

KIC 011390109

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})
011390109-01	OBS	No	372.148646	178.441308	972.6	13.813	10.8	11.3	1.09	6261	3.97	1.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011390109-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE--INCONSISTENT_TRANS

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.

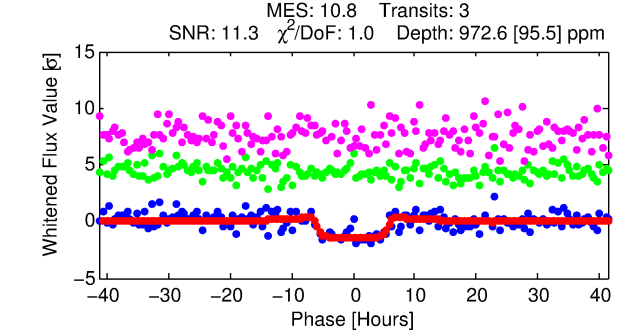
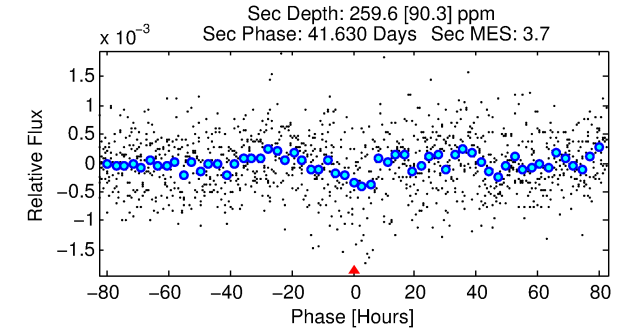
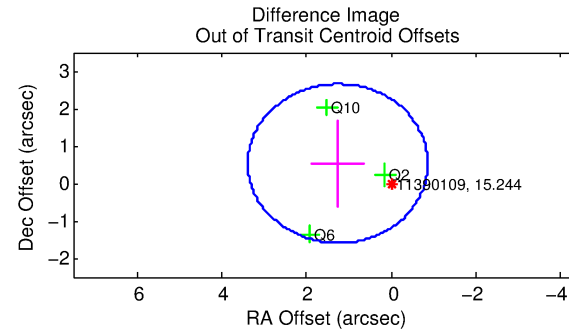
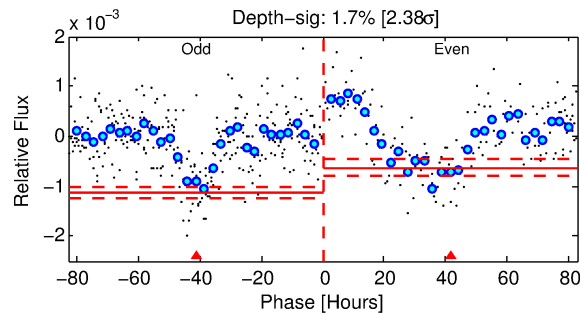
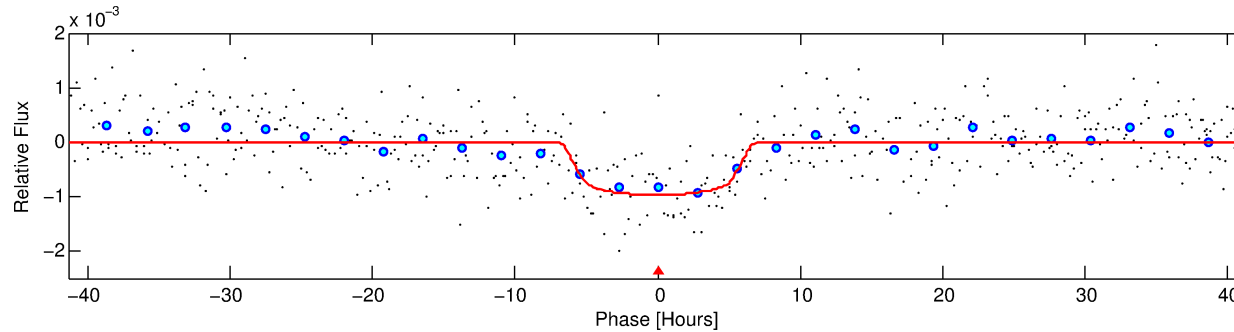
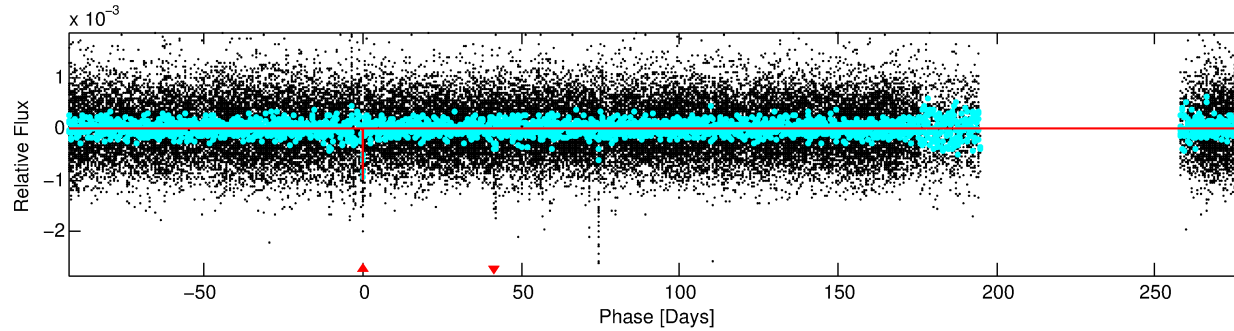
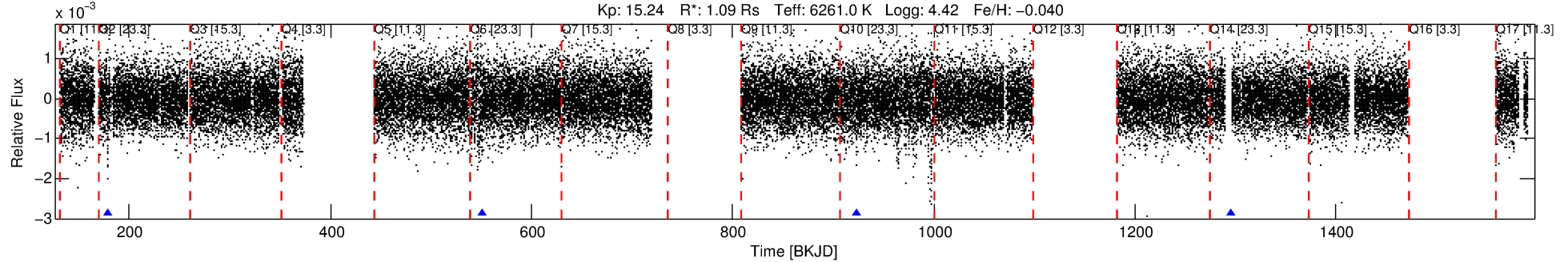
Ephemeris Match Information For 011390109-01

No Significant Match Found

DV One-Page Summary

KIC: 11390109 Candidate: 1 of 1 Period: 372.149 d
KOI: K04210 Corr: No Ephemeris Match

Kp: 15.24 R*: 1.09 Rs Teff: 6261.0 K Logg: 4.42 Fe/H: -0.040



DV Fit Results:

Period = 372.14865 [0.01317] d
Epoch = 178.4413 [0.0163] BKJD
Rp/R* = 0.0334 [0.0028]
a/R* = 107.20 [35.03]
b = 0.89 [0.08]
Seff = 1.47 [0.63]
Teq = 281 [30] K
Rp = 3.97 [1.39] Re
a = 1.0555 [0.3000] AU
Ag = 10100.71 [5709.96] [1.77σ]
Teffp = 4351 [445] K [9.13σ]

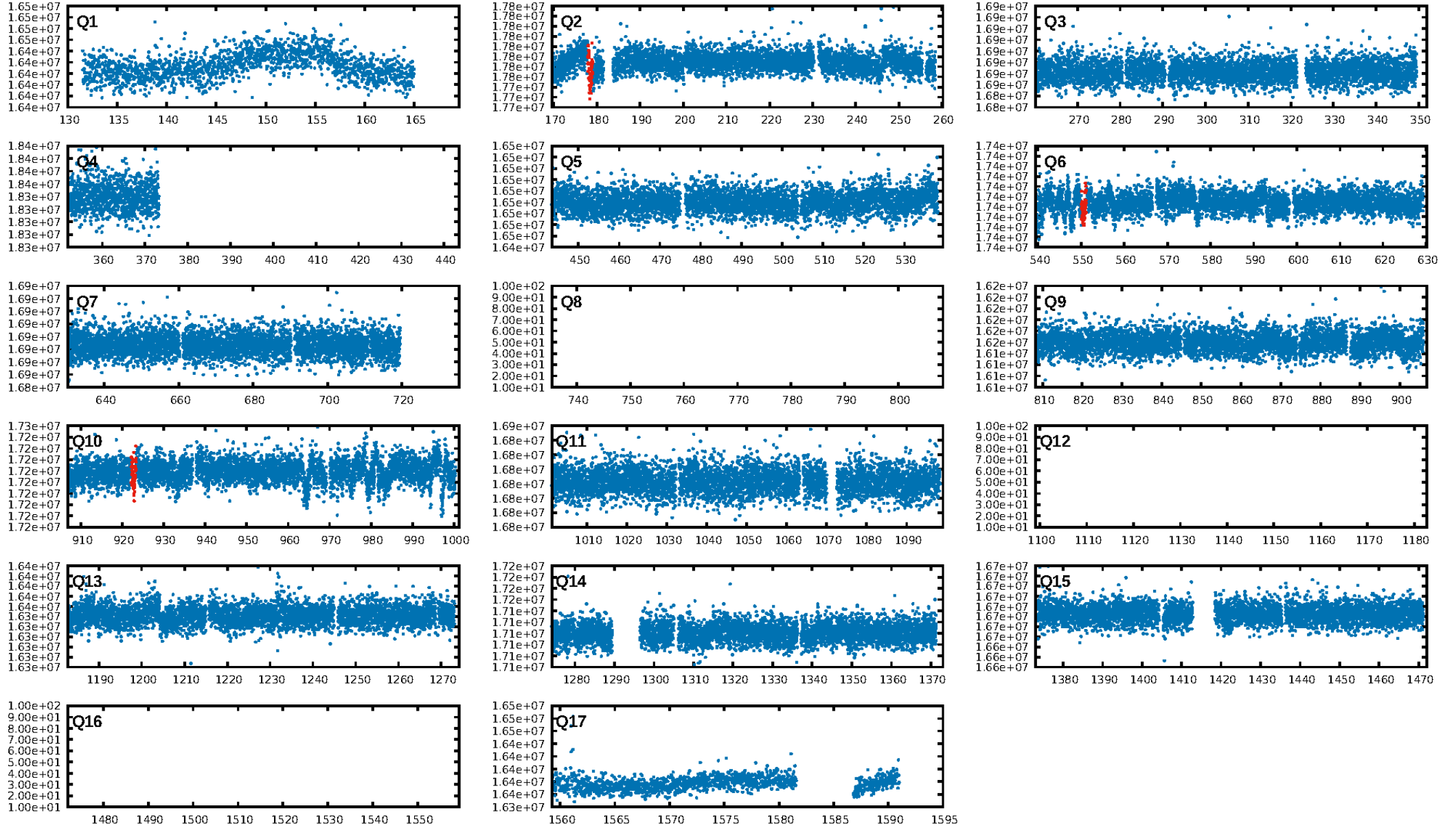
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.4%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 6.46e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 4.922
Centroid-sig: 9.0%
Centroid-so: 1.866 arcsec [1.35σ]
OotOffset-rm: 1.364 arcsec [1.93σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-rm: 1.336 arcsec [2.11σ]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

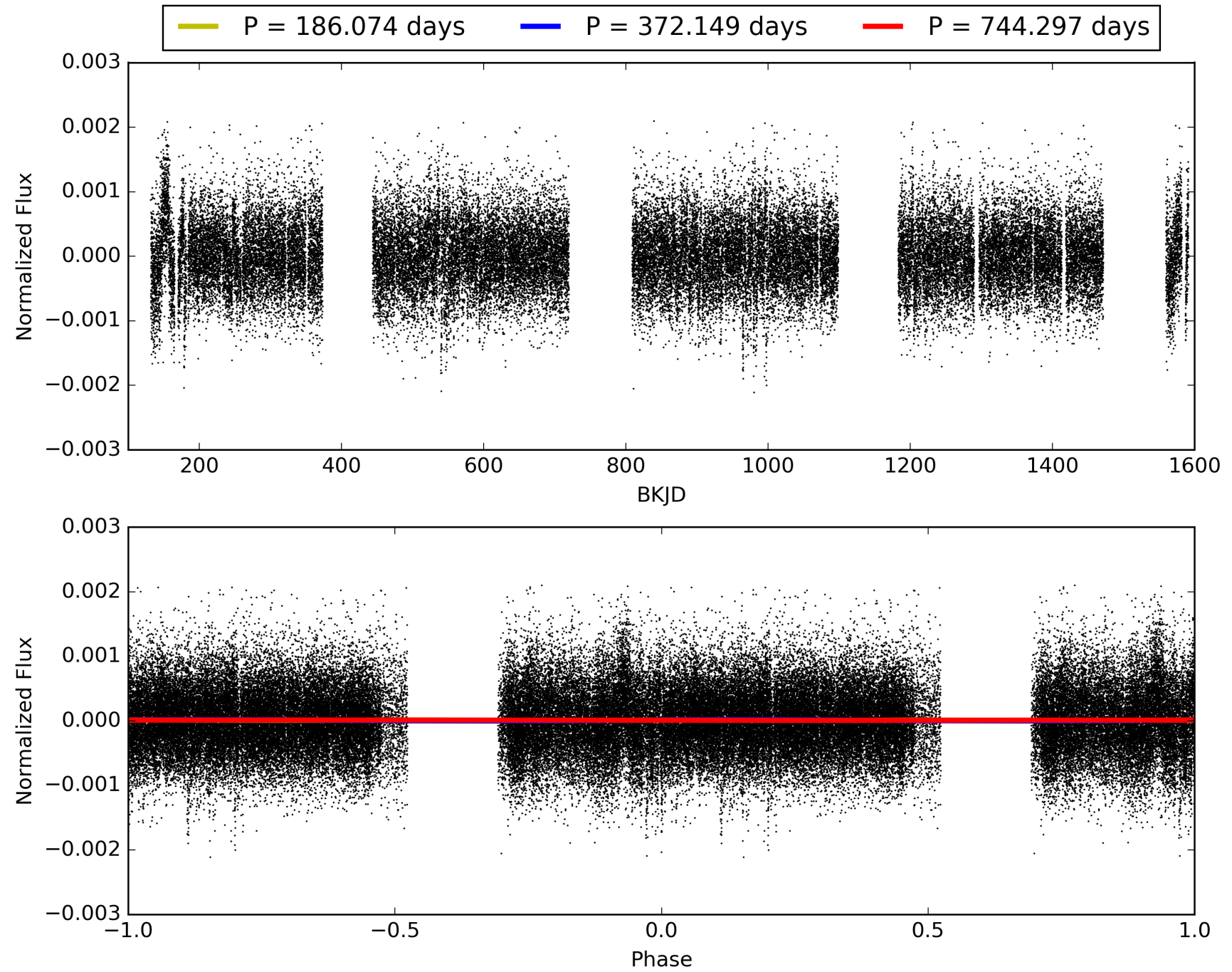
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:46:03 Z

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

TCE 011390109-01, PDC Light Curves

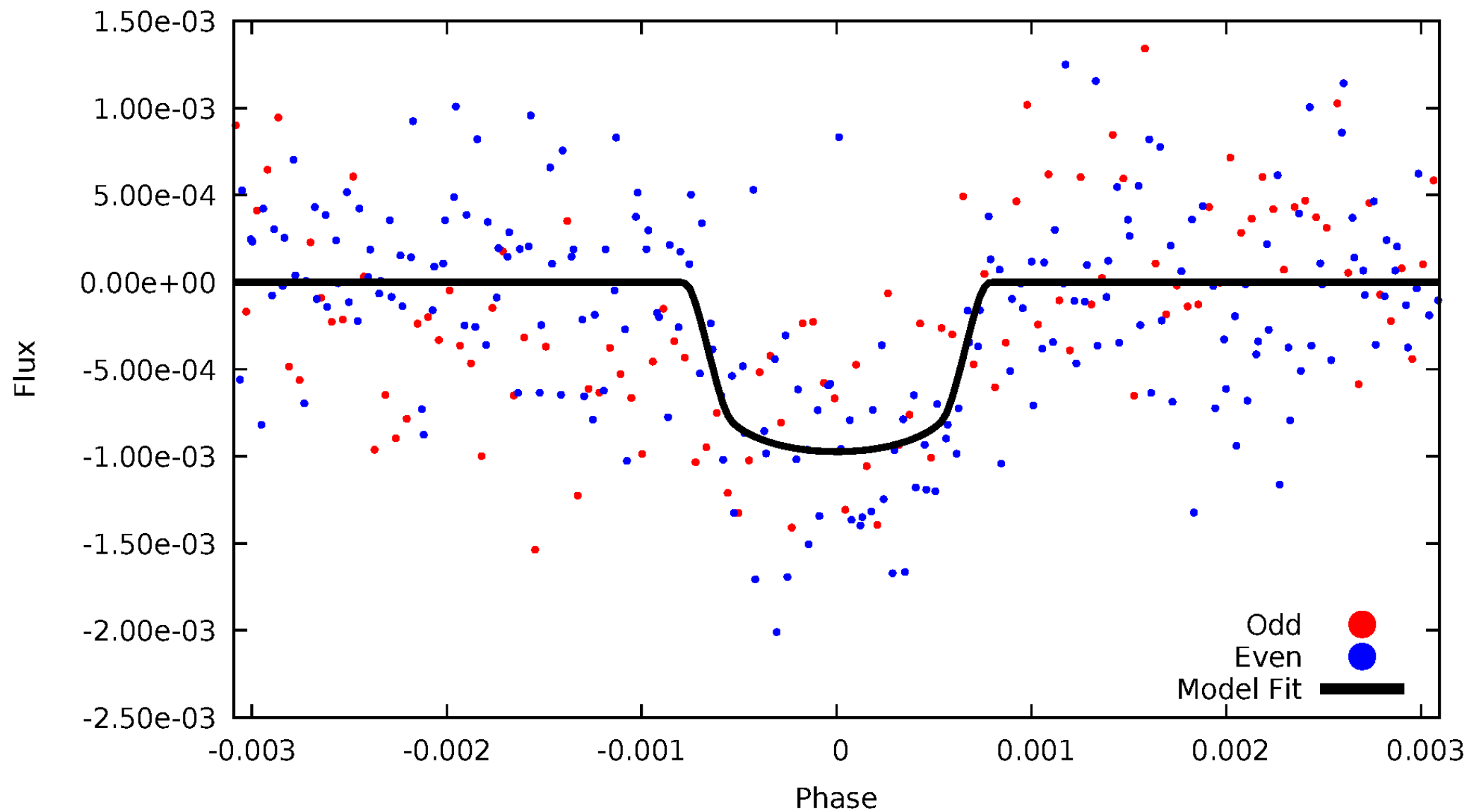


TCE 011390109-01



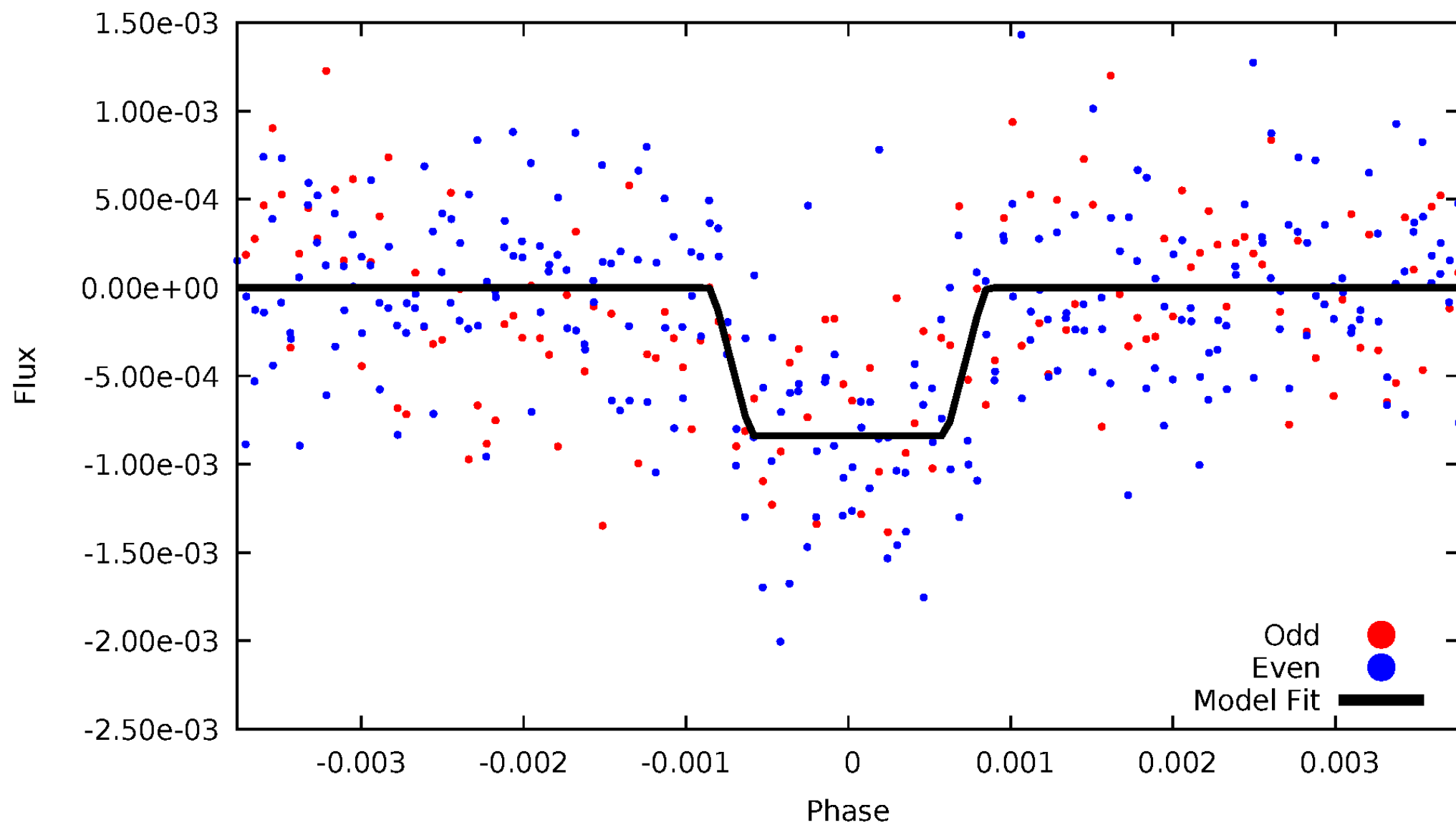
DV Odd/Even

TCE 011390109-01



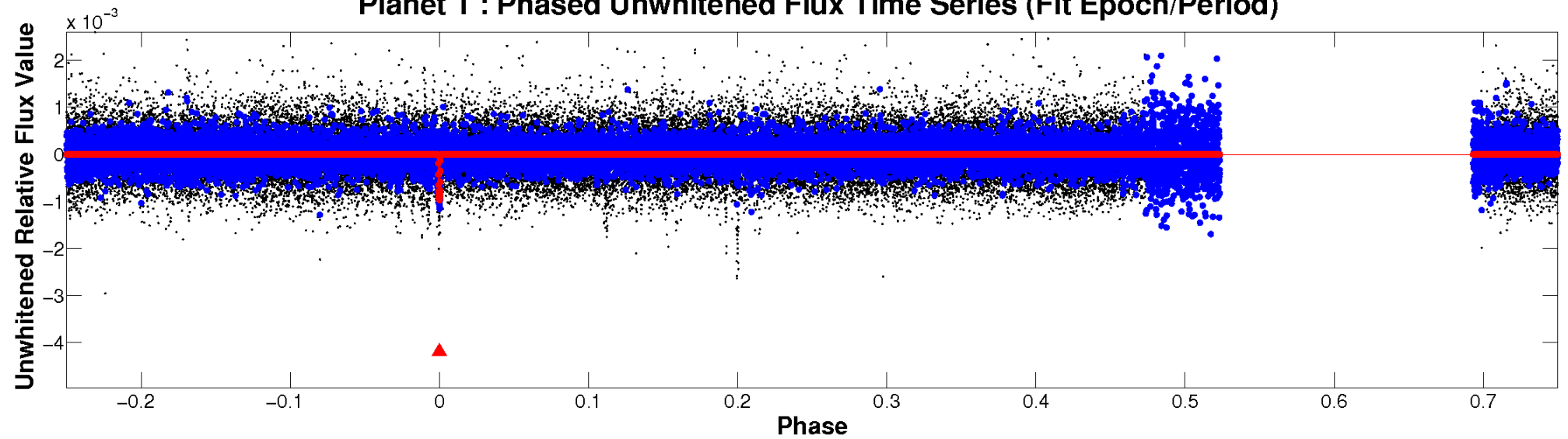
ALT Odd/Even

TCE 011390109-01

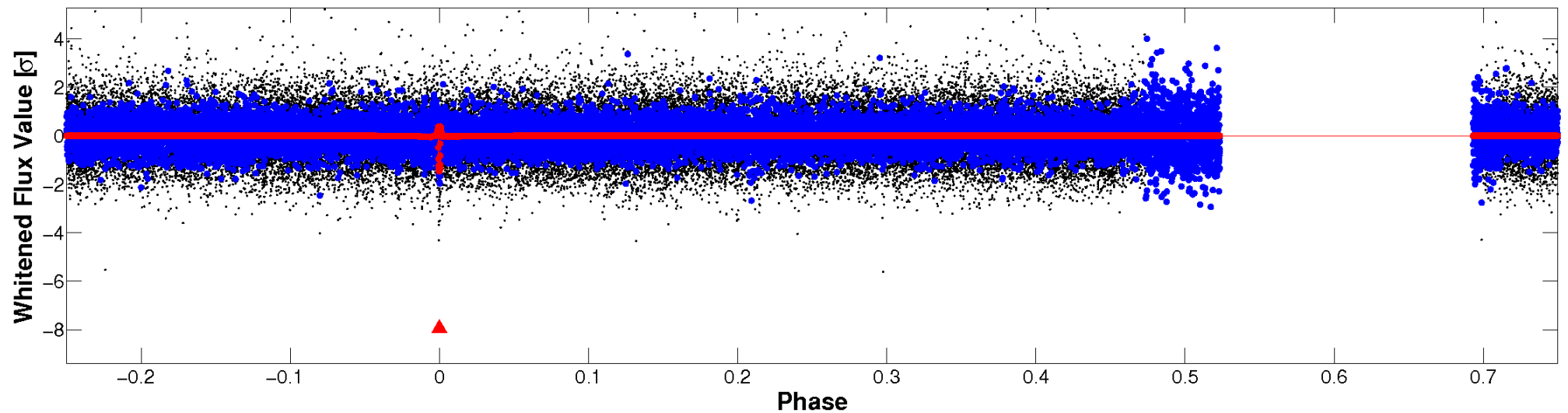


Non-Whitened Vs. Whitened Light Curve

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 011390109-01 P=372.148645 Days $T_0=178.441308$ (BKJD)



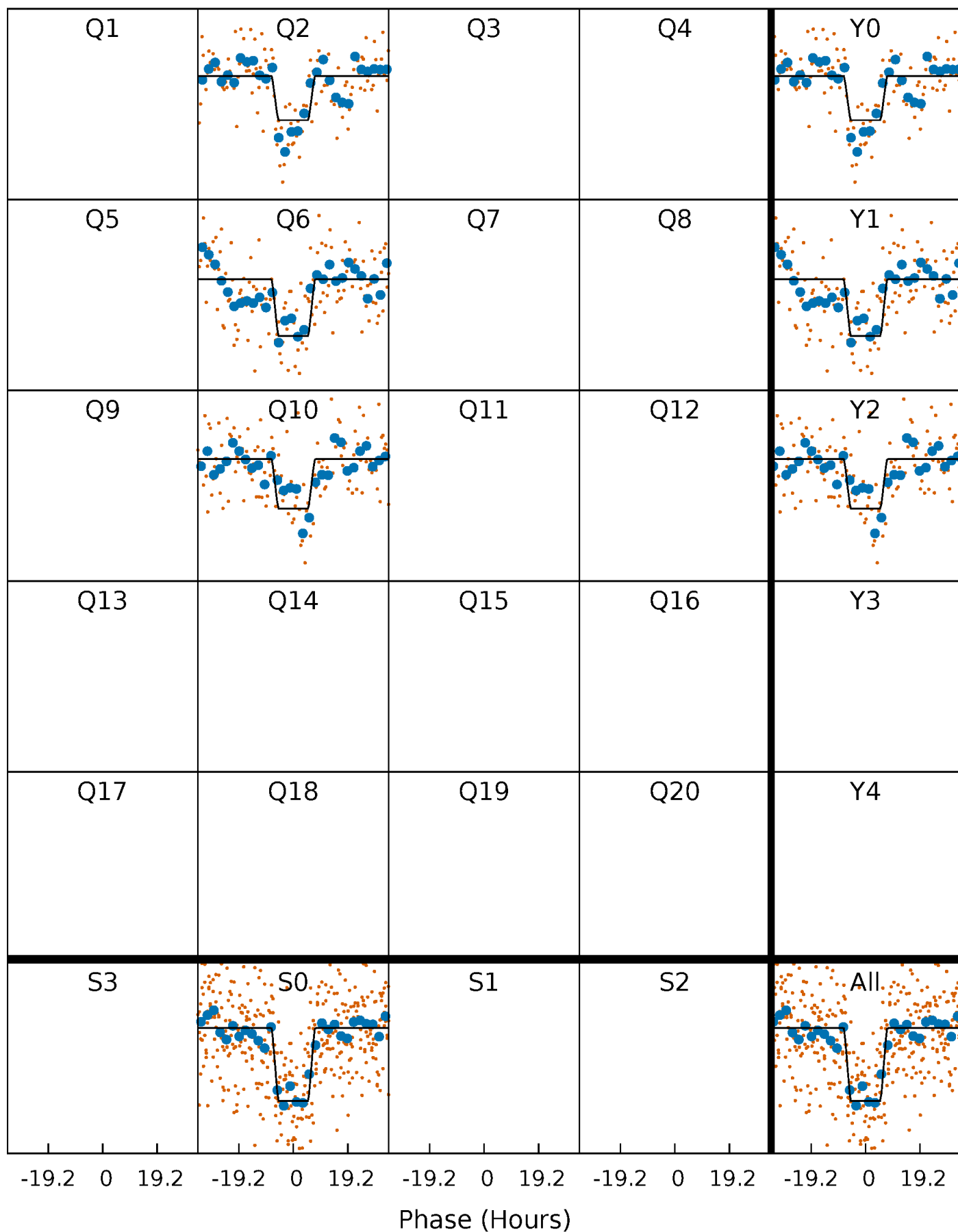
DV Quarter-Phased Transit Curves

TCE 011390109-01 P=372.148645 Days $T_0=178.441308$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

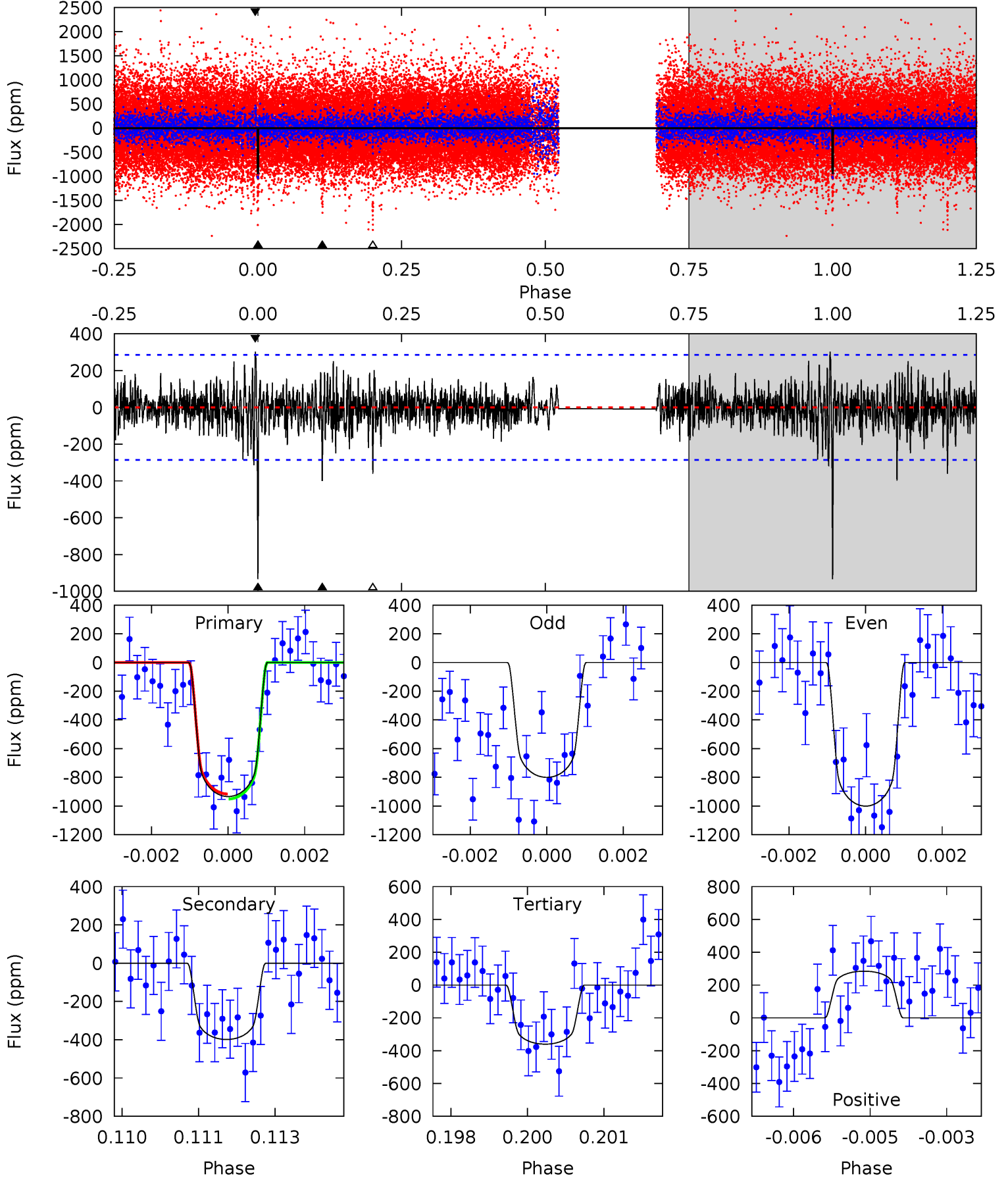
TCE 011390109-01 $P=372.095128$ Days $T_0=178.482335$ (BKJD)



DV Model-Shift Uniqueness Test

011390109-01, P = 372.148645 Days, E = 178.441308 Days

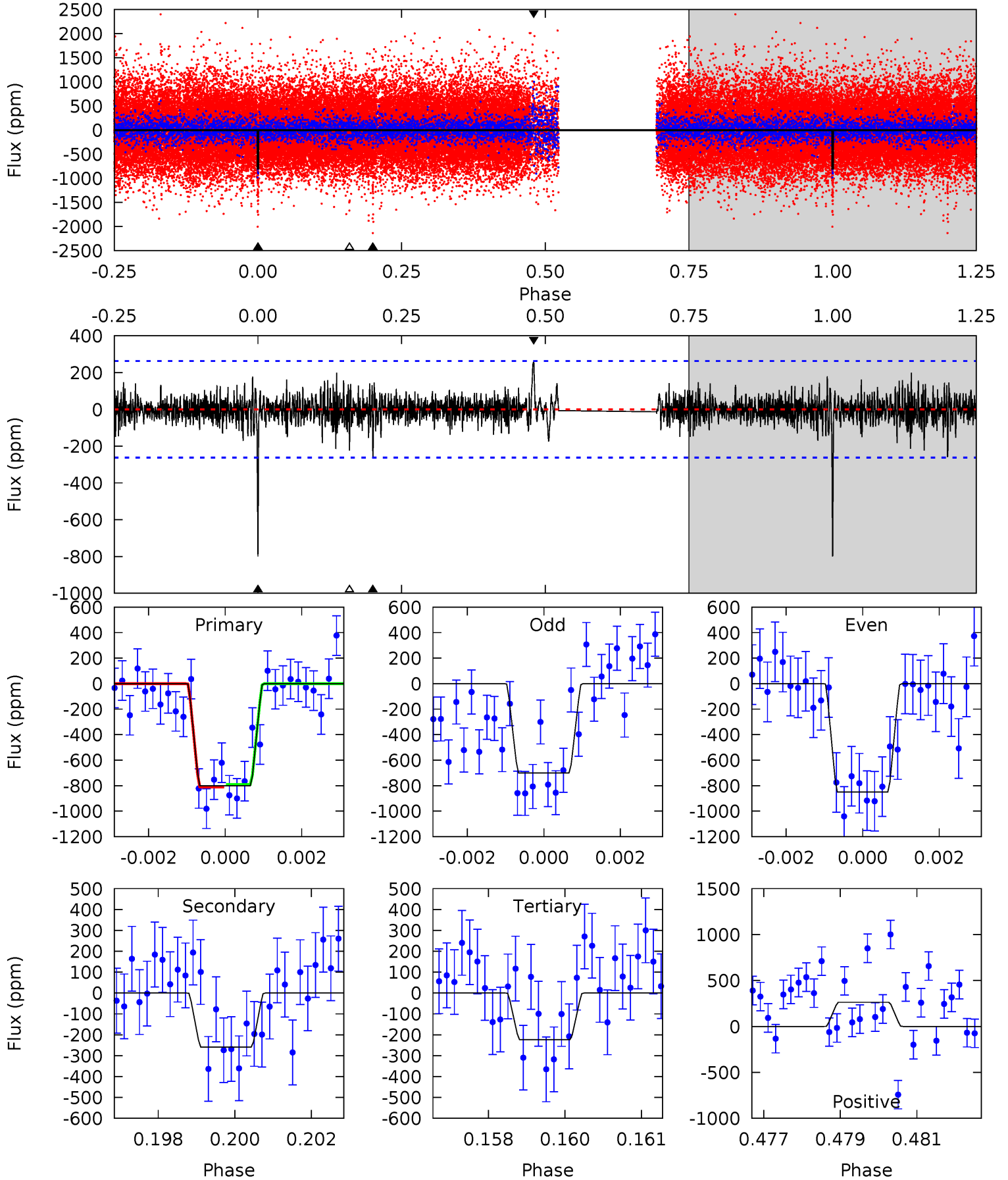
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	7.51	6.78	5.36	5.37	3.17	1.35	10.8	12.2	0.72	2.15	1.78	1.17	0.24	0.32



Alt Model-Shift Uniqueness Test

011390109-01, P = 372.095128 Days, E = 178.482335 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	5.28	4.55	5.35	5.35	3.13	1.00	11.7	10.9	0.73	-0.07	1.44	1.14	0.25	0.22



Stellar Parameters For KIC 011390109

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6261^{+168}_{-205}	$4.417^{+0.070}_{-0.224}$	$-0.040^{+0.250}_{-0.300}$	$1.090^{+0.370}_{-0.123}$	$1.131^{+0.157}_{-0.141}$	$1.231^{+0.381}_{-0.689}$
	+3%/-3%	+2%/-5%	+625%/-750%	+34%/-11%	+14%/-12%	+31%/-56%
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 011390109-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-399 ± 53	$4.09^{+0.75}_{-0.49}$	399^{+30}_{-19}	4928^{+263}_{-244}	14048^{+4672}_{-3894}
Alt.	-259 ± 49	$3.59^{+0.67}_{-0.48}$	399^{+33}_{-19}	4794^{+299}_{-274}	12109^{+4835}_{-3901}

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

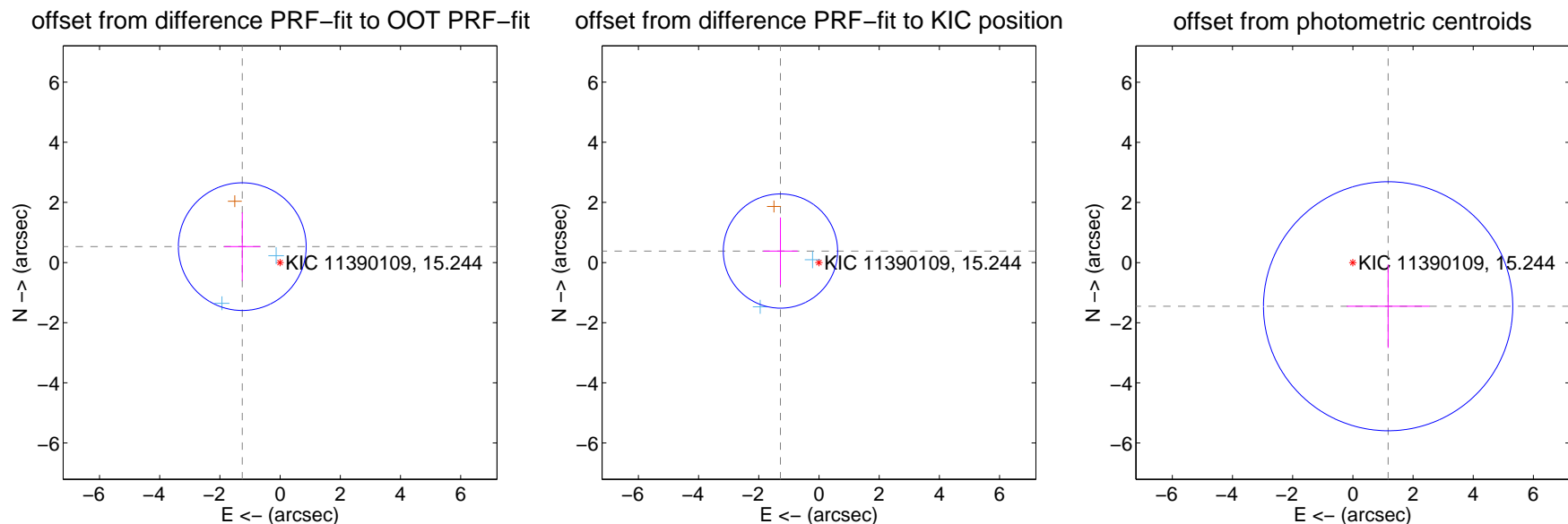
DV Centroid Data

Supplemental centroid analysis for 011390109-01. Kepler magnitude: 15.24. Transit SNR 11.26

There are 2 quarters with good PRF difference image offsets

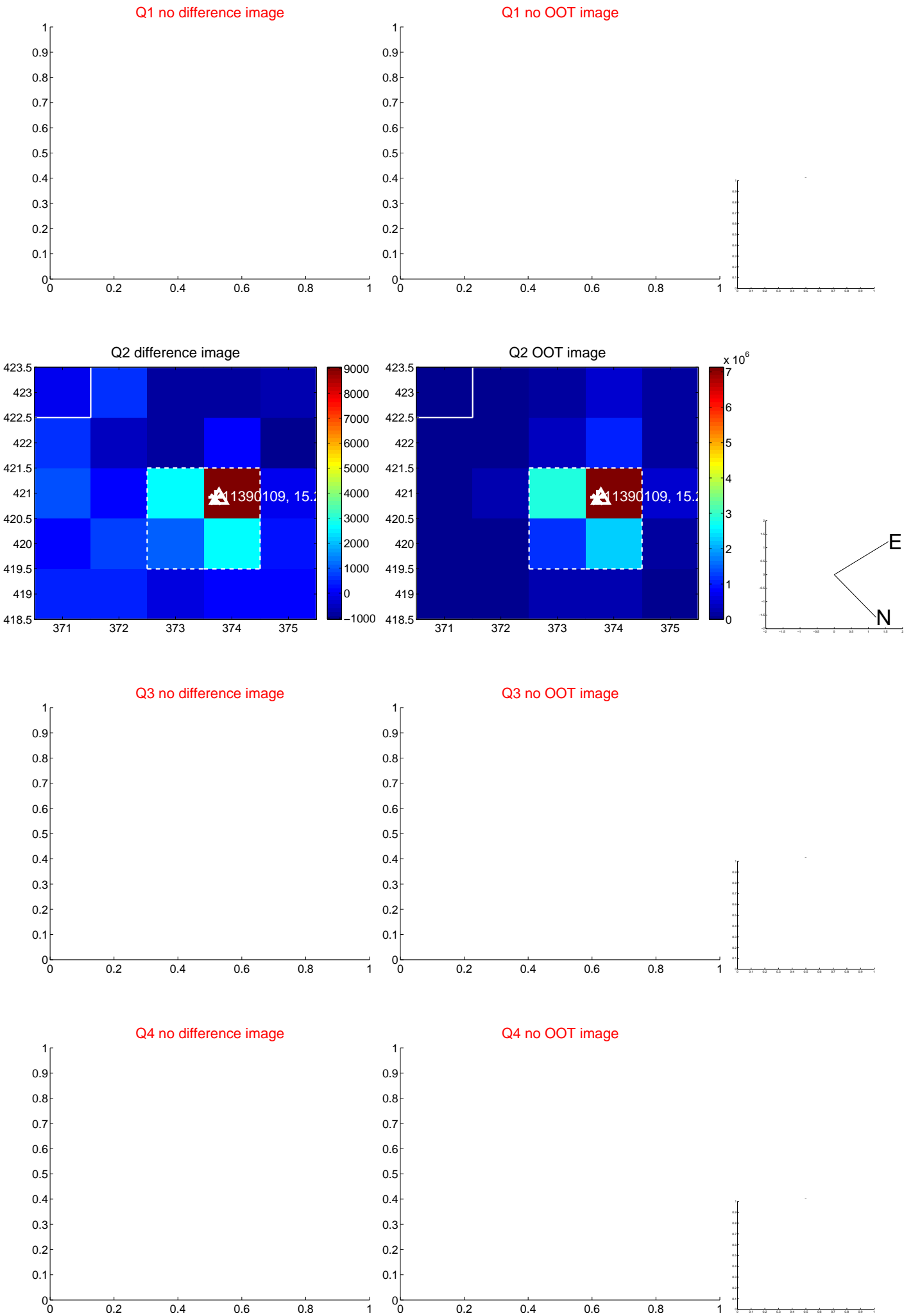
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.364 ± 0.708	1.93	1.257 ± 0.600	0.529 ± 1.139
PRF-fit source offset from KIC position	1.336 ± 0.633	2.11	1.280 ± 0.570	0.382 ± 1.119
photometric centroid source offset	1.87 ± 1.38	1.35	-1.17 ± 1.37	-1.45 ± 1.39

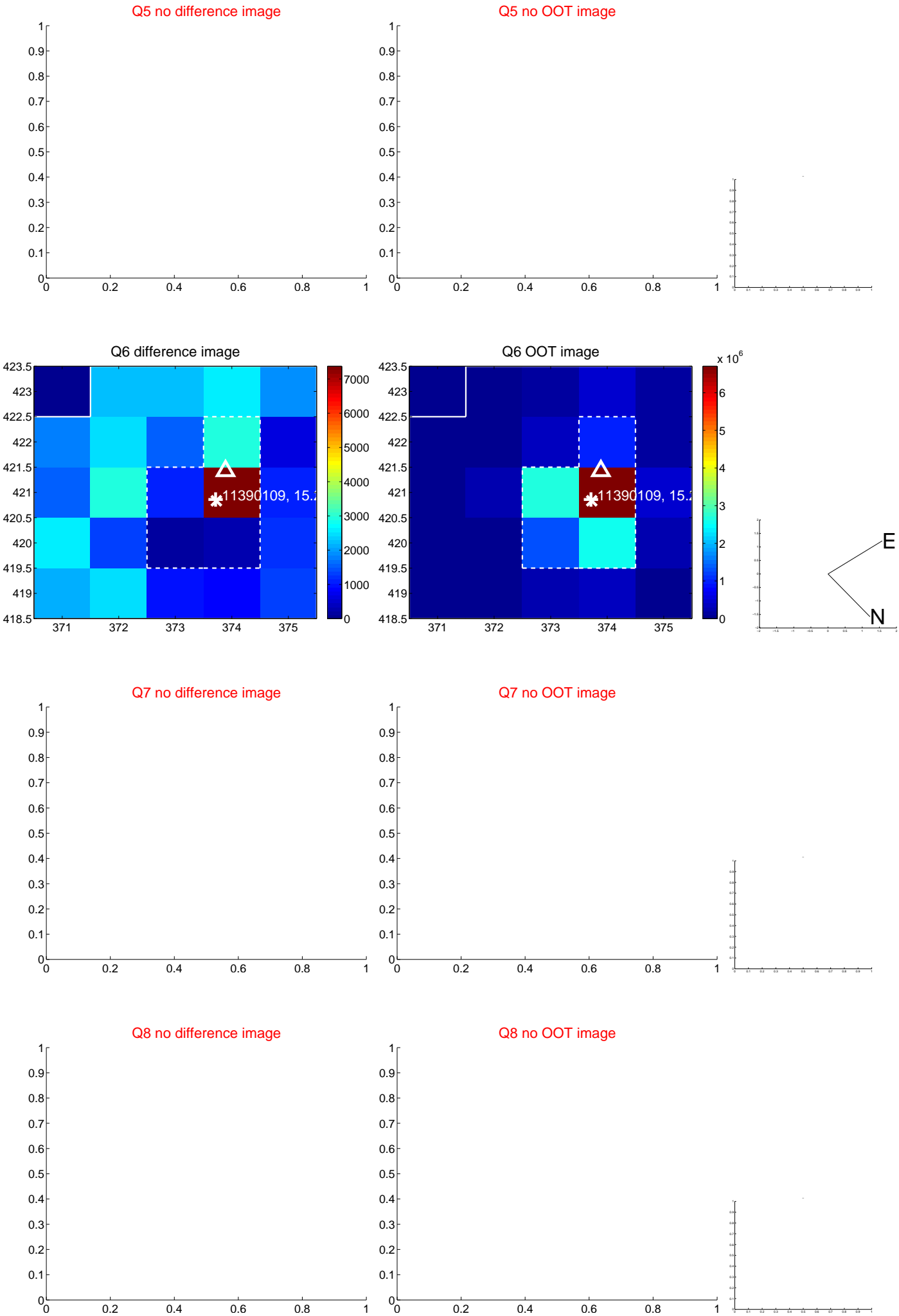


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

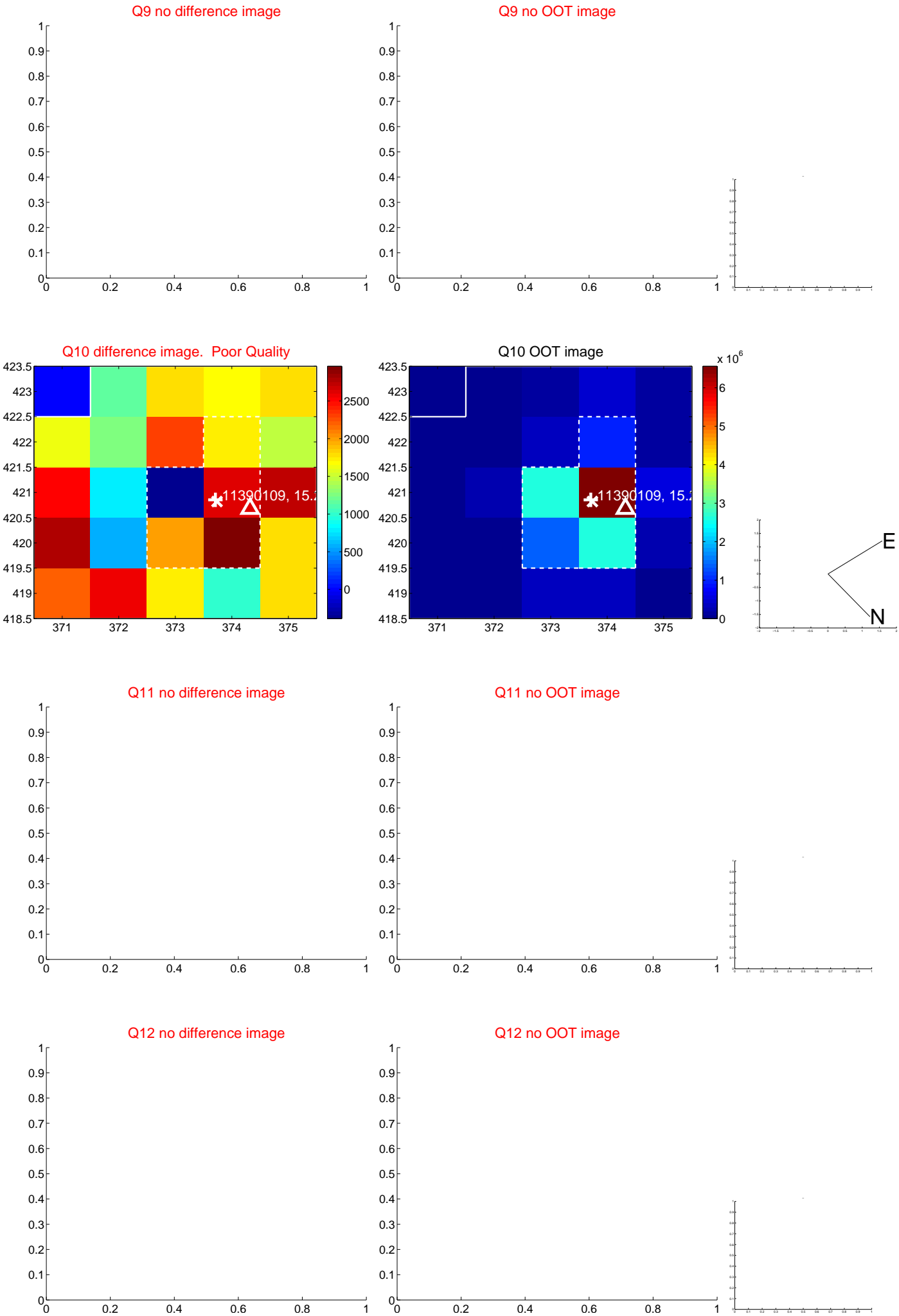
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



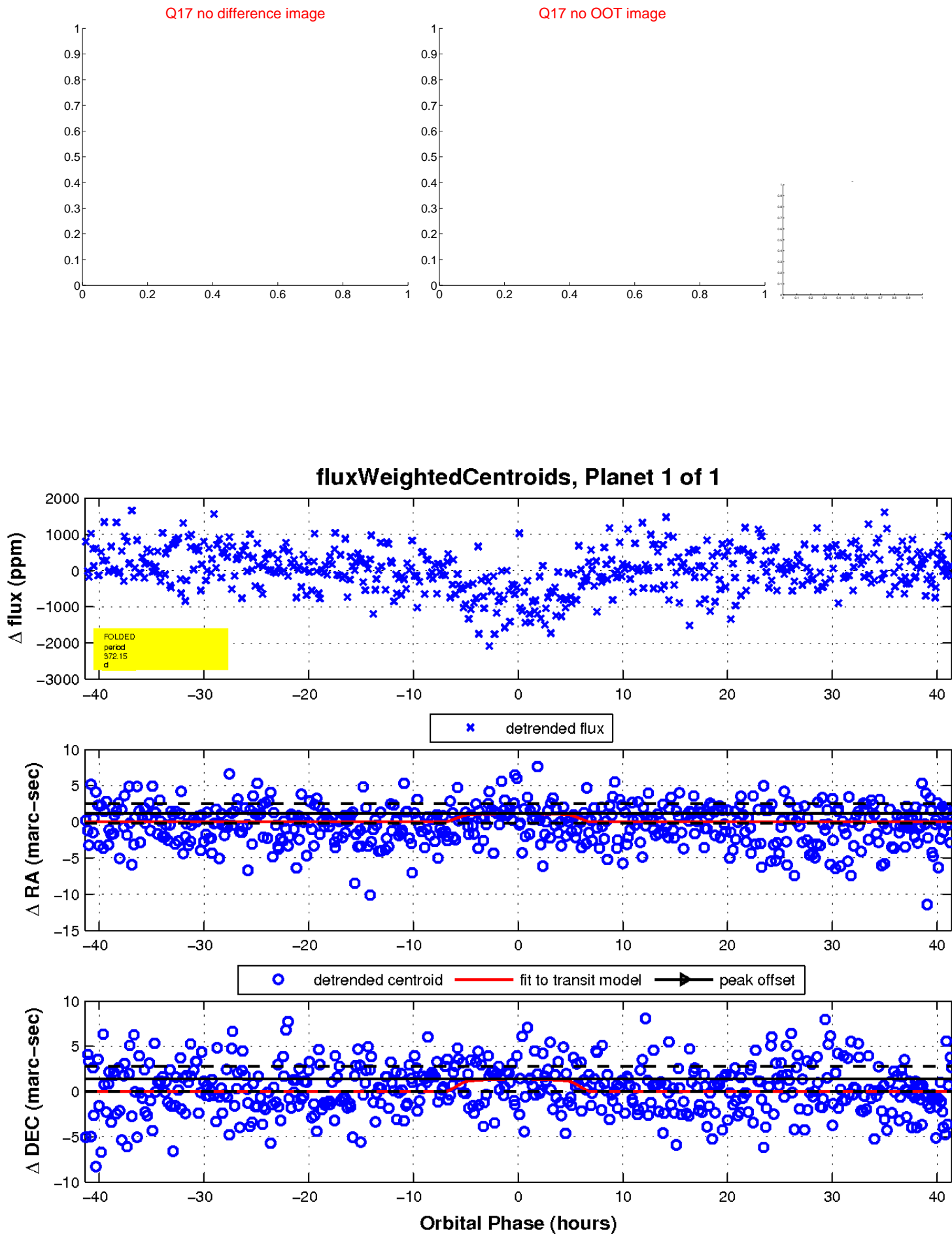
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

