

KIC 006223501

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})
006223501-01	OBS	No	367.872388	188.197769	1956.6	3.366	65.8	48.4	63.85	3808	285.43	517.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006223501-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_ZUMA—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

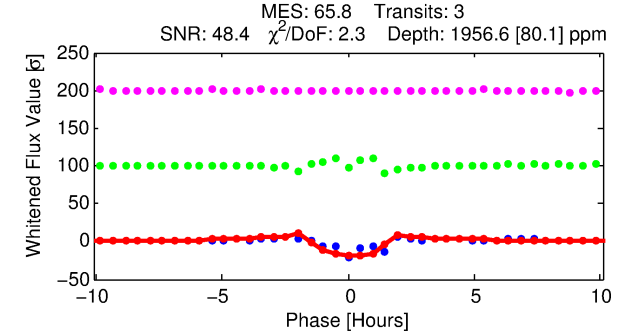
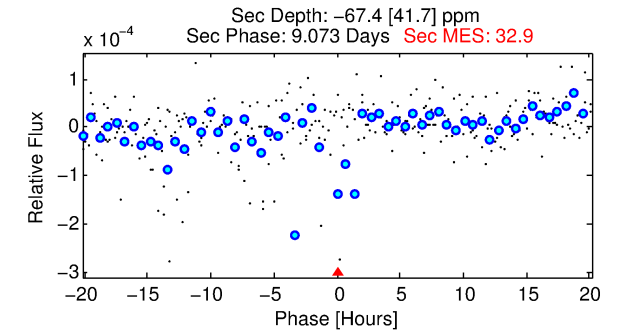
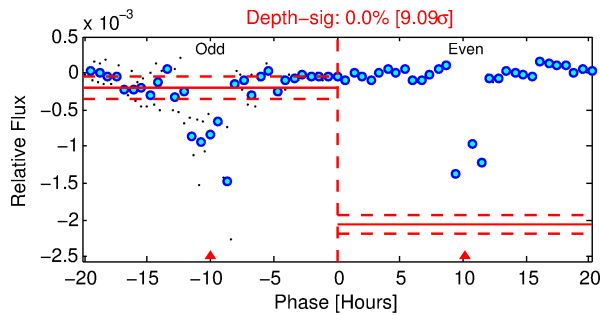
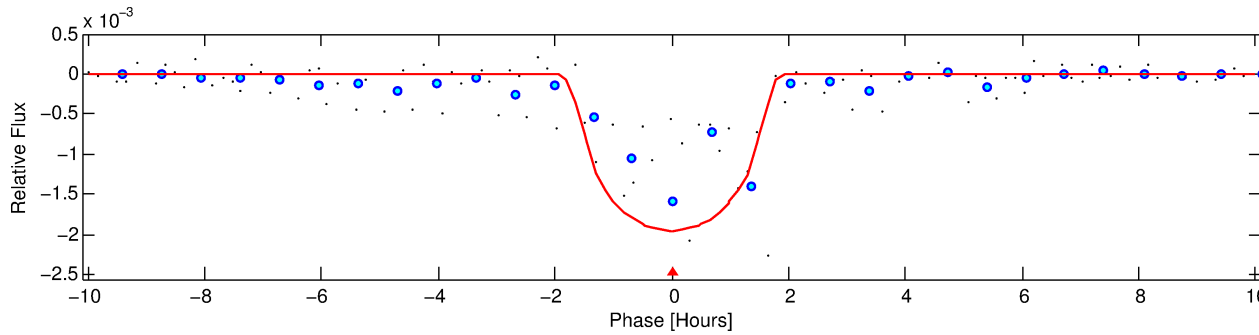
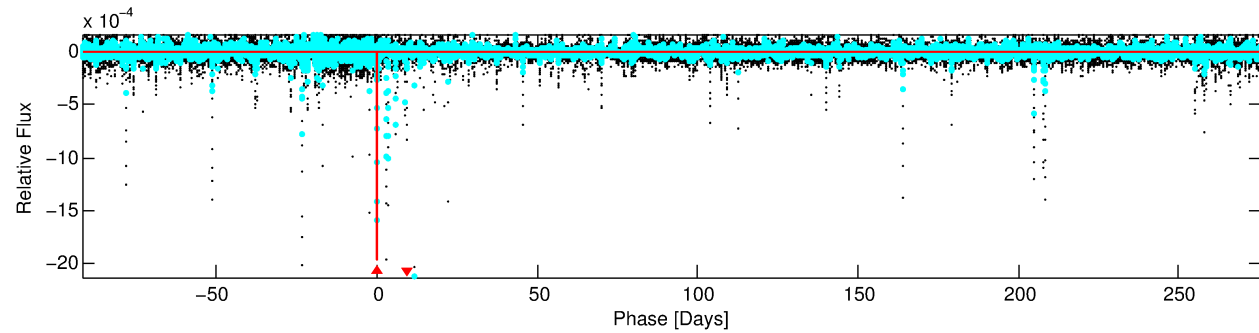
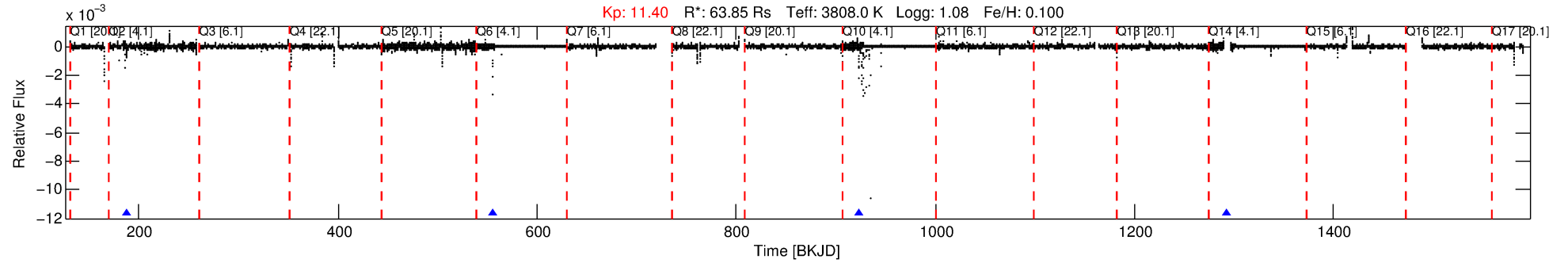
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006223501-01

No Significant Match Found

DV One-Page Summary

KIC: 6223501 Candidate: 1 of 1 Period: 367.872 d



DV Fit Results:

Period = 367.87239 [0.00162] d
Epoch = 188.1978 [0.0015] BKJD
 $R_p/R^* = 0.0410$ [0.0157]
 $a/R^* = 725.74$ [646.85]
 $b = 0.57$ [1.09]
Seff = 517.83 [91.59]
Teq = 1216 [54] K
 $R_p = 285.43$ [122.52] R_e
 $a = 1.2179$ [0.1602] AU
Ag = N/A
Teffp = N/A

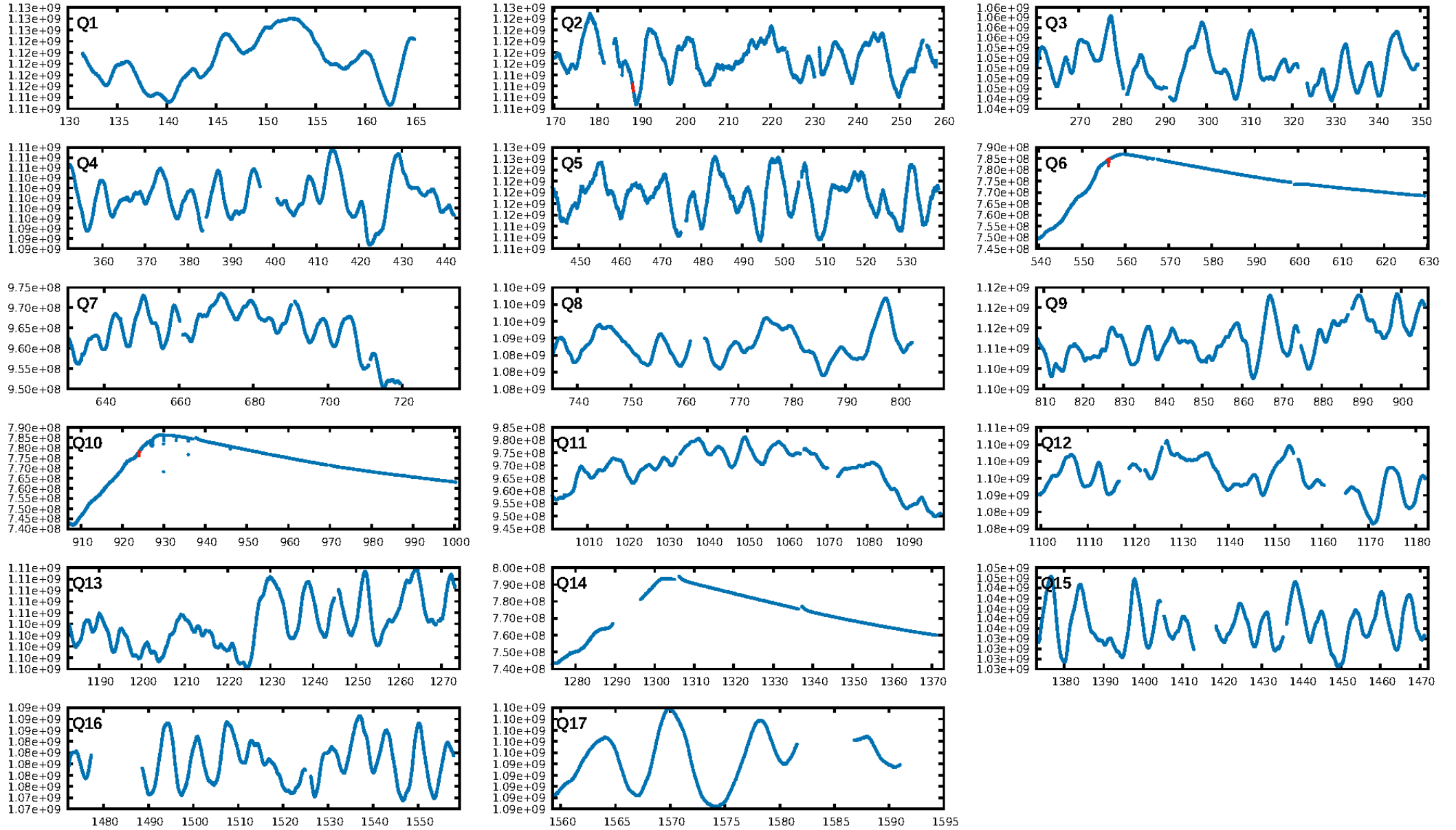
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 89.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.42e-24
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.574
Centroid-sig: 0.0%
Centroid-so: 1.665 arcsec [6.77 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

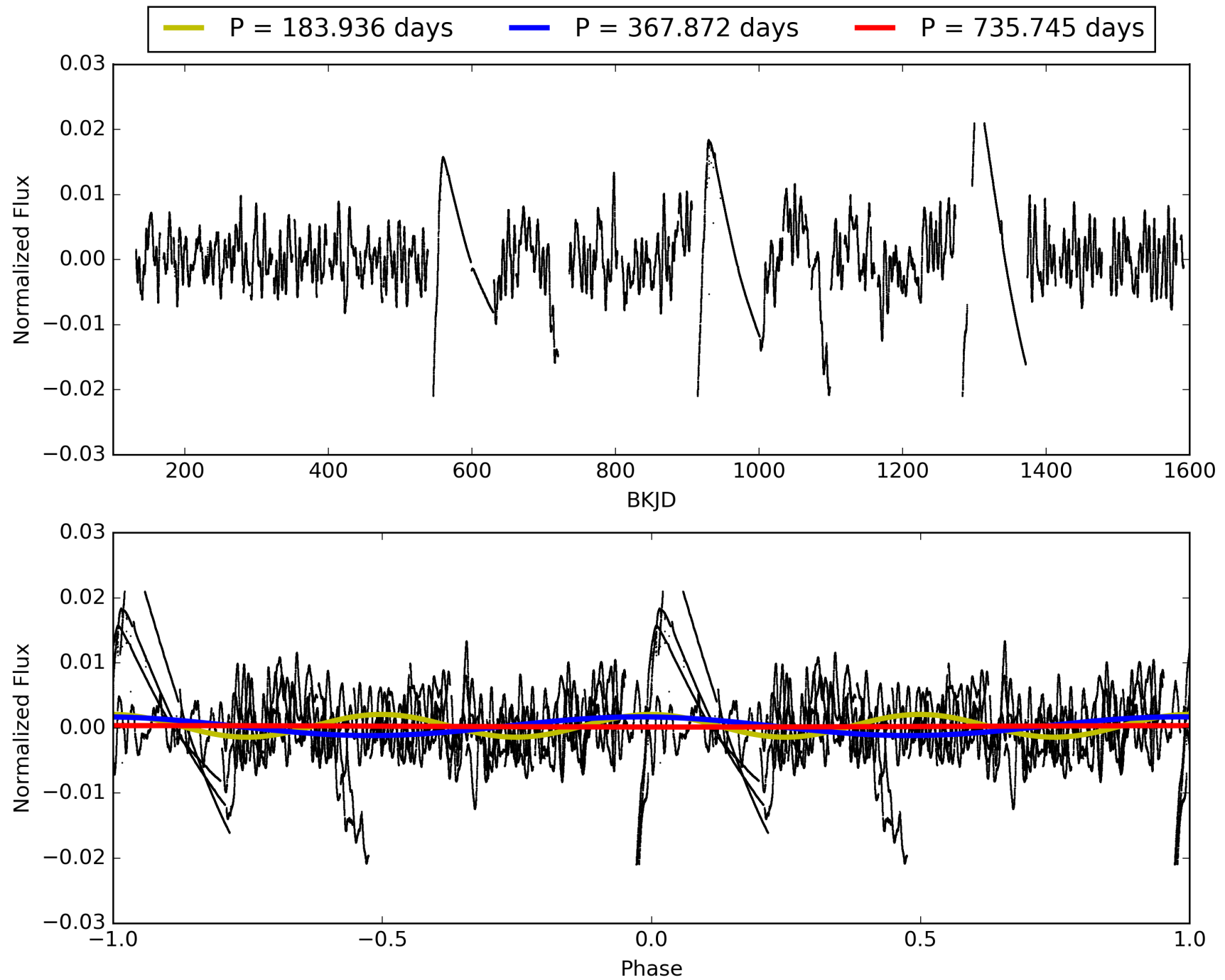
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:23:23 Z

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

TCE 006223501-01, PDC Light Curves

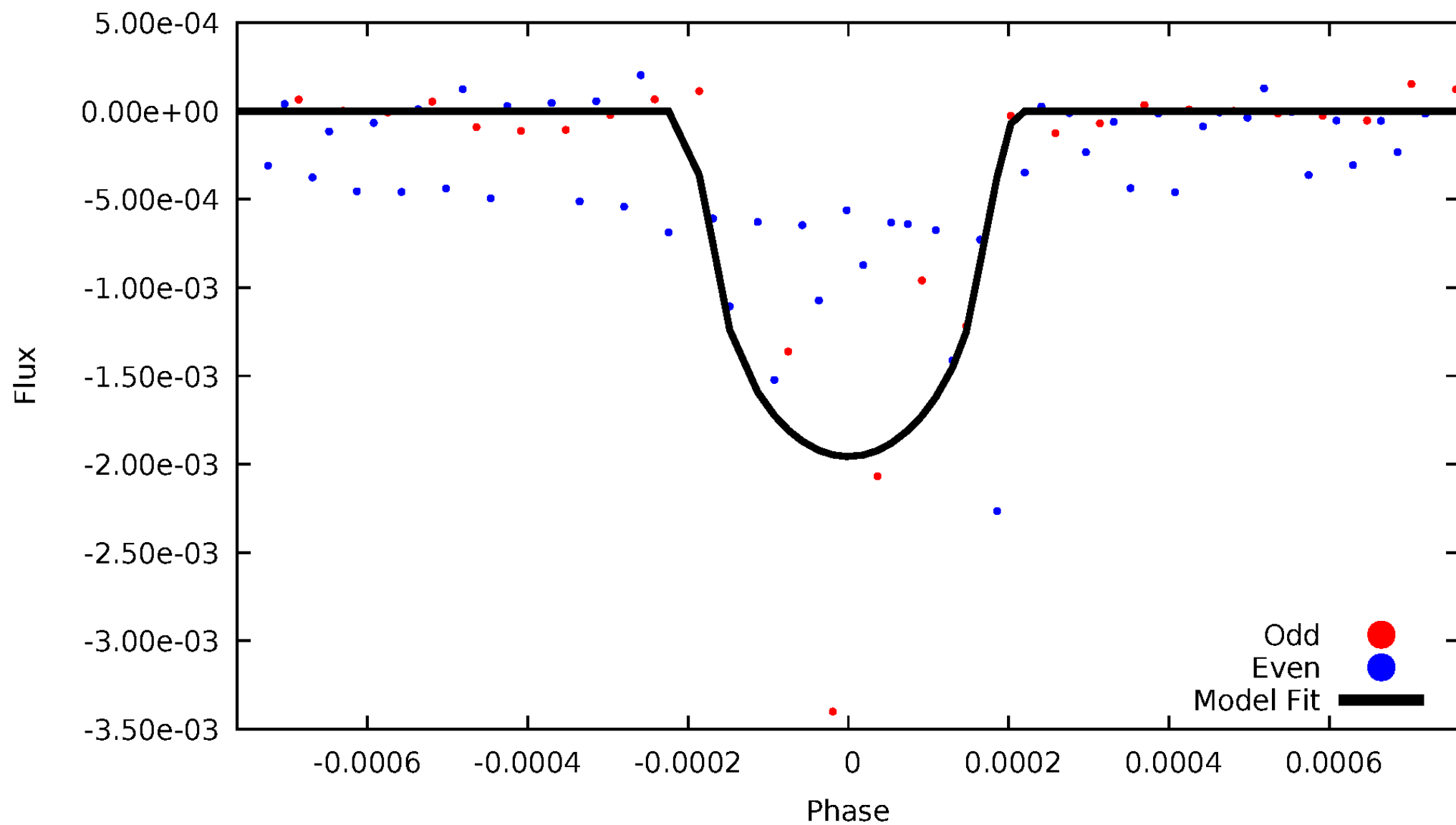


TCE 006223501-01



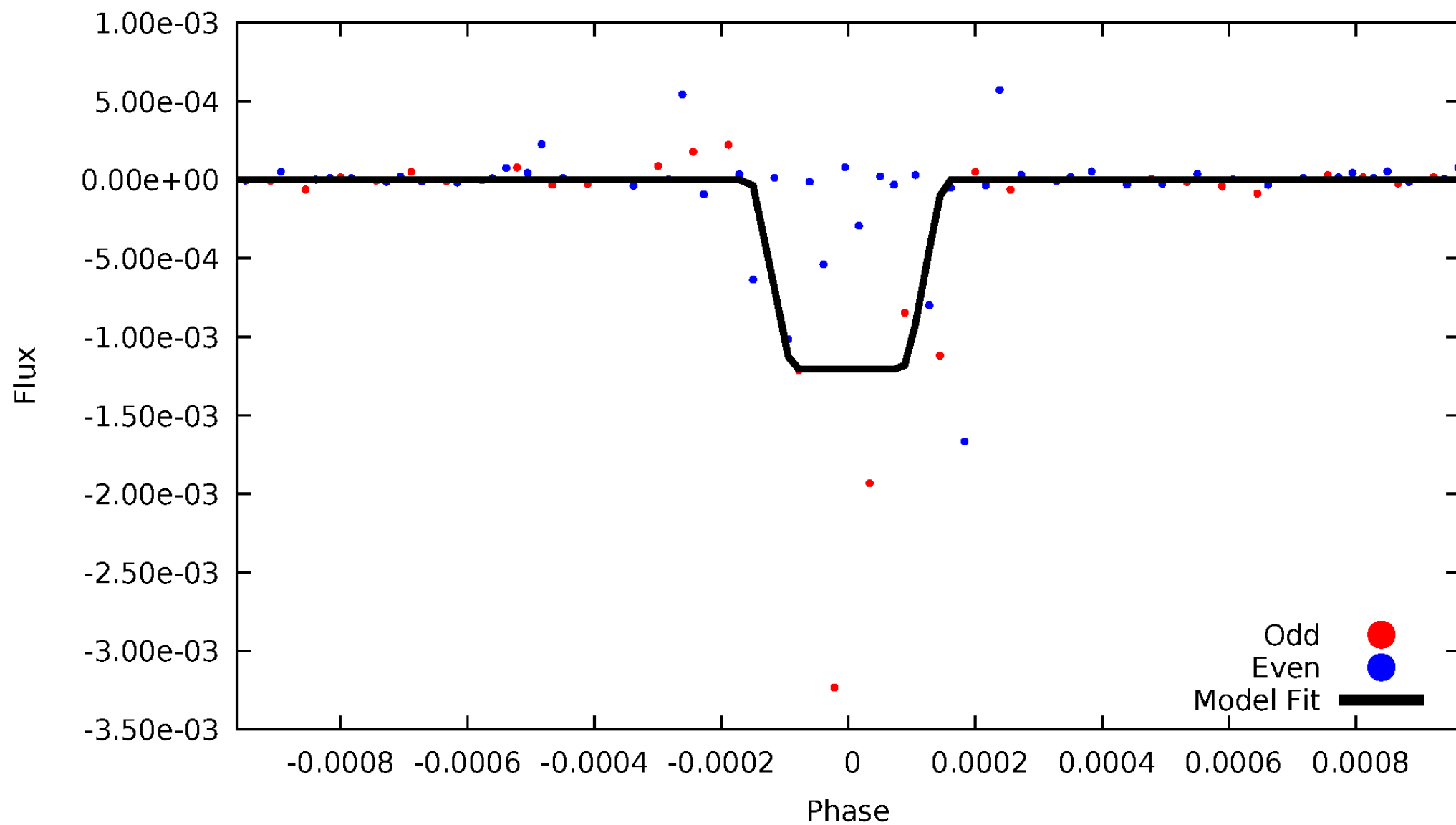
DV Odd/Even

TCE 006223501-01



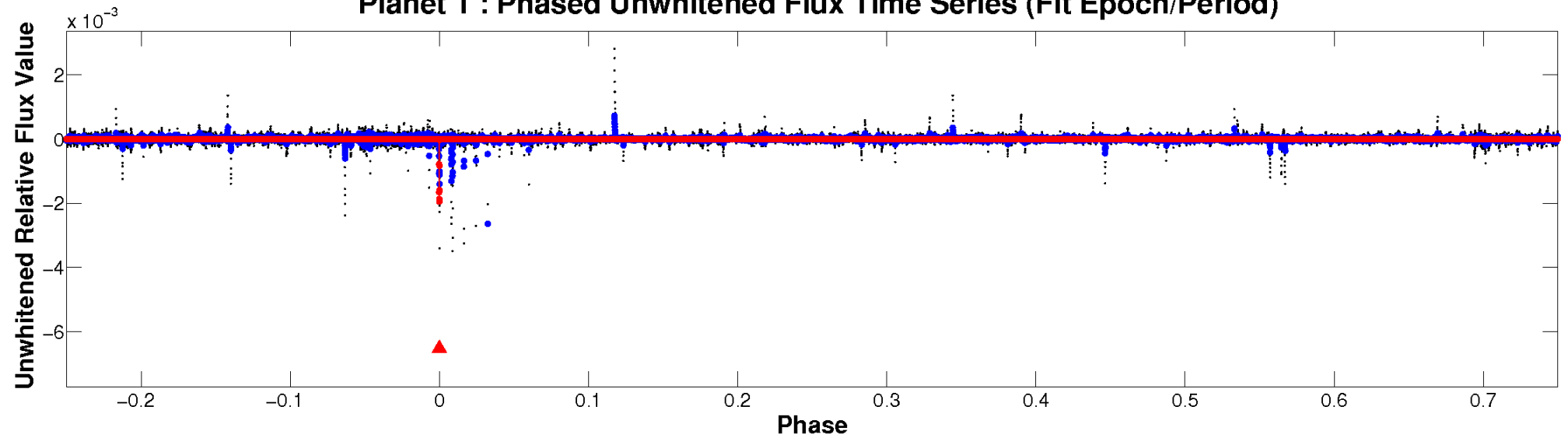
ALT Odd/Even

TCE 006223501-01

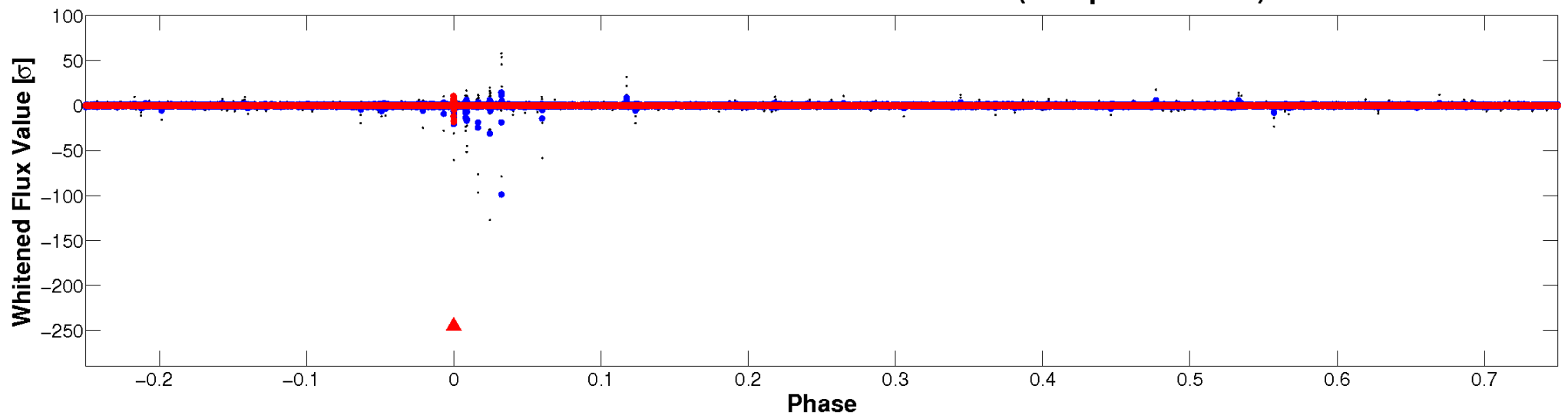


Non-Whitened Vs. Whitened Light Curve

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



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



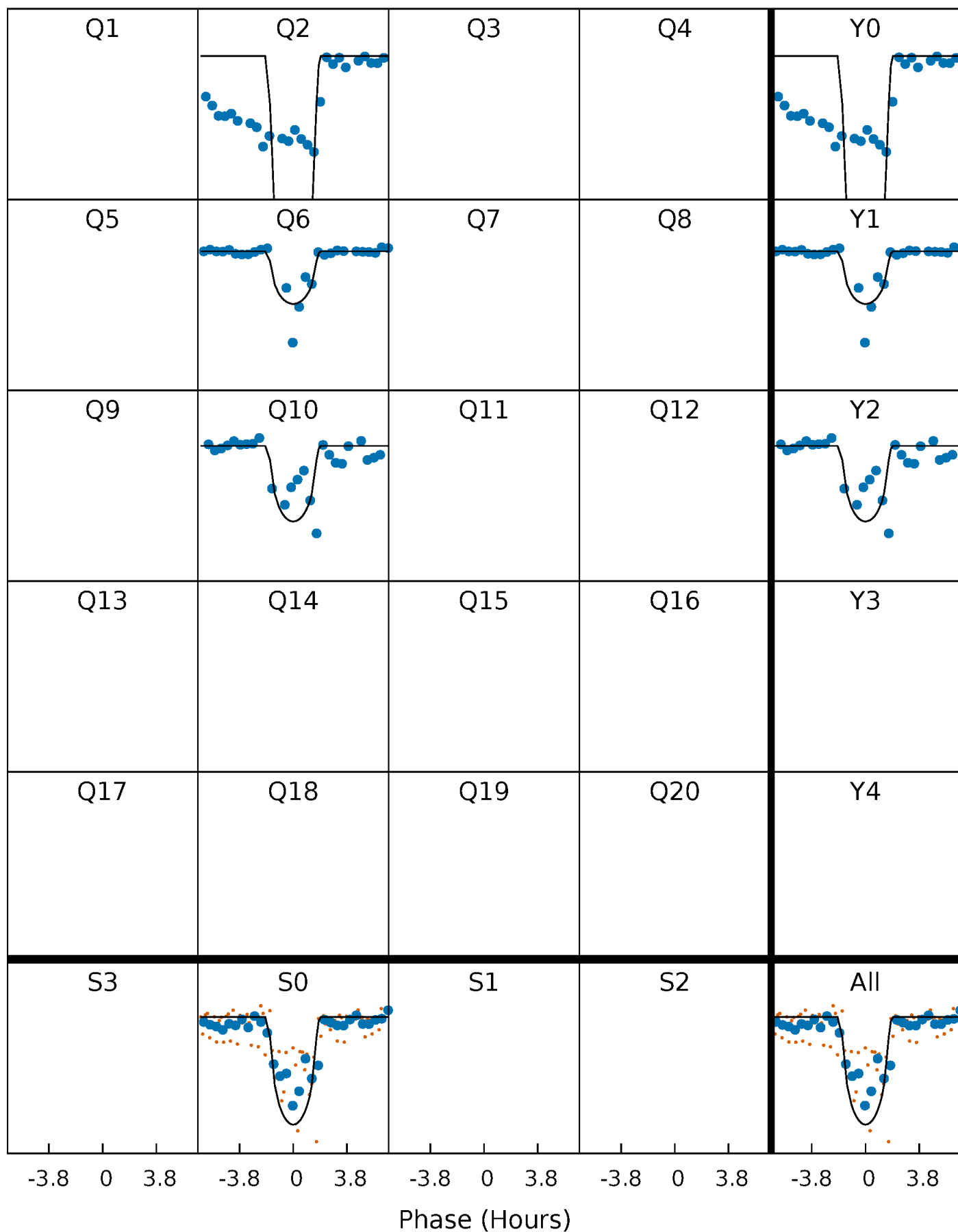
PDC Quarter-Phased Transit Curves

TCE 006223501-01 P=367.872388 Days $T_0=188.197769$ (BKJD)



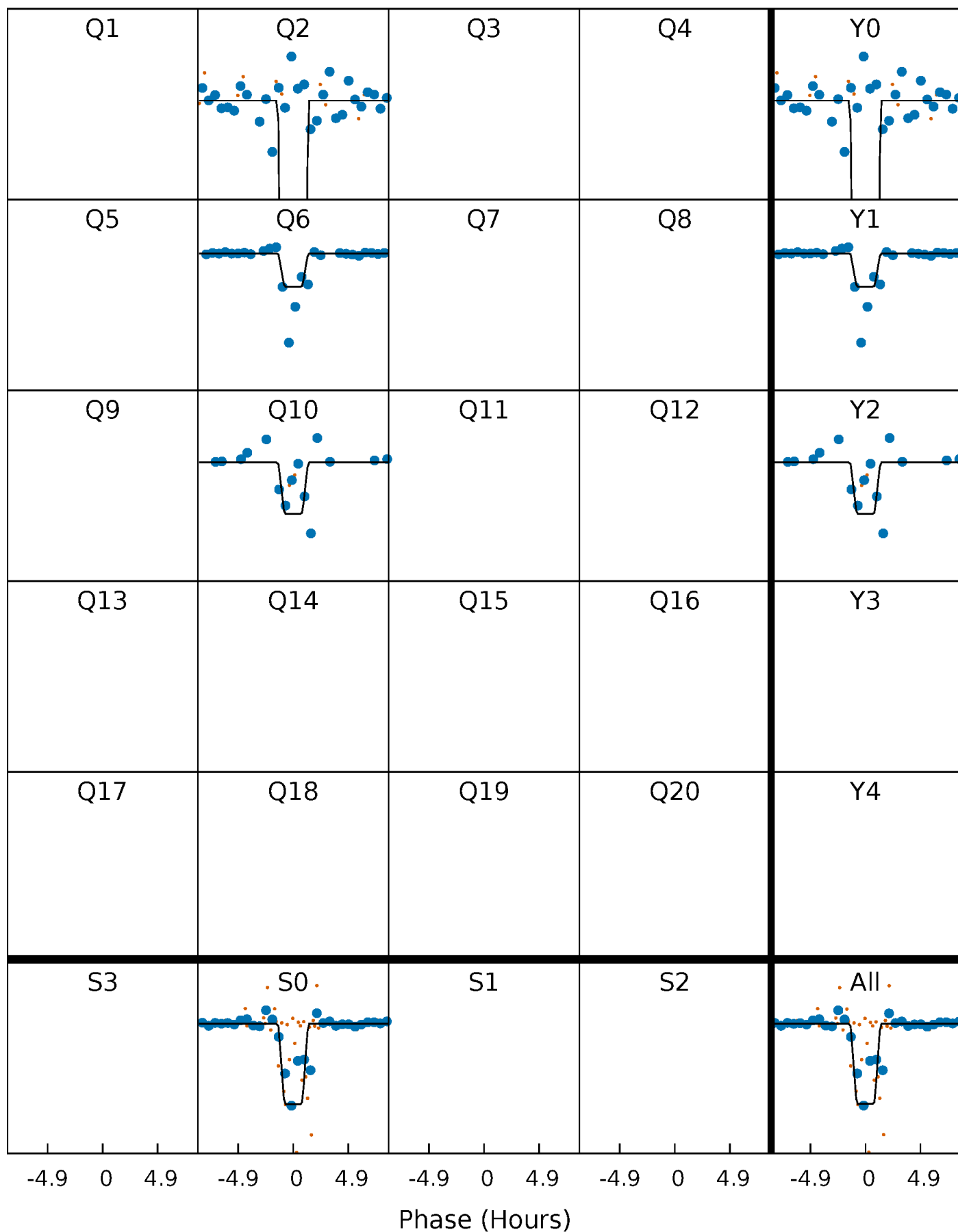
DV Quarter-Phased Transit Curves

TCE 006223501-01 P=367.872388 Days $T_0=188.197769$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

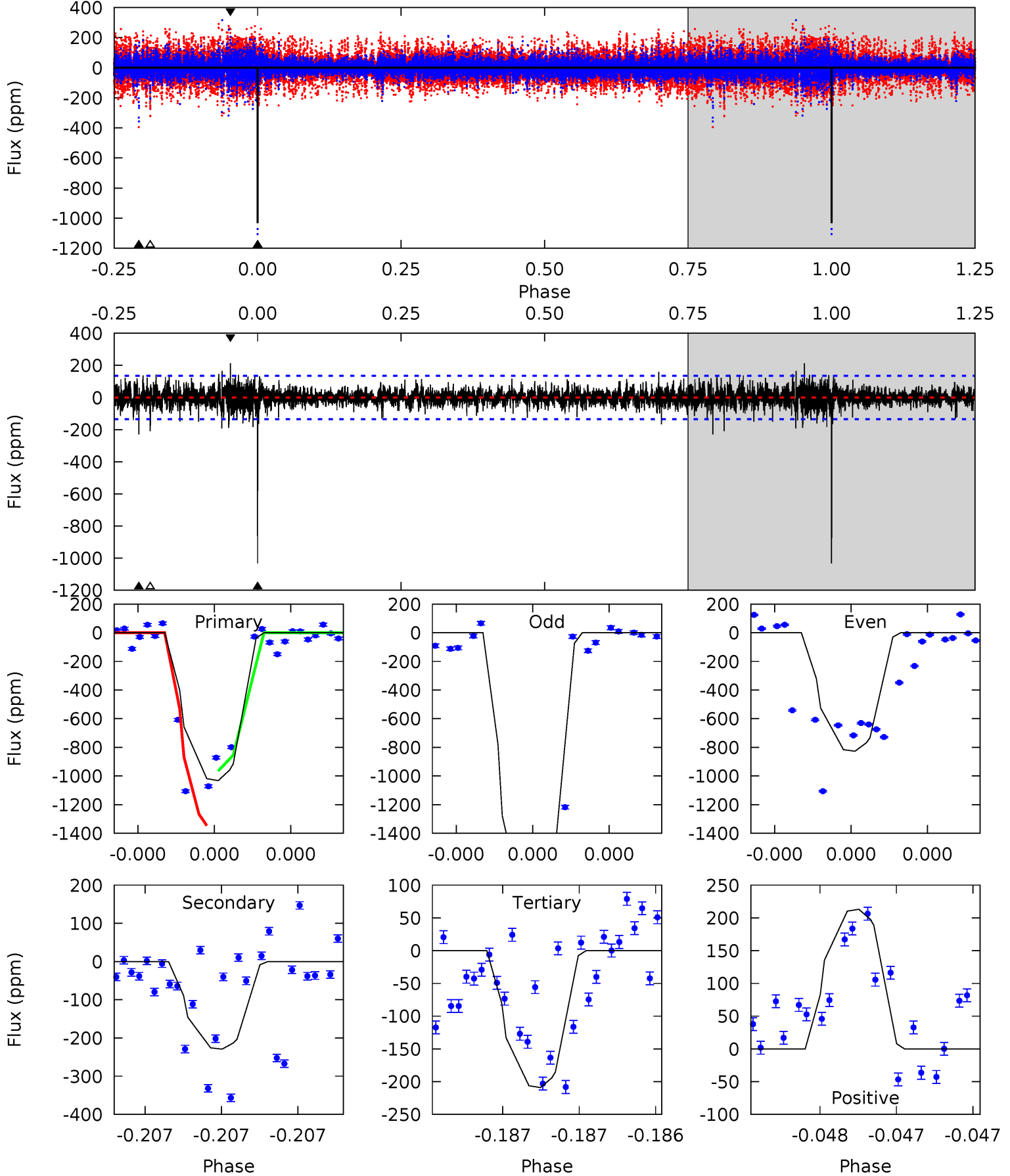
TCE 006223501-01 P=367.872192 Days $T_0=188.199002$ (BKJD)



DV Model-Shift Uniqueness Test

006223501-01, P = 367.872388 Days, E = 188.197769 Days

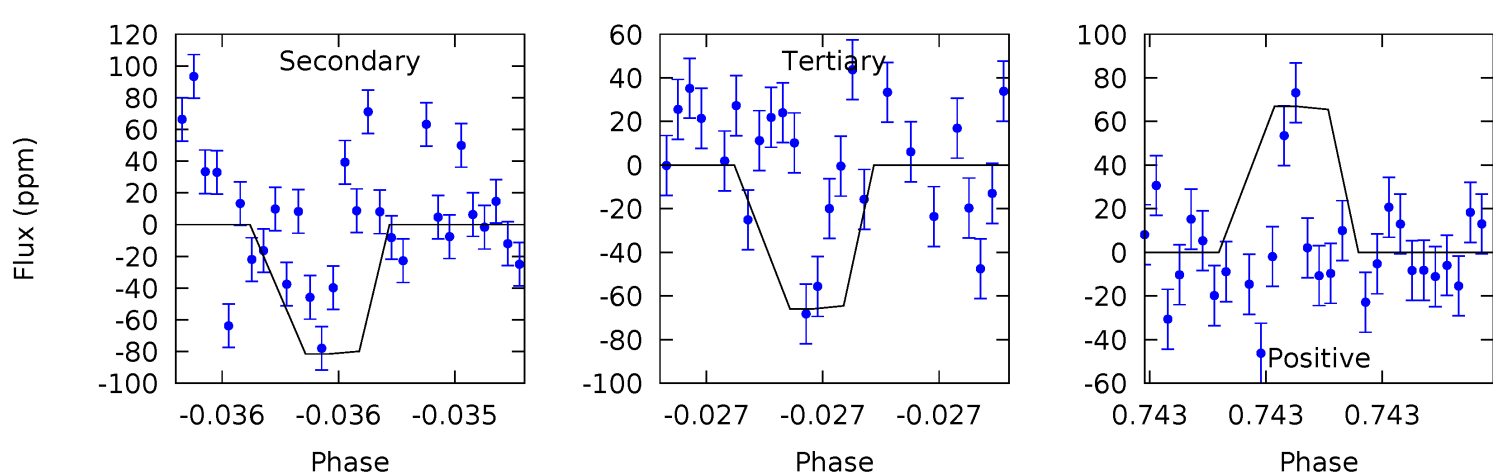
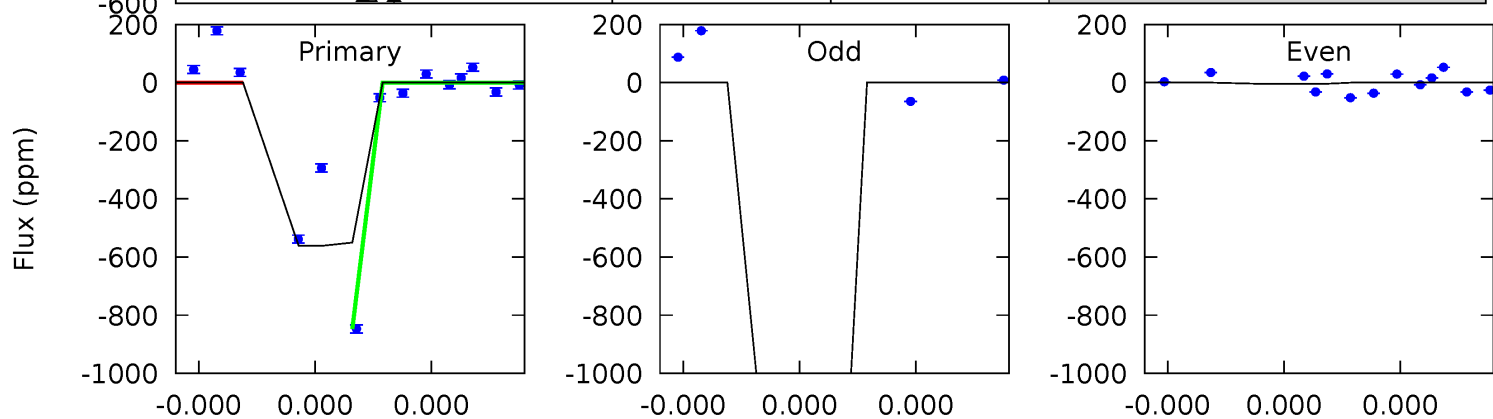
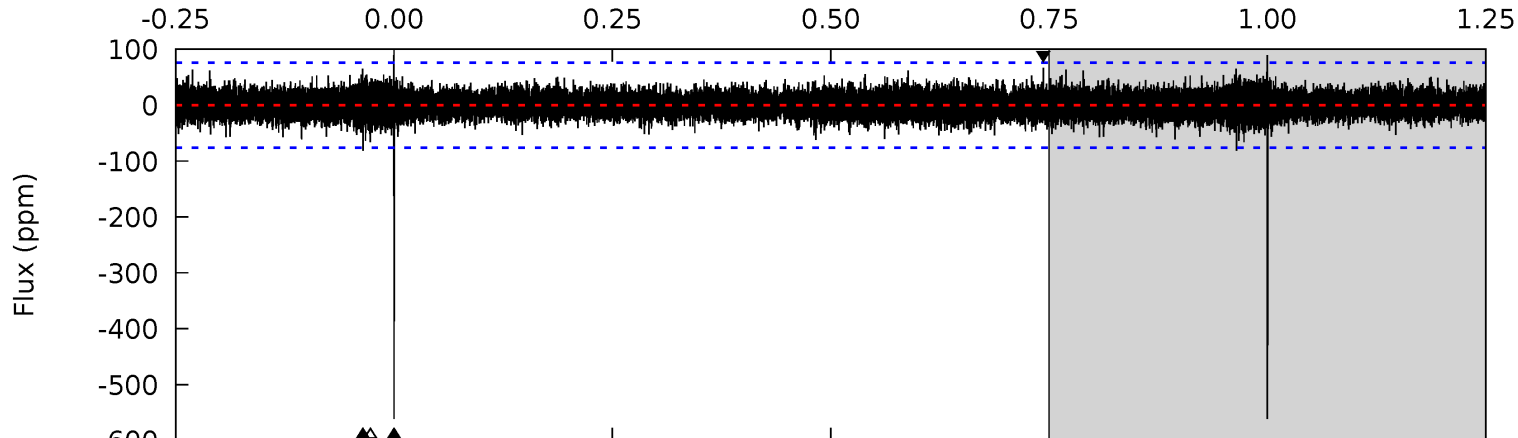
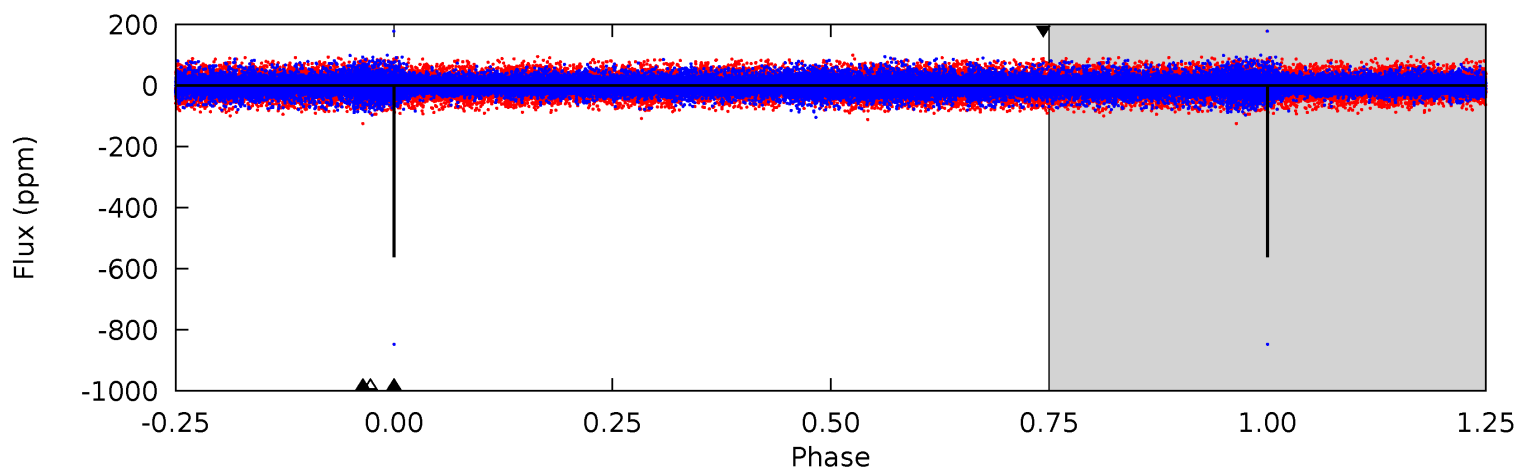
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.1	9.57	8.74	8.90	5.62	3.56	1.27	34.4	34.2	0.84	0.67	24.0	1.04	0.17	0



Alt Model-Shift Uniqueness Test

006223501-01, P = 367.872192 Days, E = 188.199002 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
41.8	6.07	4.90	4.98	5.67	3.64	1.00	36.9	36.8	1.17	1.09	72.2	1.47	0.14	0



Stellar Parameters For KIC 006223501

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3808^{+86}_{-106}	$1.078^{+0.030}_{-0.030}$	$0.100^{+0.200}_{-0.250}$	$63.849^{+2.325}_{-12.401}$	$1.779^{+0.070}_{-0.596}$	$0.000^{+0.000}_{-0.000}$
	+2%/-3%	+3%/-3%	+200%/-250%	+4%/-19%	+4%/-34%	+27%/-8%
Source	PHO54	AST54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006223501-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-229±24	$287.76^{+112.41}_{-107.64}$	1697^{+48}_{-49}	2759^{+427}_{-270}	$2.294^{+3.486}_{-1.107}$
Alt.	-82±13	$249.19^{+99.97}_{-106.09}$	1702^{+44}_{-51}	2461^{+432}_{-323}	$1.074^{+2.039}_{-0.553}$

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

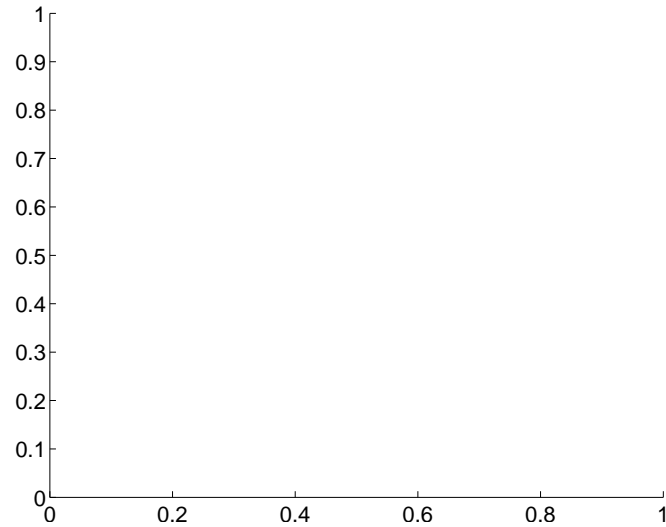
Supplemental centroid analysis for 006223501-01. **Kepler magnitude: 11.40.** Transit SNR 48.41

There are 0 quarters with good PRF difference image offsets

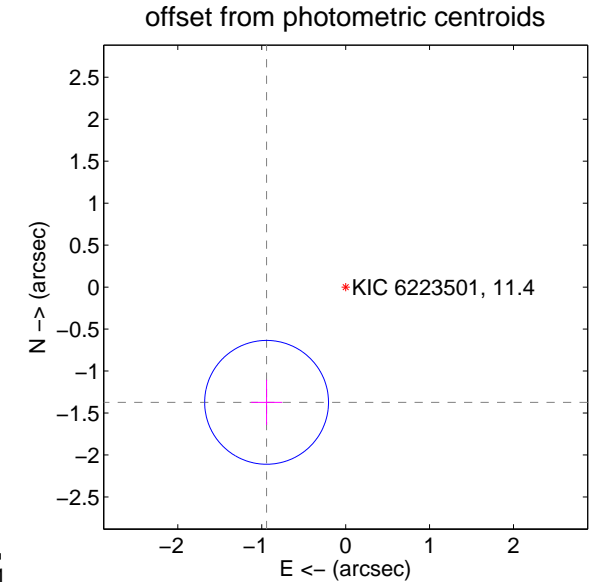
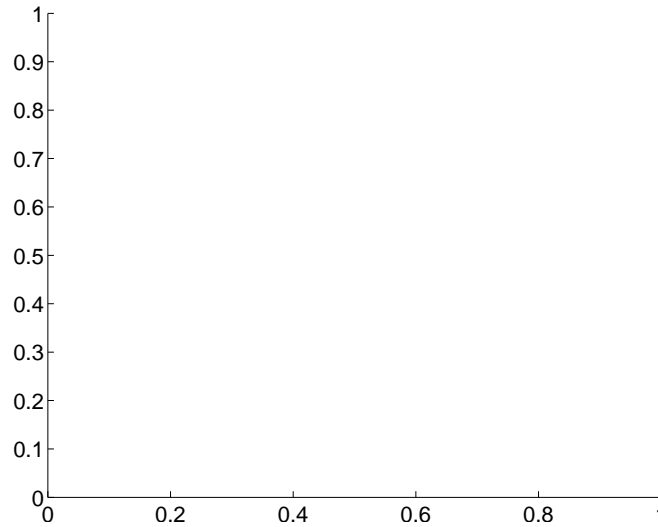
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.66 \pm 0.25	6.77	0.94 ± 0.18	-1.37 ± 0.27

There is no PRF-fit offset from OOT-fit

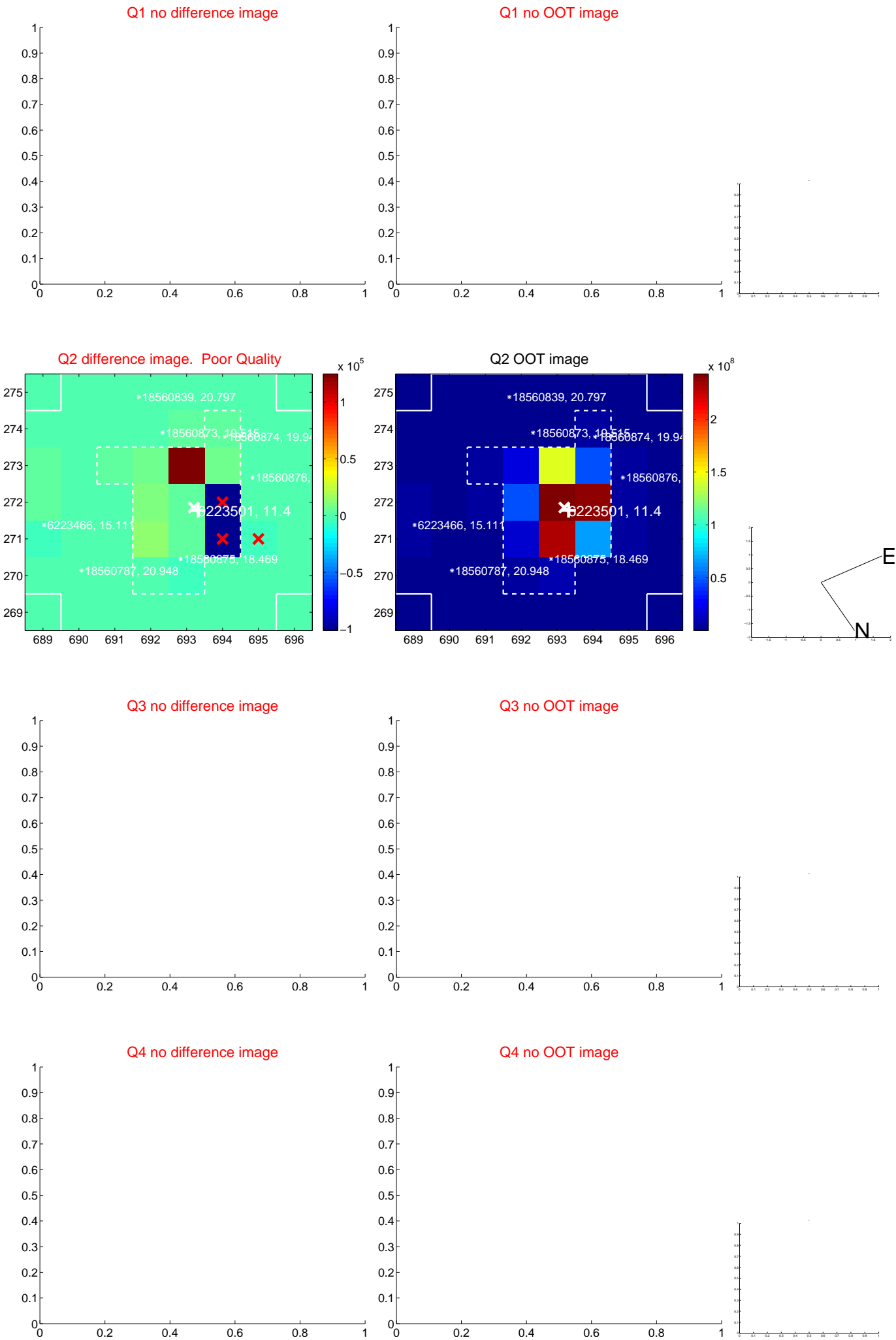


There is no PRF-fit offset from KIC

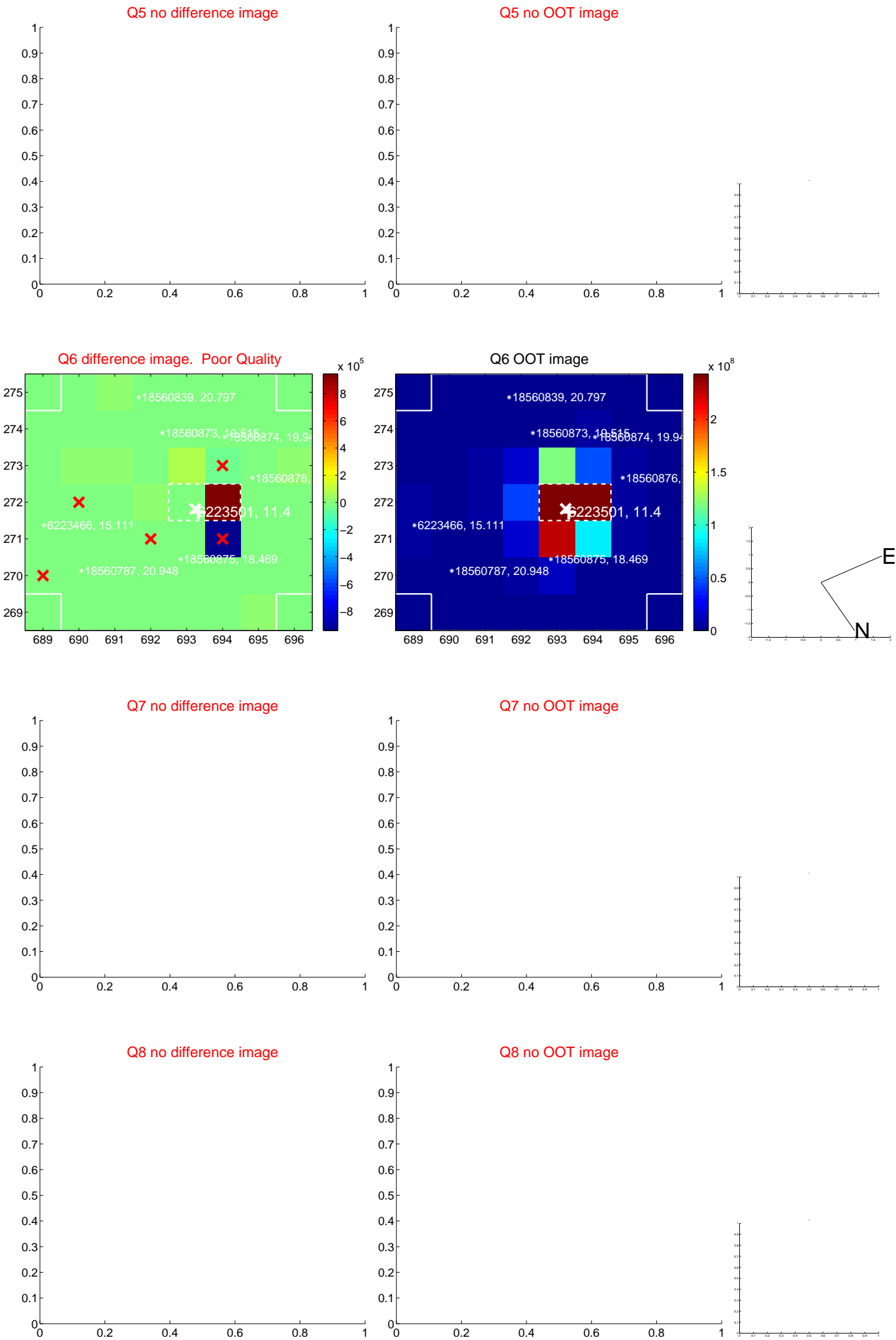


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

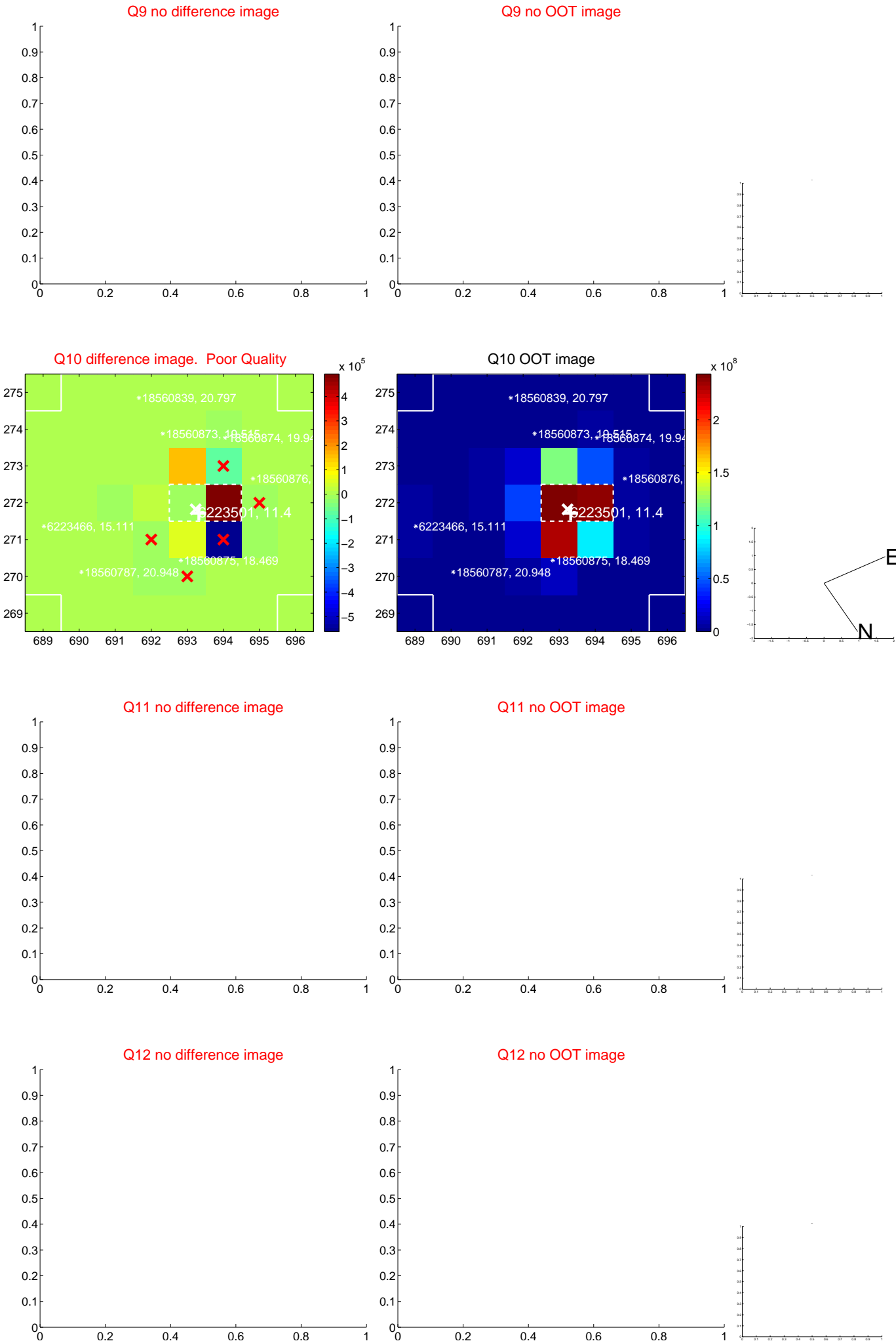
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



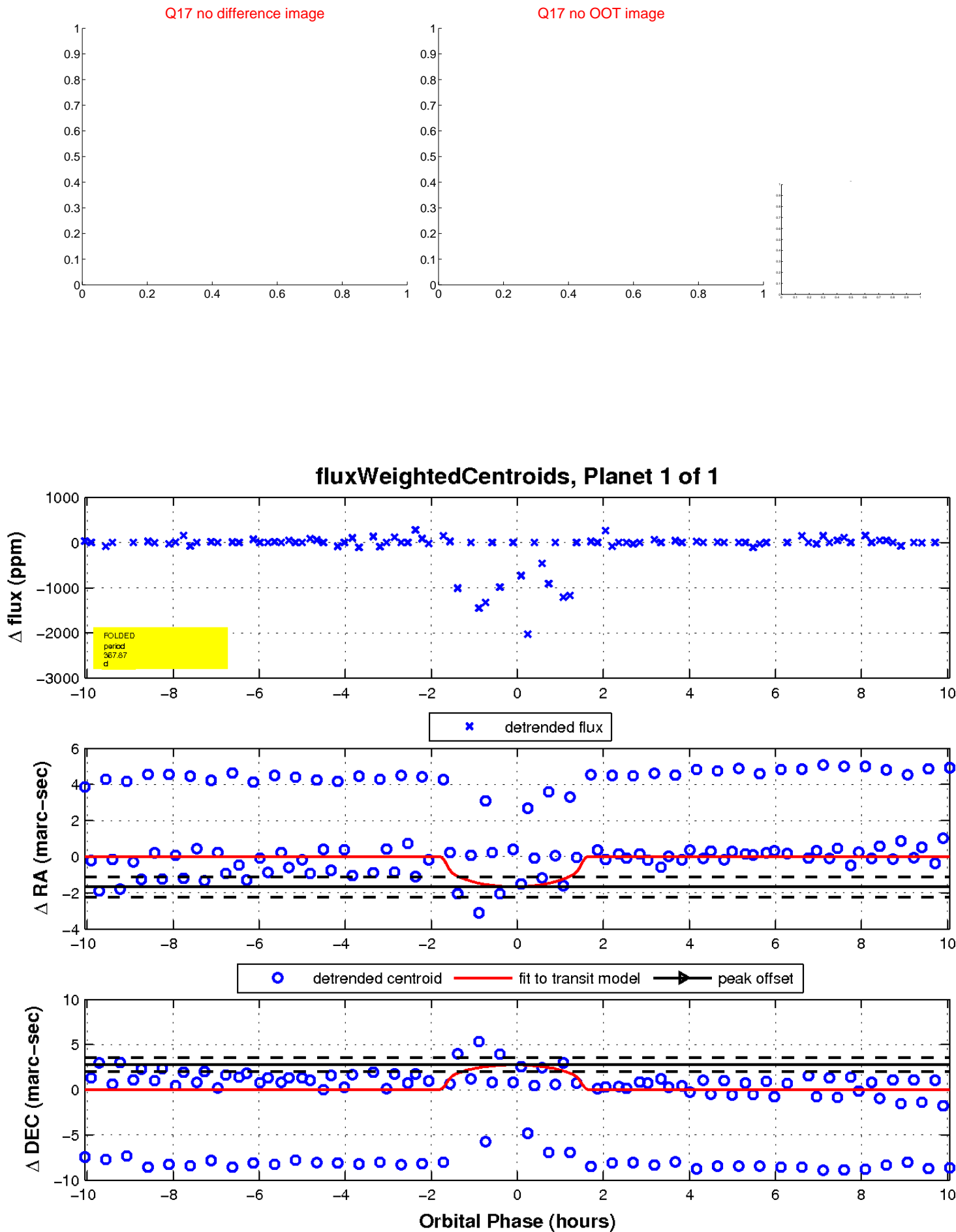
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

