

KIC 005599774

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})
005599774-01	OBS	2337.01	8.496412	138.734818	811.2	2.165	18.8	20.5	0.71	5093	2.16	57.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005599774-01	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.

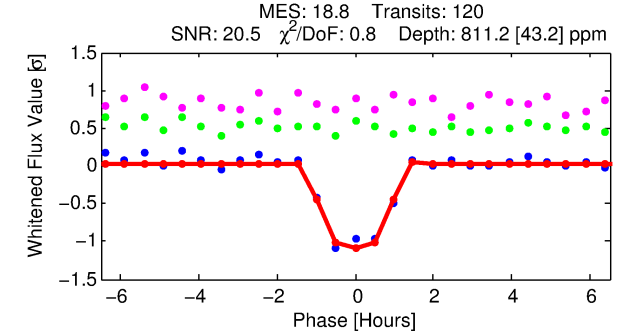
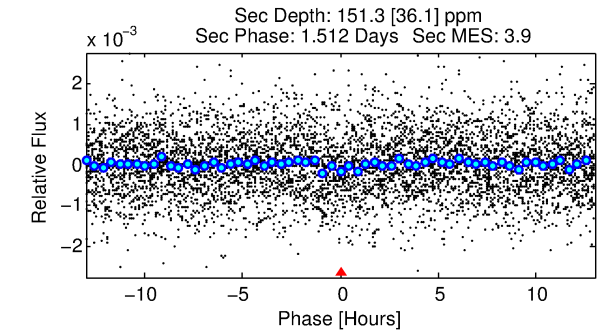
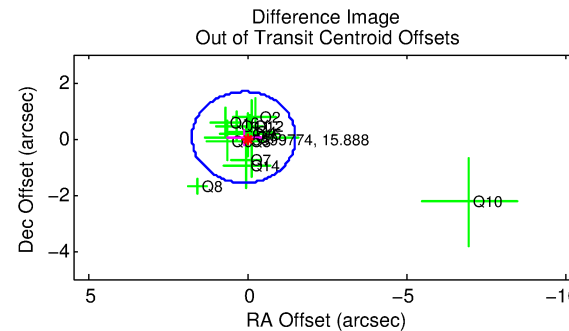
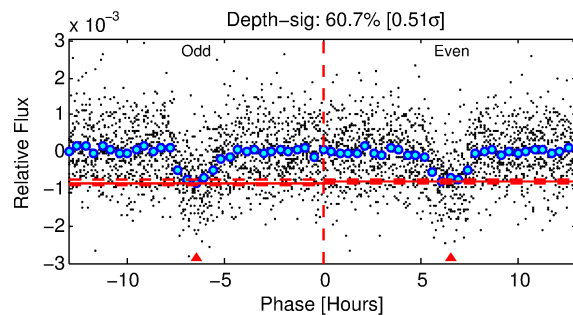
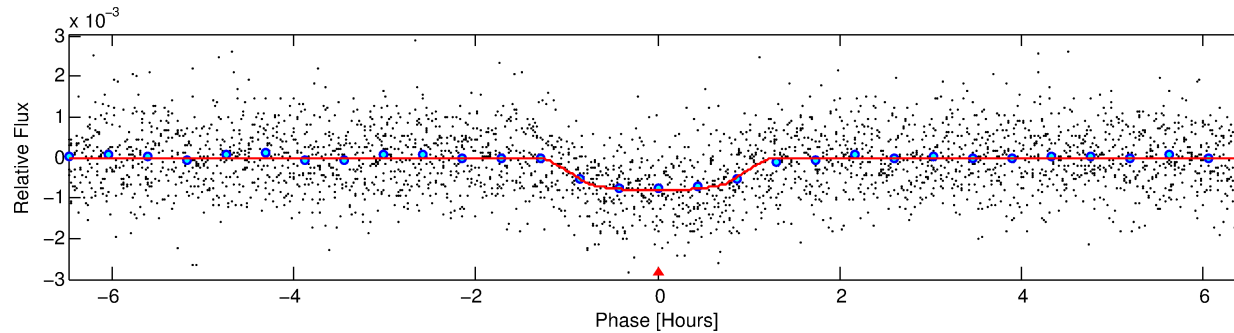
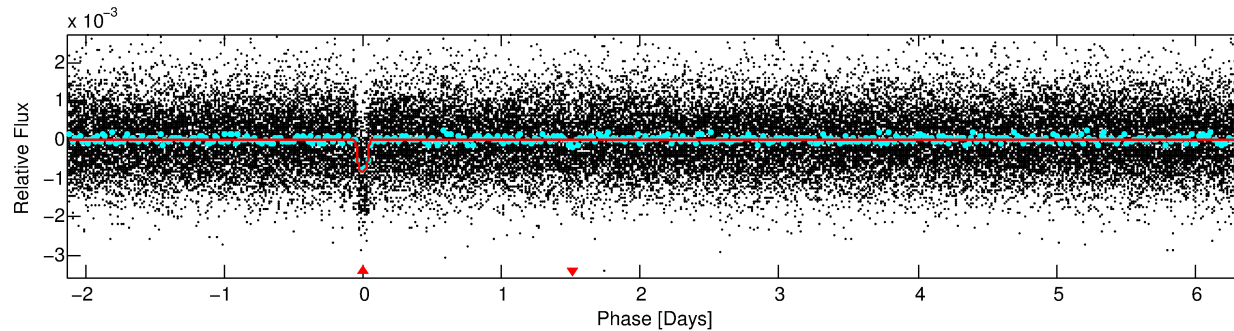
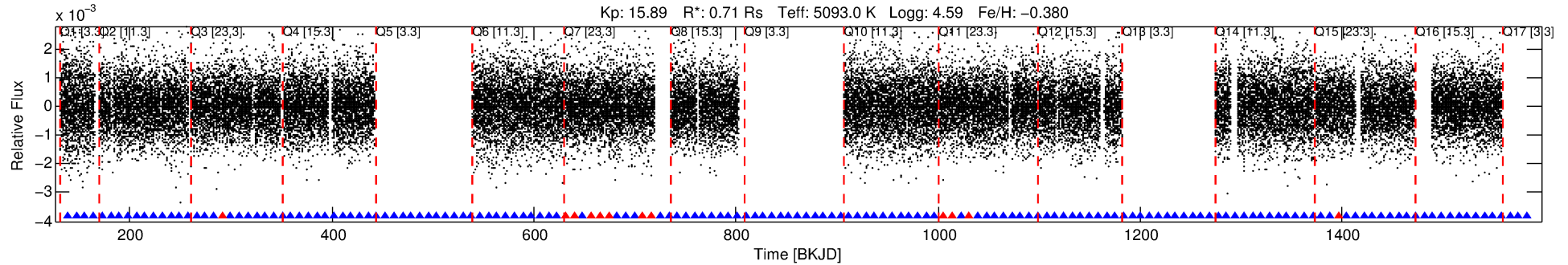
Ephemeris Match Information For 005599774-01

No Significant Match Found

DV One-Page Summary

KIC: 5599774 Candidate: 1 of 1 Period: 8.496 d
KOI: K02337.01 Corr: 0.983

Kp: 15.89 R*: 0.71 Rs Teff: 5093.0 K Logg: 4.59 Fe/H: -0.380



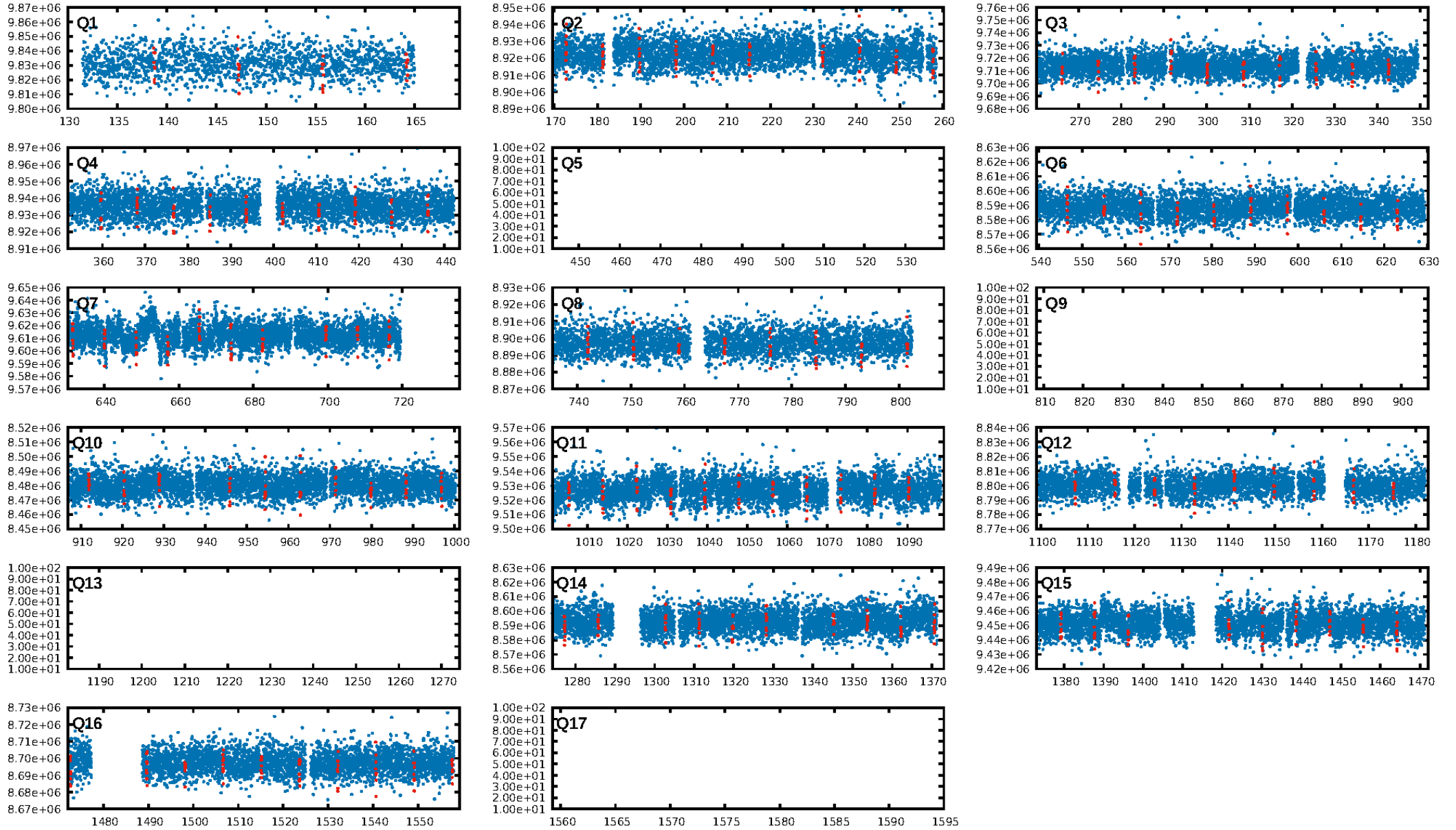
DV Fit Results:

Period = 8.49641 [0.00003] d
Epoch = 138.7348 [0.0025] BKJD
Rp/R* = 0.0279 [0.0249]
a/R* = 22.53 [74.58]
b = 0.70 [2.45]
Seff = 57.49 [9.68]
Teq = 702 [30] K
Rp = 2.16 [1.94] Re
a = 0.0726 [0.0064] AU
Ag = 94.08 [169.80] [0.55σ]
Teffp = 3381 [1525] K [1.76σ]

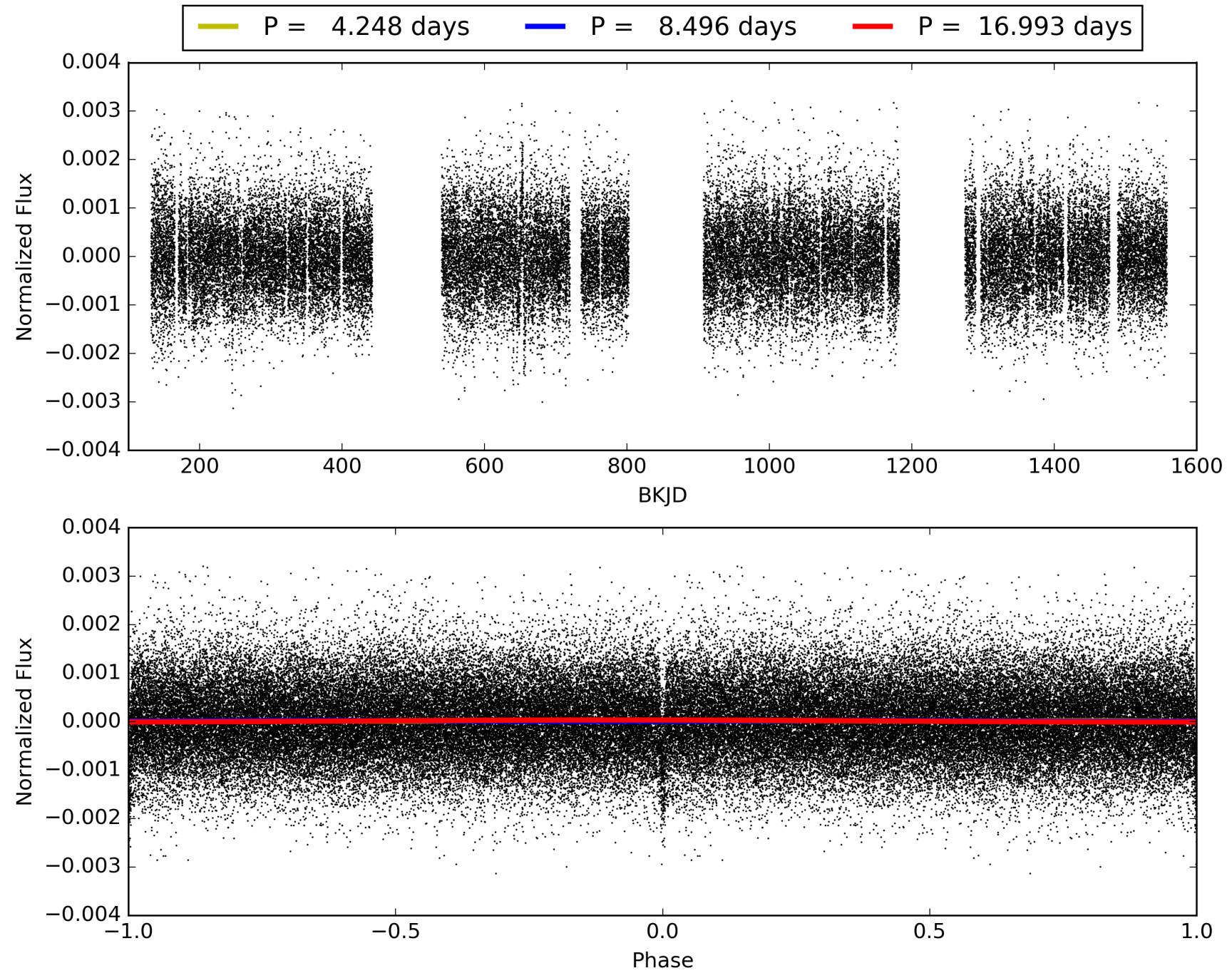
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.12e-79
RollingBand-fgt: 0.90 [104/116]
GhostDiagnostic-chr: 1.982
Centroid-sig: 4.3%
Centroid-so: 1.260 arcsec [1.53σ]
OotOffset-rm: 0.140 arcsec [0.26σ]
KicOffset-rm: 0.043 arcsec [0.08σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.85 [11/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005599774-01, PDC Light Curves

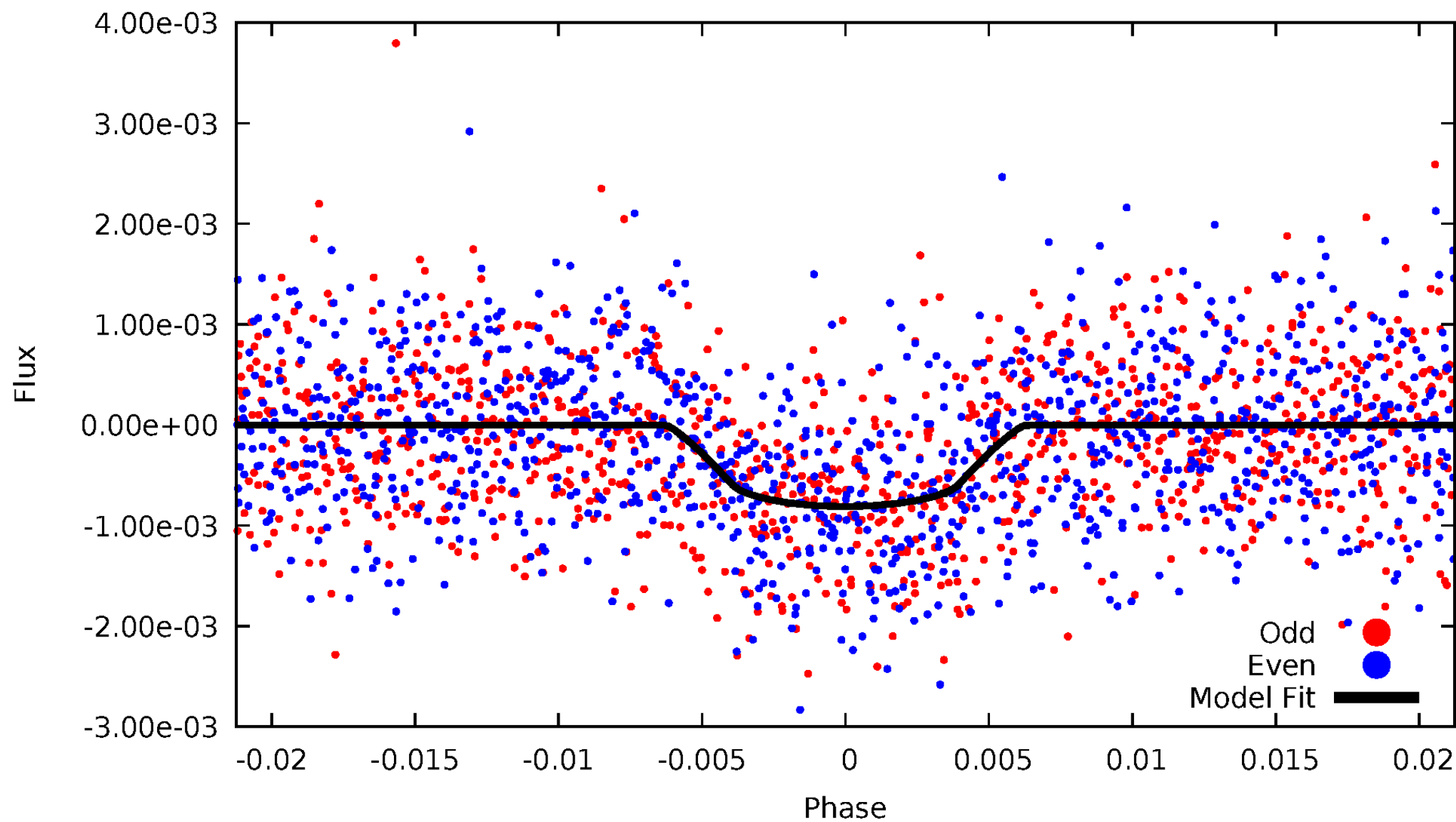


TCE 005599774-01



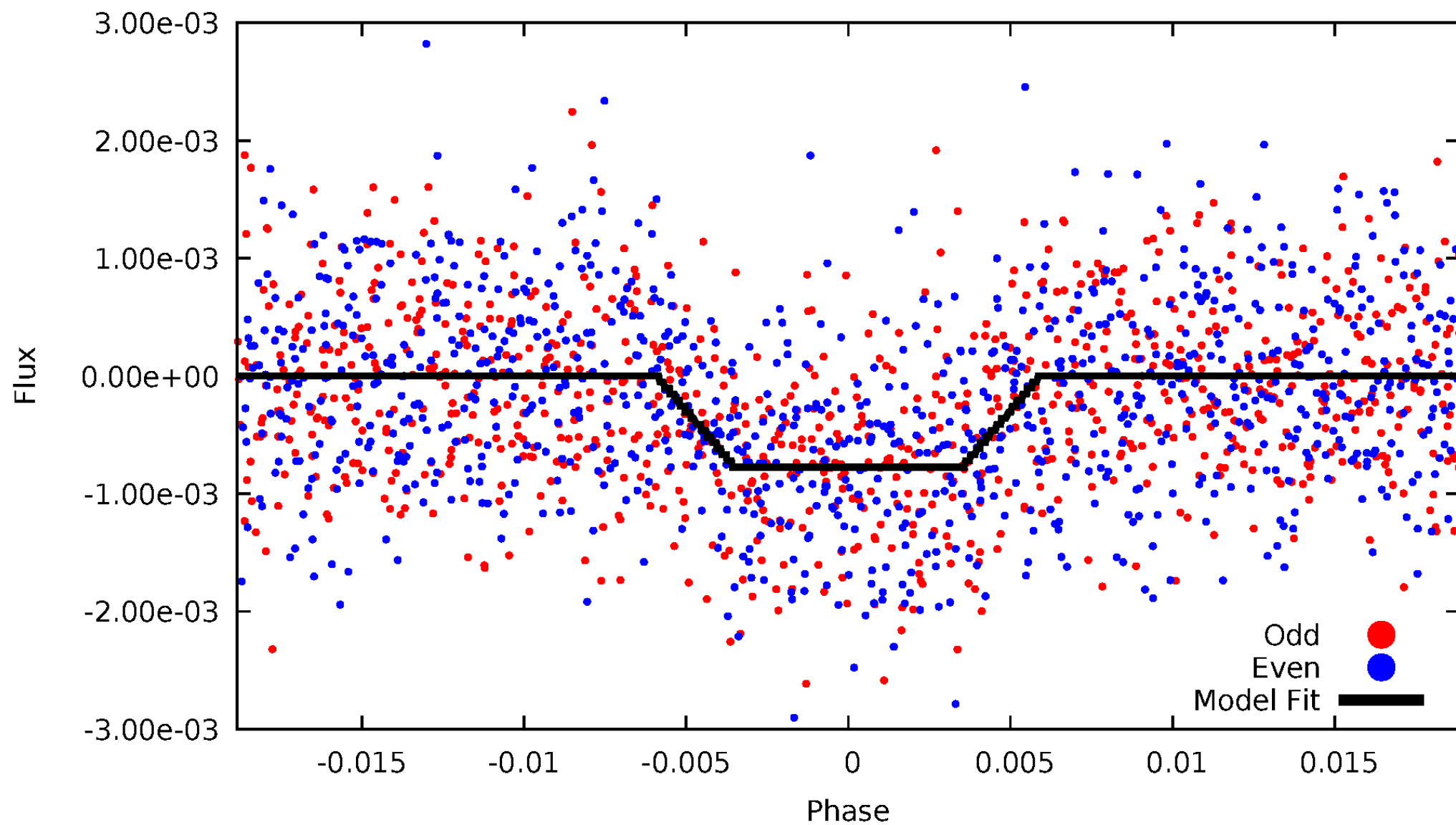
DV Odd/Even

TCE 005599774-01



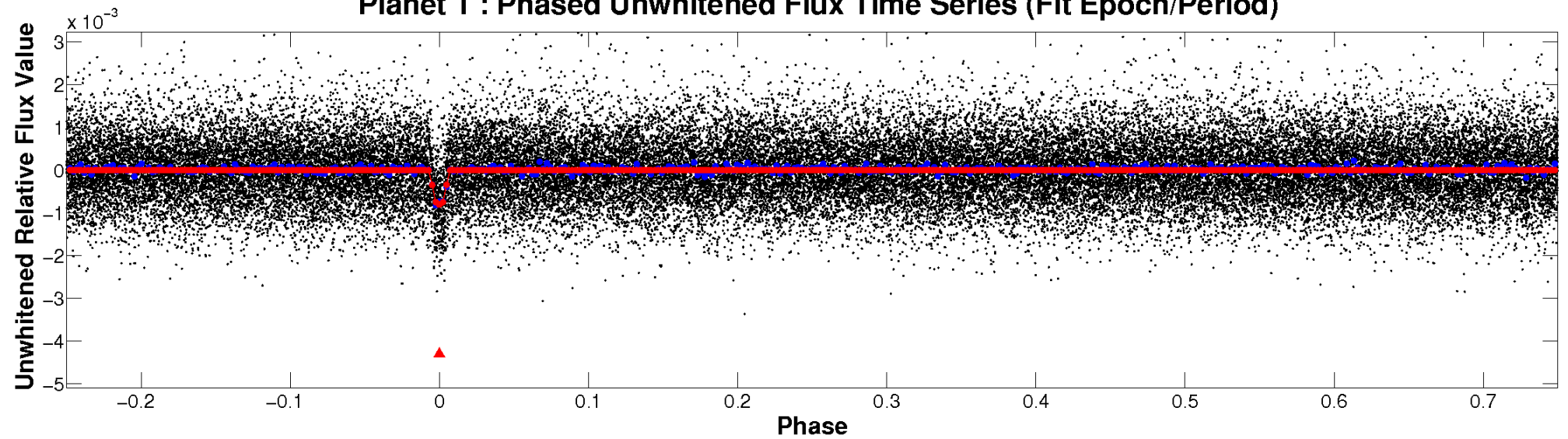
ALT Odd/Even

TCE 005599774-01

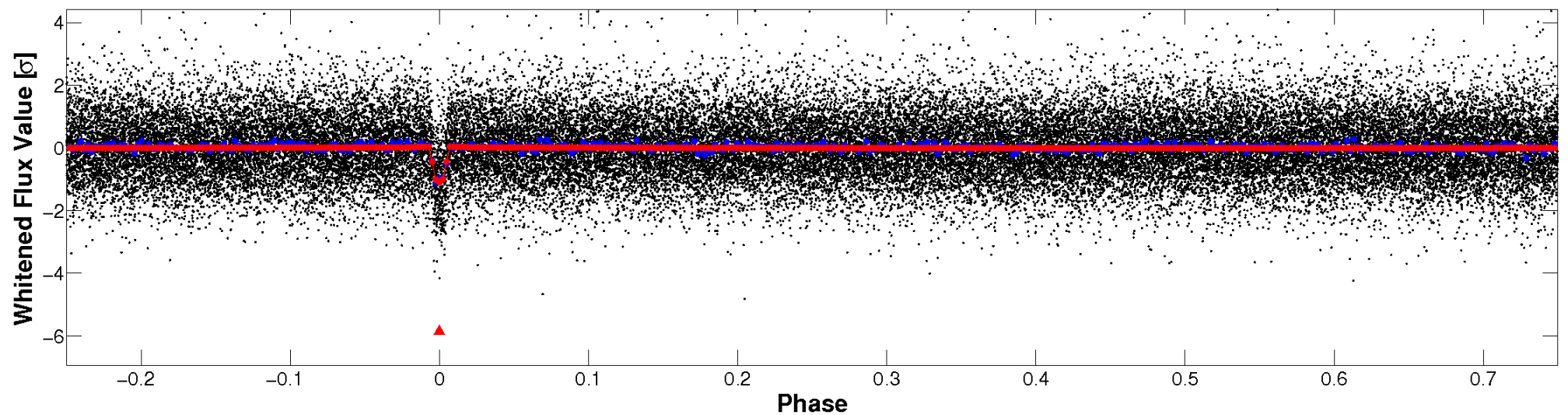


Non-Whitened Vs. Whitened Light Curve

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

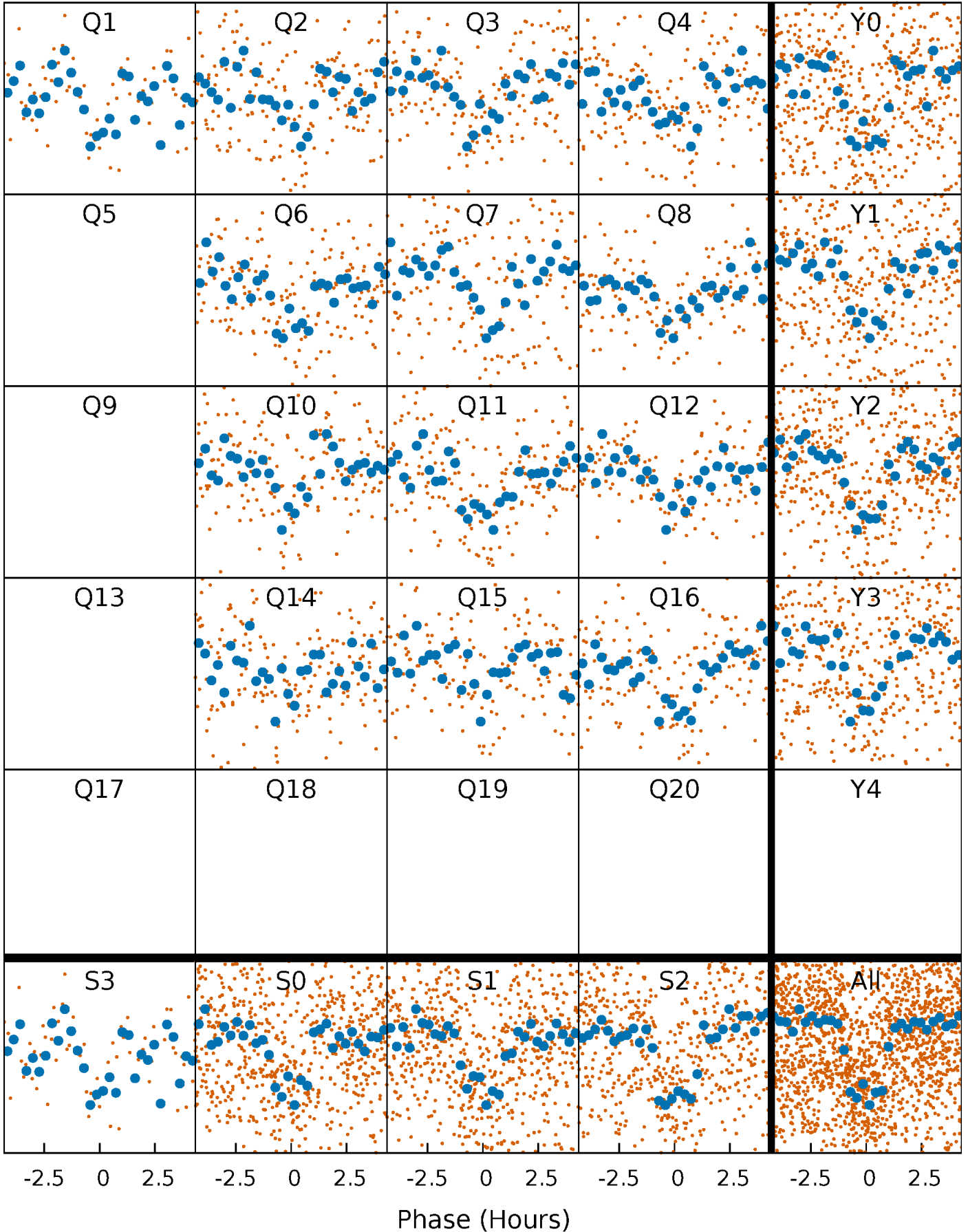


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



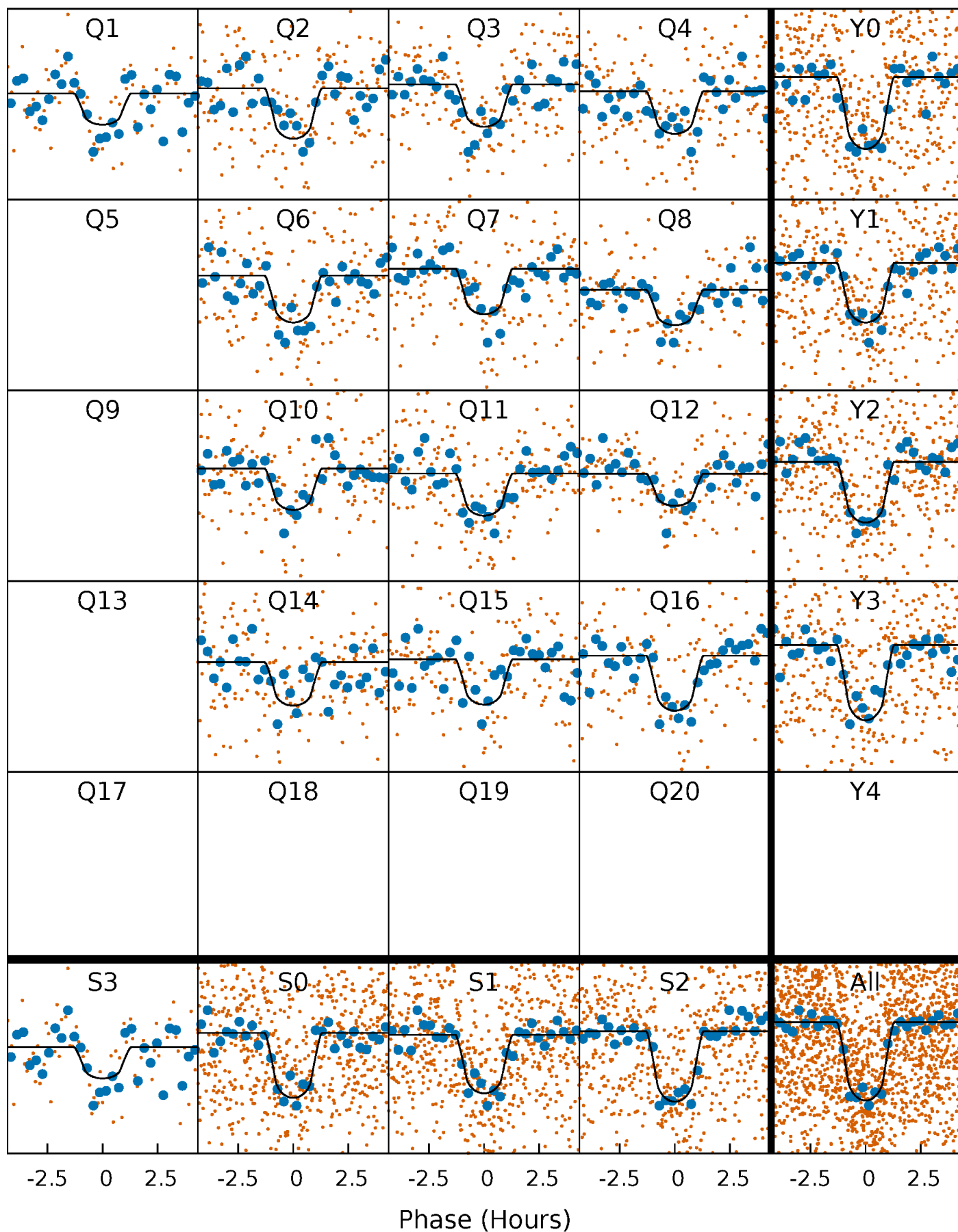
PDC Quarter-Phased Transit Curves

TCE 005599774-01 P= 8.496412 Days $T_0=138.734818$ (BKJD)



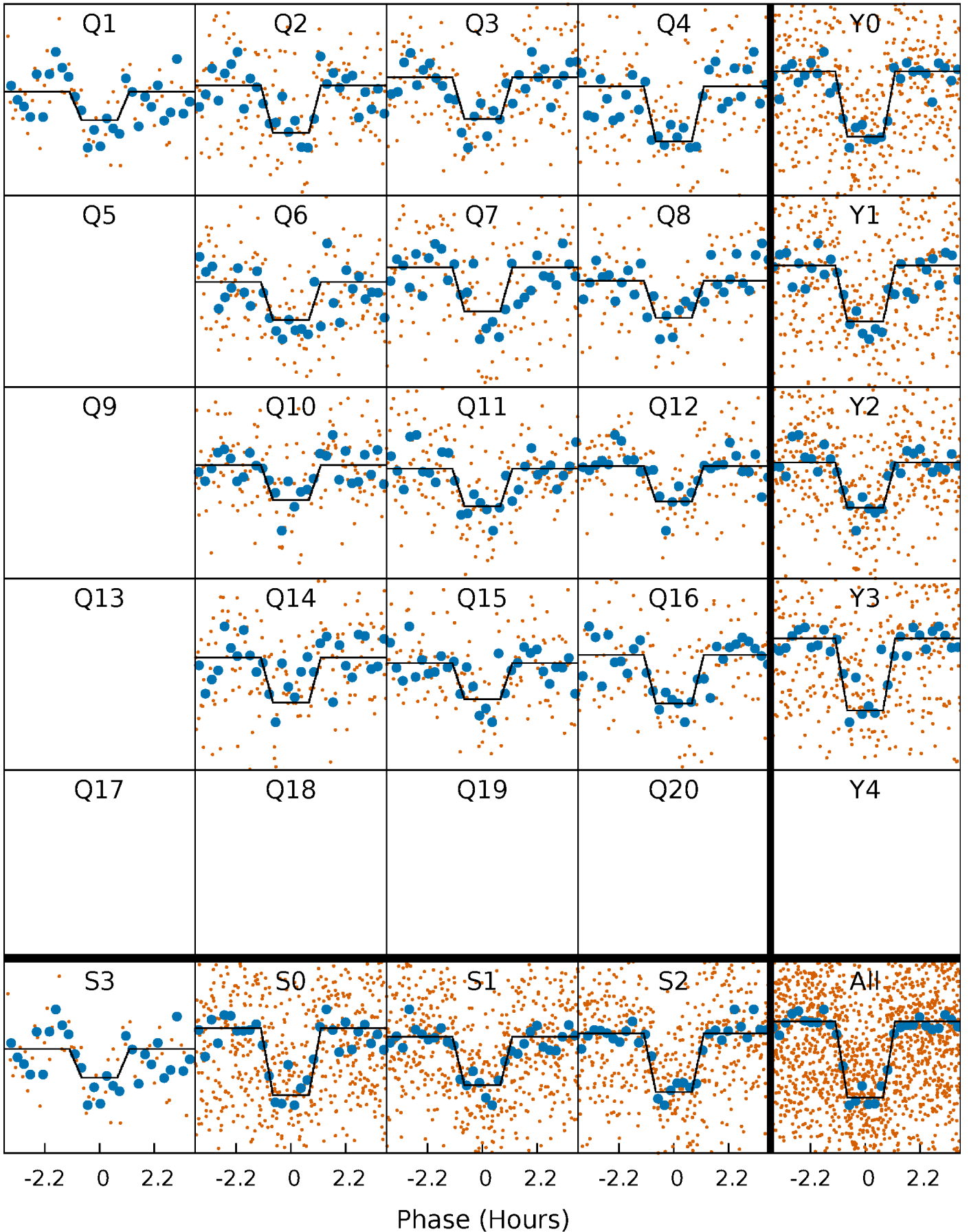
DV Quarter-Phased Transit Curves

TCE 005599774-01 P= 8.496412 Days $T_0=138.734818$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

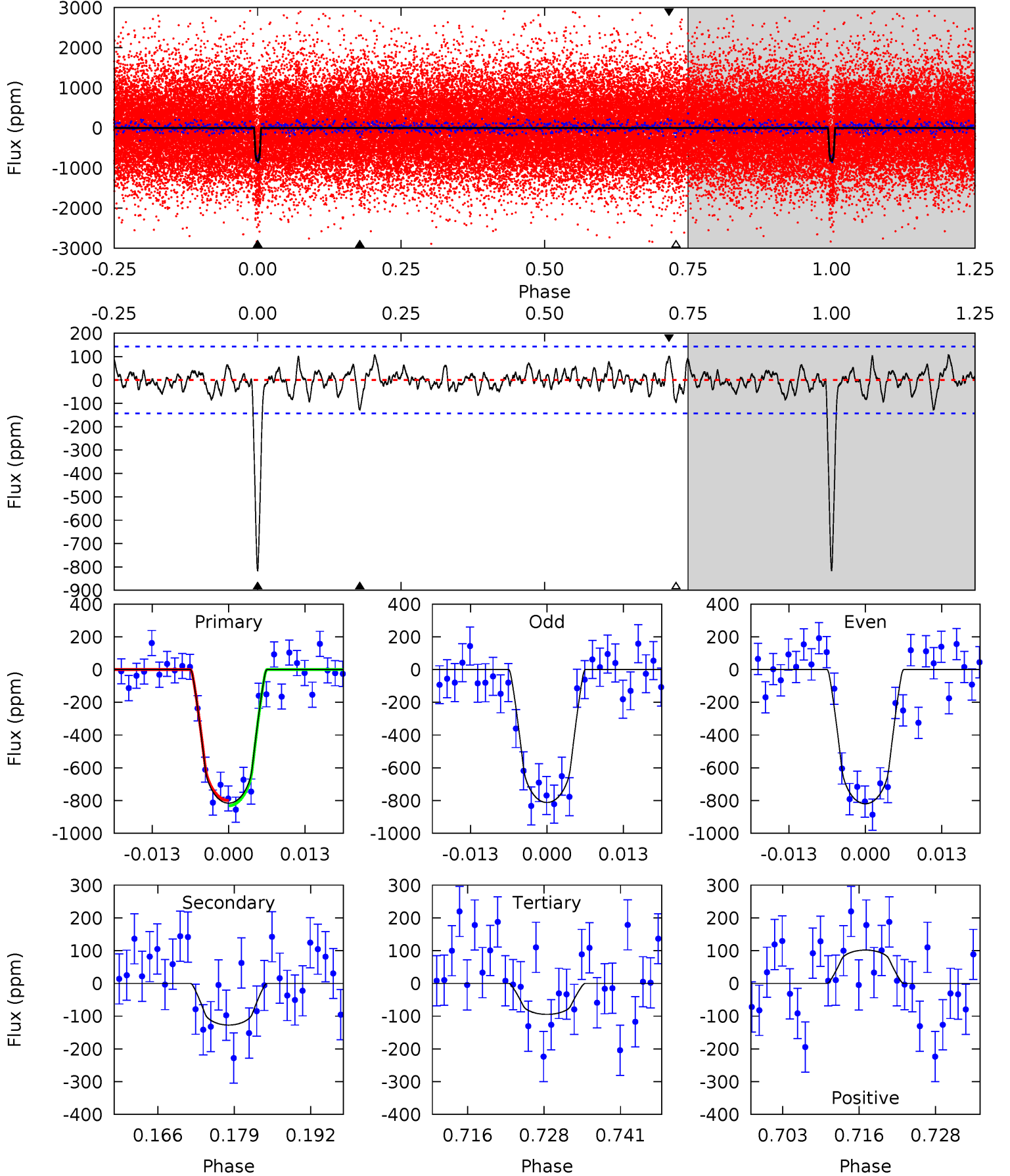
TCE 005599774-01 P= 8.496395 Days $T_0=138.736466$ (BKJD)



DV Model-Shift Uniqueness Test

005599774-01, P = 8.496412 Days, E = 130.238406 Days

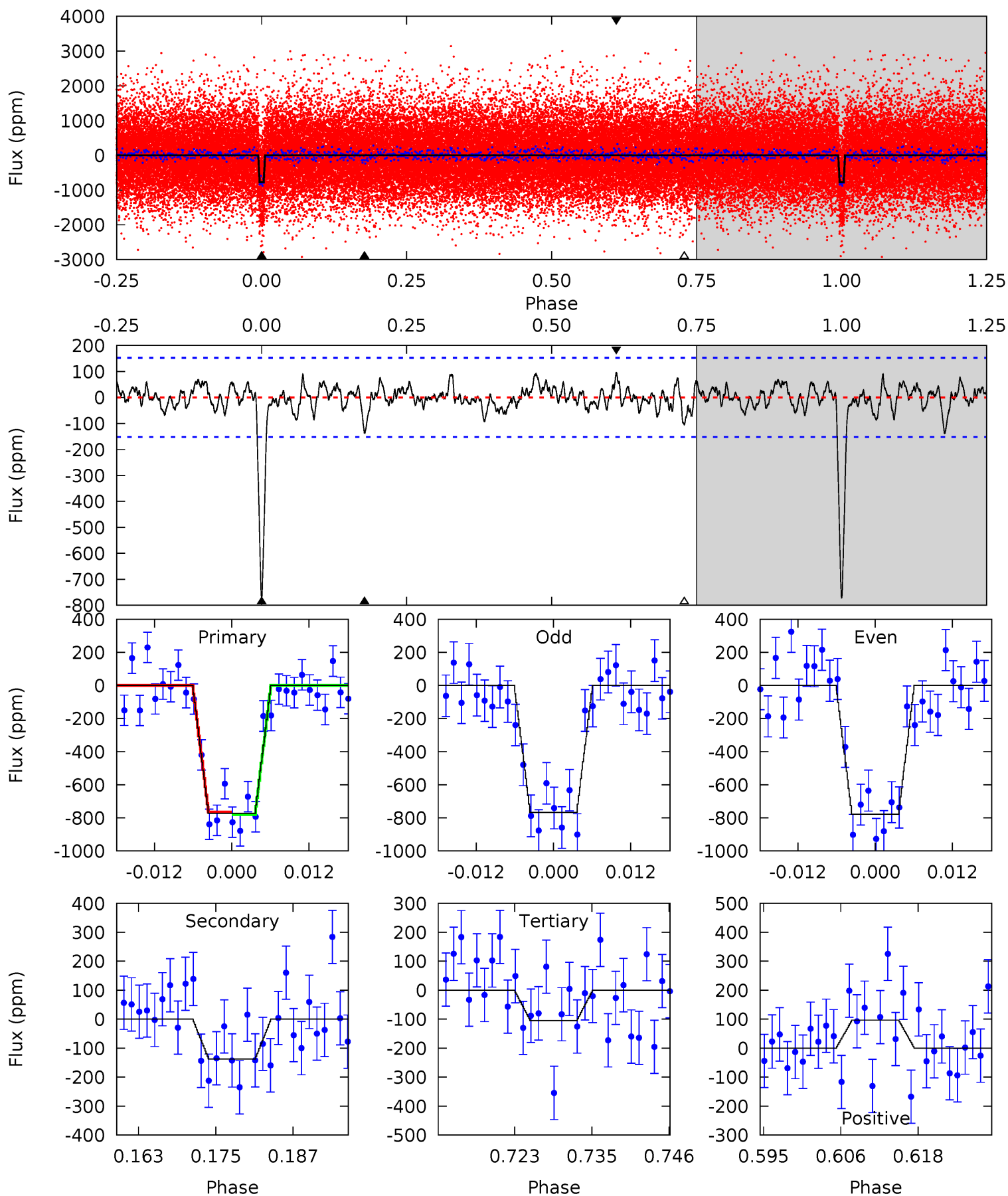
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.4	4.43	3.29	3.54	4.98	2.49	1.16	25.1	24.9	1.14	0.89	0.14	0.97	0.12	0.56



Alt Model-Shift Uniqueness Test

005599774-01, P = 8.496395 Days, E = 130.240071 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.4	4.51	3.44	3.18	5.00	2.52	1.15	21.9	22.2	1.07	1.33	0.15	0.98	0.11	0.28



Stellar Parameters For KIC 005599774

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5093^{+151}_{-151}	$4.586^{+0.061}_{-0.050}$	$-0.380^{+0.300}_{-0.300}$	$0.709^{+0.079}_{-0.065}$	$0.707^{+0.085}_{-0.057}$	$2.791^{+0.758}_{-0.547}$
	+3%/-3%	+1%/-1%	+79%/-79%	+11%/-9%	+12%/-8%	+27%/-20%
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 005599774-01 / KOI 2337.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-127 ± 29	$2.51^{+1.91}_{-1.66}$	980^{+36}_{-37}	3439^{+1683}_{-546}	58^{+466}_{-40}
Alt.	-137 ± 30	$2.51^{+1.65}_{-1.53}$	979^{+37}_{-36}	3475^{+1421}_{-494}	60^{+347}_{-38}

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 $A_{obs} \gg 1.0$

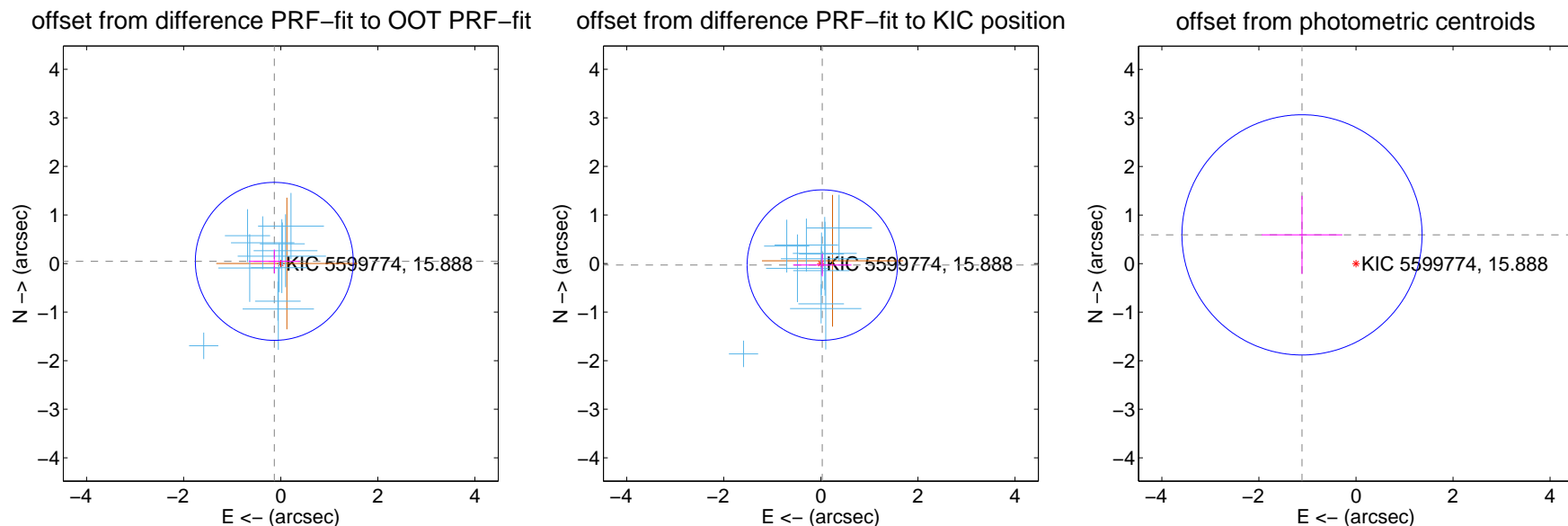
DV Centroid Data

Supplemental centroid analysis for 005599774-01. Kepler magnitude: 15.89. Transit SNR 20.47

There are 11 quarters with good PRF difference image offsets

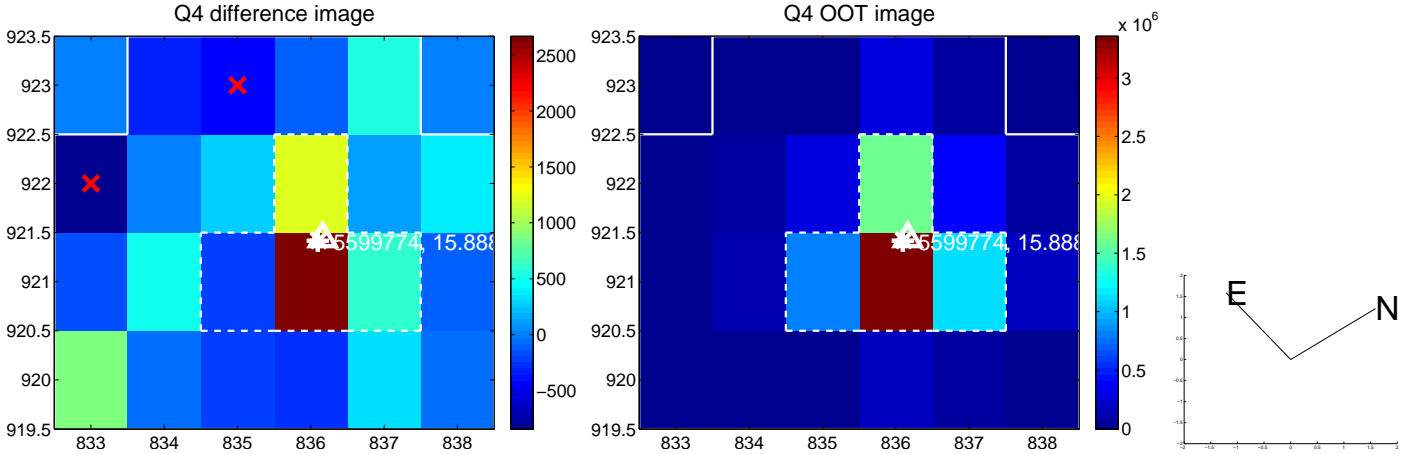
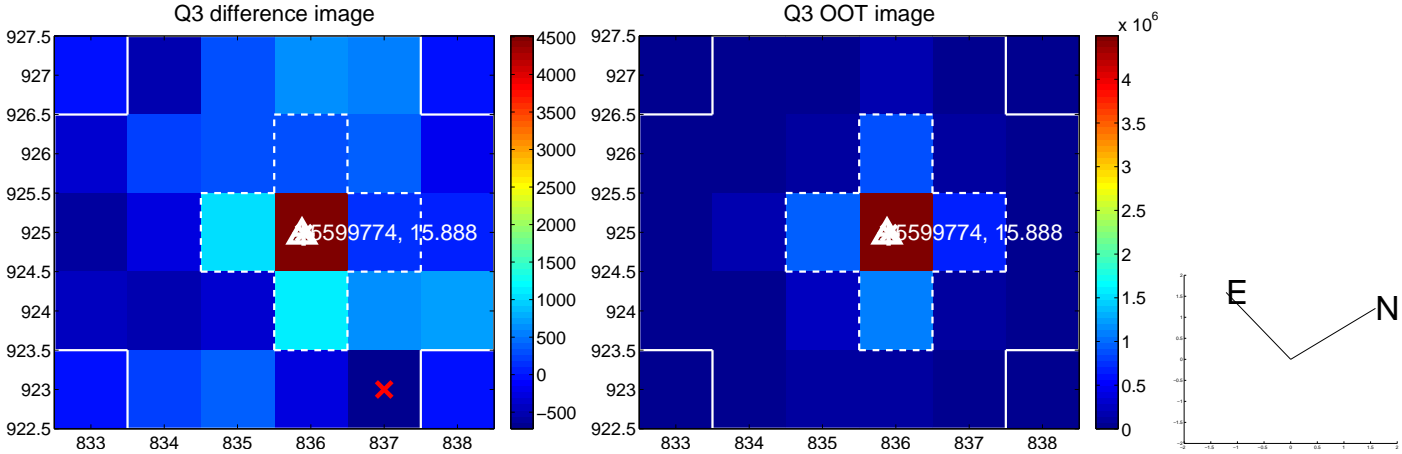
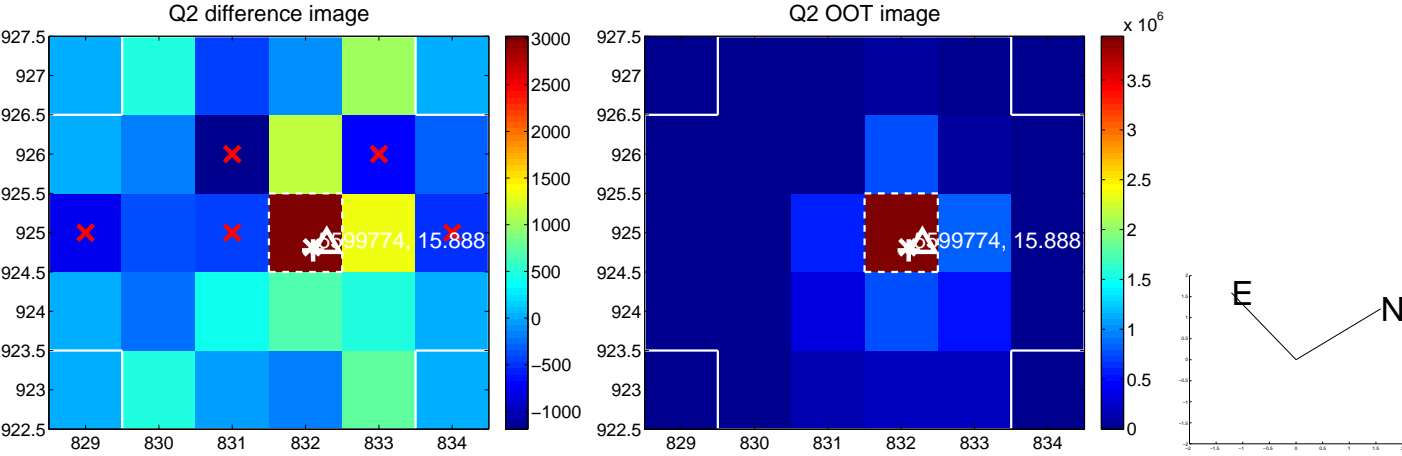
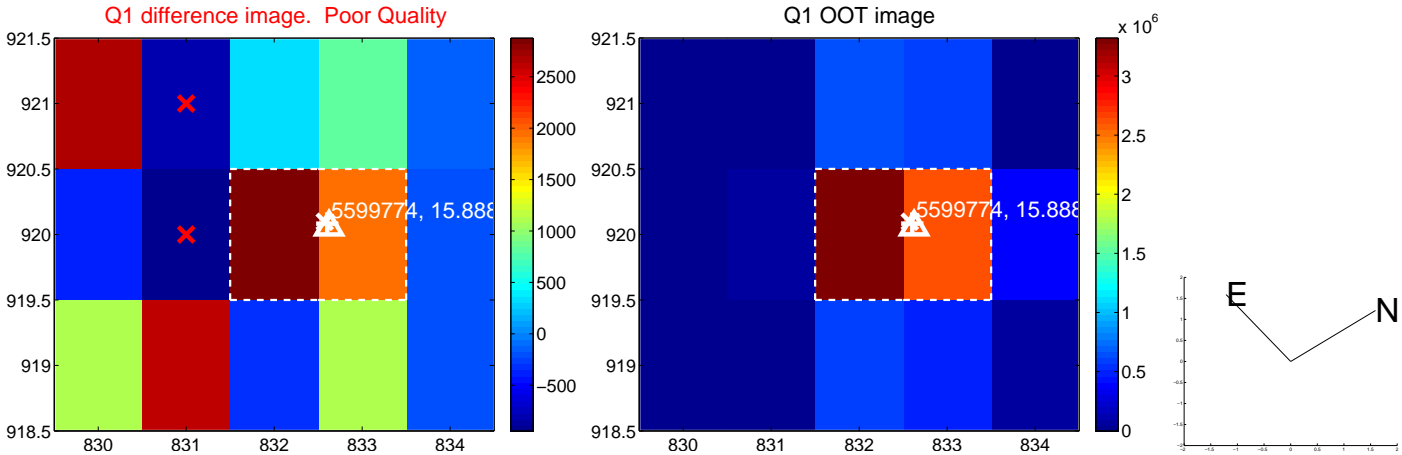
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.140 ± 0.542	0.26	0.133 ± 0.526	0.045 ± 0.245
PRF-fit source offset from KIC position	0.043 ± 0.516	0.08	-0.029 ± 0.601	-0.032 ± 0.233
photometric centroid source offset	1.26 ± 0.82	1.53	1.11 ± 0.83	0.59 ± 0.81

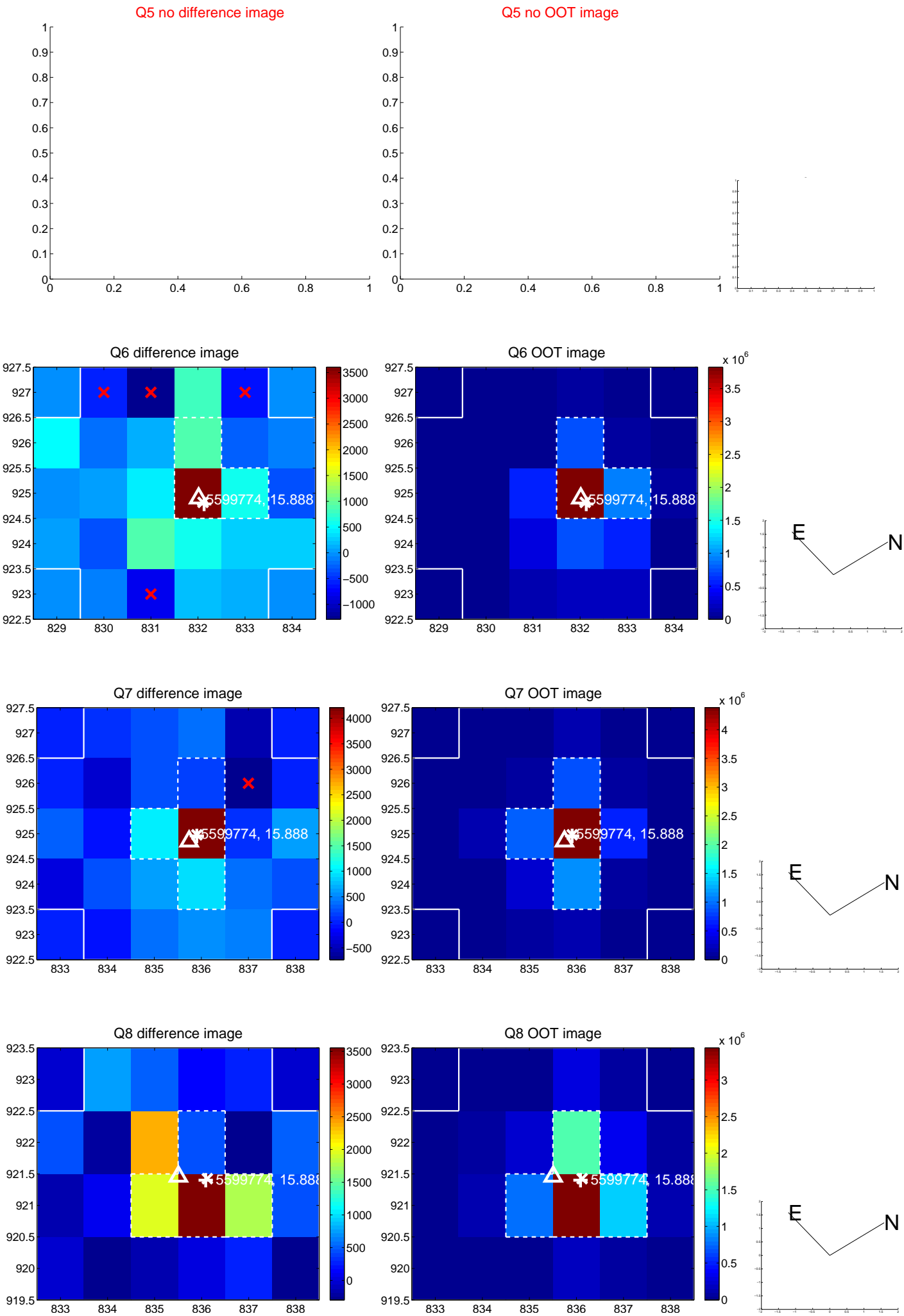


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

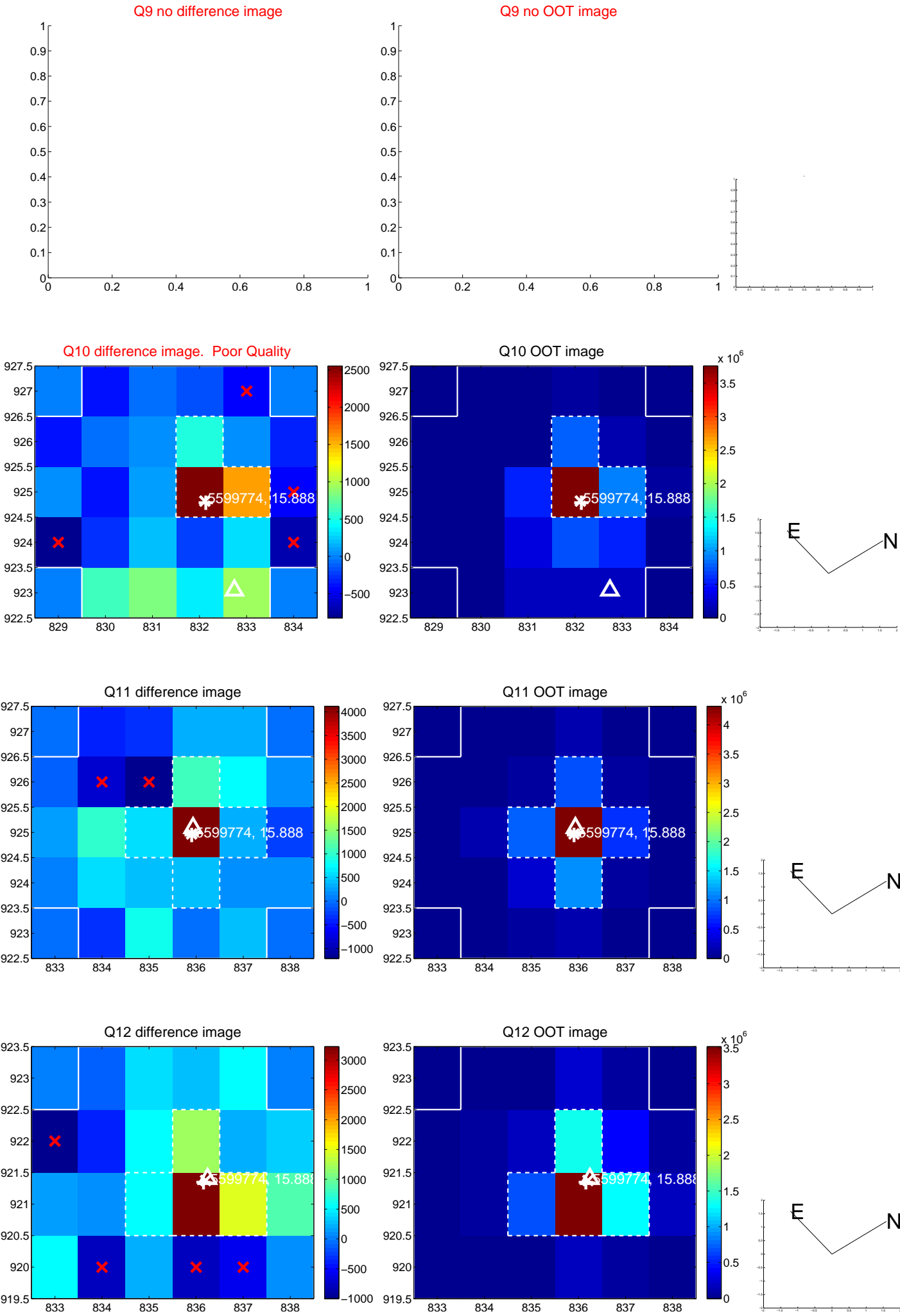
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



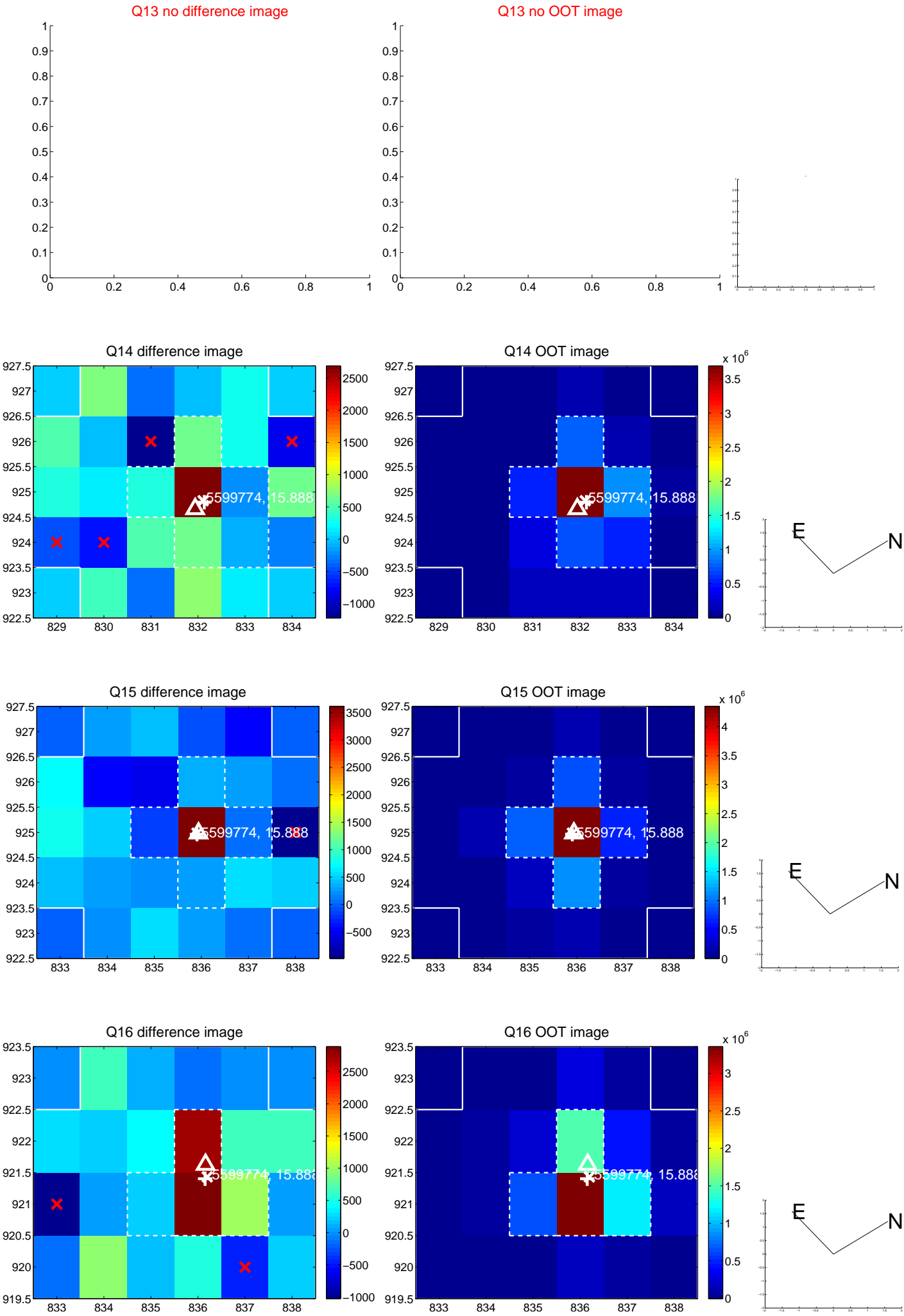
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



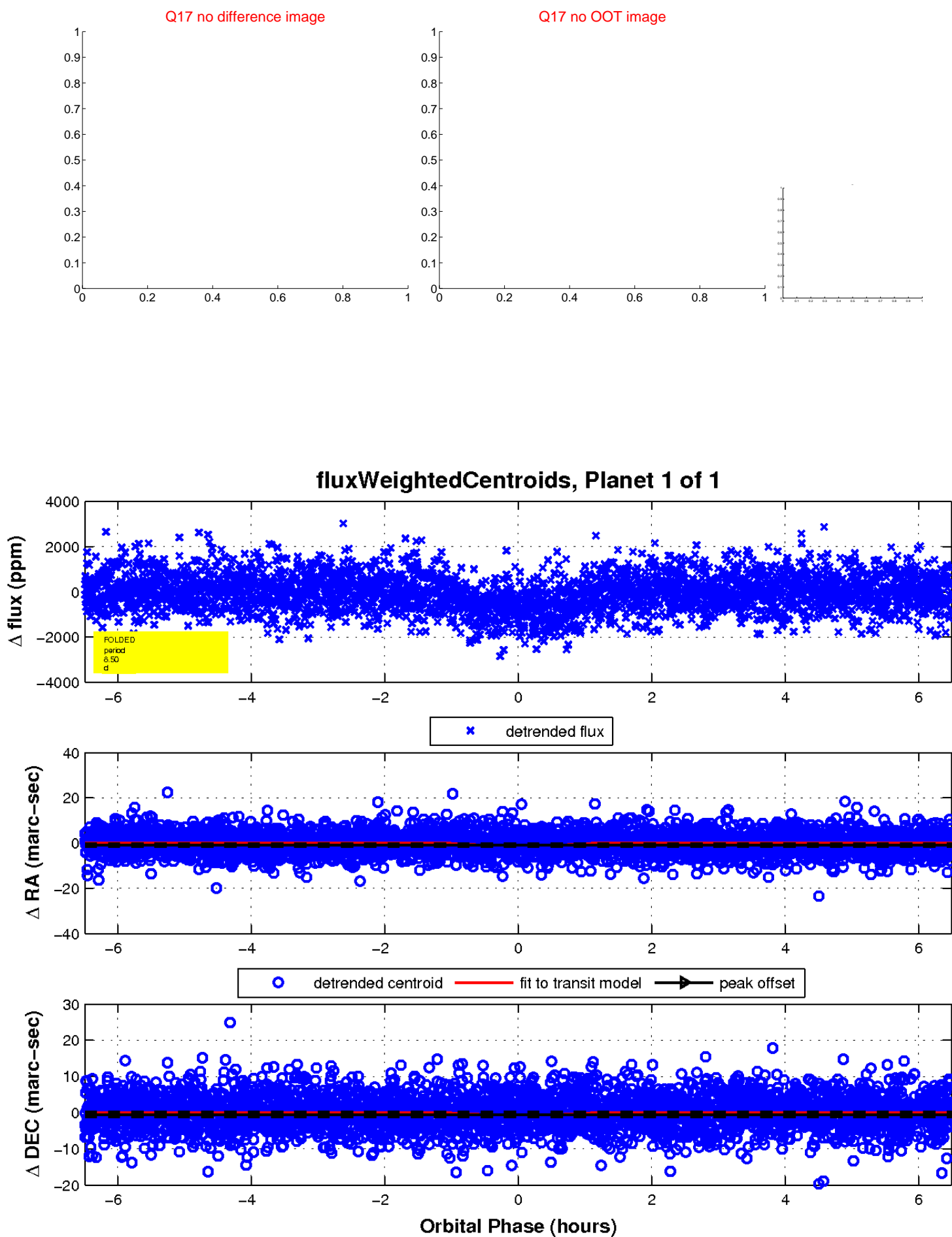
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

