

KIC 008824100

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})
008824100-01	OBS	No	398.244646	181.837794	148.2	23.857	7.4	7.4	0.94	6160	1.28	1.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008824100-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—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.

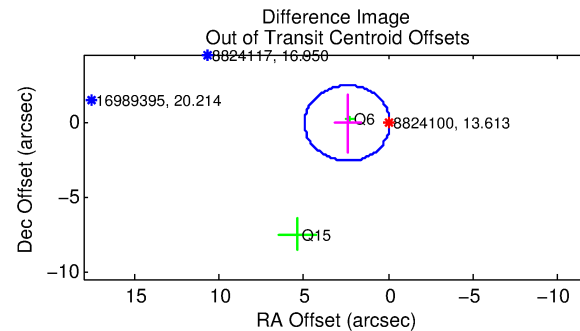
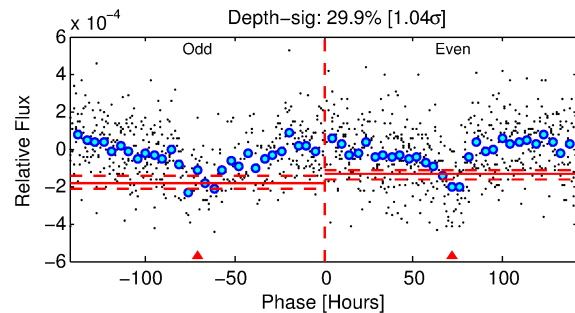
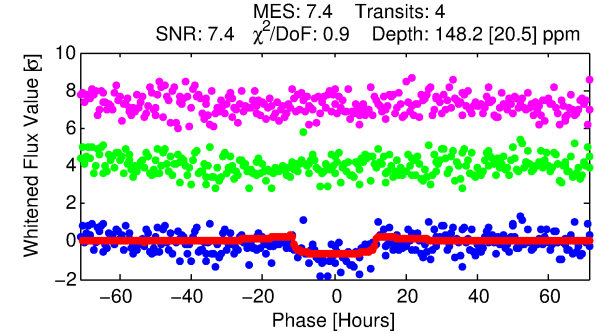
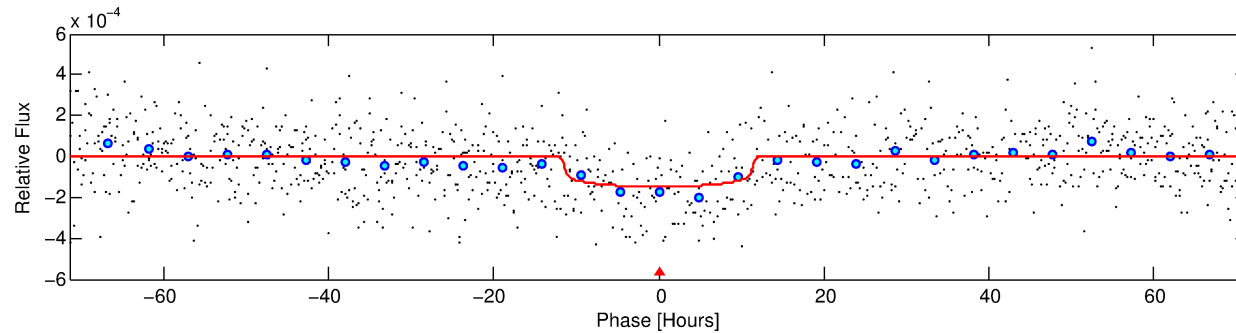
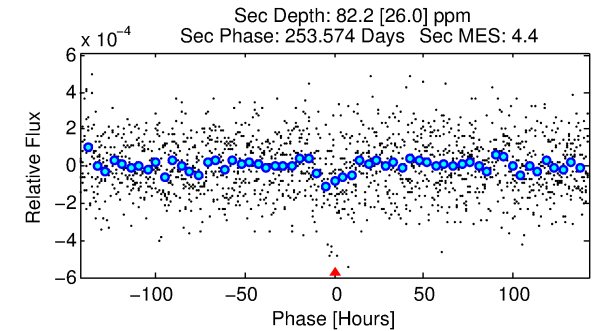
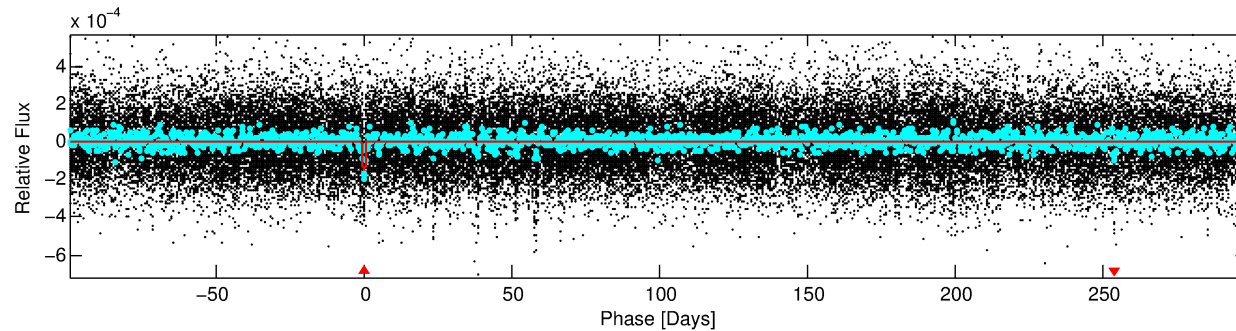
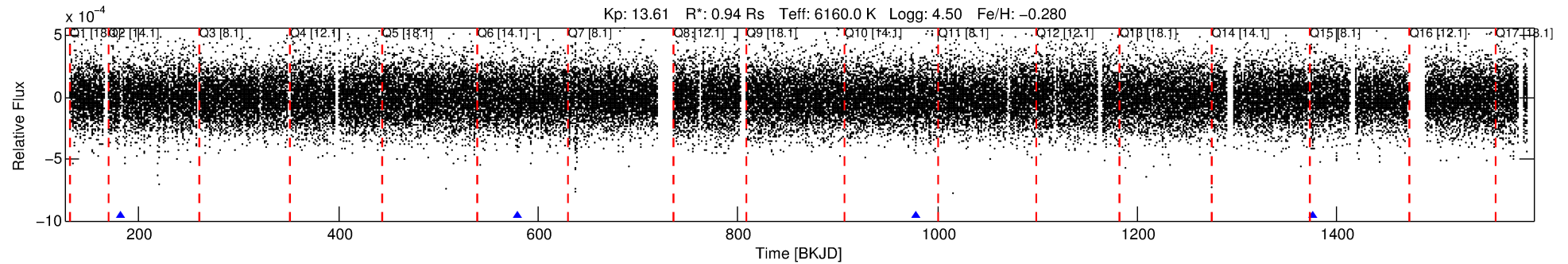
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008824100-01

No Significant Match Found

DV One-Page Summary

KIC: 8824100 Candidate: 1 of 1 Period: 398.245 d



DV Fit Results:

Period = 398.24465 [0.01661] d
Epoch = 181.8378 [0.0331] BKJD
Rp/R* = 0.0125 [0.0021]
a/R* = 75.21 [61.17]
b = 0.82 [0.32]
Seff = 1.01 [0.43]
Teq = 255 [27] K
Rp = 1.28 [0.47] Re
a = 1.0654 [0.2973] AU
Ag = 31339.67 [19551.27] [1.60σ]
Teffp = 5254 [635] K [7.87σ]

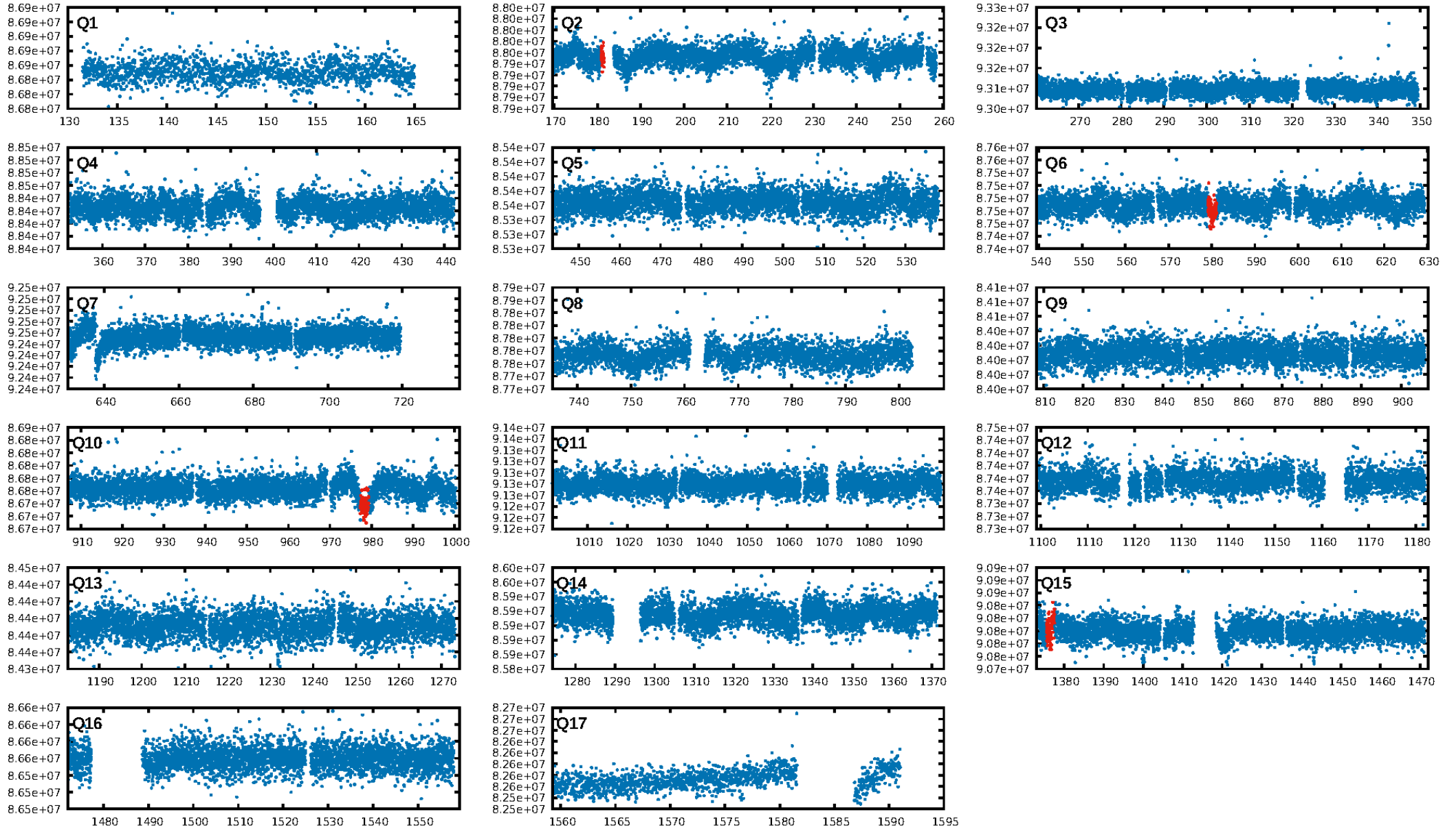
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.06e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.262
Centroid-sig: 39.3%
Centroid-so: 0.916 arcsec [0.84σ]
OotOffset-rm: 2.436 arcsec [2.90σ]
KicOffset-rm: 2.450 arcsec [2.18σ]
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]

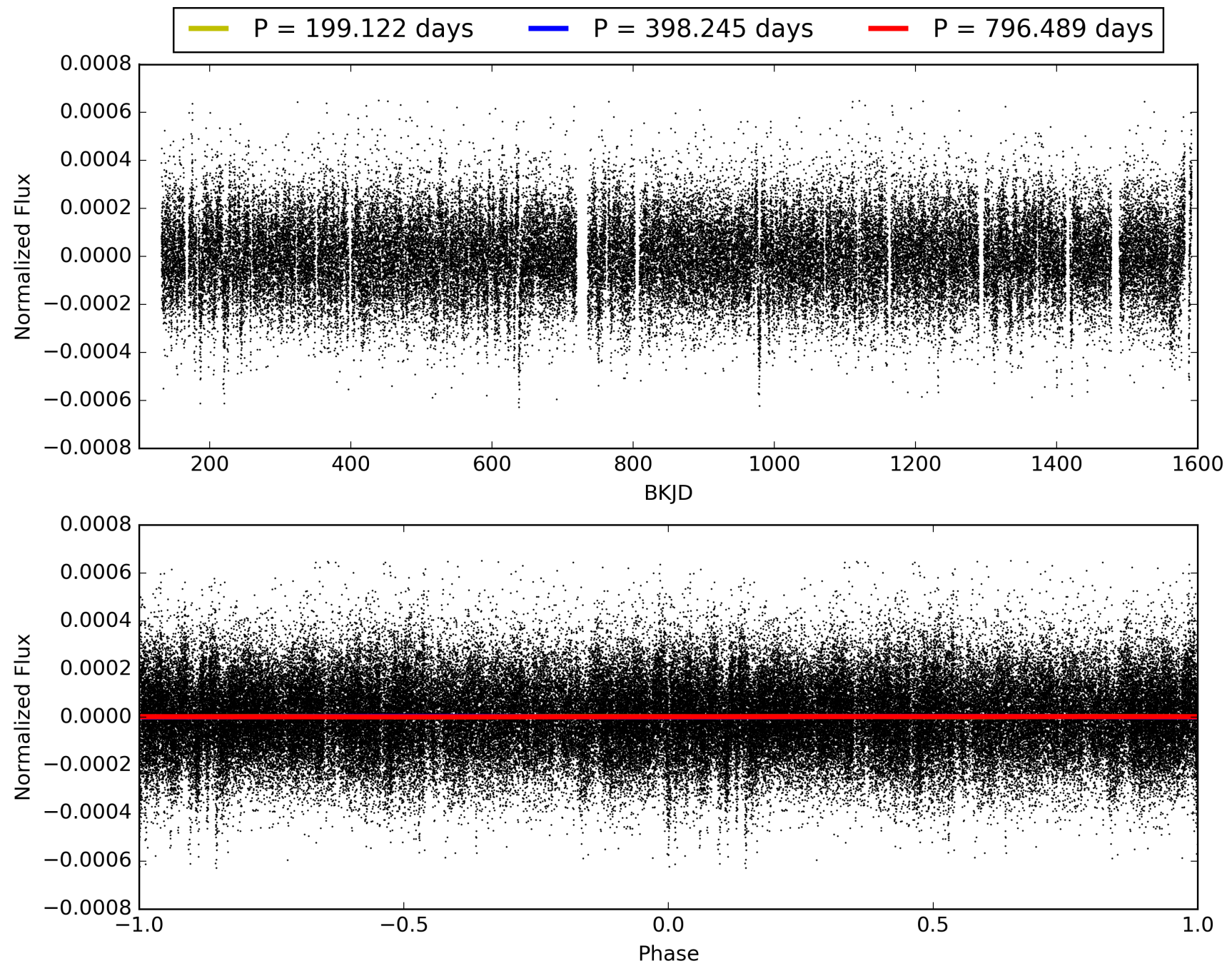
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:33:22 Z

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

TCE 008824100-01, PDC Light Curves

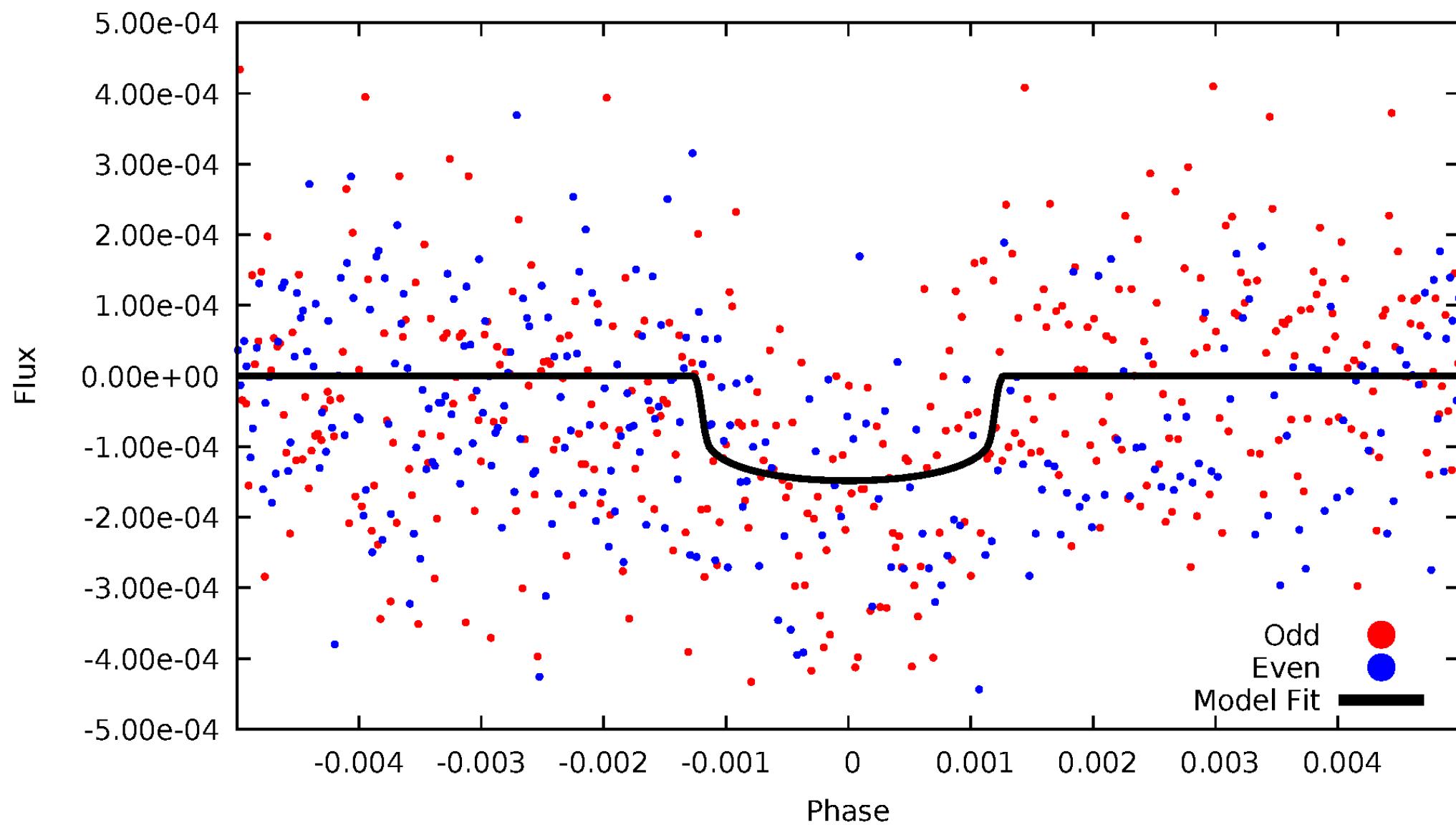


TCE 008824100-01



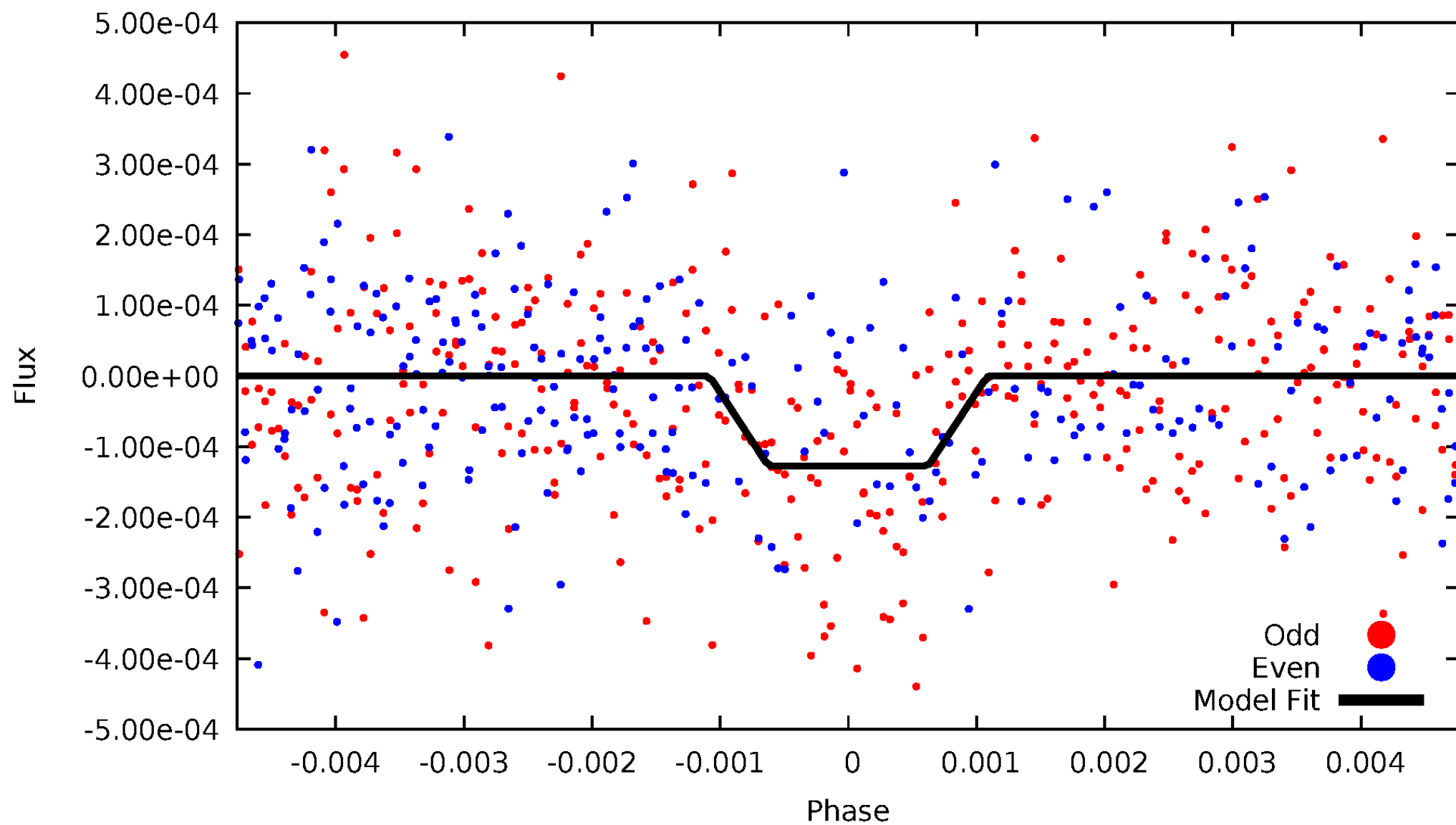
DV Odd/Even

TCE 008824100-01

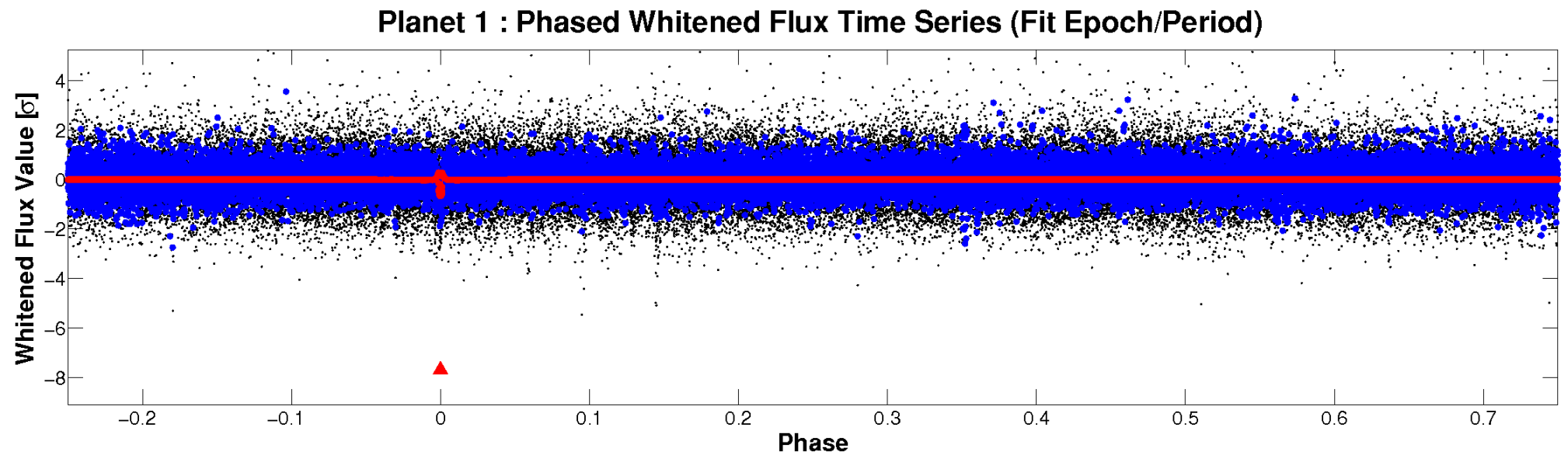
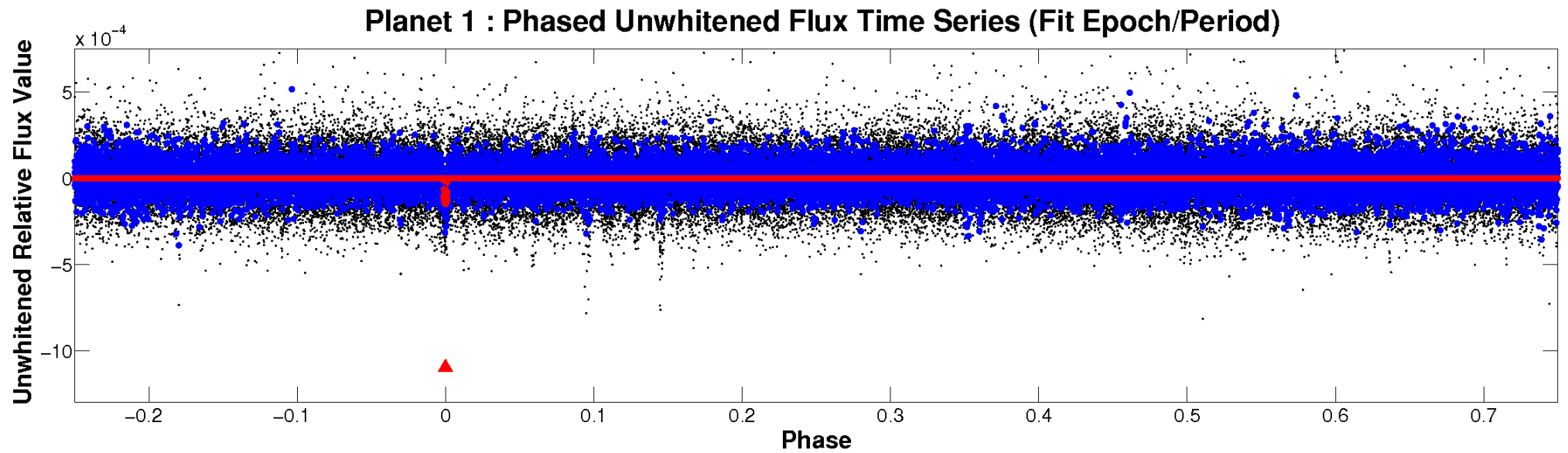


ALT Odd/Even

TCE 008824100-01



Non-Whitened Vs. Whitened Light Curve



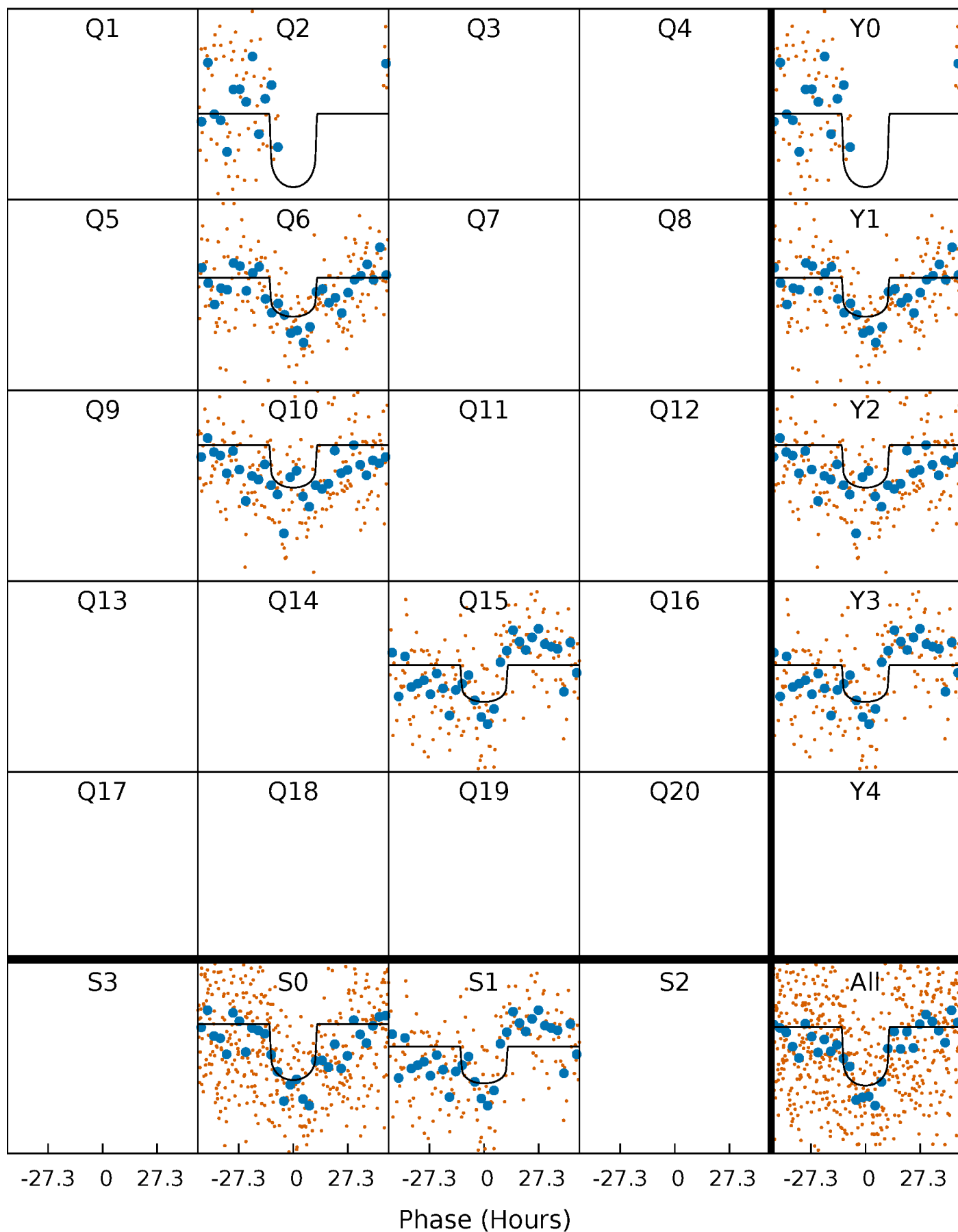
PDC Quarter-Phased Transit Curves

TCE 008824100-01 P=398.244646 Days $T_0=181.837794$ (BKJD)



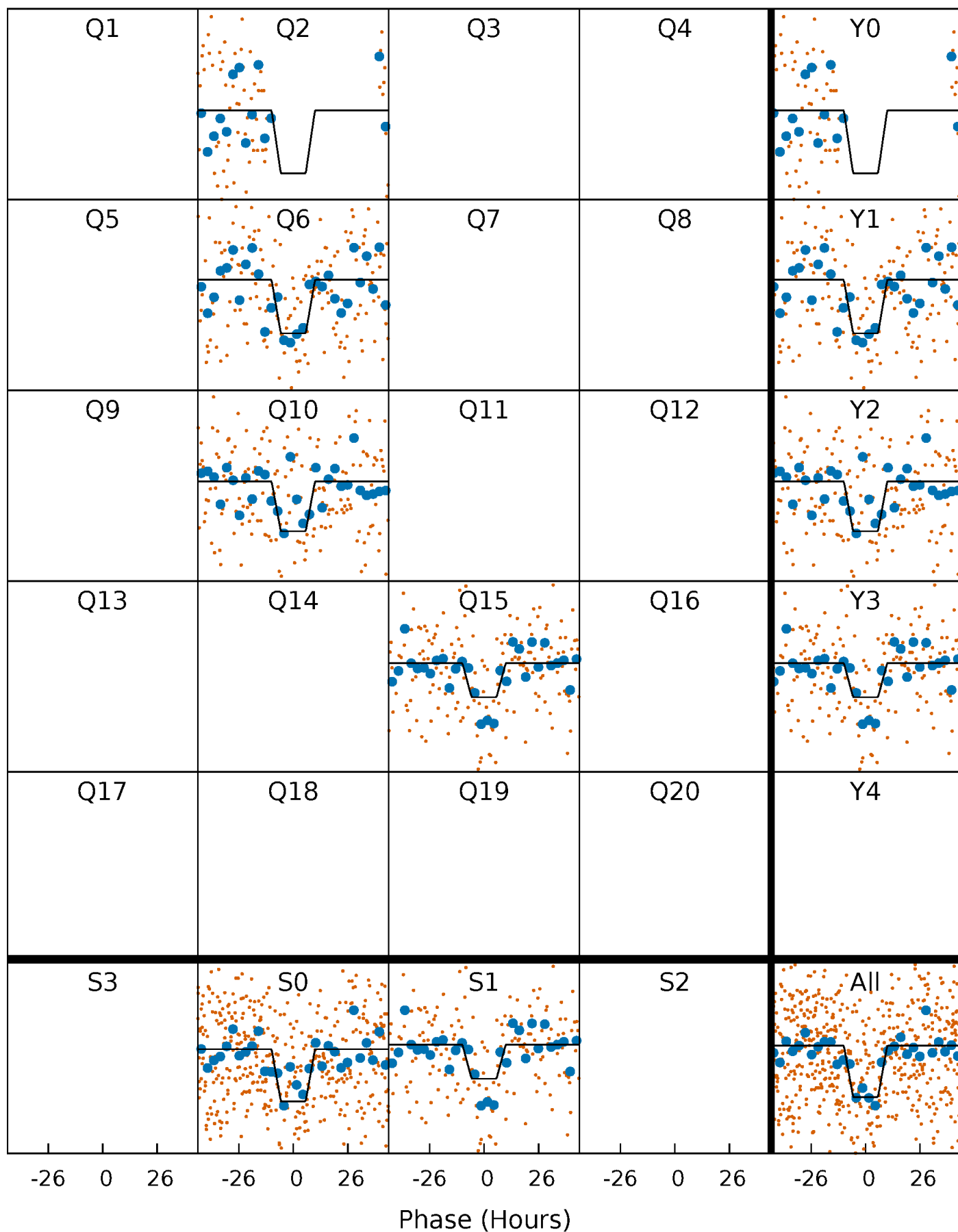
DV Quarter-Phased Transit Curves

TCE 008824100-01 P=398.244646 Days $T_0=181.837794$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

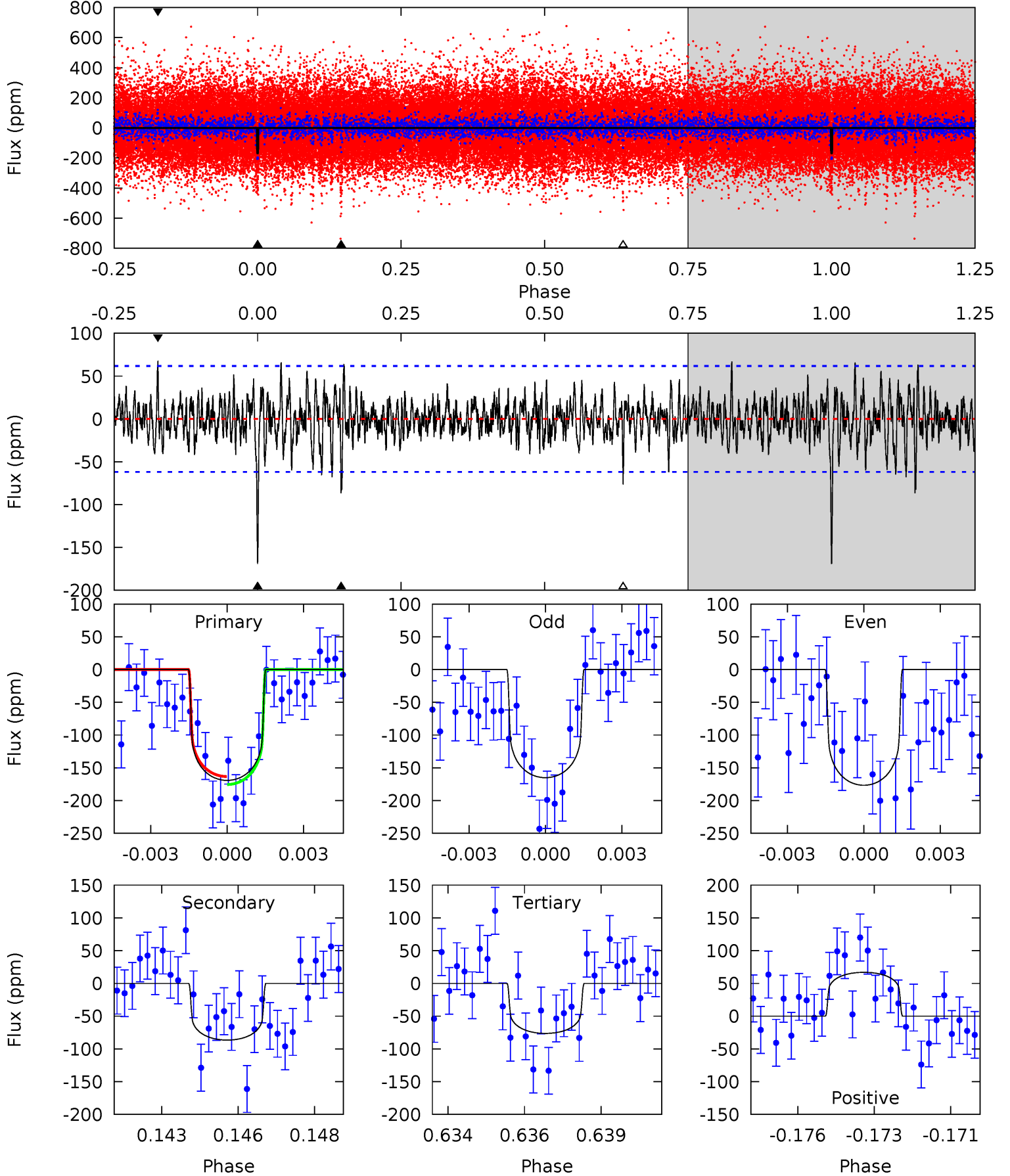
TCE 008824100-01 P=398.188784 Days $T_0=182.000319$ (BKJD)



DV Model-Shift Uniqueness Test

008824100-01, $P = 398.244646$ Days, $E = 181.837794$ Days

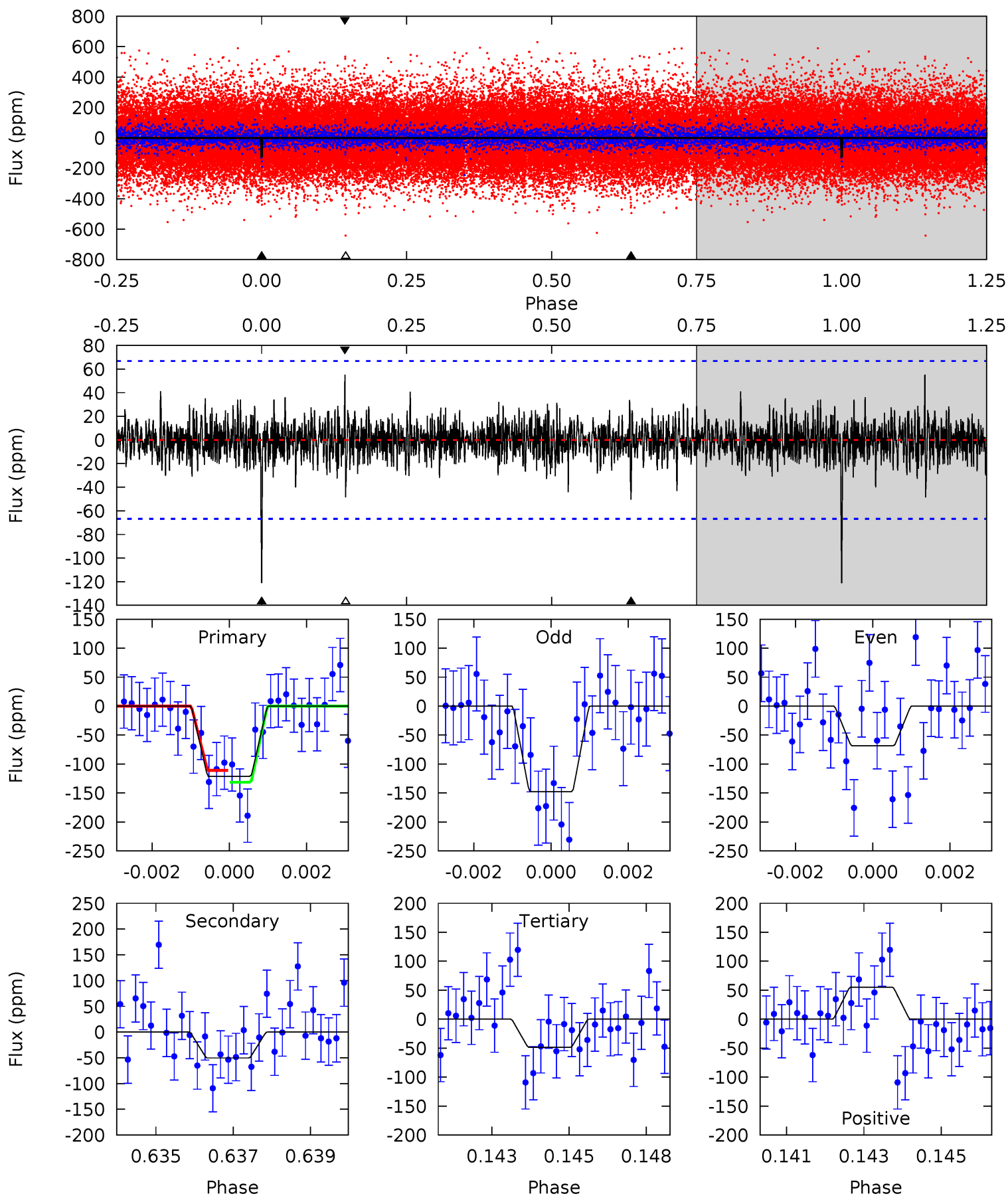
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	7.40	6.53	5.72	5.28	3.02	1.60	7.94	8.75	0.87	1.68	0.48	0.87	0.28	0.52



Alt Model-Shift Uniqueness Test

008824100-01, P = 398.188784 Days, E = 182.000319 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.64	4.00	3.86	4.40	5.31	3.06	0.92	5.78	5.24	0.14	-0.39	2.97	0.99	0.31	0.81



Stellar Parameters For KIC 008824100

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6160^{+168}_{-187}	$4.498^{+0.040}_{-0.229}$	$-0.280^{+0.250}_{-0.350}$	$0.941^{+0.306}_{-0.082}$	$1.017^{+0.134}_{-0.134}$	$1.719^{+0.378}_{-0.945}$
	+3%/-3%	+1%/-5%	+89%/-125%	+33%/-9%	+13%/-13%	+22%/-55%
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 008824100-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-87 ± 12	$1.35^{+0.32}_{-0.27}$	367^{+28}_{-20}	5367^{+565}_{-421}	29164^{+16524}_{-9892}
Alt.	-50 ± 13	$1.23^{+0.30}_{-0.27}$	366^{+29}_{-18}	4956^{+573}_{-445}	19695^{+14247}_{-7650}

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

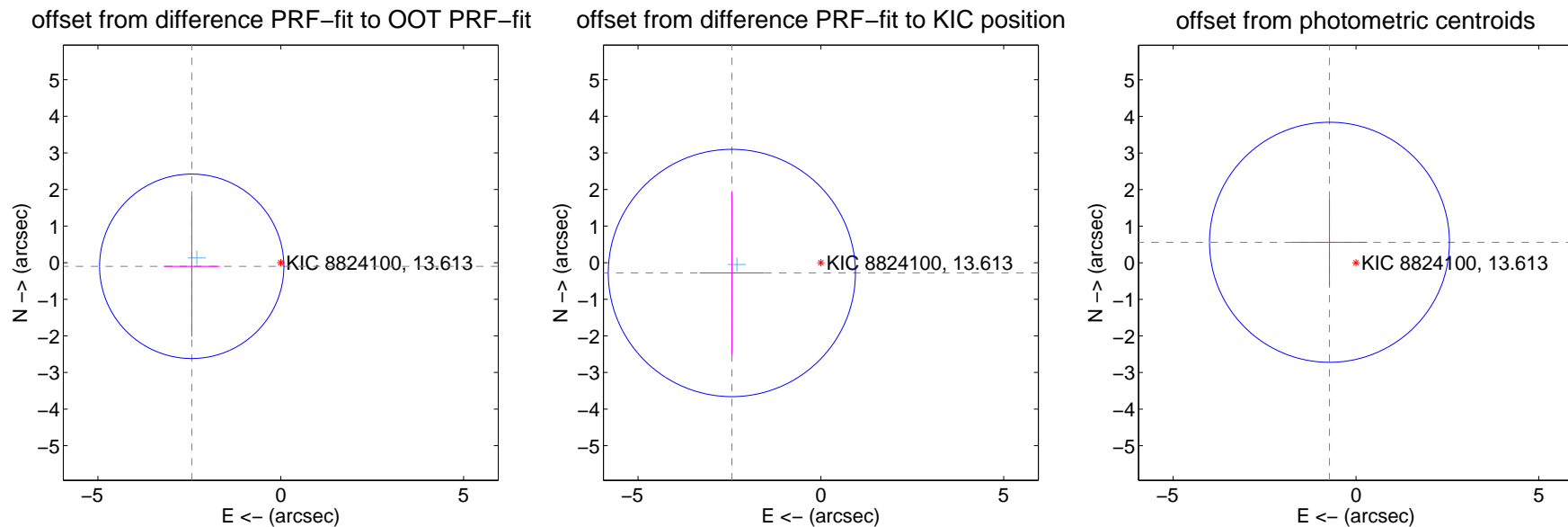
DV Centroid Data

Supplemental centroid analysis for 008824100-01. Kepler magnitude: 13.61. Transit SNR 7.43

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	2.436 ± 0.840	2.90	2.434 ± 0.763	-0.099 ± 1.917
PRF-fit source offset from KIC position	2.450 ± 1.126	2.18	2.434 ± 0.877	-0.281 ± 2.224
photometric centroid source offset	0.92 ± 1.09	0.84	0.72 ± 1.03	0.56 ± 1.19



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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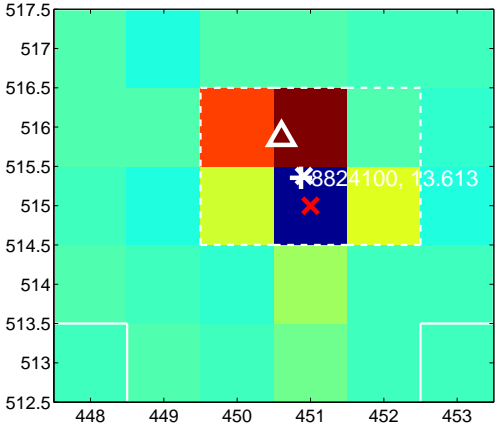
Q5 no difference image



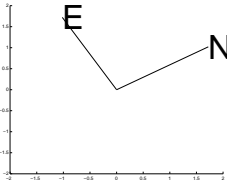
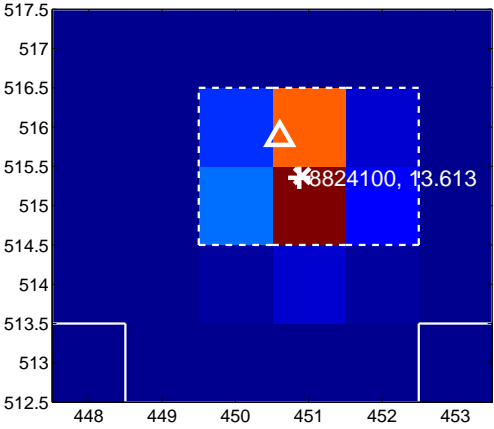
Q5 no OOT image



Q6 difference image



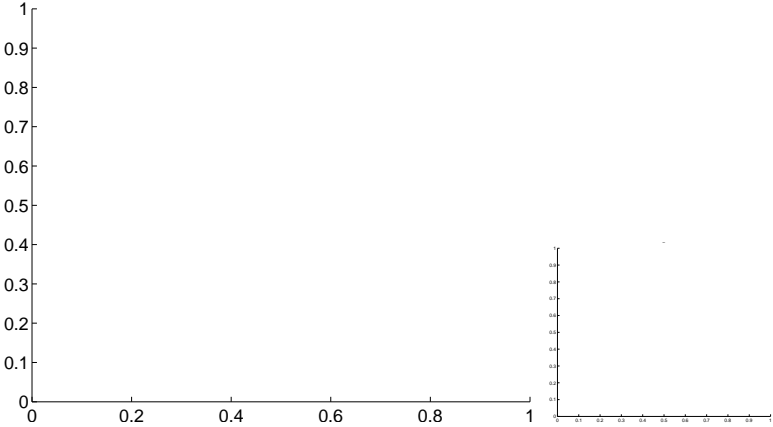
Q6 OOT image



Q7 no difference image



Q7 no OOT image



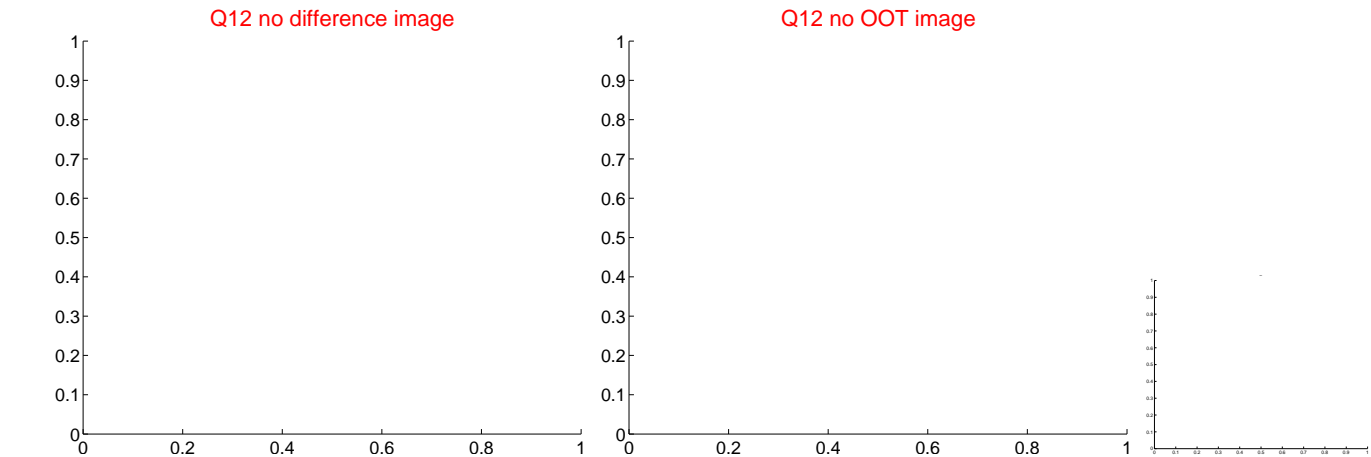
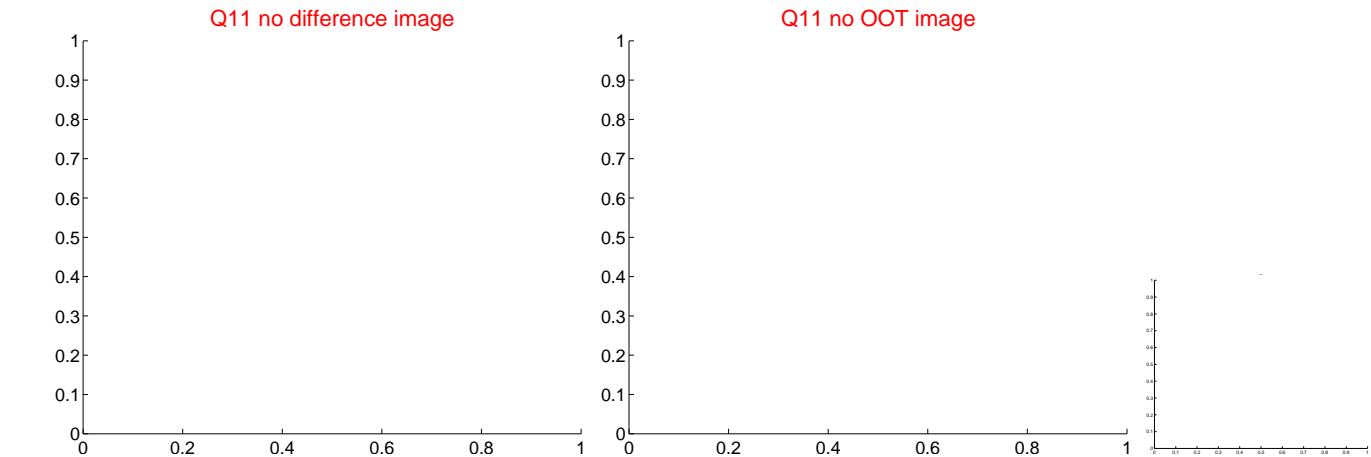
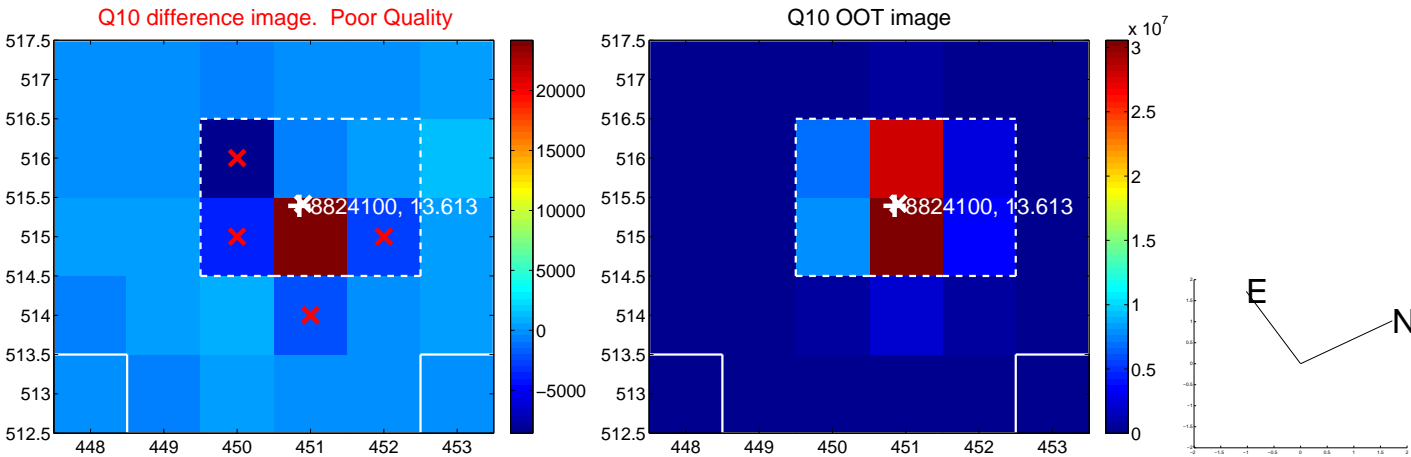
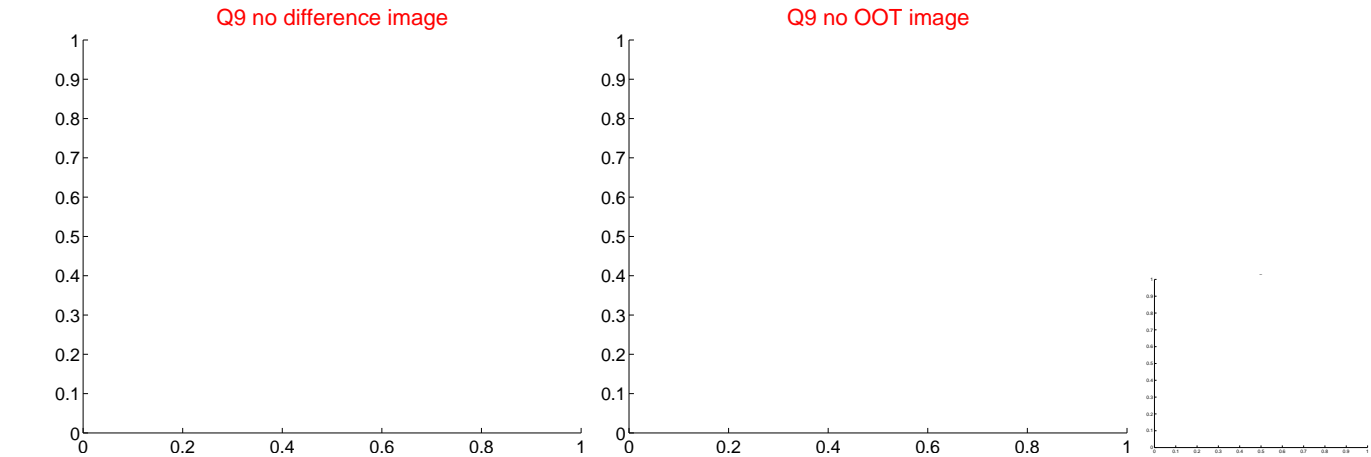
Q8 no difference image



Q8 no OOT image

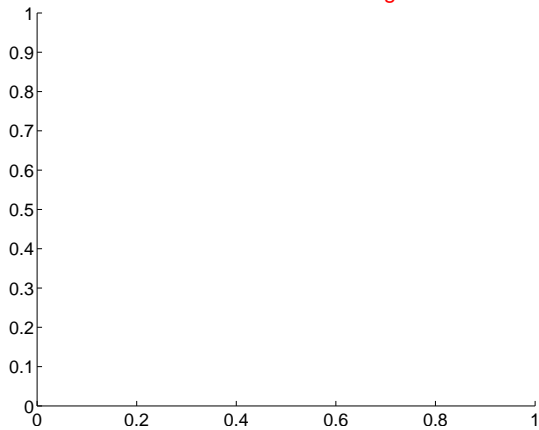


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

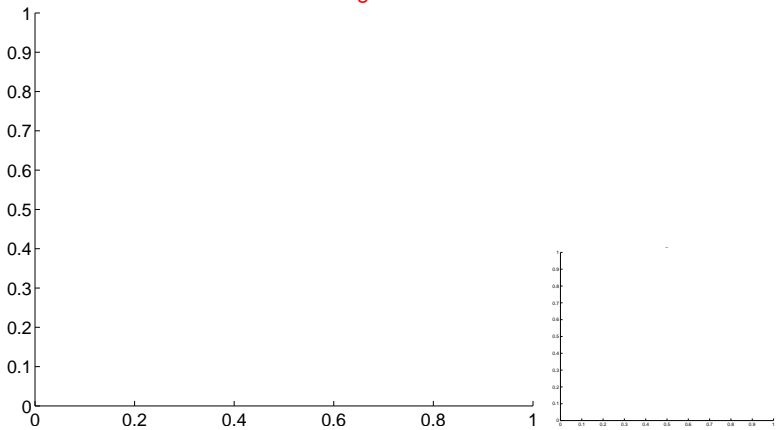


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

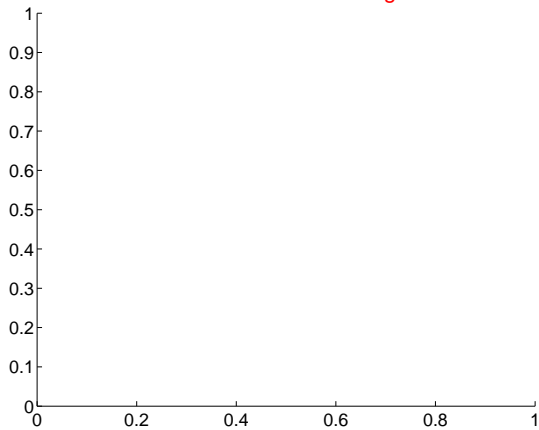
Q13 no difference image



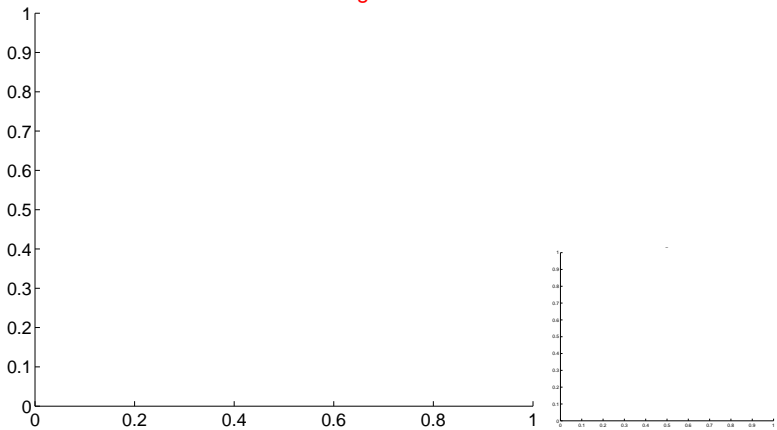
Q13 no OOT image



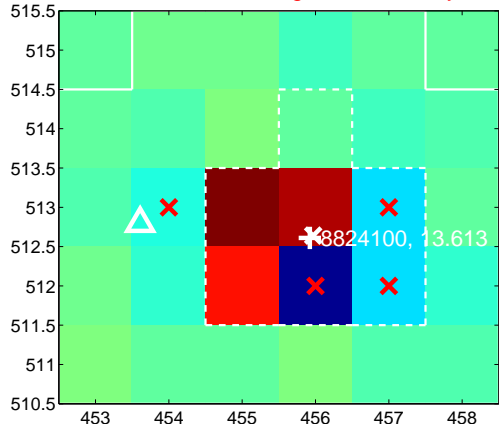
Q14 no difference image



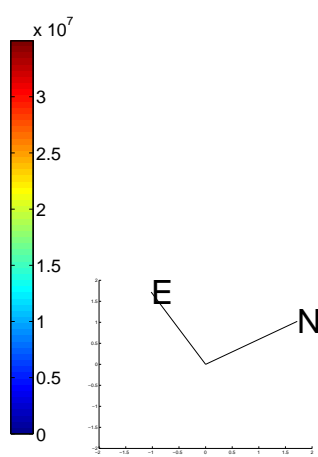
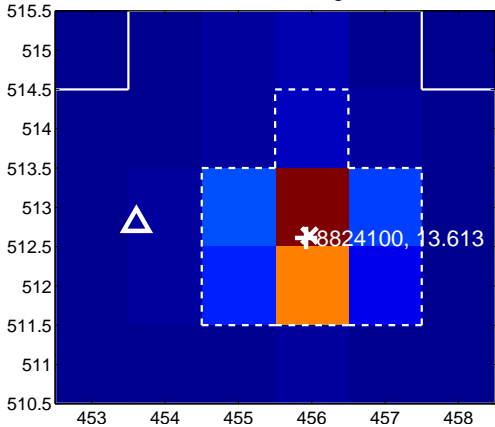
Q14 no OOT image



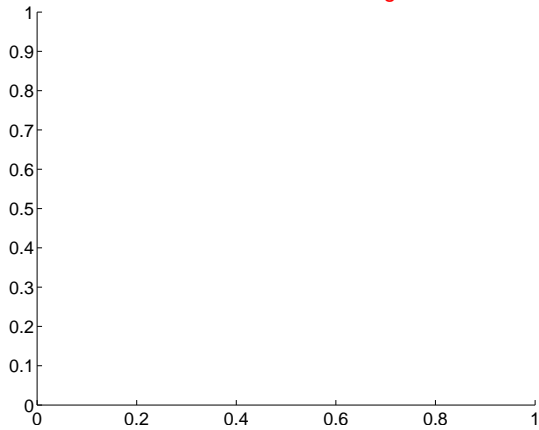
Q15 difference image. Poor Quality



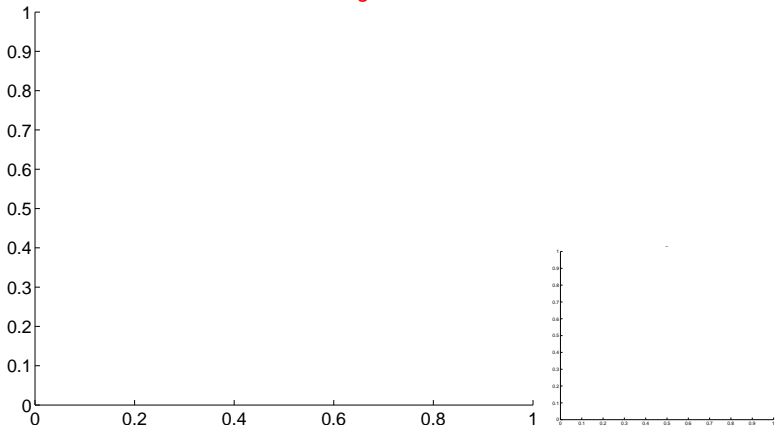
Q15 OOT image



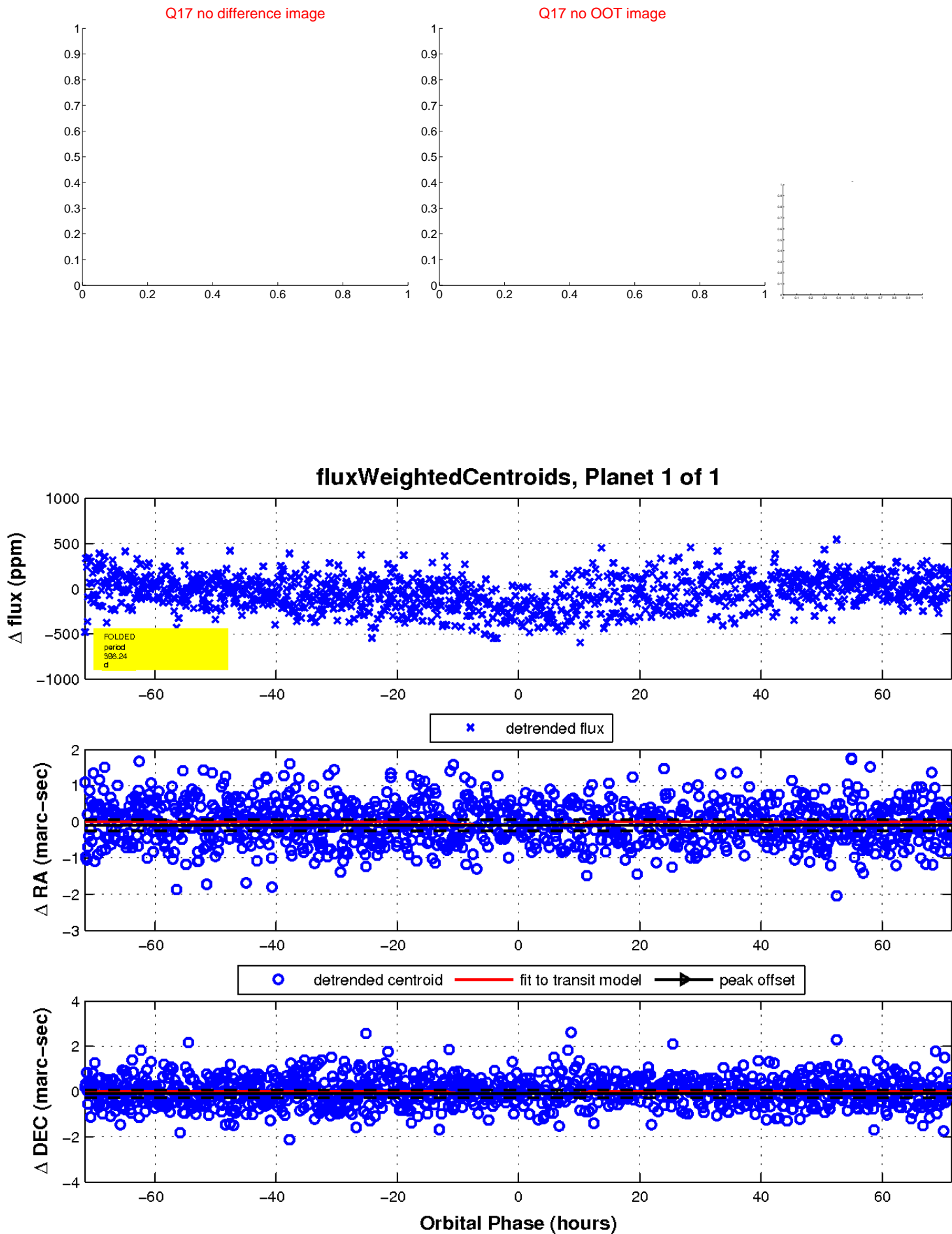
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

