

KIC 007820967

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})
007820967-01	OBS	No	328.934800	306.540323	578.9	12.322	8.1	7.9	0.95	5900	2.74	1.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007820967-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—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.

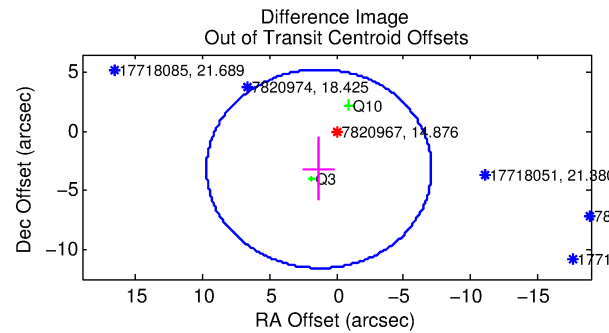
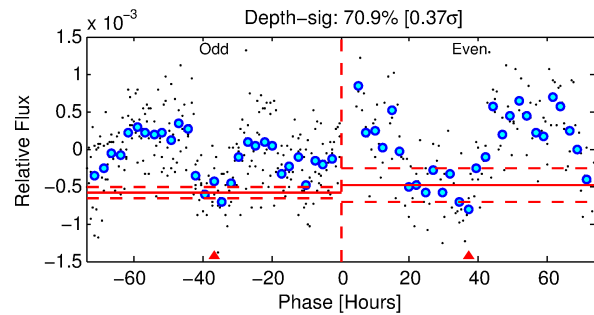
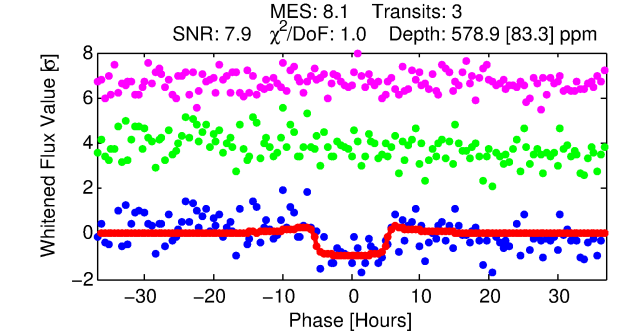
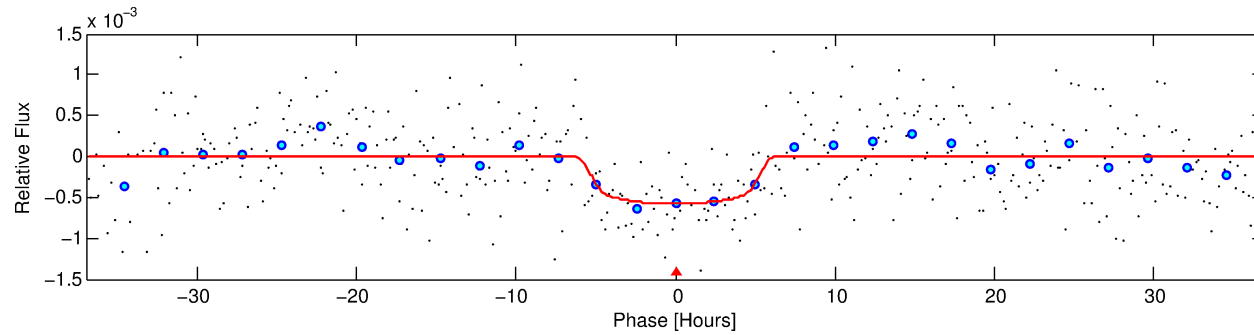
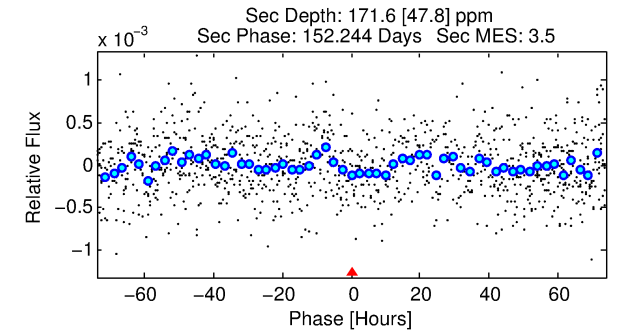
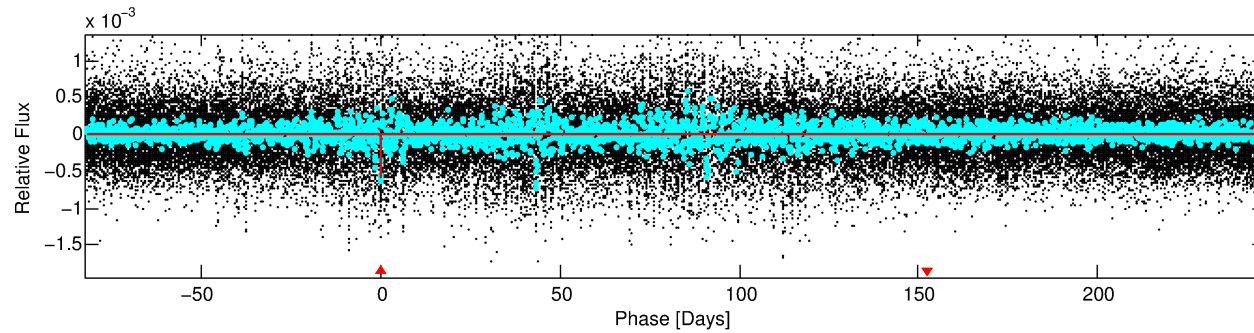
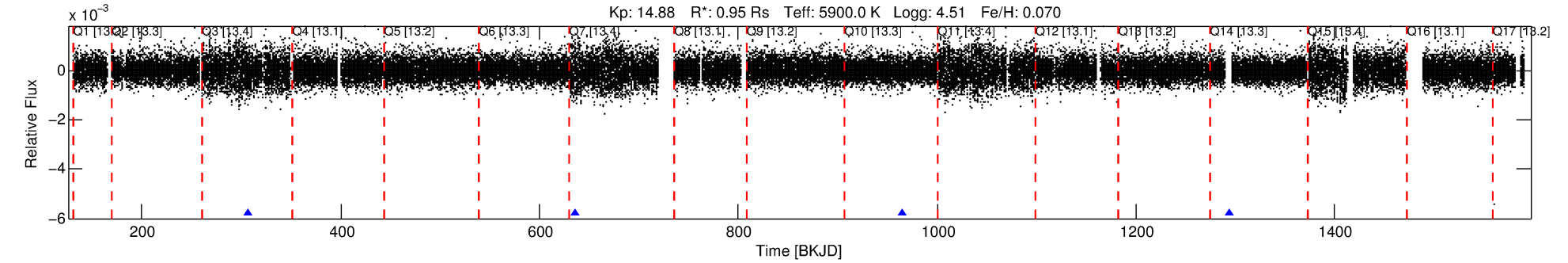
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007820967-01

No Significant Match Found

DV One-Page Summary

KIC: 7820967 Candidate: 1 of 1 Period: 328.935 d



DV Fit Results:

Period = 328.93480 [0.01760] d
Epoch = 306.5403 [0.0283] BKJD
Rp/R* = 0.0264 [0.0036]
a/R* = 96.64 [50.36]
b = 0.91 [0.10]
Seff = 1.08 [0.44]
Teff = 260 [27] K
Rp = 2.74 [0.94] Re
a/R* = 0.9526 [0.2517] AU
Ag = 11382.53 [6257.90] [1.82 σ]
Teffp = 4153 [431] K [9.02 σ]

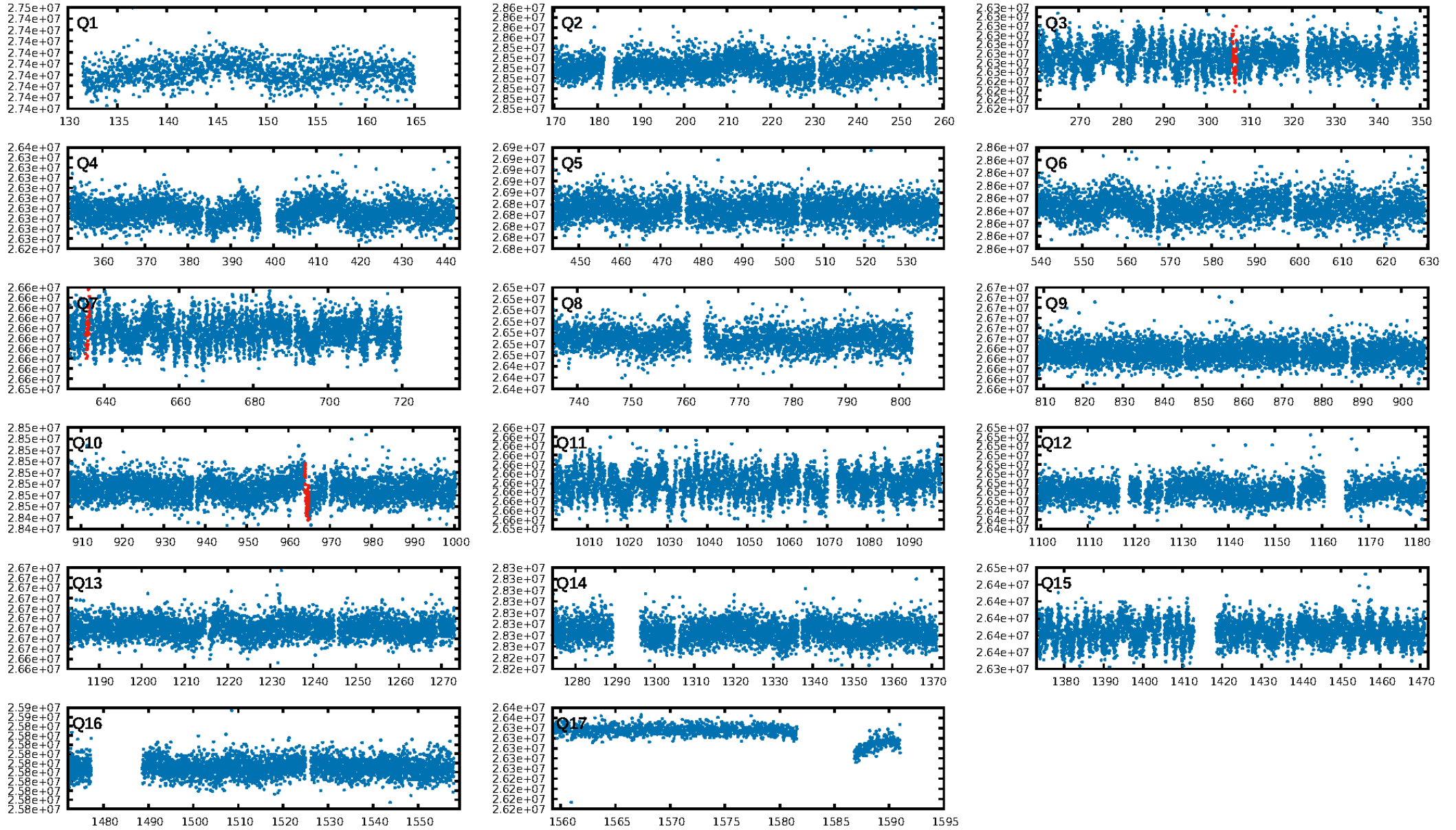
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 82.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 9.46e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.94
Centroid-sig: 37.0%
Centroid-so: 1.575 arcsec [0.87 σ]
OotOffset-rm: 3.432 arcsec [1.22 σ]
KicOffset-rm: 3.328 arcsec [1.39 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

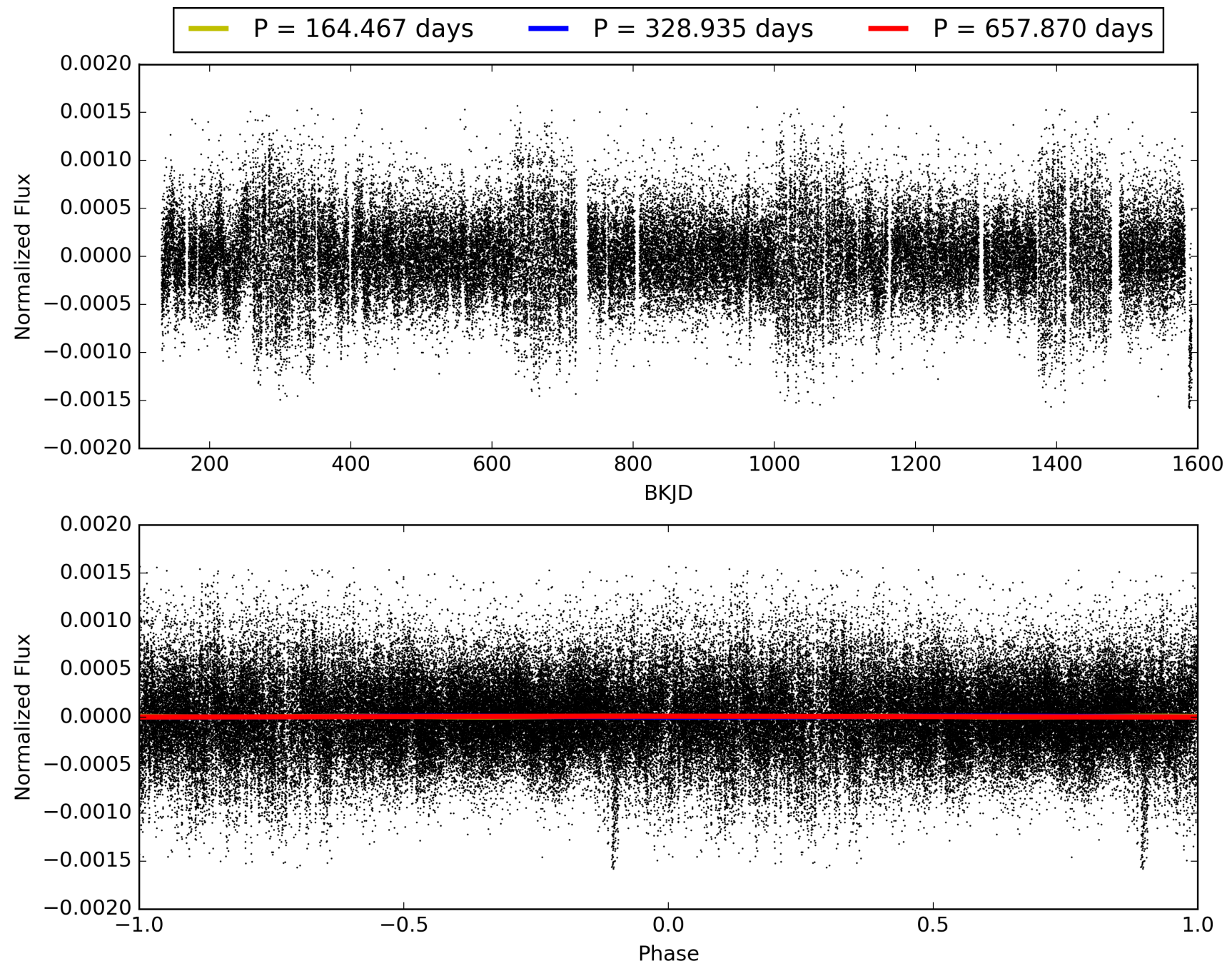
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:29:34 Z

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

TCE 007820967-01, PDC Light Curves

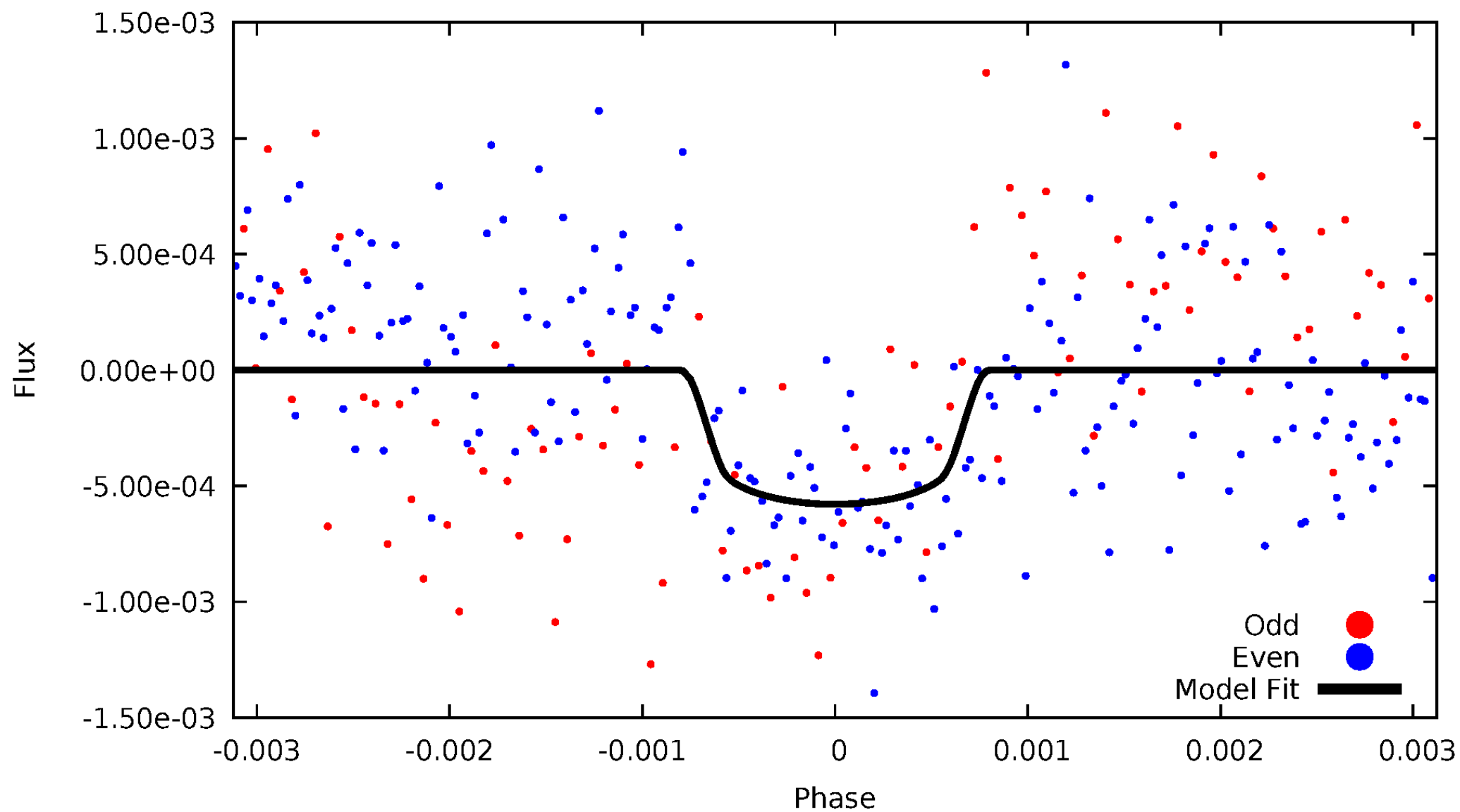


TCE 007820967-01



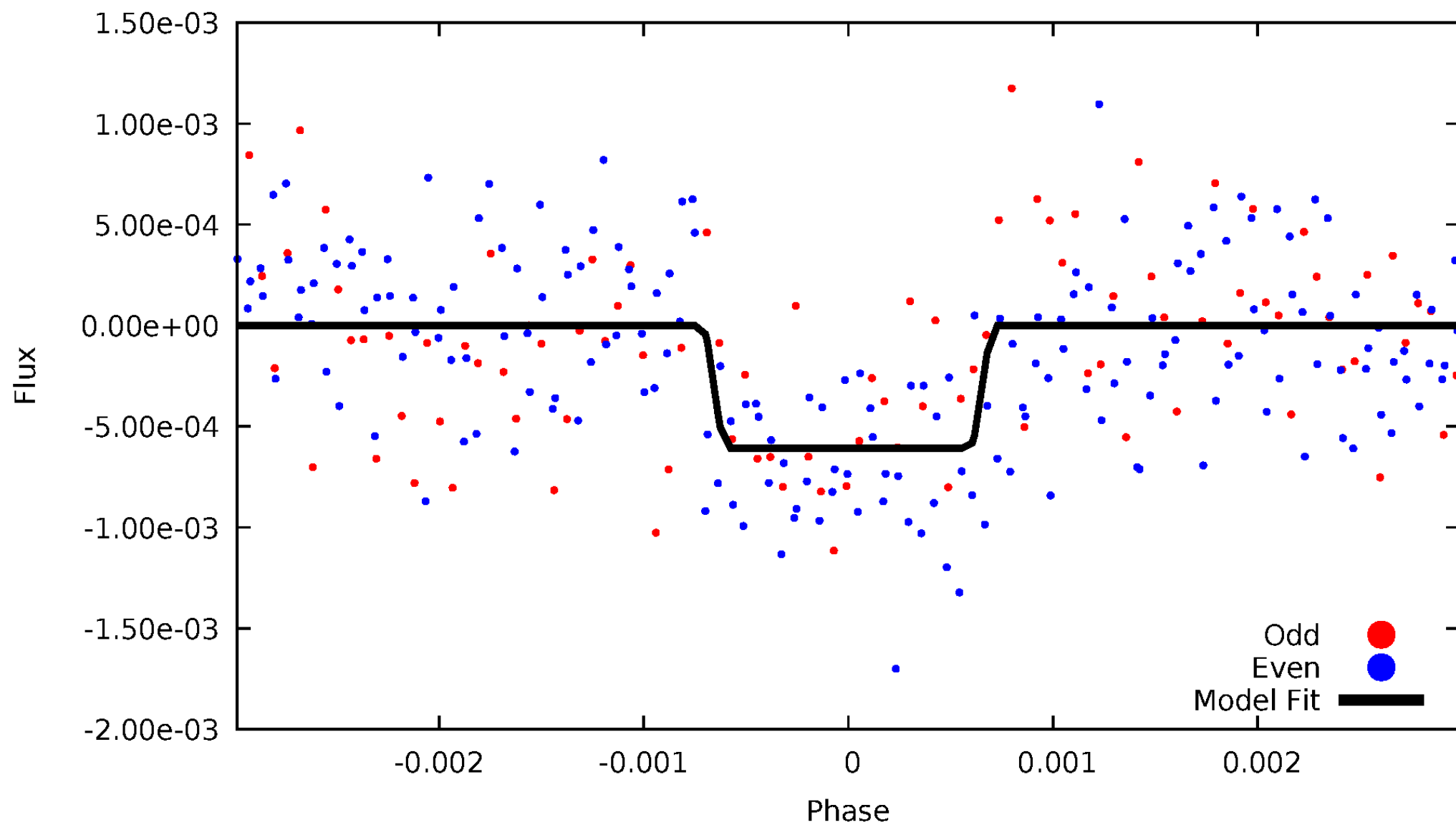
DV Odd/Even

TCE 007820967-01

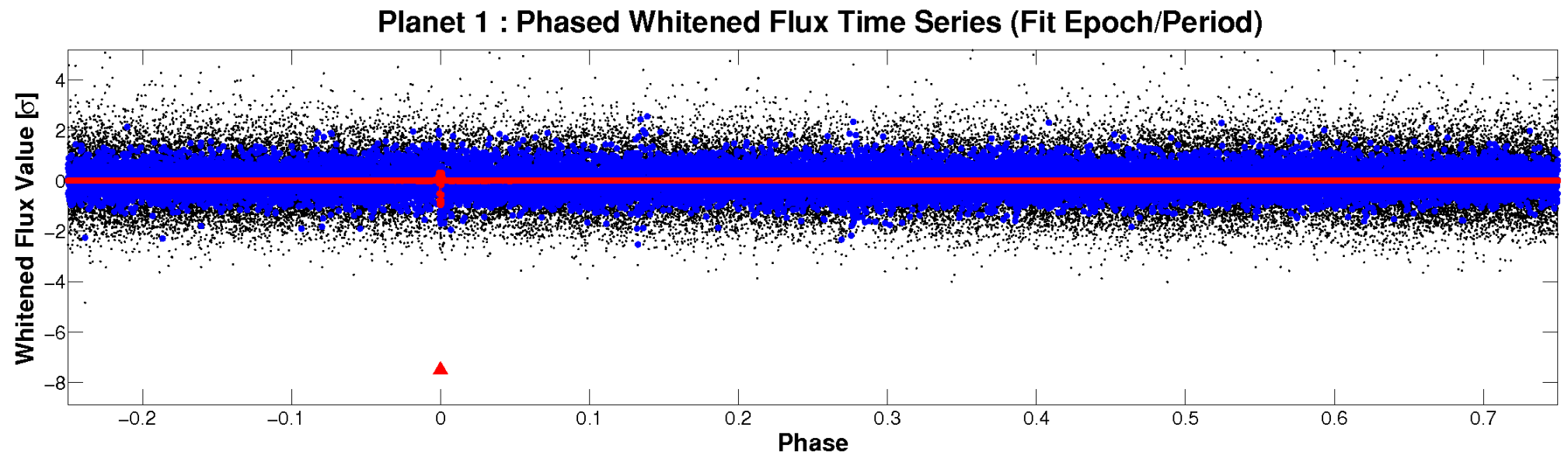
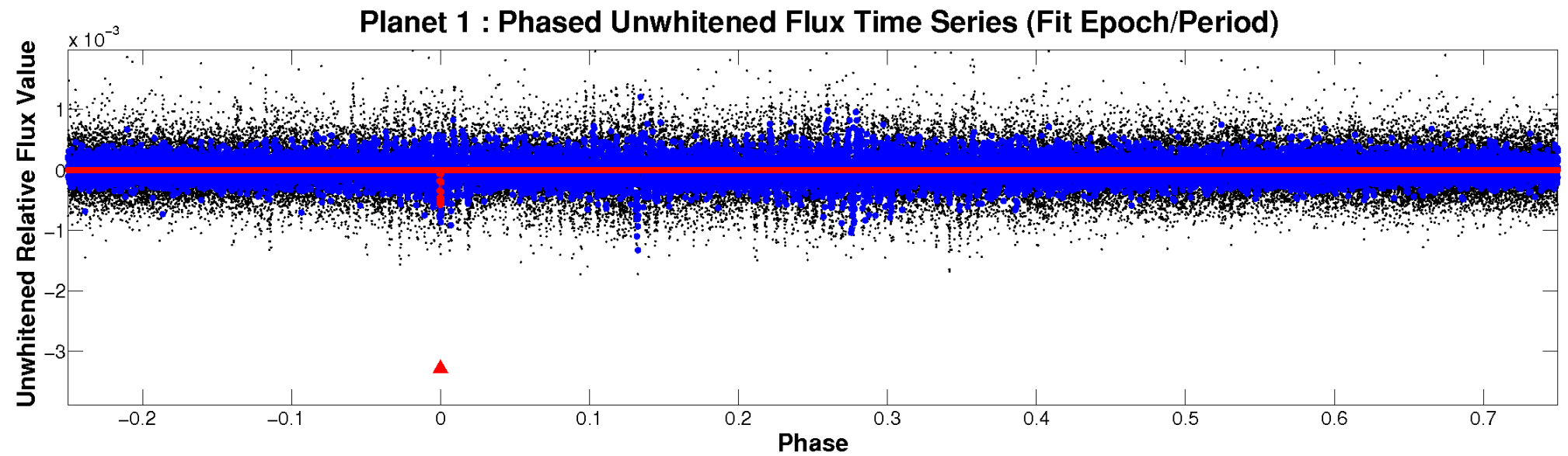


ALT Odd/Even

TCE 007820967-01

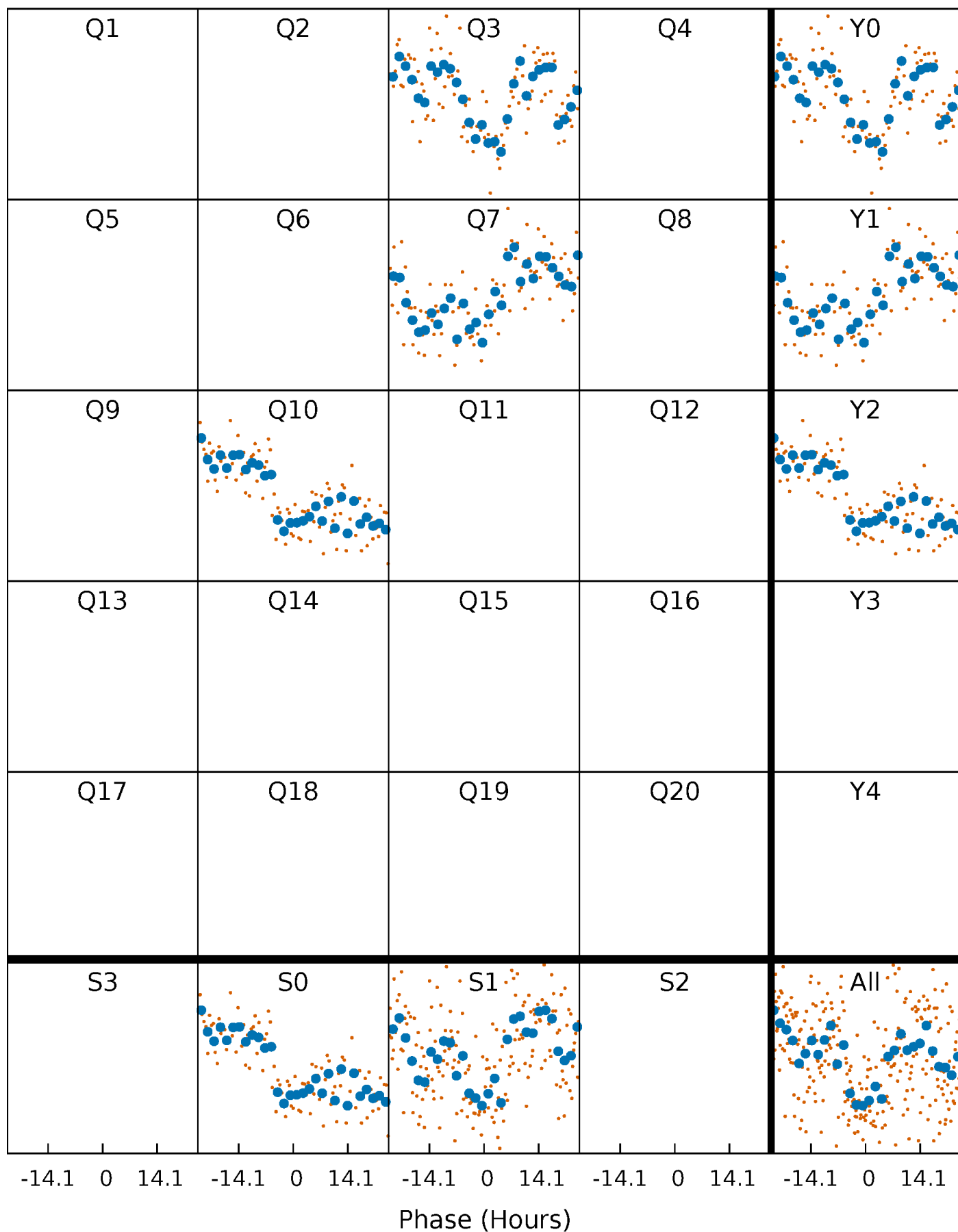


Non-Whitened Vs. Whitened Light Curve



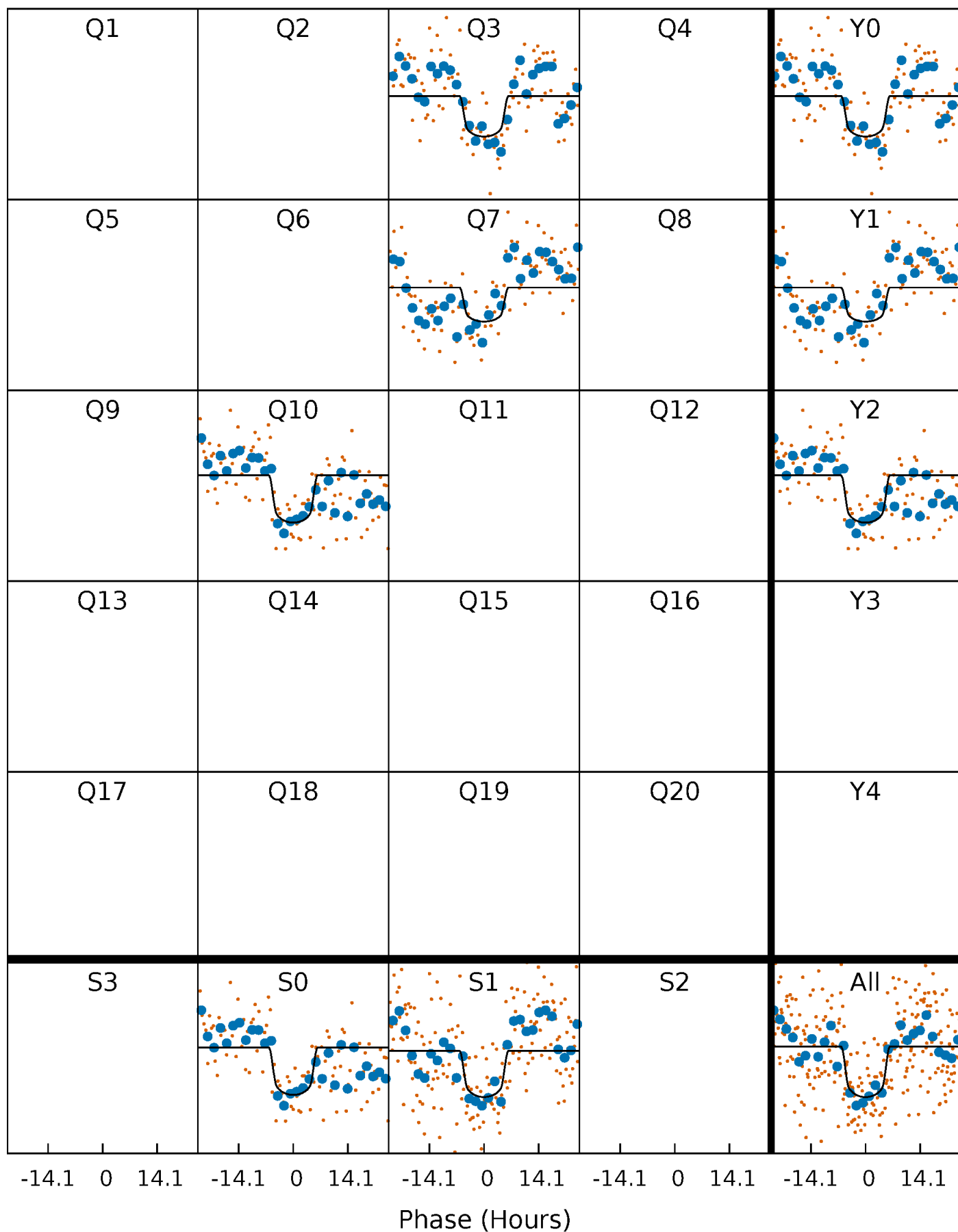
PDC Quarter-Phased Transit Curves

TCE 007820967-01 P=328.934800 Days $T_0=306.540323$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007820967-01 P=328.934800 Days $T_0=306.540323$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

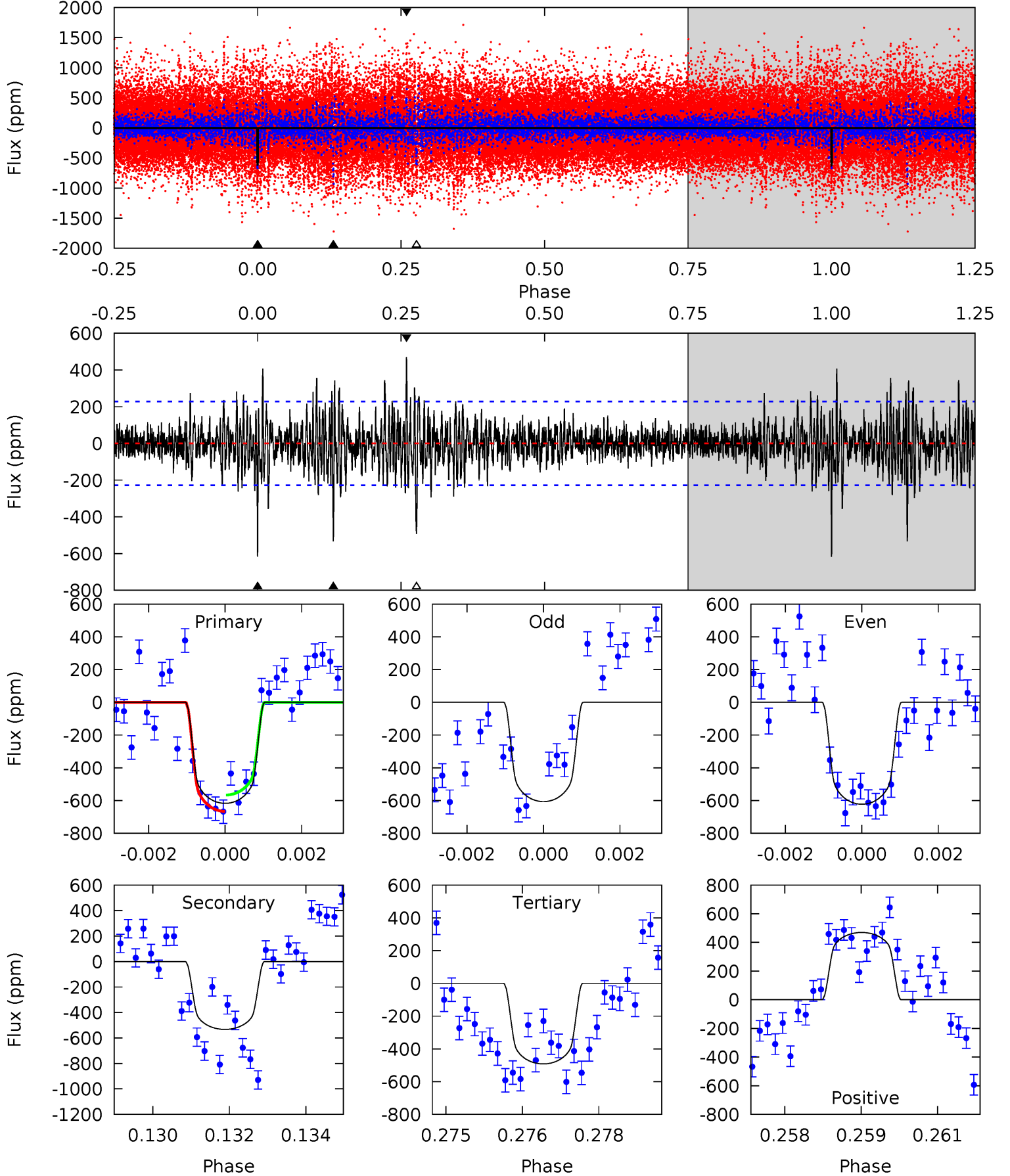
TCE 007820967-01 P=328.939449 Days $T_0=306.530835$ (BKJD)



DV Model-Shift Uniqueness Test

007820967-01, P = 328.934800 Days, E = 306.540323 Days

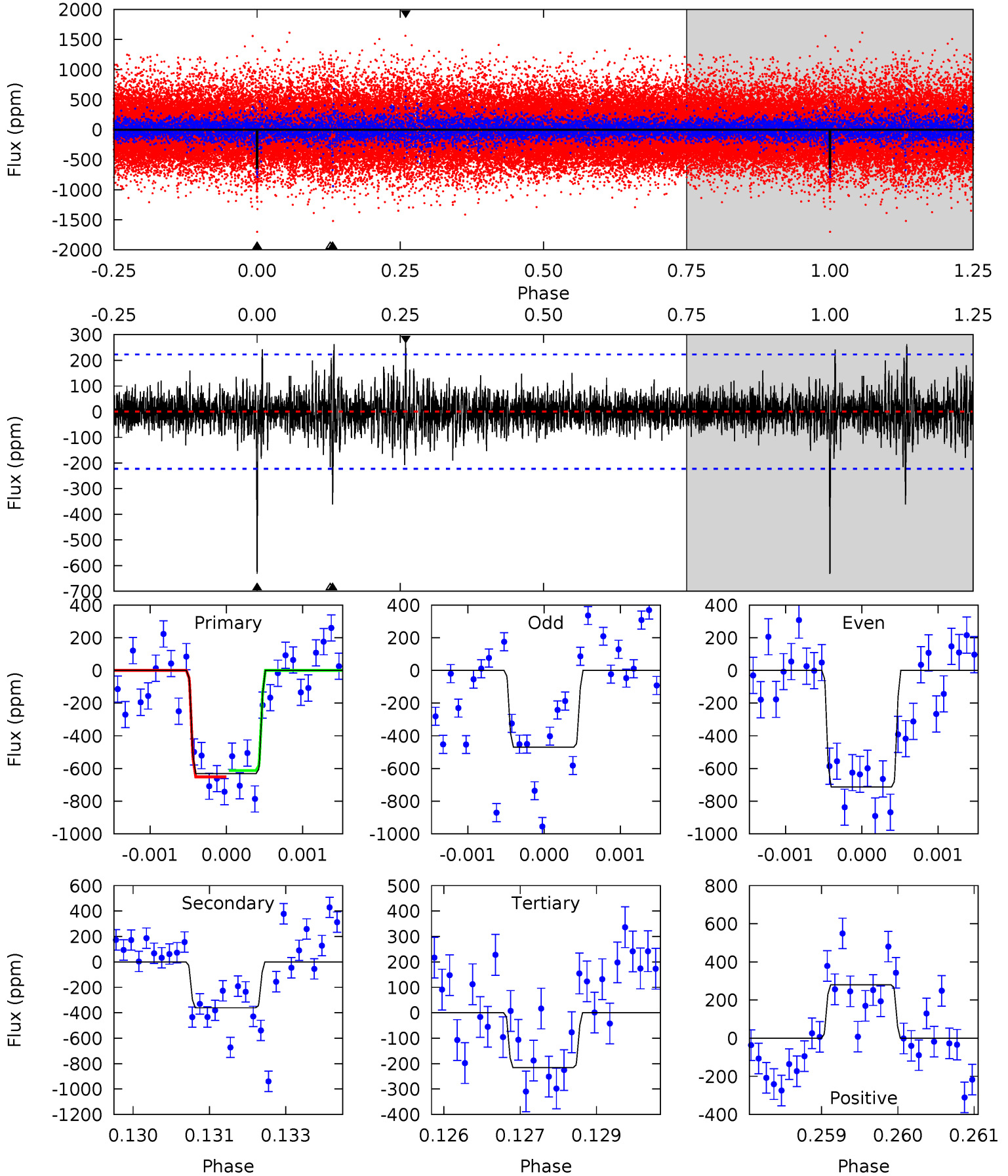
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	12.6	11.6	11.1	5.37	3.16	2.07	2.95	3.48	0.97	1.49	0.18	1.02	0.43	1.17



Alt Model-Shift Uniqueness Test

007820967-01, P = 328.939449 Days, E = 306.530835 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	8.73	5.21	6.76	5.39	3.19	1.20	10.1	8.51	3.52	1.96	2.80	1.22	0.31	0.47



Stellar Parameters For KIC 007820967

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5900^{+164}_{-205}	$4.509^{+0.038}_{-0.212}$	$0.070^{+0.250}_{-0.300}$	$0.951^{+0.297}_{-0.099}$	$1.065^{+0.115}_{-0.153}$	$1.745^{+0.364}_{-0.930}$
	+3%/-3%	+1%/-5%	+357%/-429%	+31%/-10%	+11%/-14%	+21%/-53%
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 007820967-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-533 ± 42	$2.87^{+0.59}_{-0.48}$	372^{+28}_{-17}	5522^{+454}_{-377}	31070^{+13145}_{-9162}
Alt.	-361 ± 41	$2.70^{+0.56}_{-0.46}$	373^{+26}_{-17}	5211^{+484}_{-342}	23600^{+11988}_{-6841}

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 $A_{\text{obs}} \gg 1.0$

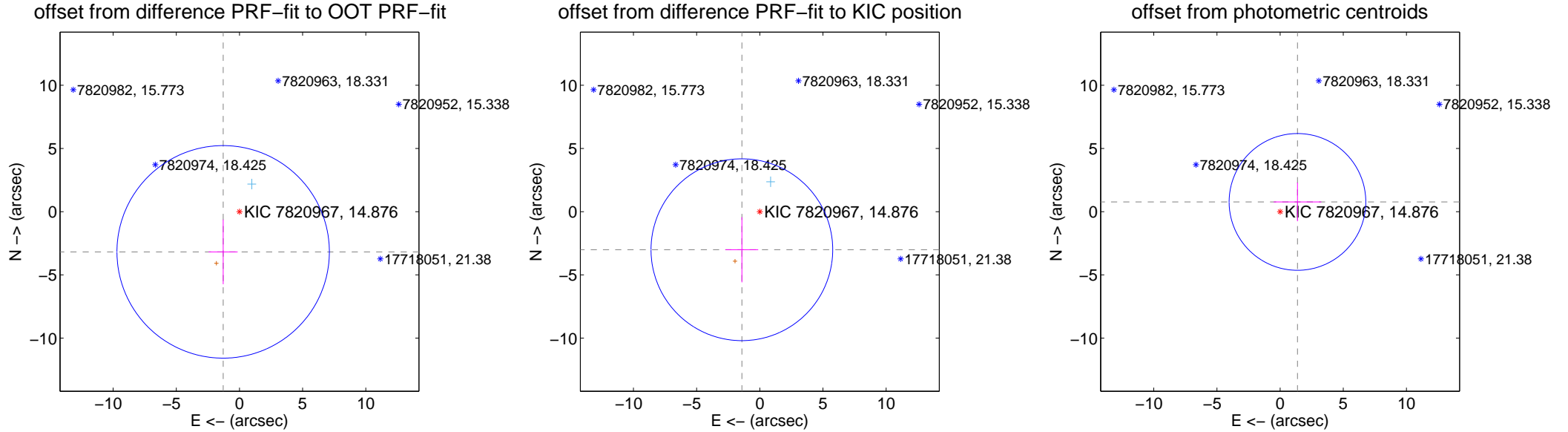
DV Centroid Data

Supplemental centroid analysis for 007820967-01. Kepler magnitude: 14.88. Transit SNR 7.95

There are 1 quarters with good PRF difference image offsets

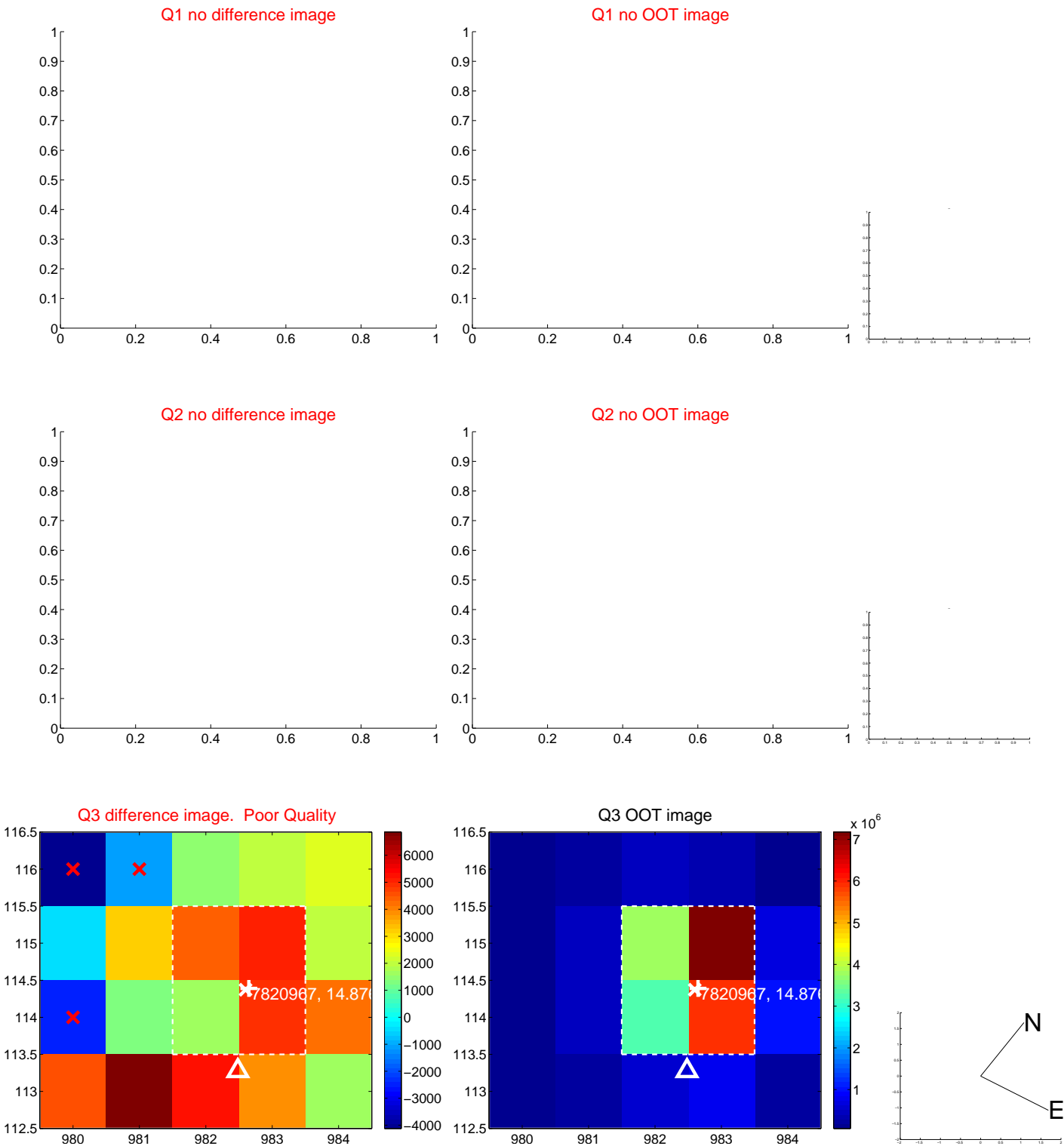
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.432 ± 2.802	1.22	1.291 ± 1.147	-3.180 ± 2.560
PRF-fit source offset from KIC position	3.328 ± 2.397	1.39	1.418 ± 1.297	-3.011 ± 2.578
photometric centroid source offset	1.58 ± 1.80	0.87	-1.37 ± 1.88	0.77 ± 1.53

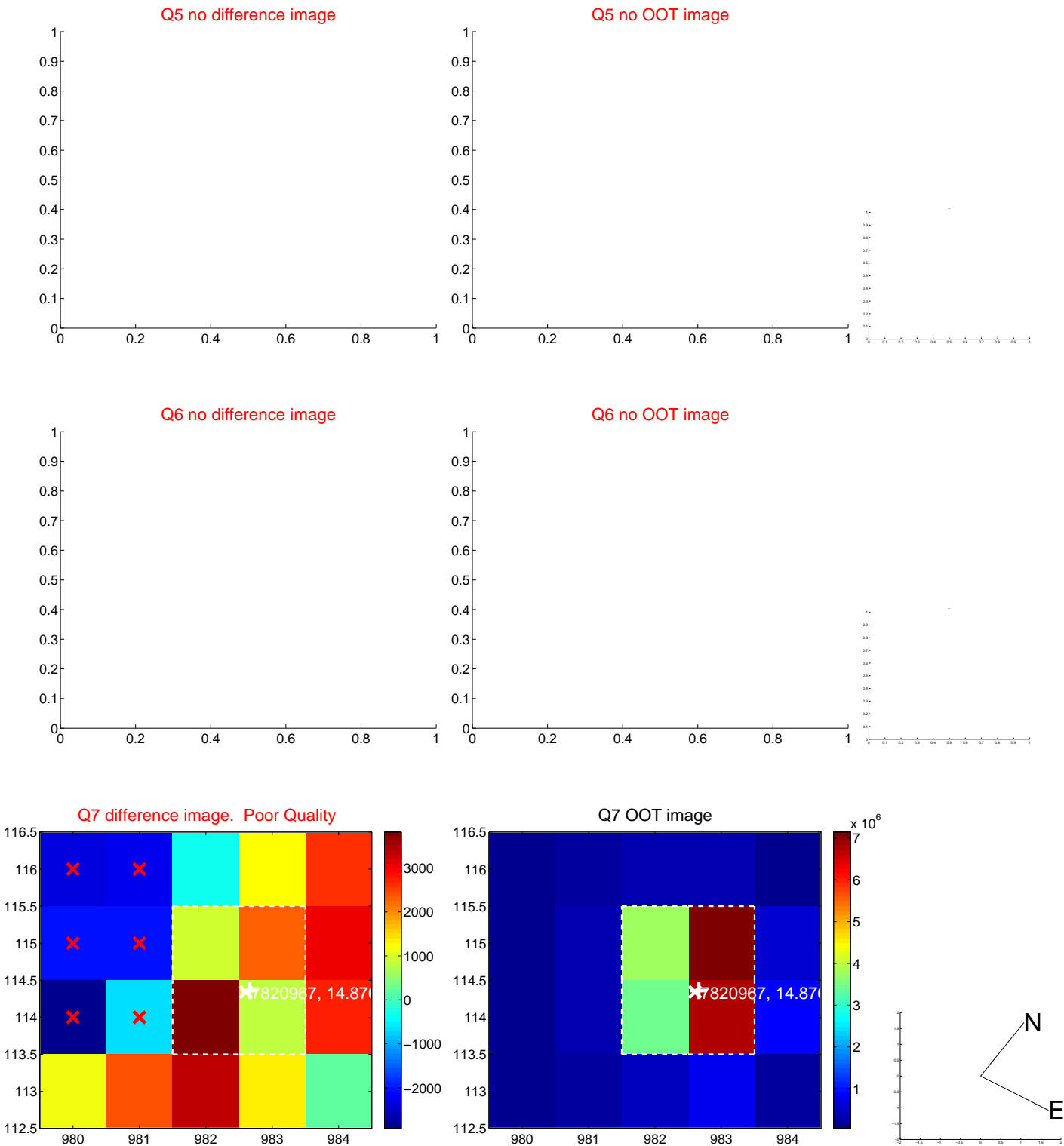


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

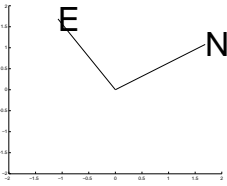
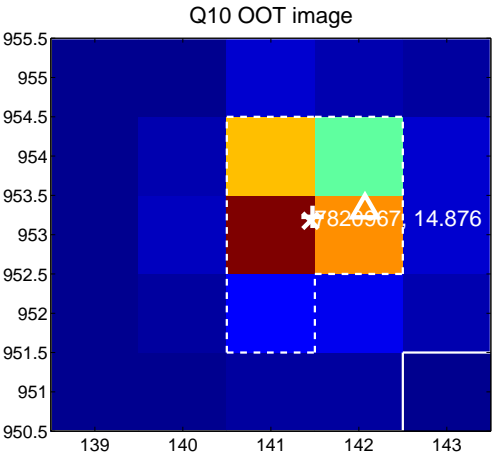
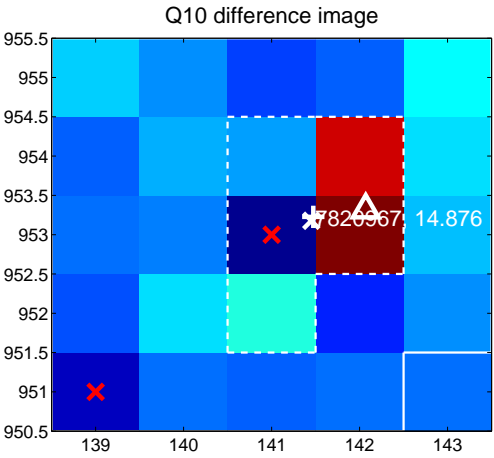


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

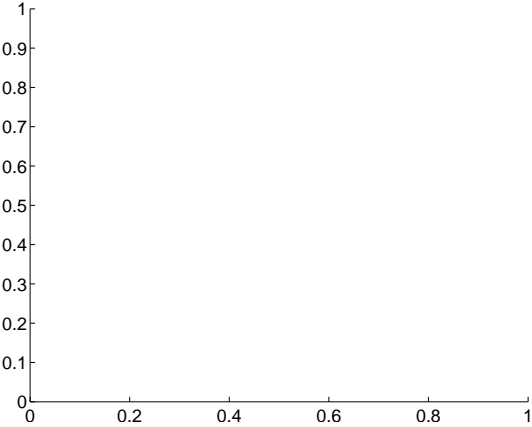
Q9 no difference image



Q9 no OOT image



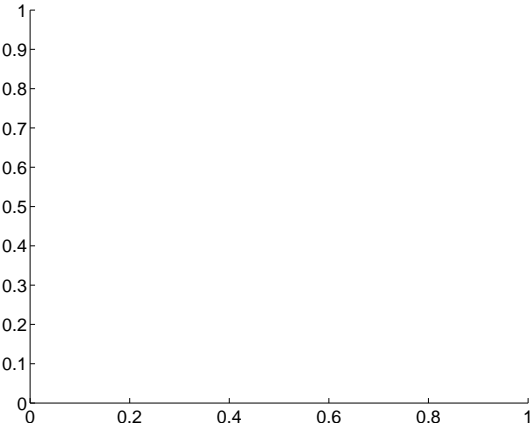
Q11 no difference image



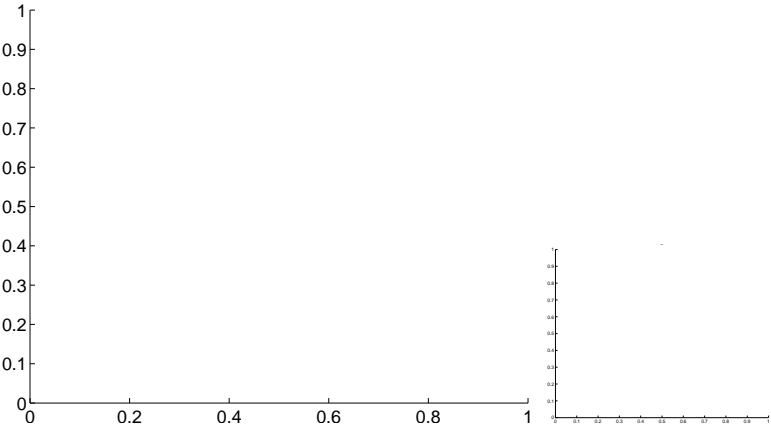
Q11 no OOT image



Q12 no difference image



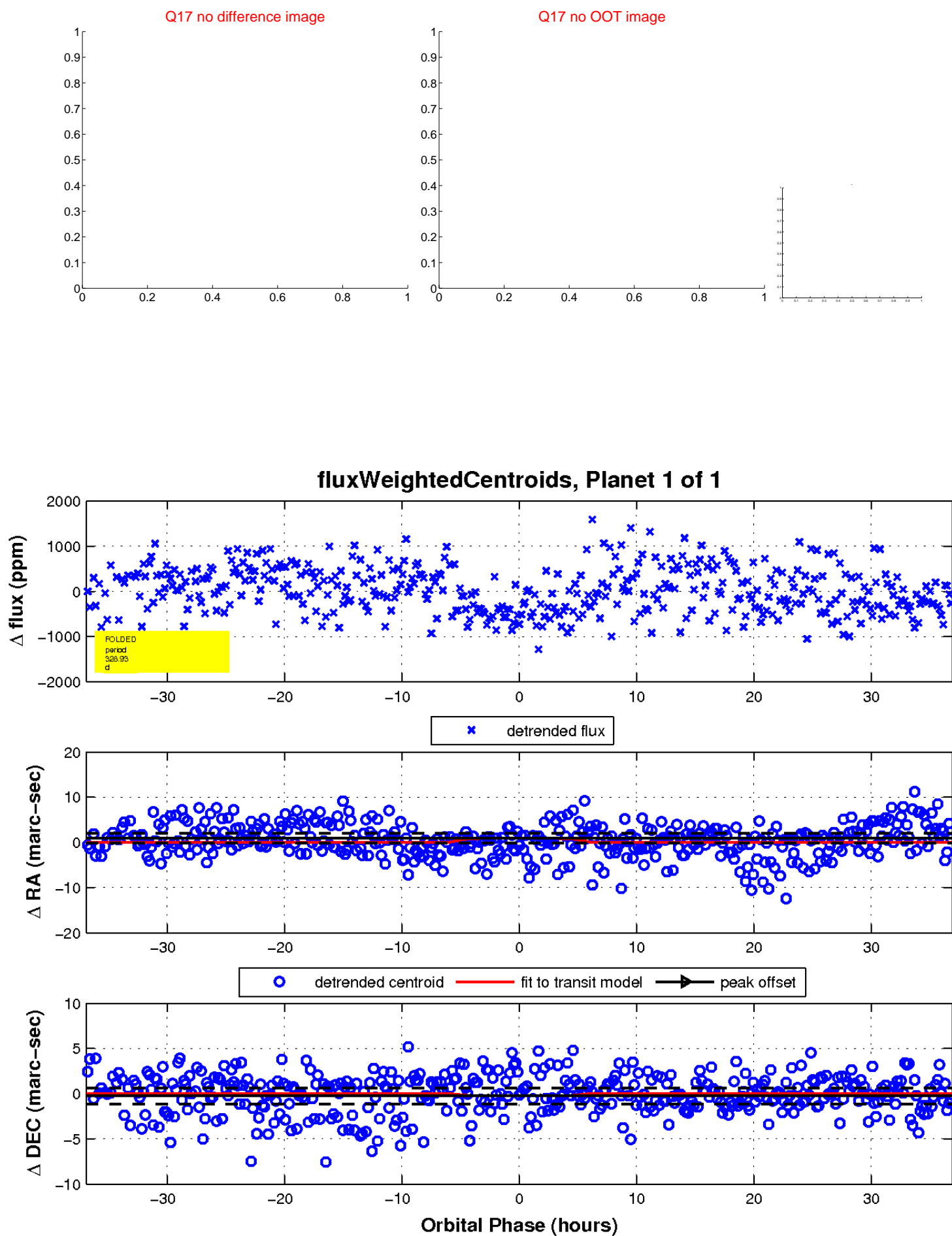
Q12 no OOT image



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

