

KIC 006346809

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})
006346809-01	OBS	2775.01	17.577059	137.730144	637.7	2.014	17.6	19.4	0.90	5653	3.65	48.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006346809-01	OBS	PC	1.00	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.

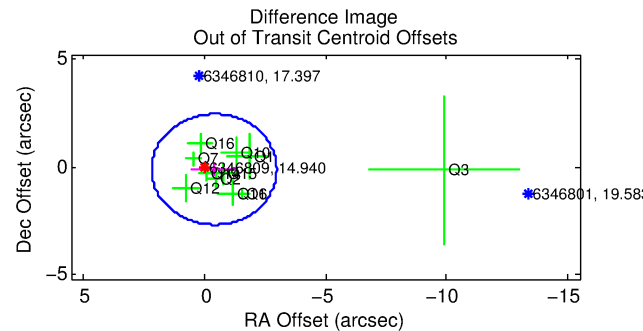
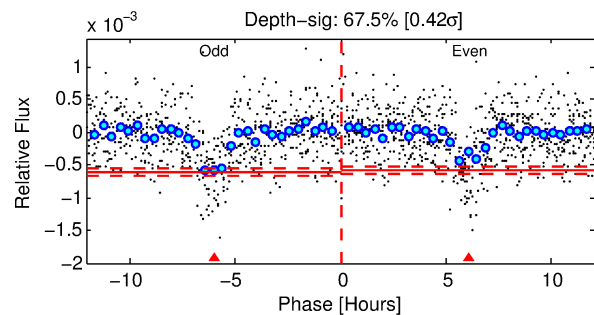
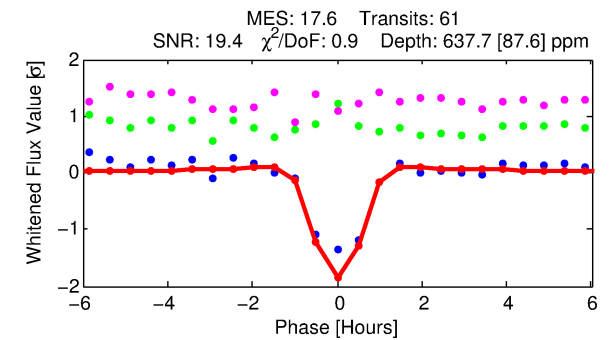
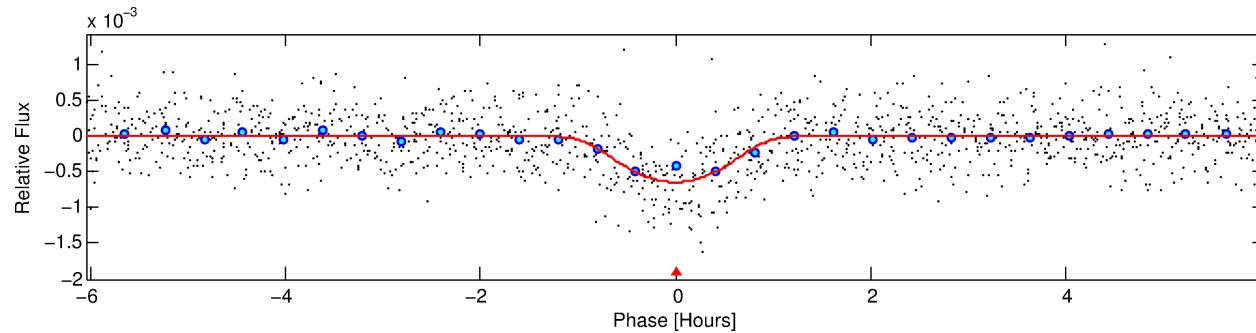
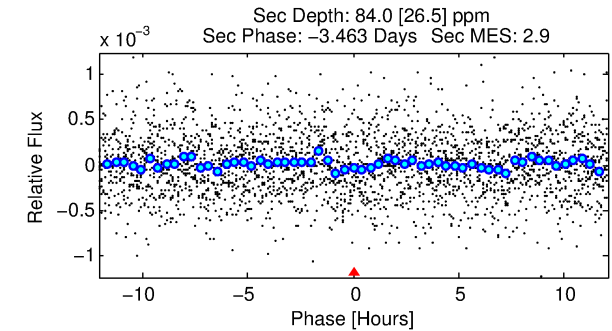
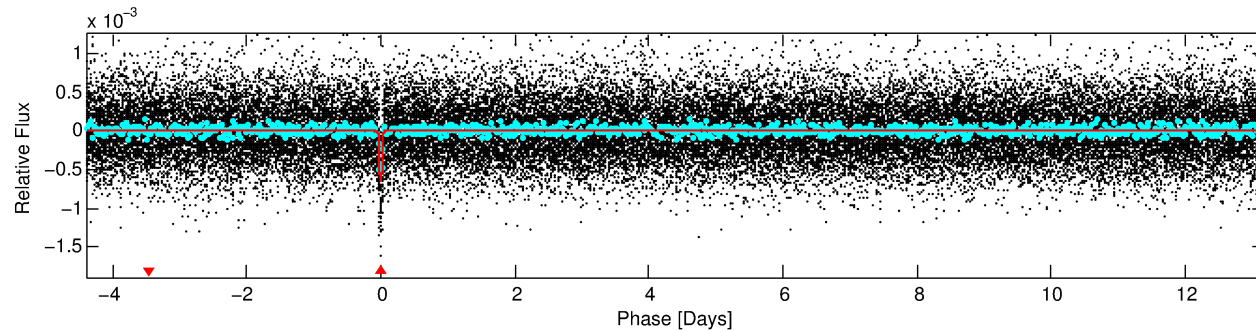
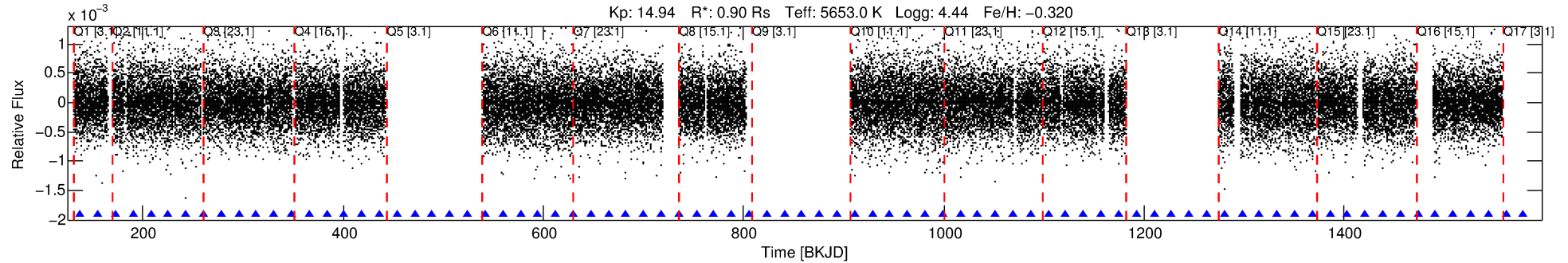
Ephemeris Match Information For 006346809-01

No Significant Match Found

DV One-Page Summary

KIC: 6346809 Candidate: 1 of 1 Period: 17.577 d

KOI: K02775.01 Corr: 0.869



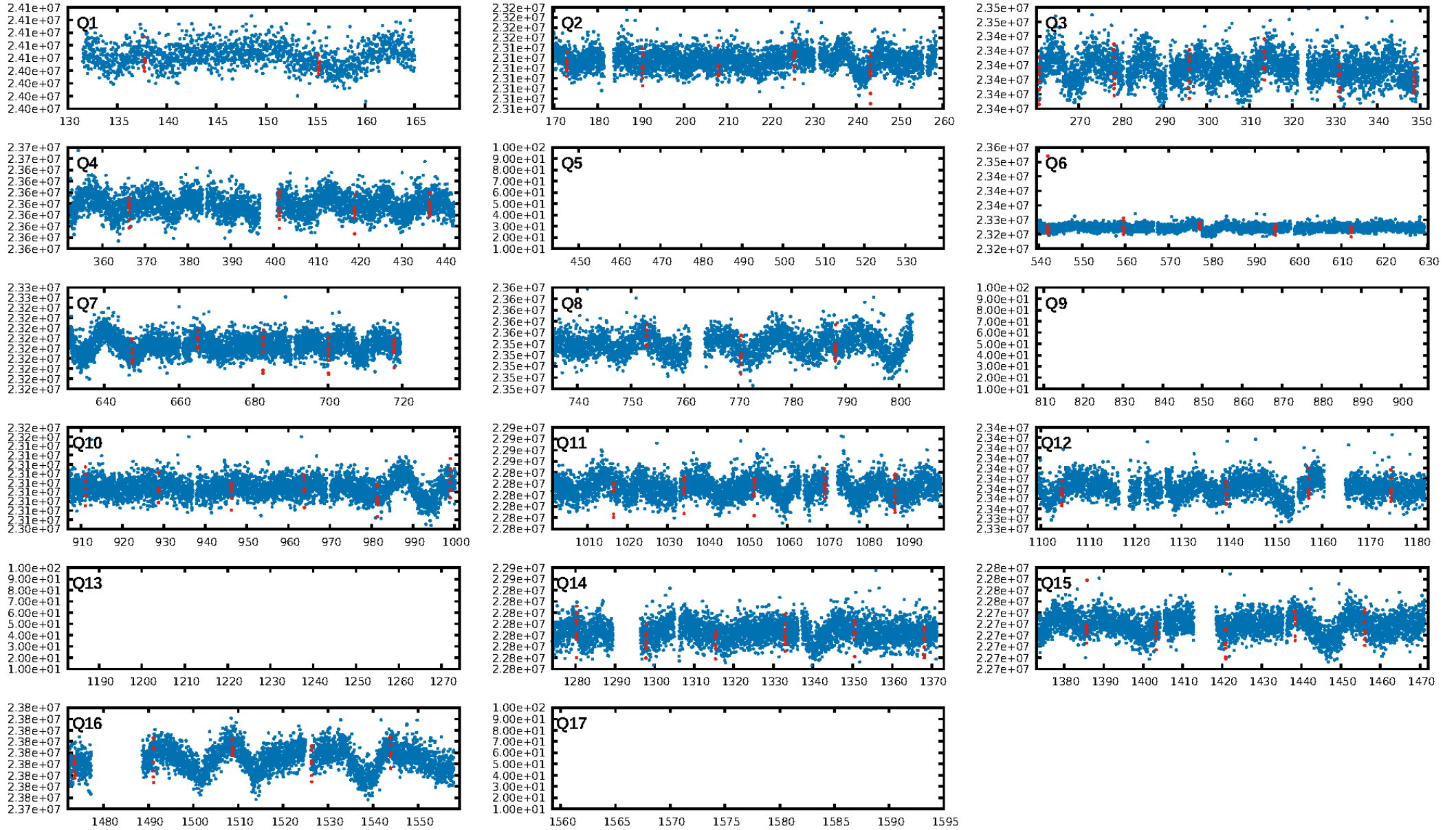
DV Fit Results:

Period = 17.57706 [0.00005] d
Epoch = 137.7301 [0.0025] BKJD
Rp/R* = 0.0372 [0.0550]
a/R* = 21.71 [12.21]
b = 0.98 [0.10]
Seff = 48.44 [16.42]
Teff = 673 [57] K
Rp = 3.65 [5.49] Re
a = 0.1238 [0.0269] AU
Ag = 53.13 [159.18] [0.33σ]
Teffp = 2808 [2093] K [1.02σ]

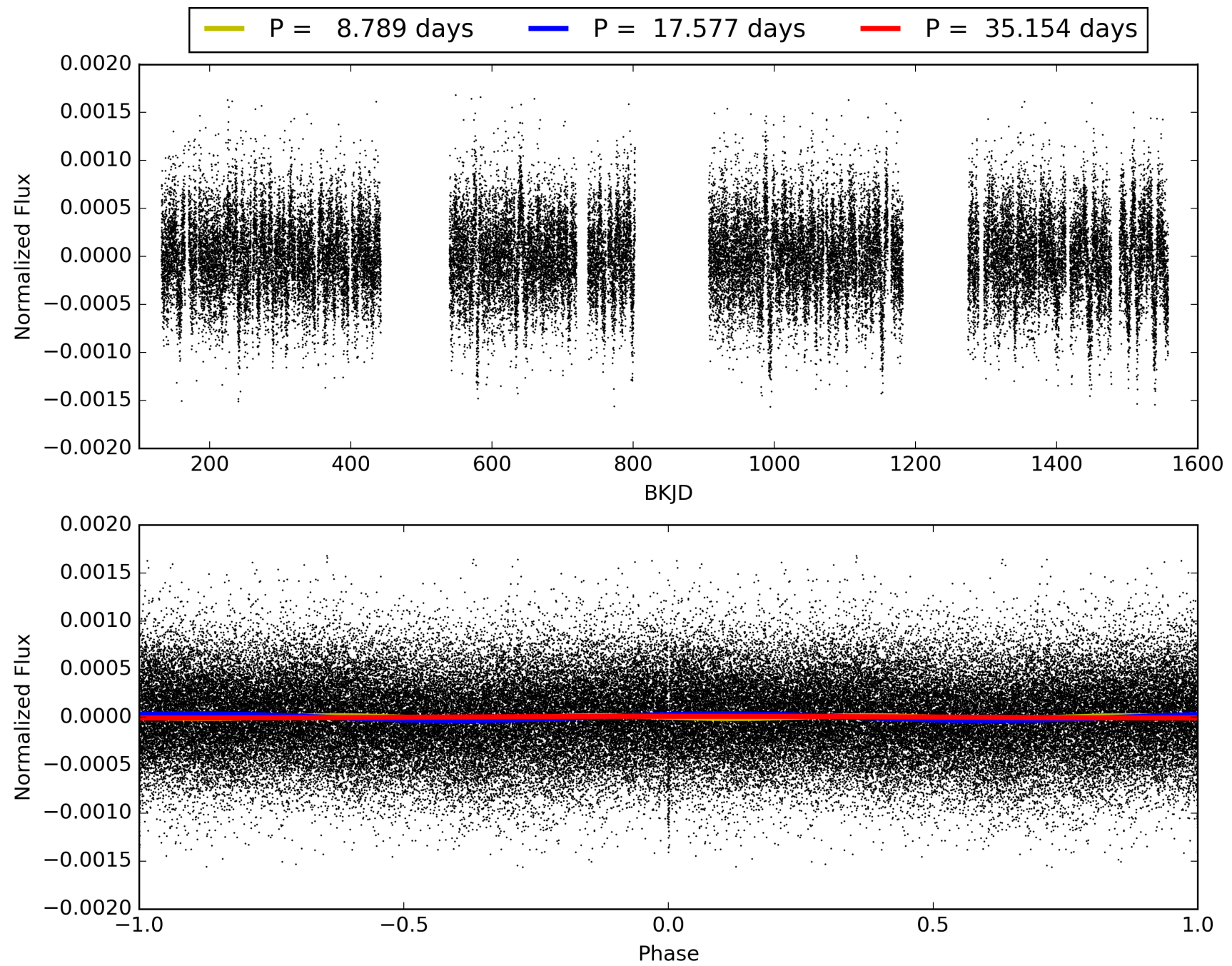
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 88.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.69e-70
RollingBand-fgt: 1.00 [59/59]
GhostDiagnostic-chr: -26.75
Centroid-sig: 19.8%
Centroid-so: 0.917 arcsec [1.07σ]
OotOffset-rm: 0.430 arcsec [0.50σ]
KicOffset-rm: 0.591 arcsec [0.78σ]
OotOffset-st: 4/4/2/1 [11]
KicOffset-st: 4/4/2/1 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006346809-01, PDC Light Curves

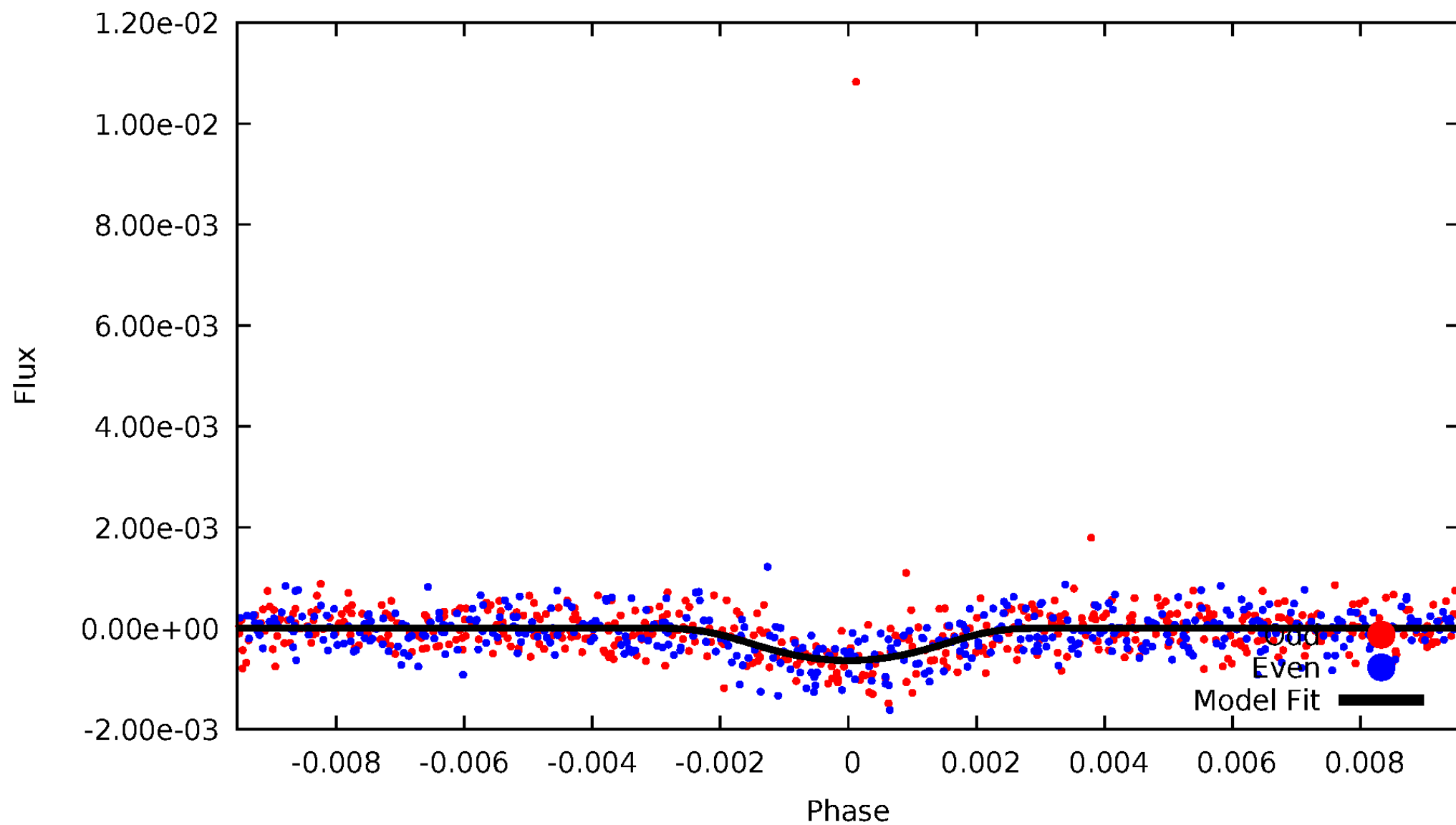


TCE 006346809-01



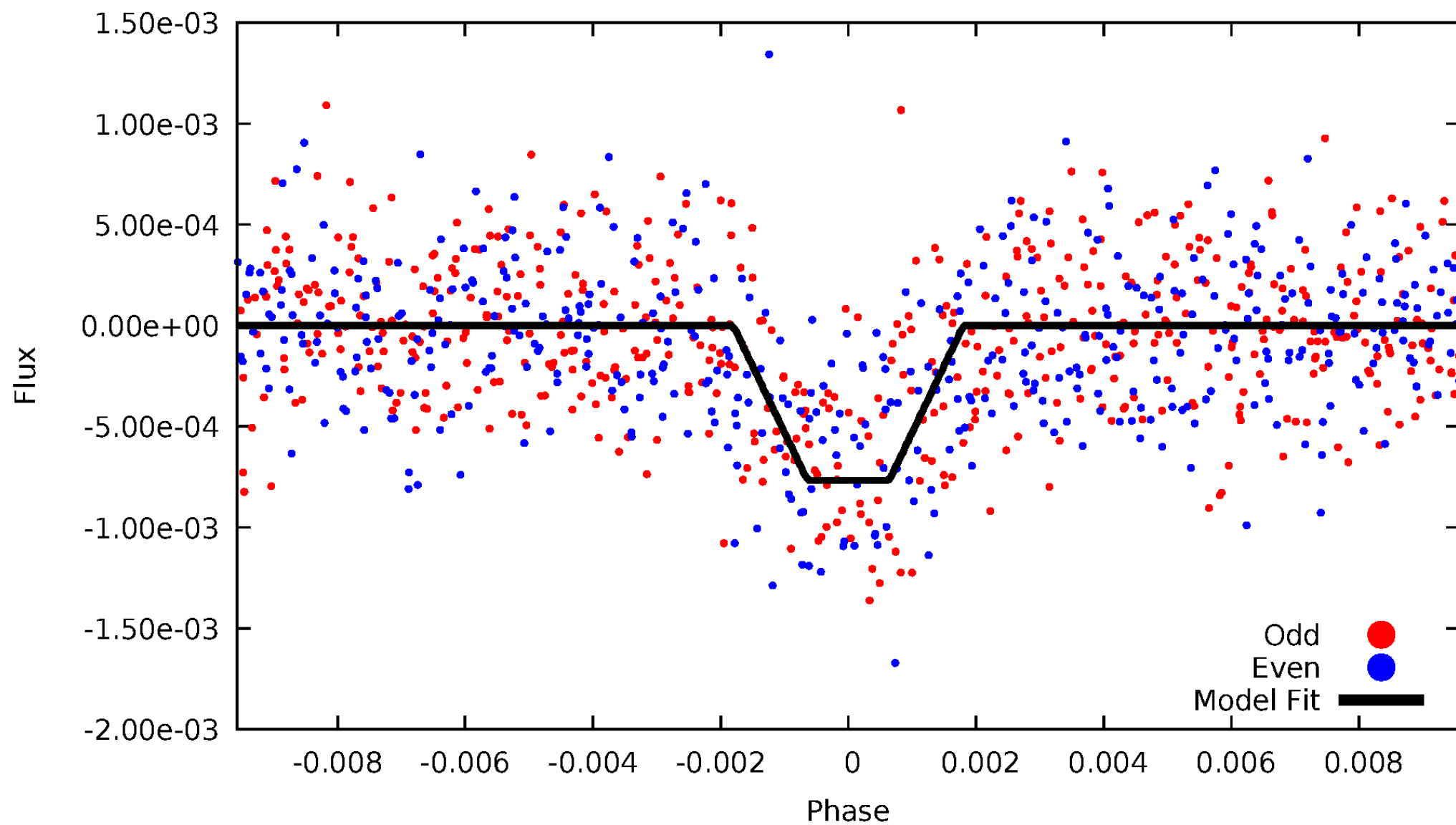
DV Odd/Even

TCE 006346809-01



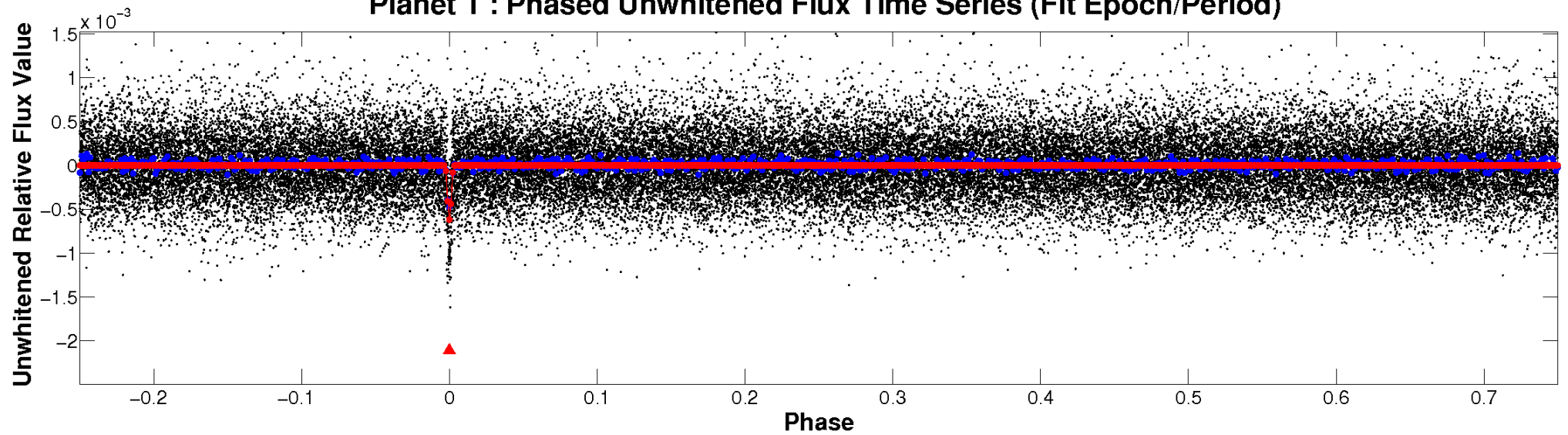
ALT Odd/Even

TCE 006346809-01

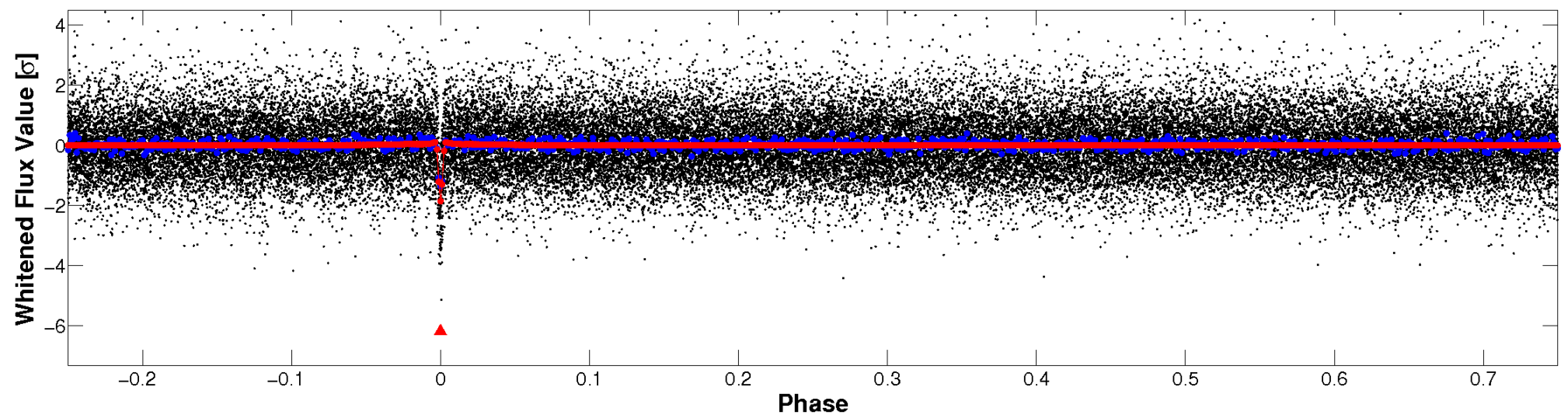


Non-Whitened Vs. Whitened Light Curve

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

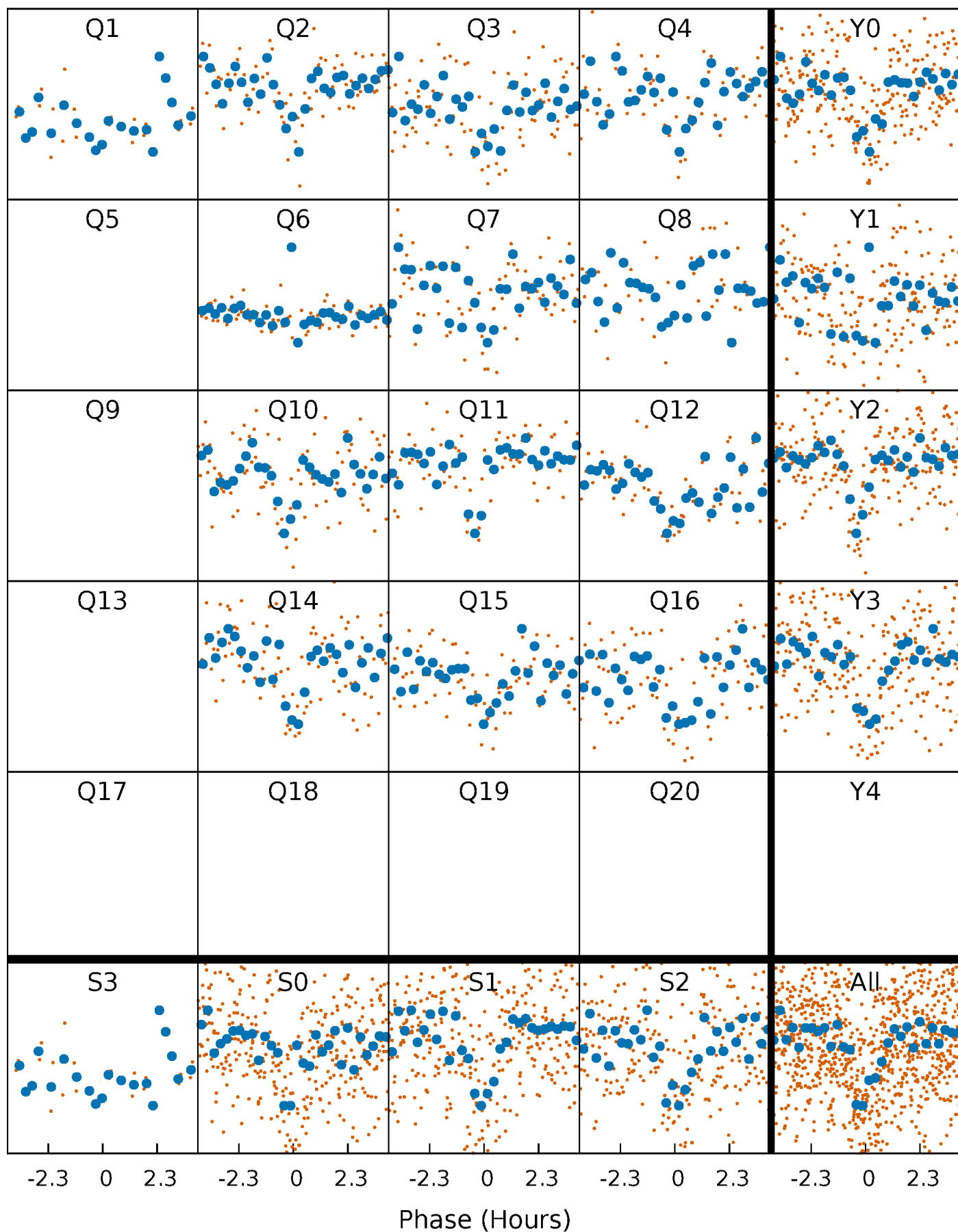


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



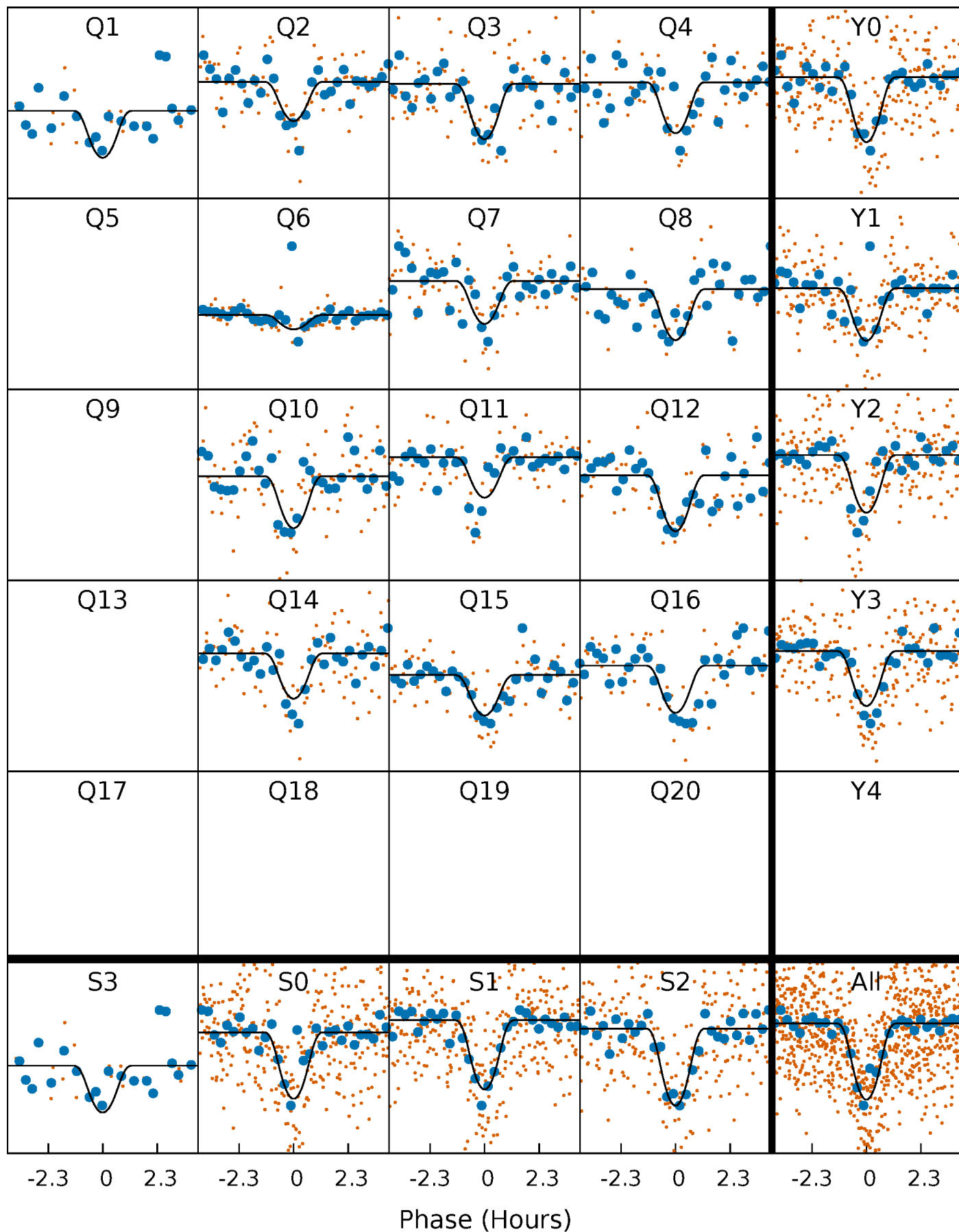
PDC Quarter-Phased Transit Curves

TCE 006346809-01 P= 17.577059 Days $T_0=137.730144$ (BKJD)



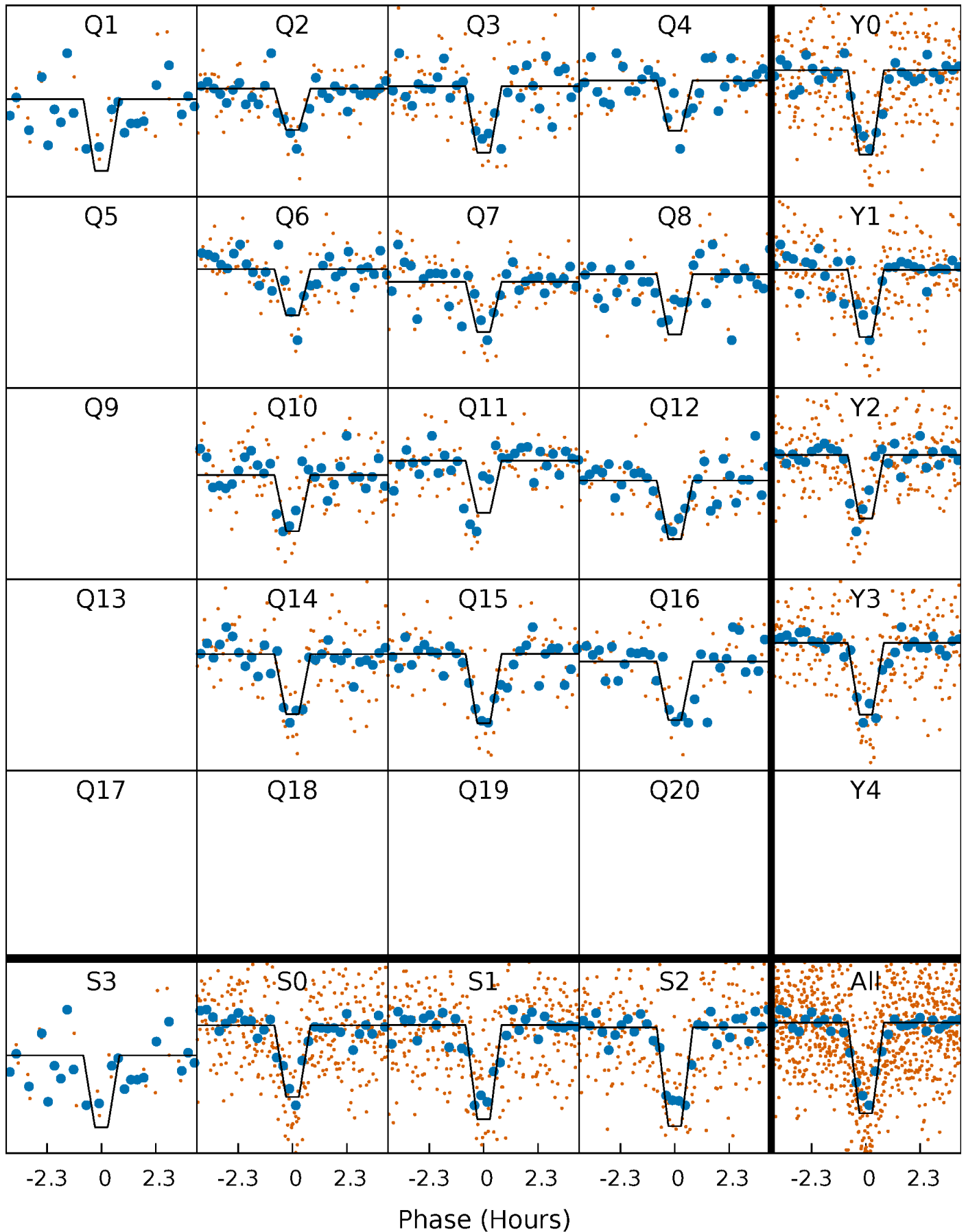
DV Quarter-Phased Transit Curves

TCE 006346809-01 P= 17.577059 Days $T_0=137.730144$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

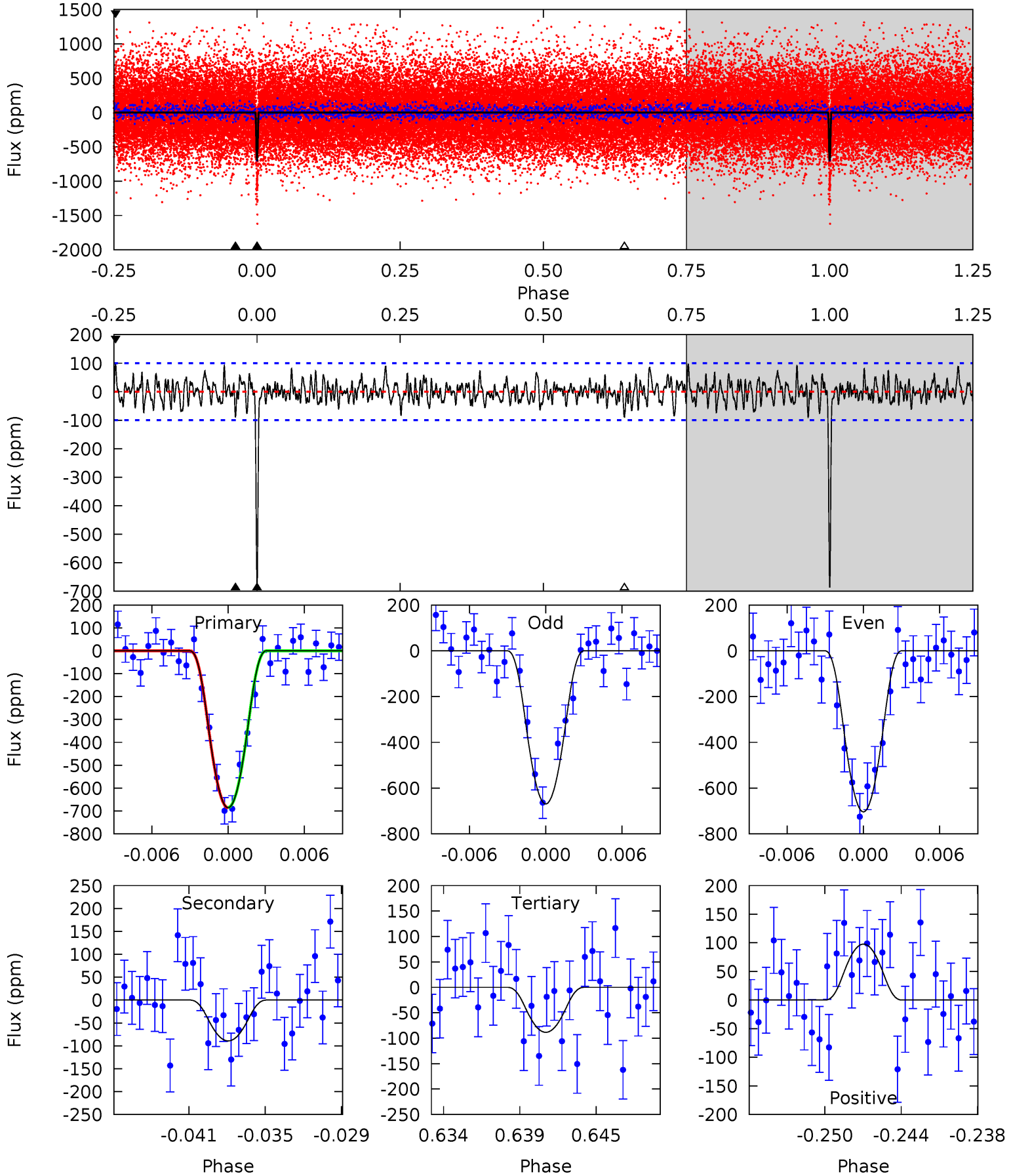
TCE 006346809-01 P= 17.577126 Days $T_0=137.728162$ (BKJD)



DV Model-Shift Uniqueness Test

006346809-01, $P = 17.577059$ Days, $E = 120.153085$ Days

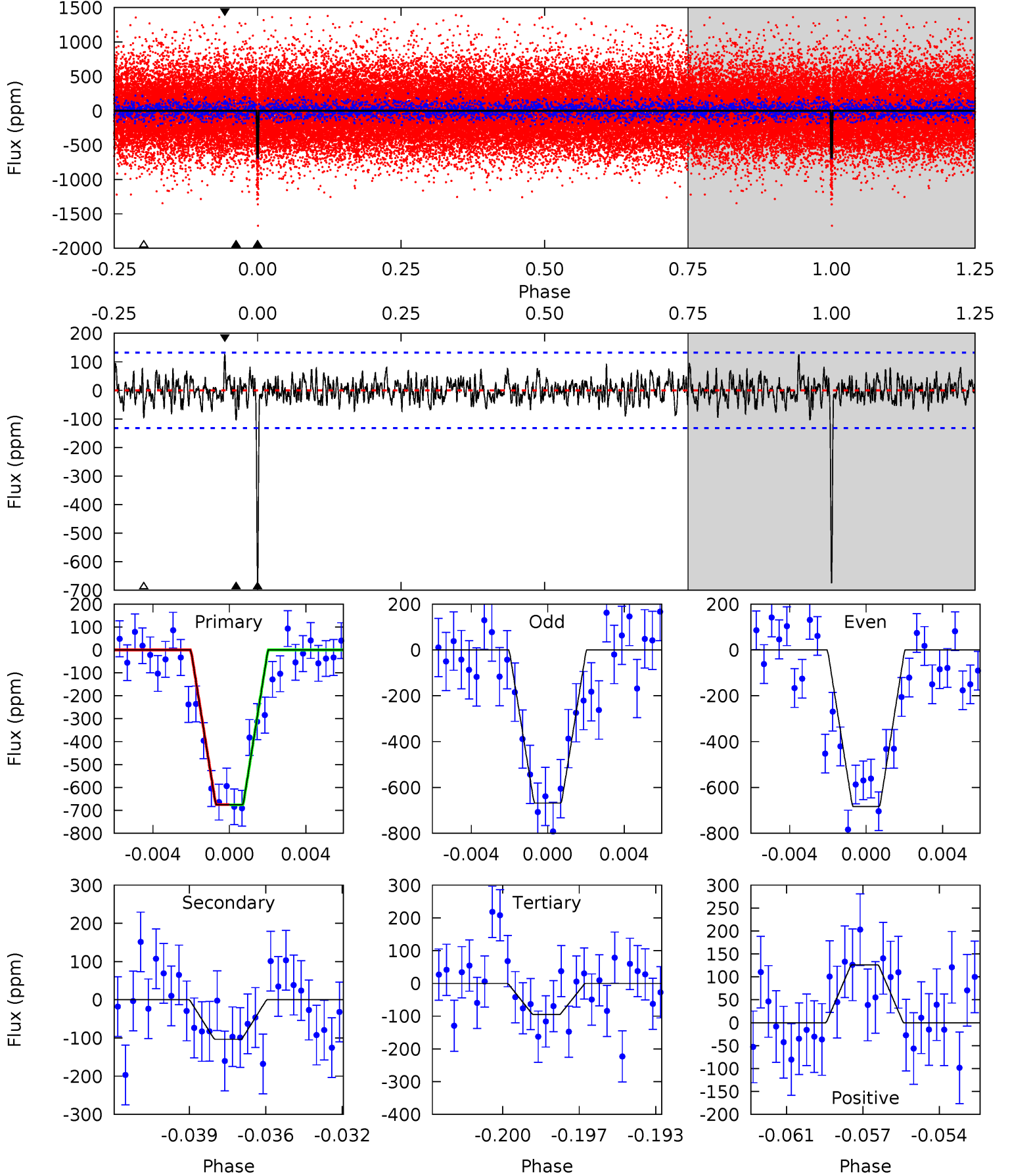
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.1	4.57	4.53	5.01	5.13	2.76	1.53	30.6	30.1	0.04	-0.44	0.89	0.92	0.12	0.04



Alt Model-Shift Uniqueness Test

006346809-01, $P = 17.577126$ Days, $E = 120.151036$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	4.09	3.77	4.98	5.22	2.91	1.24	22.9	21.7	0.32	-0.90	0.31	1.04	0.16	0.03



Stellar Parameters For KIC 006346809

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5653^{+169}_{-152}	$4.442^{+0.116}_{-0.174}$	$-0.320^{+0.300}_{-0.300}$	$0.901^{+0.231}_{-0.124}$	$0.819^{+0.115}_{-0.062}$	$1.579^{+0.921}_{-0.718}$
	+3%/-3%	+3%/-4%	+94%/-94%	+26%/-14%	+14%/-8%	+58%/-45%
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 006346809-01 / KOI 2775.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-89 ± 20	$5.80^{+4.75}_{-3.69}$	946^{+64}_{-48}	2953^{+1155}_{-430}	23^{+161}_{-16}
Alt.	-103 ± 25	$4.80^{+4.53}_{-3.18}$	953^{+64}_{-50}	3203^{+1571}_{-558}	36^{+328}_{-26}

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 $A_{obs} \gg 1.0$

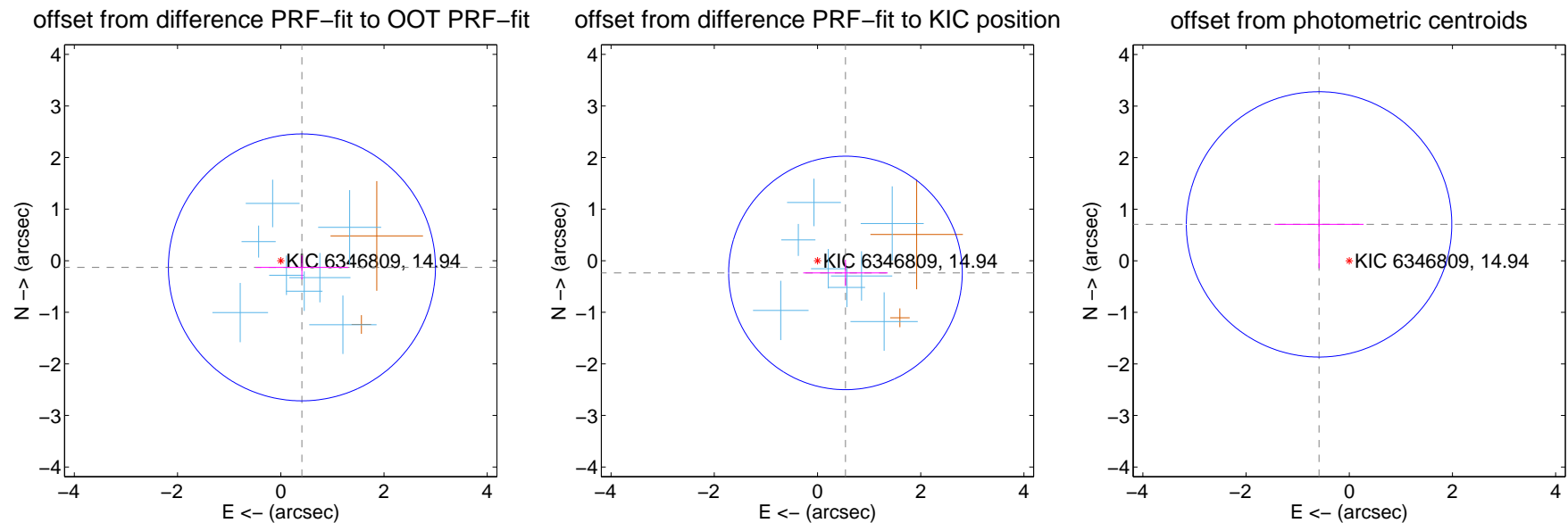
DV Centroid Data

Supplemental centroid analysis for 006346809-01. Kepler magnitude: 14.94. Transit SNR 19.36

There are 8 quarters with good PRF difference image offsets

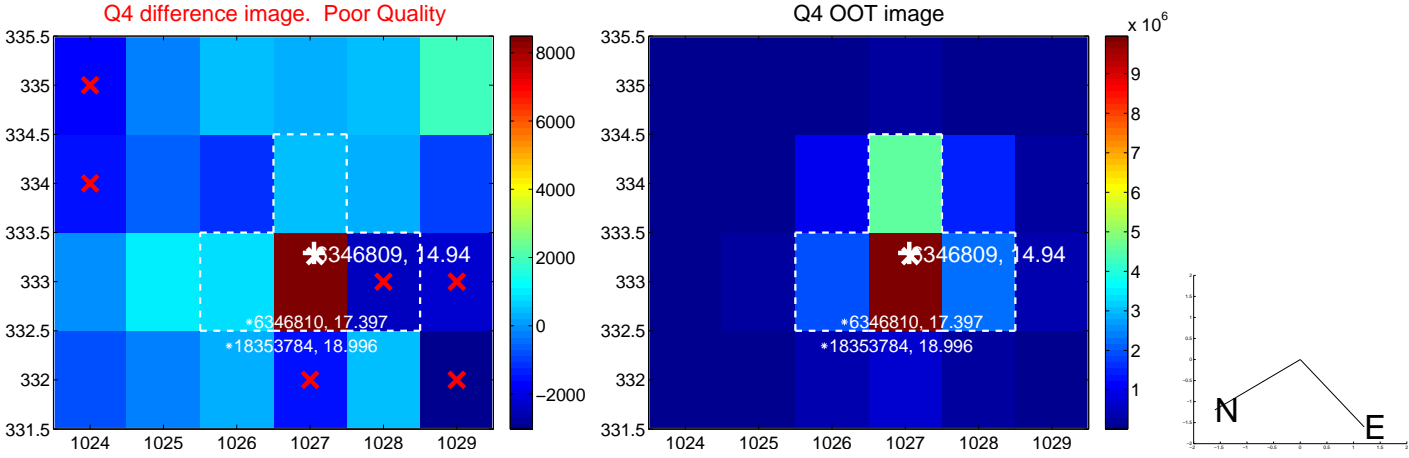
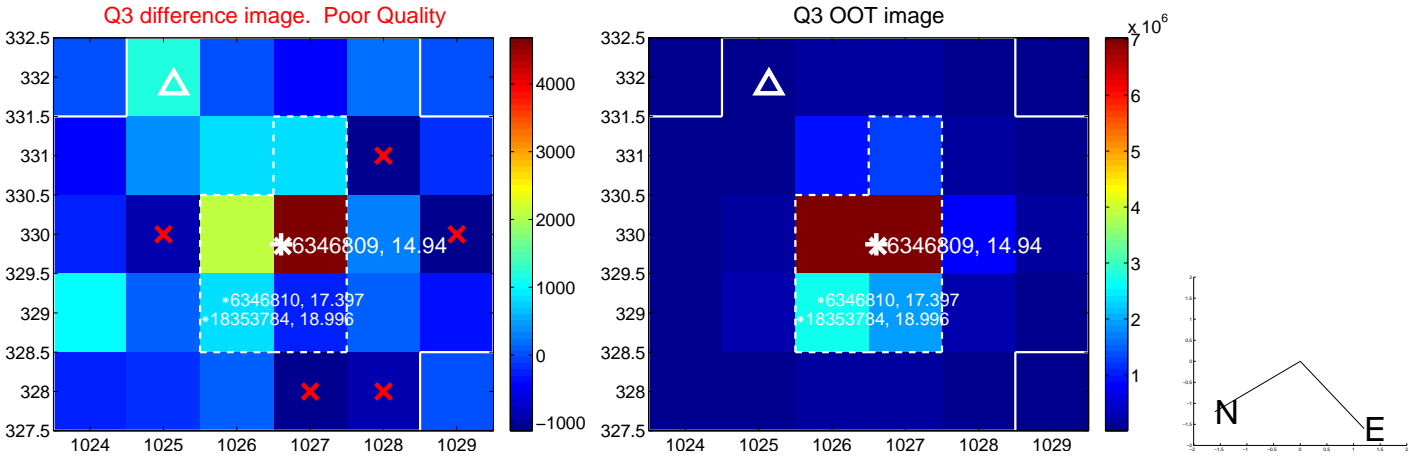
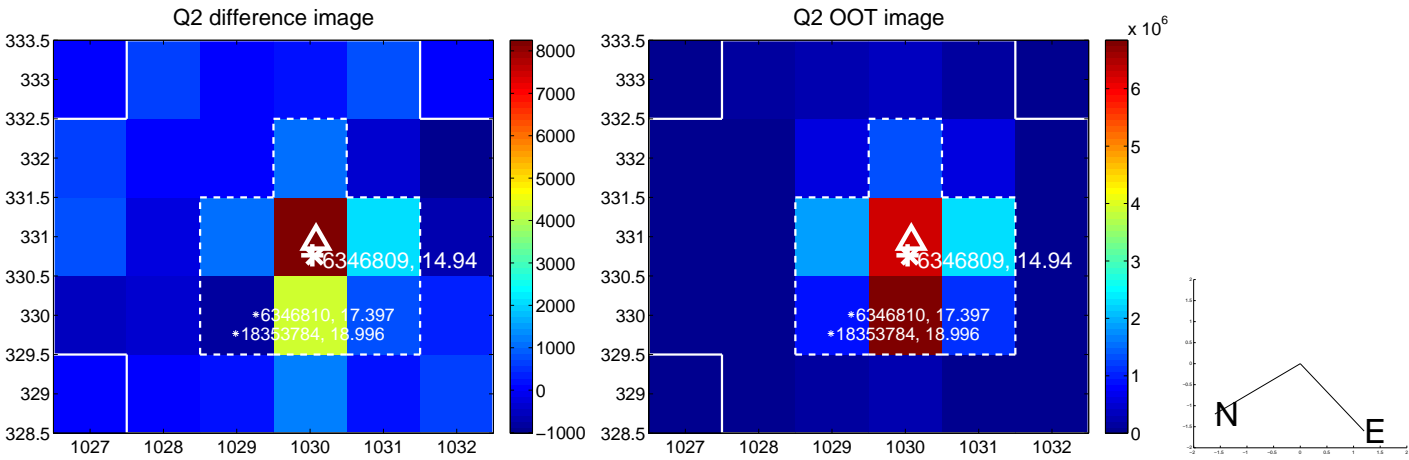
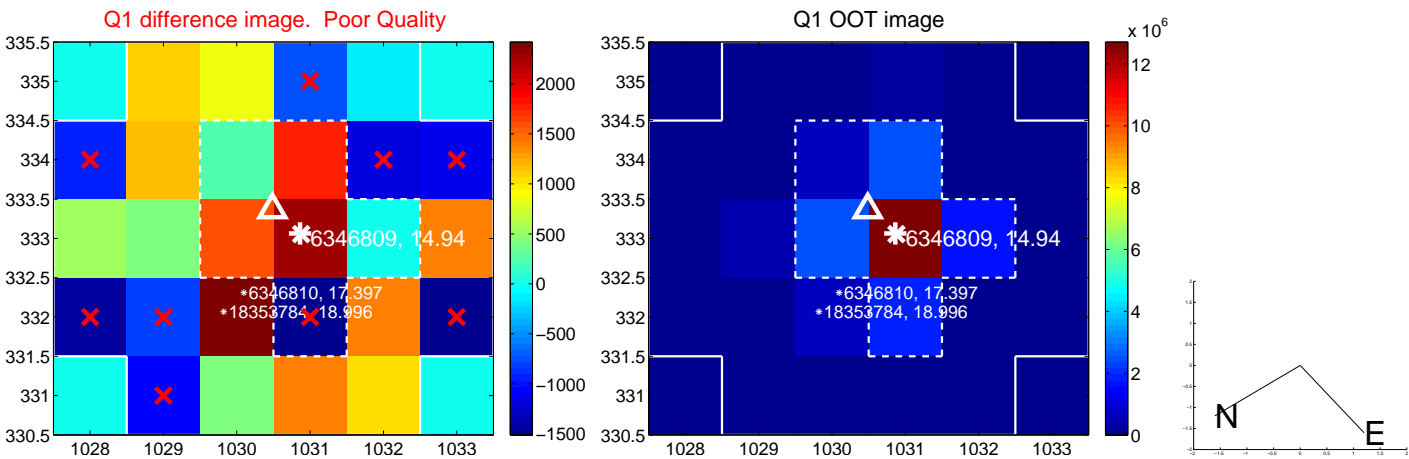
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.430 ± 0.863	0.50	-0.410 ± 0.895	-0.130 ± 0.231
PRF-fit source offset from KIC position	0.591 ± 0.755	0.78	-0.541 ± 0.818	-0.237 ± 0.255
photometric centroid source offset	0.92 ± 0.86	1.07	0.59 ± 0.86	0.71 ± 0.85

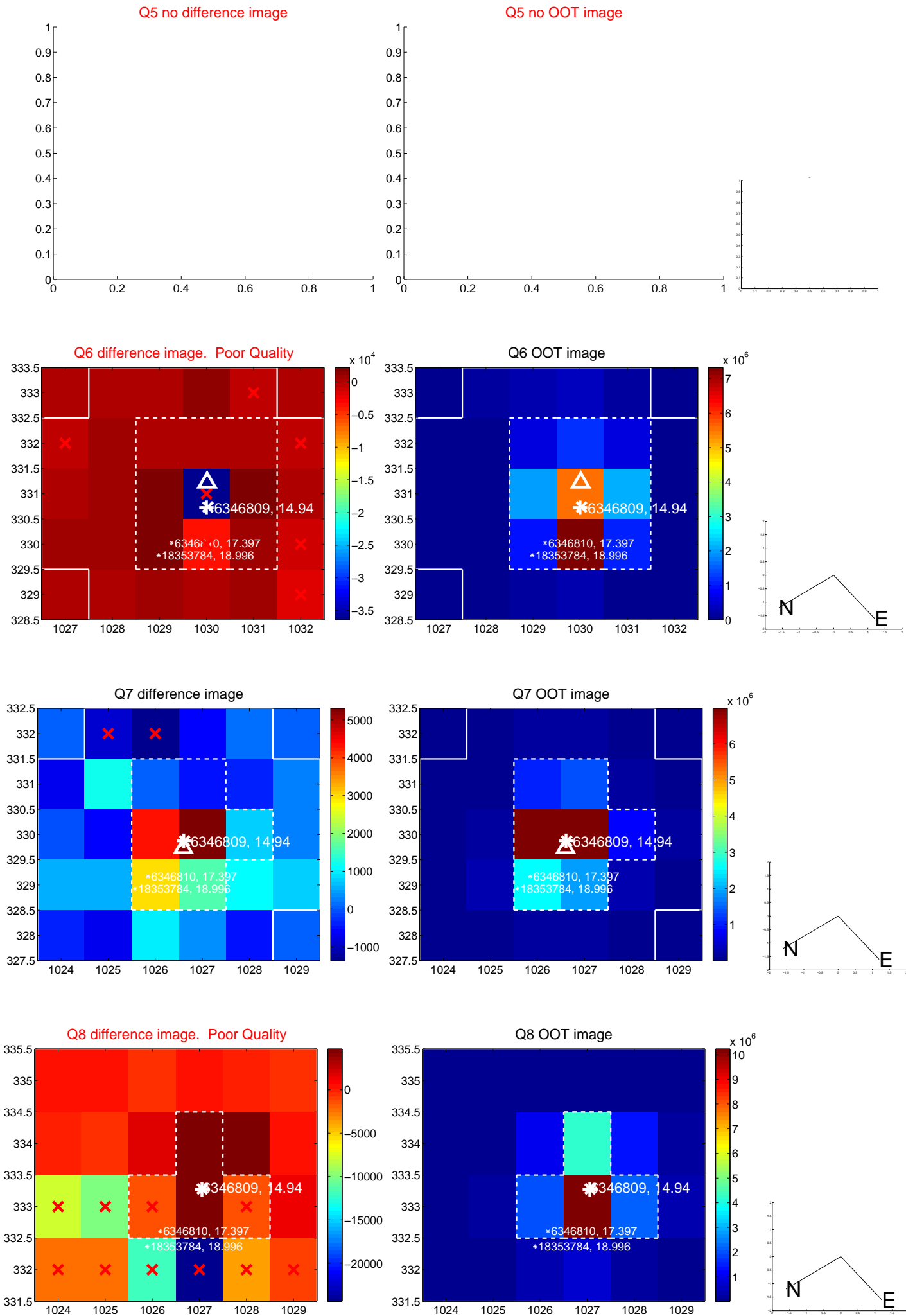


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

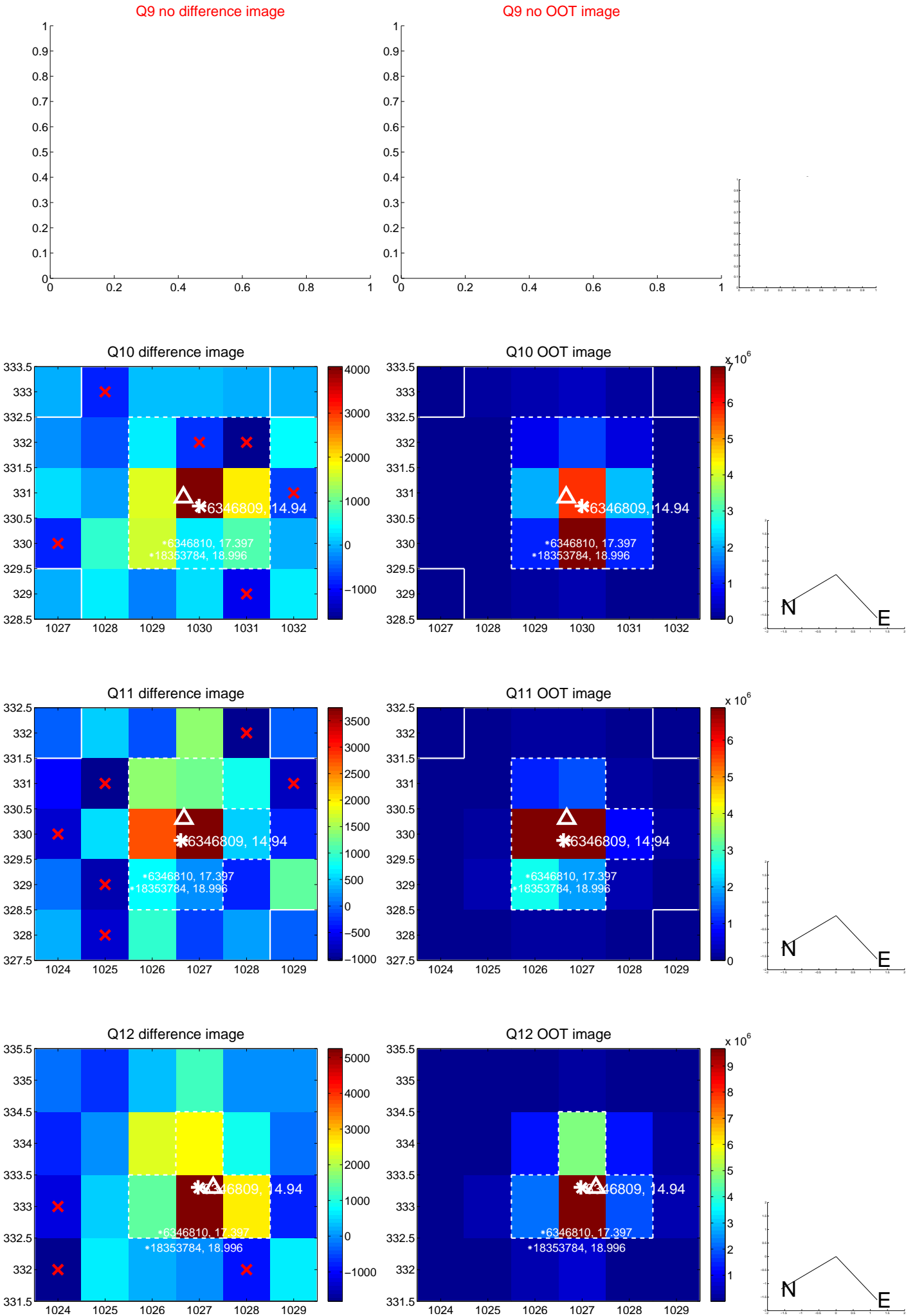
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



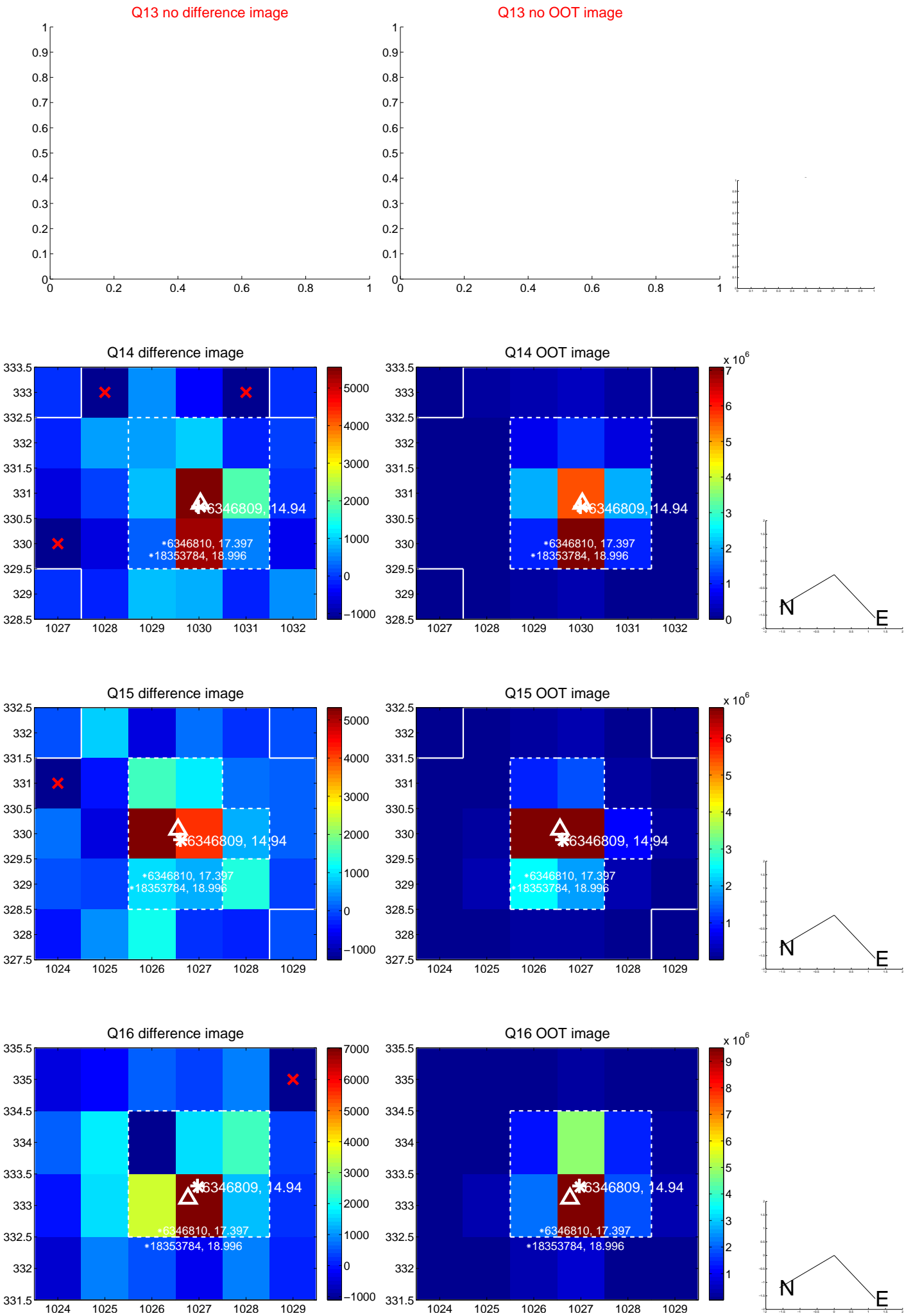
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



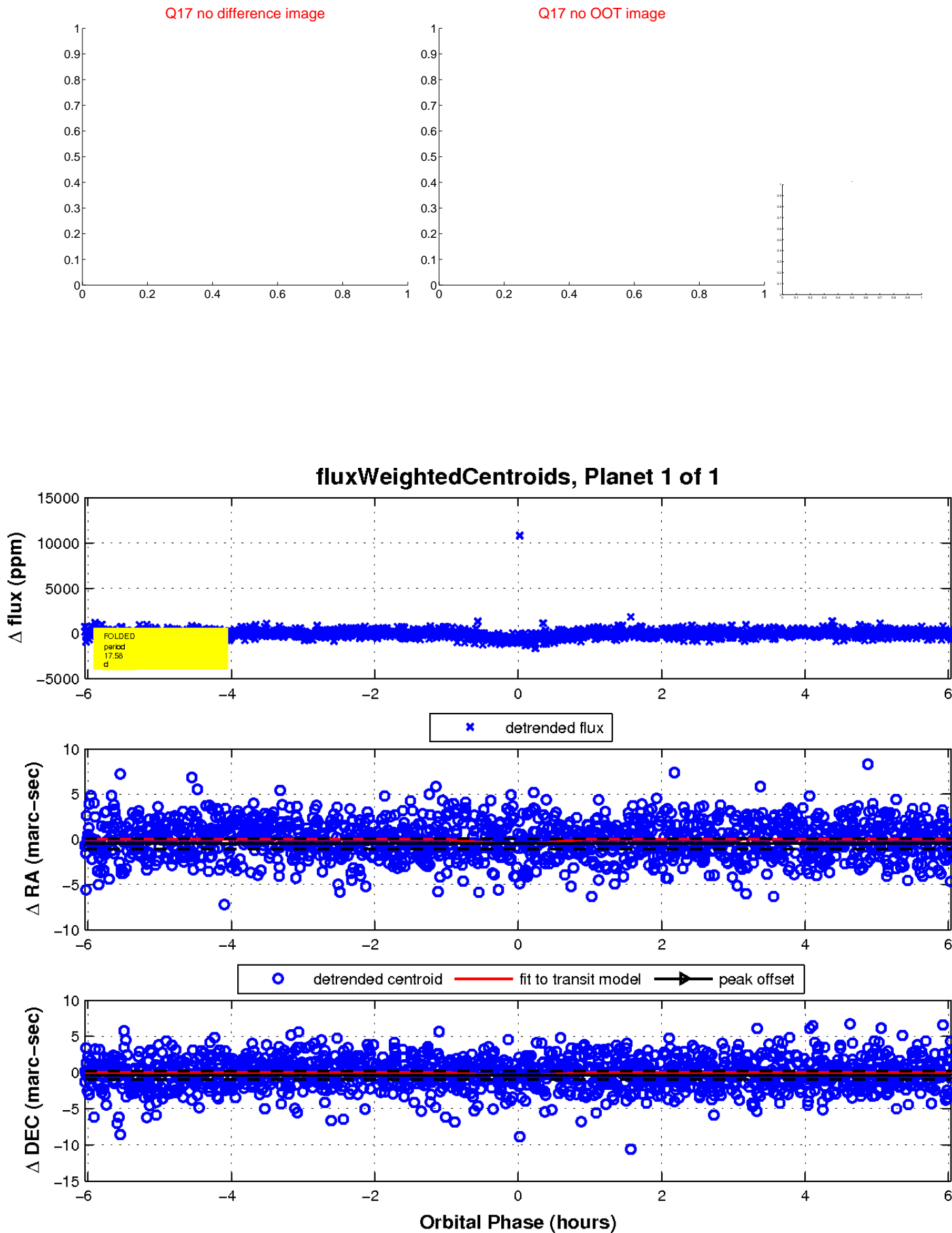
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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

