

KIC 007818452

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})
007818452-01	OBS	No	227.021585	214.581143	1086.3	3.222	7.8	8.9	16.55	4878	66.82	124.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007818452-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE

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

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

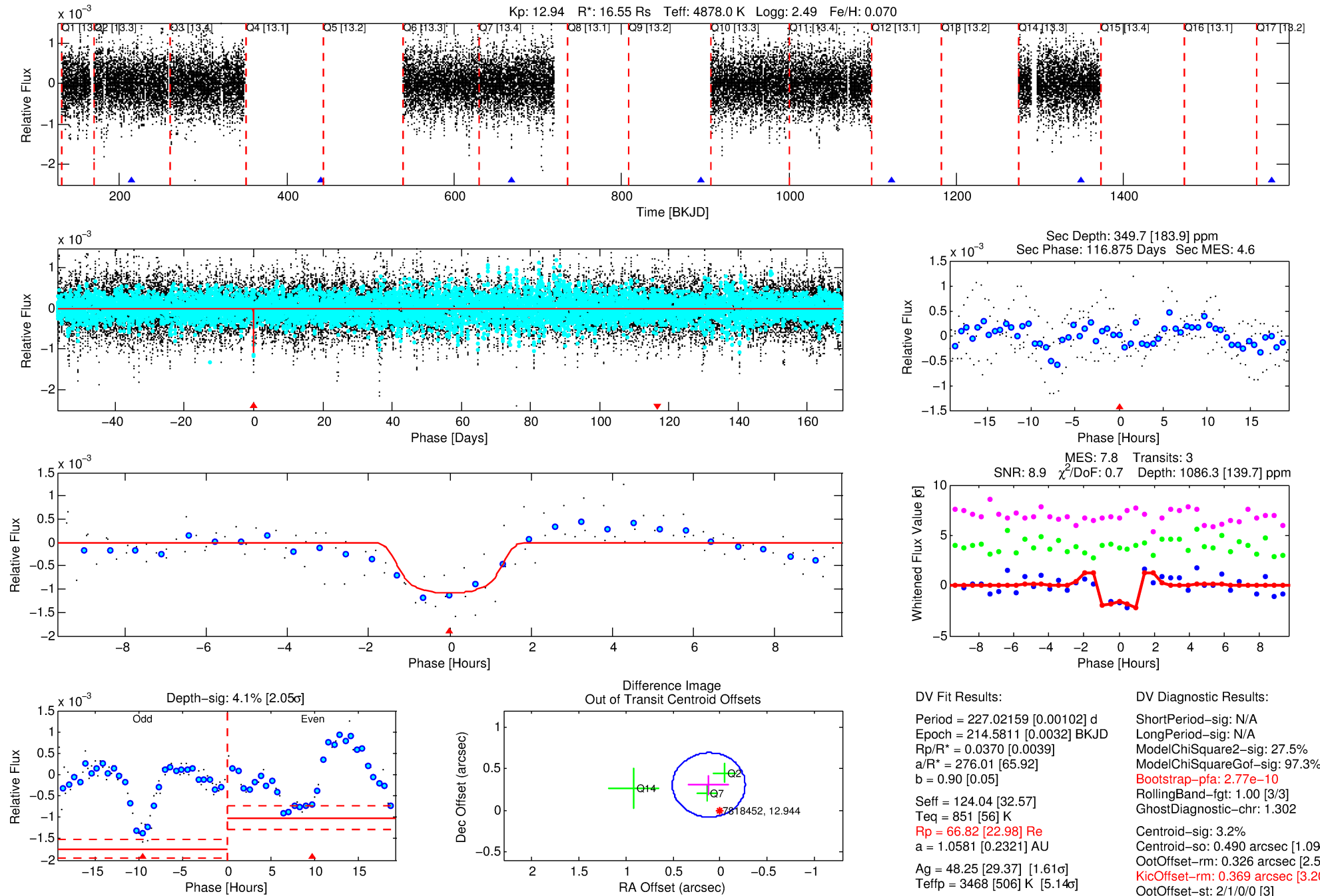
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007818452-01

No Significant Match Found

DV One-Page Summary

KIC: 7818452 Candidate: 1 of 1 Period: 227.022 d



DV Fit Results:

Period = 227.02159 [0.00102] d
Epoch = 214.5811 [0.0032] BKJD
Rp/R* = 0.0370 [0.0039]
a/R* = 276.01 [65.92]
b = 0.90 [0.05]
Seff = 124.04 [32.57]
Teff = 851 [56] K
Rp = 66.82 [22.98] Re
a = 1.0581 [0.2321] AU
Ag = 48.25 [29.37] [1.61 σ]
Teffp = 3468 [506] K [5.14 σ]

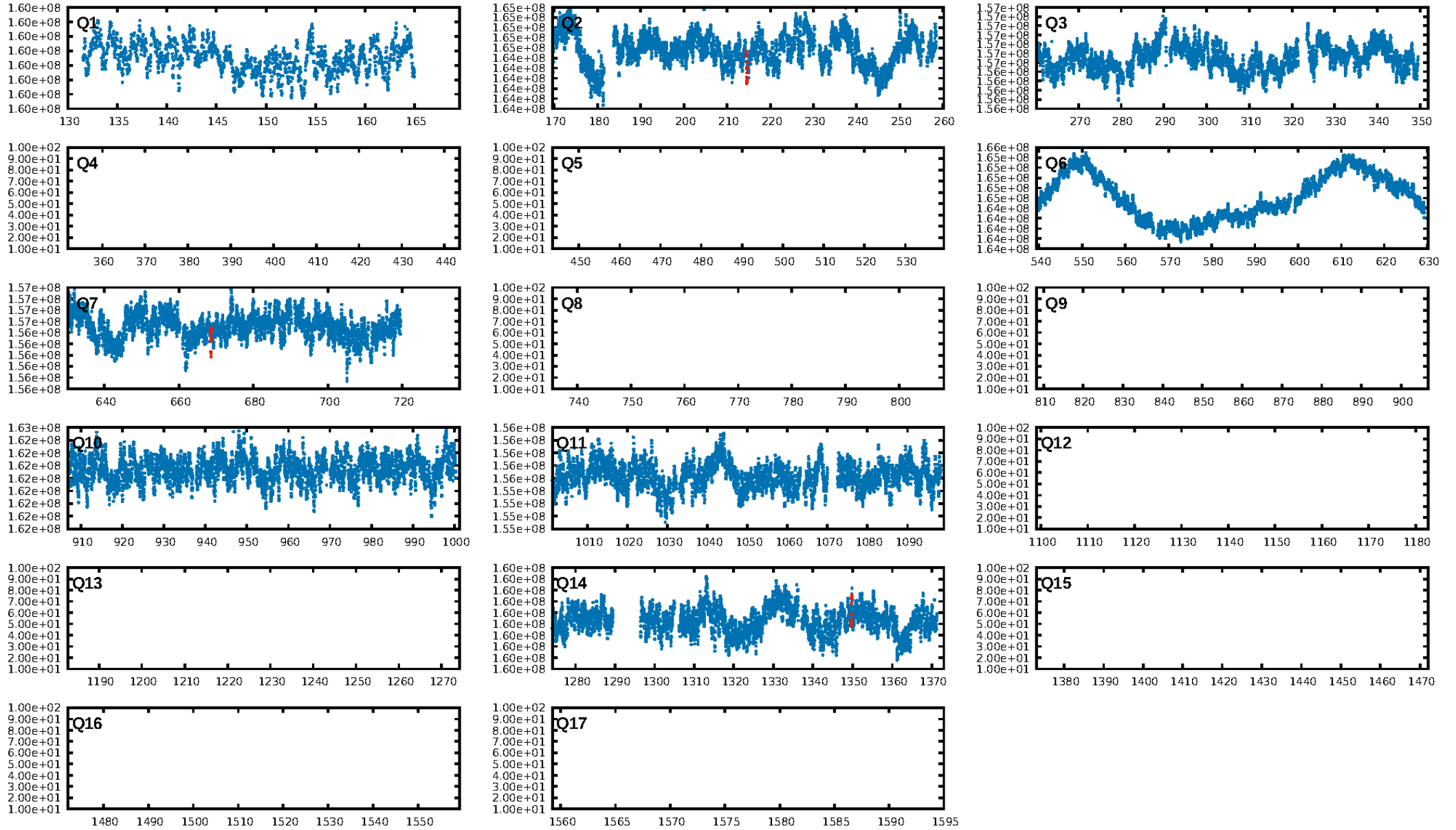
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 27.5%
ModelChiSquareGof-sig: 97.3%
Bootstrap-pfa: 2.77e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.302
Centroid-sig: 3.2%
Centroid-so: 0.490 arcsec [1.09 σ]
OotOffset-rm: 0.326 arcsec [2.53 σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-rm: 0.369 arcsec [3.20 σ]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

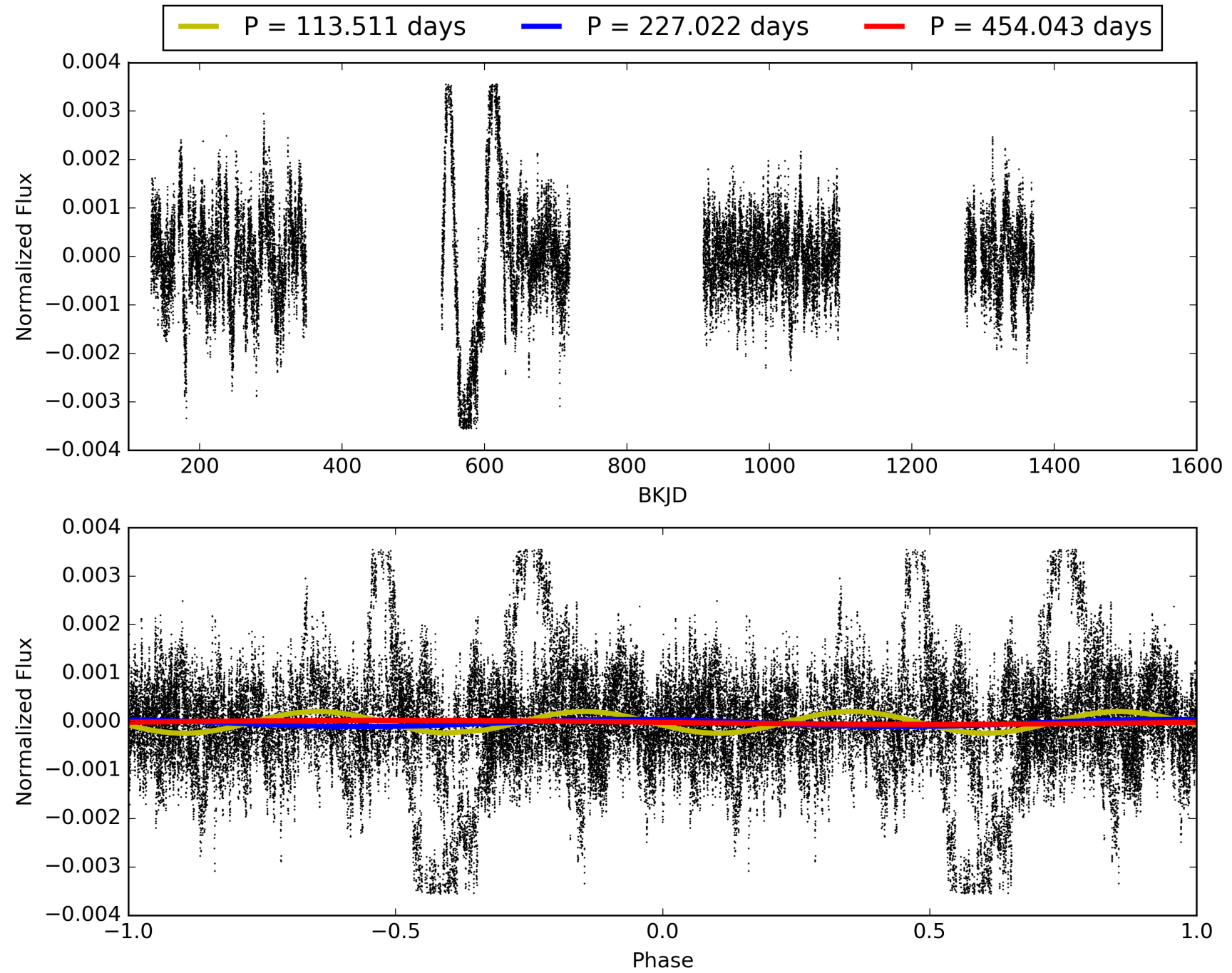
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:08:51 Z

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

TCE 007818452-01, PDC Light Curves

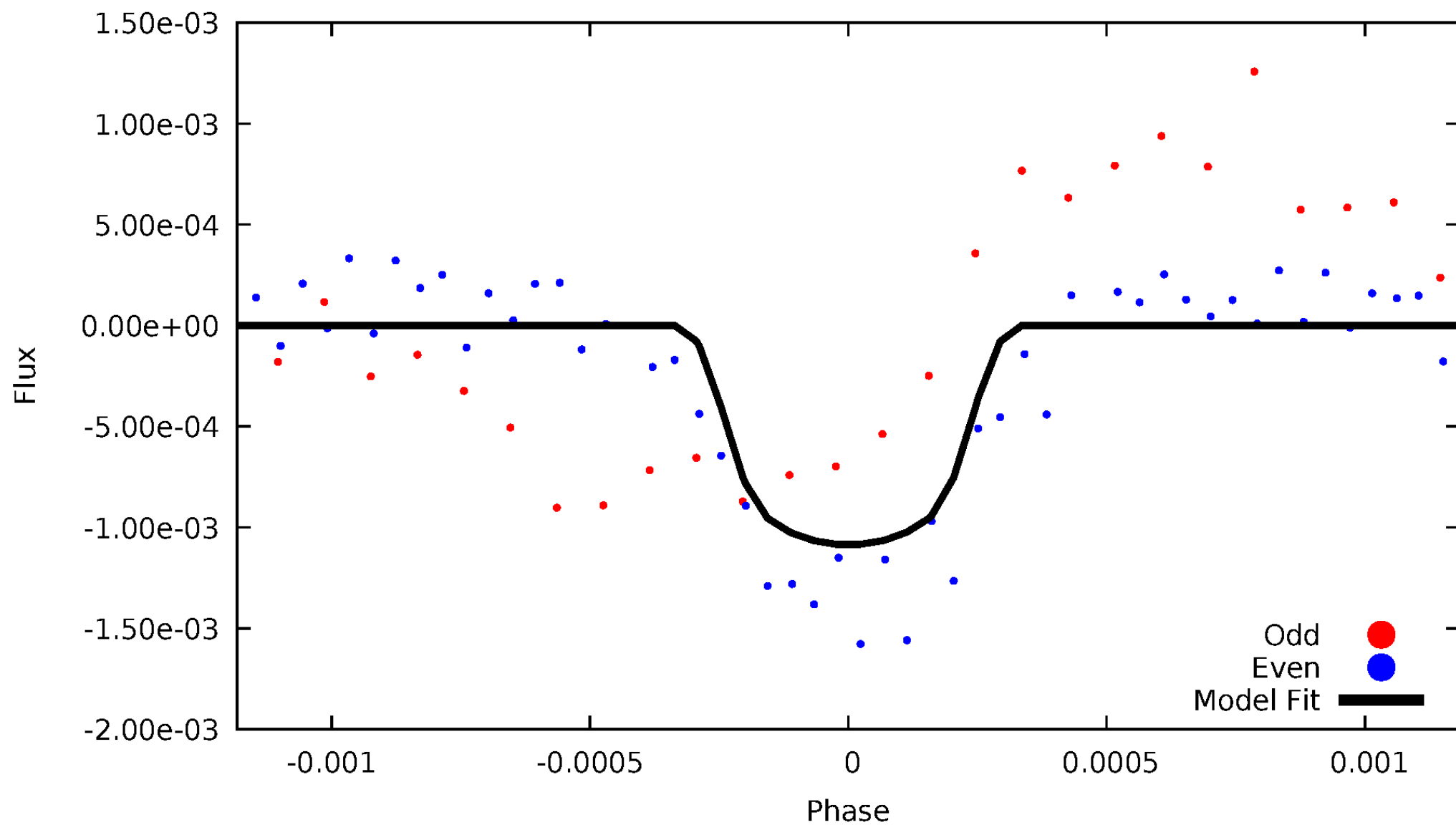


TCE 007818452-01



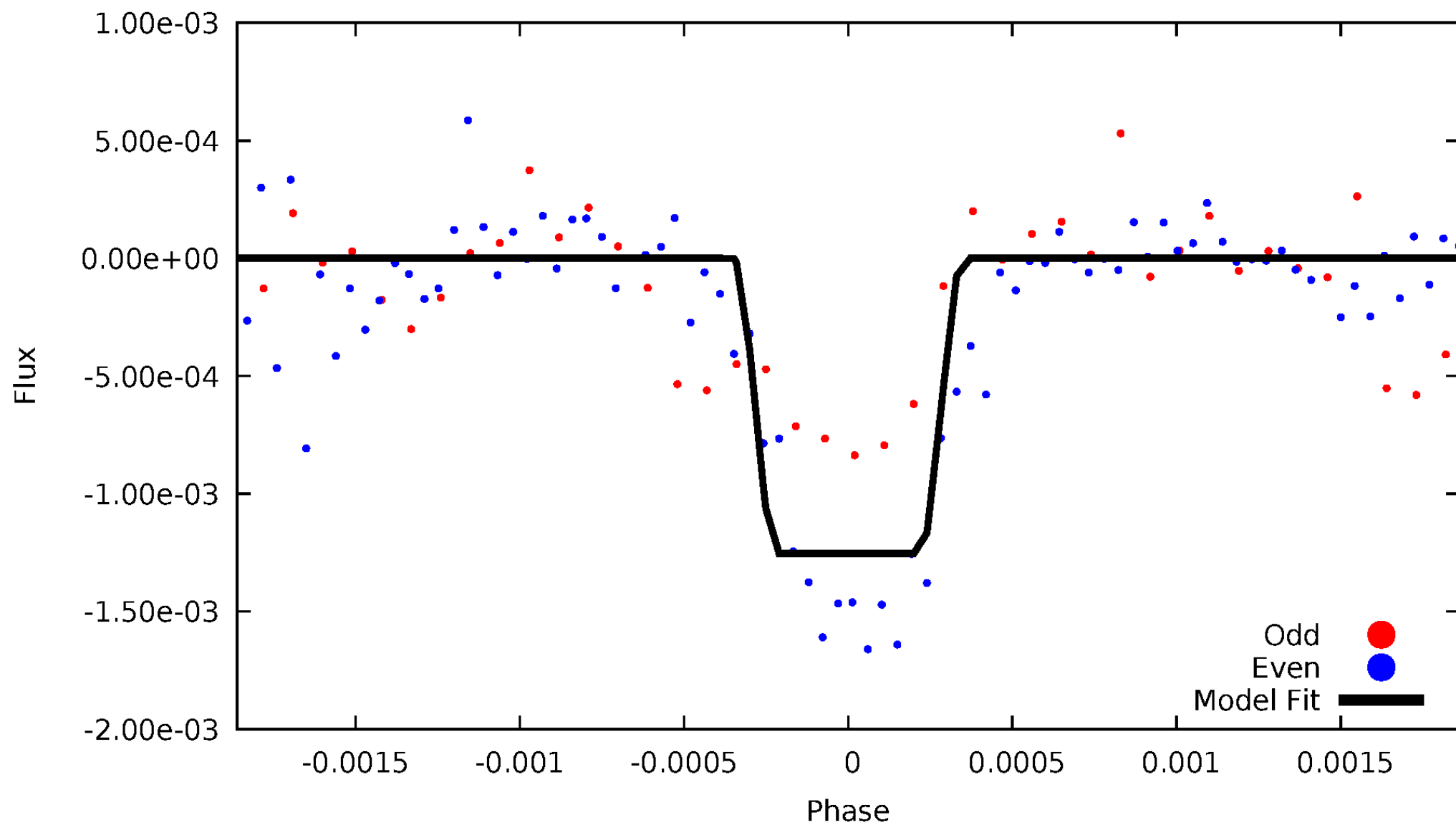
DV Odd/Even

TCE 007818452-01



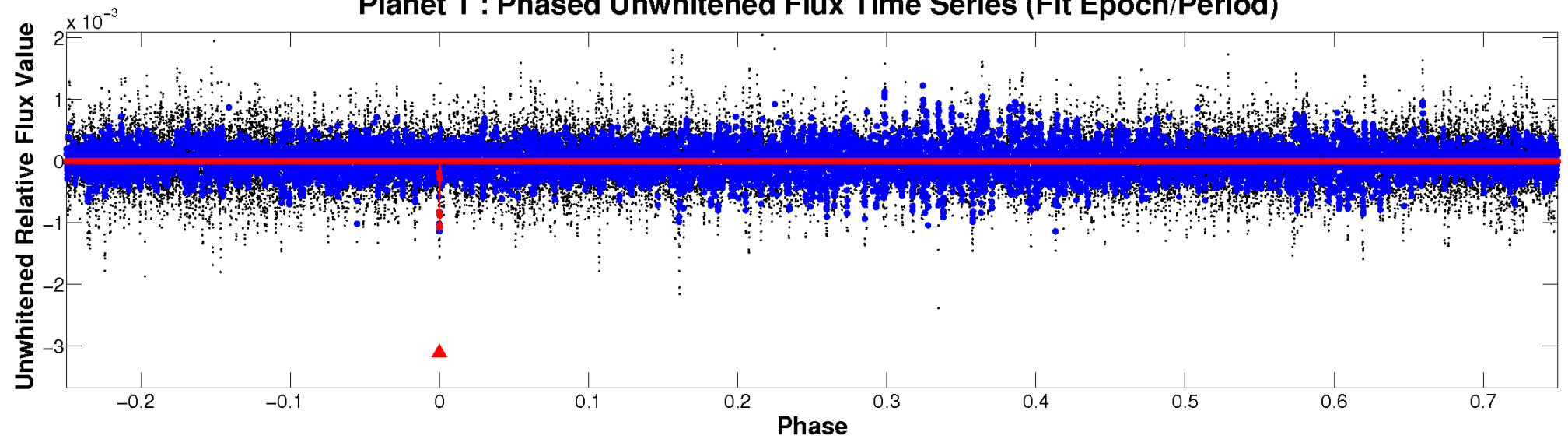
ALT Odd/Even

TCE 007818452-01

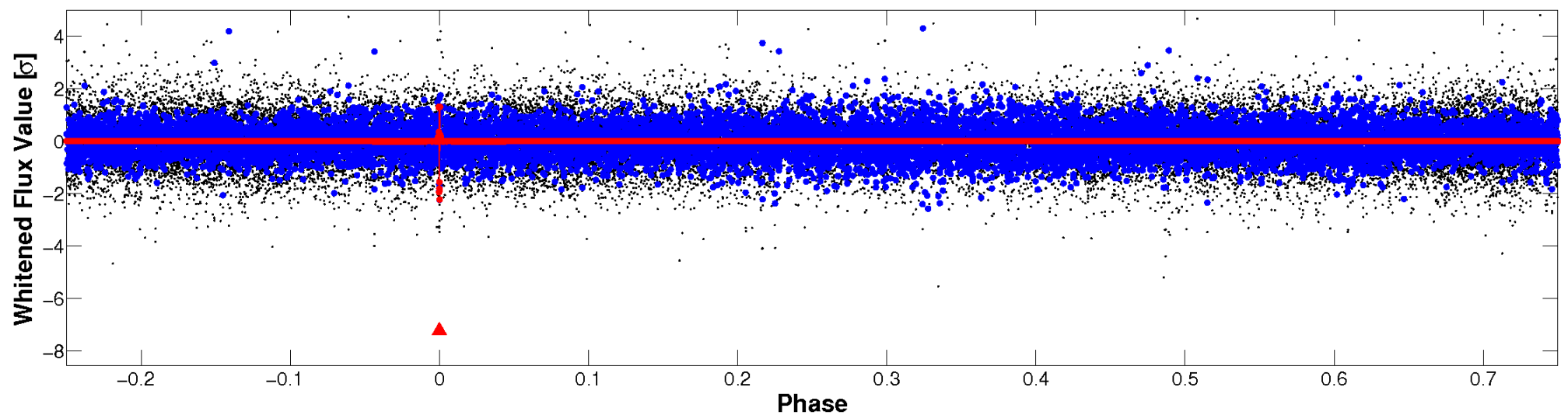


Non-Whitened Vs. Whitened Light Curve

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

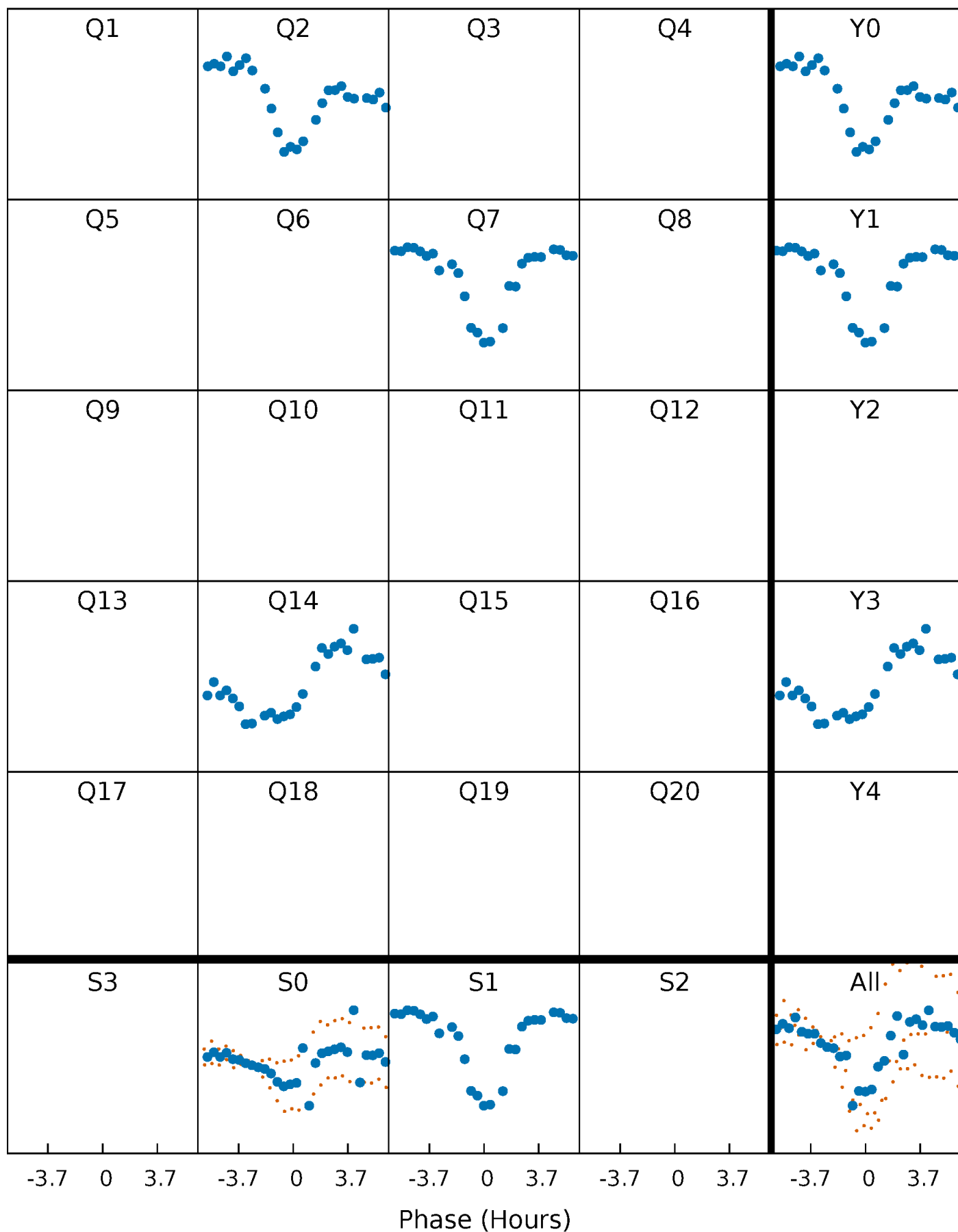


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



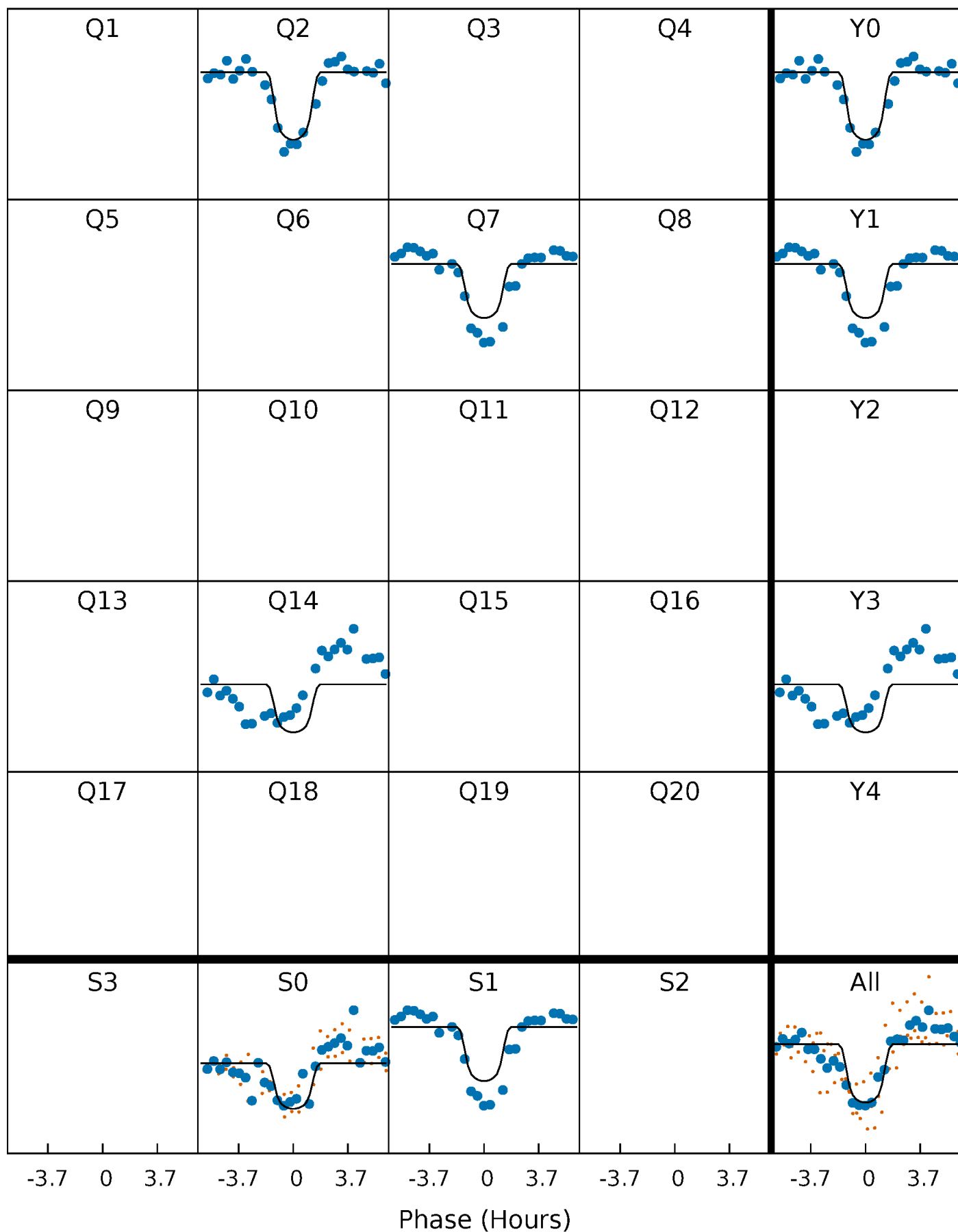
PDC Quarter-Phased Transit Curves

TCE 007818452-01 P=227.021585 Days $T_0=214.581143$ (BKJD)



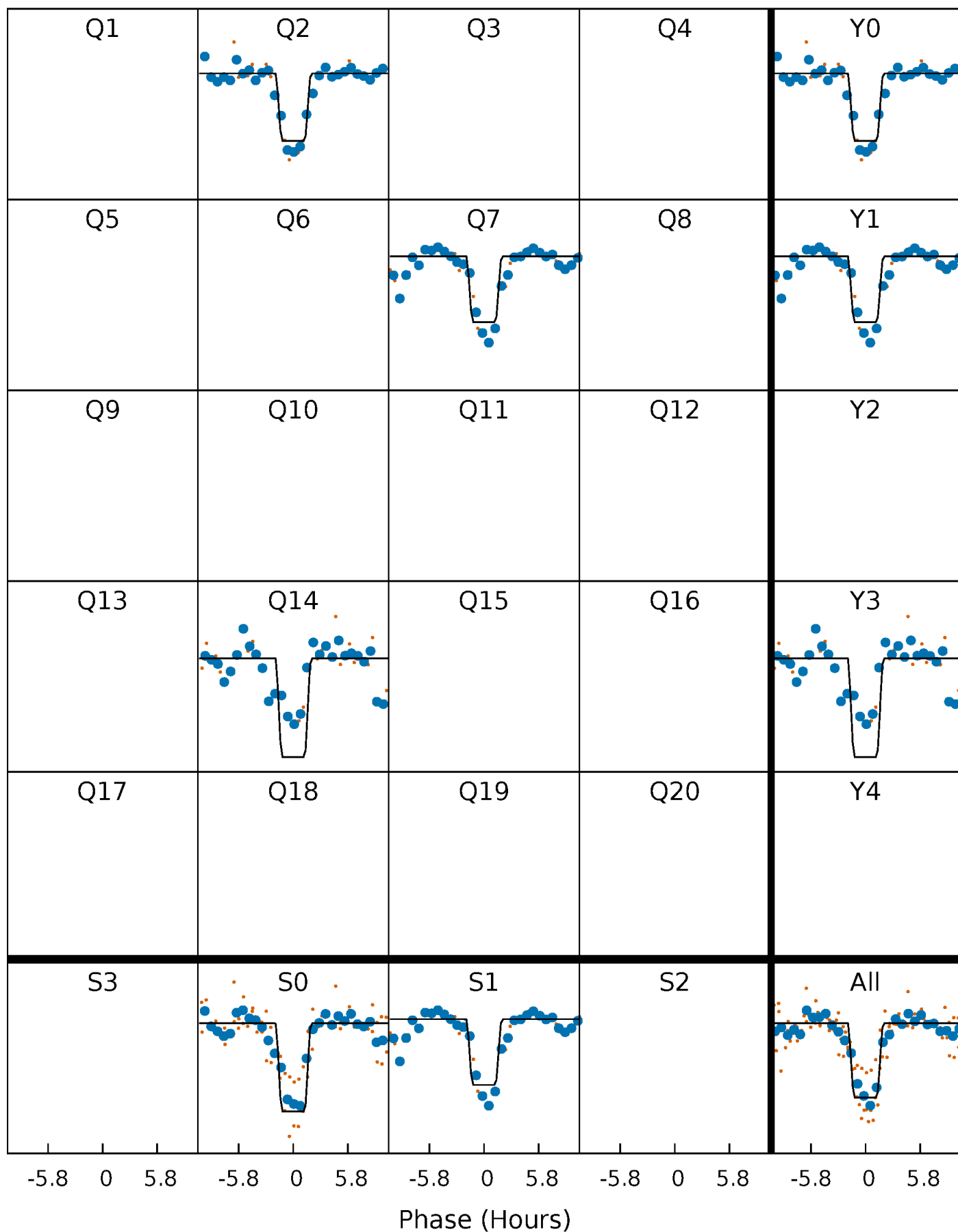
DV Quarter-Phased Transit Curves

TCE 007818452-01 P=227.021585 Days $T_0=214.581143$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

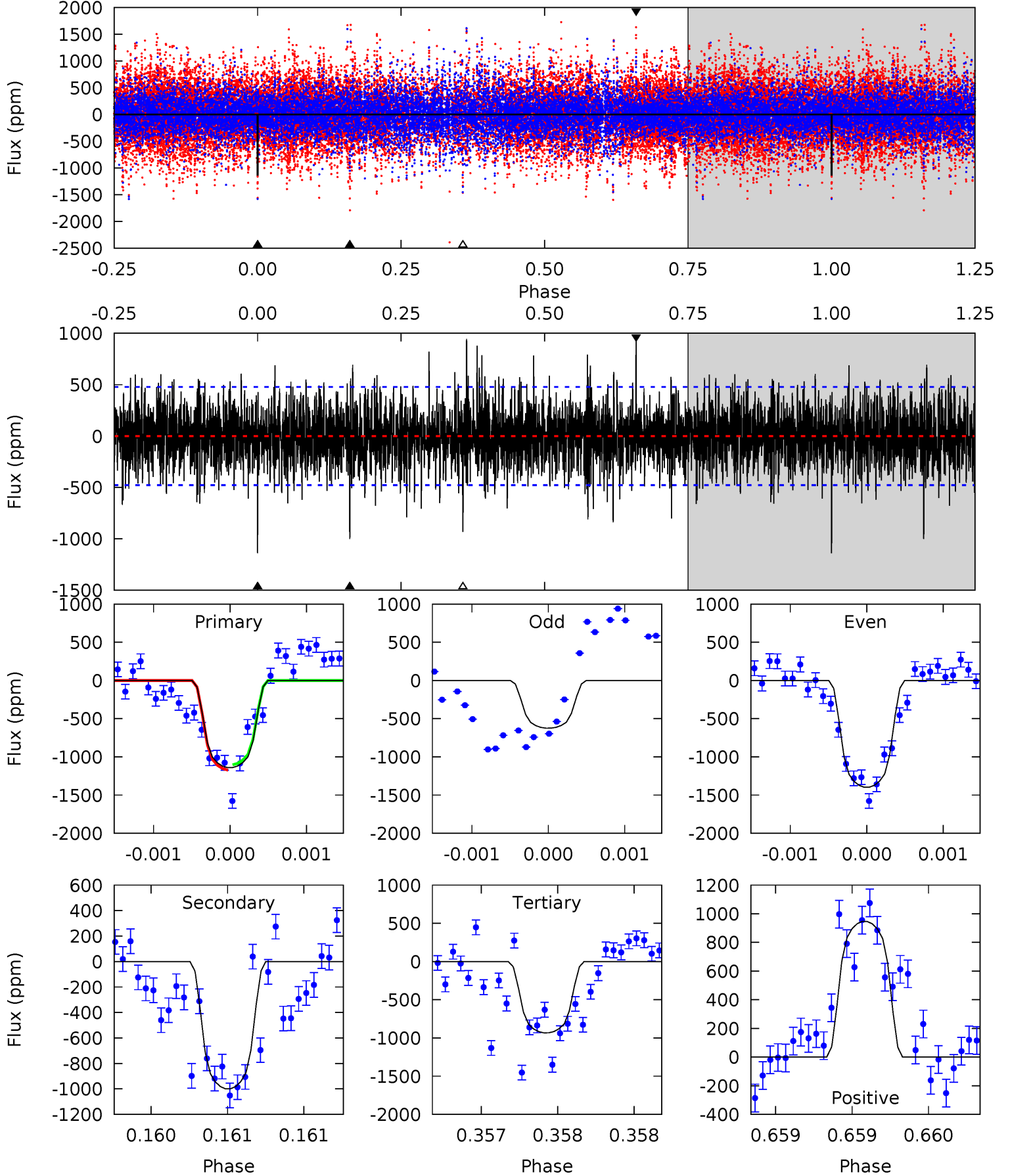
TCE 007818452-01 P=227.021011 Days $T_0=214.574181$ (BKJD)



DV Model-Shift Uniqueness Test

007818452-01, P = 227.021585 Days, E = 214.581143 Days

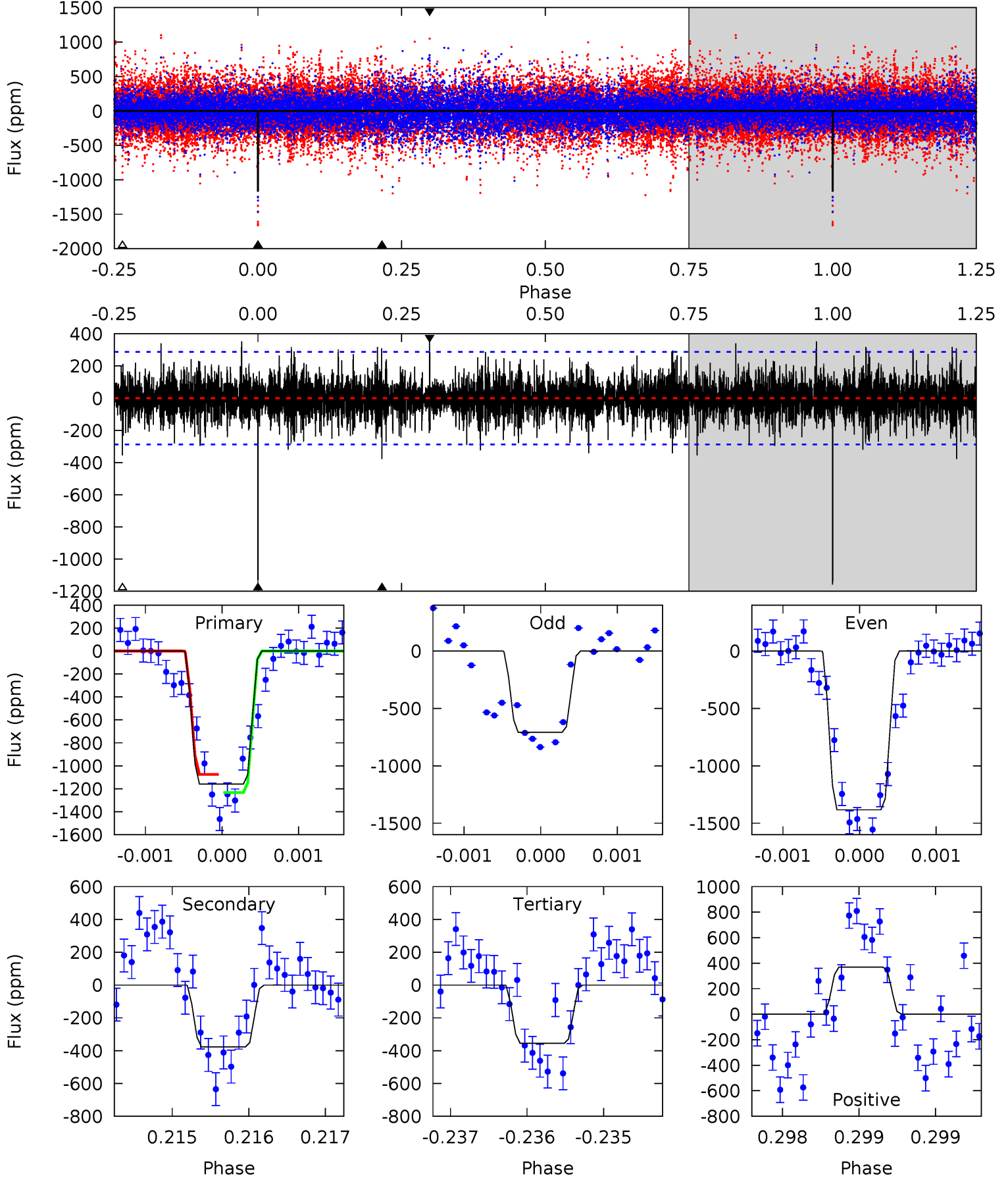
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	11.6	10.8	10.9	5.52	3.40	2.58	2.40	2.24	0.77	0.61	4.38	0.93	0.45	0.40



Alt Model-Shift Uniqueness Test

007818452-01, P = 227.021011 Days, E = 214.574181 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.2	7.22	6.81	7.08	5.51	3.38	1.73	15.4	15.1	0.41	0.14	6.03	0.85	0.24	1.51



Stellar Parameters For KIC 007818452

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4878^{+60}_{-169}	$2.487^{+0.030}_{-0.025}$	$0.070^{+0.050}_{-0.350}$	$16.546^{+0.956}_{-5.415}$	$3.064^{+0.290}_{-1.646}$	$0.001^{+0.001}_{-0.000}$
	+1%/-3%	+1%/-1%	+71%/-500%	+6%/-33%	+9%/-54%	+56%/-10%
Source	SPE74	AST9	SPE74	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007818452-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-999 ± 86	$68.05^{+7.99}_{-9.02}$	1188^{+24}_{-46}	4537^{+246}_{-209}	136^{+42}_{-26}
Alt.	-376 ± 52	$64.69^{+8.26}_{-7.92}$	1187^{+24}_{-42}	3853^{+194}_{-193}	56^{+18}_{-13}

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 $A_{obs} \gg 1.0$

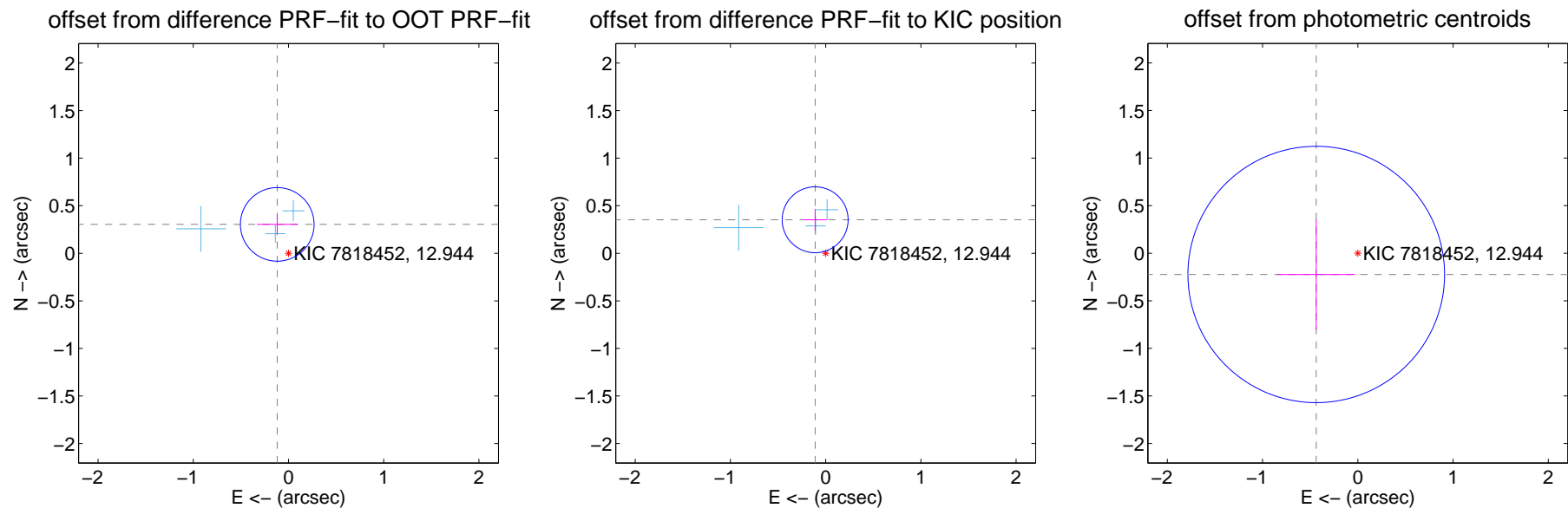
DV Centroid Data

Supplemental centroid analysis for 007818452-01. Kepler magnitude: 12.94. Transit SNR 8.86

There are 3 quarters with good PRF difference image offsets

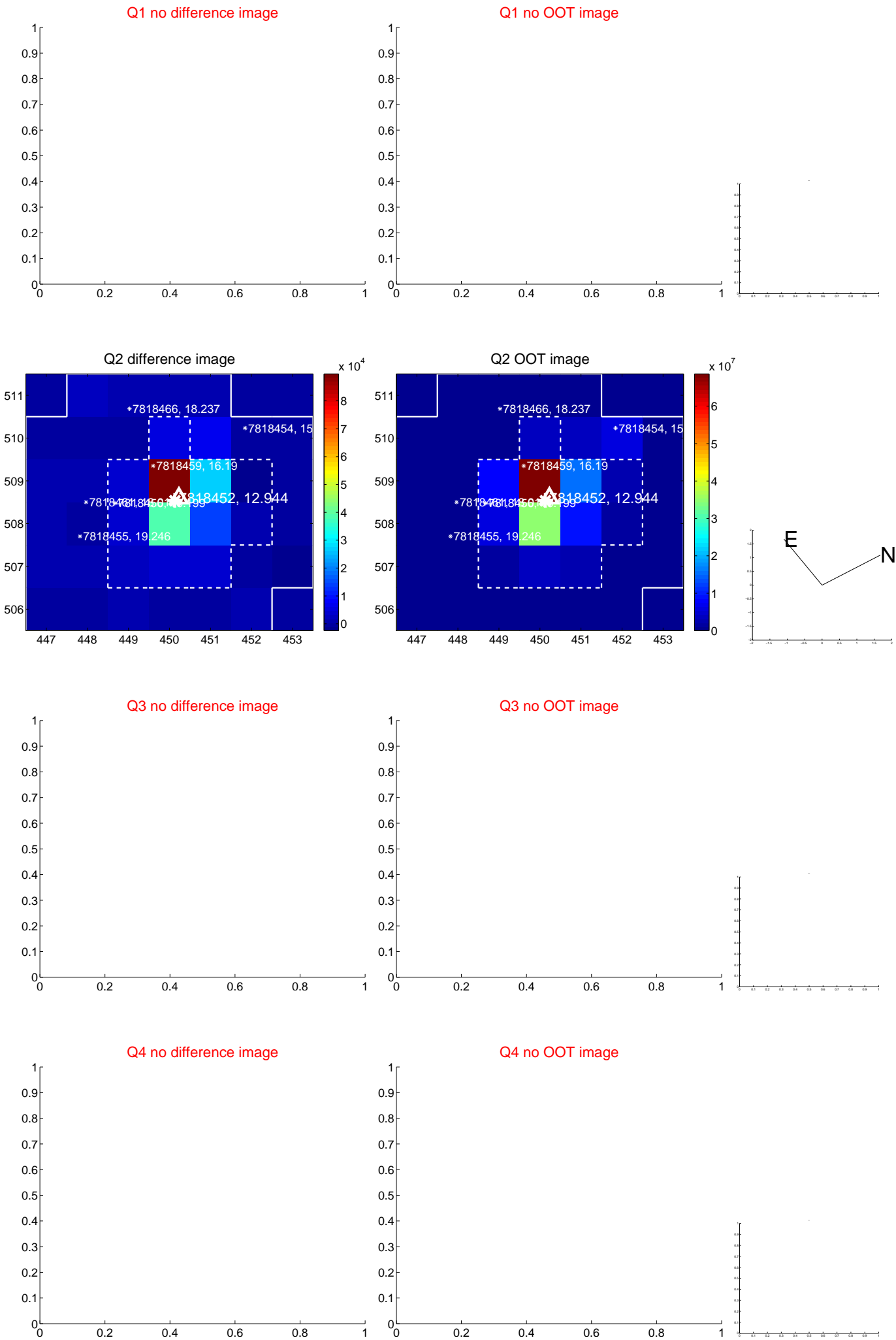
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.326 ± 0.129	2.53	0.118 ± 0.214	0.304 ± 0.111
PRF-fit source offset from KIC position	0.369 ± 0.115	3.20	0.110 ± 0.121	0.352 ± 0.115
photometric centroid source offset	0.49 ± 0.45	1.09	0.44 ± 0.41	-0.22 ± 0.58

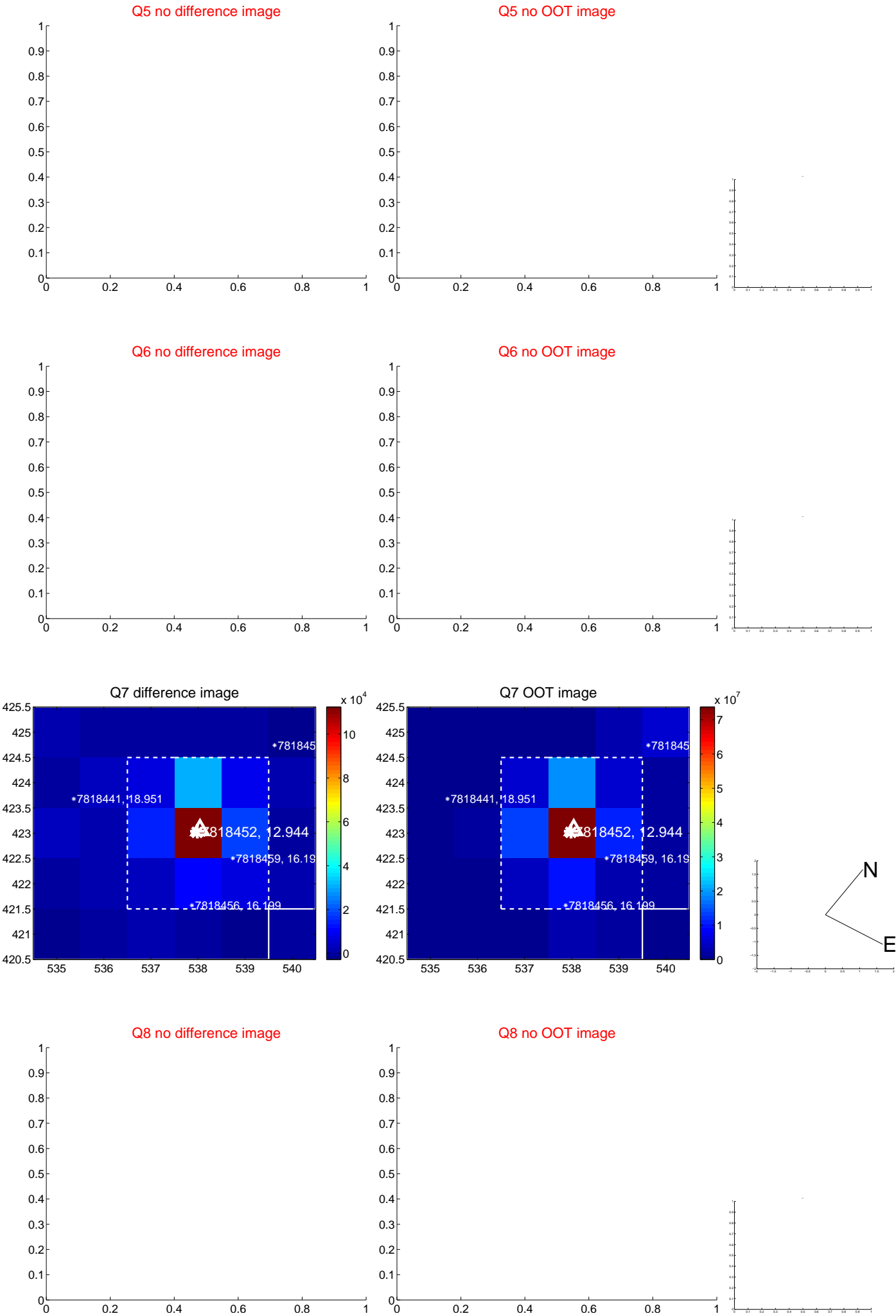


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



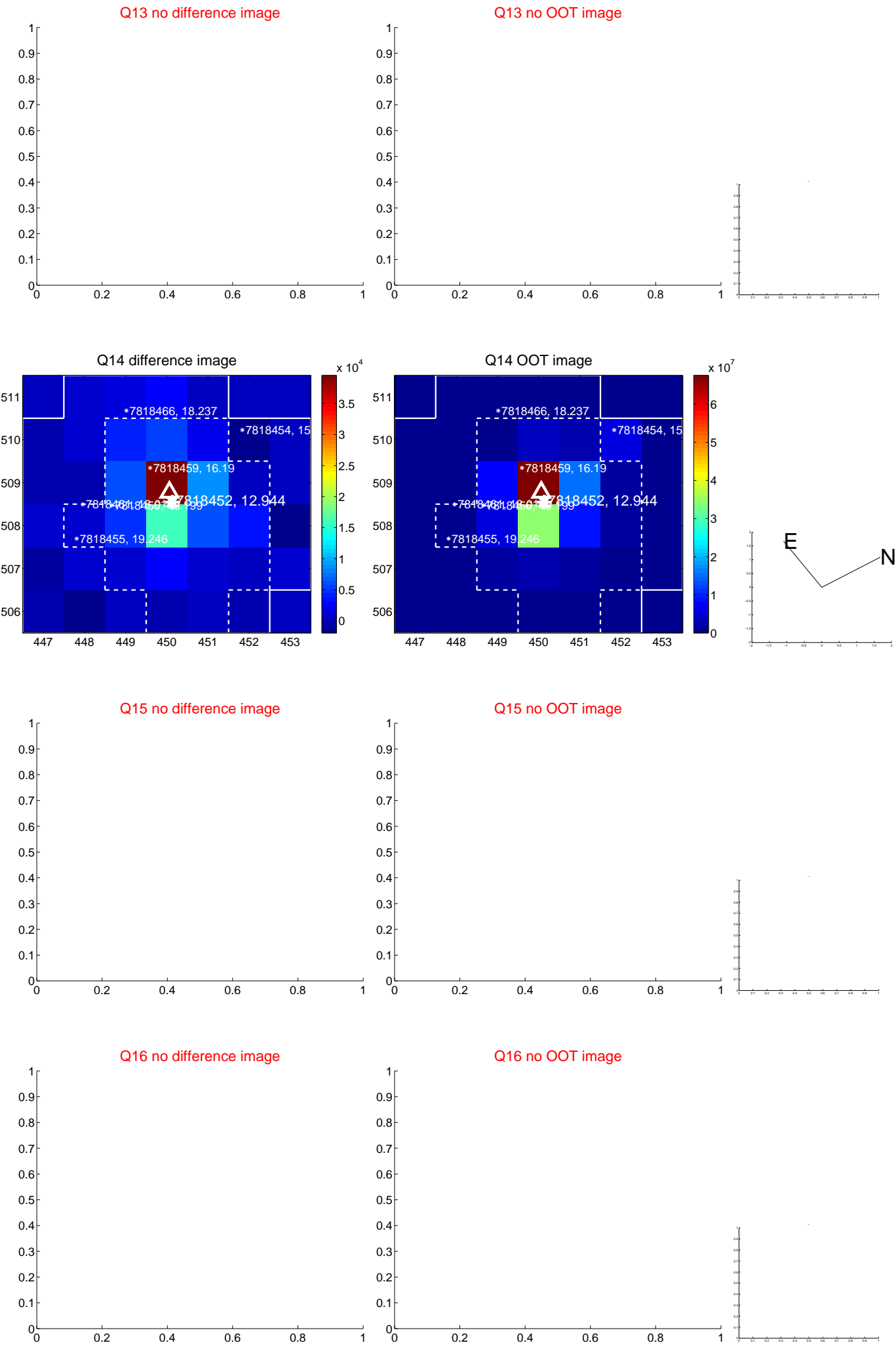
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



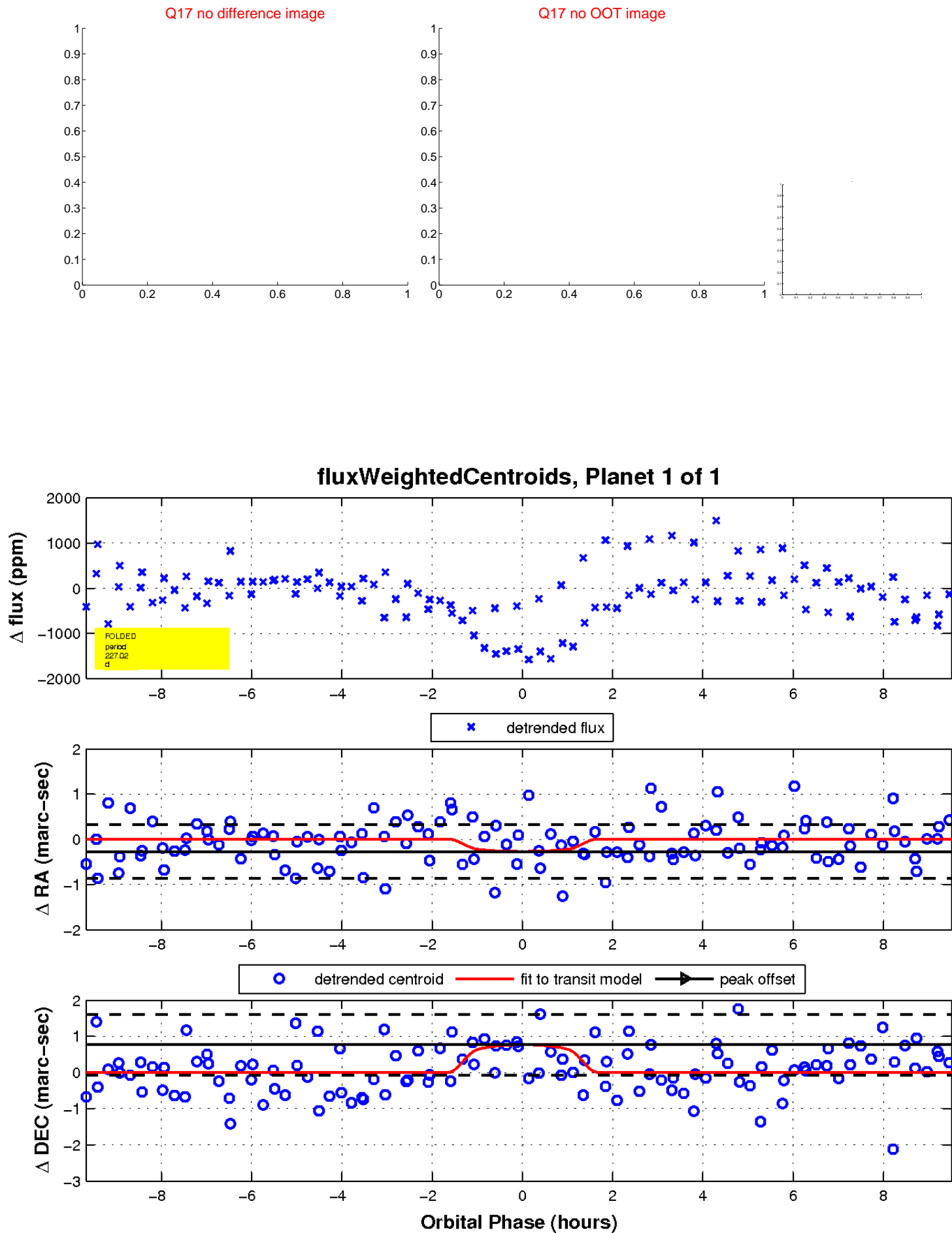
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

