

KIC 006106046

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})
006106046-01	OBS	7762.01	8.507360	135.811202	205.0	2.358	7.9	8.4	0.95	5914	1.62	149.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006106046-01	OBS	PC	0.98	0	0	0	0	NO_COMMENT

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

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

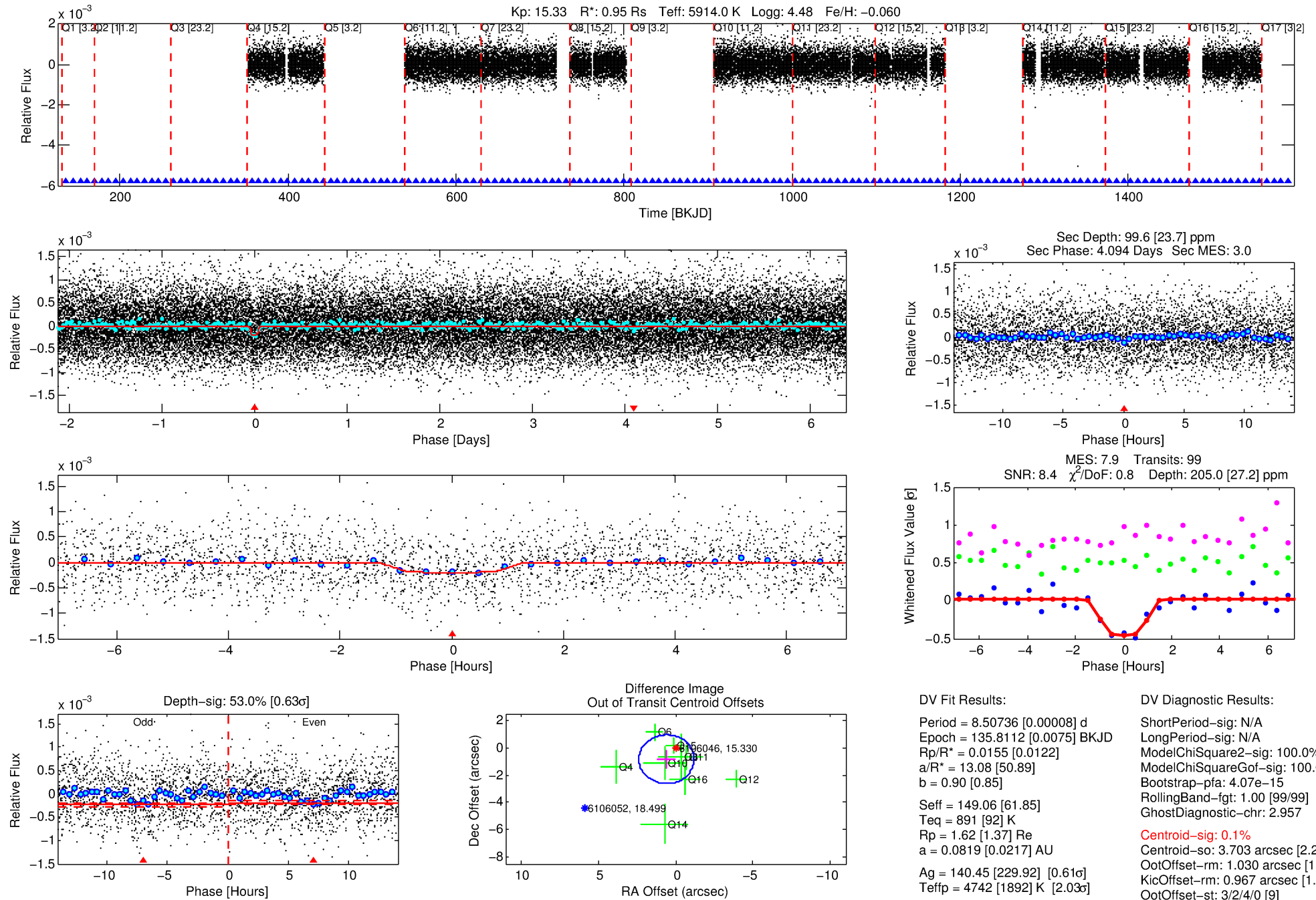
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006106046-01

No Significant Match Found

DV One-Page Summary

KIC: 6106046 Candidate: 1 of 1 Period: 8.507 d



DV Fit Results:

Period = 8.50736 [0.00008] d
Epoch = 135.8112 [0.0075] BKJD
Rp/R* = 0.0155 [0.0122]
a/R* = 13.08 [50.89]
b = 0.90 [0.85]
Seff = 149.06 [61.85]
Teff = 891 [92] K
Rp = 1.62 [1.37] Re
a = 0.0819 [0.0217] AU
Ag = 140.45 [229.92] [0.61σ]
Teffp = 4742 [1892] K [2.03σ]

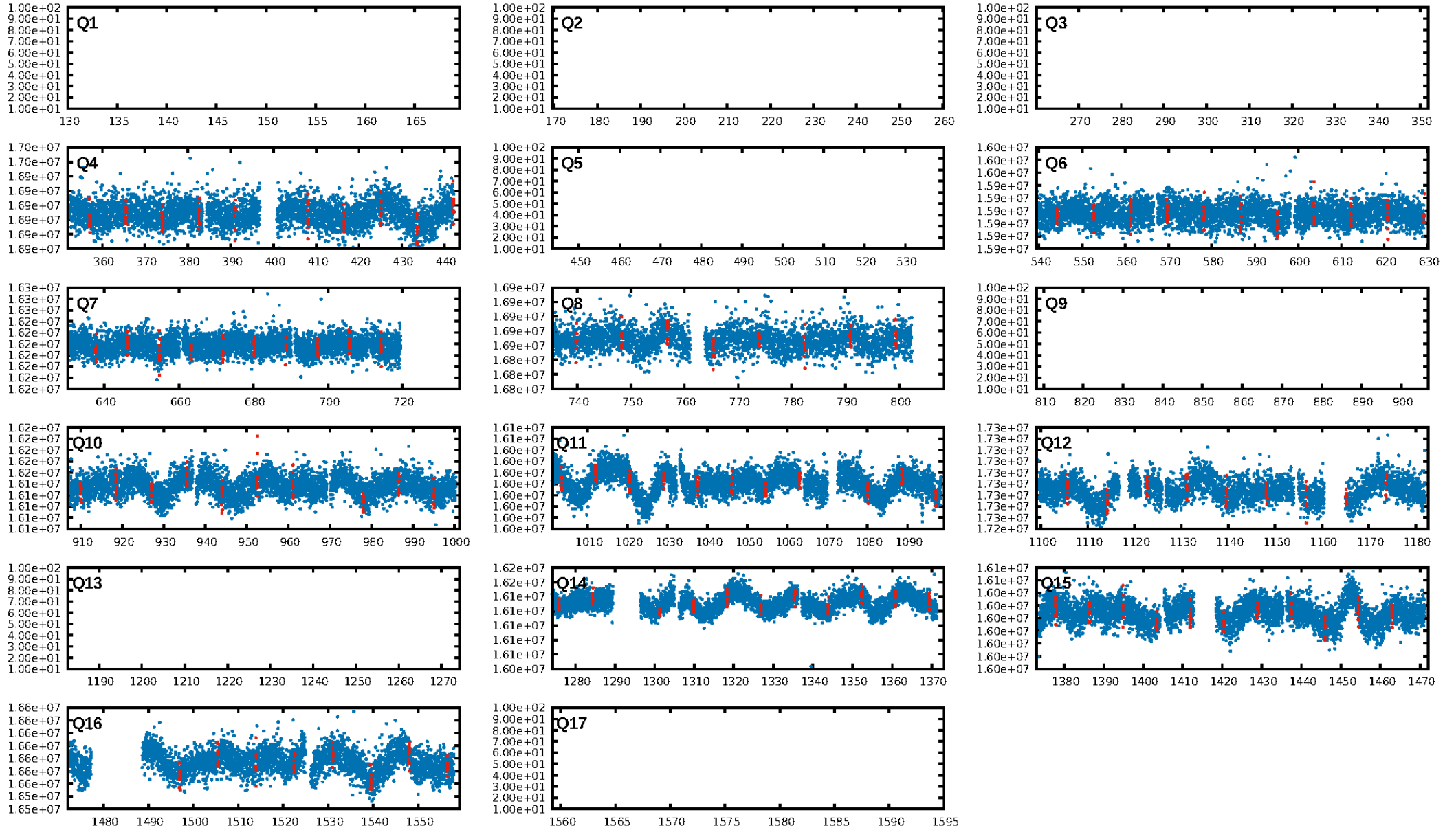
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.07e-15
RollingBand-fgt: 1.00 [99/99]
GhostDiagnostic-chr: 2.957
Centroid-sig: 0.1%
Centroid-so: 3.703 arcsec [2.24σ]
OotOffset-rm: 1.030 arcsec [1.73σ]
KicOffset-rm: 0.967 arcsec [1.65σ]
OotOffset-st: 3/2/4/0 [9]
KicOffset-st: 3/2/4/0 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [10/10]

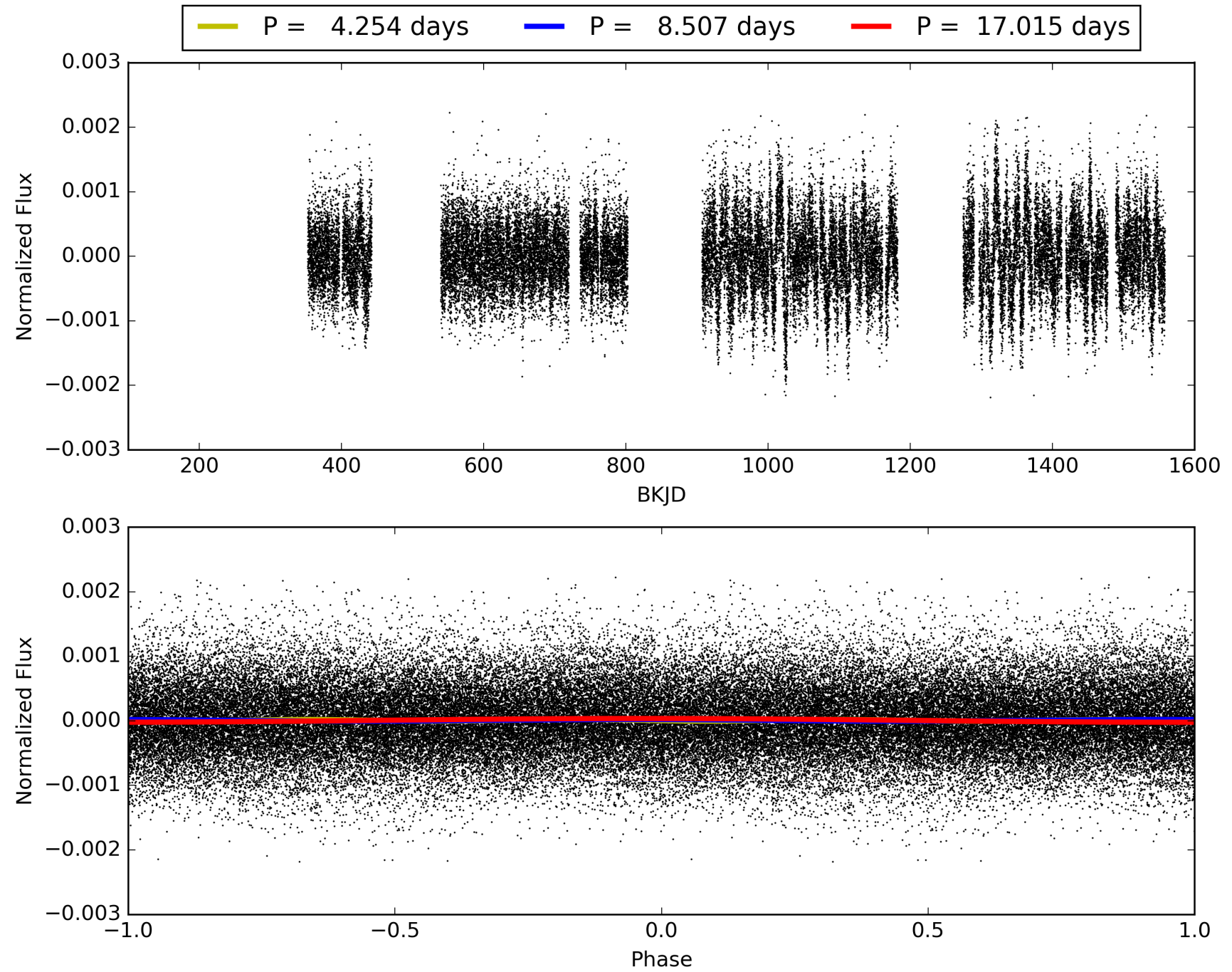
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:20:26 Z

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

TCE 006106046-01, PDC Light Curves

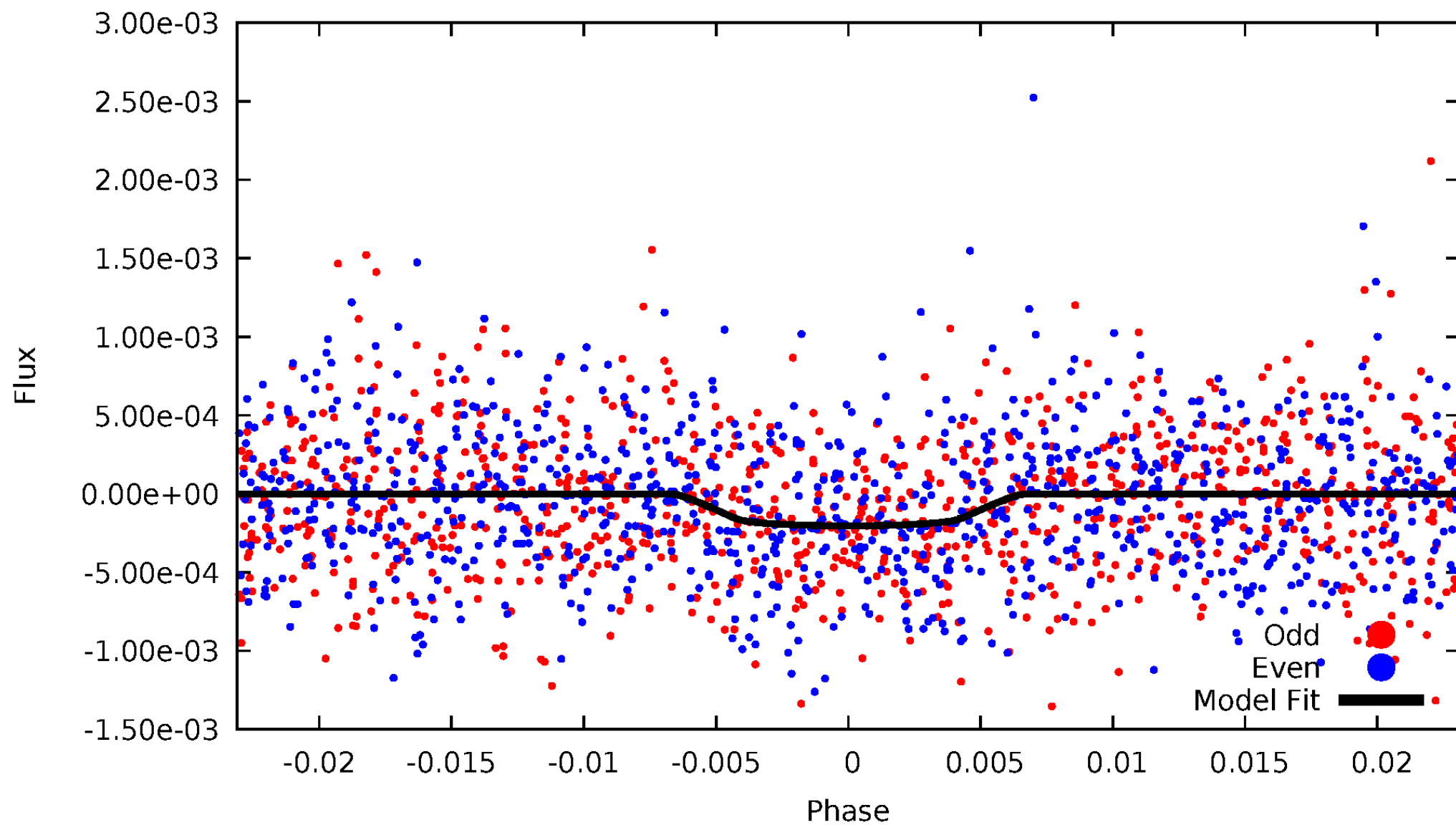


TCE 006106046-01



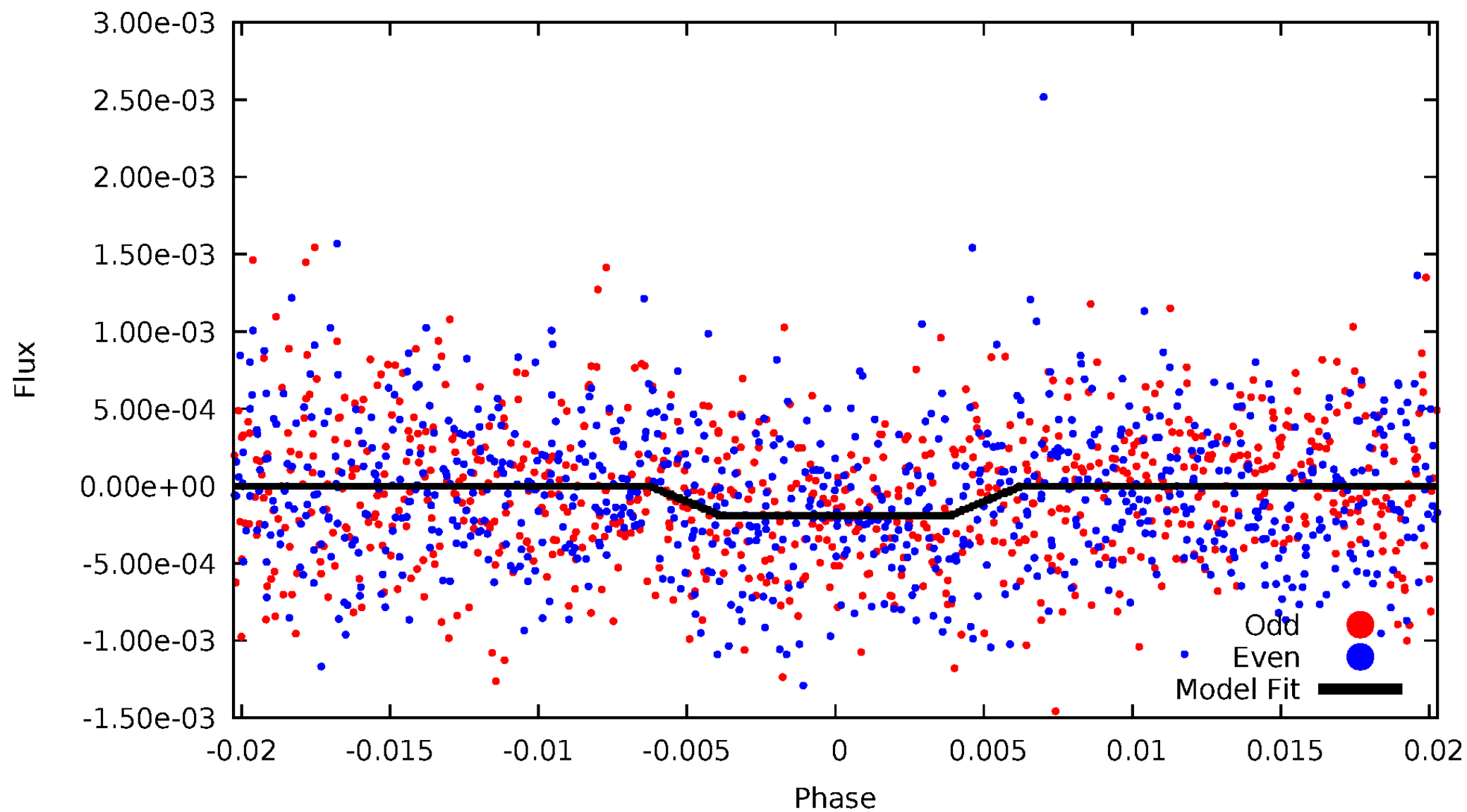
DV Odd/Even

TCE 006106046-01

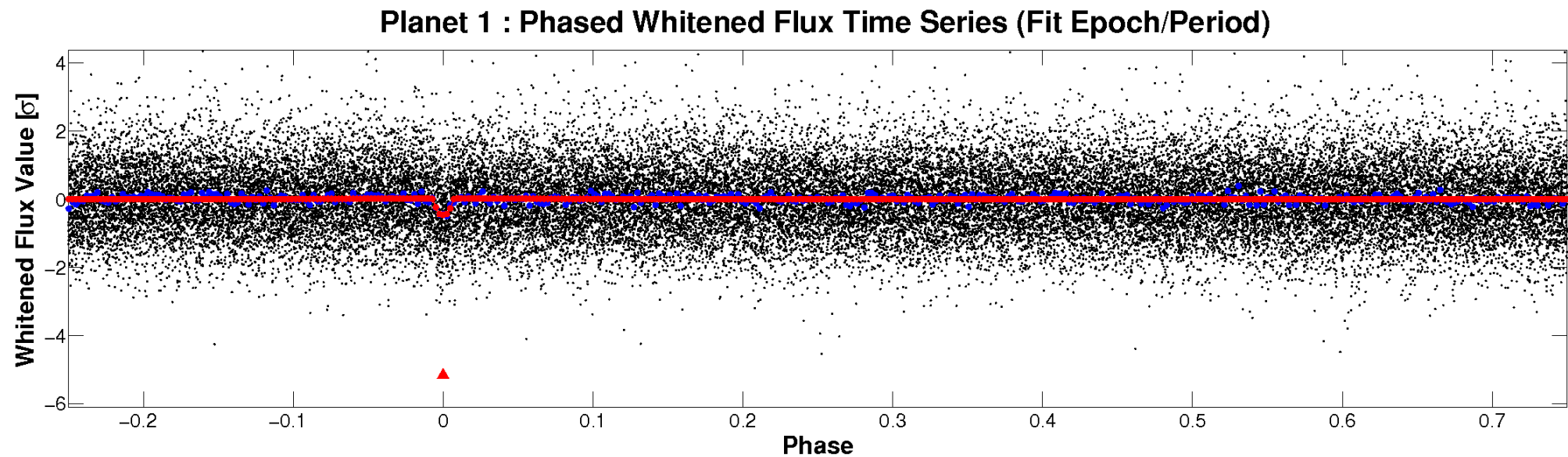
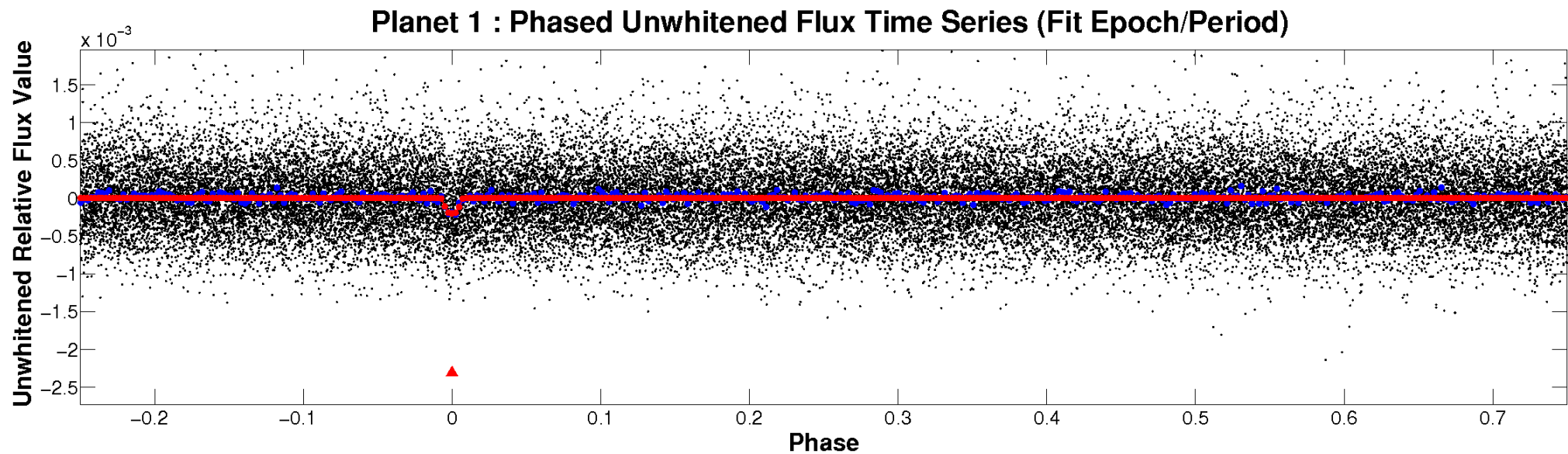


ALT Odd/Even

TCE 006106046-01

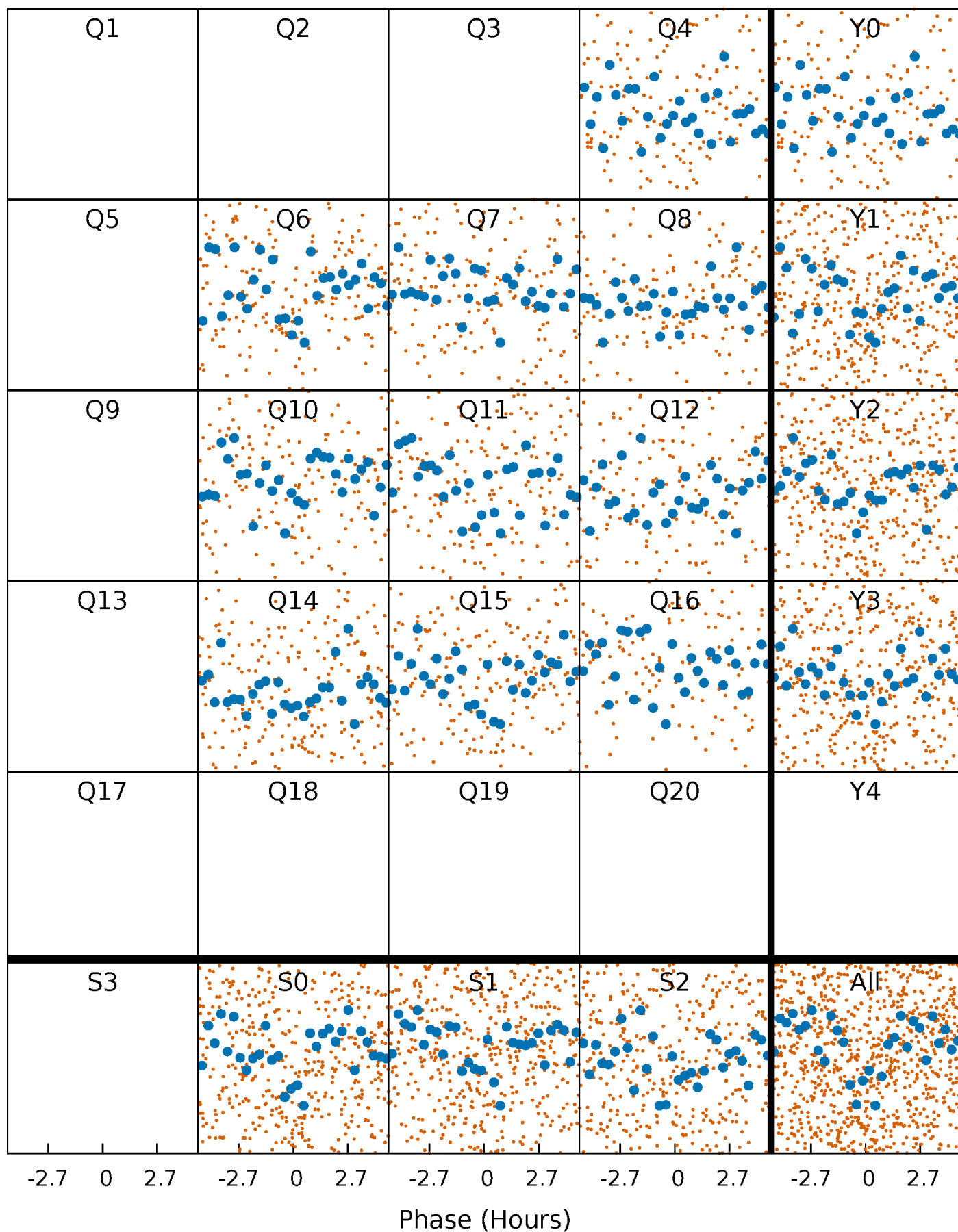


Non-Whitened Vs. Whitened Light Curve



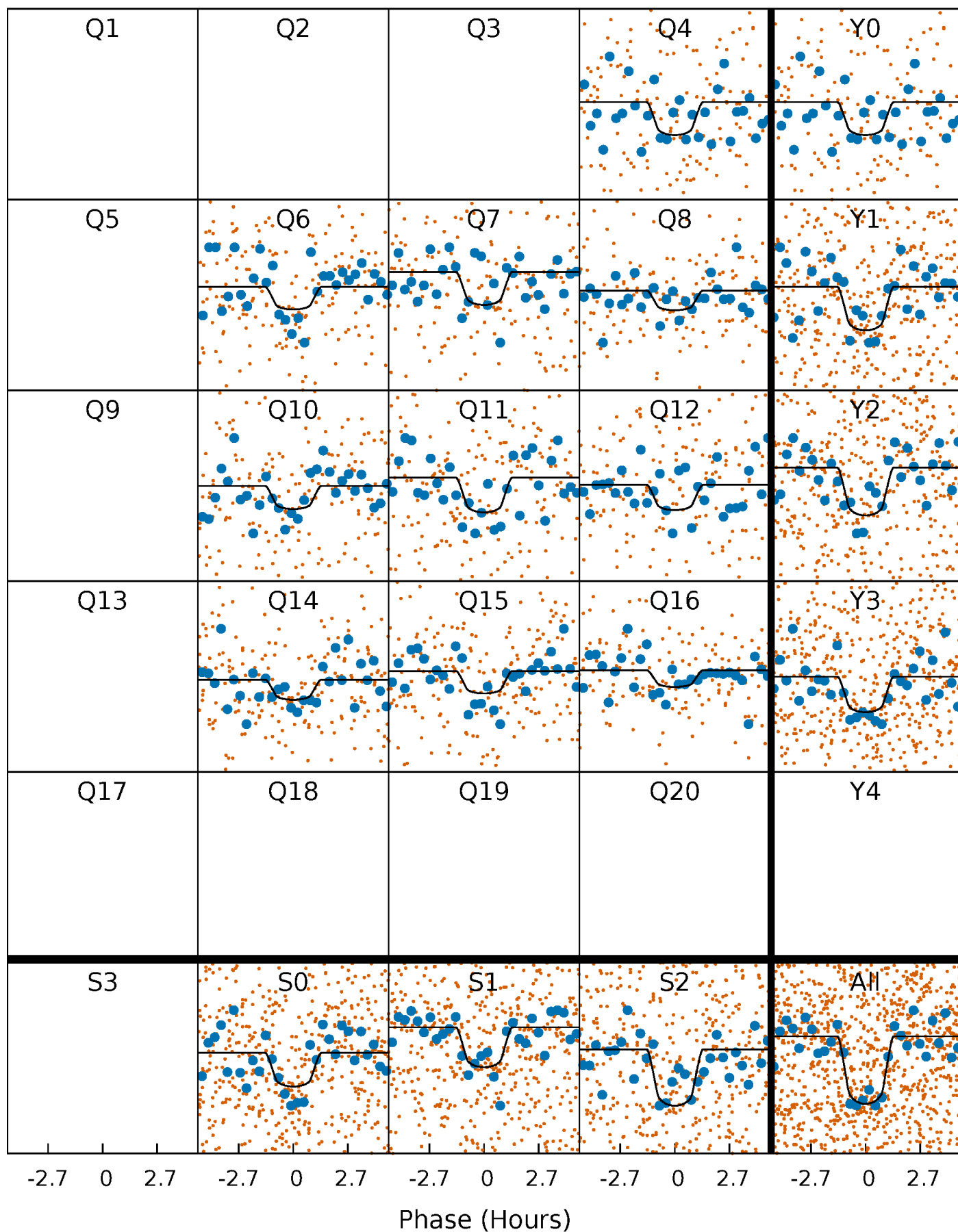
PDC Quarter-Phased Transit Curves

TCE 006106046-01 P= 8.507360 Days $T_0=135.811202$ (BKJD)



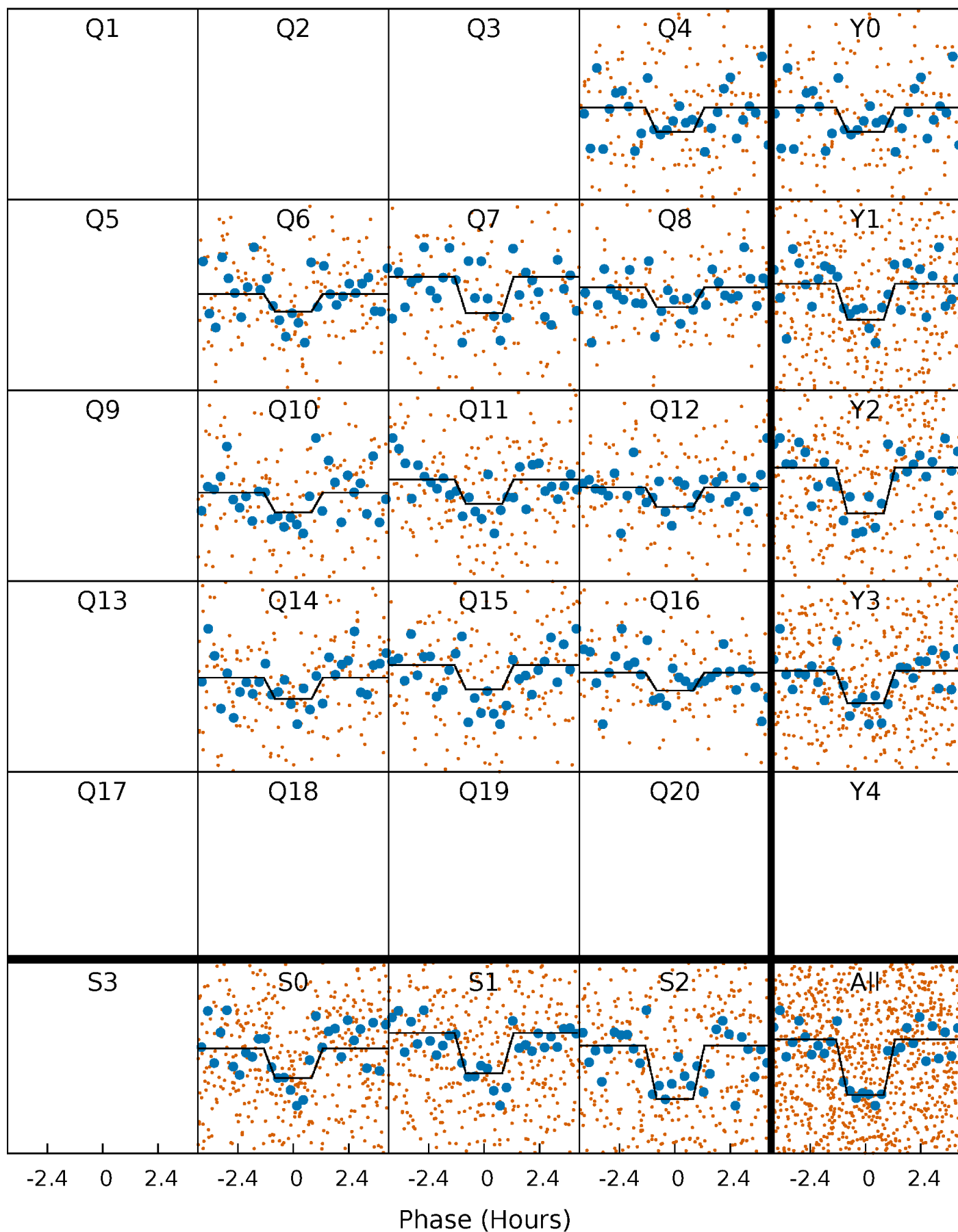
DV Quarter-Phased Transit Curves

TCE 006106046-01 P= 8.507360 Days $T_0=135.811202$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

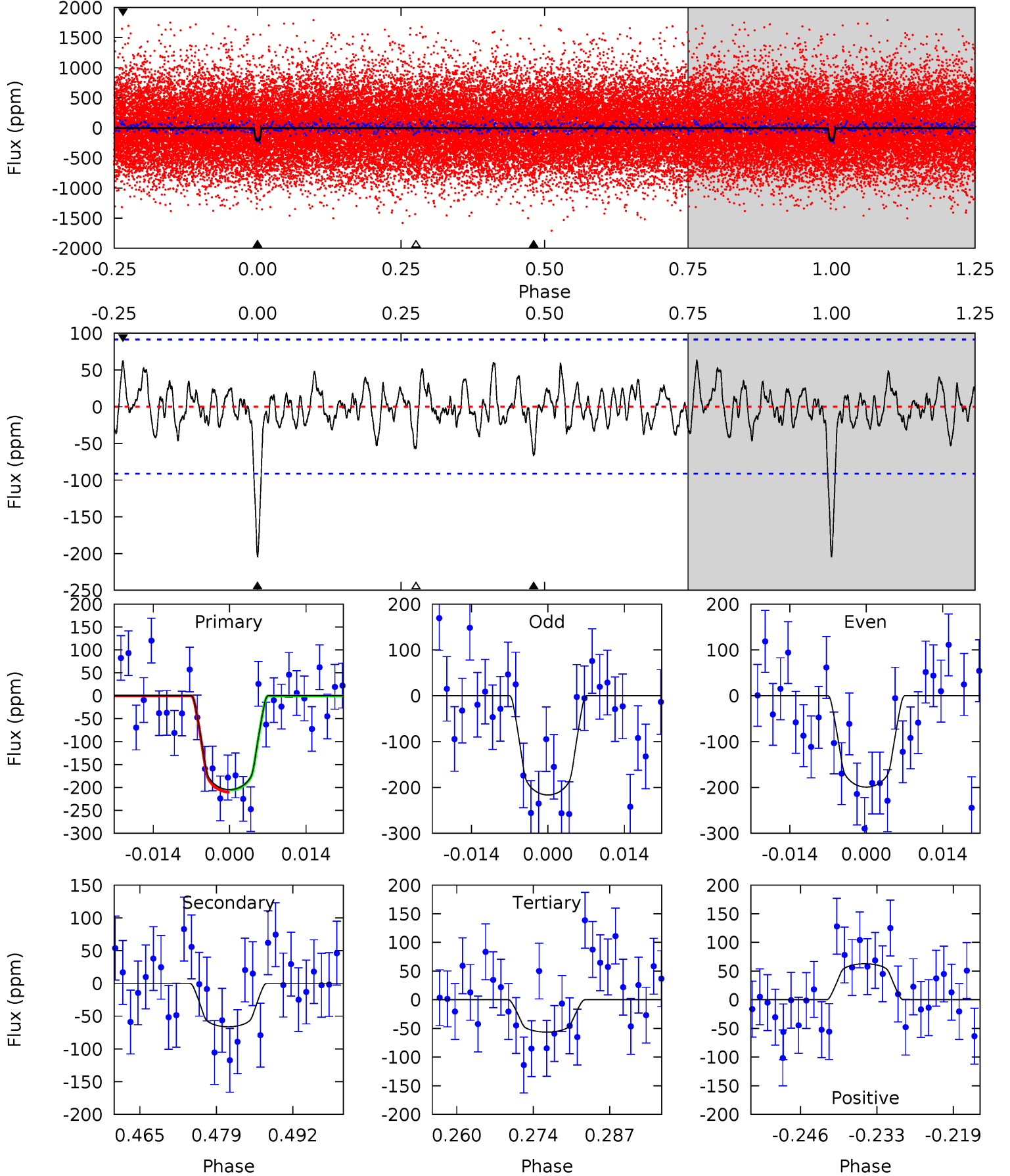
TCE 006106046-01 P= 8.507296 Days $T_0=135.817181$ (BKJD)



DV Model-Shift Uniqueness Test

006106046-01, P = 8.507360 Days, E = 135.811202 Days

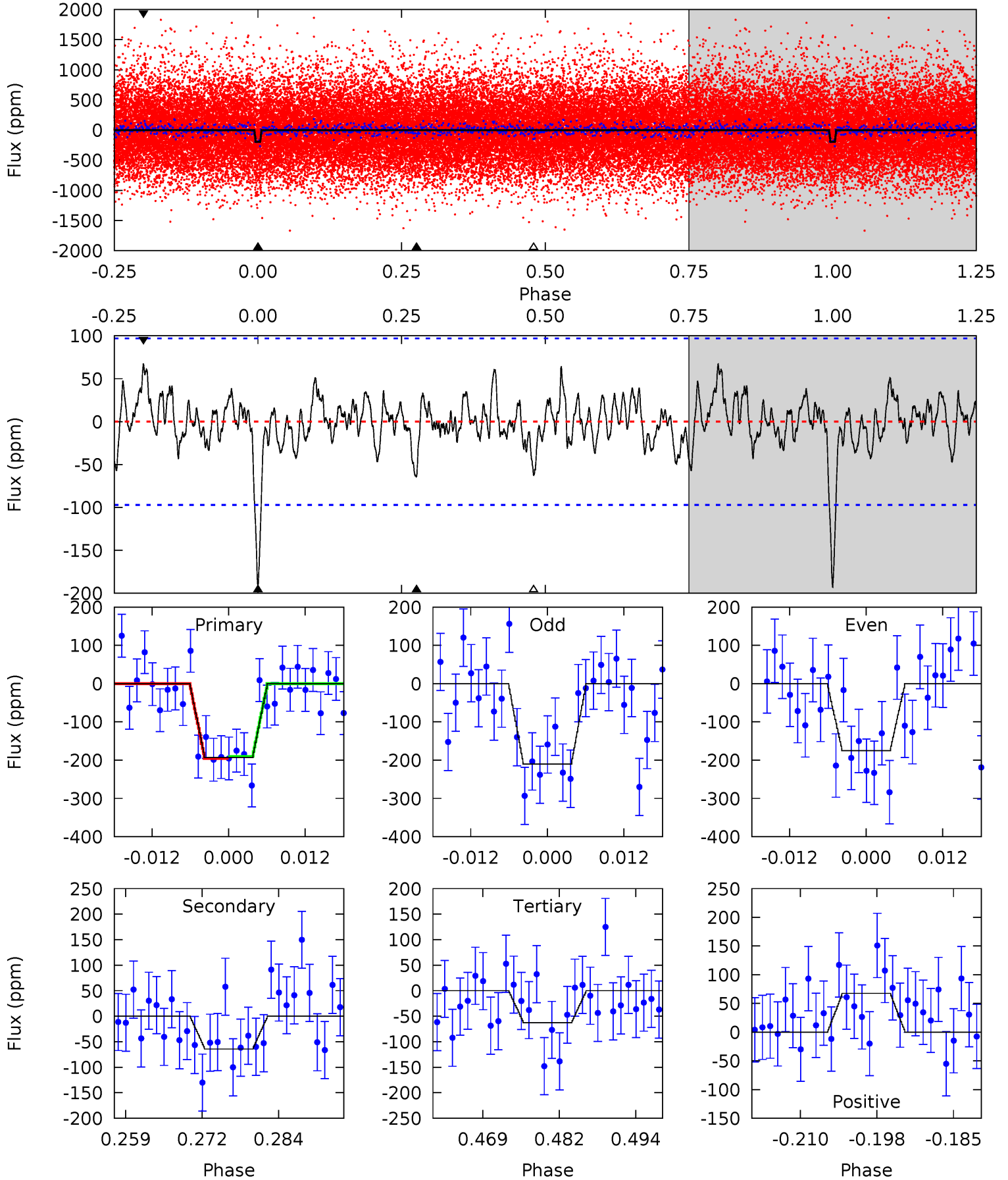
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	3.60	3.06	3.42	4.97	2.47	1.16	8.07	7.72	0.54	0.19	0.47	0.92	0.23	0.12



Alt Model-Shift Uniqueness Test

006106046-01, P = 8.507296 Days, E = 135.817181 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.92	3.30	3.24	3.47	4.99	2.50	1.13	6.68	6.45	0.06	-0.17	0.91	0.90	0.26	0.13



Stellar Parameters For KIC 006106046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5914^{+184}_{-205}	$4.483^{+0.054}_{-0.216}$	$-0.060^{+0.250}_{-0.300}$	$0.955^{+0.297}_{-0.099}$	$1.011^{+0.127}_{-0.127}$	$1.636^{+0.482}_{-0.889}$
	+3%/-3%	+1%/-5%	+417%/-500%	+31%/-10%	+13%/-13%	+29%/-54%
Source	KIC0	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 006106046-01 / KOI 7762.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-66 ± 18	$1.96^{+1.33}_{-1.25}$	1275^{+96}_{-70}	4255^{+2256}_{-722}	63^{+416}_{-42}
Alt.	-64 ± 19	$1.77^{+1.31}_{-1.07}$	1275^{+101}_{-70}	4332^{+2230}_{-792}	70^{+396}_{-48}

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

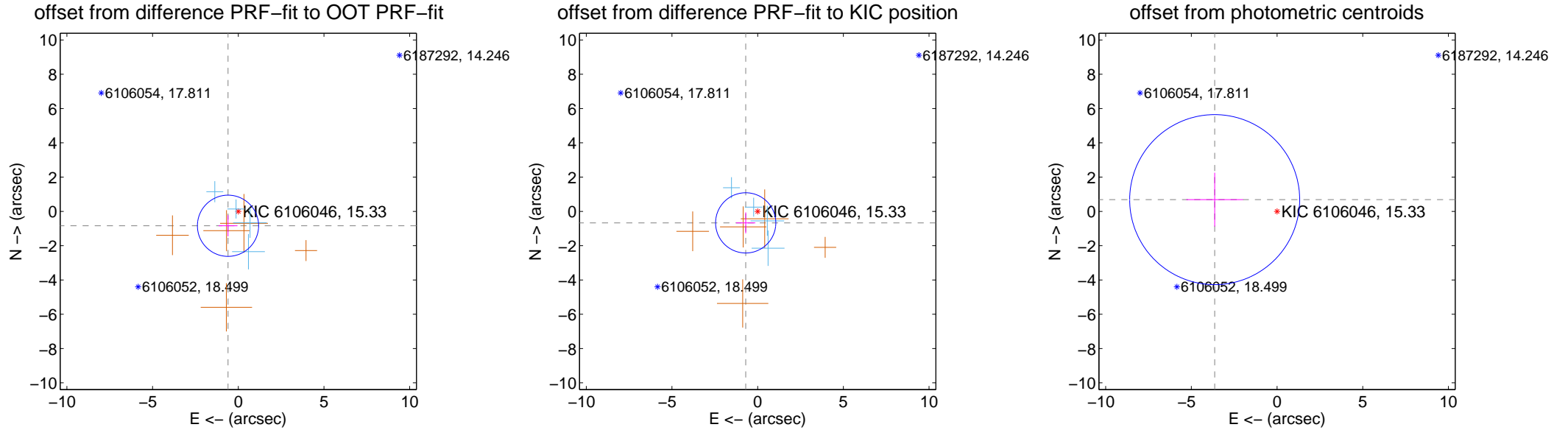
DV Centroid Data

Supplemental centroid analysis for 006106046-01. Kepler magnitude: 15.33. Transit SNR 8.42

There are 4 quarters with good PRF difference image offsets

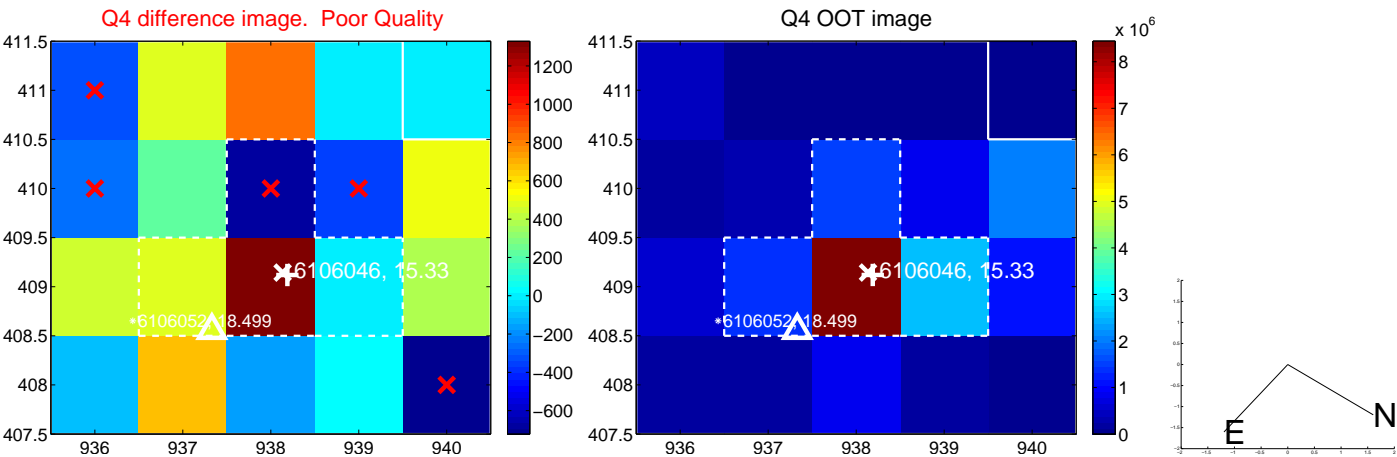
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.030 ± 0.595	1.73	0.599 ± 0.550	-0.838 ± 0.617
PRF-fit source offset from KIC position	0.967 ± 0.586	1.65	0.698 ± 0.561	-0.670 ± 0.612
photometric centroid source offset	3.70 ± 1.65	2.24	3.64 ± 1.66	0.69 ± 1.57

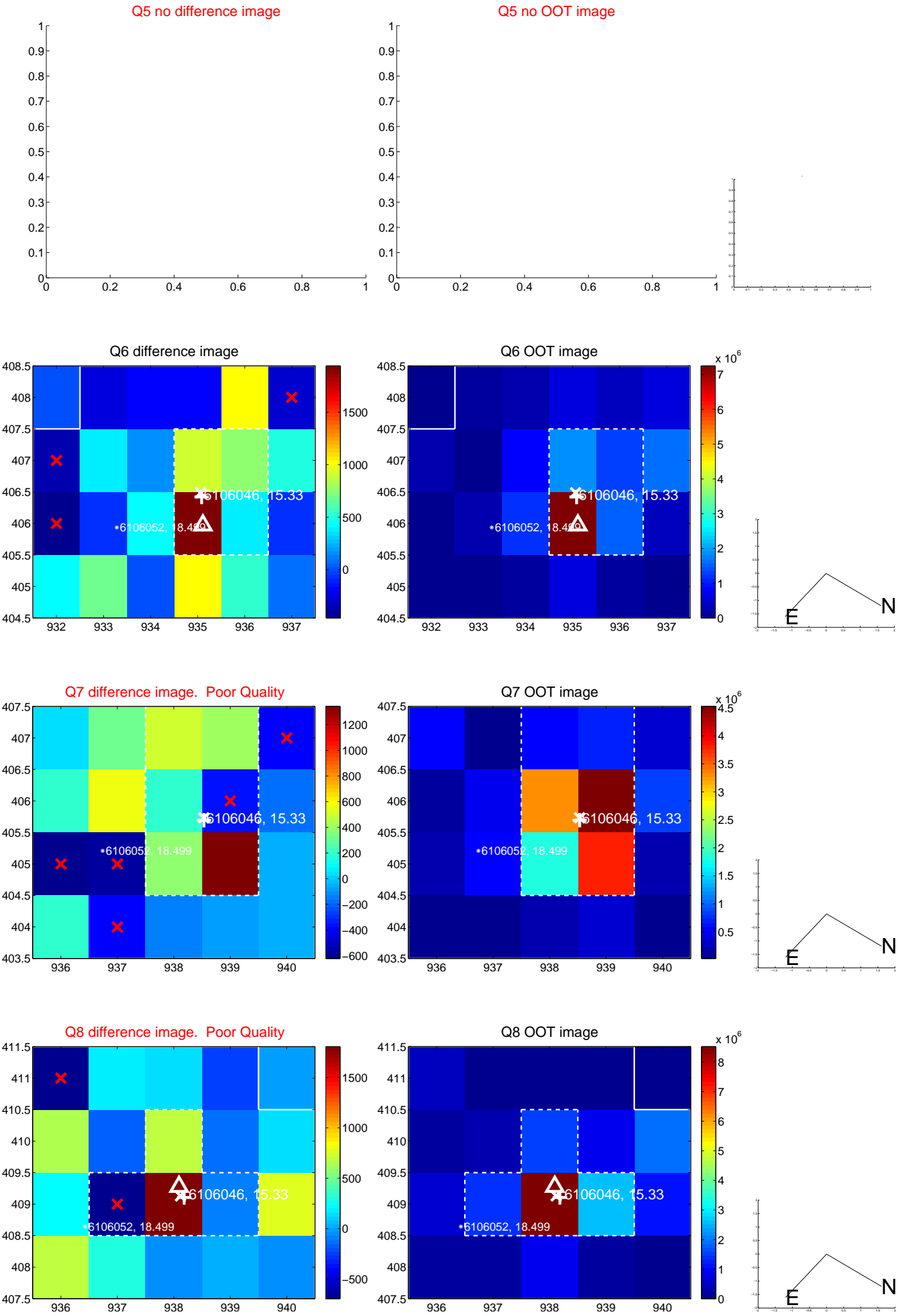


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

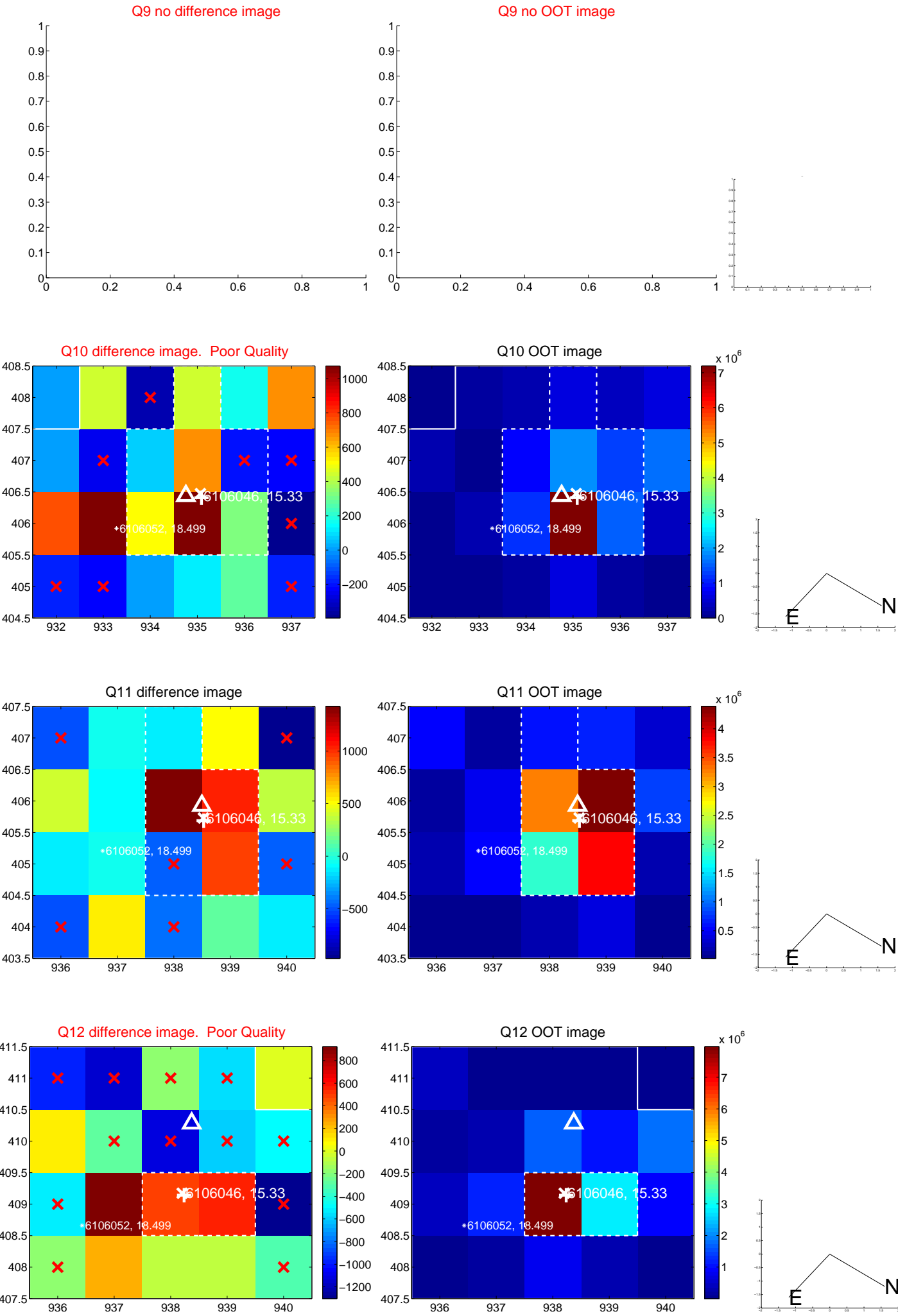
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



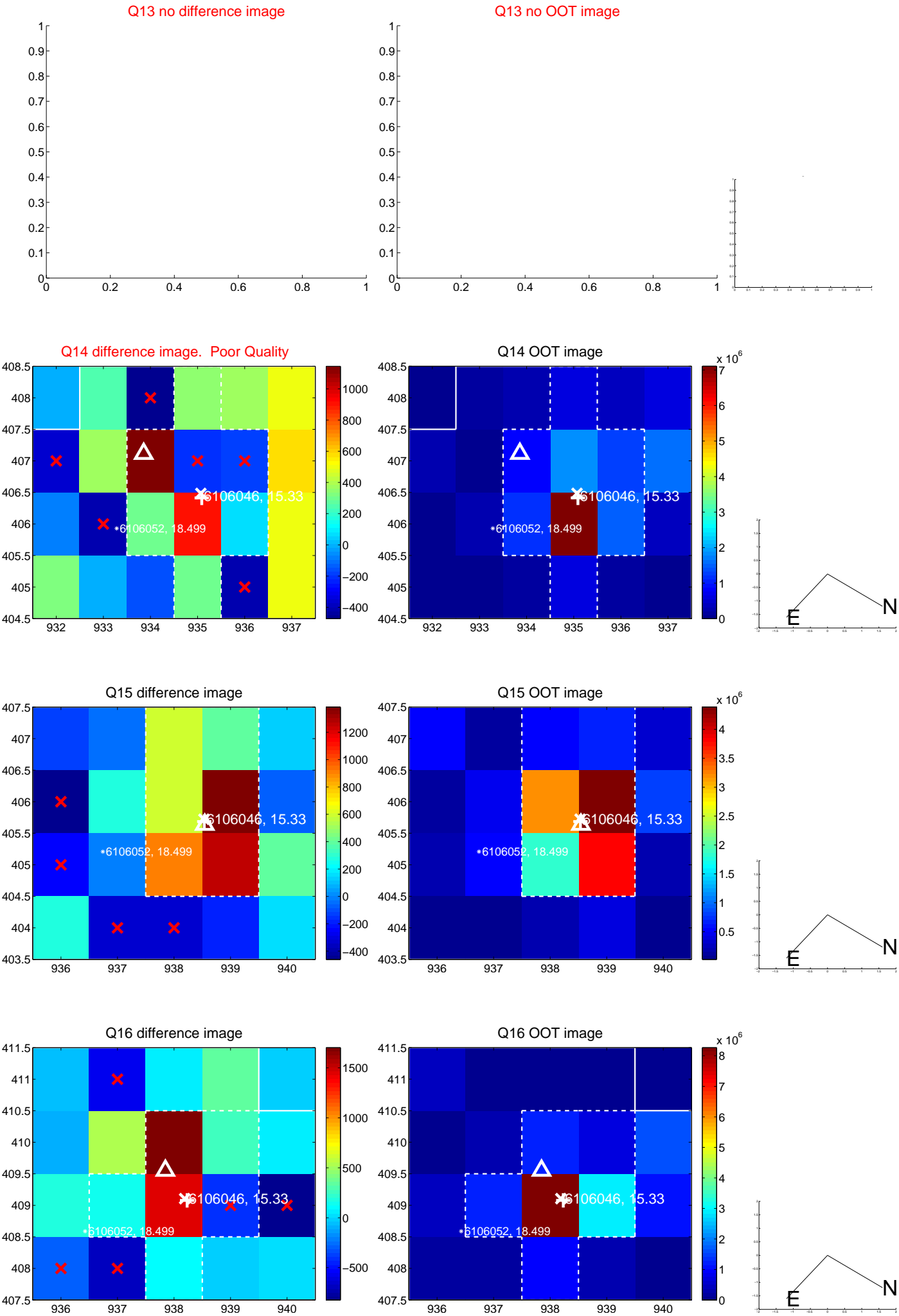
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



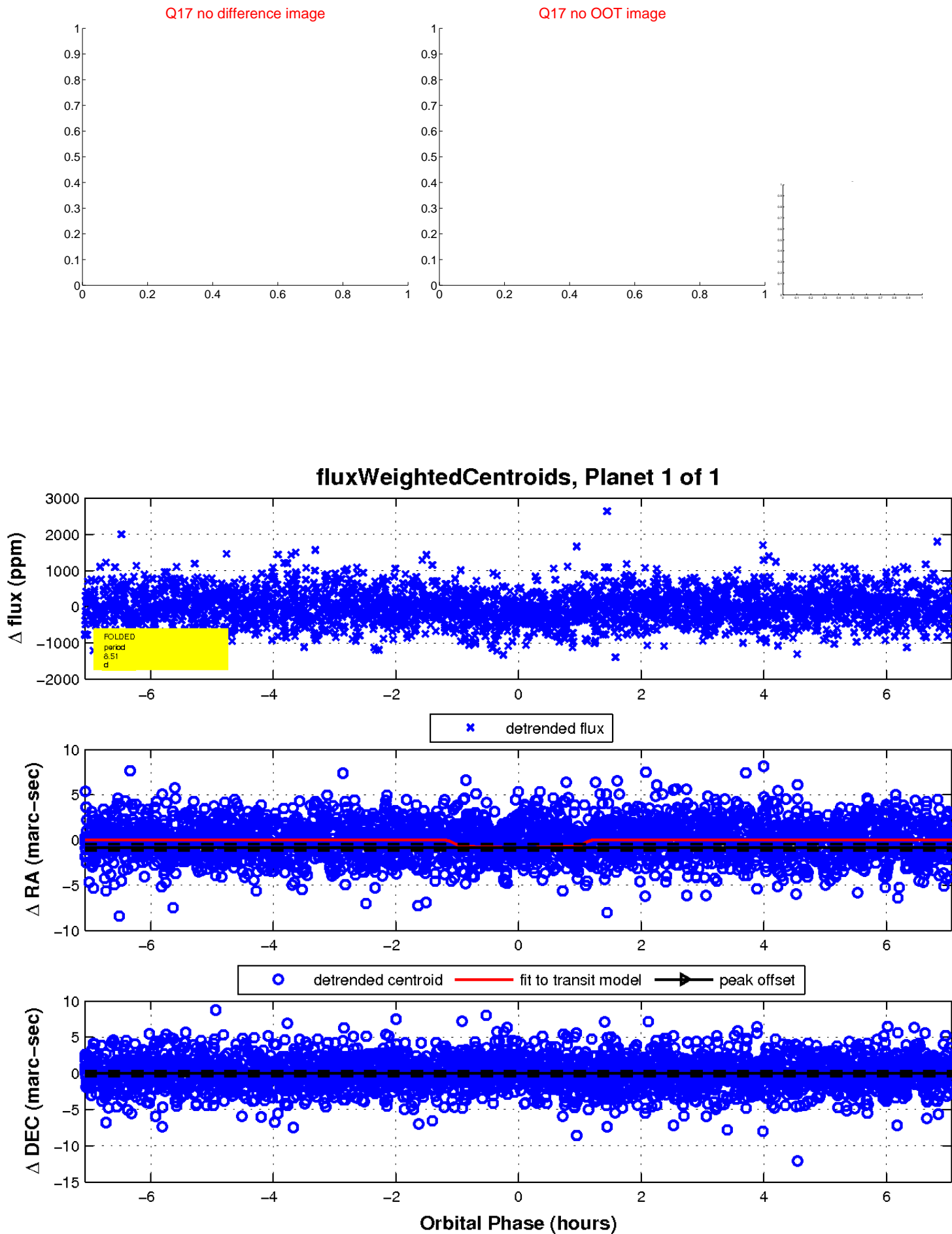
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

