

KIC 010363300

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})
010363300-01	OBS	7318.01	0.934935	132.172991	129294.8	3.003	6334.5	3214.2	1.08	5962	46.93	3476.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010363300-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_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.

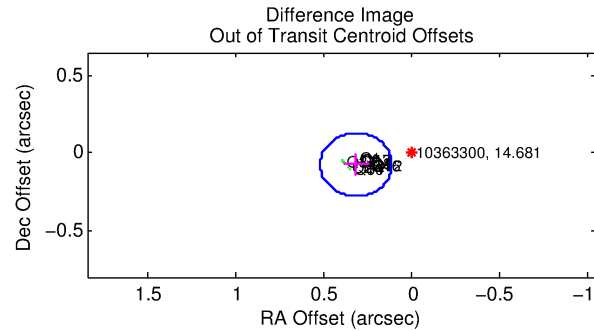
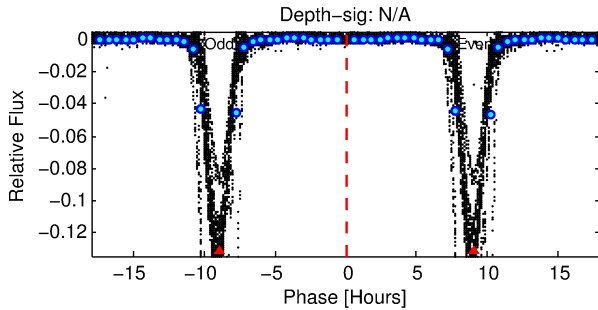
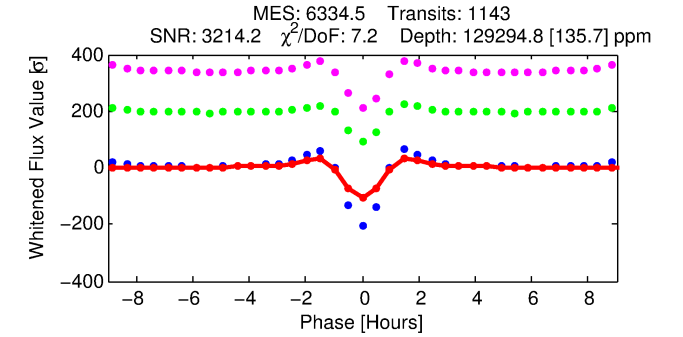
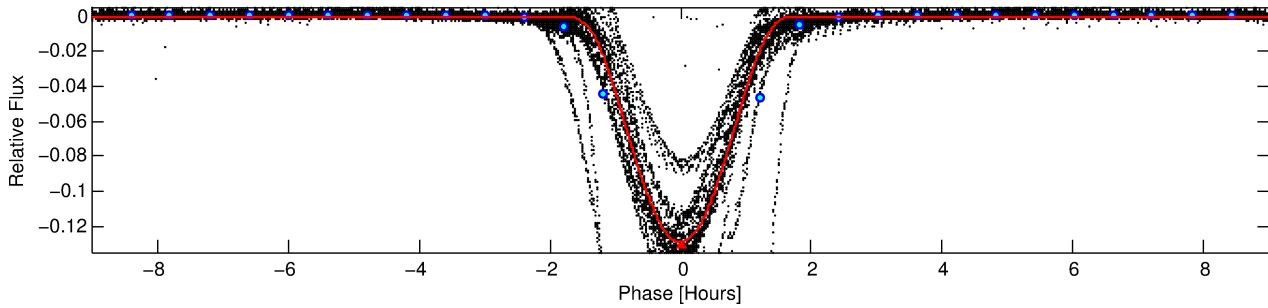
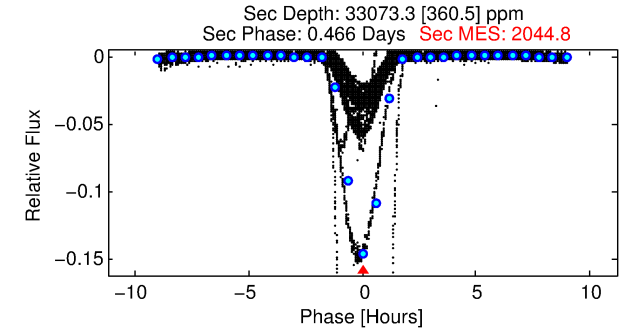
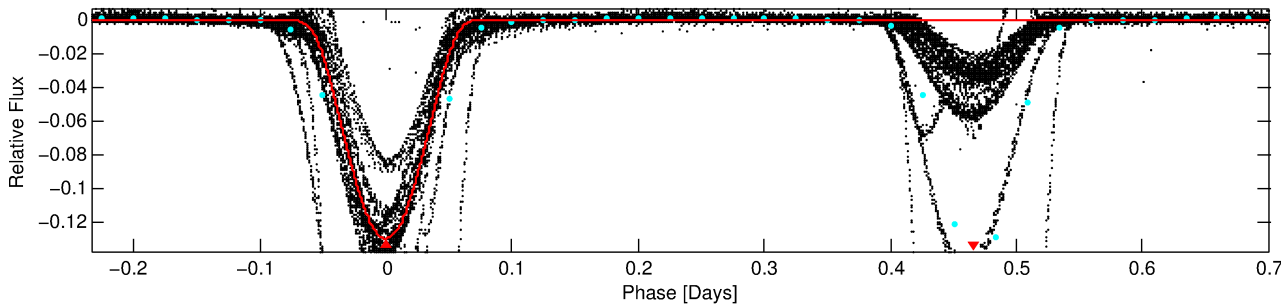
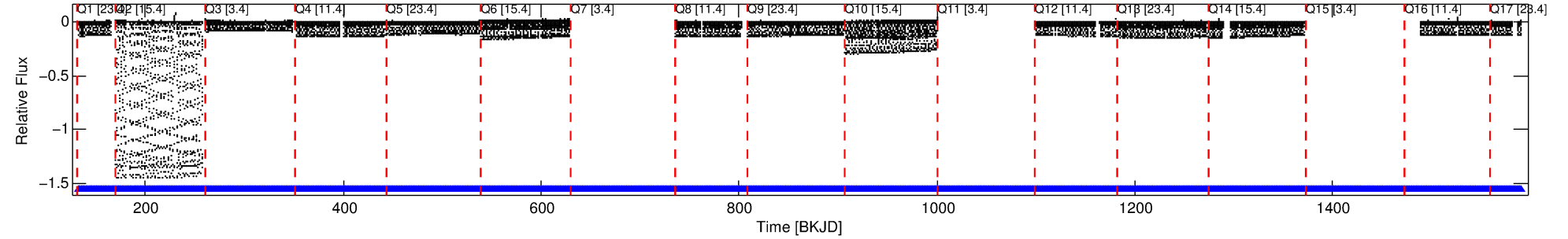
Ephemeris Match Information For 010363300-01

No Significant Match Found

DV One-Page Summary

KIC: 10363300 Candidate: 1 of 1 Period: 0.935 d
KOI: K07318.01 Corr: 0.963

Kp: 14.68 R*: 1.08 Rs Teff: 5962.0 K Logg: 4.42 Fe/H: 0.220



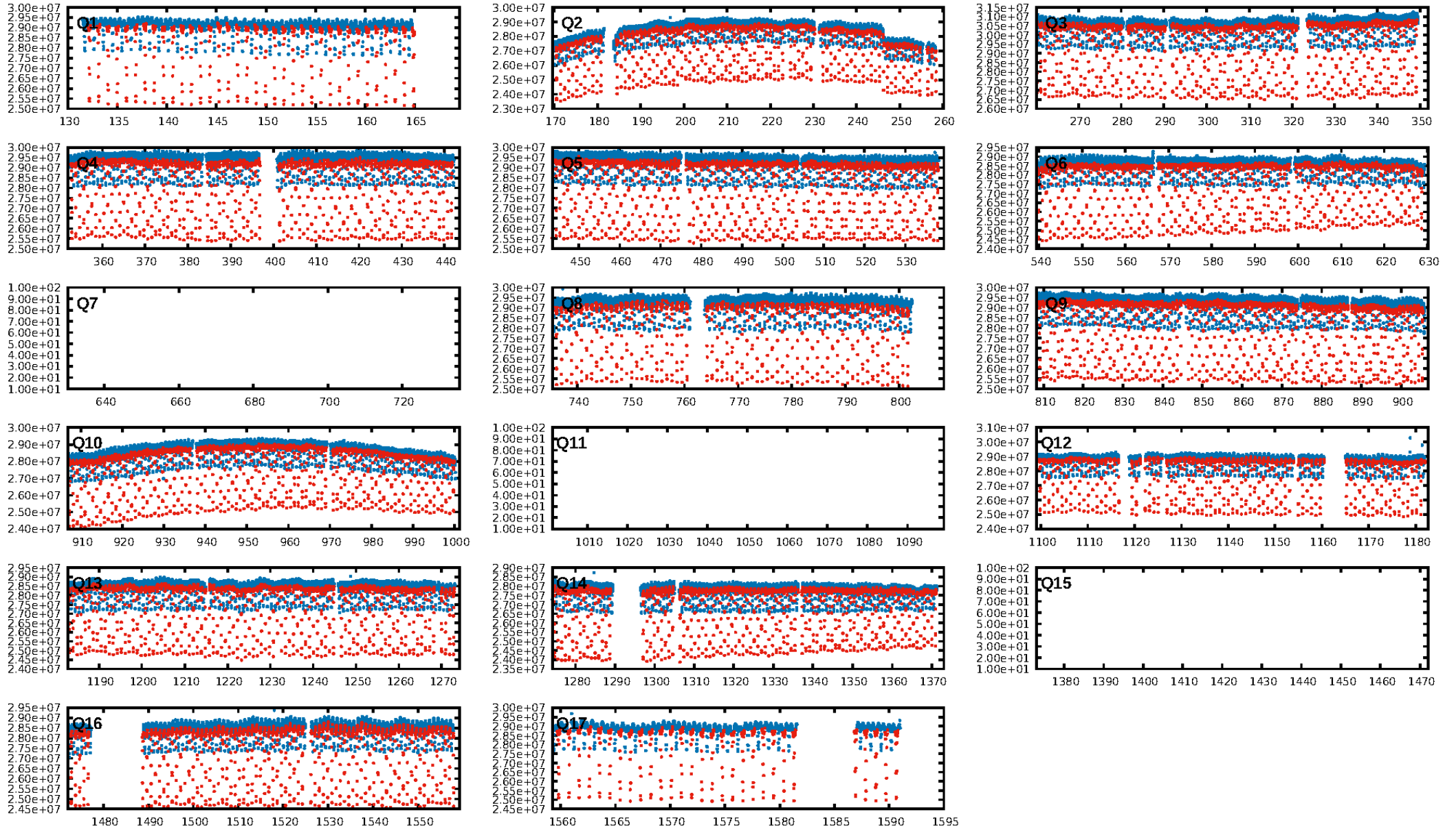
DV Fit Results:

Period = 0.93493 [0.00000] d
Epoch = 132.1730 [0.0000] BKJD
Rp/R* = 0.3990 [0.0042]
a/R* = 2.99 [0.00]
b = 0.75 [0.01]
Seff = 3476.69 [1446.23]
Teq = 1958 [204] K
Rp = 46.93 [14.42] Re
a = 0.0195 [0.0051] AU
Ag = 3.13 [1.22] [1.74σ]
Teffp = 4025 [148] K [8.20σ]

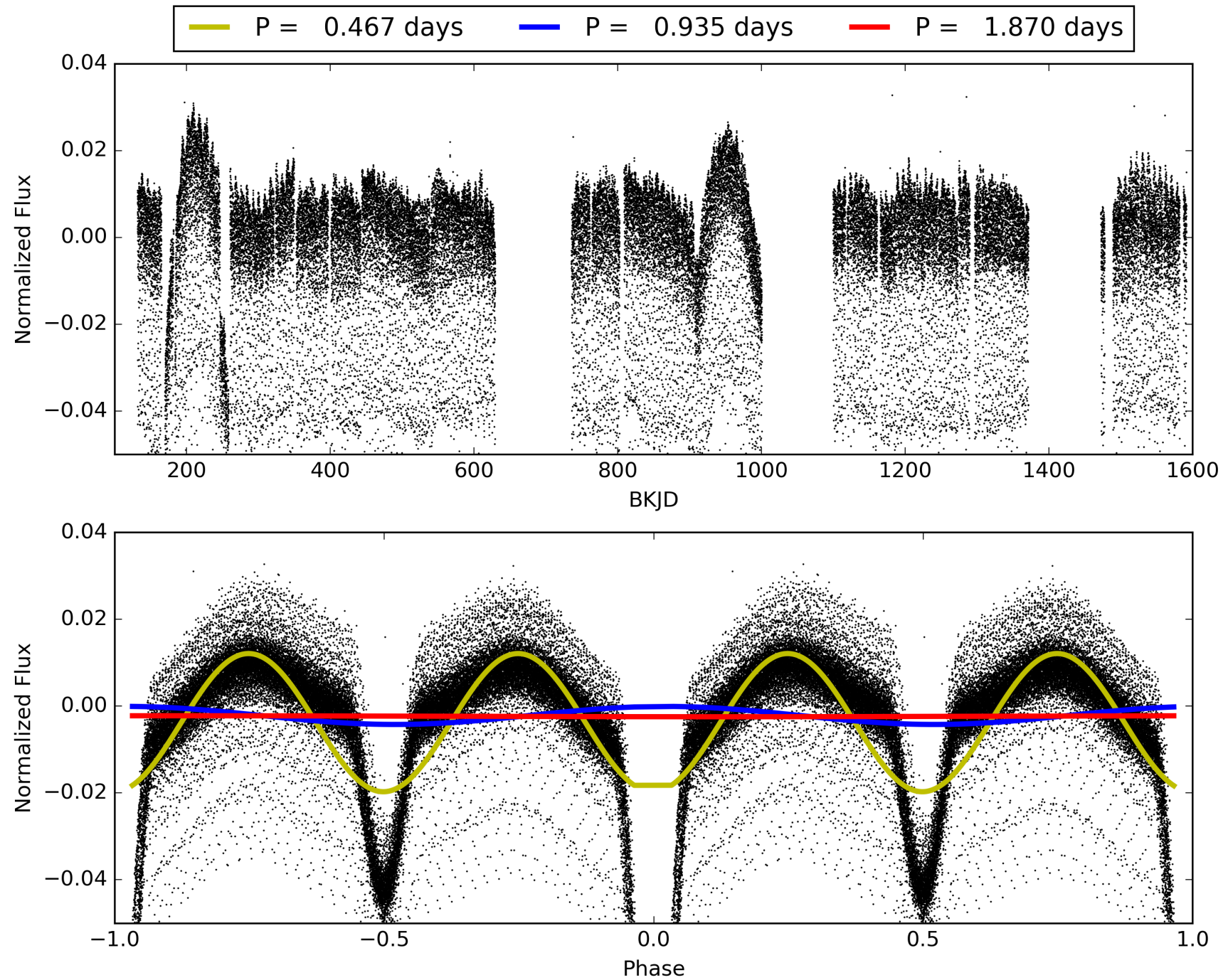
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1078/1078]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.327 arcsec [4.80σ]
KicOffset-rm: 0.349 arcsec [5.18σ]
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 010363300-01, PDC Light Curves

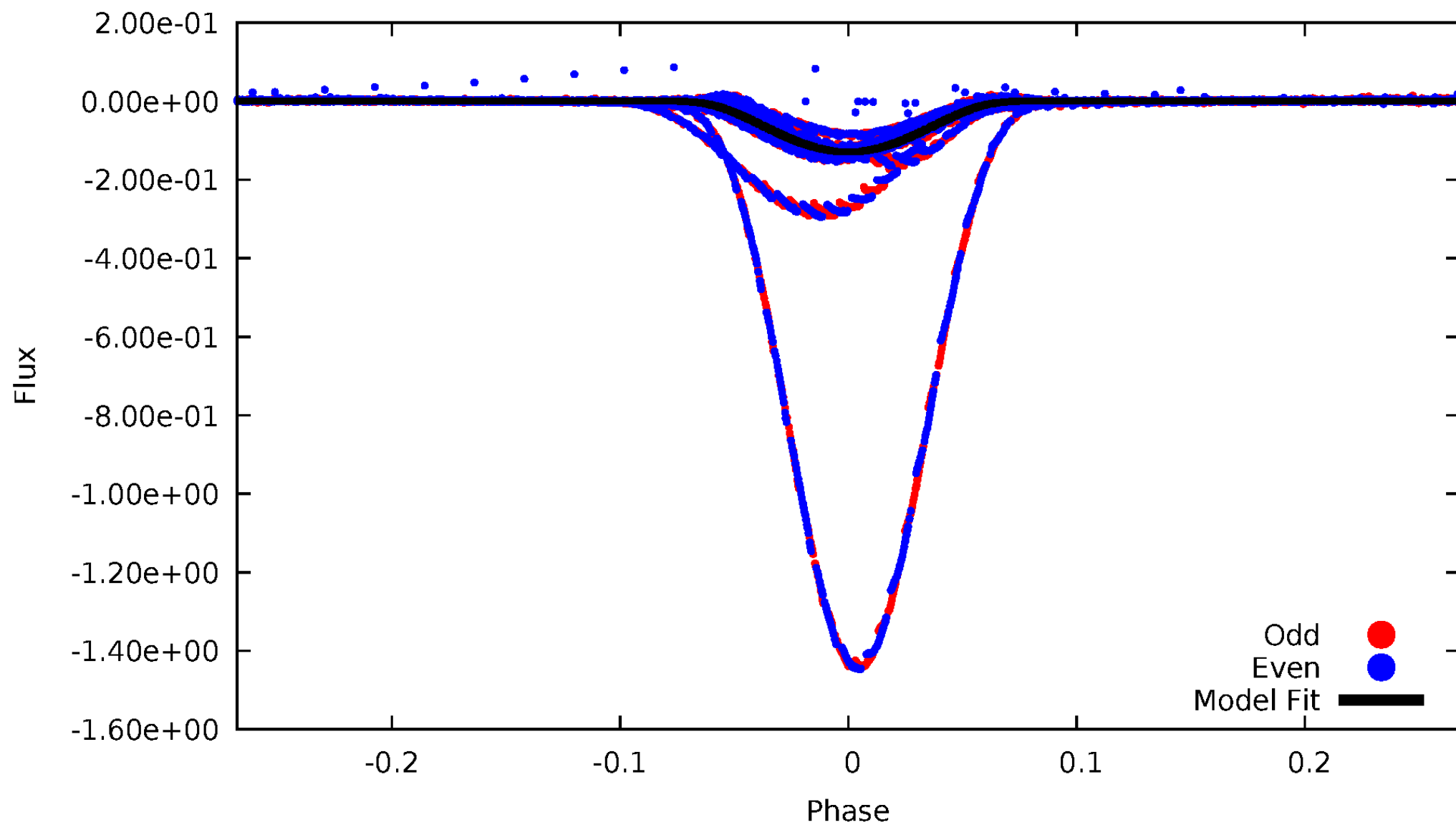


TCE 010363300-01



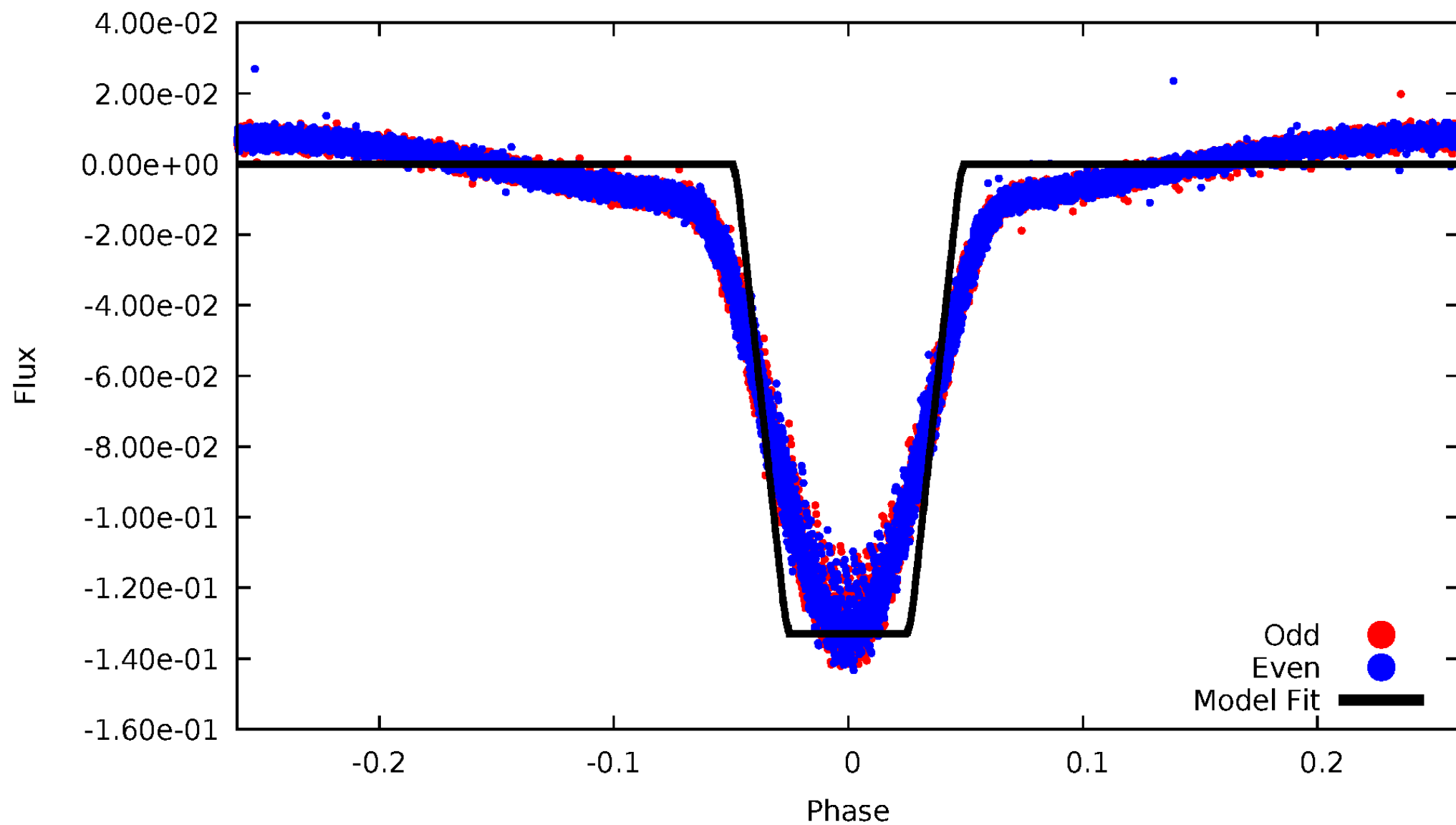
DV Odd/Even

TCE 010363300-01



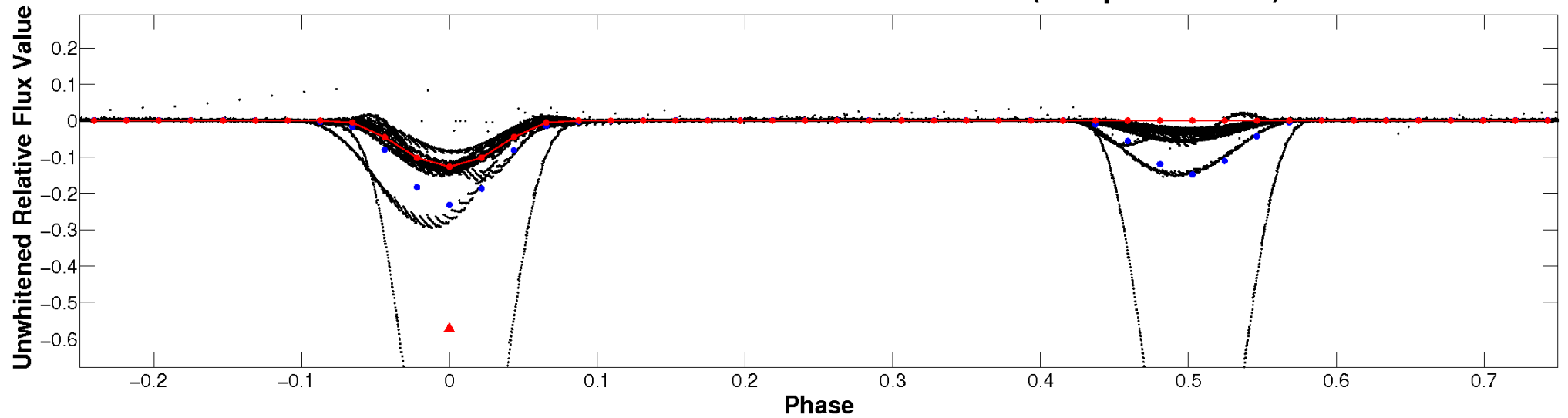
ALT Odd/Even

TCE 010363300-01

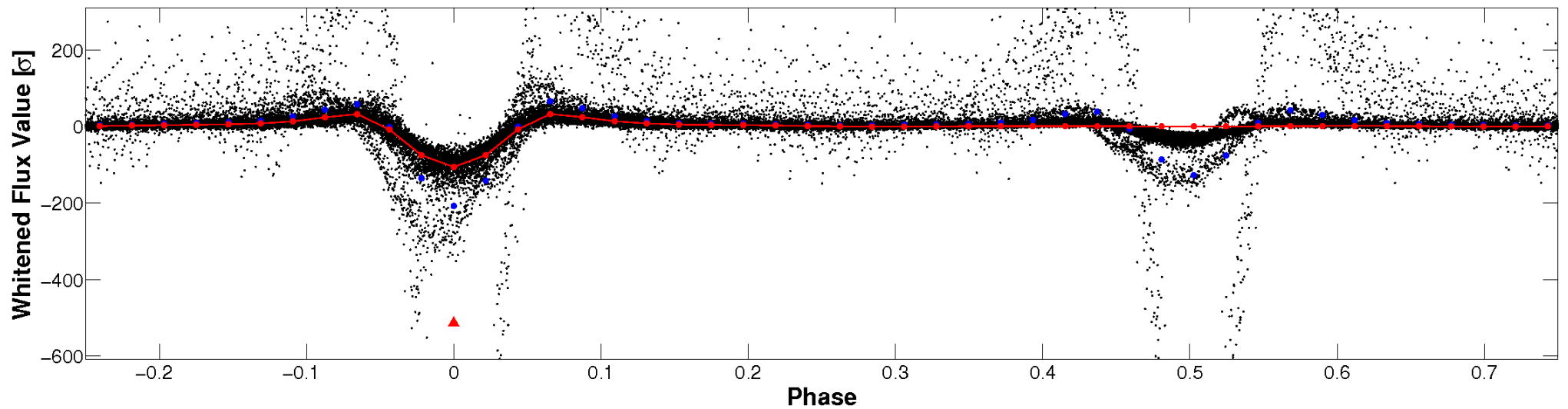


Non-Whitened Vs. Whitened Light Curve

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

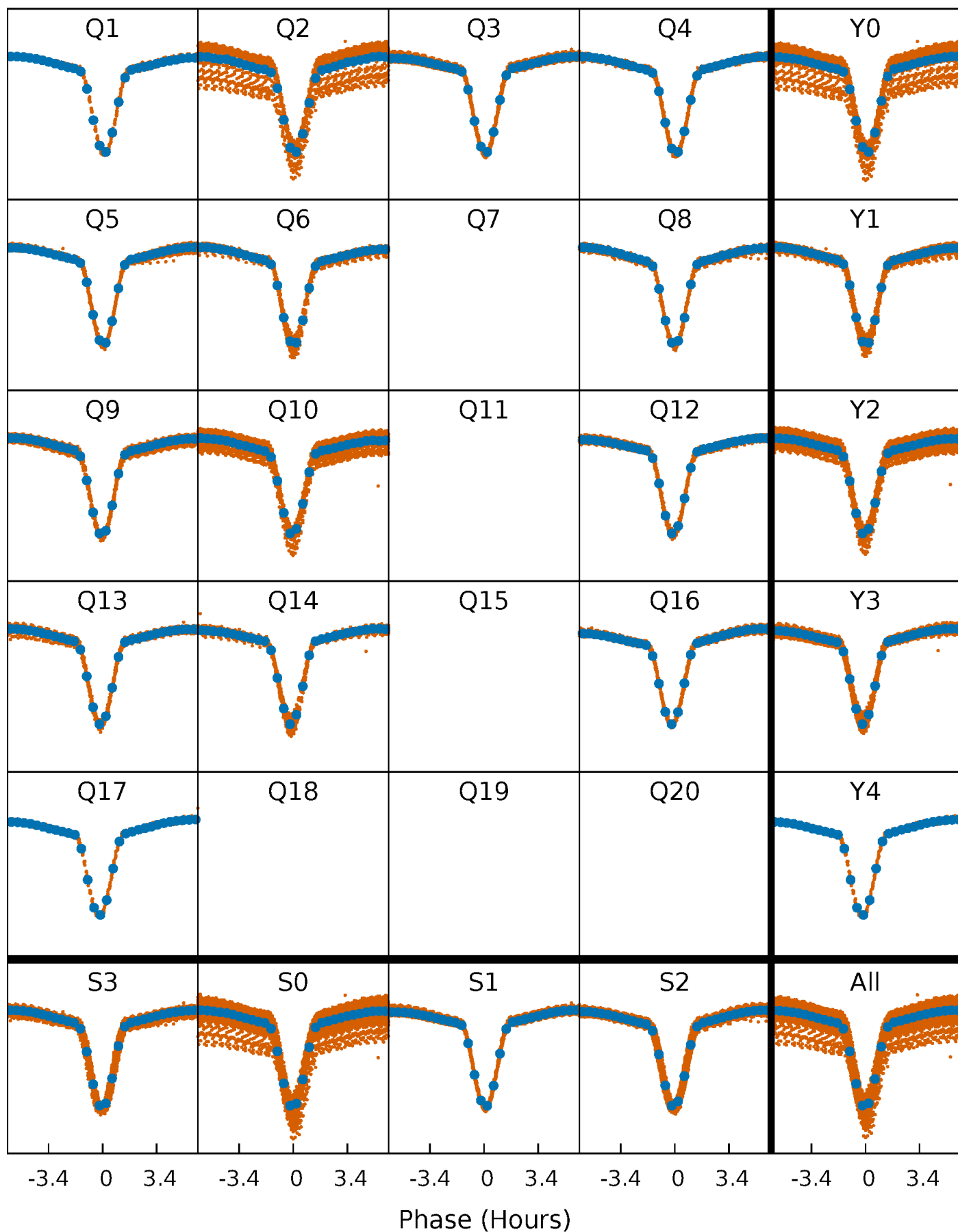


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



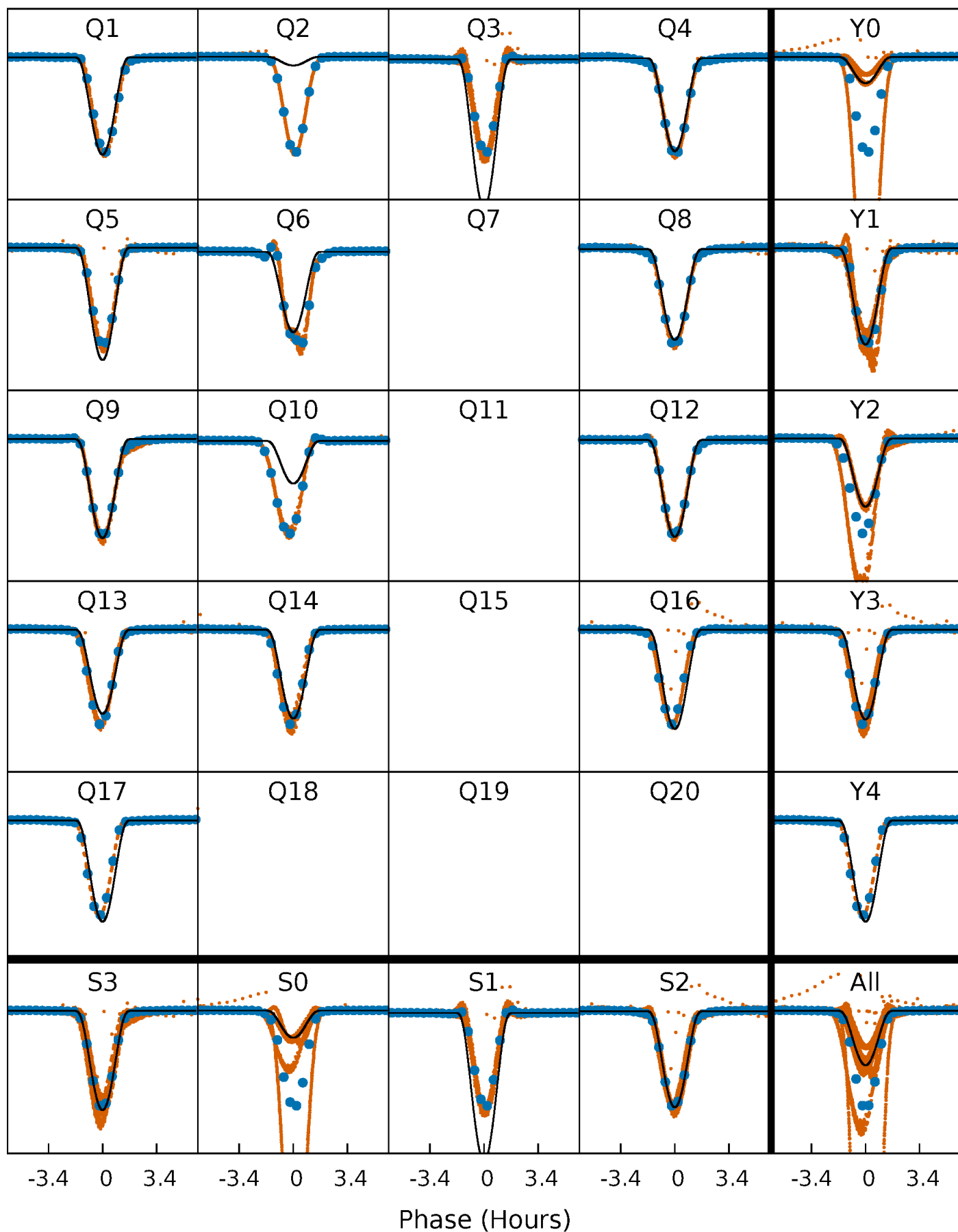
PDC Quarter-Phased Transit Curves

TCE 010363300-01 P= 0.934935 Days $T_0=132.172990$ (BKJD)



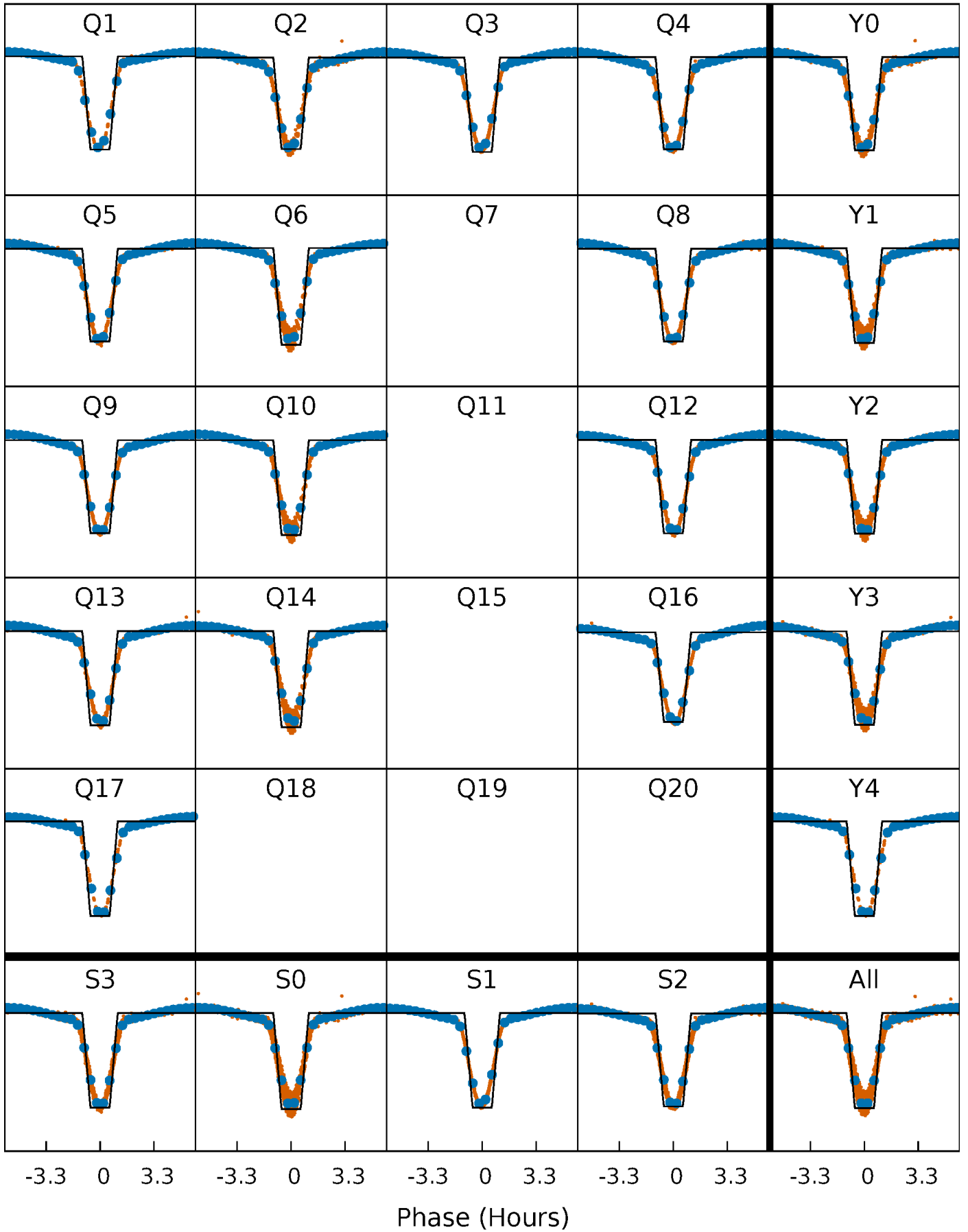
DV Quarter-Phased Transit Curves

TCE 010363300-01 P= 0.934935 Days $T_0=132.172990$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

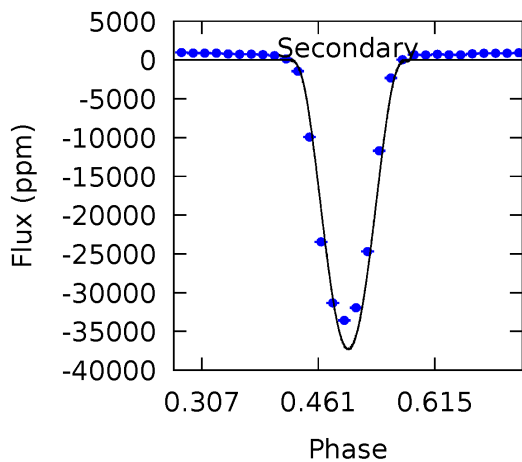
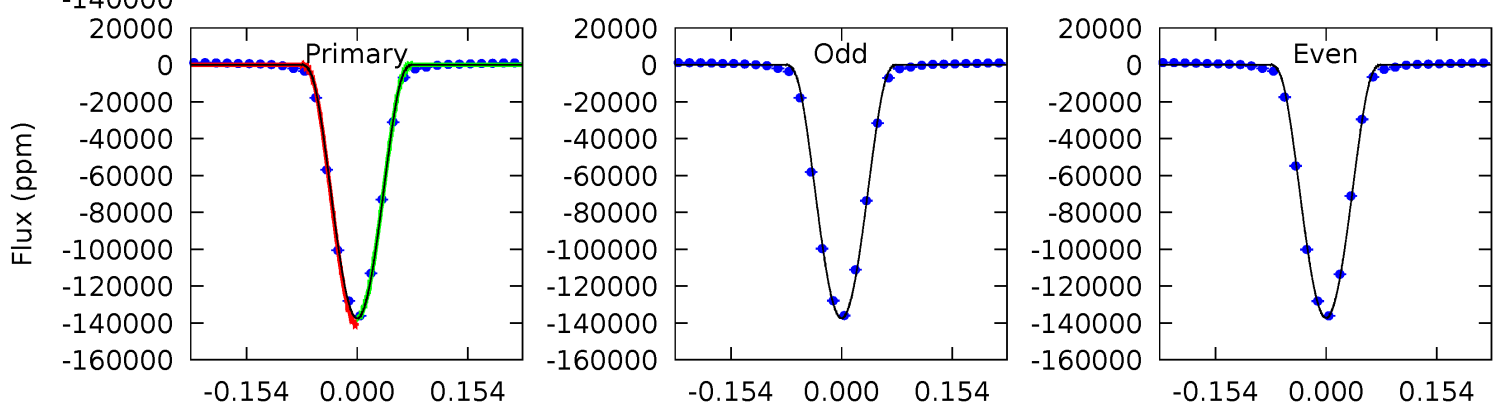
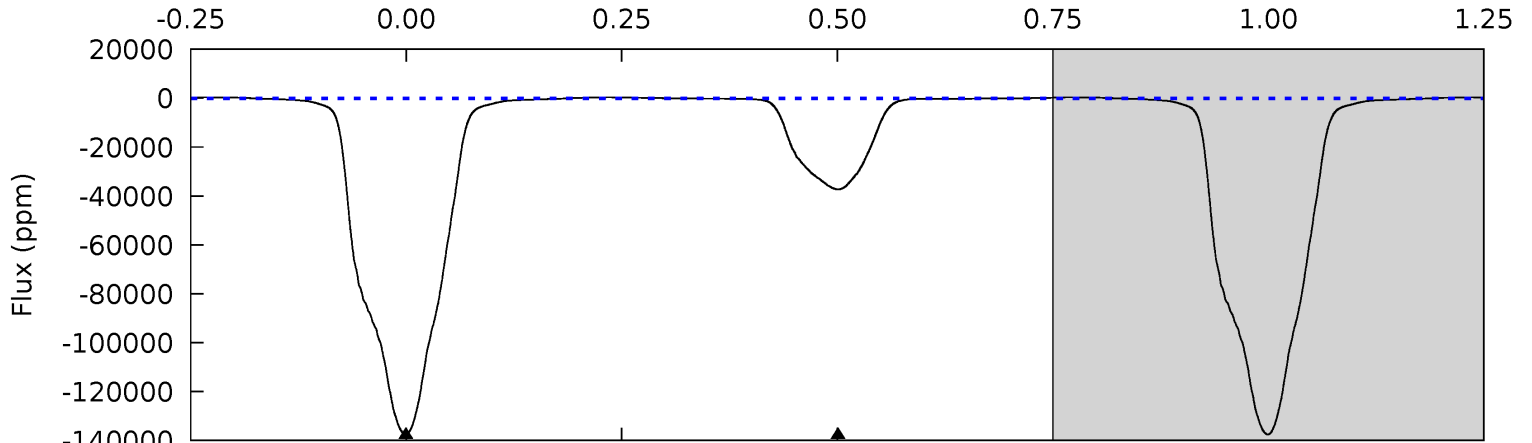
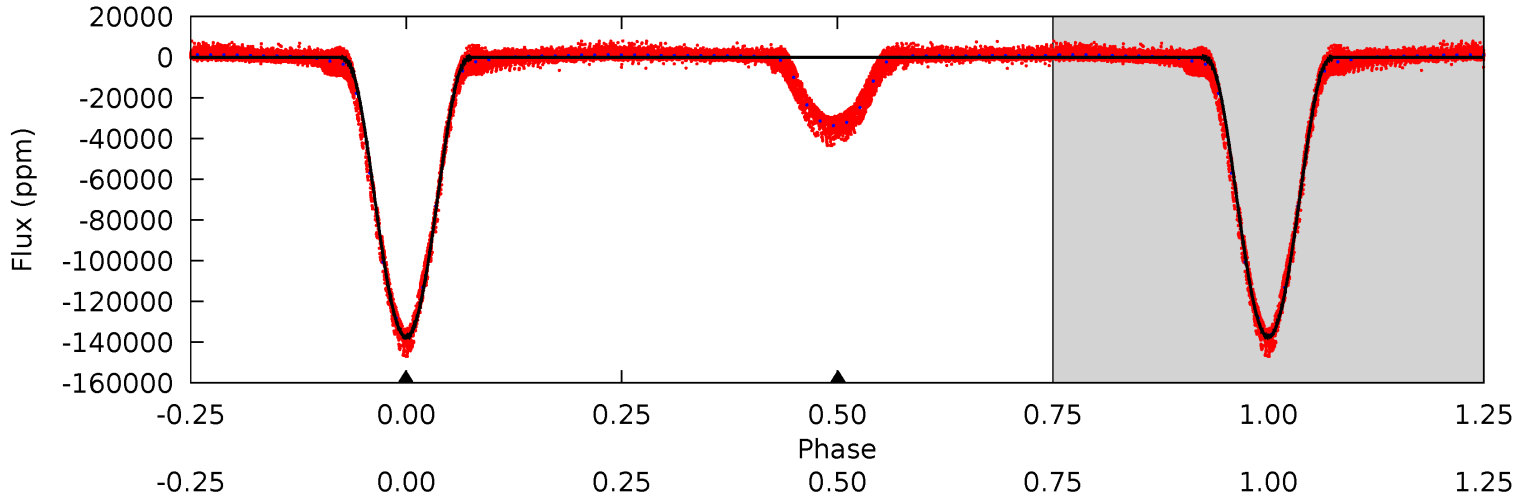
TCE 010363300-01 $P = 0.934923$ Days $T_0 = 132.180400$ (BKJD)



DV Model-Shift Uniqueness Test

010363300-01, P = 0.934935 Days, E = 131.238055 Days

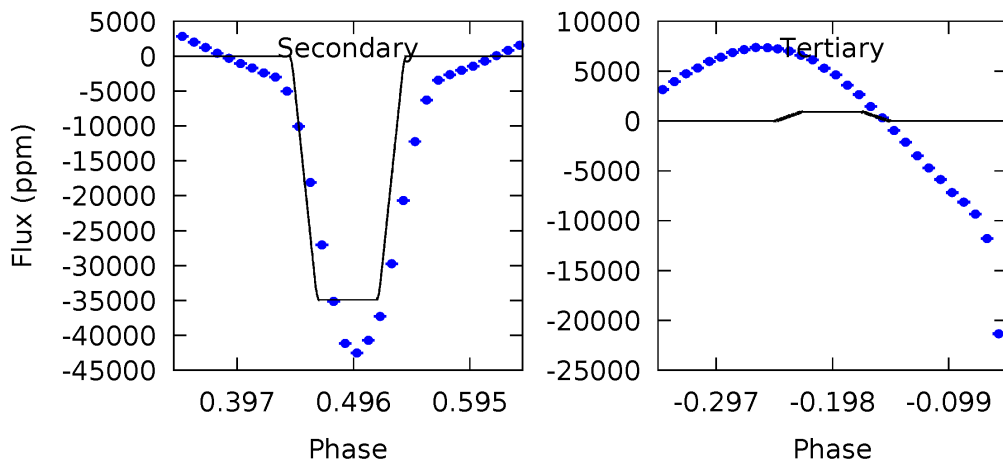
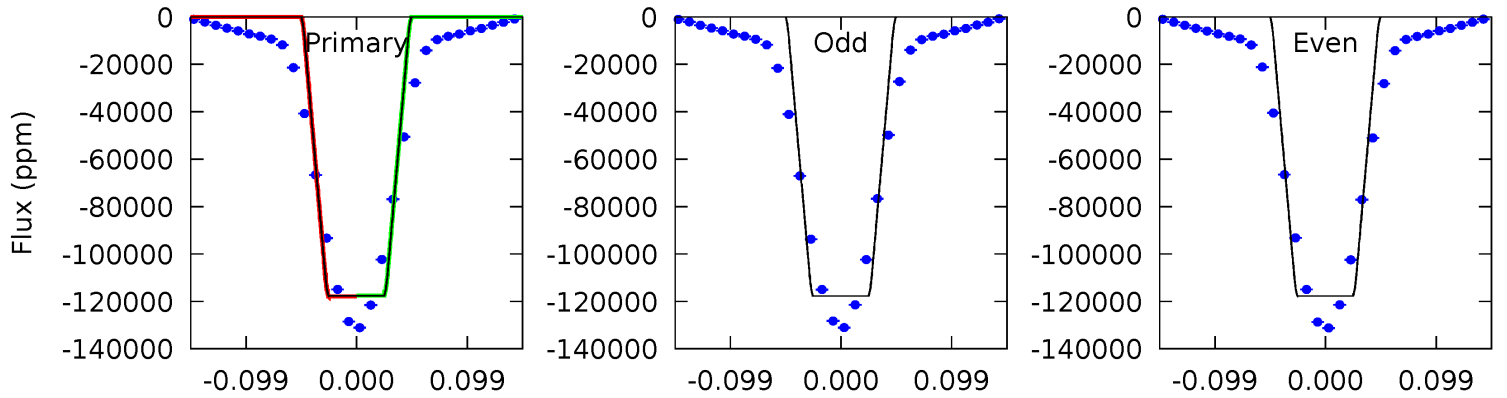
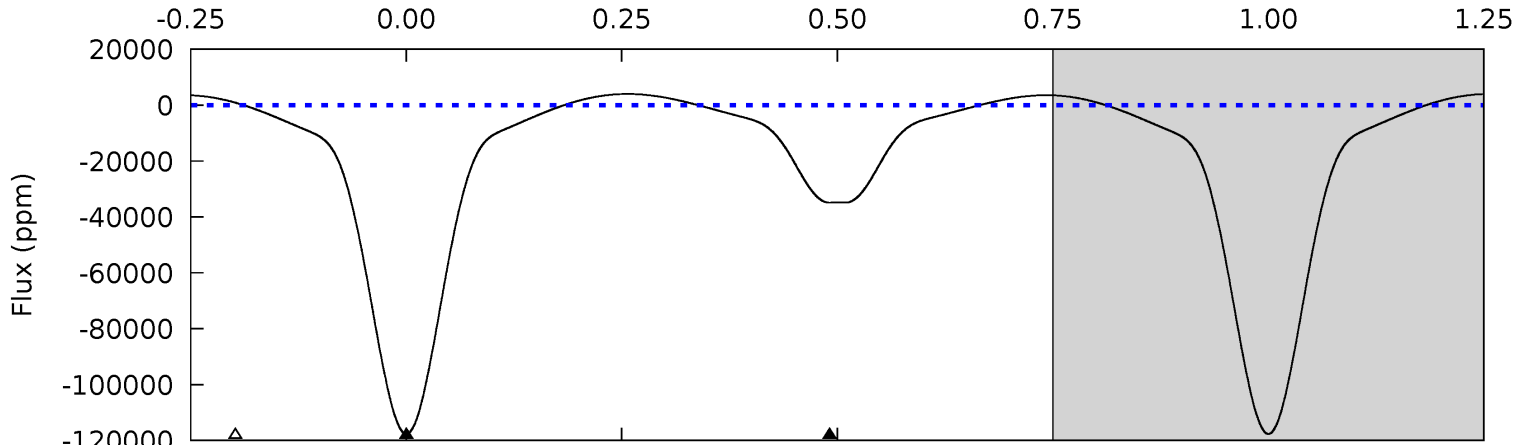
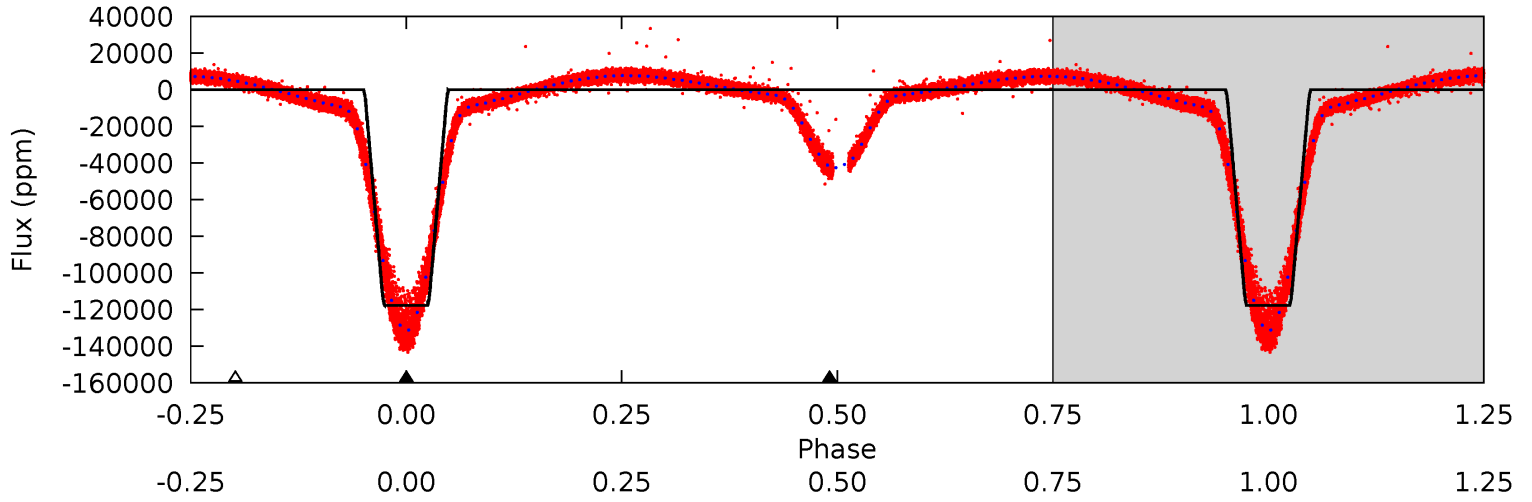
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4983	1351	0	0	4.47	1.43	7.27	4983	4983	1351	1351	3.66	1.76	0.00	0



Alt Model-Shift Uniqueness Test

010363300-01, P = 0.934923 Days, E = 131.245477 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1631	483.9	-12.5	0	4.57	1.65	55.6	1644	1631	496.4	483.9	0.19	0.99	0.03	2.57



Stellar Parameters For KIC 010363300

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5962^{+181}_{-217}	$4.423^{+0.067}_{-0.216}$	$0.220^{+0.200}_{-0.300}$	$1.078^{+0.331}_{-0.142}$	$1.126^{+0.138}_{-0.152}$	$1.265^{+0.381}_{-0.696}$
	+3%/-4%	+2%/-5%	+91%/-136%	+31%/-13%	+12%/-13%	+30%/-55%
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 010363300-01 / KOI 7318.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-37287 ± 28	$47.98^{+8.12}_{-4.13}$	2791^{+215}_{-151}	4317^{+106}_{-121}	$3.440^{+0.577}_{-0.843}$
Alt.	-34908 ± 72	$44.55^{+7.60}_{-4.03}$	2809^{+220}_{-157}	4422^{+103}_{-125}	$3.751^{+0.655}_{-0.956}$

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 $A_{obs} \gg 1.0$

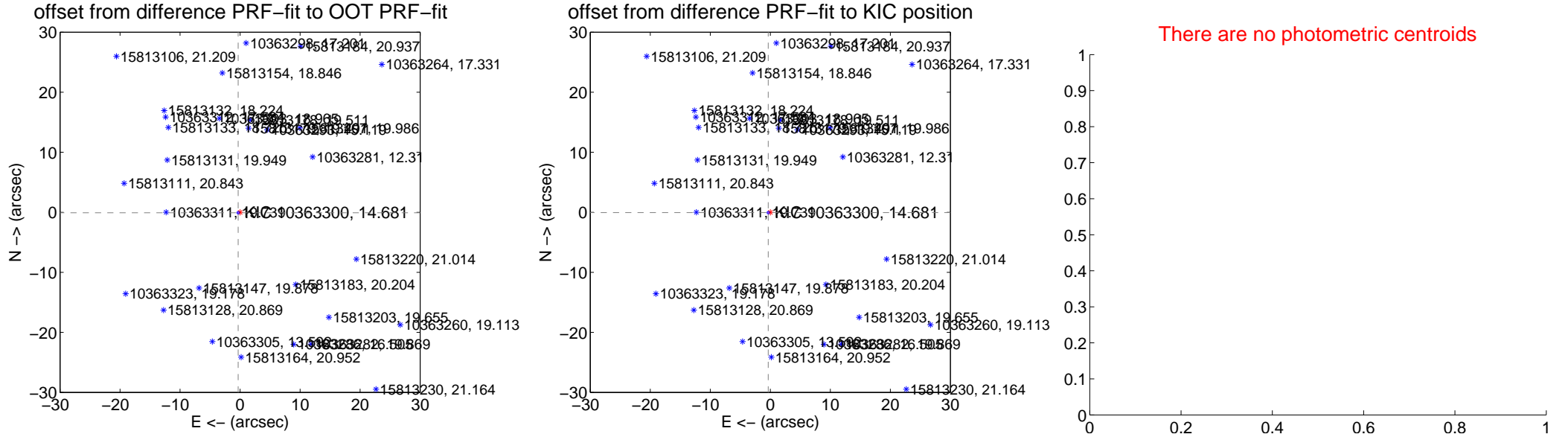
DV Centroid Data

Supplemental centroid analysis for 010363300-01. Kepler magnitude: 14.68. Transit SNR 3214.21

There are 14 quarters with good PRF difference image offsets

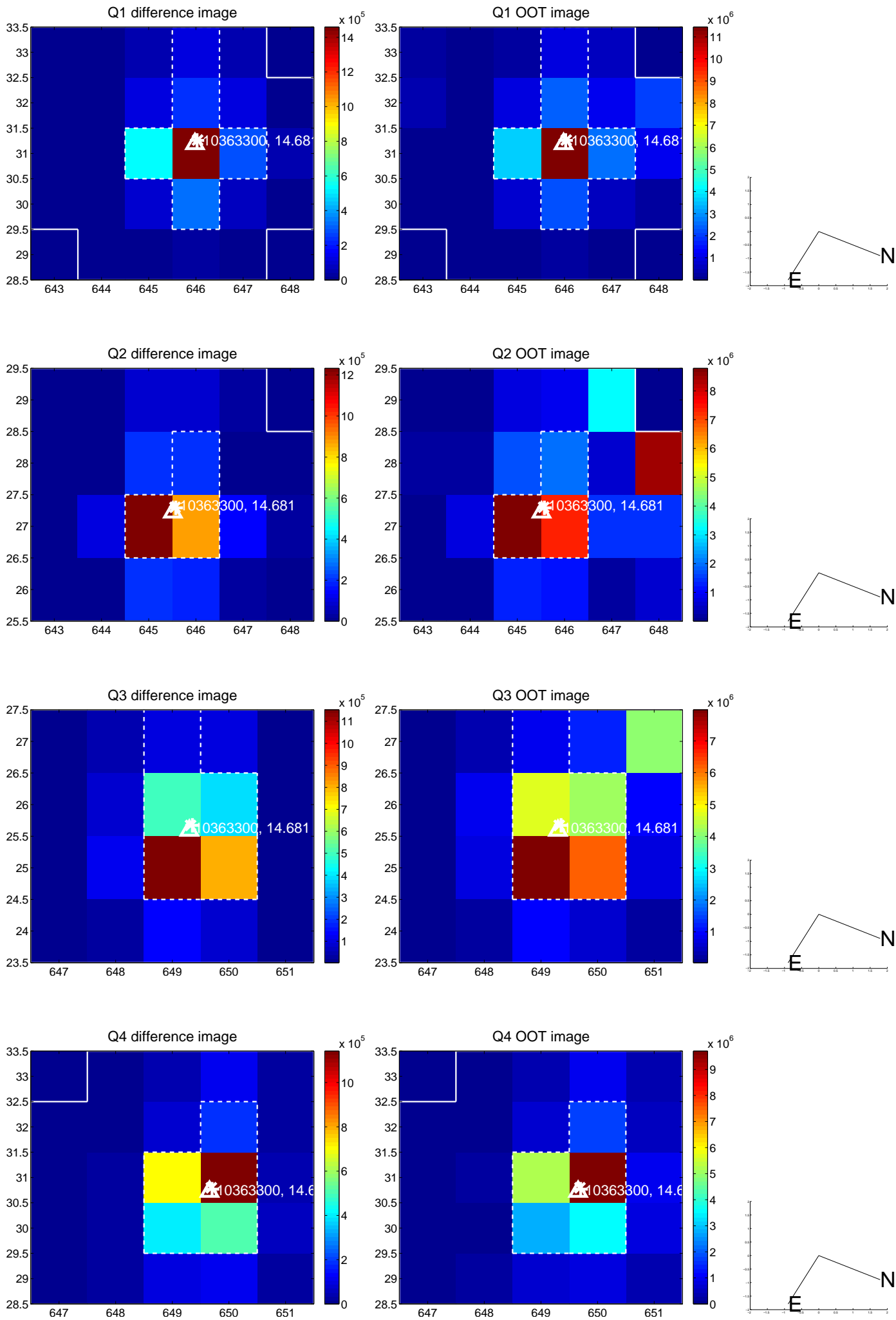
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.327 ± 0.068	4.80	0.318 ± 0.068	-0.075 ± 0.067
PRF-fit source offset from KIC position	0.349 ± 0.067	5.18	0.344 ± 0.067	-0.057 ± 0.068
photometric centroid source offset	—	—	—	—

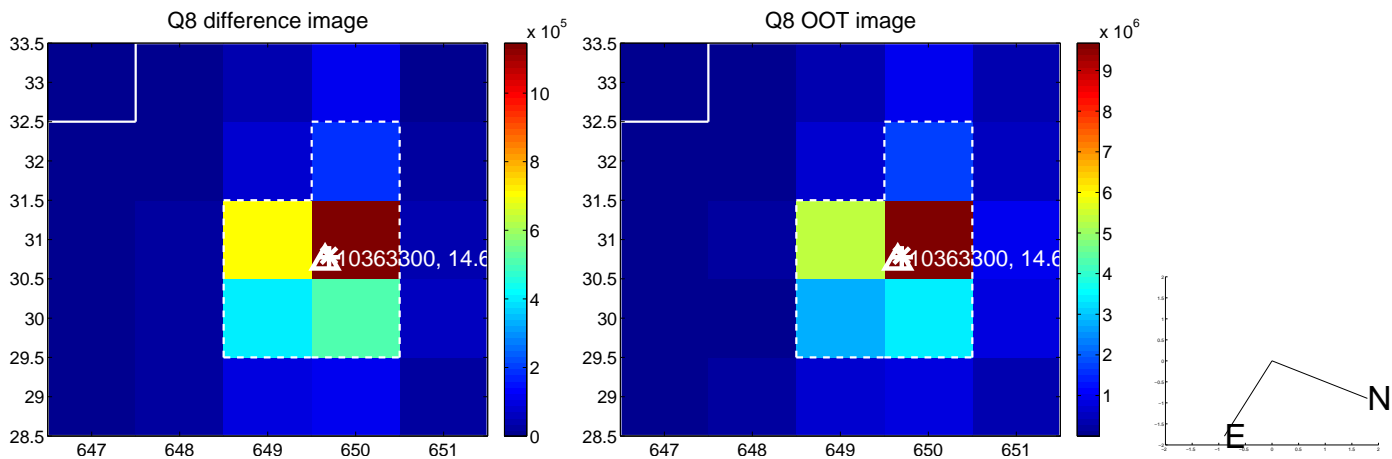
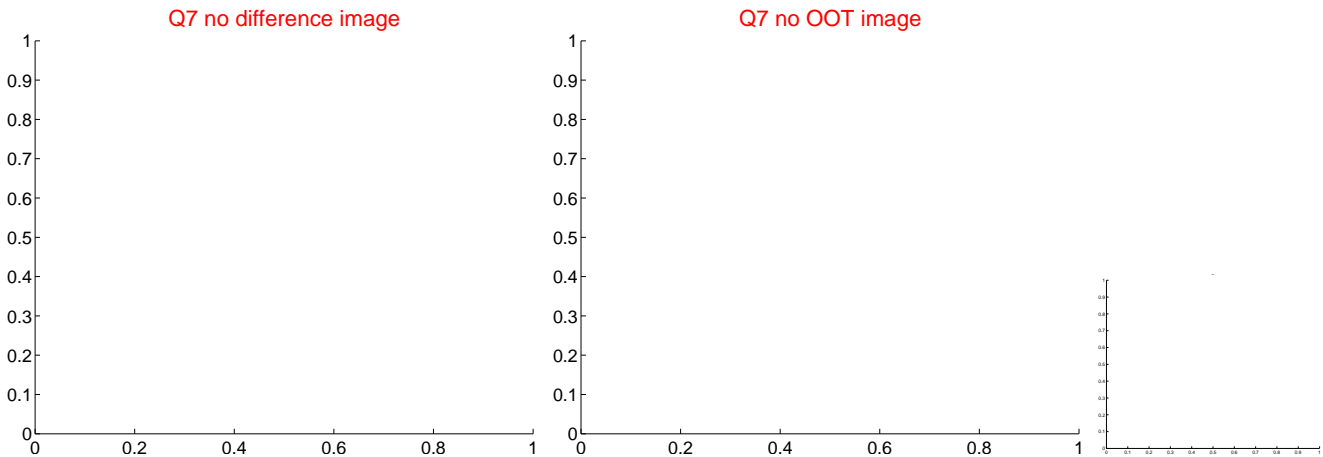
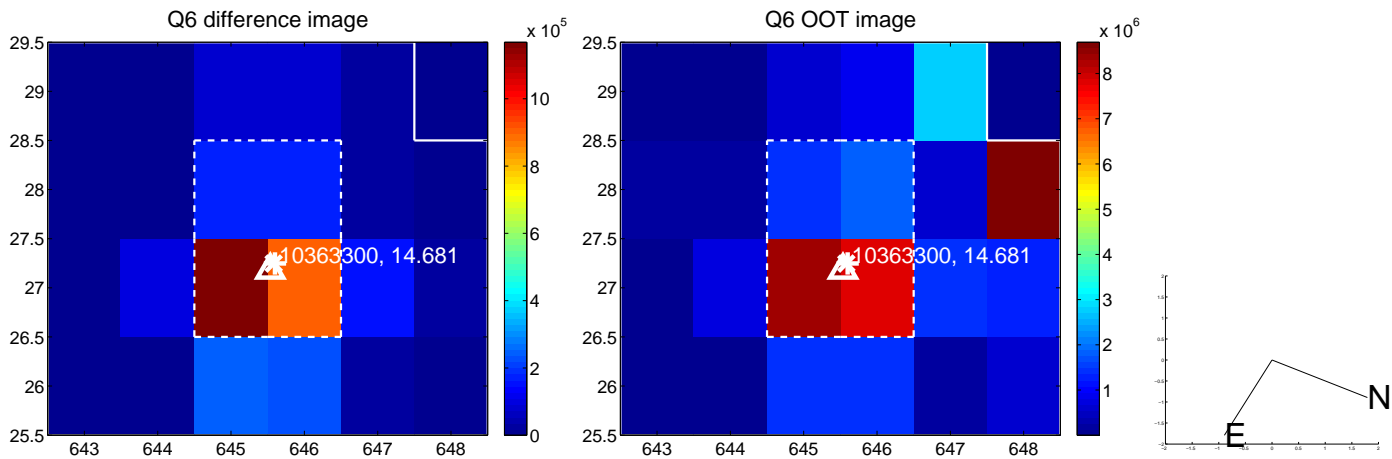
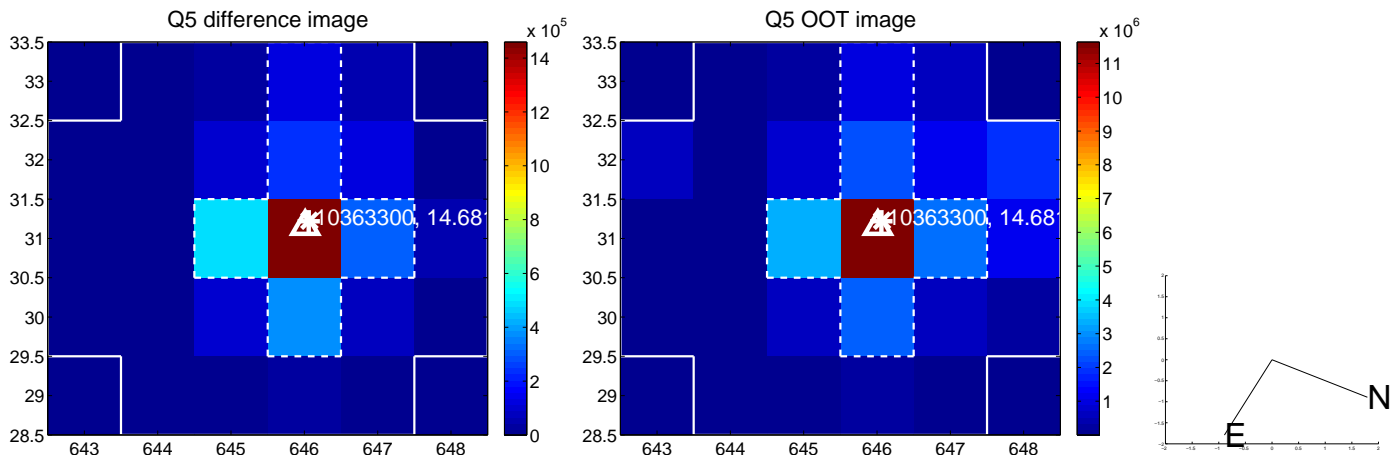


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

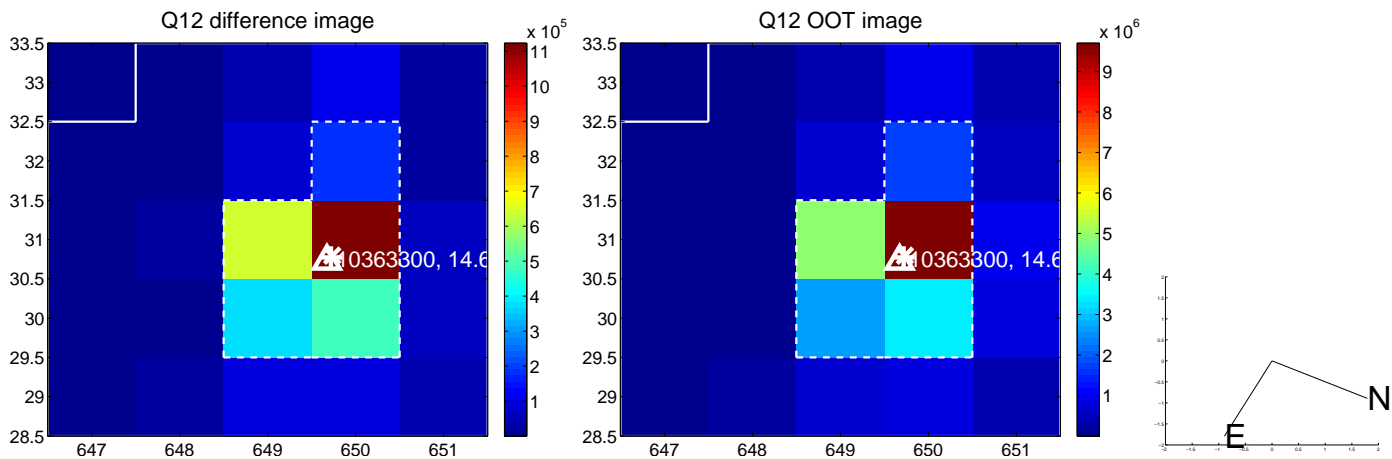
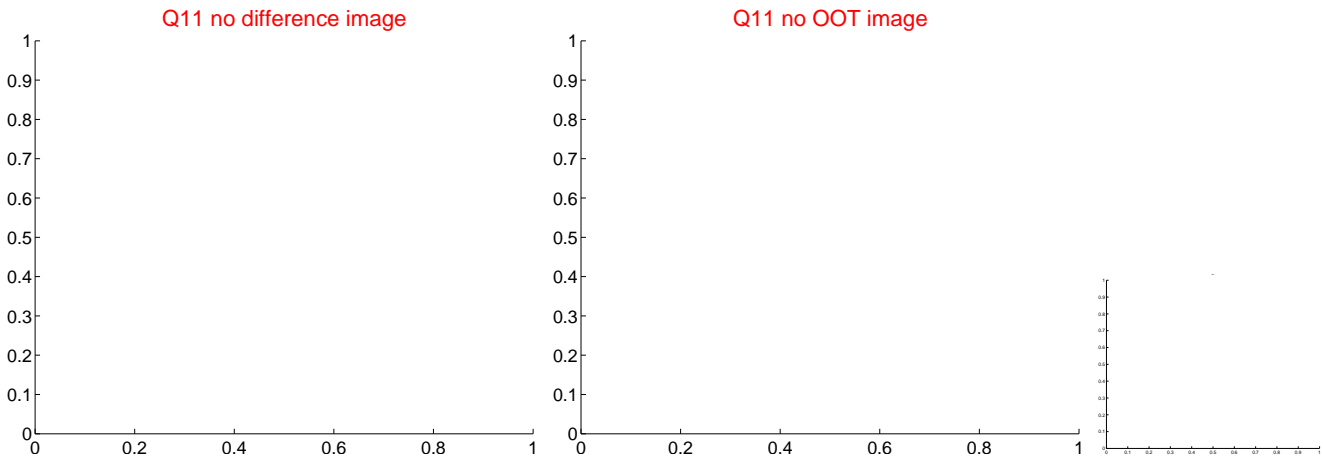
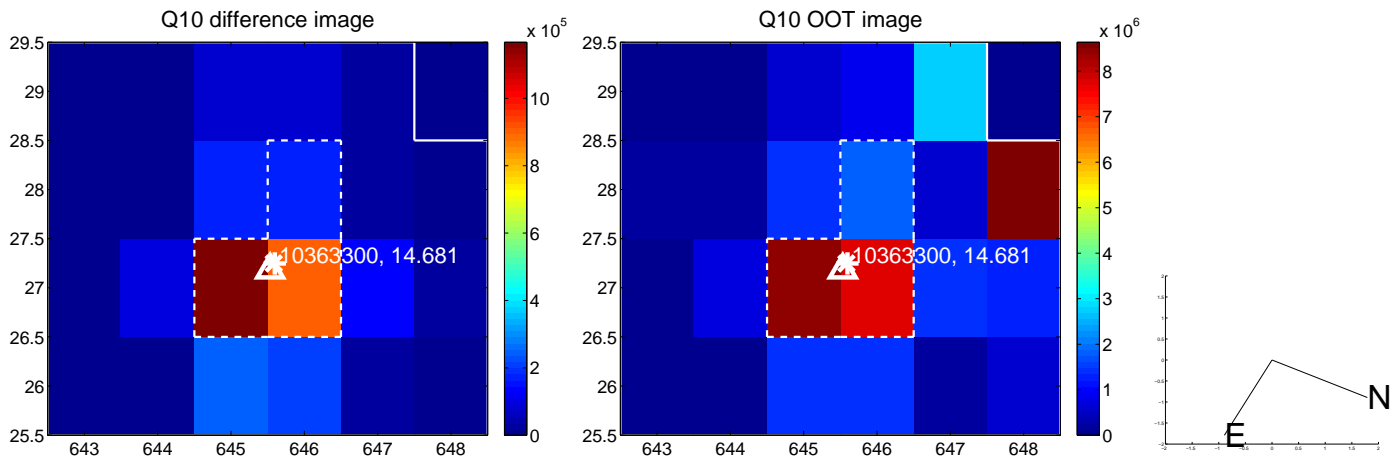
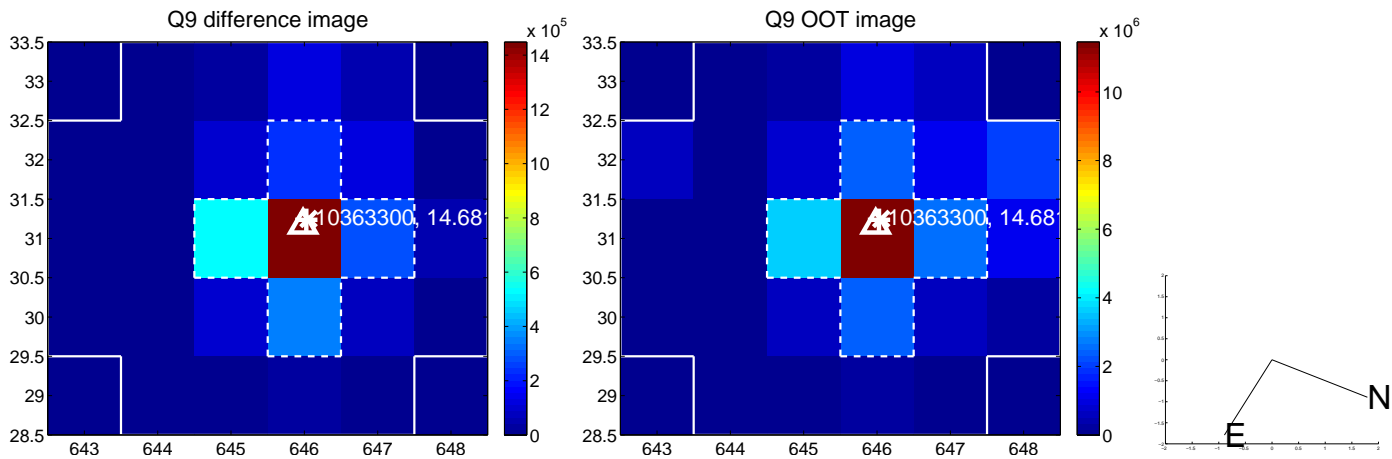
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



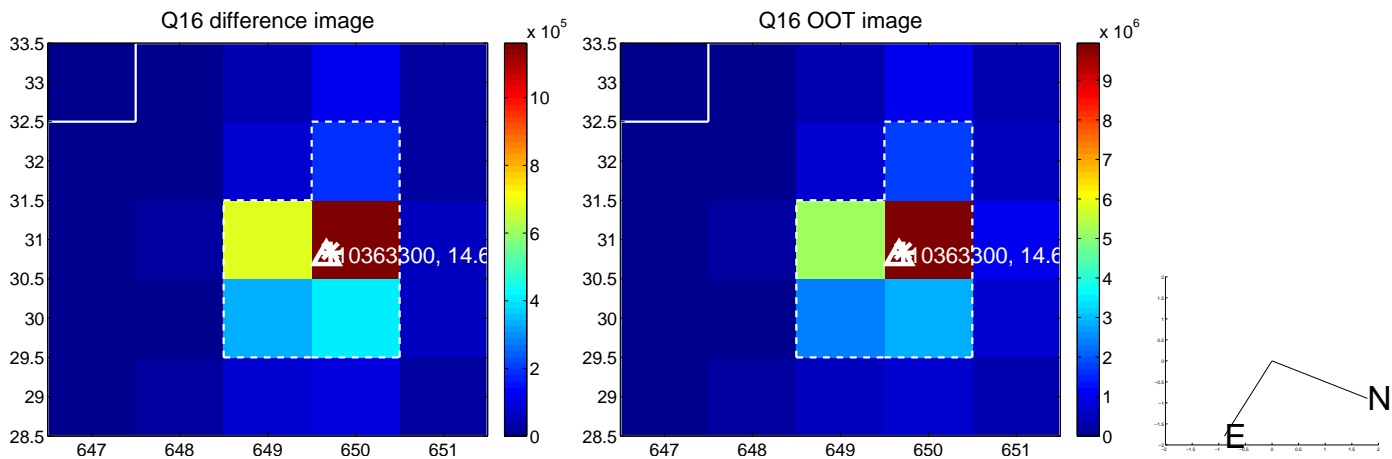
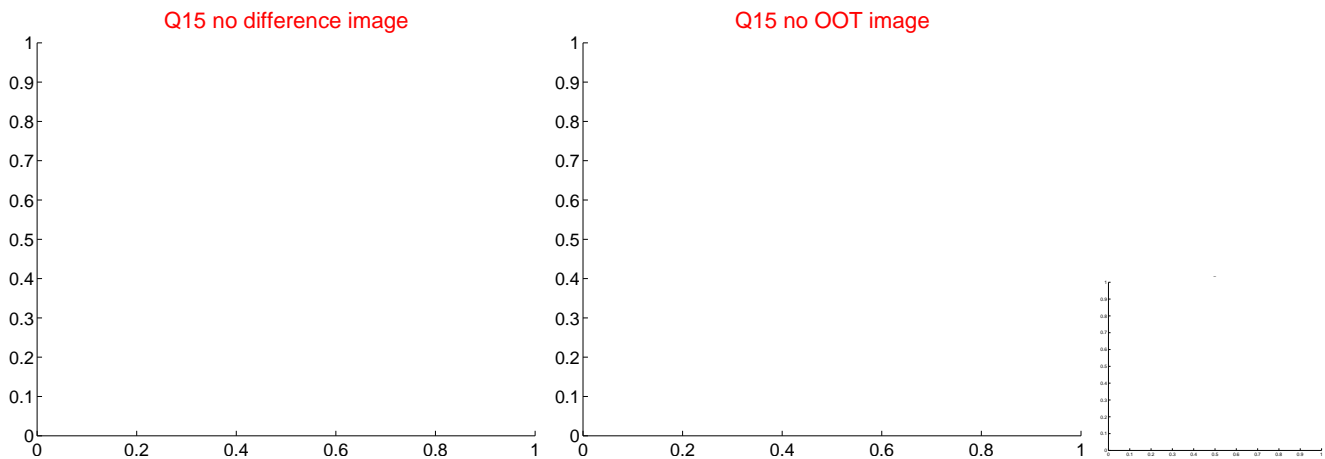
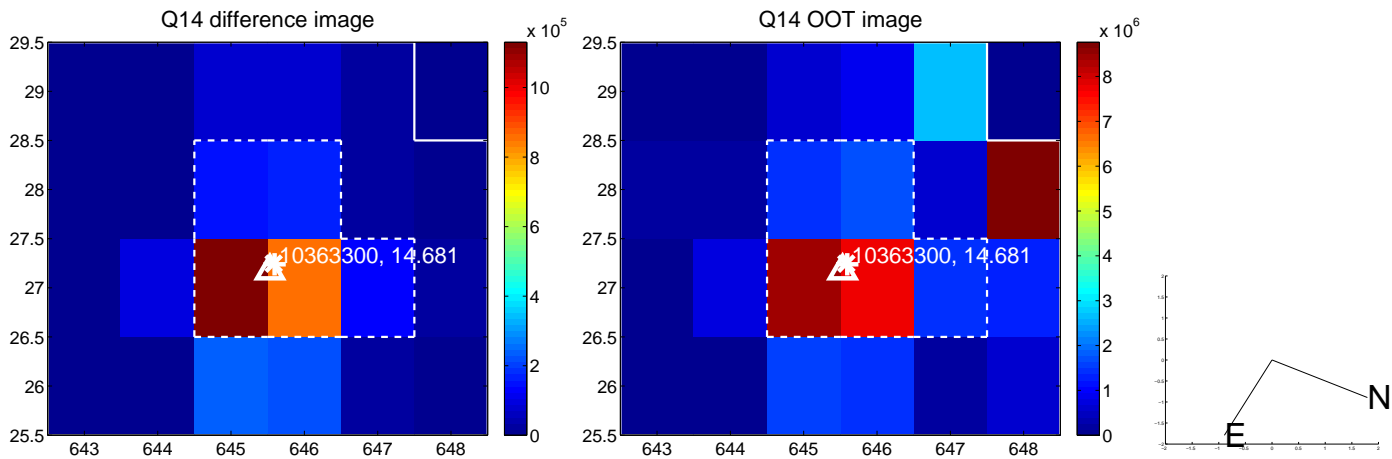
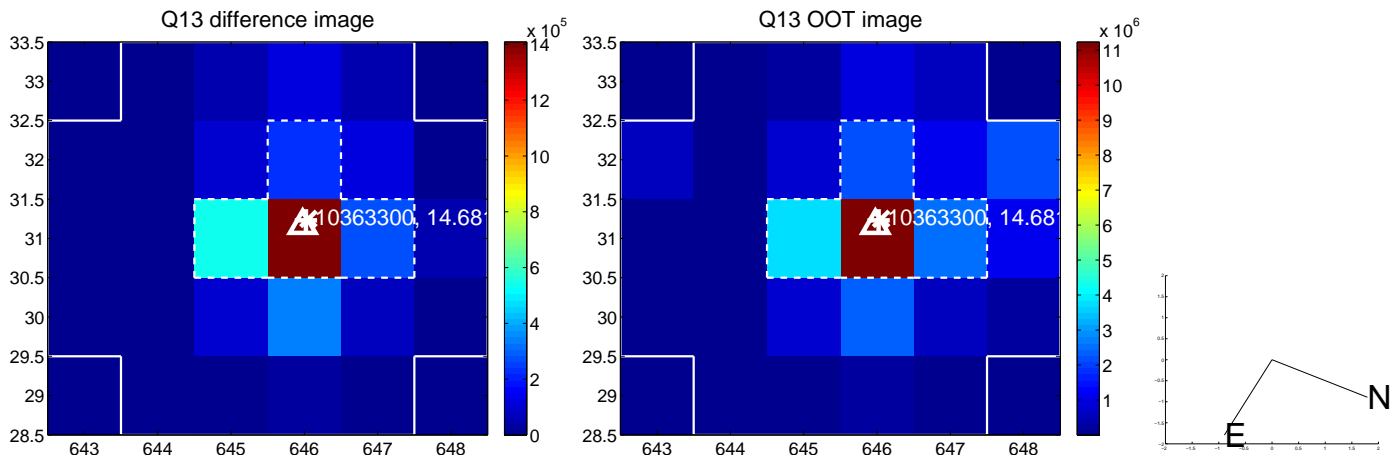
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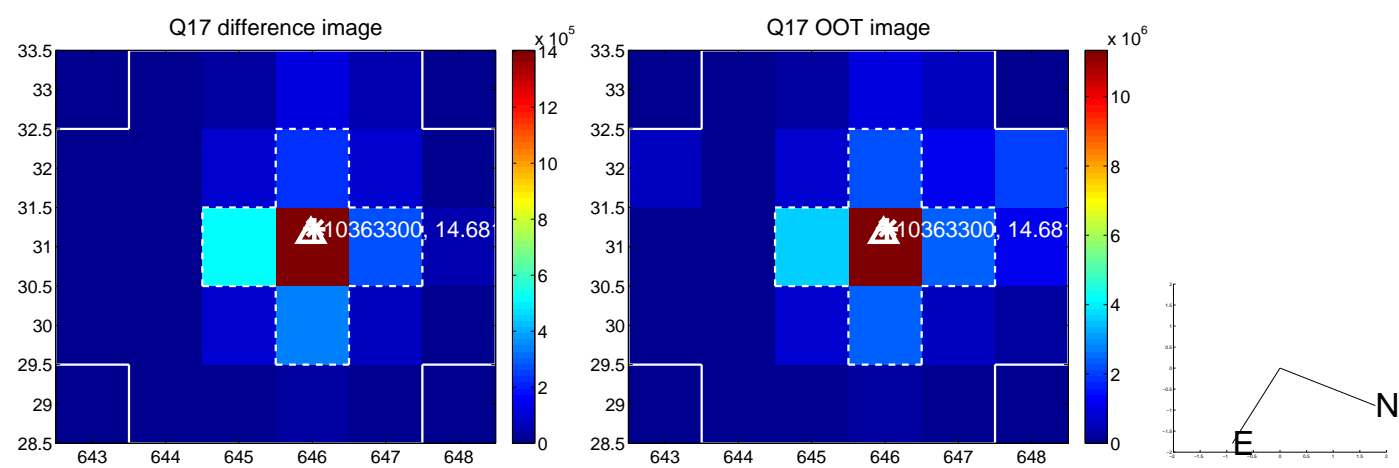
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

