

KIC 007960251

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})
007960251-01	OBS	No	473.905698	508.329396	247.1	16.701	11.3	7.0	1.95	5223	3.65	2.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007960251-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

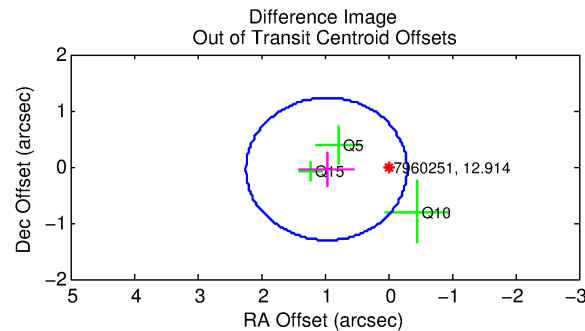
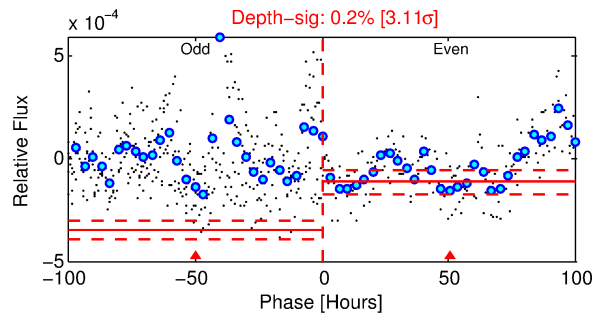
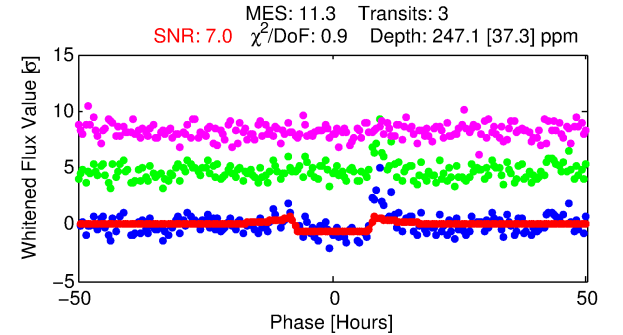
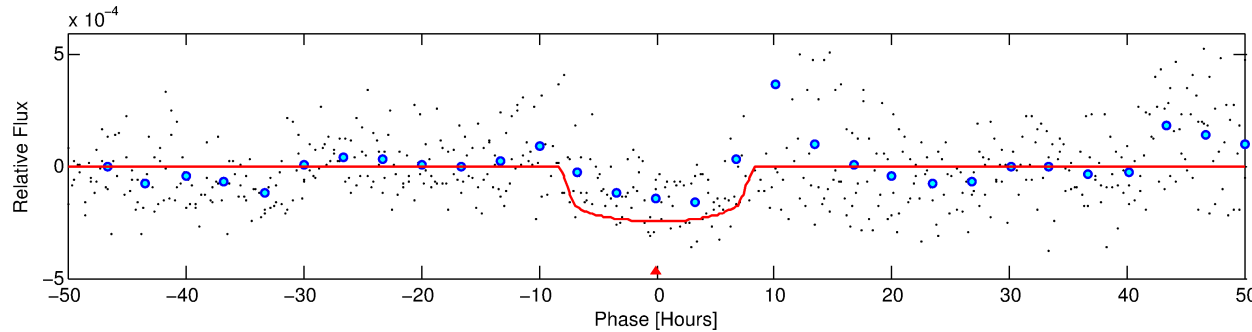
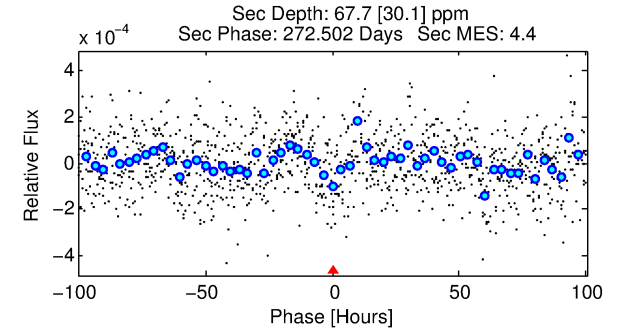
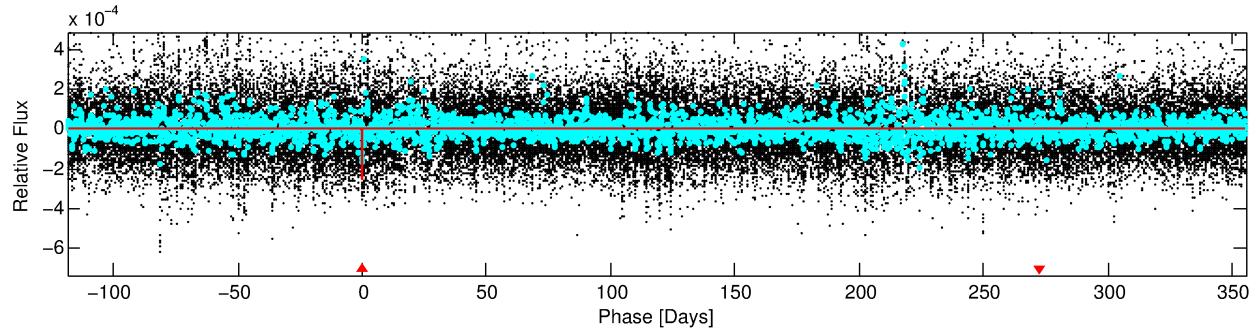
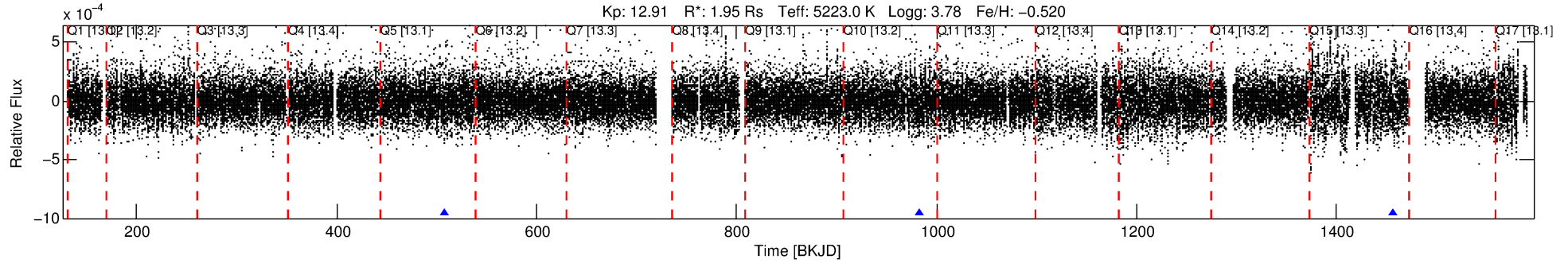
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007960251-01

No Significant Match Found

DV One-Page Summary

KIC: 7960251 Candidate: 1 of 1 Period: 473.906 d



DV Fit Results:

Period = 473.90570 [0.01458] d
Epoch = 508.3294 [0.0181] BKJD
Rp/R* = 0.0172 [0.0021]
a/R* = 103.78 [41.02]
b = 0.90 [0.09]
Seff = 2.02 [2.63]
Teq = 304 [99] K
Rp = 3.65 [2.49] Re
a = 1.1163 [0.8418] AU
Ag = 3473.31 [4832.96] [0.72σ]
Teffp = 3610 [468] K [6.91σ]

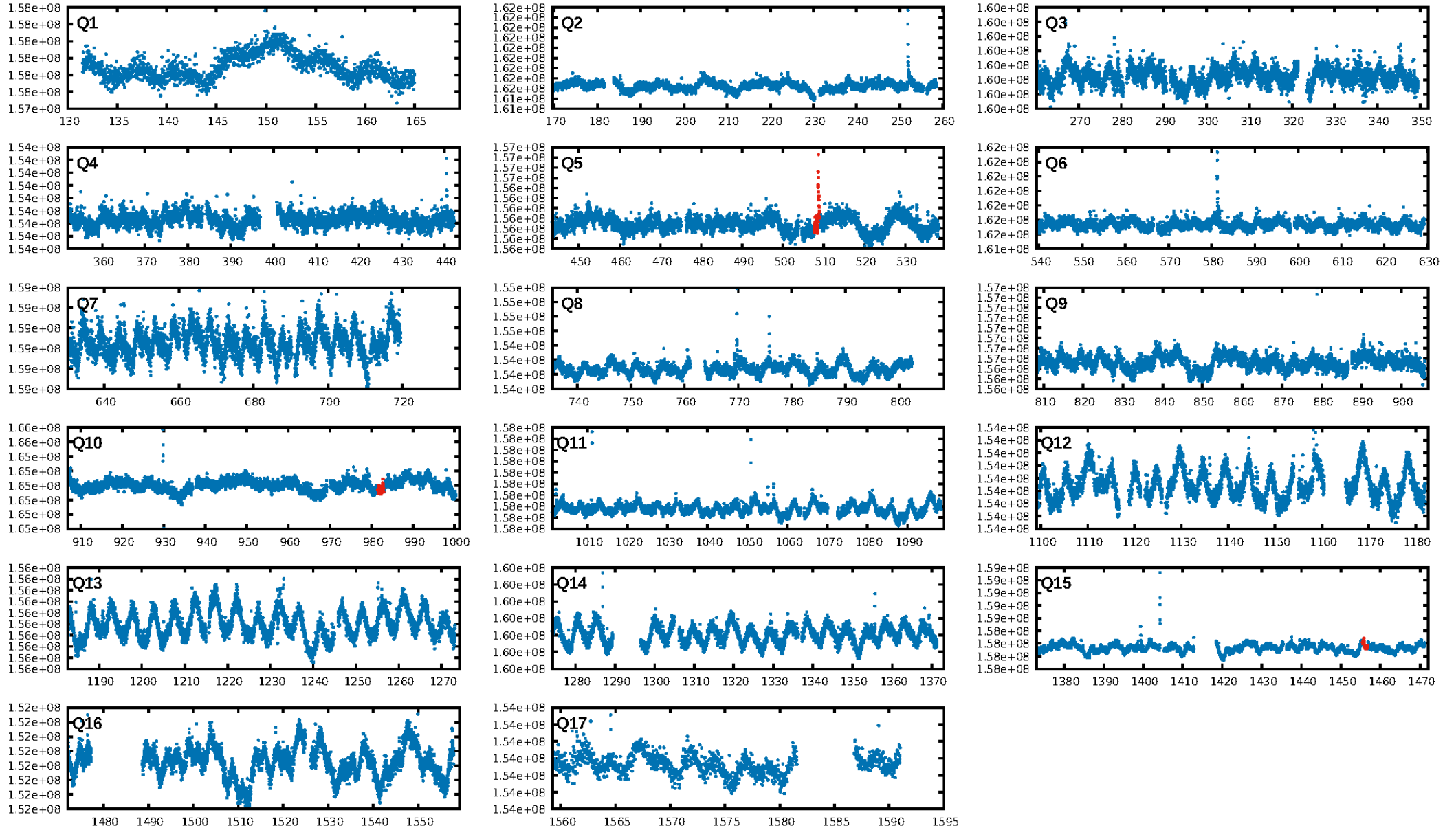
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.0%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 8.44e-18
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 15.71
Centroid-sig: 22.0%
Centroid-so: 0.897 arcsec [1.09σ]
OotOffset-rm: 0.970 arcsec [2.30σ]
KicOffset-rm: 0.771 arcsec [1.95σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

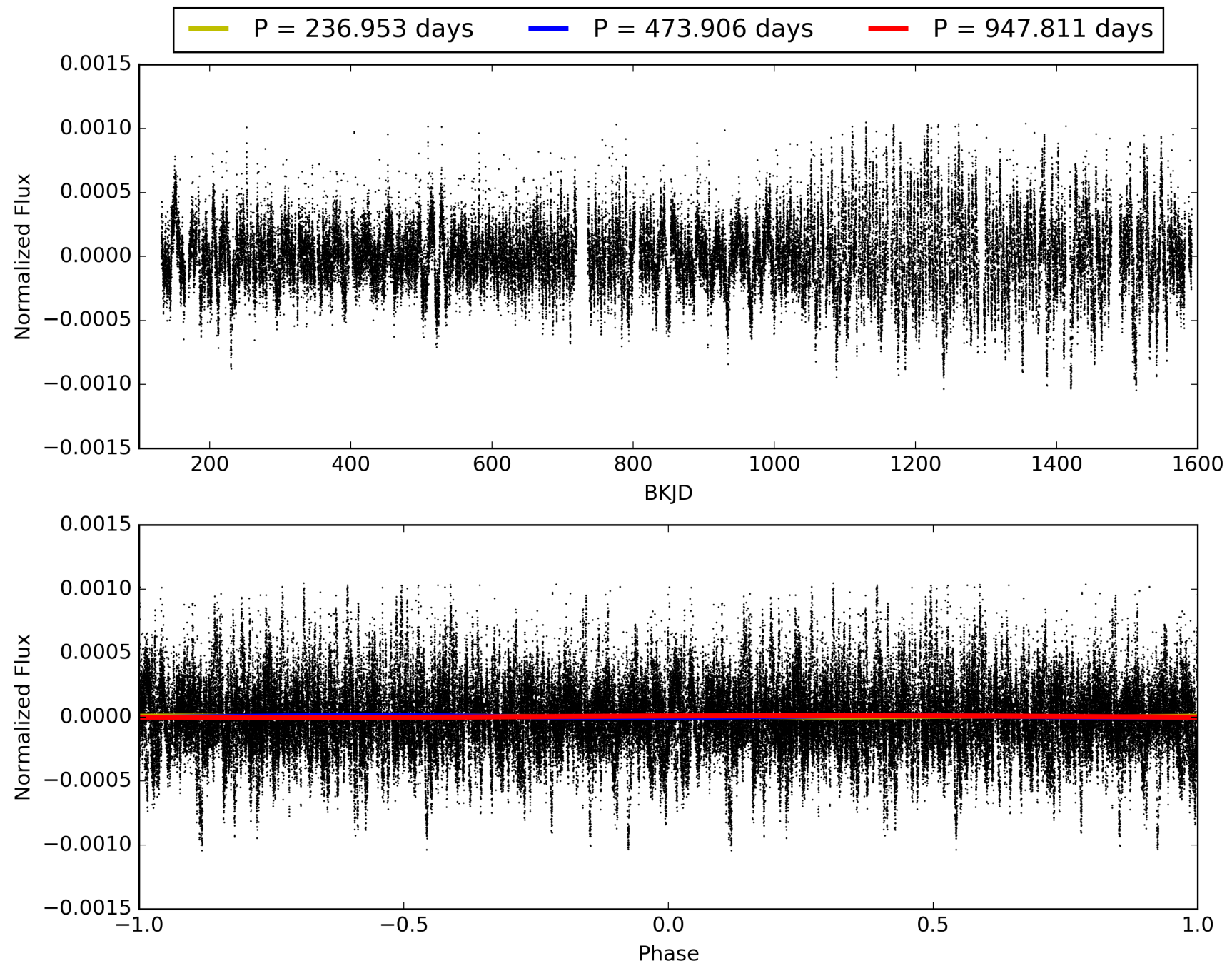
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:43:35 Z

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

TCE 007960251-01, PDC Light Curves

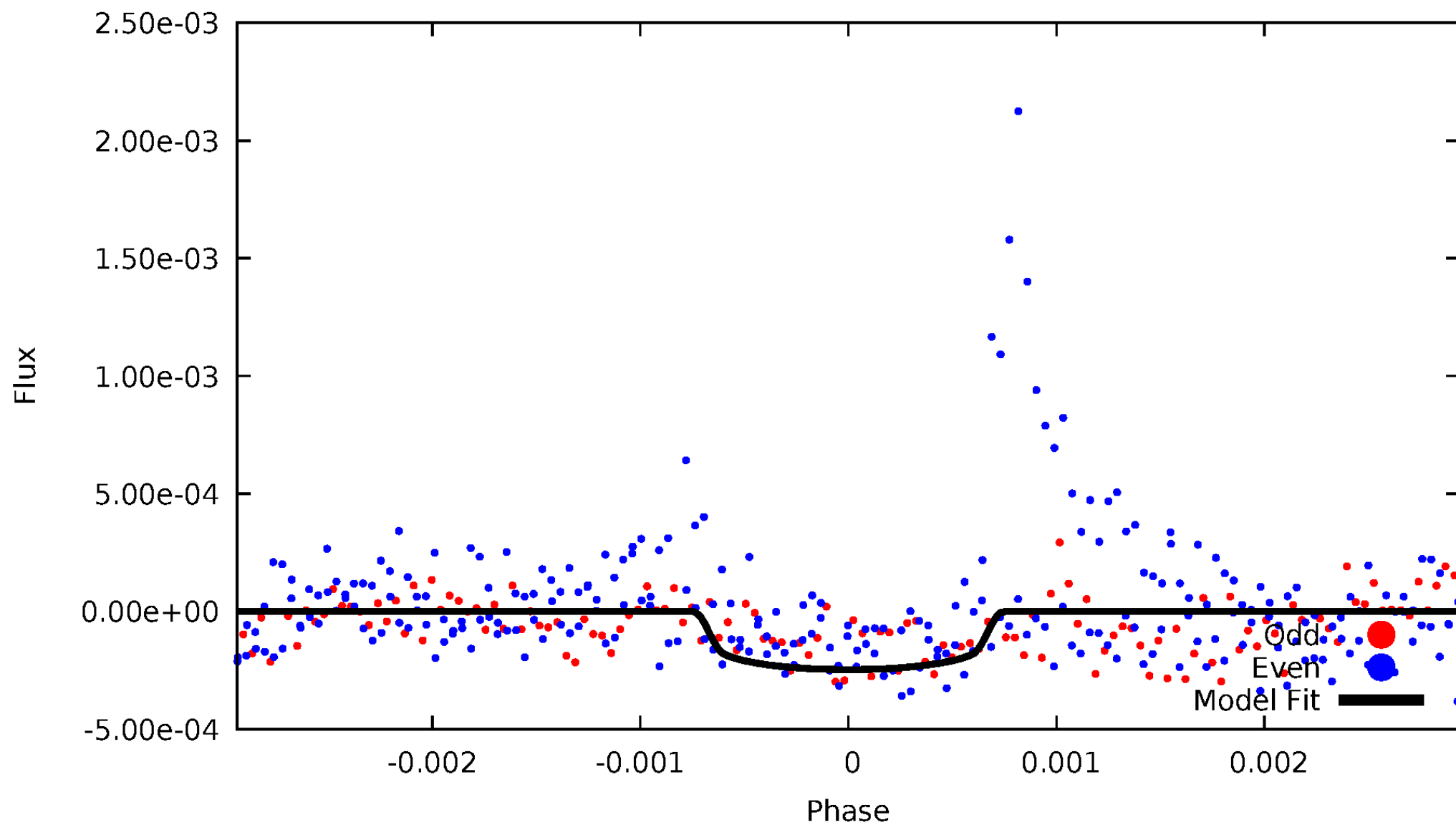


TCE 007960251-01



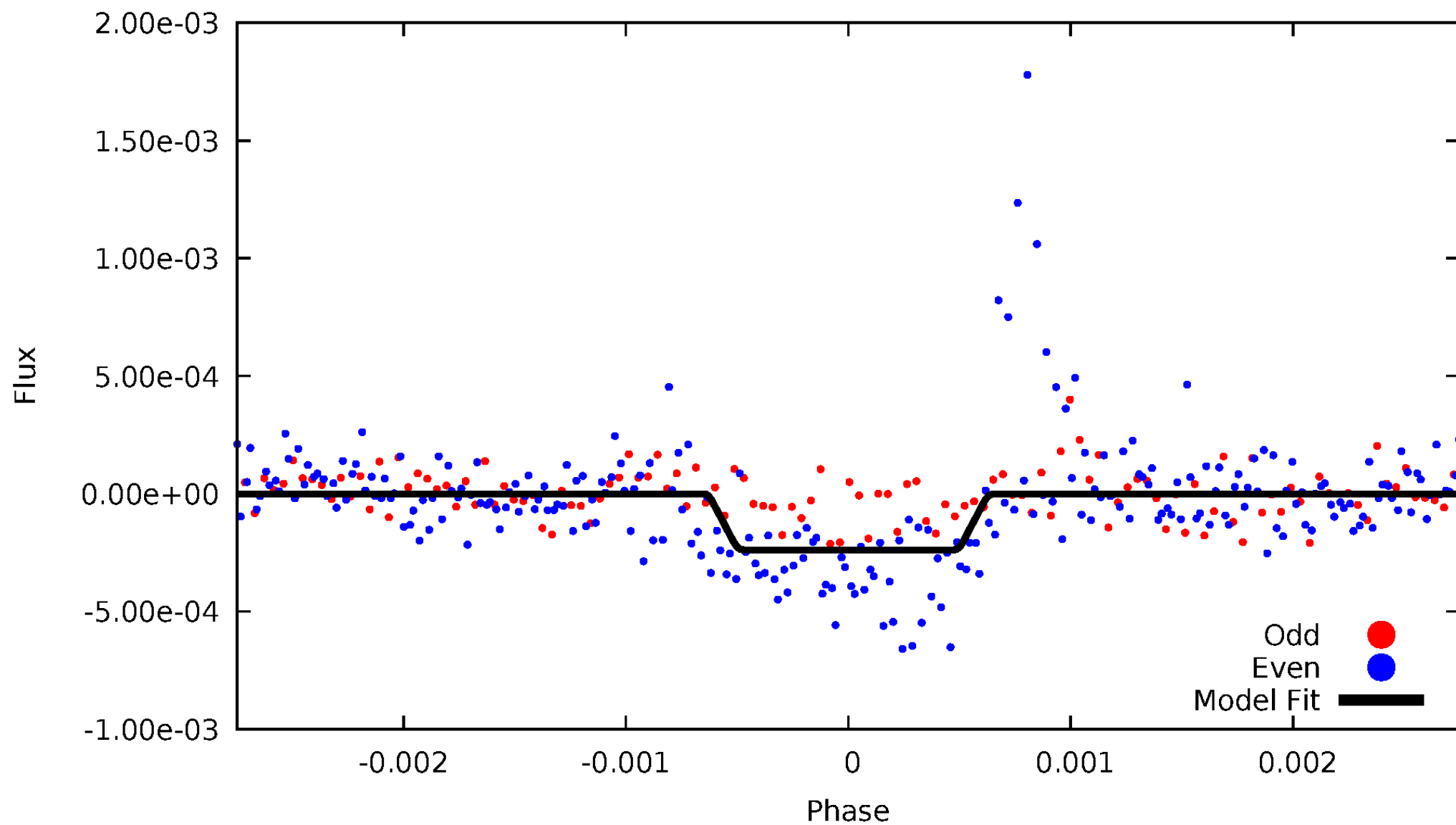
DV Odd/Even

TCE 007960251-01

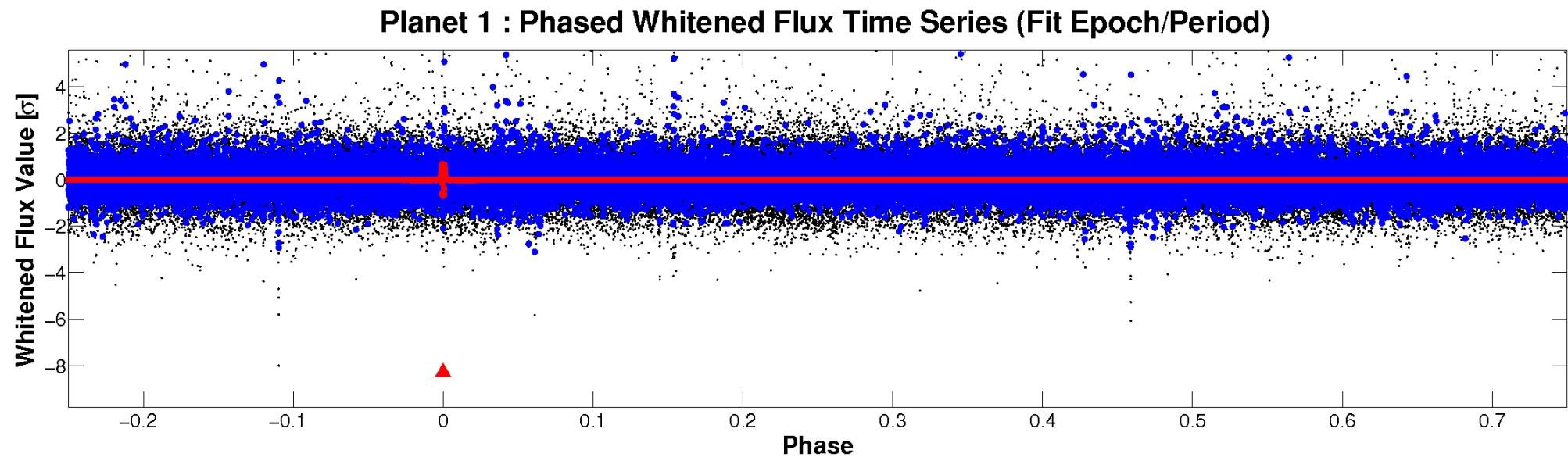
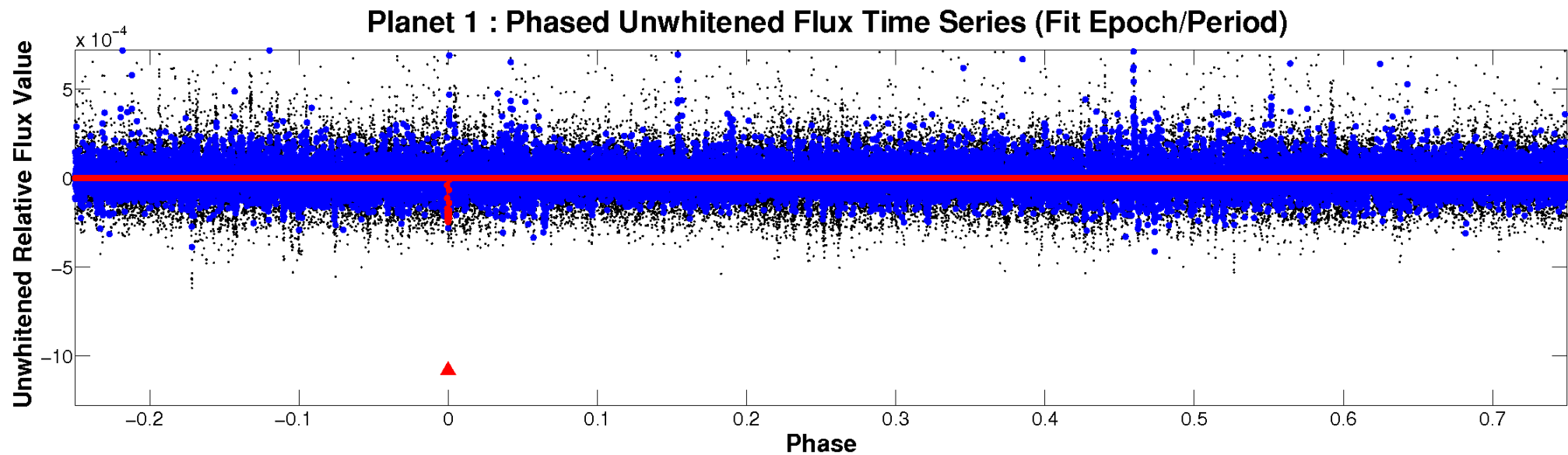


ALT Odd/Even

TCE 007960251-01

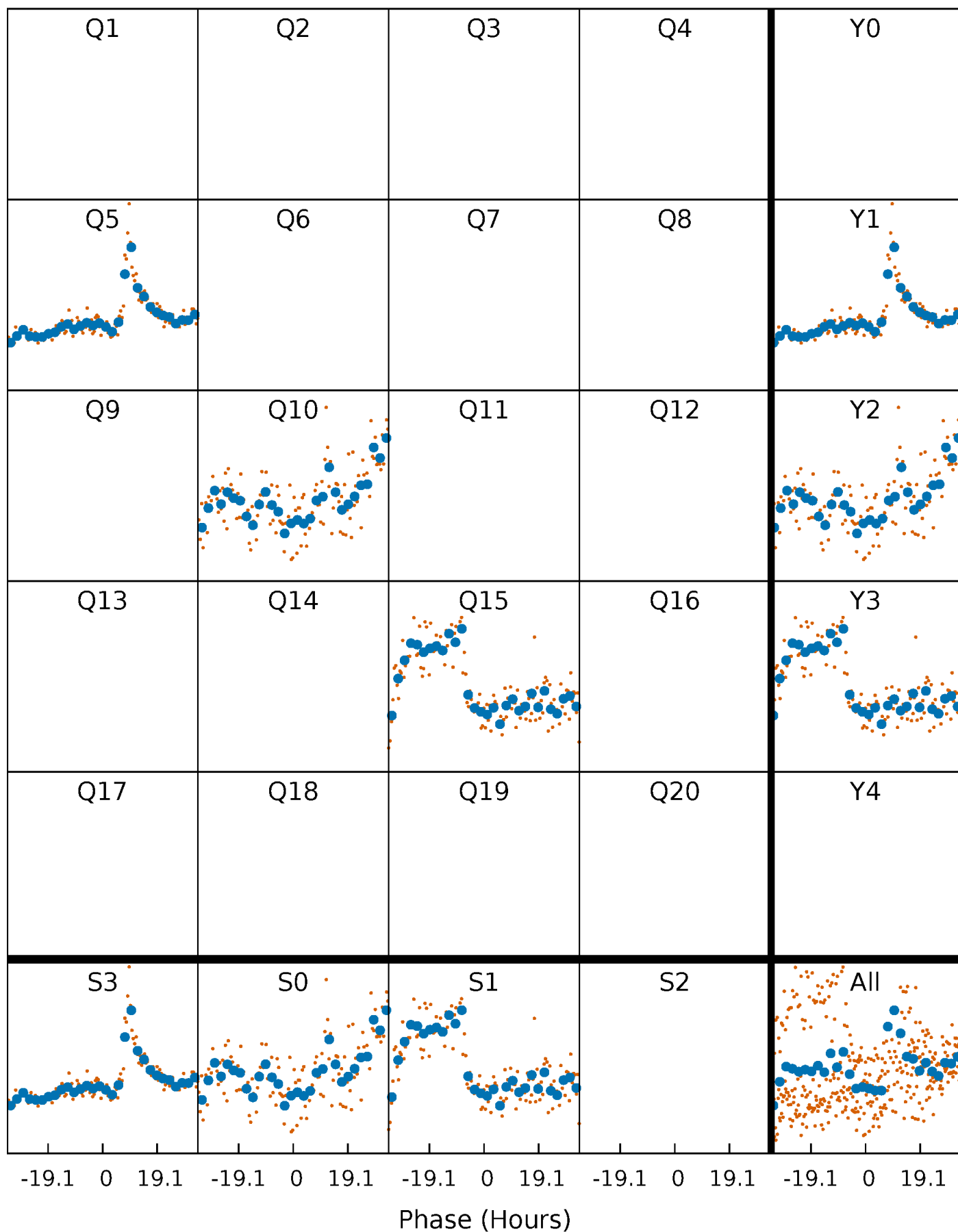


Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 007960251-01 P=473.905698 Days $T_0=508.329396$ (BKJD)



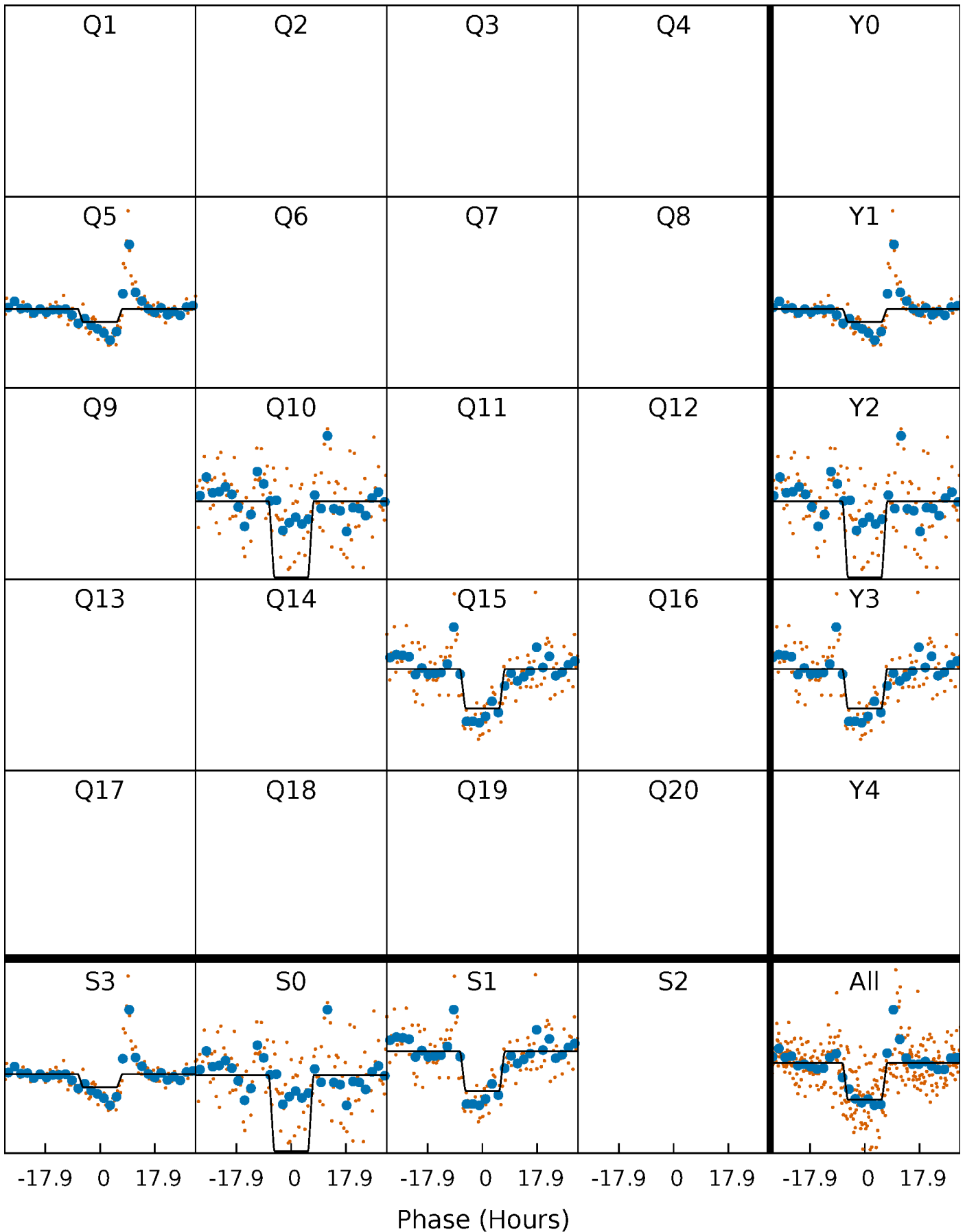
DV Quarter-Phased Transit Curves

TCE 007960251-01 P=473.905698 Days $T_0=508.329396$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

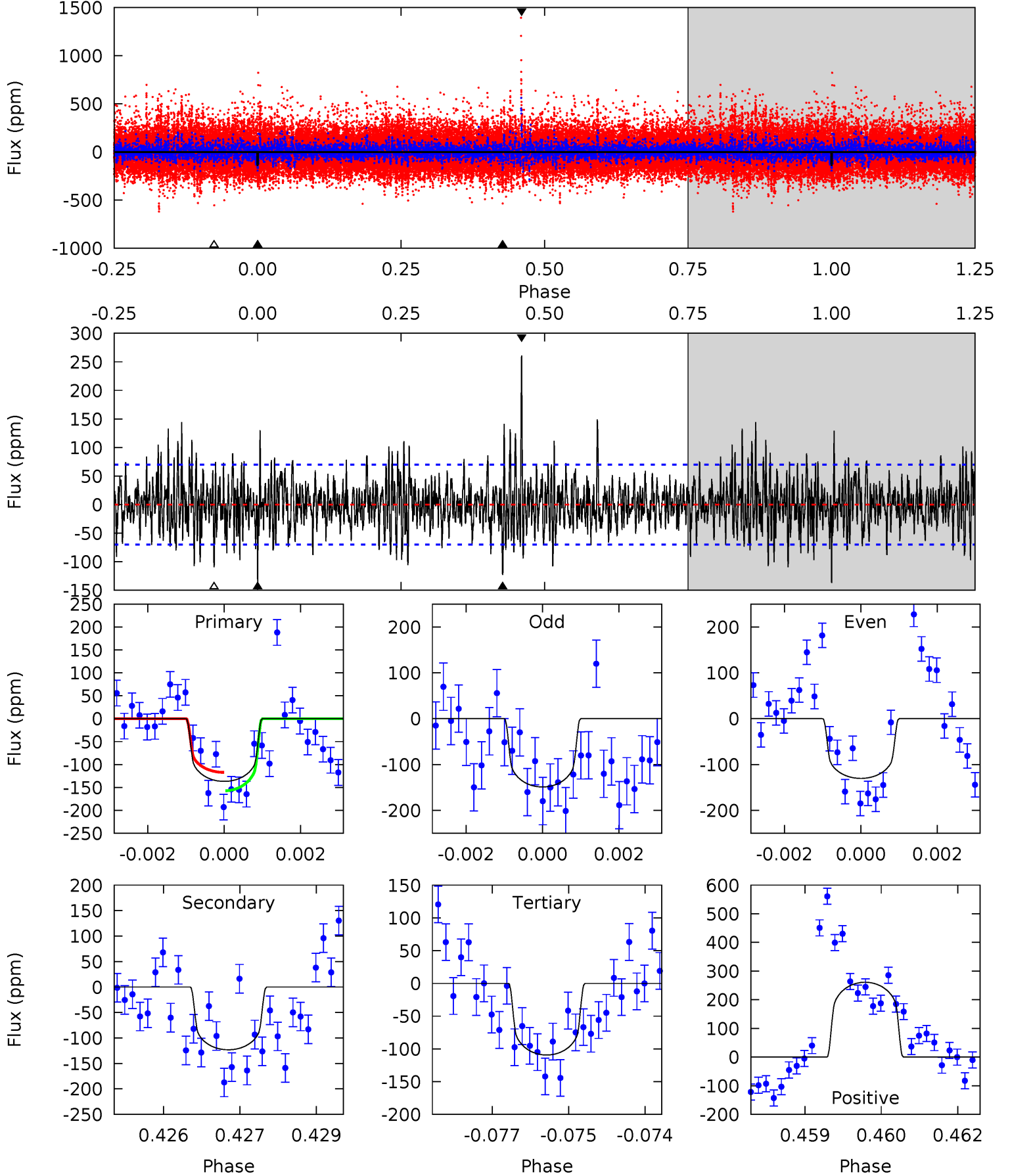
TCE 007960251-01 P=473.908746 Days $T_0=508.335539$ (BKJD)



DV Model-Shift Uniqueness Test

007960251-01, $P = 473.905698$ Days, $E = 34.423698$ Days

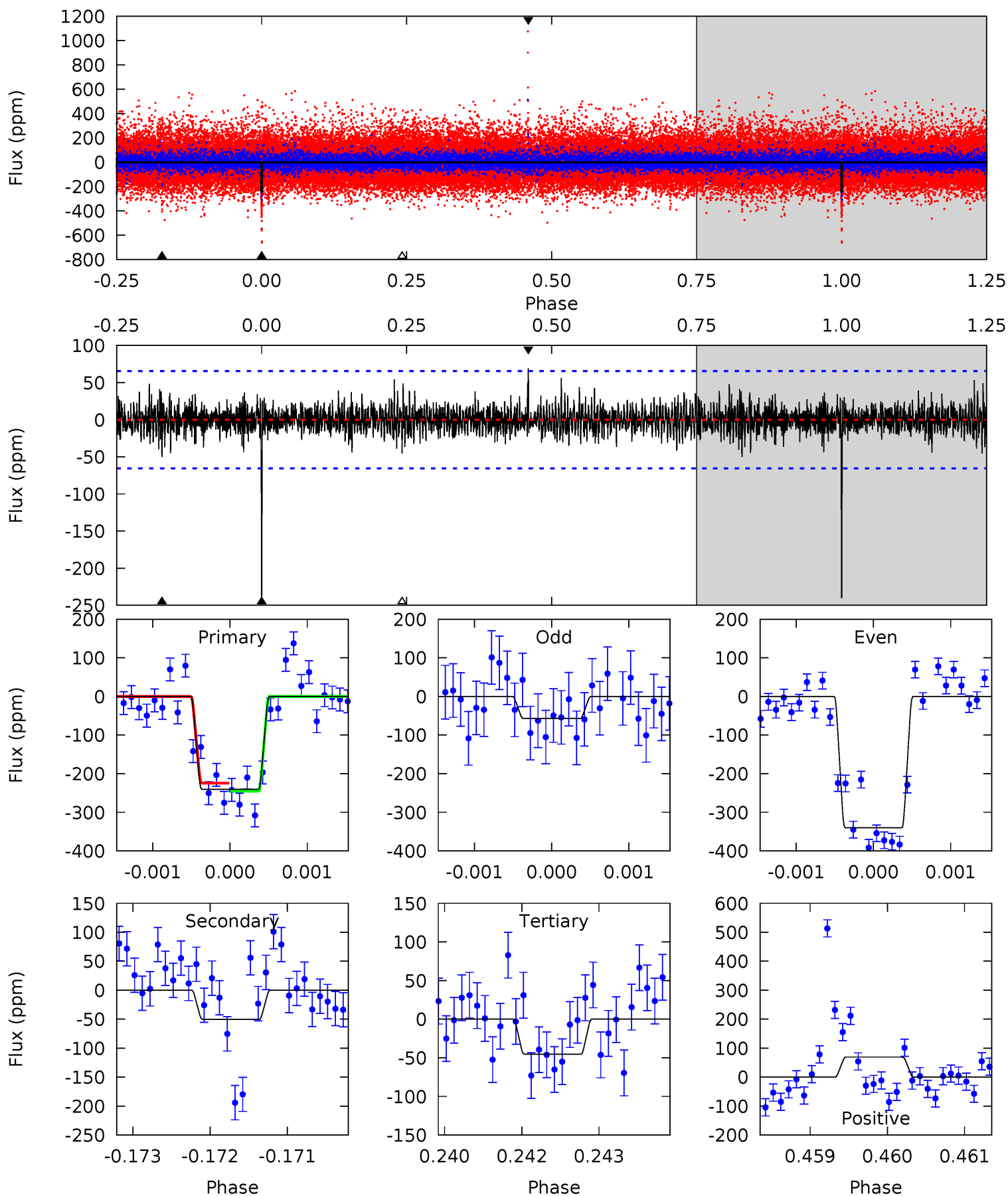
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	9.47	8.40	20.1	5.38	3.17	2.80	2.11	-9.55	1.07	-10.6	0.65	1.05	0.66	1.55



Alt Model-Shift Uniqueness Test

007960251-01, $P = 473.908746$ Days, $E = 34.426793$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	4.14	3.73	5.70	5.41	3.22	1.06	16.1	14.1	0.42	-1.56	11.0	0.85	0.22	0.85



Stellar Parameters For KIC 007960251

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5223^{+130}_{-130}	$3.777^{+0.792}_{-0.198}$	$-0.520^{+0.300}_{-0.250}$	$1.945^{+0.558}_{-1.302}$	$0.826^{+0.152}_{-0.152}$	$0.158^{+2.771}_{-0.084}$
	+2%/-2%	+21%/-5%	+58%/-48%	+29%/-67%	+18%/-18%	+1753%/-53%
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 007960251-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-123 ± 13	$3.43^{+0.95}_{-1.11}$	418^{+37}_{-76}	4372^{+260}_{-213}	7353^{+8711}_{-2961}
Alt.	-50 ± 12	$3.08^{+0.87}_{-1.06}$	417^{+40}_{-79}	3852^{+301}_{-244}	3720^{+4766}_{-1693}

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 $A_{obs} \gg 1.0$

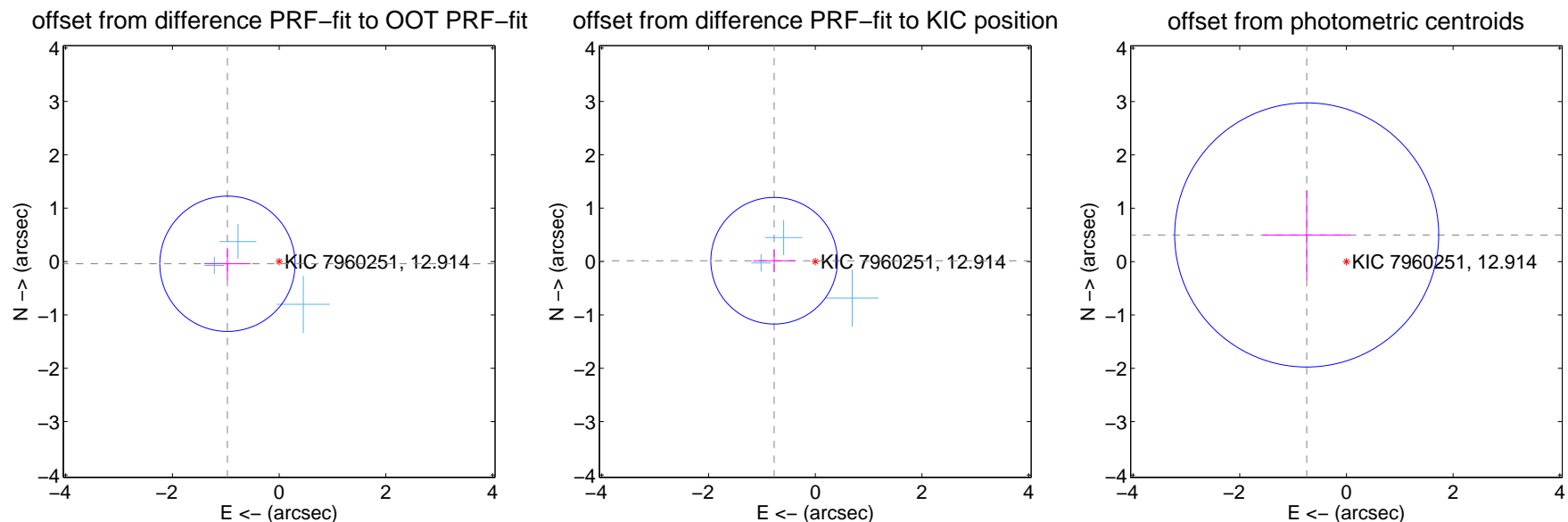
DV Centroid Data

Supplemental centroid analysis for 007960251-01. Kepler magnitude: 12.91. Transit SNR 6.97

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.970 ± 0.423	2.30	0.969 ± 0.433	-0.042 ± 0.299
PRF-fit source offset from KIC position	0.771 ± 0.395	1.95	0.771 ± 0.395	0.015 ± 0.214
photometric centroid source offset	0.90 ± 0.83	1.09	0.74 ± 0.82	0.50 ± 0.84

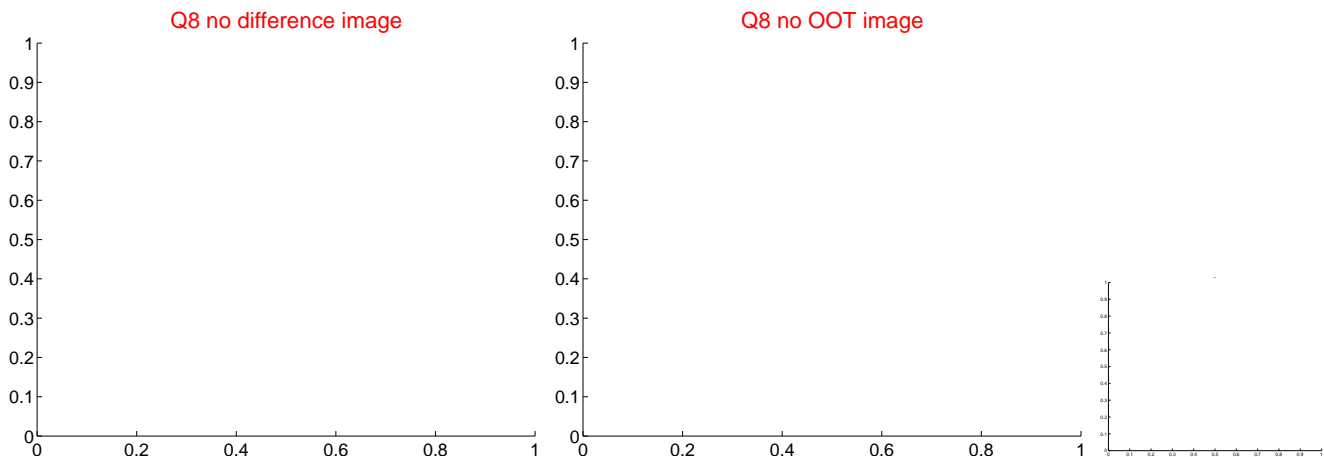
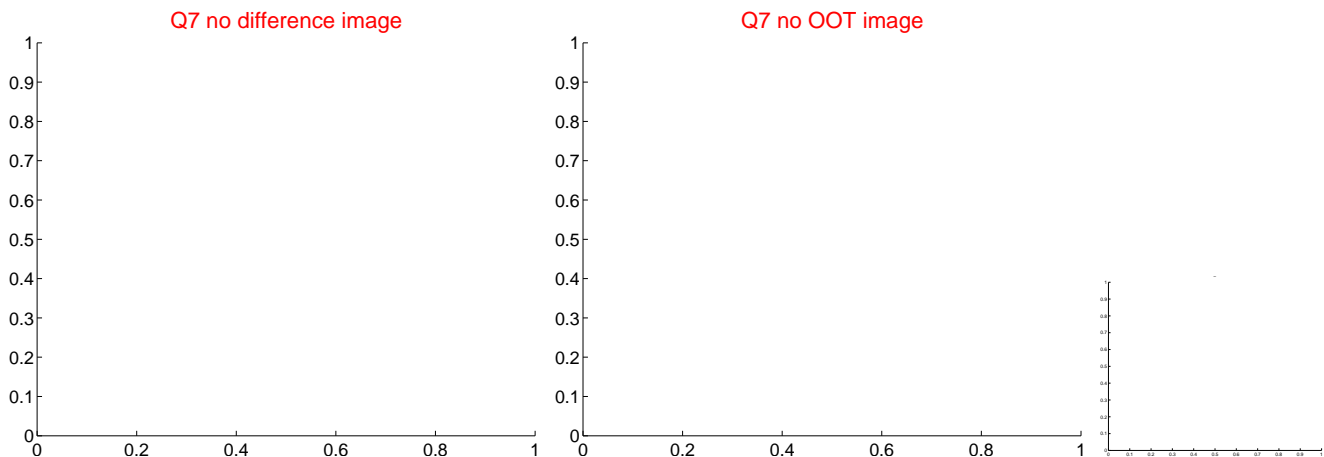
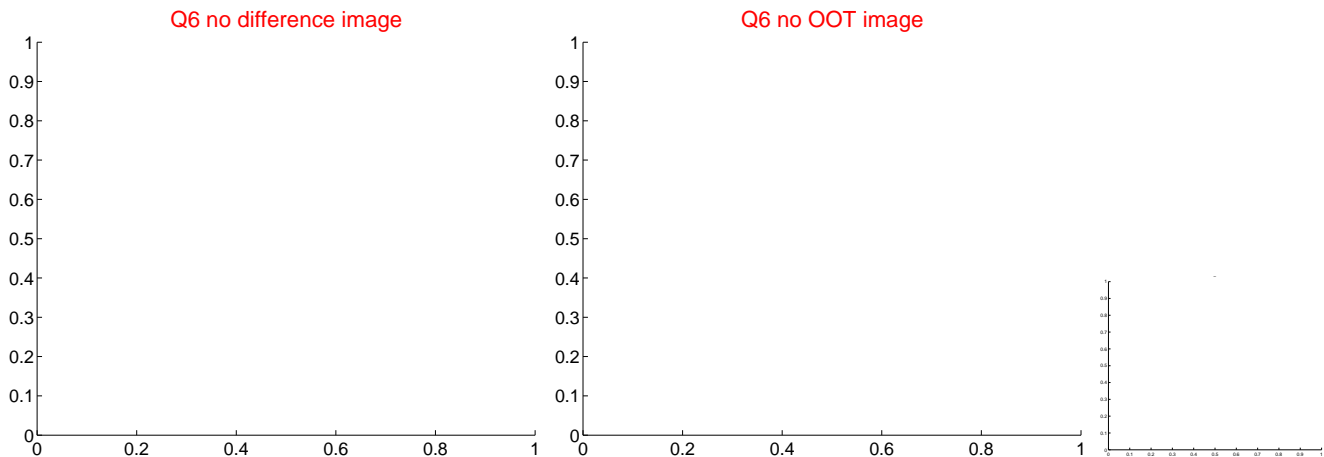
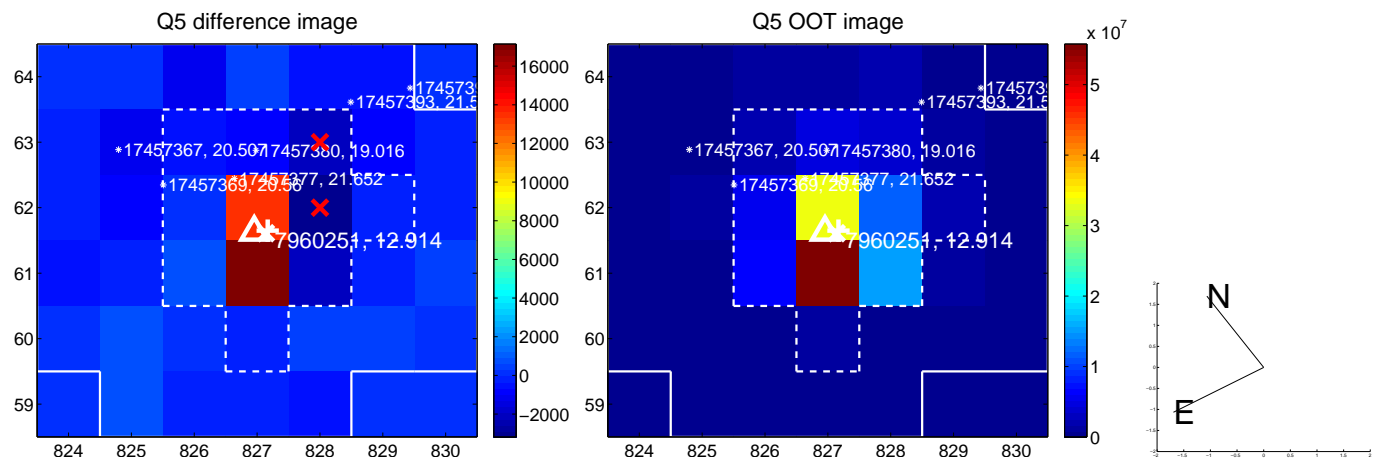


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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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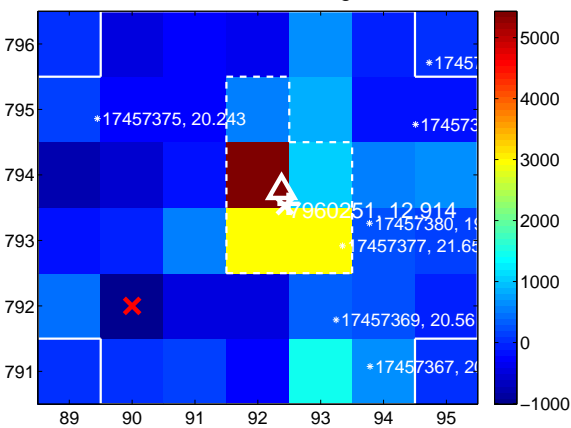
Q9 no difference image



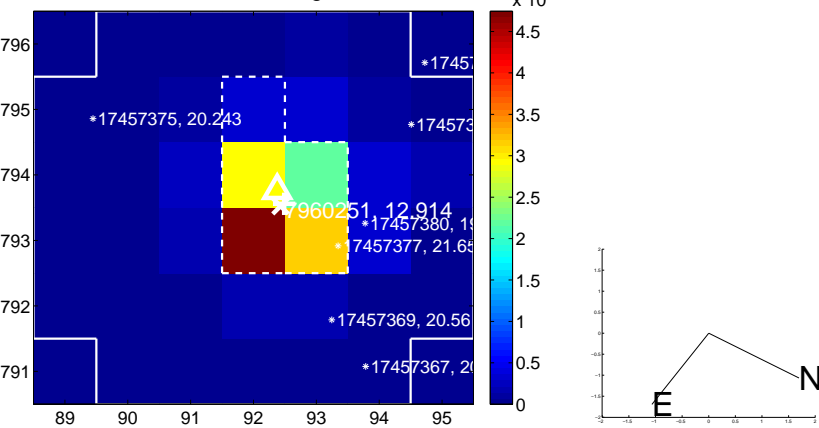
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



Q11 no OOT image



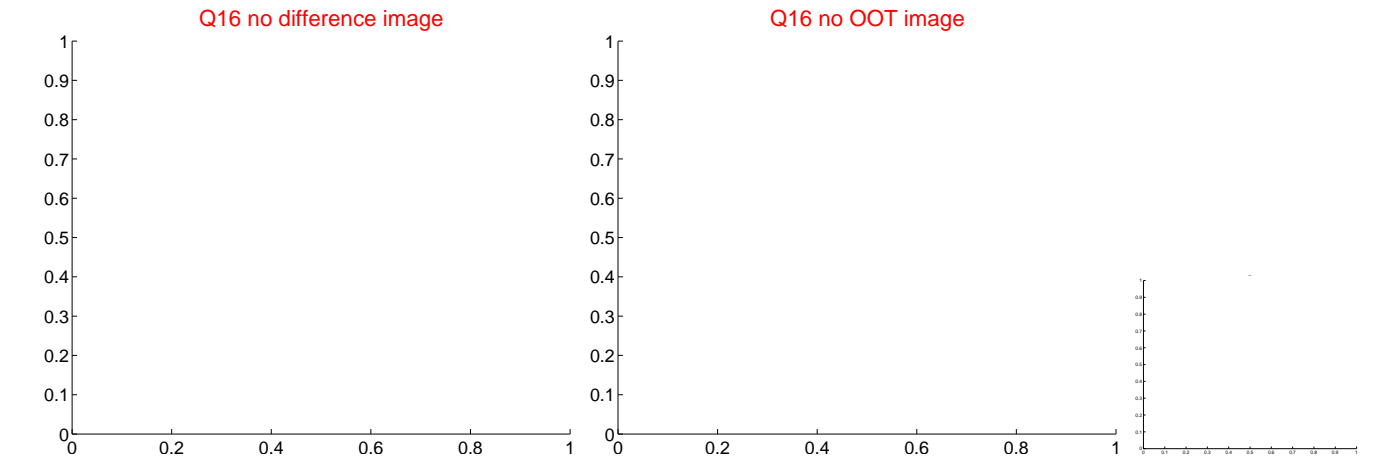
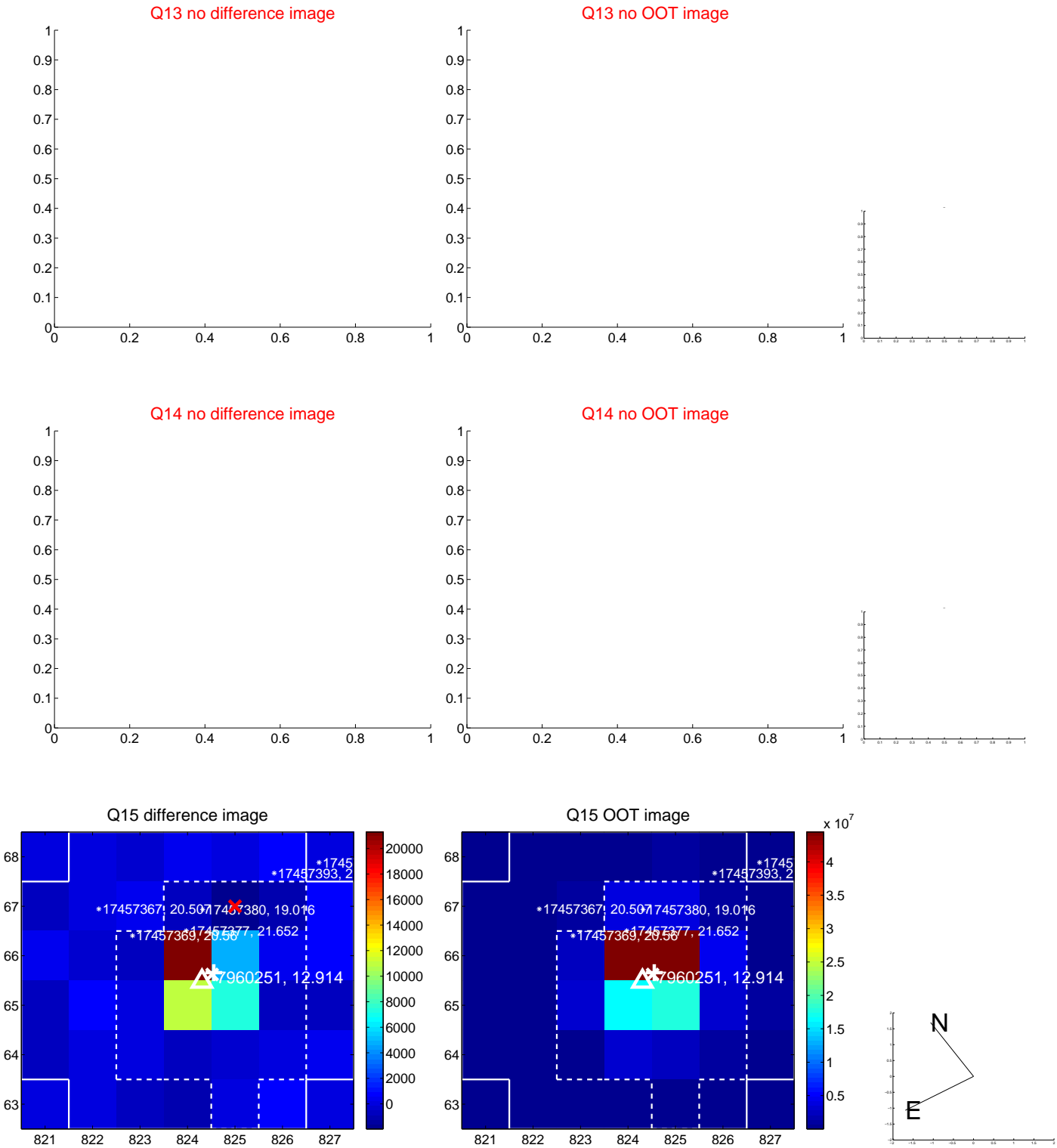
Q12 no difference image



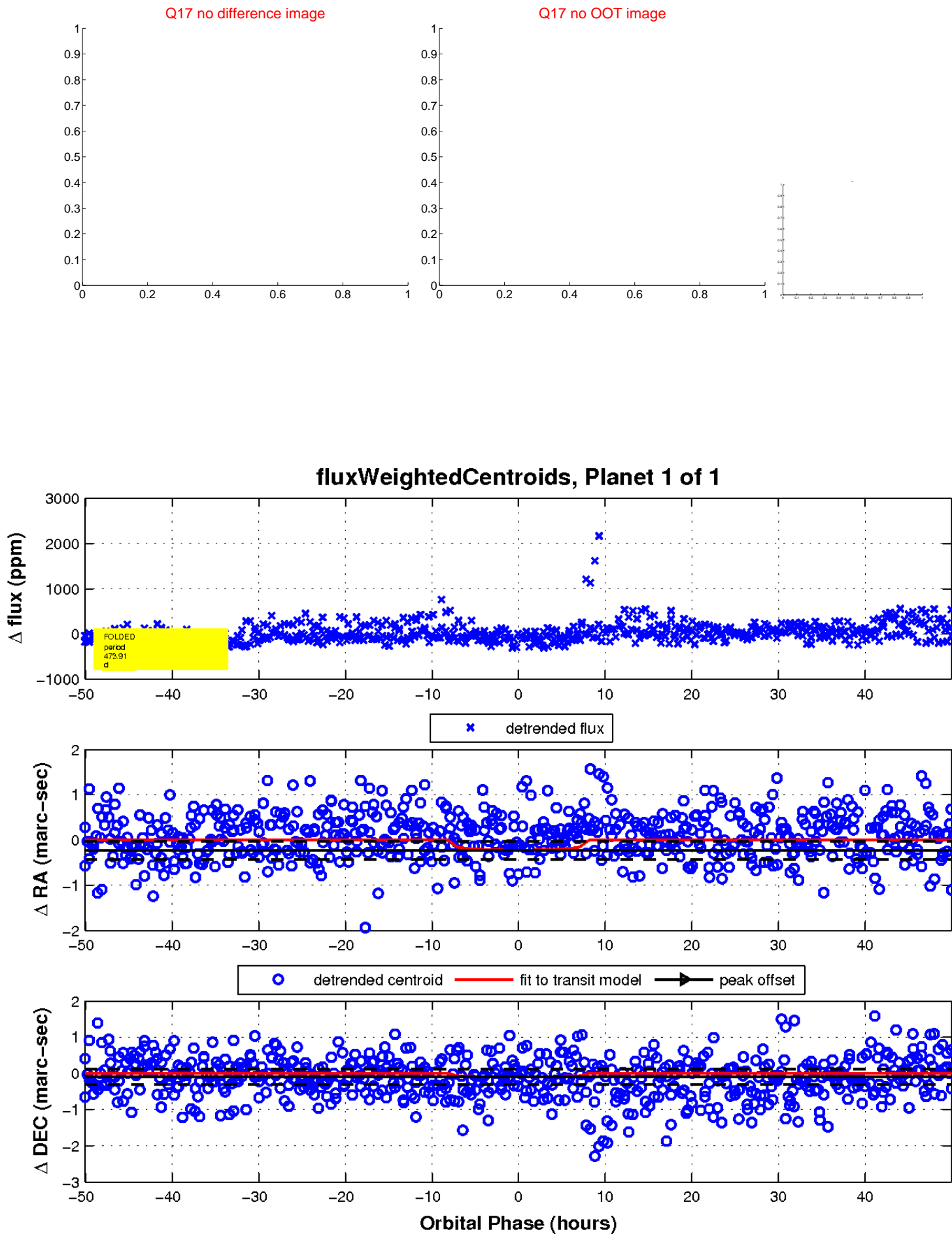
Q12 no OOT image



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.



UKIRT Image

Declination

