

KIC 010854403

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})
010854403-01	OBS	No	391.399520	361.463365	124.6	10.714	11.1	9.6	1.10	6455	1.40	1.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010854403-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—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.

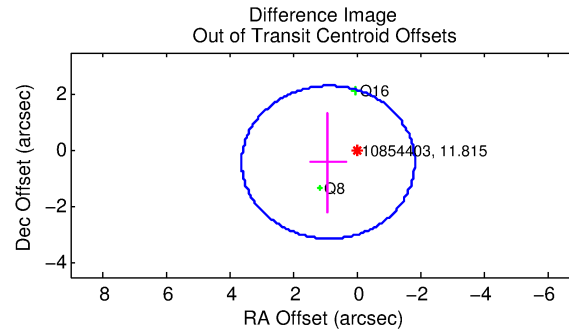
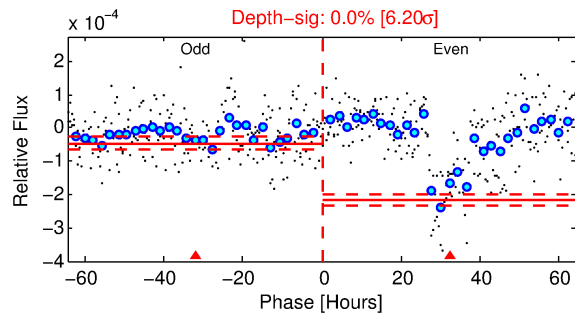
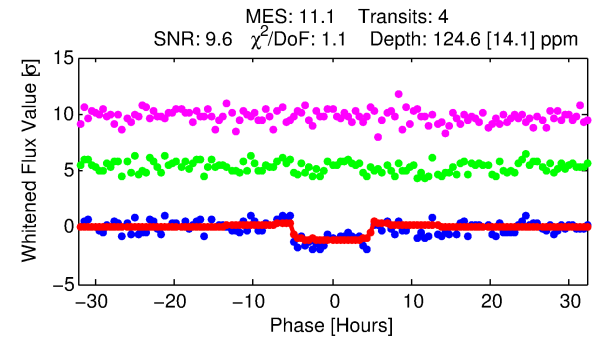
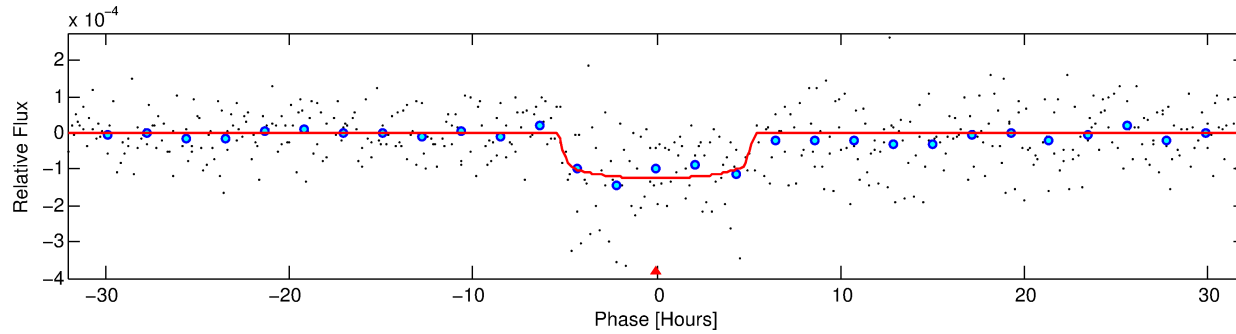
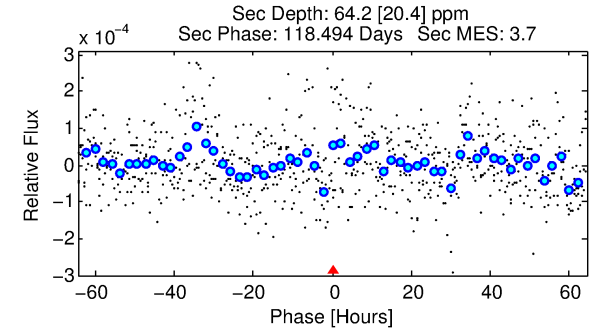
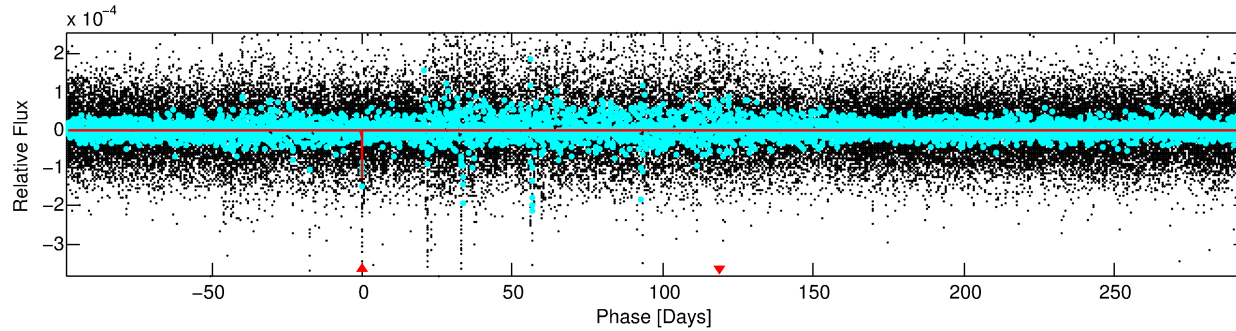
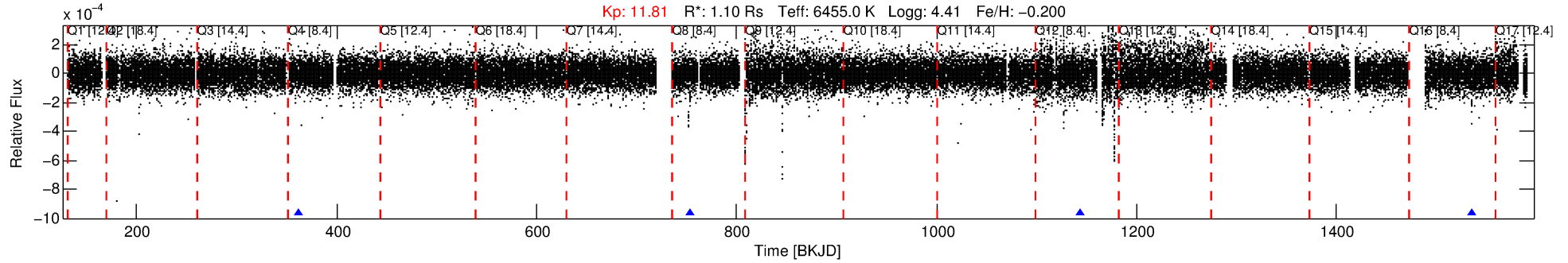
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010854403-01

No Significant Match Found

DV One-Page Summary

KIC: 10854403 Candidate: 1 of 1 Period: 391.400 d



DV Fit Results:

Period = 391.39952 [0.00602] d
Epoch = 361.4634 [0.0109] BKJD
Rp/R* = 0.0116 [0.0021]
a/R* = 149.12 [143.09]
b = 0.86 [0.29]
Seff = 1.58 [0.44]
Teq = 286 [20] K
Rp = 1.40 [0.39] Re
a = 1.0930 [0.1923] AU
Ag = 21657.17 [11890.00] [1.82σ]
Teffp = 5361 [667] K [7.60σ]

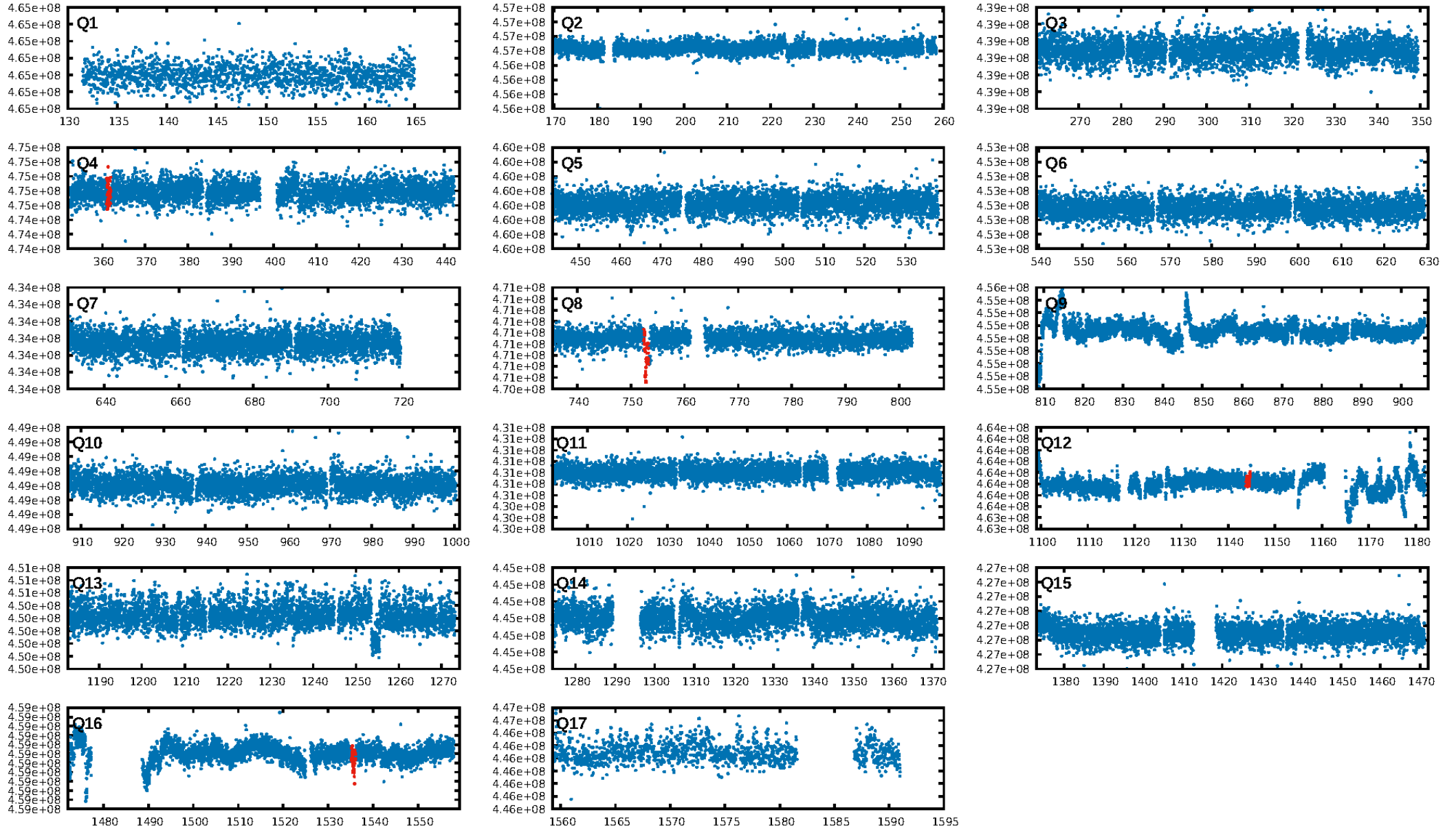
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 97.8%
Bootstrap-pfa: 6.75e-19
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.78
Centroid-sig: 49.2%
Centroid-so: 0.457 arcsec [0.57σ]
OotOffset-rm: 0.976 arcsec [1.08σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-rm: 0.936 arcsec [0.64σ]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [4/4]

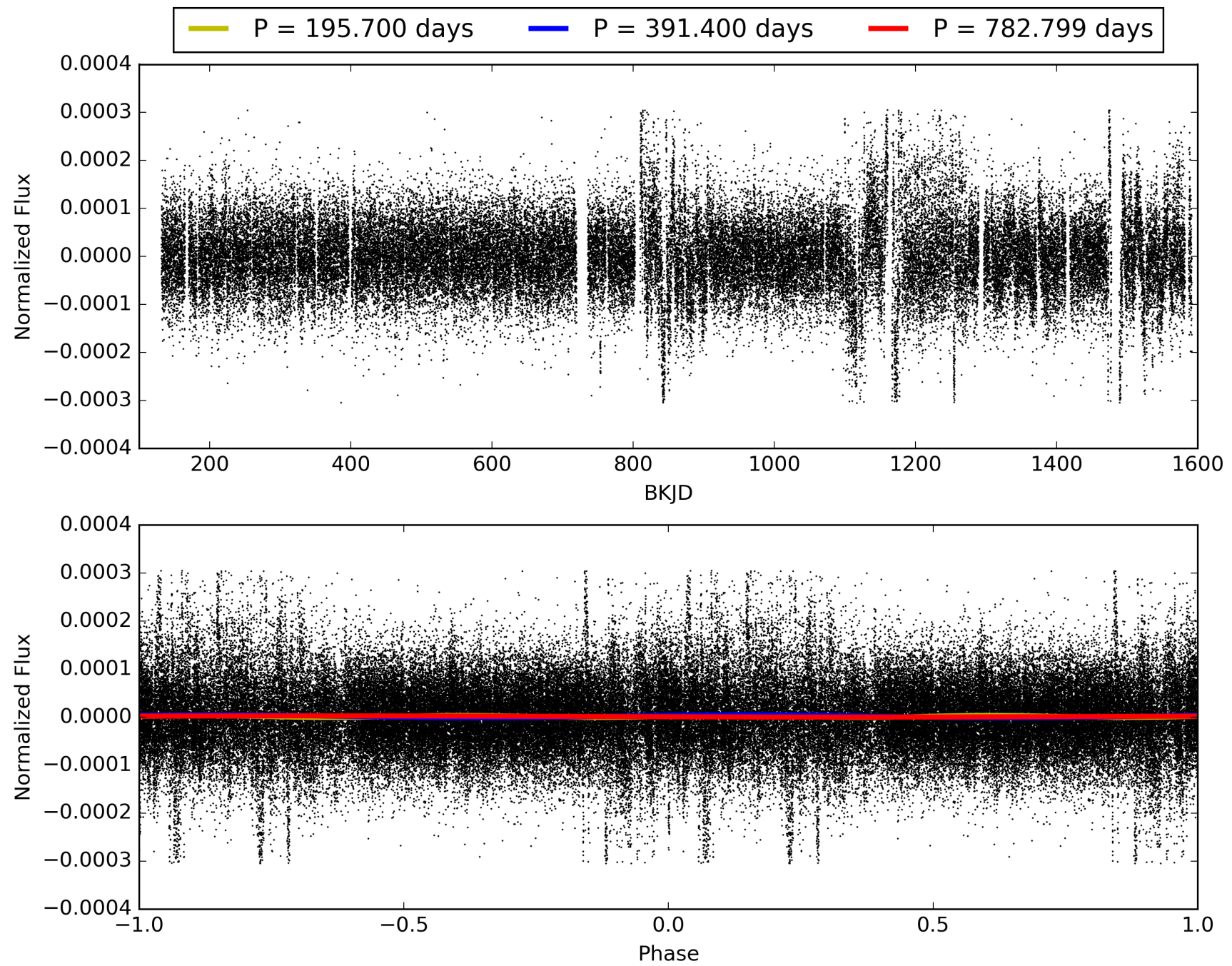
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:07:11 Z

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

TCE 010854403-01, PDC Light Curves

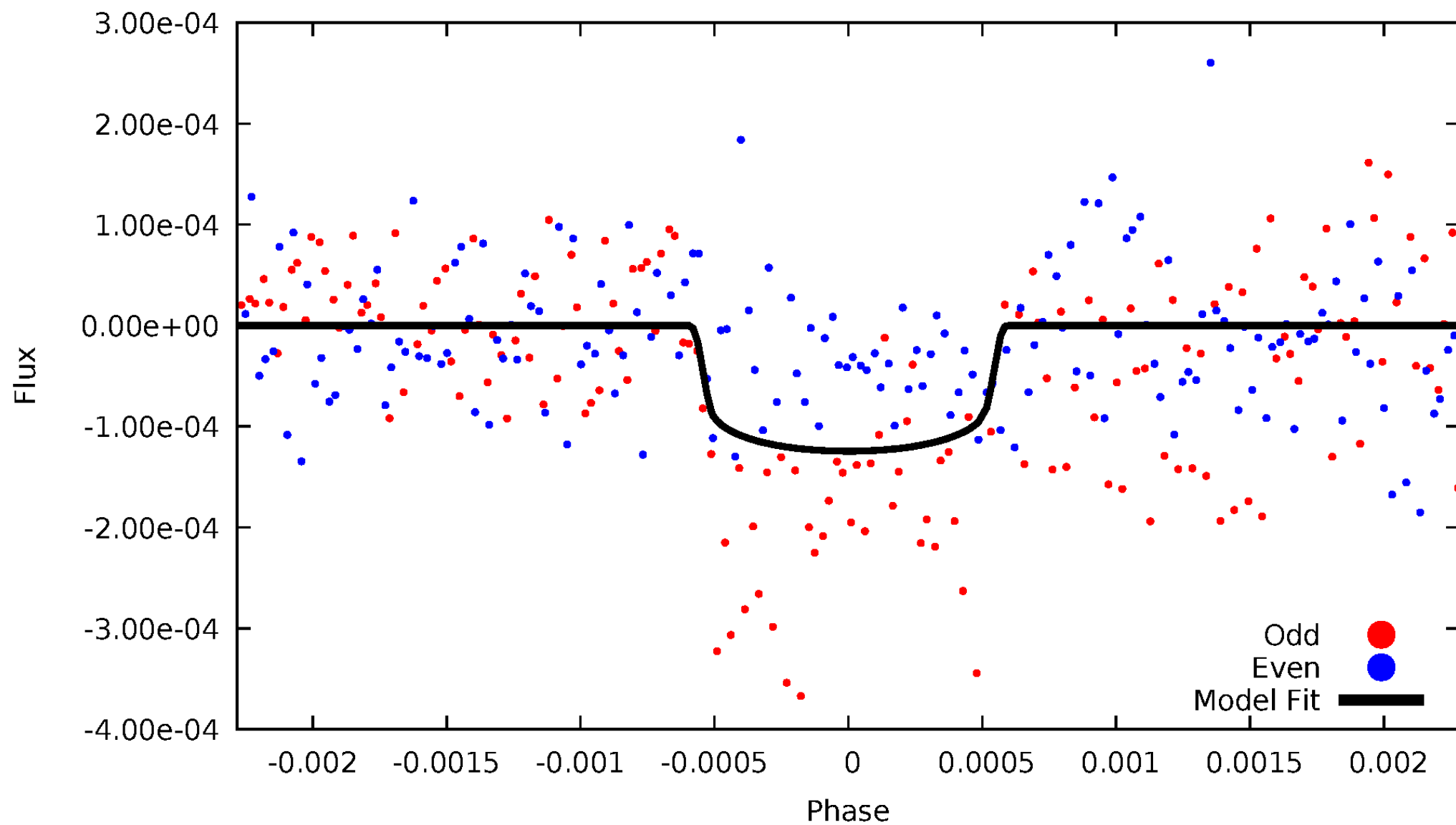


TCE 010854403-01



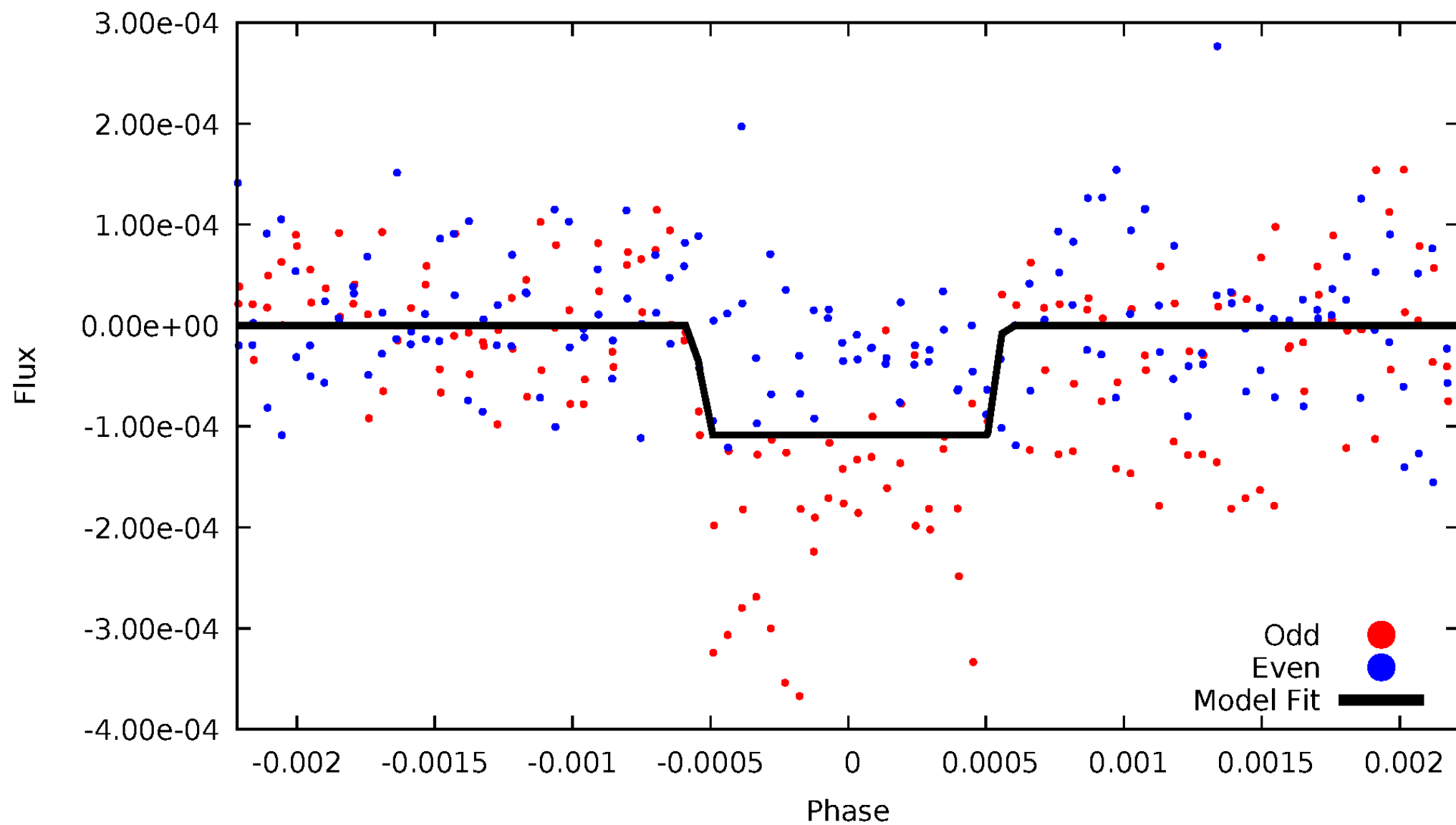
DV Odd/Even

TCE 010854403-01



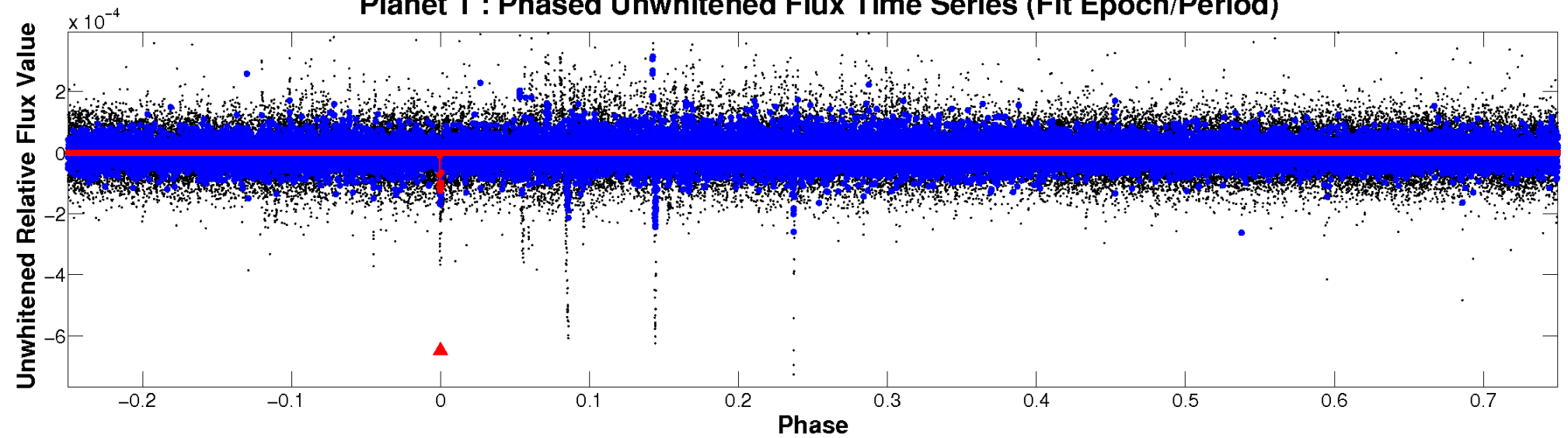
ALT Odd/Even

TCE 010854403-01

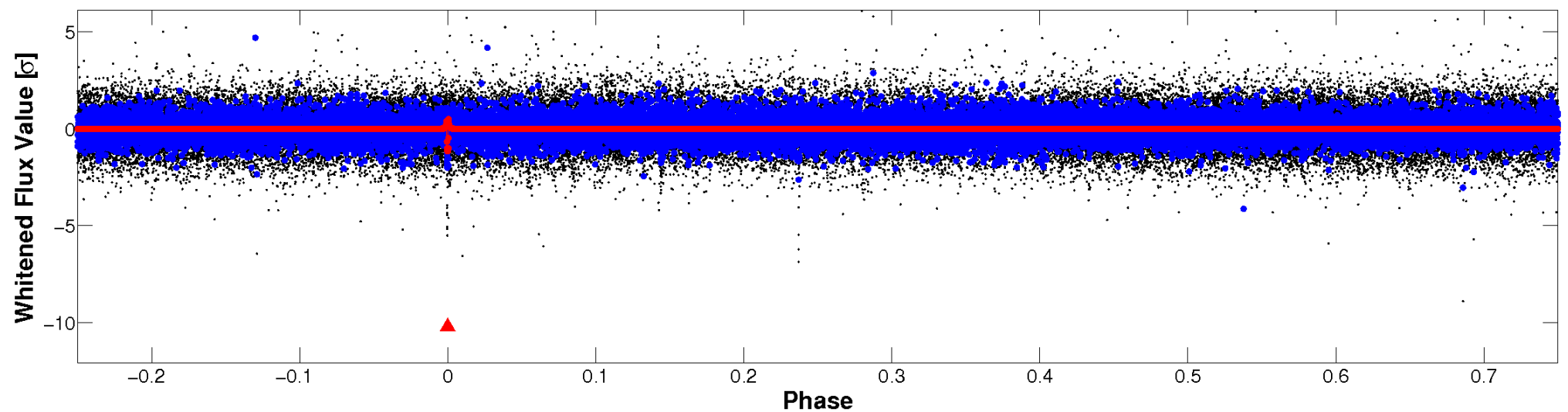


Non-Whitened Vs. Whitened Light Curve

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



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



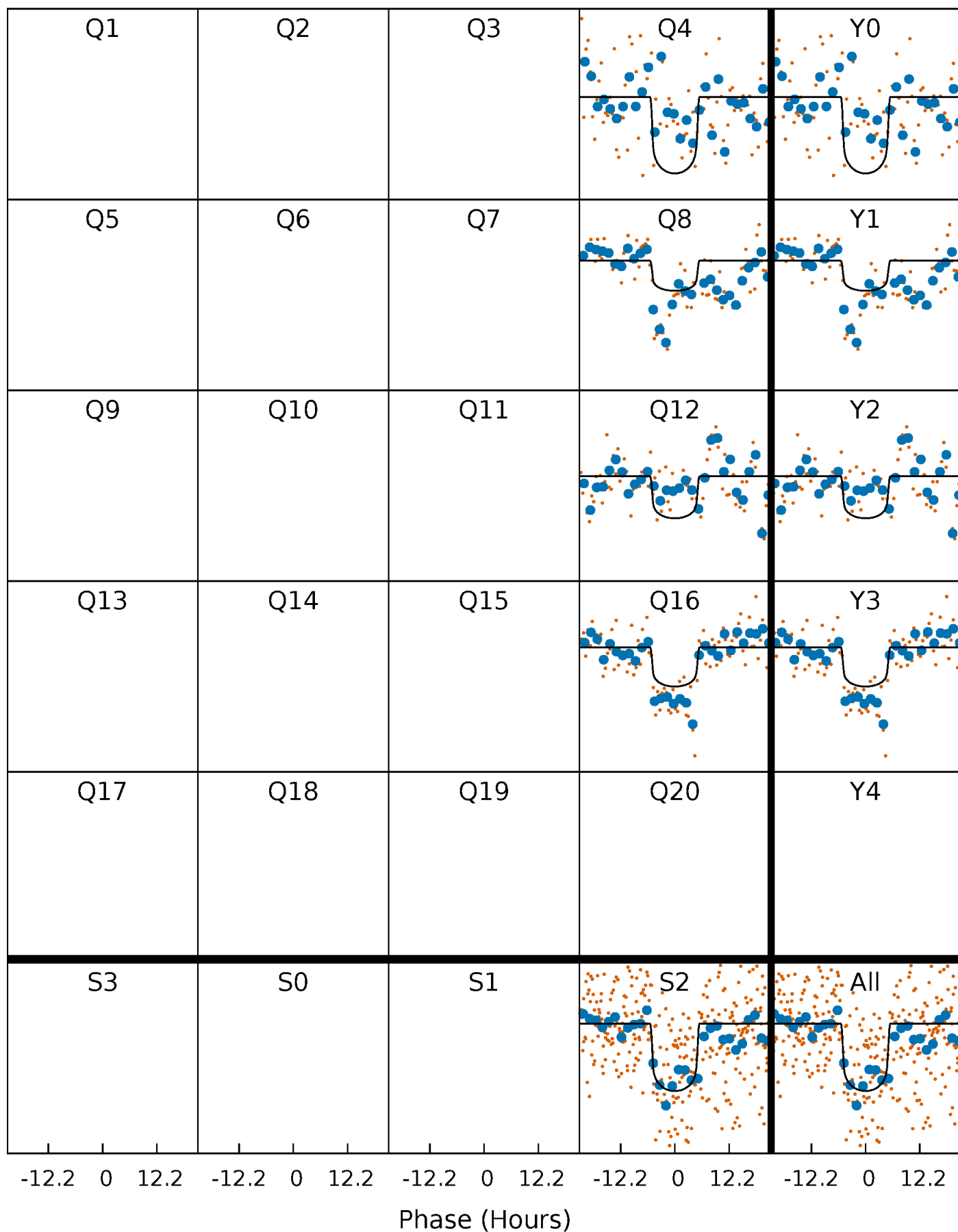
PDC Quarter-Phased Transit Curves

TCE 010854403-01 P=391.399520 Days $T_0=361.463365$ (BKJD)



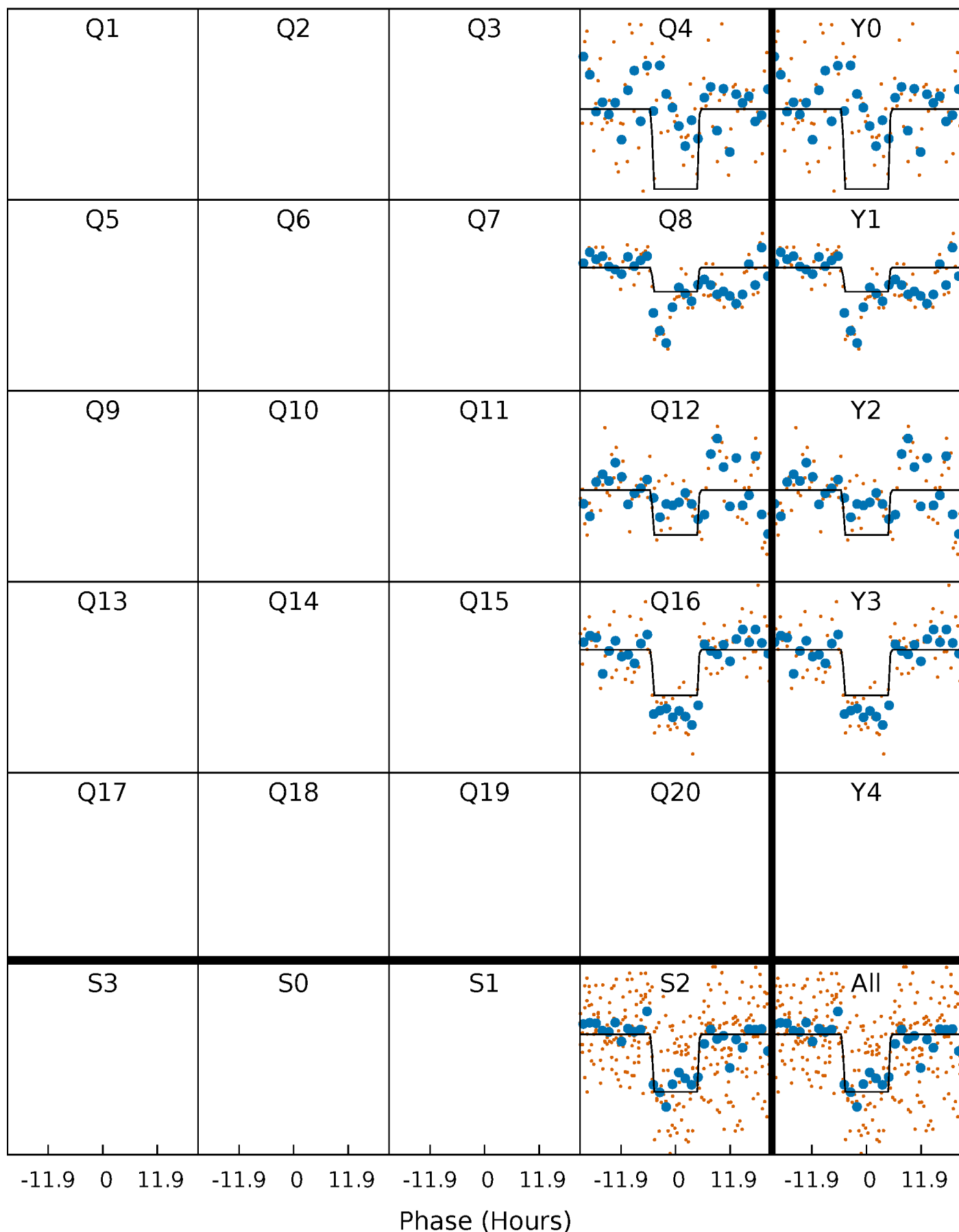
DV Quarter-Phased Transit Curves

TCE 010854403-01 P=391.399520 Days $T_0=361.463365$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

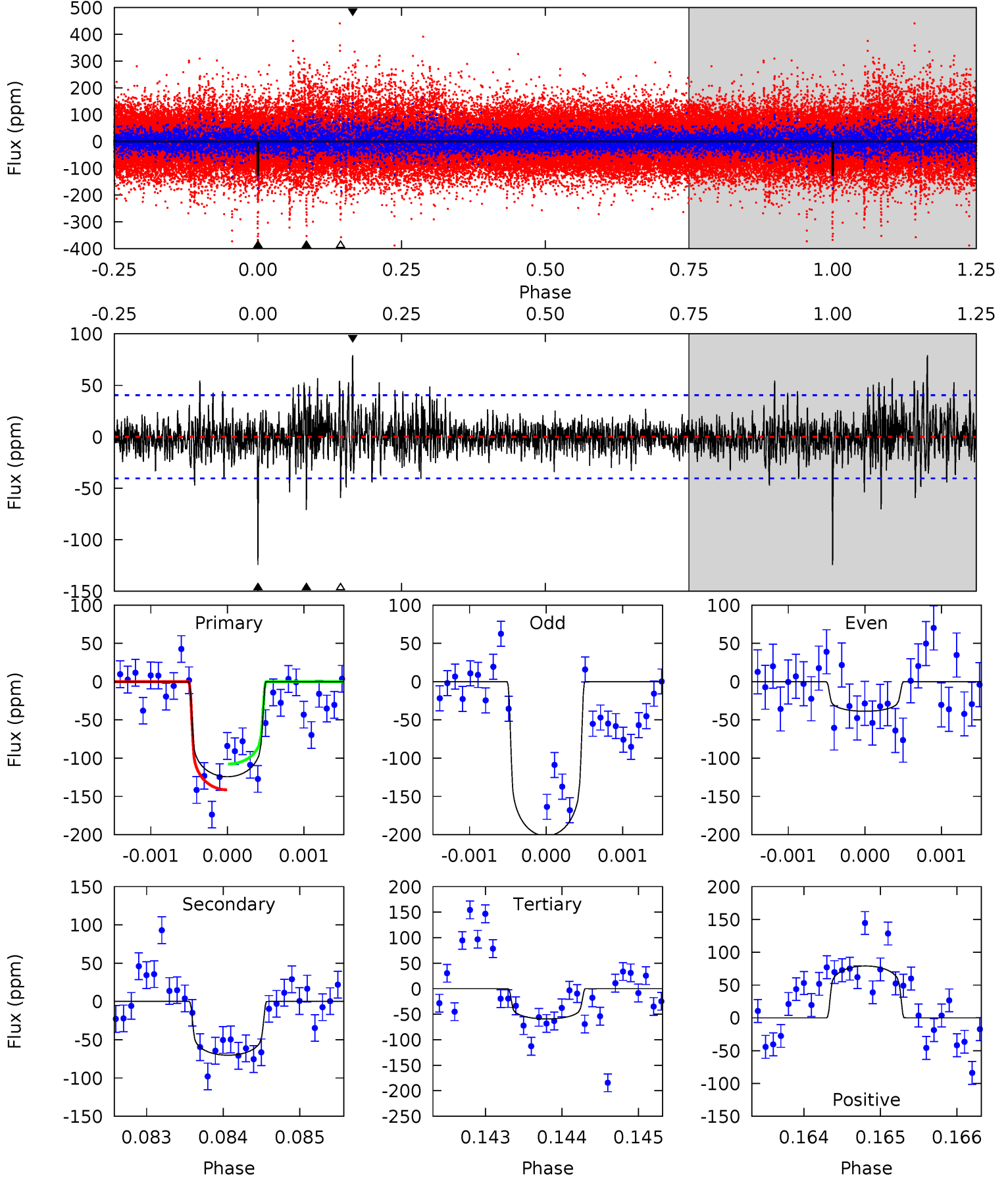
TCE 010854403-01 P=391.404842 Days $T_0=361.457839$ (BKJD)



DV Model-Shift Uniqueness Test

010854403-01, P = 391.399520 Days, E = 361.463365 Days

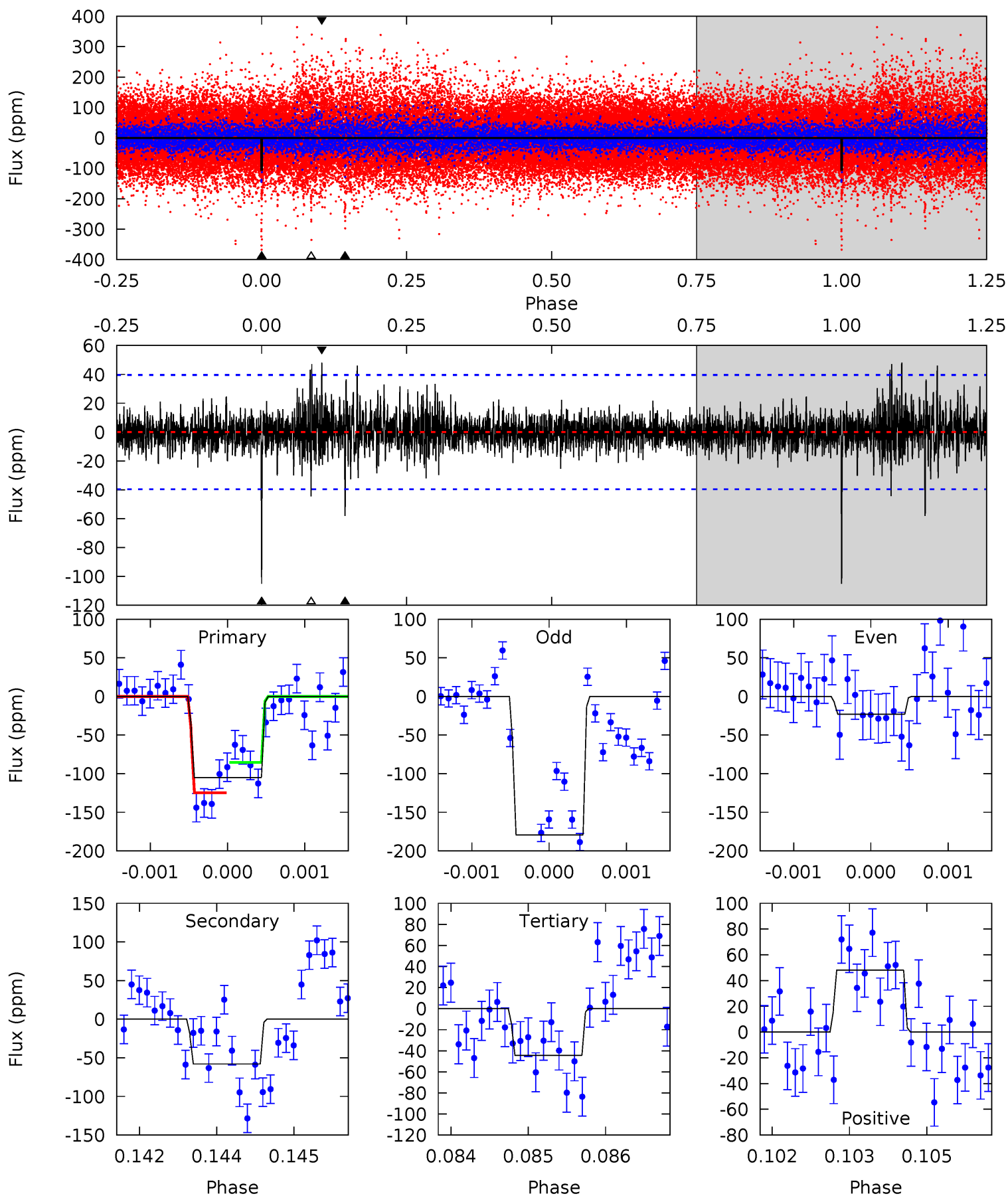
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	9.43	7.95	10.6	5.42	3.25	1.74	8.73	6.07	1.47	-1.18	10.9	1.02	0.39	2.25



Alt Model-Shift Uniqueness Test

010854403-01, P = 391.404842 Days, E = 361.457839 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	7.96	6.09	6.59	5.43	3.25	1.16	8.31	7.81	1.87	1.37	10.8	1.02	0.31	2.69



Stellar Parameters For KIC 010854403

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6455^{+145}_{-177}	$4.410^{+0.060}_{-0.140}$	$-0.200^{+0.250}_{-0.300}$	$1.101^{+0.230}_{-0.115}$	$1.136^{+0.127}_{-0.142}$	$1.200^{+0.305}_{-0.464}$
	+2%/-3%	+1%/-3%	+125%/-150%	+21%/-10%	+11%/-12%	+25%/-39%
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 010854403-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-70 ± 7	$1.43^{+0.31}_{-0.28}$	403^{+20}_{-15}	5471^{+585}_{-410}	22052^{+12684}_{-7007}
Alt.	-58 ± 7	$1.27^{+0.30}_{-0.28}$	404^{+18}_{-16}	5520^{+682}_{-468}	23104^{+13613}_{-8190}

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 $A_{obs} \gg 1.0$

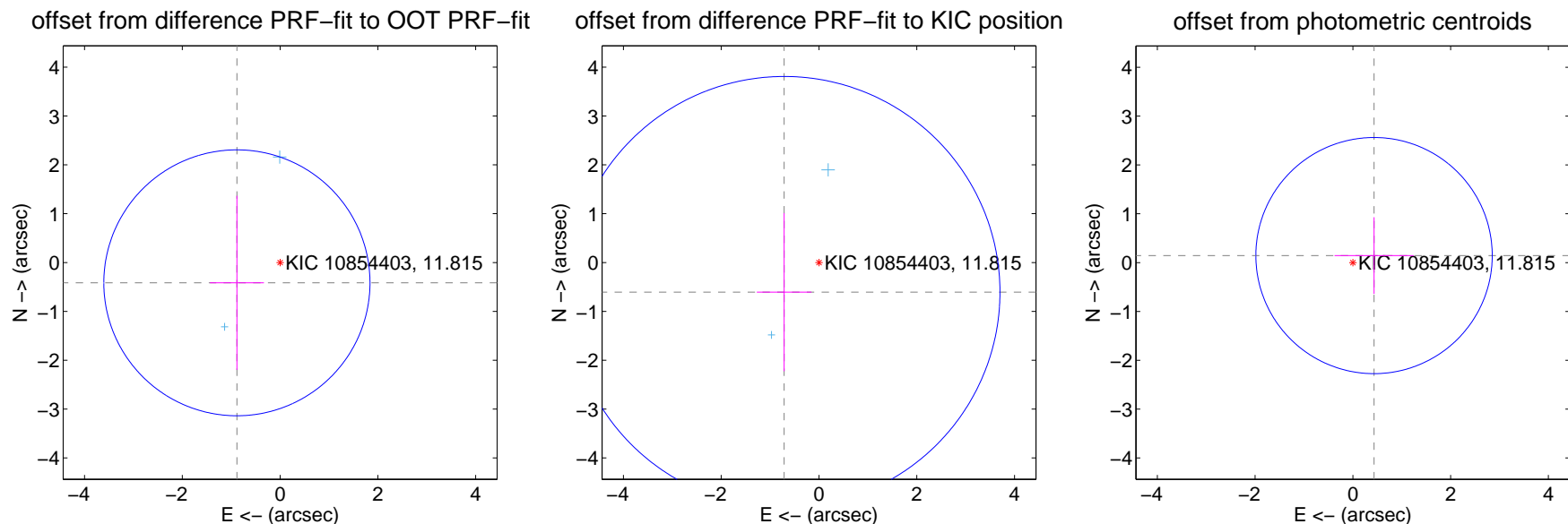
DV Centroid Data

Supplemental centroid analysis for 010854403-01. **Kepler magnitude: 11.81.** Transit SNR 9.57

There are 2 quarters with good PRF difference image offsets

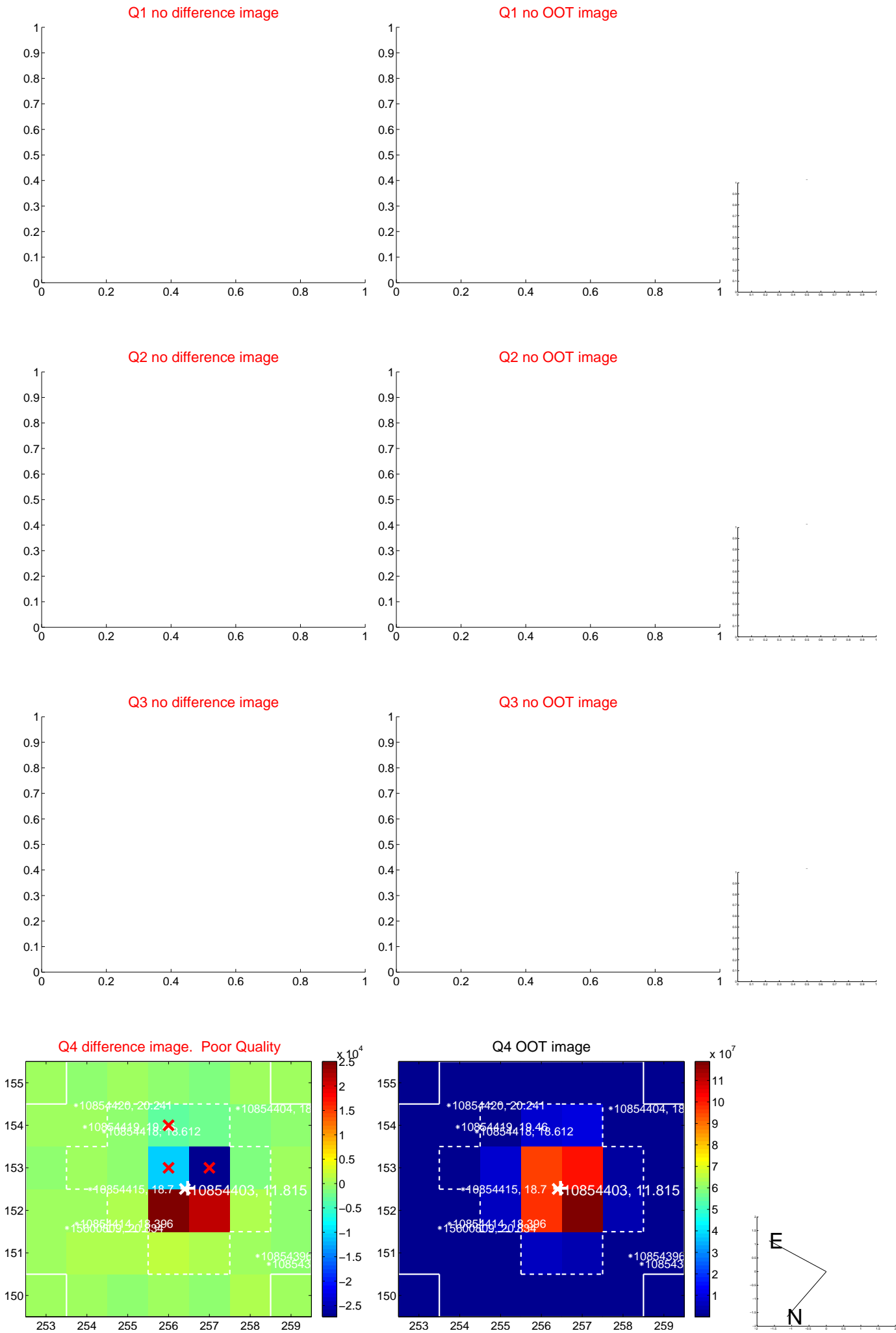
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.976 ± 0.907	1.08	0.884 ± 0.552	-0.415 ± 1.781
PRF-fit source offset from KIC position	0.936 ± 1.471	0.64	0.713 ± 0.559	-0.606 ± 1.619
photometric centroid source offset	0.46 ± 0.81	0.57	-0.43 ± 0.81	0.14 ± 0.78

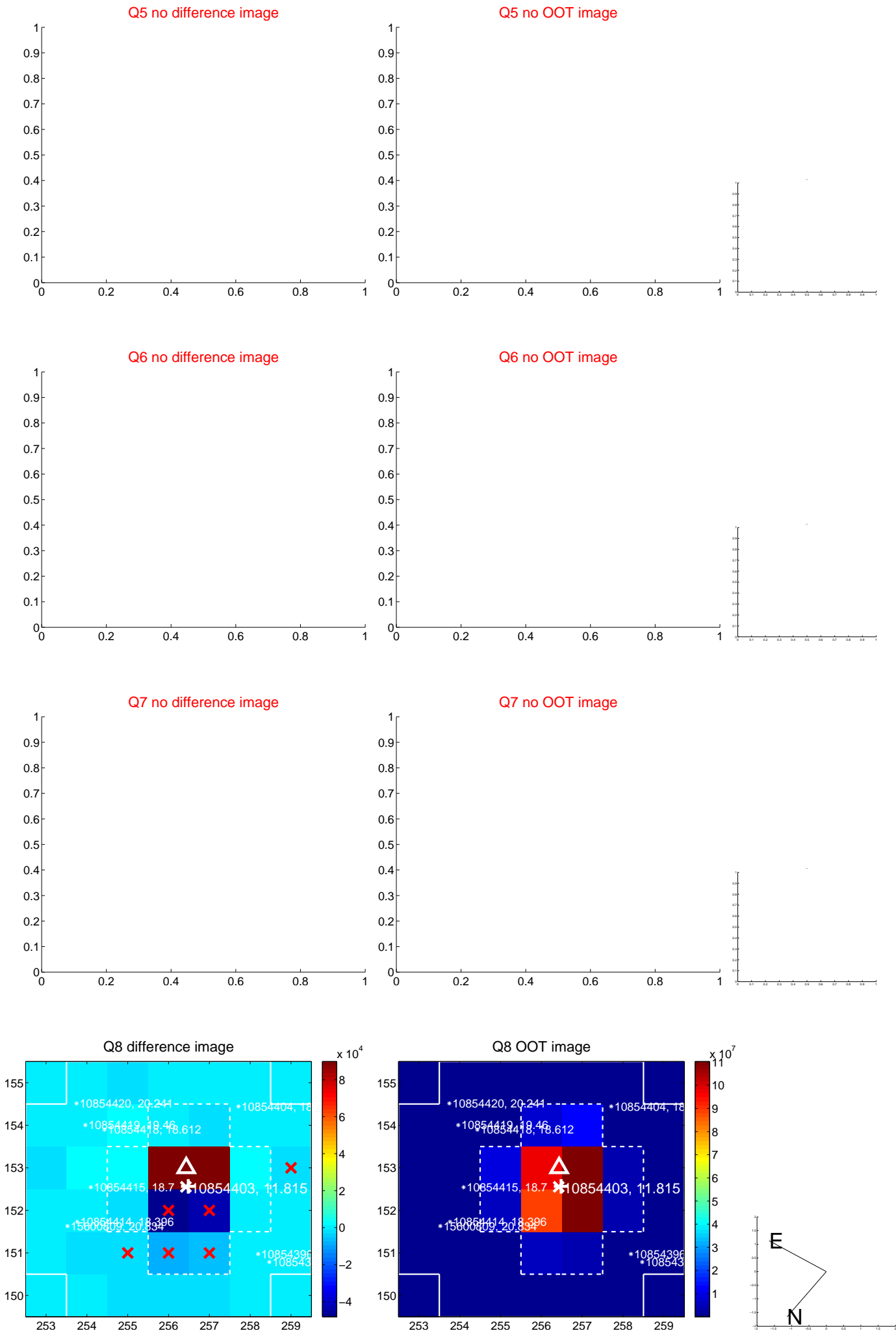


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

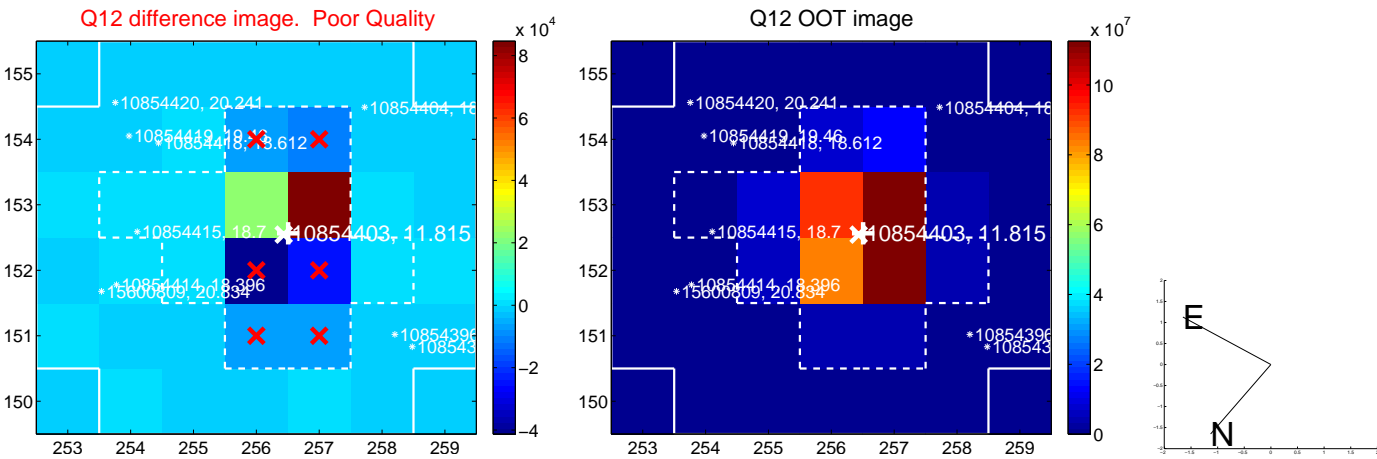
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



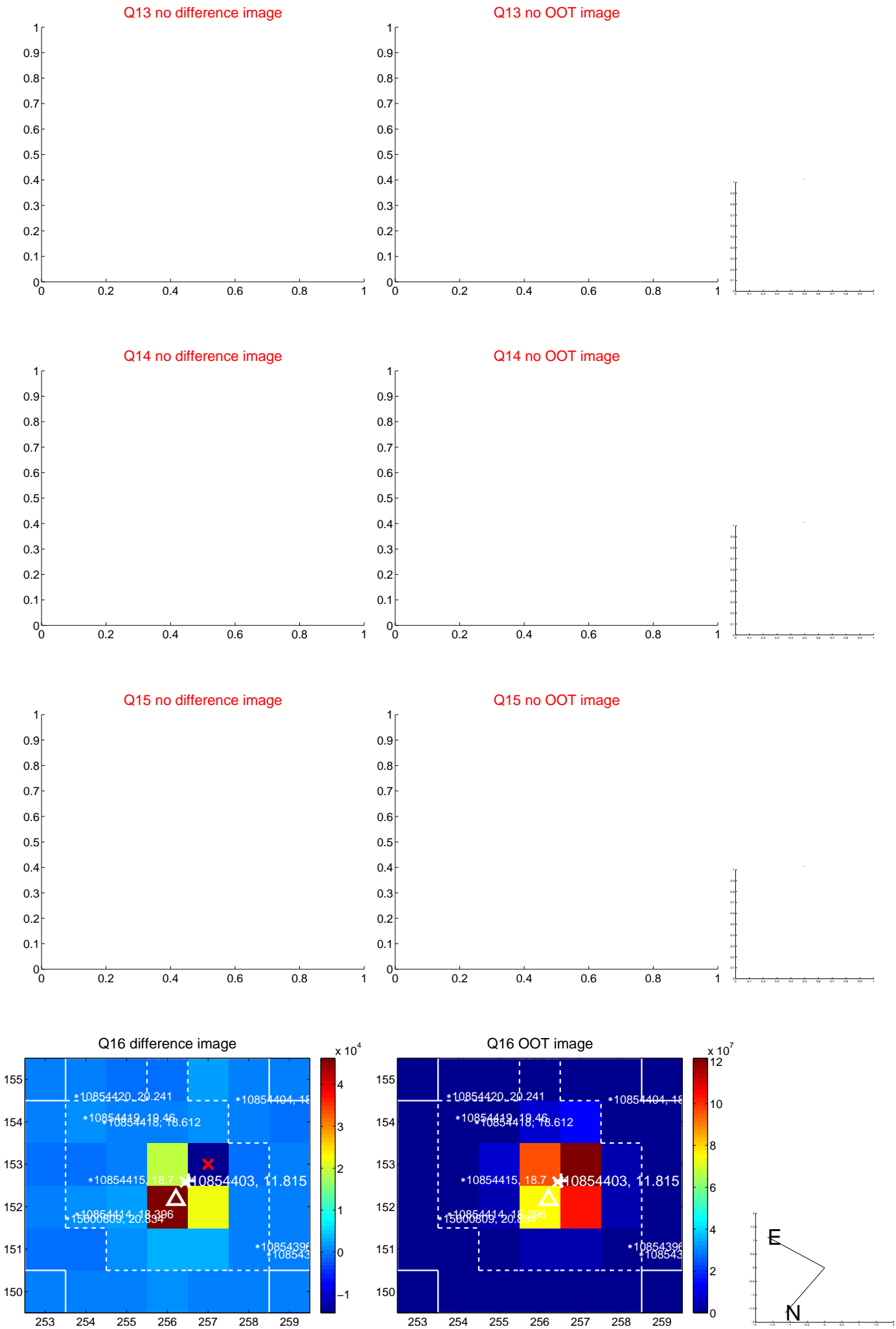
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



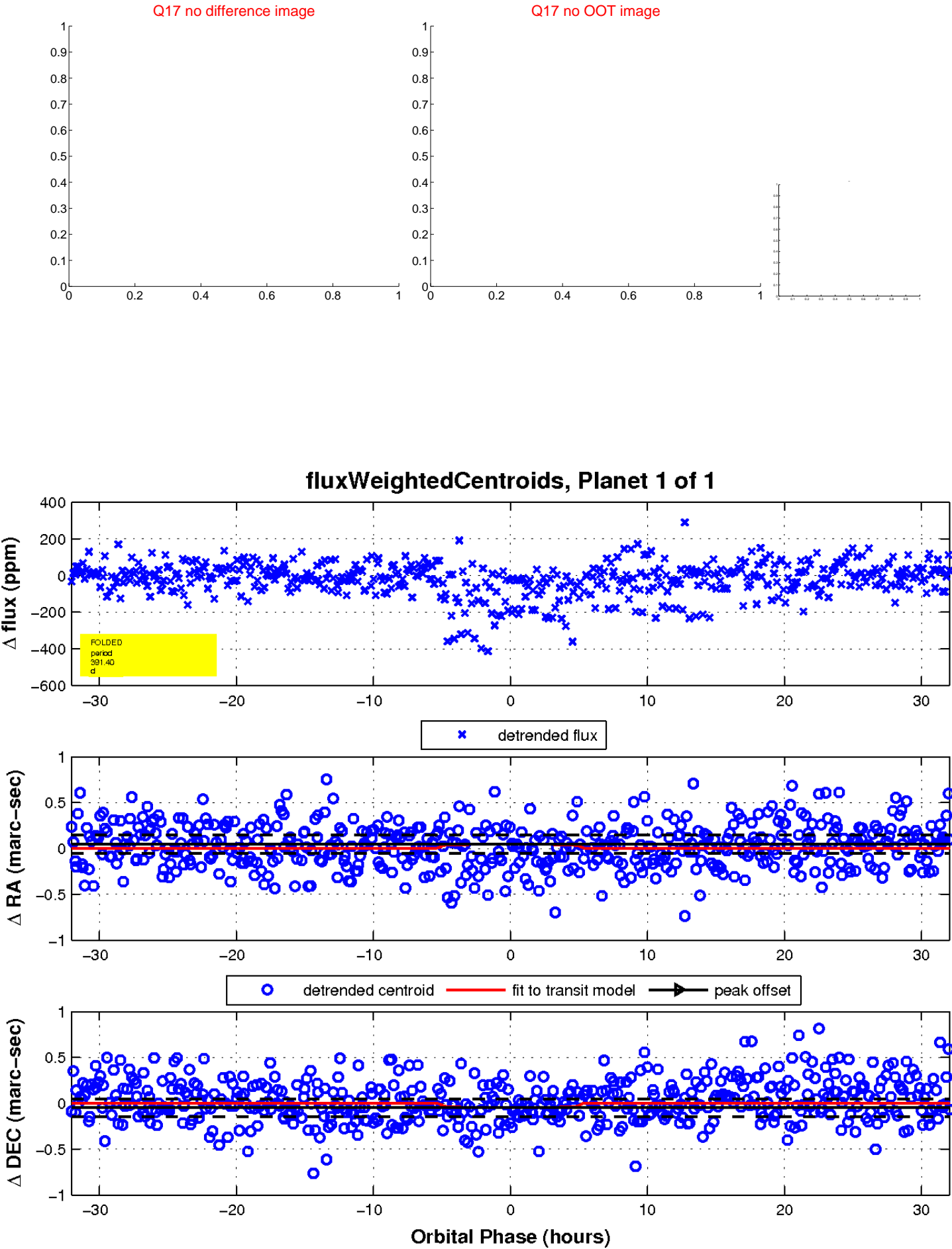
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

