

KIC 004935172

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})
004935172-01	OBS	2962.01	2.172917	131.732312	83.3	2.093	12.7	14.1	1.04	6164	1.07	1220.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004935172-01	OBS	PC	0.79	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.

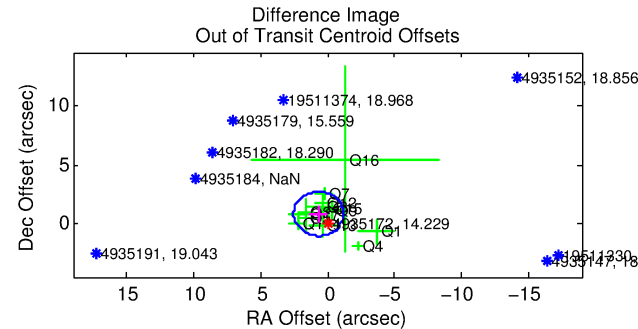
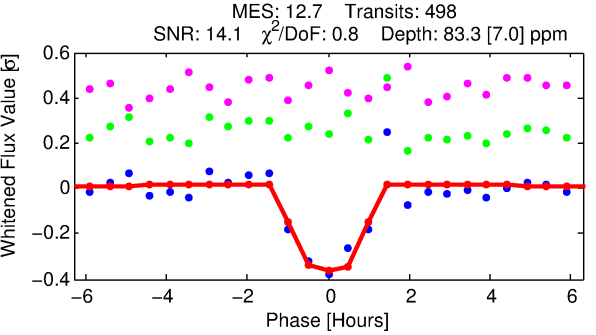
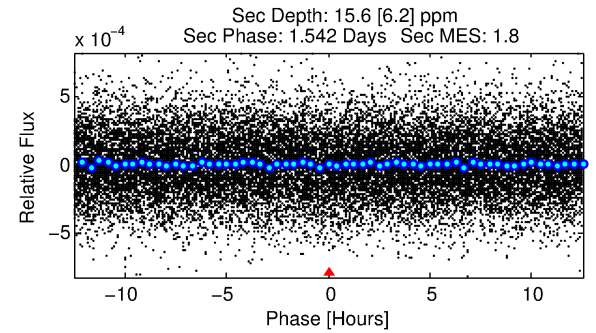
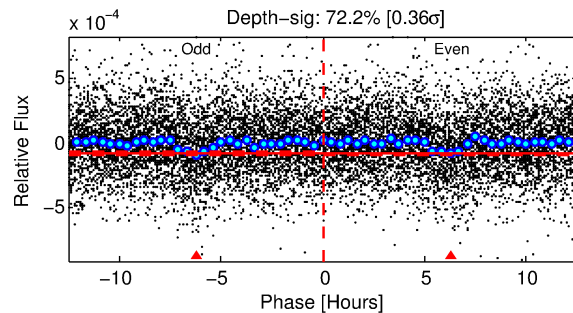
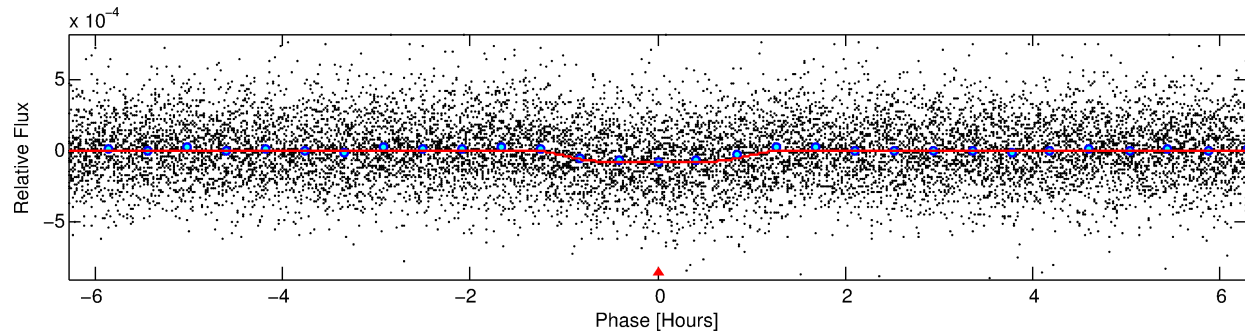
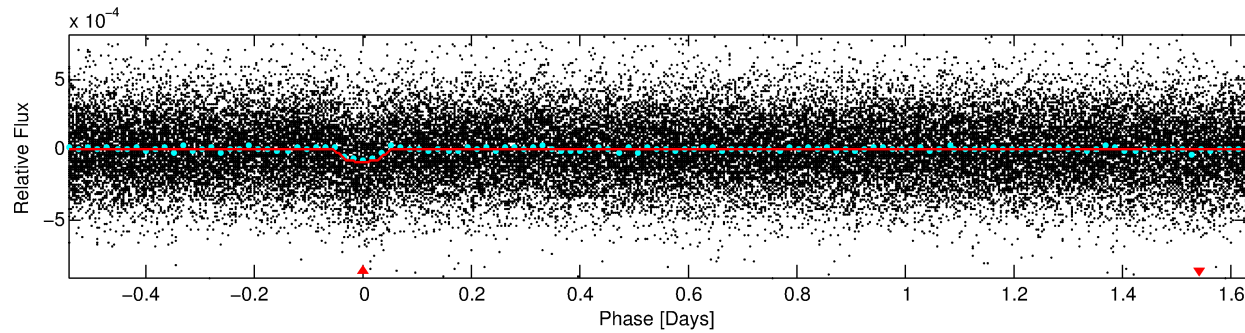
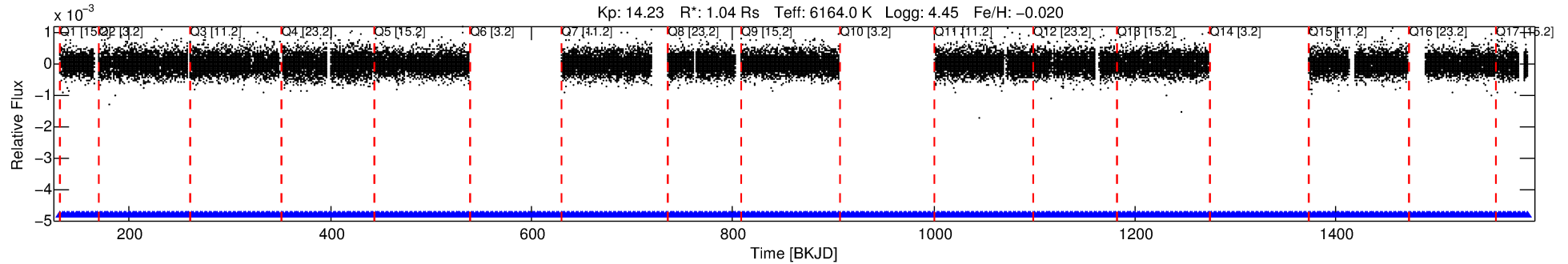
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004935172-01

No Significant Match Found

DV One-Page Summary

KIC: 4935172 Candidate: 1 of 1 Period: 2.173 d
KOI: K02962.01 Corr: 0.979



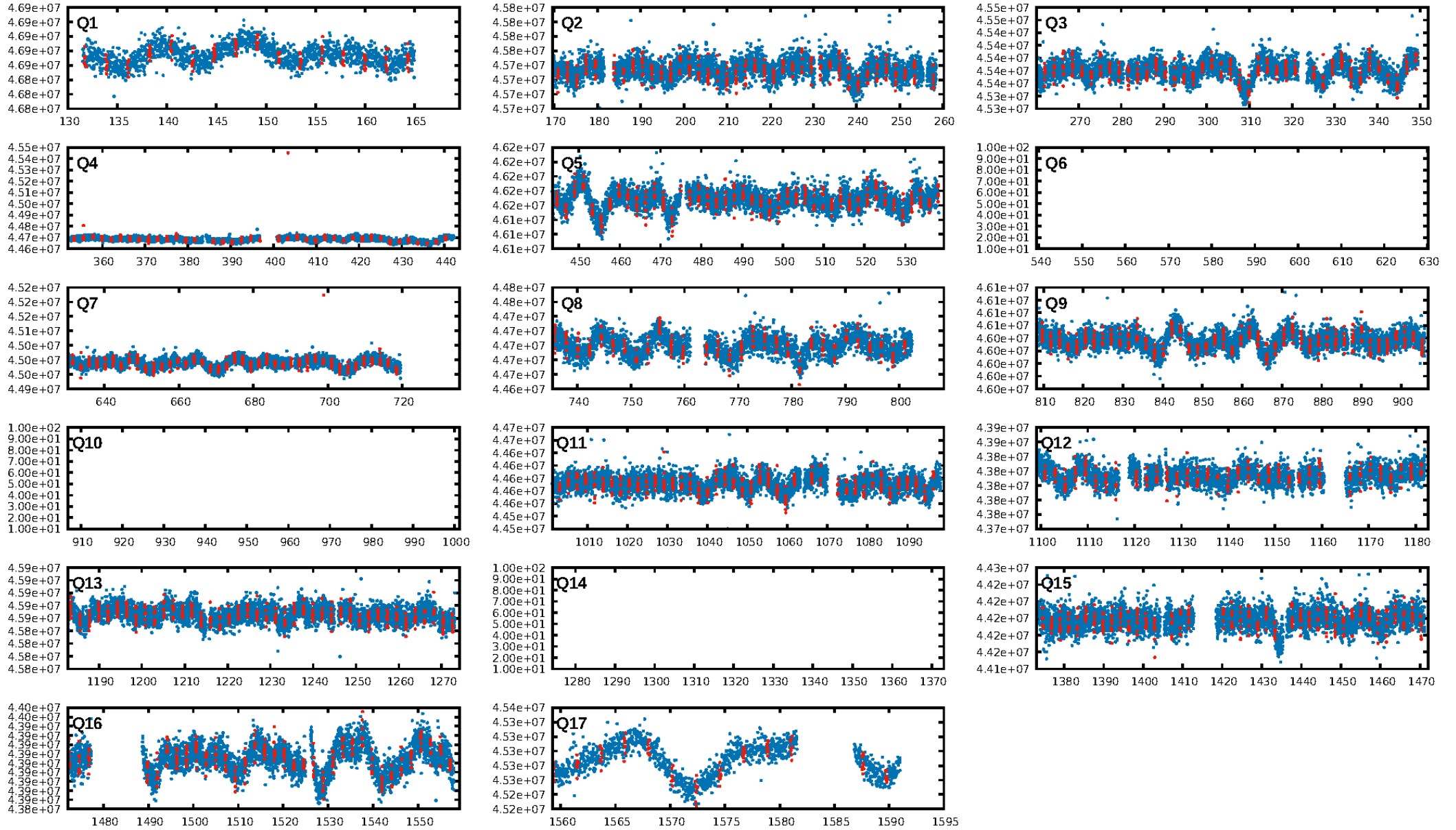
DV Fit Results:

Period = 2.17292 [0.00001] d
Epoch = 131.7323 [0.0023] BKJD
Rp/R* = 0.0094 [0.0045]
a/R* = 4.58 [10.50]
b = 0.84 [0.88]
Seff = 1220.01 [512.62]
Teq = 1507 [158] K
Rp = 1.08 [0.62] Re
a = 0.0340 [0.0093] AU
Ag = 8.60 [9.44] [0.80 σ]
Teff = 3990 [1031] K [2.38 σ]

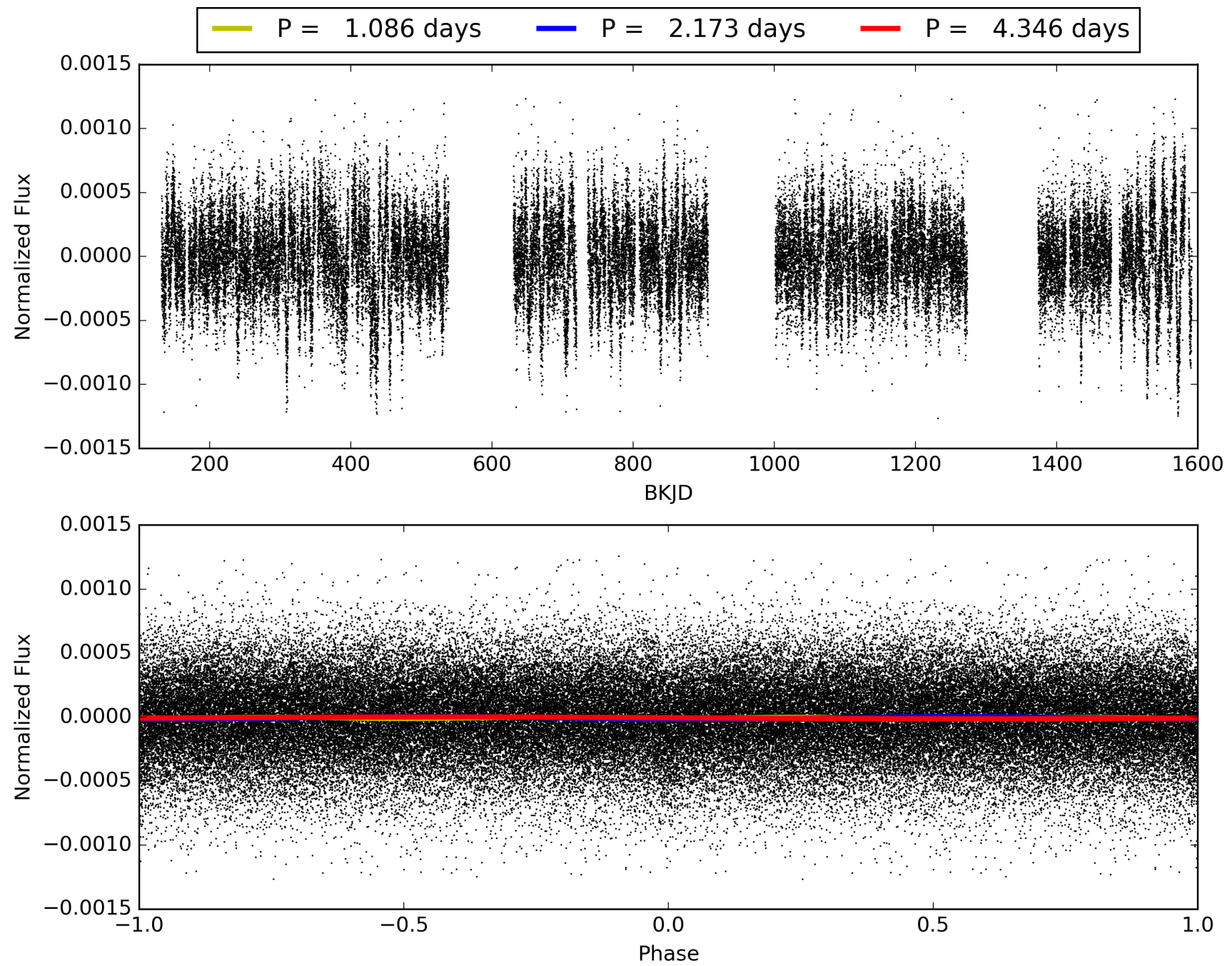
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.82e-36
RollingBand-fgt: 1.00 [469/469]
GhostDiagnostic-chr: 1.491
Centroid-sig: 61.2%
Centroid-so: 0.755 arcsec [0.89 σ]
OotOffset-rm: 1.075 arcsec [1.73 σ]
KicOffset-rm: 1.036 arcsec [1.66 σ]
OotOffset-st: 1/3/4/5 [13]
KicOffset-st: 1/3/4/5 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004935172-01, PDC Light Curves

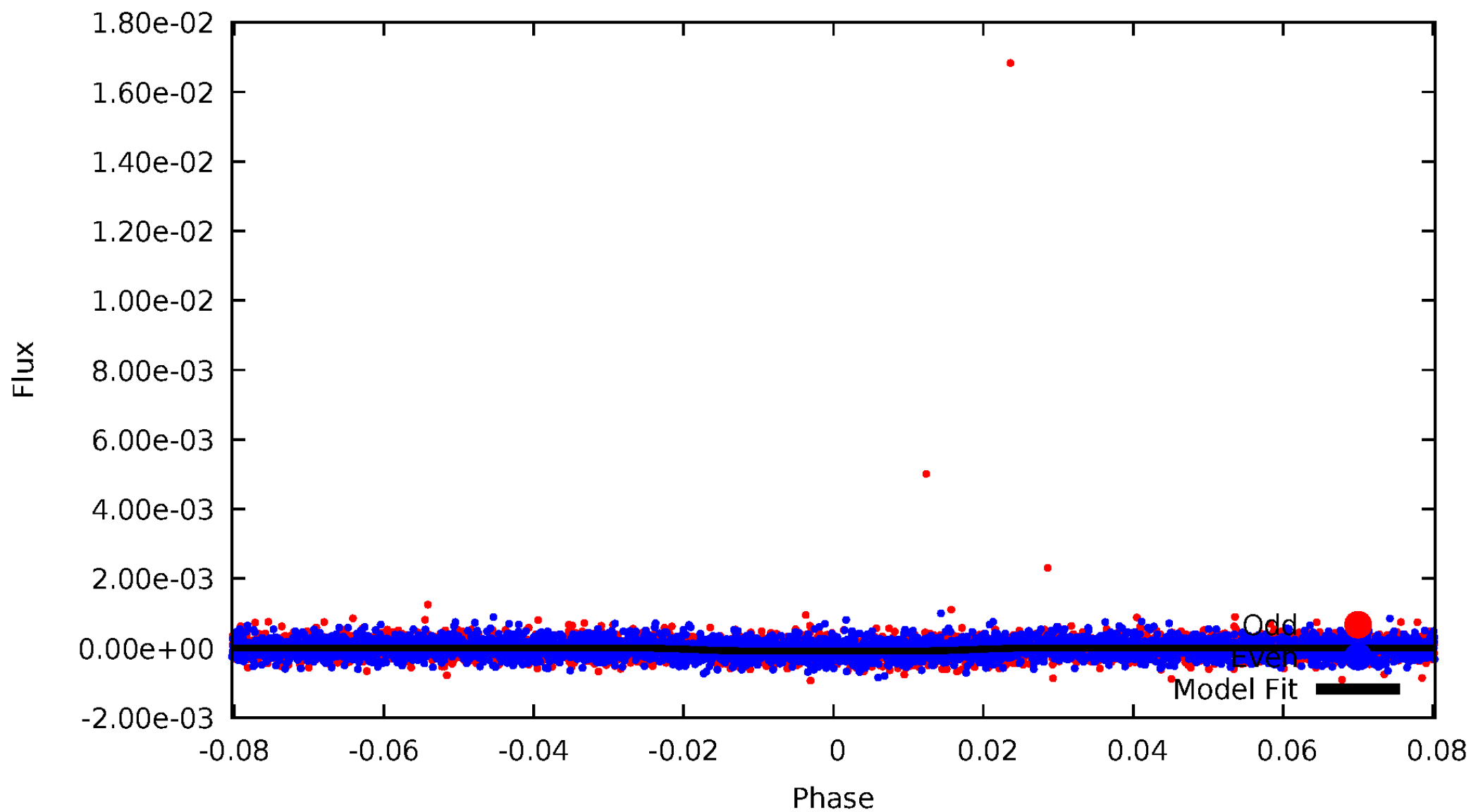


TCE 004935172-01



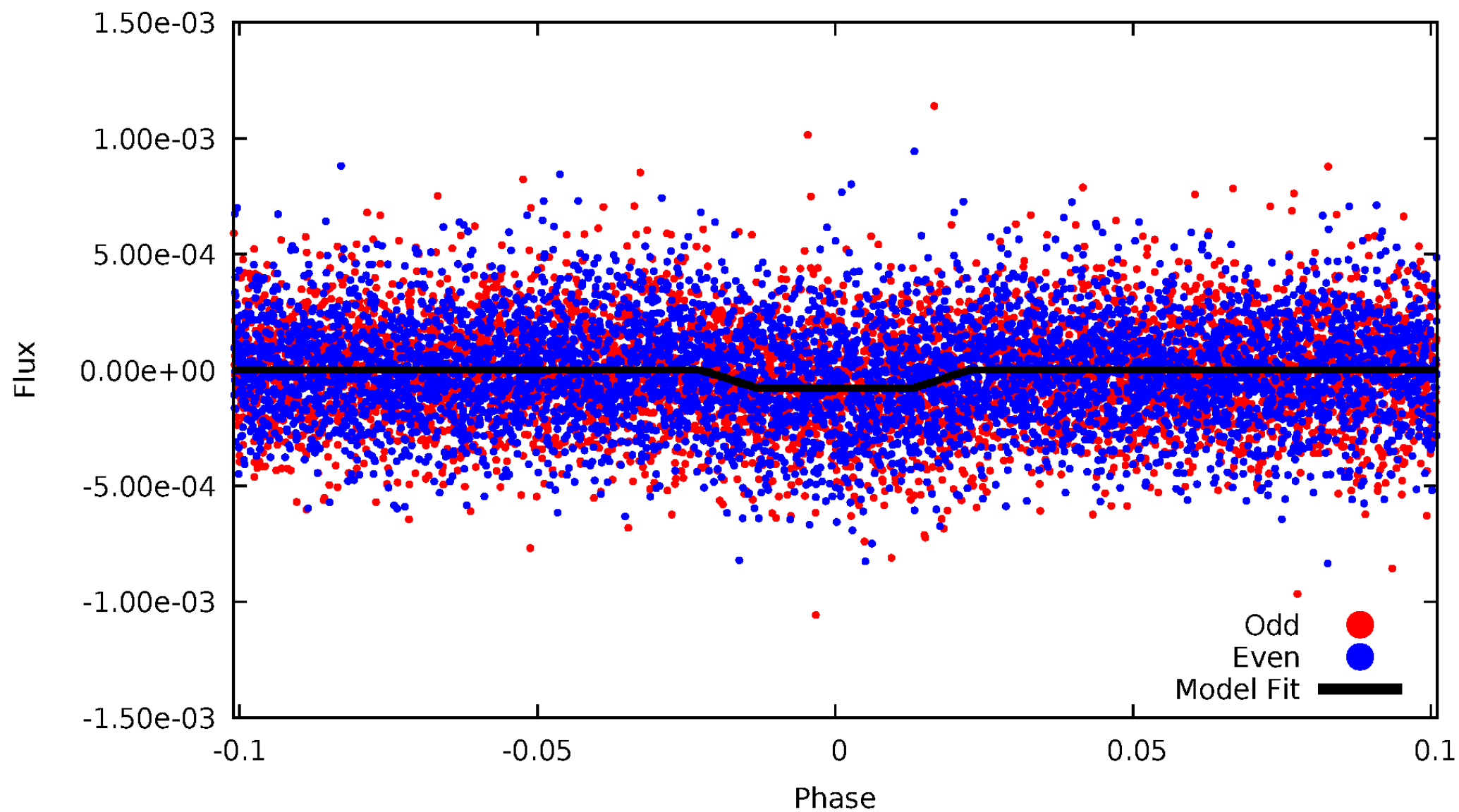
DV Odd/Even

TCE 004935172-01

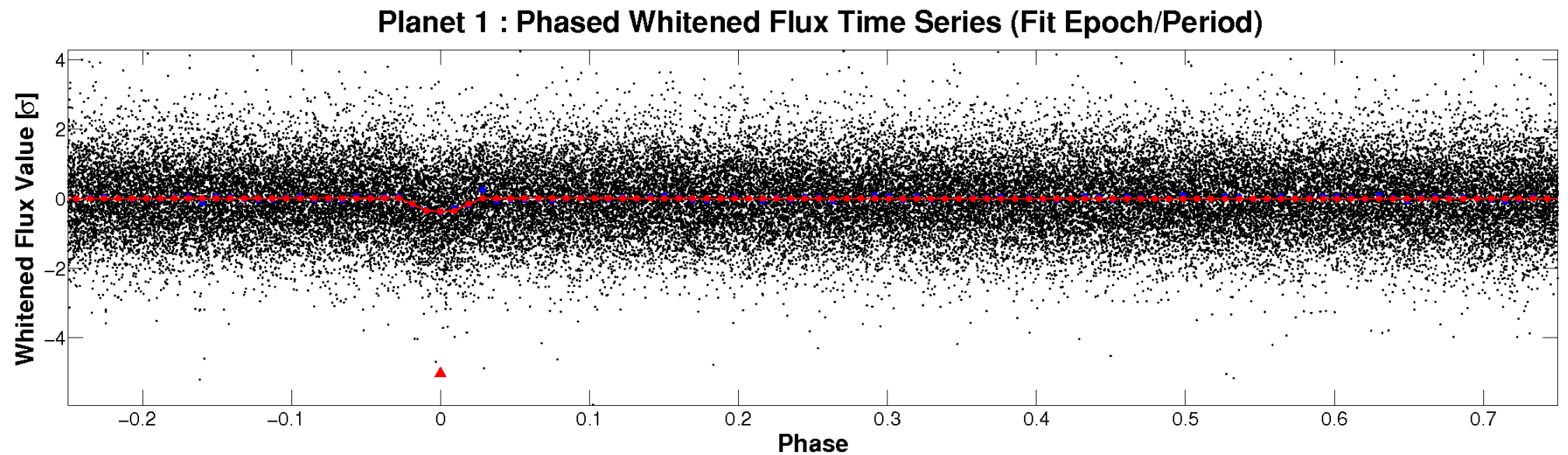
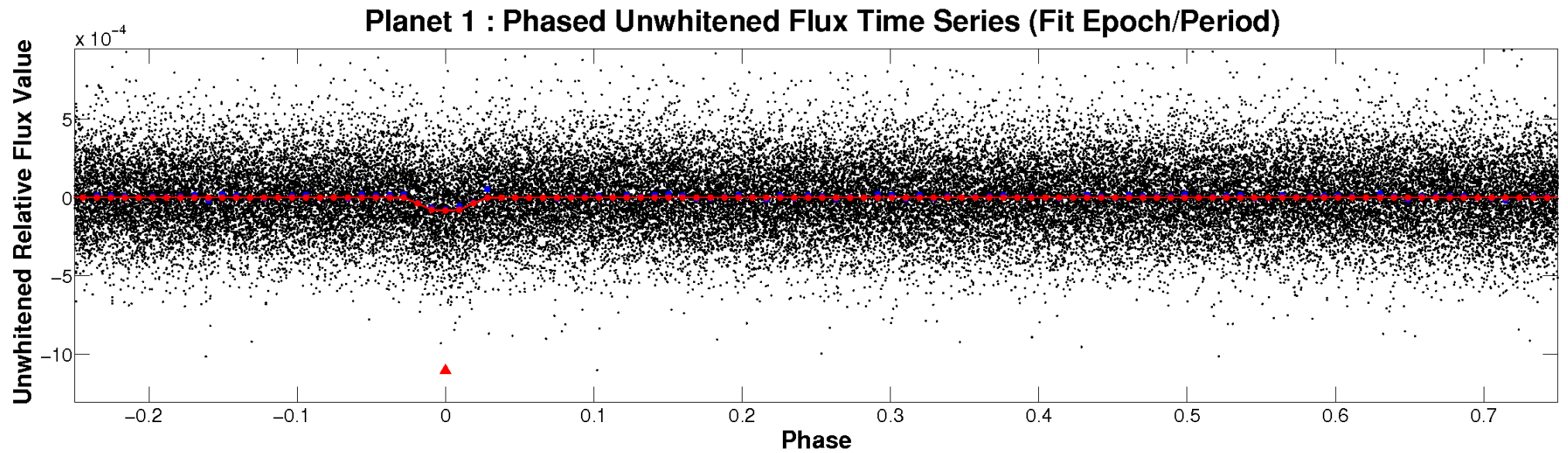


ALT Odd/Even

TCE 004935172-01

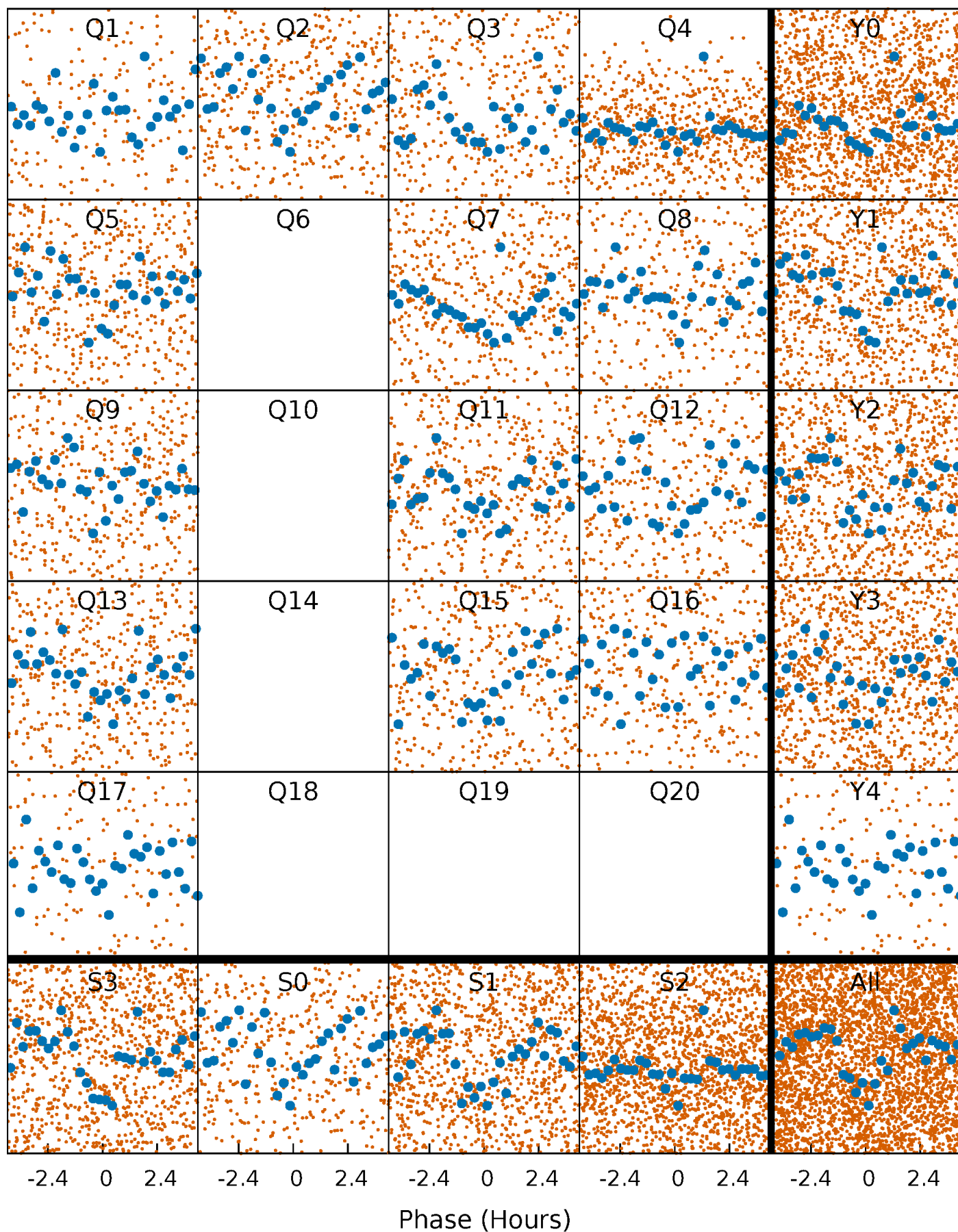


Non-Whitened Vs. Whitened Light Curve



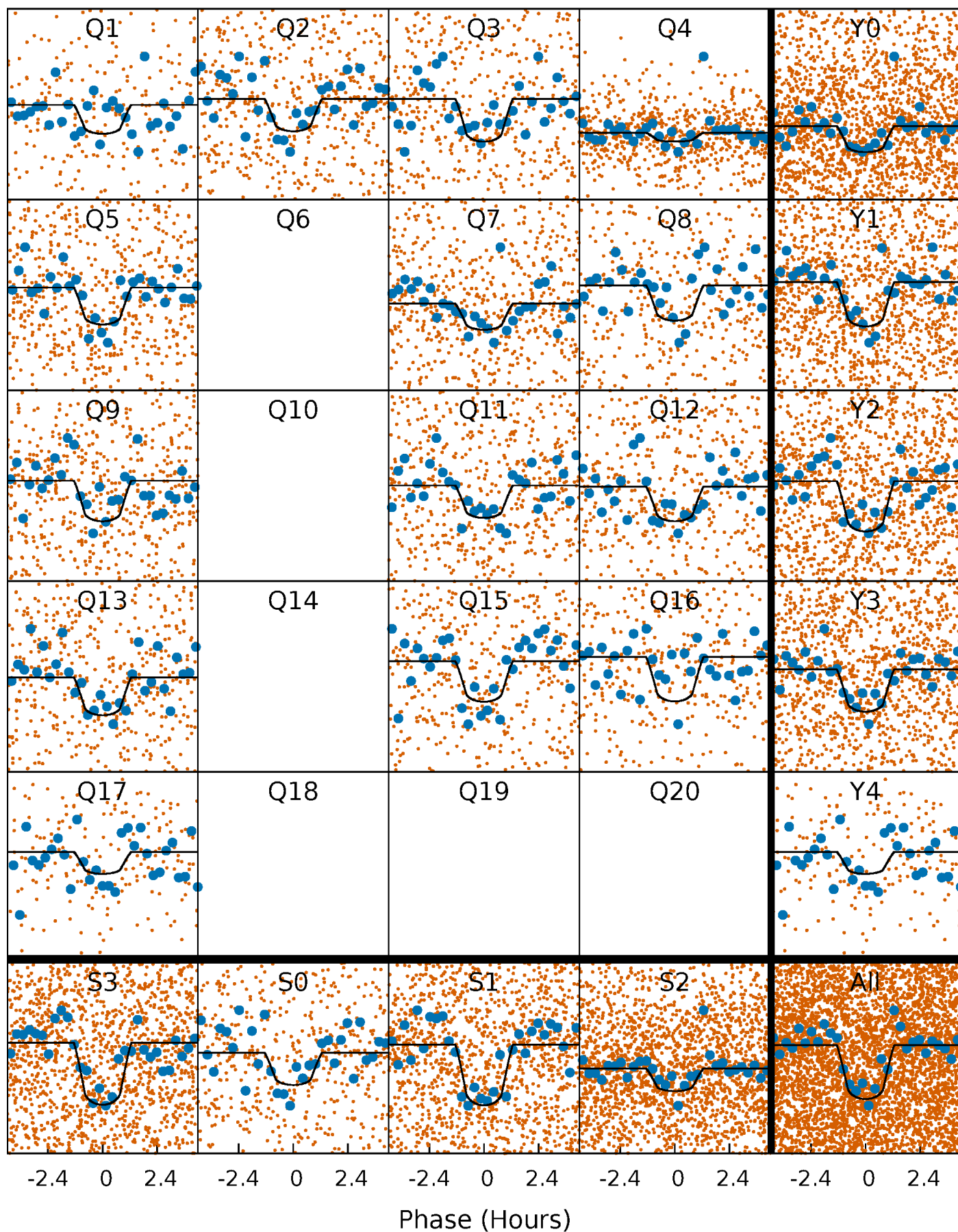
PDC Quarter-Phased Transit Curves

TCE 004935172-01 P= 2.172917 Days $T_0=131.732312$ (BKJD)



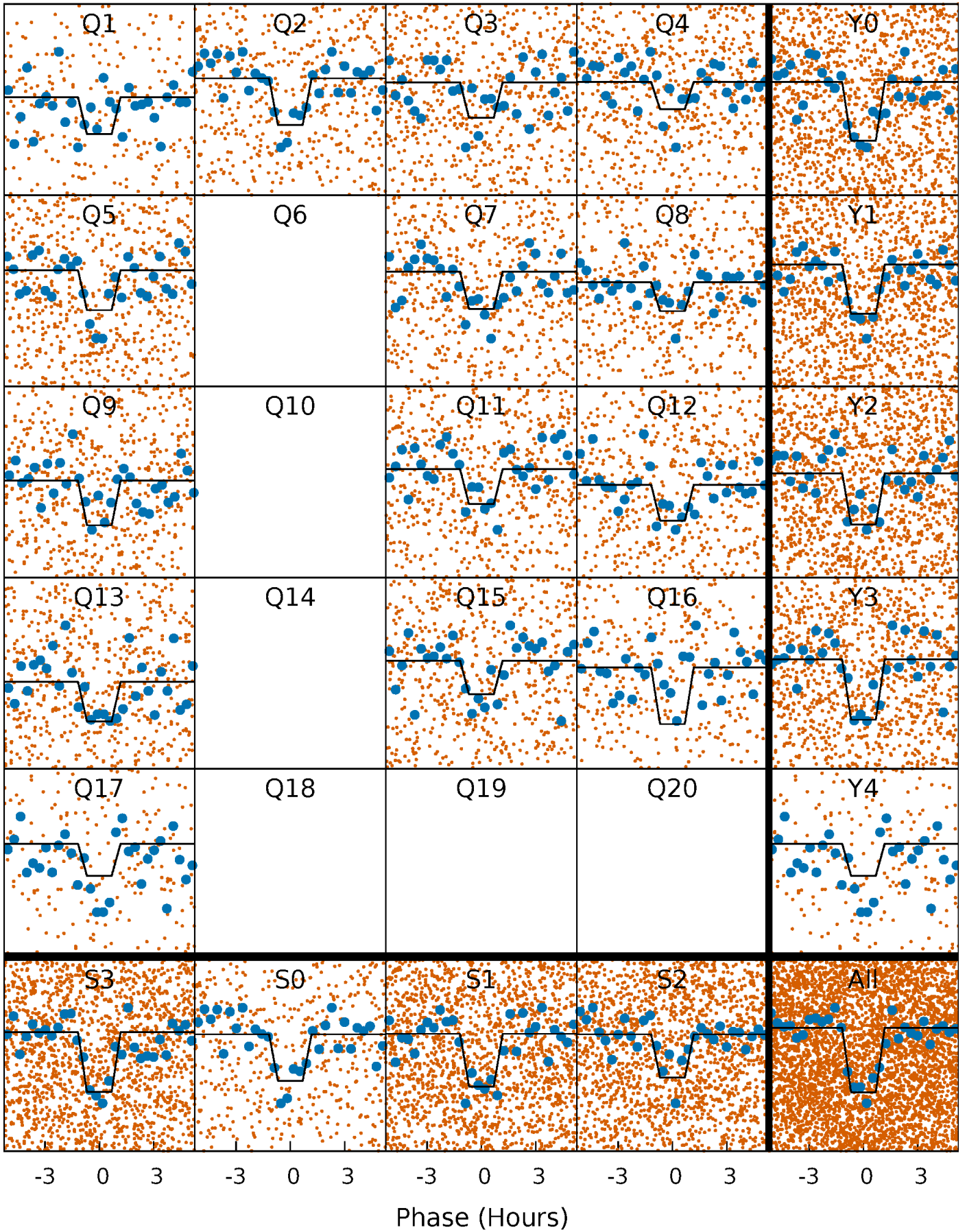
DV Quarter-Phased Transit Curves

TCE 004935172-01 P= 2.172917 Days $T_0=131.732312$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

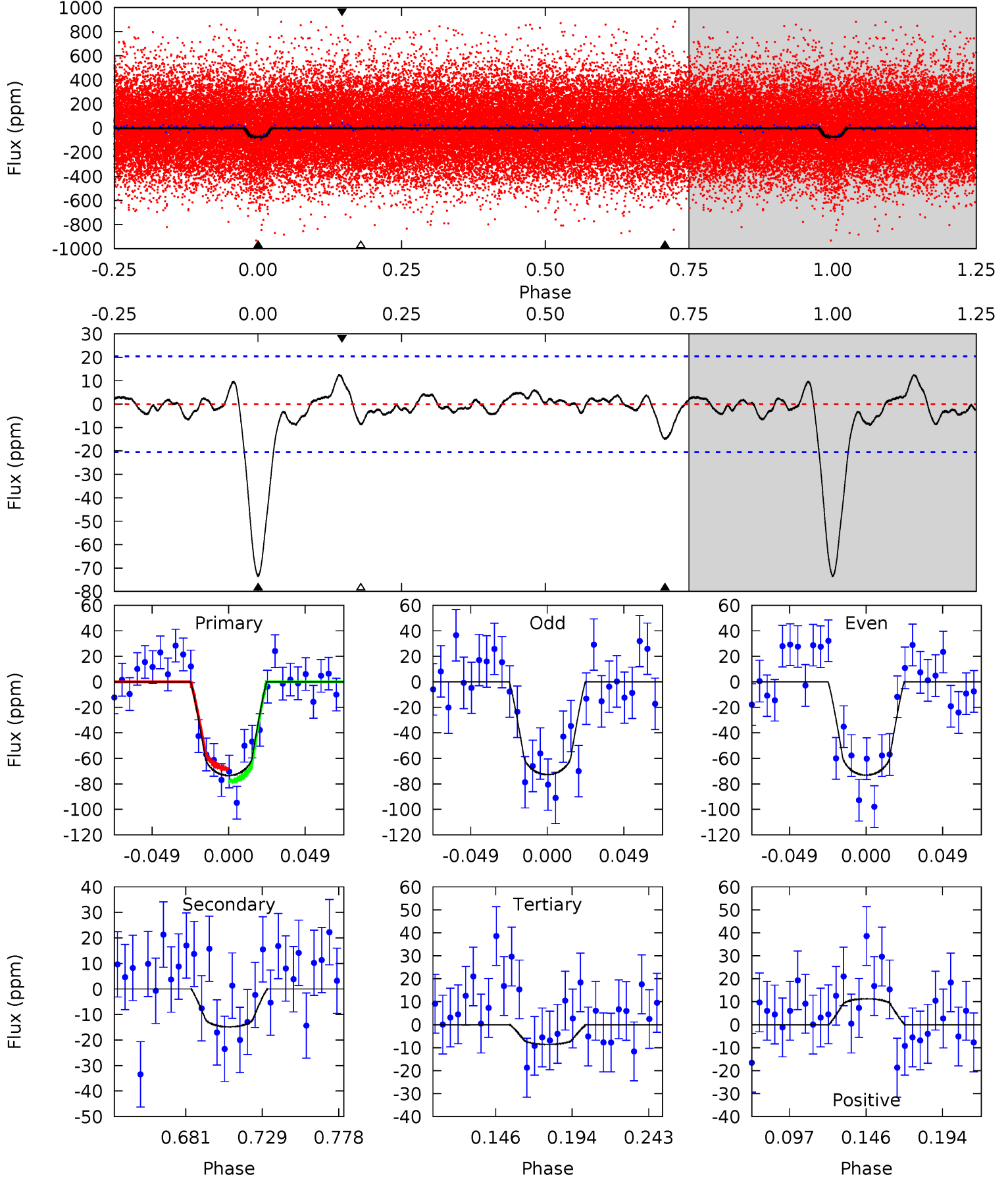
TCE 004935172-01 P= 2.172904 Days $T_0=131.735800$ (BKJD)



DV Model-Shift Uniqueness Test

004935172-01, P = 2.172917 Days, E = 129.559395 Days

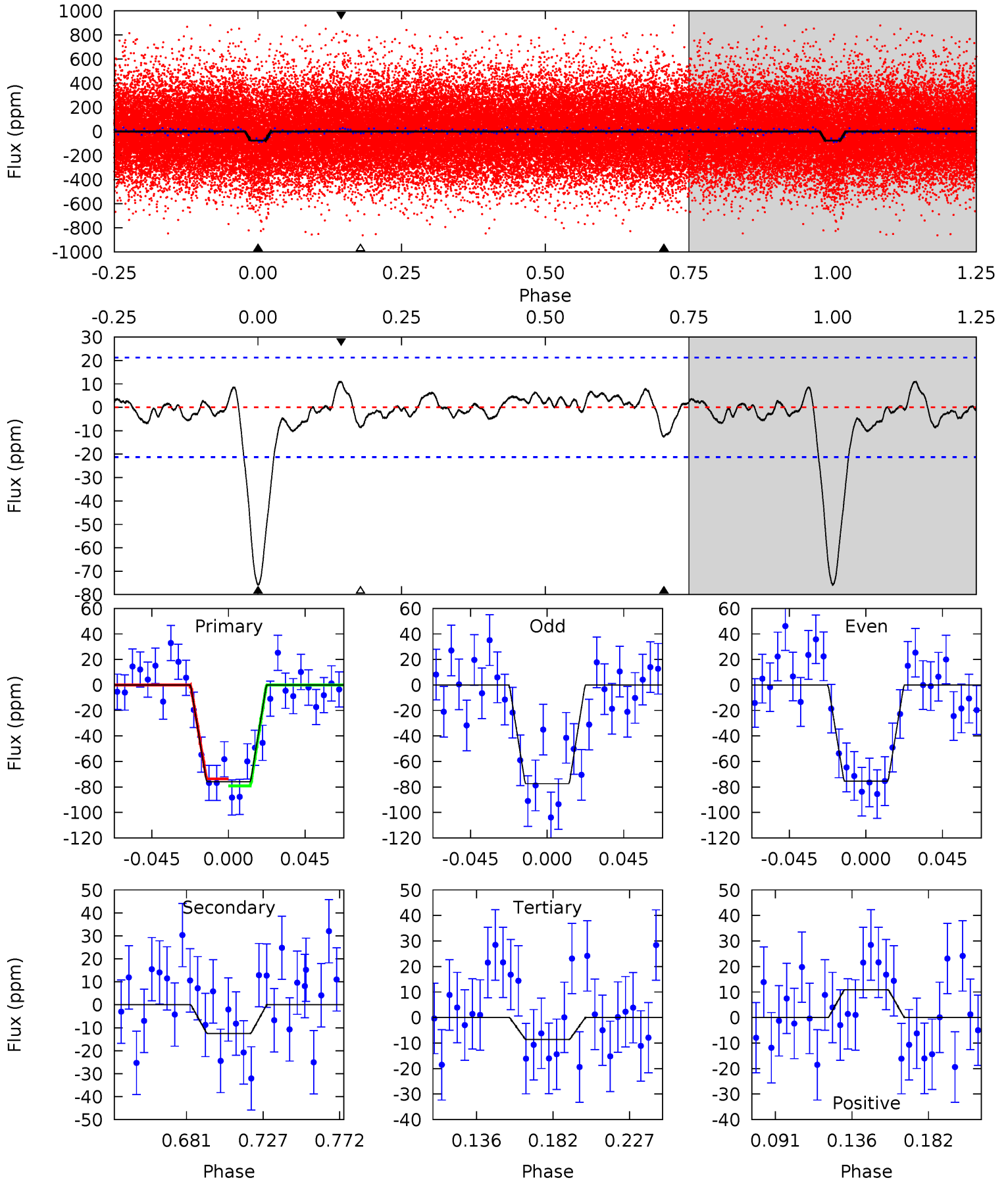
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	3.42	1.97	2.60	4.71	1.97	0.83	15.0	14.3	1.45	0.82	0.05	0.87	0.14	1.15



Alt Model-Shift Uniqueness Test

004935172-01, P = 2.172904 Days, E = 129.562896 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	2.78	1.92	2.43	4.73	2.00	0.87	15.0	14.4	0.86	0.35	0.23	0.89	0.13	0.59



Stellar Parameters For KIC 004935172

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6164^{+171}_{-214}	$4.446^{+0.054}_{-0.216}$	$-0.020^{+0.250}_{-0.300}$	$1.045^{+0.341}_{-0.114}$	$1.109^{+0.151}_{-0.151}$	$1.370^{+0.395}_{-0.729}$
	+3%/-3%	+1%/-5%	+1250%/-1500%	+33%/-11%	+14%/-14%	+29%/-53%
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 004935172-01 / KOI 2962.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-15 ± 4	$1.16^{+0.54}_{-0.52}$	2151^{+159}_{-102}	4101^{+1174}_{-542}	$6.721^{+17.106}_{-3.821}$
Alt.	-12 ± 4	$1.08^{+0.56}_{-0.48}$	2158^{+162}_{-110}	4116^{+1180}_{-621}	$6.704^{+15.946}_{-4.036}$

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

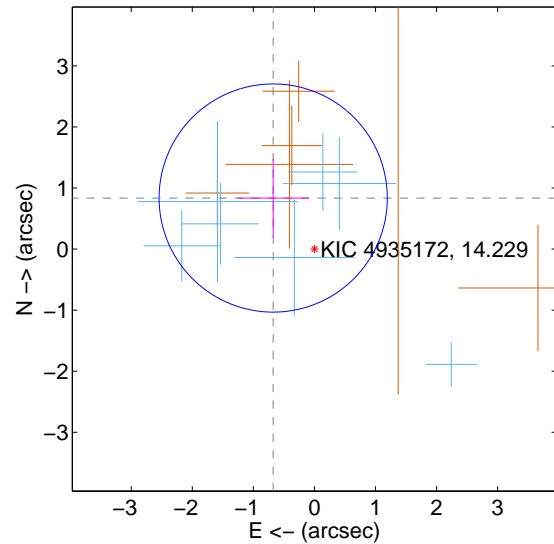
Supplemental centroid analysis for 004935172-01. Kepler magnitude: 14.23. Transit SNR 14.09

There are 7 quarters with good PRF difference image offsets

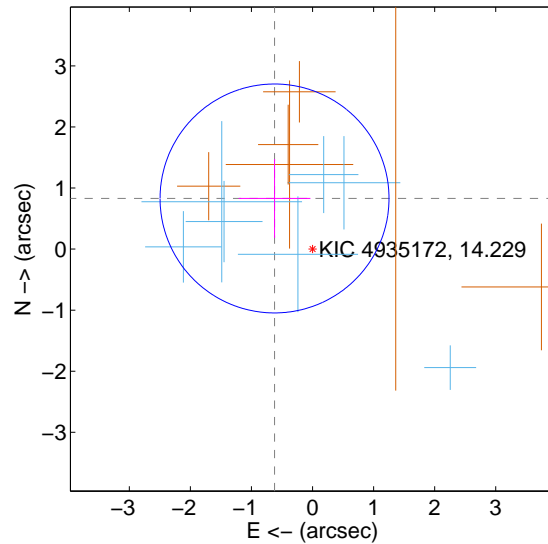
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.075 ± 0.623	1.73	0.675 ± 0.587	0.836 ± 0.645
PRF-fit source offset from KIC position	1.036 ± 0.625	1.66	0.622 ± 0.587	0.829 ± 0.645
photometric centroid source offset	0.76 ± 0.85	0.89	0.73 ± 0.85	0.18 ± 0.77

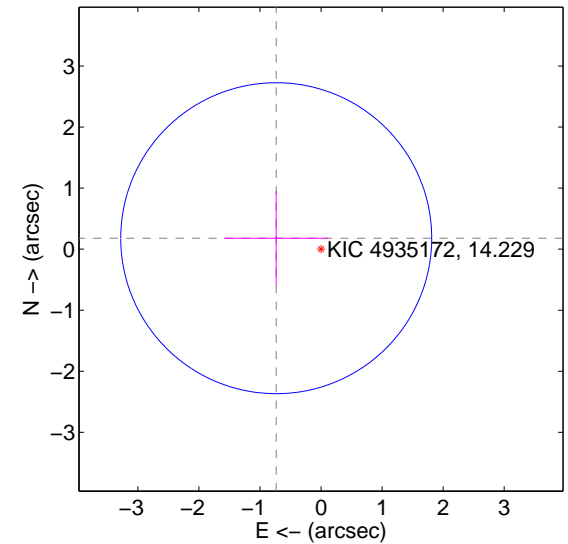
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

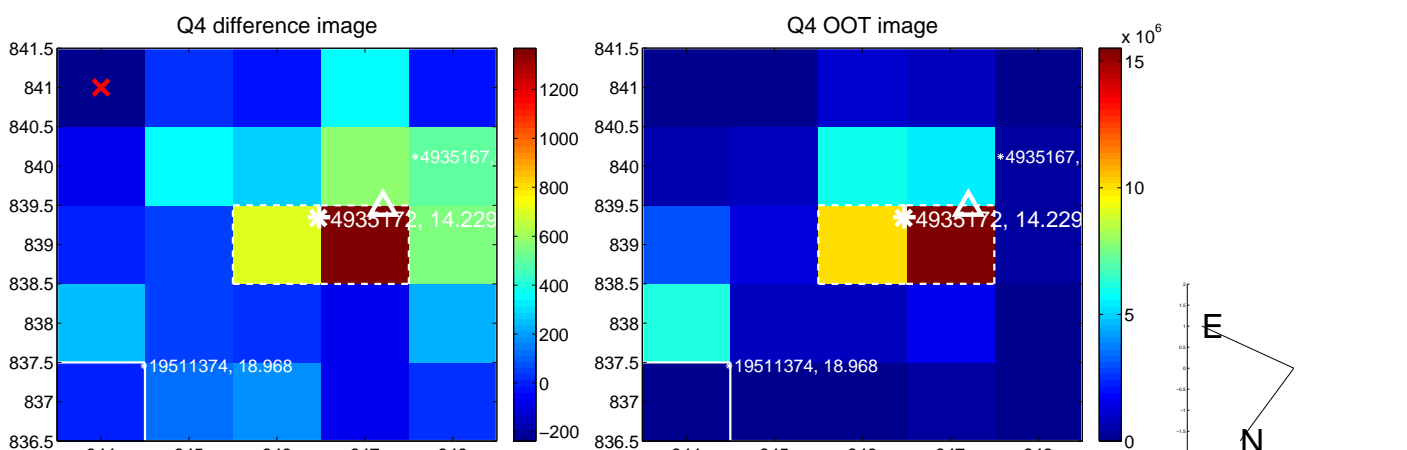
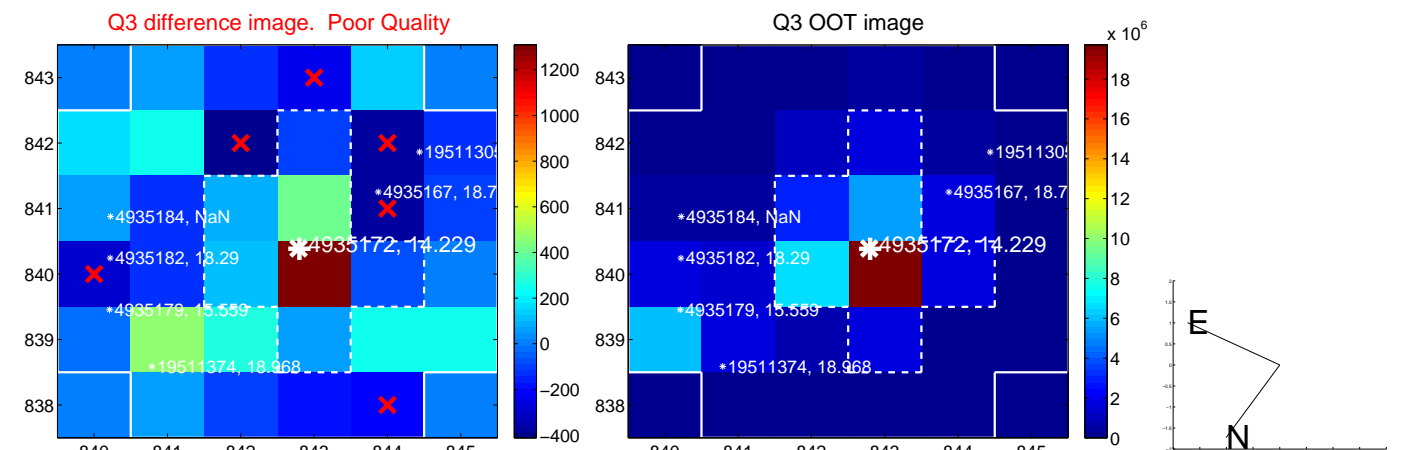
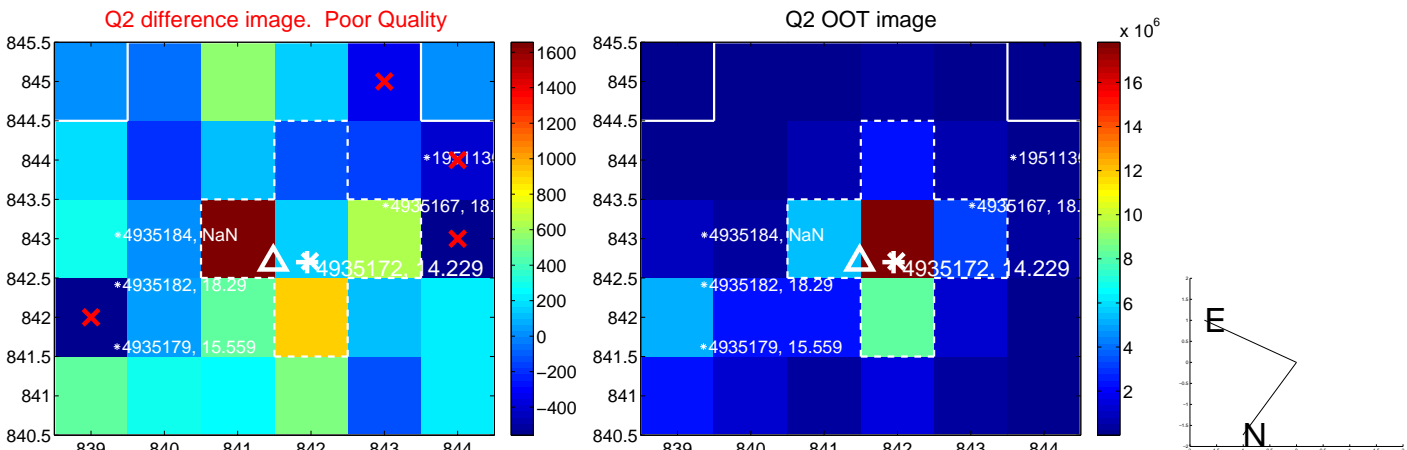
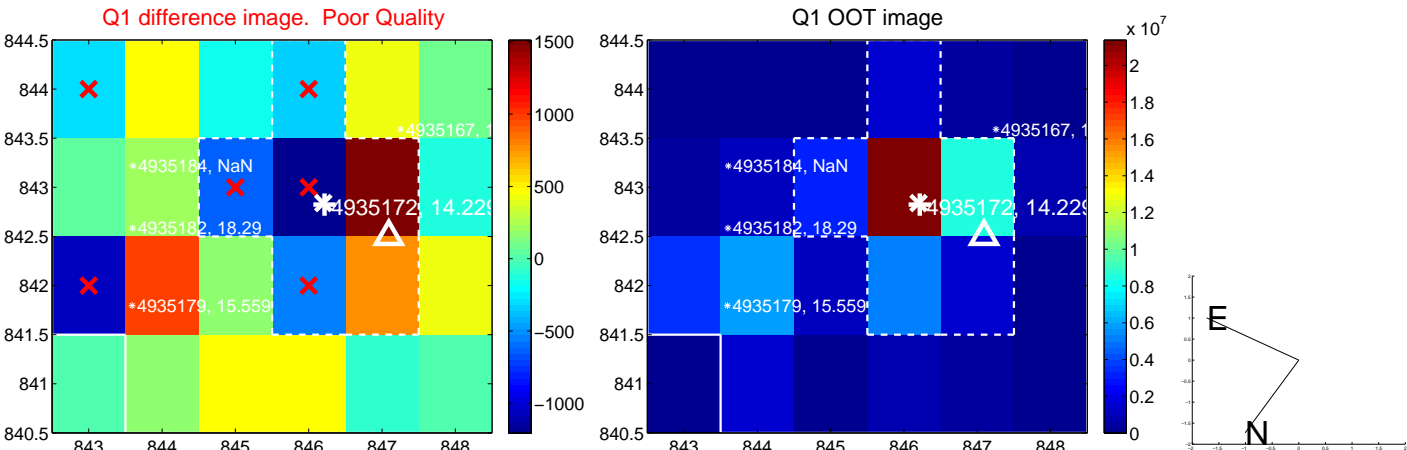


offset from photometric centroids

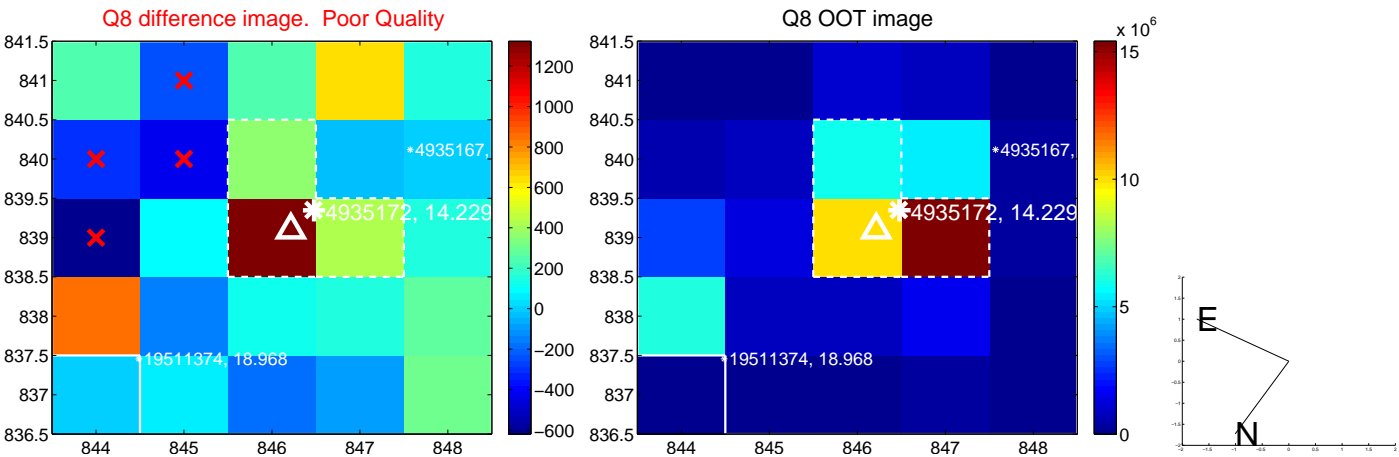
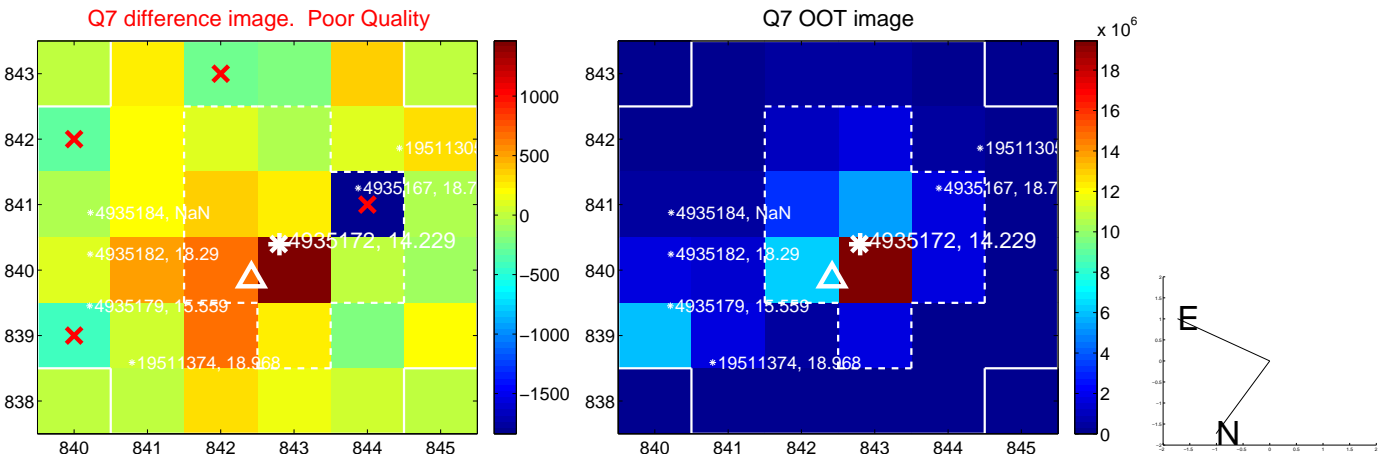
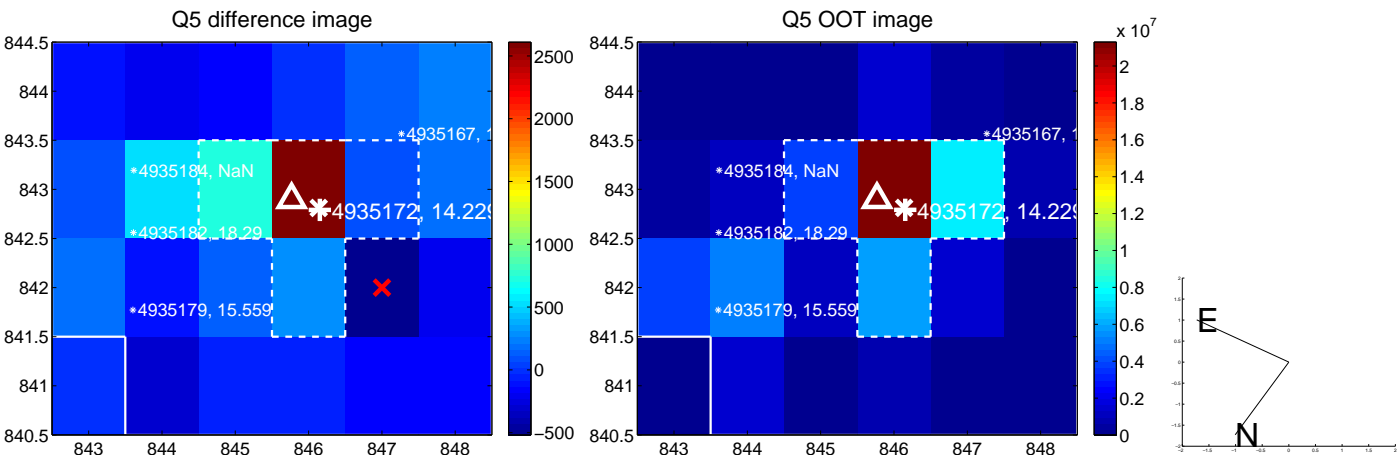


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

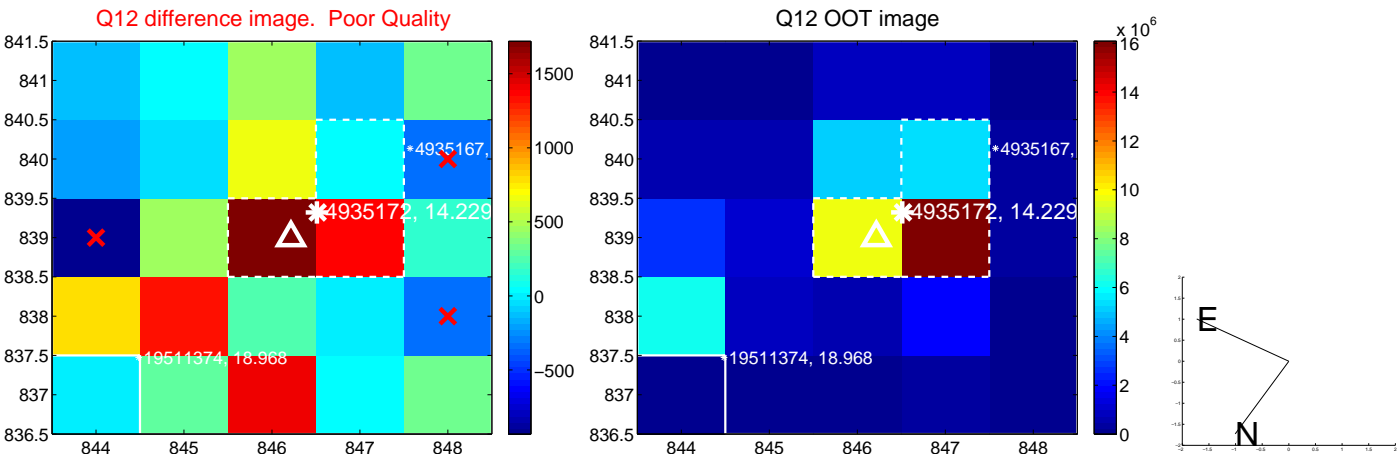
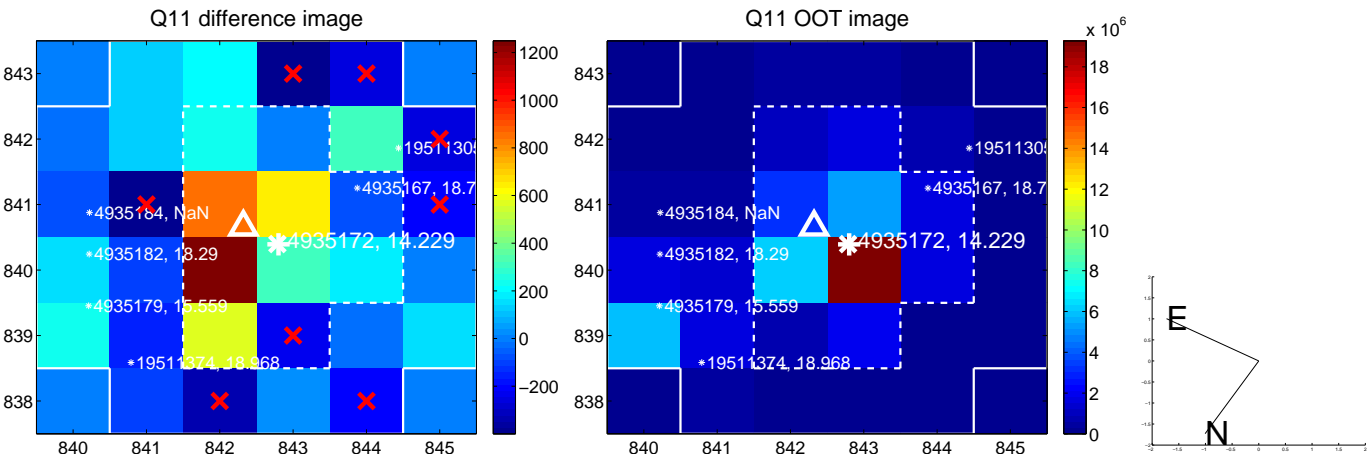
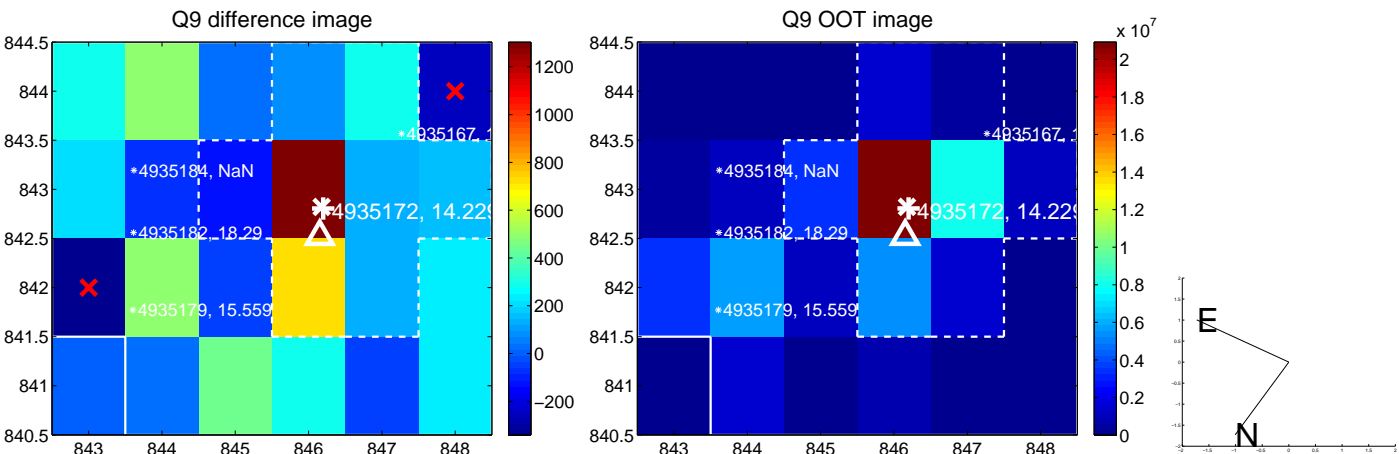
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



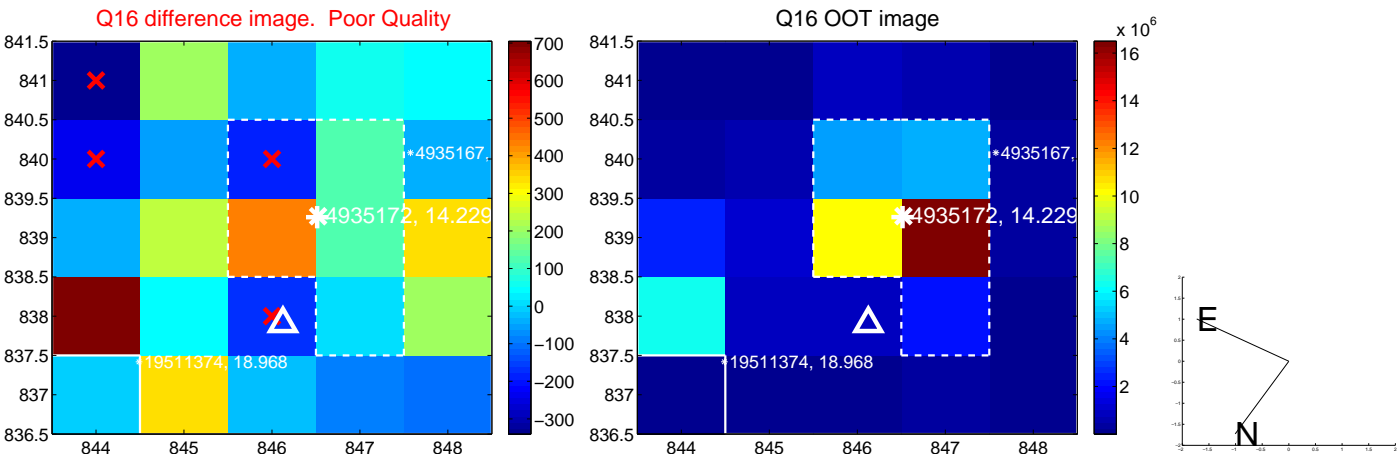
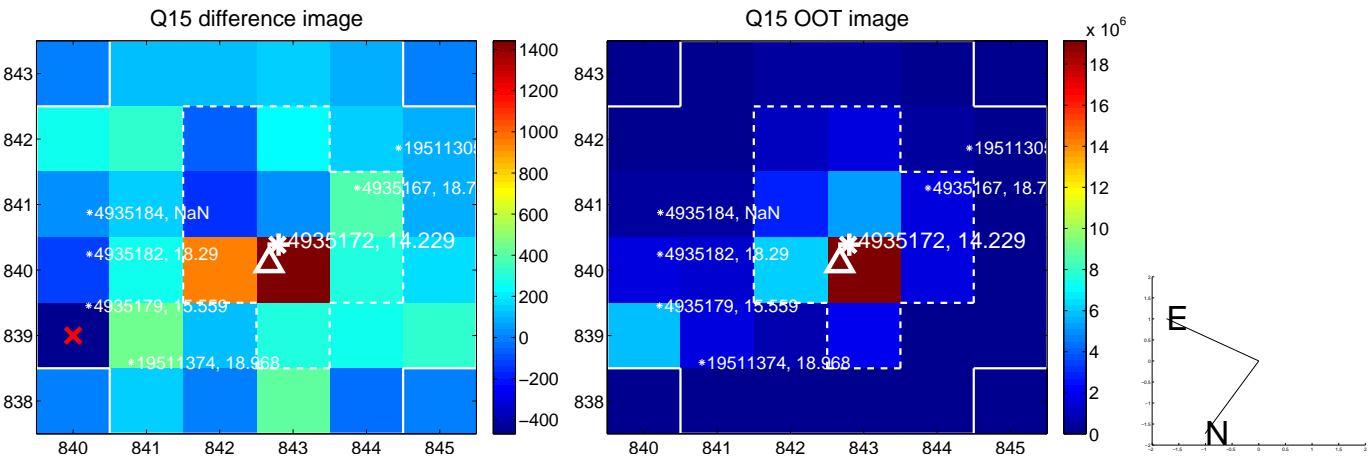
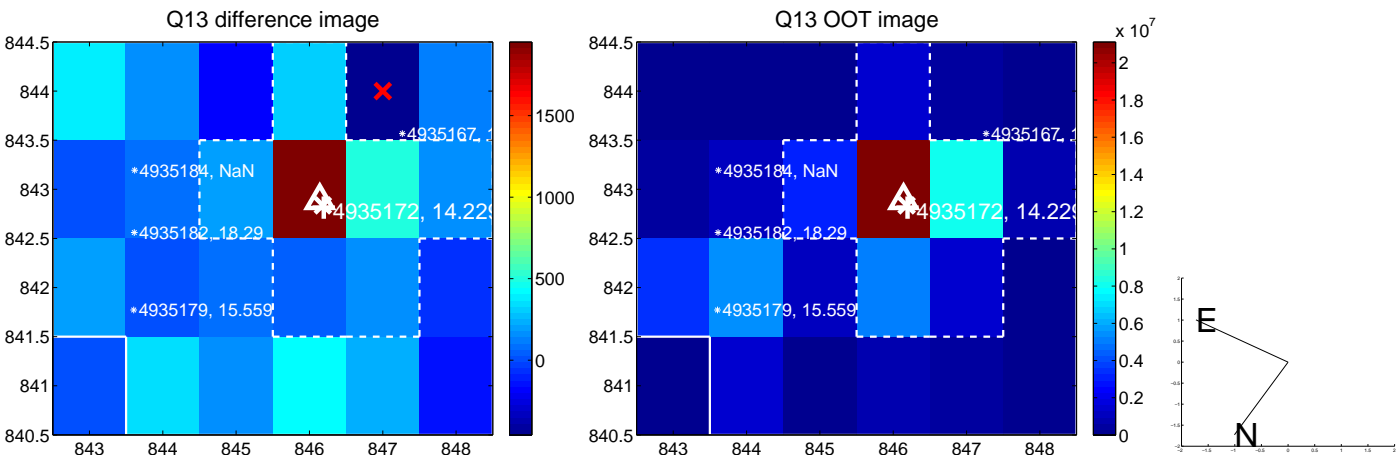
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



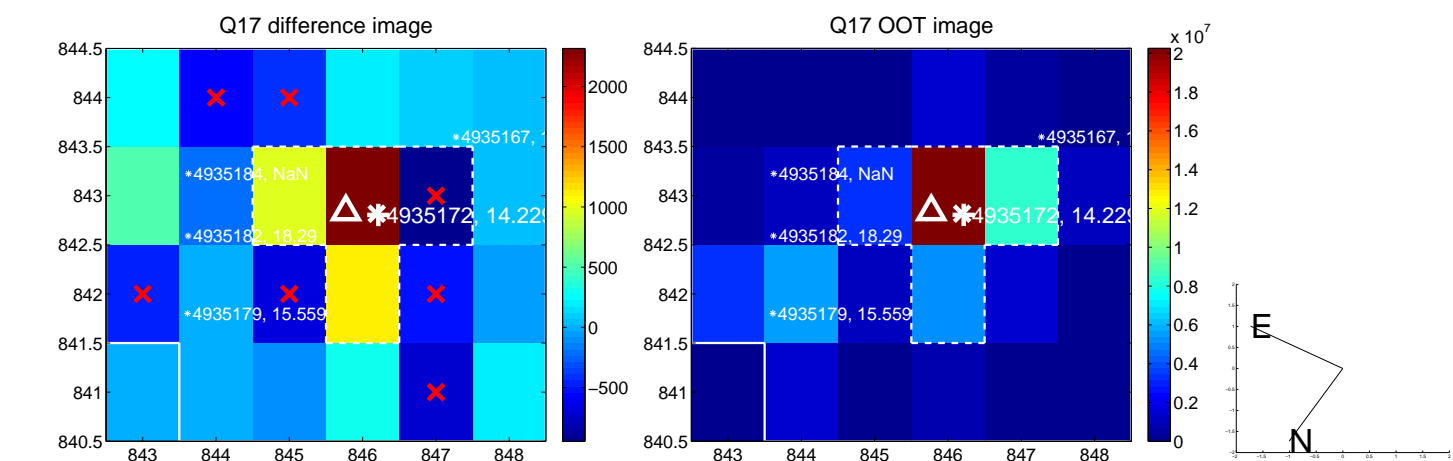
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



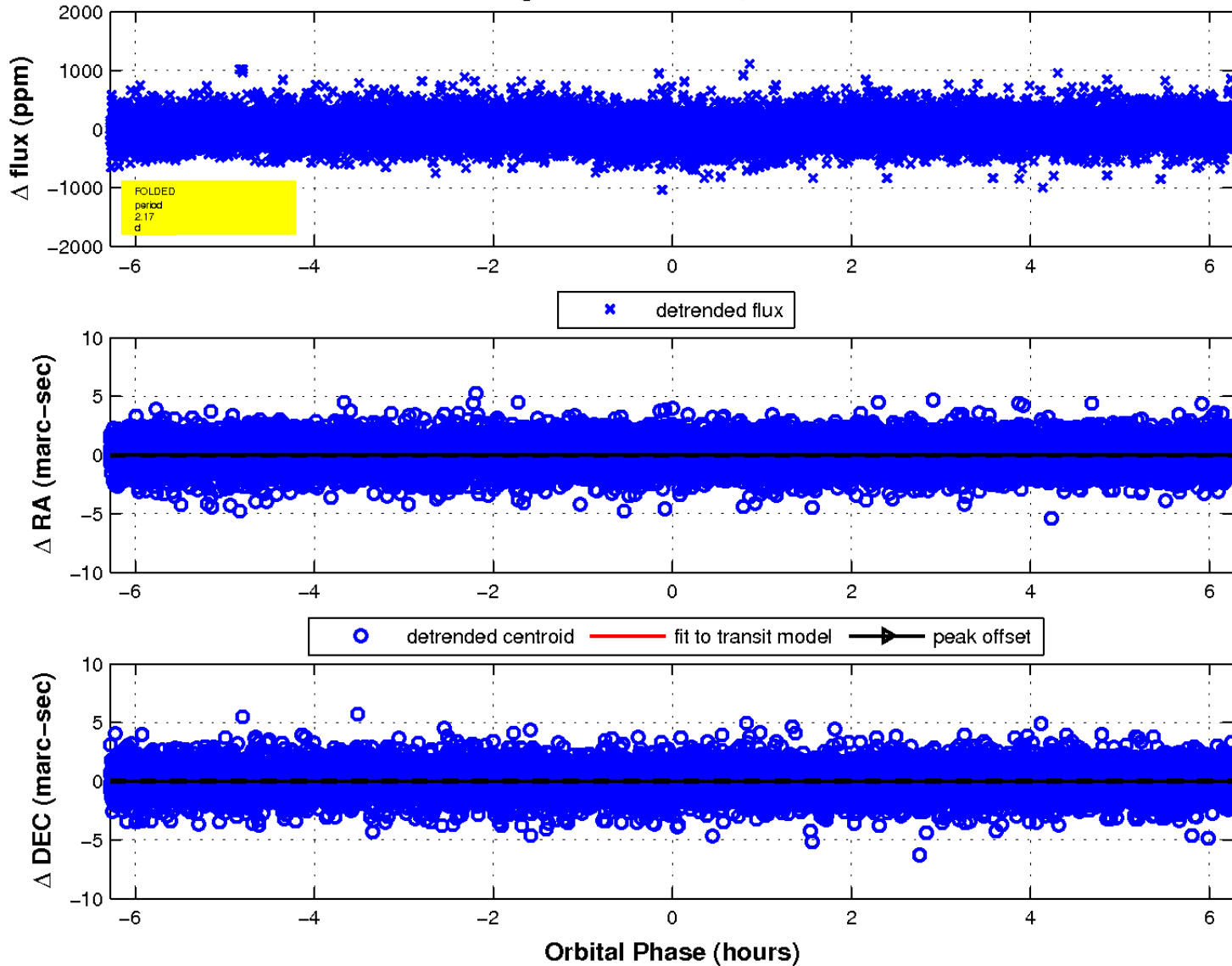
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

