

KIC 006048956

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})
006048956-01	OBS	No	563.016460	430.155740	140.1	20.880	8.7	12.8	0.94	6187	1.24	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006048956-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_MEAS

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

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

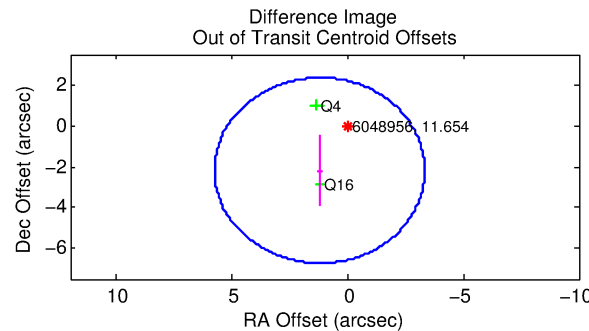
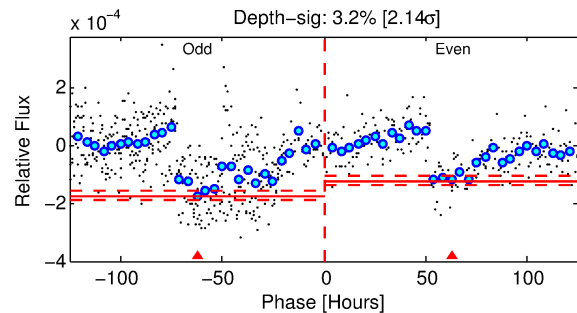
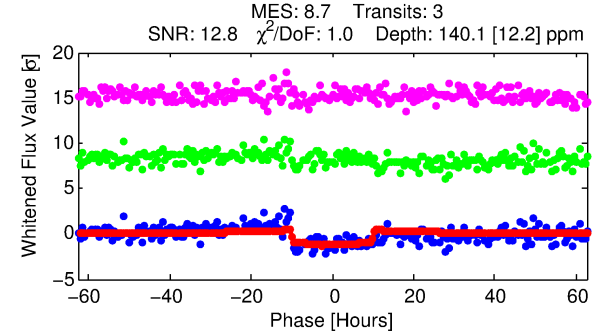
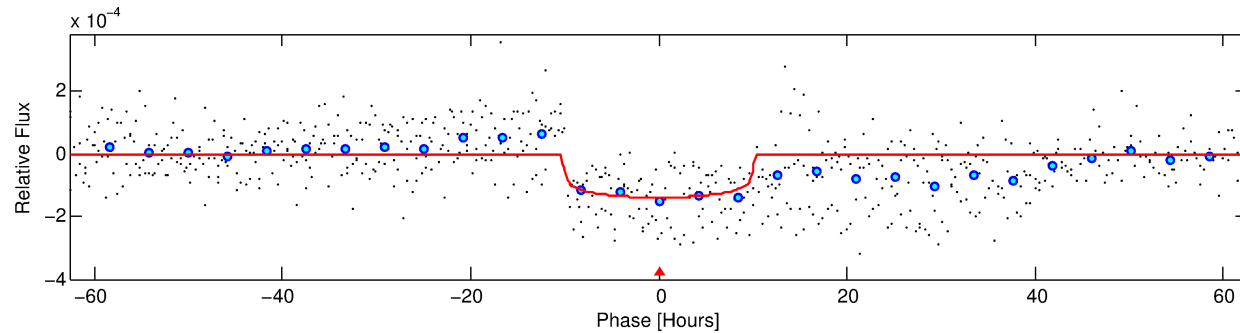
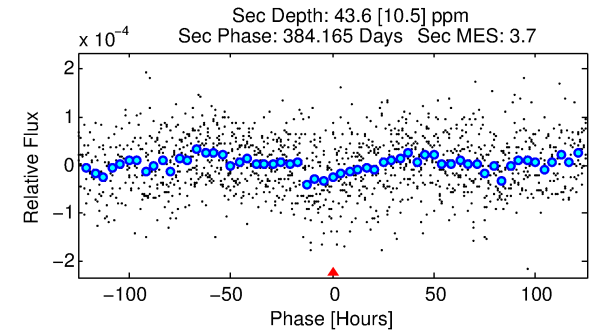
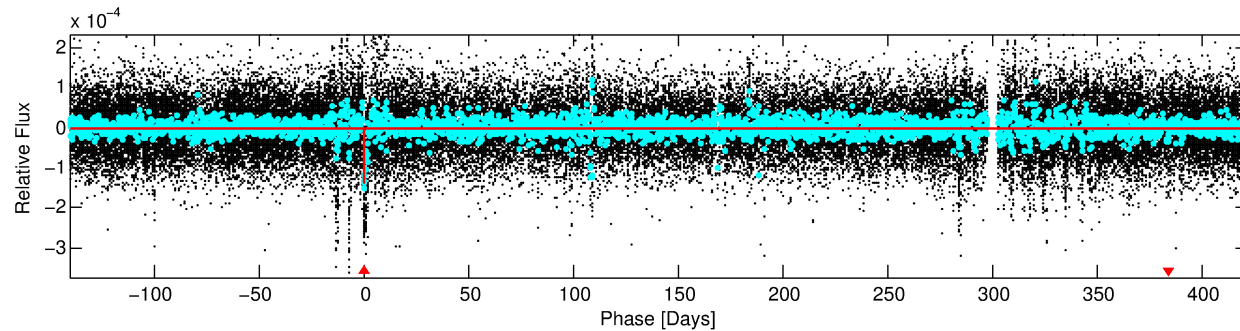
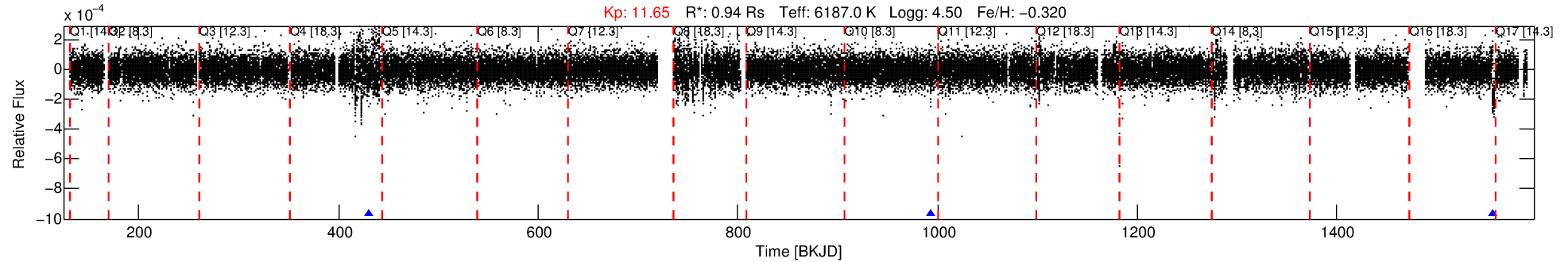
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006048956-01

No Significant Match Found

DV One-Page Summary

KIC: 6048956 Candidate: 1 of 1 Period: 563.016 d



DV Fit Results:

Period = 563.01646 [0.01077] d
Epoch = 430.1557 [0.0150] BKJD
Rp/R* = 0.0121 [0.0014]
a/R* = 120.48 [67.04]
b = 0.83 [0.22]
Seff = 0.64 [0.20]
Teq = 228 [17] K
Rp = 1.24 [0.31] Re
a = 1.3393 [0.2527] AU
Ag = 27966.39 [12216.07] [2.29σ]
Teffp = 4565 [406] K [10.68σ]

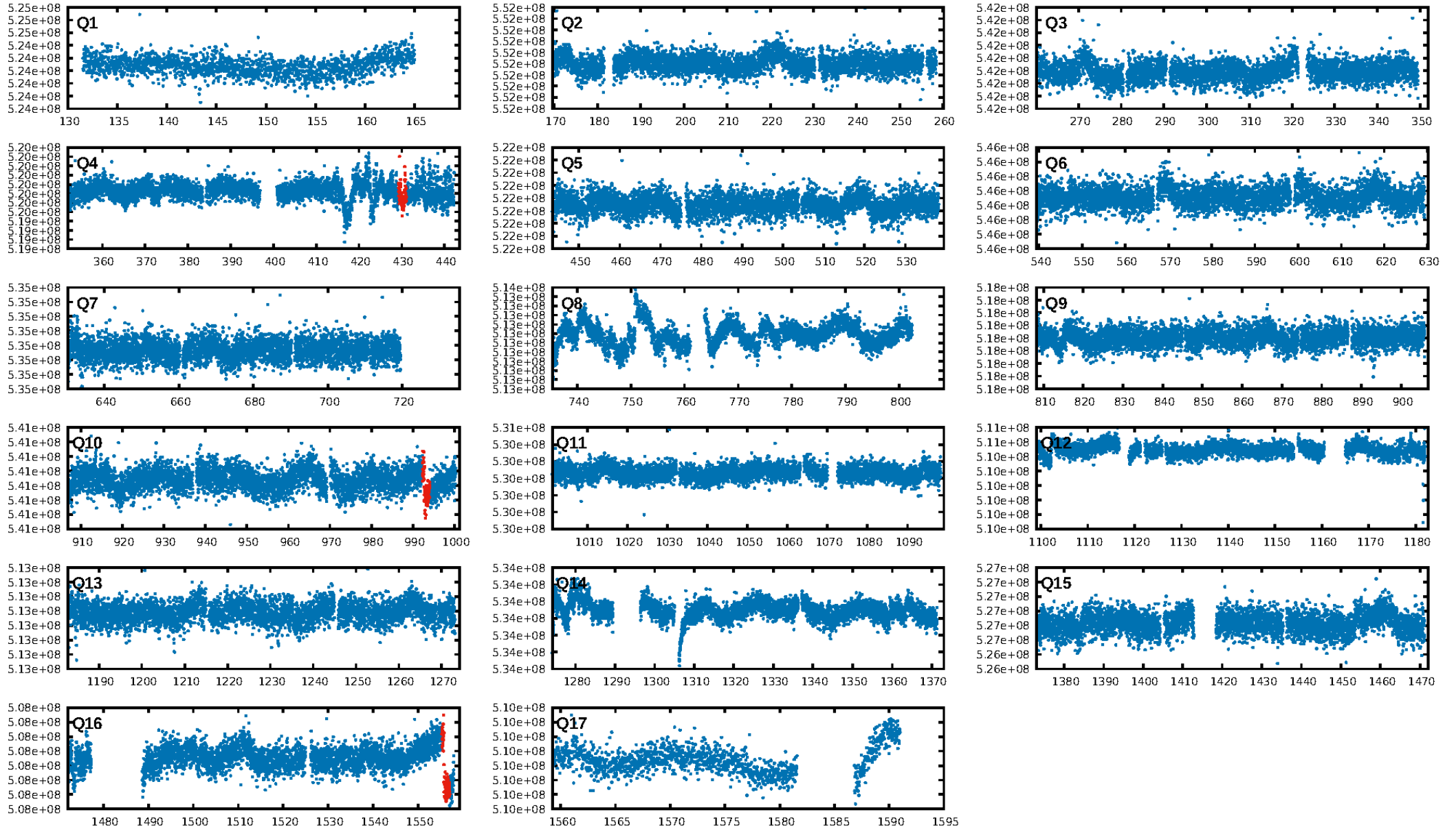
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 3.37e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.048
Centroid-sig: 87.5%
Centroid-so: 0.351 arcsec [0.29σ]
OotOffset-rm: 2.502 arcsec [1.65σ]
KicOffset-rm: 2.383 arcsec [1.74σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

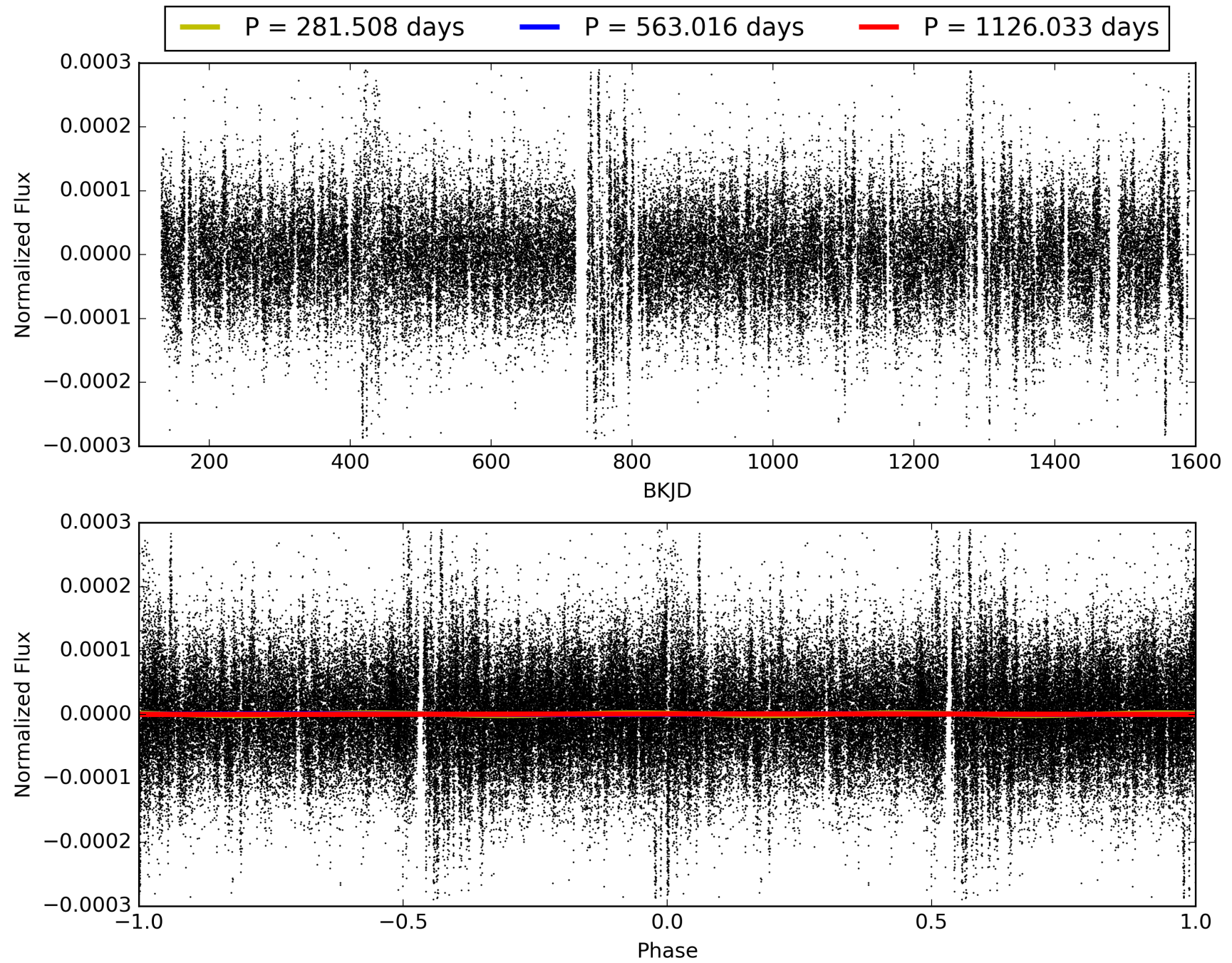
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:45:06 Z

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

TCE 006048956-01, PDC Light Curves

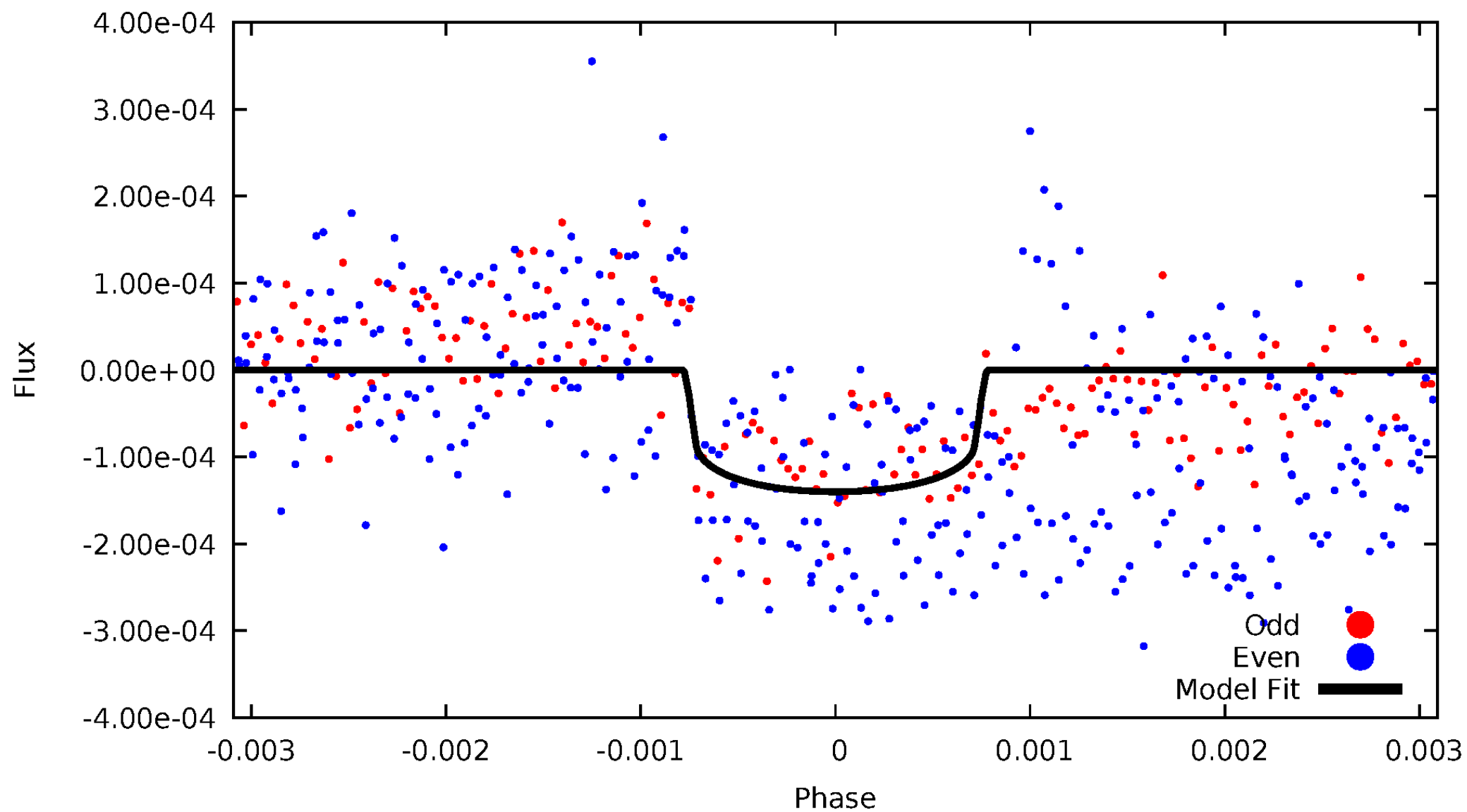


TCE 006048956-01



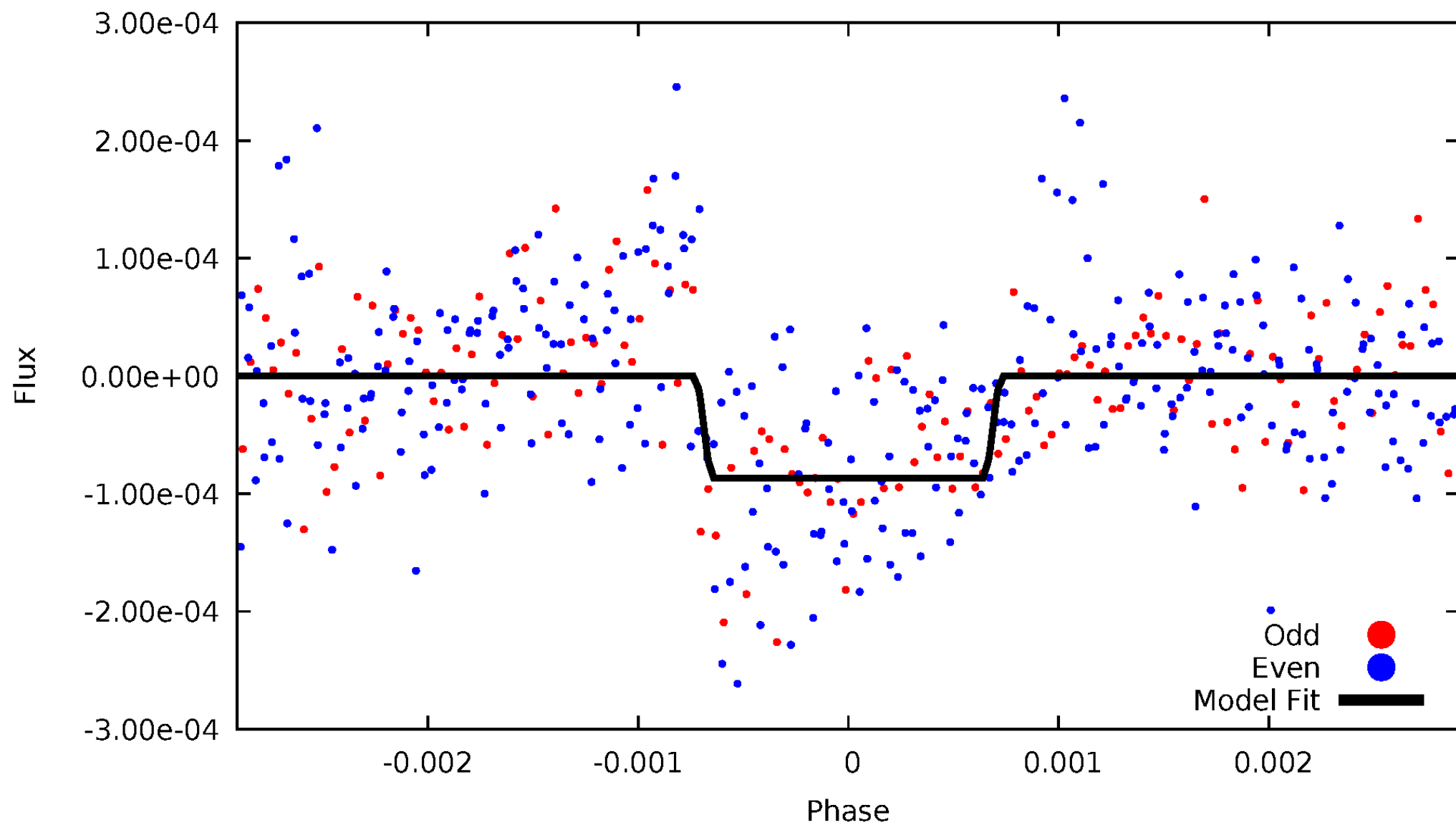
DV Odd/Even

TCE 006048956-01



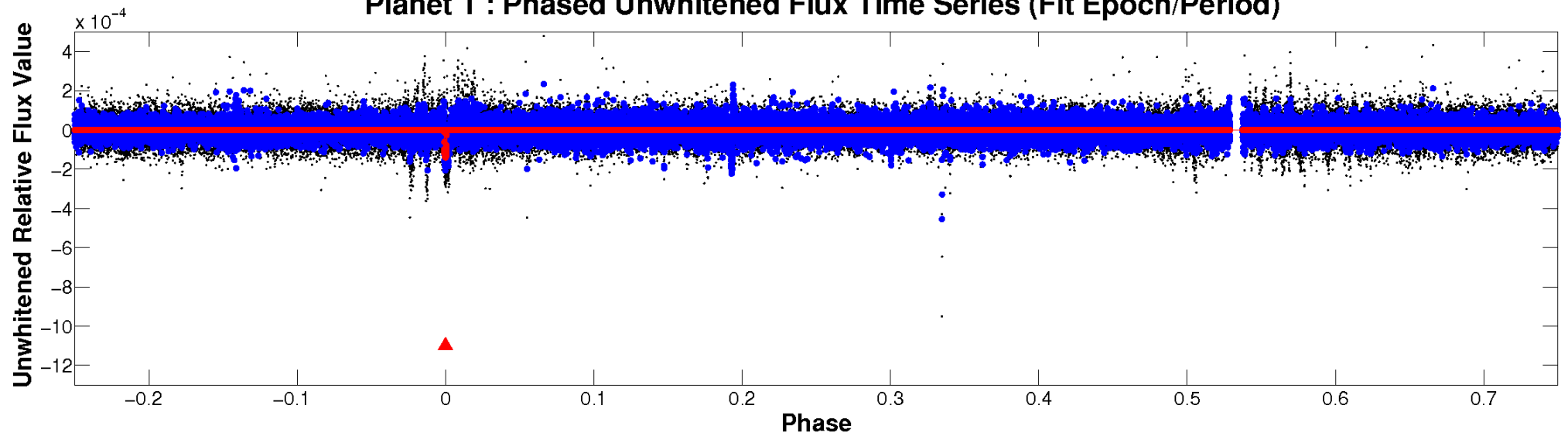
ALT Odd/Even

TCE 006048956-01

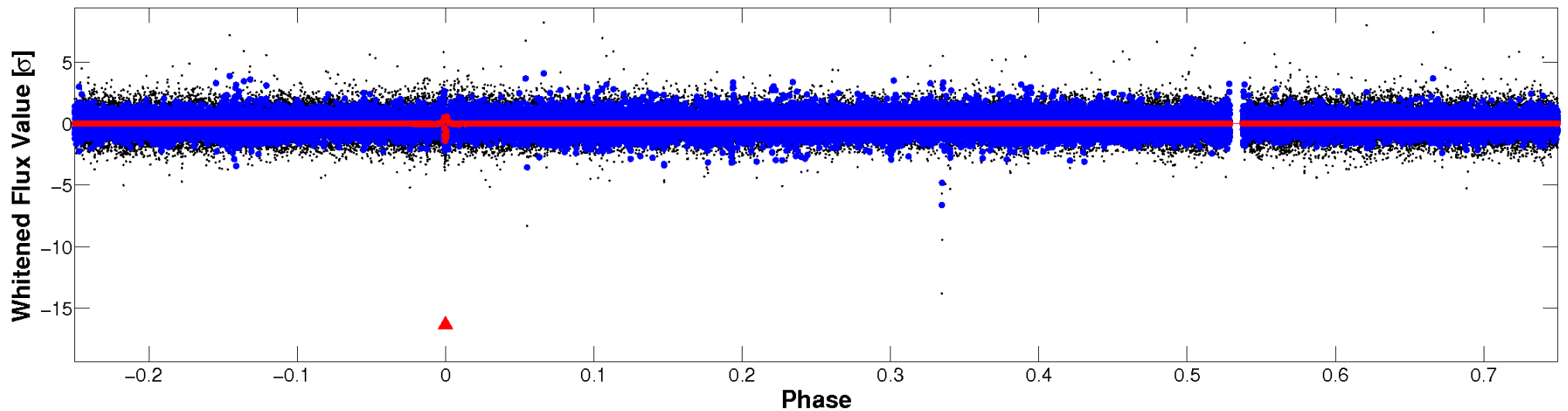


Non-Whitened Vs. Whitened Light Curve

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

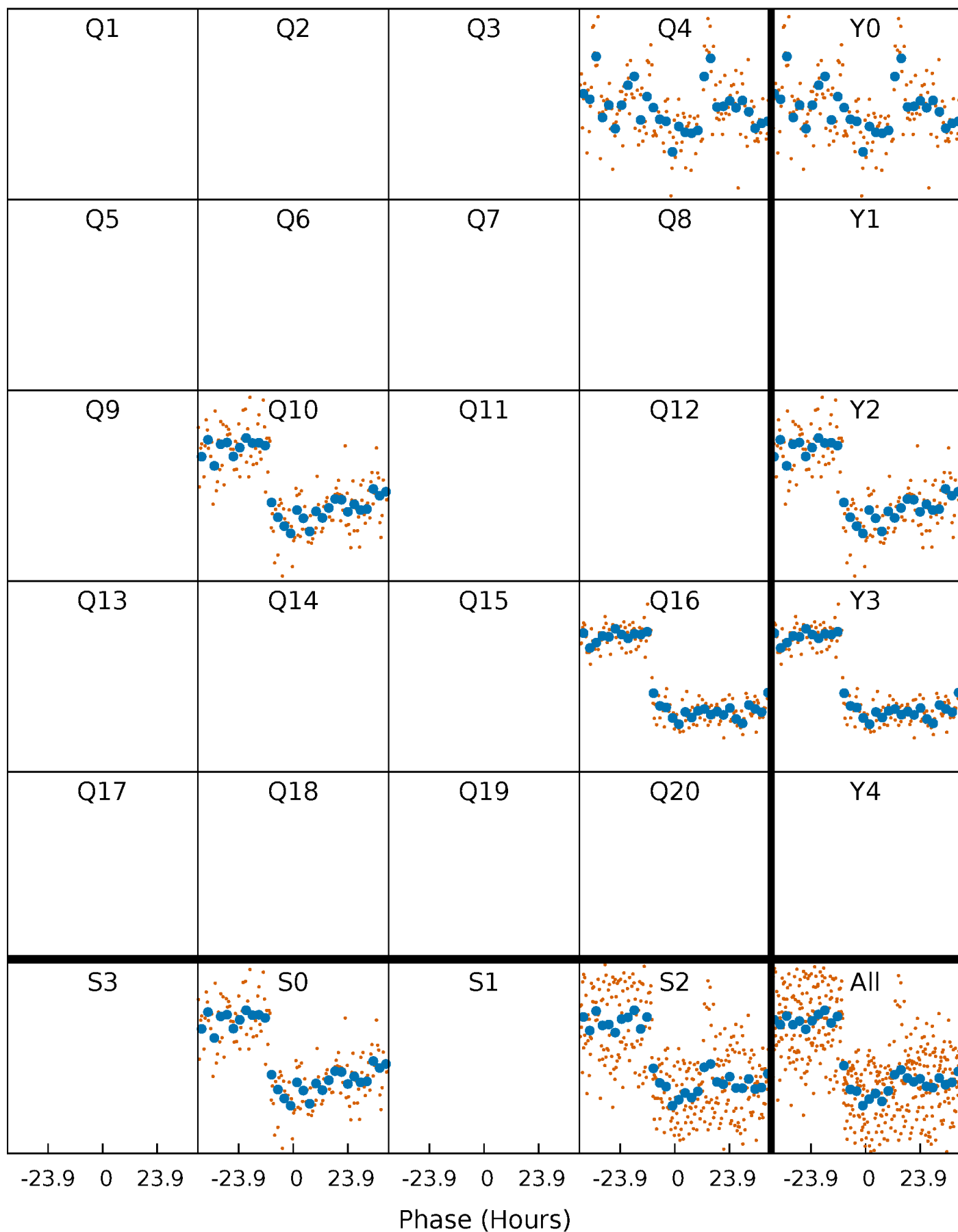


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



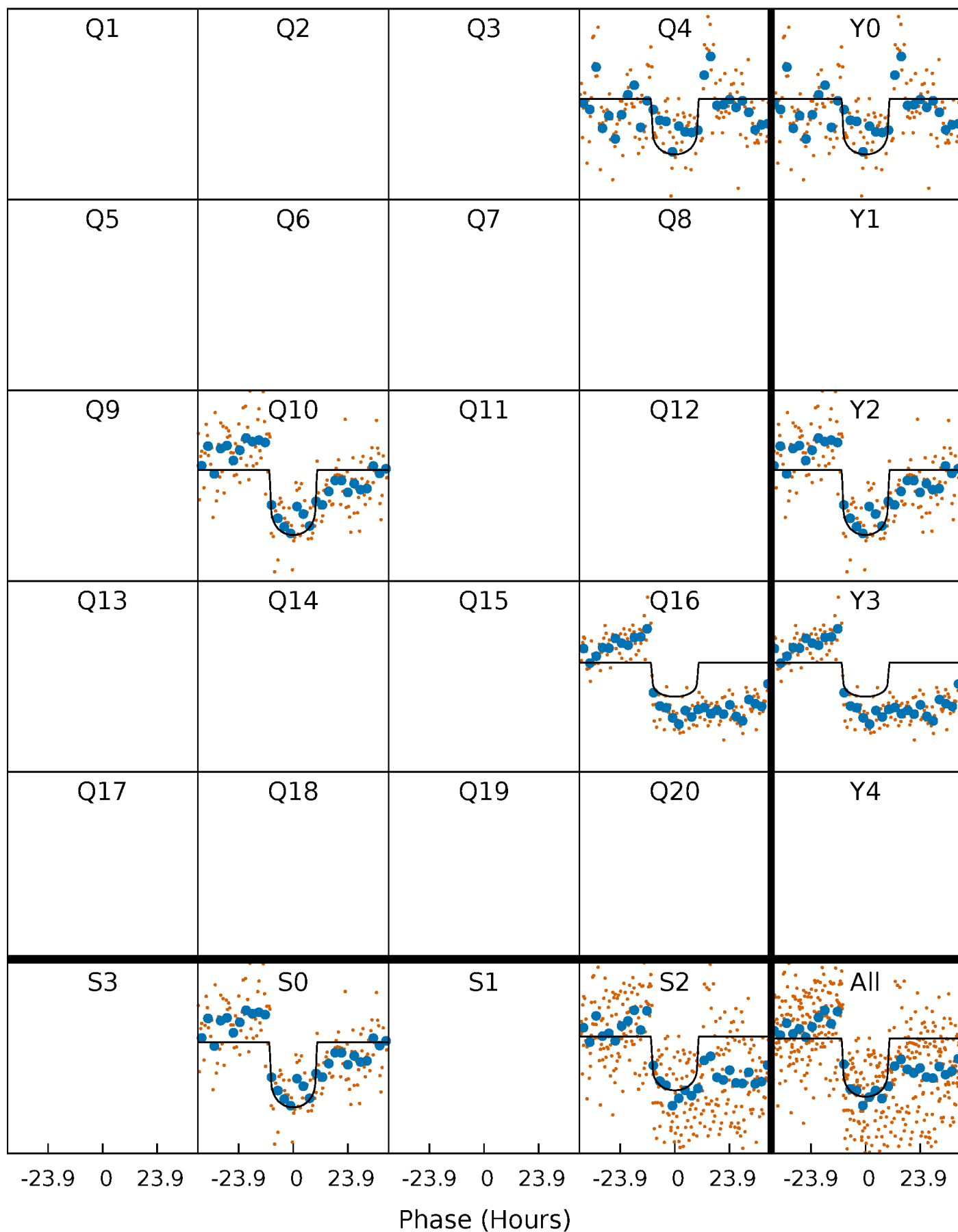
PDC Quarter-Phased Transit Curves

TCE 006048956-01 P=563.016460 Days $T_0=430.155740$ (BKJD)



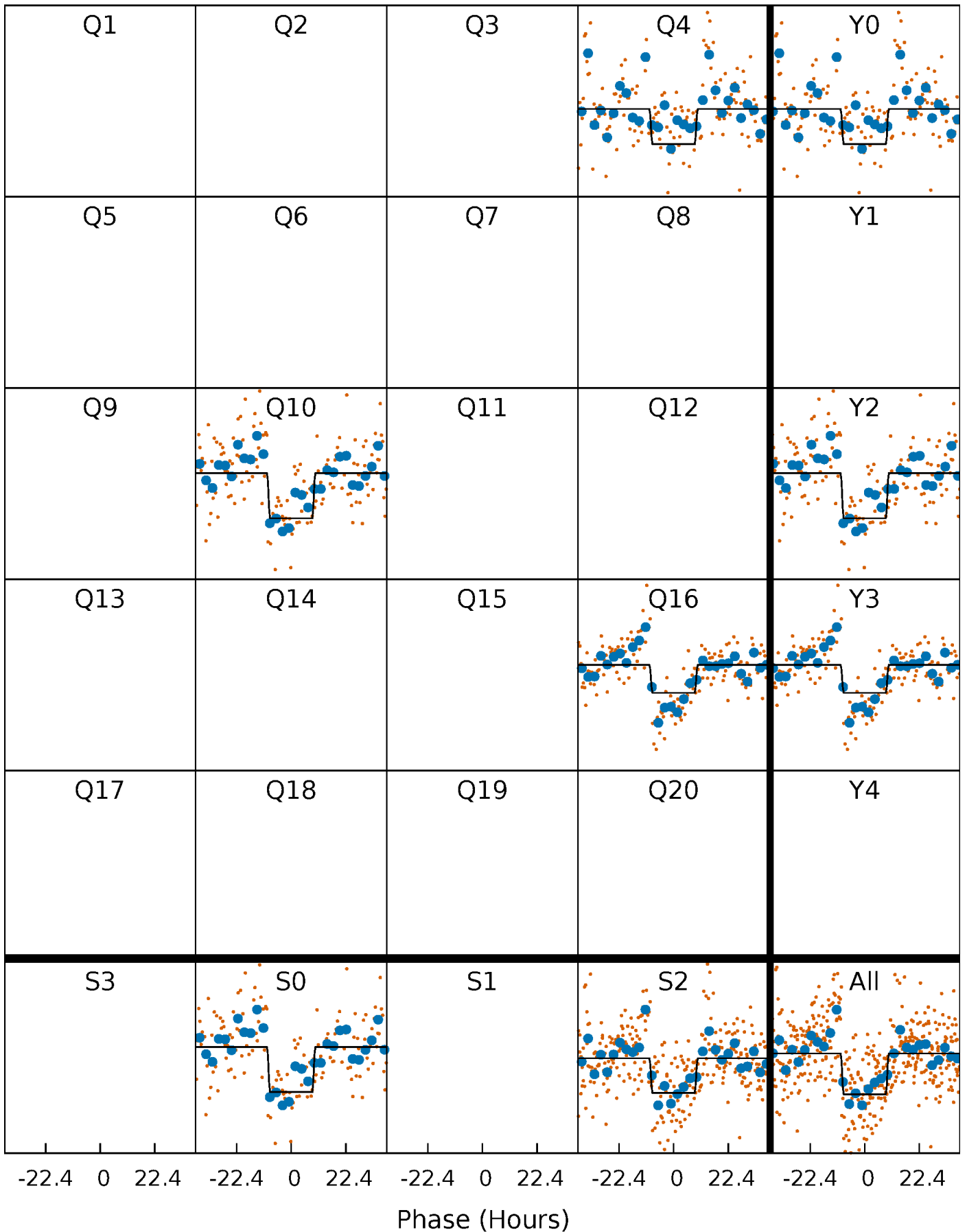
DV Quarter-Phased Transit Curves

TCE 006048956-01 P=563.016460 Days $T_0=430.155740$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

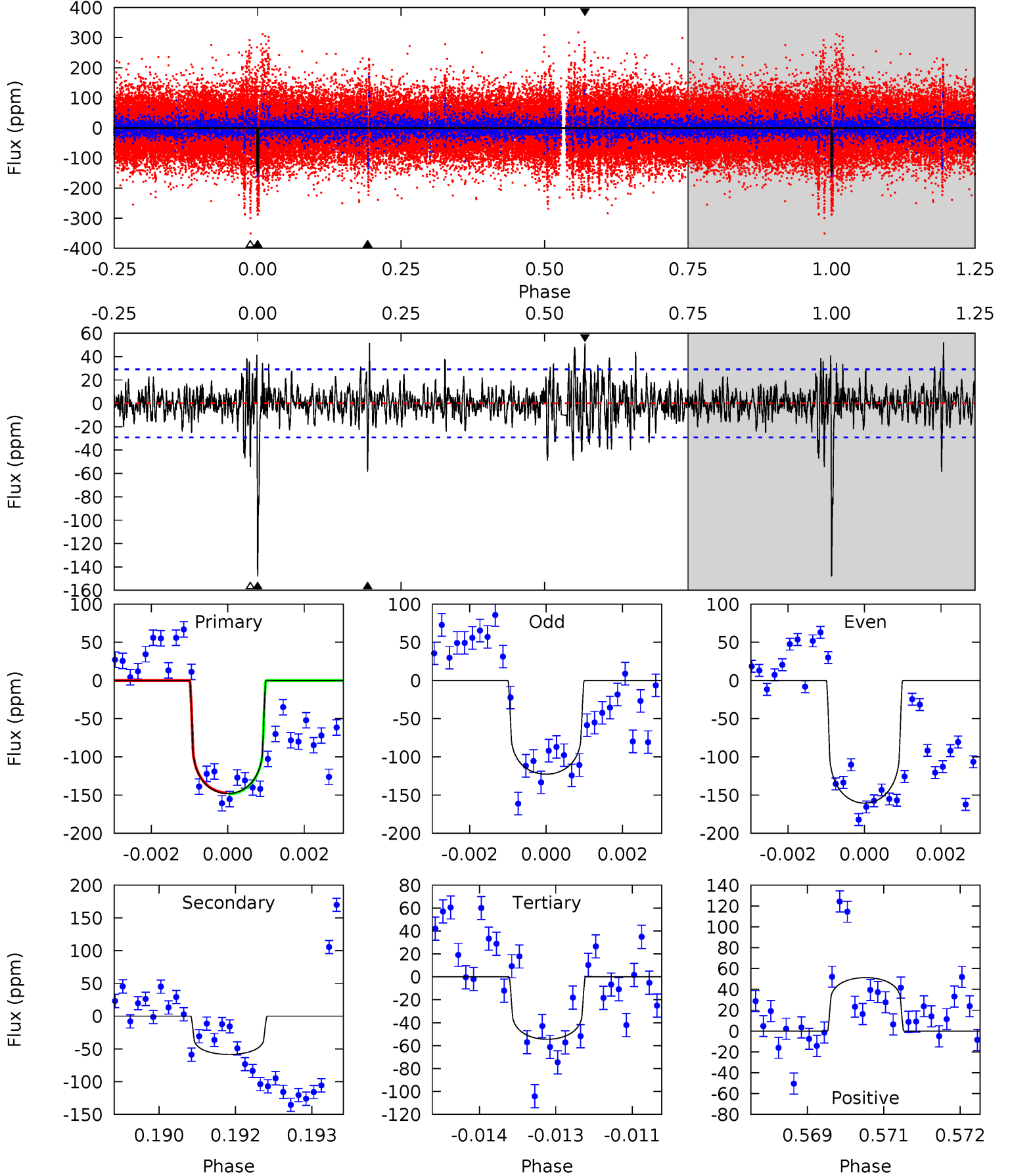
TCE 006048956-01 P=562.985445 Days $T_0=430.179905$ (BKJD)



DV Model-Shift Uniqueness Test

006048956-01, P = 563.016460 Days, E = 430.155740 Days

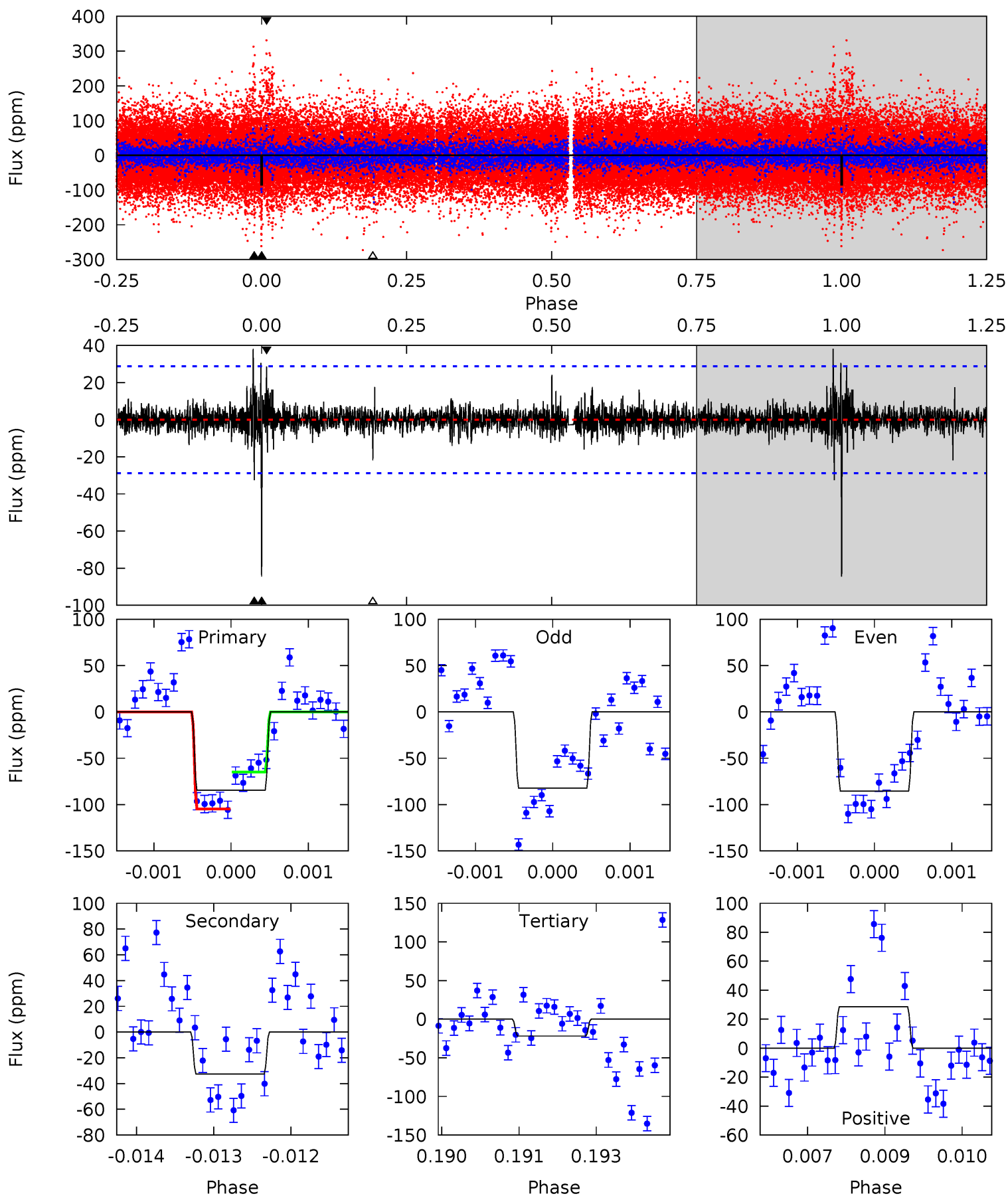
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.2	10.7	10.0	9.42	5.37	3.16	2.31	17.2	17.8	0.73	1.33	3.26	1.20	0.26	0.14



Alt Model-Shift Uniqueness Test

006048956-01, P = 562.985445 Days, E = 430.179905 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	6.08	4.08	5.36	5.39	3.18	0.82	11.7	10.4	2.00	0.73	0.30	1.02	0.31	3.71



Stellar Parameters For KIC 006048956

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	6187^{+156}_{-188}	$4.499^{+0.042}_{-0.157}$	$-0.320^{+0.250}_{-0.350}$	$0.937^{+0.204}_{-0.087}$	$1.011^{+0.111}_{-0.136}$	$1.732^{+0.361}_{-0.750}$
	+3%/-3%	+1%/-3%	+78%/-109%	+22%/-9%	+11%/-13%	+21%/-43%
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 006048956-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-58 ± 5	$1.28^{+0.21}_{-0.18}$	325^{+17}_{-14}	5006^{+307}_{-288}	34637^{+11590}_{-9065}
Alt.	-33 ± 5	$0.99^{+0.19}_{-0.17}$	326^{+16}_{-14}	4911^{+433}_{-327}	31258^{+15880}_{-9577}

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

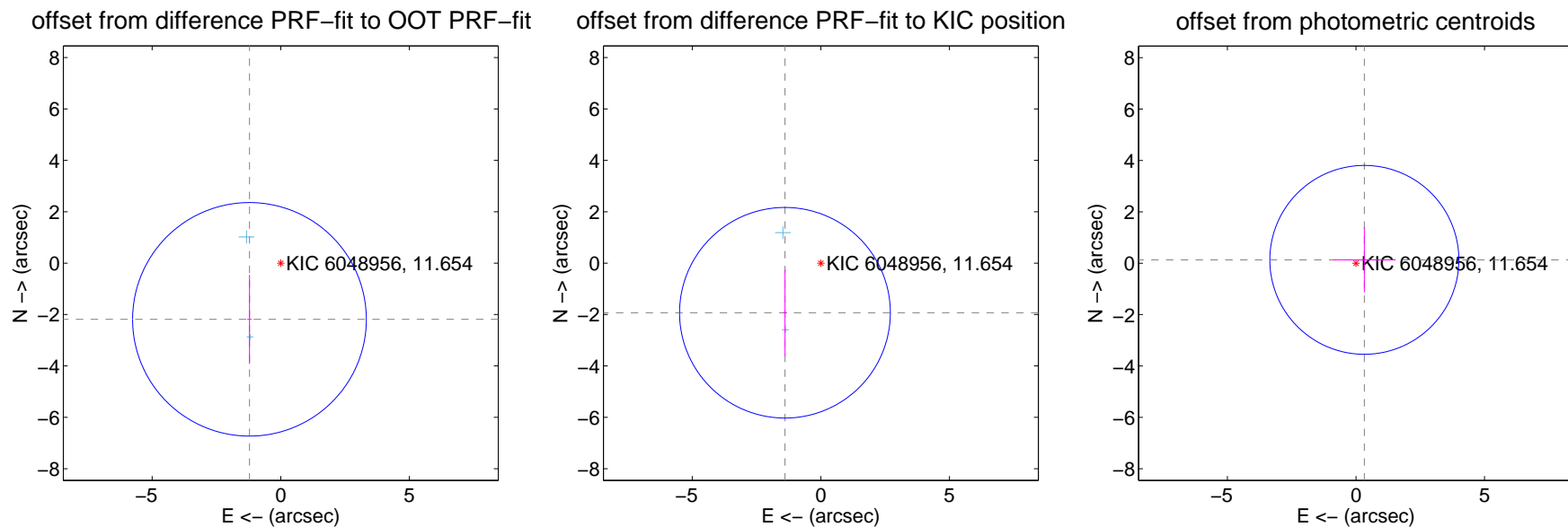
DV Centroid Data

Supplemental centroid analysis for 006048956-01. **Kepler magnitude: 11.65.** Transit SNR 12.81

There are 2 quarters with good PRF difference image offsets

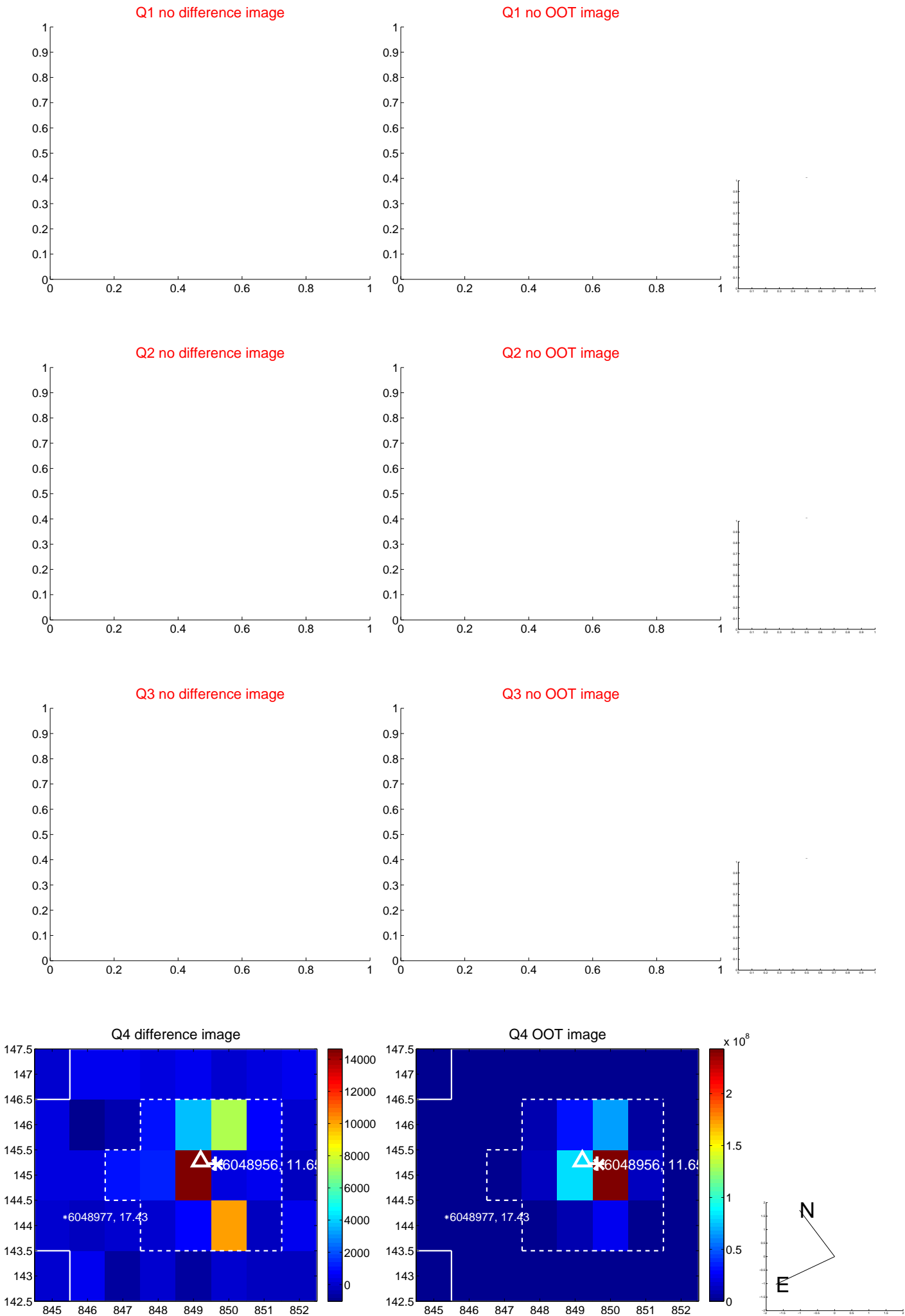
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.502 ± 1.514	1.65	1.216 ± 0.087	-2.186 ± 1.732
PRF-fit source offset from KIC position	2.383 ± 1.366	1.74	1.396 ± 0.076	-1.931 ± 1.684
photometric centroid source offset	0.35 ± 1.23	0.29	-0.33 ± 1.22	0.13 ± 1.27



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.

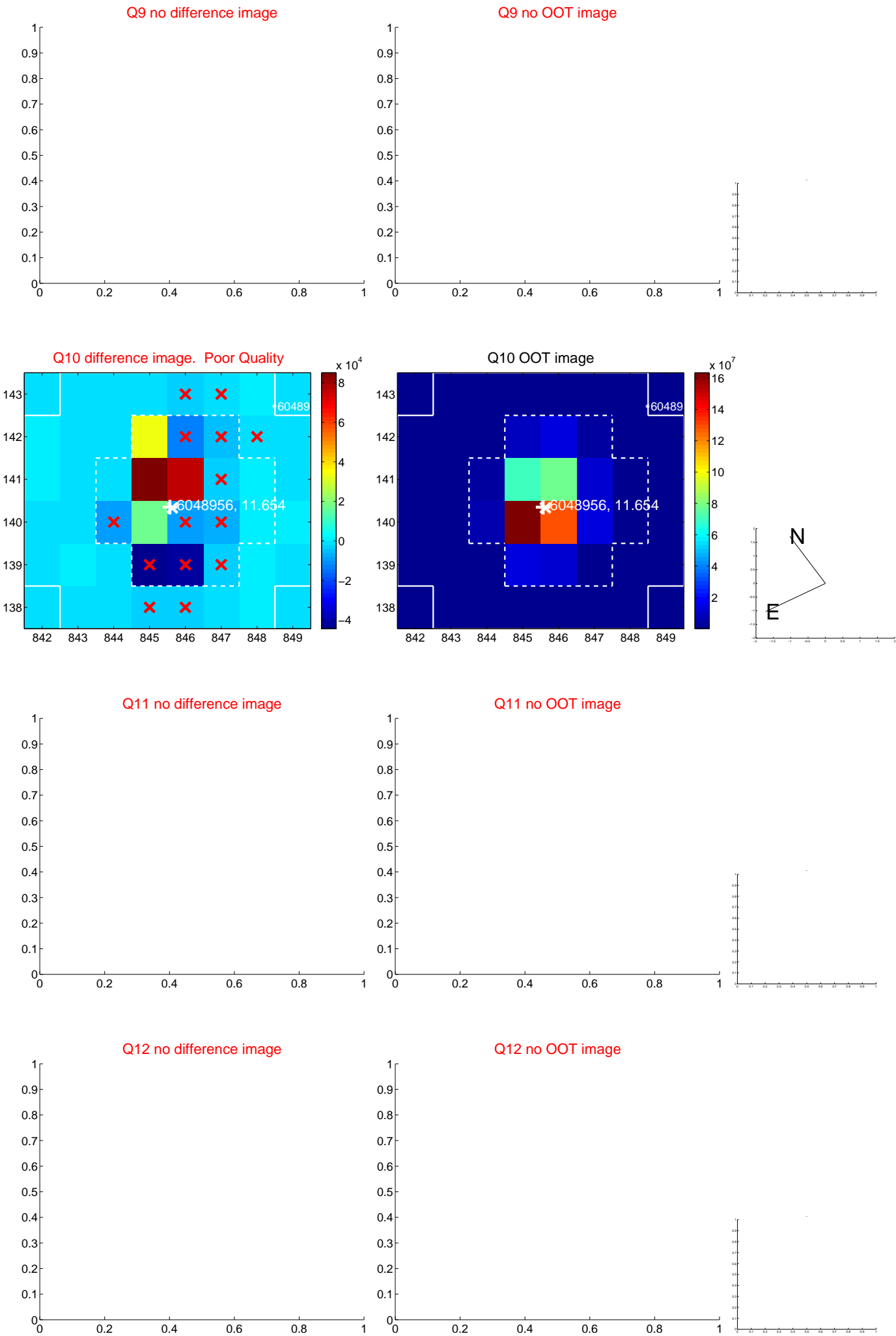
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



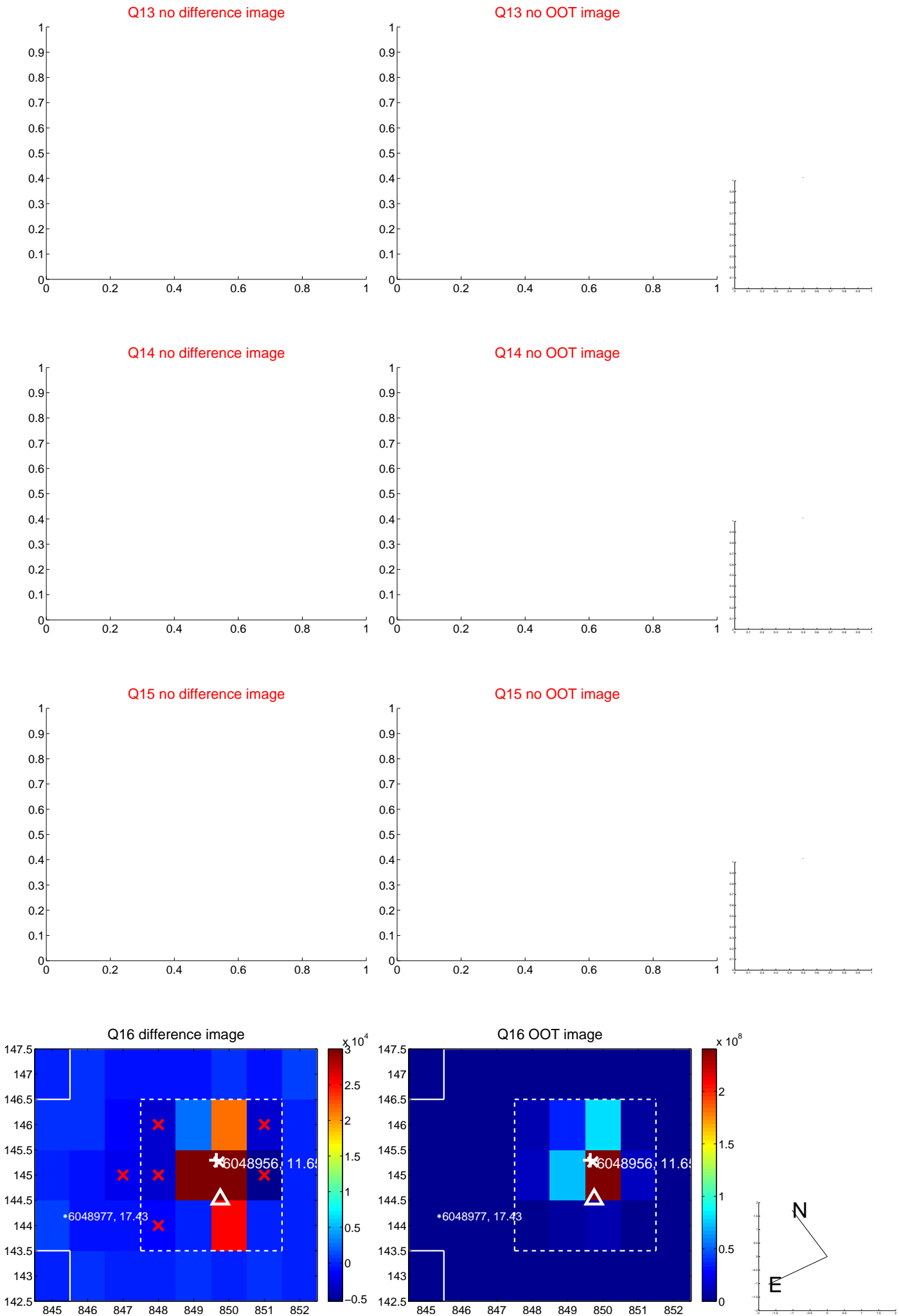
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



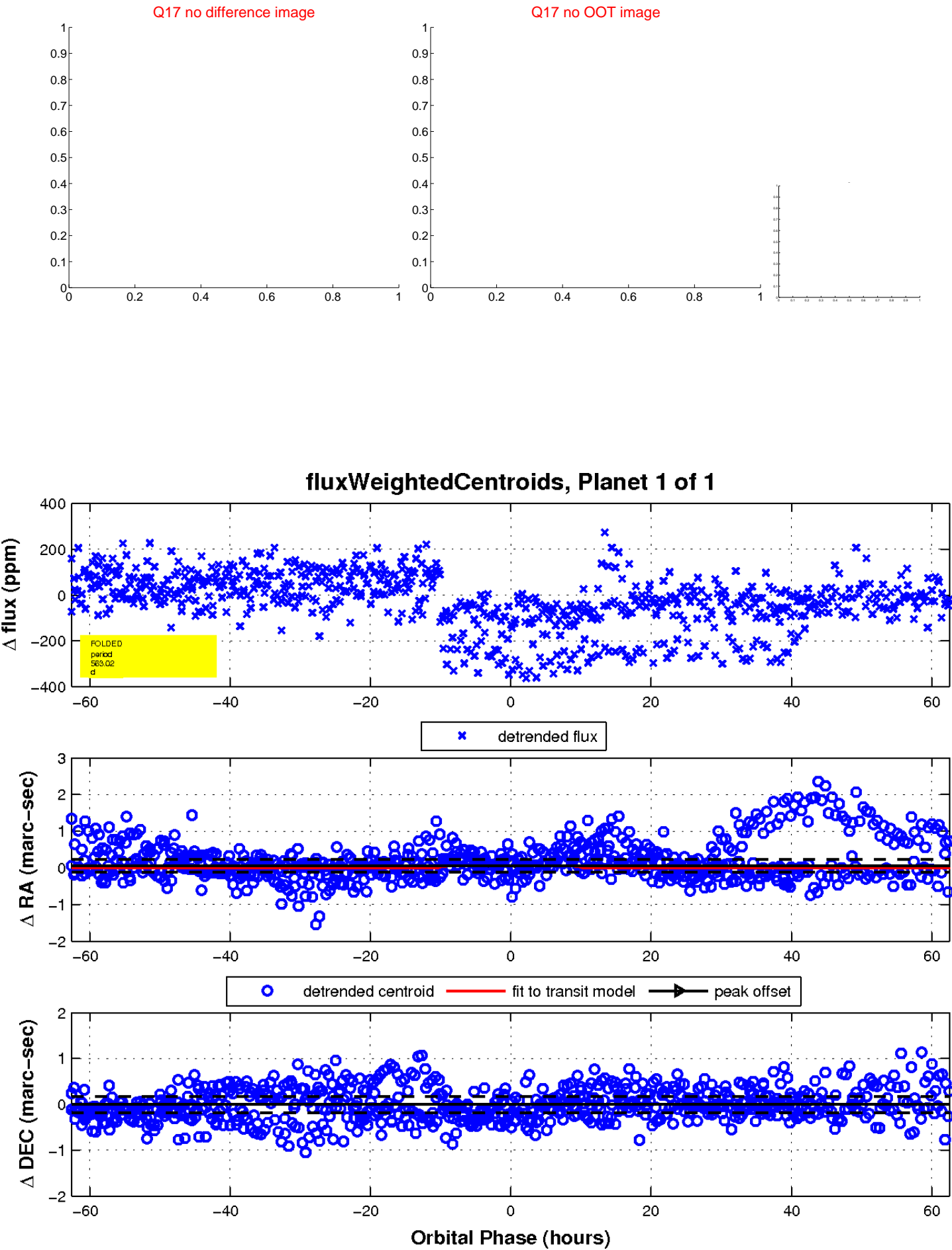
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

