

KIC 010014698

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})
010014698-01	OBS	No	483.663731	155.399441	952.1	22.475	16.2	16.1	0.83	5865	2.91	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010014698-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

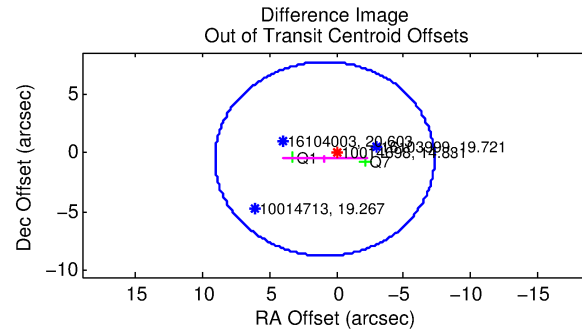
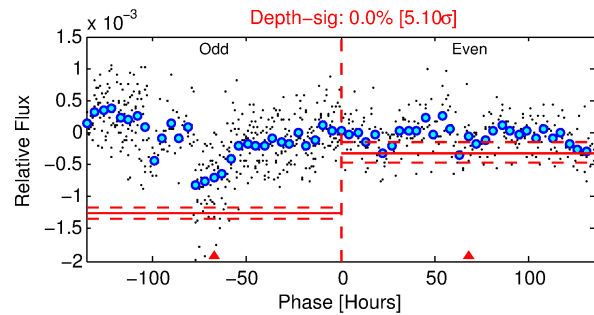
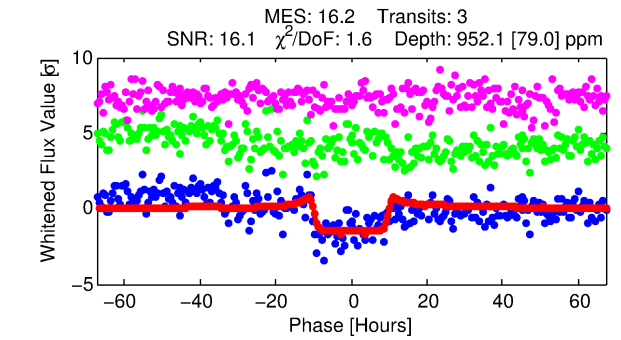
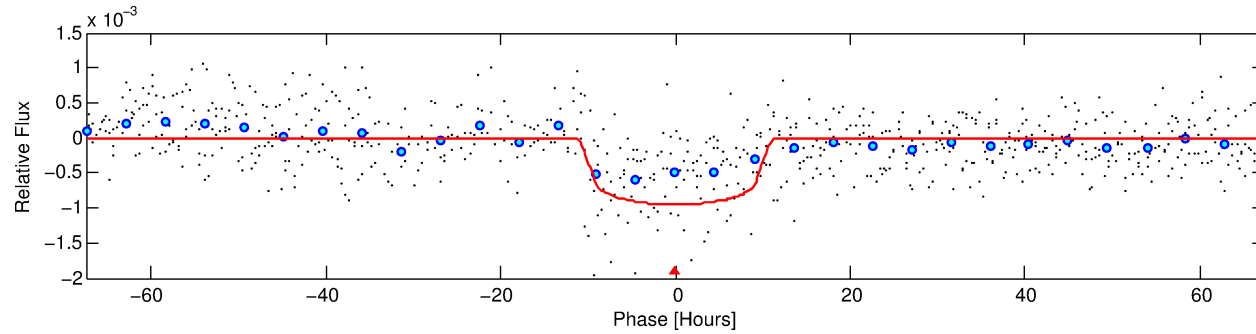
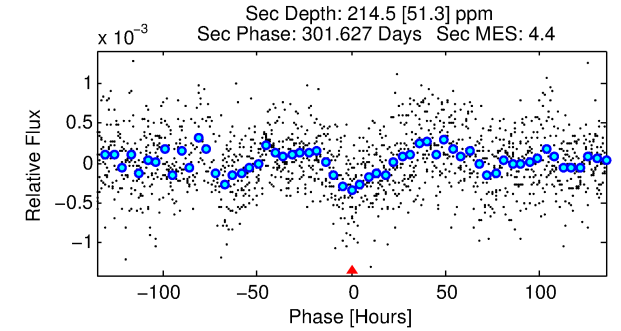
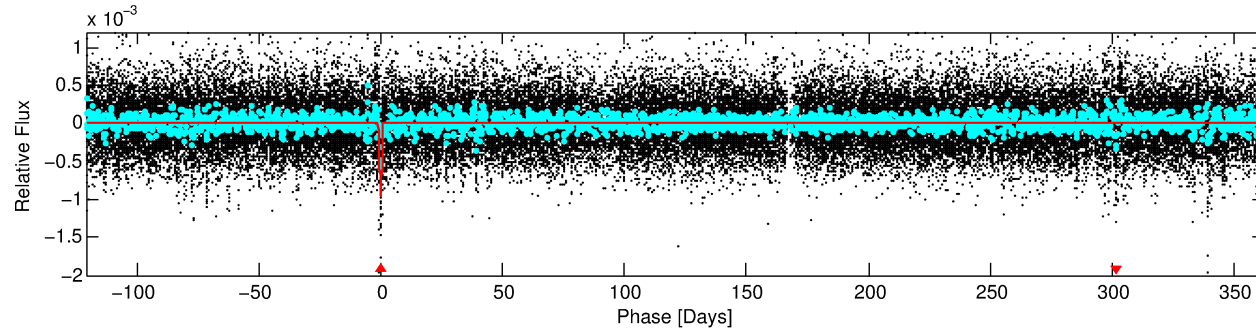
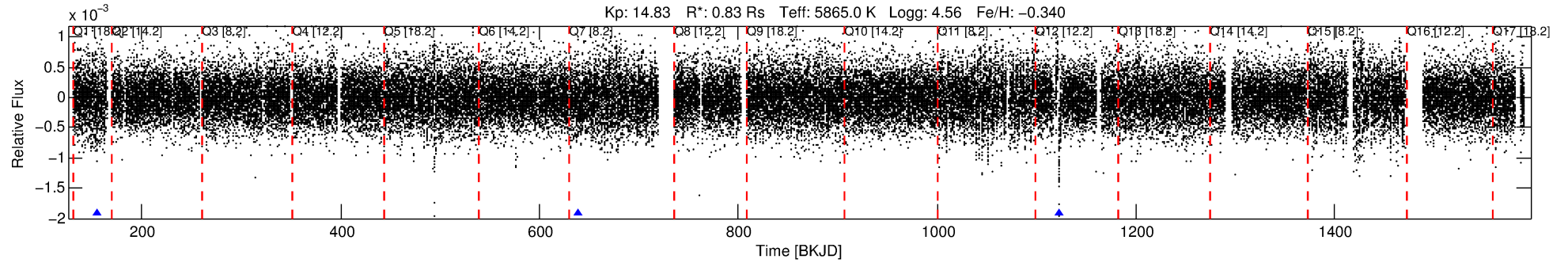
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010014698-01

No Significant Match Found

DV One-Page Summary

KIC: 10014698 Candidate: 1 of 1 Period: 483.664 d



DV Fit Results:

Period = 483.66373 [0.01508] d
Epoch = 155.3994 [0.0218] BKJD
Rp/R* = 0.0322 [0.0024]
a/R* = 95.39 [26.02]
b = 0.85 [0.09]
Seff = 0.53 [0.18]
Teff = 218 [19] K
Rp = 2.91 [0.77] Re
a = 1.1697 [0.2541] AU
Ag = 19087.90 [8116.53] [2.35σ]
Teffp = 3954 [302] K [12.36σ]

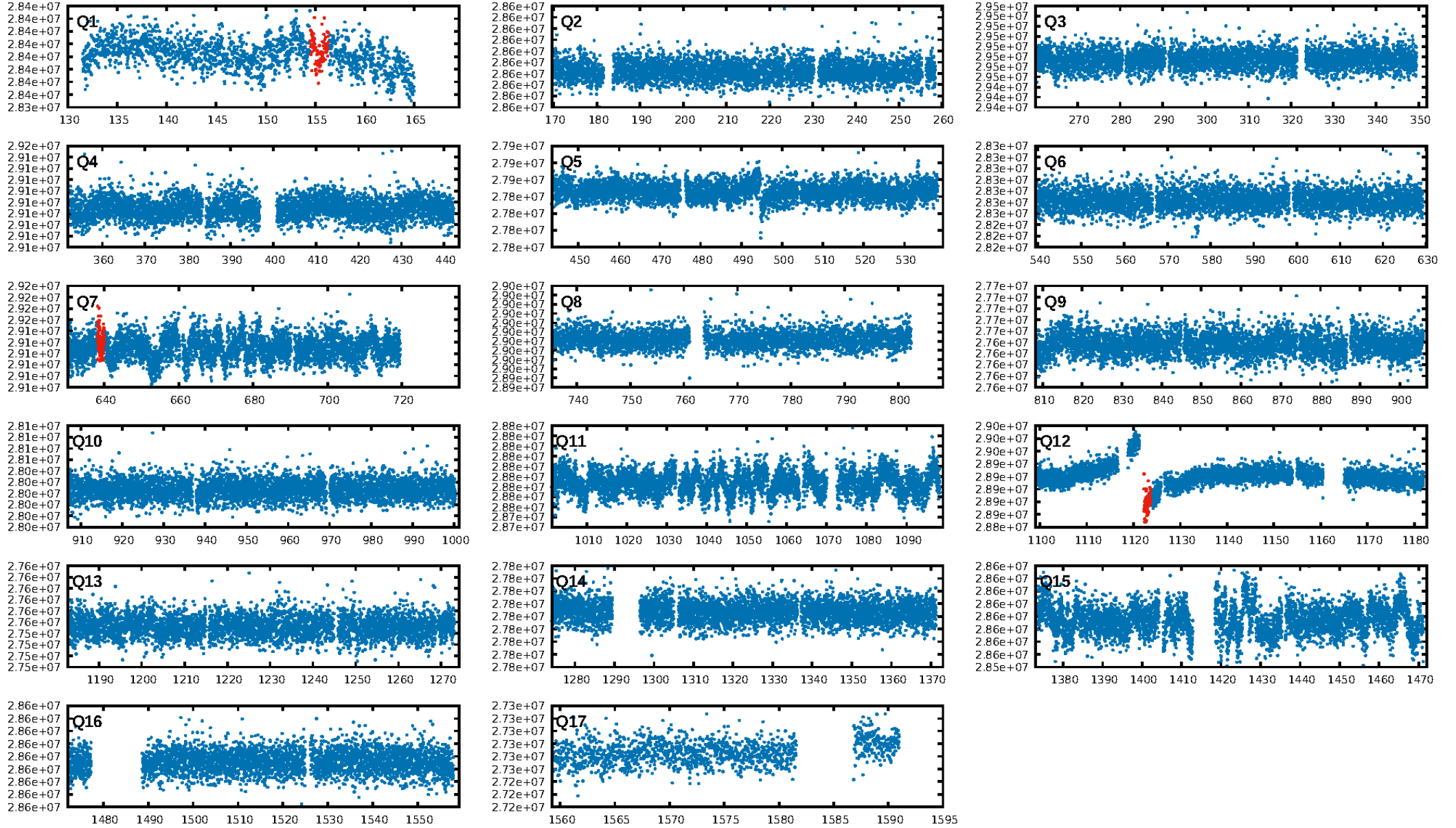
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 39.4%
Bootstrap-pfa: 2.09e-30
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -2.754
Centroid-sig: 5.4%
Centroid-so: 1.478 arcsec [1.97σ]
OotOffset-rm: 1.018 arcsec [0.37σ]
KicOffset-rm: 1.120 arcsec [0.46σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

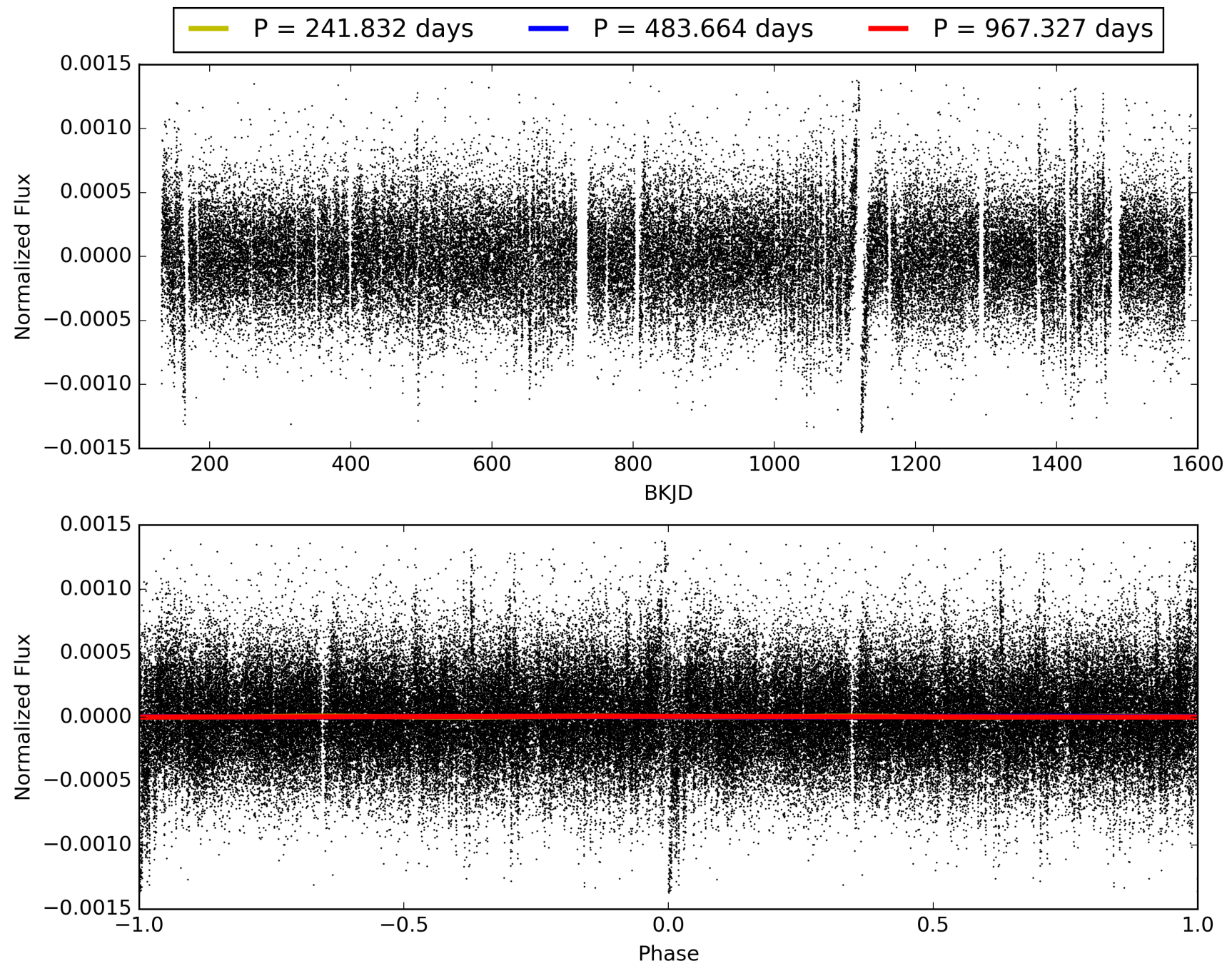
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:47:34 Z

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

TCE 010014698-01, PDC Light Curves

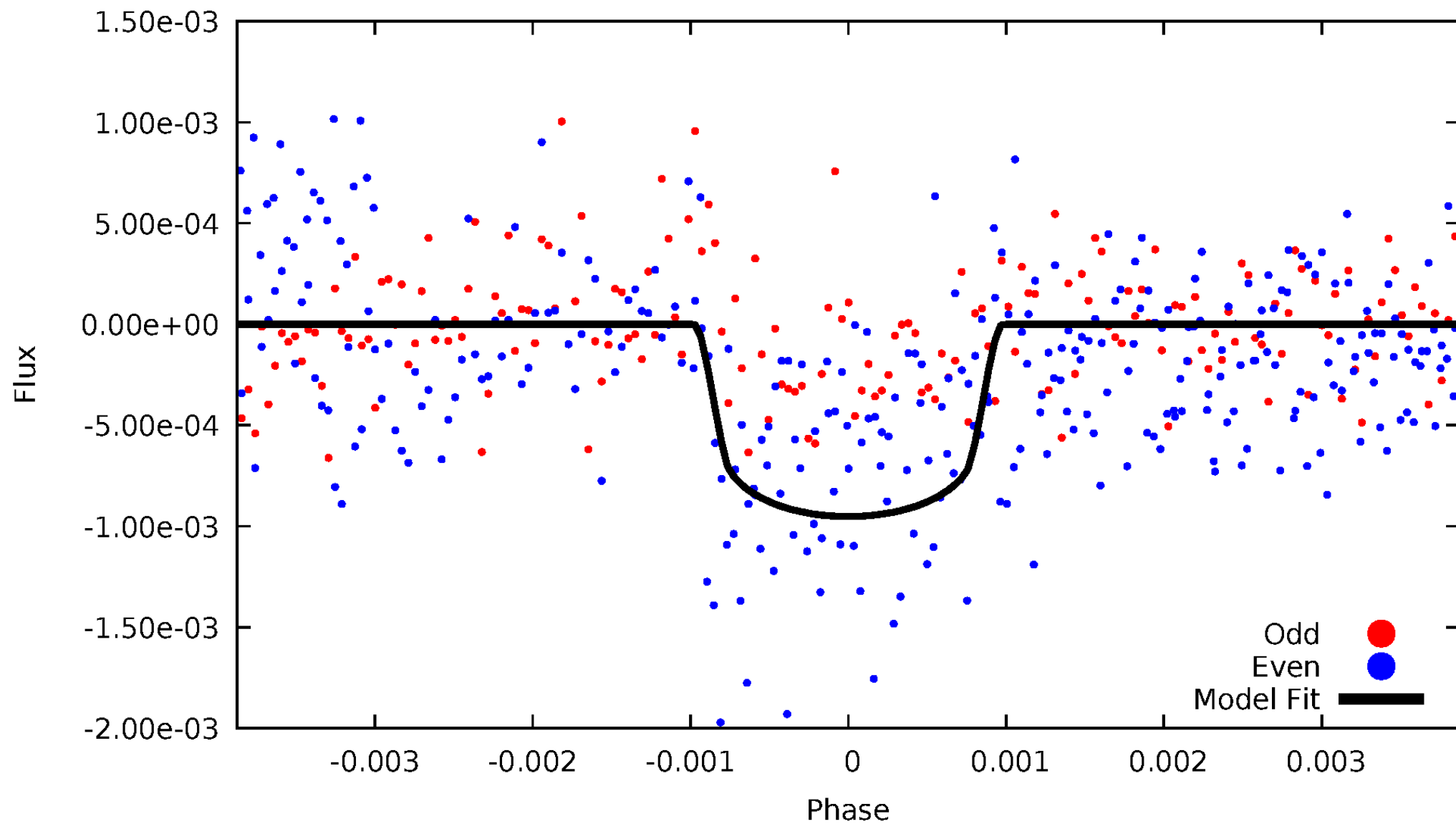


TCE 010014698-01



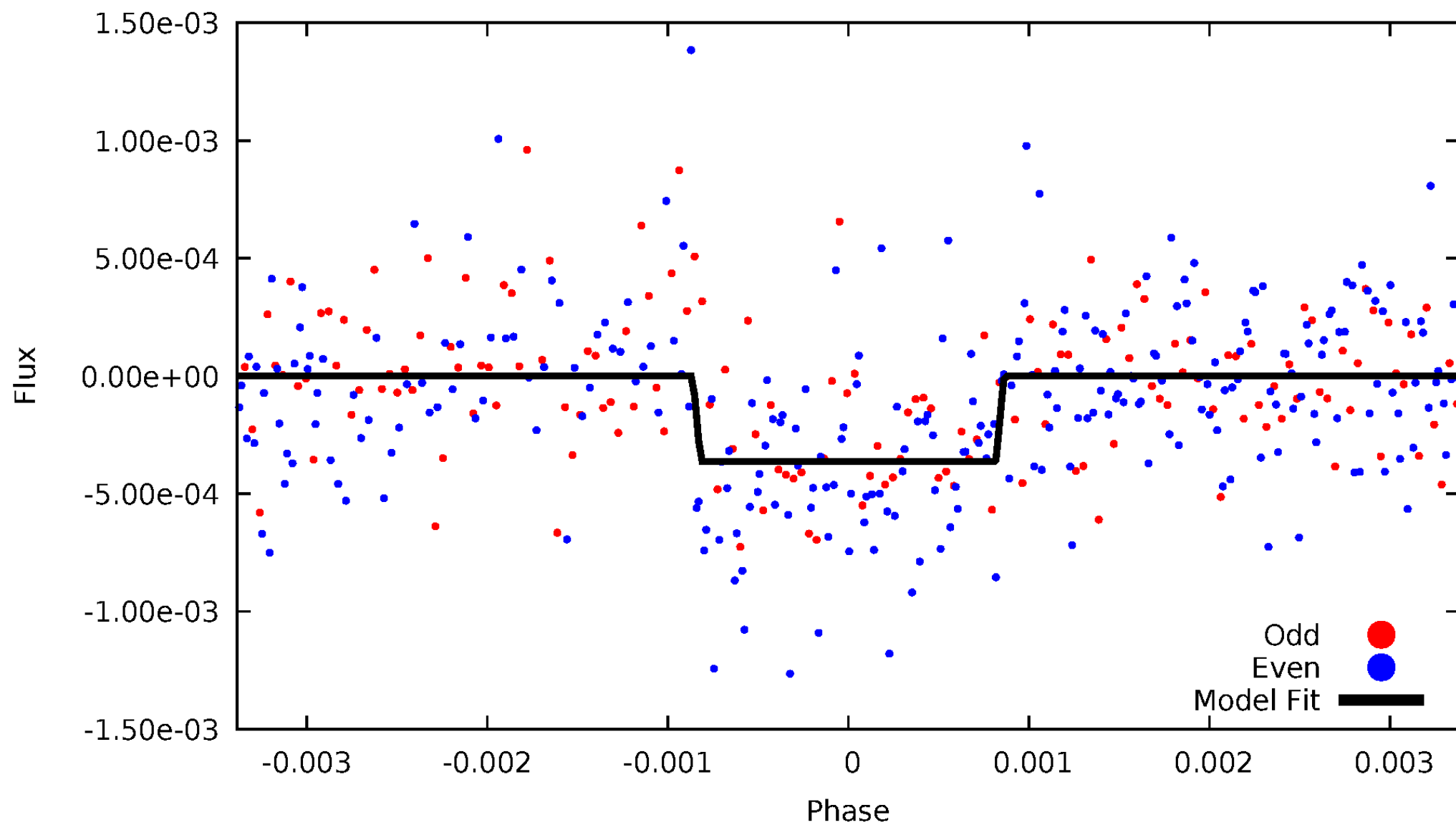
DV Odd/Even

TCE 010014698-01

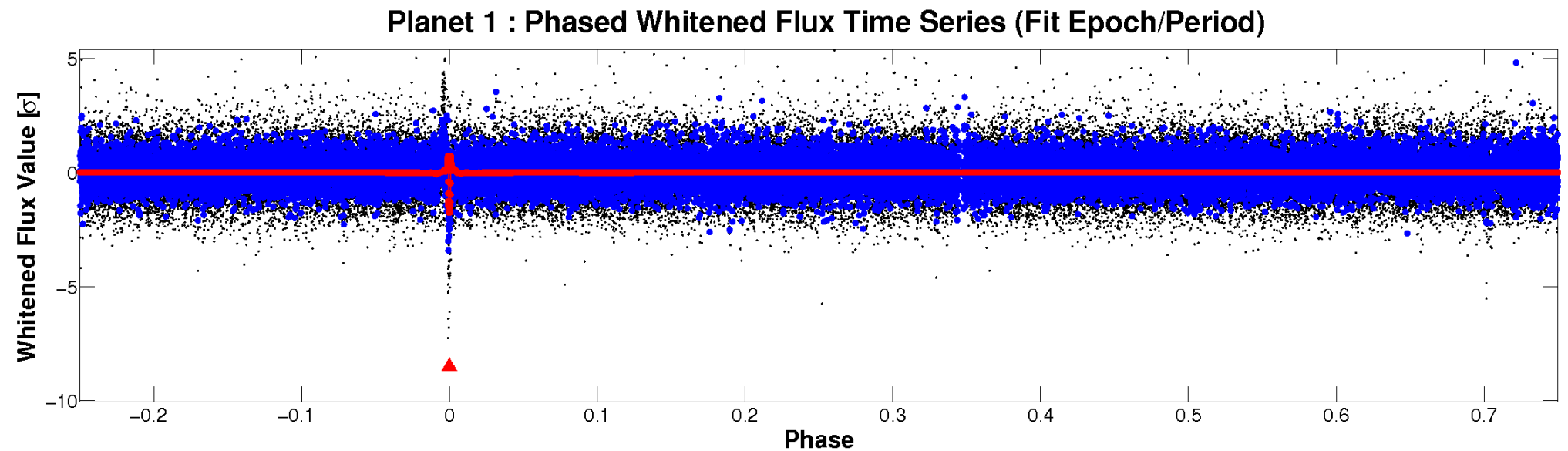
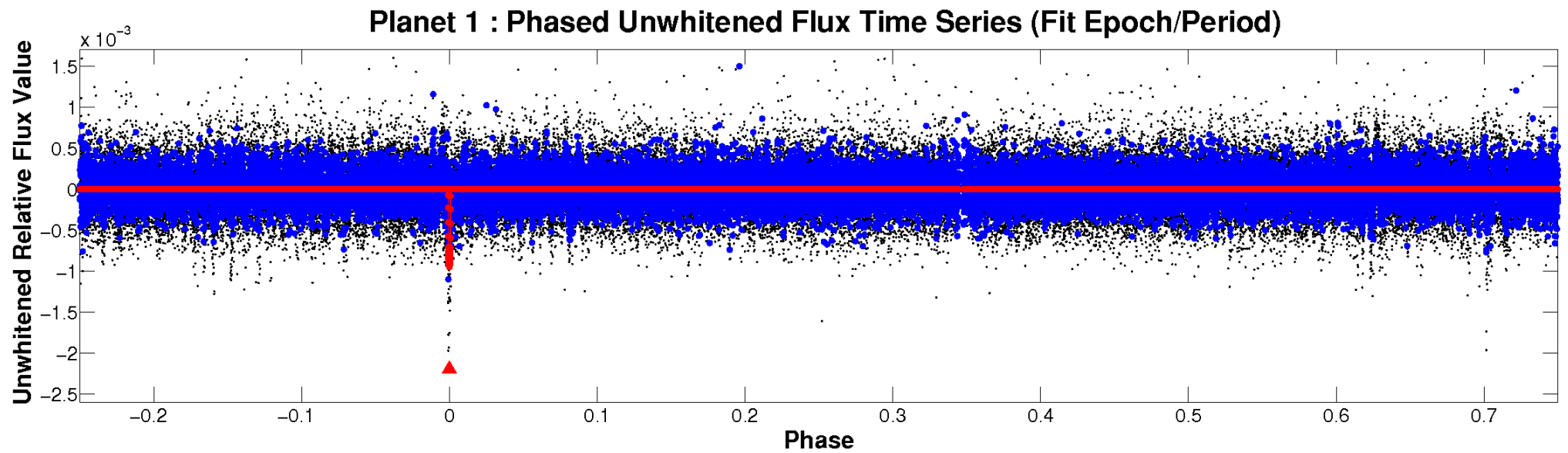


ALT Odd/Even

TCE 010014698-01



Non-Whitened Vs. Whitened Light Curve



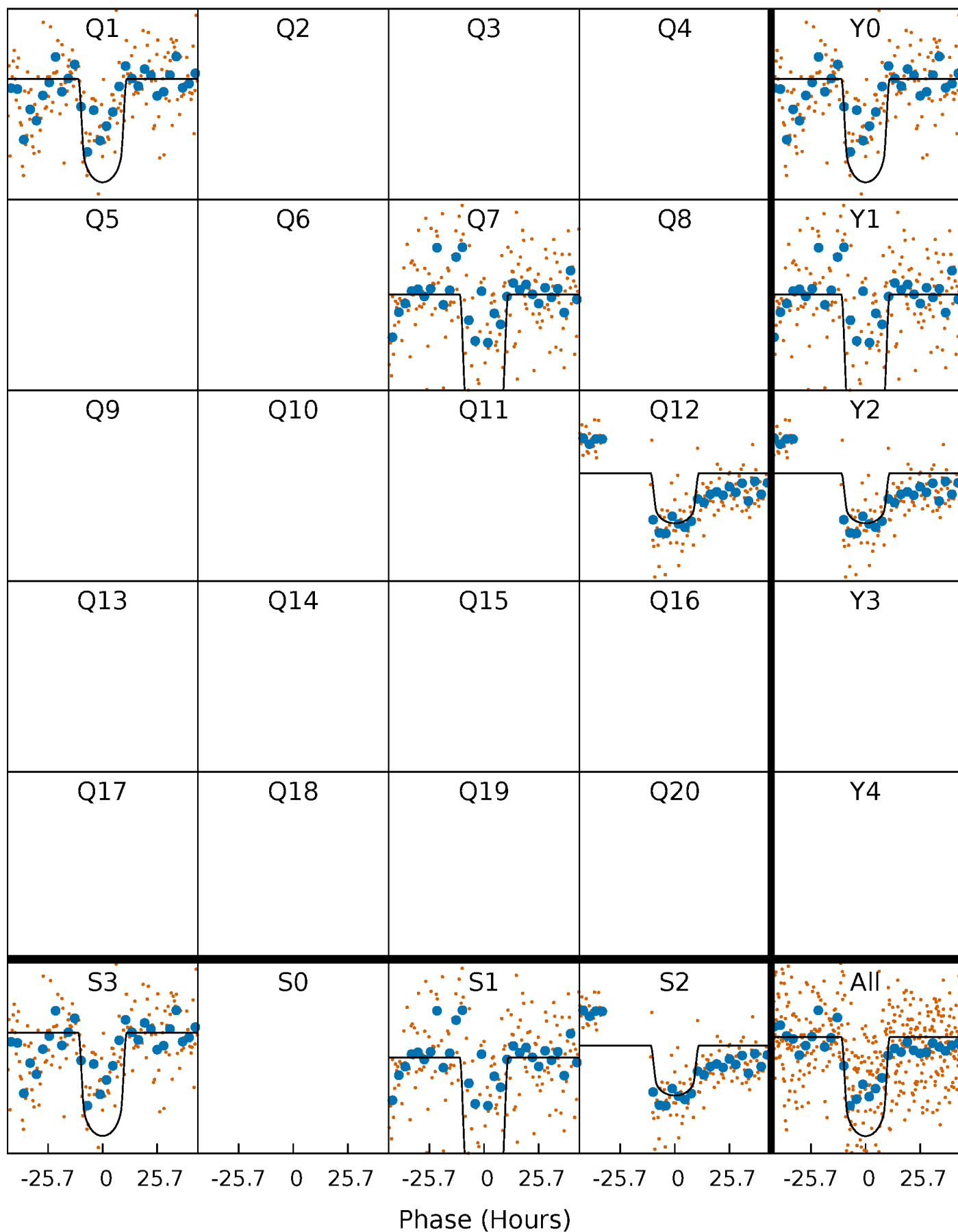
PDC Quarter-Phased Transit Curves

TCE 010014698-01 P=483.663731 Days $T_0=155.399441$ (BKJD)



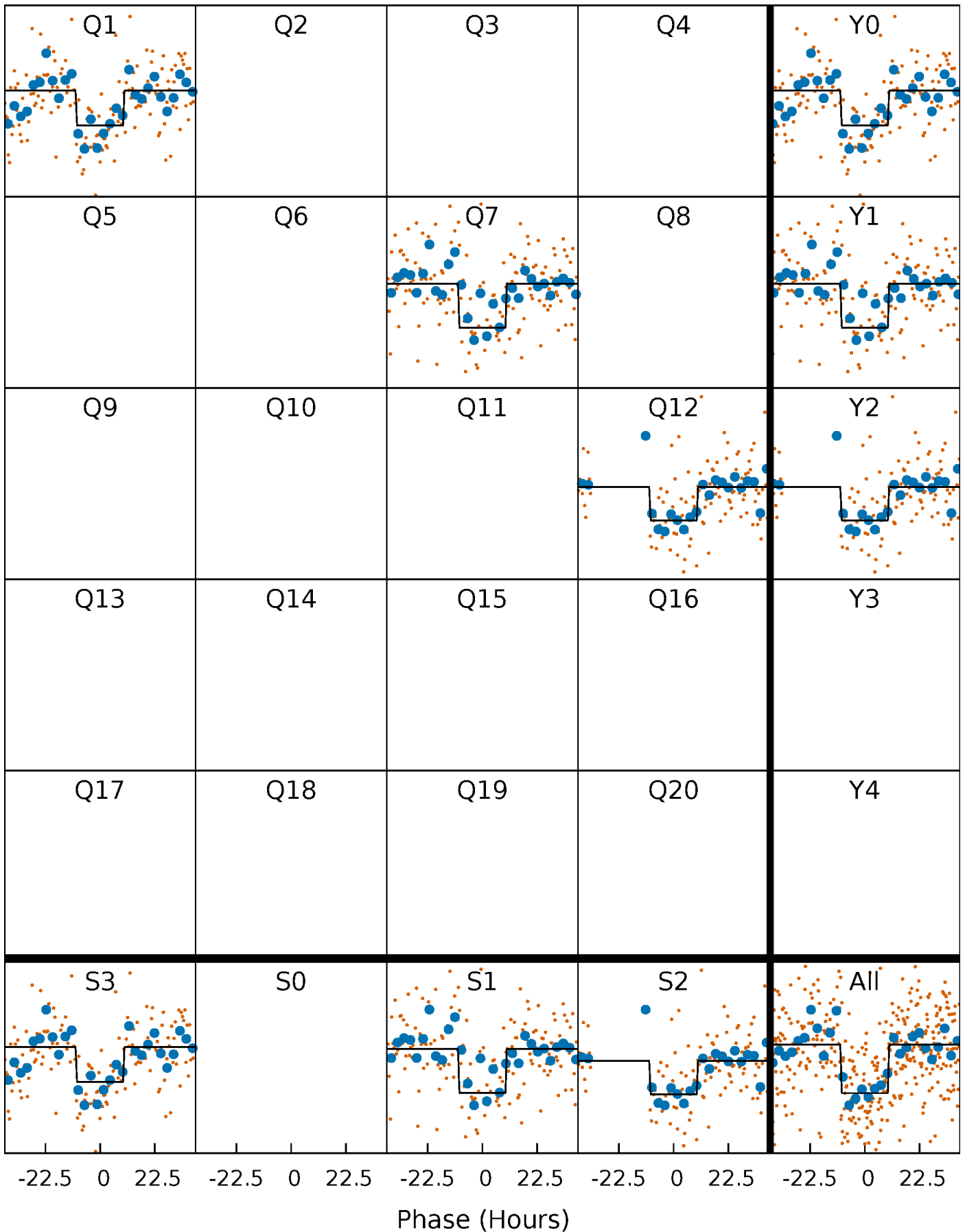
DV Quarter-Phased Transit Curves

TCE 010014698-01 P=483.663731 Days $T_0=155.399441$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

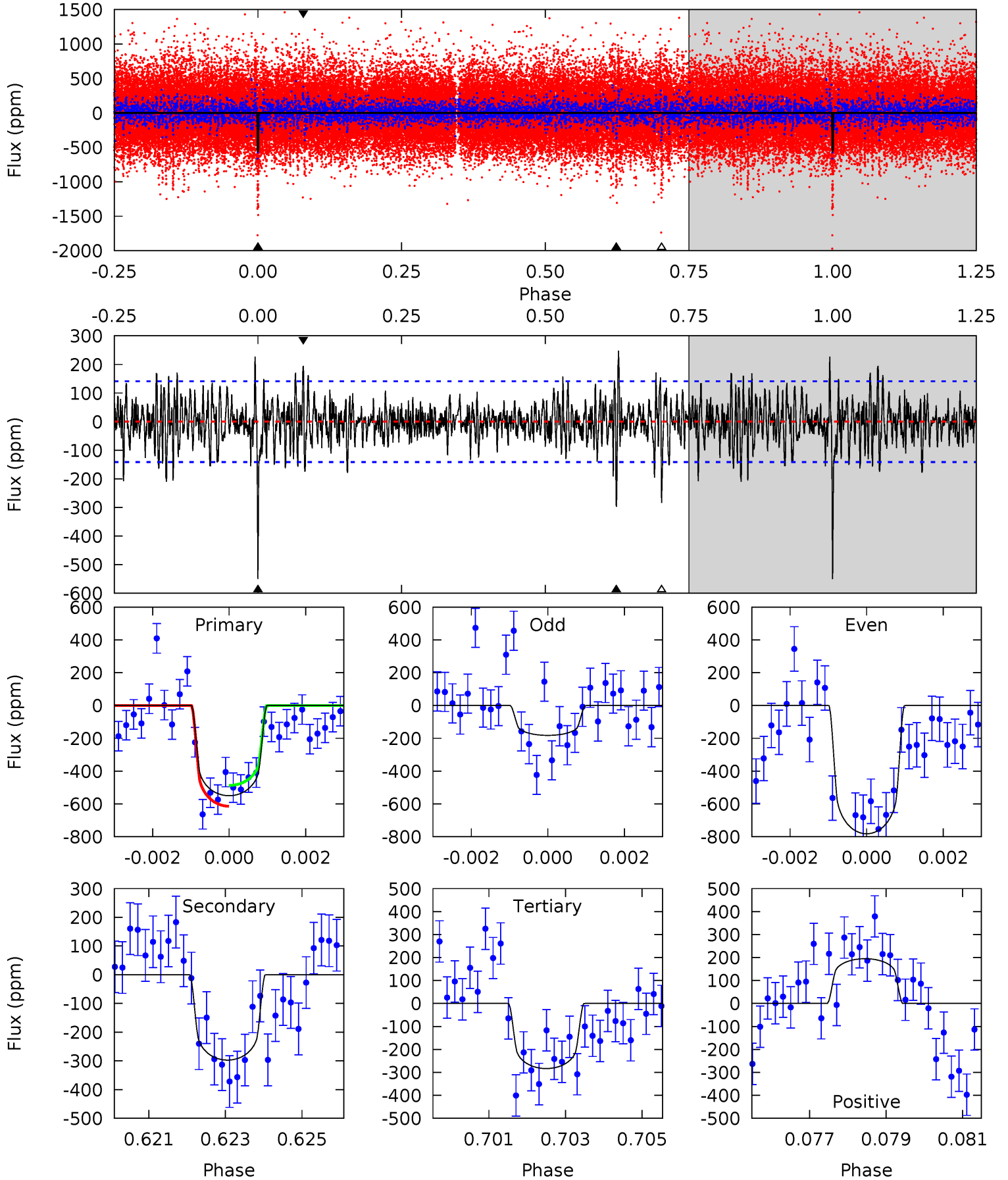
TCE 010014698-01 P=483.648743 Days $T_0=155.397640$ (BKJD)



DV Model-Shift Uniqueness Test

010014698-01, P = 483.663731 Days, E = 155.399441 Days

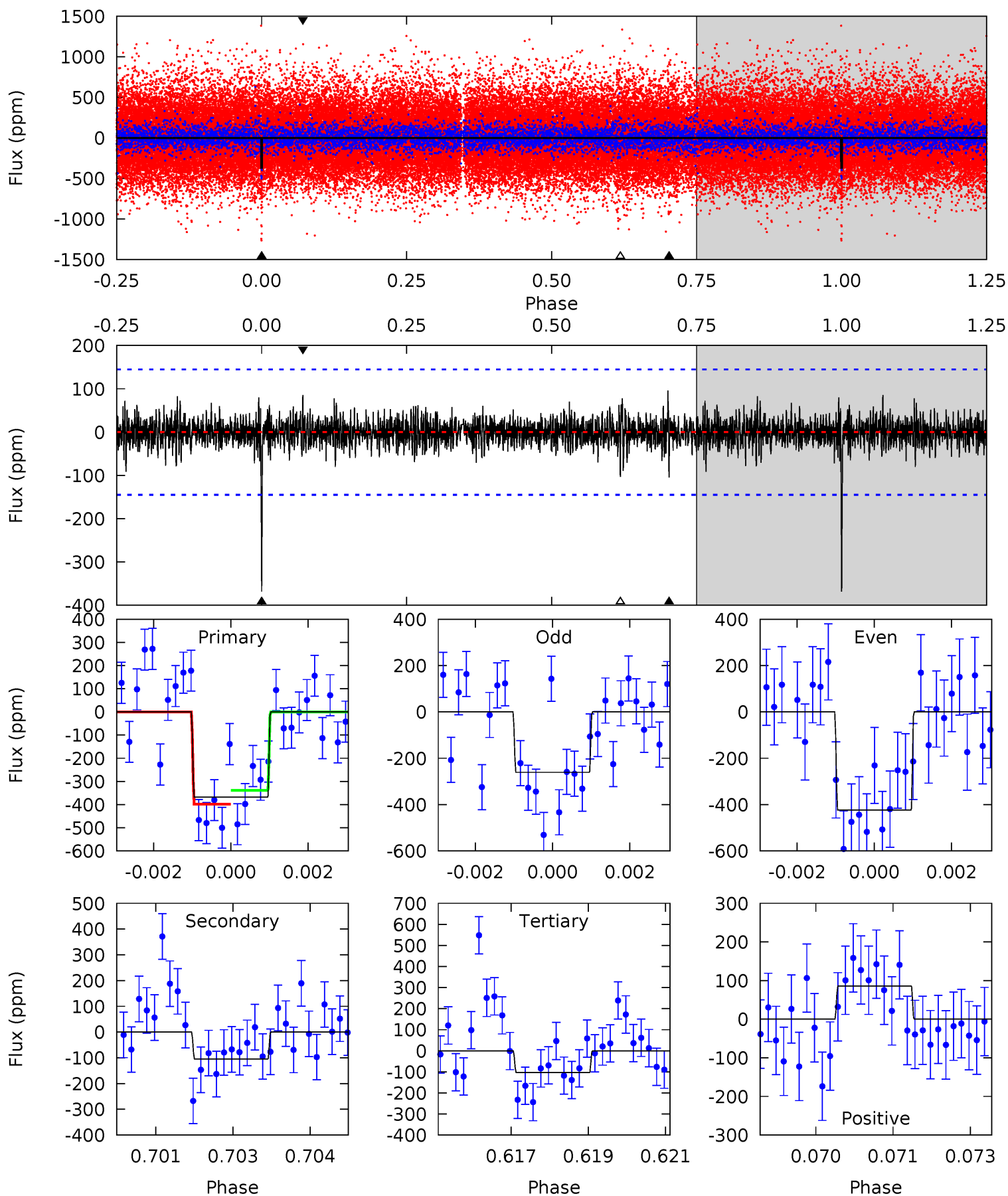
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	11.2	10.7	7.34	5.33	3.09	2.22	10.1	13.4	0.52	3.87	10.7	1.33	0.31	2.39



Alt Model-Shift Uniqueness Test

010014698-01, P = 483.648743 Days, E = 155.397640 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	3.88	3.82	3.18	5.36	3.14	0.84	9.81	10.5	0.05	0.70	2.84	0.88	0.21	1.10



Stellar Parameters For KIC 010014698

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5865^{+158}_{-175}	$4.563^{+0.033}_{-0.176}$	$-0.340^{+0.300}_{-0.300}$	$0.827^{+0.211}_{-0.070}$	$0.914^{+0.099}_{-0.109}$	$2.274^{+0.395}_{-1.073}$
	+3%/-3%	+1%/-4%	+88%/-88%	+26%/-8%	+11%/-12%	+17%/-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 010014698-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-297 ± 27	$3.02^{+0.44}_{-0.33}$	311^{+19}_{-13}	4478^{+193}_{-185}	23909^{+5946}_{-5653}
Alt.	-105 ± 27	$1.80^{+0.32}_{-0.27}$	311^{+19}_{-13}	4469^{+341}_{-299}	23692^{+11127}_{-8102}

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

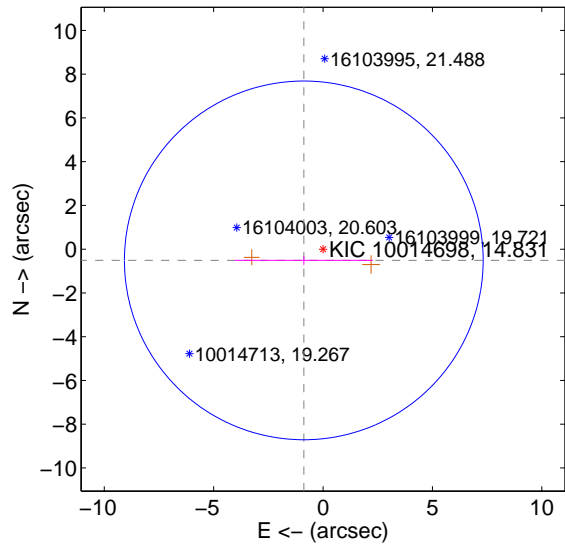
Supplemental centroid analysis for 010014698-01. Kepler magnitude: 14.83. Transit SNR 16.08

There are 0 quarters with good PRF difference image offsets

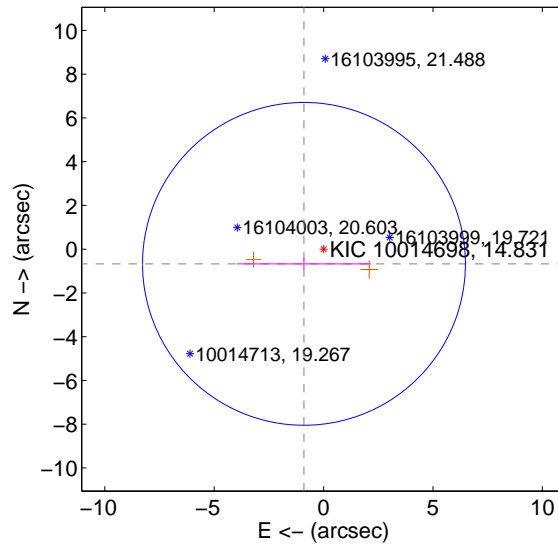
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.018 ± 2.733	0.37	0.879 ± 3.162	-0.513 ± 0.202
PRF-fit source offset from KIC position	1.120 ± 2.459	0.46	0.896 ± 3.065	-0.671 ± 0.271
photometric centroid source offset	1.48 ± 0.75	1.97	-1.45 ± 0.75	0.27 ± 0.75

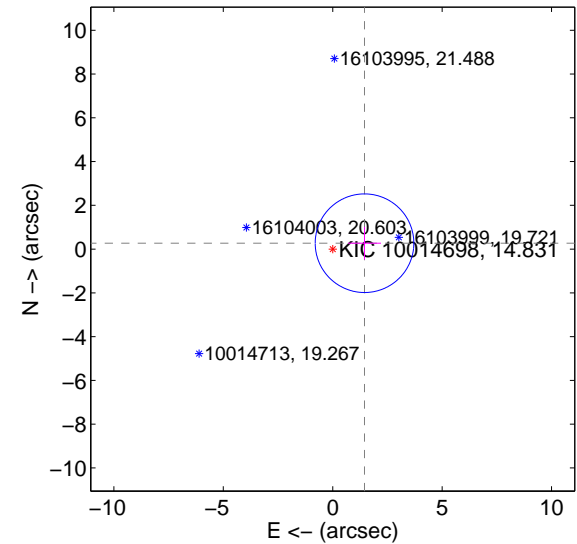
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

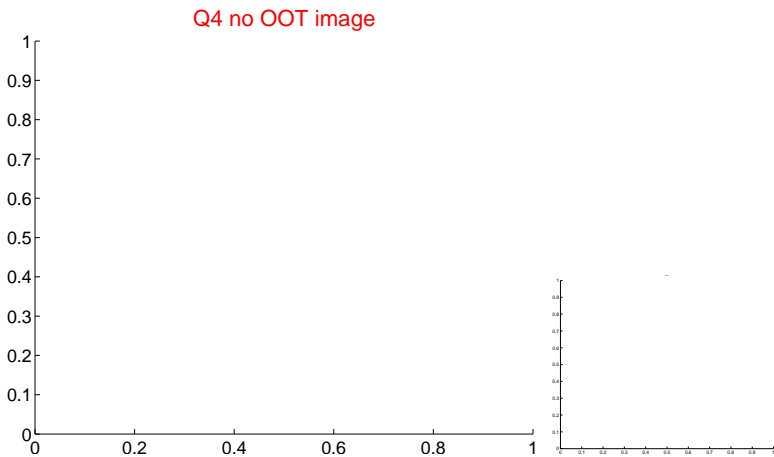
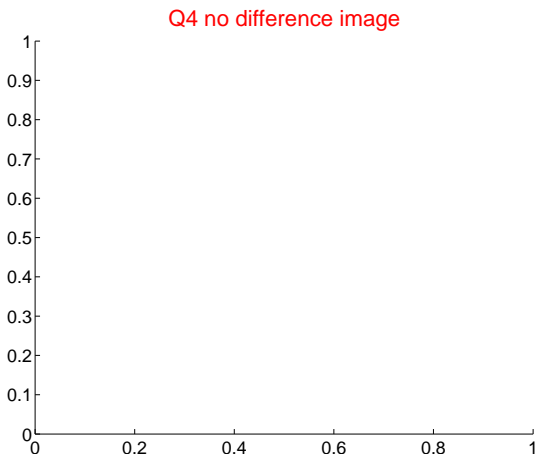
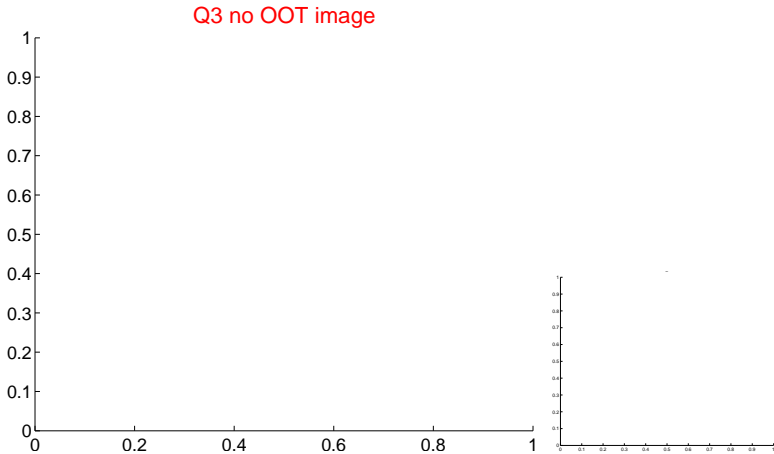
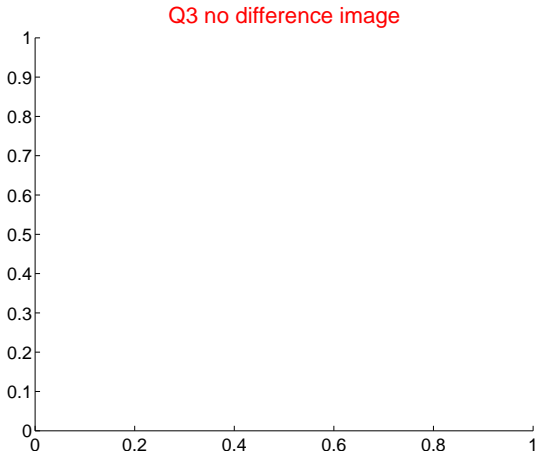
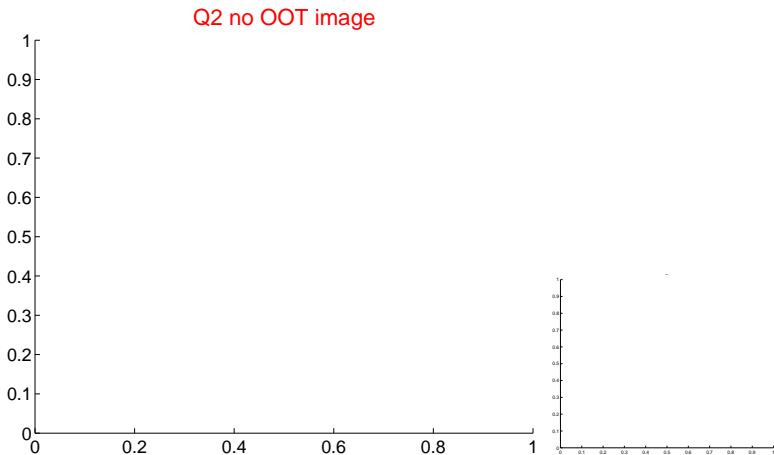
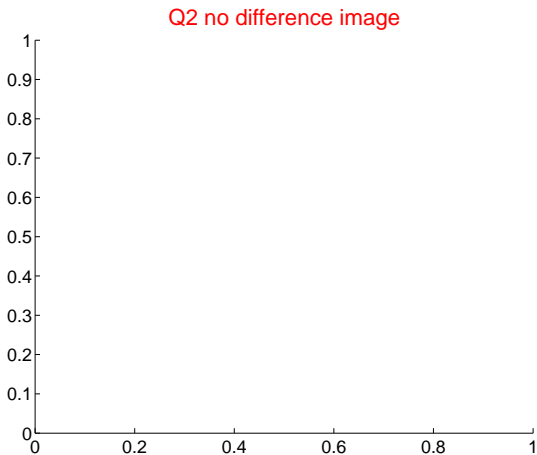
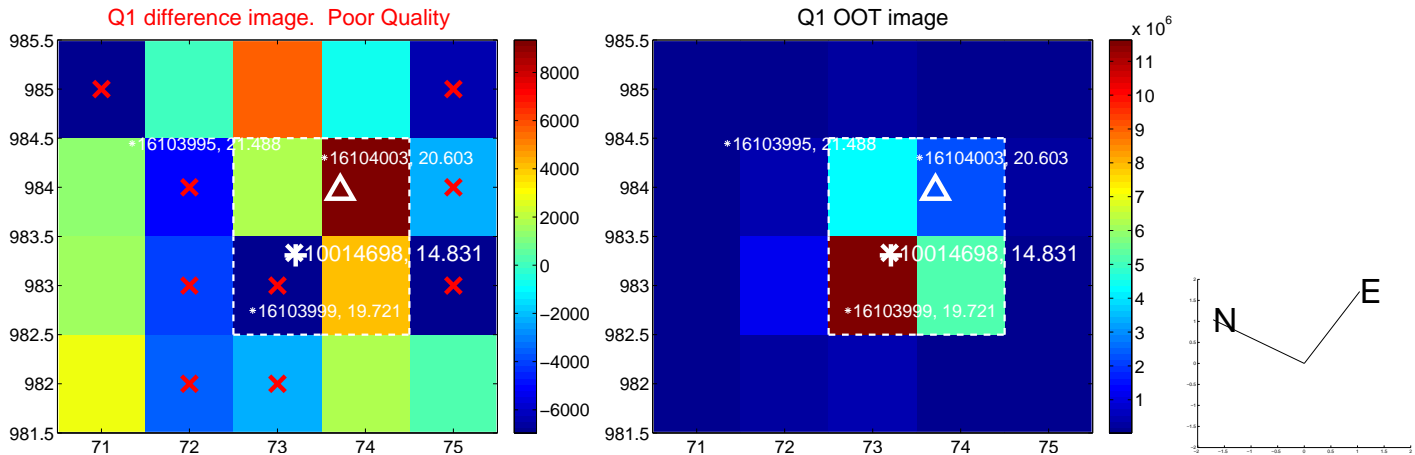


offset from photometric centroids

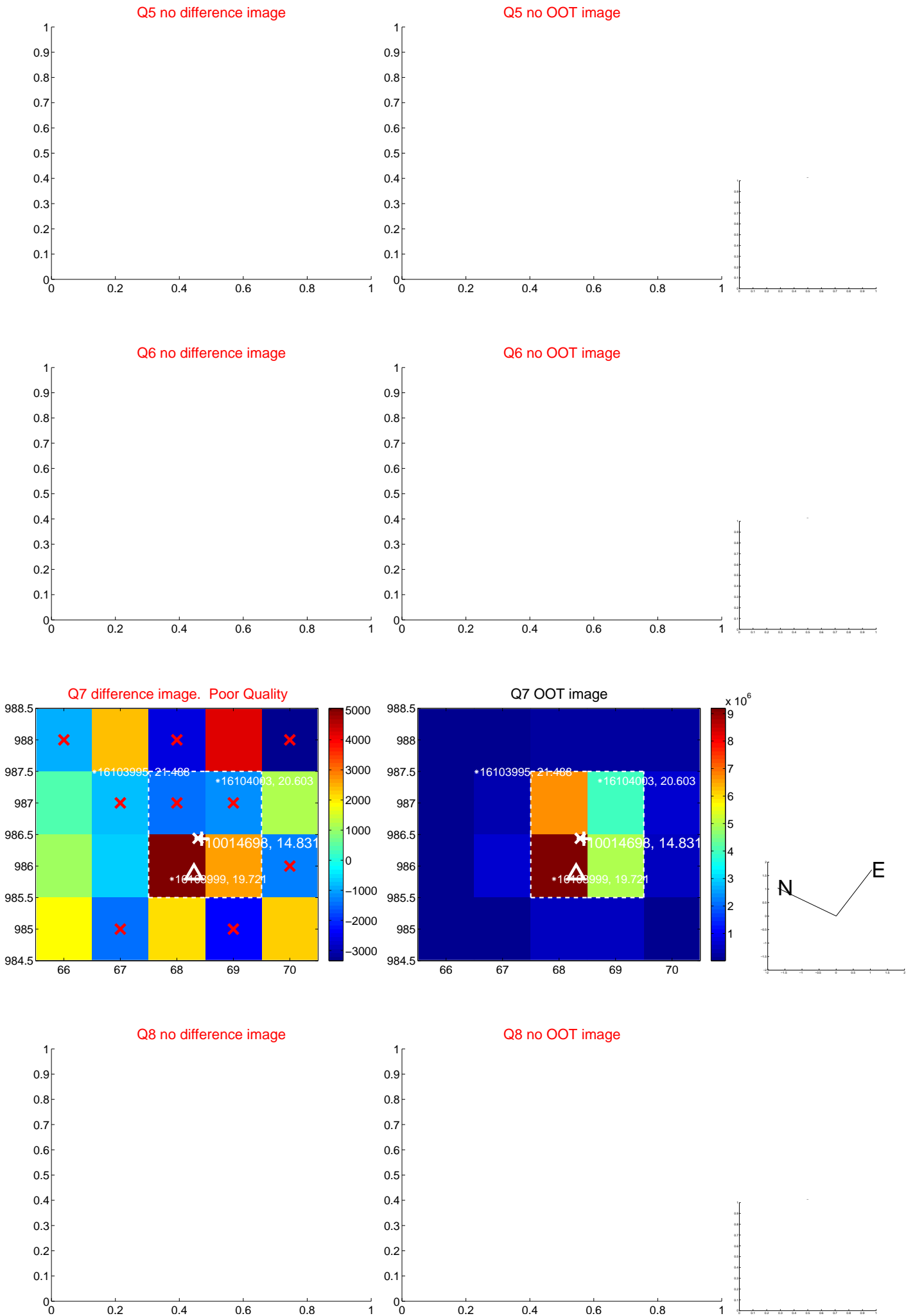


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



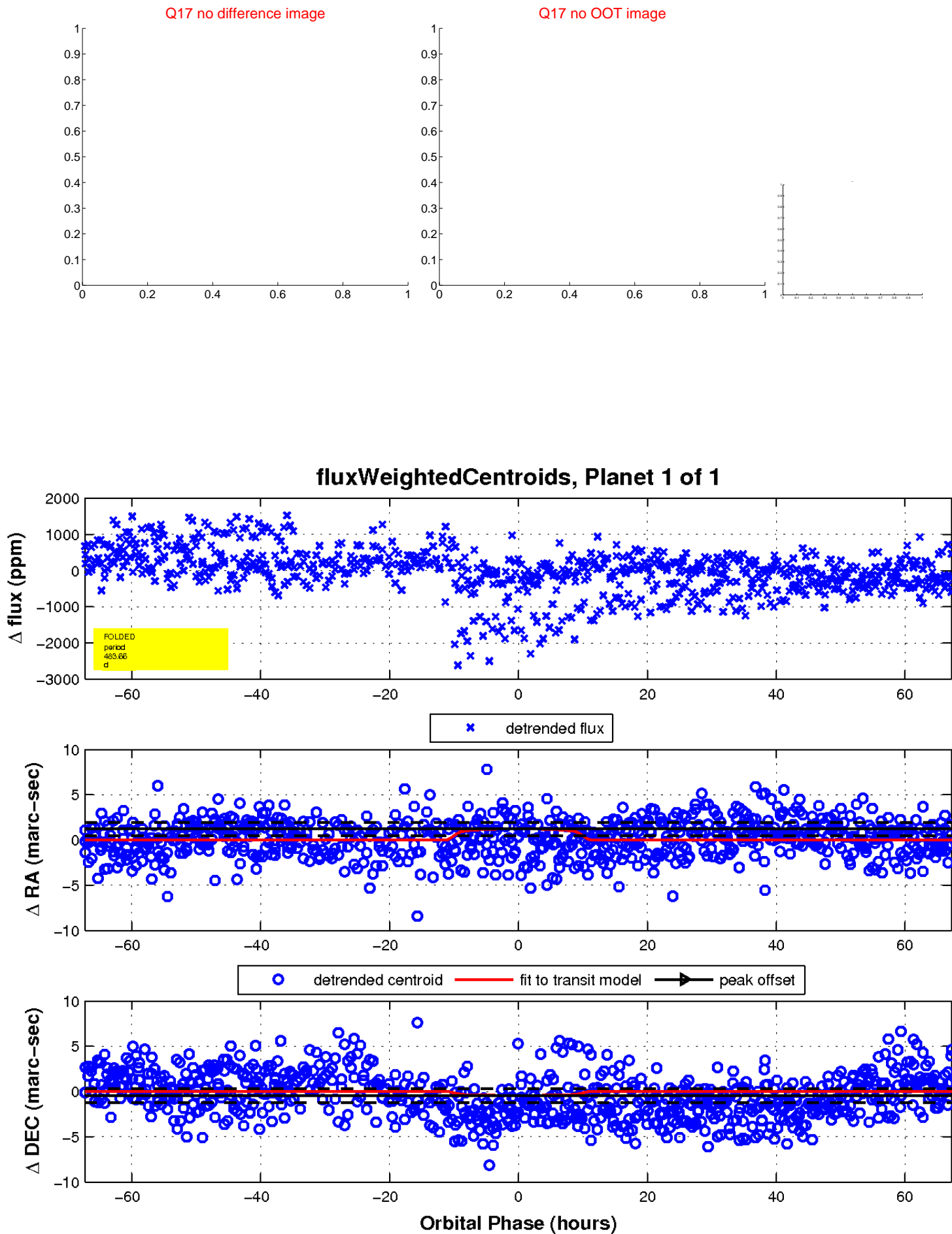
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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.



UKIRT Image

