

KIC 008934495

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})
008934495-01	OBS	0524.01	4.592383	135.267483	963.2	2.843	81.6	91.0	0.80	5351	3.16	172.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008934495-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

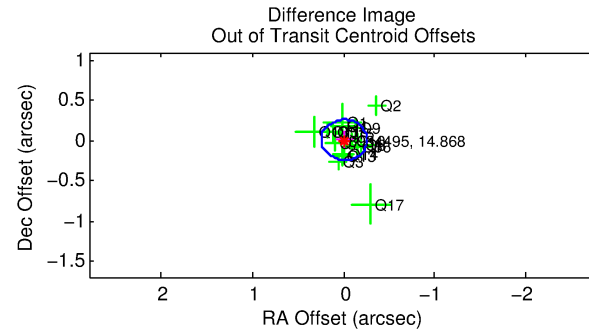
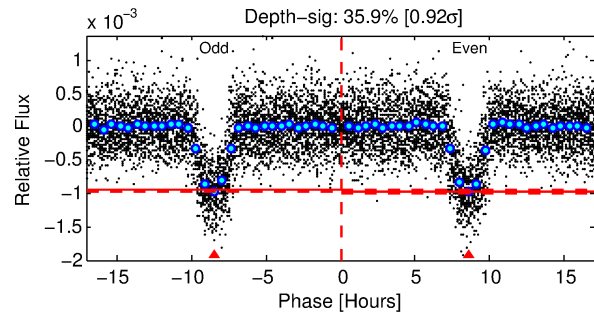
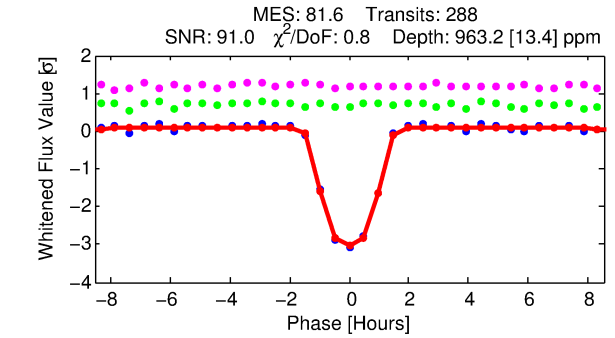
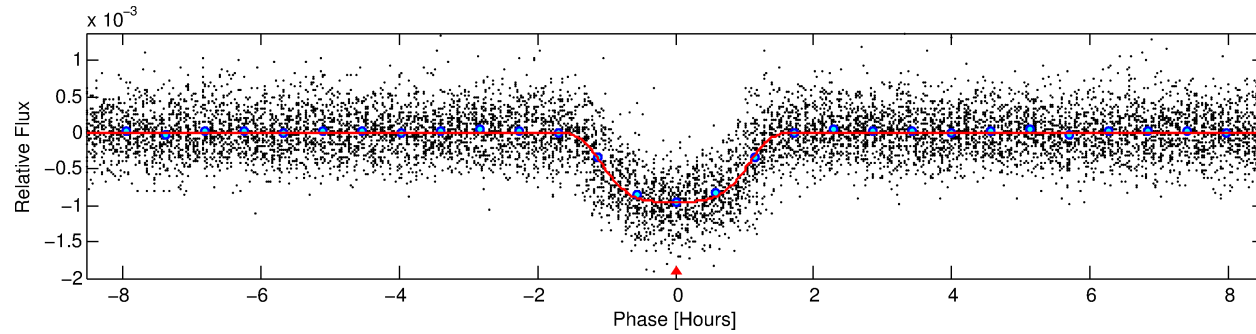
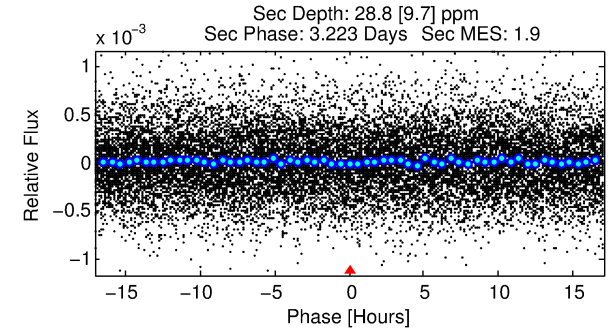
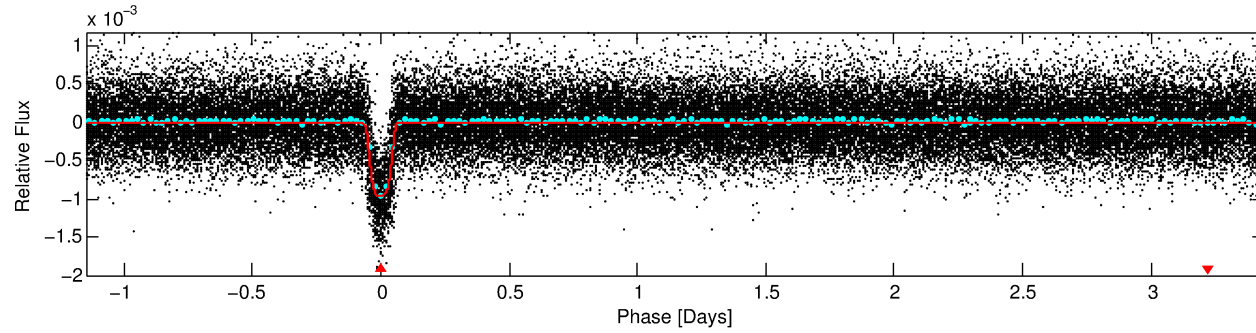
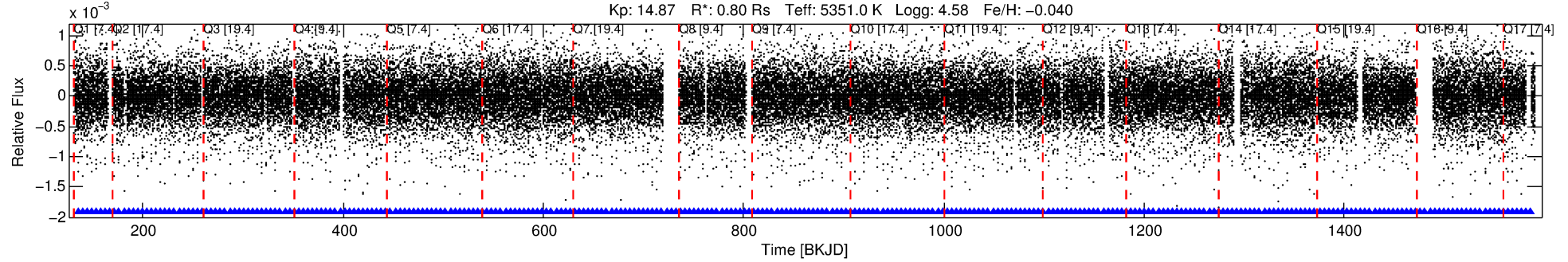
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008934495-01

No Significant Match Found

DV One-Page Summary

KIC: 8934495 Candidate: 1 of 1 Period: 4.592 d
KOI: K00524.01 Corr: 0.900



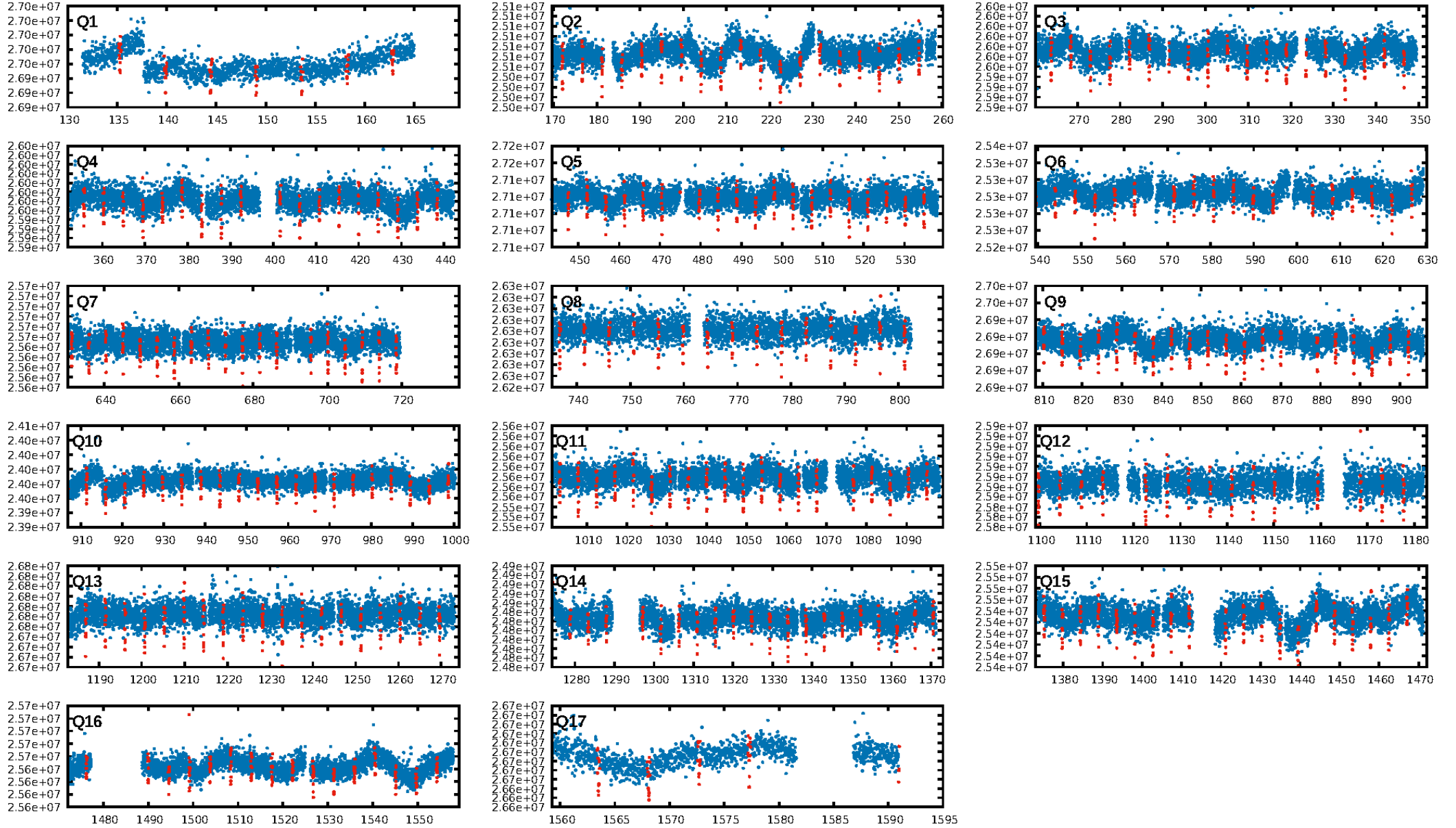
DV Fit Results:

Period = 4.59238 [0.00000] d
Epoch = 135.2675 [0.0006] BKJD
Rp/R* = 0.0363 [0.0006]
a/R* = 5.44 [0.26]
b = 0.94 [0.01]
Seff = 172.93 [43.20]
Teff = 925 [58] K
Rp = 3.16 [0.57] Re
a = 0.0519 [0.0078] AU
Ag = 4.27 [1.72] [1.90σ]
Teffp = 2055 [184] K [5.86σ]

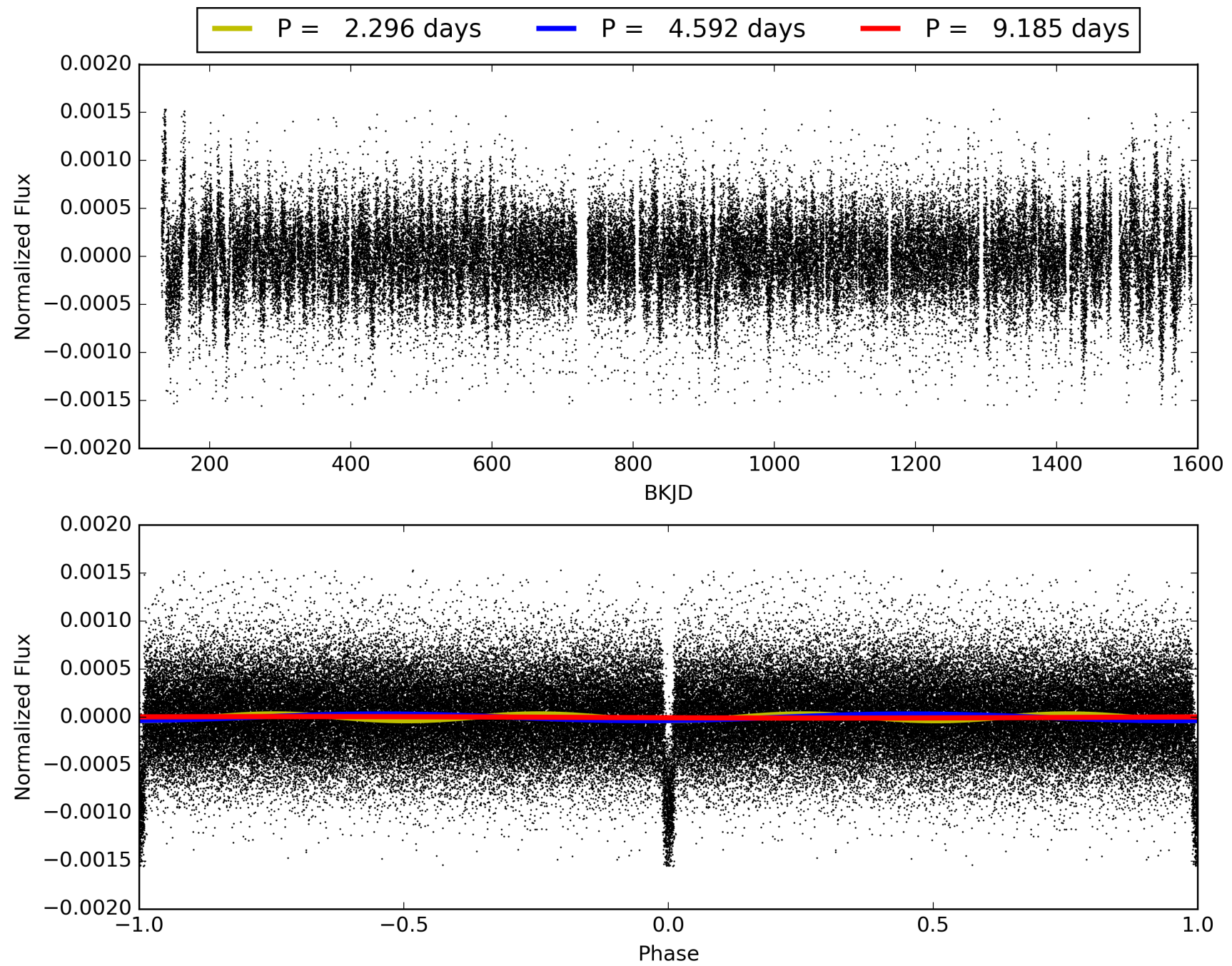
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [276/276]
GhostDiagnostic-chr: 4.723
Centroid-sig: 12.2%
Centroid-so: 0.434 arcsec [2.73σ]
OotOffset-rm: 0.012 arcsec [0.14σ]
KicOffset-rm: 0.352 arcsec [4.07σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008934495-01, PDC Light Curves

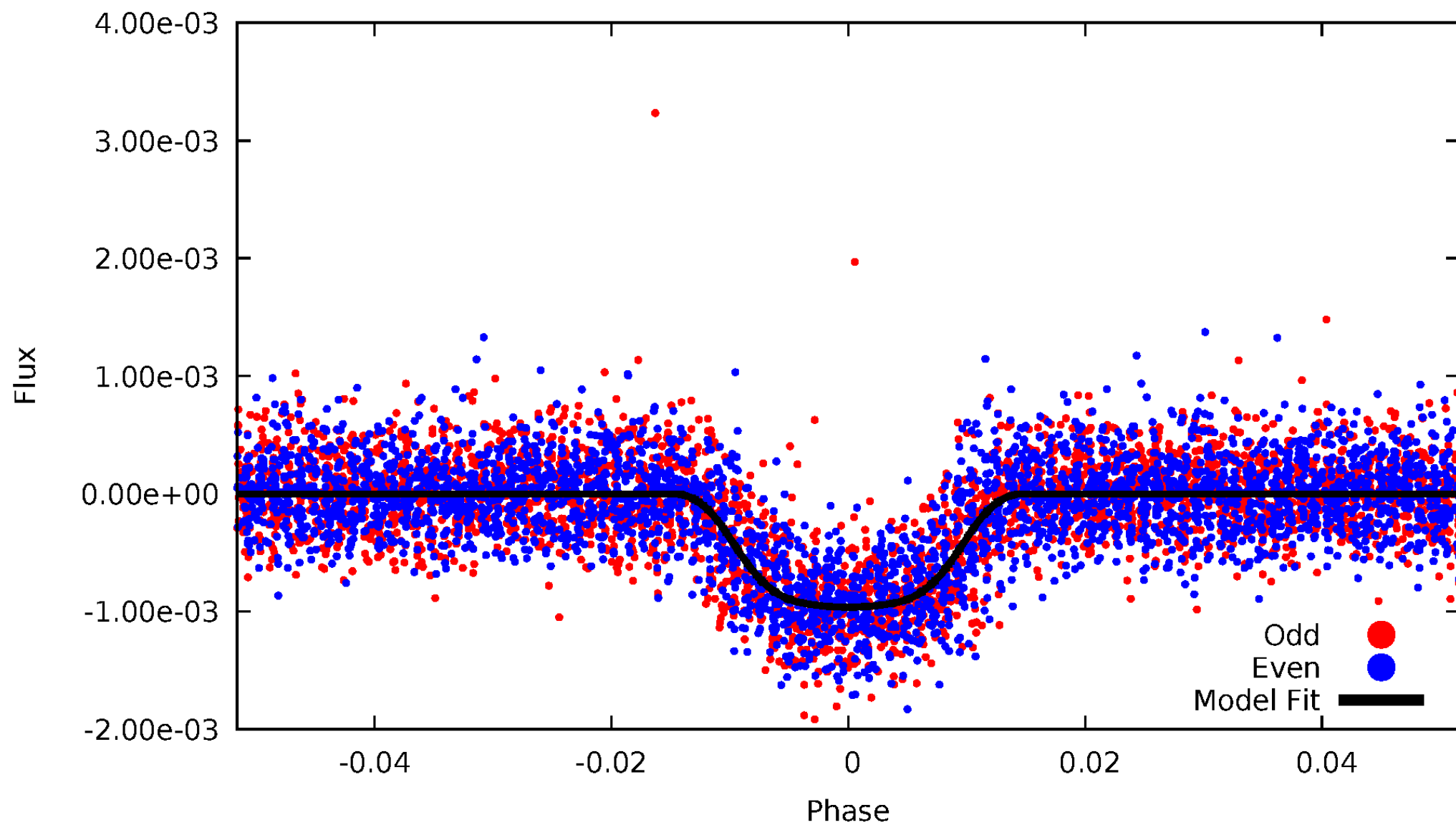


TCE 008934495-01



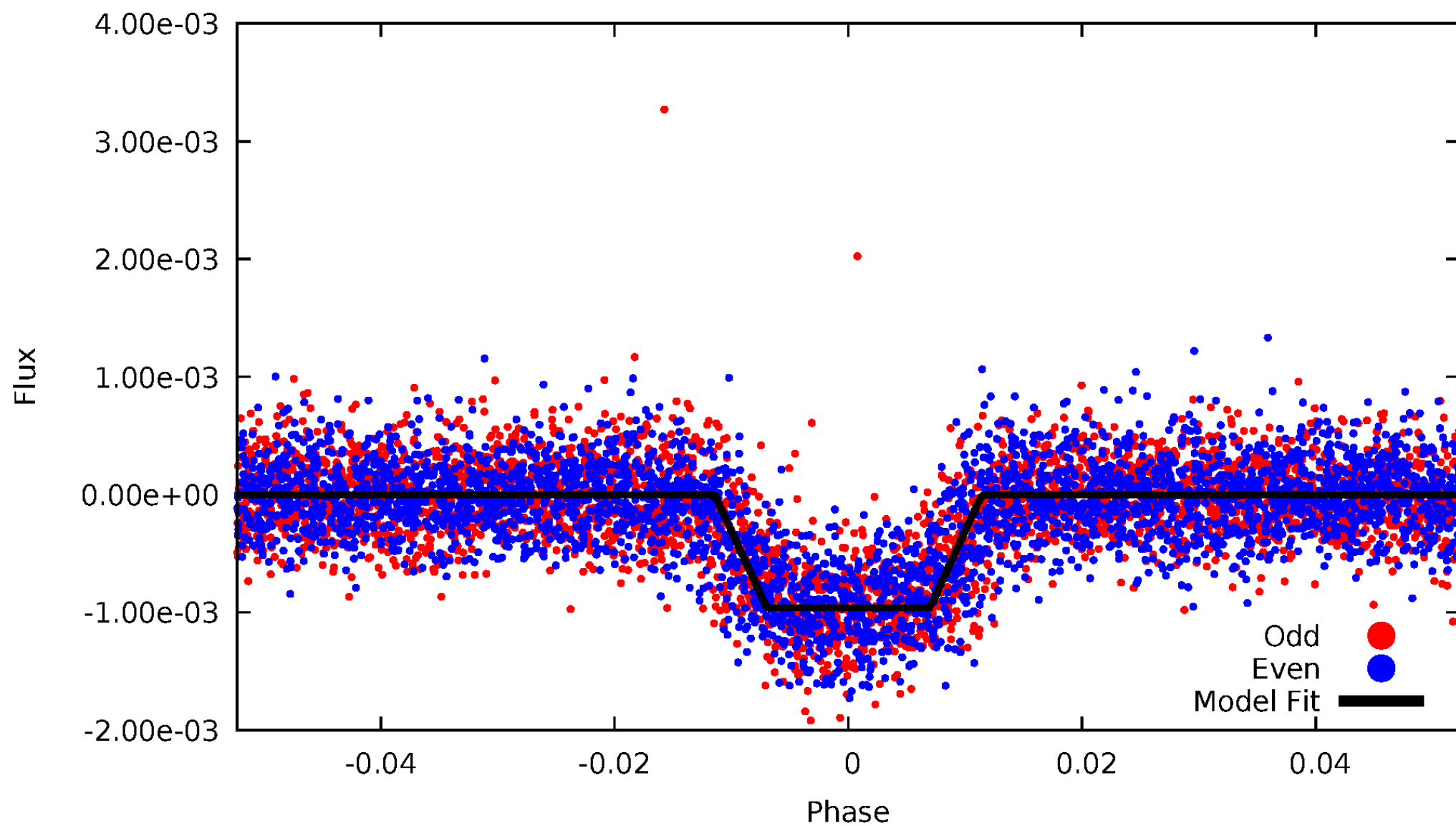
DV Odd/Even

TCE 008934495-01



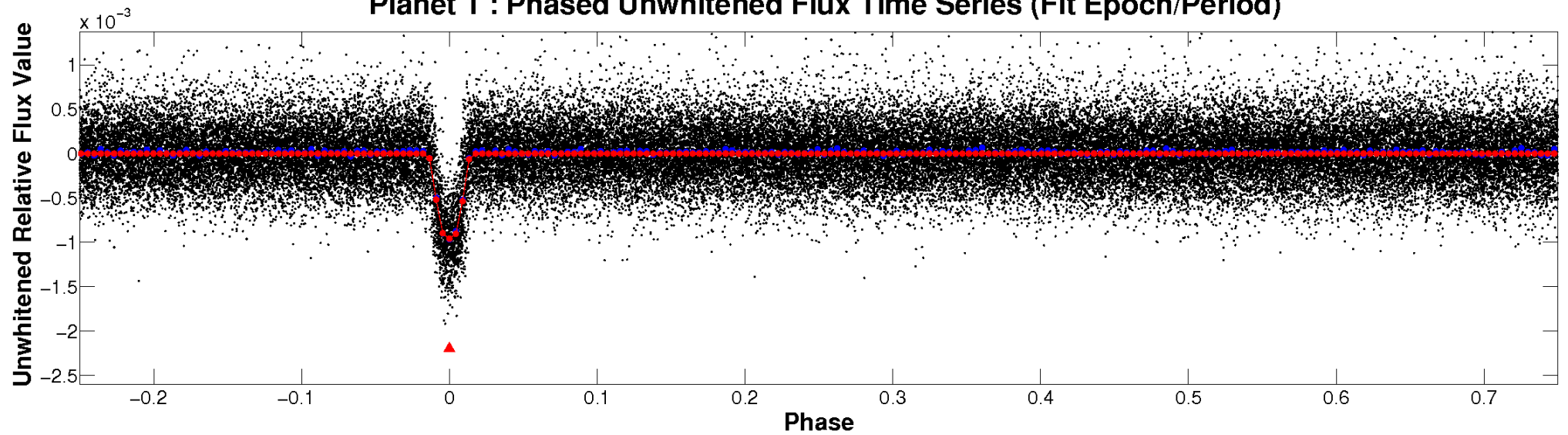
ALT Odd/Even

TCE 008934495-01

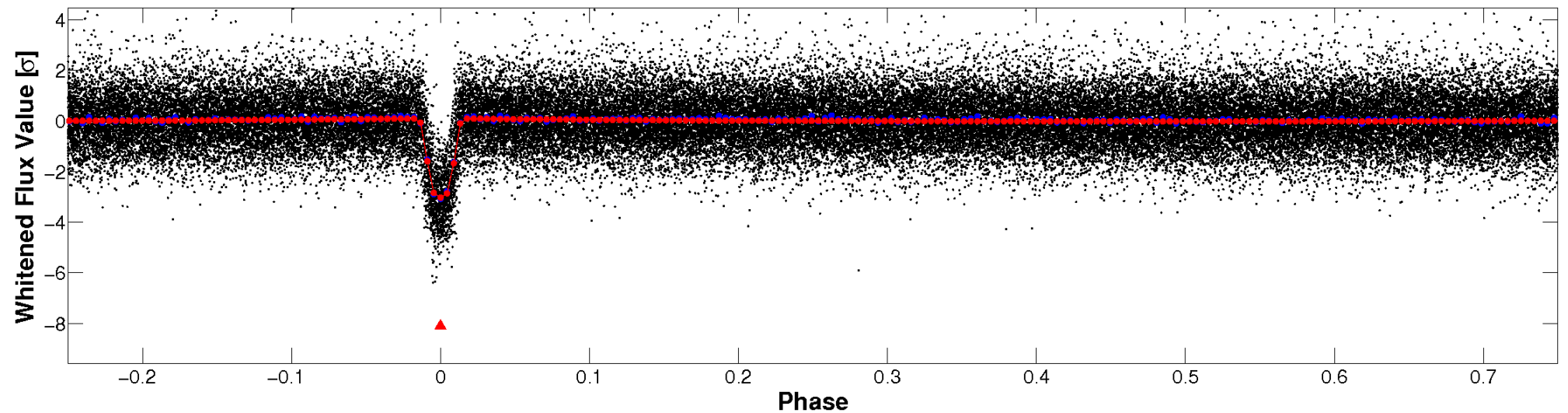


Non-Whitened Vs. Whitened Light Curve

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

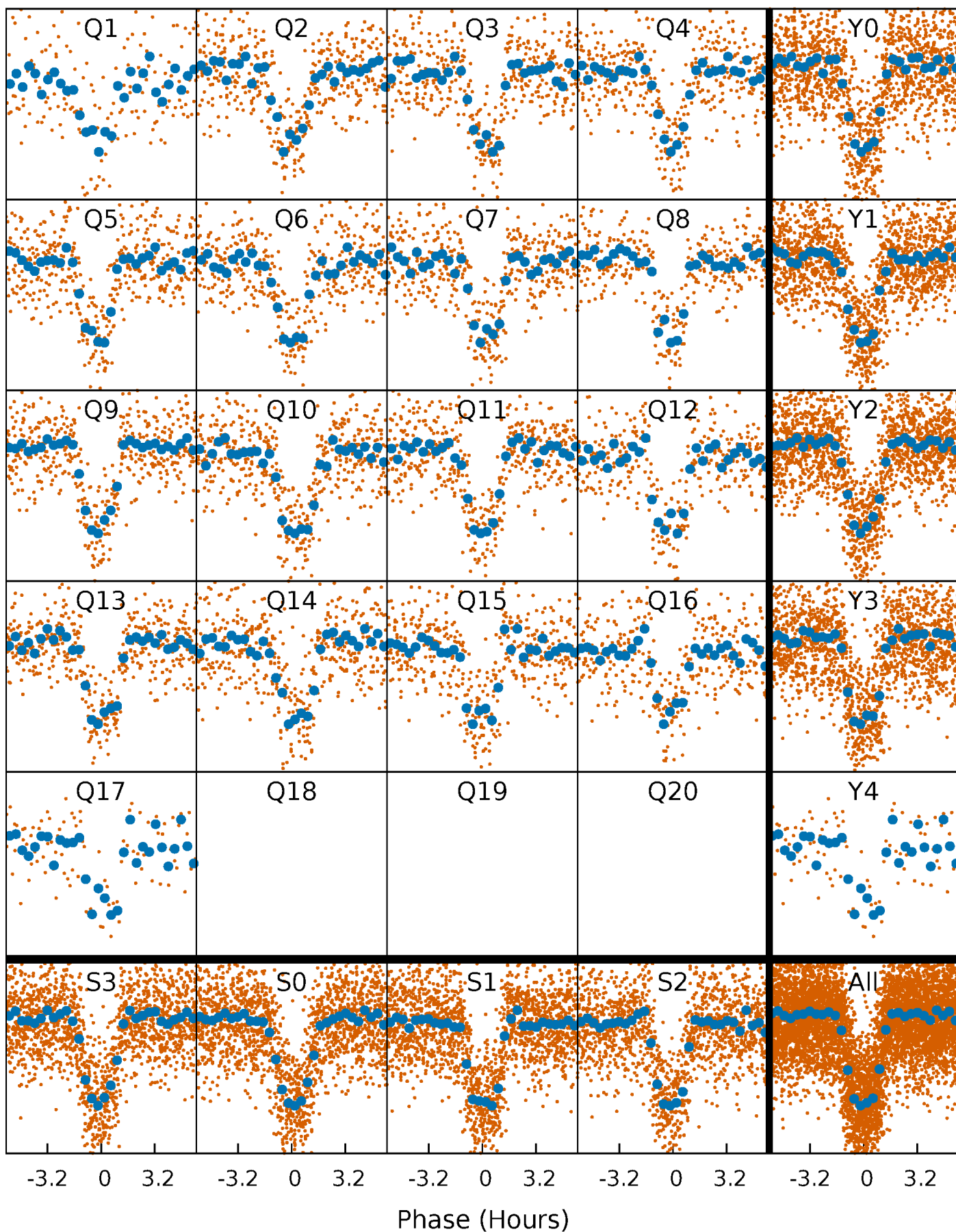


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



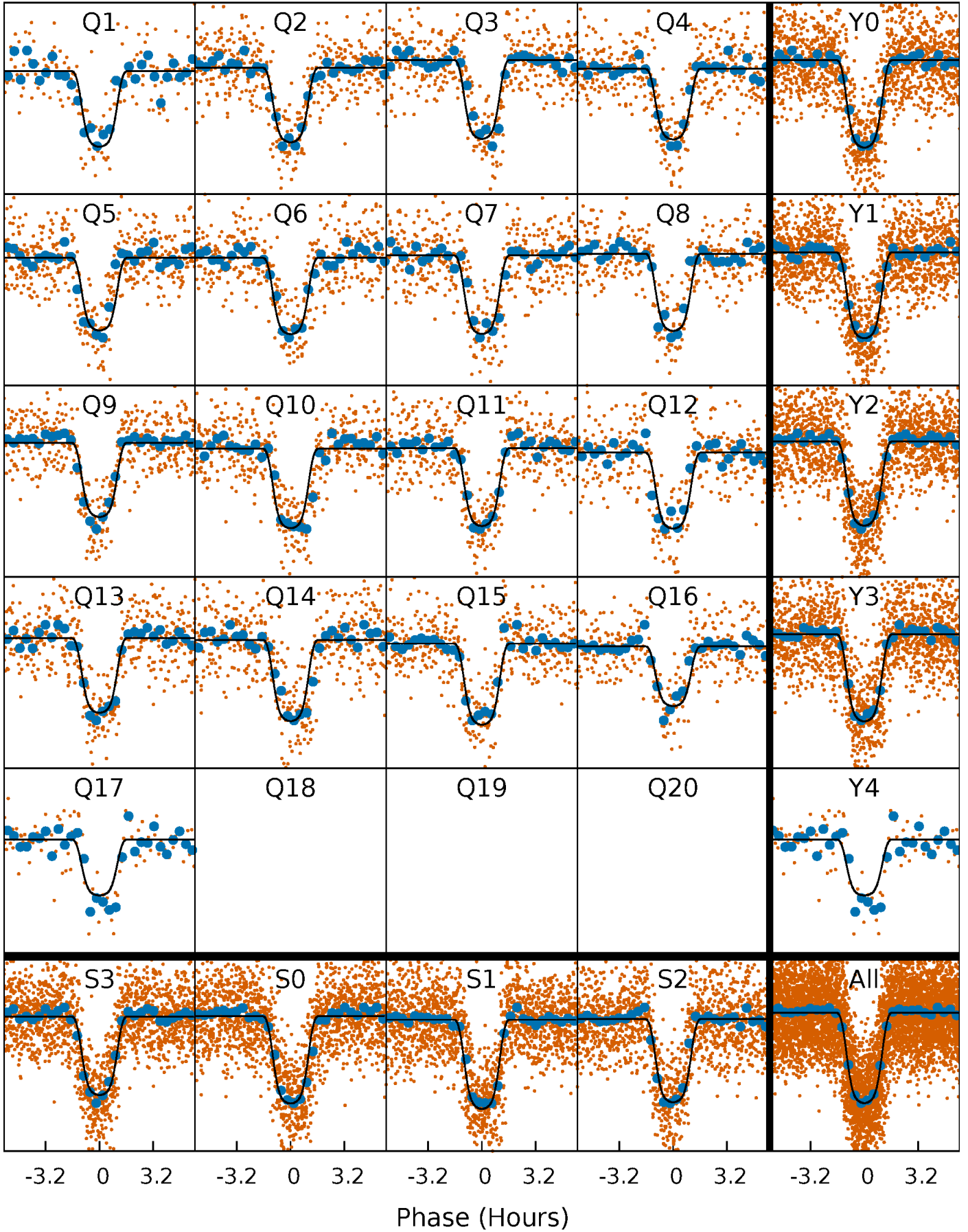
PDC Quarter-Phased Transit Curves

TCE 008934495-01 P= 4.592383 Days $T_0=135.267483$ (BKJD)



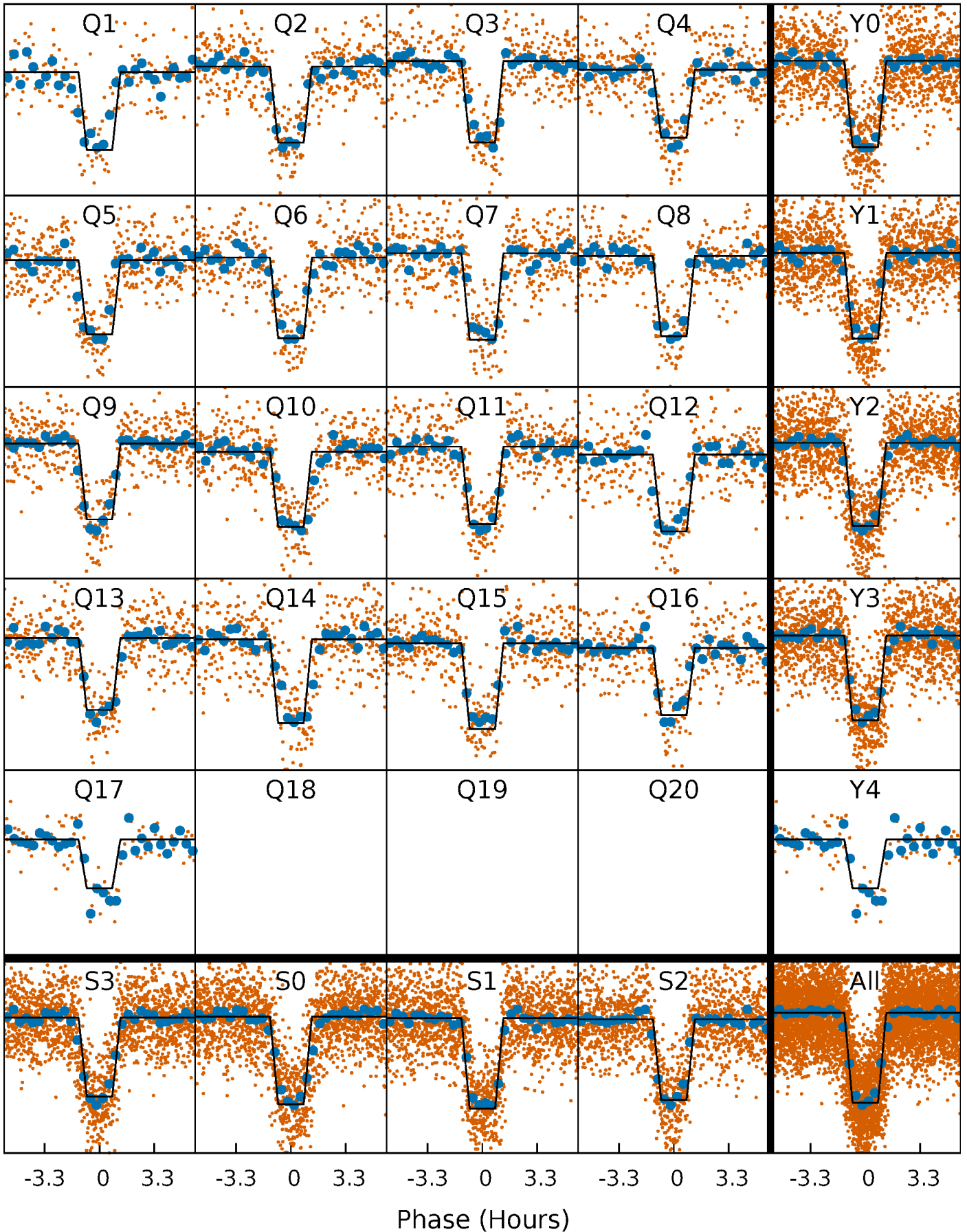
DV Quarter-Phased Transit Curves

TCE 008934495-01 P= 4.592383 Days $T_0=135.267483$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

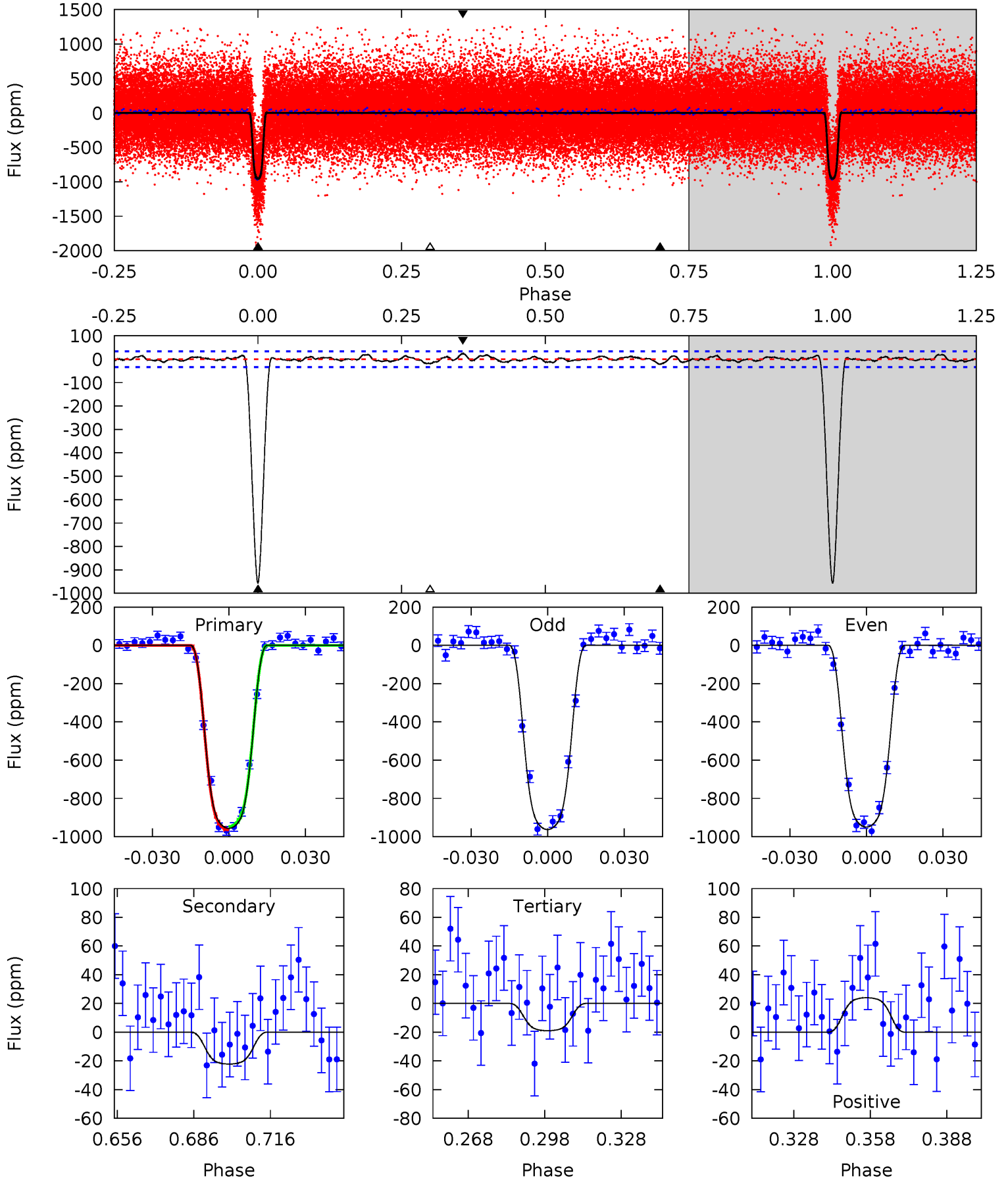
TCE 008934495-01 P= 4.592362 Days $T_0=135.271049$ (BKJD)



DV Model-Shift Uniqueness Test

008934495-01, P = 4.592383 Days, E = 130.675100 Days

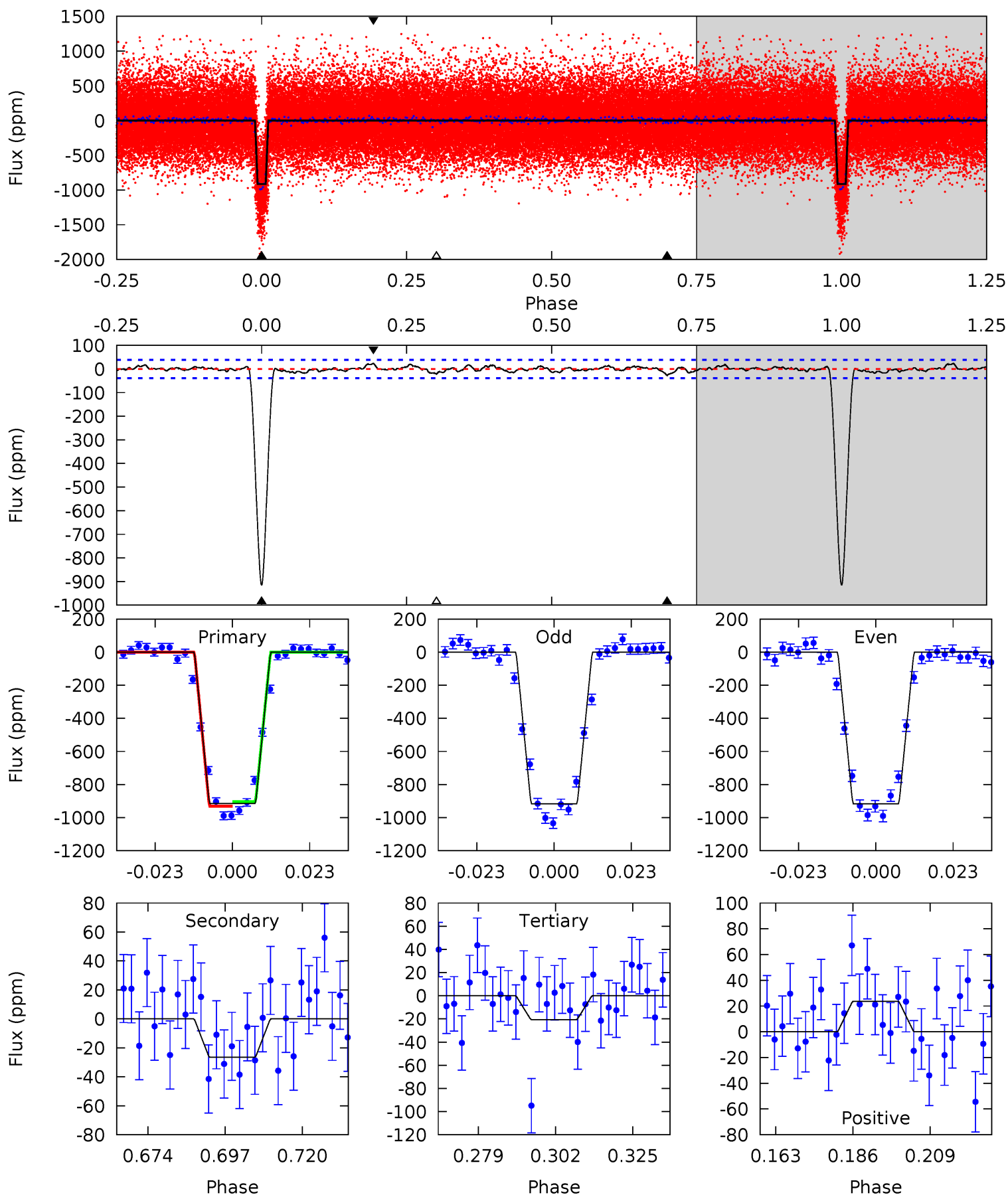
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
135.6	3.15	2.69	3.40	4.81	2.17	1.11	132.9	132.2	0.46	-0.25	0.93	1.00	0.02	1.15



Alt Model-Shift Uniqueness Test

008934495-01, P = 4.592362 Days, E = 130.678687 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
115.4	3.34	2.59	2.98	4.86	2.27	1.03	112.8	112.4	0.75	0.36	0.04	1.00	0.03	1.74



Stellar Parameters For KIC 008934495

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5351^{+159}_{-159}	$4.582^{+0.030}_{-0.120}$	$-0.040^{+0.300}_{-0.300}$	$0.796^{+0.143}_{-0.061}$	$0.890^{+0.070}_{-0.096}$	$2.484^{+0.401}_{-0.850}$
	+3%/-3%	+1%/-3%	+750%/-750%	+18%/-8%	+8%/-11%	+16%/-34%
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 008934495-01 / KOI 0524.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22 ± 7	$3.22^{+0.29}_{-0.19}$	1311^{+64}_{-51}	2650^{+120}_{-141}	$2.959^{+1.088}_{-0.940}$
Alt.	-26 ± 8	$2.76^{+0.25}_{-0.17}$	1314^{+60}_{-53}	2852^{+119}_{-152}	$5.036^{+1.575}_{-1.655}$

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

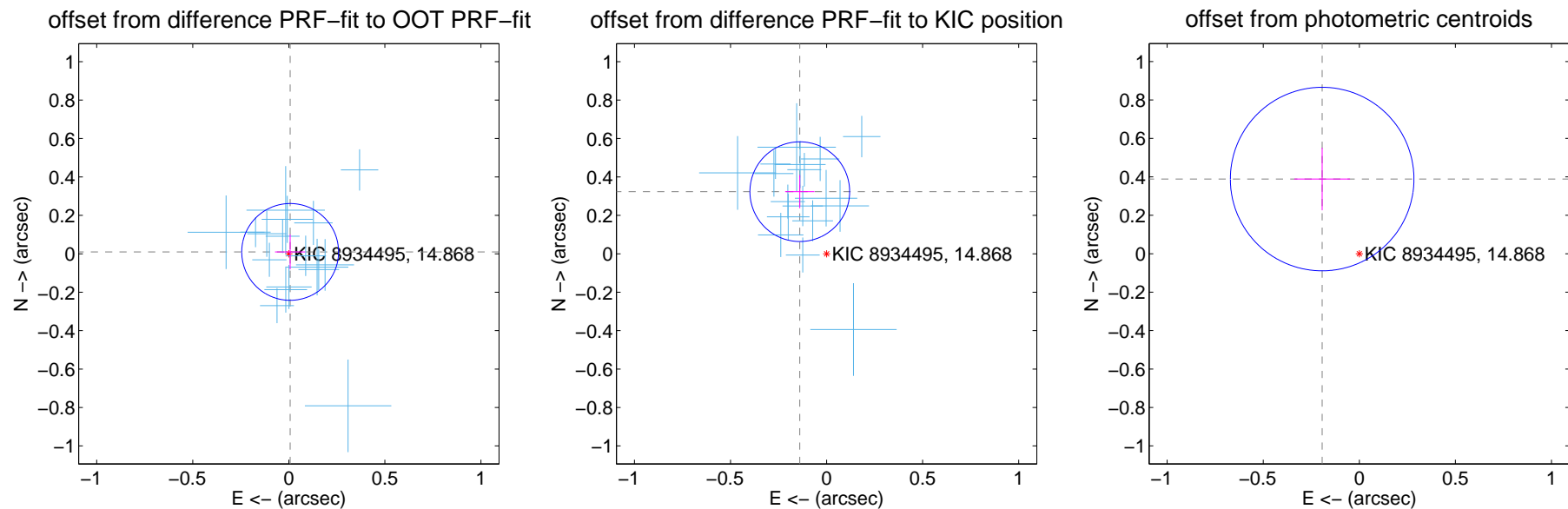
DV Centroid Data

Supplemental centroid analysis for 008934495-01. Kepler magnitude: 14.87. Transit SNR 90.95

There are 17 quarters with good PRF difference image offsets

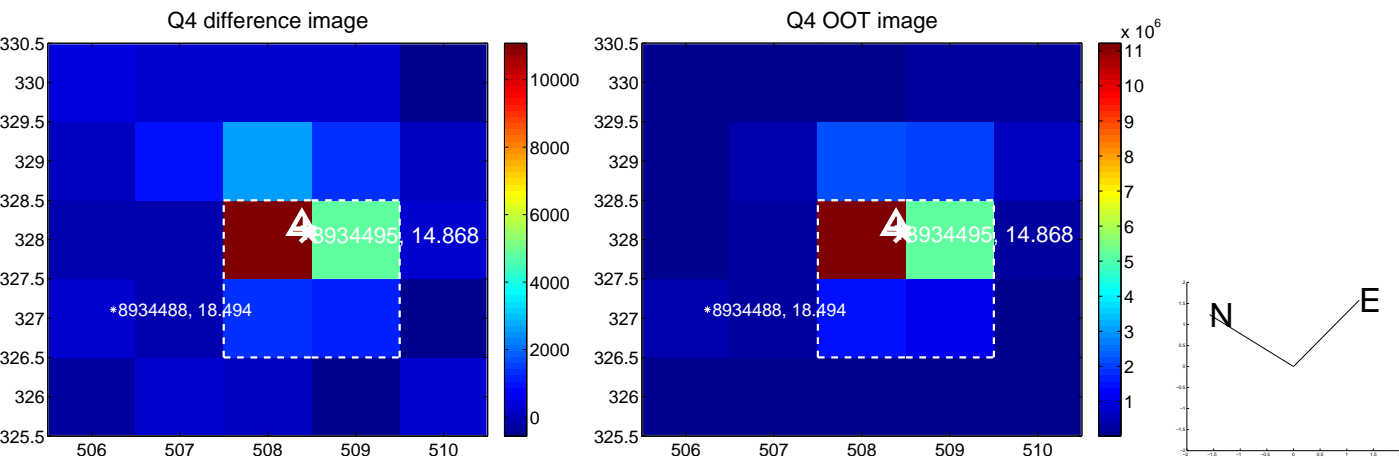
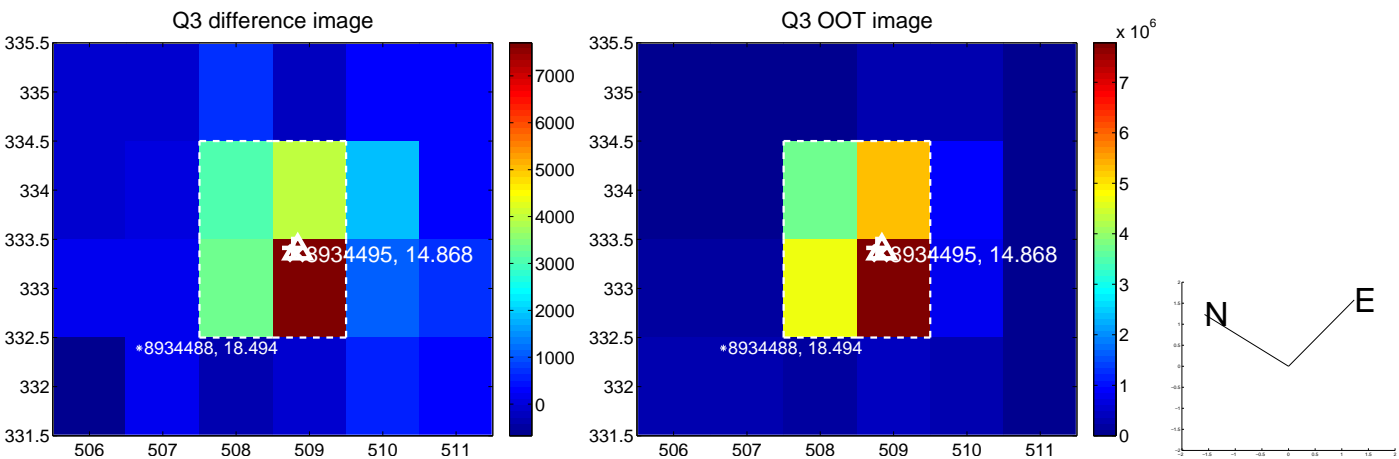
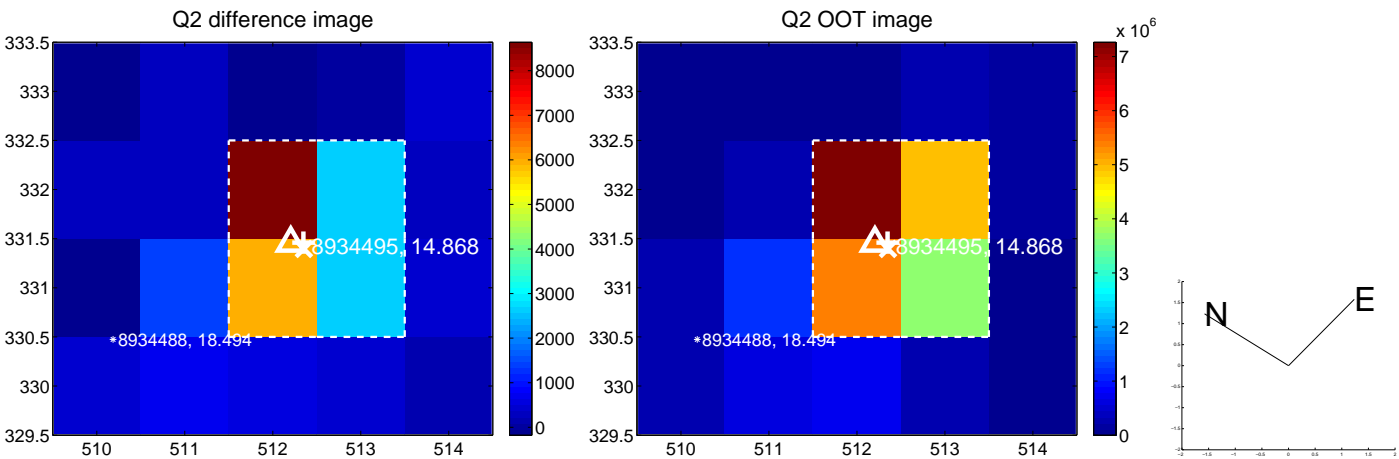
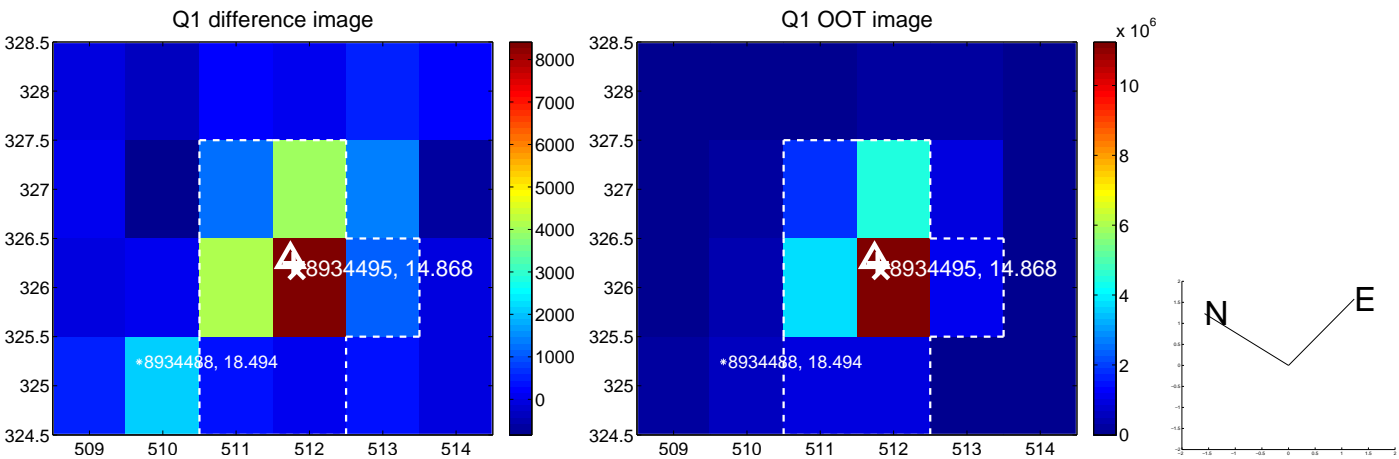
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.012 ± 0.084	0.14	-0.007 ± 0.079	0.010 ± 0.091
PRF-fit source offset from KIC position	0.352 ± 0.086	4.07	0.139 ± 0.076	0.323 ± 0.087
photometric centroid source offset	0.43 ± 0.16	2.73	0.19 ± 0.15	0.39 ± 0.16

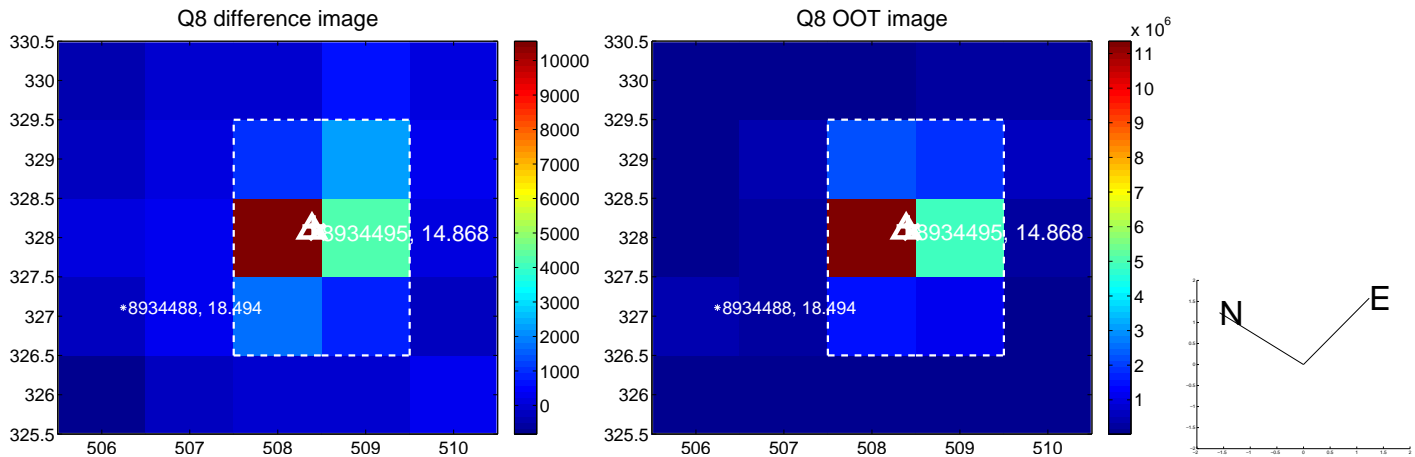
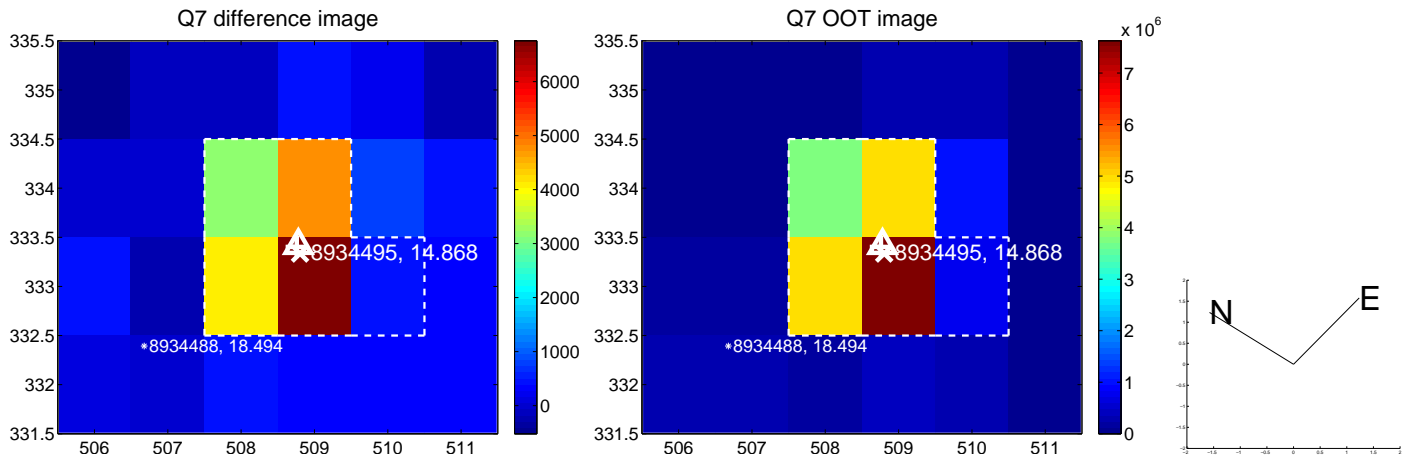
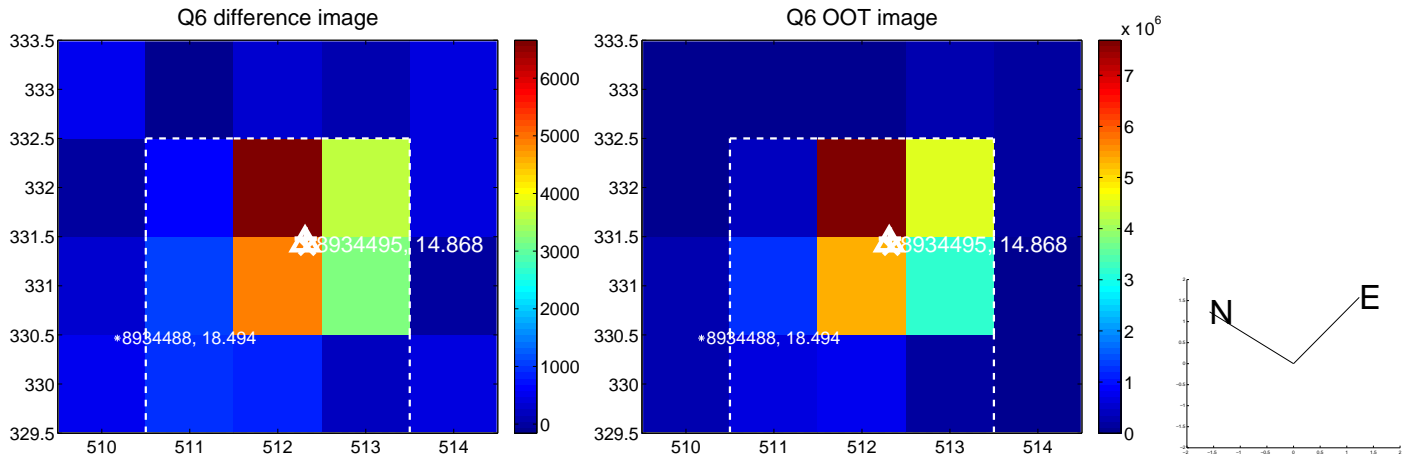
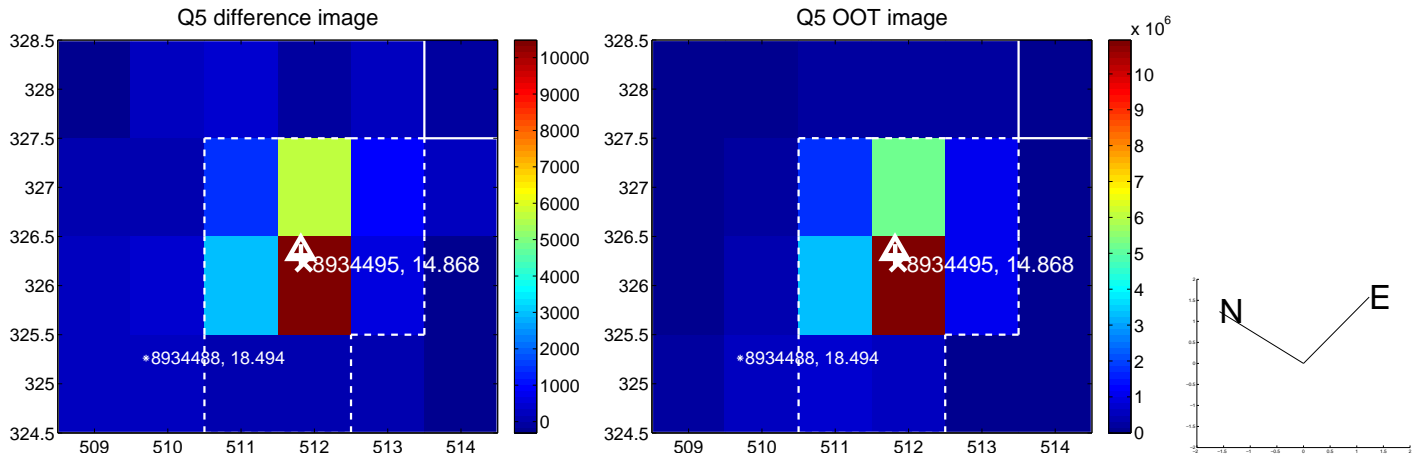


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

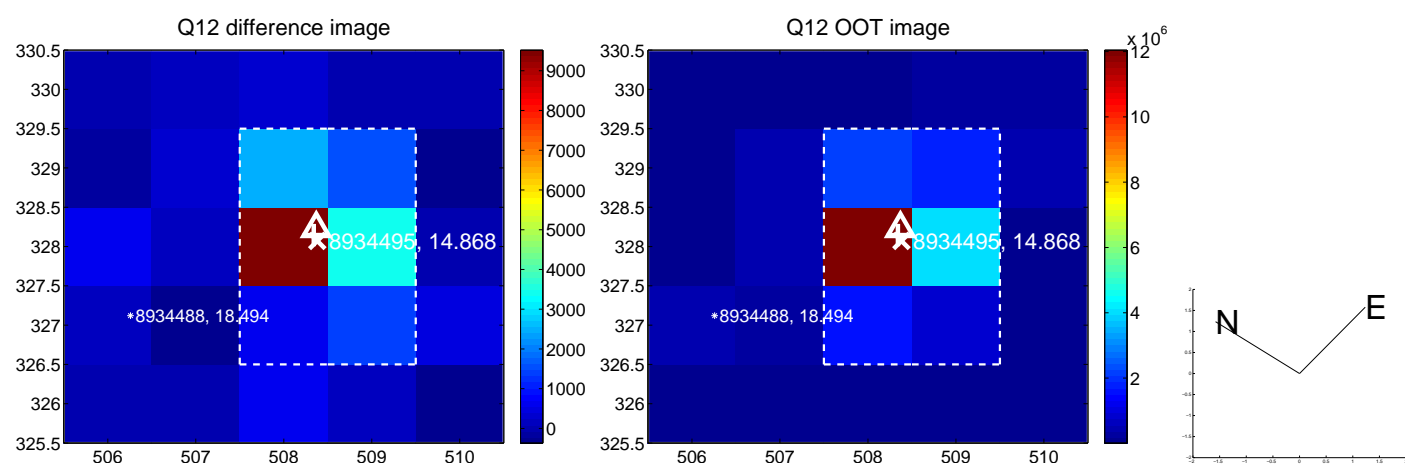
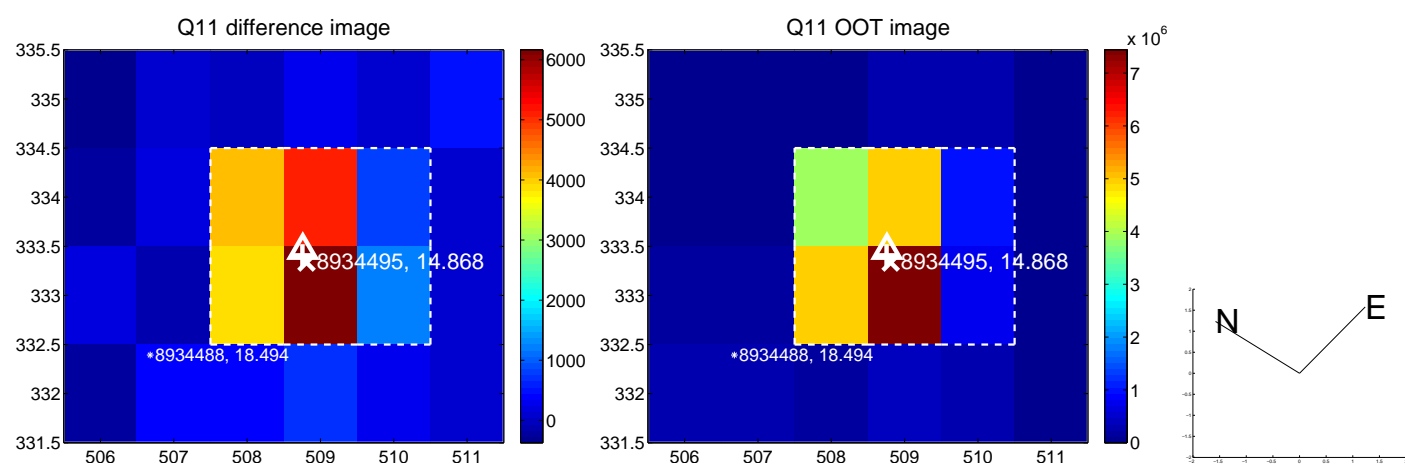
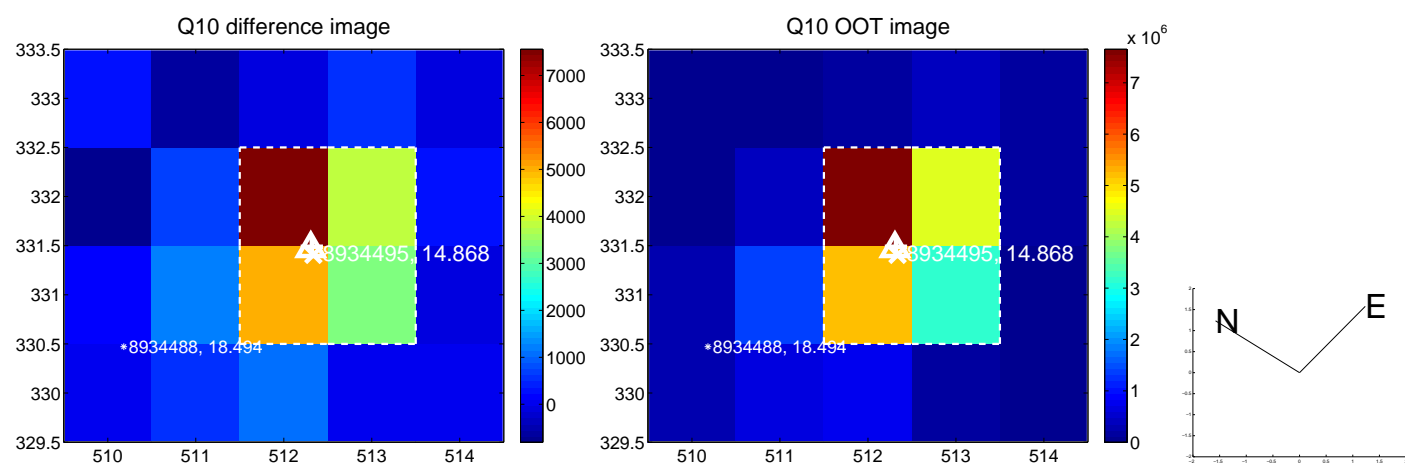
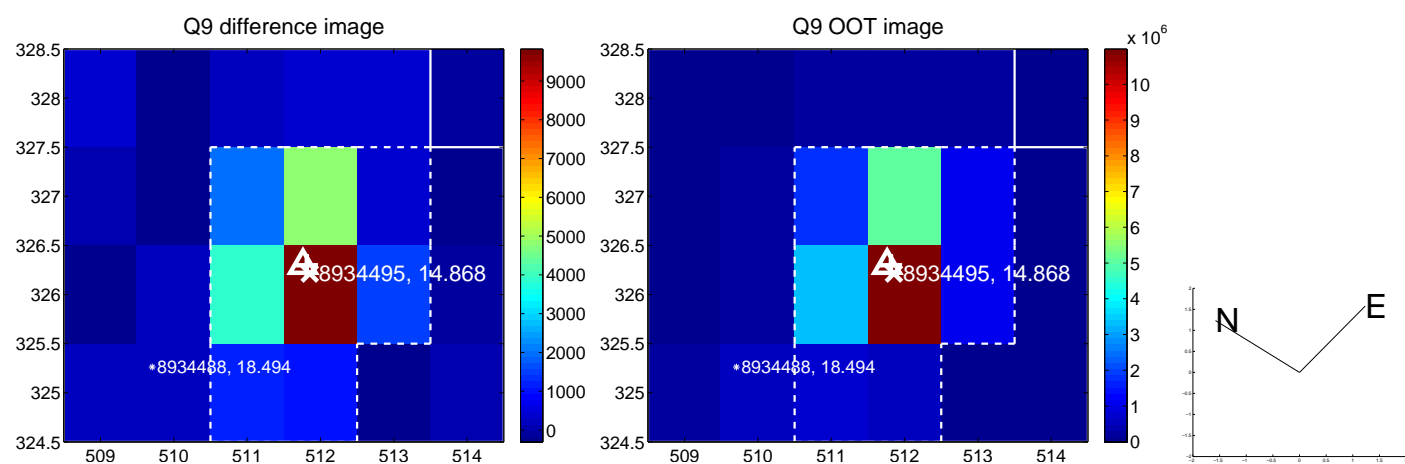
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



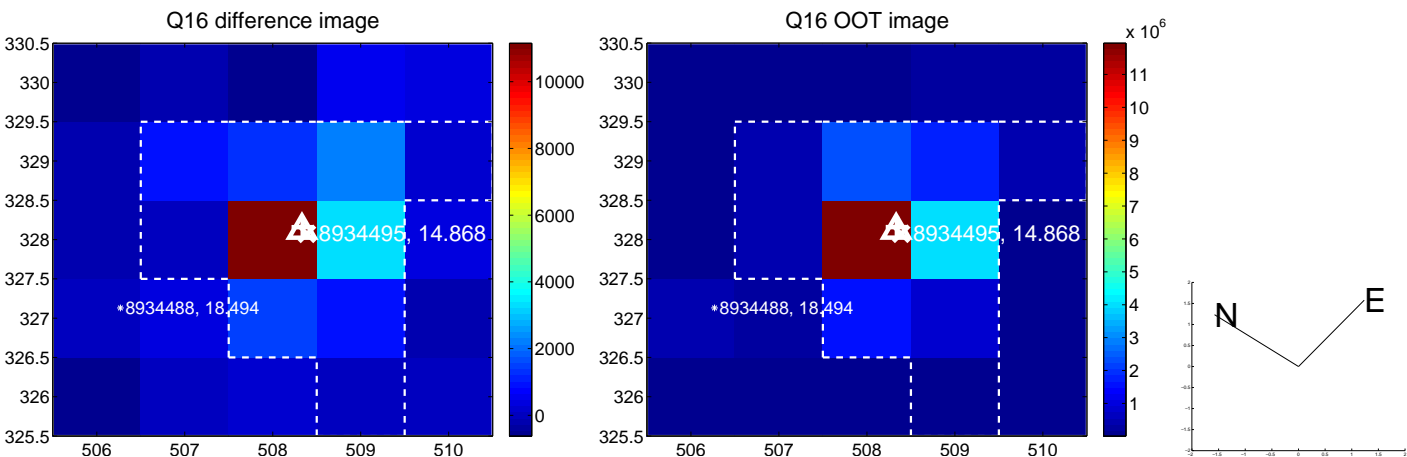
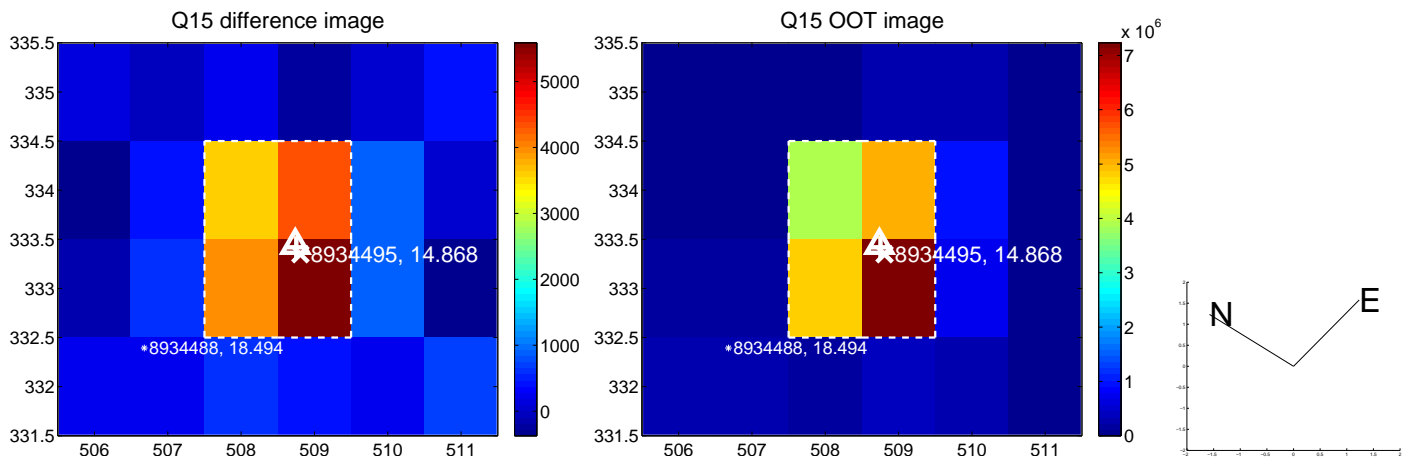
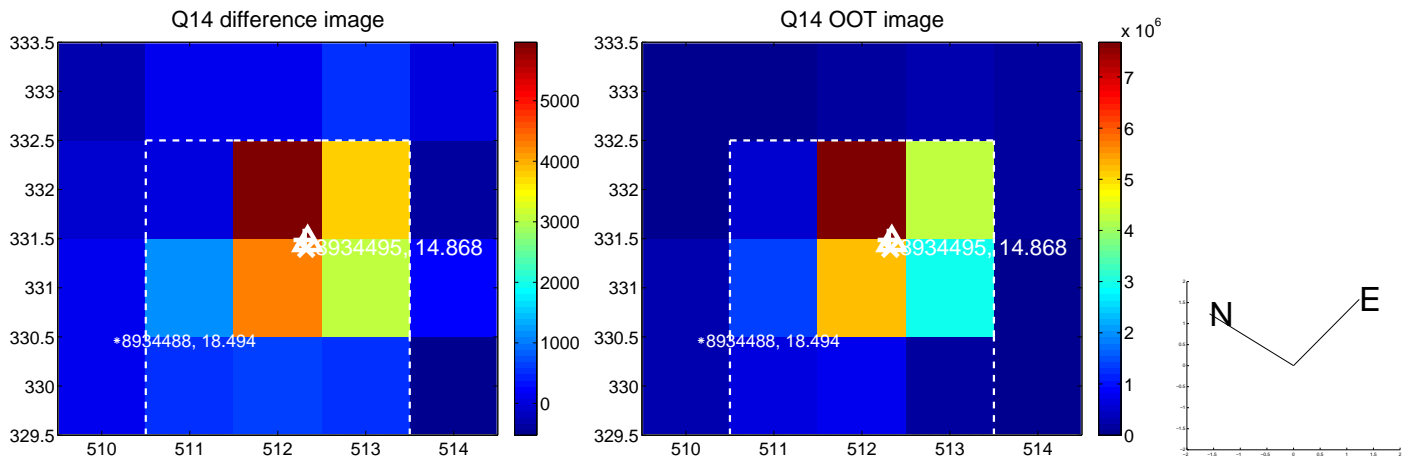
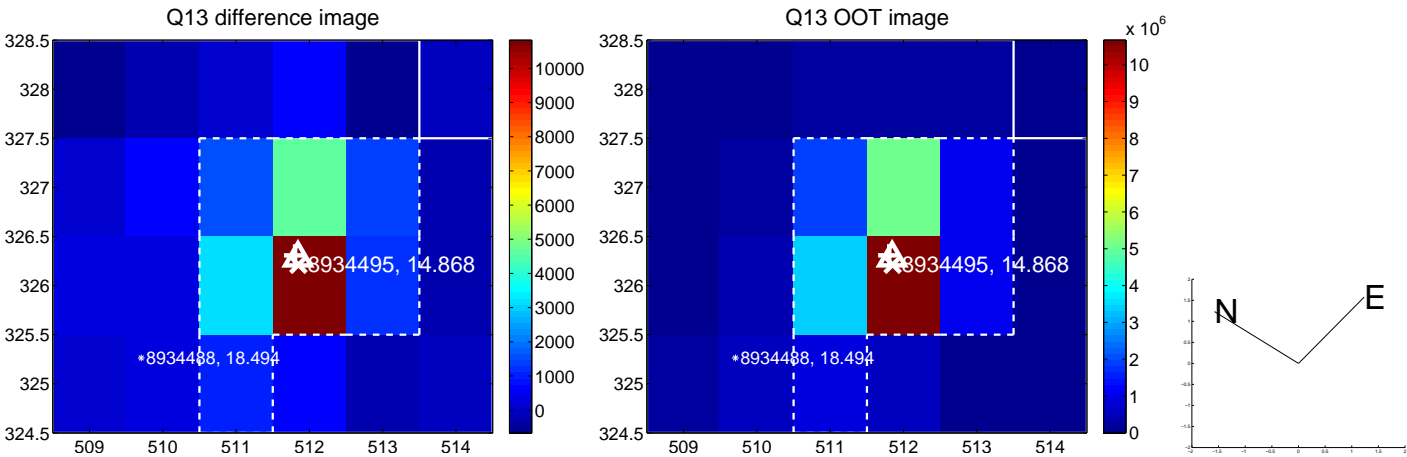
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



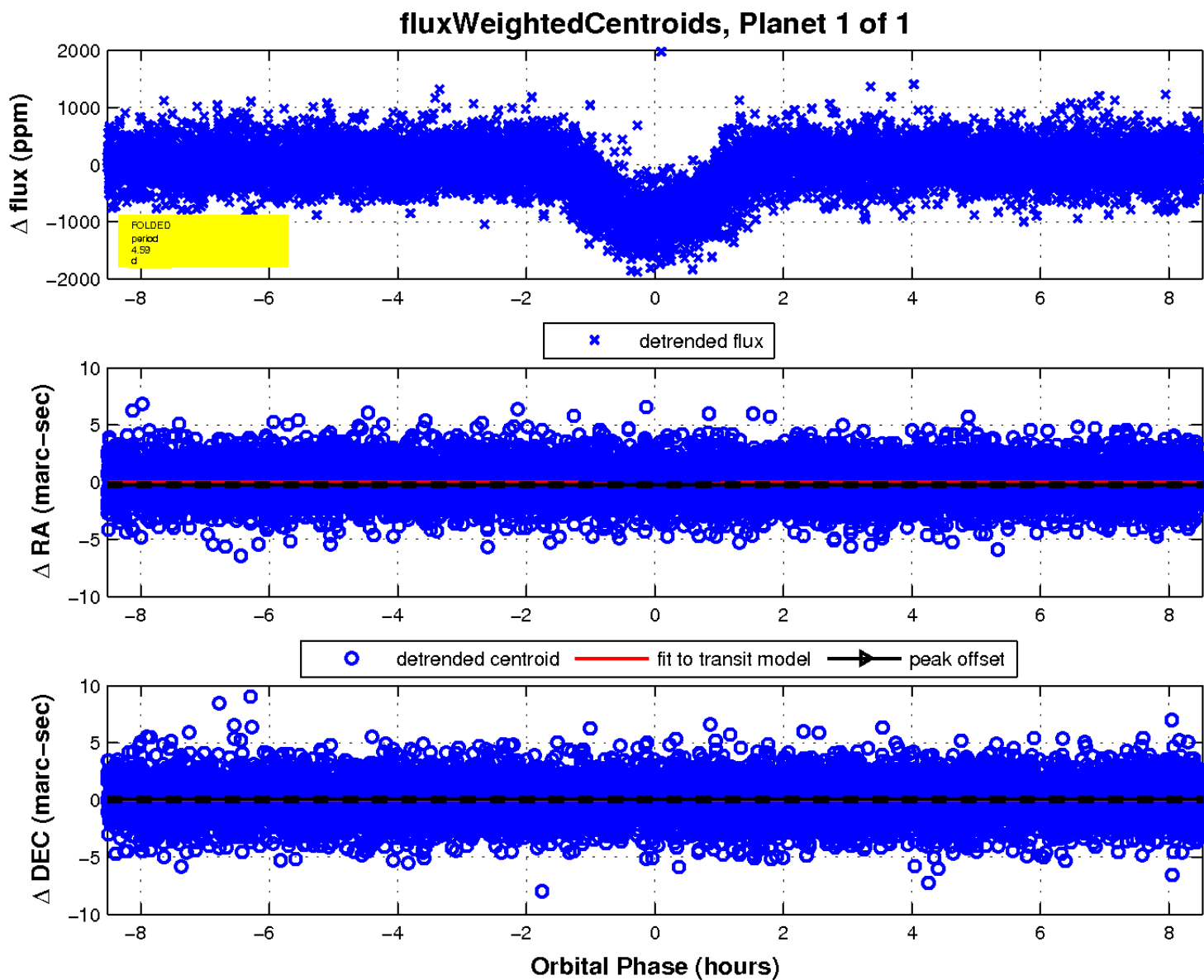
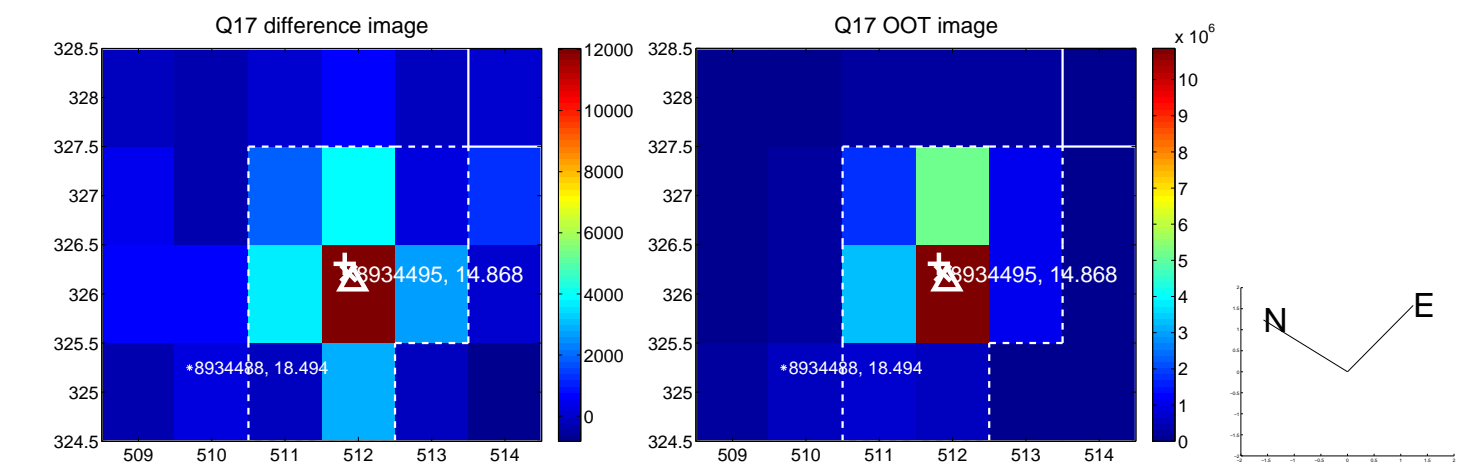
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UKIRT Image

Declination

