

KIC 011462341

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})
011462341-01	OBS	2124.01	42.337978	158.249086	348.0	5.038	16.1	16.4	0.58	4132	1.44	2.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011462341-01	OBS	PC	0.99	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.

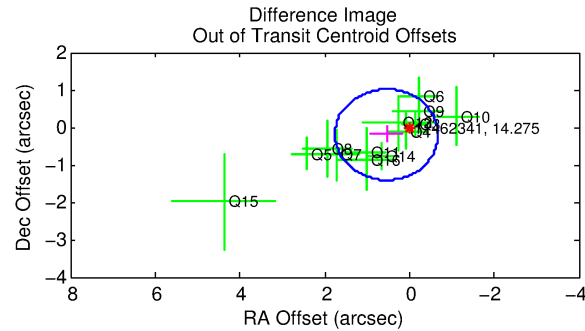
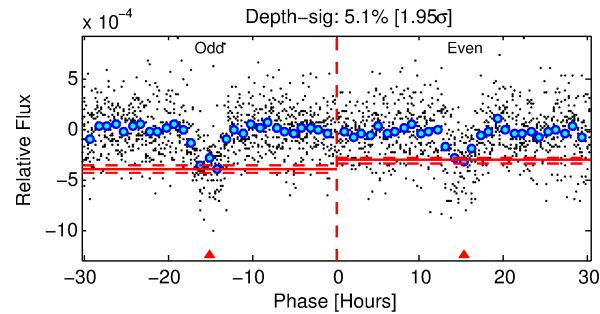
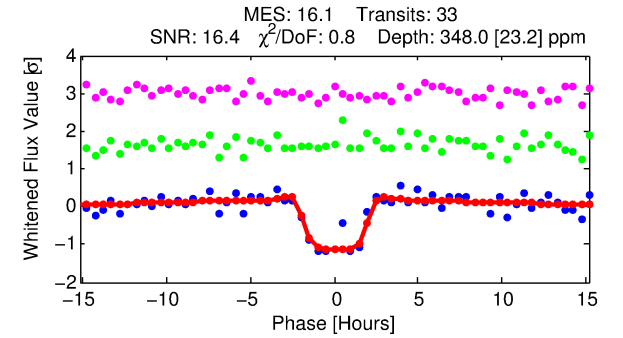
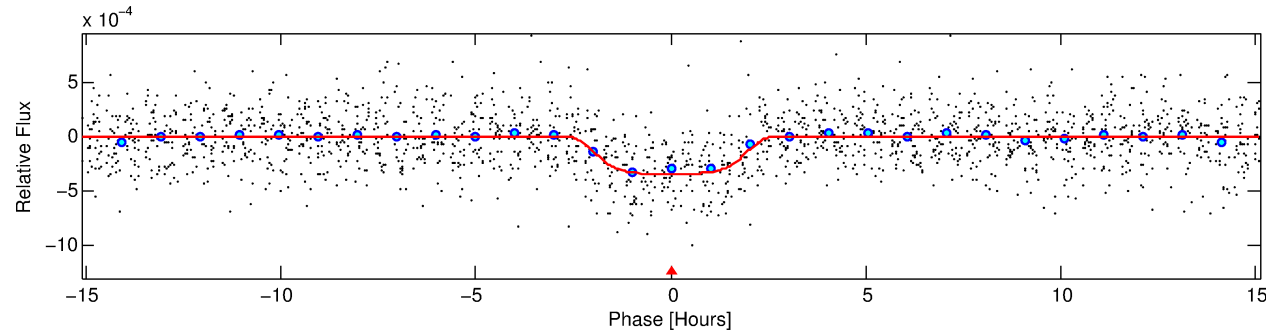
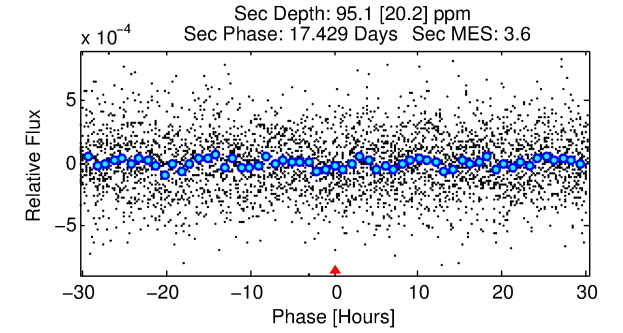
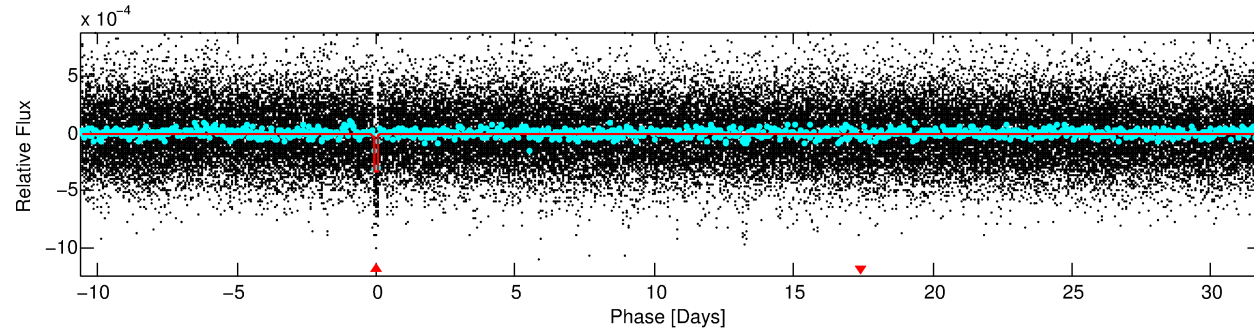
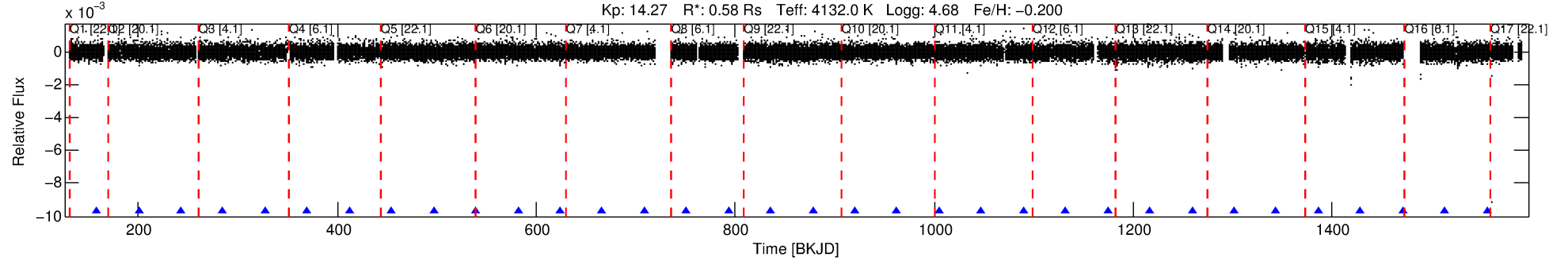
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011462341-01

No Significant Match Found

DV One-Page Summary

KIC: 11462341 Candidate: 1 of 1 Period: 42.338 d
KOI: K02124.01 Corr: 0.944



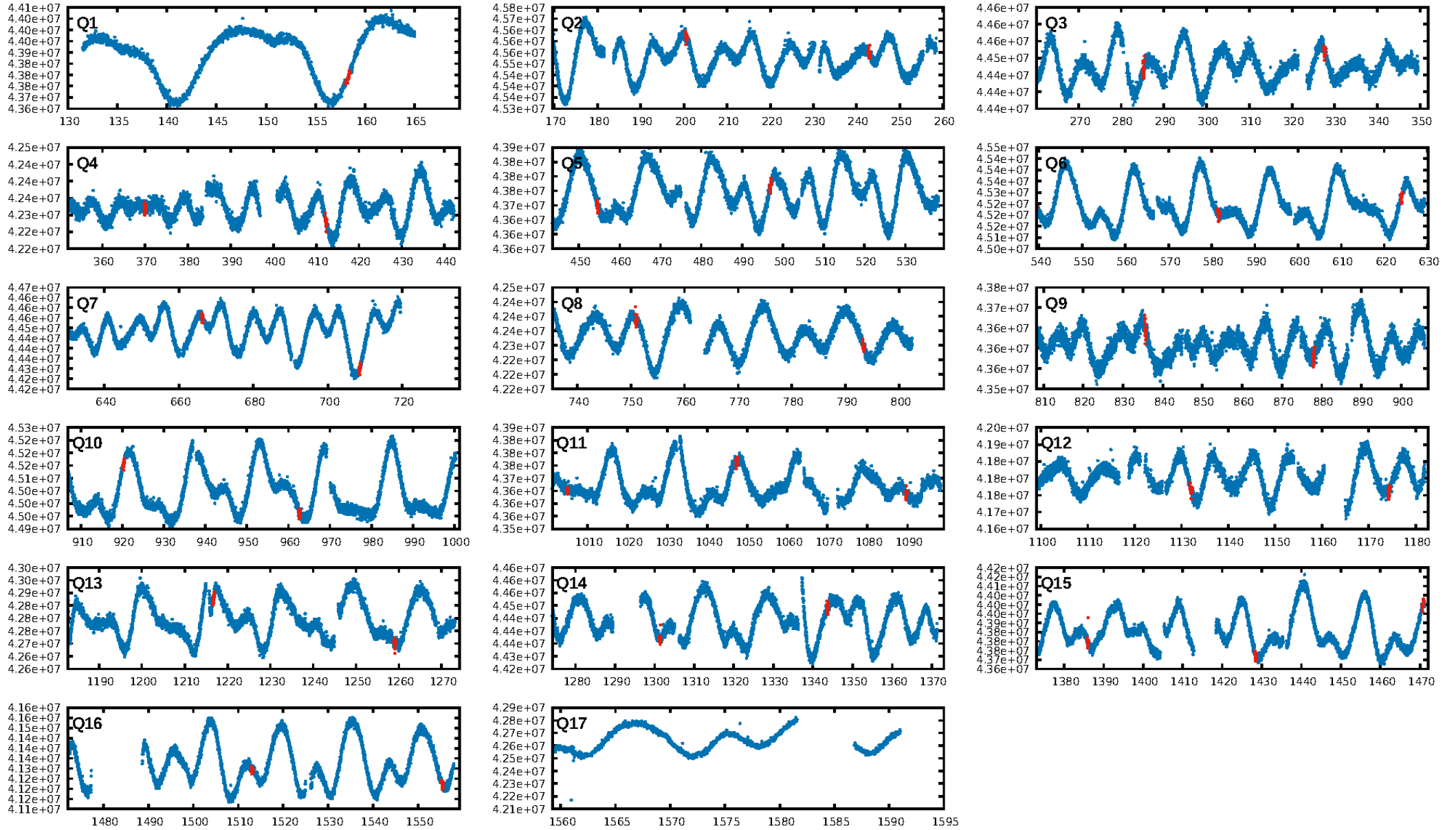
DV Fit Results:

Period = 42.33798 [0.00031] d
Epoch = 158.2491 [0.0055] BKJD
Rp/R* = 0.0226 [0.0013]
a/R* = 22.93 [4.07]
b = 0.96 [0.02]
Seff = 2.21 [0.23]
Teq = 311 [8] K
Rp = 1.44 [0.11] Re
a = 0.1997 [0.0079] AU
Ag = 1011.62 [250.91] [4.03σ]
Teffp = 2711 [175] K [13.71σ]

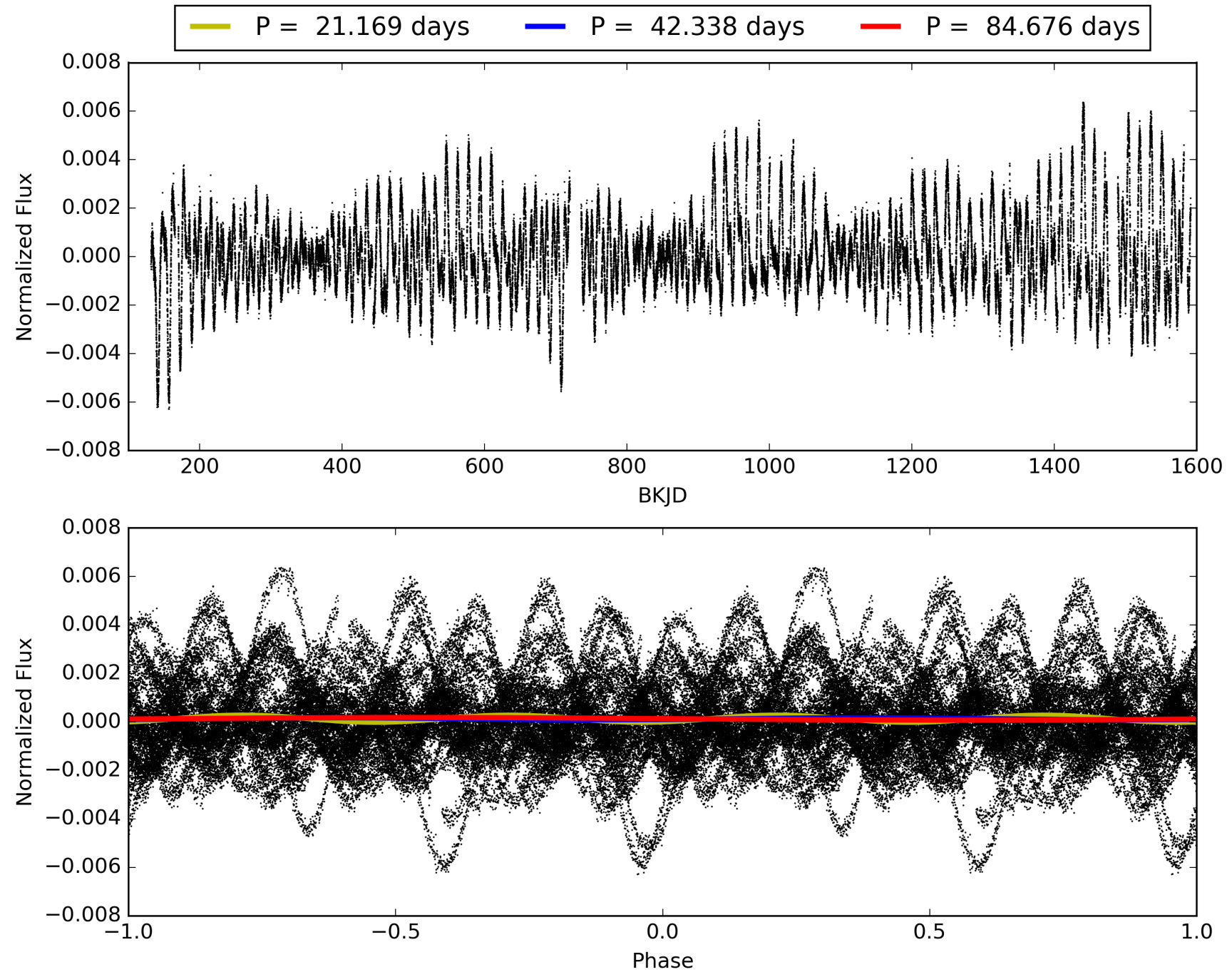
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 67.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.54e-52
RollingBand-fgt: 1.00 [32/32]
GhostDiagnostic-chr: 3.699
Centroid-sig: 16.5%
Centroid-so: 0.881 arcsec [1.31σ]
OotOffset-rm: 0.579 arcsec [1.43σ]
OotOffset-st: 3/4/4/3 [14]
KicOffset-rm: 0.508 arcsec [1.23σ]
KicOffset-st: 3/4/4/3 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 011462341-01, PDC Light Curves

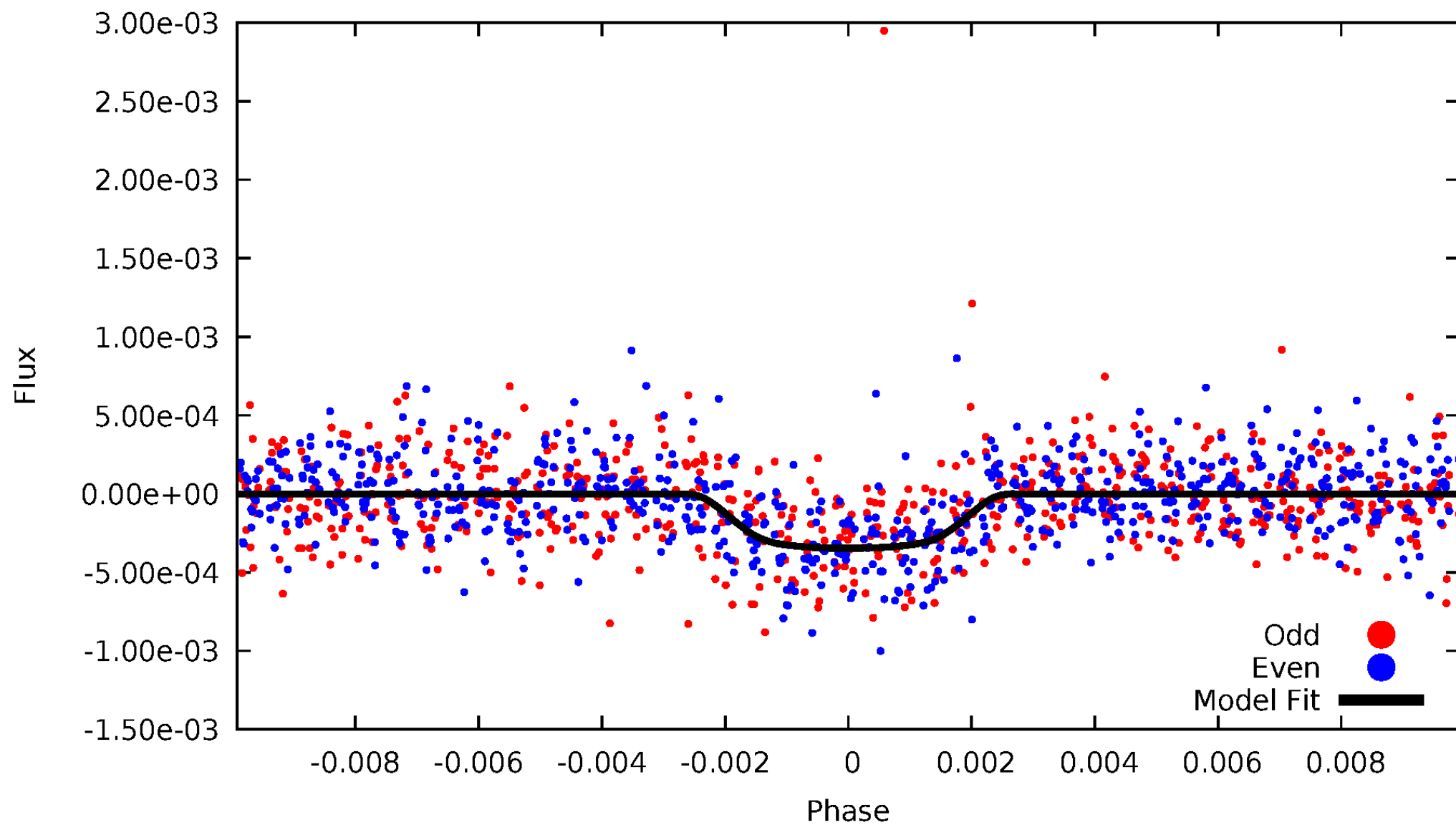


TCE 011462341-01



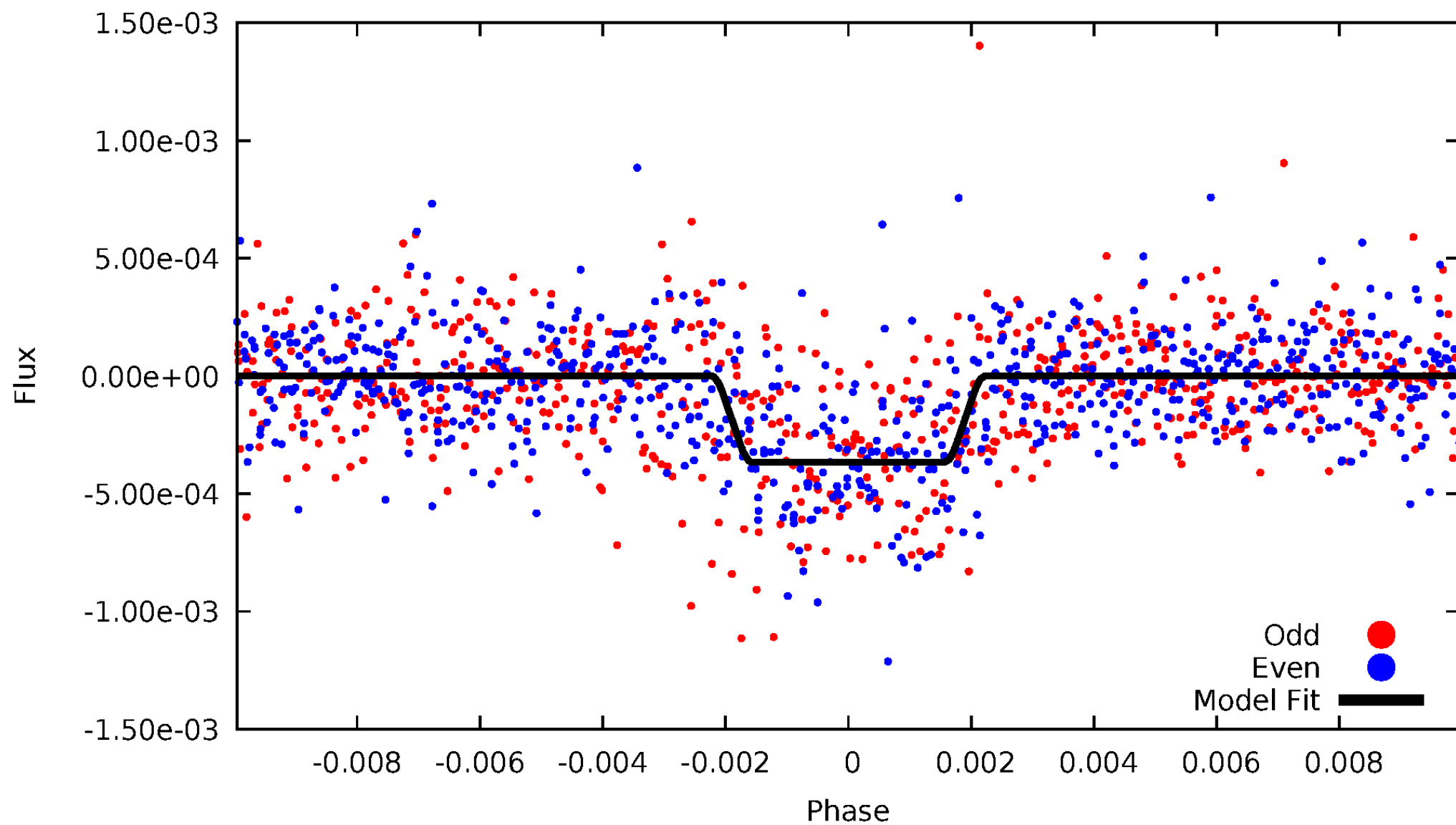
DV Odd/Even

TCE 011462341-01

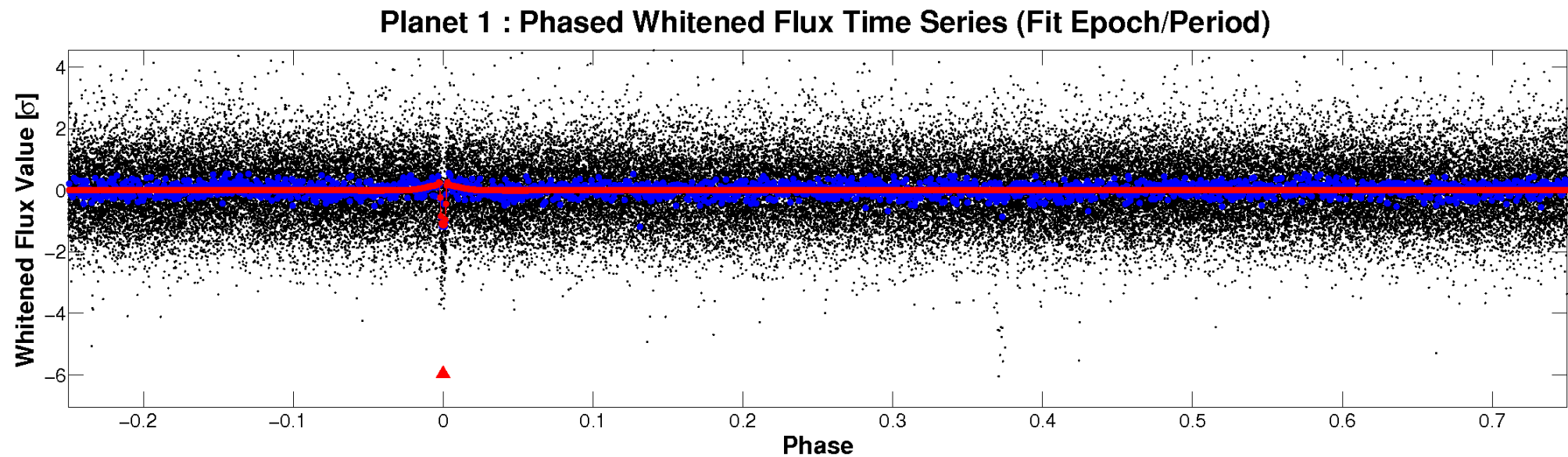
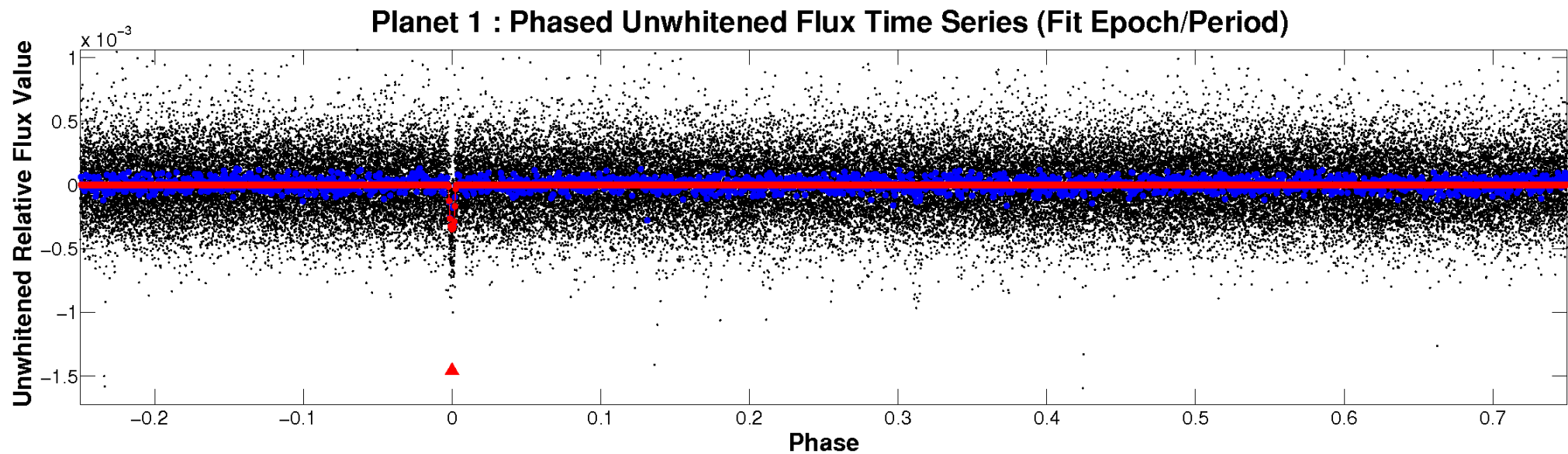


ALT Odd/Even

TCE 011462341-01

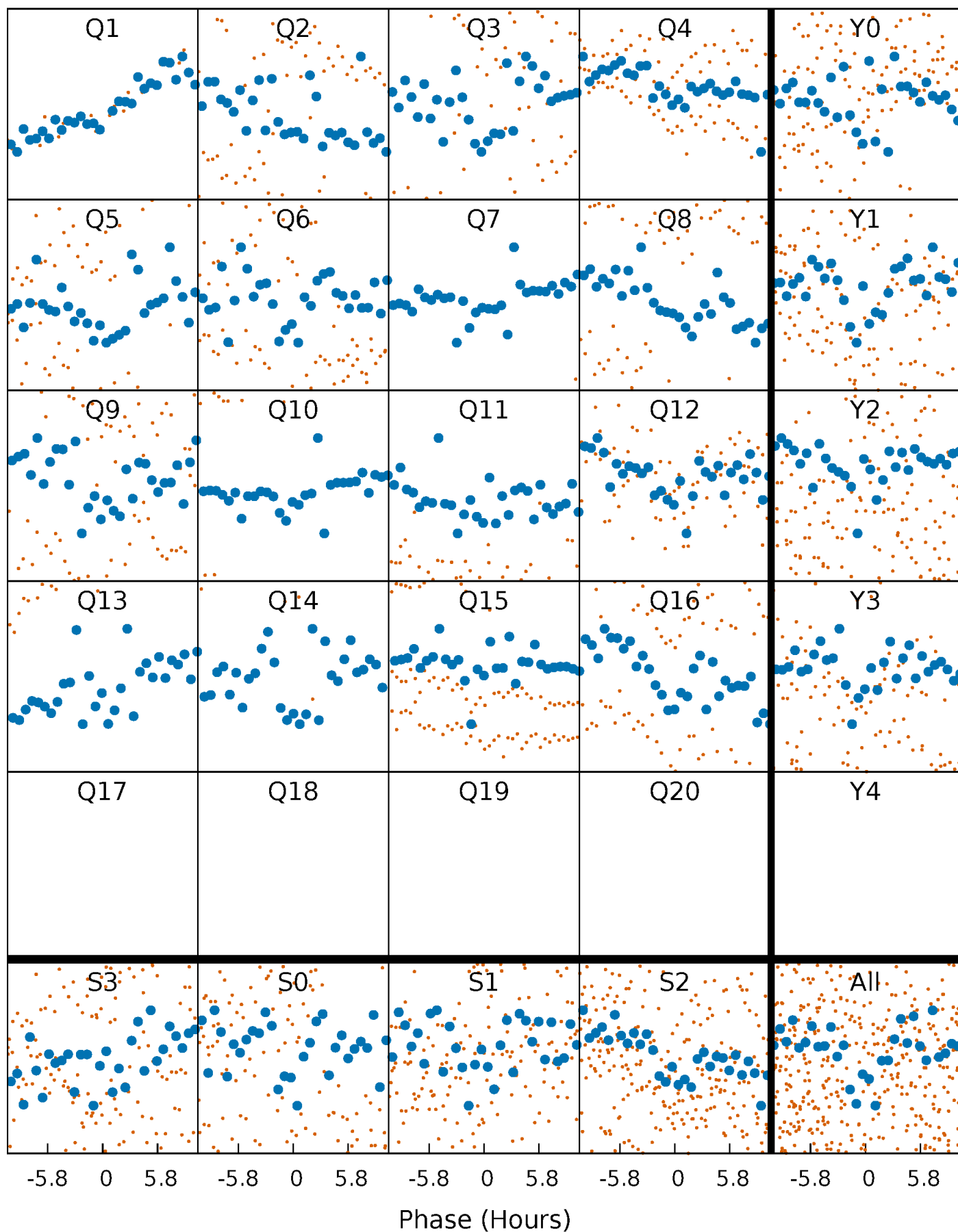


Non-Whitened Vs. Whitened Light Curve



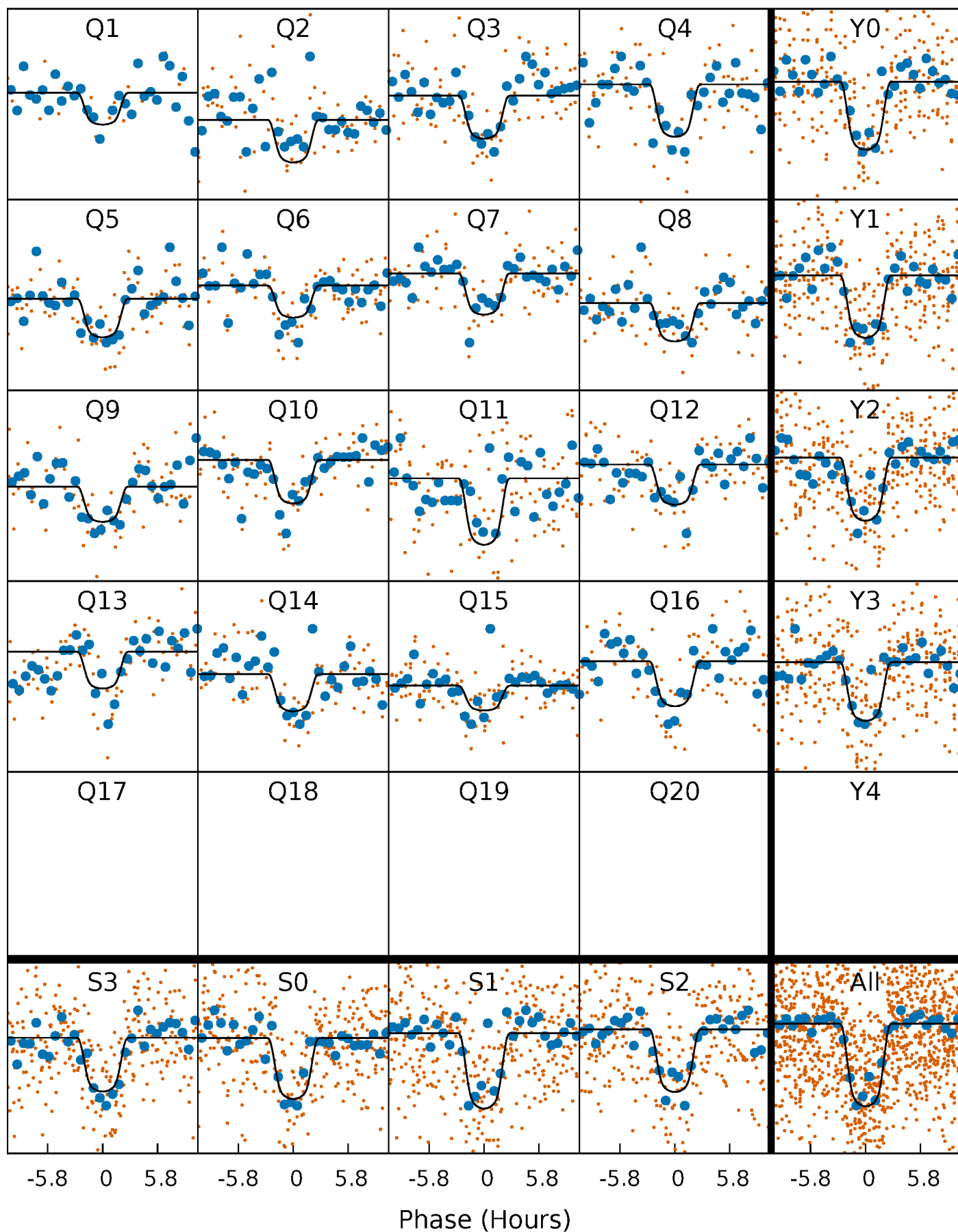
PDC Quarter-Phased Transit Curves

TCE 011462341-01 P= 42.337978 Days $T_0=158.249087$ (BKJD)



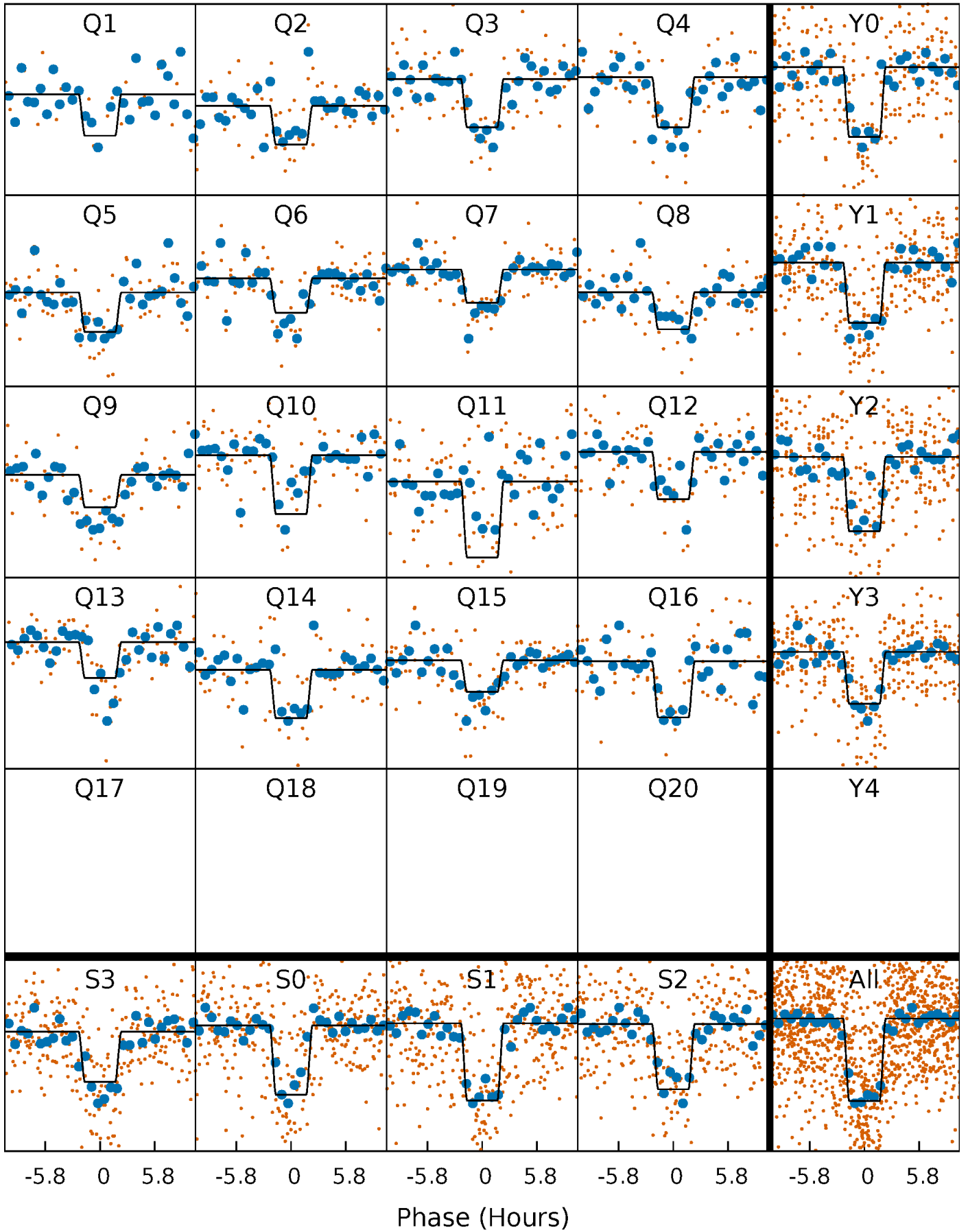
DV Quarter-Phased Transit Curves

TCE 011462341-01 P= 42.337978 Days $T_0=158.249087$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

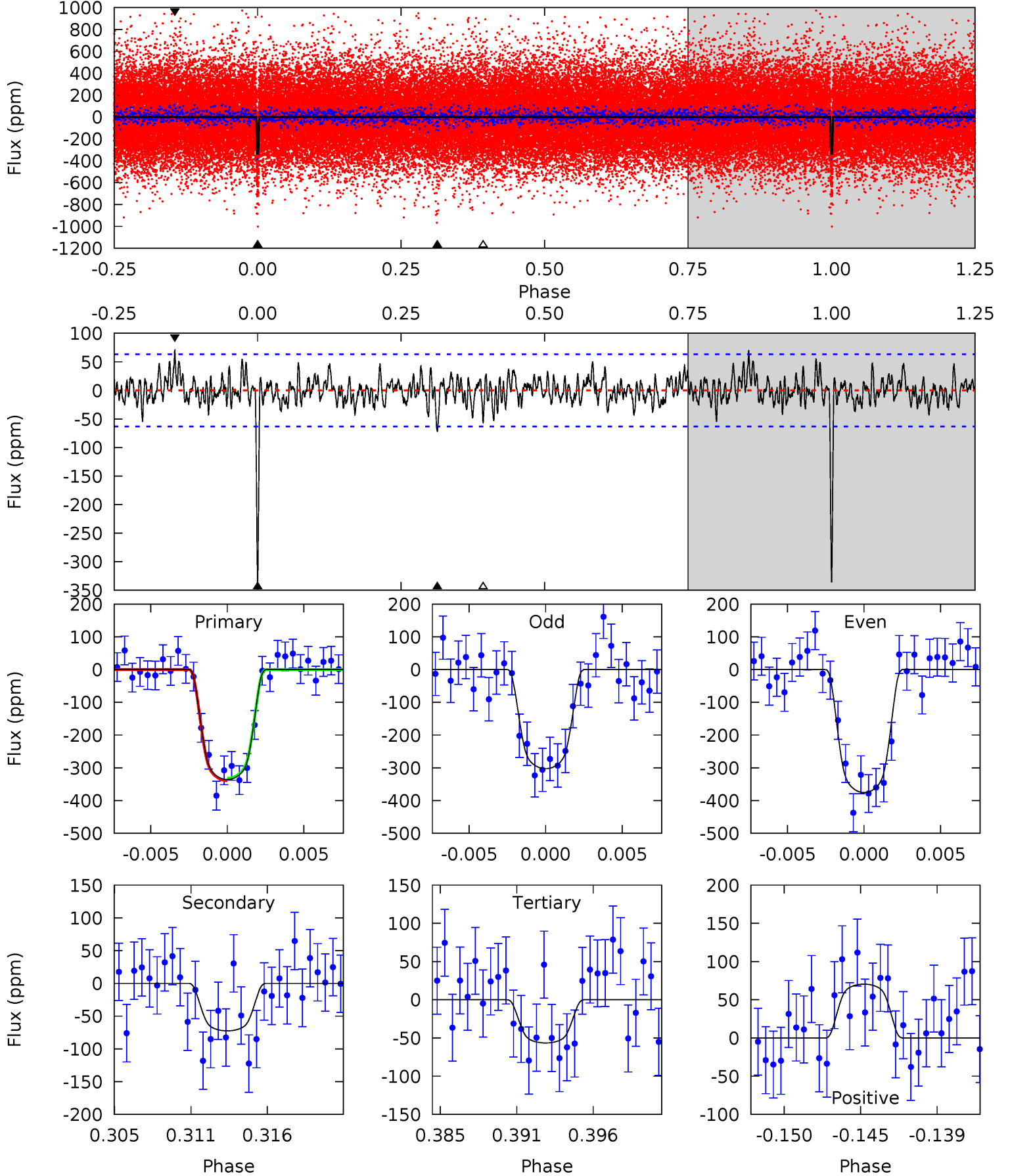
TCE 011462341-01 P= 42.337829 Days $T_0=158.247737$ (BKJD)



DV Model-Shift Uniqueness Test

011462341-01, P = 42.337978 Days, E = 115.911109 Days

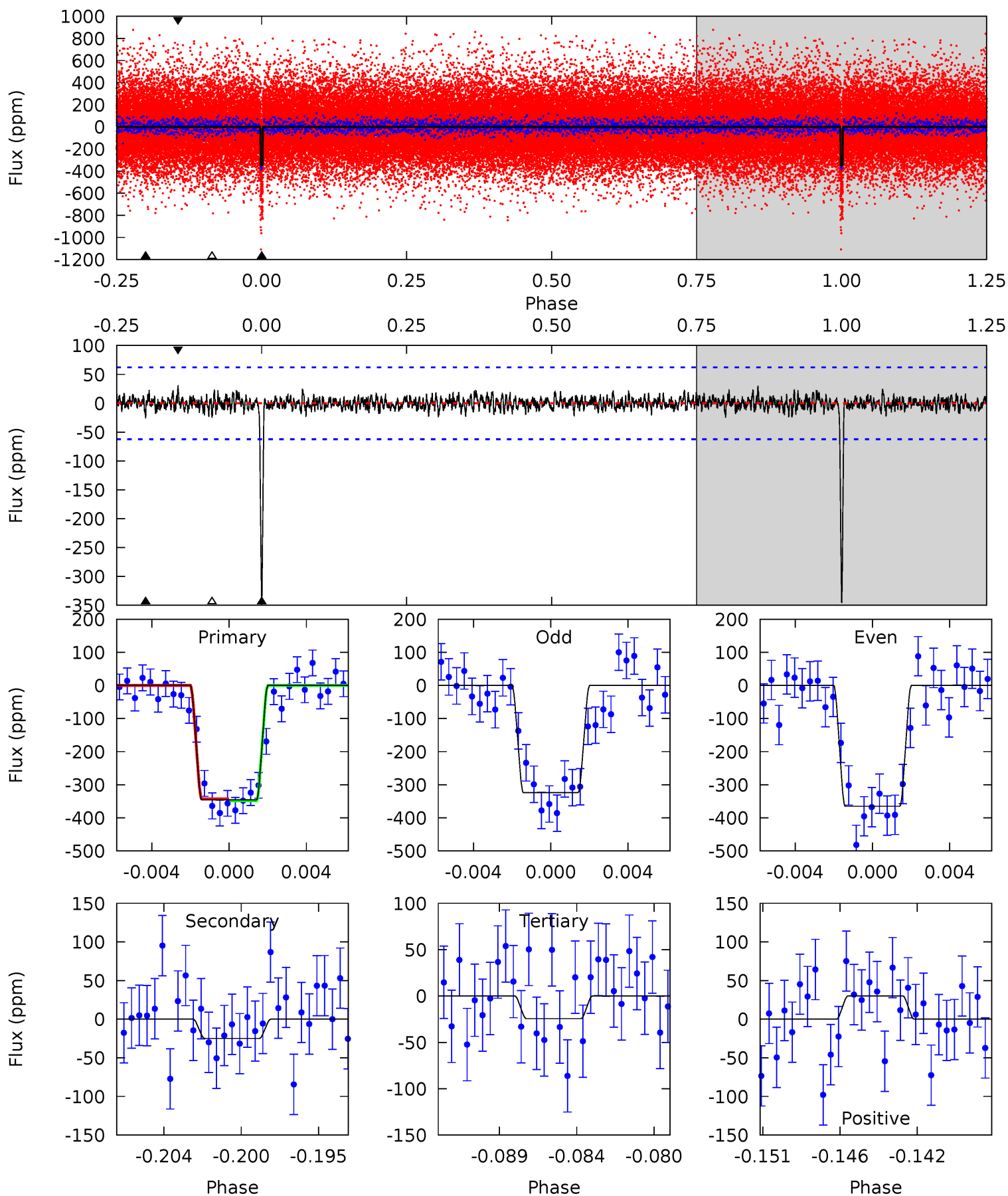
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.3	5.90	4.60	5.73	5.14	2.78	1.50	22.7	21.6	1.30	0.17	2.97	0.91	0.17	0.29



Alt Model-Shift Uniqueness Test

011462341-01, P = 42.337829 Days, E = 115.909908 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.7	2.07	2.02	2.50	5.18	2.85	0.66	26.7	26.2	0.05	-0.43	1.70	0.97	0.08	0.25



Stellar Parameters For KIC 011462341

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4132^{+83}_{-91}	$4.682^{+0.025}_{-0.022}$	$-0.200^{+0.150}_{-0.150}$	$0.581^{+0.030}_{-0.030}$	$0.593^{+0.032}_{-0.032}$	$4.249^{+0.463}_{-0.417}$
	+2%/-2%	+1%/-0%	+75%/-75%	+5%/-5%	+5%/-5%	+11%/-10%
Source	SPE60	SPE60	SPE60	DSEP		

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

Secondary Eclipse Parameters for KIC 011462341-01 / KOI 2124.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-73 ± 12	$1.44^{+0.09}_{-0.09}$	434^{+11}_{-11}	3018^{+101}_{-107}	768^{+174}_{-154}
Alt.	-25 ± 12	$1.21^{+0.10}_{-0.09}$	434^{+10}_{-10}	2731^{+177}_{-225}	370^{+207}_{-179}

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

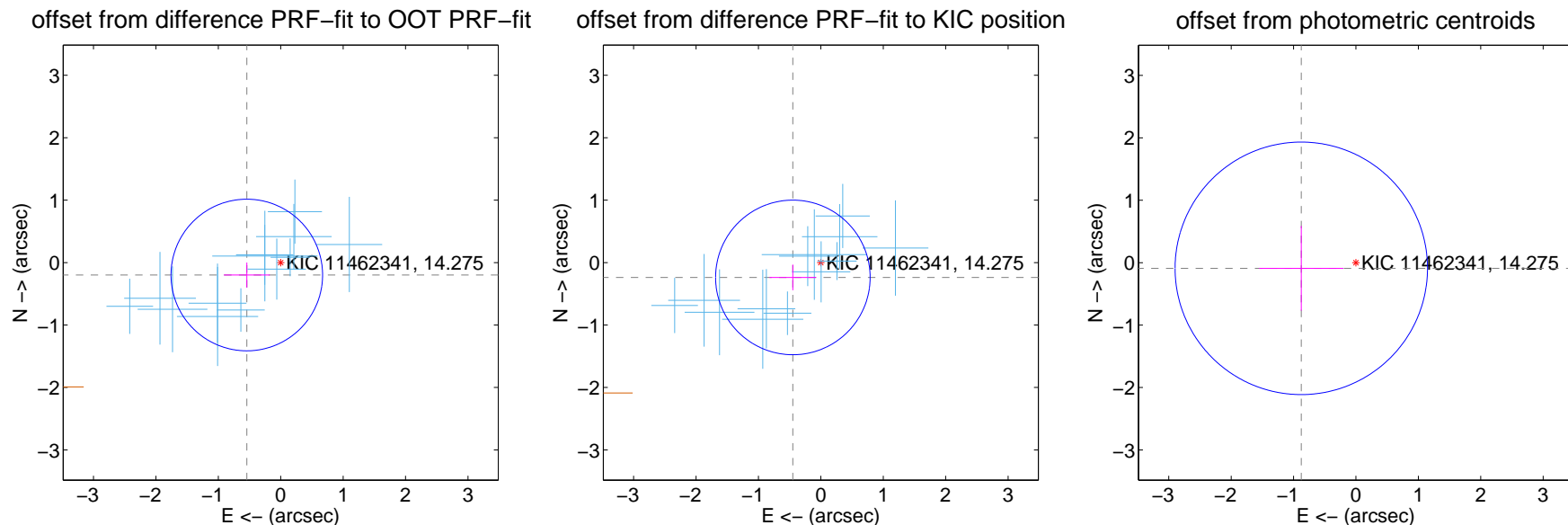
DV Centroid Data

Supplemental centroid analysis for 011462341-01. Kepler magnitude: 14.28. Transit SNR 16.40

There are 13 quarters with good PRF difference image offsets

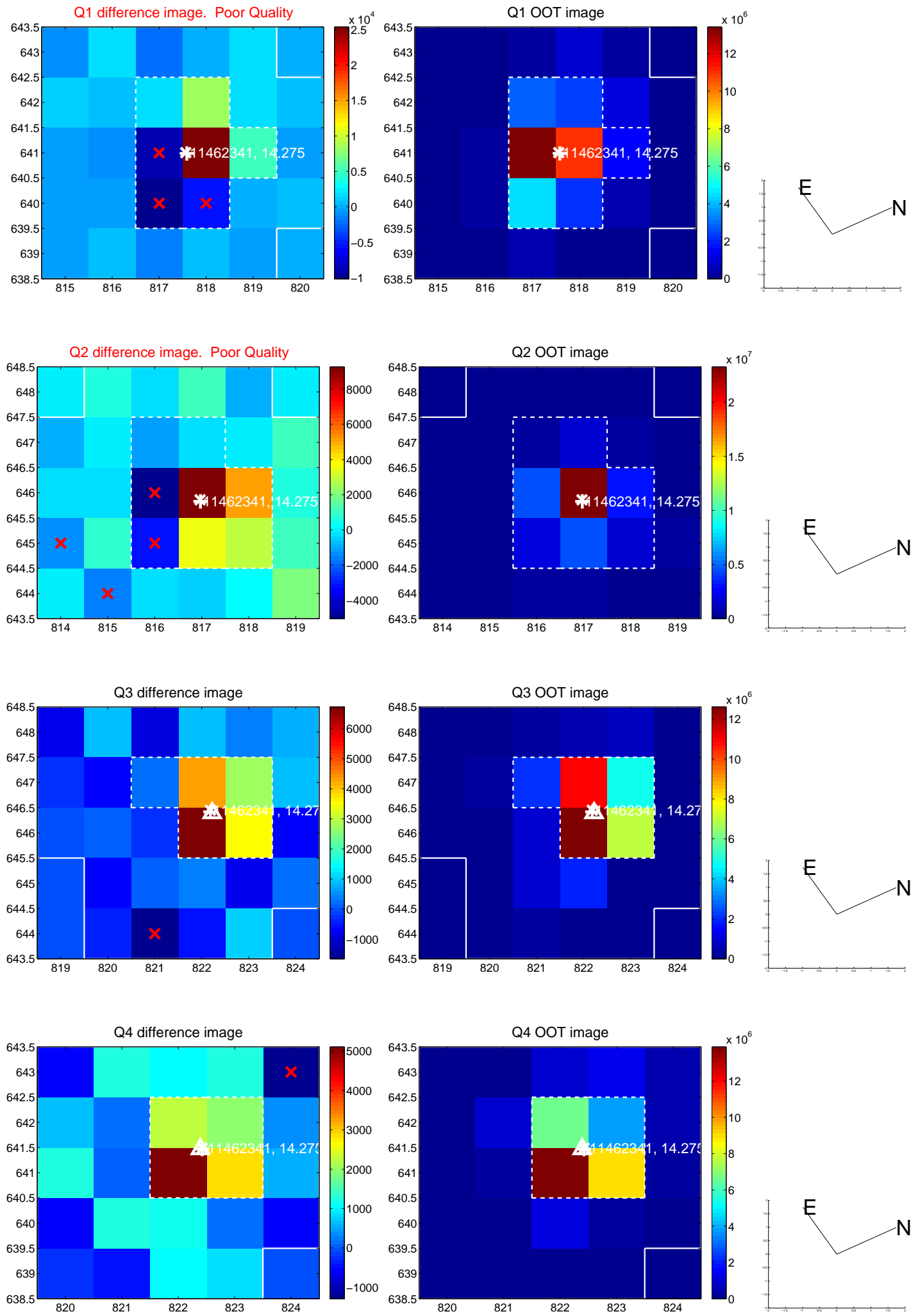
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.579 ± 0.405	1.43	0.544 ± 0.368	-0.199 ± 0.200
PRF-fit source offset from KIC position	0.508 ± 0.413	1.23	0.449 ± 0.373	-0.238 ± 0.205
photometric centroid source offset	0.88 ± 0.67	1.31	0.88 ± 0.67	-0.09 ± 0.68

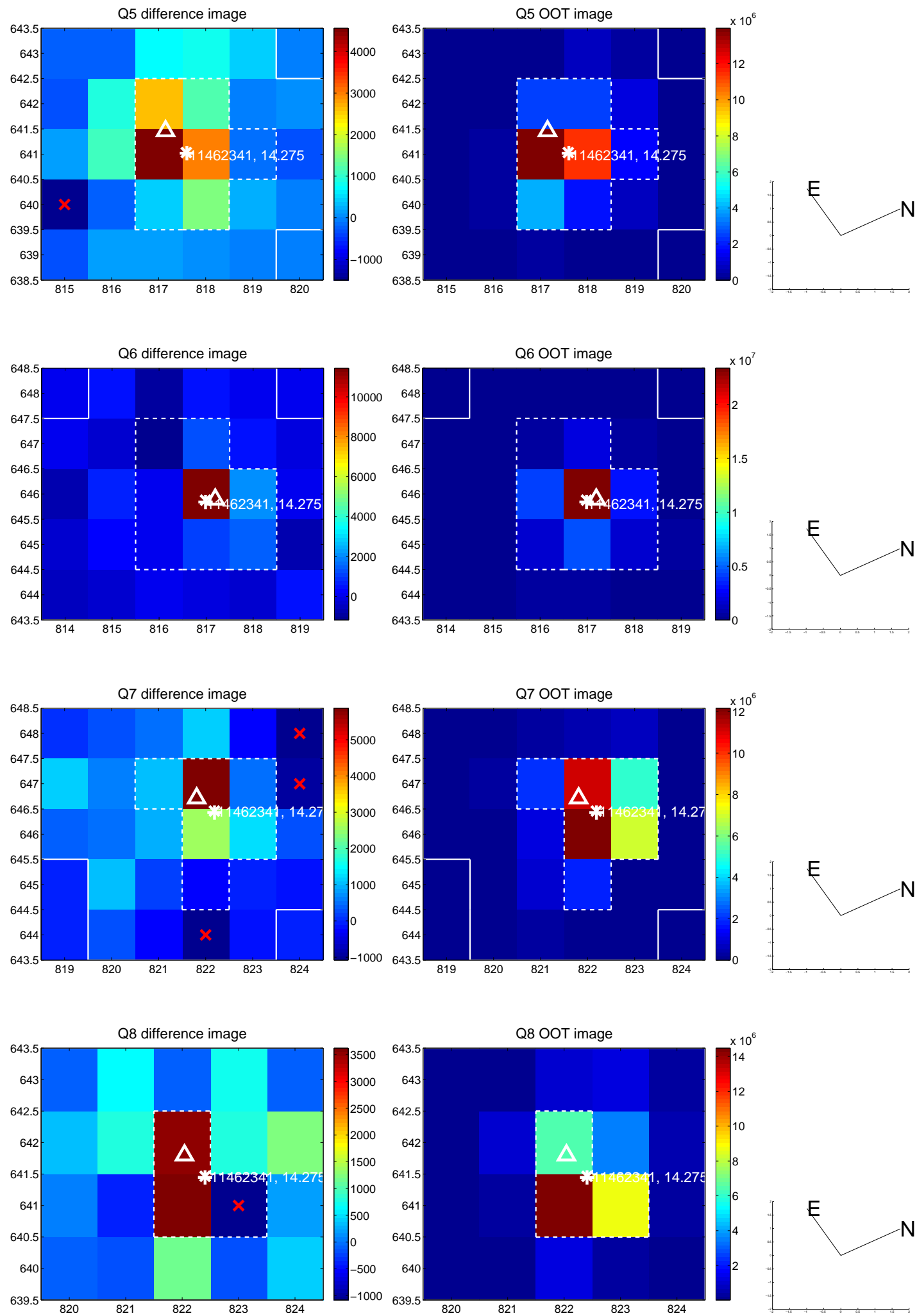


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

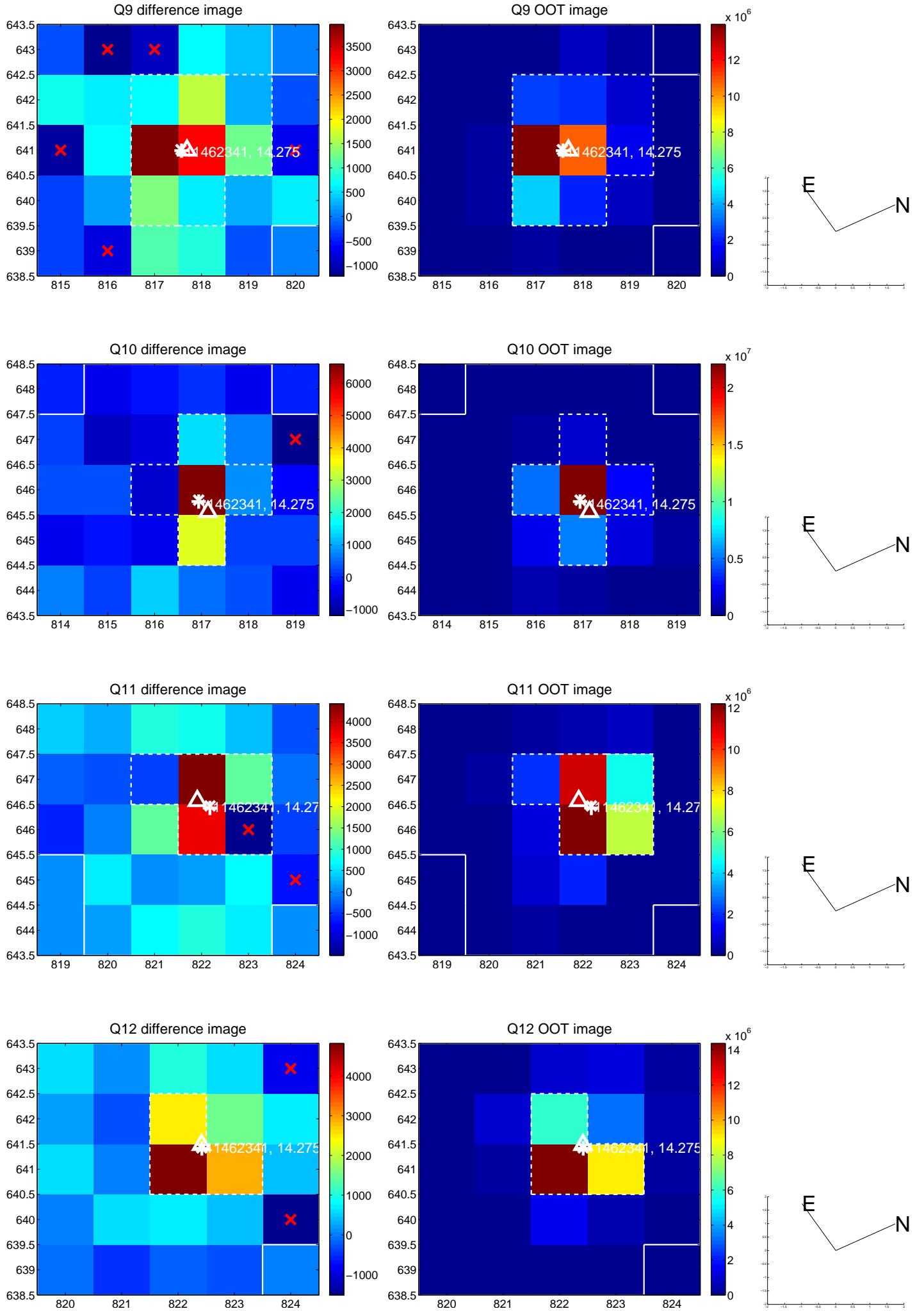
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



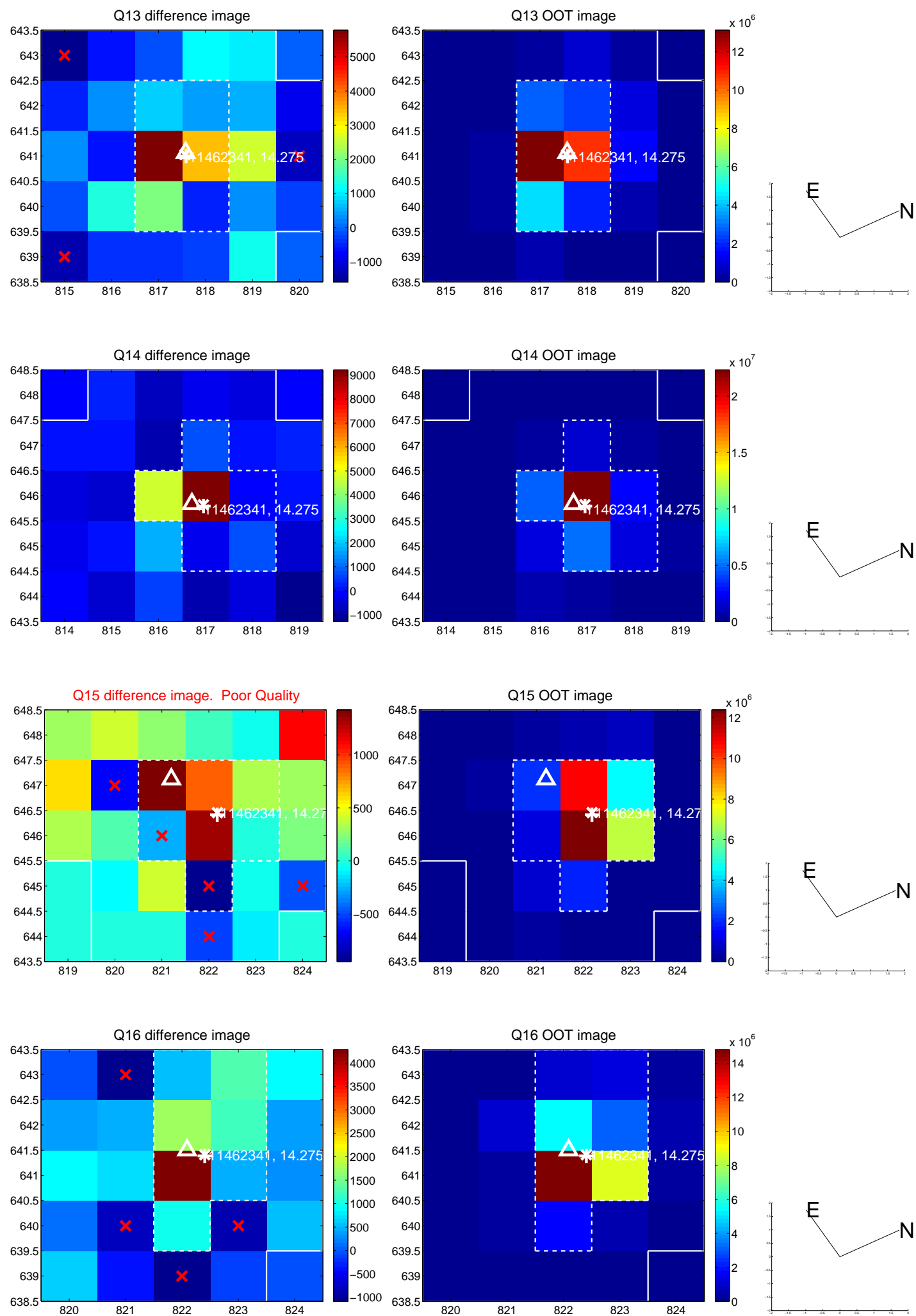
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



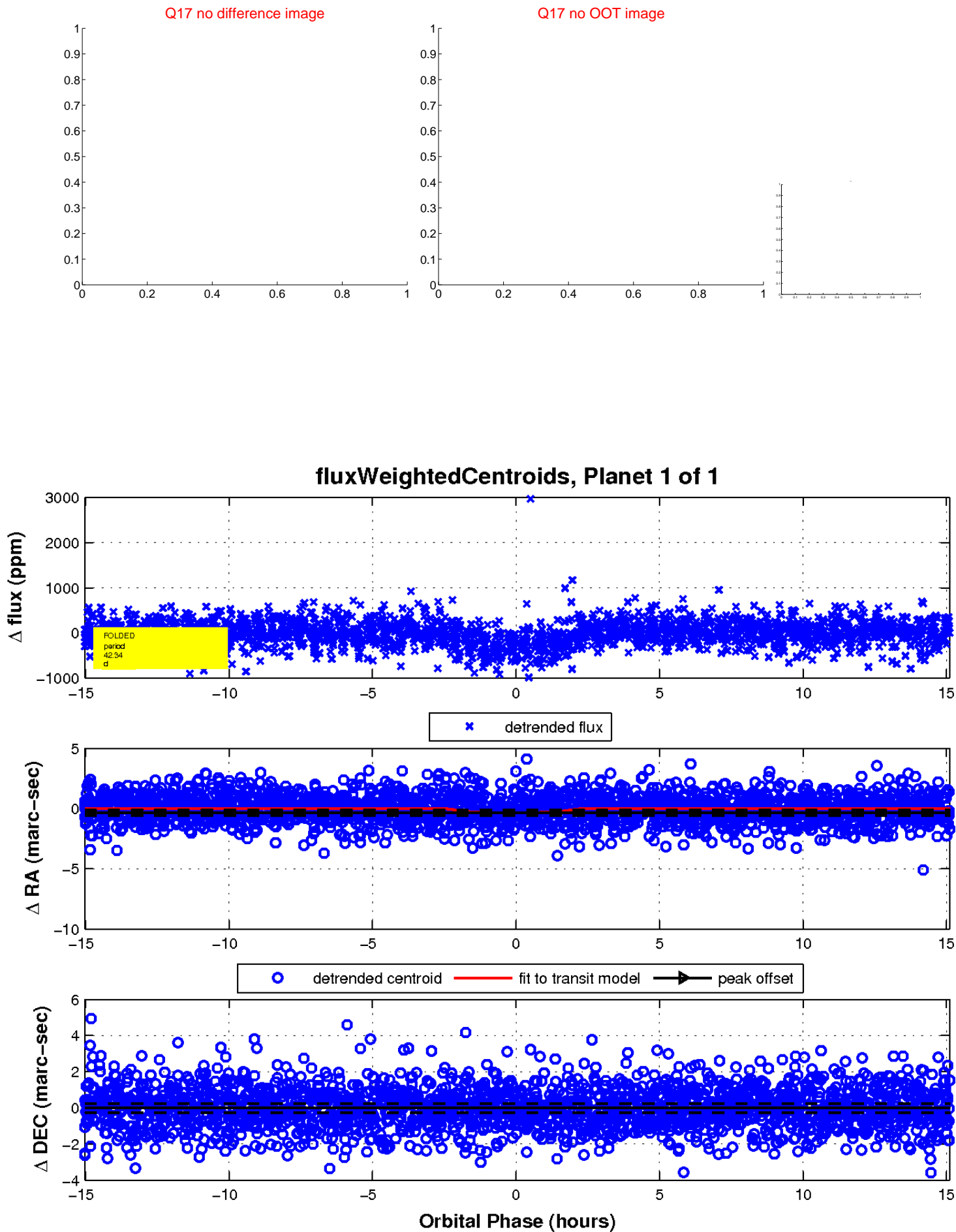
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

