

KIC 008104940

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})
008104940-01	OBS	No	543.450739	404.087896	1245.9	32.145	7.7	8.7	1.12	6289	6.16	0.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008104940-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

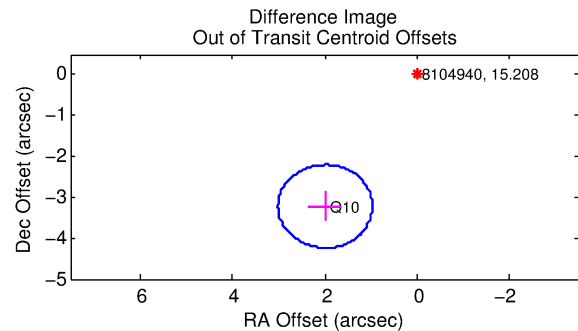
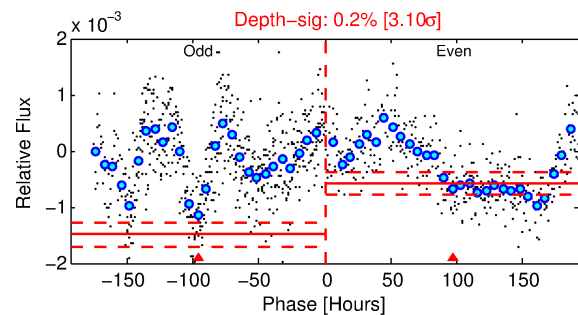
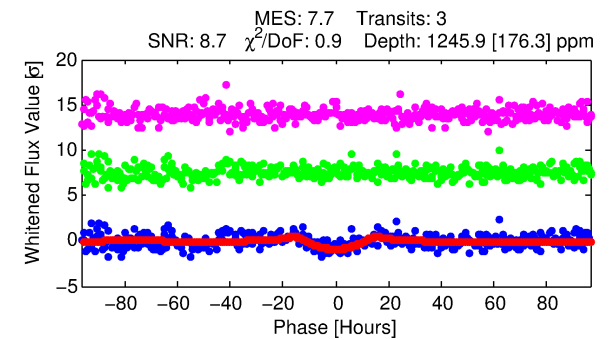
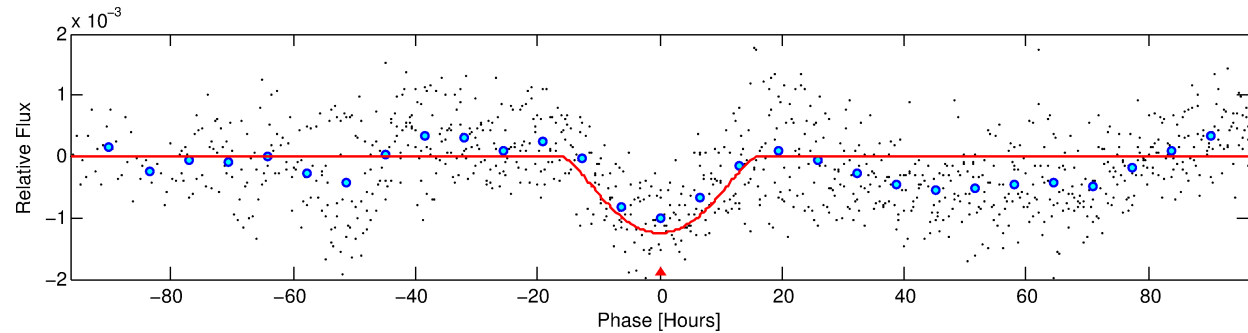
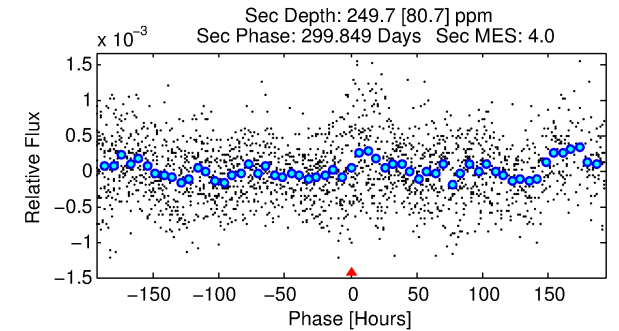
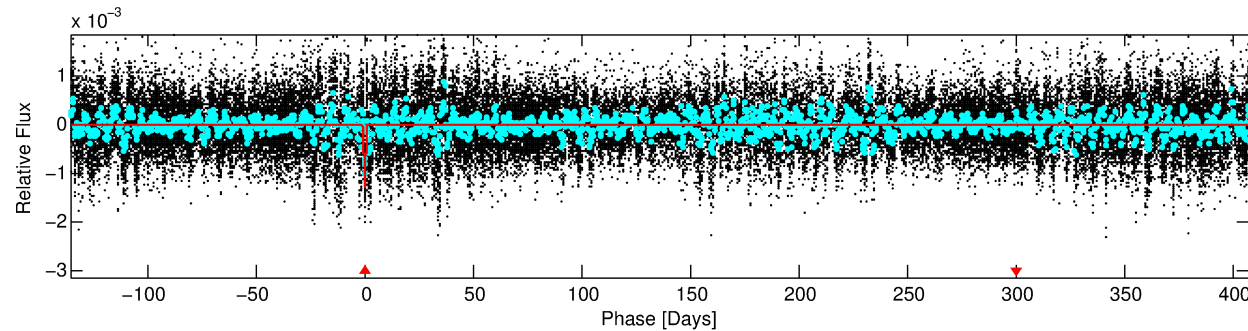
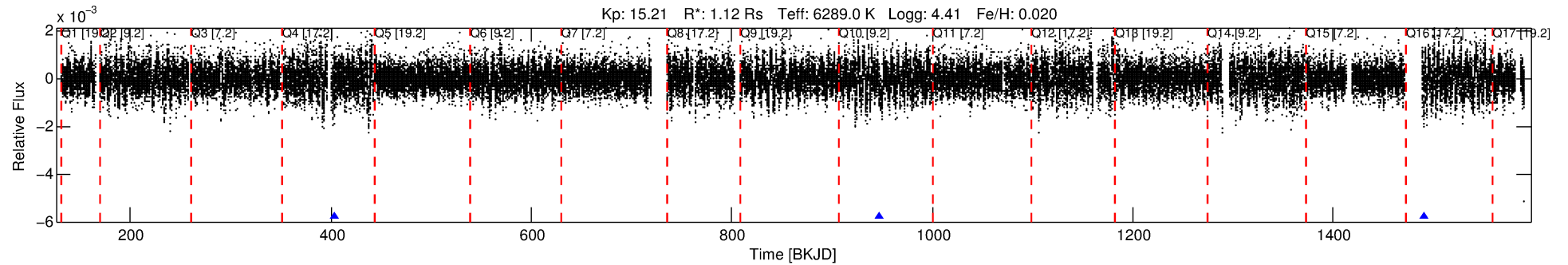
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008104940-01

No Significant Match Found

DV One-Page Summary

KIC: 8104940 Candidate: 1 of 1 Period: 543.451 d



DV Fit Results:

Period = 543.45074 [0.03847] d
Epoch = 404.0879 [0.0472] BKJD
Rp/R* = 0.0505 [0.0441]
a/R* = 48.01 [13.95]
b = 0.98 [0.08]
Seff = 0.93 [0.39]
Teq = 251 [27] K
Rp = 6.16 [5.74] Re
a = 1.3712 [0.3732] AU
Ag = 6801.56 [12368.10] [0.55σ]
Teff = 3518 [1567] K [2.09σ]

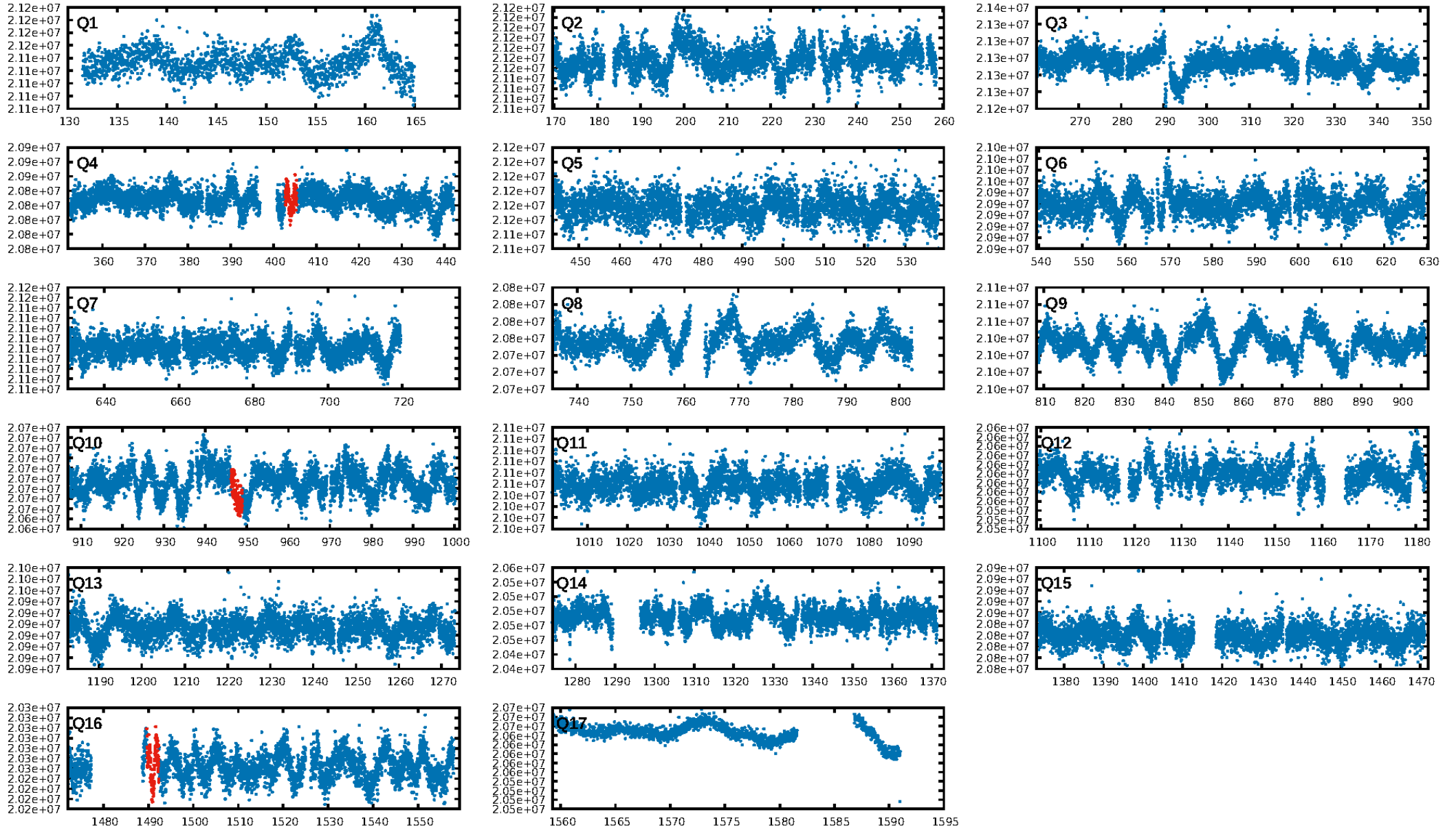
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.98e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.004
Centroid-sig: 82.5%
Centroid-so: 0.593 arcsec [0.39σ]
OotOffset-rm: 3.789 arcsec [11.15σ]
KicOffset-rm: 3.961 arcsec [11.65σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

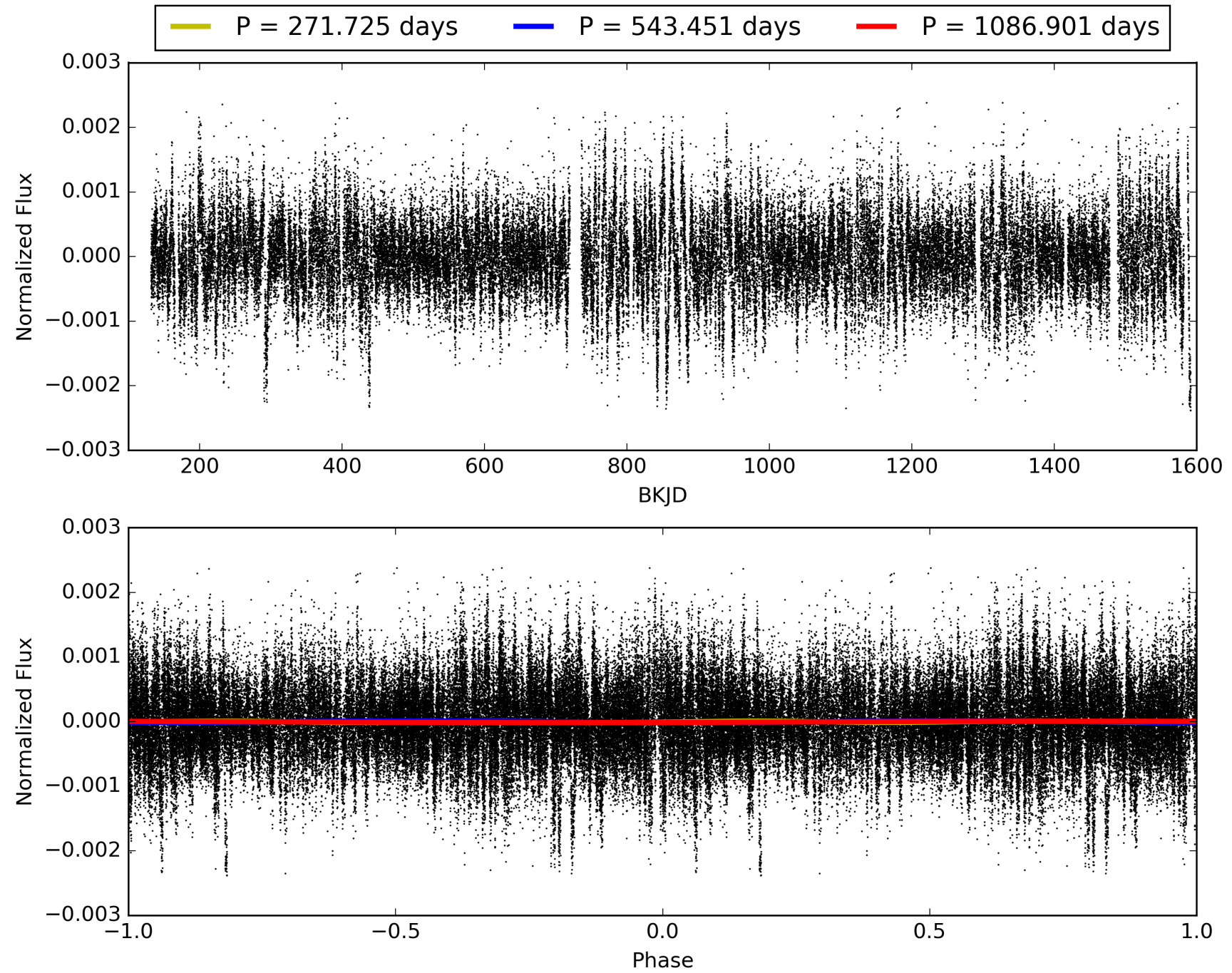
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:39:46 Z

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

TCE 008104940-01, PDC Light Curves

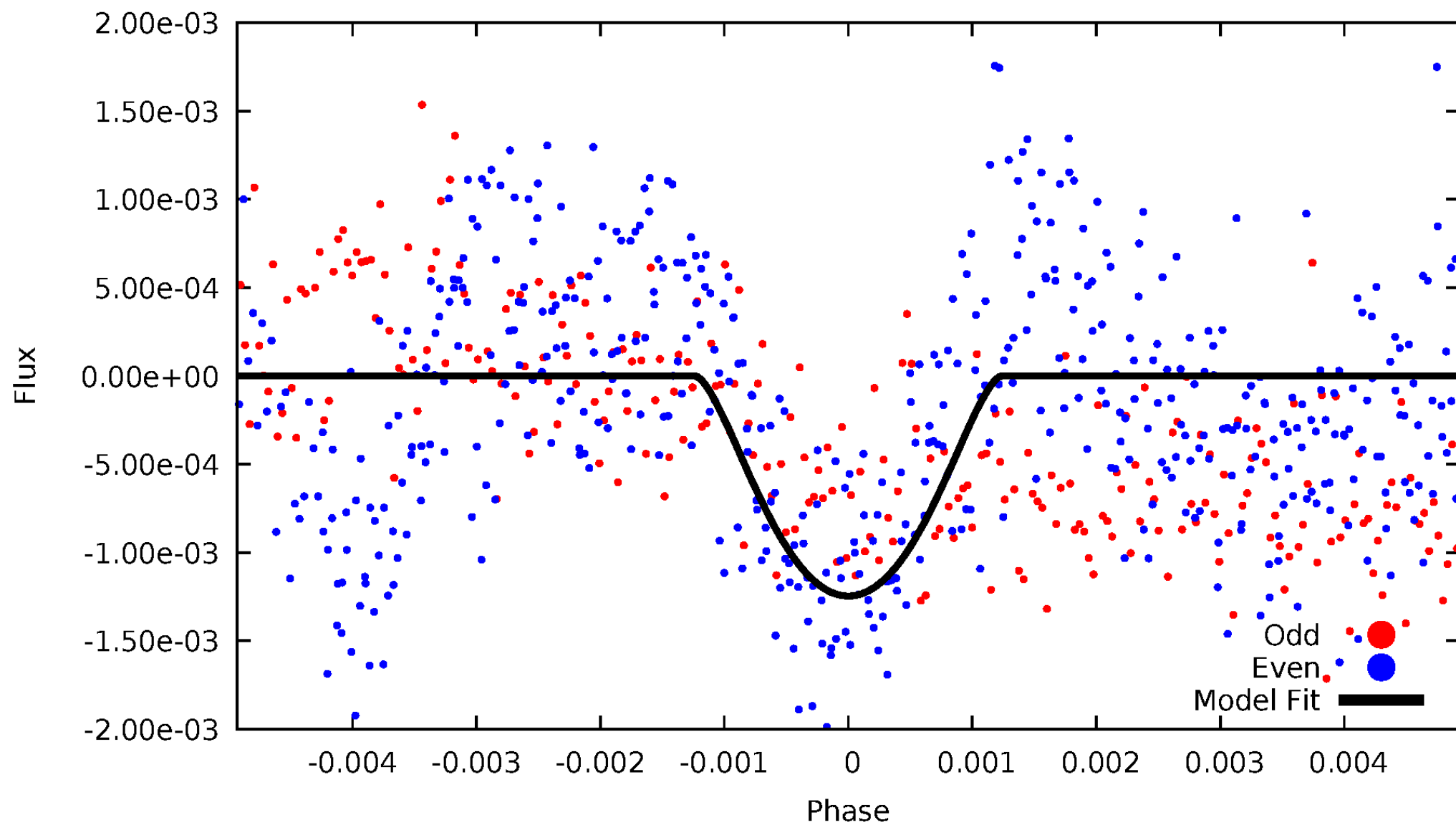


TCE 008104940-01



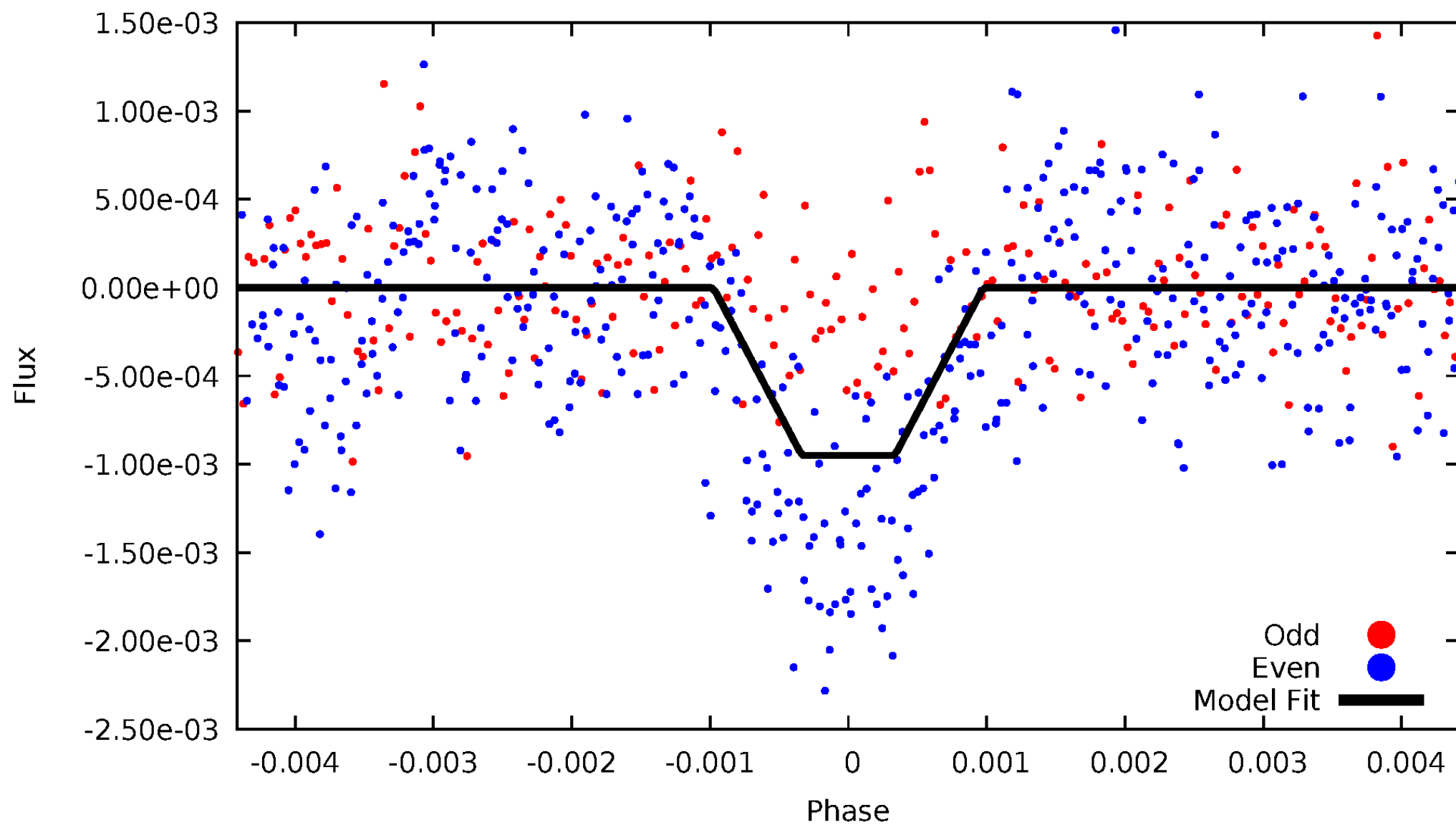
DV Odd/Even

TCE 008104940-01



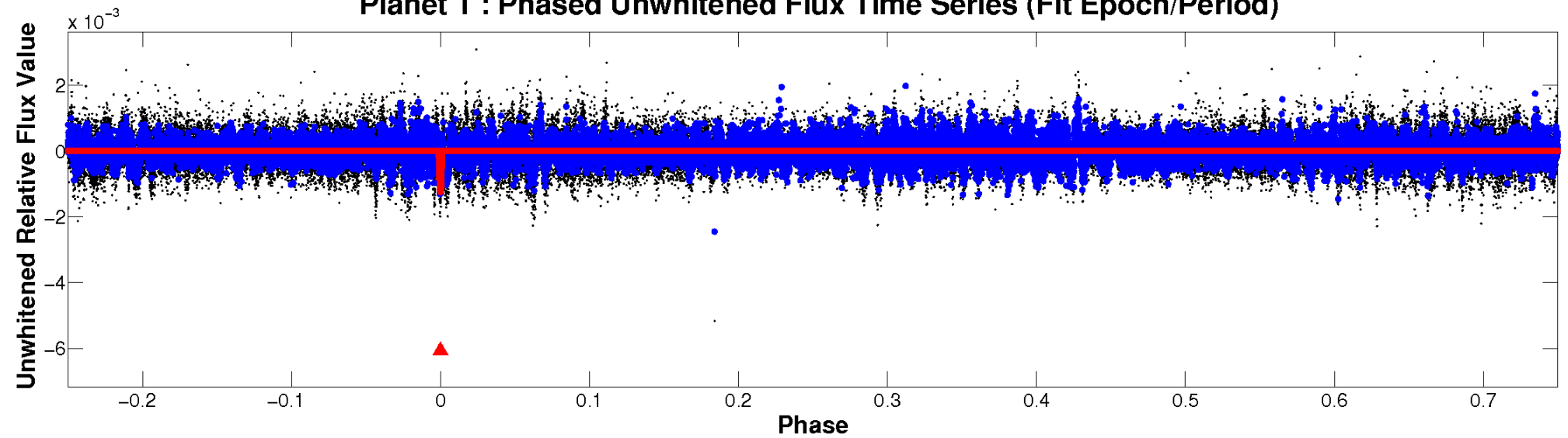
ALT Odd/Even

TCE 008104940-01

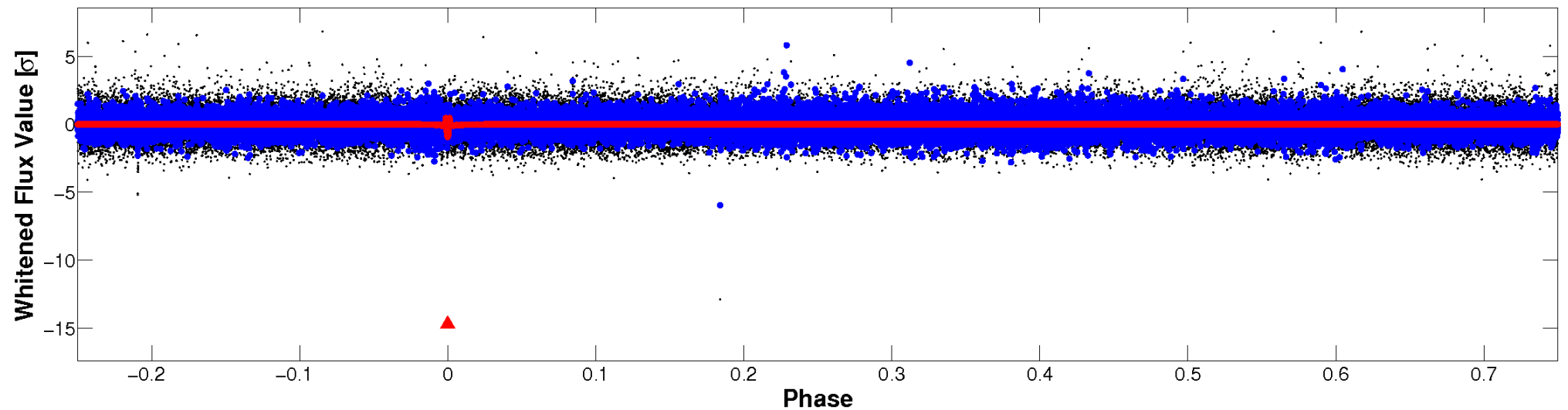


Non-Whitened Vs. Whitened Light Curve

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 008104940-01 P=543.450739 Days $T_0=404.087896$ (BKJD)



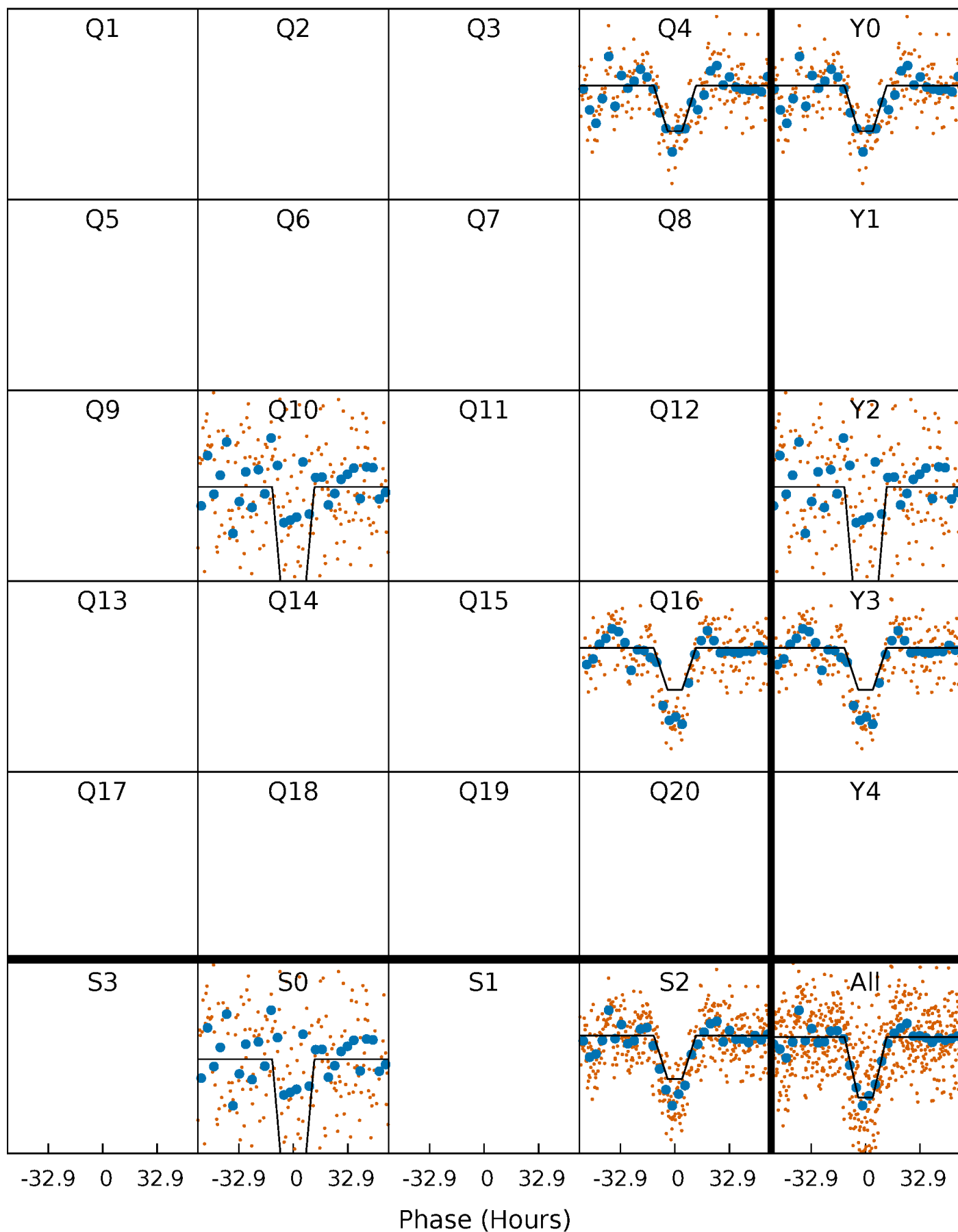
DV Quarter-Phased Transit Curves

TCE 008104940-01 P=543.450739 Days $T_0=404.087896$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

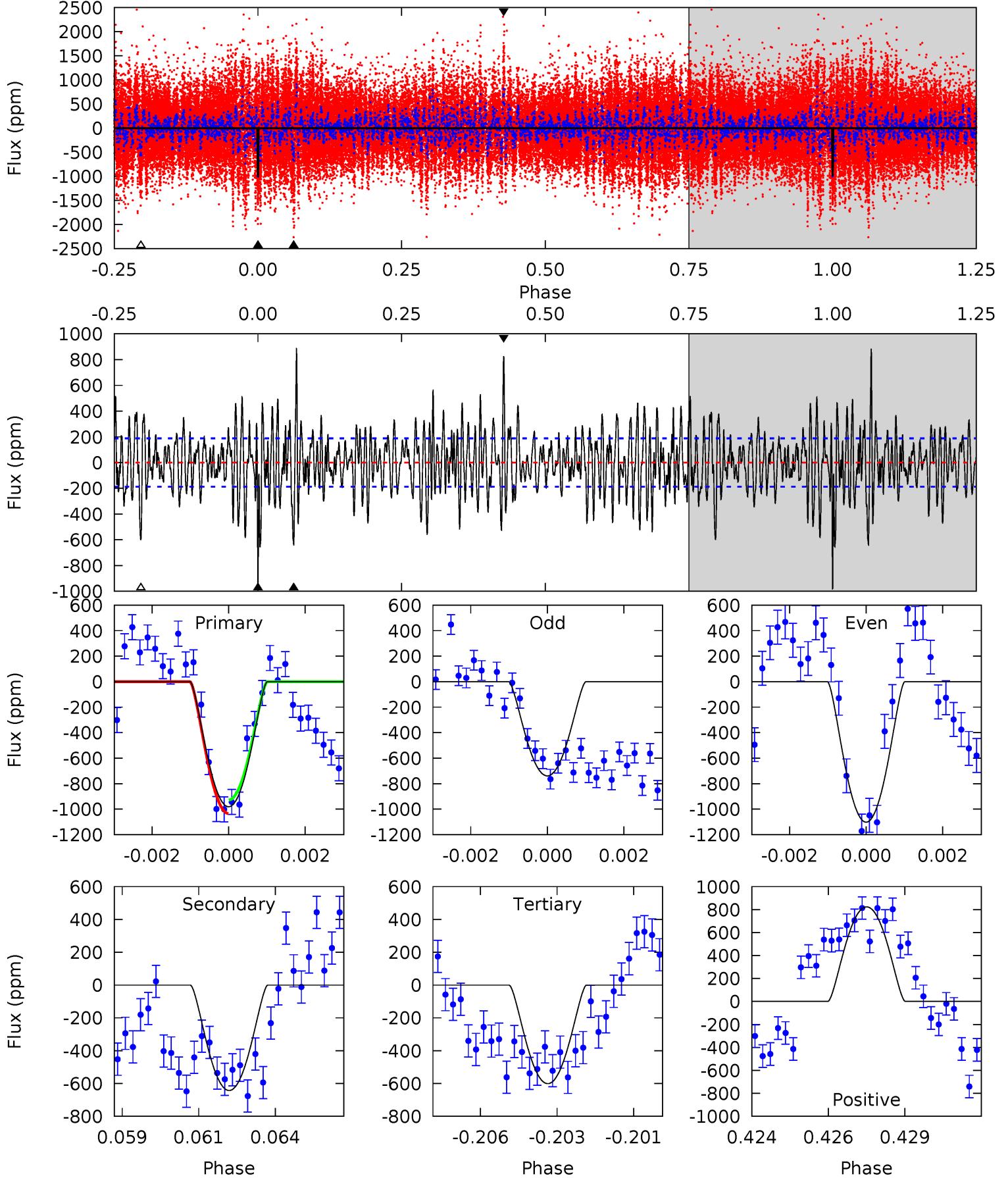
TCE 008104940-01 P=543.491829 Days $T_0=404.003758$ (BKJD)



DV Model-Shift Uniqueness Test

008104940-01, $P = 543.450739$ Days, $E = 404.087896$ Days

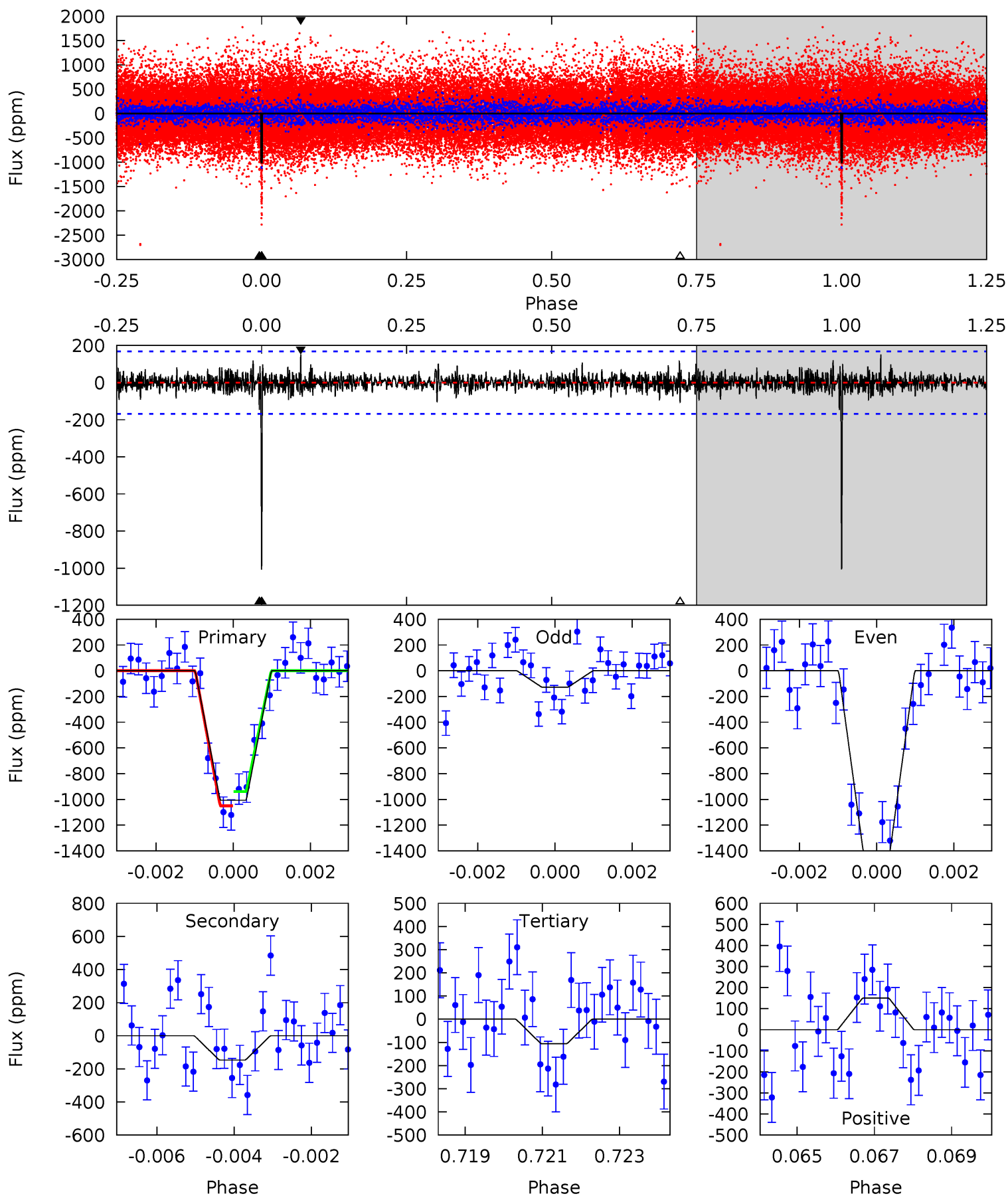
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.7	18.1	17.0	23.2	5.29	3.03	5.84	10.7	4.44	1.17	-5.10	4.81	0.99	0.47	1.49



Alt Model-Shift Uniqueness Test

008104940-01, P = 543.491829 Days, E = 404.003758 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.9	4.66	3.35	4.77	5.33	3.09	0.92	28.6	27.2	1.31	-0.11	19.5	0.87	0.13	1.76



Stellar Parameters For KIC 008104940

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6289^{+174}_{-239}	$4.407^{+0.067}_{-0.216}$	$0.020^{+0.250}_{-0.300}$	$1.118^{+0.362}_{-0.129}$	$1.164^{+0.169}_{-0.152}$	$1.173^{+0.345}_{-0.631}$
	+3%/-4%	+2%/-5%	+1250%/-1500%	+32%/-12%	+15%/-13%	+29%/-54%
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 008104940-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-643 ± 35	$7.77^{+4.73}_{-4.71}$	356^{+29}_{-19}	4273^{+2218}_{-657}	10533^{+60112}_{-6290}
Alt.	-147 ± 32	$5.73^{+4.88}_{-3.76}$	356^{+28}_{-20}	3677^{+1988}_{-645}	4551^{+35096}_{-3360}

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 $A_{obs} \gg 1.0$

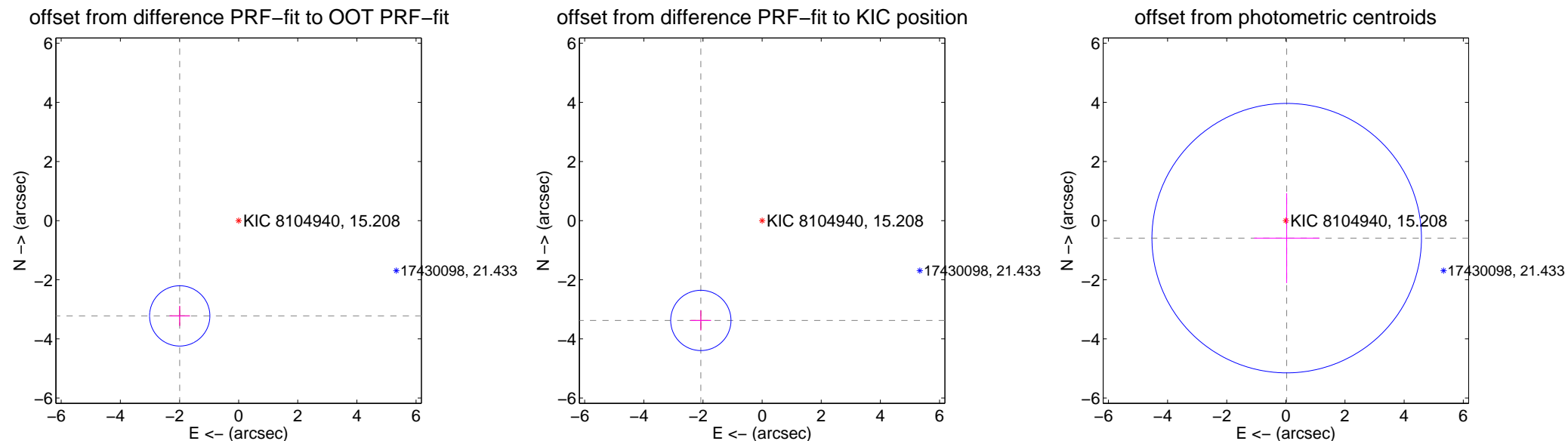
DV Centroid Data

Supplemental centroid analysis for 008104940-01. Kepler magnitude: 15.21. Transit SNR 8.67

There are 0 quarters with good PRF difference image offsets

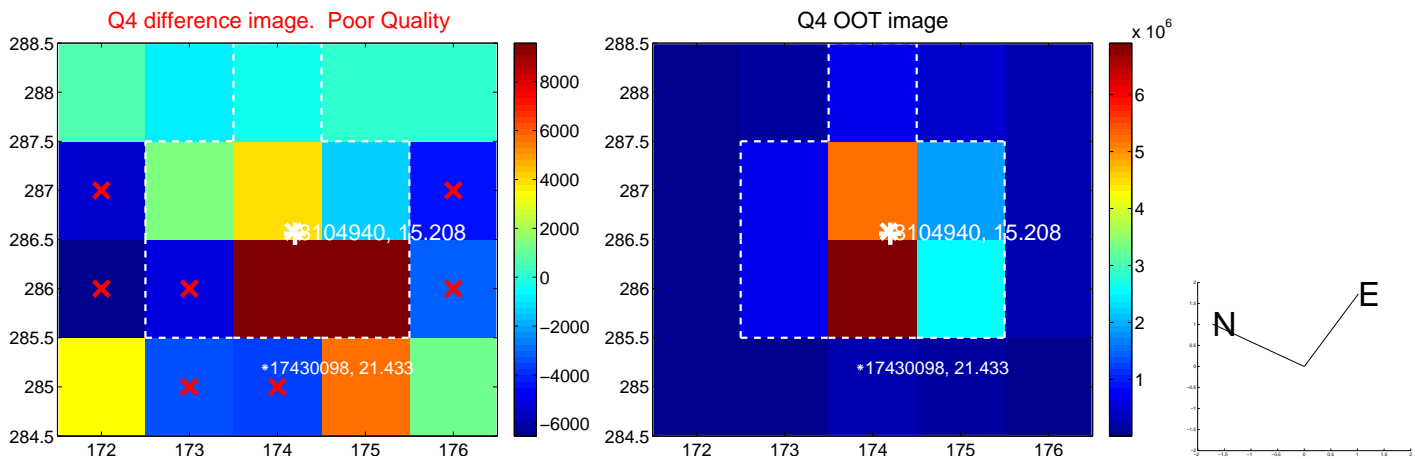
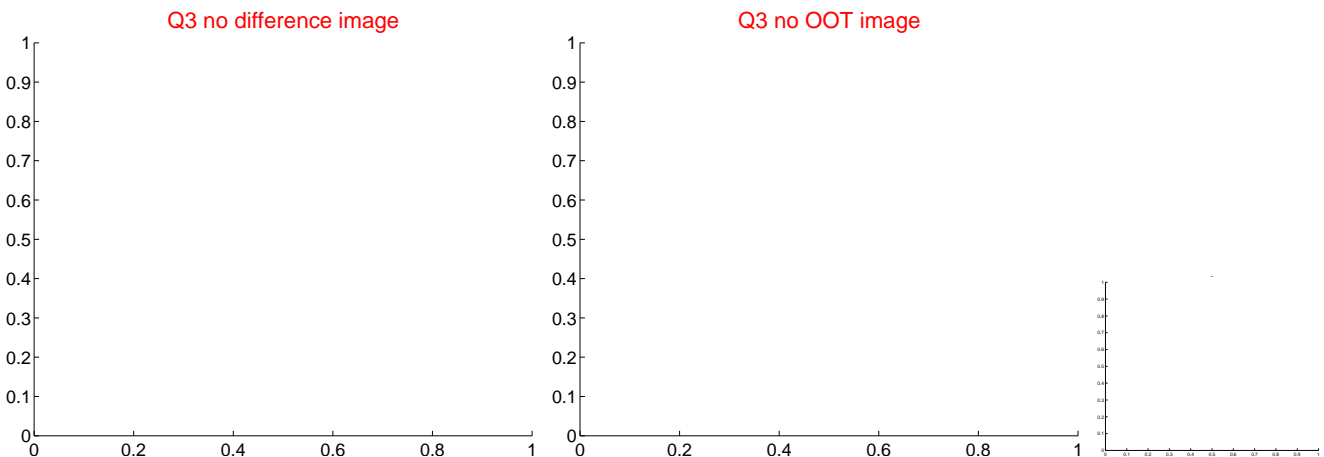
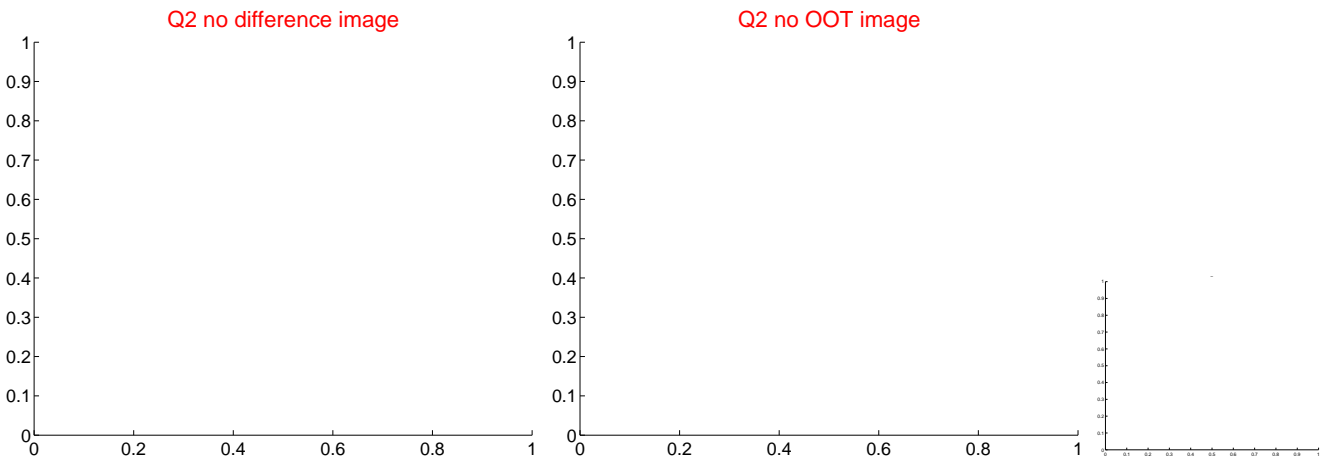
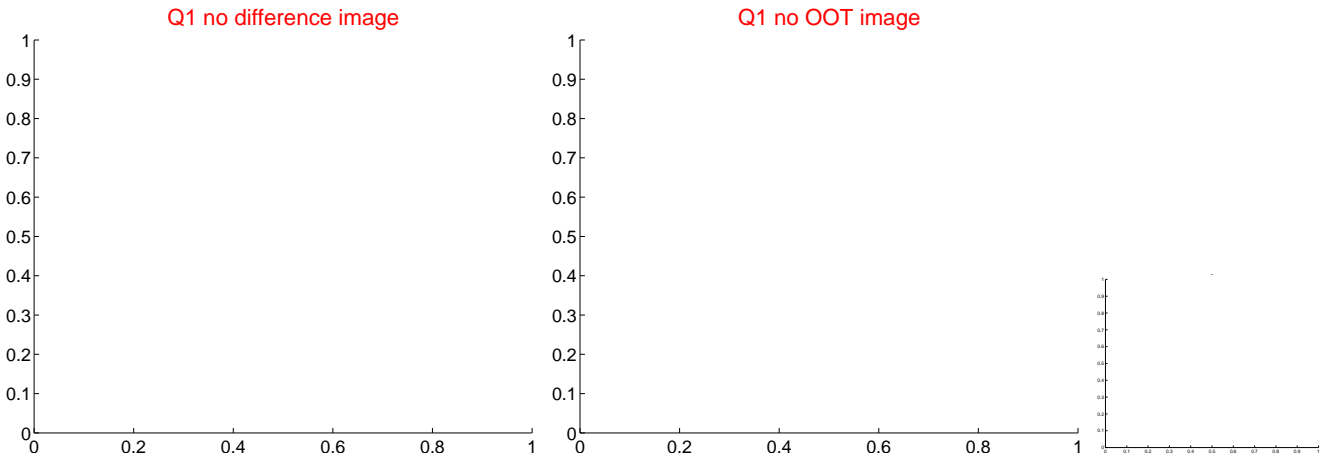
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.789 ± 0.340	11.15	1.992 ± 0.345	-3.223 ± 0.338
PRF-fit source offset from KIC position	3.961 ± 0.340	11.65	2.072 ± 0.345	-3.376 ± 0.338
photometric centroid source offset	0.59 ± 1.52	0.39	-0.03 ± 1.11	-0.59 ± 1.52

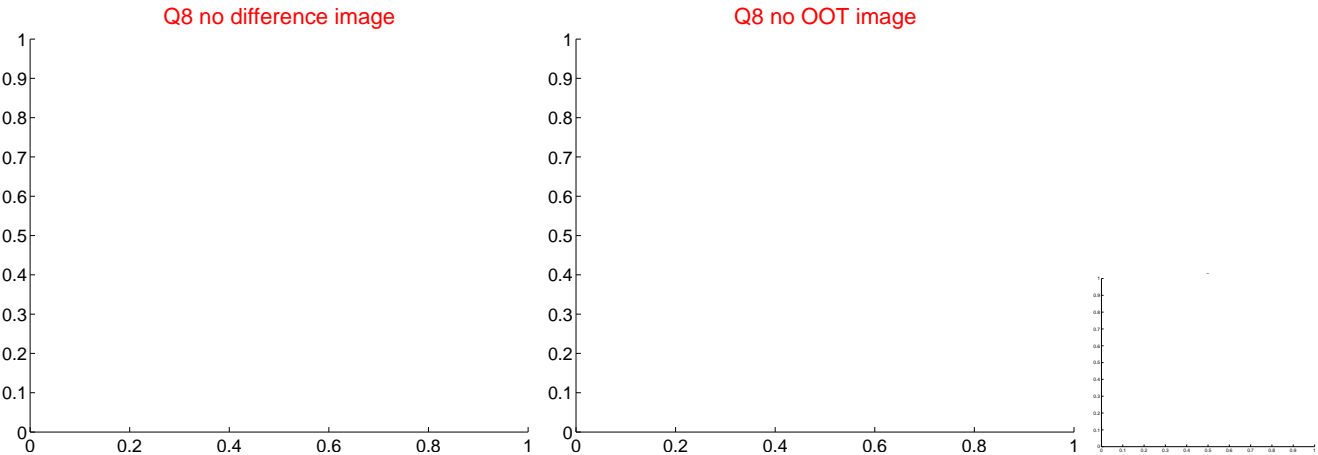
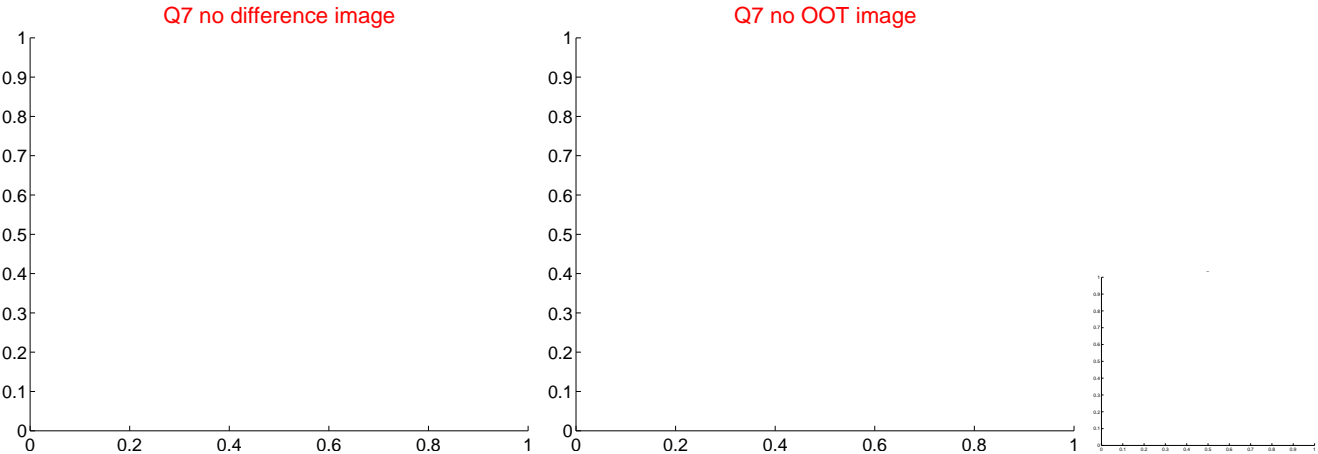
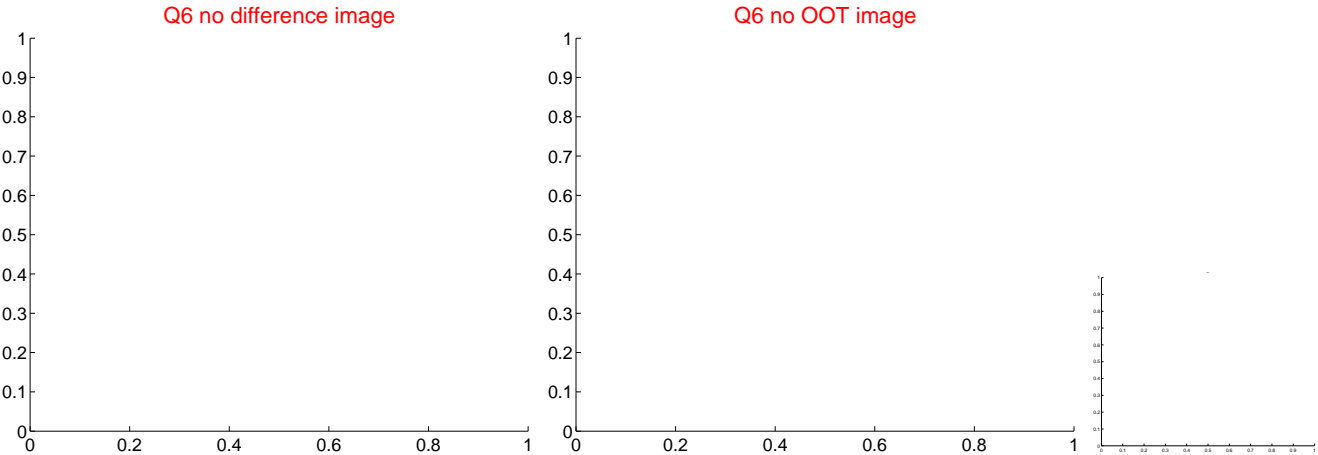
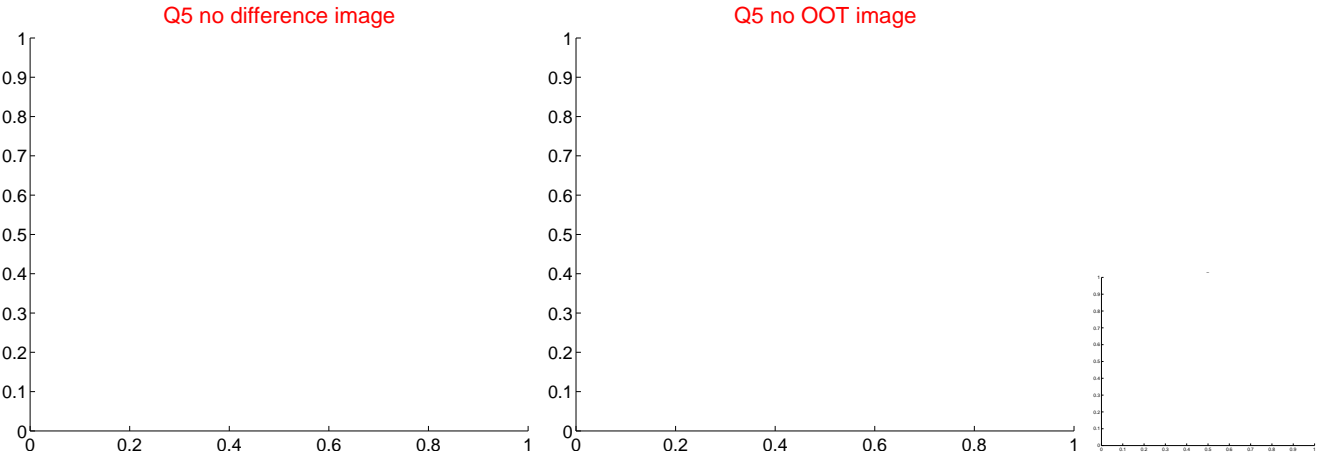


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

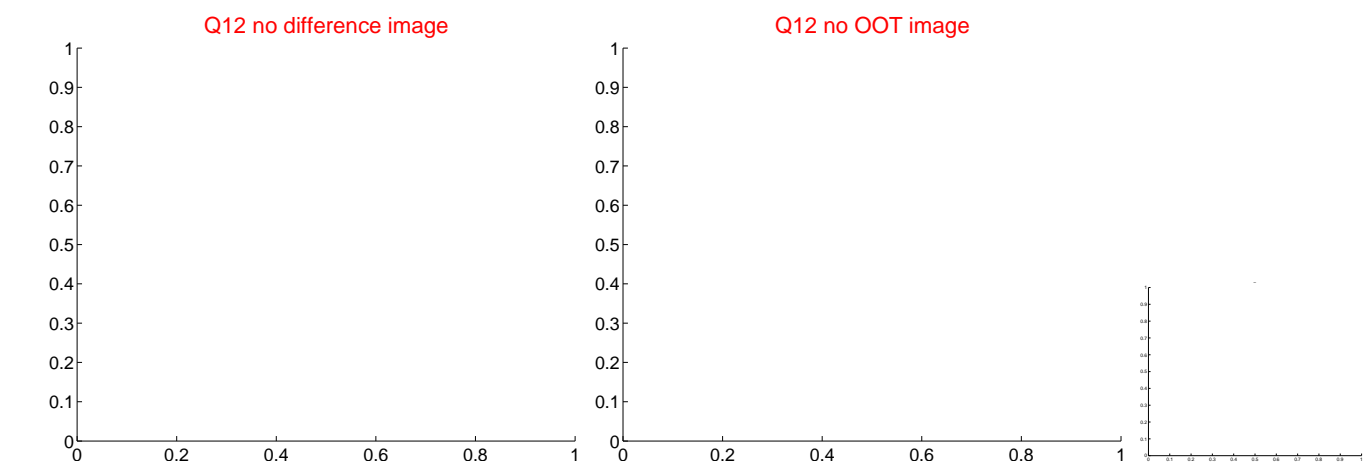
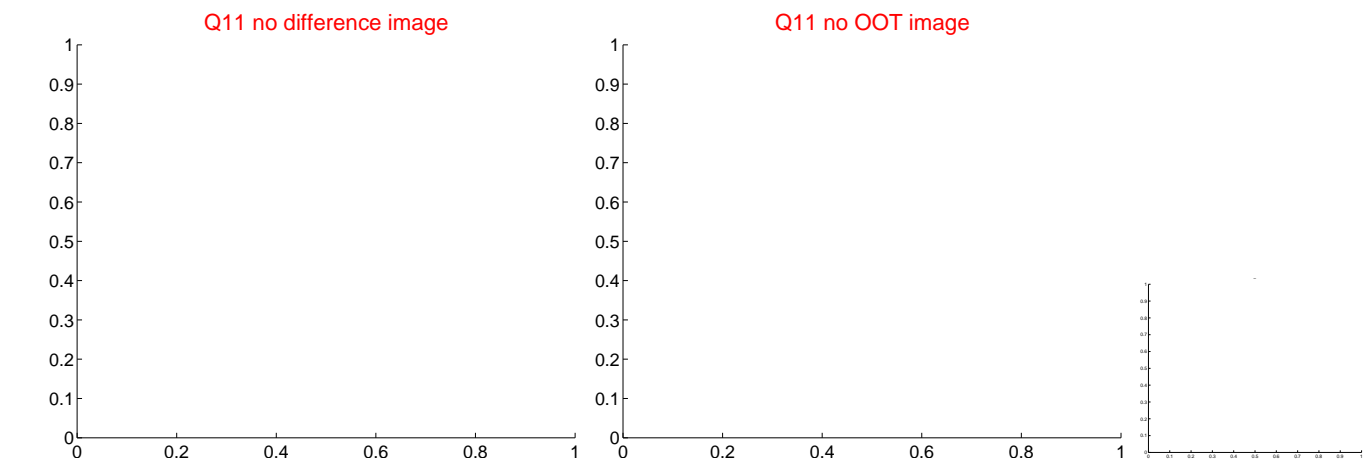
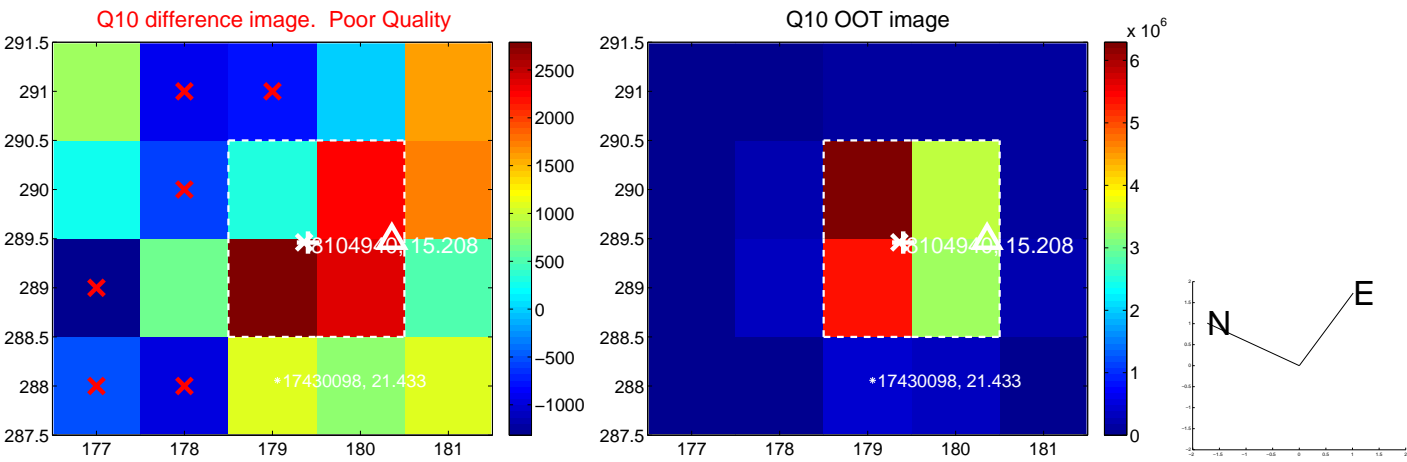
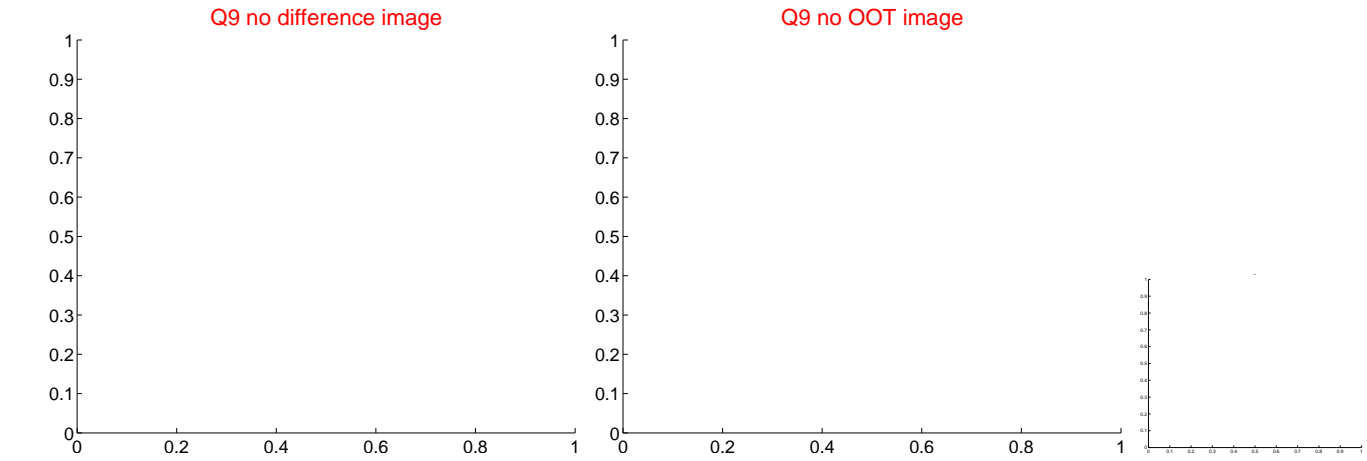
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



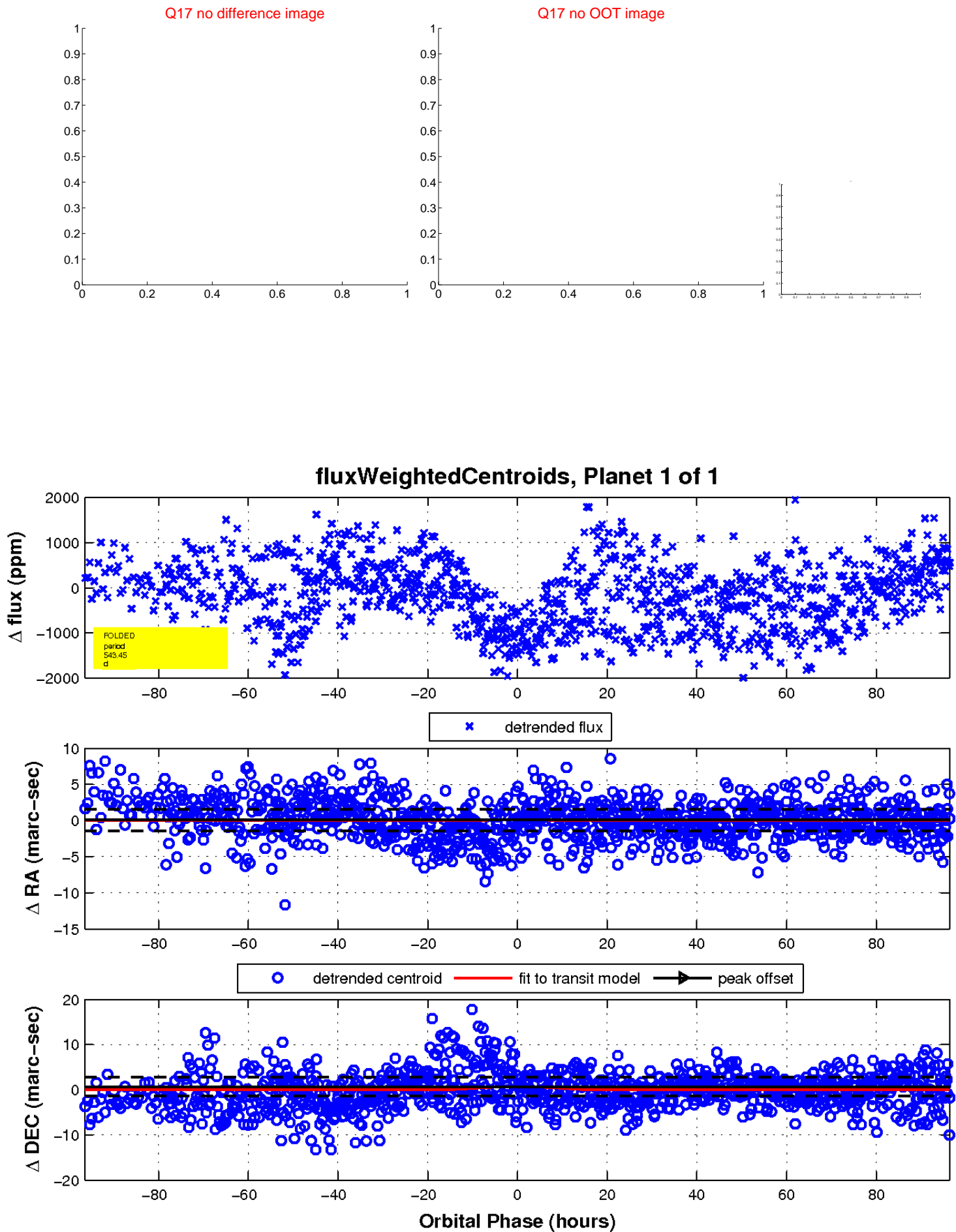
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

