

KIC 008748103

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})
008748103-01	OBS	No	375.174271	178.833197	282.5	43.286	7.4	12.2	1.03	5929	2.29	1.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008748103-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

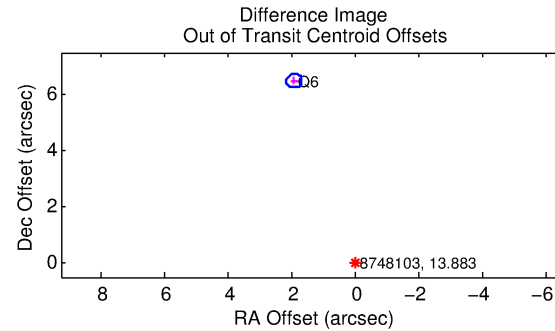
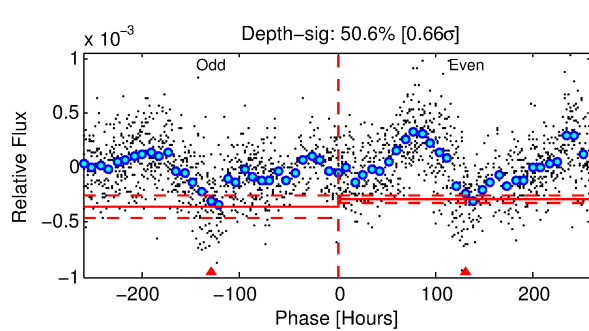
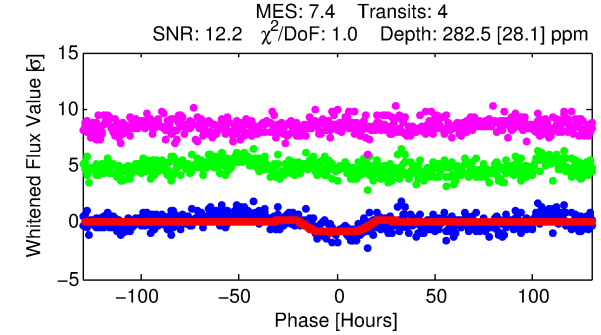
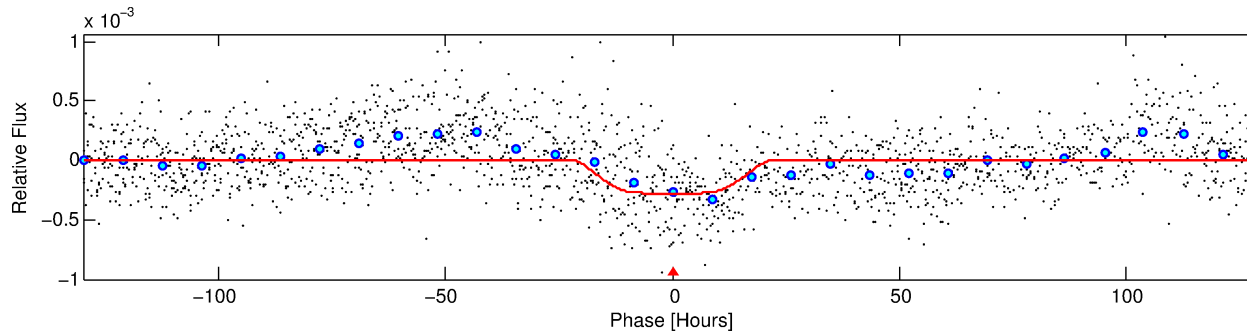
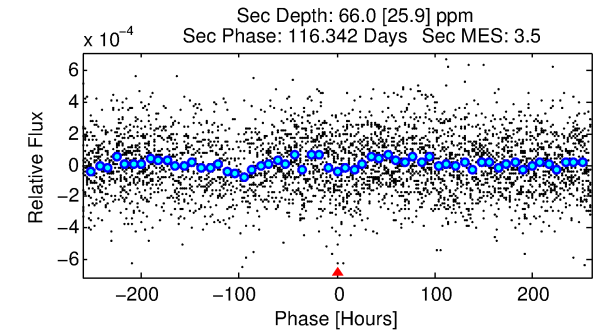
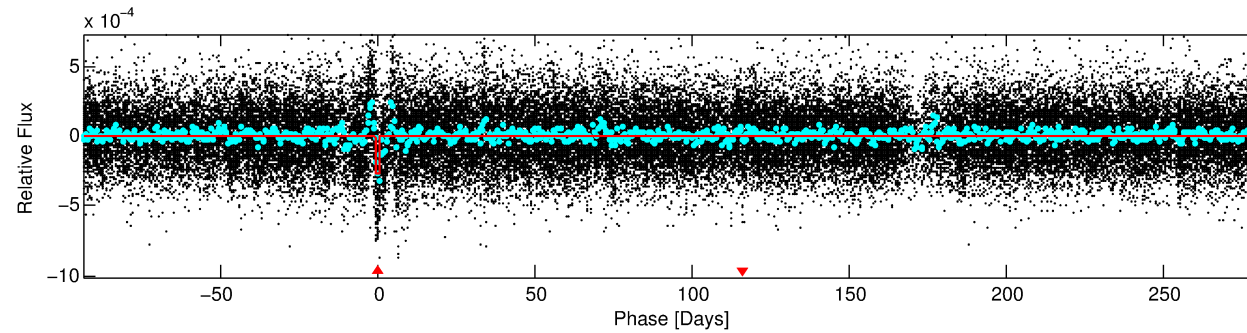
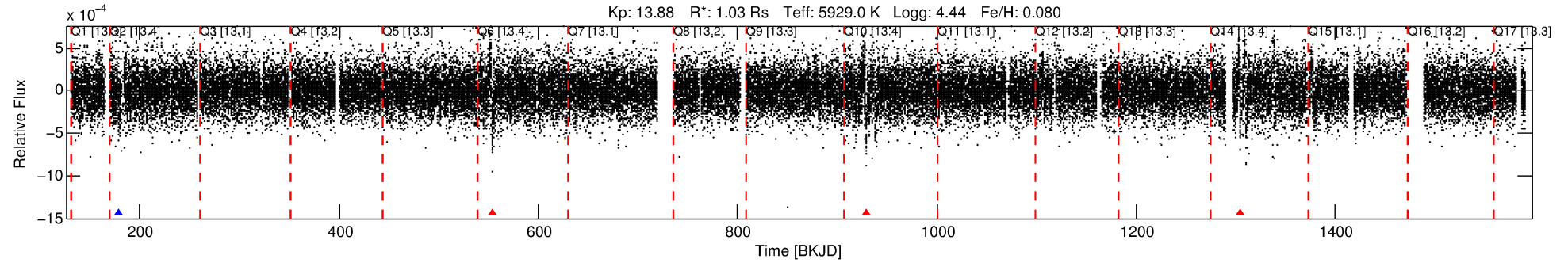
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008748103-01

No Significant Match Found

DV One-Page Summary

KIC: 8748103 Candidate: 1 of 1 Period: 375.174 d



DV Fit Results:

Period = 375.17427 [0.03752] d
Epoch = 178.8332 [0.0624] BKJD
Rp/R* = 0.0203 [0.0014]
a/R* = 21.13 [3.64]
b = 0.97 [0.01]
Seff = 1.09 [0.44]
Teq = 261 [27] K
Rp = 2.29 [0.74] Re
a = 1.0376 [0.2759] AU
Ag = 7463.09 [4227.32] [1.77σ]
Teffp = 3747 [407] K [8.54σ]

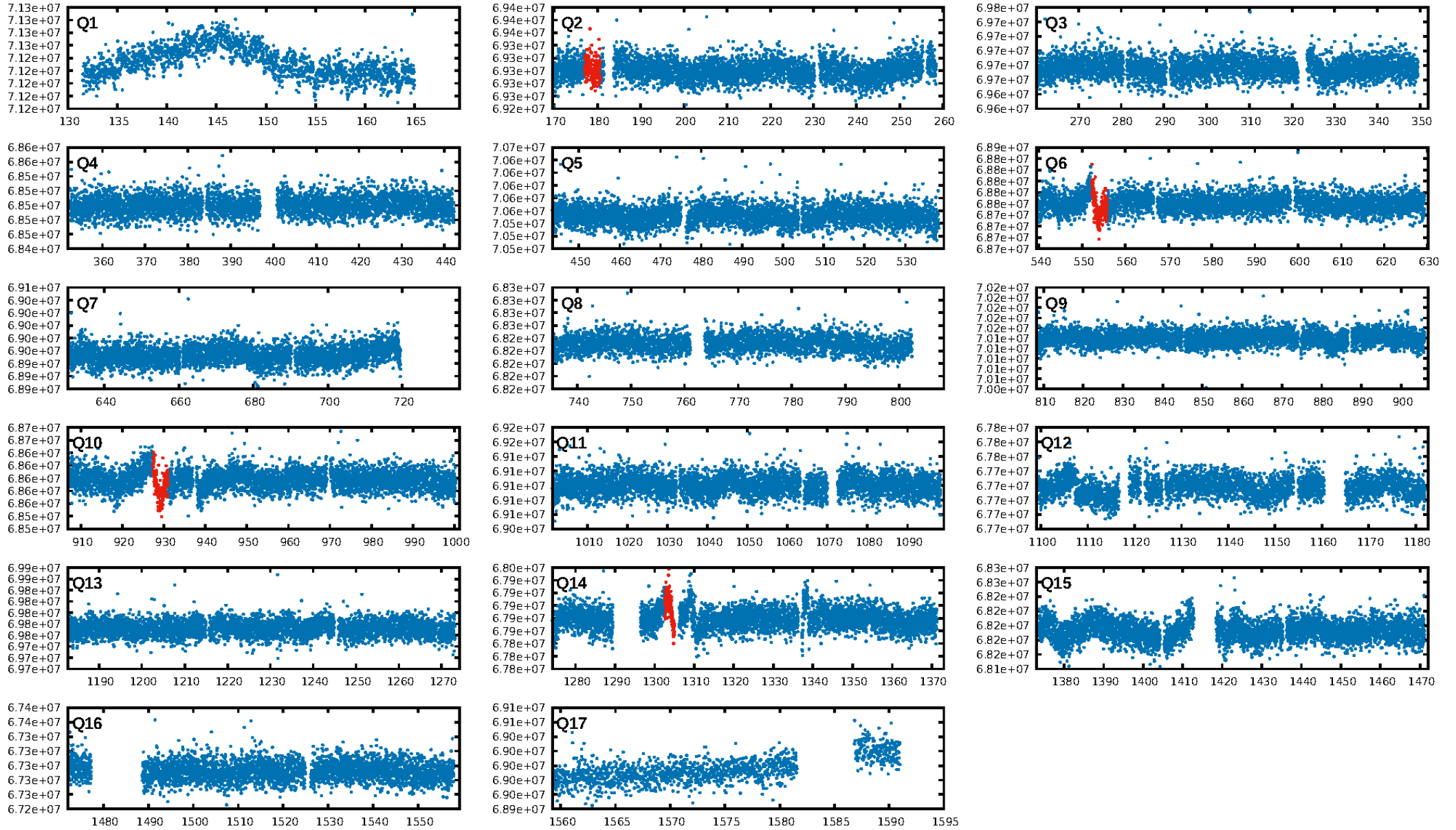
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.18e-08
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: -1.316
Centroid-sig: 2.7%
Centroid-so: 1.065 arcsec [0.90σ]
OotOffset-rm: 6.773 arcsec [82.08σ]
KicOffset-rm: 6.249 arcsec [75.75σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

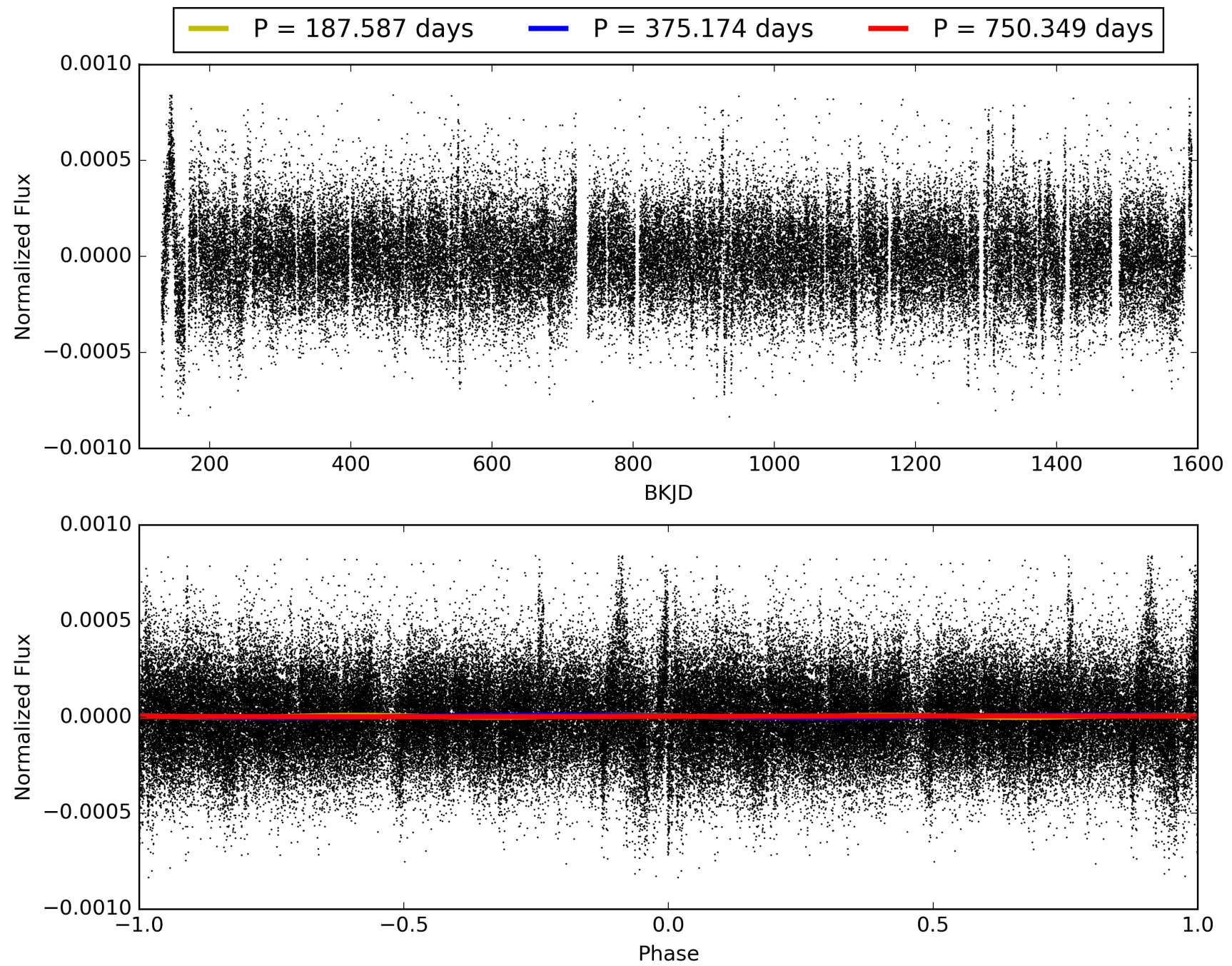
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:53:12 Z

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

TCE 008748103-01, PDC Light Curves

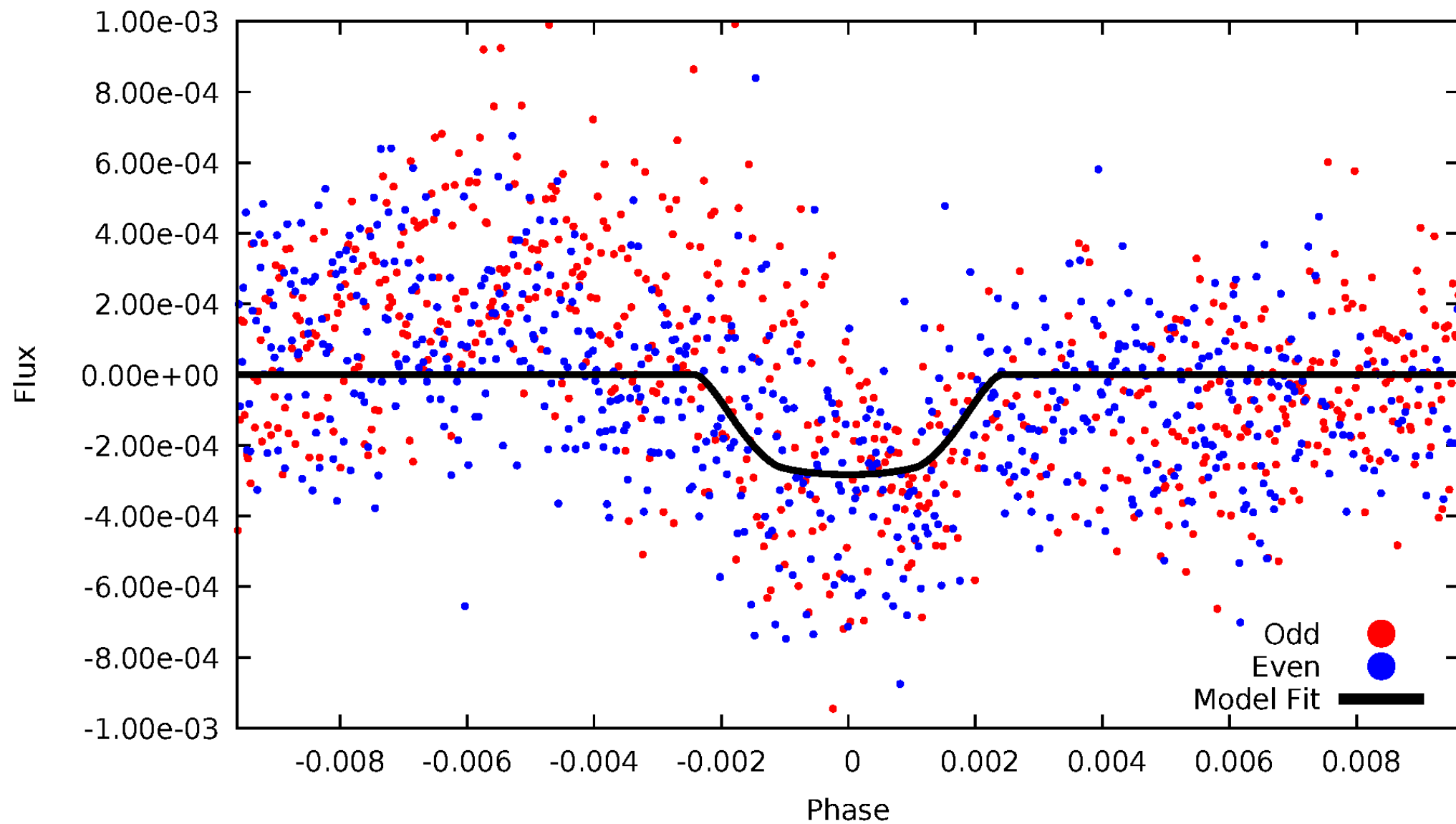


TCE 008748103-01



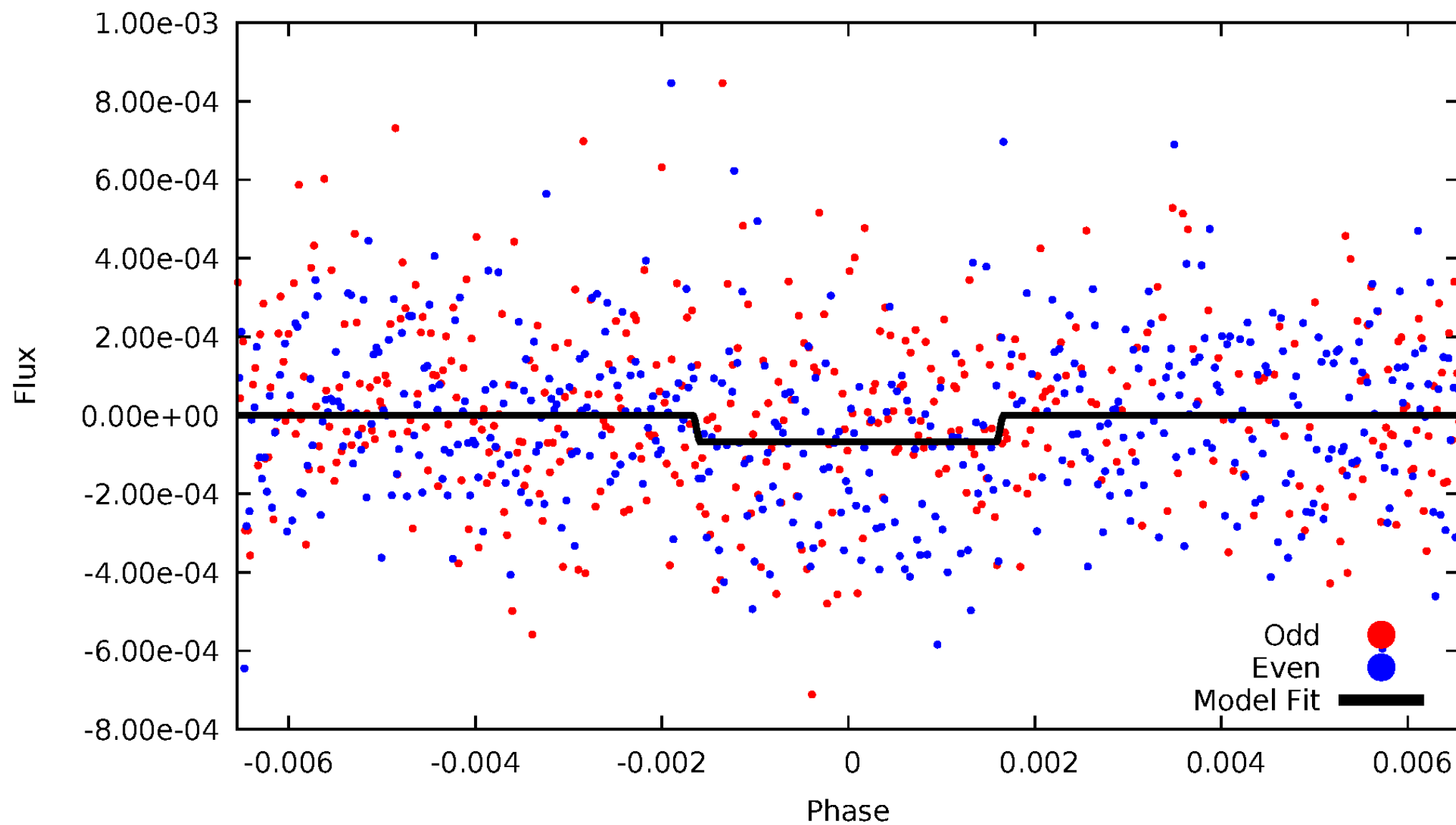
DV Odd/Even

TCE 008748103-01



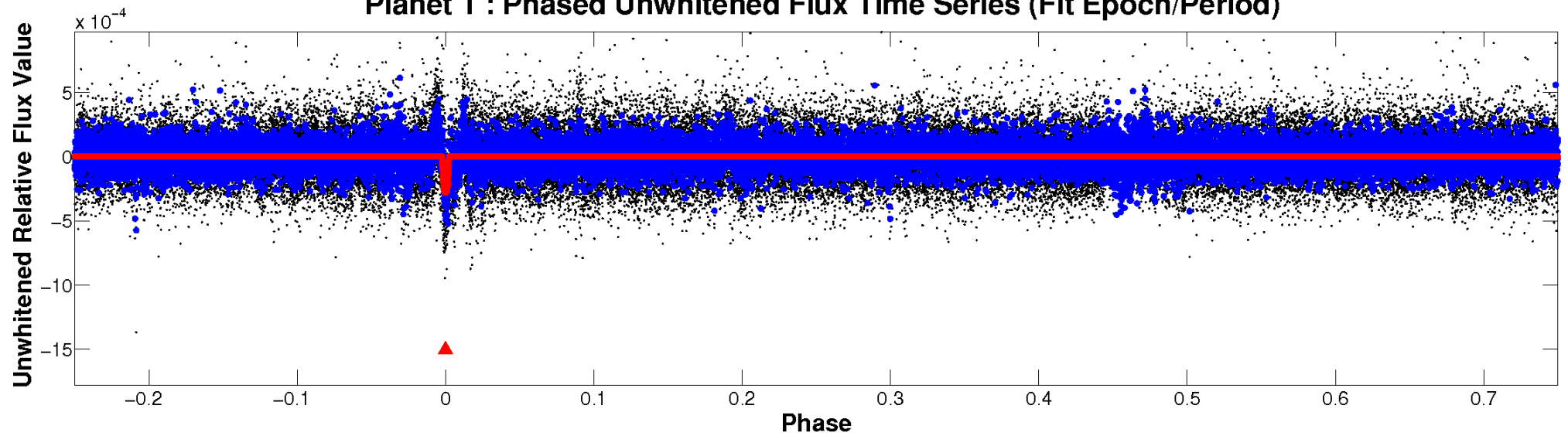
ALT Odd/Even

TCE 008748103-01

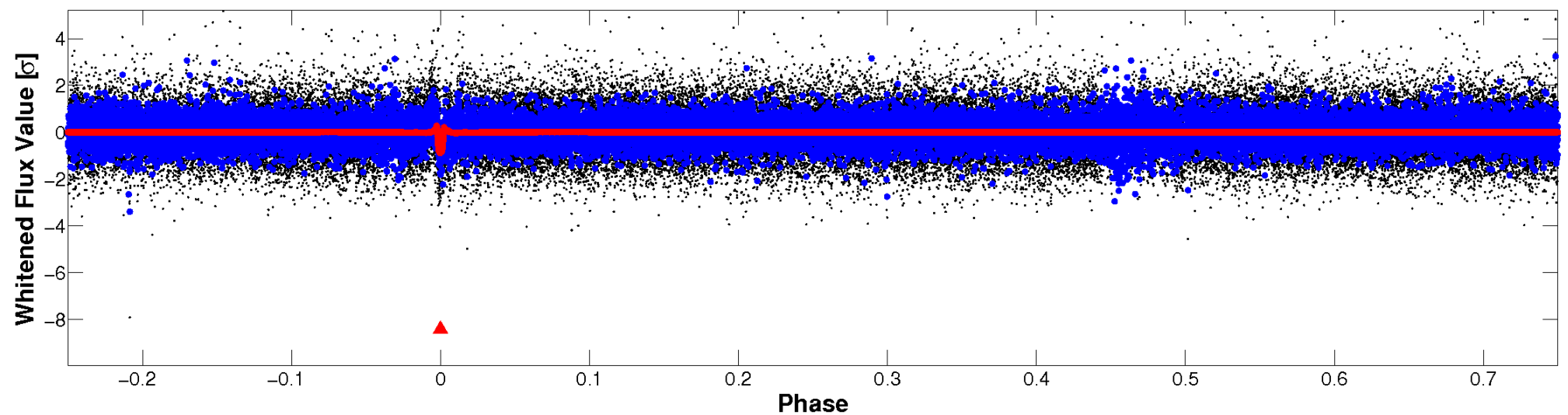


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

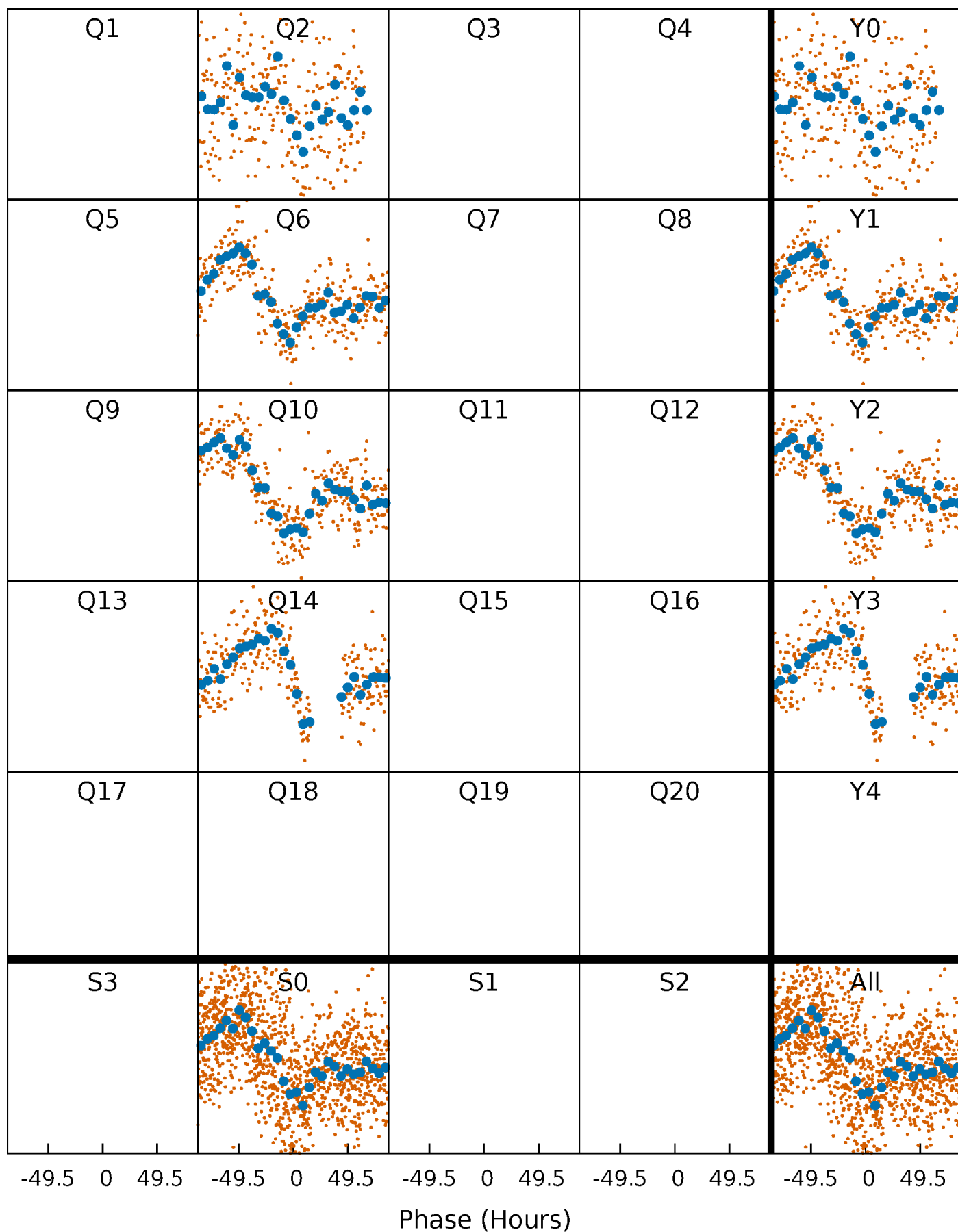


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008748103-01 P=375.174271 Days $T_0=178.833197$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008748103-01 P=375.174271 Days $T_0=178.833197$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

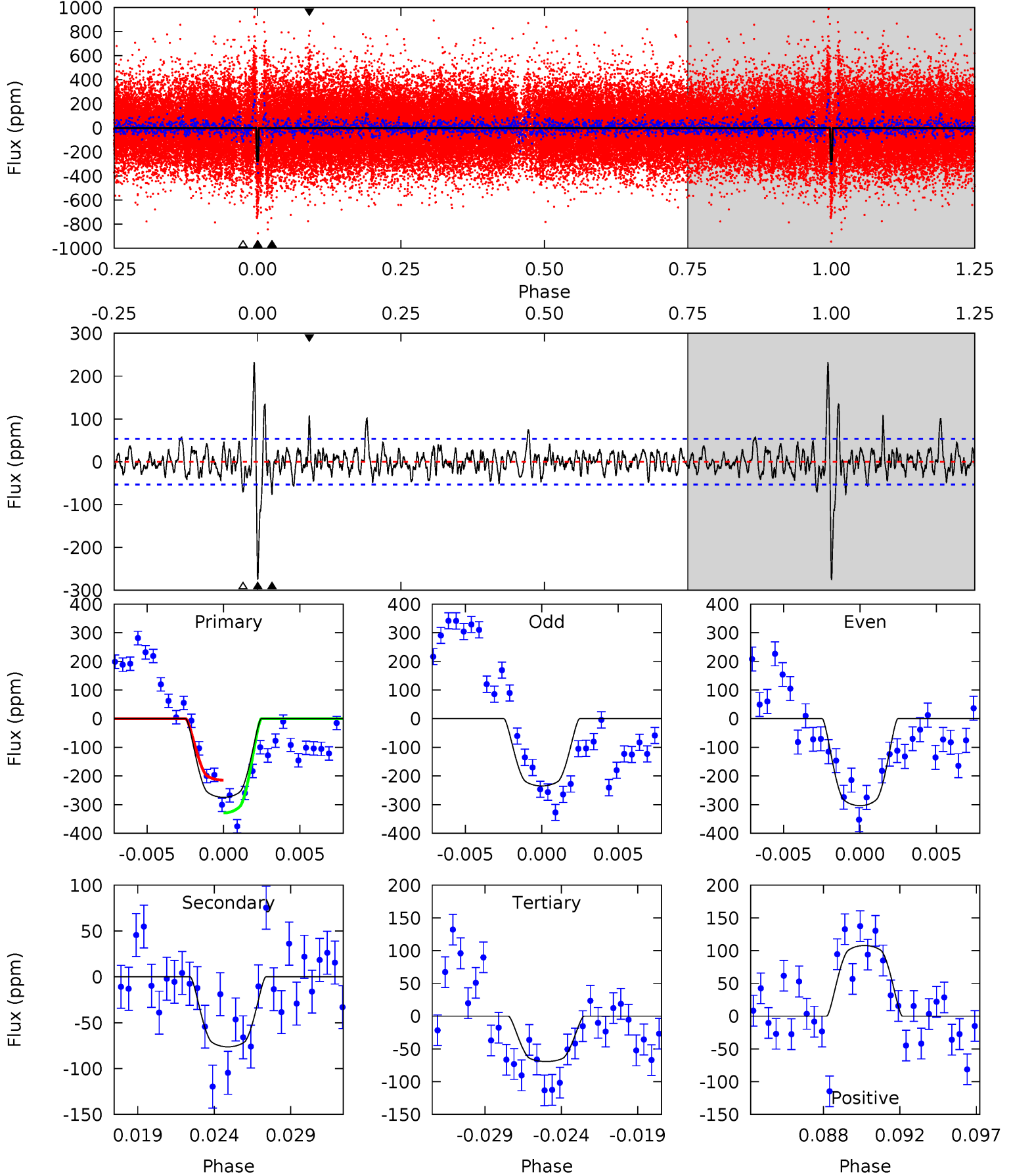
TCE 008748103-01 P=375.064805 Days $T_0=178.998755$ (BKJD)



DV Model-Shift Uniqueness Test

008748103-01, P = 375.174271 Days, E = 178.833197 Days

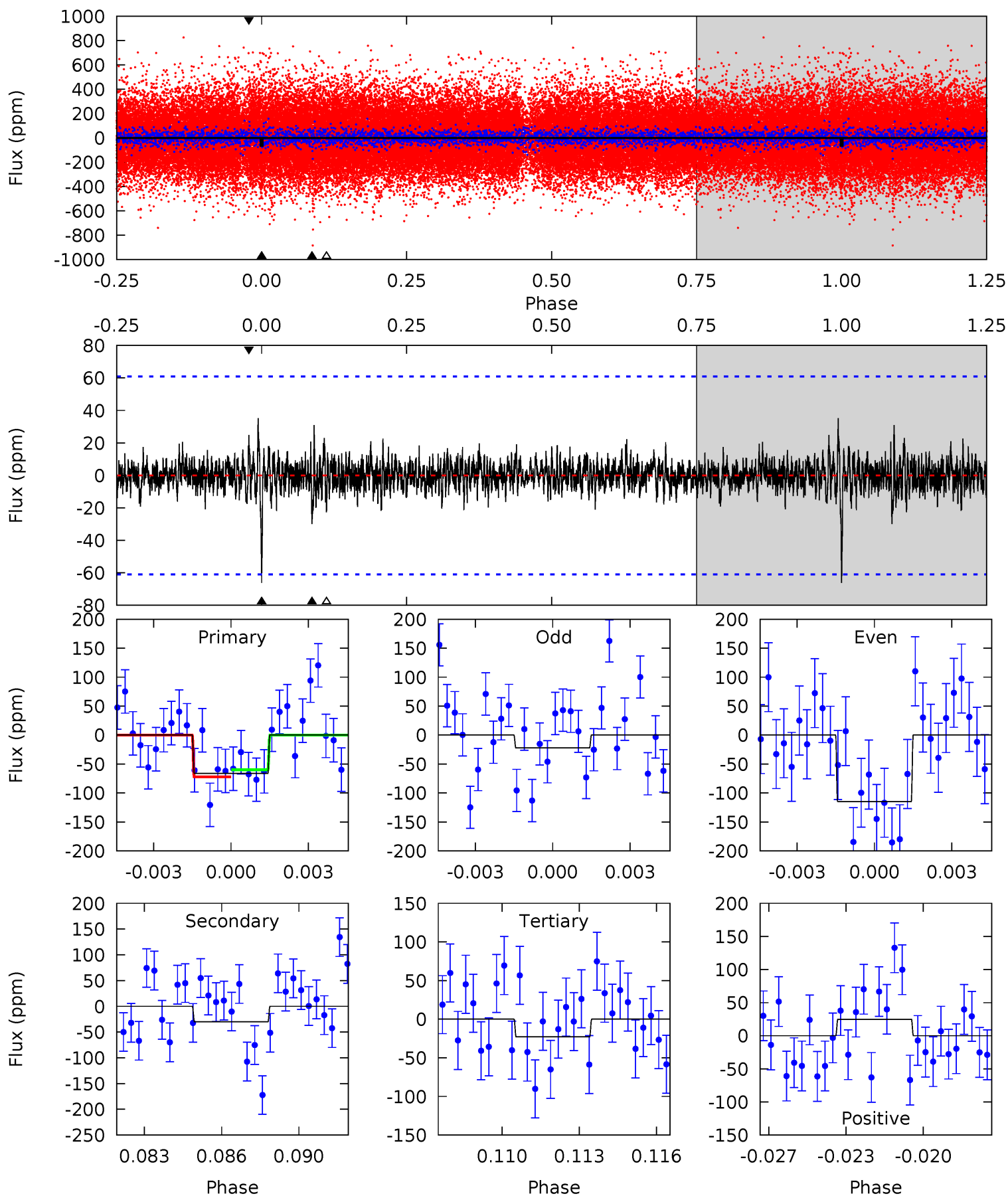
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.6	7.39	6.71	10.4	5.16	2.82	2.56	19.9	16.1	0.68	-3.04	3.34	1.00	0.46	5.52



Alt Model-Shift Uniqueness Test

008748103-01, P = 375.064805 Days, E = 178.998755 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.67	2.57	1.95	2.14	5.23	2.94	0.57	3.72	3.54	0.62	0.44	3.98	0.59	0.35	0.52



Stellar Parameters For KIC 008748103

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5929^{+158}_{-193}	$4.436^{+0.070}_{-0.210}$	$0.080^{+0.250}_{-0.300}$	$1.031^{+0.327}_{-0.131}$	$1.059^{+0.140}_{-0.127}$	$1.360^{+0.400}_{-0.739}$
	+3%/-3%	+2%/-5%	+312%/-375%	+32%/-13%	+13%/-12%	+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 008748103-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-76 ± 10	$2.36^{+0.40}_{-0.26}$	369^{+28}_{-18}	4135^{+187}_{-164}	7955^{+2345}_{-2127}
Alt.	-30 ± 12	$0.95^{+0.22}_{-0.18}$	371^{+28}_{-19}	4901^{+624}_{-514}	17869^{+14324}_{-8257}

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

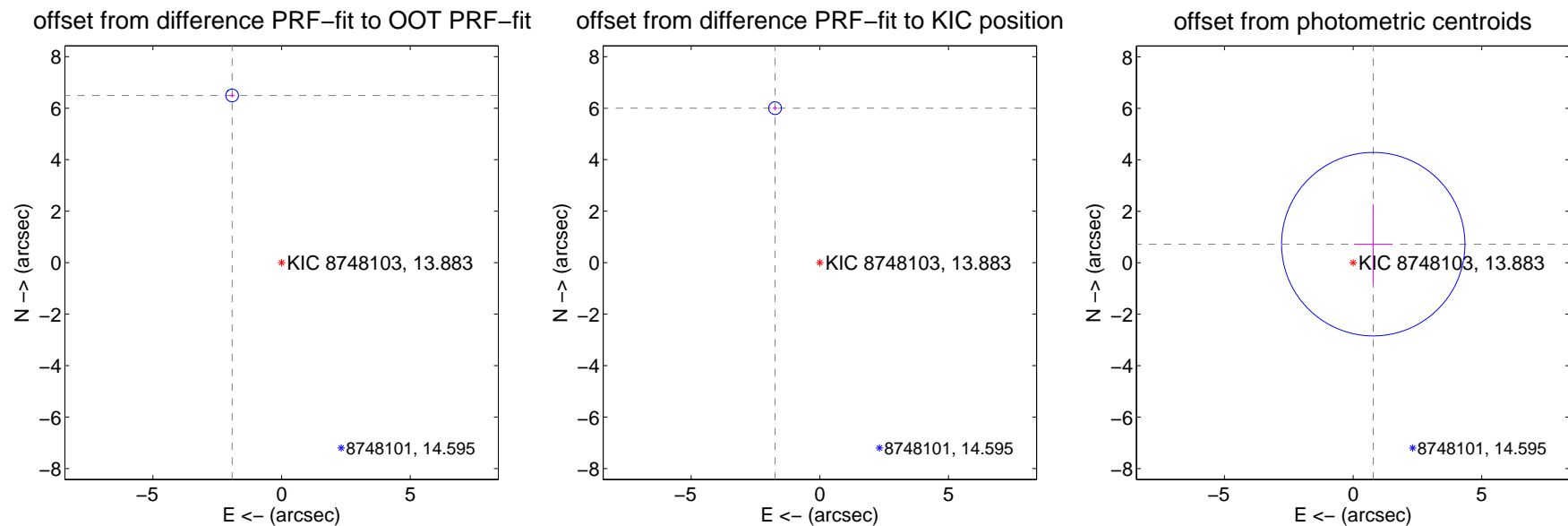
DV Centroid Data

Supplemental centroid analysis for 008748103-01. Kepler magnitude: 13.88. Transit SNR 12.21

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.53 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.773 ± 0.083	82.08	1.922 ± 0.089	6.495 ± 0.082
PRF-fit source offset from KIC position	6.249 ± 0.082	75.75	1.741 ± 0.089	6.002 ± 0.082
photometric centroid source offset	1.06 ± 1.19	0.90	-0.78 ± 0.75	0.72 ± 1.55

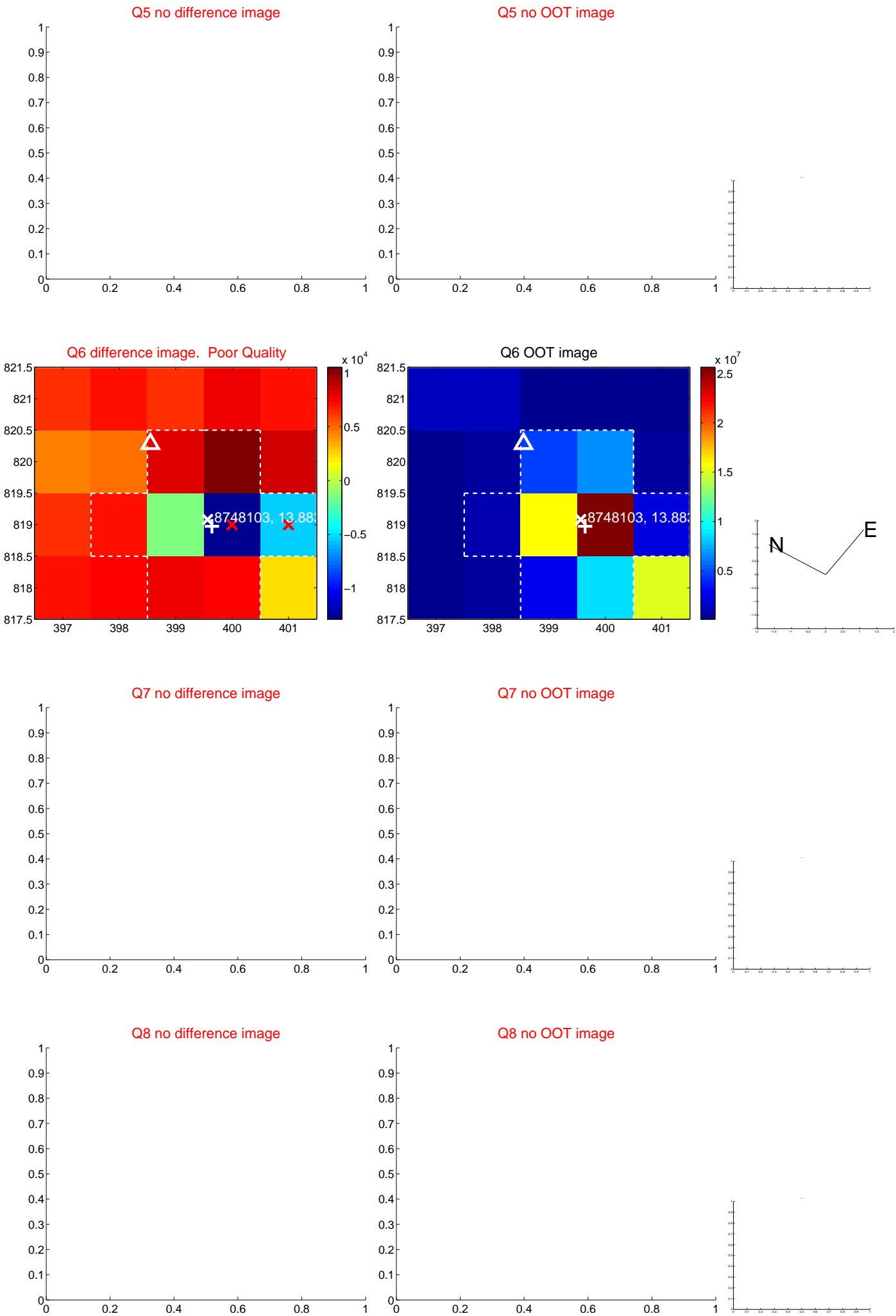


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



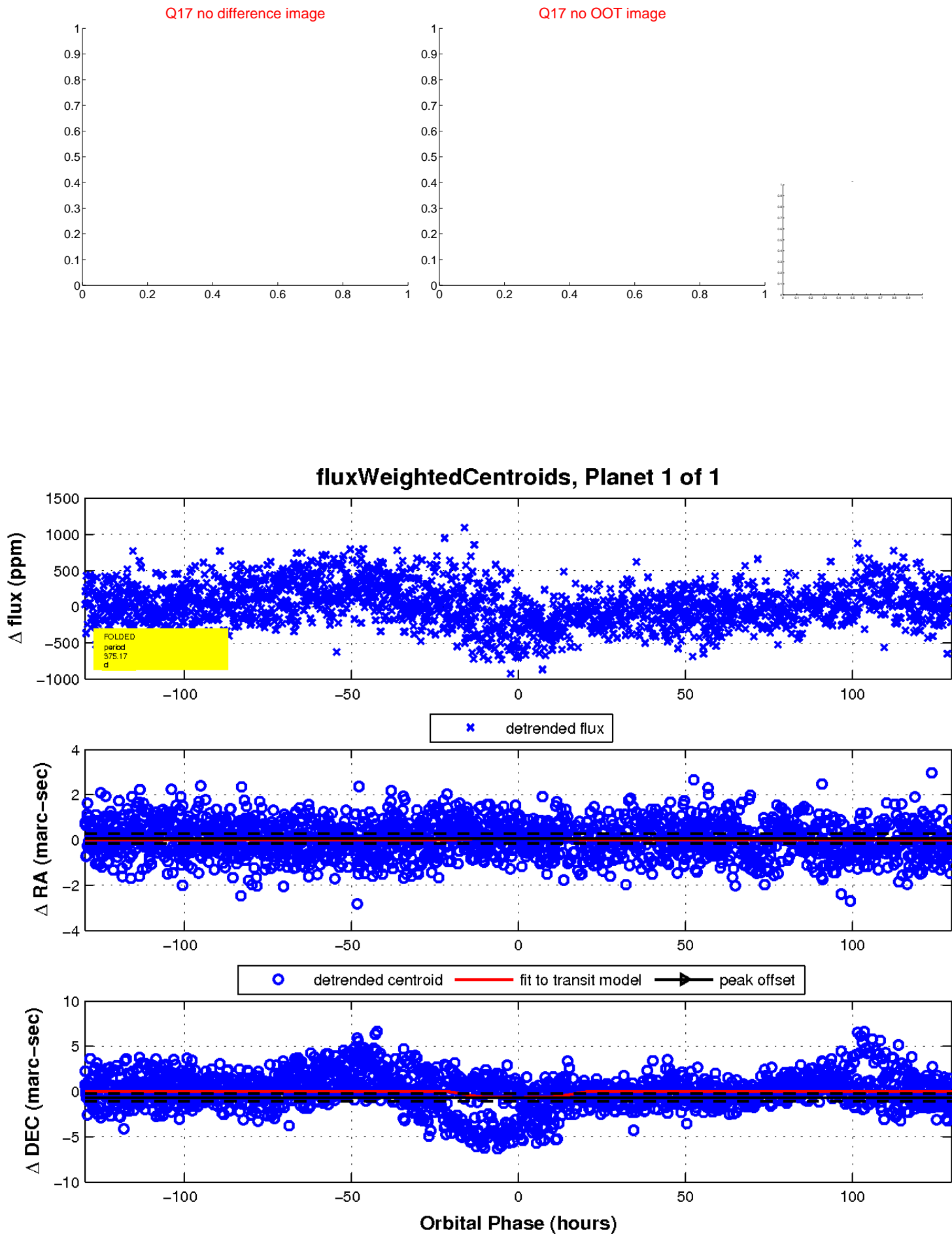
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

