

KIC 010095512

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})
010095512-01	OBS	7286.01	3.008612	132.923108	72680.0	4.932	13952.6	5246.7	1.03	6033	47.16	771.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010095512-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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.

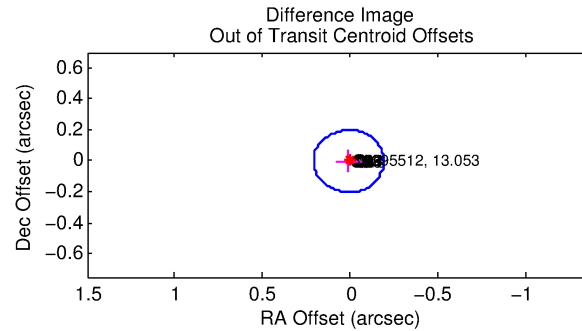
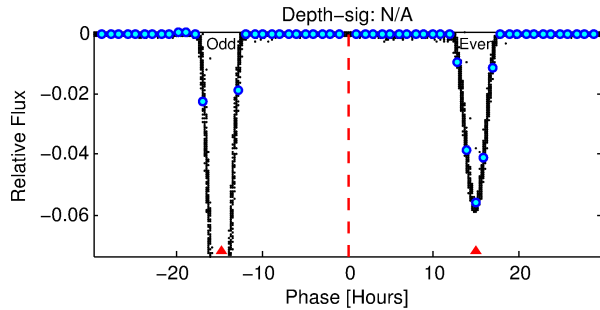
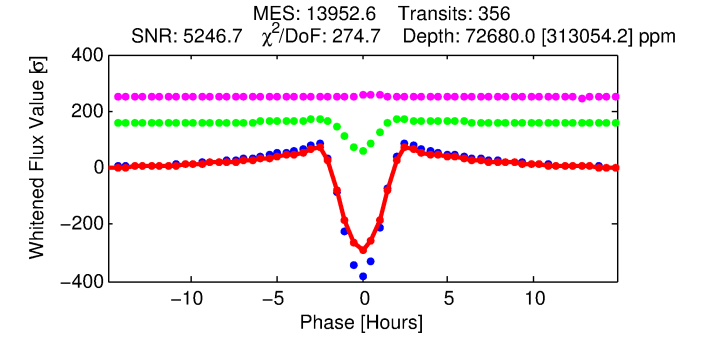
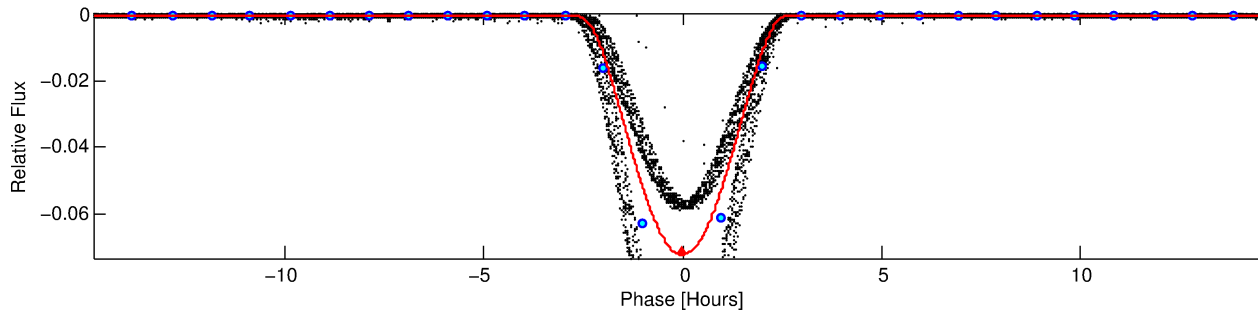
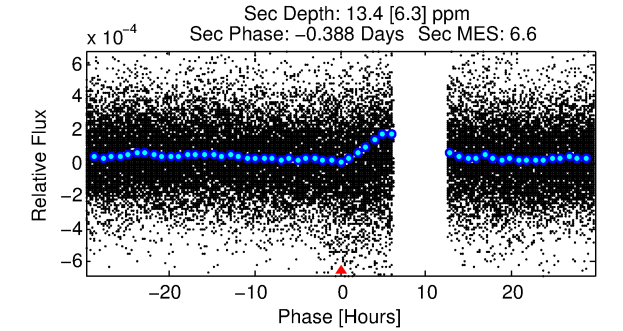
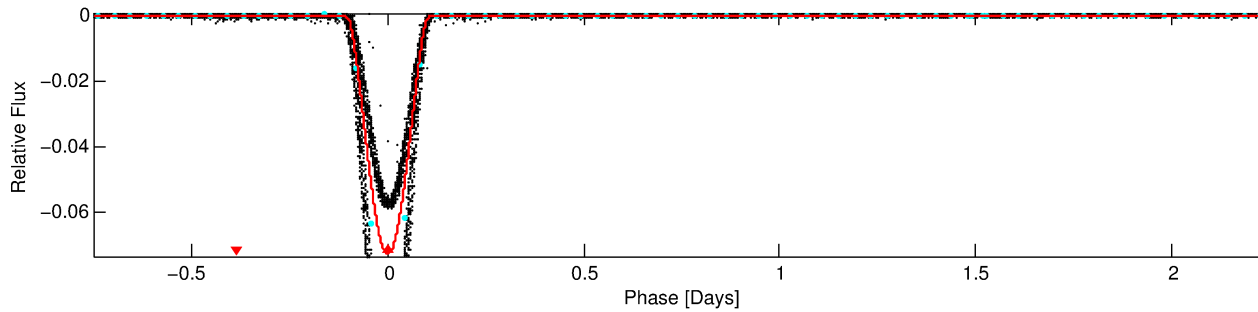
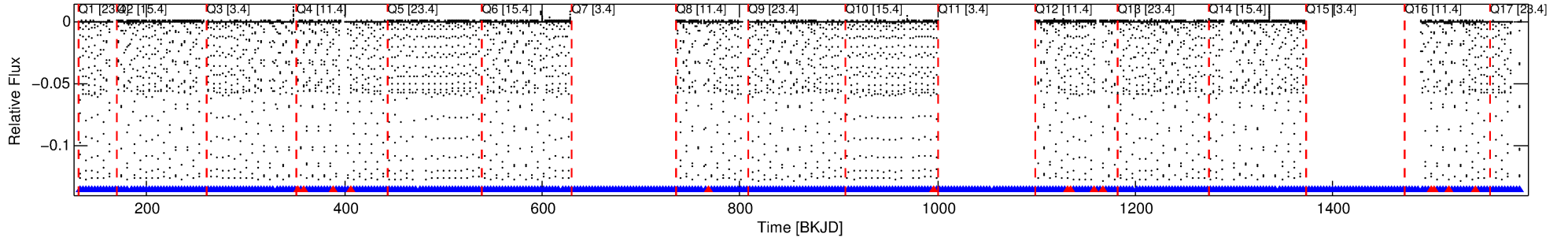
Ephemeris Match Information For 010095512-01

No Significant Match Found

DV One-Page Summary

KIC: 10095512 Candidate: 1 of 1 Period: 3.009 d
KOI: K07286.01 Corr: 0.978

Kp: 13.05 R*: 1.03 Rs Teff: 6033.0 K Logg: 4.40 Fe/H: -0.260



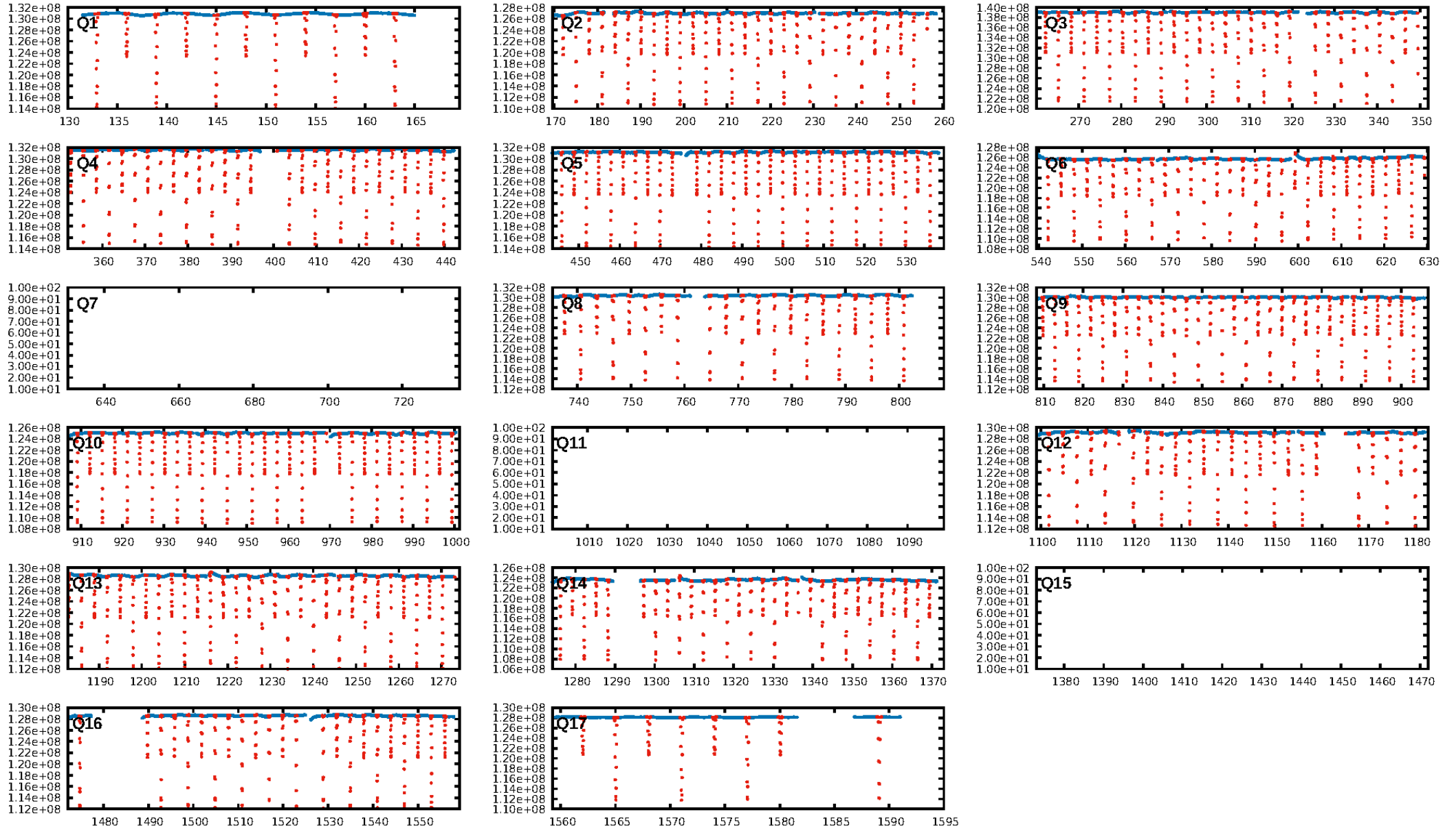
DV Fit Results:

Period = 3.00861 [0.00000] d
Epoch = 132.9231 [0.0001] BKJD
Rp/R* = 0.4212 [0.1134]
a/R* = 4.85 [0.07]
b = 1.00 [1.02]
Seff = 771.44 [296.13]
Teff = 1344 [129] K
Rp = 47.16 [18.71] Re
a = 0.0402 [0.0100] AU
Ag = 0.01 [0.00] [-231.34σ]
Teffp = 562 [102] K [-4.76σ]

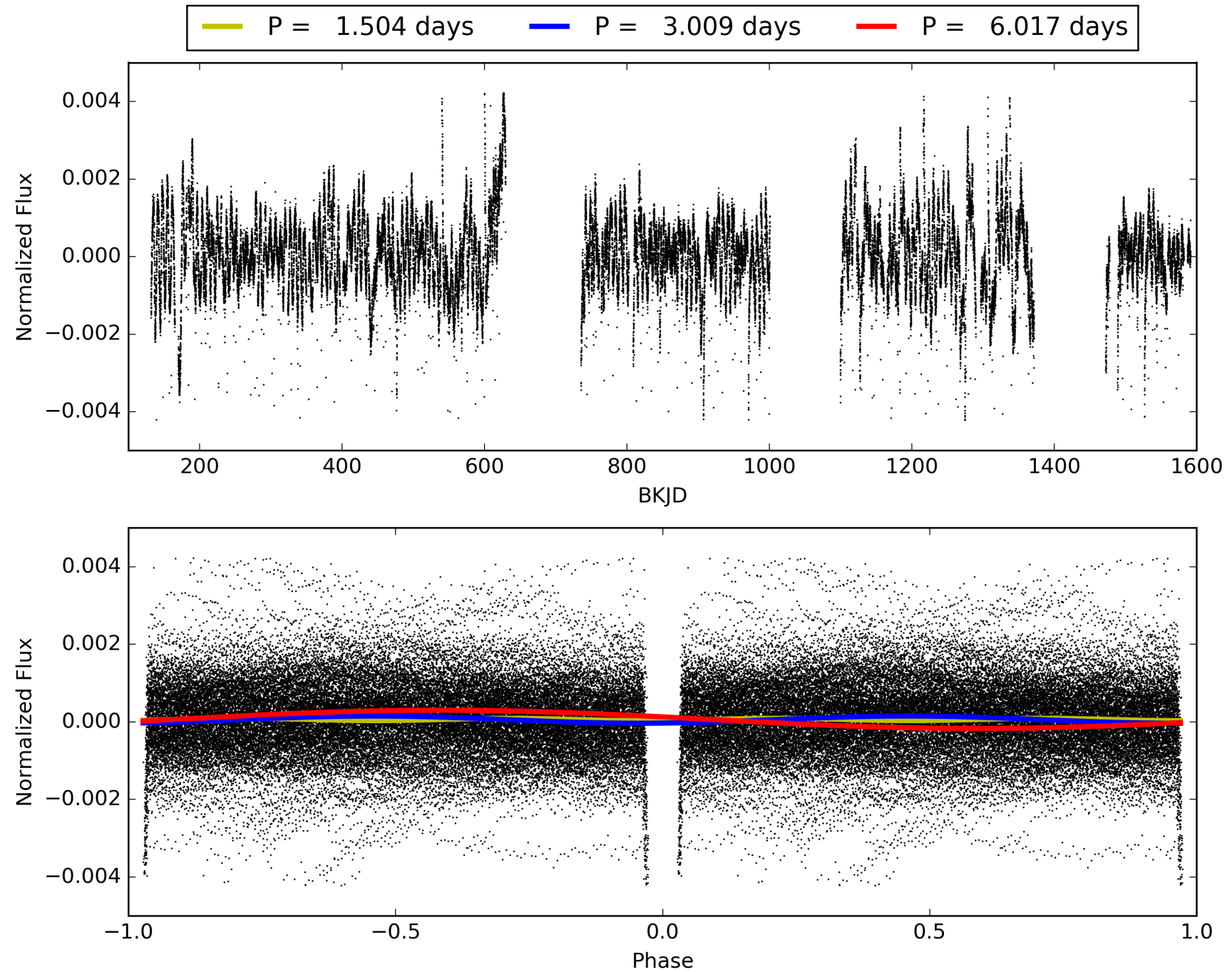
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.96 [323/337]
GhostDiagnostic-chr: 1.945
Centroid-sig: 0.0%
Centroid-so: 0.048 arcsec [50.53σ]
OotOffset-rm: 0.010 arcsec [0.15σ]
KicOffset-rm: 0.032 arcsec [0.47σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010095512-01, PDC Light Curves

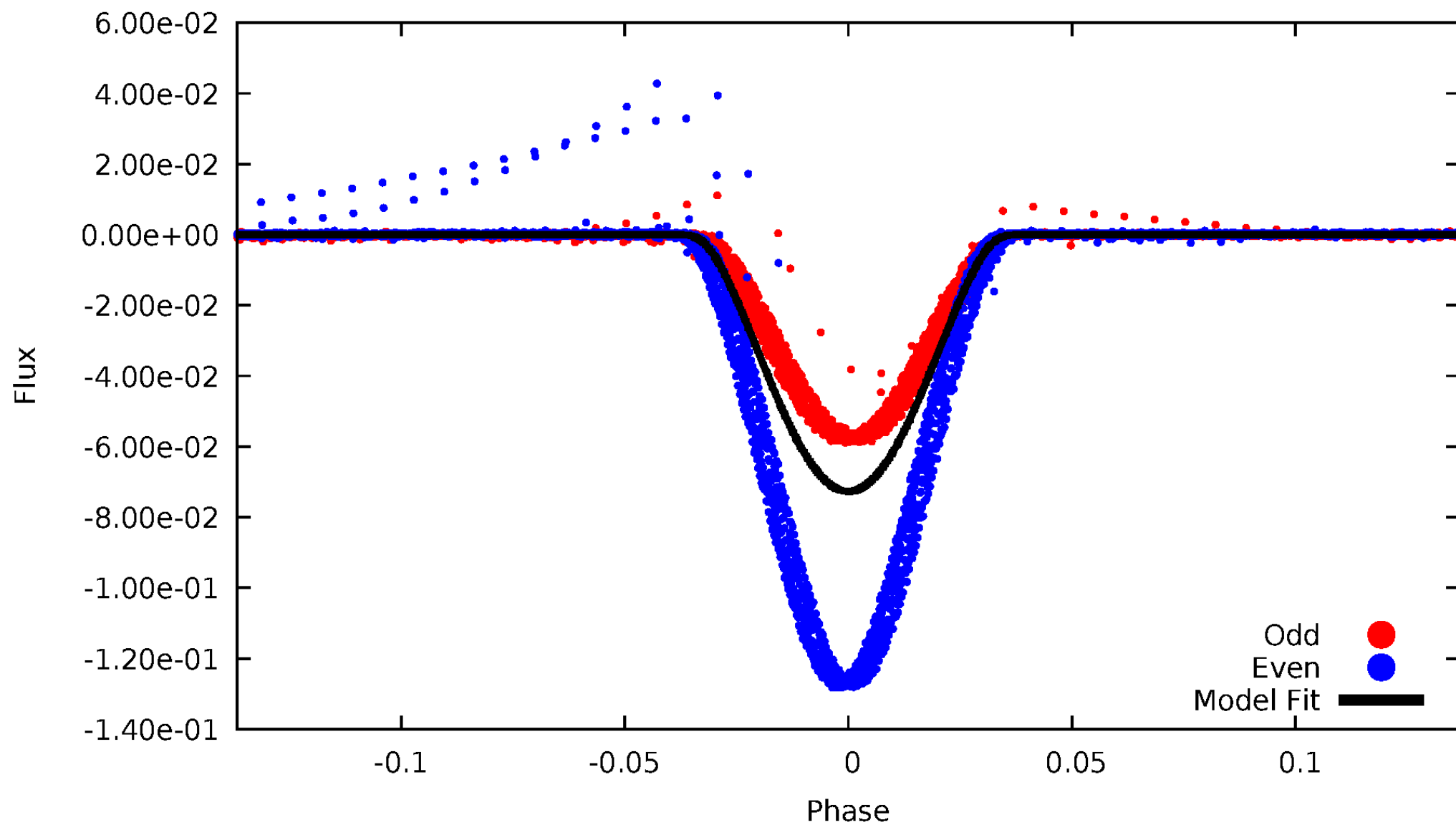


TCE 010095512-01



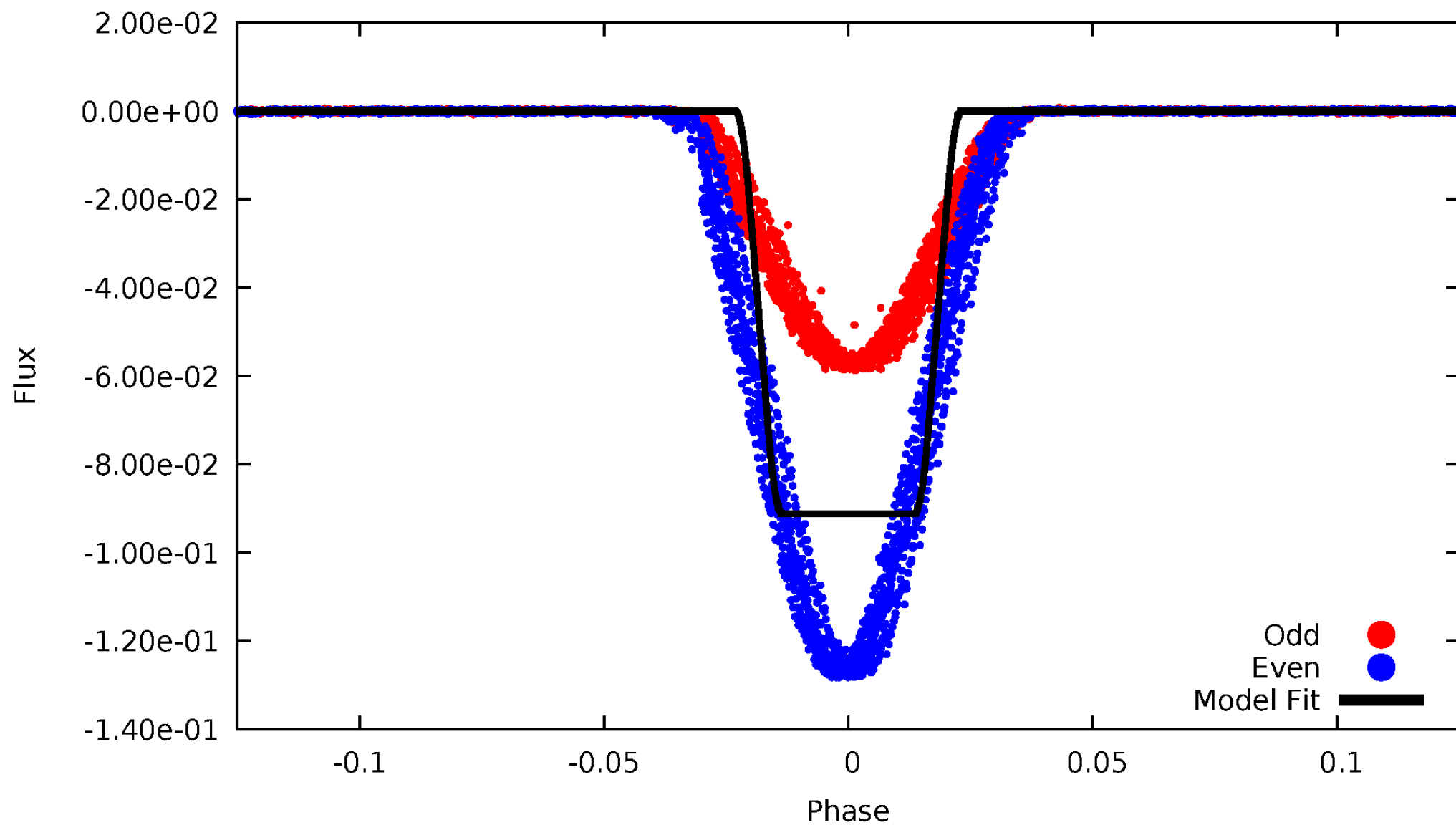
DV Odd/Even

TCE 010095512-01



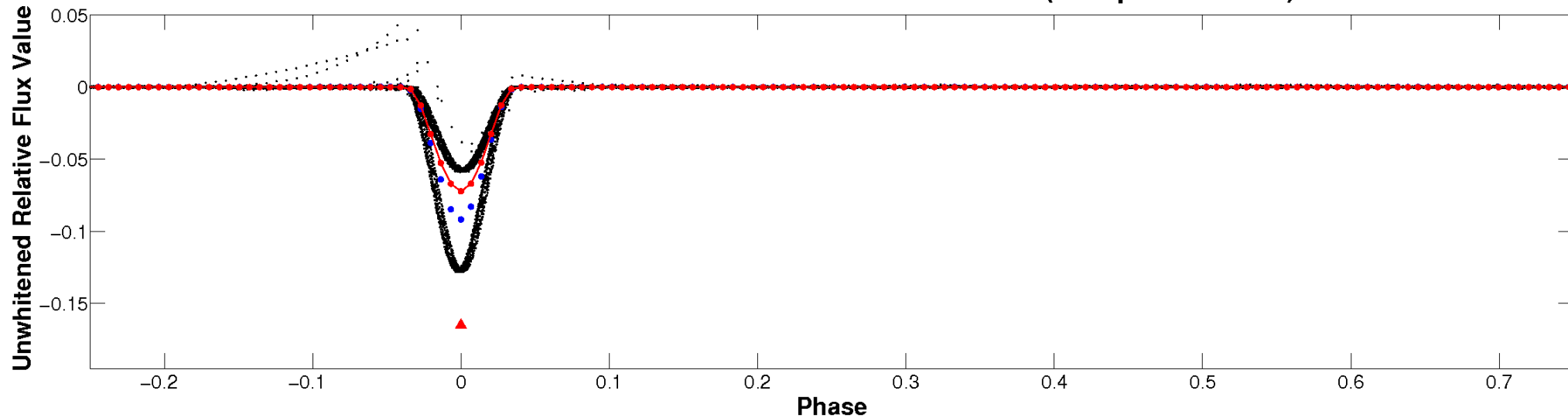
ALT Odd/Even

TCE 010095512-01

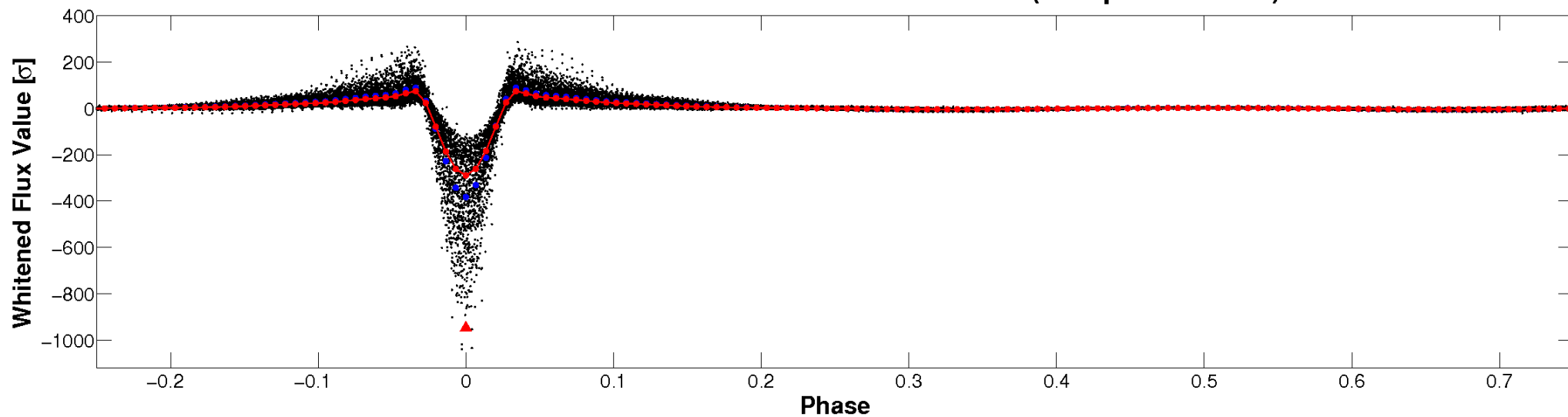


Non-Whitened Vs. Whitened Light Curve

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

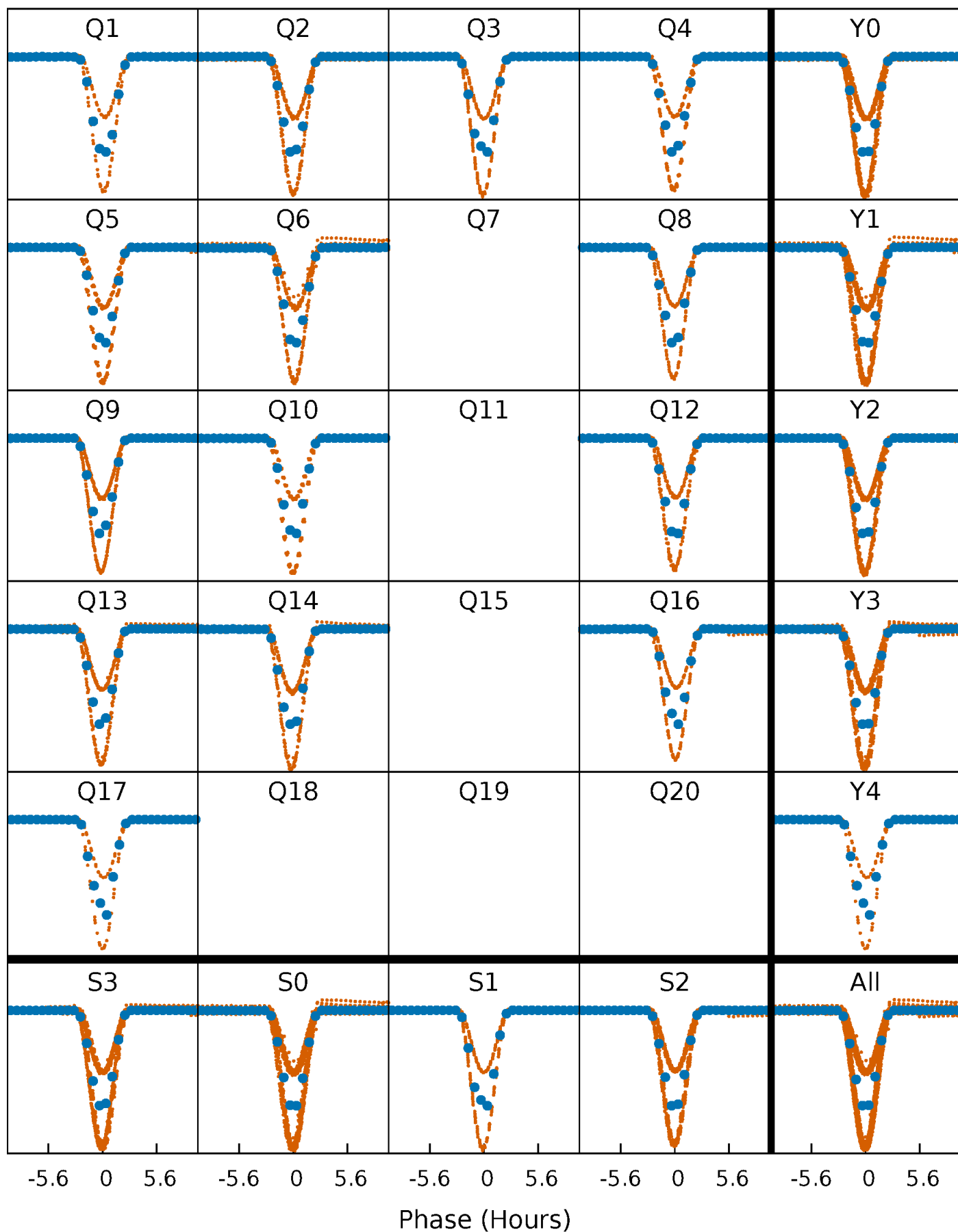


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



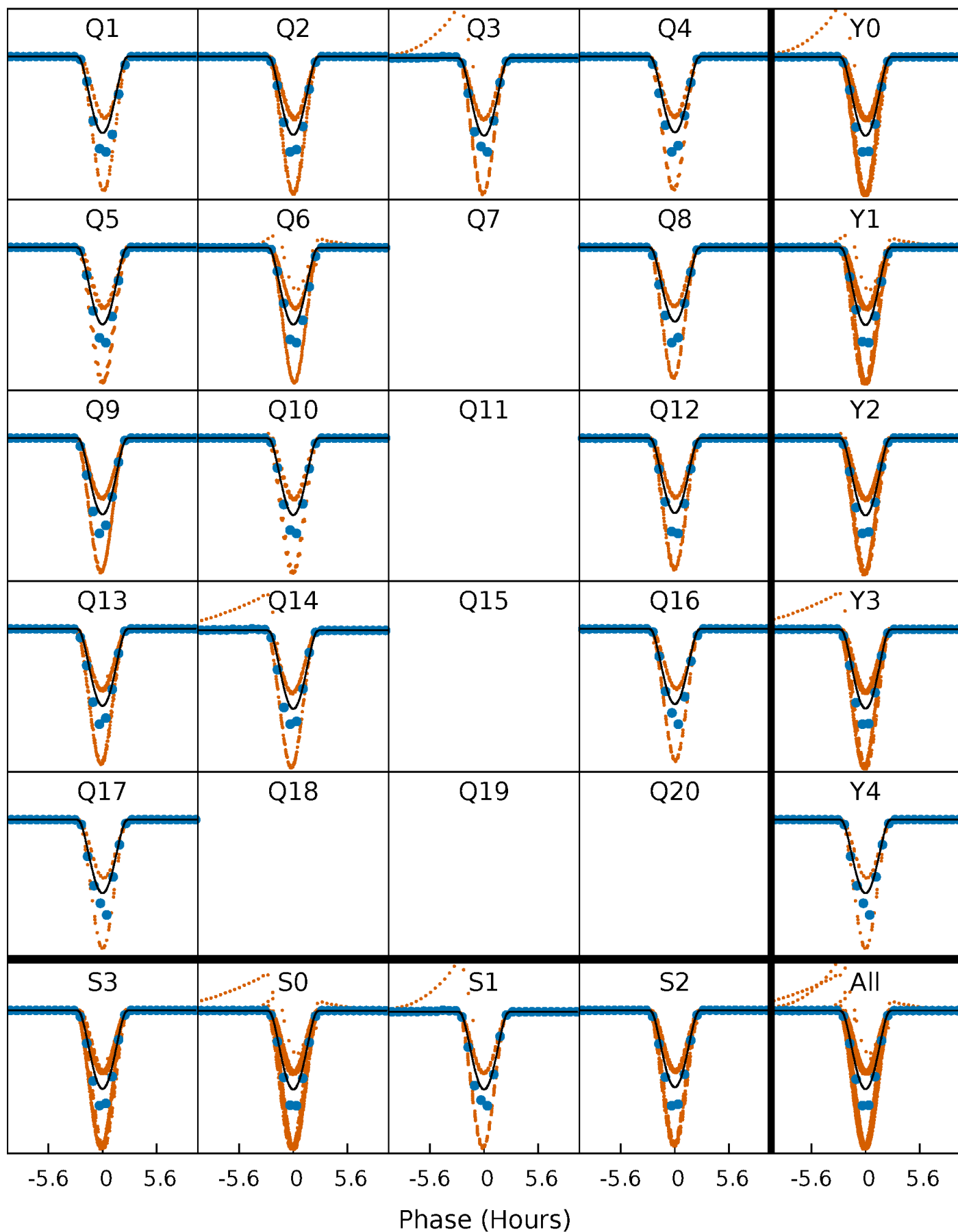
PDC Quarter-Phased Transit Curves

TCE 010095512-01 P= 3.008612 Days $T_0=132.923108$ (BKJD)



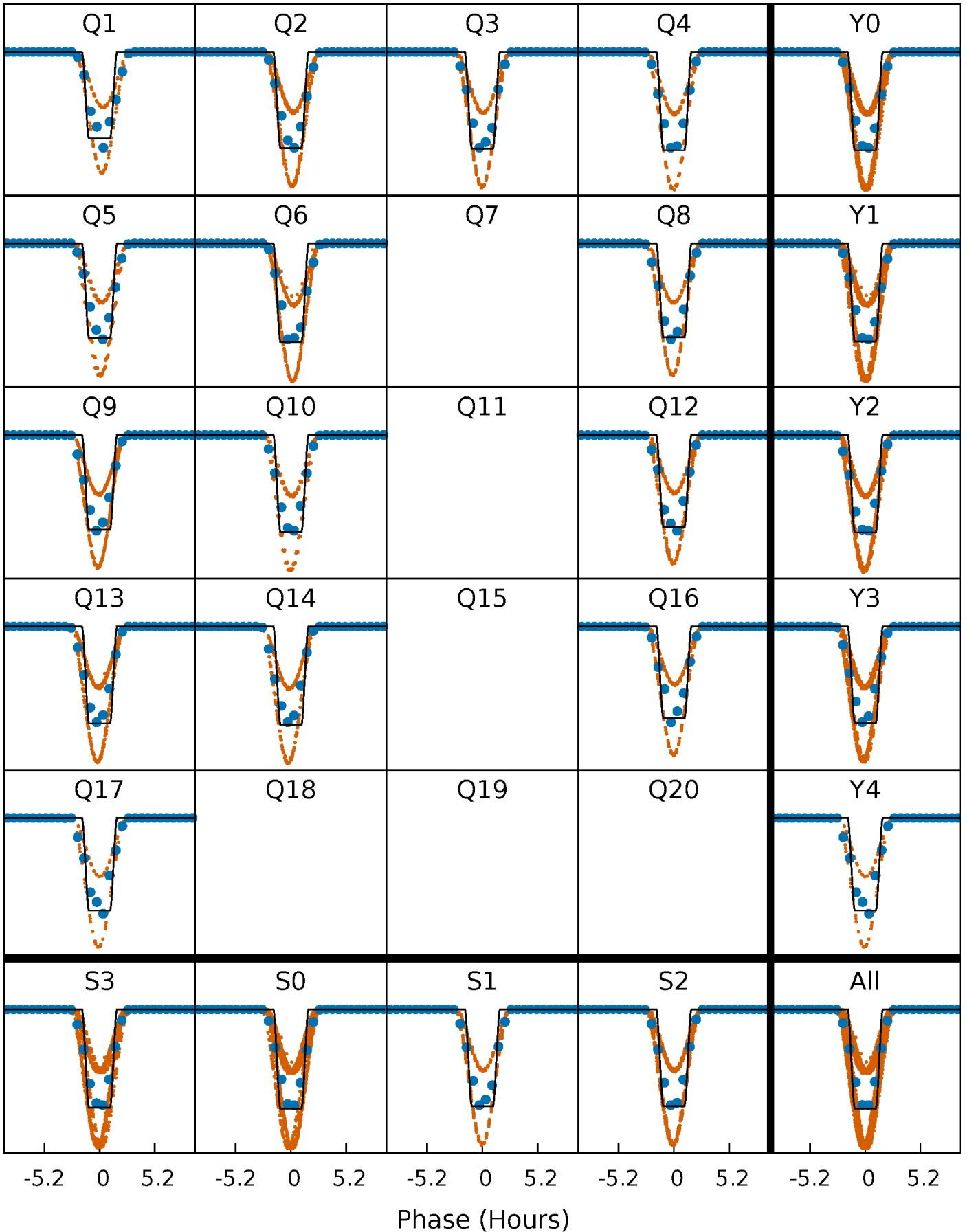
DV Quarter-Phased Transit Curves

TCE 010095512-01 P= 3.008612 Days $T_0=132.923108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

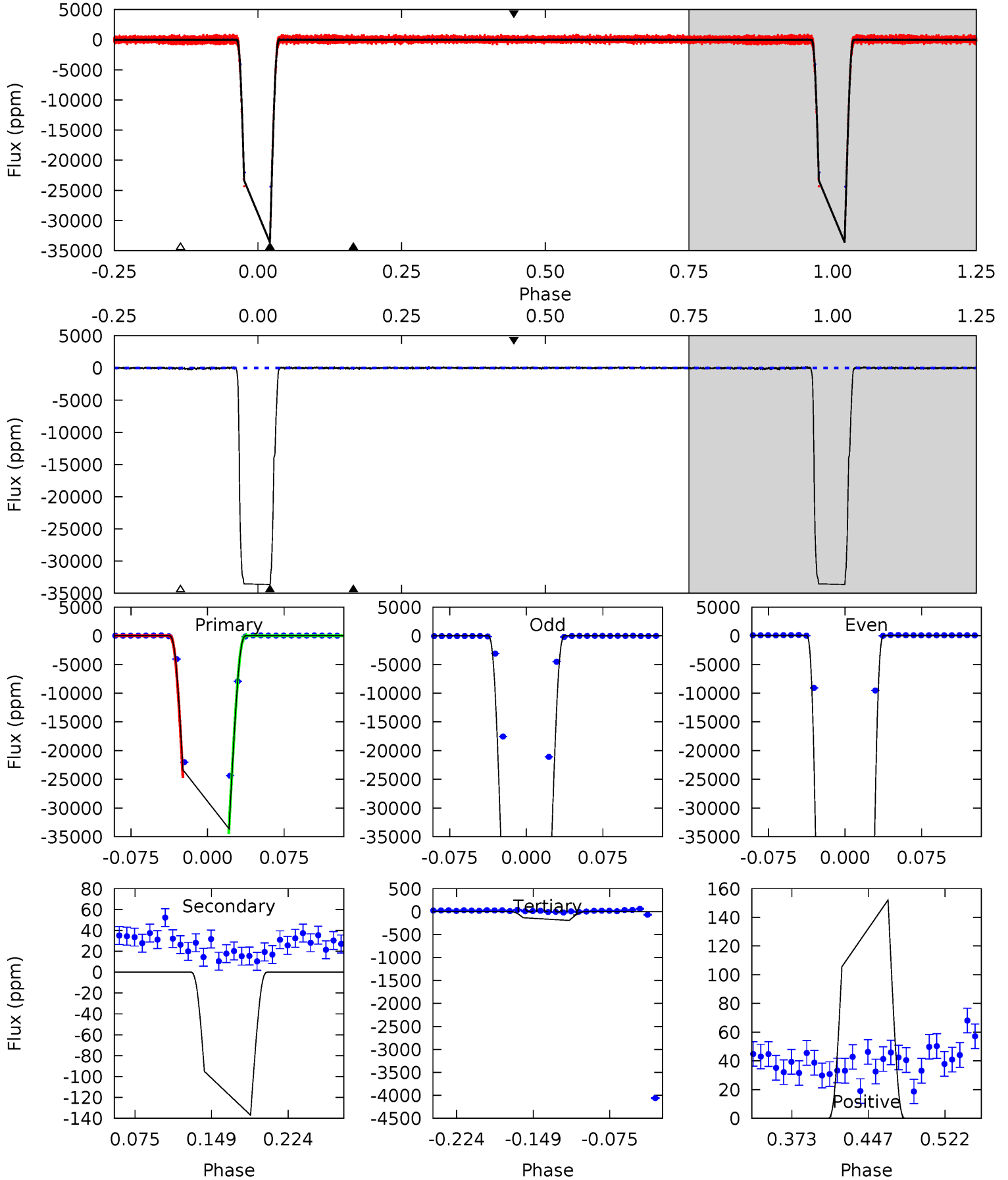
TCE 010095512-01 P= 3.008629 Days $T_0=132.918469$ (BKJD)



DV Model-Shift Uniqueness Test

010095512-01, P = 3.008612 Days, E = 129.914496 Days

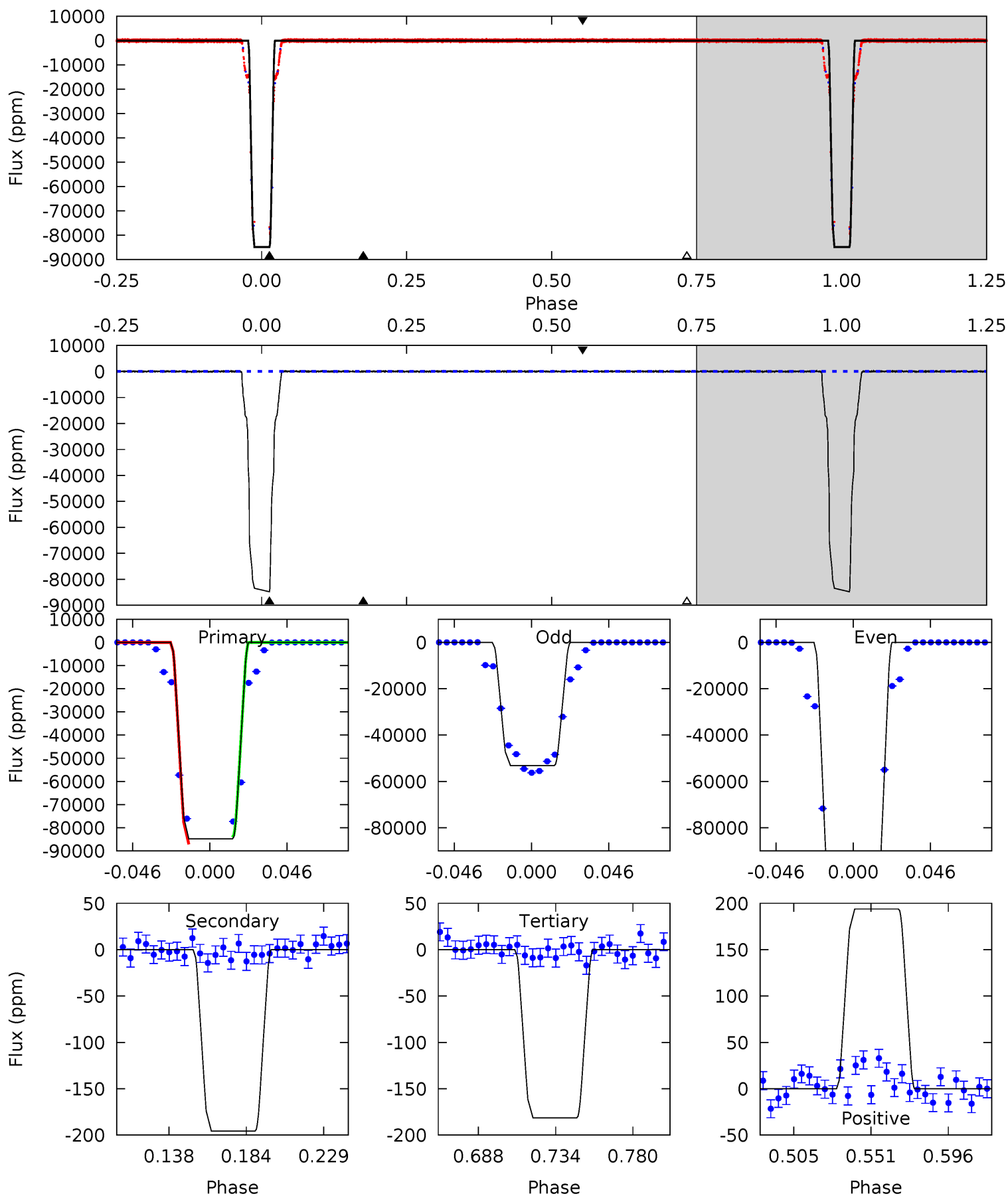
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3579	14.6	20.6	16.2	4.63	1.78	5.33	3559	3563	-5.98	-1.60	4836	1.52	0.00	0



Alt Model-Shift Uniqueness Test

010095512-01, P = 3.008629 Days, E = 129.909840 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2681	6.19	5.74	6.13	4.73	2.00	2.20	2675	2674	0.45	0.06	3099	0.75	0.00	0



Stellar Parameters For KIC 010095512

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6033^{+163}_{-181}	$4.398^{+0.108}_{-0.201}$	$-0.260^{+0.300}_{-0.300}$	$1.026^{+0.299}_{-0.161}$	$0.961^{+0.130}_{-0.117}$	$1.252^{+0.584}_{-0.634}$
	+3%/-3%	+2%/-5%	+115%/-115%	+29%/-16%	+14%/-12%	+47%/-51%
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 010095512-01 / KOI 7286.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-137 ± 9	$47.86^{+15.51}_{-13.56}$	1896^{+132}_{-103}	-2367^{+94}_{-97}	$0.054^{+0.050}_{-0.023}$
Alt.	-196 ± 32	$34.67^{+14.41}_{-14.63}$	1895^{+146}_{-107}	-2240^{+444}_{-149}	$0.140^{+0.297}_{-0.068}$

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

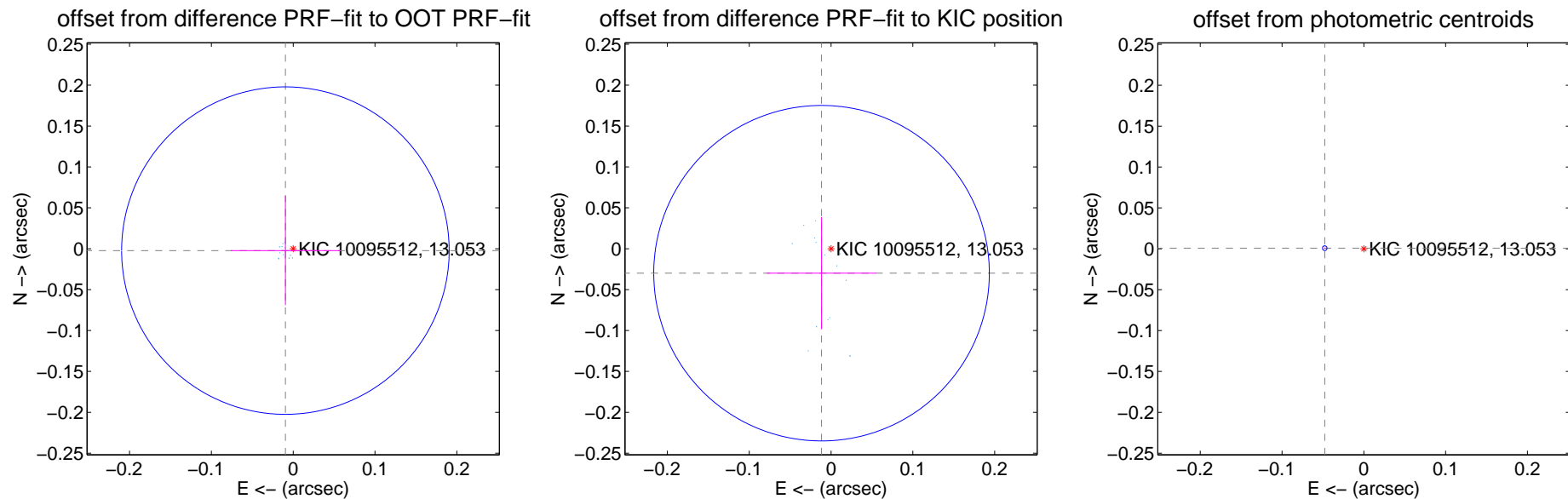
DV Centroid Data

Supplemental centroid analysis for 010095512-01. Kepler magnitude: 13.05. Transit SNR 5246.70

There are 14 quarters with good PRF difference image offsets

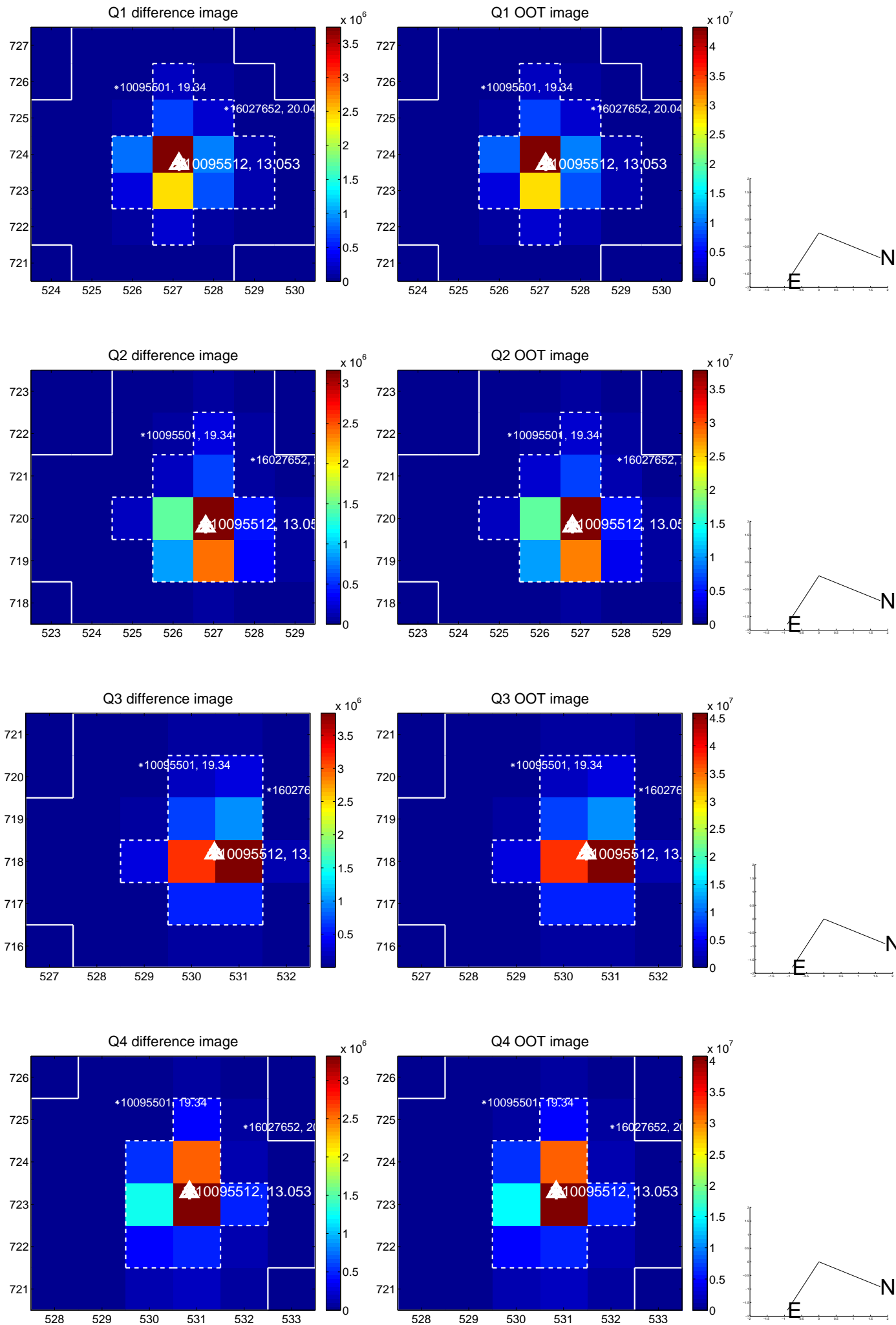
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.067	0.15	0.010 ± 0.067	-0.002 ± 0.067
PRF-fit source offset from KIC position	0.032 ± 0.068	0.47	0.012 ± 0.067	-0.030 ± 0.069
photometric centroid source offset	0.05 ± 0.00	50.53	0.05 ± 0.00	0.00 ± 0.00

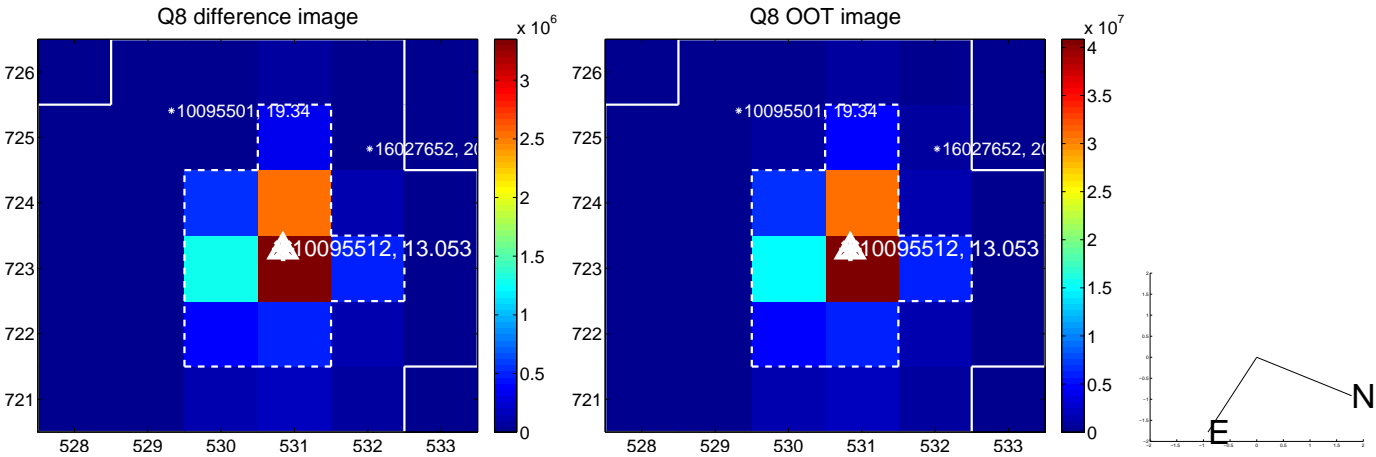
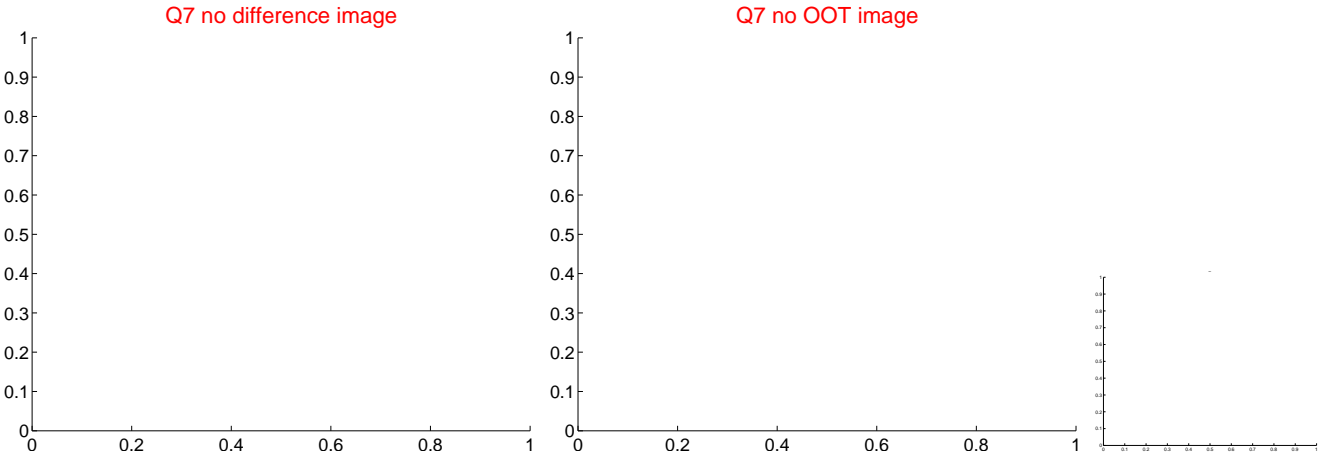
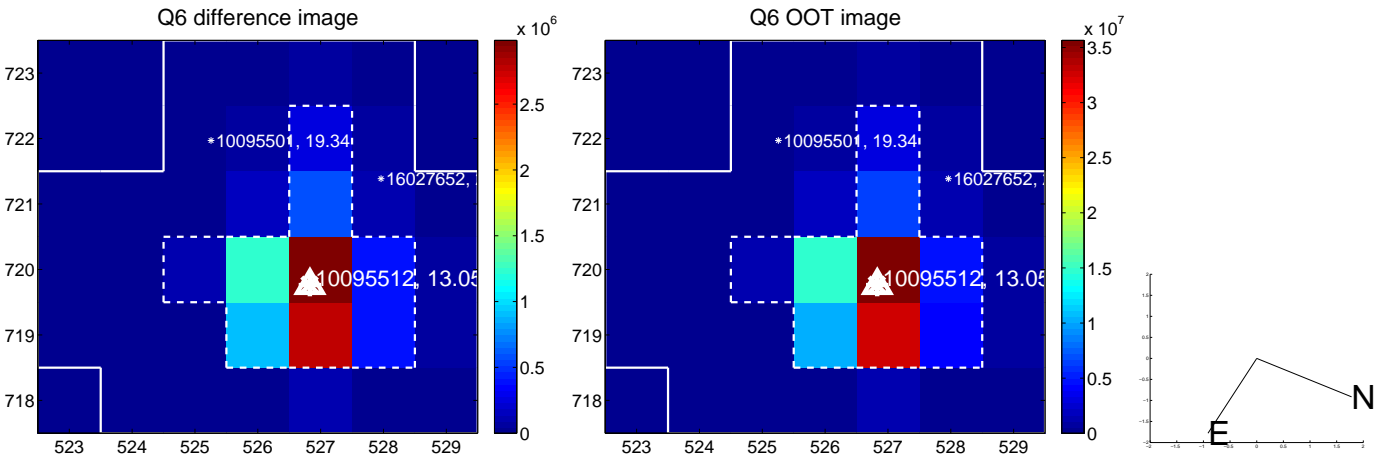
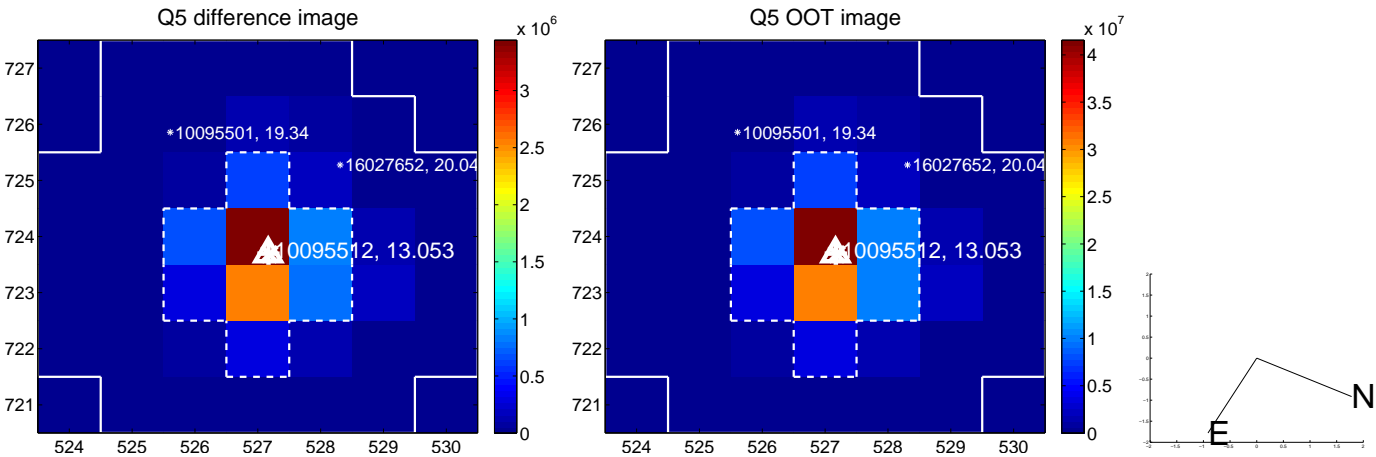


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

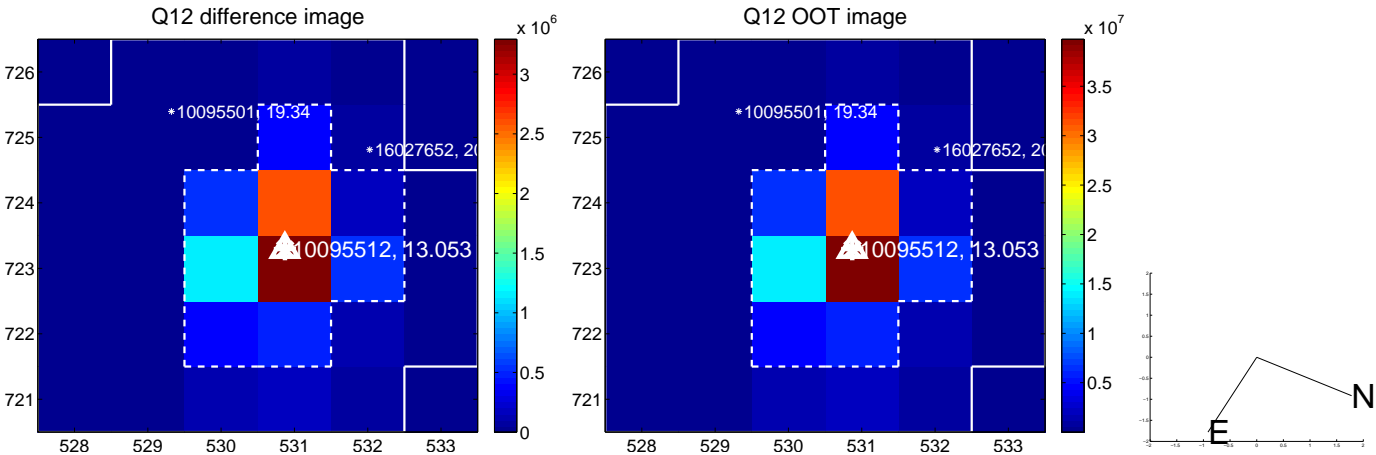
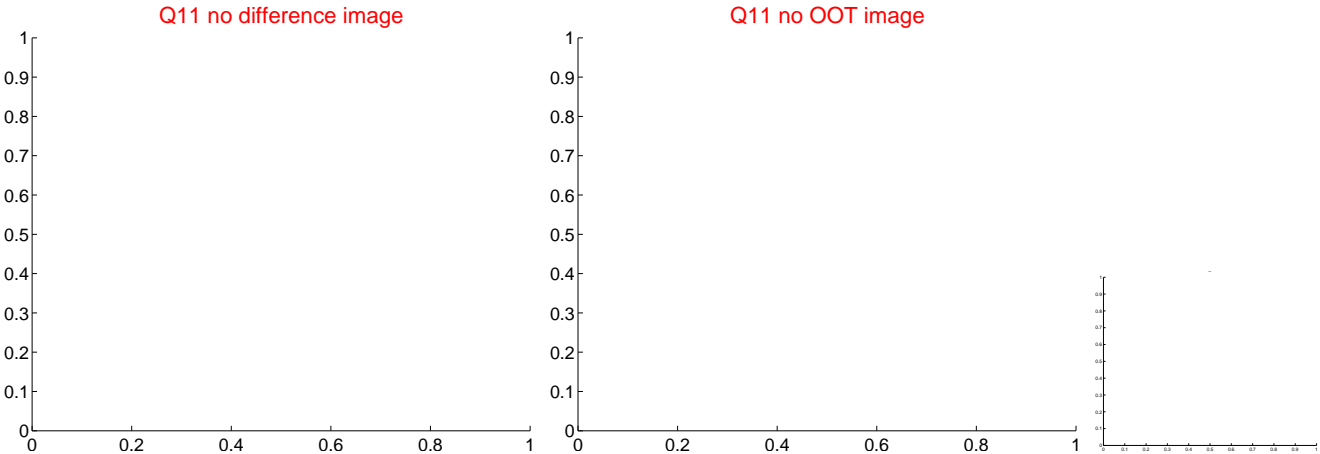
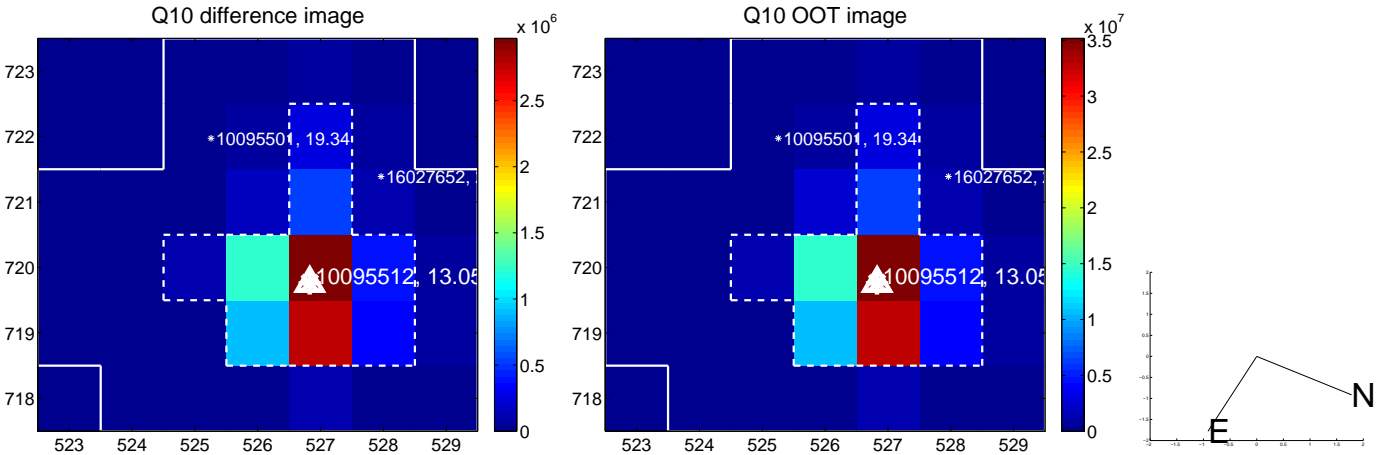
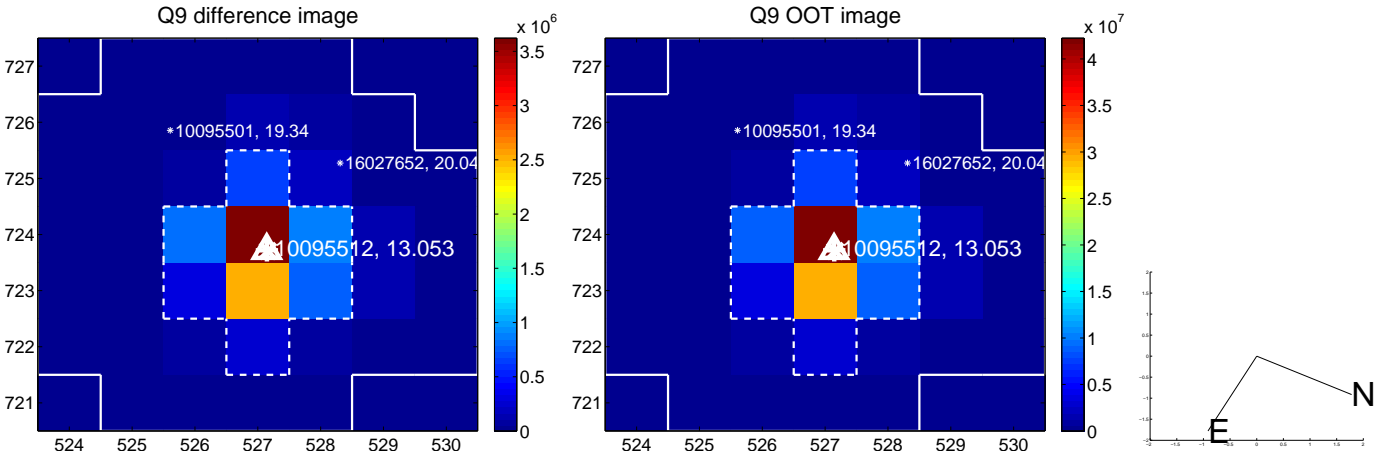
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



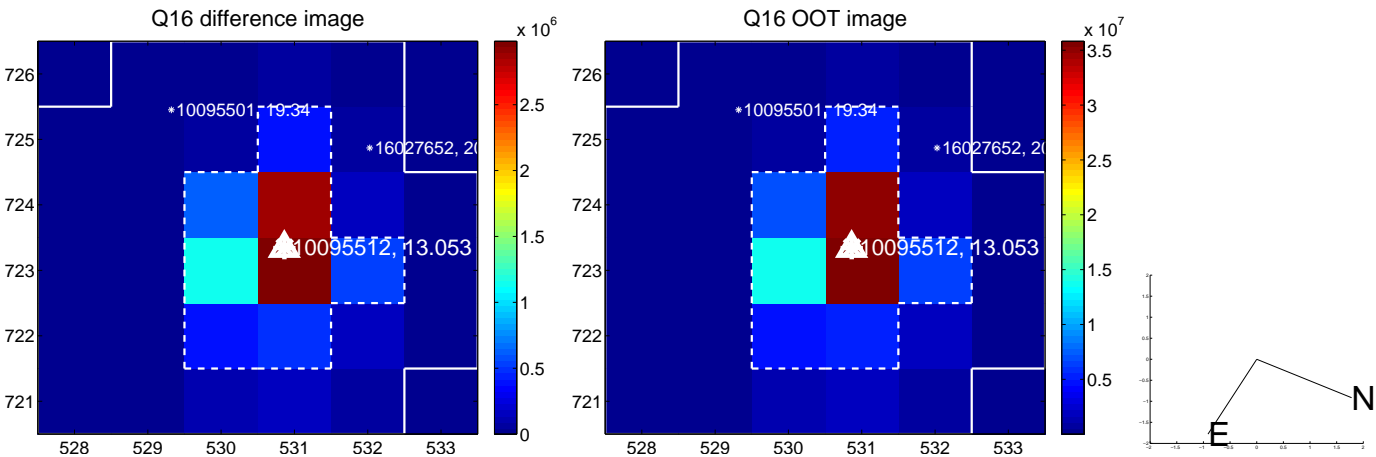
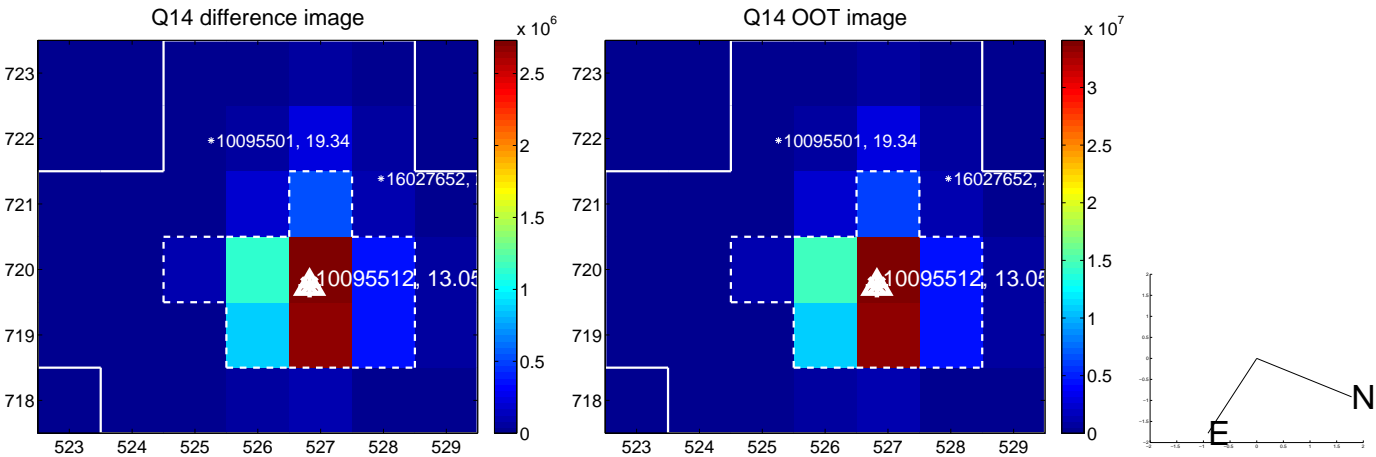
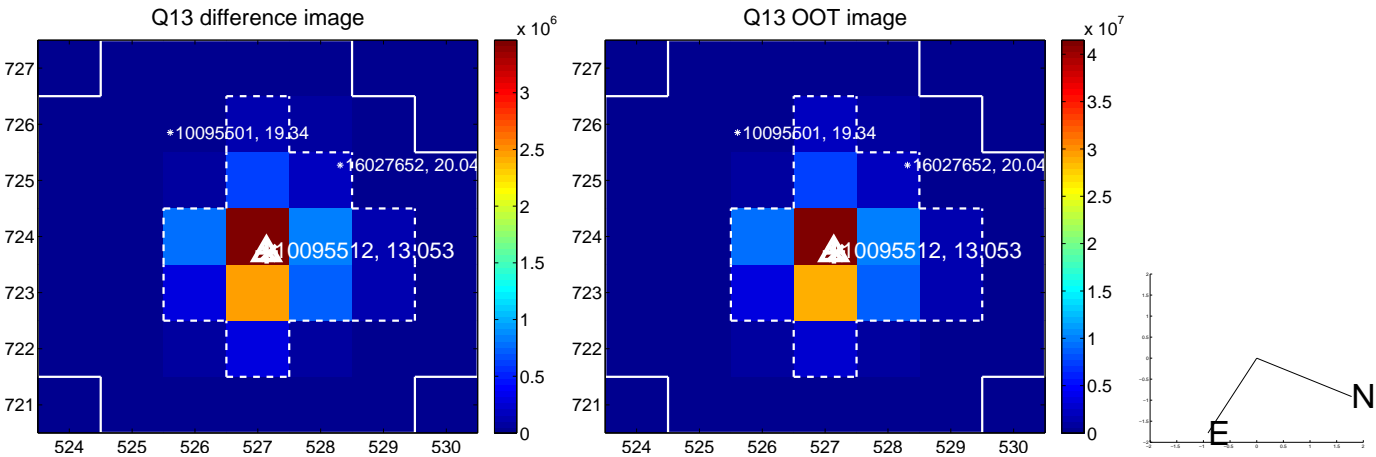
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



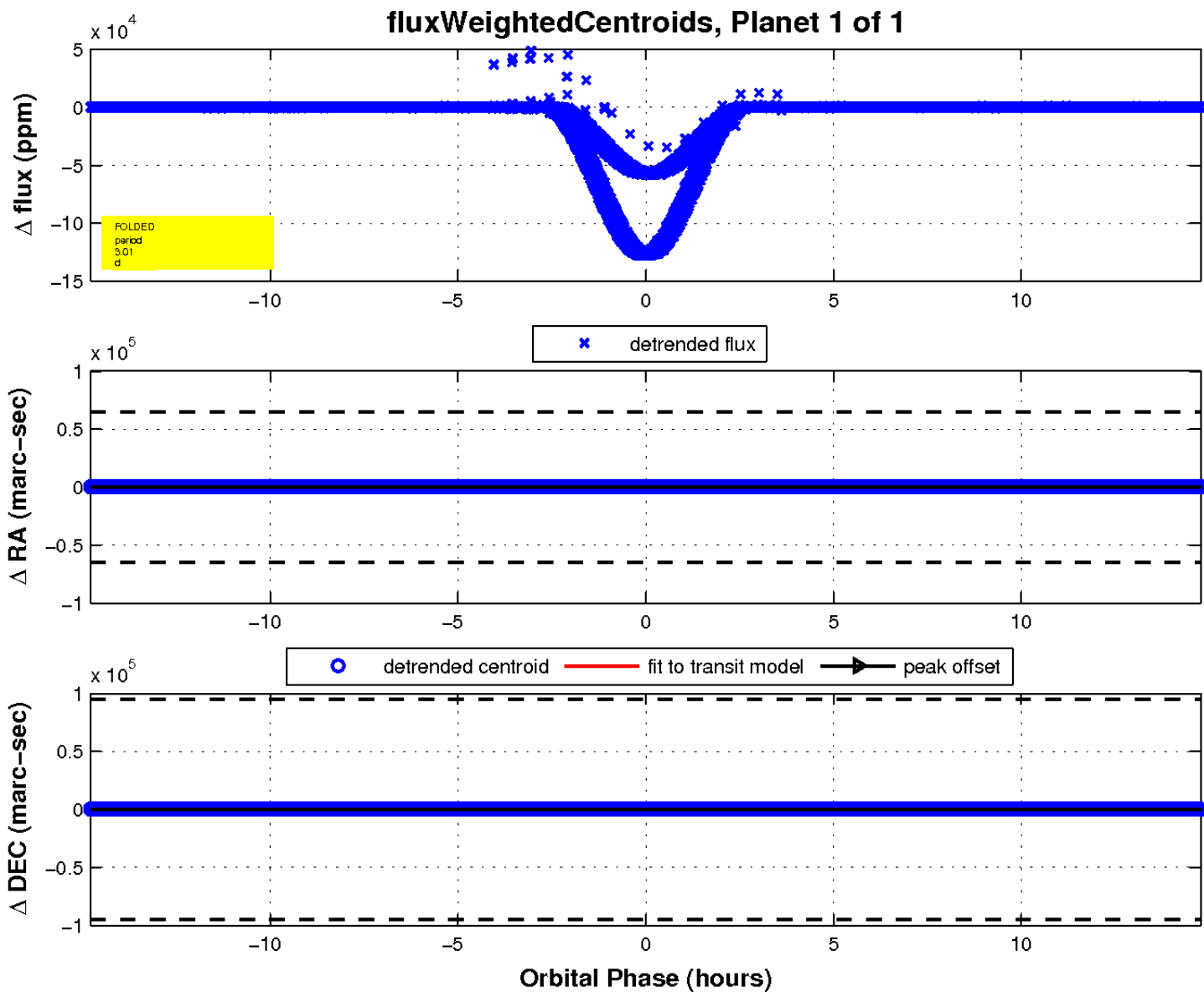
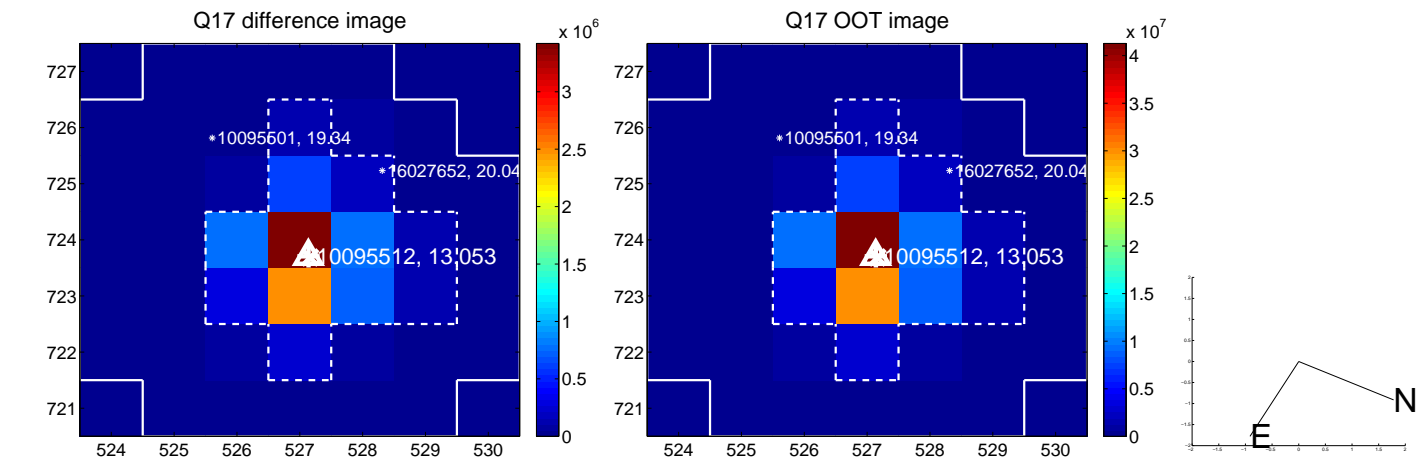
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UKIRT Image

Declination

