

KIC 005017058

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})
005017058-01	OBS	6486.01	1.161951	132.210590	120410.7	4.387	14441.1	7079.8	1.46	6225	58.62	5290.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005017058-01	OBS	FP	0.00	0	1	0	0	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.

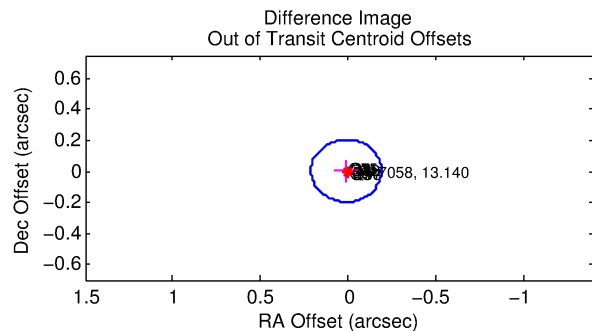
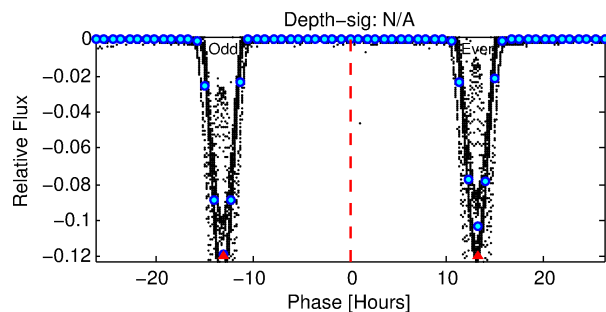
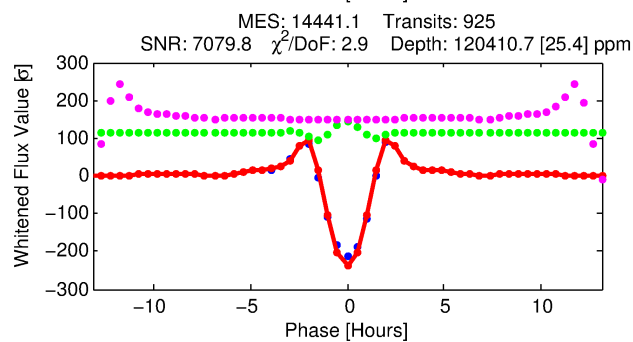
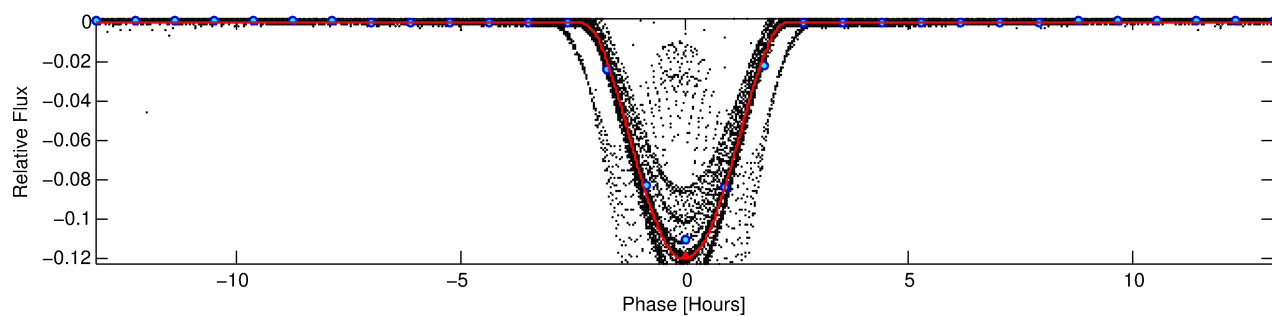
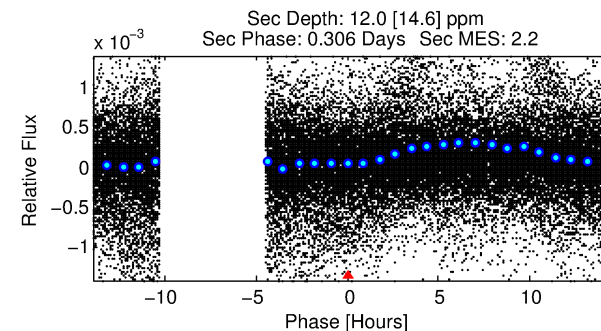
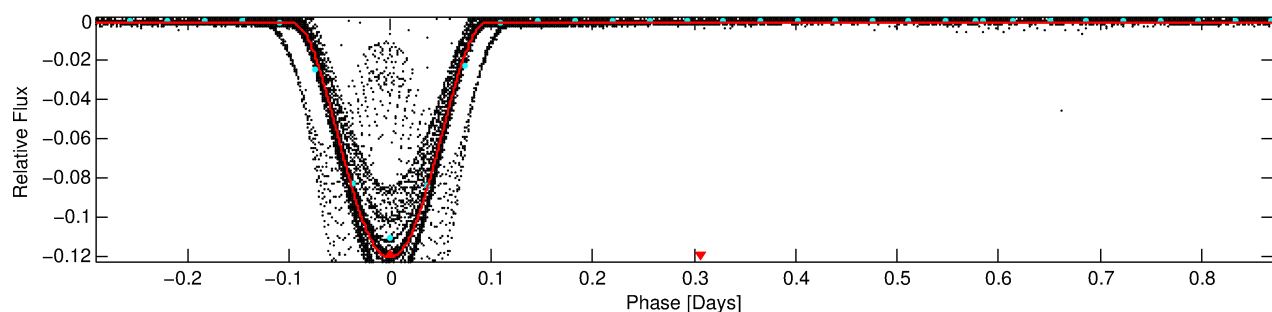
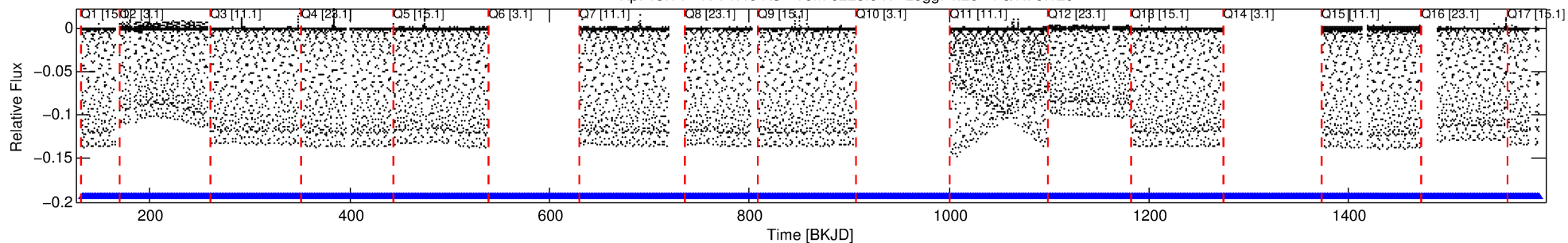
Ephemeris Match Information For 005017058-01

No Significant Match Found

DV One-Page Summary

KIC: 5017058 Candidate: 1 of 1 Period: 1.162 d
KOI: K06486.01 Corr: 0.990

Kp: 13.14 R*: 1.46 Rs Teff: 6225.0 K Logg: 4.20 Fe/H: 0.120



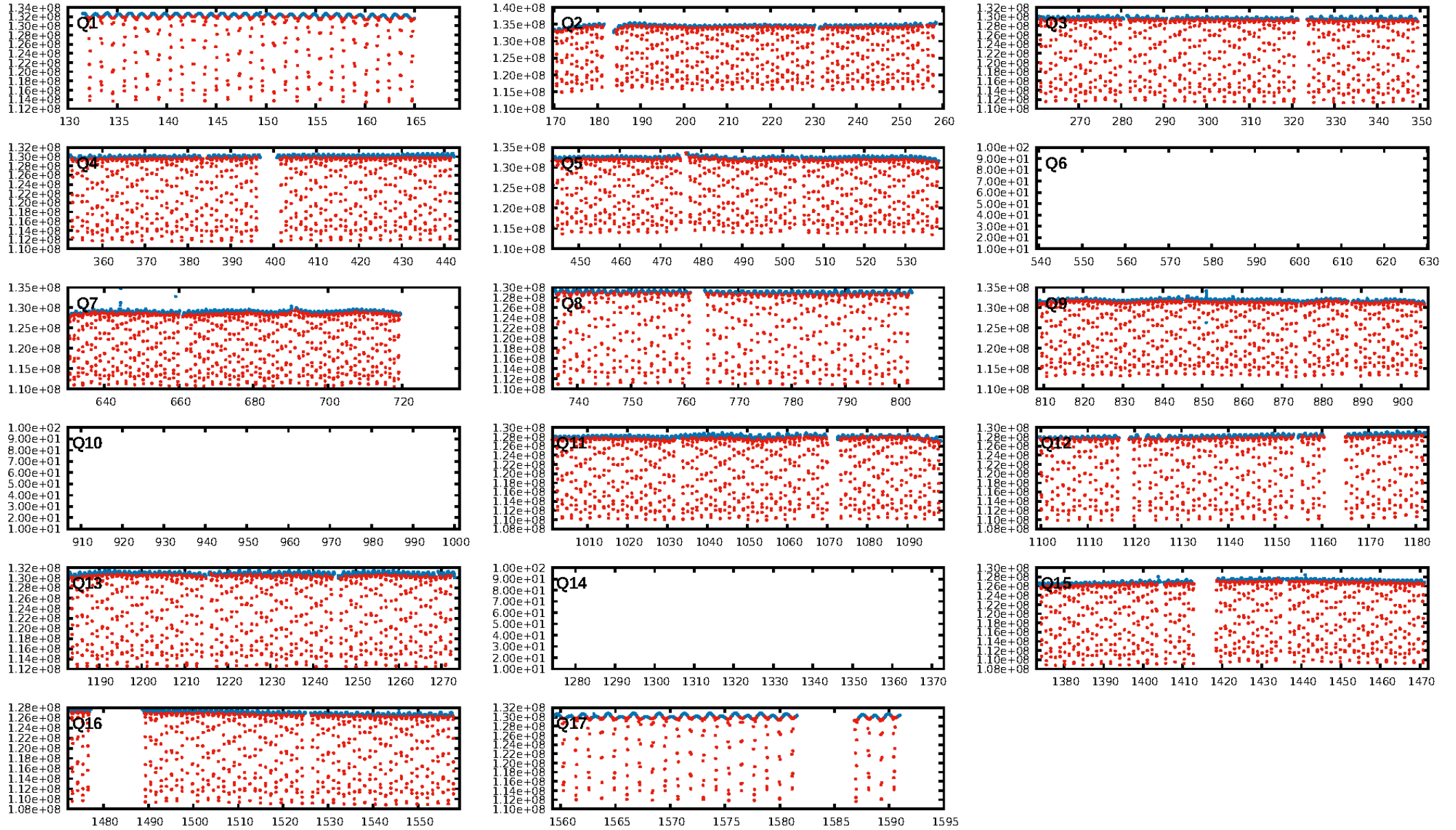
DV Fit Results:

Period = 1.16195 [0.00000] d
Epoch = 132.2106 [0.0000] BKJD
Rp/R* = 0.3687 [0.0003]
a/R* = 2.55 [0.00]
b = 0.73 [0.00]
Seff = 5290.64 [2123.53]
Teff = 2175 [218] K
Rp = 58.62 [18.83] Re
a = 0.0232 [0.0062] AU
Ag = 0.00 [0.00] [-757.53σ]
Teffp = 604 [184] K [-5.51σ]

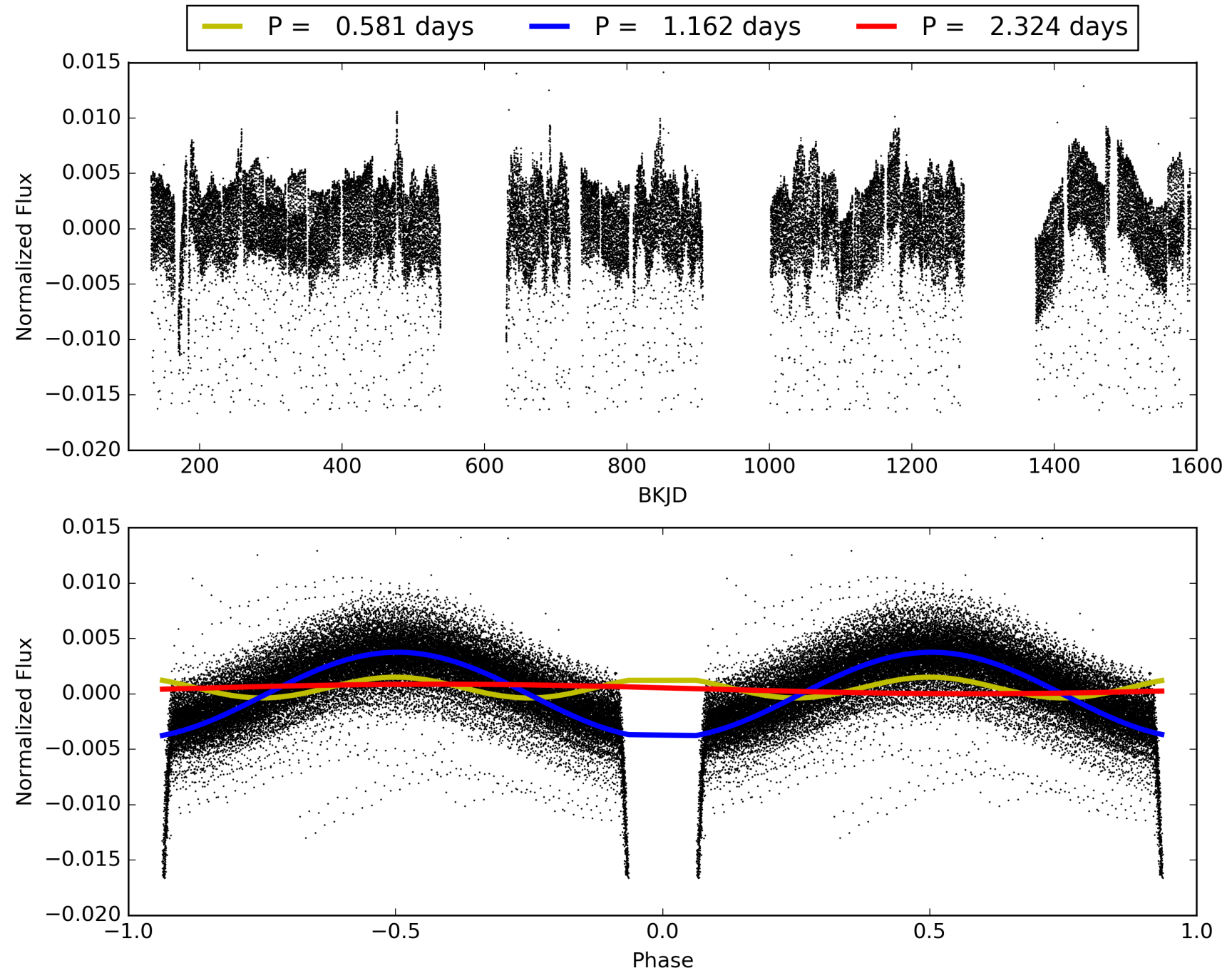
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [873/873]
GhostDiagnostic-chr: 2.05
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.014 arcsec [0.20σ]
KicOffset-rm: 0.126 arcsec [1.88σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 005017058-01, PDC Light Curves

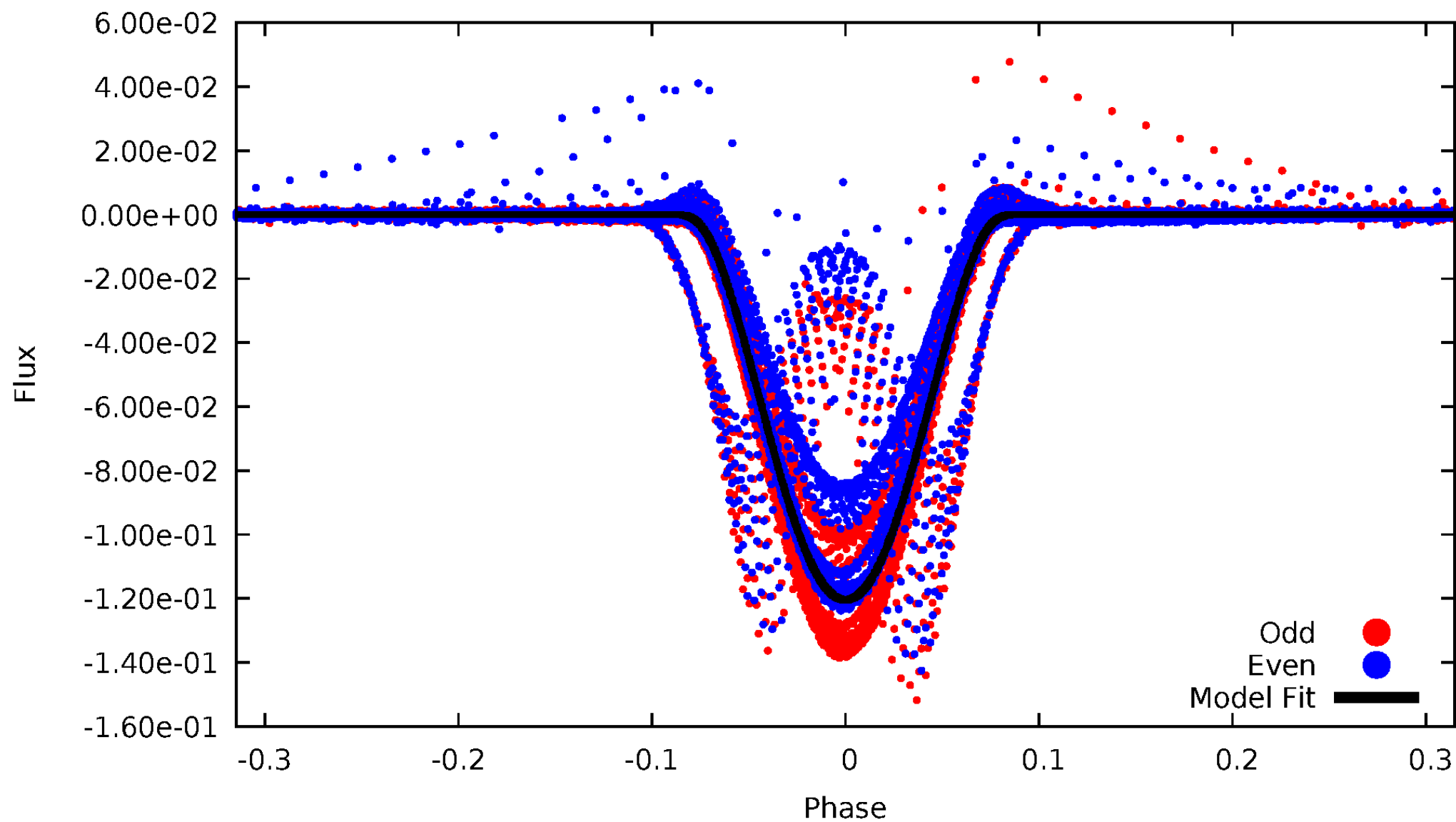


TCE 005017058-01



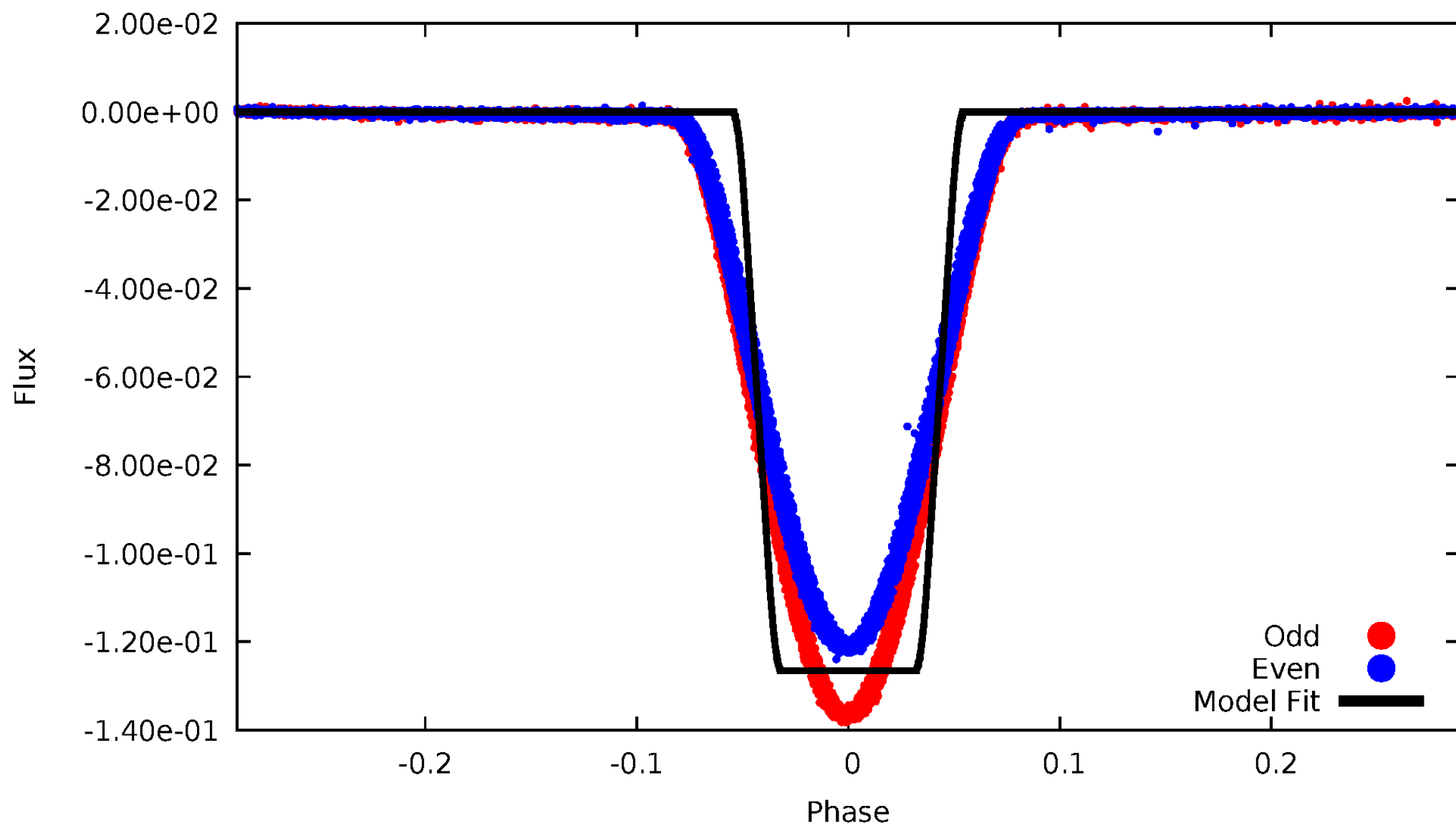
DV Odd/Even

TCE 005017058-01



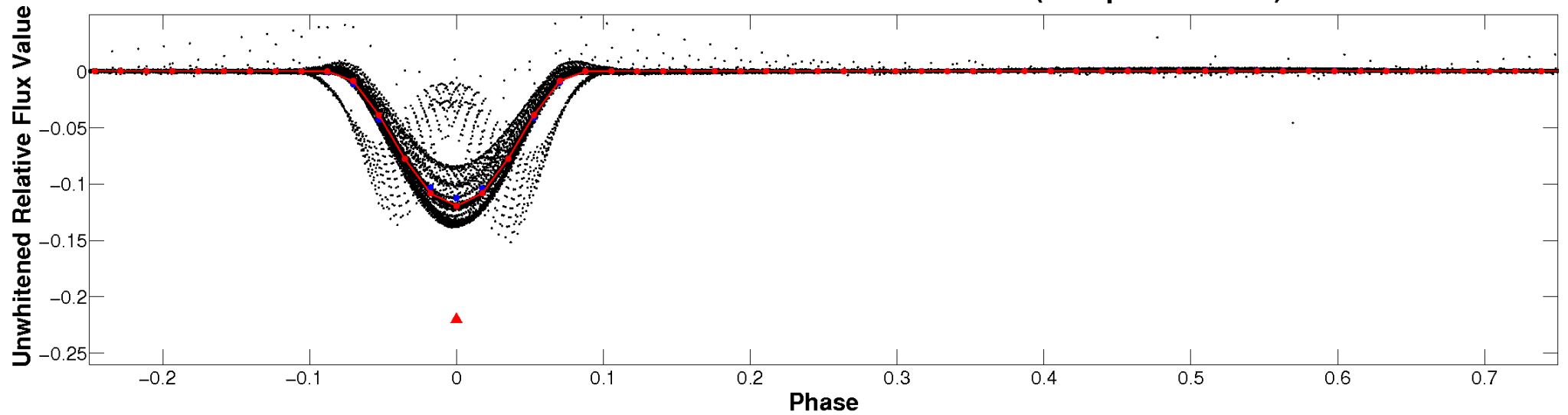
ALT Odd/Even

TCE 005017058-01

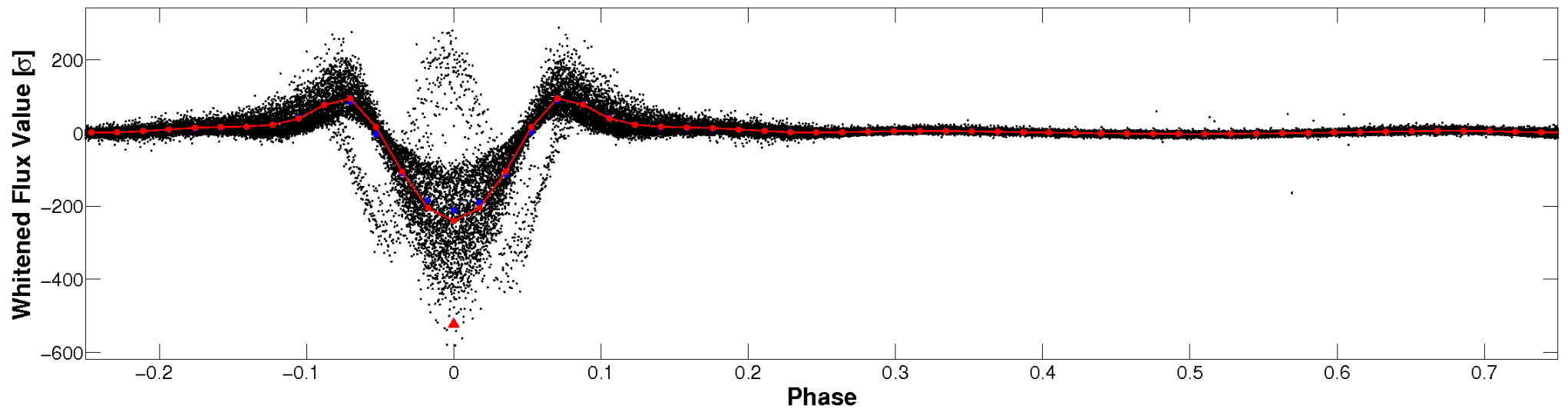


Non-Whitened Vs. Whitened Light Curve

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

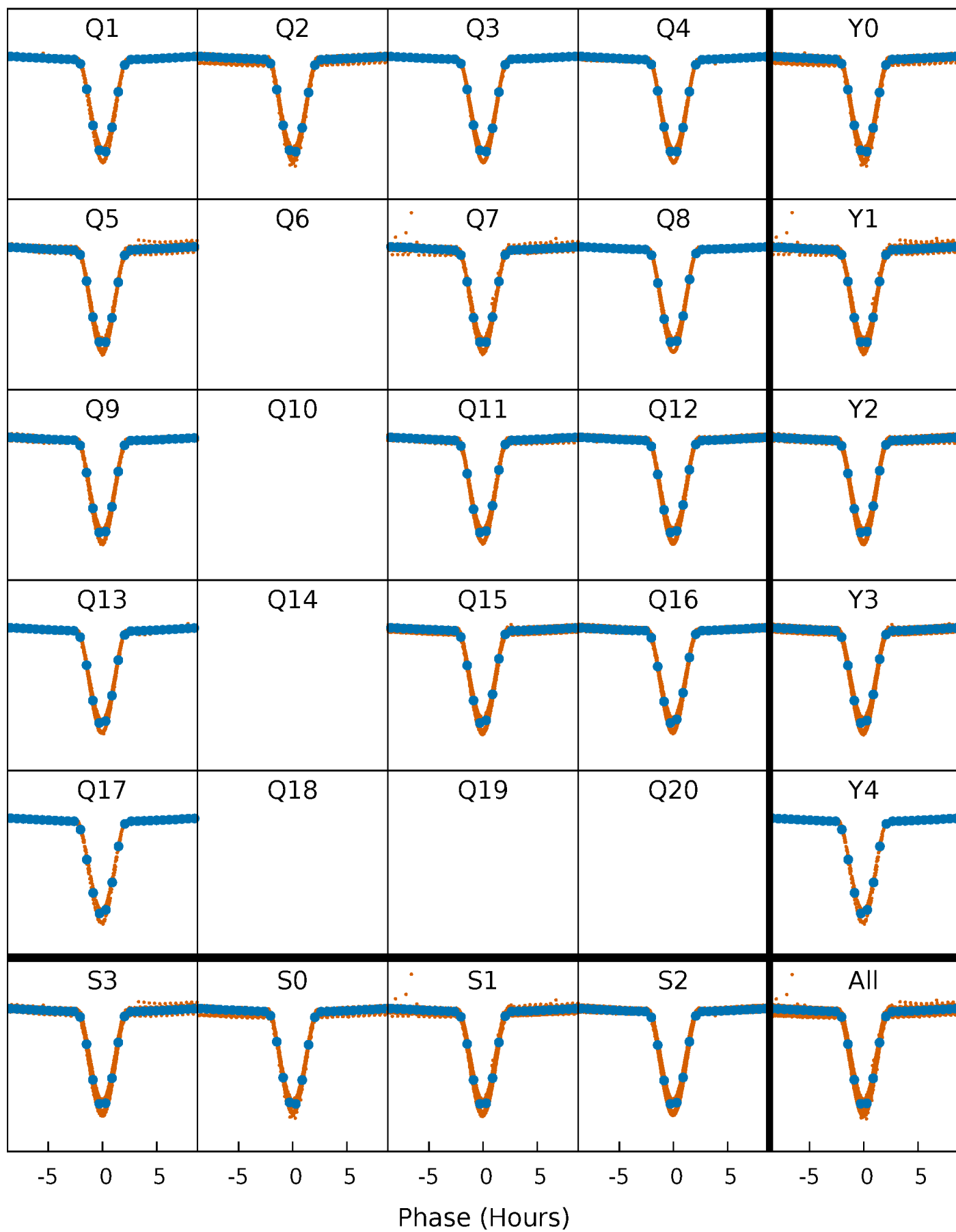


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



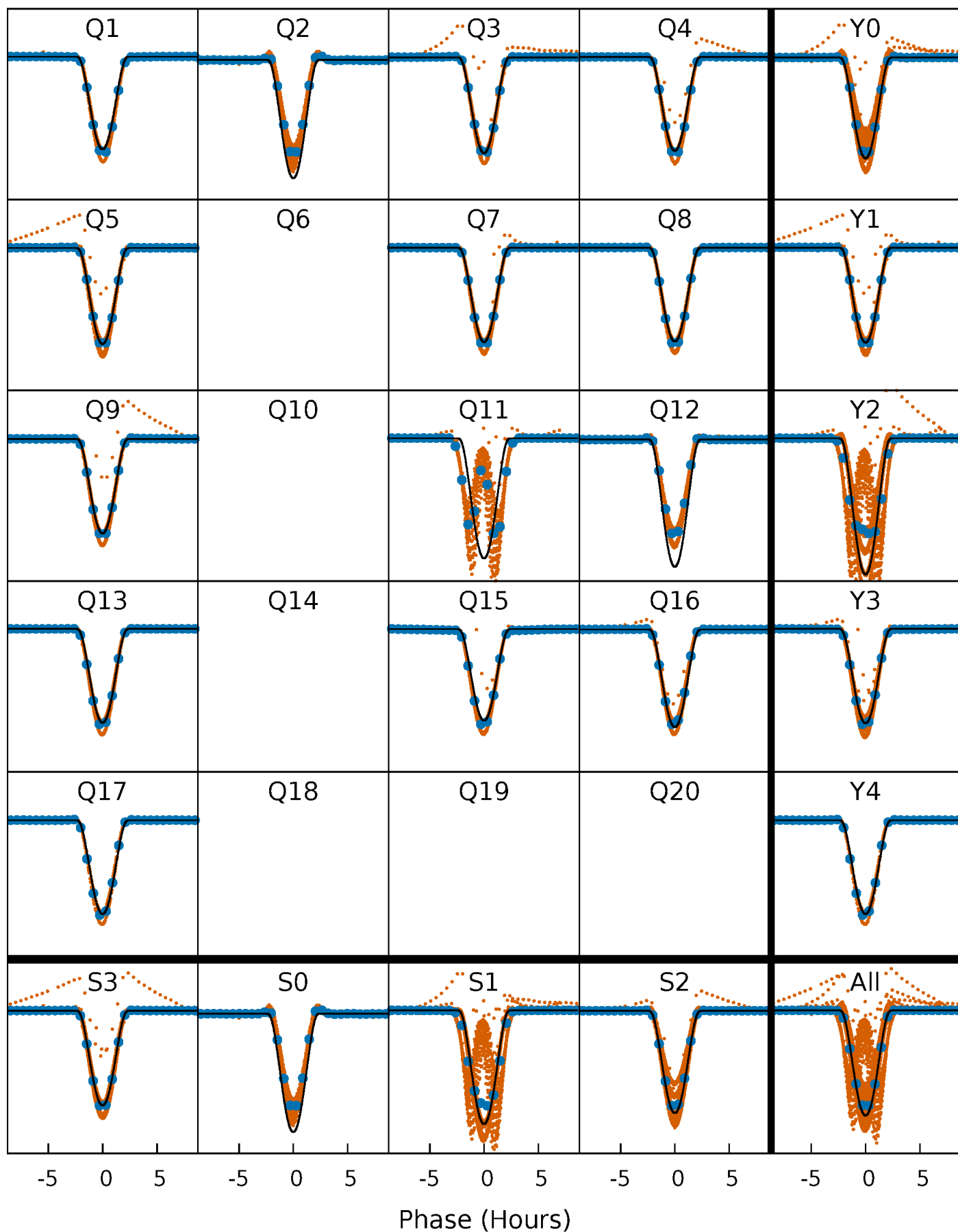
PDC Quarter-Phased Transit Curves

TCE 005017058-01 P= 1.161951 Days $T_0=132.210589$ (BKJD)



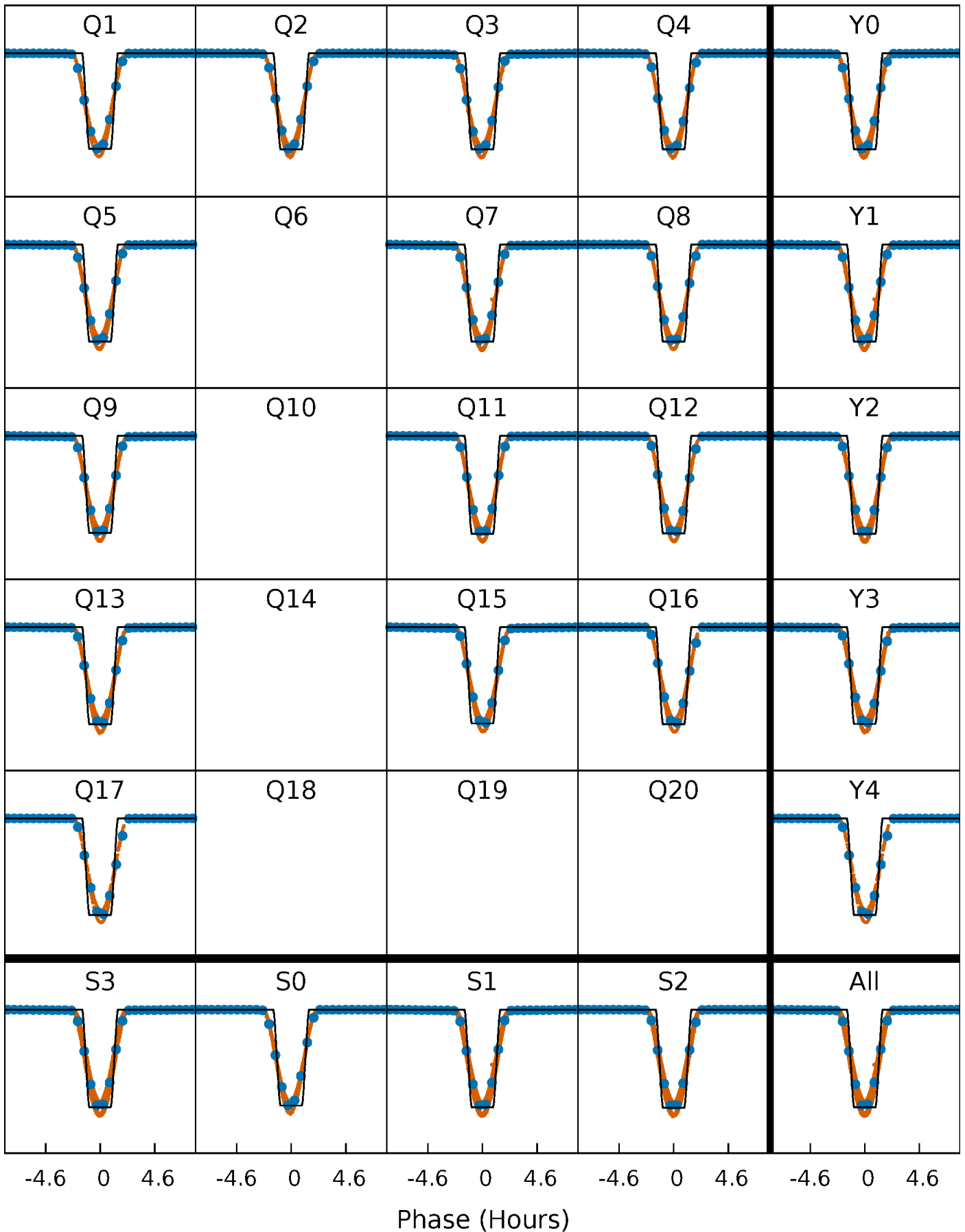
DV Quarter-Phased Transit Curves

TCE 005017058-01 P= 1.161951 Days $T_0=132.210589$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

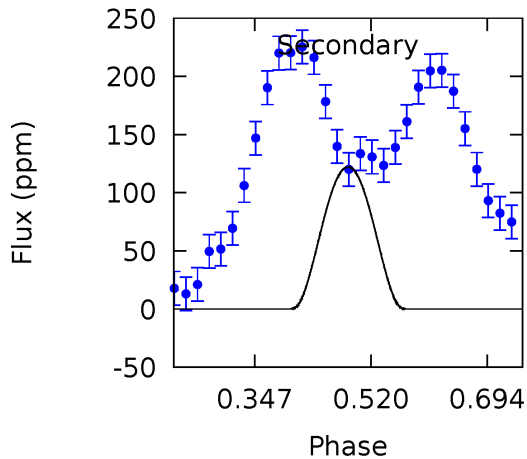
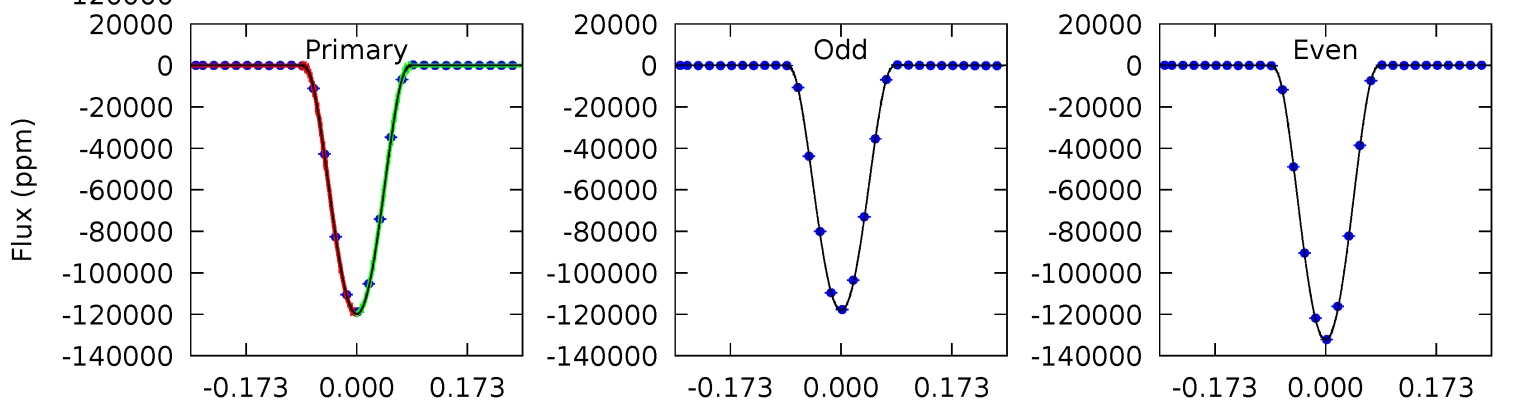
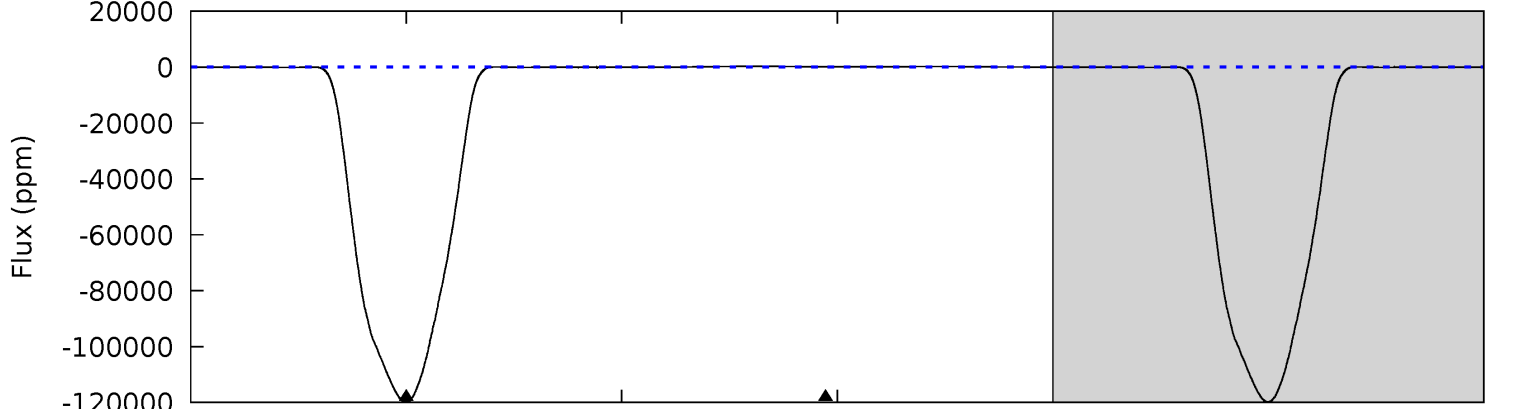
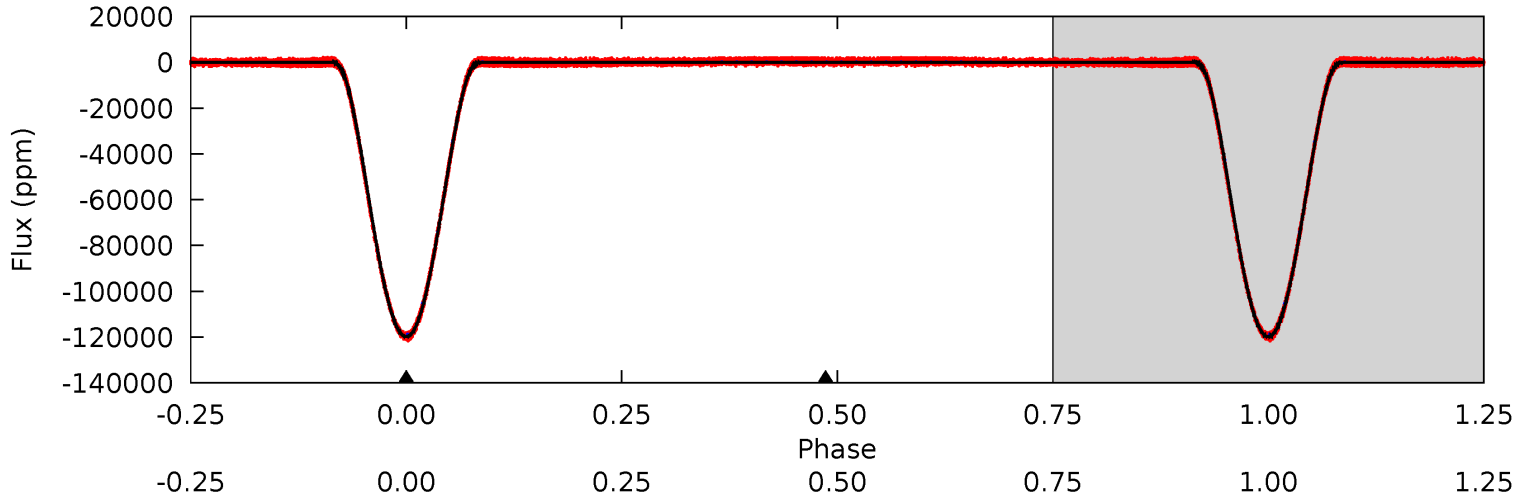
TCE 005017058-01 P= 1.161941 Days $T_0=132.216512$ (BKJD)



DV Model-Shift Uniqueness Test

005017058-01, P = 1.161951 Days, E = 131.048638 Days

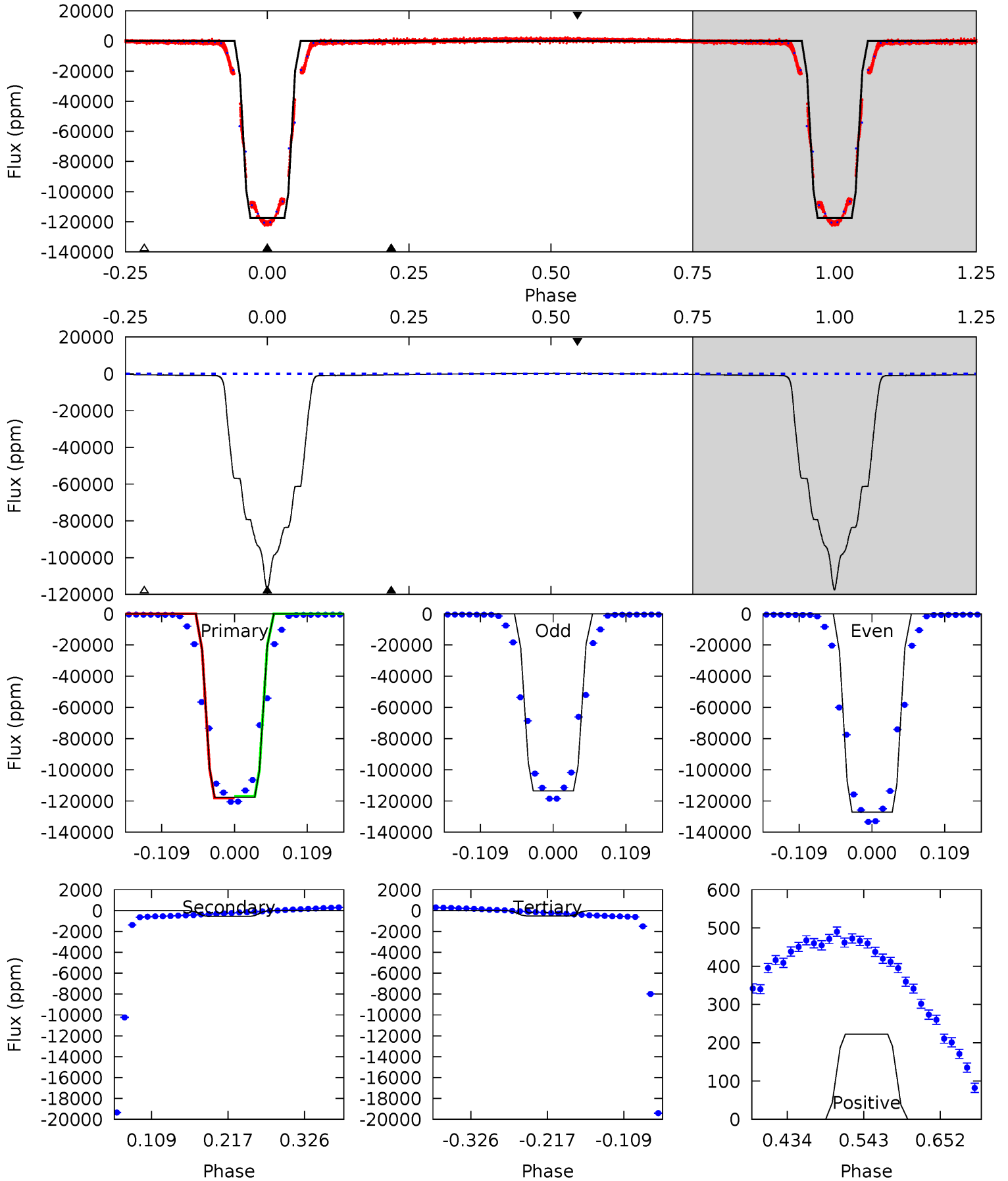
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15609	-15.9	0	0	4.45	1.36	6.78	15609	15609	-15.9	-15.9	1038	0.97	0.00	0



Alt Model-Shift Uniqueness Test

005017058-01, P = 1.161941 Days, E = 131.054571 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6853	32.5	30.1	13.0	4.55	1.60	20.6	6823	6840	2.36	19.5	500.3	1.02	0.00	36.9



Stellar Parameters For KIC 005017058

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6225^{+167}_{-204}	$4.204^{+0.167}_{-0.204}$	$0.120^{+0.250}_{-0.300}$	$1.457^{+0.468}_{-0.351}$	$1.242^{+0.164}_{-0.200}$	$0.565^{+0.555}_{-0.278}$
	+3%/-3%	+4%/-5%	+208%/-250%	+32%/-24%	+13%/-16%	+98%/-49%
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 005017058-01 / KOI 6486.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	122 ± 8	$59.67^{+9.95}_{-7.60}$	3065^{+253}_{-197}	-3148^{+117}_{-148}	$-0.010^{+0.003}_{-0.003}$
Alt.	-557 ± 17	$56.73^{+9.75}_{-6.79}$	3057^{+231}_{-207}	-3046^{+143}_{-155}	$0.050^{+0.015}_{-0.013}$

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 $A_{obs} \gg 1.0$

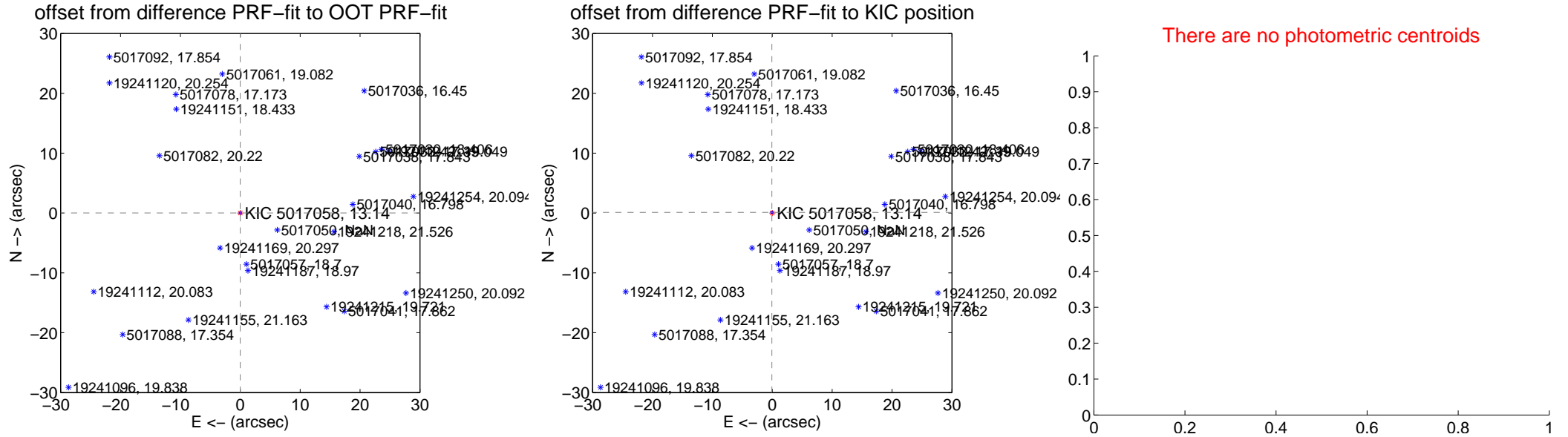
DV Centroid Data

Supplemental centroid analysis for 005017058-01. Kepler magnitude: 13.14. Transit SNR 7079.82

There are 14 quarters with good PRF difference image offsets

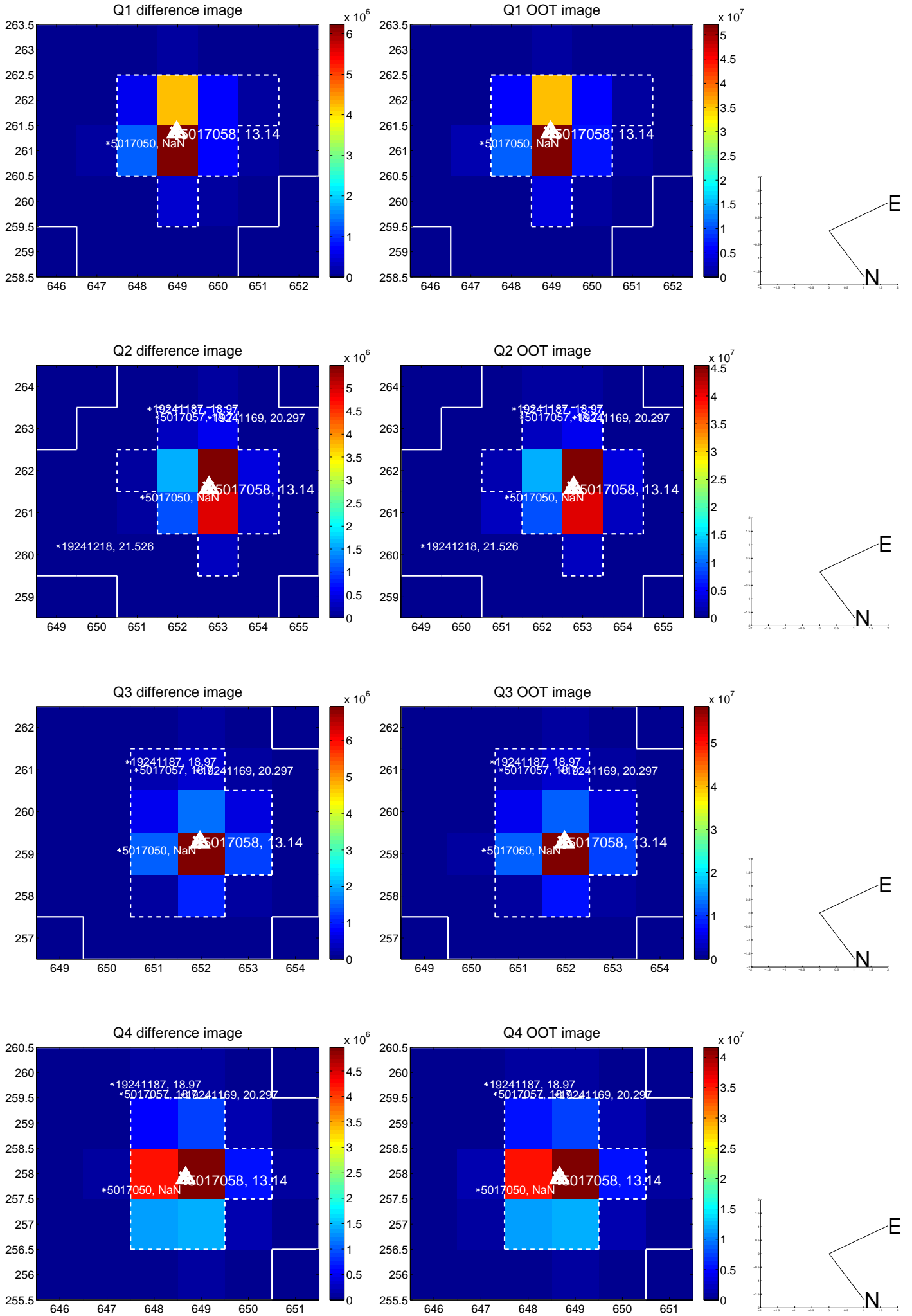
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.067	0.20	0.013 ± 0.067	0.004 ± 0.067
PRF-fit source offset from KIC position	0.126 ± 0.067	1.88	0.065 ± 0.067	0.108 ± 0.067
photometric centroid source offset	—	—	—	—

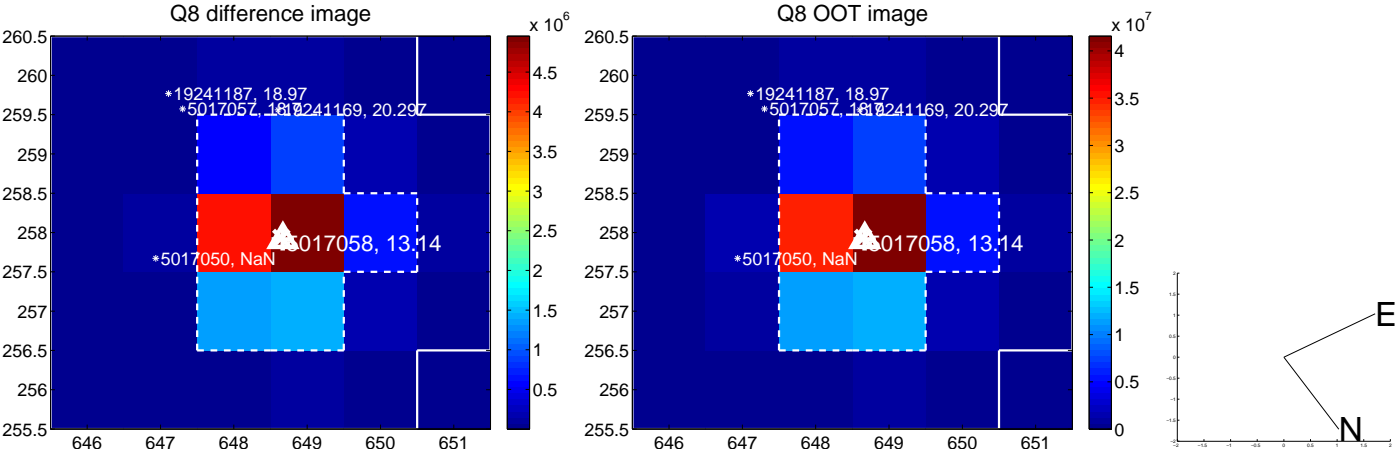
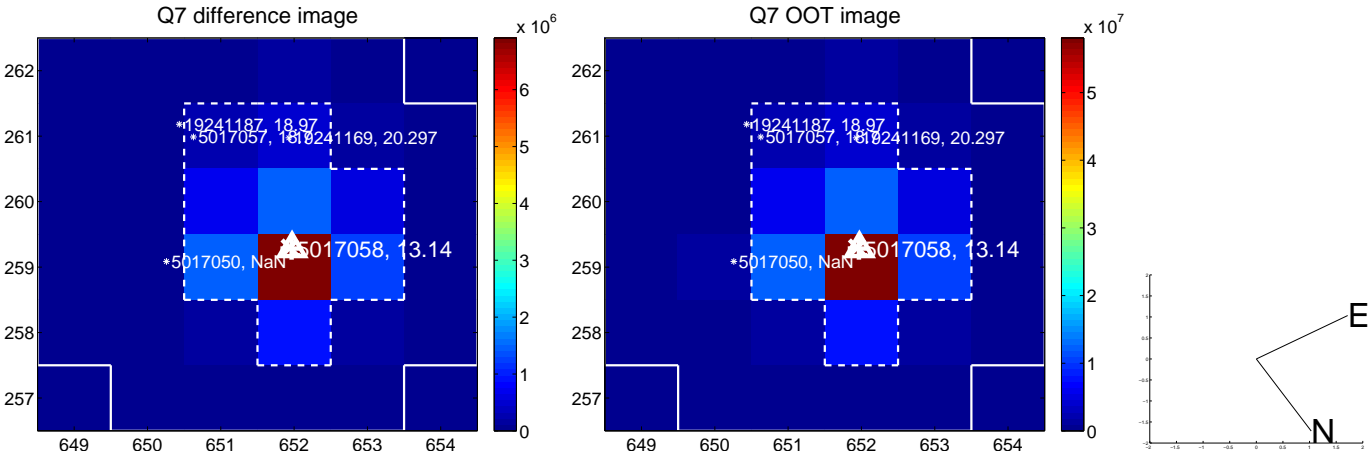
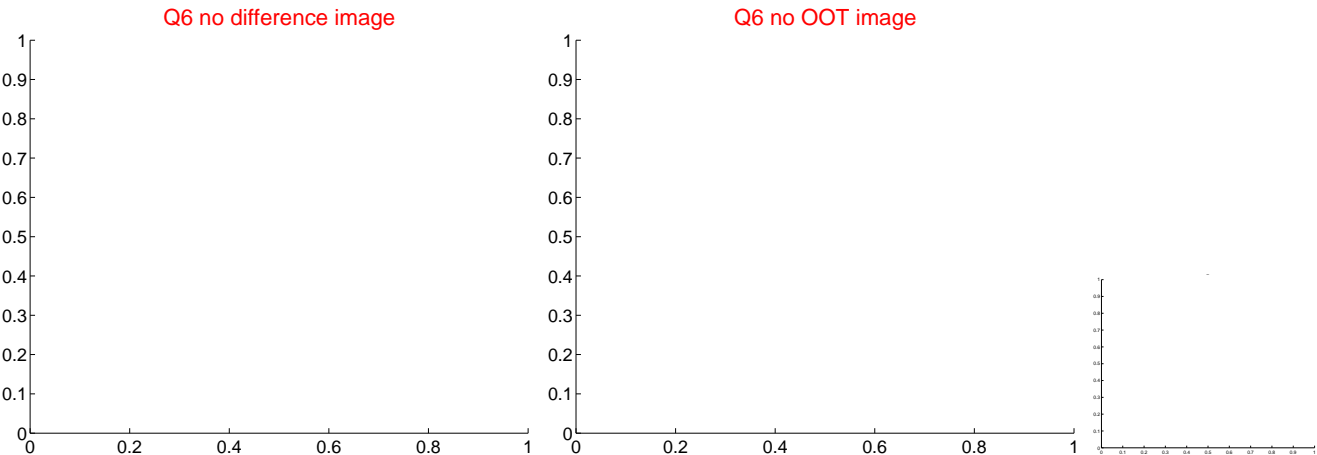
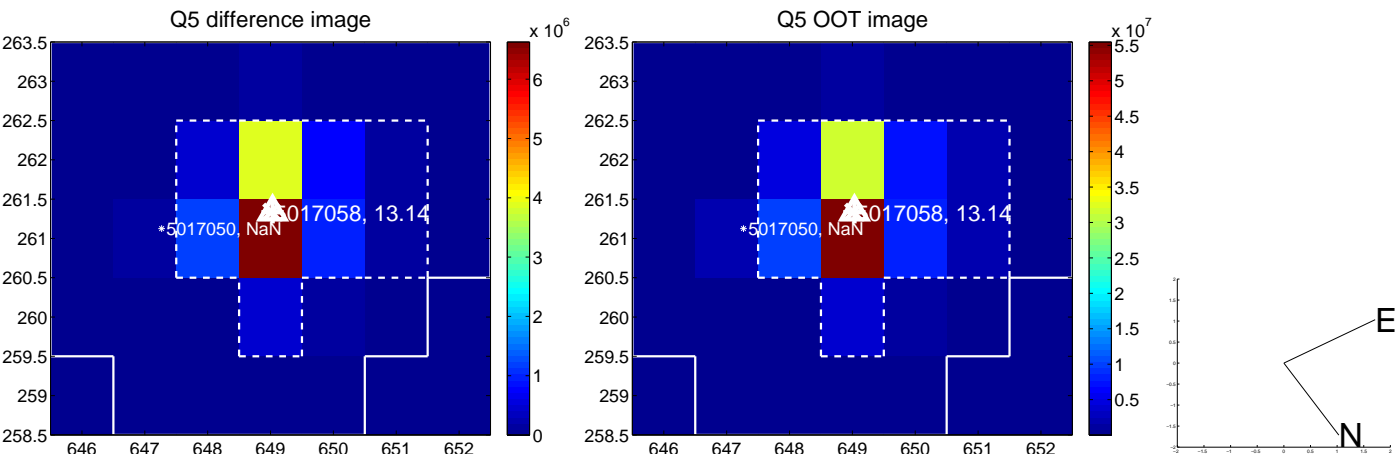


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

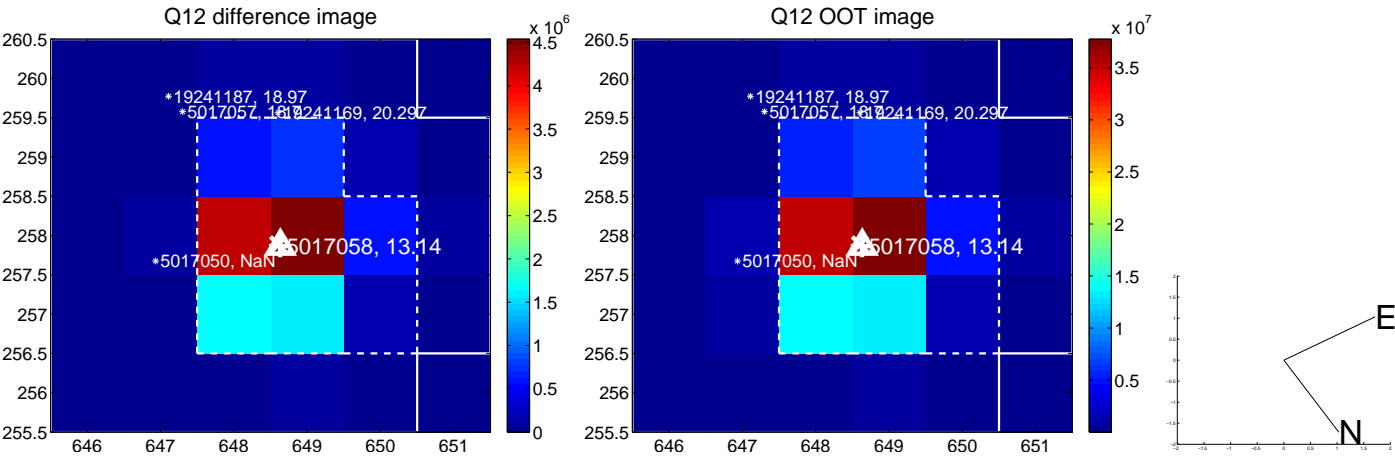
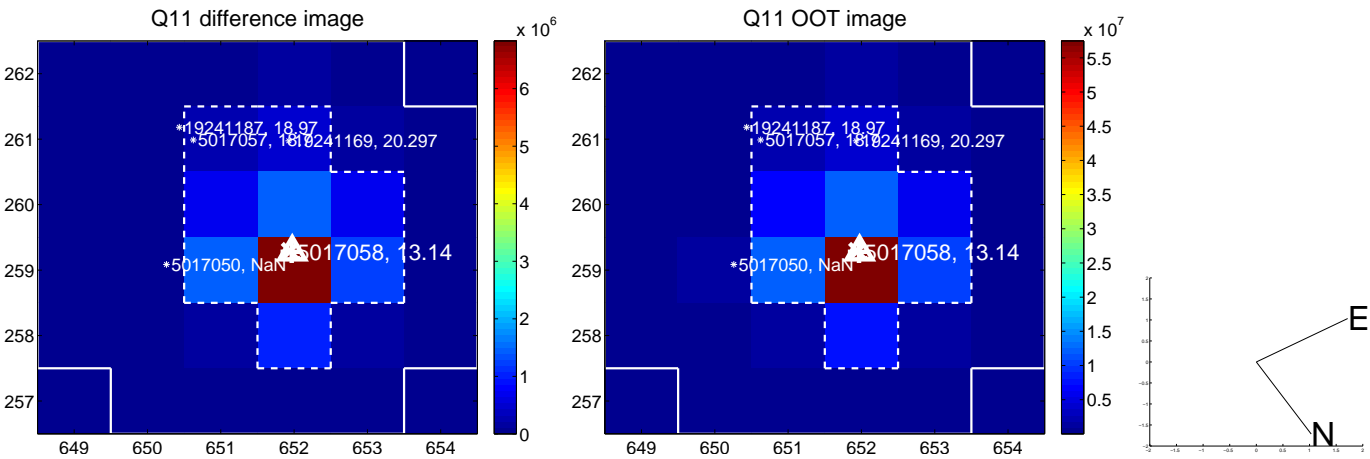
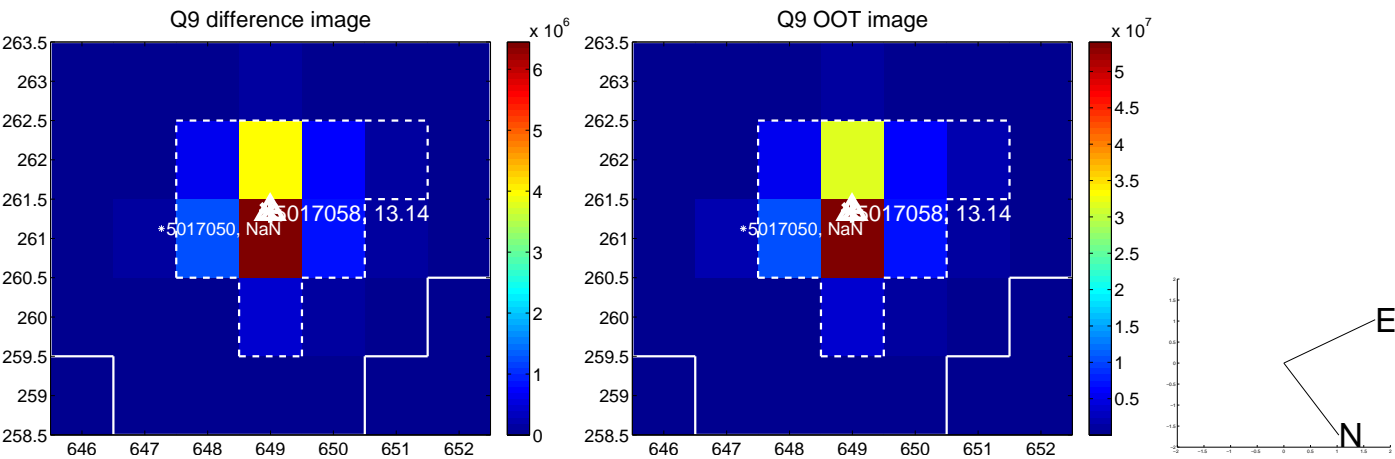
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



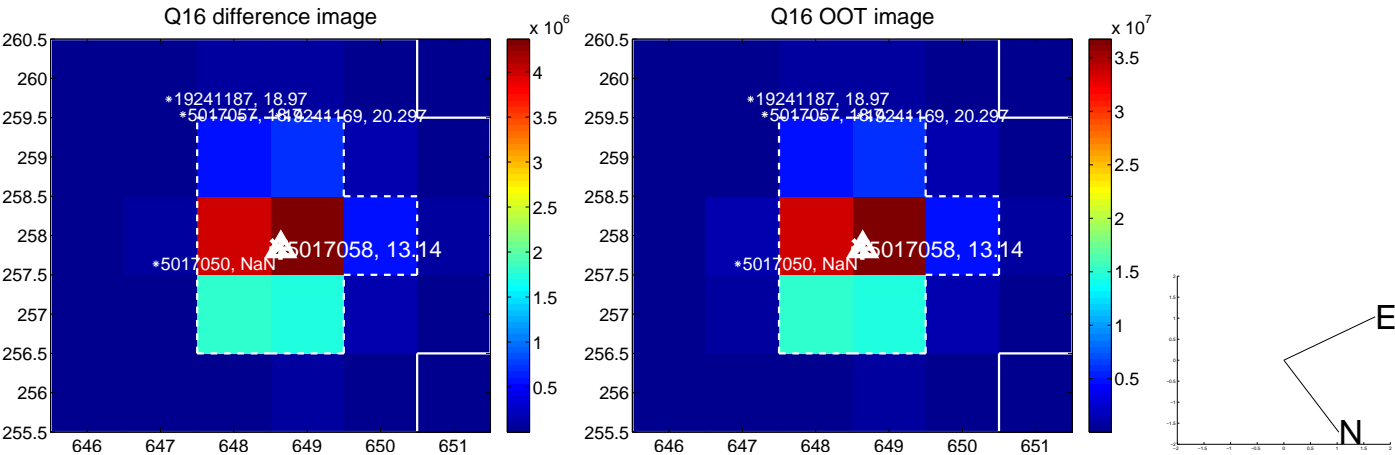
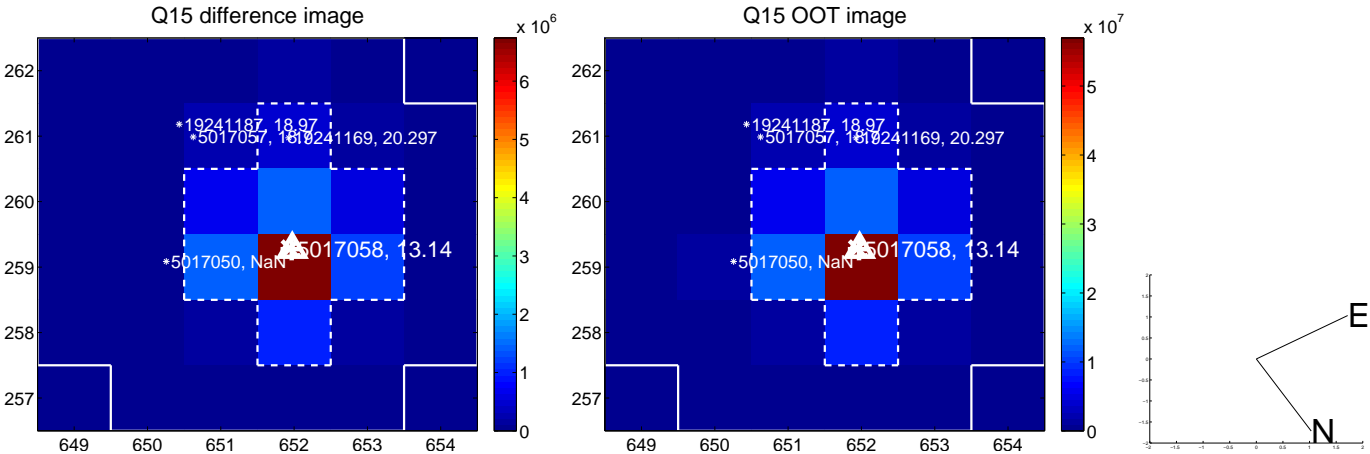
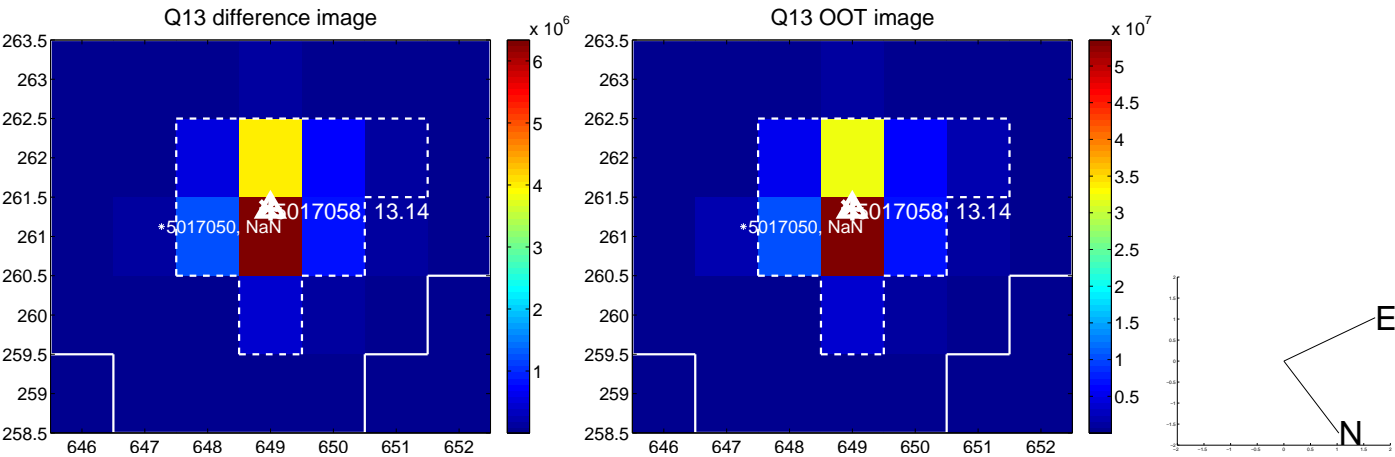
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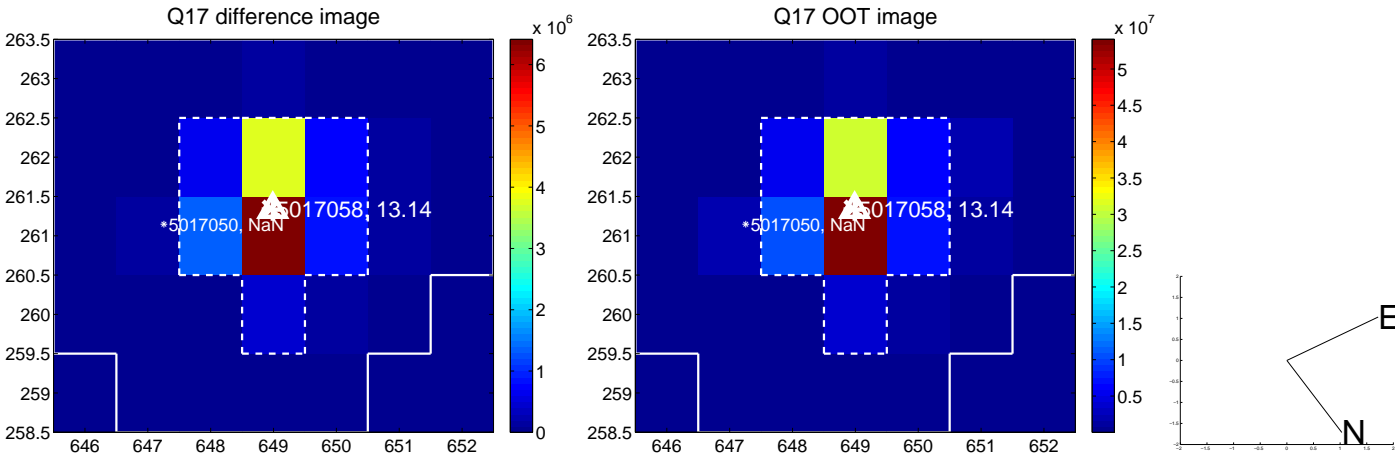
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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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

