

KIC 006209071

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})
006209071-01	OBS	No	361.048334	227.321345	174.7	9.243	9.2	6.2	1.97	6227	2.88	4.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006209071-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—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.

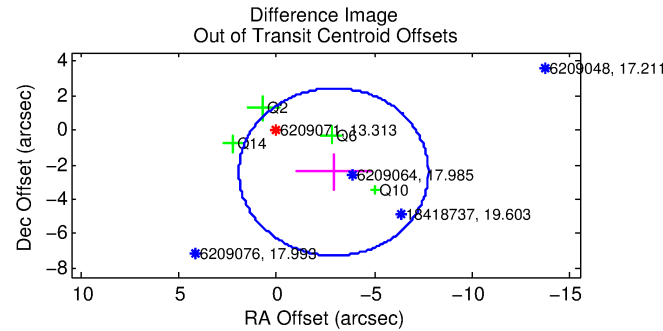
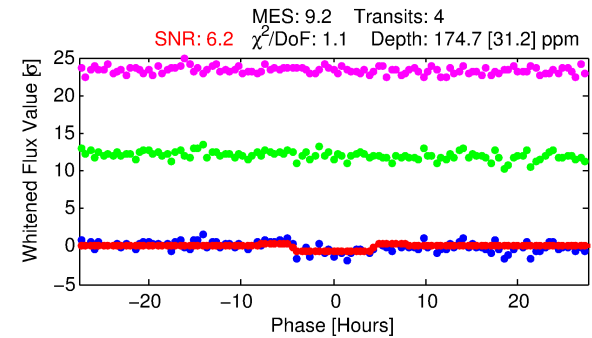
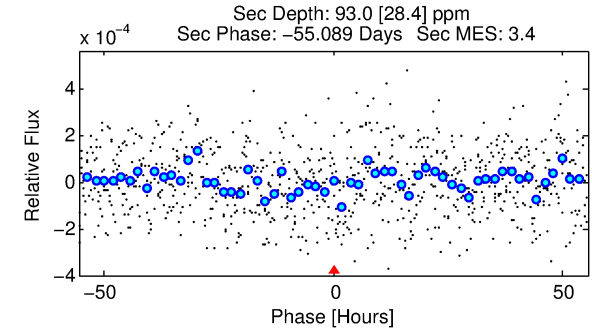
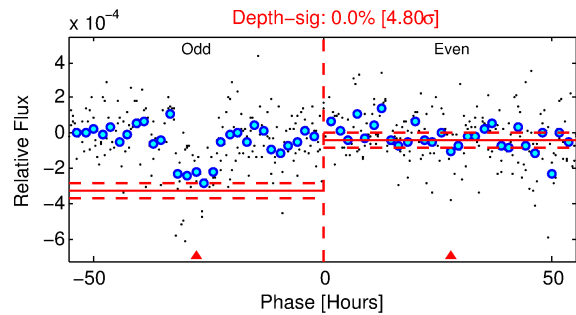
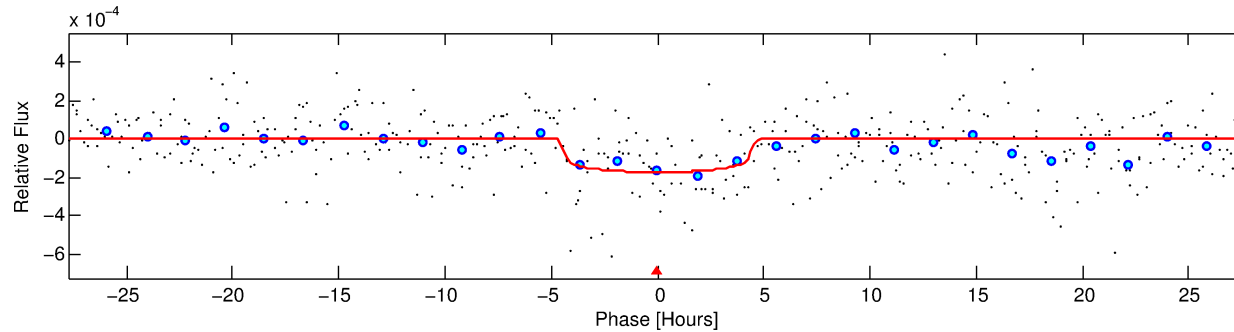
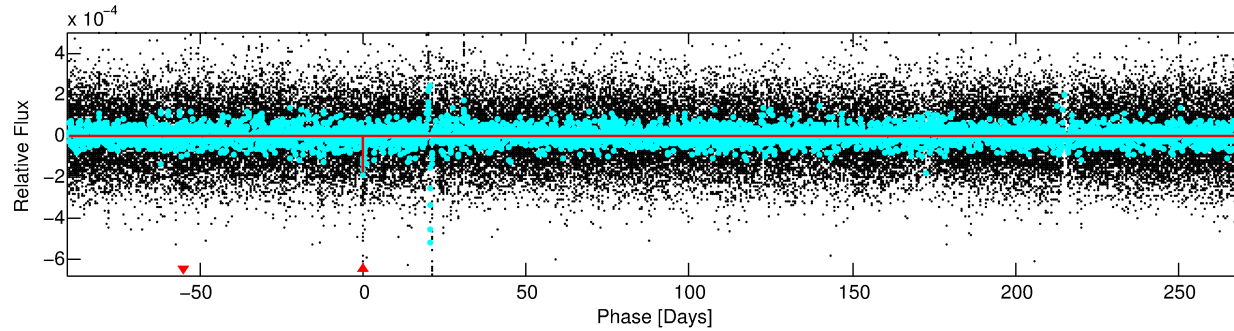
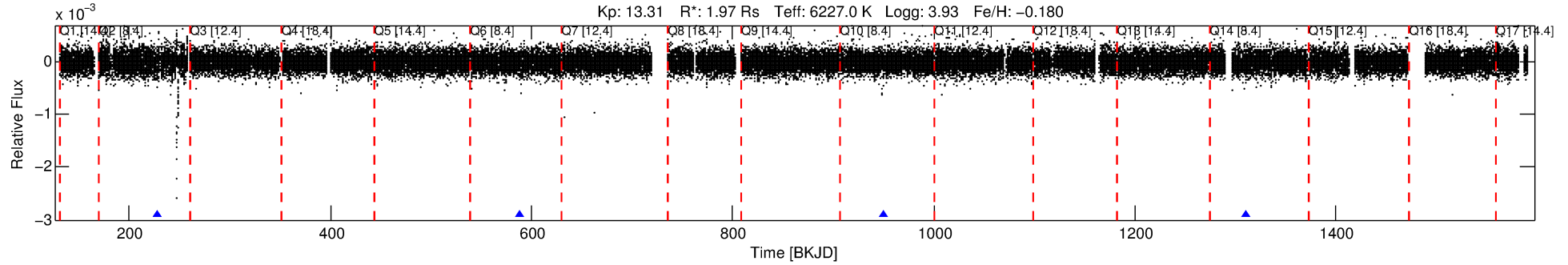
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006209071-01

No Significant Match Found

DV One-Page Summary

KIC: 6209071 Candidate: 1 of 1 Period: 361.048 d



DV Fit Results:

Period = 361.04833 [0.01005] d
Epoch = 227.3213 [0.0187] BKJD
Rp/R* = 0.0134 [0.0071]
a/R* = 186.09 [507.64]
b = 0.80 [1.25]
Seff = 4.70 [2.27]
Teq = 375 [45] K
Rp = 2.87 [1.77] Re
a = 1.0538 [0.3116] AU
Ag = 6873.26 [8224.89] [0.84 σ]
Teffp = 5285 [1464] K [3.35 σ]

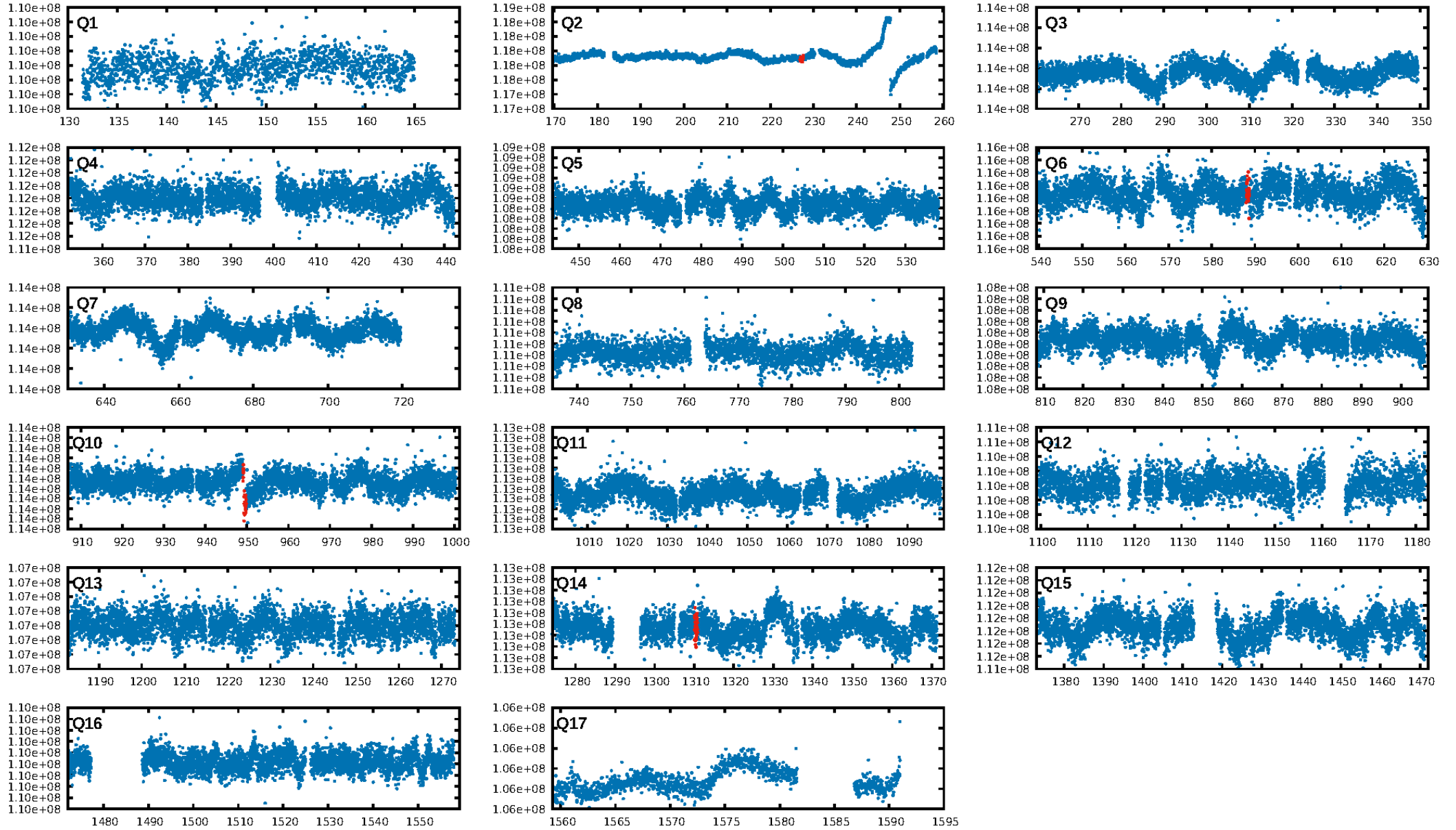
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 96.9%
Bootstrap-pfa: 1.04e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -4.307
Centroid-sig: 2.6%
Centroid-so: 2.124 arcsec [1.65 σ]
OotOffset-rm: 3.794 arcsec [2.35 σ]
KicOffset-rm: 3.807 arcsec [2.32 σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

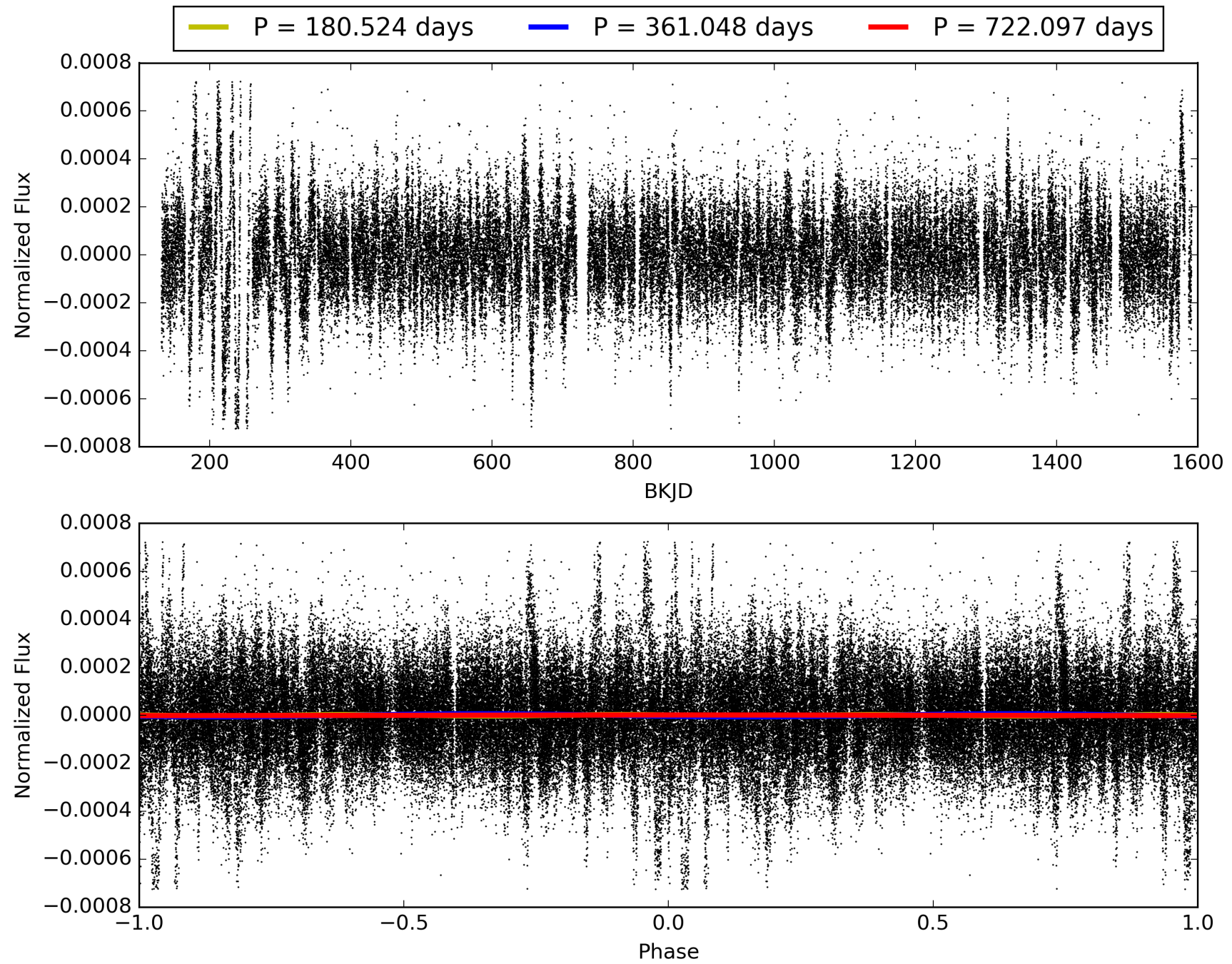
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:35:36 Z

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

TCE 006209071-01, PDC Light Curves

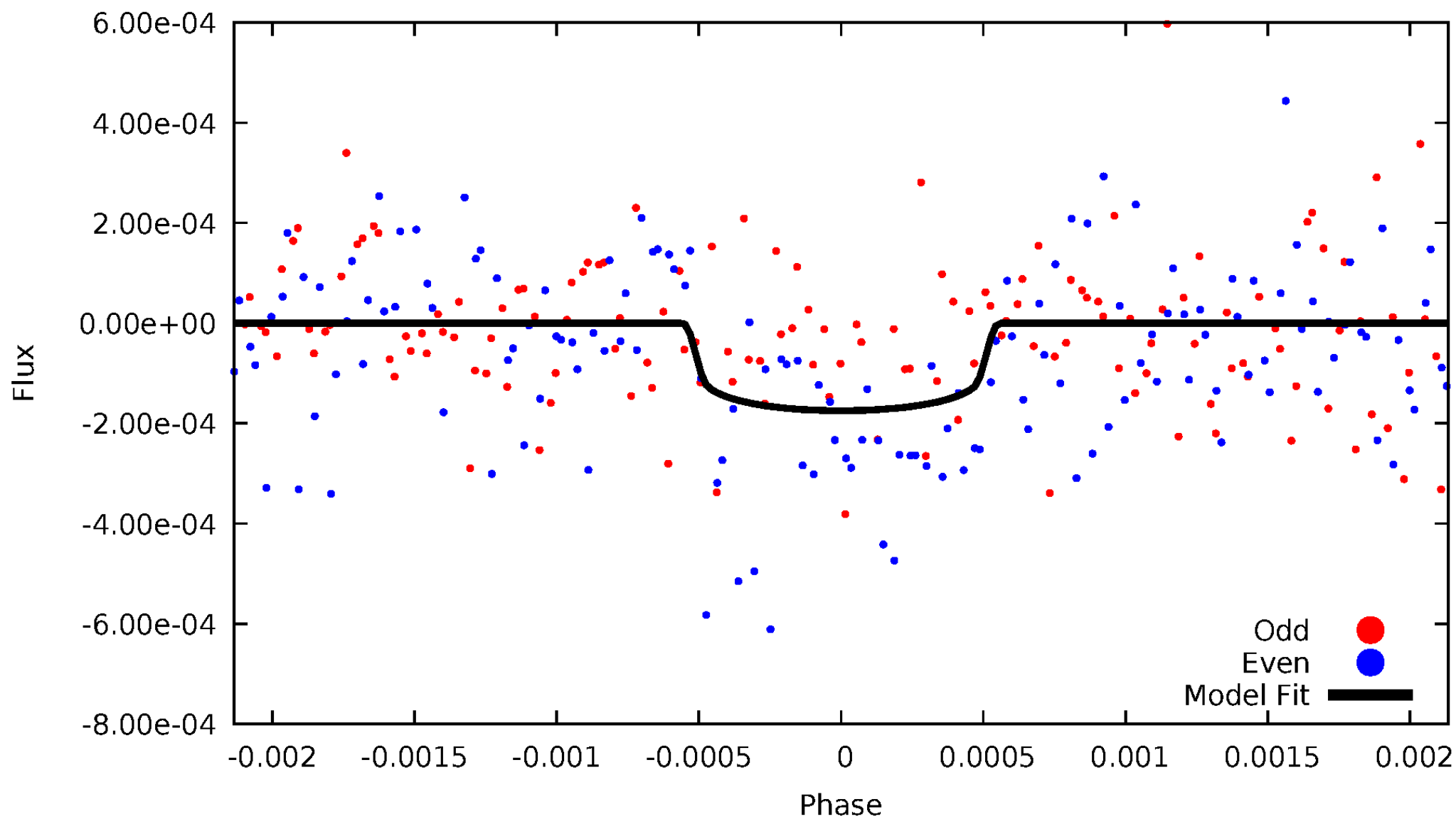


TCE 006209071-01



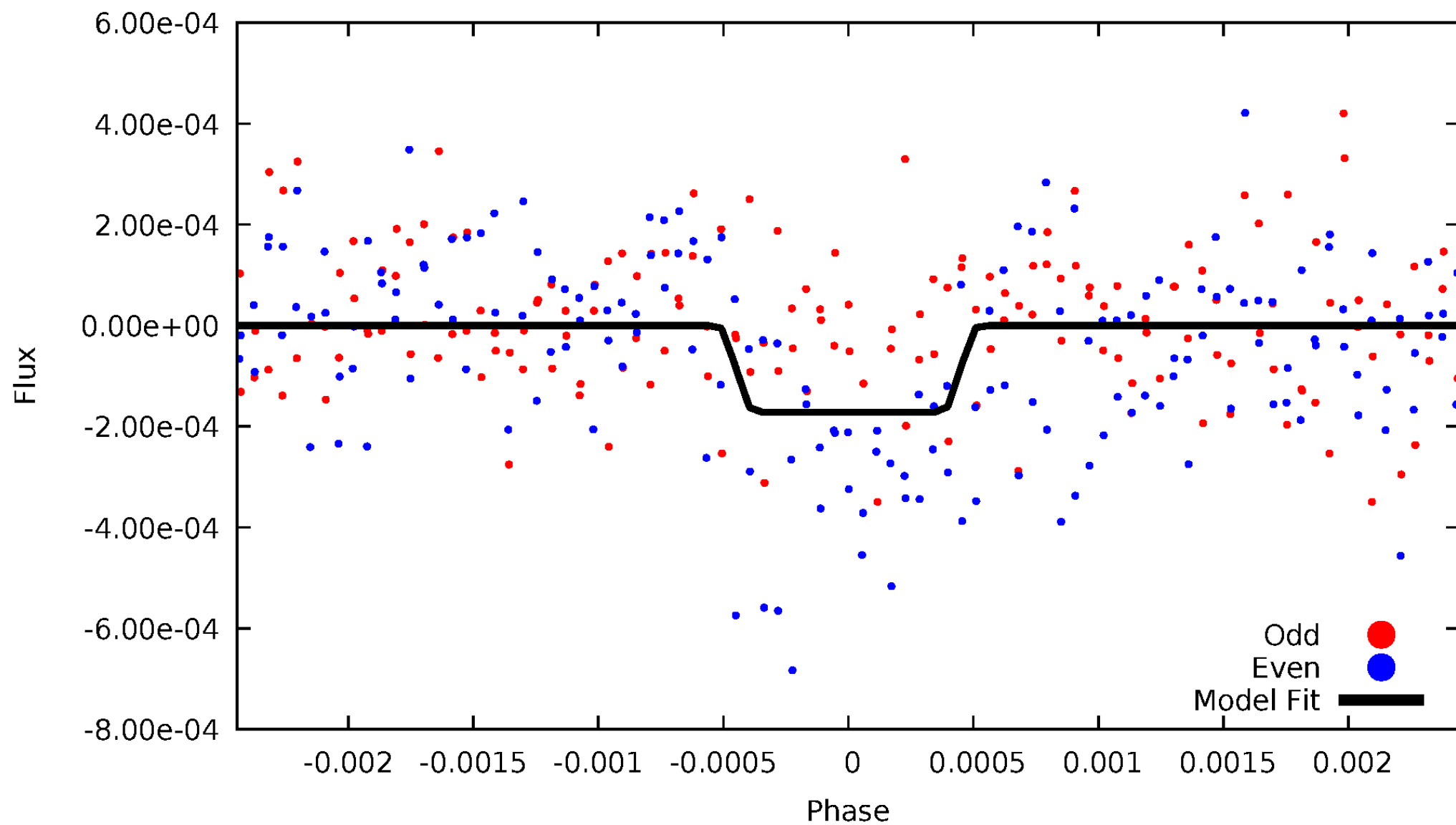
DV Odd/Even

TCE 006209071-01

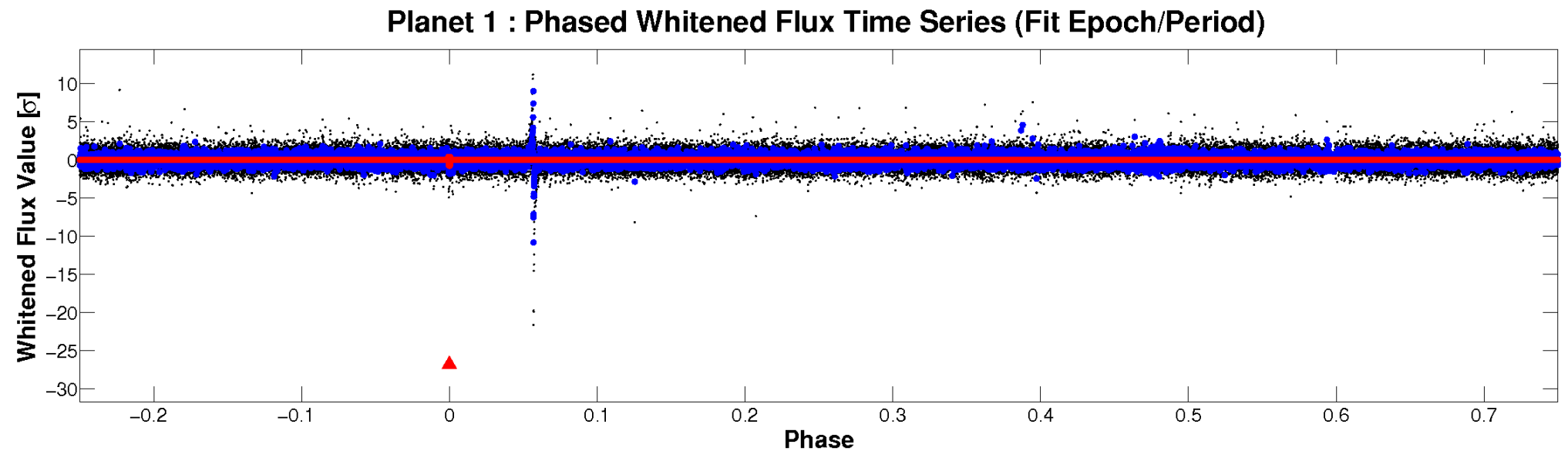
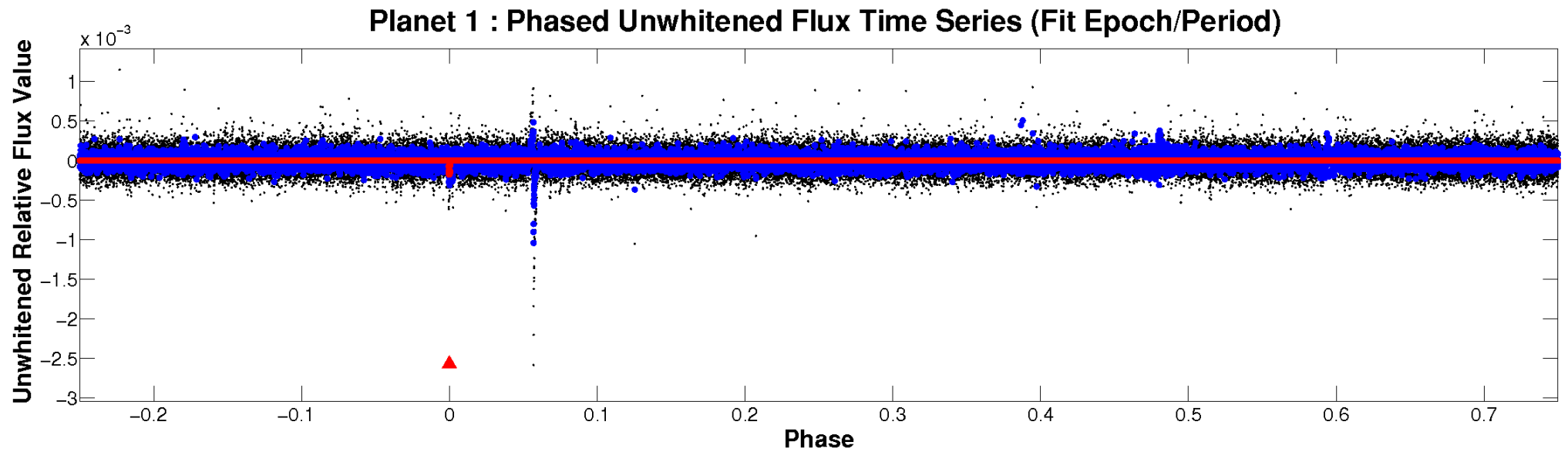


ALT Odd/Even

TCE 006209071-01

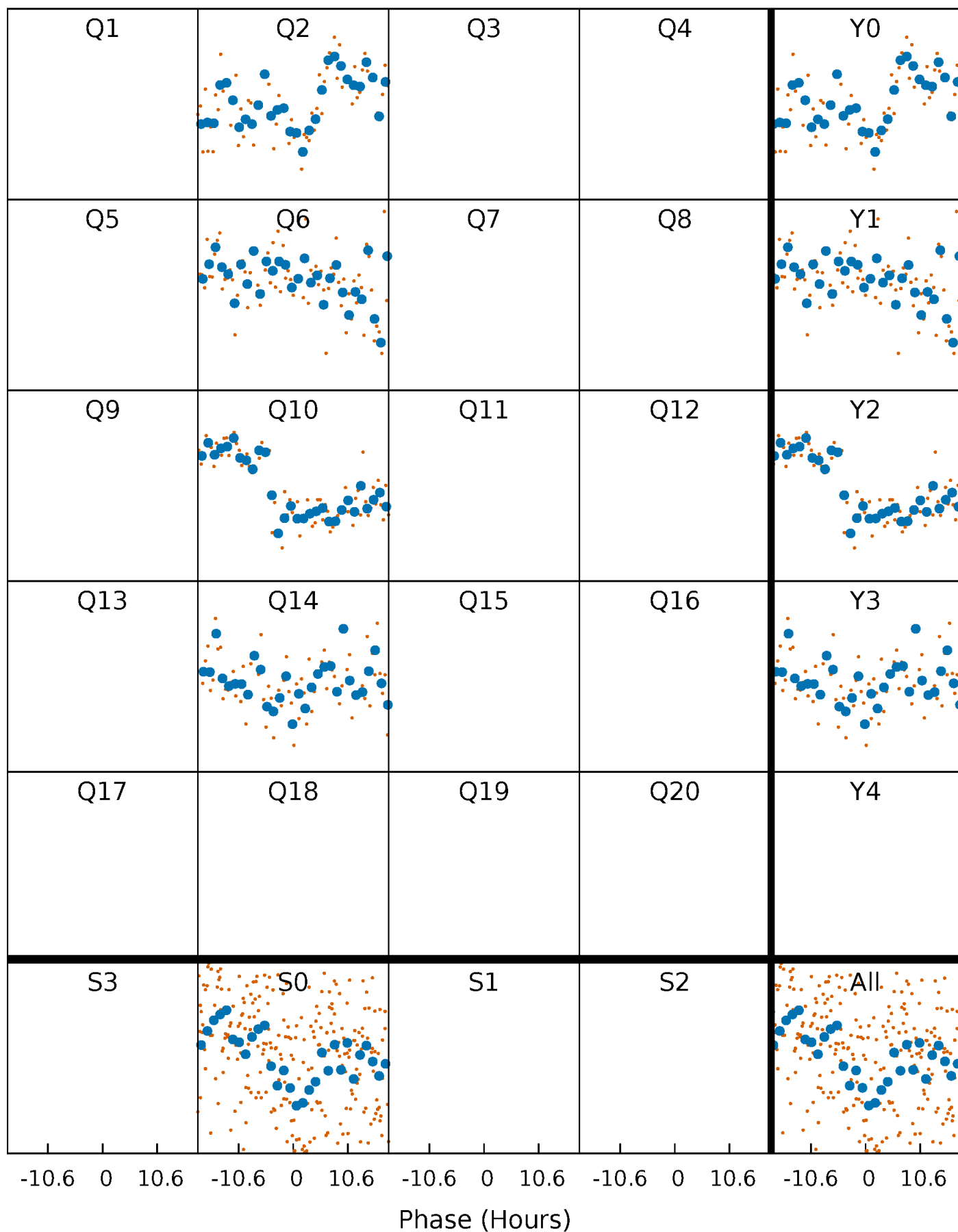


Non-Whitened Vs. Whitened Light Curve



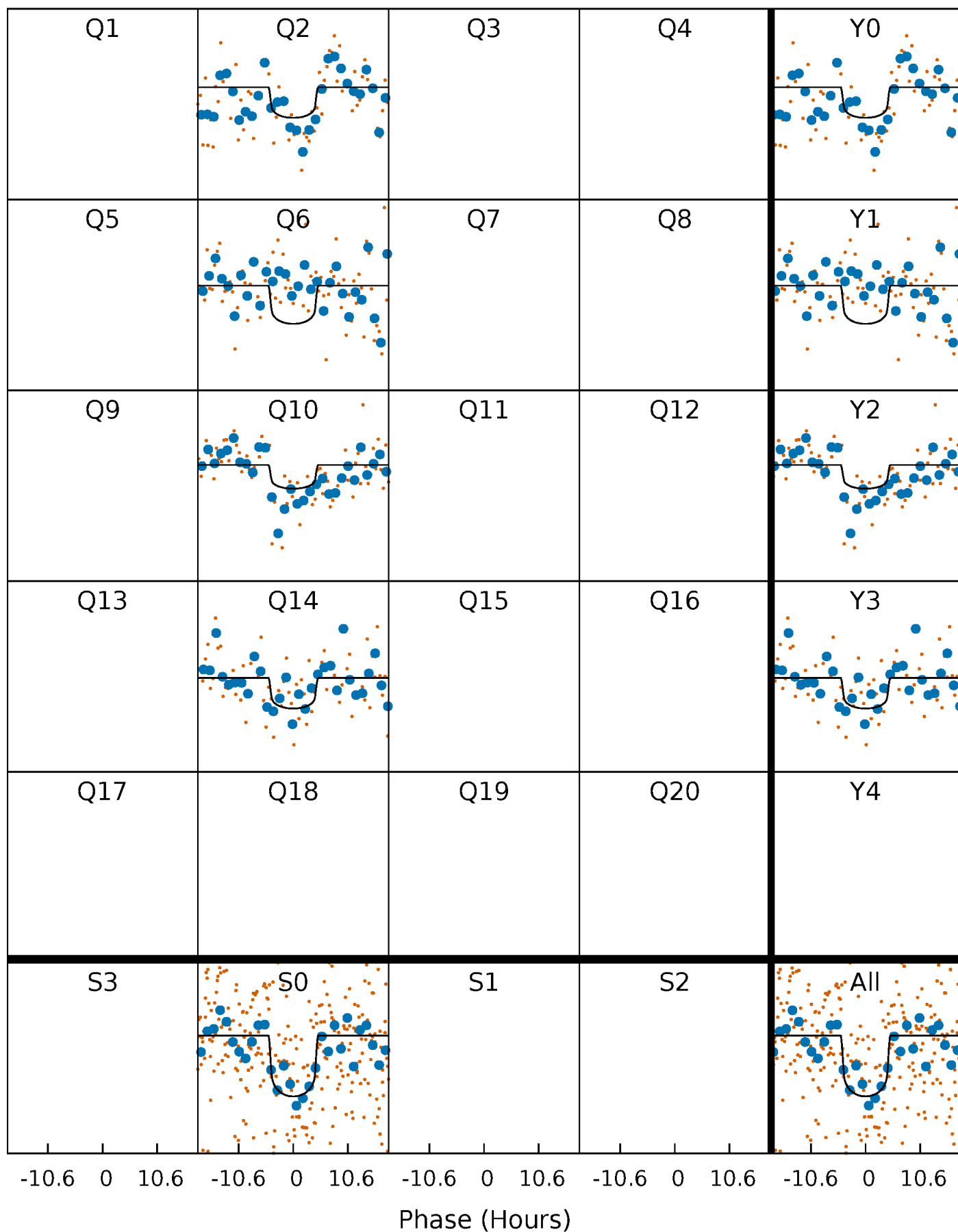
PDC Quarter-Phased Transit Curves

TCE 006209071-01 P=361.048334 Days $T_0=227.321345$ (BKJD)



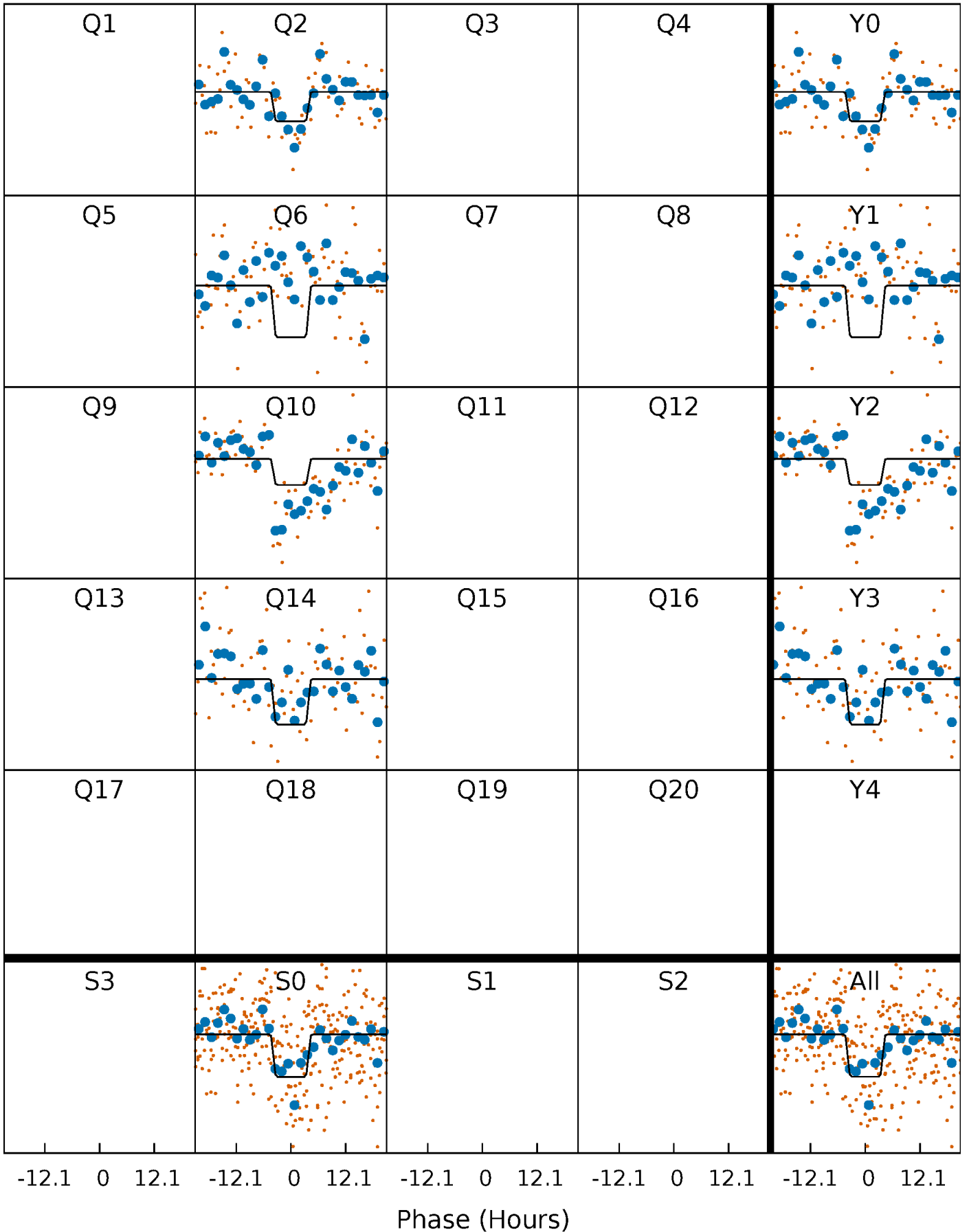
DV Quarter-Phased Transit Curves

TCE 006209071-01 P=361.048334 Days $T_0=227.321345$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

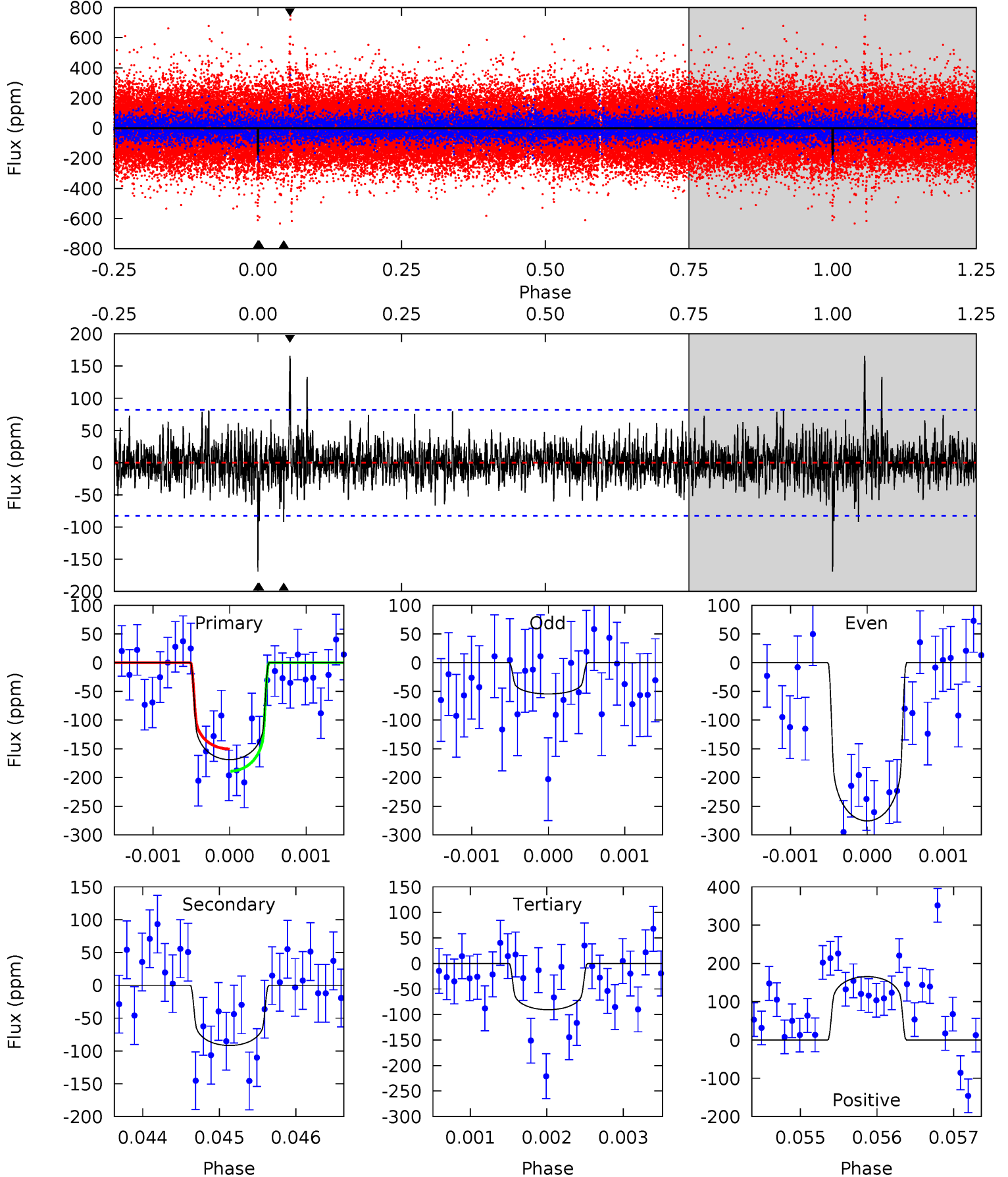
TCE 006209071-01 P=361.020138 Days $T_0=227.369056$ (BKJD)



DV Model-Shift Uniqueness Test

006209071-01, P = 361.048334 Days, E = 227.321345 Days

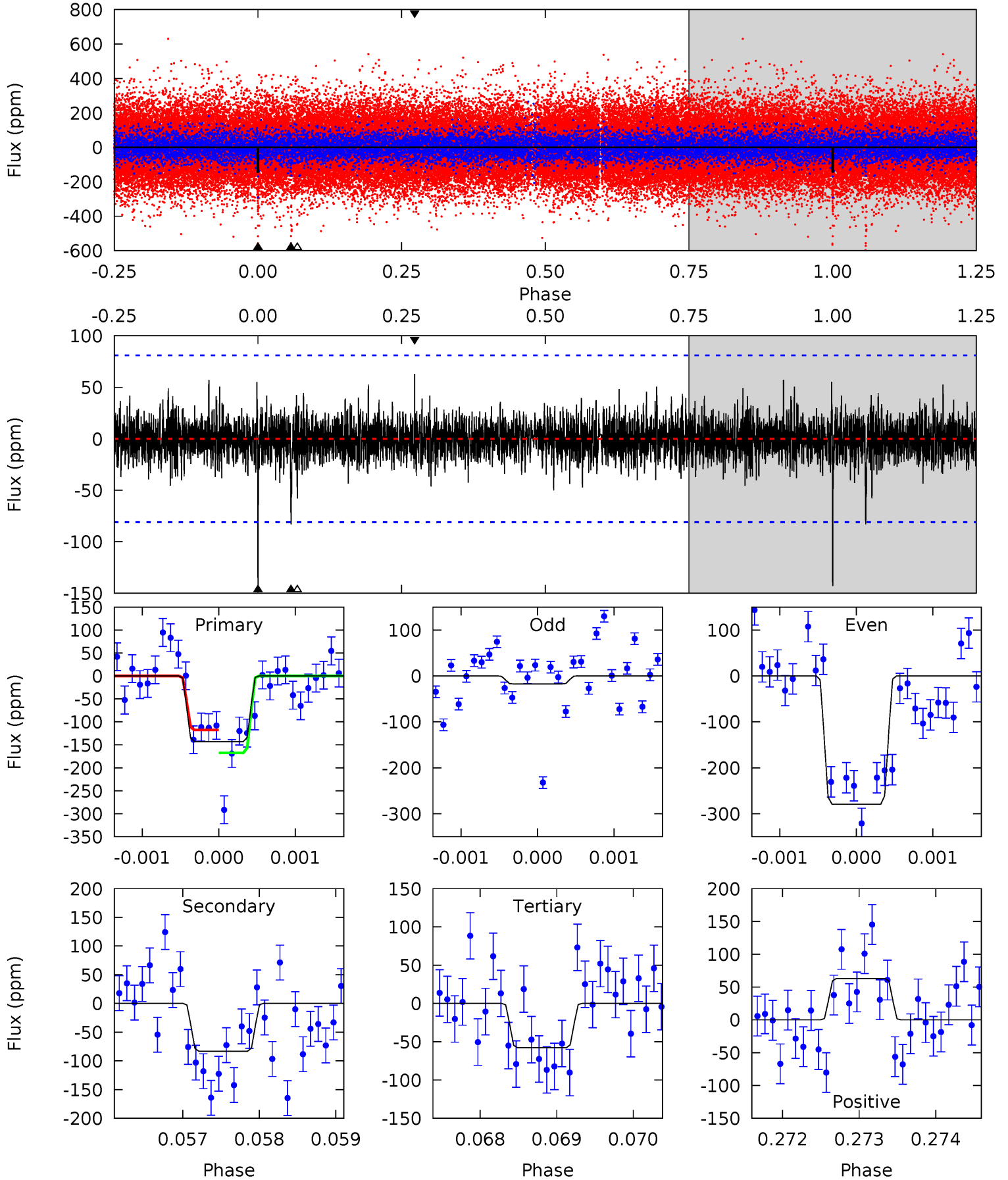
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	6.05	5.98	10.9	5.44	3.27	1.48	5.17	0.22	0.07	-4.87	7.35	0.91	0.49	1.28



Alt Model-Shift Uniqueness Test

006209071-01, P = 361.020138 Days, E = 227.369056 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.60	5.58	3.88	4.22	5.44	3.27	0.93	5.72	5.38	1.69	1.35	5.93	1.04	0.31	1.67



Stellar Parameters For KIC 006209071

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6227^{+167}_{-186}	$3.928^{+0.273}_{-0.117}$	$-0.180^{+0.300}_{-0.250}$	$1.968^{+0.411}_{-0.616}$	$1.196^{+0.218}_{-0.198}$	$0.221^{+0.378}_{-0.076}$
	+3%/-3%	+7%/-3%	+167%/-139%	+21%/-31%	+18%/-17%	+171%/-34%
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 006209071-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-92 ± 15	$2.82^{+1.44}_{-1.42}$	517^{+34}_{-41}	5262^{+2095}_{-828}	7104^{+20617}_{-4019}
Alt.	-83 ± 15	$2.76^{+1.59}_{-1.50}$	516^{+34}_{-40}	5208^{+2322}_{-886}	6726^{+23934}_{-4057}

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 $A_{obs} \gg 1.0$

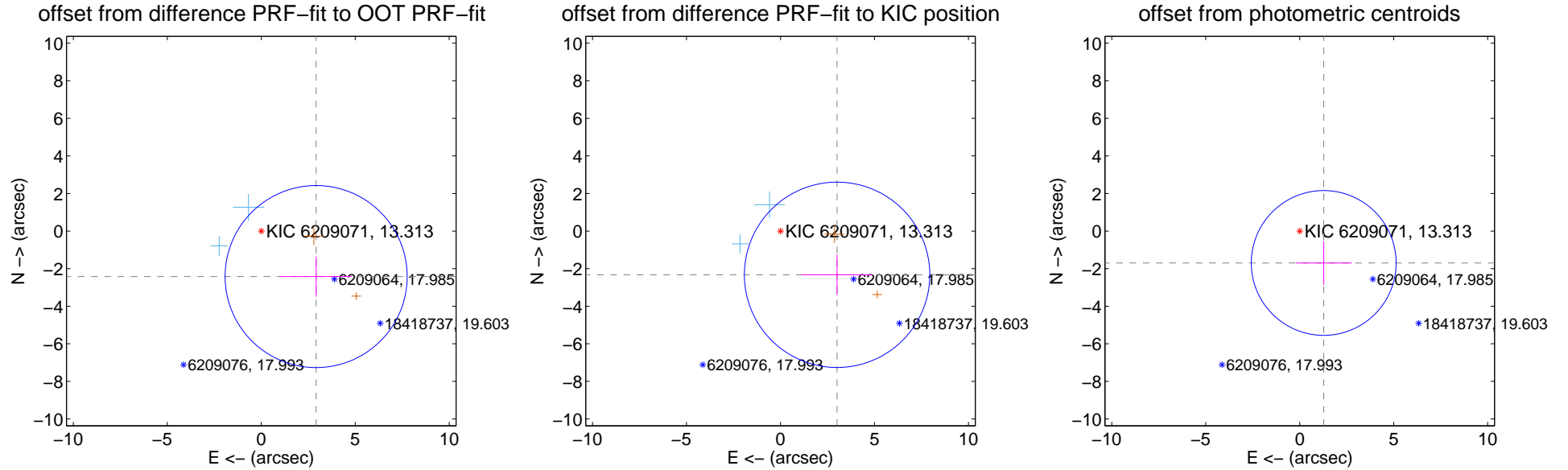
DV Centroid Data

Supplemental centroid analysis for 006209071-01. Kepler magnitude: 13.31. Transit SNR 6.23

There are 2 quarters with good PRF difference image offsets

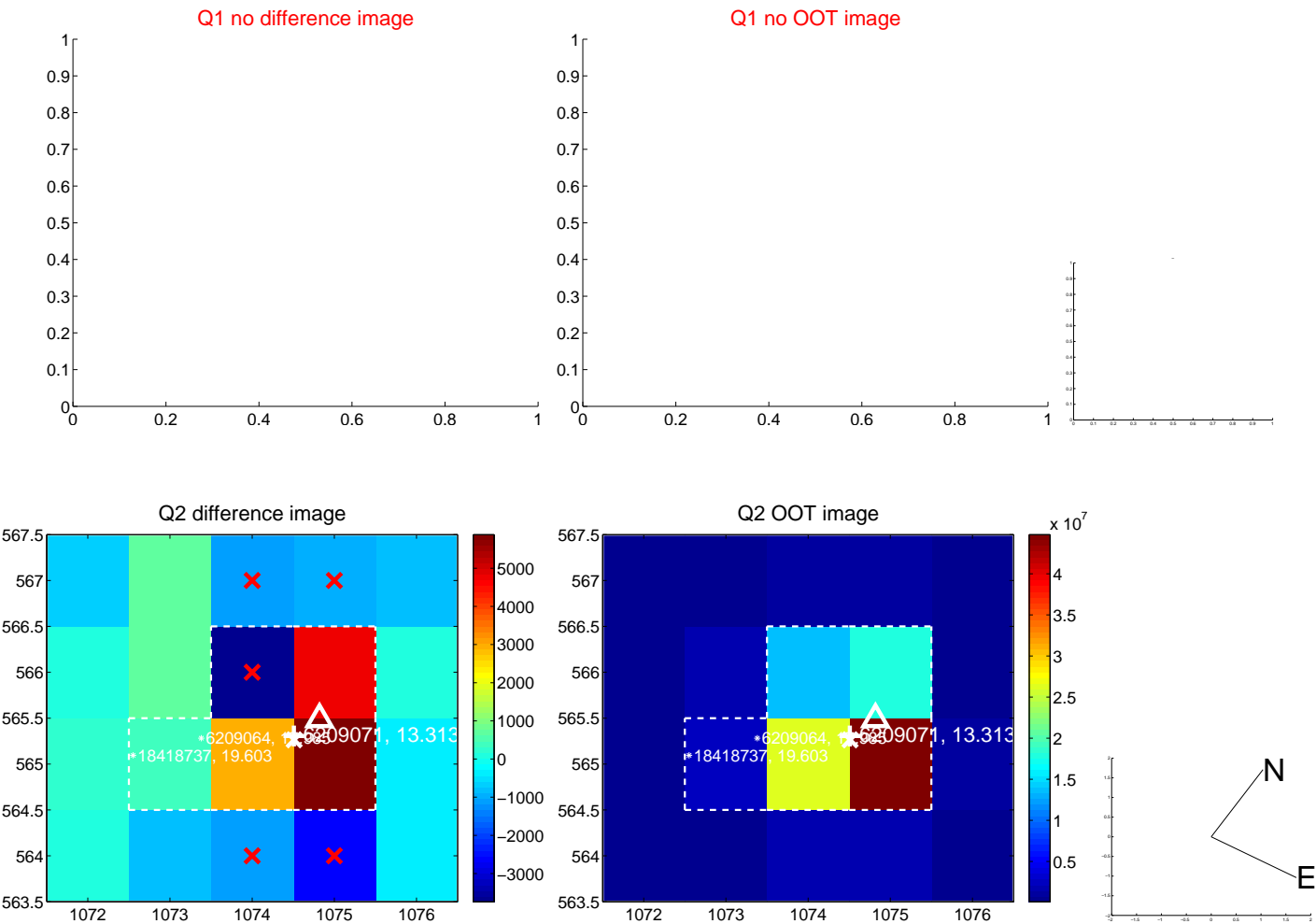
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.794 ± 1.615	2.35	-2.921 ± 1.901	-2.422 ± 1.069
PRF-fit source offset from KIC position	3.807 ± 1.644	2.32	-3.012 ± 1.904	-2.329 ± 1.078
photometric centroid source offset	2.12 ± 1.28	1.65	-1.28 ± 1.48	-1.70 ± 1.16

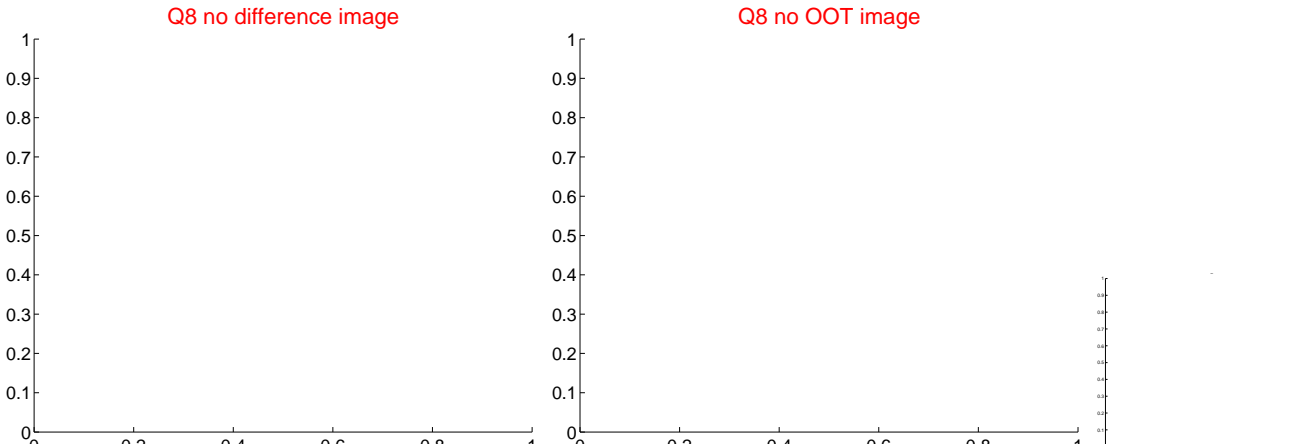
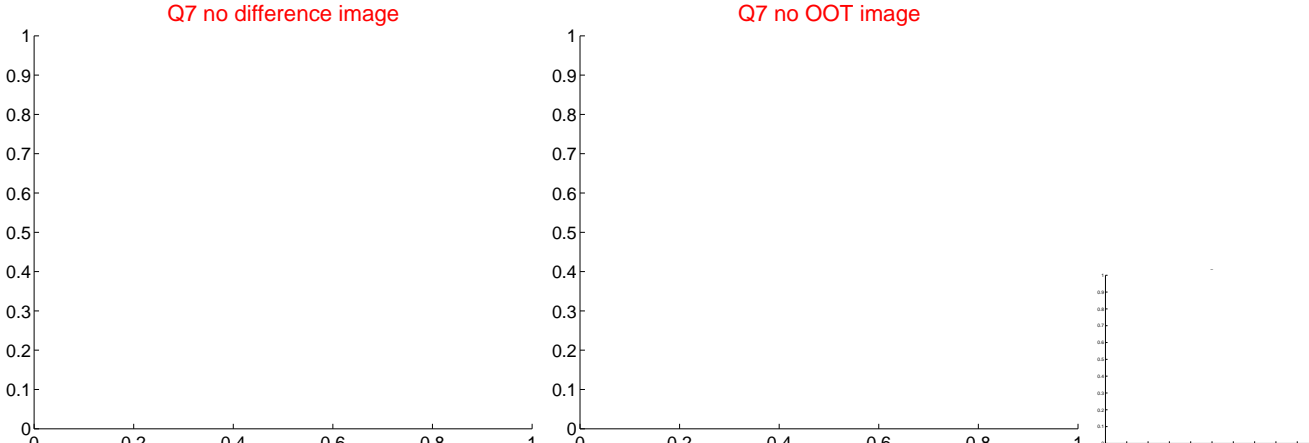
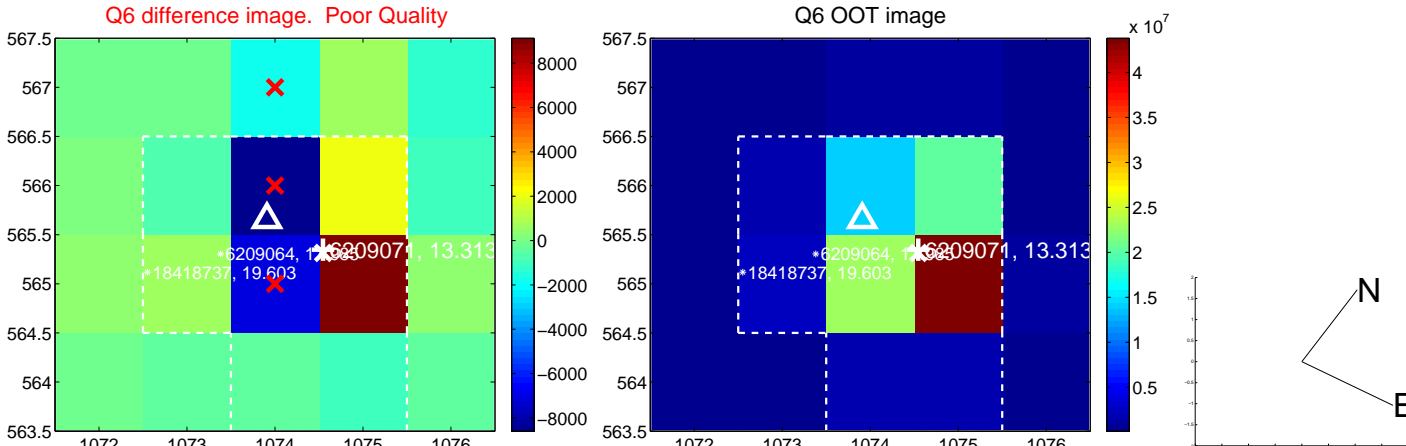
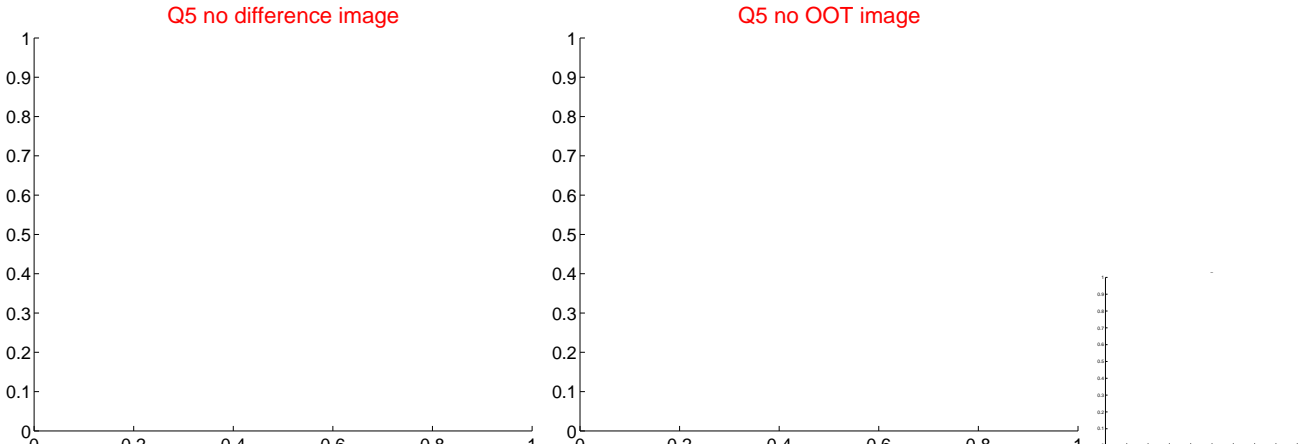


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

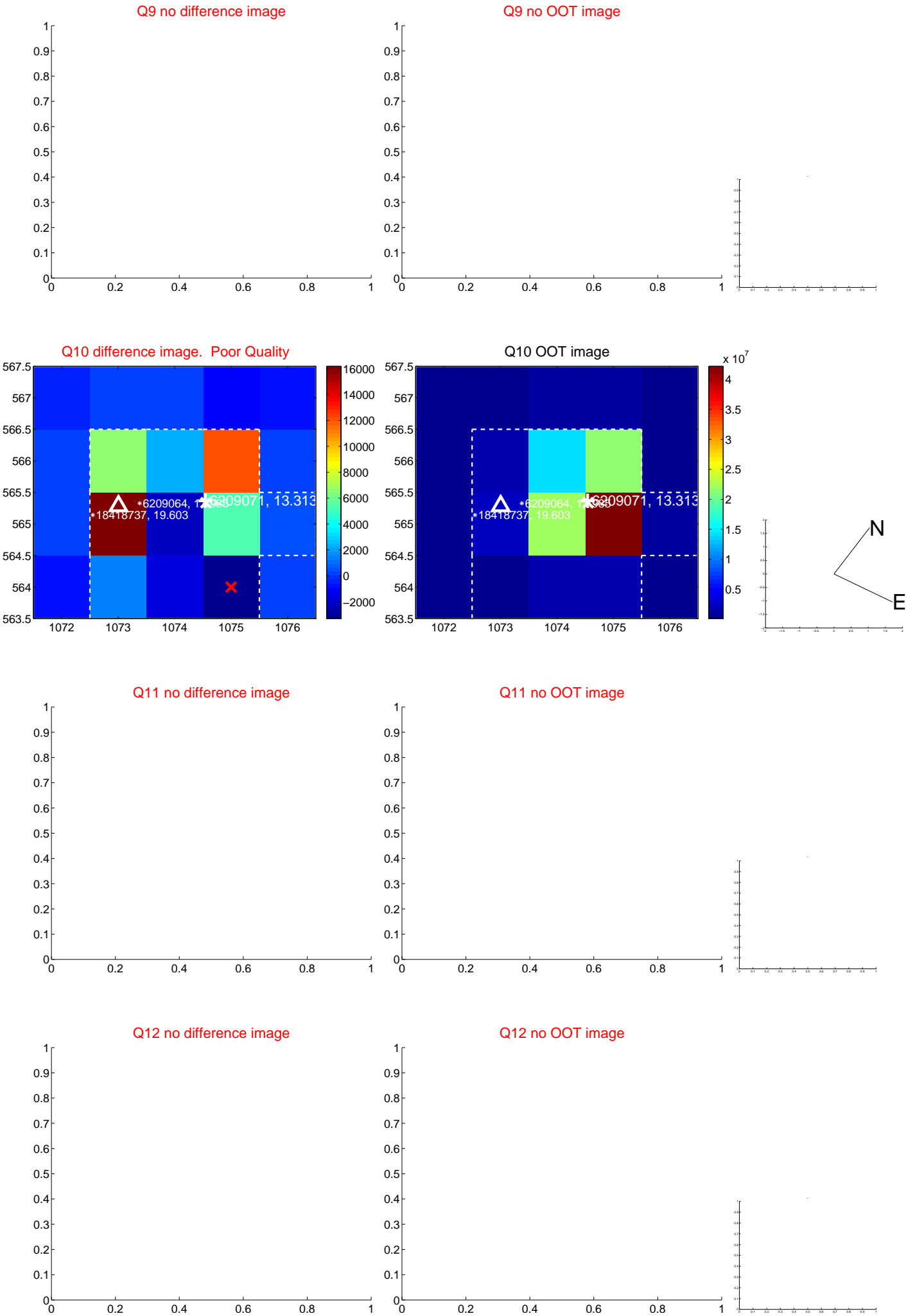
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



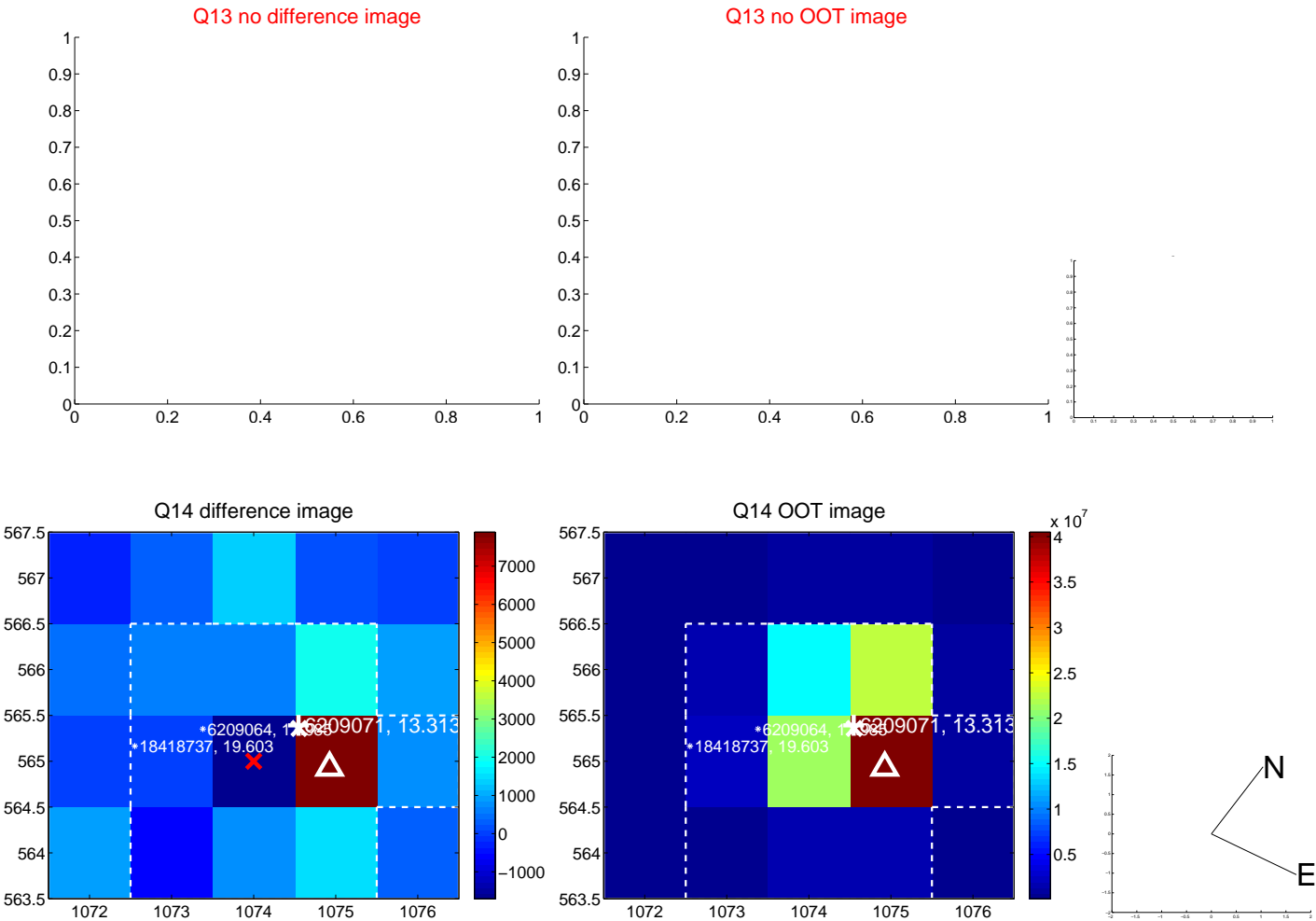
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



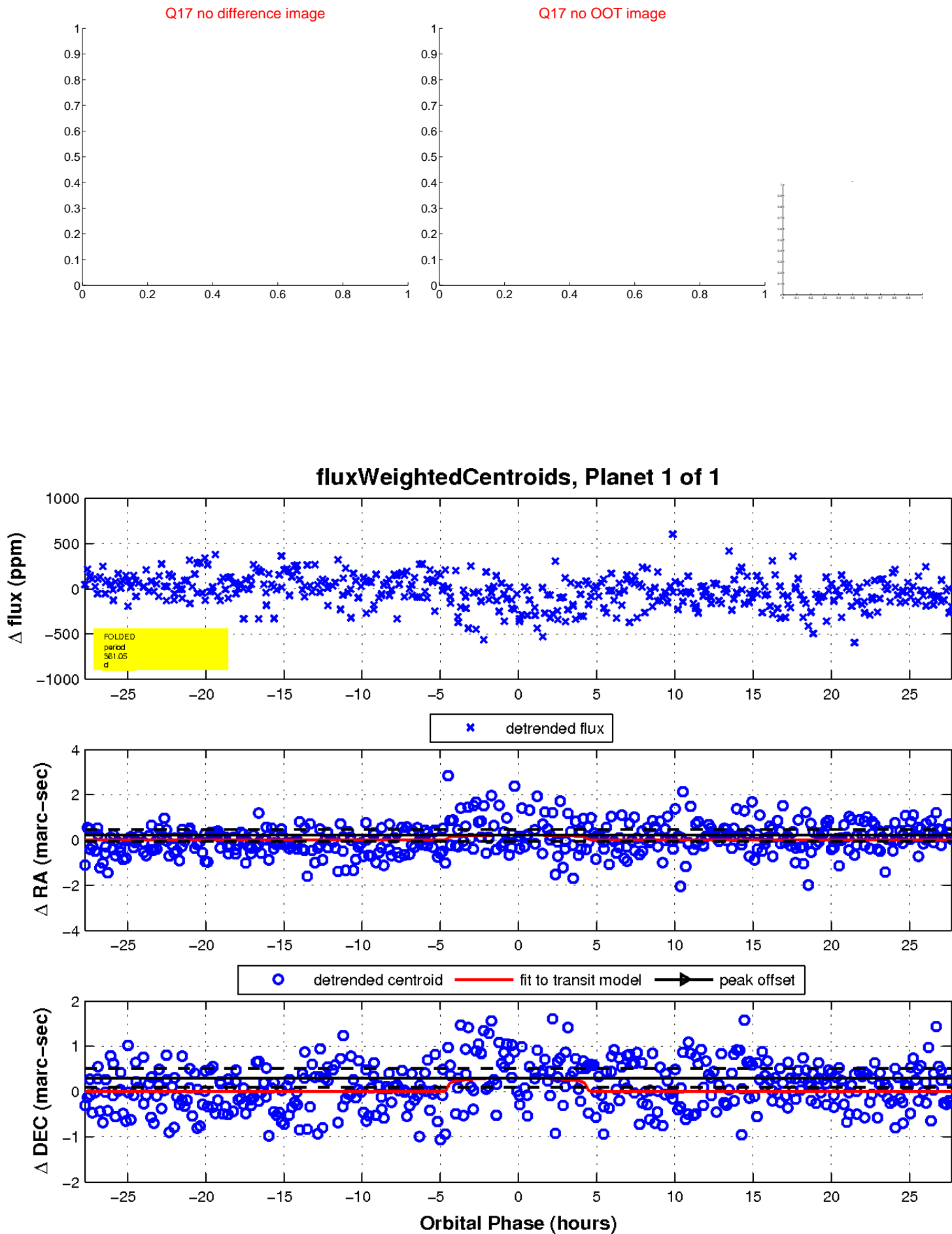
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

