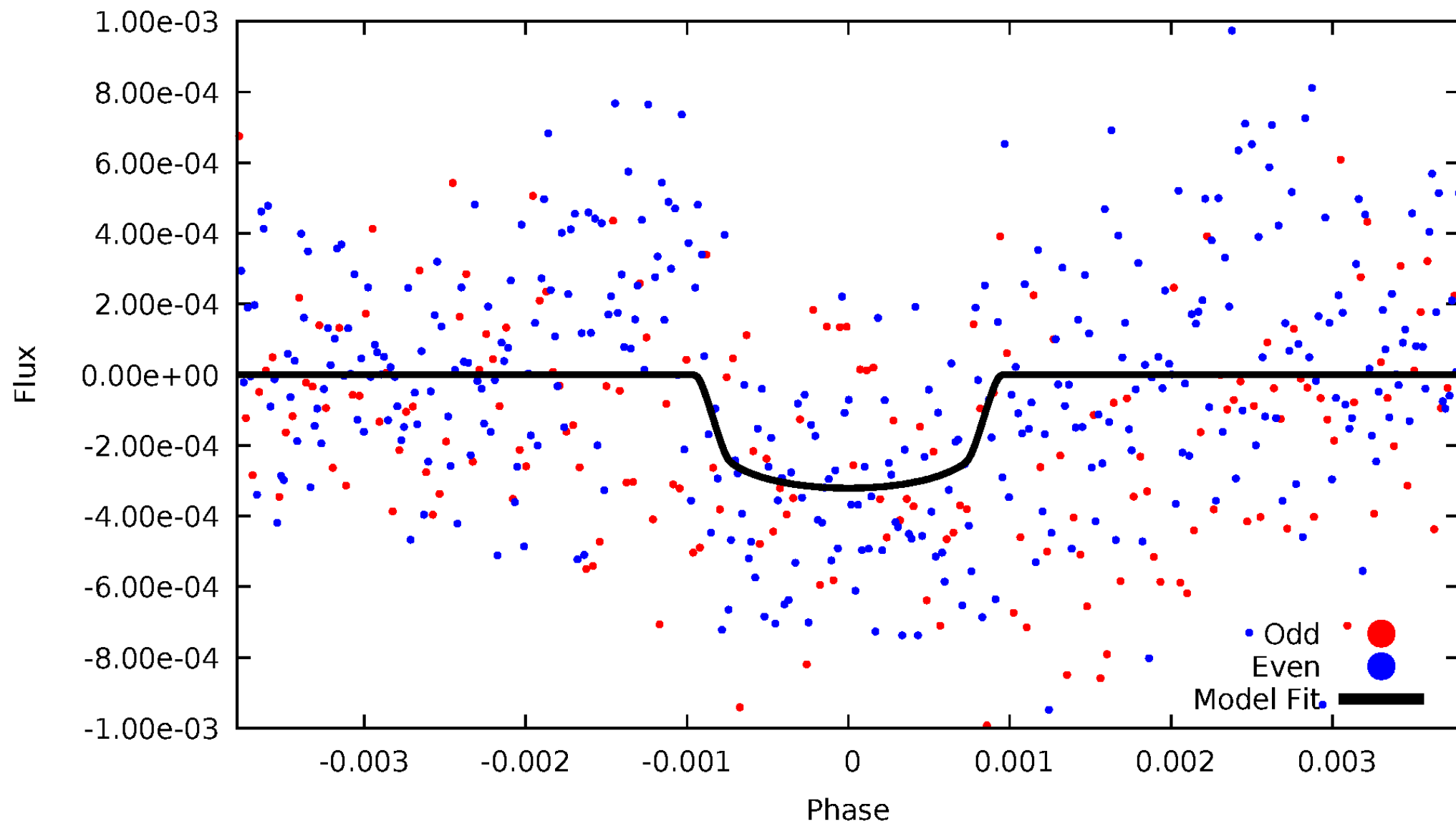


TCE 010797088-01



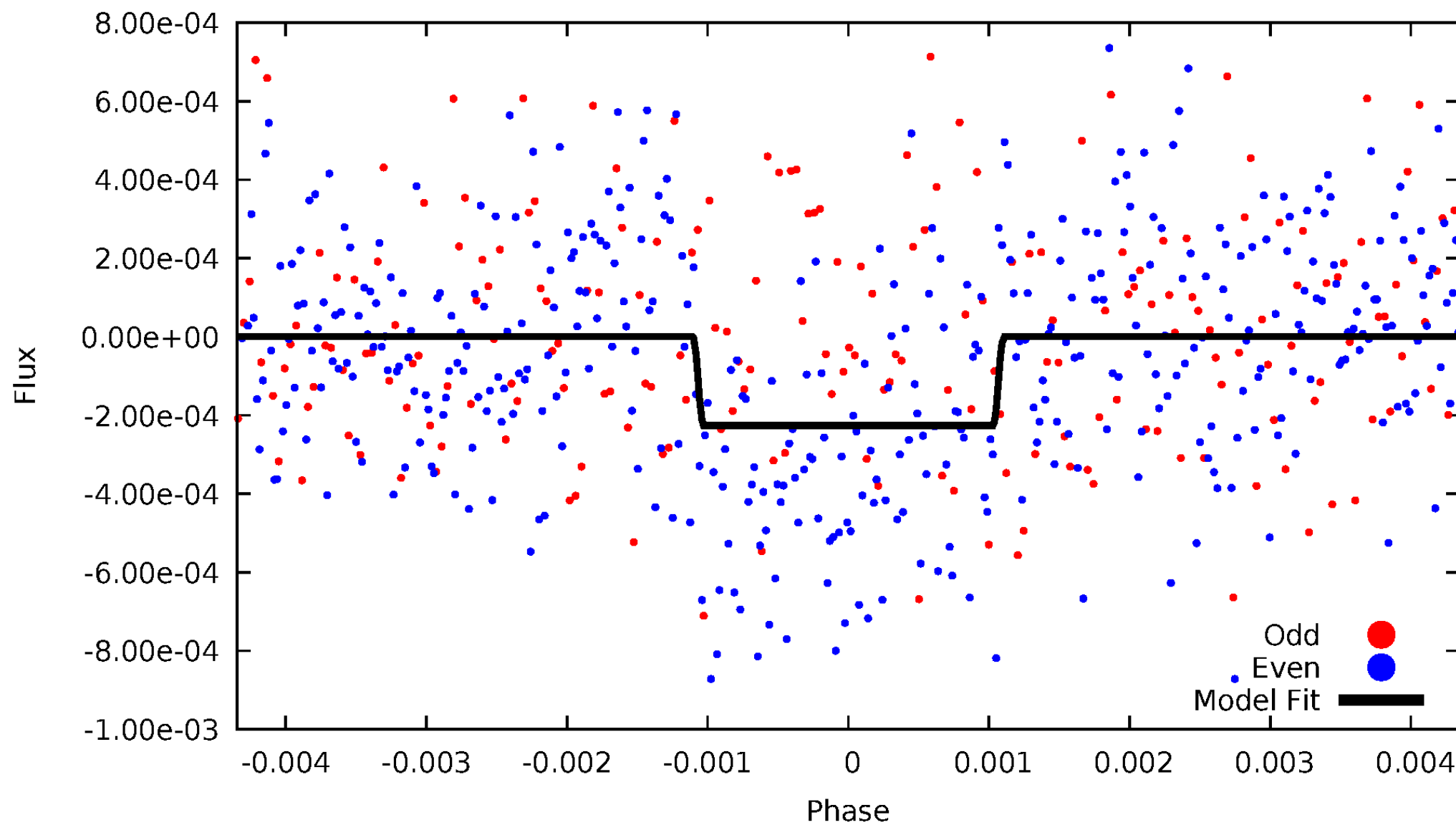
DV Odd/Even

TCE 010797088-01

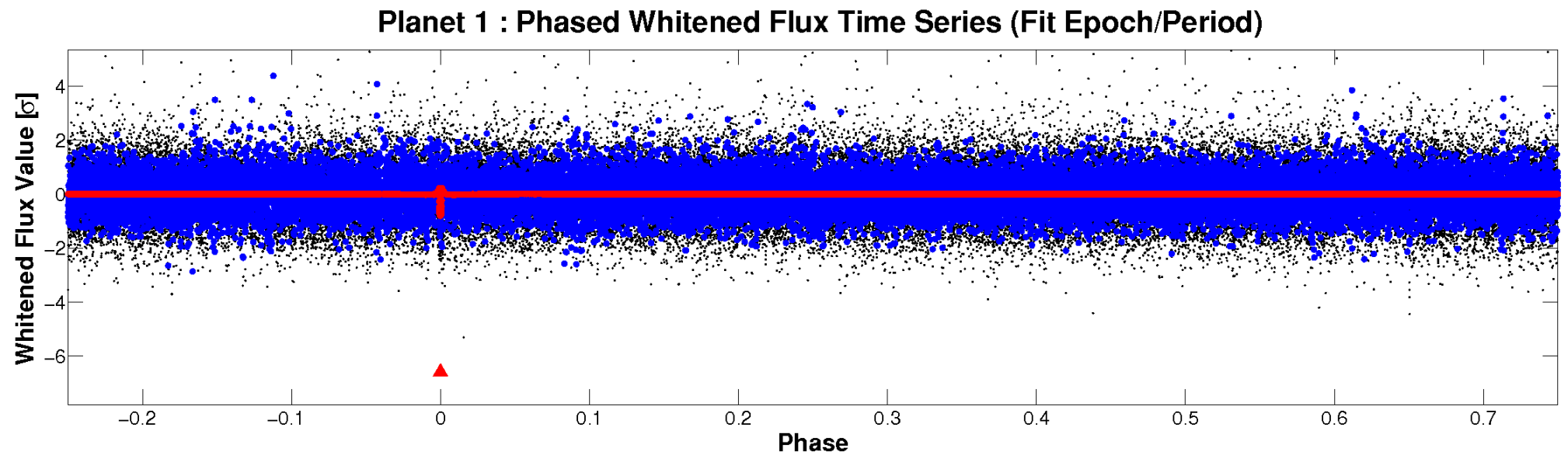
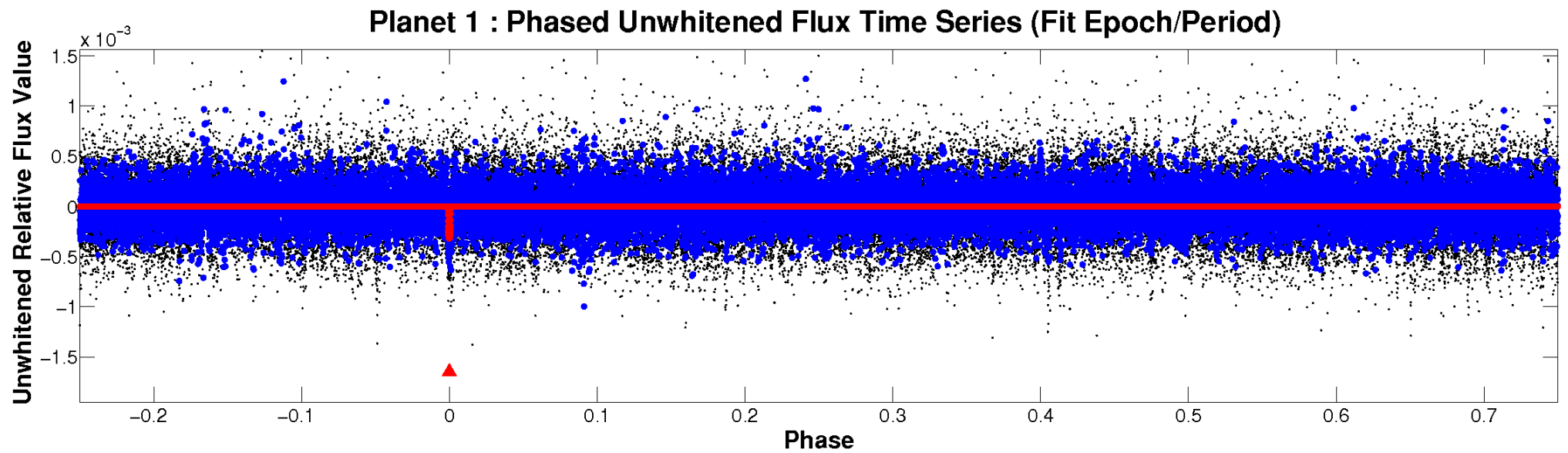


ALT Odd/Even

TCE 010797088-01

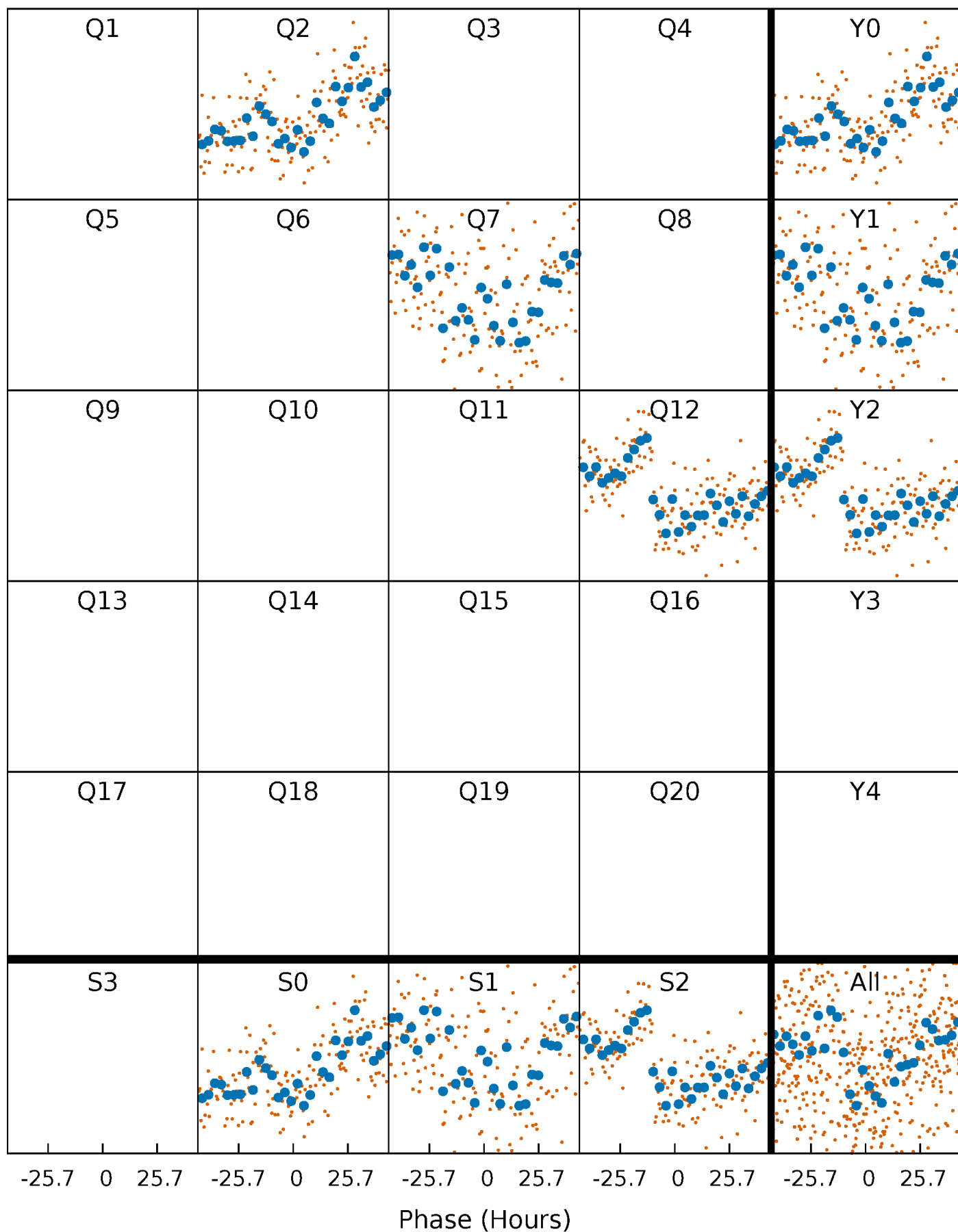


Non-Whitened Vs. Whitened Light Curve



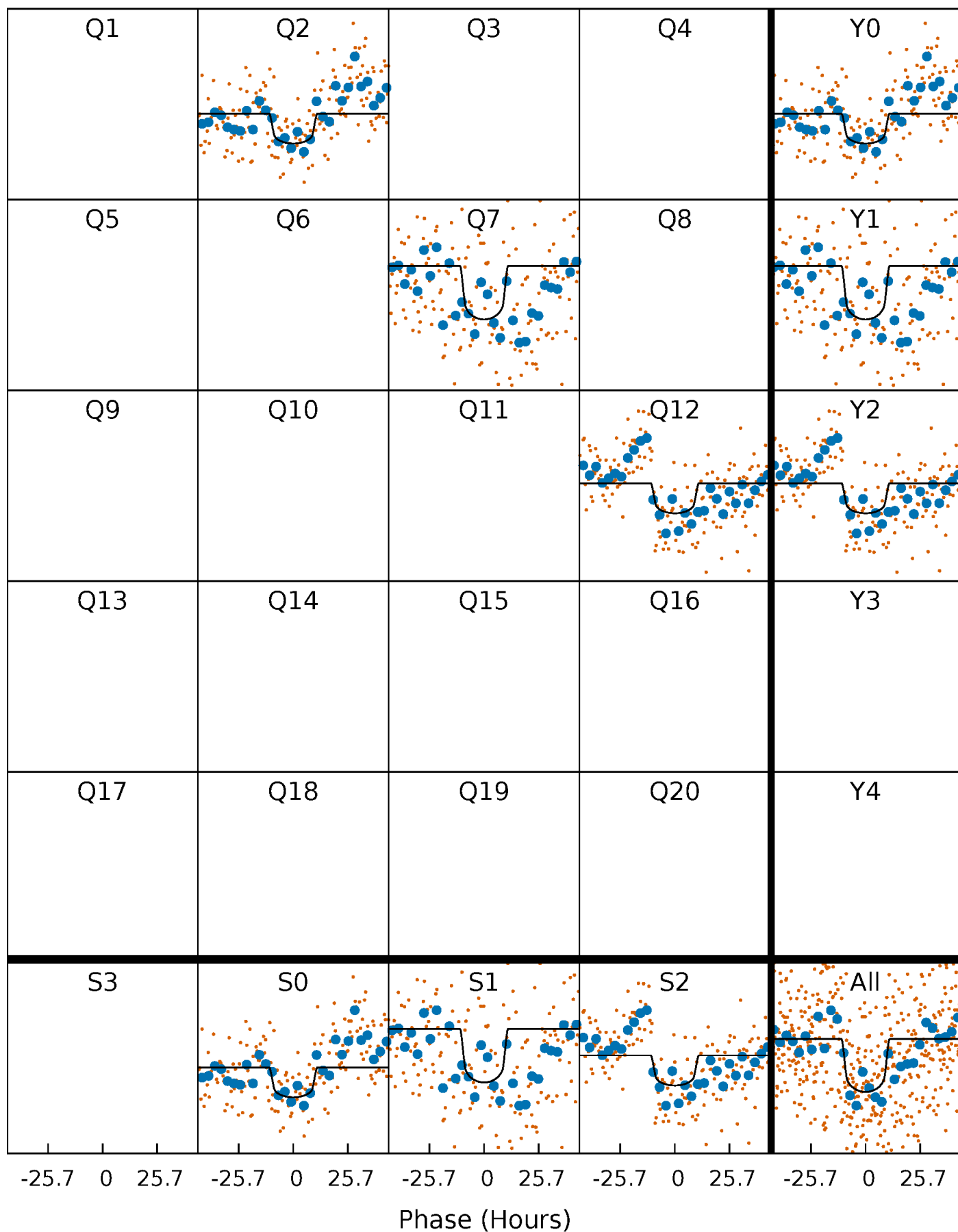
PDC Quarter-Phased Transit Curves

TCE 010797088-01 P=493.831025 Days $T_0=186.307597$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010797088-01 P=493.831025 Days $T_0=186.307597$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

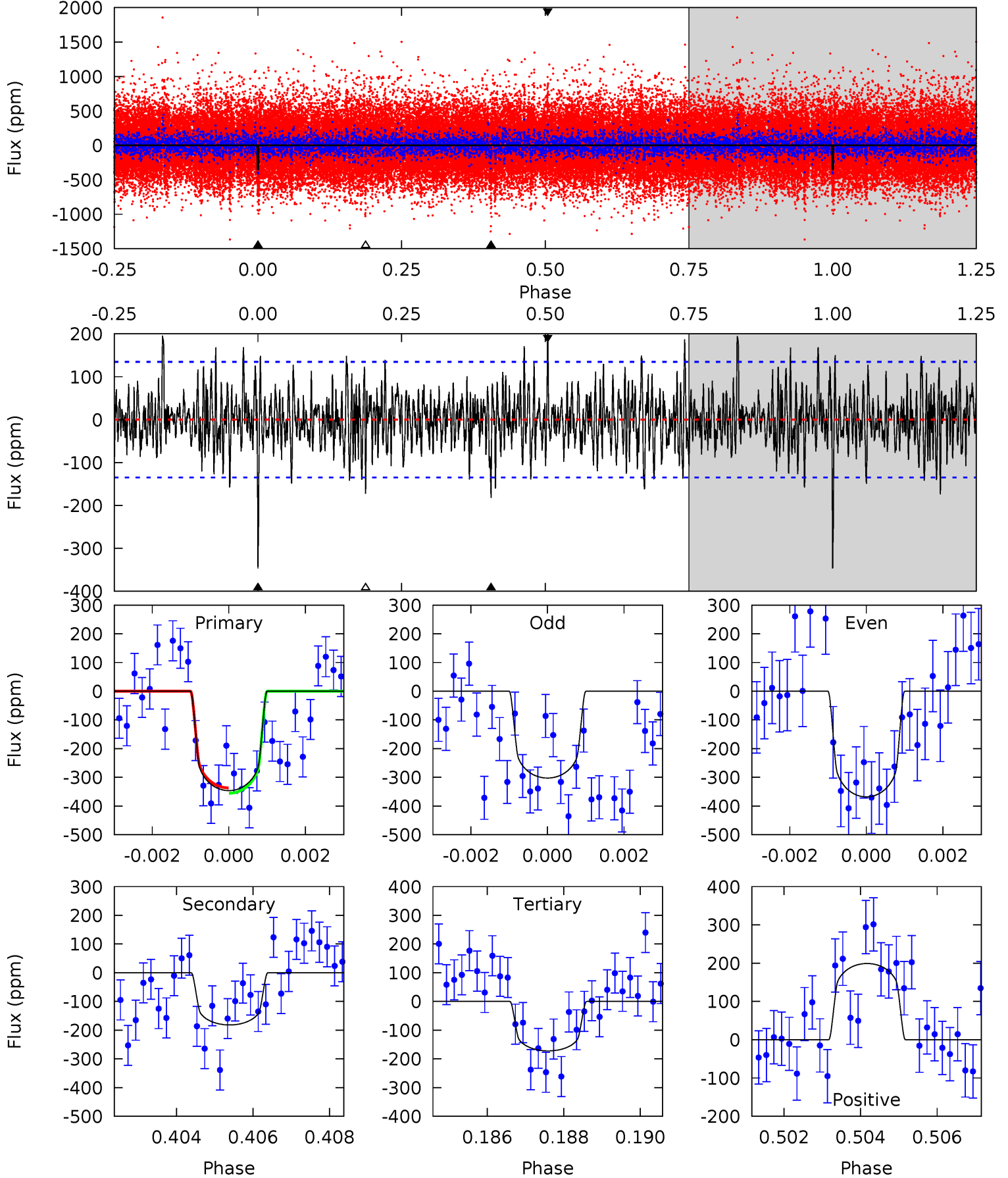
TCE 010797088-01 P=493.749733 Days $T_0=186.565098$ (BKJD)



DV Model-Shift Uniqueness Test

010797088-01, P = 493.831025 Days, E = 186.307597 Days

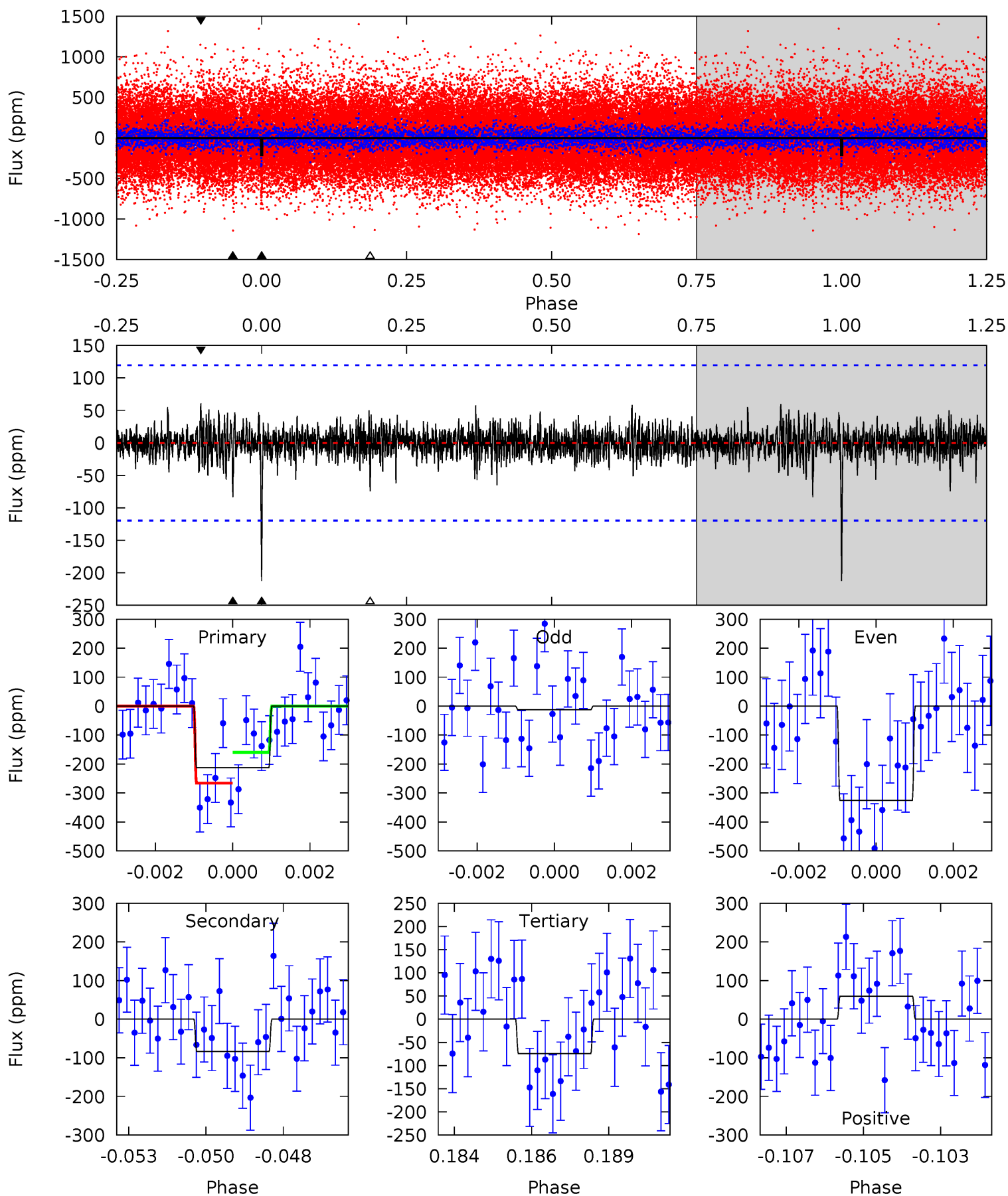
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	7.19	6.81	7.87	5.33	3.10	2.09	6.88	5.82	0.38	-0.69	1.22	1.11	0.37	0.37



Alt Model-Shift Uniqueness Test

010797088-01, P = 493.749733 Days, E = 186.565098 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.45	3.71	3.29	2.65	5.31	3.06	0.72	6.15	6.80	0.41	1.06	6.56	0.79	0.22	2.36



Stellar Parameters For KIC 010797088

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5701^{+156}_{-173}	$4.499^{+0.060}_{-0.192}$	$0.020^{+0.250}_{-0.300}$	$0.917^{+0.273}_{-0.091}$	$0.969^{+0.103}_{-0.114}$	$1.770^{+0.458}_{-0.881}$
	+3%/-3%	+1%/-4%	+1250%/-1500%	+30%/-10%	+11%/-12%	+26%/-50%
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 010797088-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-182 ± 25	$2.02^{+0.38}_{-0.29}$	310^{+20}_{-14}	4816^{+363}_{-293}	34619^{+14472}_{-10245}
Alt.	-84 ± 23	$1.57^{+0.30}_{-0.33}$	311^{+19}_{-14}	4554^{+537}_{-392}	26361^{+19316}_{-10745}

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

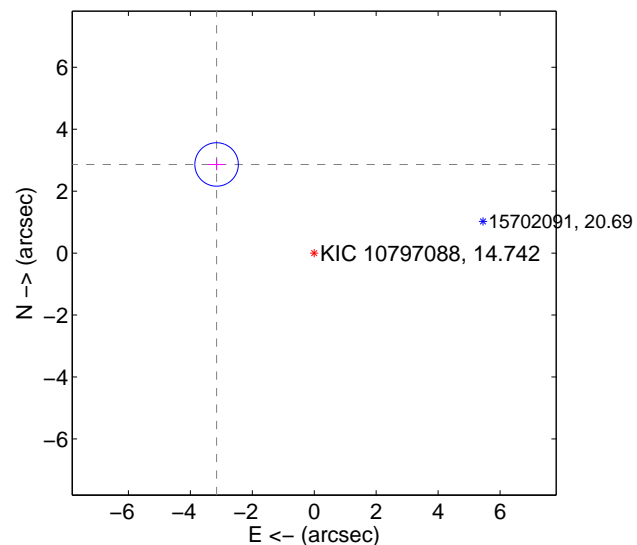
Supplemental centroid analysis for 010797088-01. Kepler magnitude: 14.74. Transit SNR 8.10

There are 1 quarters with good PRF difference image offsets

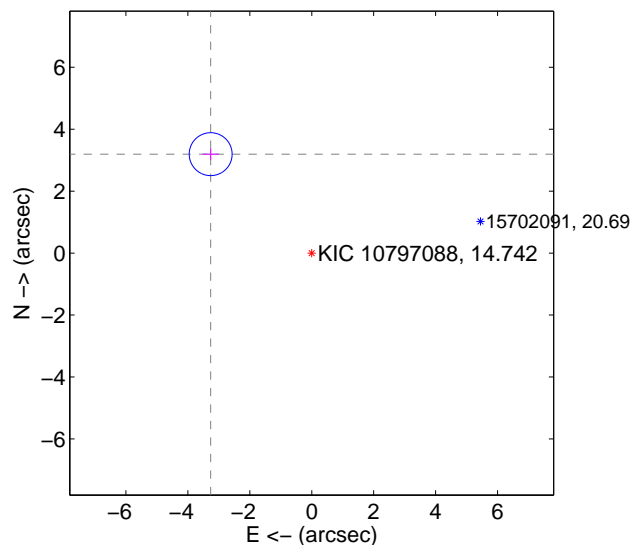
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.259 ± 0.234	18.20	3.154 ± 0.268	2.863 ± 0.185
PRF-fit source offset from KIC position	4.568 ± 0.231	19.78	3.264 ± 0.268	3.195 ± 0.185
photometric centroid source offset	0.77 ± 1.91	0.40	0.61 ± 1.88	0.48 ± 1.97

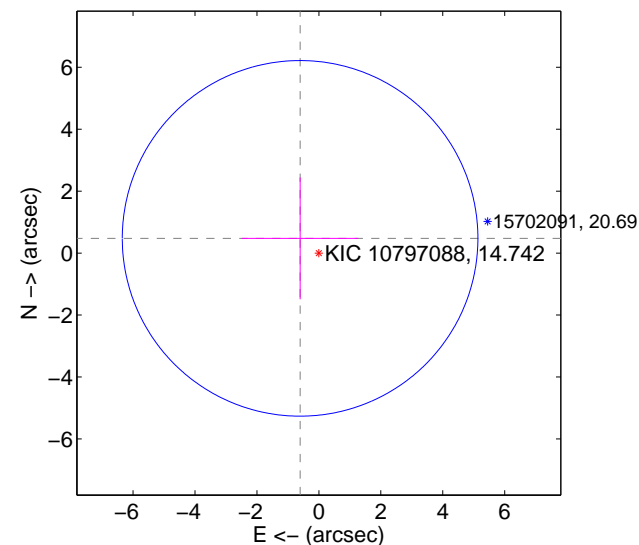
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

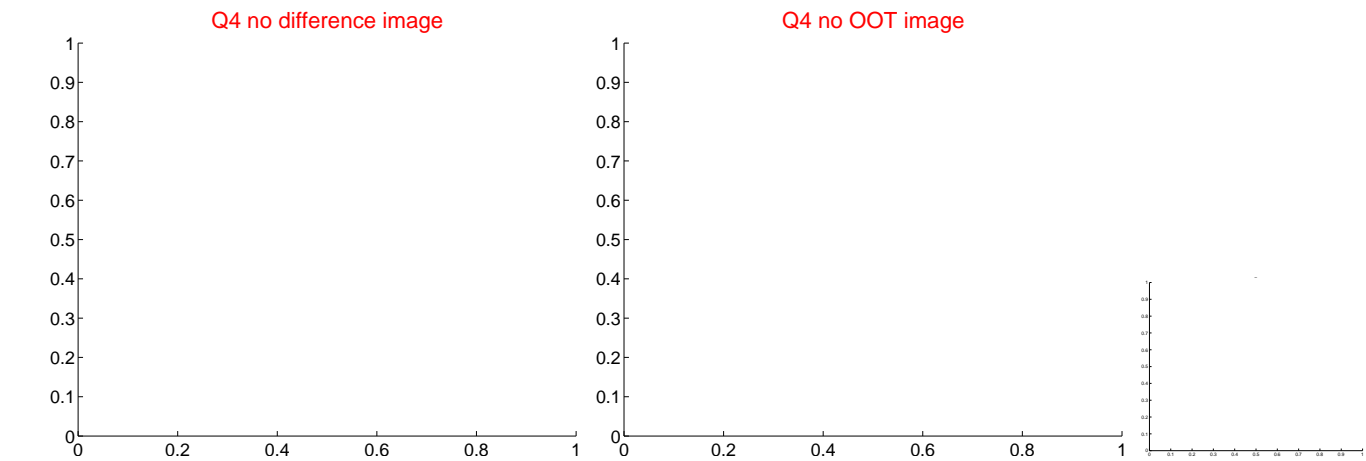
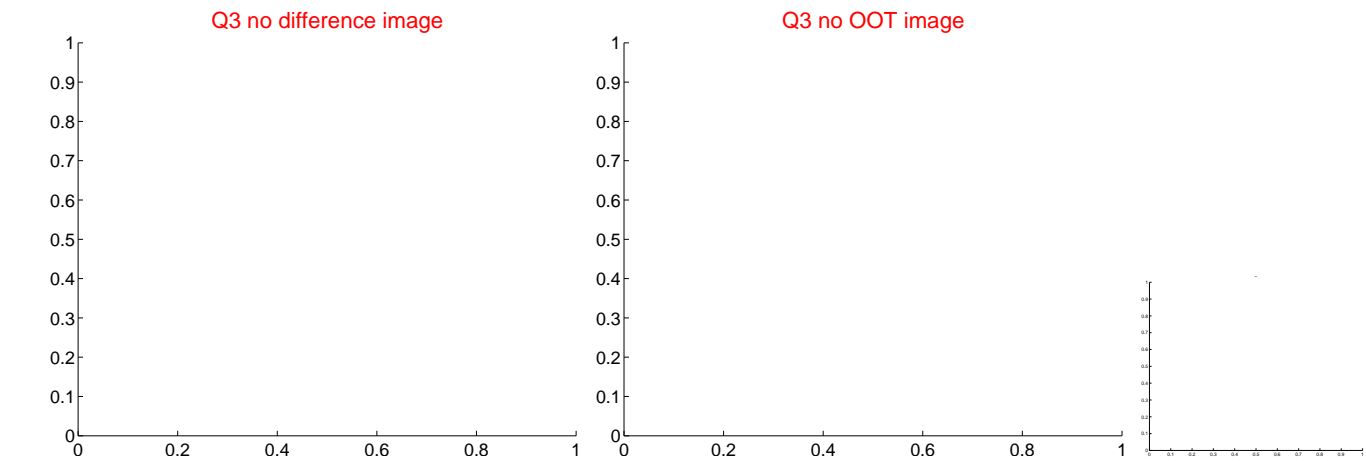
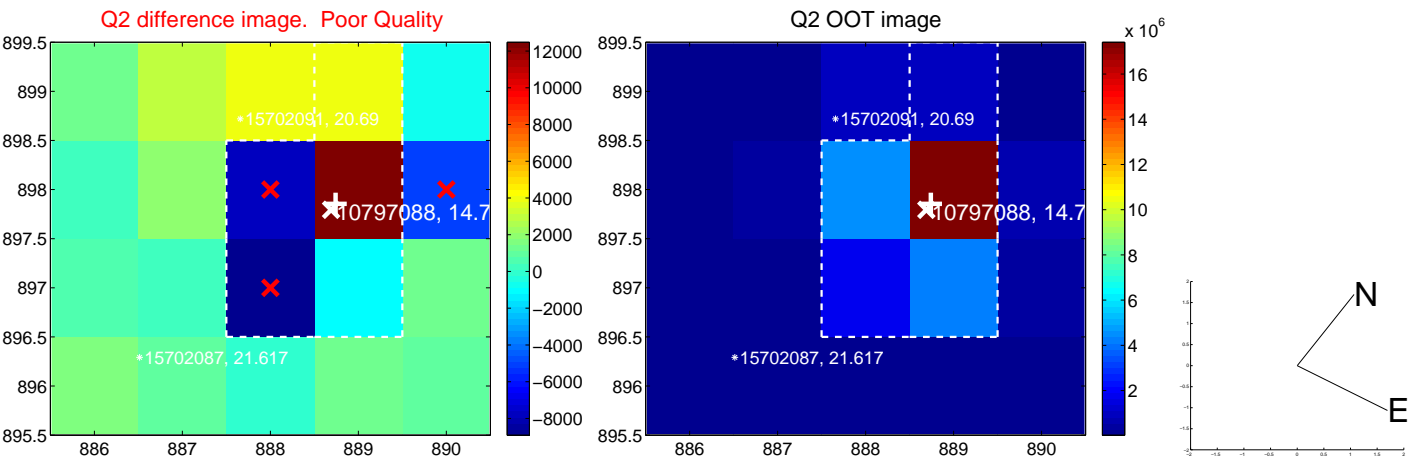
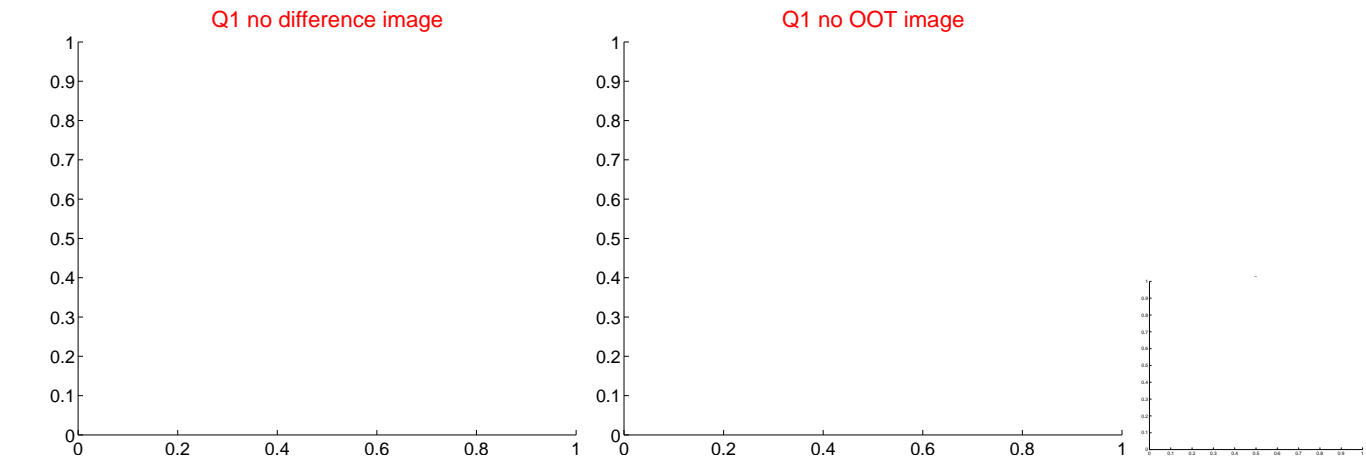


offset from photometric centroids

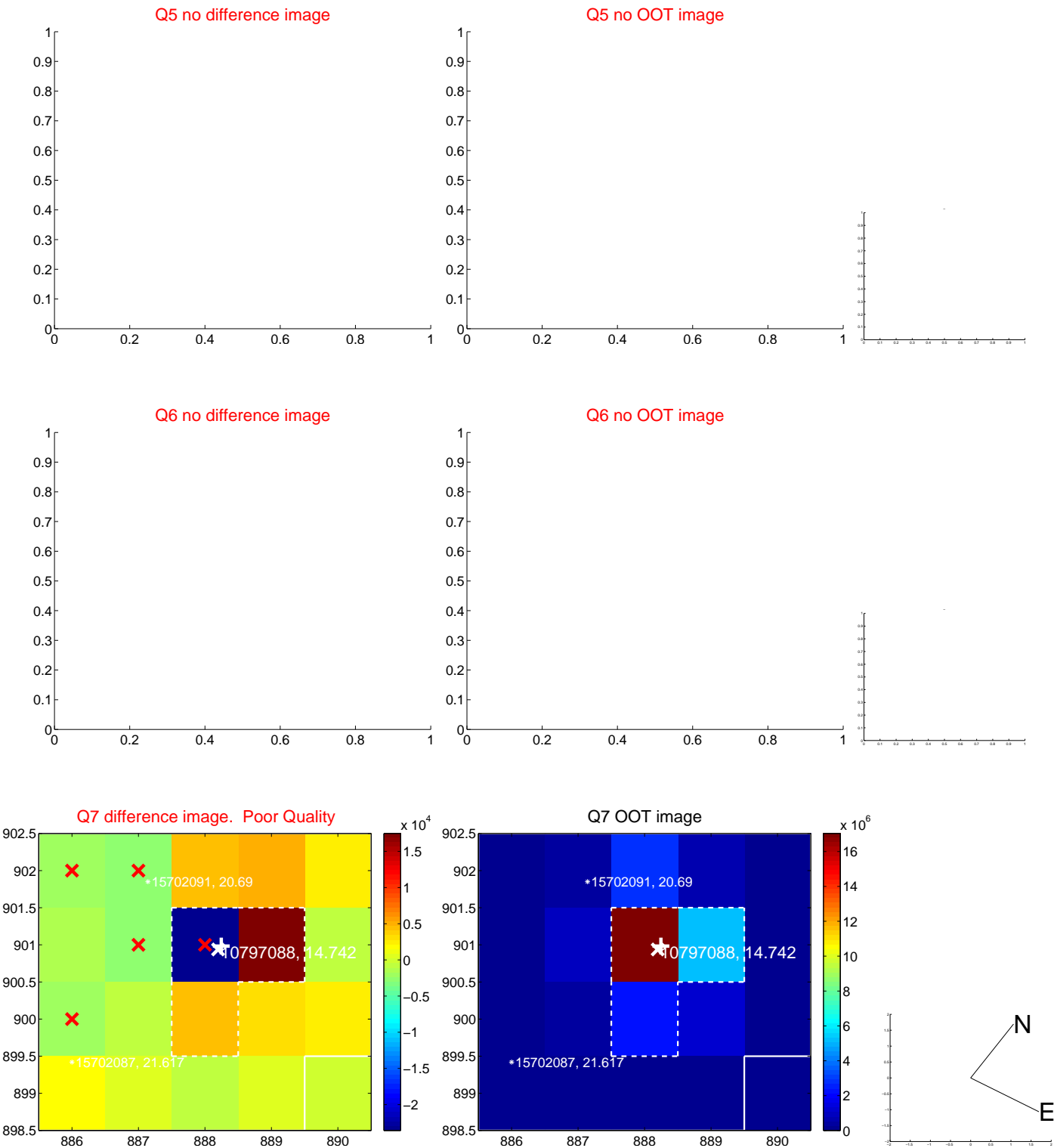


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

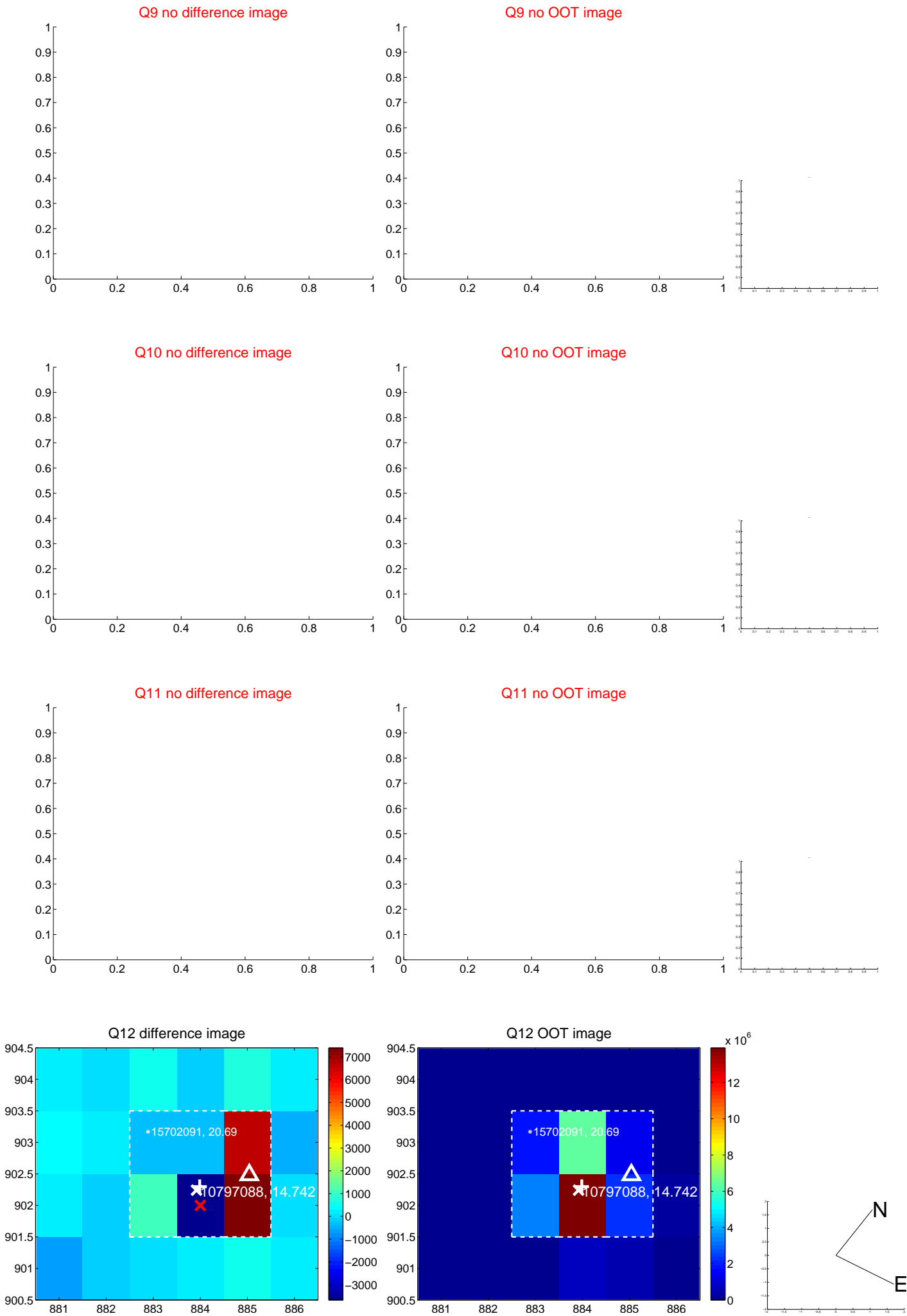
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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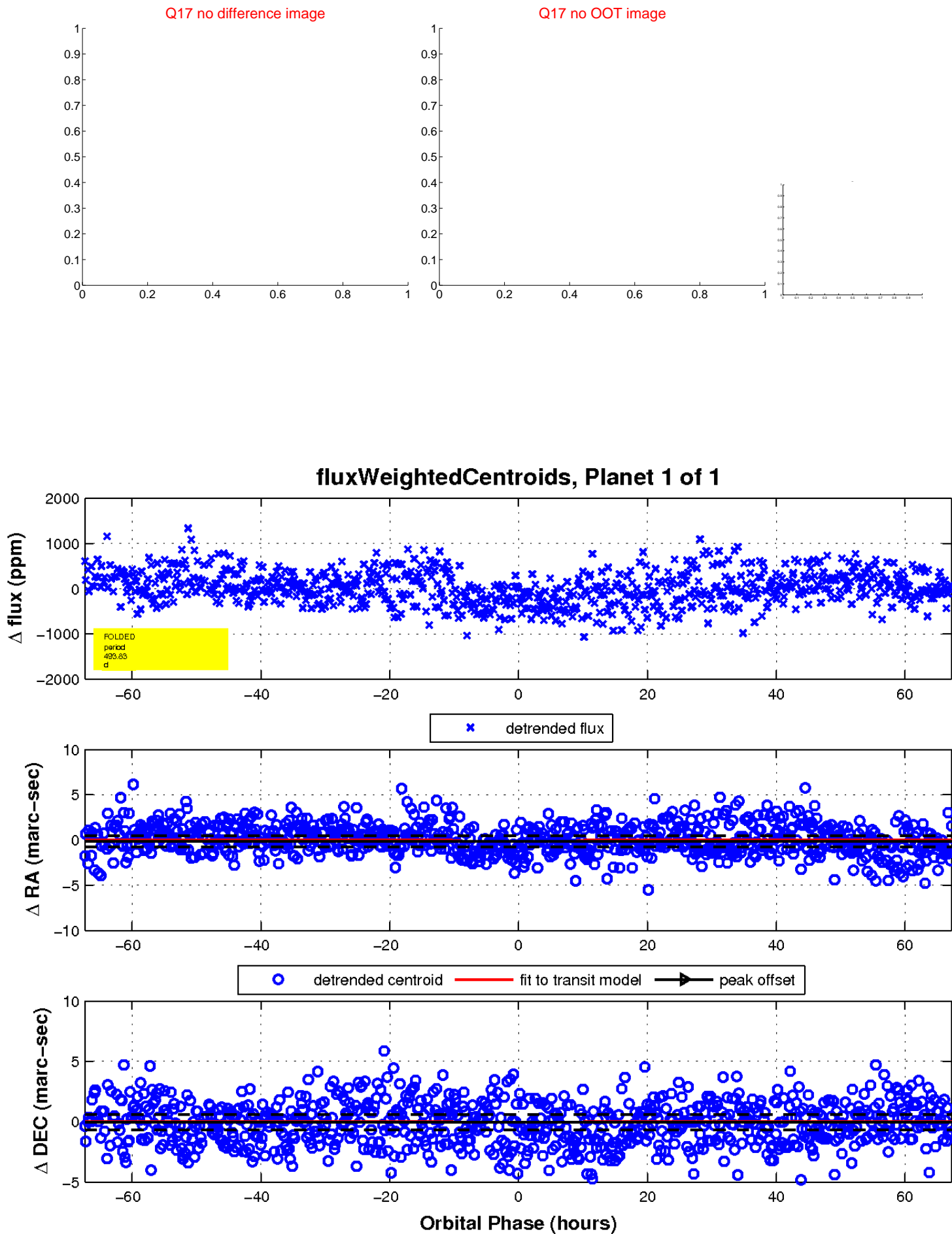
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

