

KIC 005342473

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})
005342473-01	OBS	2297.01	4.644911	136.028308	144.5	3.395	16.7	18.2	1.13	6047	1.55	506.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005342473-01	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.

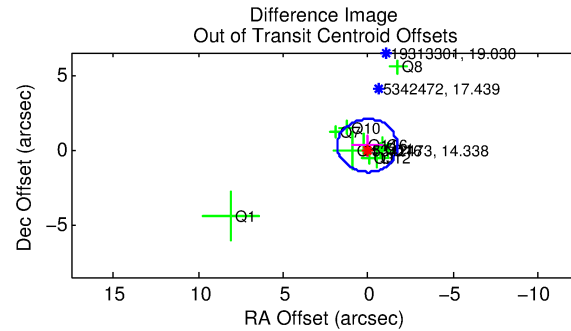
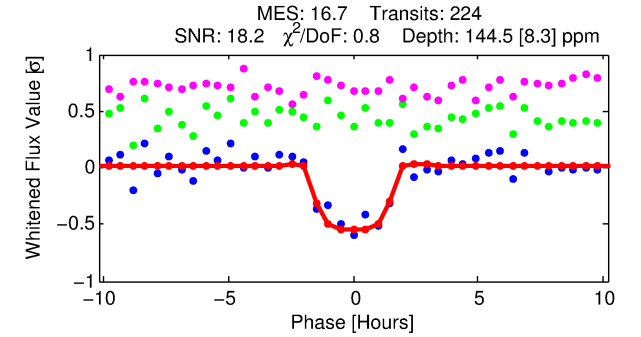
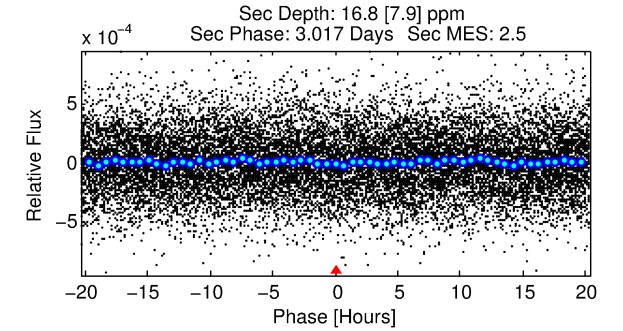
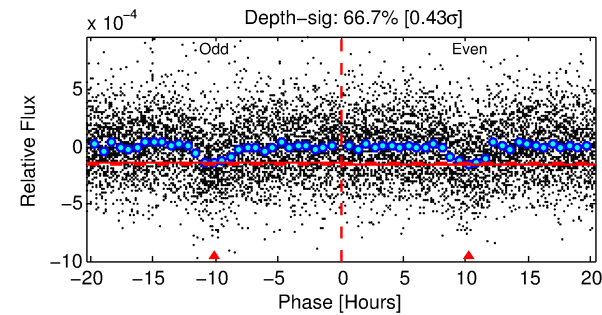
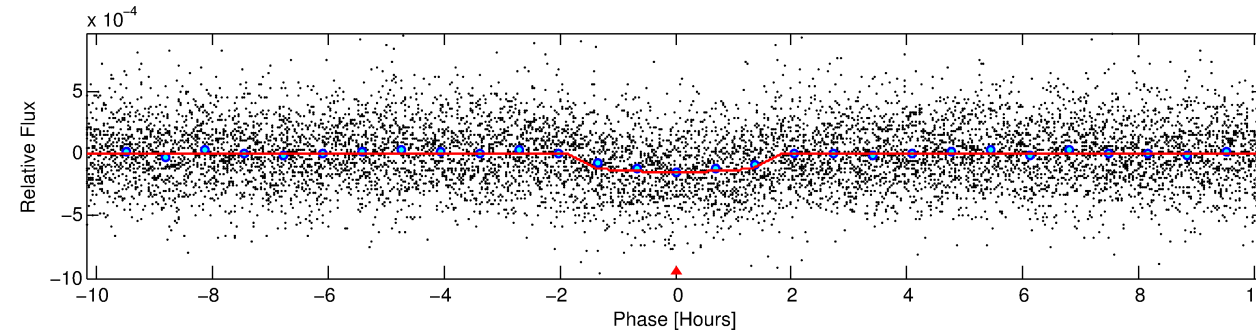
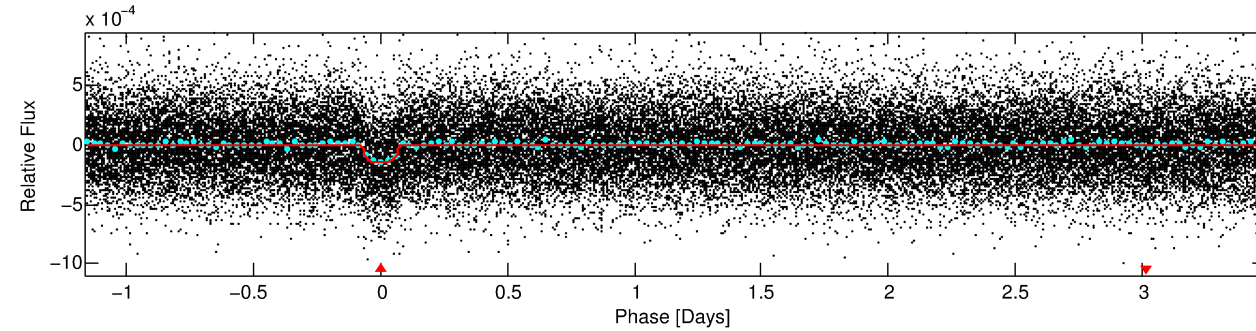
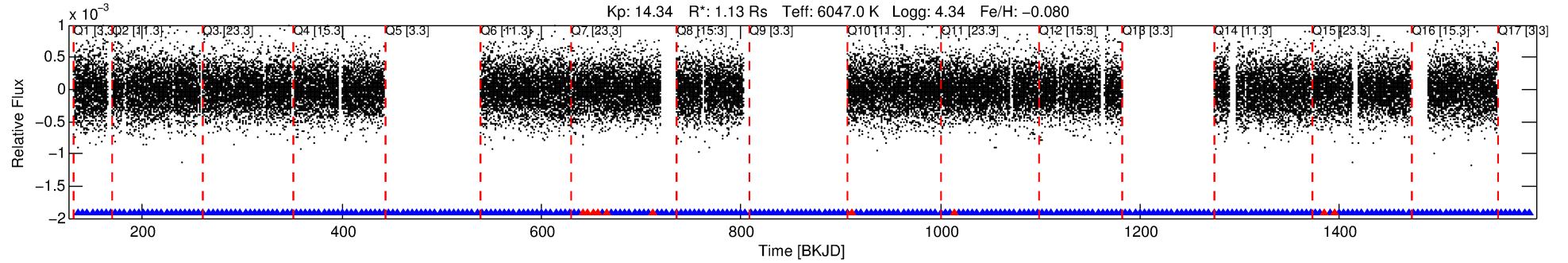
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005342473-01

No Significant Match Found

DV One-Page Summary

KIC: 5342473 Candidate: 1 of 1 Period: 4.645 d
KOI: K02297.01 Corr: 0.980



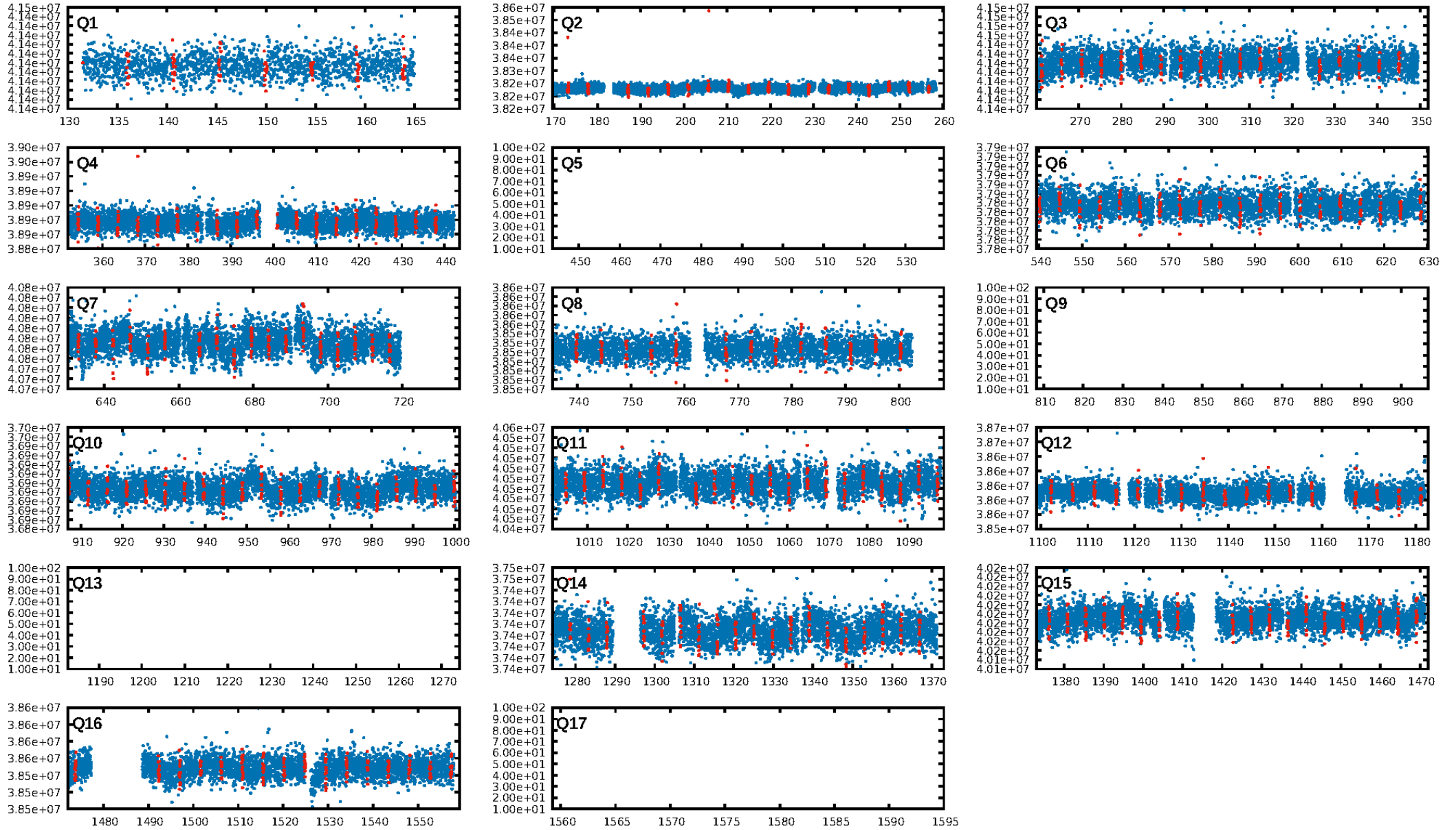
DV Fit Results:

Period = 4.64491 [0.00002] d
Epoch = 136.0283 [0.0031] BKJD
Rp/R* = 0.0126 [0.0051]
a/R* = 5.71 [11.41]
b = 0.86 [0.65]
Seff = 506.07 [189.95]
Teff = 1209 [113] K
Rp = 1.55 [0.78] Re
a = 0.0549 [0.0136] AU
Ag = 11.61 [11.63] [0.91 σ]
Teffp = 3451 [815] K [2.72 σ]

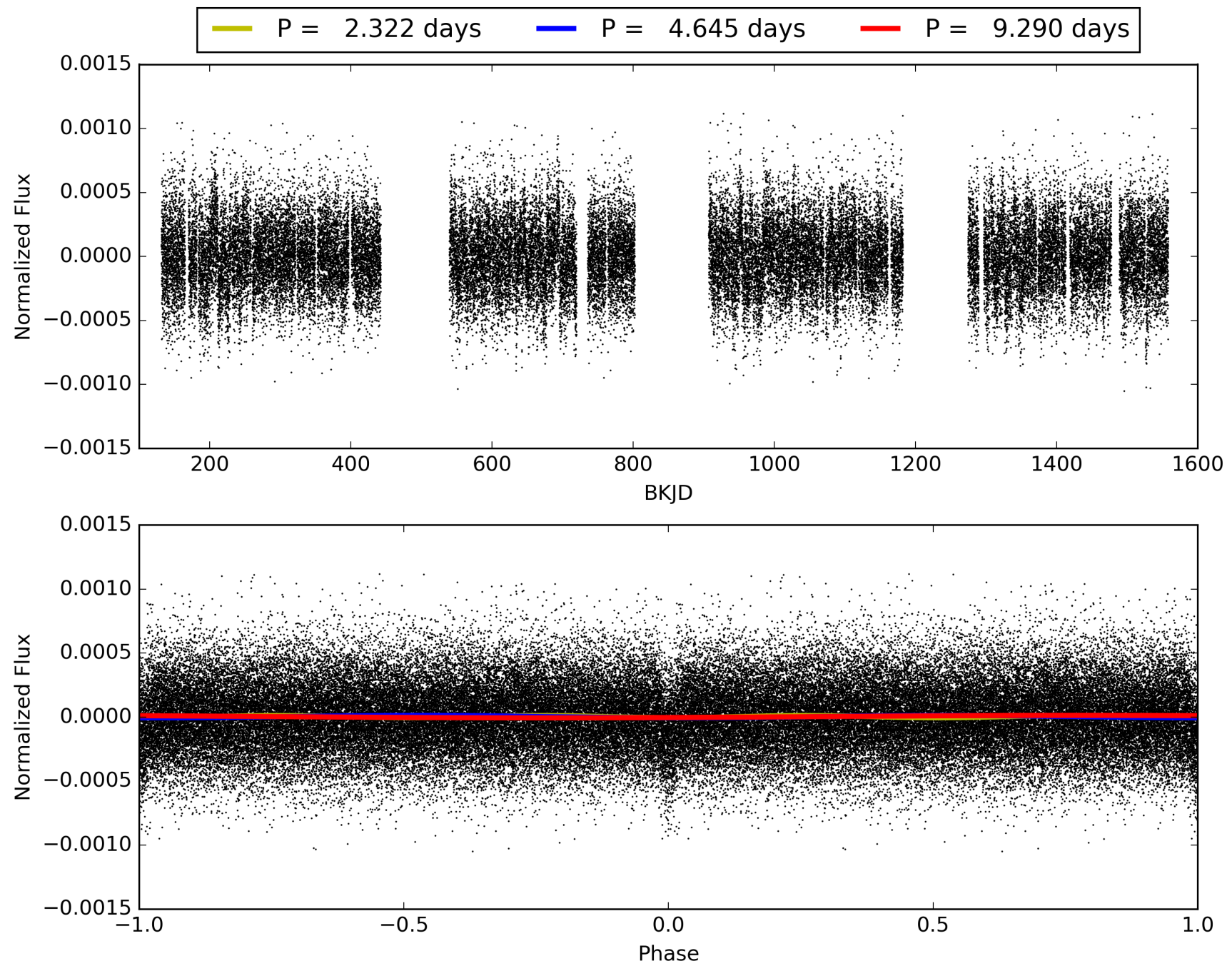
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.56e-61
RollingBand-fgt: 0.95 [207/217]
GhostDiagnostic-chr: 2.245
Centroid-sig: 0.6%
Centroid-so: 1.414 arcsec [1.80 σ]
OotOffset-rm: 0.269 arcsec [0.46 σ]
KicOffset-rm: 0.241 arcsec [0.42 σ]
OotOffset-st: 3/3/4/1 [11]
KicOffset-st: 3/3/4/1 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005342473-01, PDC Light Curves

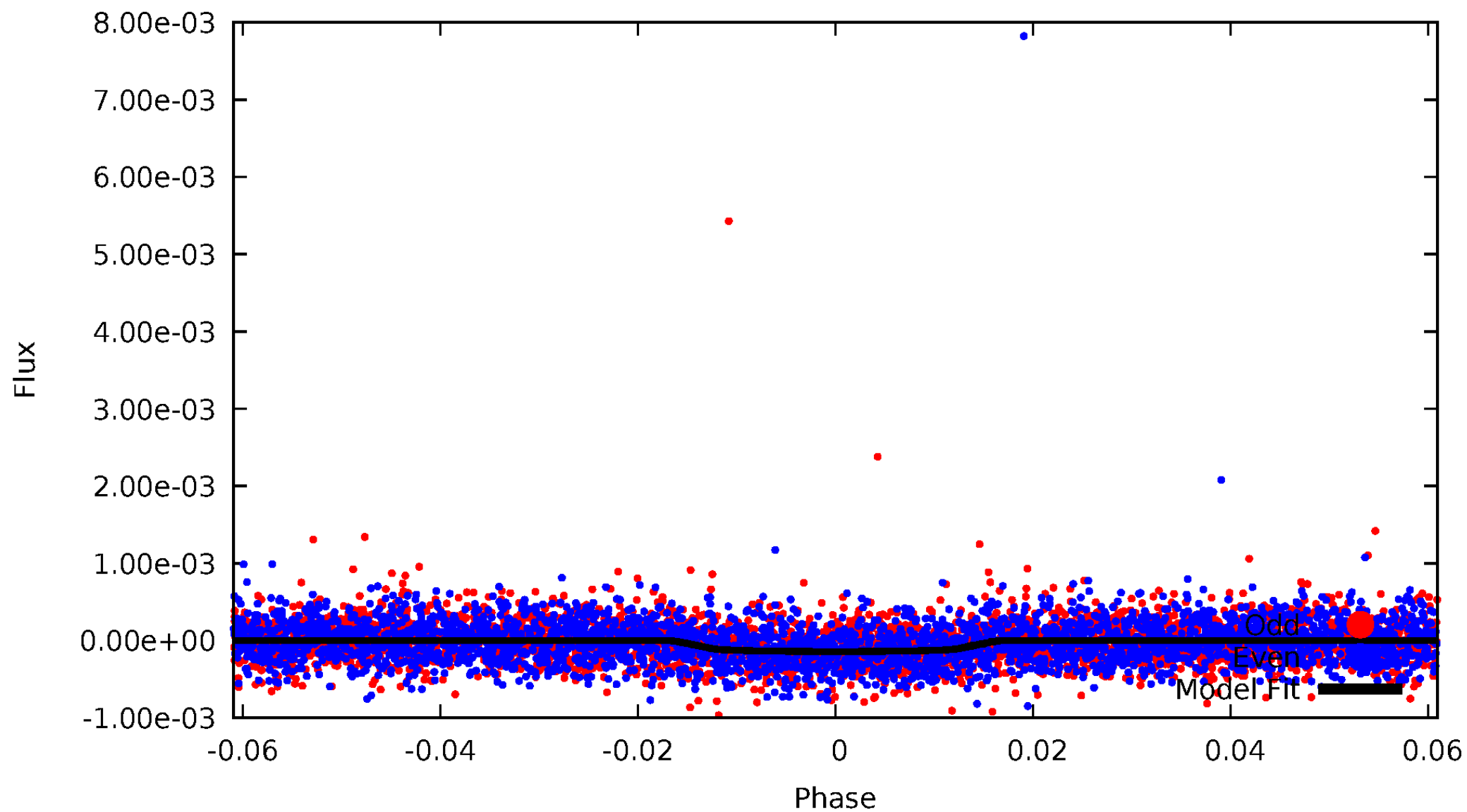


TCE 005342473-01



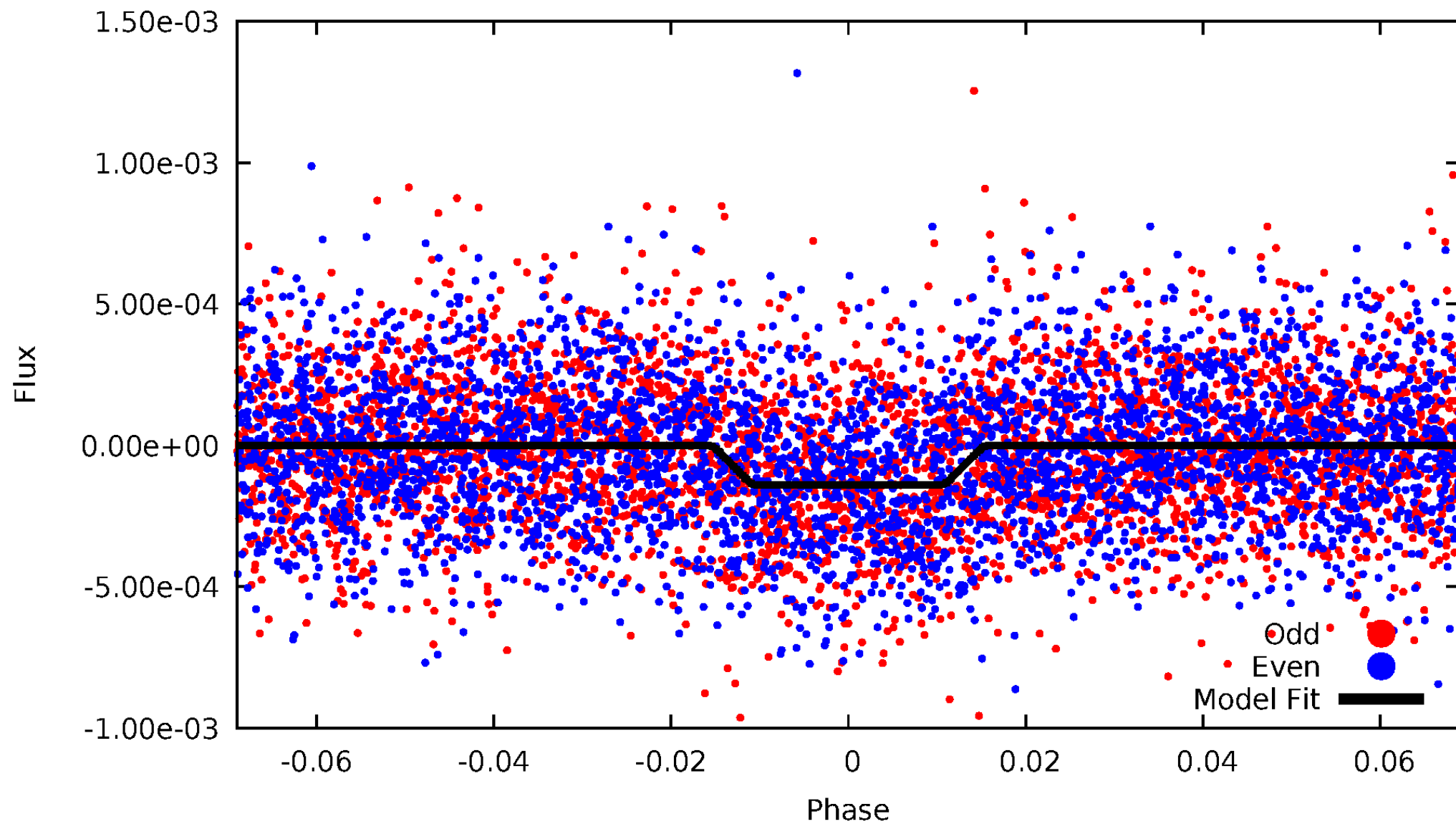
DV Odd/Even

TCE 005342473-01



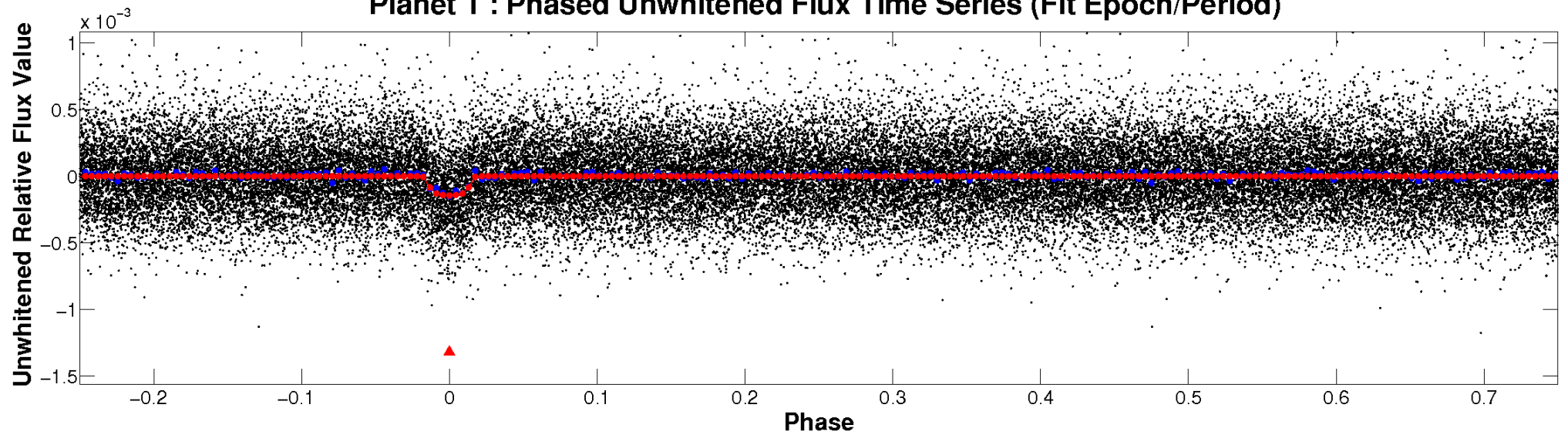
ALT Odd/Even

TCE 005342473-01

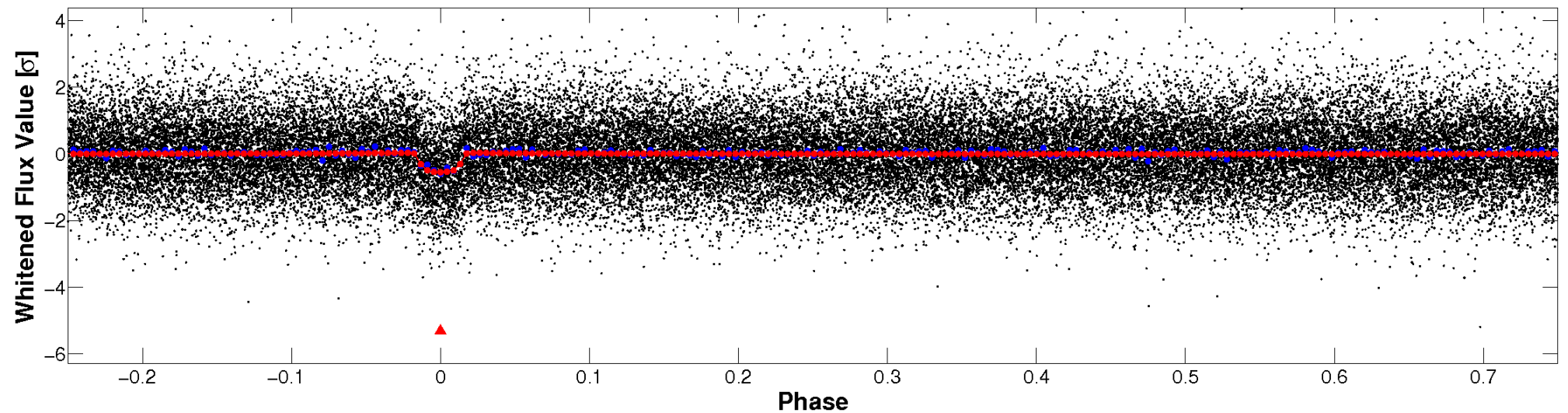


Non-Whitened Vs. Whitened Light Curve

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

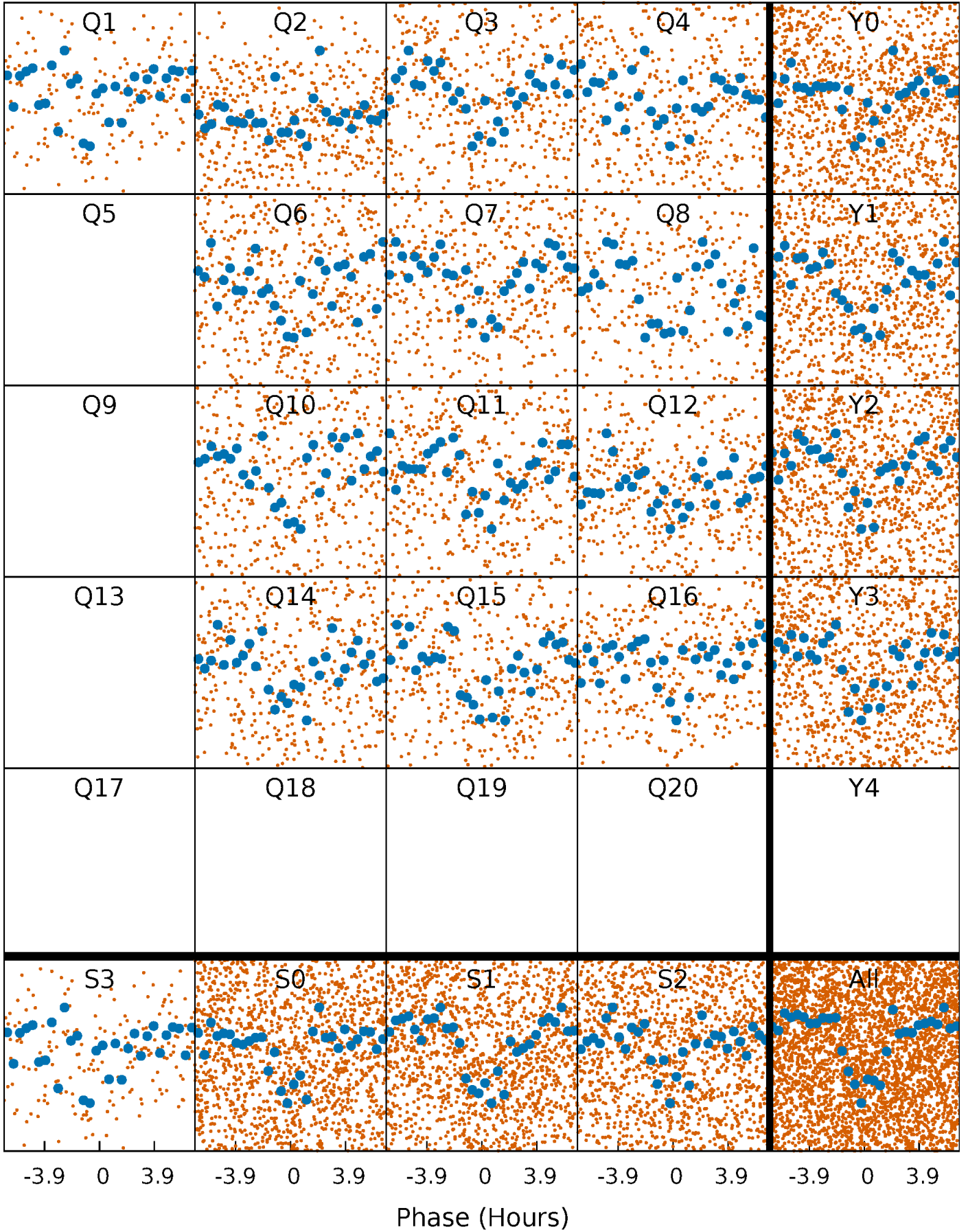


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



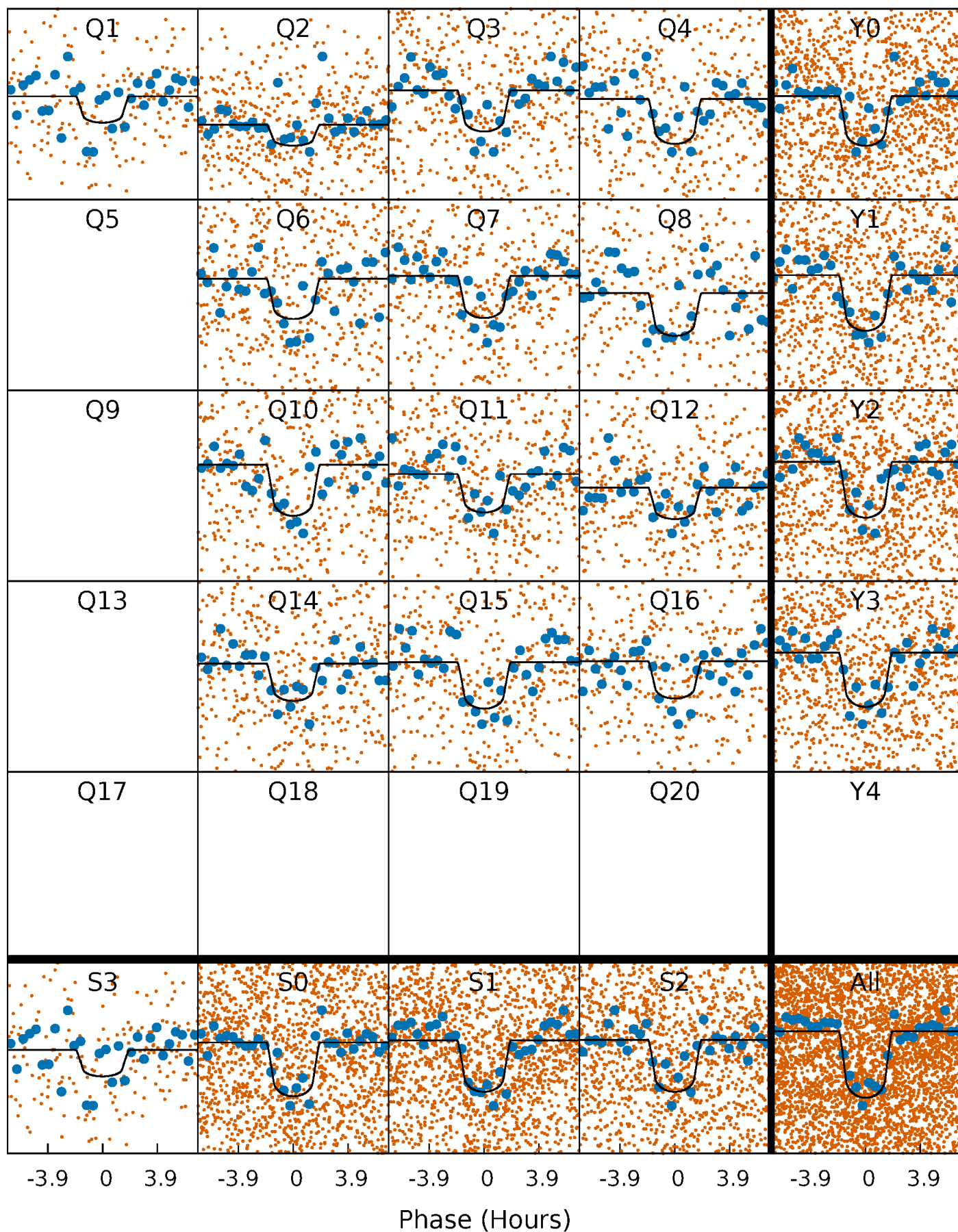
PDC Quarter-Phased Transit Curves

TCE 005342473-01 P= 4.644911 Days $T_0=136.028308$ (BKJD)



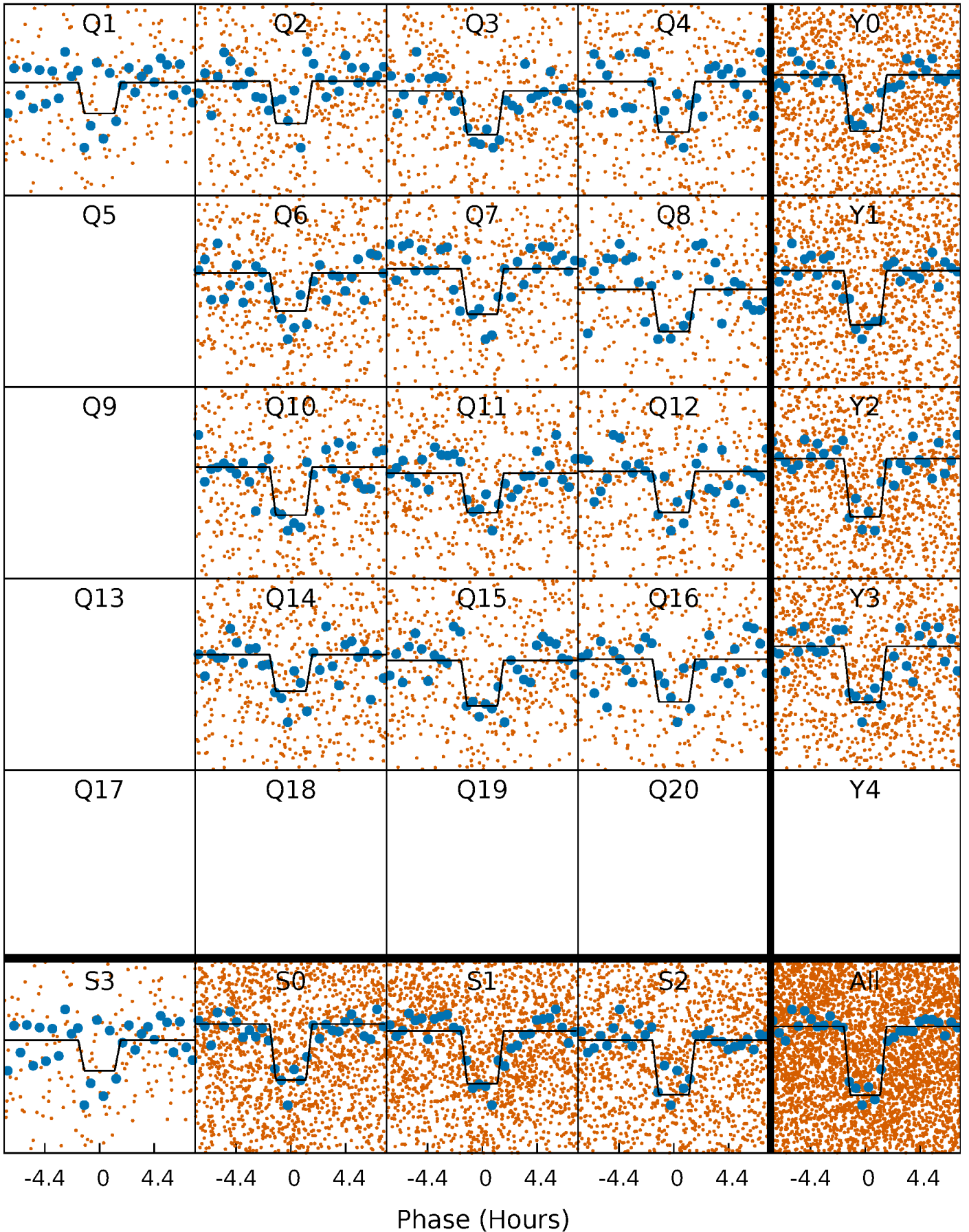
DV Quarter-Phased Transit Curves

TCE 005342473-01 P= 4.644911 Days $T_0=136.028308$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

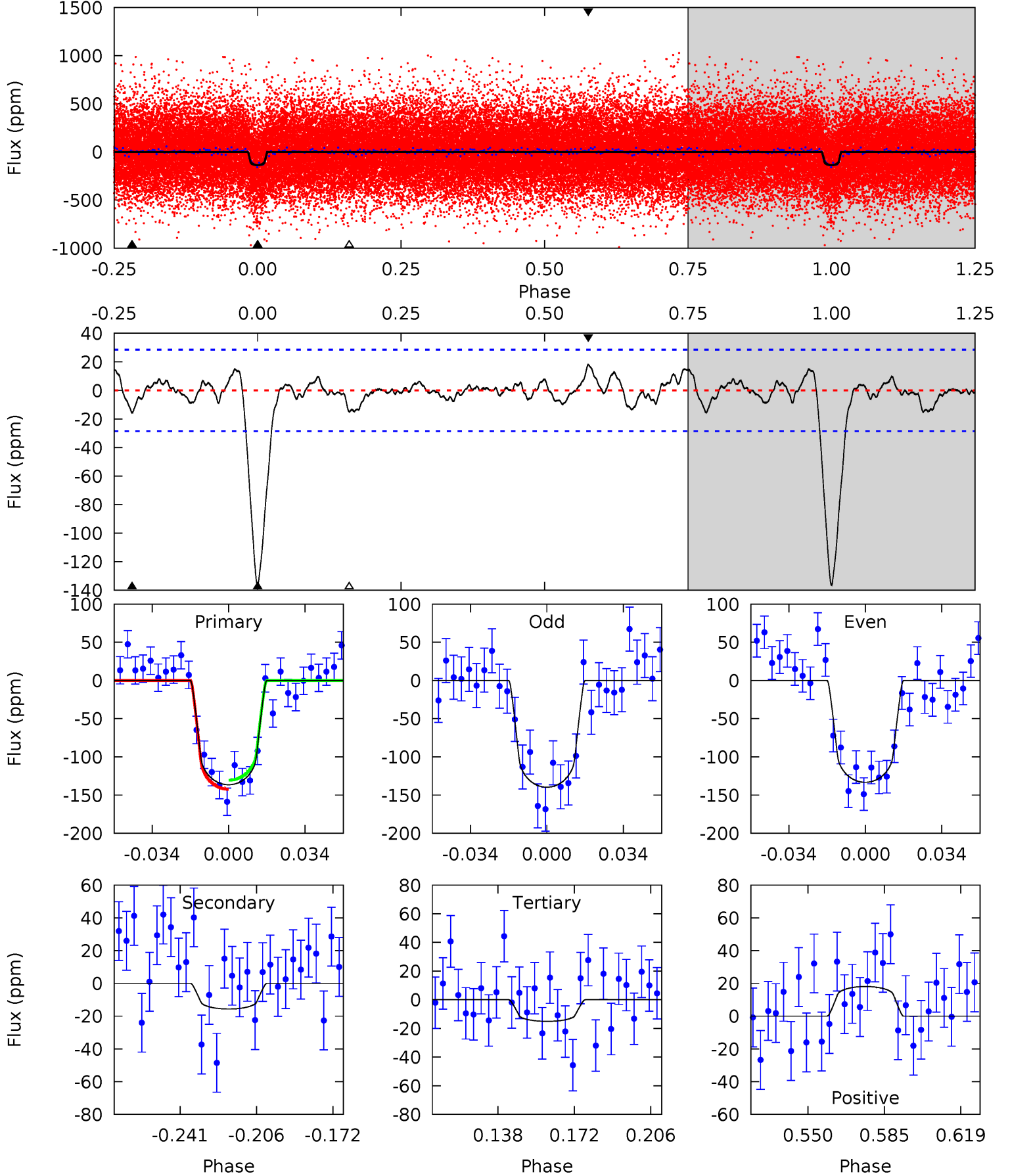
TCE 005342473-01 P= 4.644869 Days $T_0=136.035719$ (BKJD)



DV Model-Shift Uniqueness Test

005342473-01, P = 4.644911 Days, E = 131.383397 Days

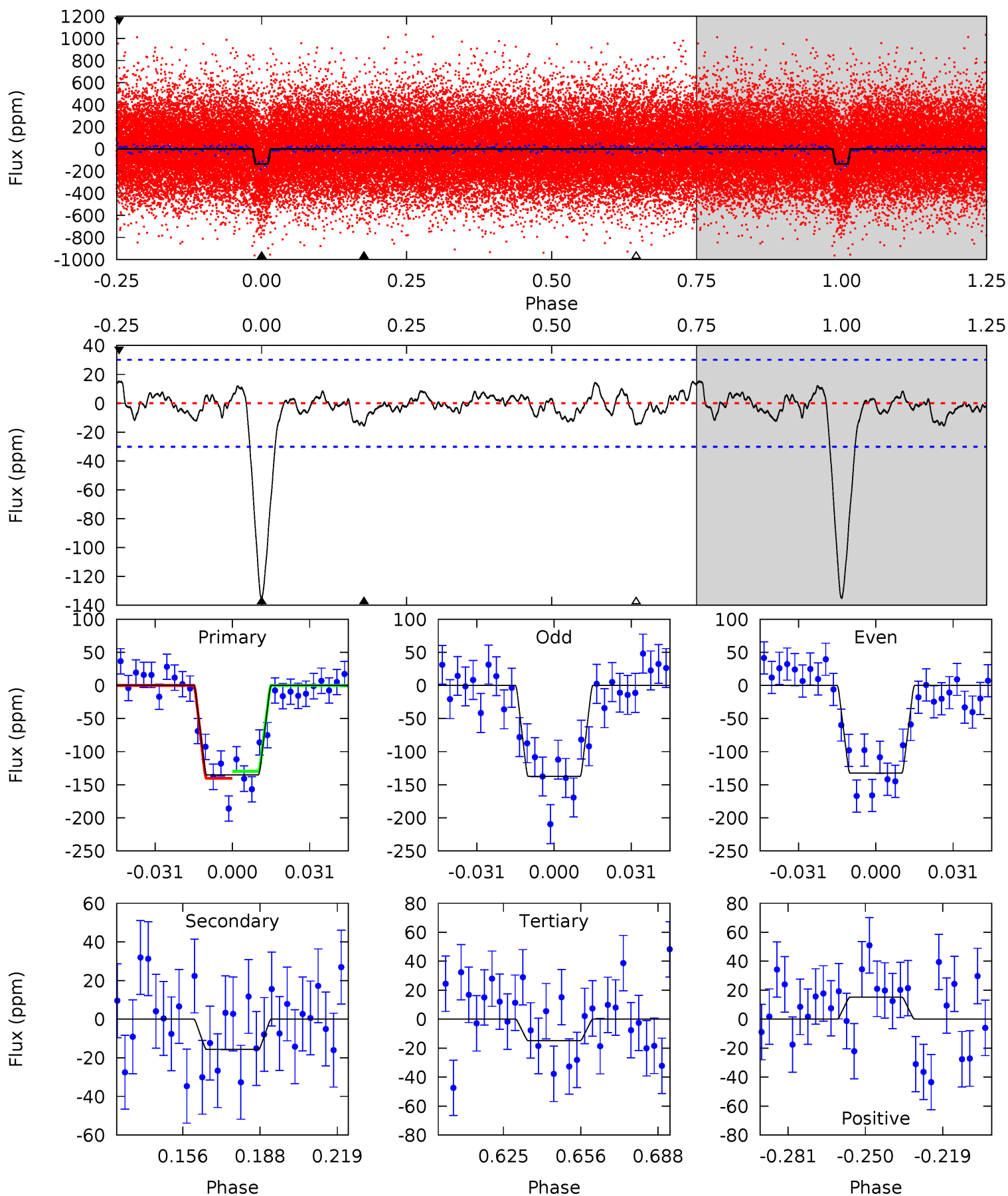
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	2.62	2.53	3.03	4.78	2.12	1.01	20.3	19.8	0.09	-0.41	0.54	0.94	0.12	1.00



Alt Model-Shift Uniqueness Test

005342473-01, P = 4.644869 Days, E = 131.390850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	2.50	2.37	2.43	4.80	2.15	0.95	19.2	19.1	0.13	0.08	0.41	0.92	0.10	0.84



Stellar Parameters For KIC 005342473

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6047^{+180}_{-180}	$4.343^{+0.128}_{-0.192}$	$-0.080^{+0.250}_{-0.300}$	$1.129^{+0.338}_{-0.182}$	$1.021^{+0.153}_{-0.126}$	$1.000^{+0.592}_{-0.499}$
	+3%/-3%	+3%/-4%	+312%/-375%	+30%/-16%	+15%/-12%	+59%/-50%
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 005342473-01 / KOI 2297.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-16 ± 6	$1.58^{+0.69}_{-0.62}$	1699^{+137}_{-97}	3768^{+793}_{-509}	10^{+20}_{-6}
Alt.	-16 ± 6	$1.50^{+0.71}_{-0.65}$	1707^{+128}_{-104}	3809^{+954}_{-542}	11^{+25}_{-7}

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 $A_{obs} \gg 1.0$

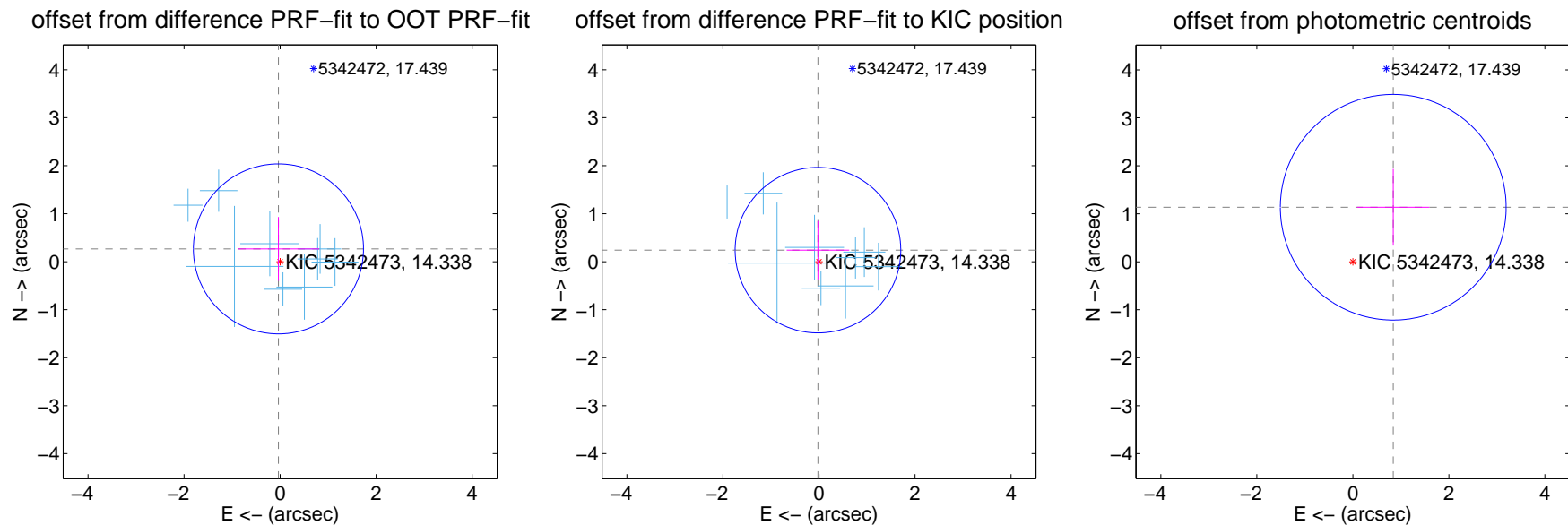
DV Centroid Data

Supplemental centroid analysis for 005342473-01. Kepler magnitude: 14.34. Transit SNR 18.21

There are 9 quarters with good PRF difference image offsets

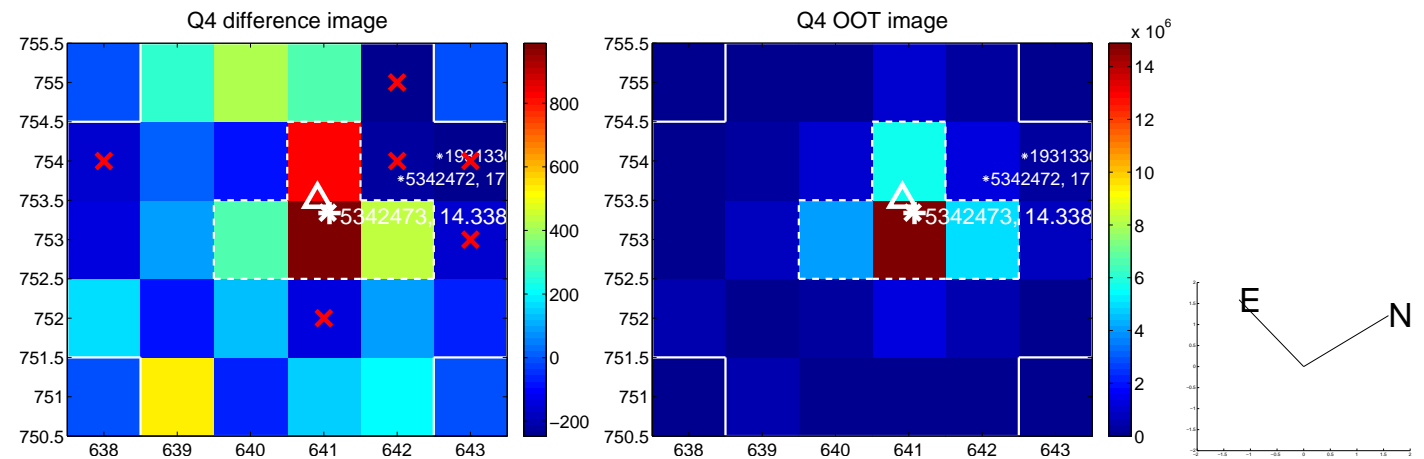
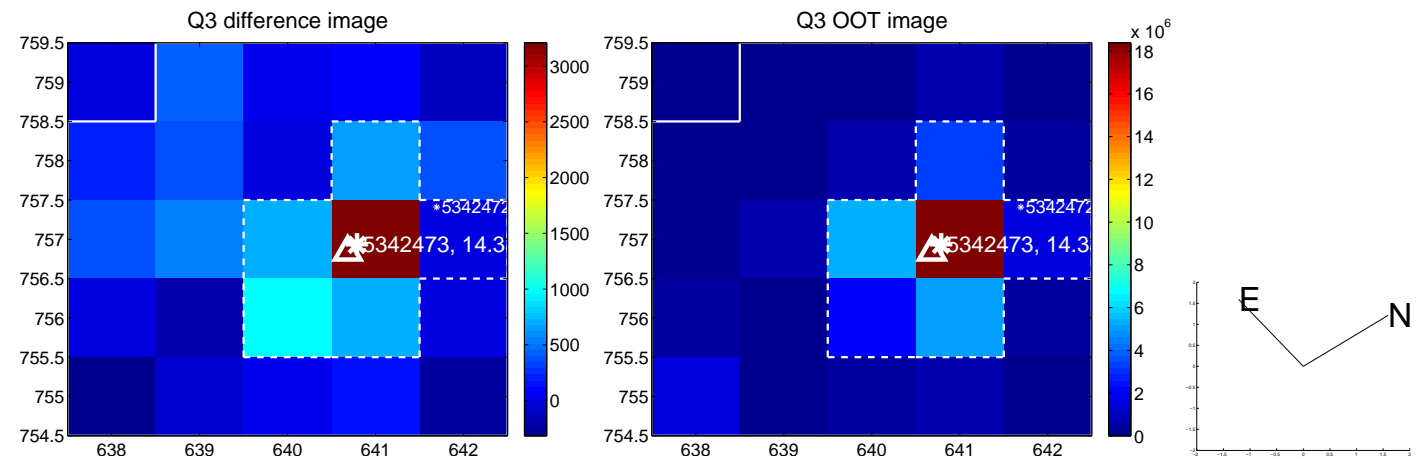
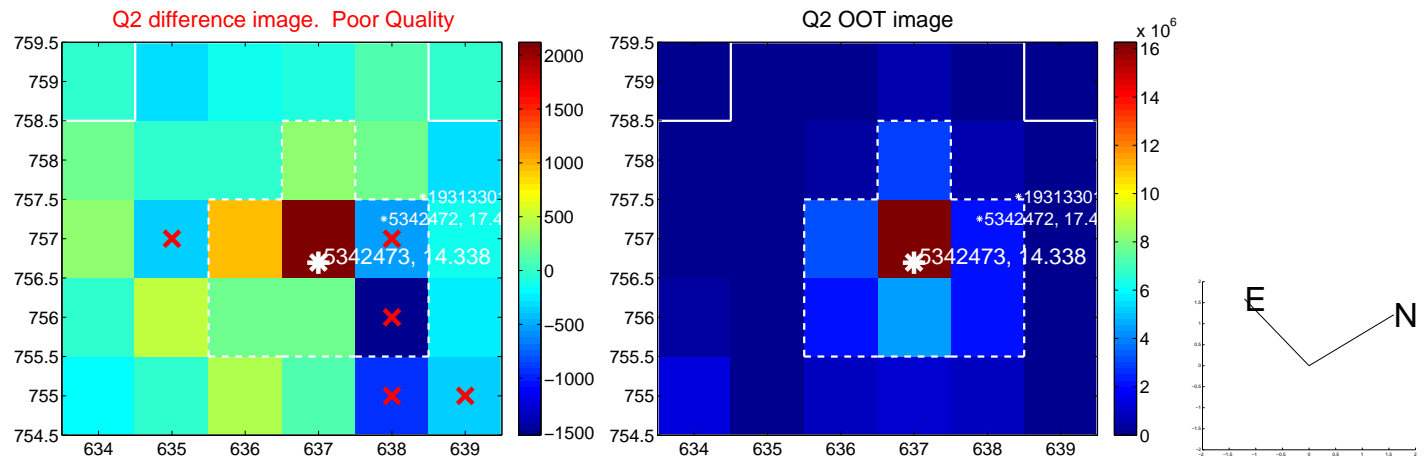
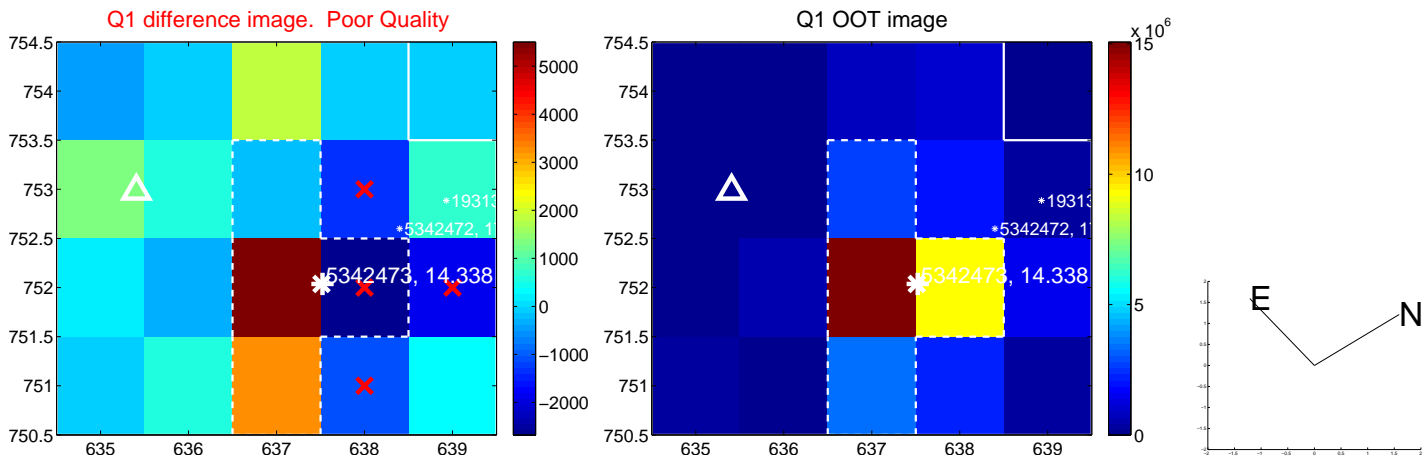
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.269 ± 0.590	0.46	0.035 ± 0.848	0.267 ± 0.664
PRF-fit source offset from KIC position	0.241 ± 0.575	0.42	0.021 ± 0.650	0.240 ± 0.607
photometric centroid source offset	1.41 ± 0.78	1.80	-0.84 ± 0.75	1.14 ± 0.80

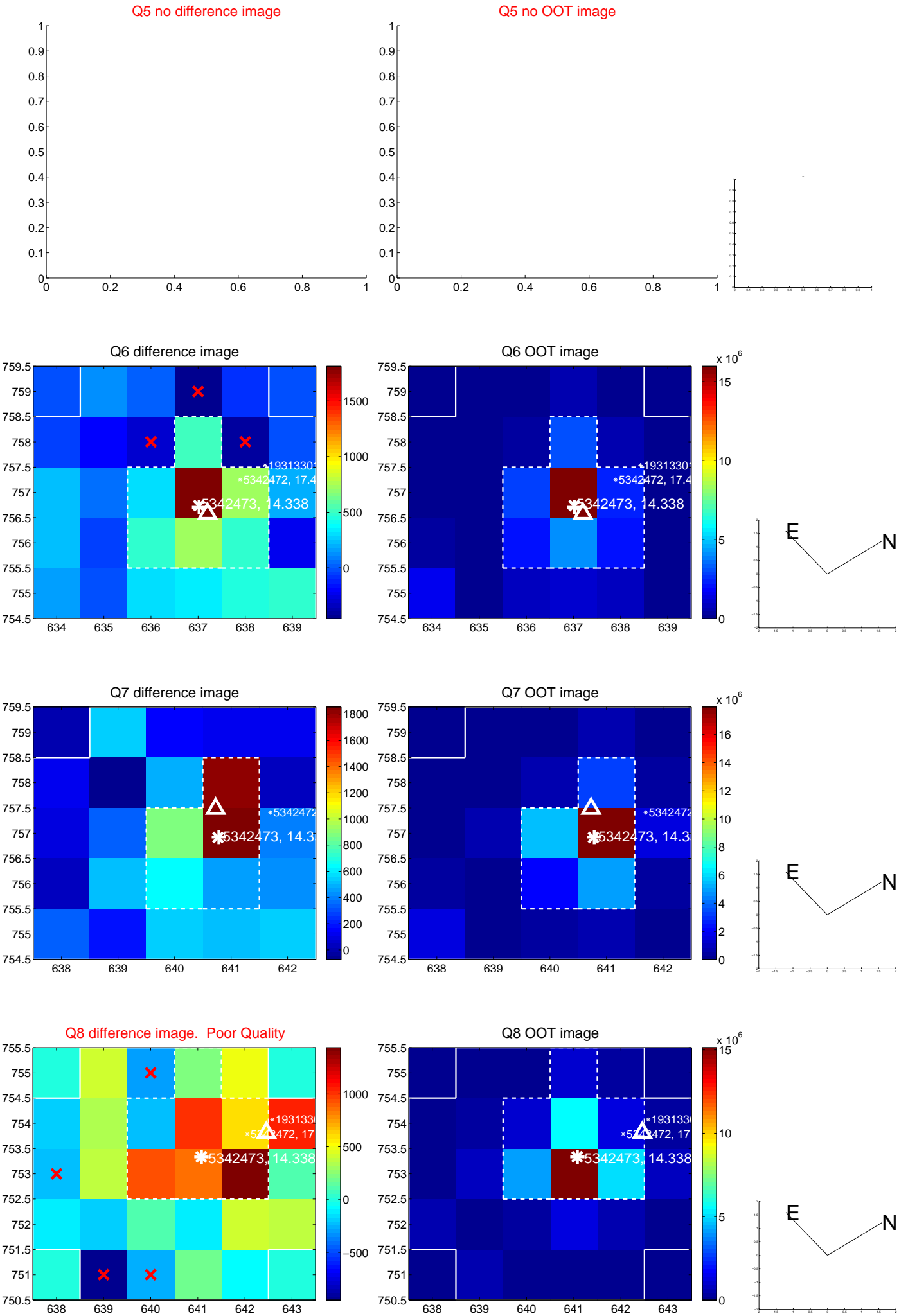


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

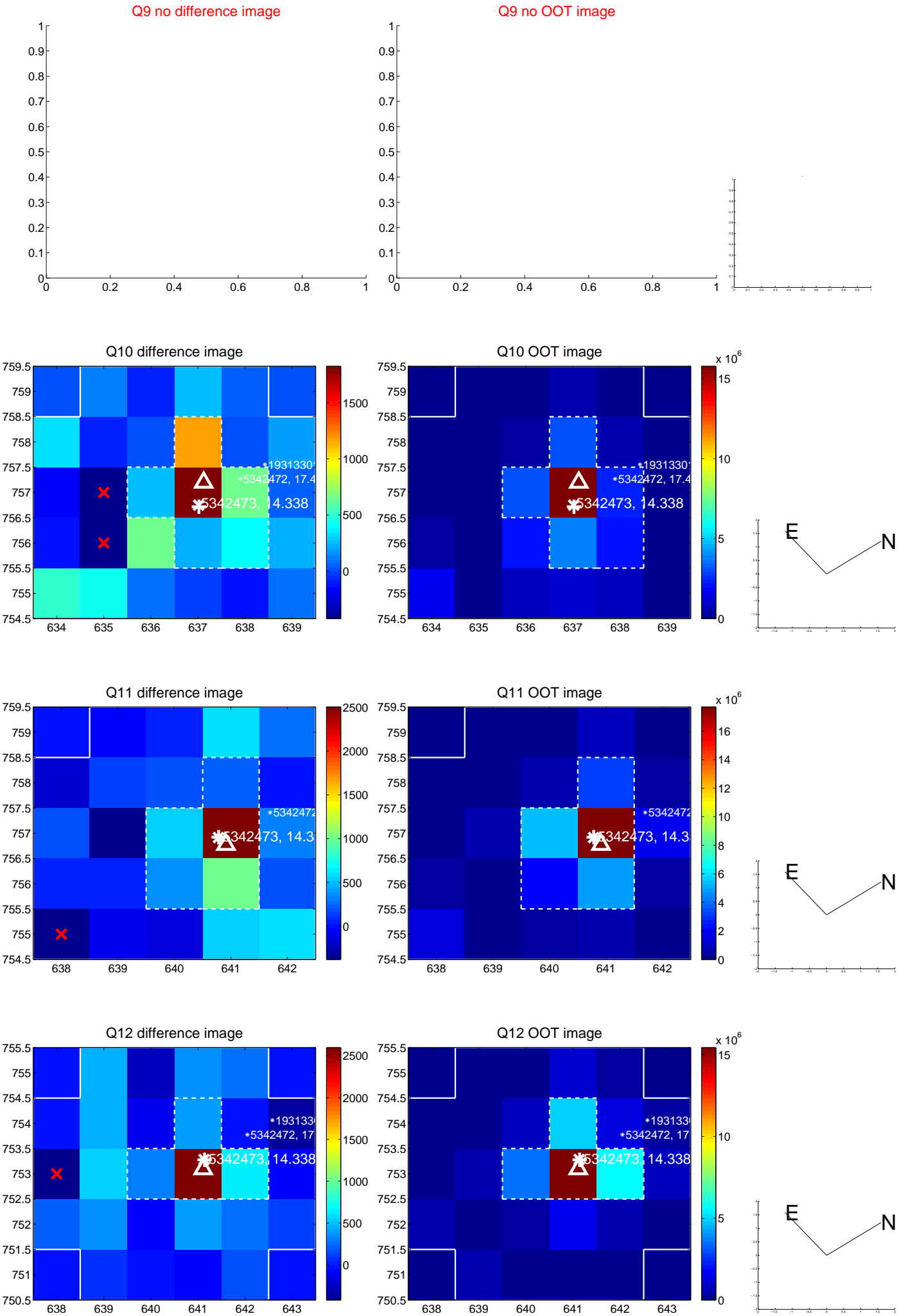
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



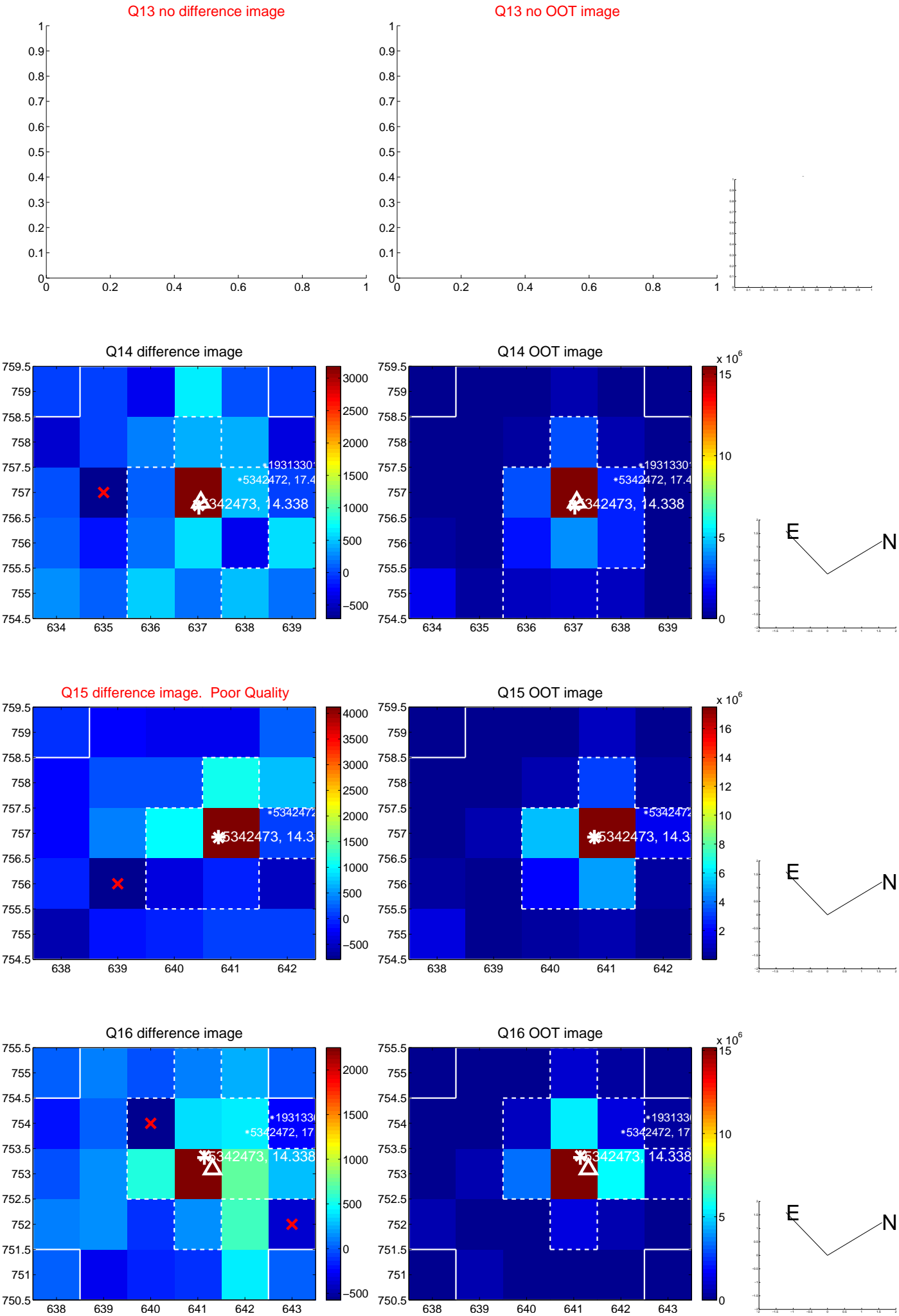
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



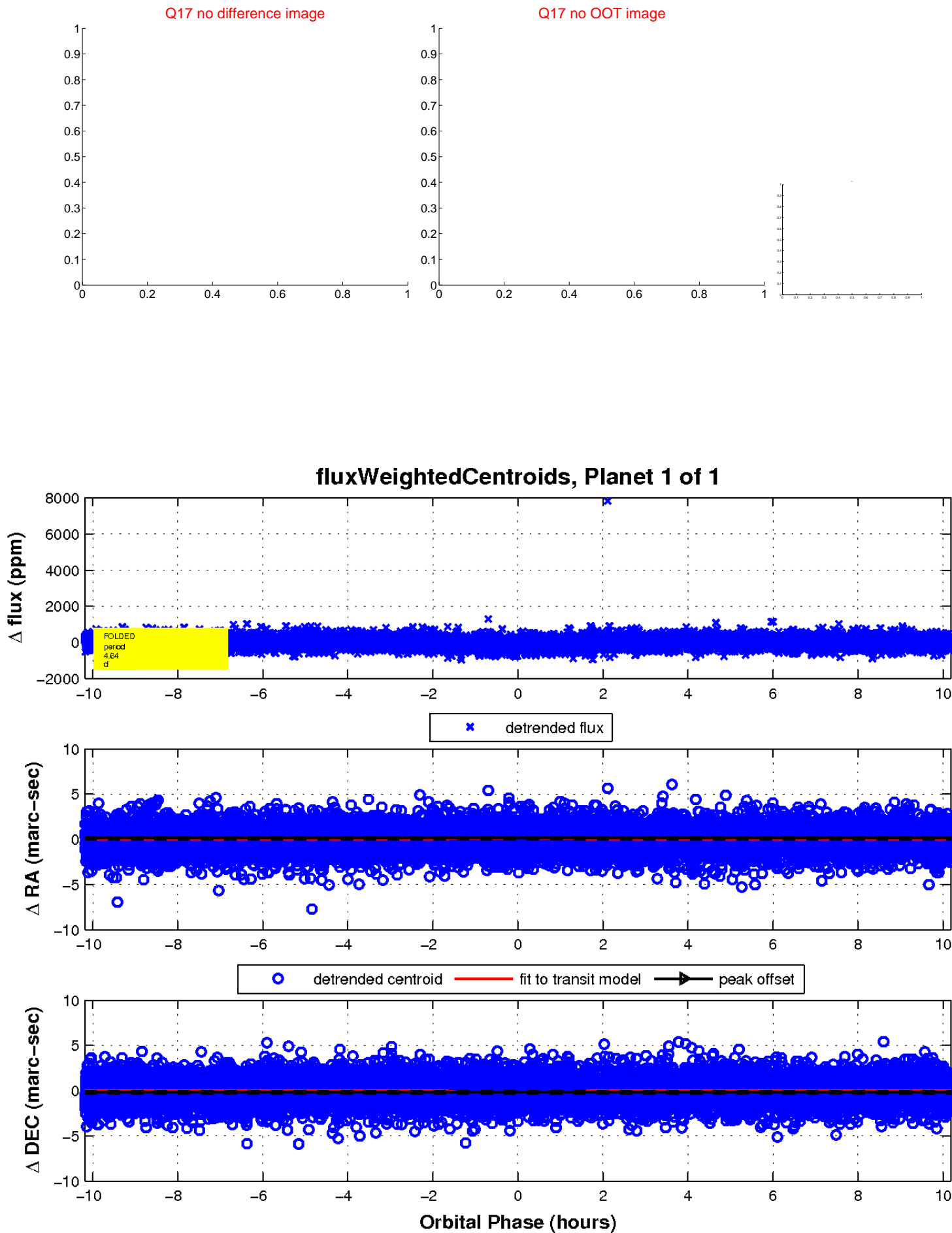
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

