

KIC 010547685

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})
010547685-01	OBS	7340.01	1.388504	131.788780	37093.9	2.846	8572.1	5167.4	1.13	6075	29.67	2694.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010547685-01	OBS	FP	0.00	0	1	1	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_UNRESOLVED_OFFSET

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.

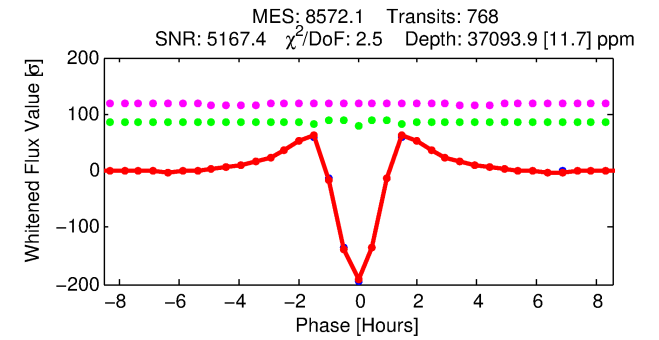
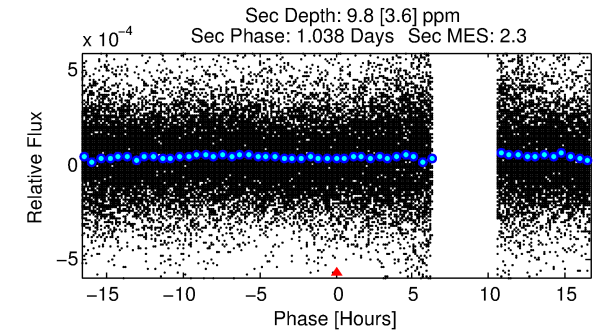
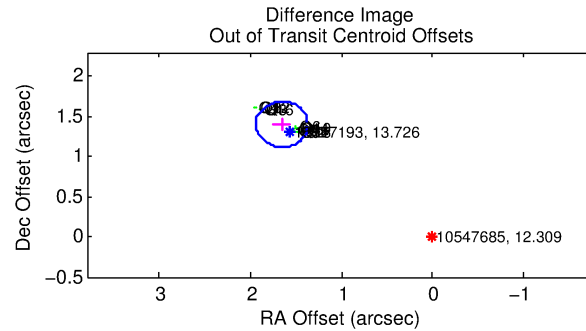
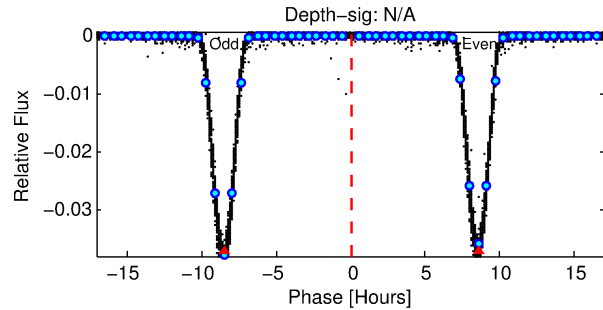
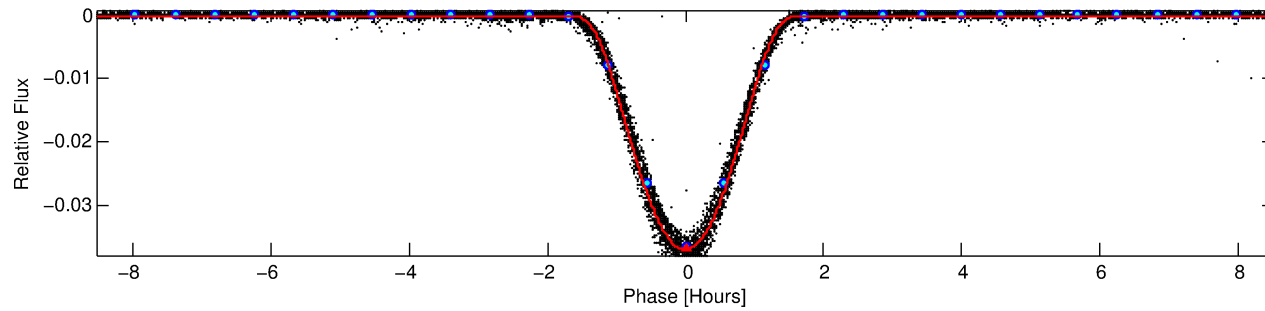
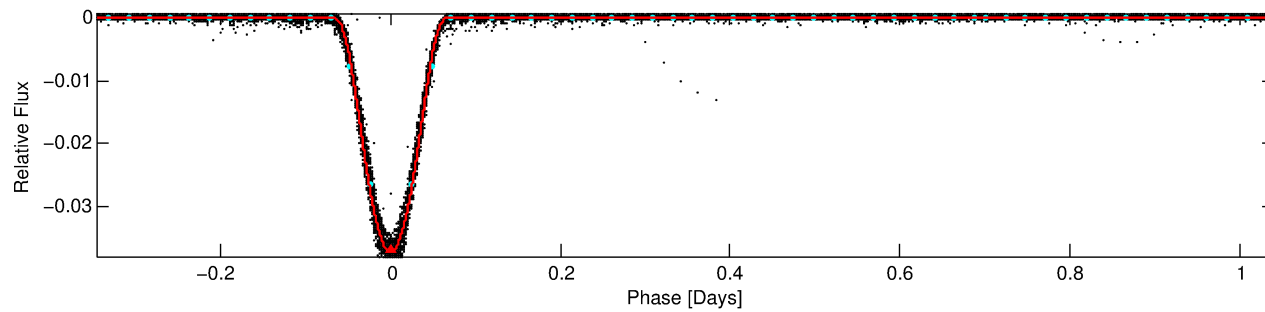
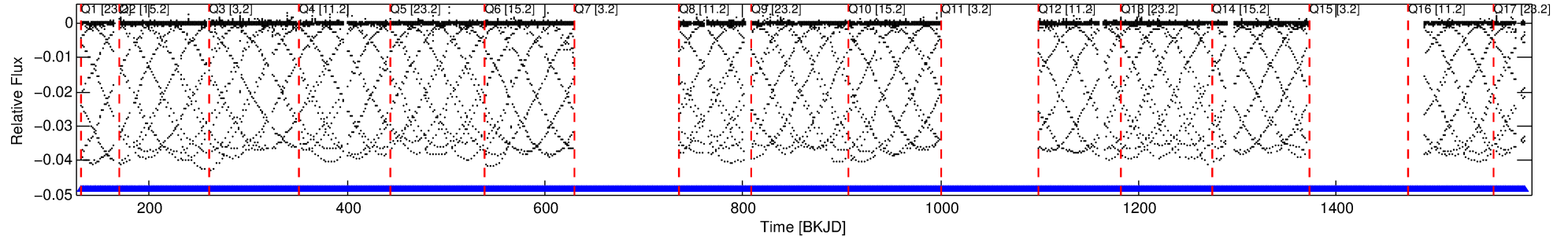
Ephemeris Match Information For 010547685-01

No Significant Match Found

DV One-Page Summary

KIC: 10547685 Candidate: 1 of 1 Period: 1.389 d
KOI: K07340.01 Corr: 0.988

Kp: 12.31 R*: 1.13 Rs Teff: 6075.0 K Logg: 4.32 Fe/H: -0.280



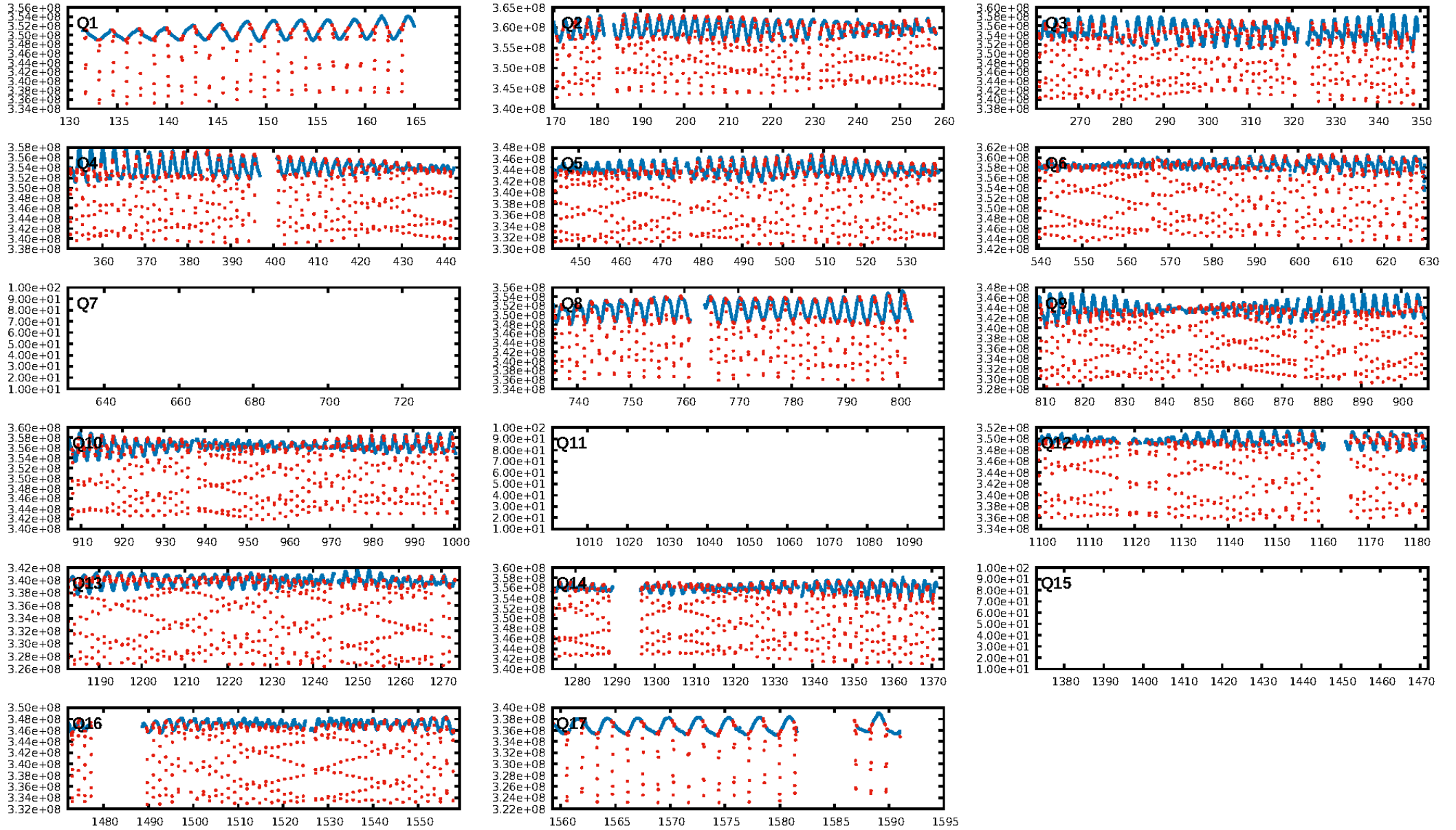
DV Fit Results:

Period = 1.38850 [0.00000] d
Epoch = 131.7888 [0.0000] BKJD
Rp/R* = 0.2406 [0.0011]
a/R* = 3.34 [0.00]
b = 0.90 [0.00]
Seff = 2694.03 [630.24]
Teff = 1837 [107] K
Rp = 29.67 [4.57] Re
a = 0.0240 [0.0035] AU
Ag = 0.00 [0.00] [-645.19σ]
Teffp = 693 [65] K [-9.10σ]

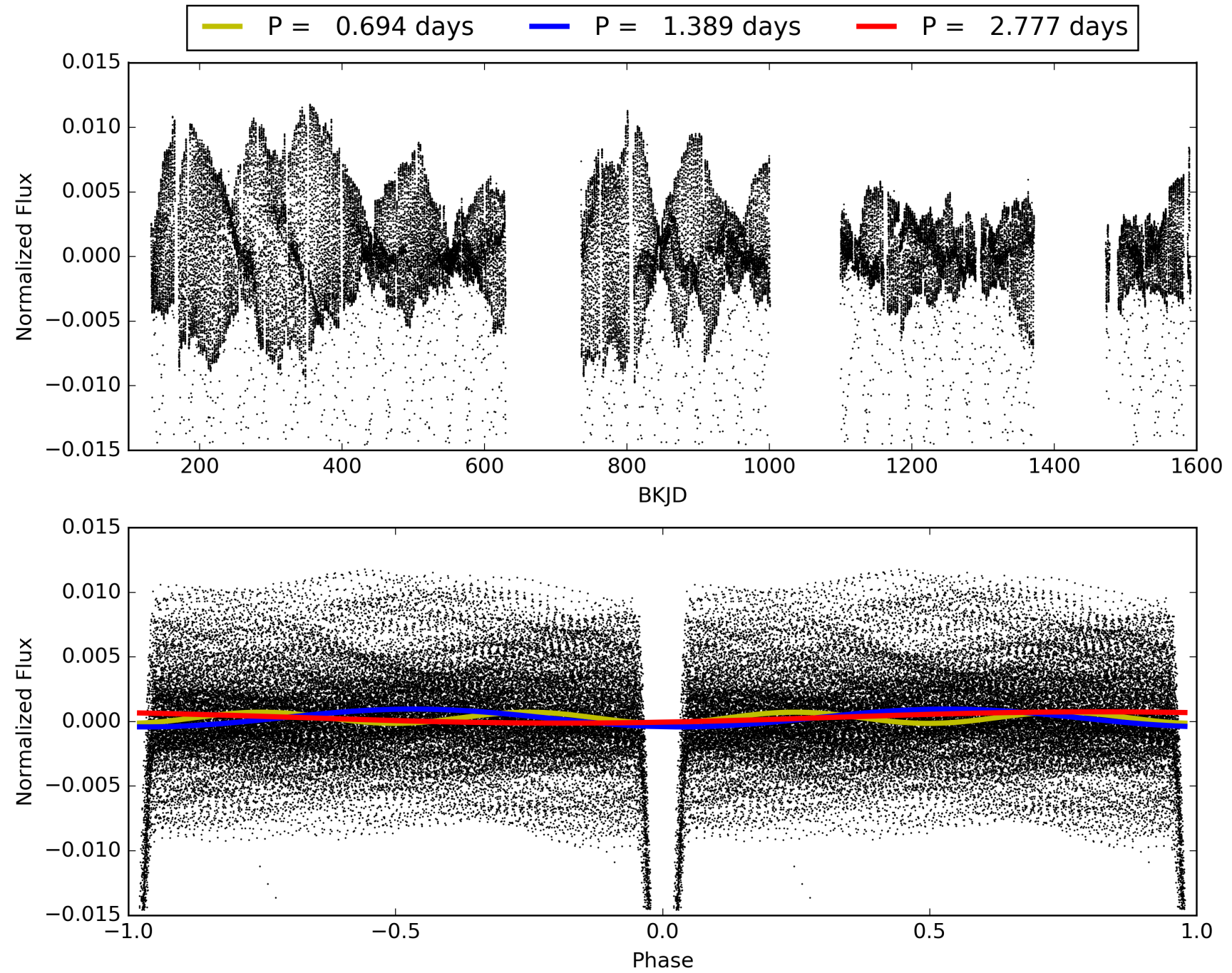
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [725/725]
GhostDiagnostic-chr: 2.074
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.169 arcsec [22.87σ]
KicOffset-rm: 2.118 arcsec [31.18σ]
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 010547685-01, PDC Light Curves

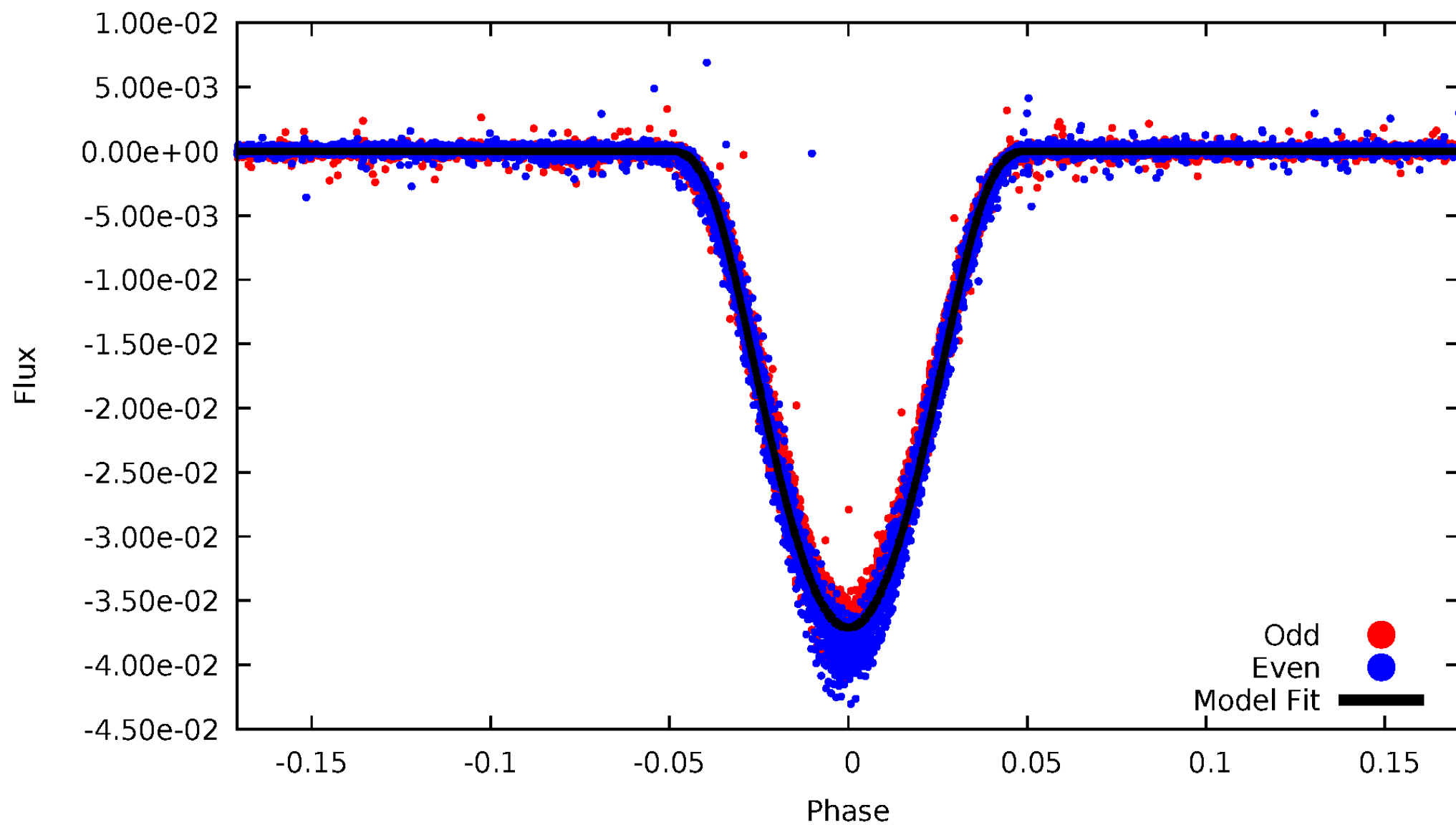


TCE 010547685-01



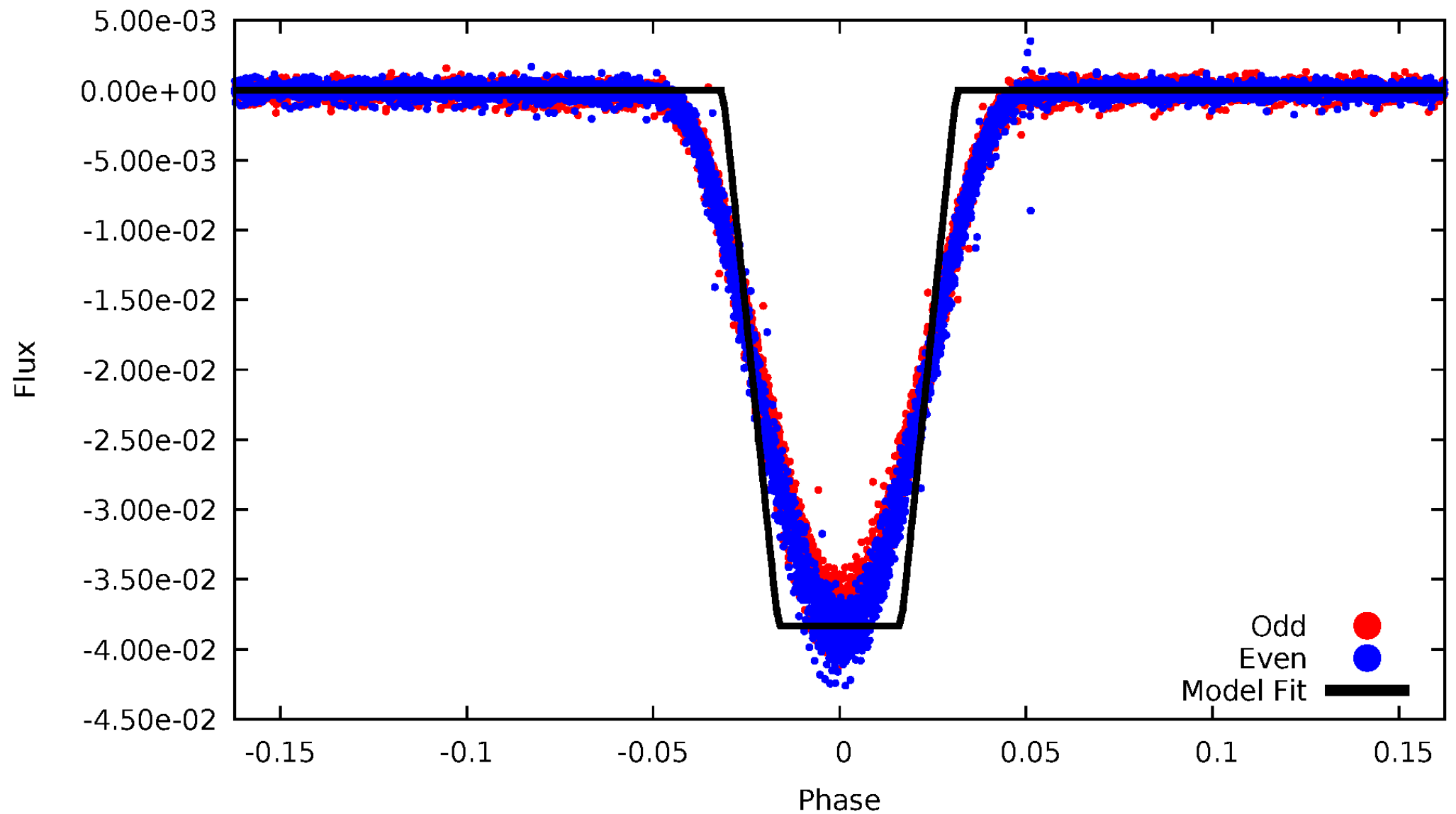
DV Odd/Even

TCE 010547685-01



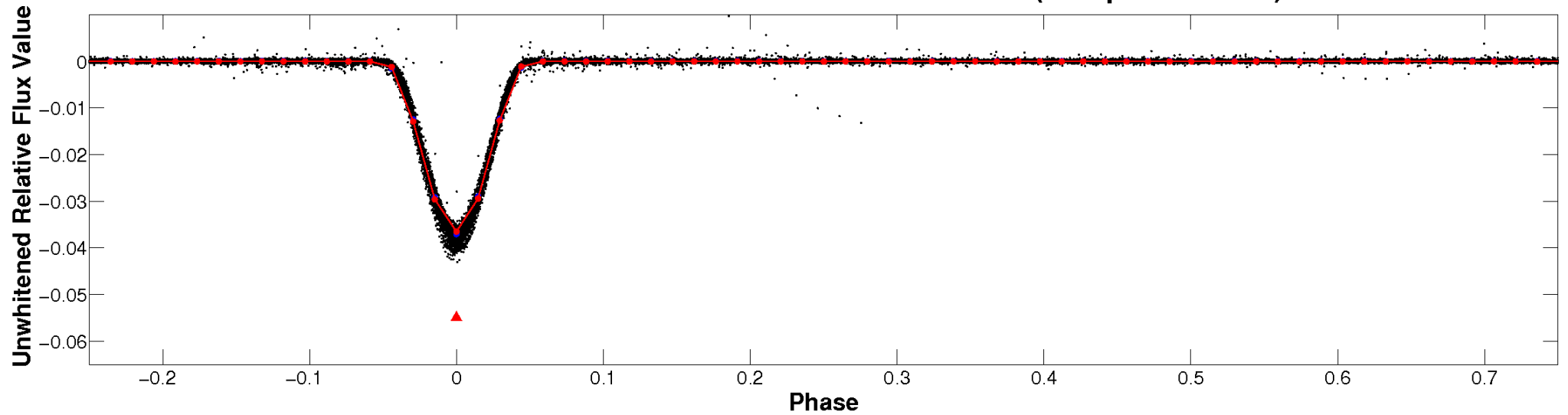
ALT Odd/Even

TCE 010547685-01

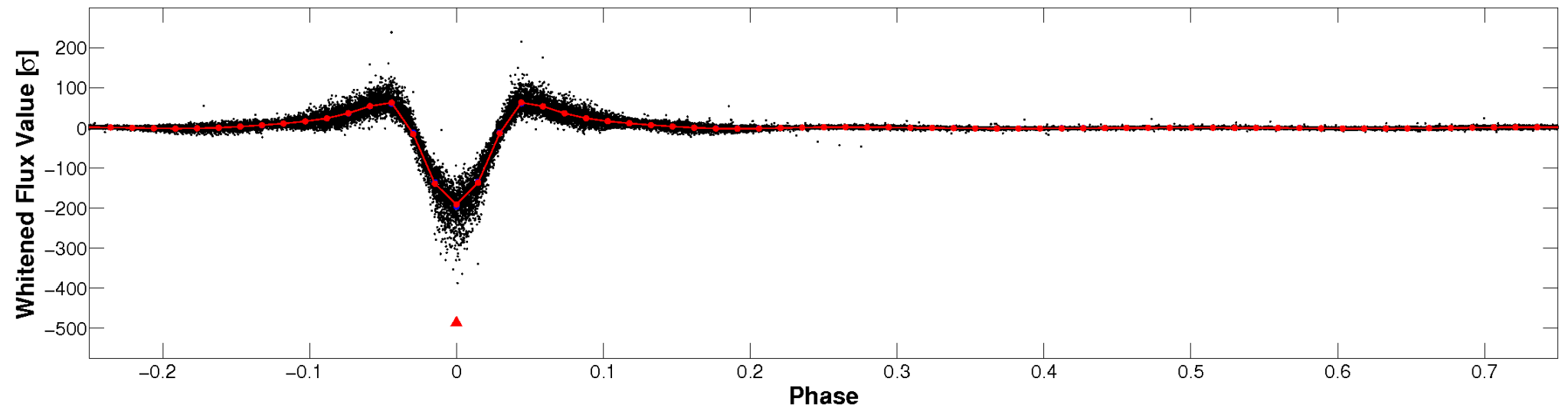


Non-Whitened Vs. Whitened Light Curve

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

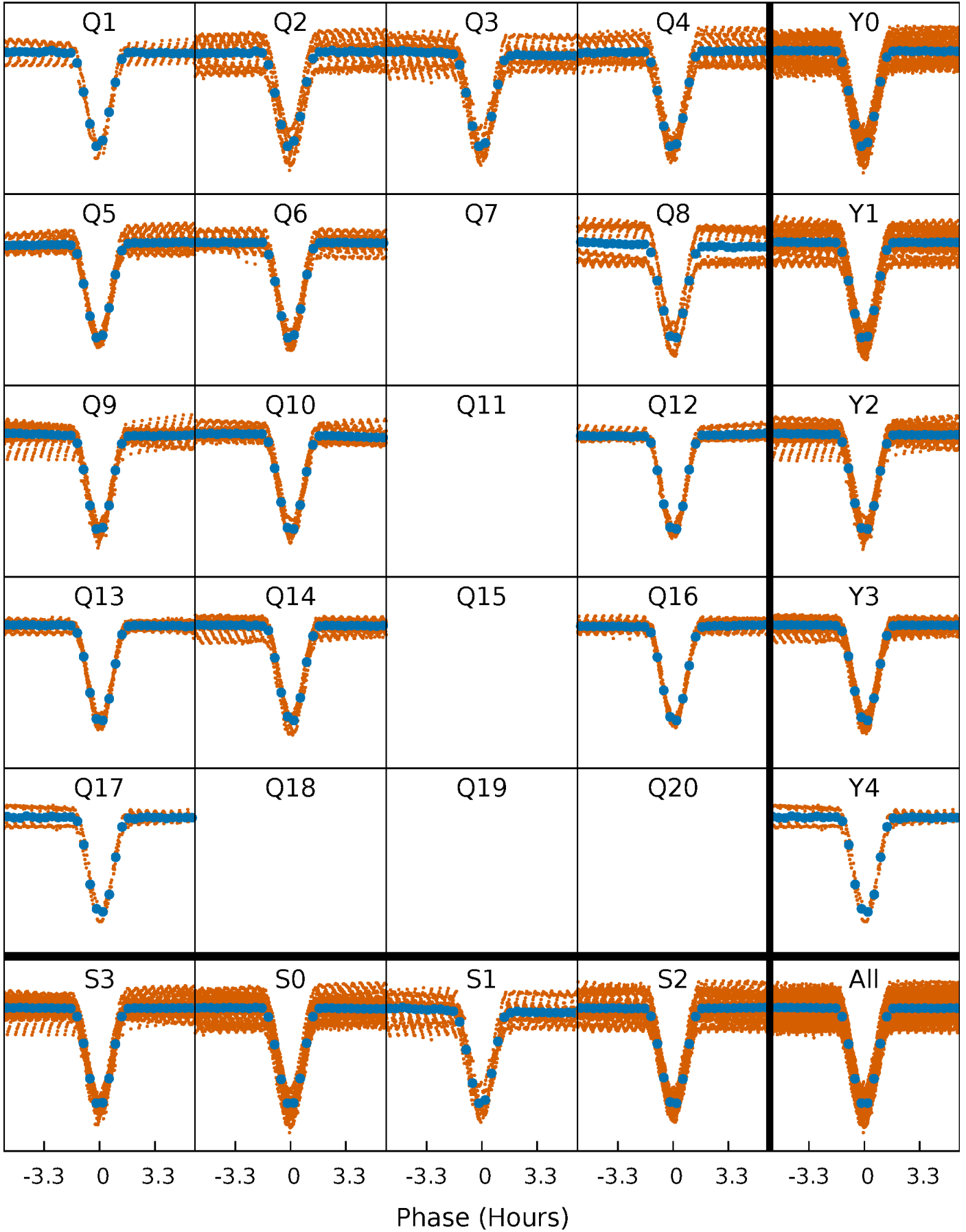


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



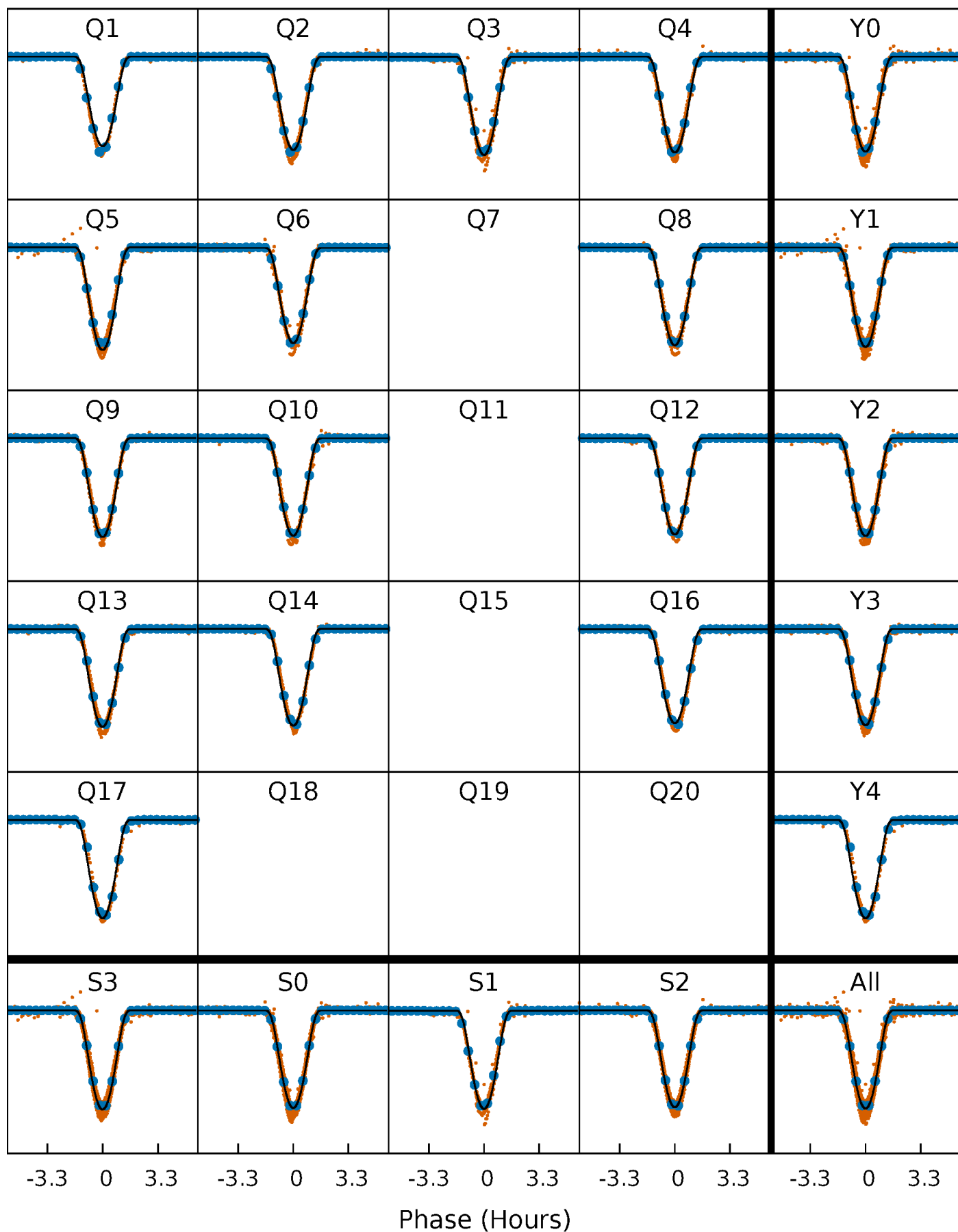
PDC Quarter-Phased Transit Curves

TCE 010547685-01 P= 1.388504 Days $T_0=131.788780$ (BKJD)



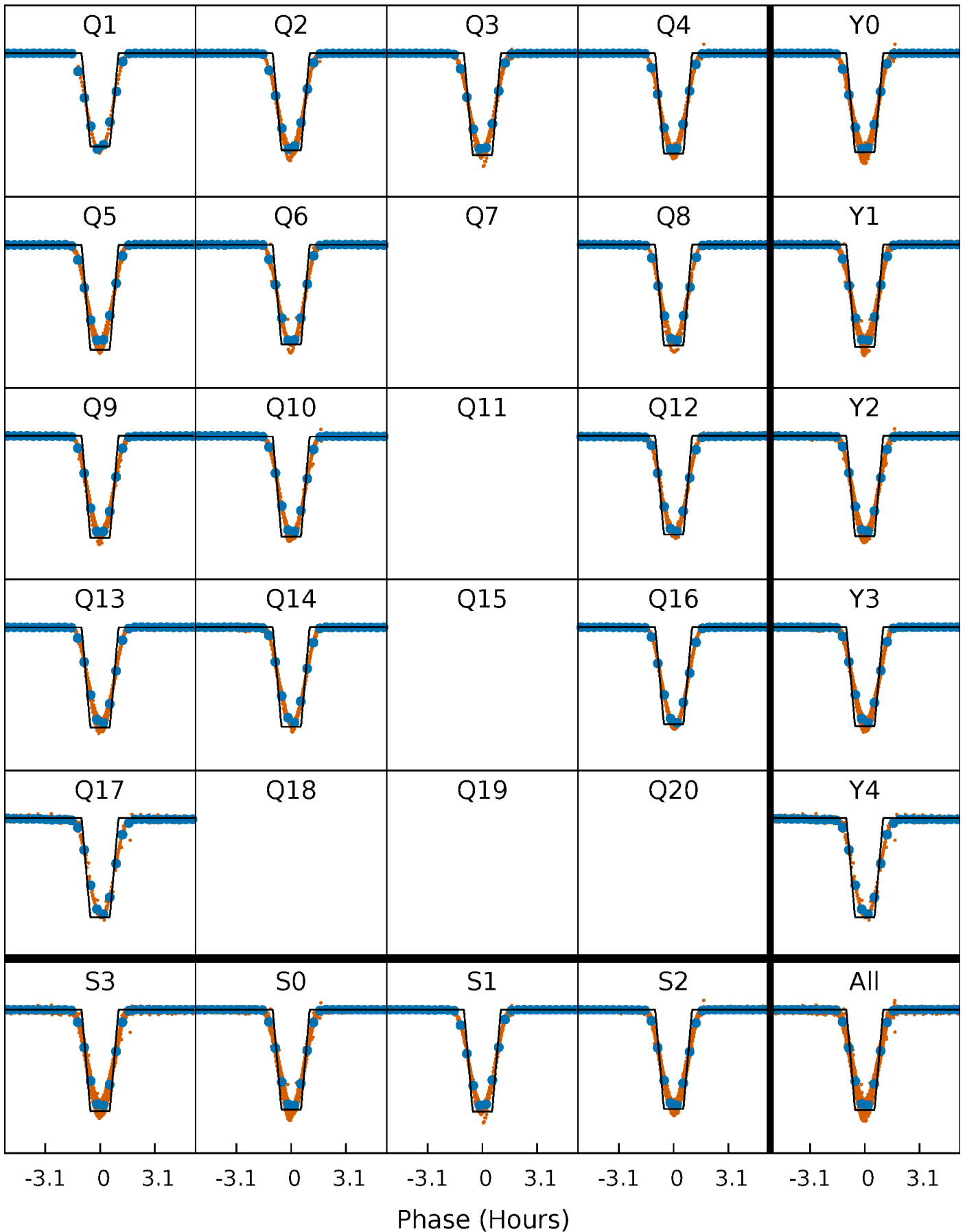
DV Quarter-Phased Transit Curves

TCE 010547685-01 P= 1.388504 Days $T_0=131.788780$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

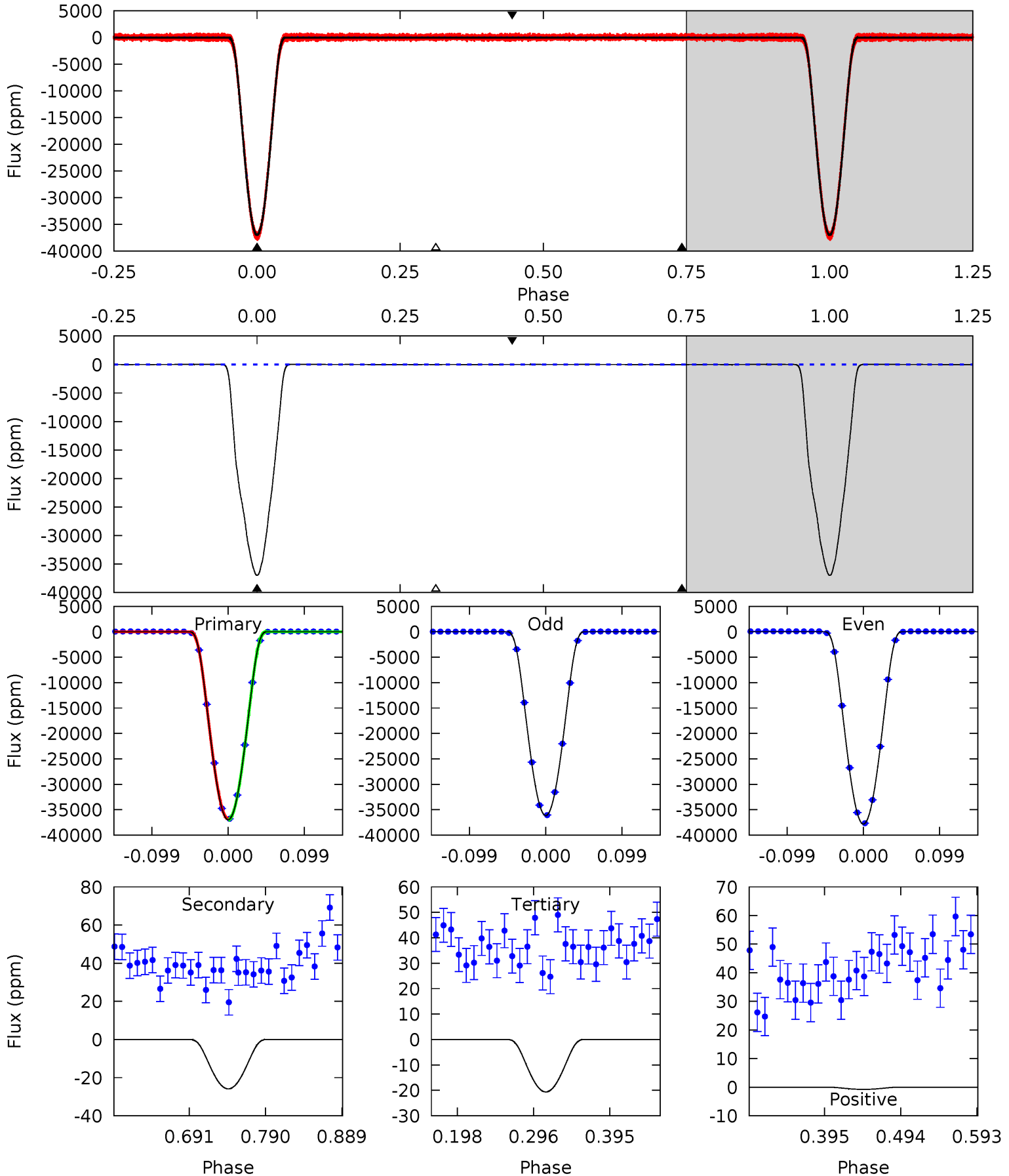
TCE 010547685-01 P= 1.388505 Days $T_0=131.787468$ (BKJD)



DV Model-Shift Uniqueness Test

010547685-01, P = 1.388504 Days, E = 130.400276 Days

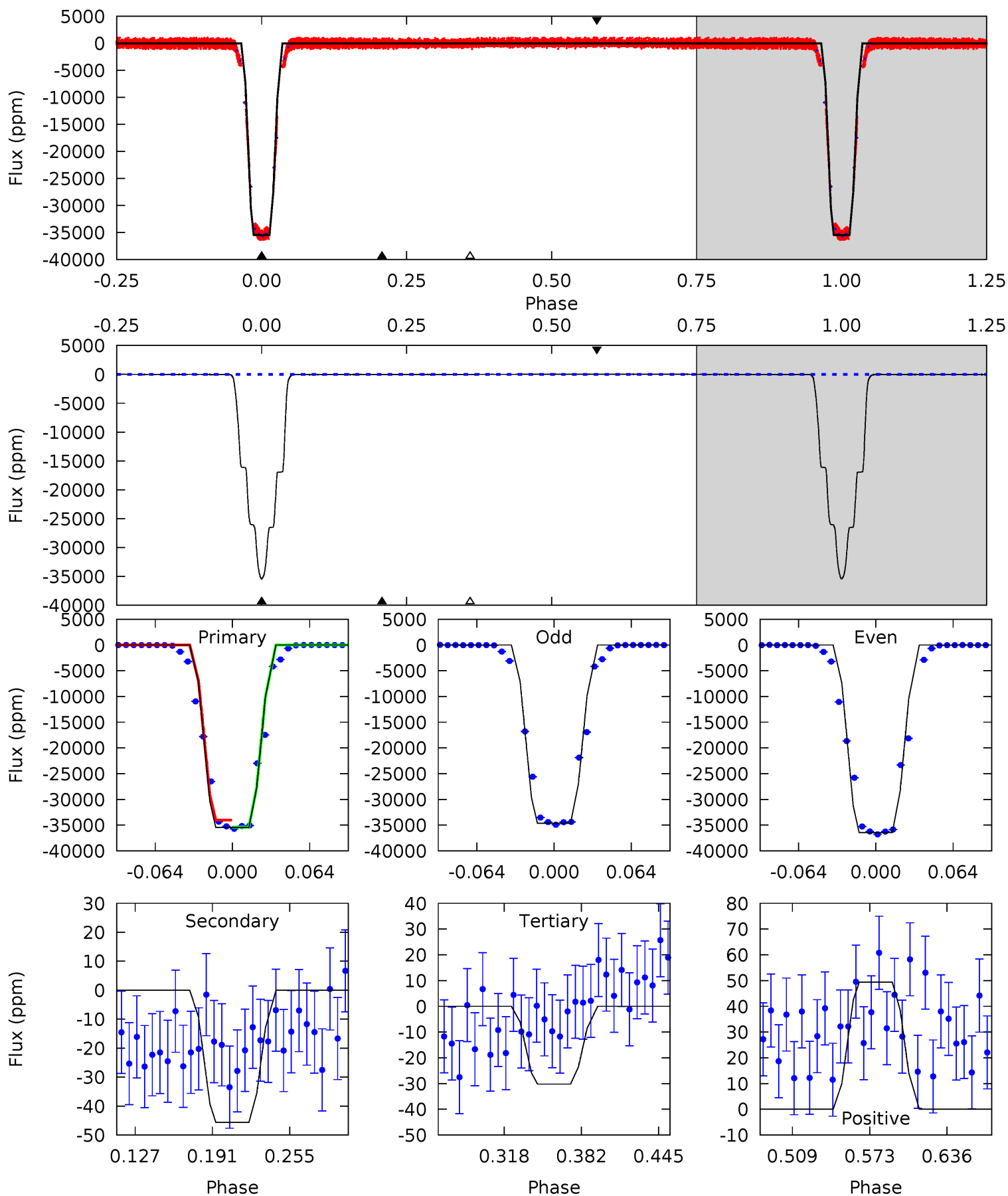
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9731	6.81	5.42	-0.20	4.57	1.65	2.64	9725	9731	1.39	7.01	221.0	1.00	0.00	0



Alt Model-Shift Uniqueness Test

010547685-01, P = 1.388505 Days, E = 130.398963 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3595	4.63	3.06	5.01	4.66	1.85	2.30	3592	3590	1.57	-0.38	91.7	1.00	0.00	0



Stellar Parameters For KIC 010547685

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6075^{+78}_{-85}	$4.315^{+0.132}_{-0.108}$	$-0.280^{+0.150}_{-0.150}$	$1.130^{+0.174}_{-0.157}$	$0.962^{+0.065}_{-0.054}$	$0.940^{+0.525}_{-0.312}$
	+1%/-1%	+3%/-3%	+54%/-54%	+15%/-14%	+7%/-6%	+56%/-33%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010547685-01 / KOI 7340.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-26 ± 4	$29.65^{+2.48}_{-2.47}$	2561^{+112}_{-116}	-2821^{+70}_{-69}	$0.010^{+0.002}_{-0.002}$
Alt.	-46 ± 10	$24.24^{+2.10}_{-2.03}$	2564^{+111}_{-101}	-2801^{+61}_{-72}	$0.025^{+0.007}_{-0.007}$

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 $A_{obs} \gg 1.0$

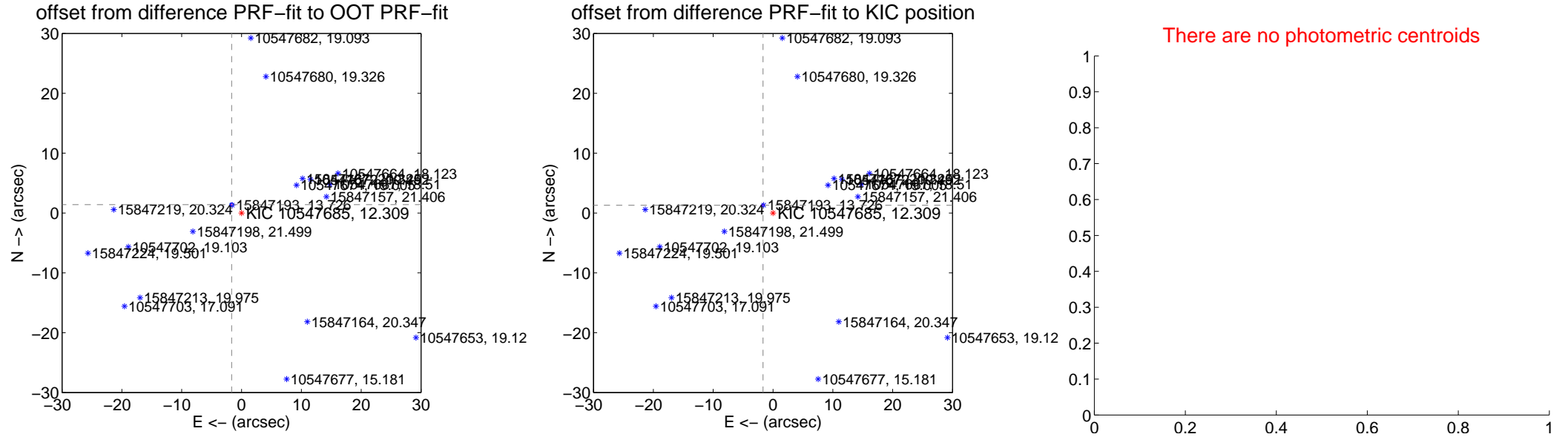
DV Centroid Data

Supplemental centroid analysis for 010547685-01. Kepler magnitude: 12.31. Transit SNR 5167.41

There are 14 quarters with good PRF difference image offsets

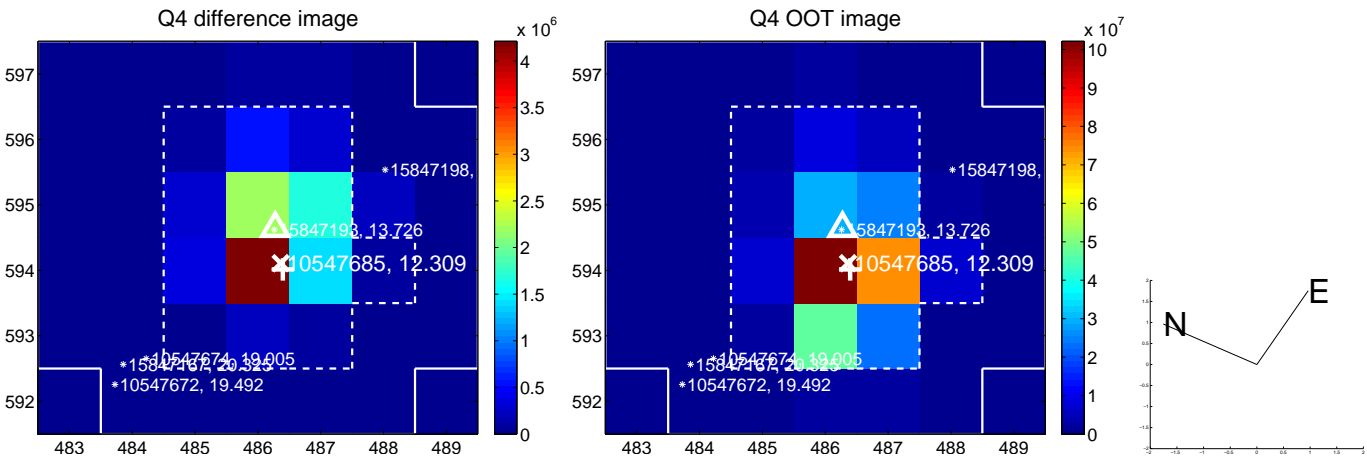
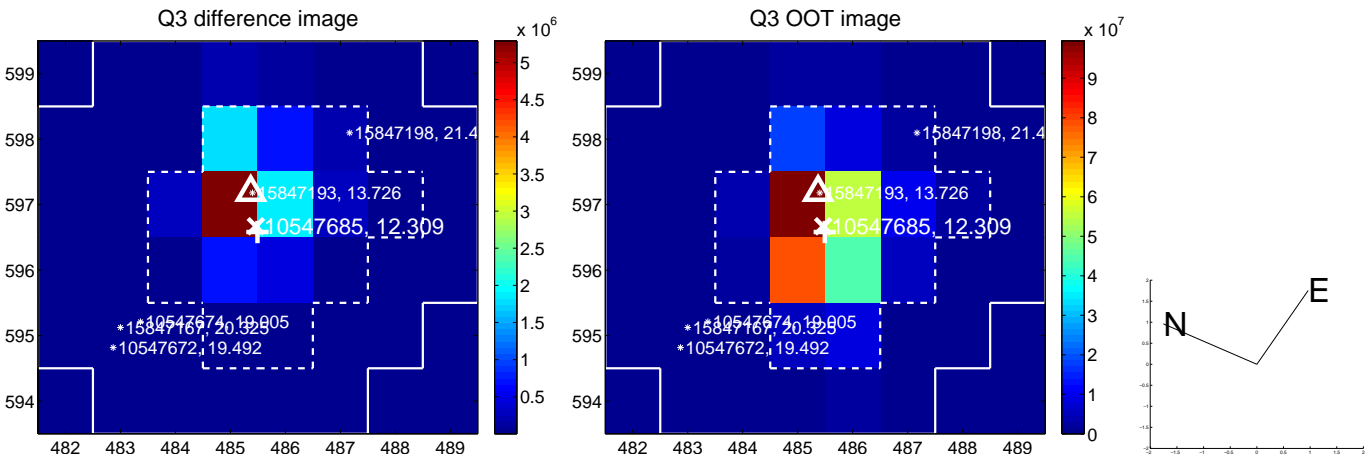
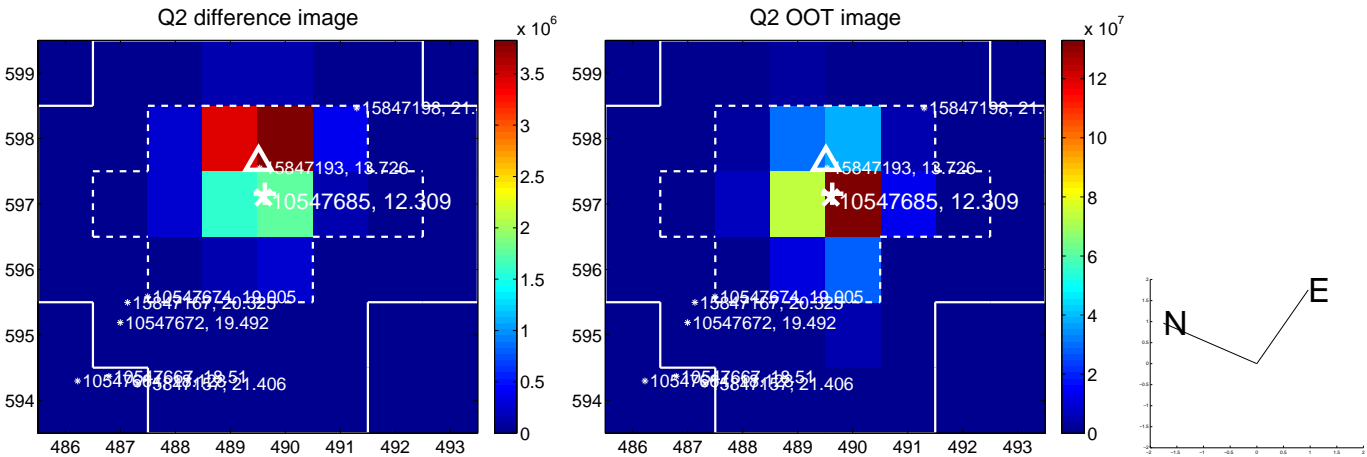
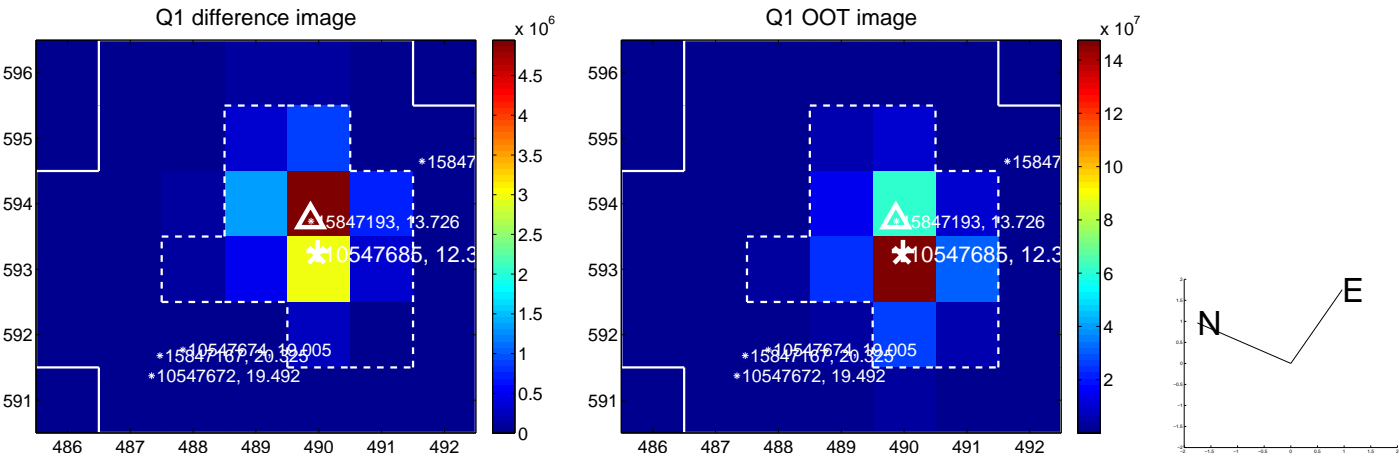
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.169 \pm 0.095	22.87	1.654 \pm 0.088	1.403 \pm 0.076
PRF-fit source offset from KIC position	2.118 \pm 0.068	31.18	1.671 \pm 0.067	1.301 \pm 0.068
photometric centroid source offset	—	—	—	—

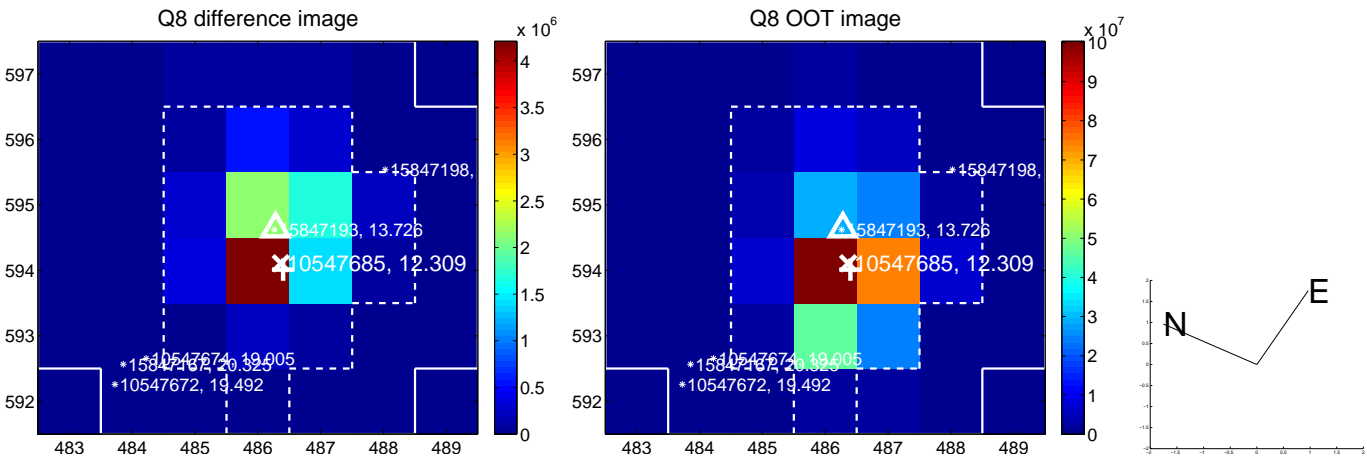
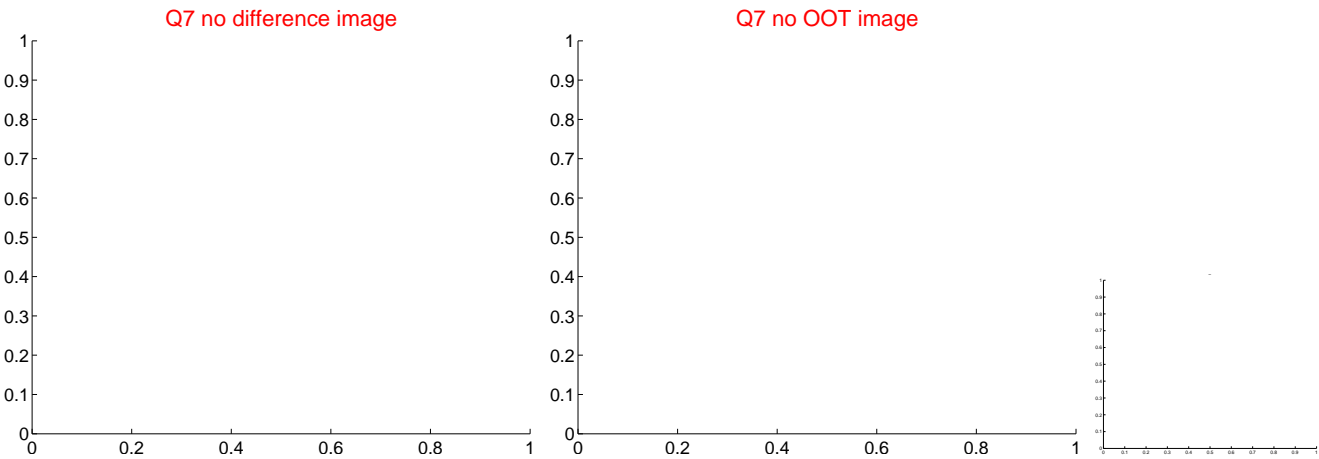
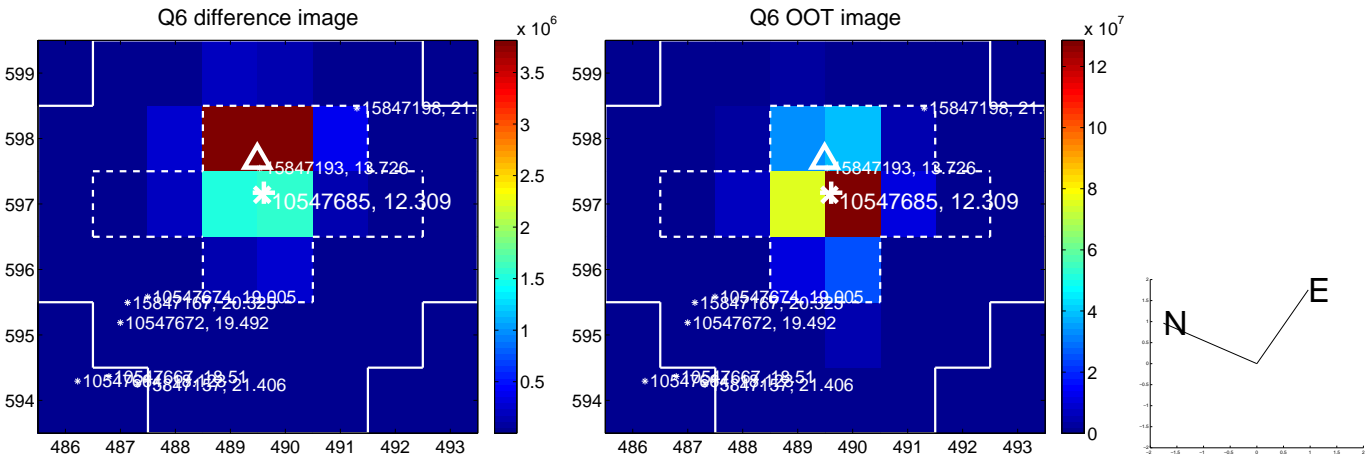
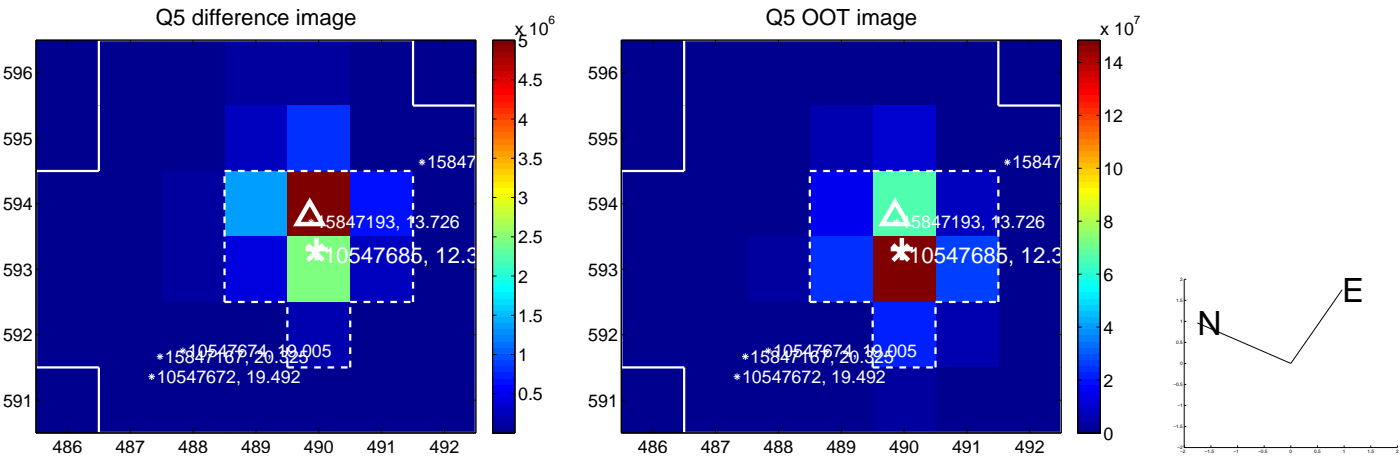


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

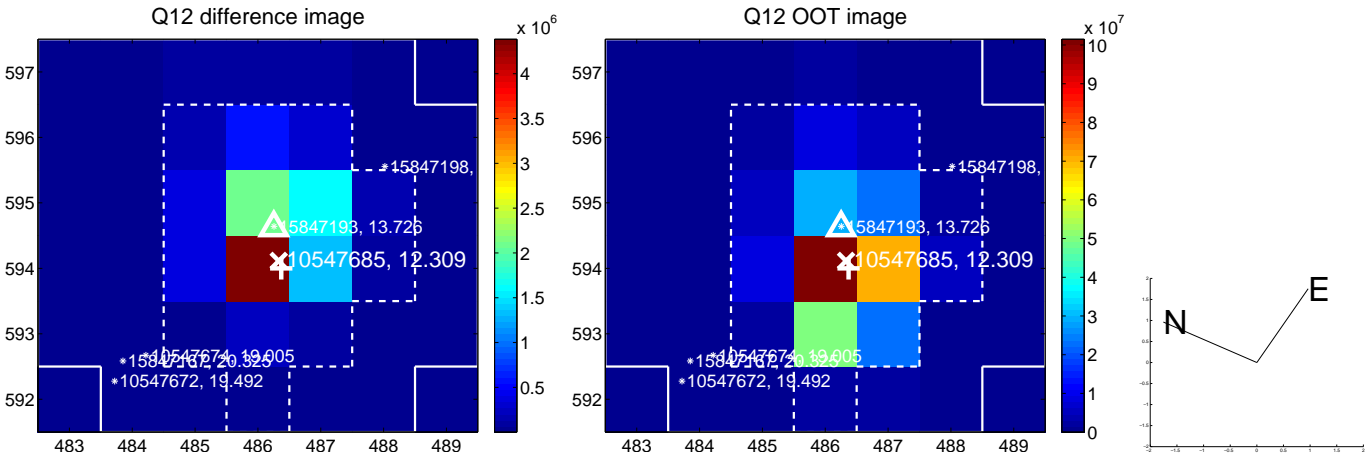
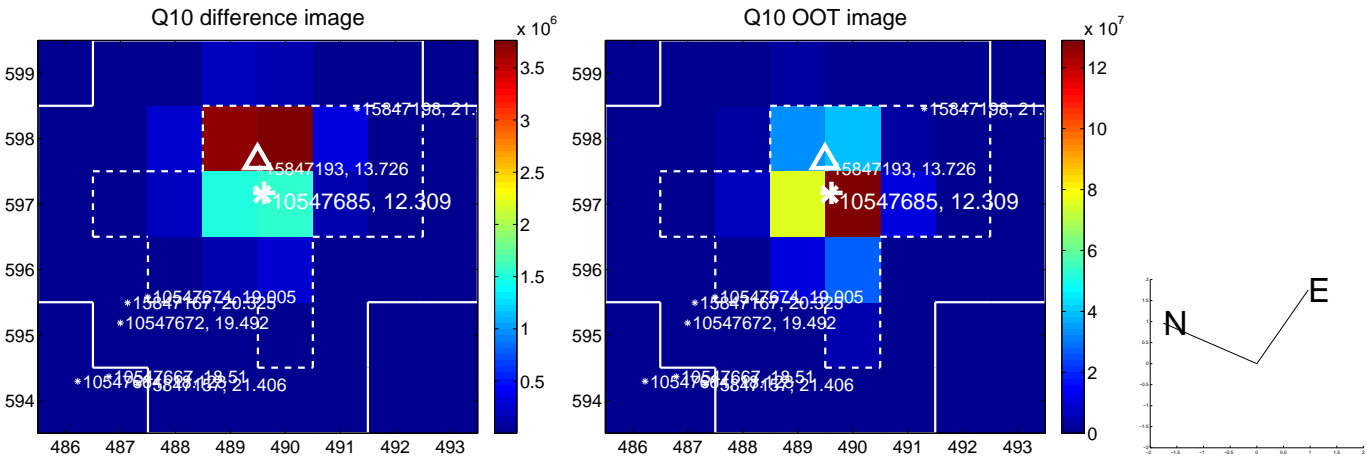
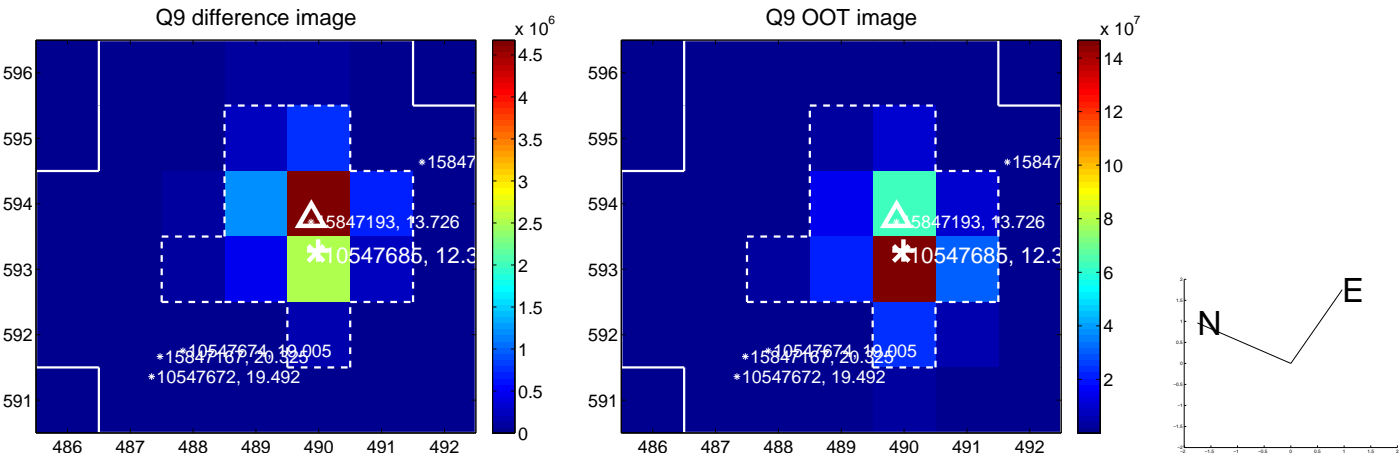
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



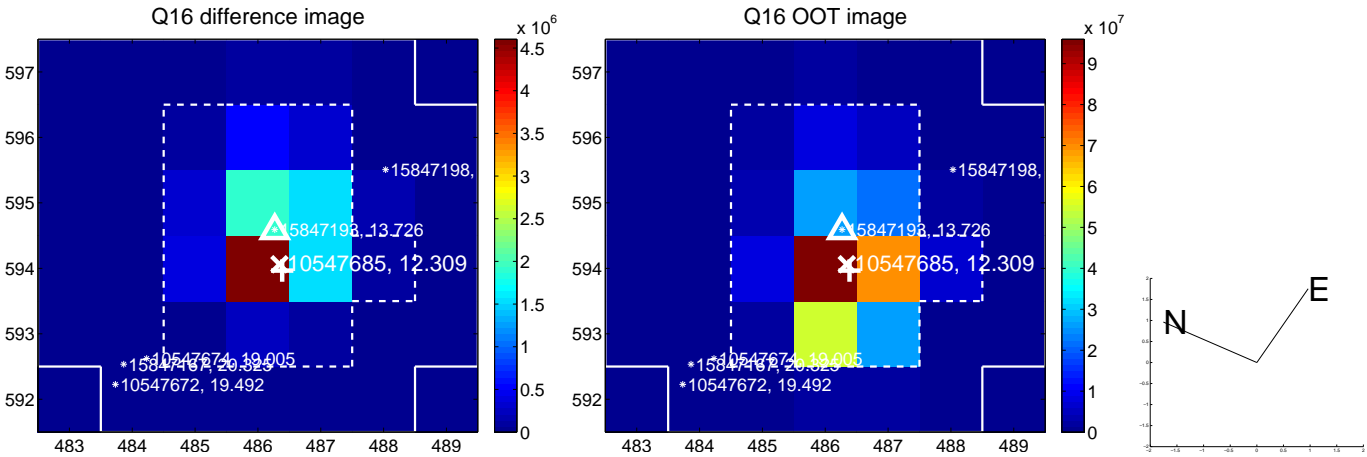
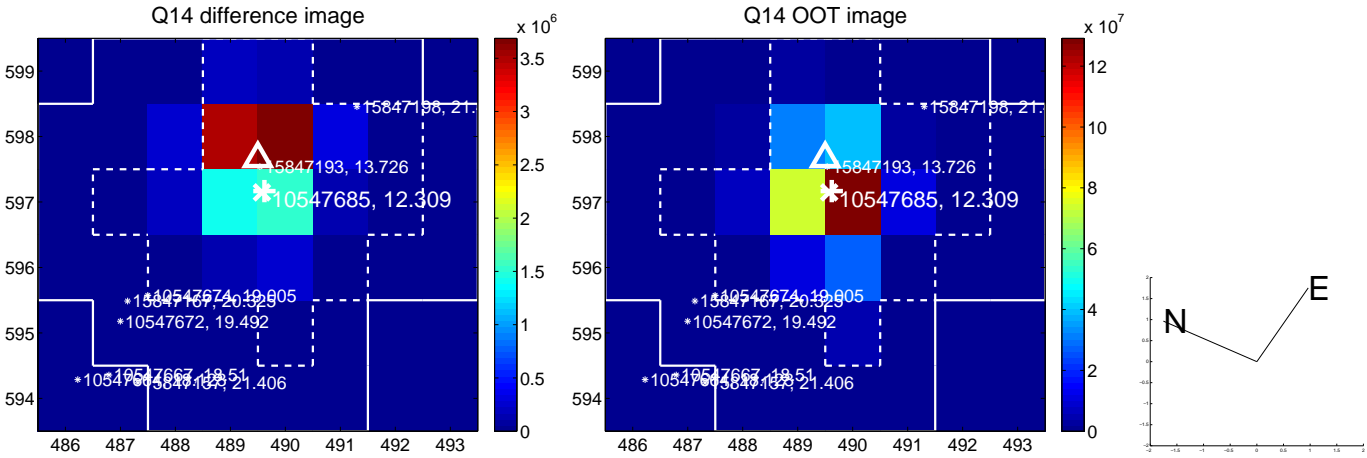
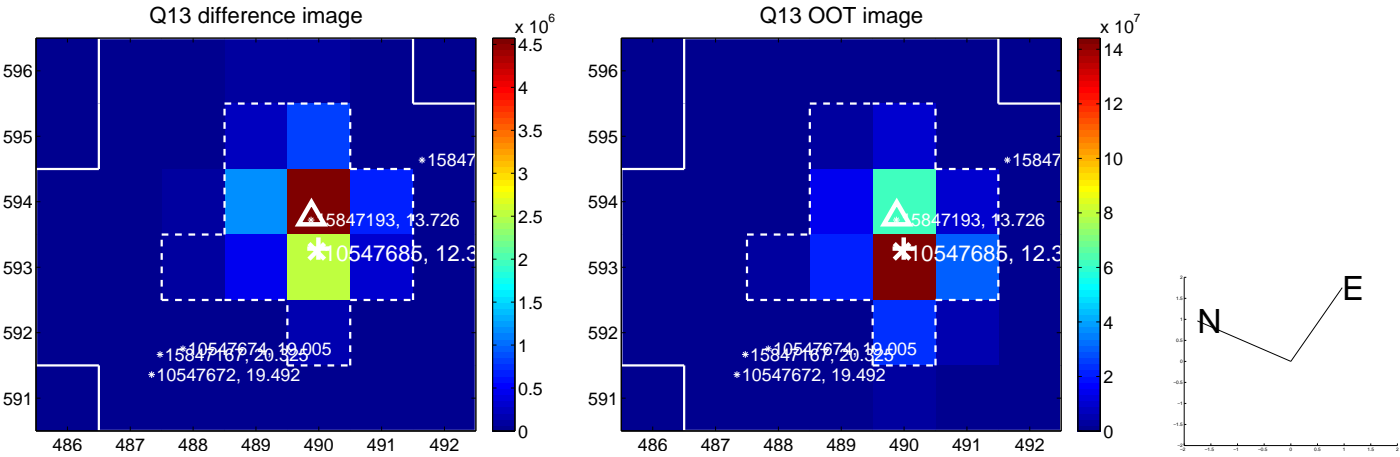
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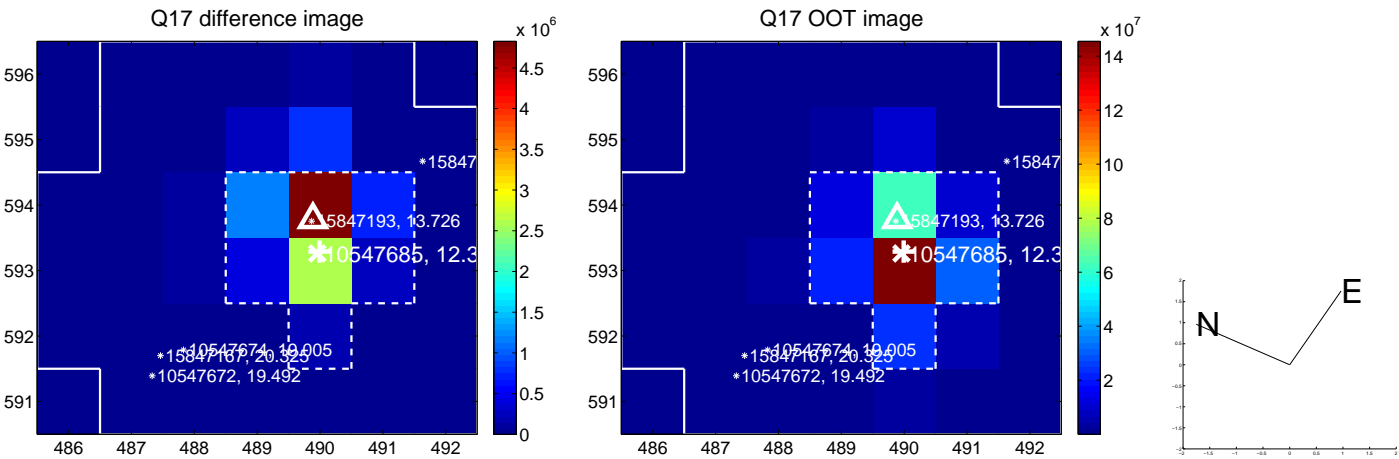
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

