

KIC 005359678

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})
005359678-01	OBS	6569.01	3.115305	133.124004	132138.4	5.111	14410.8	5805.6	1.09	6367	58.21	919.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005359678-01	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.

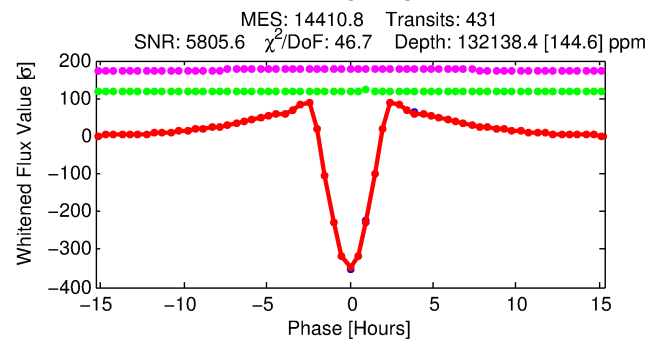
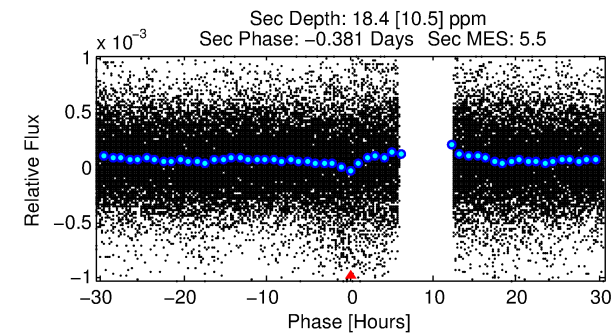
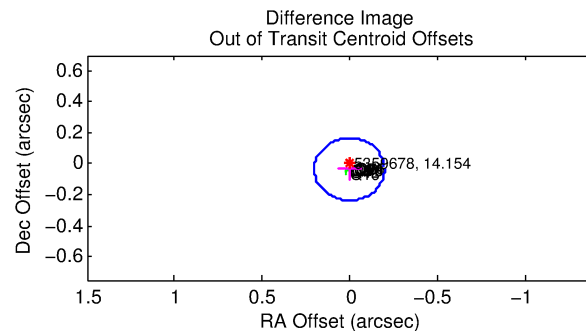
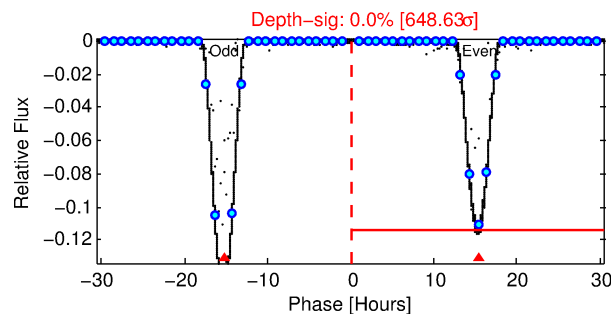
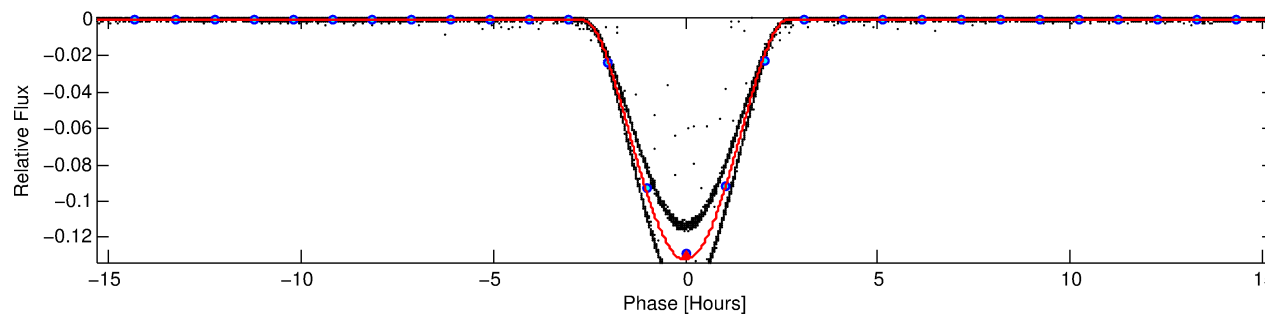
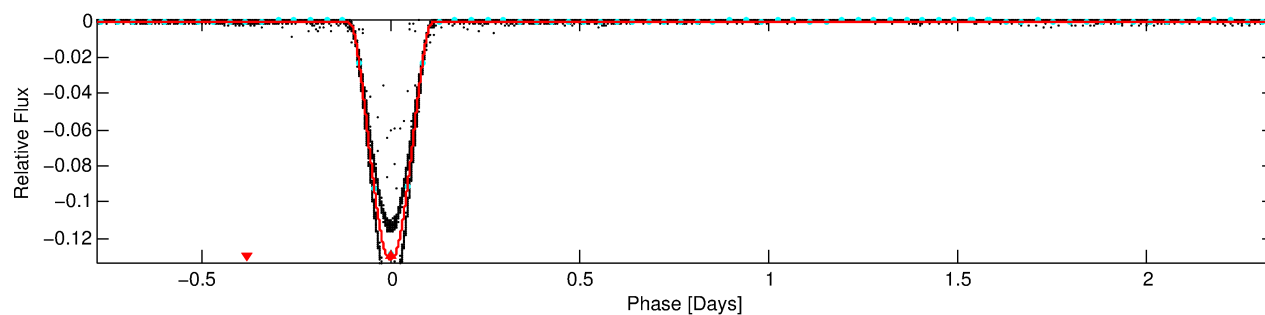
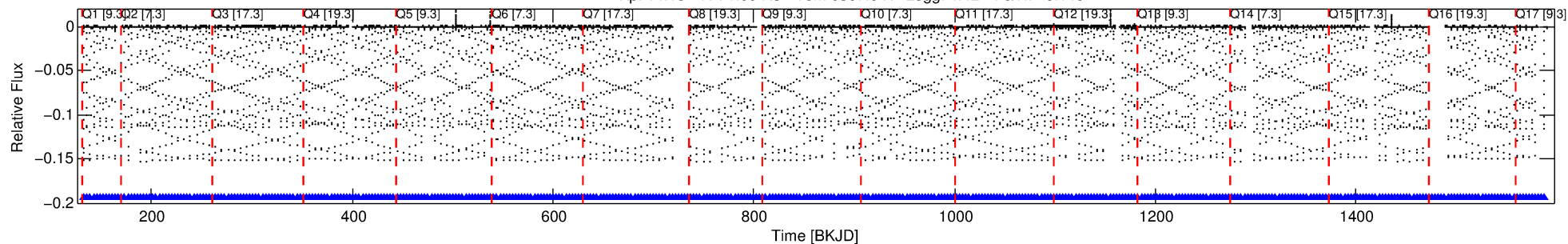
Ephemeris Match Information For 005359678-01

No Significant Match Found

DV One-Page Summary

KIC: 5359678 Candidate: 1 of 1 Period: 3.115 d
KOI: K06569.01 Corr: 1.000

Kp: 14.15 R*: 1.09 Rs Teff: 6367.0 K Logg: 4.42 Fe/H: -0.140



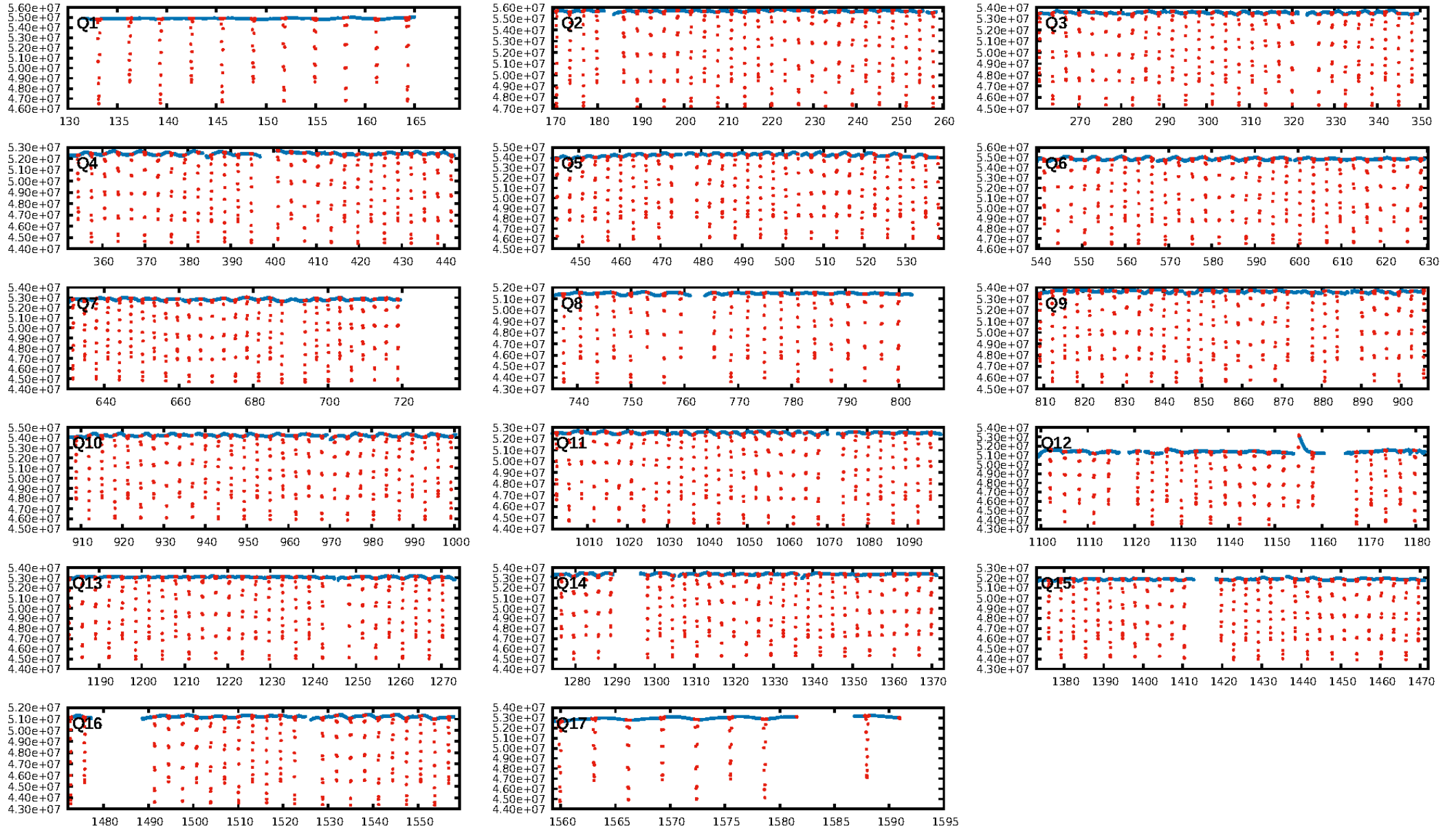
DV Fit Results:

Period = 3.11531 [0.00000] d
Epoch = 133.1240 [0.0000] BKJD
Rp/R* = 0.4907 [0.0497]
a/R* = 5.65 [0.05]
b = 0.90 [0.07]
Seff = 919.29 [337.67]
Teff = 1404 [129] K
Rp = 58.21 [17.82] Re
a = 0.0435 [0.0105] AU
Ag = 0.01 [0.00] [-252.40σ]
Teffp = 595 [92] K [-5.11σ]

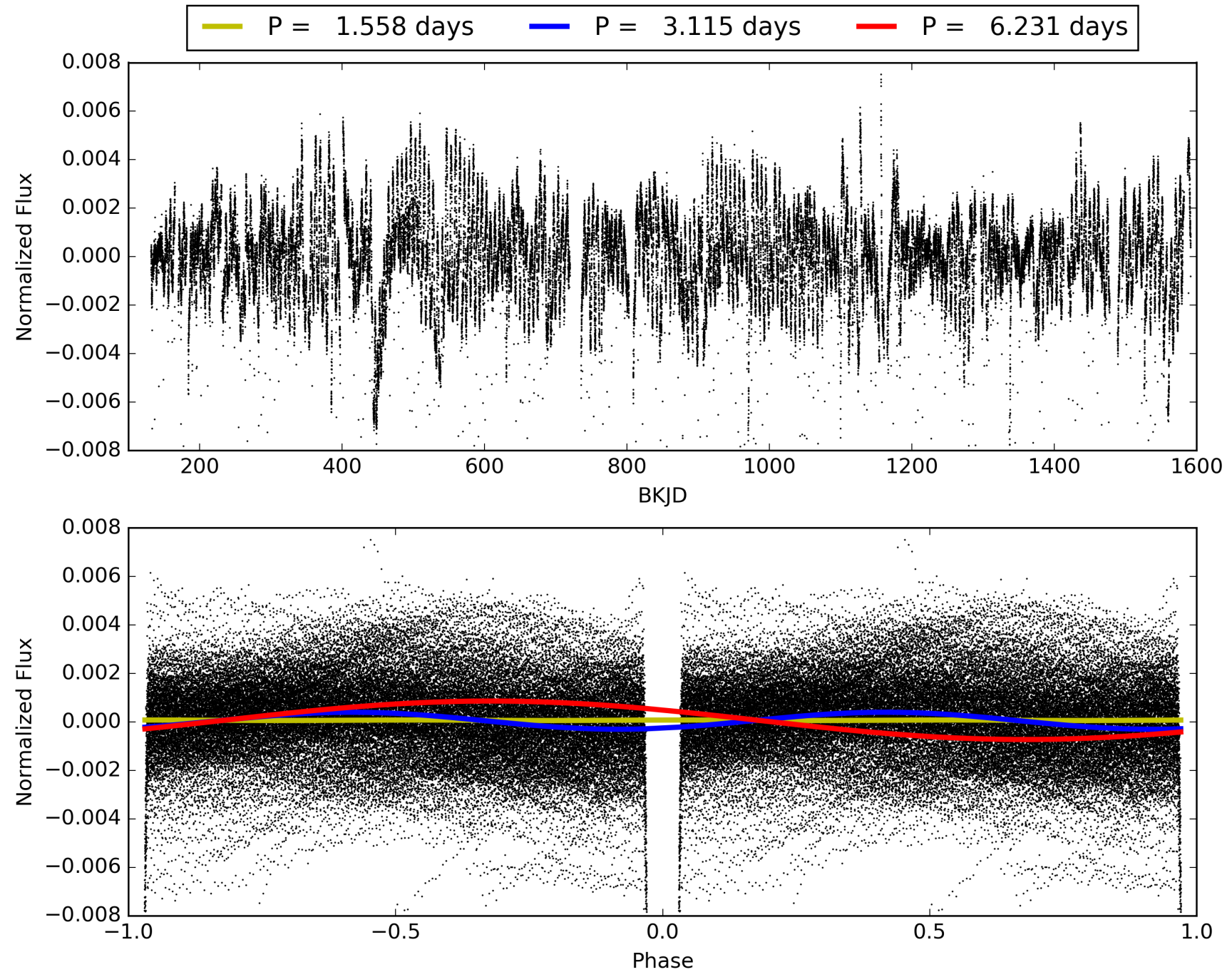
DV Diagnostic Results:

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 [411/411]
GhostDiagnostic-chr: 1.091
Centroid-sig: 0.0%
Centroid-so: 0.145 arcsec [278.01σ]
OotOffset-rm: 0.036 arcsec [0.54σ]
KicOffset-rm: 0.099 arcsec [1.48σ]
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 005359678-01, PDC Light Curves

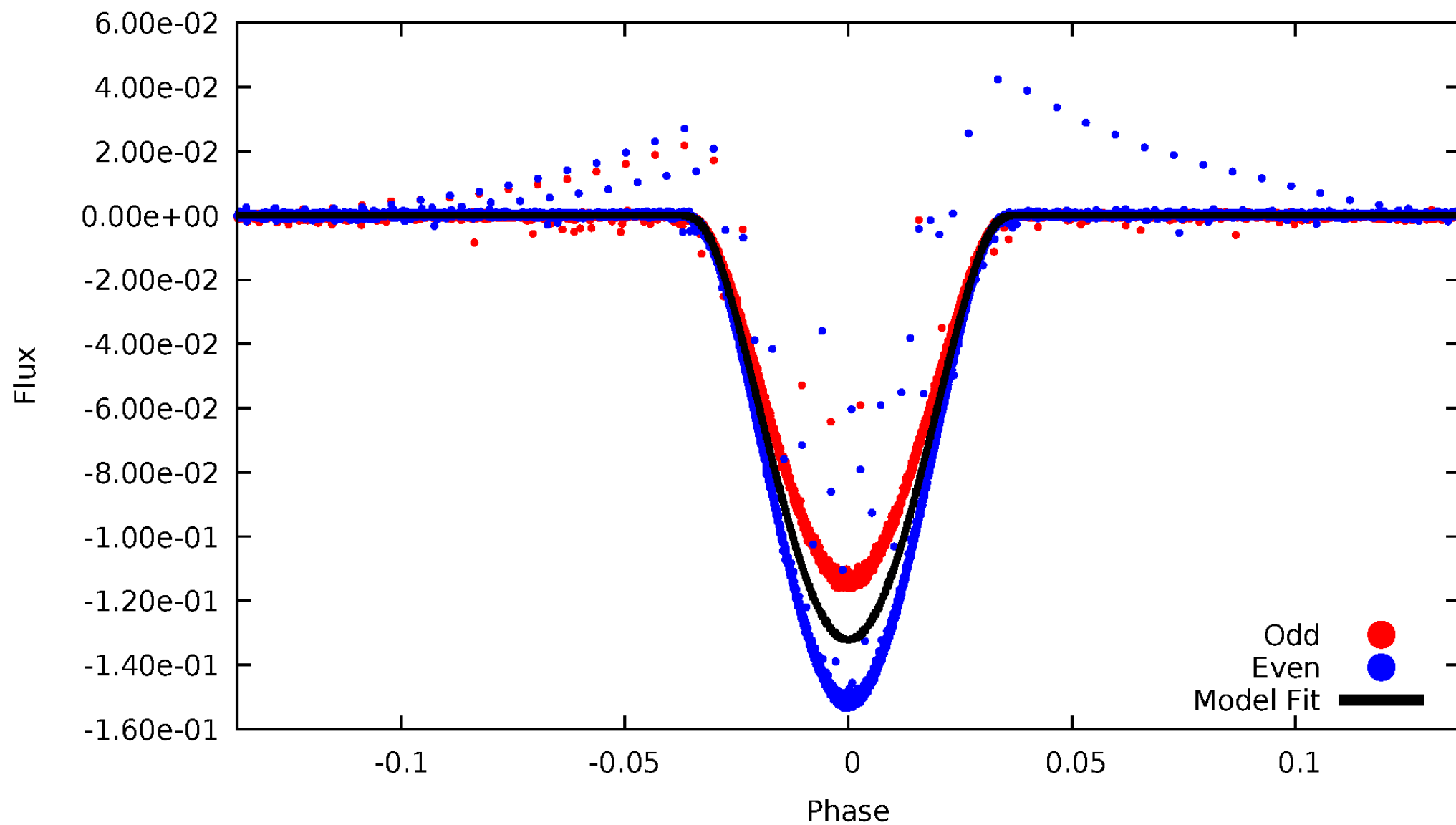


TCE 005359678-01



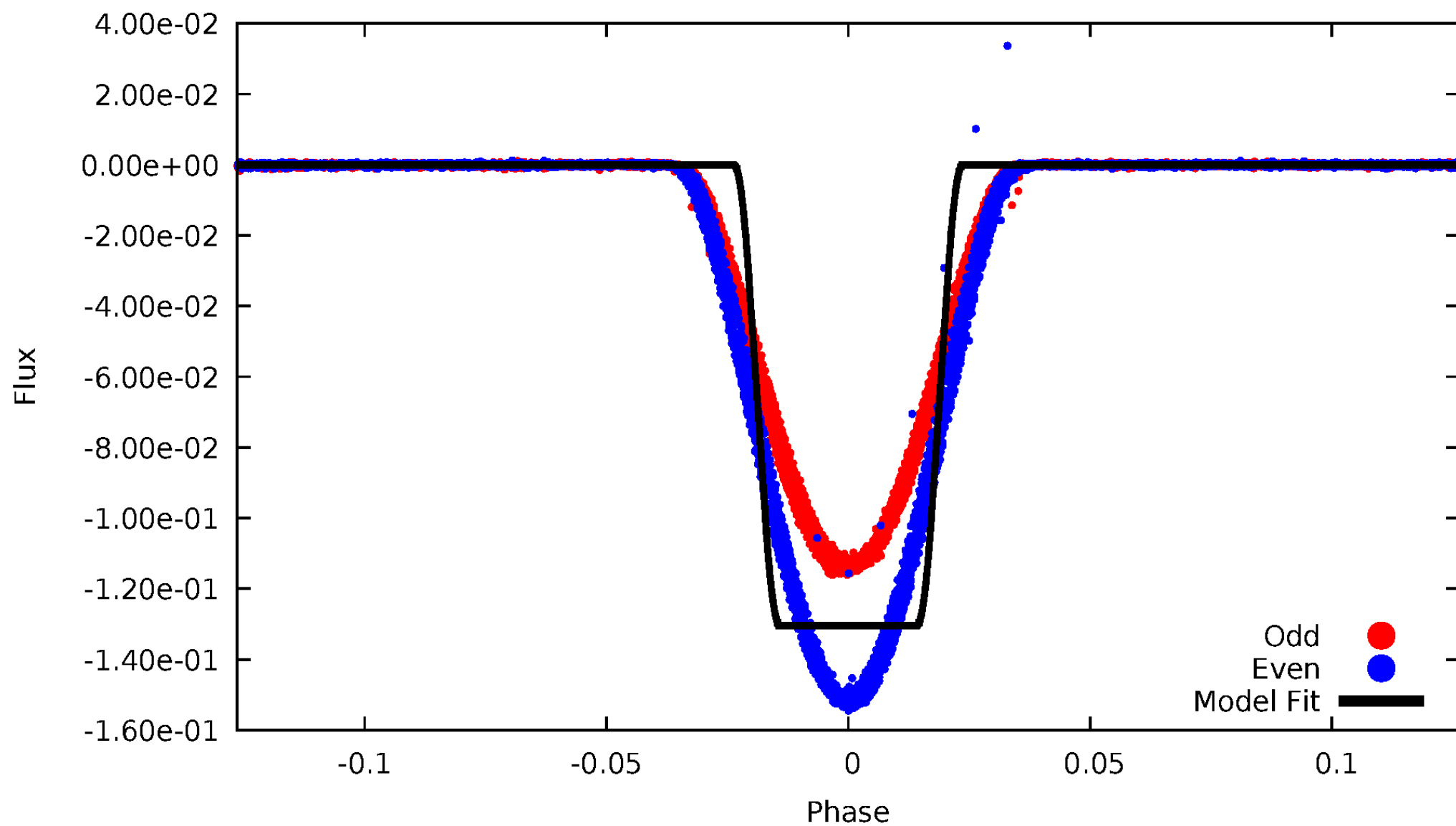
DV Odd/Even

TCE 005359678-01



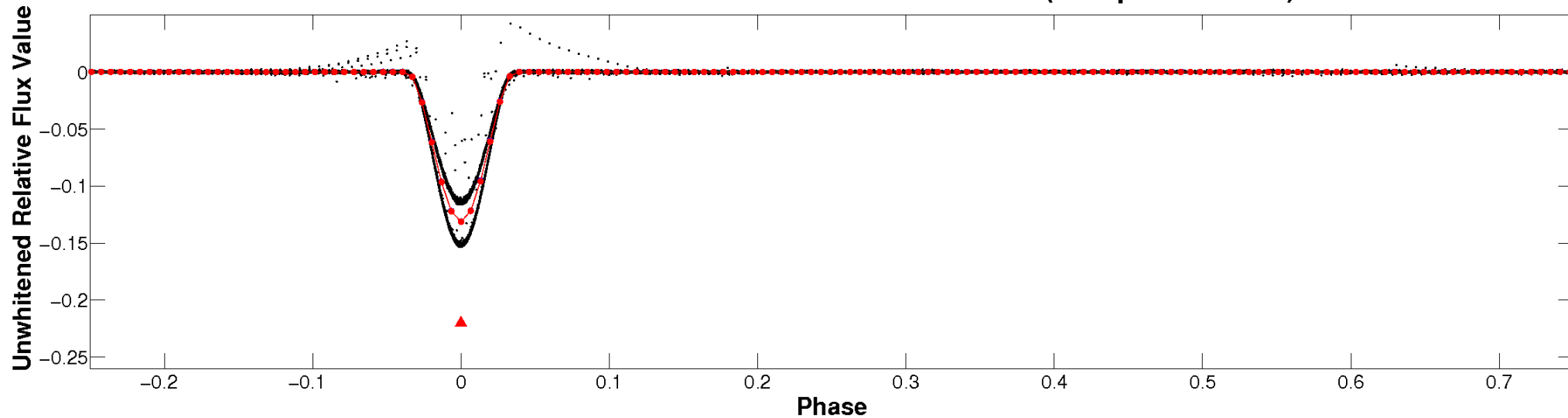
ALT Odd/Even

TCE 005359678-01

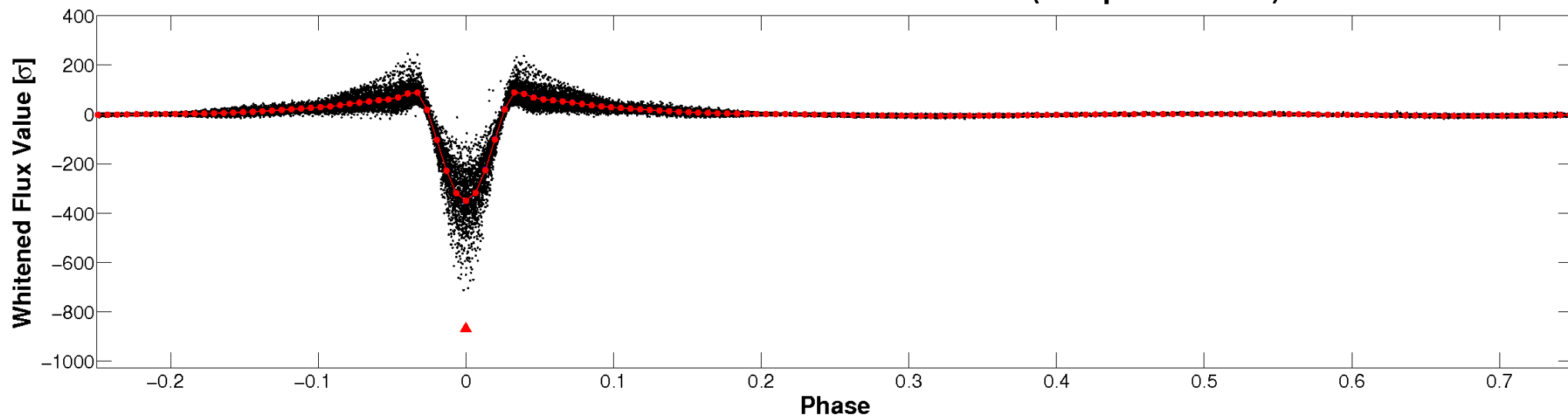


Non-Whitened Vs. Whitened Light Curve

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

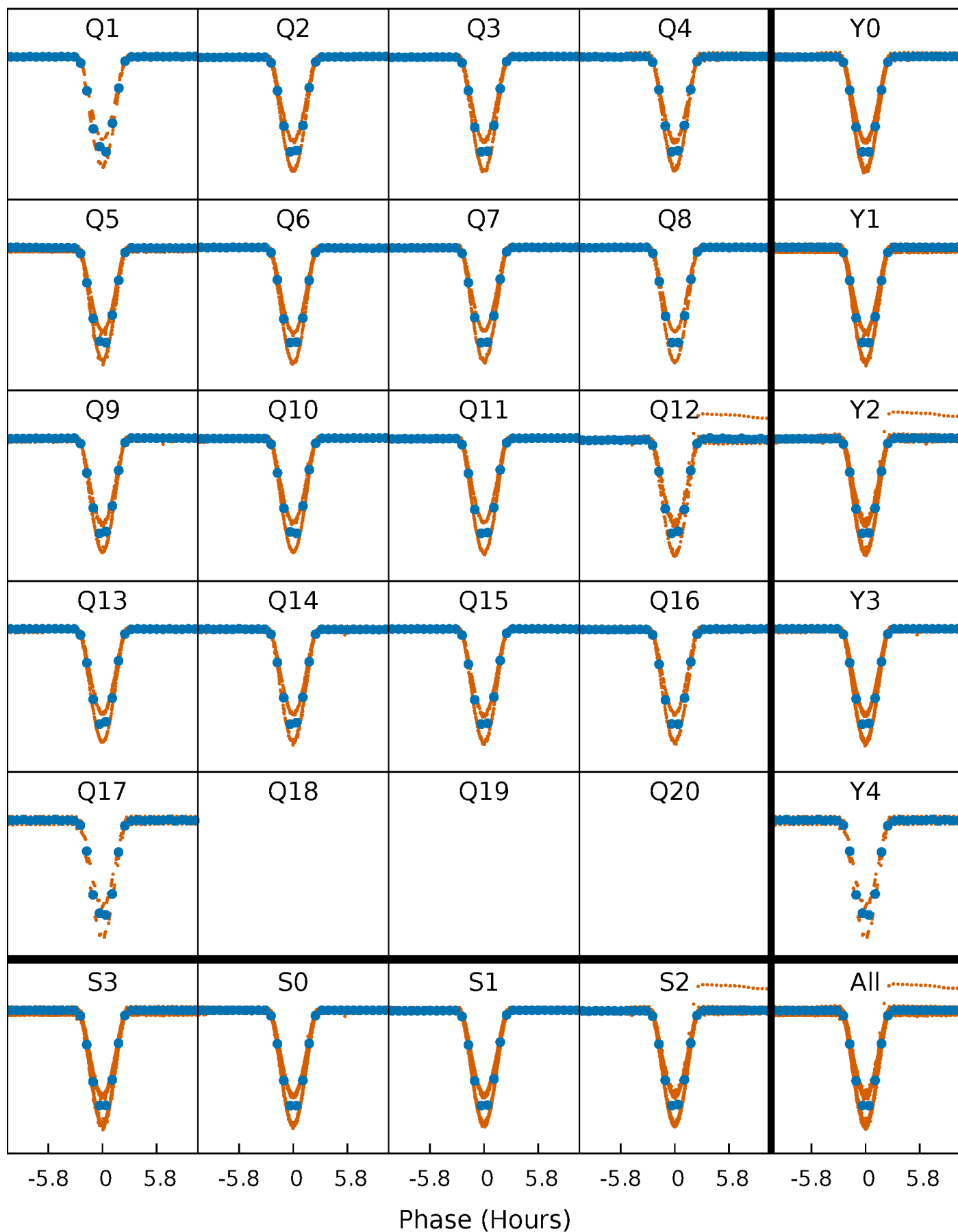


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



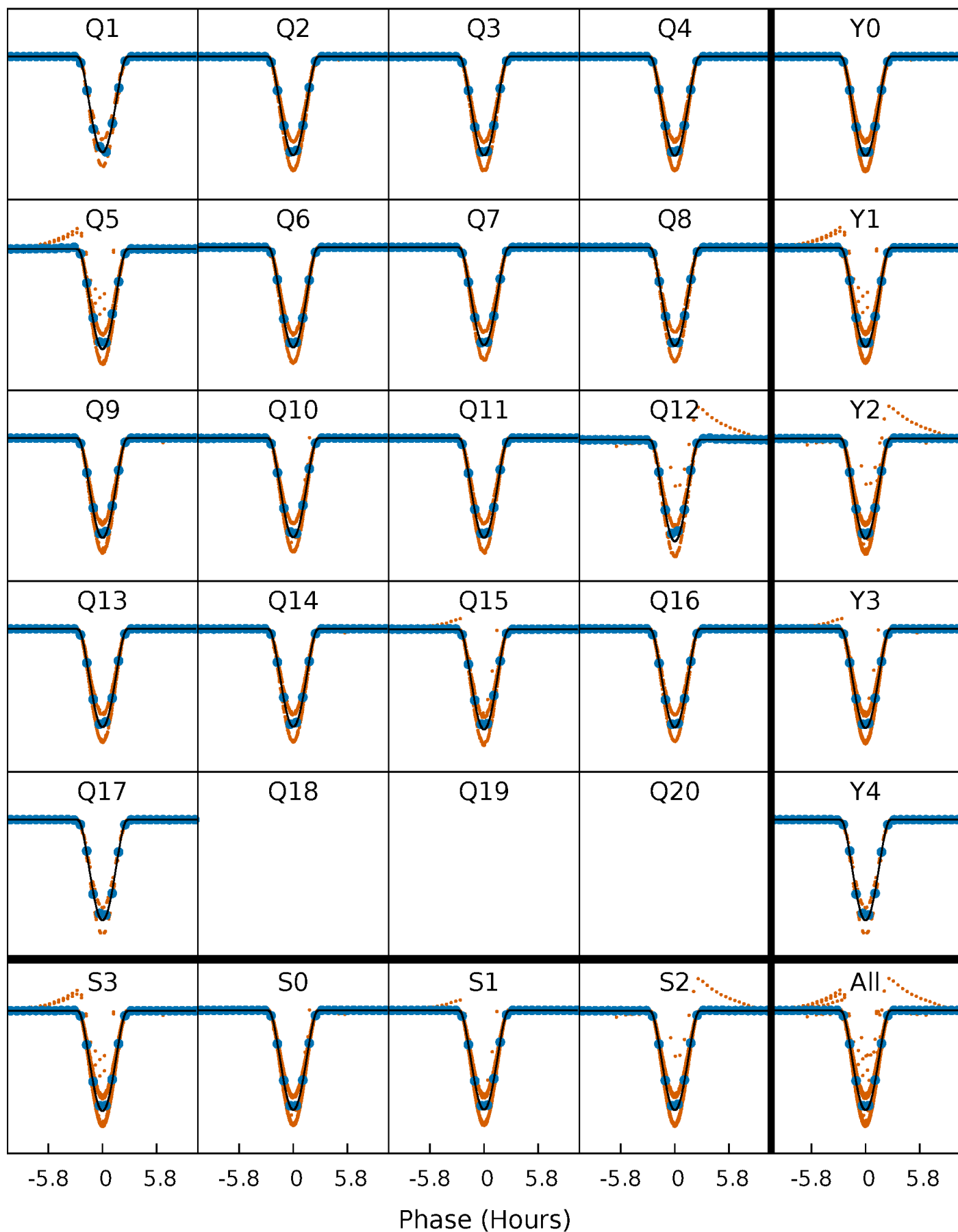
PDC Quarter-Phased Transit Curves

TCE 005359678-01 P= 3.115305 Days $T_0=133.124004$ (BKJD)



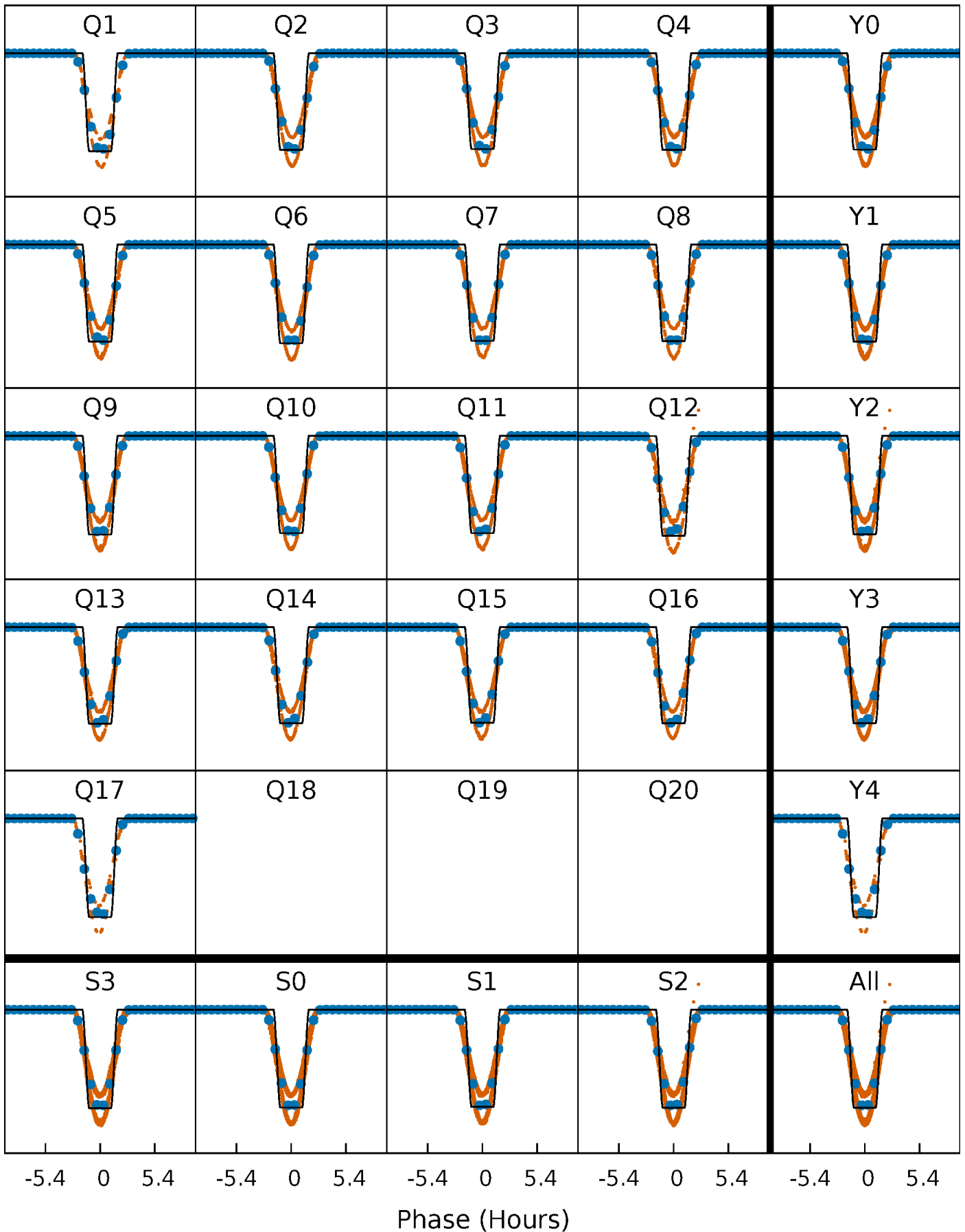
DV Quarter-Phased Transit Curves

TCE 005359678-01 P= 3.115305 Days $T_0=133.124004$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

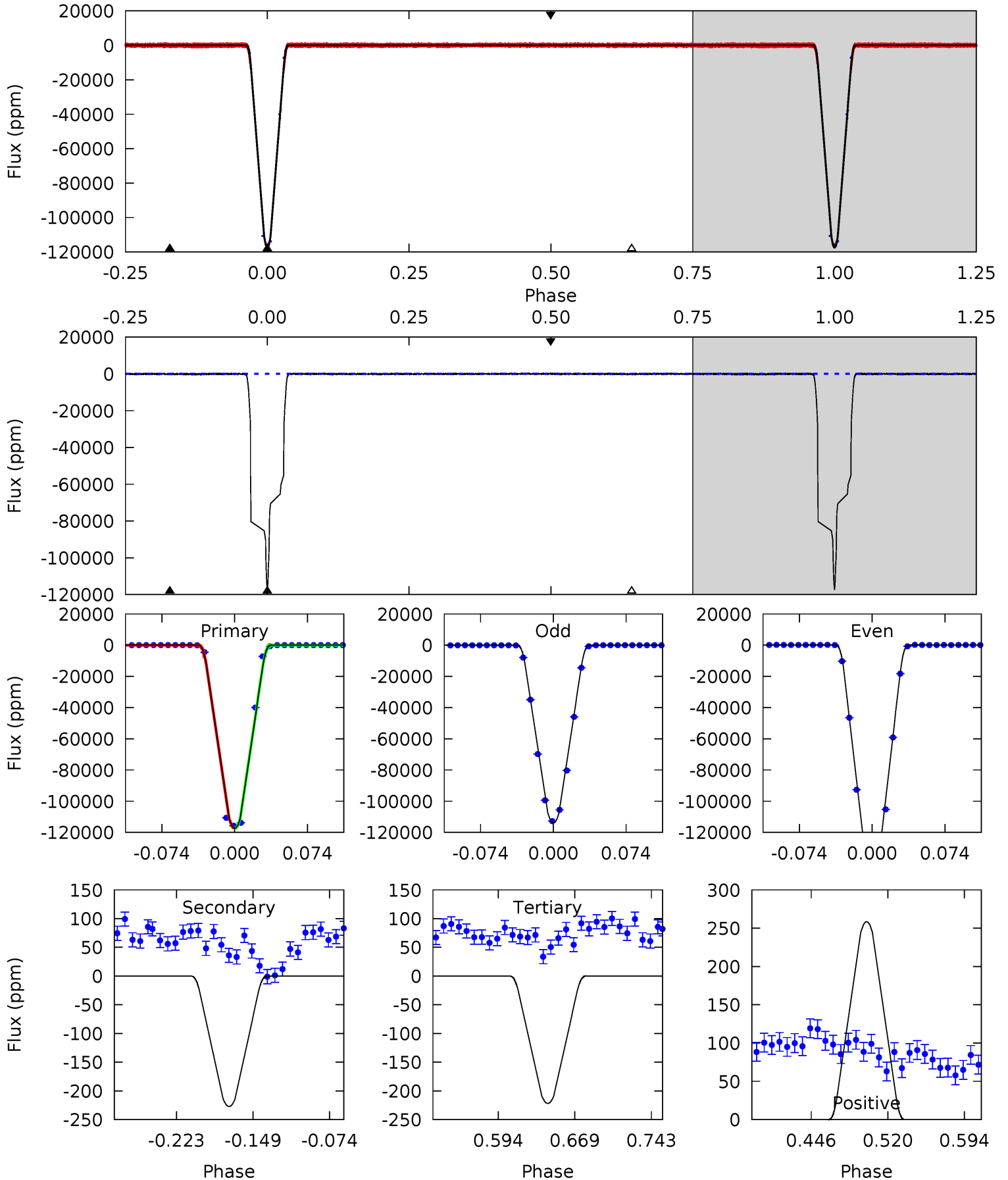
TCE 005359678-01 P= 3.115324 Days $T_0=133.119665$ (BKJD)



DV Model-Shift Uniqueness Test

005359678-01, P = 3.115305 Days, E = 130.008699 Days

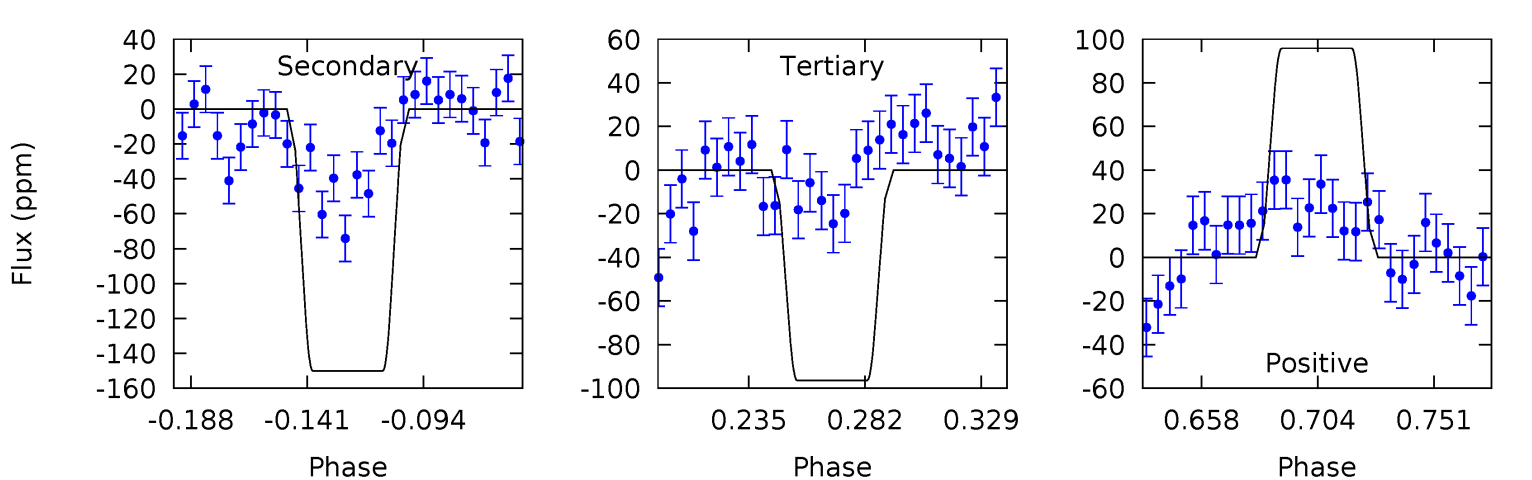
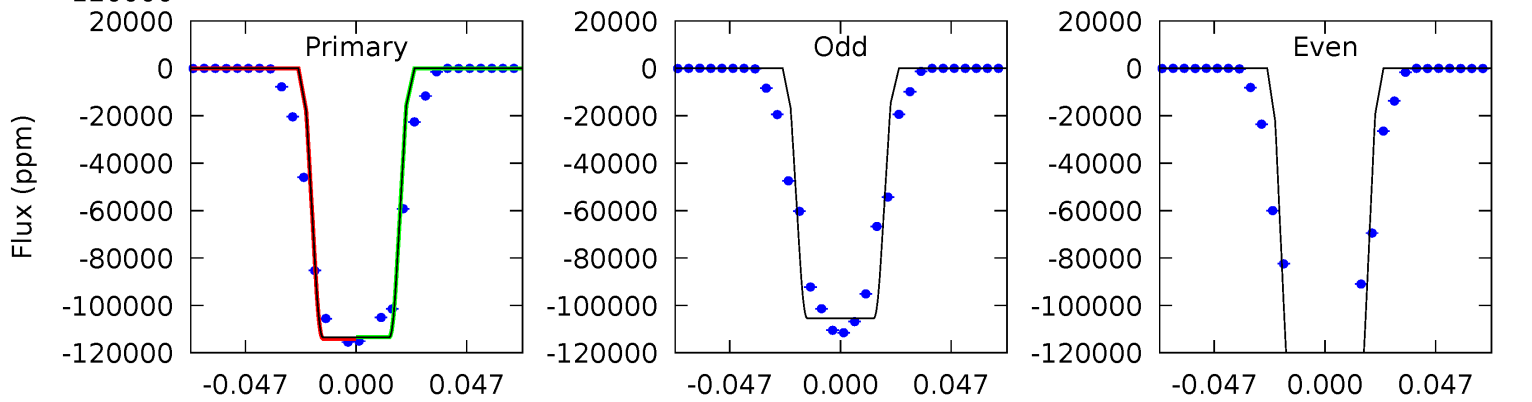
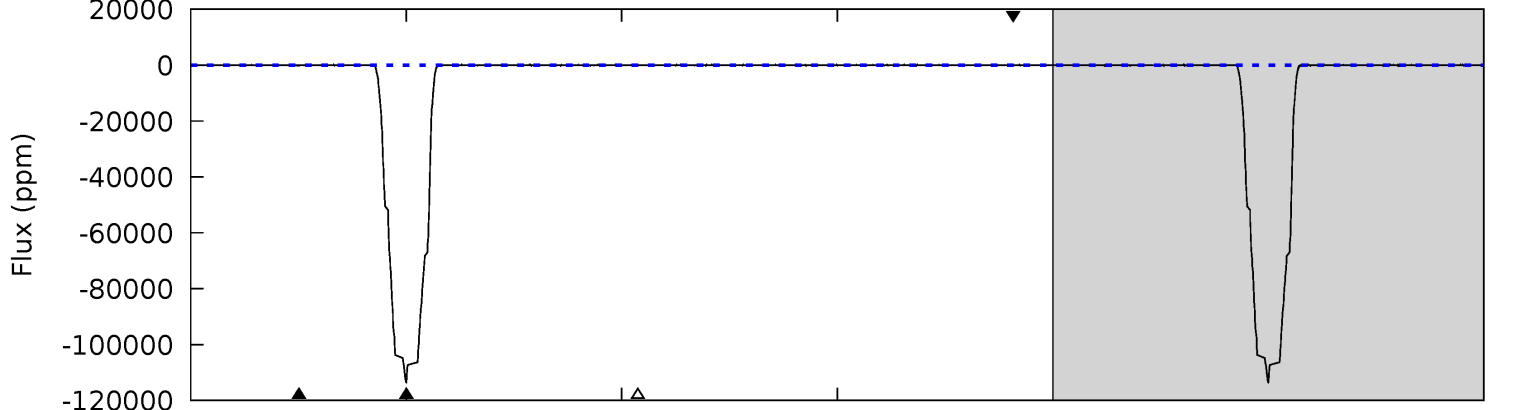
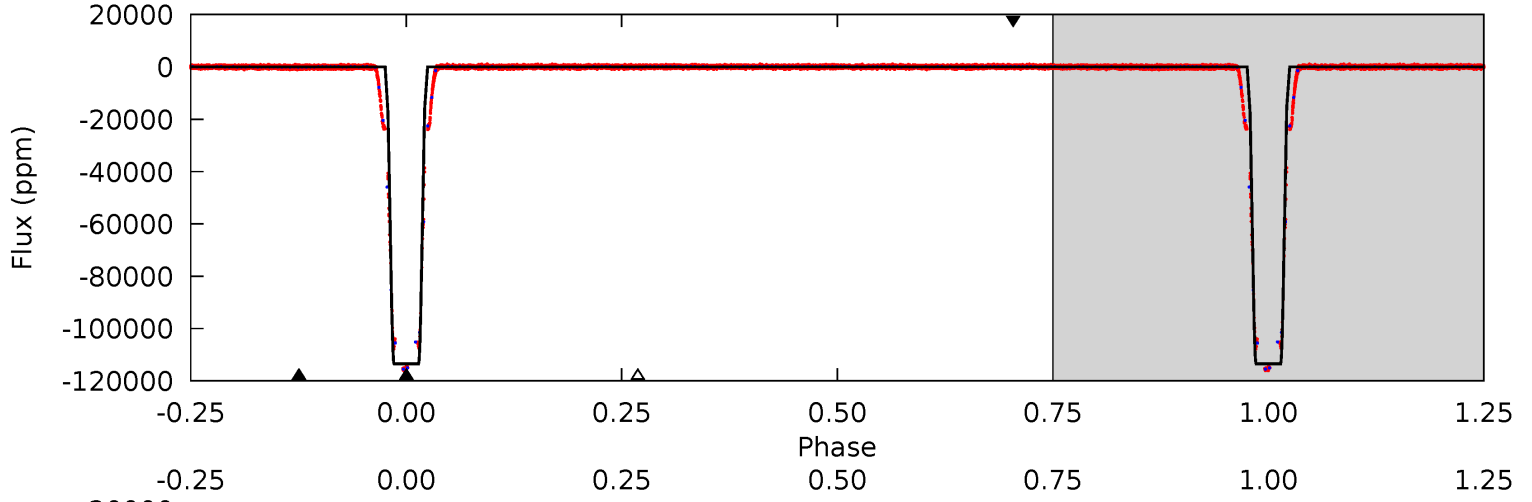
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12245	23.7	23.1	27.0	4.63	1.78	6.88	12222	12218	0.56	-3.27	4073	1.13	0.00	0



Alt Model-Shift Uniqueness Test

005359678-01, P = 3.115324 Days, E = 130.004341 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4632	6.12	3.94	3.91	4.72	1.99	1.24	4628	4628	2.19	2.21	1531	1.11	0.00	0



Stellar Parameters For KIC 005359678

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6367^{+153}_{-192}	$4.419^{+0.062}_{-0.188}$	$-0.140^{+0.250}_{-0.300}$	$1.087^{+0.314}_{-0.134}$	$1.131^{+0.150}_{-0.150}$	$1.241^{+0.334}_{-0.637}$
	+2%/-3%	+1%/-4%	+179%/-214%	+29%/-12%	+13%/-13%	+27%/-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 005359678-01 / KOI 6569.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-227 ± 10	$60.32^{+9.47}_{-8.26}$	1989^{+133}_{-101}	-2413^{+71}_{-93}	$0.065^{+0.020}_{-0.017}$
Alt.	-150 ± 25	$44.52^{+9.16}_{-7.69}$	1996^{+150}_{-100}	-2403^{+88}_{-105}	$0.077^{+0.039}_{-0.024}$

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

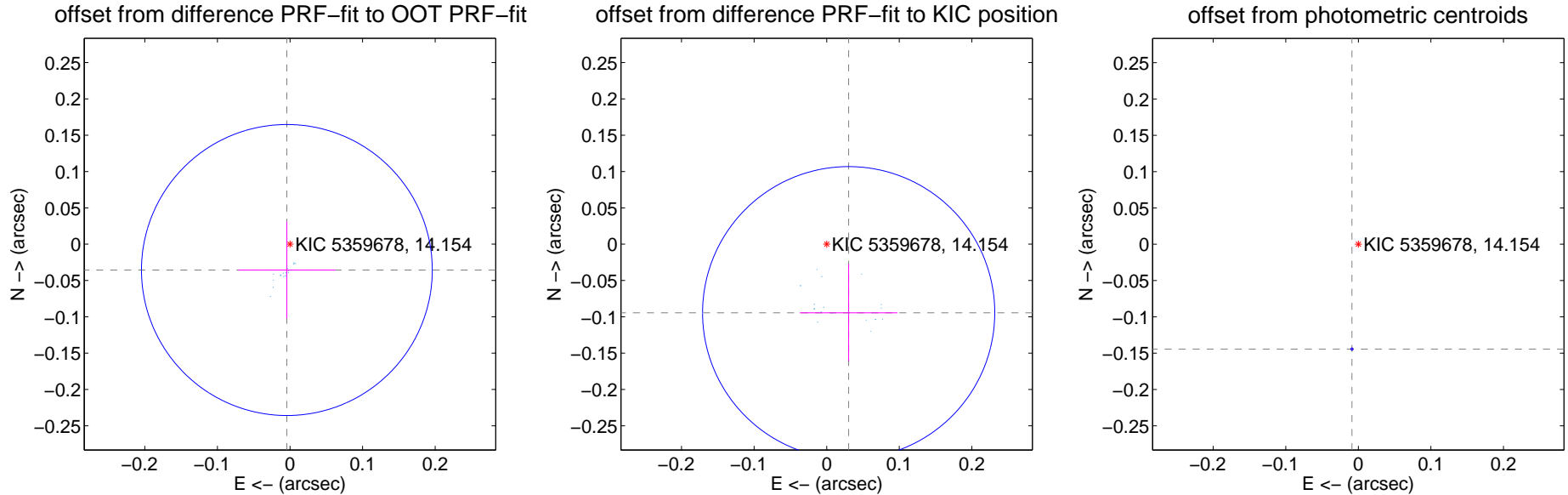
DV Centroid Data

Supplemental centroid analysis for 005359678-01. Kepler magnitude: 14.15. Transit SNR 5805.59

There are 17 quarters with good PRF difference image offsets

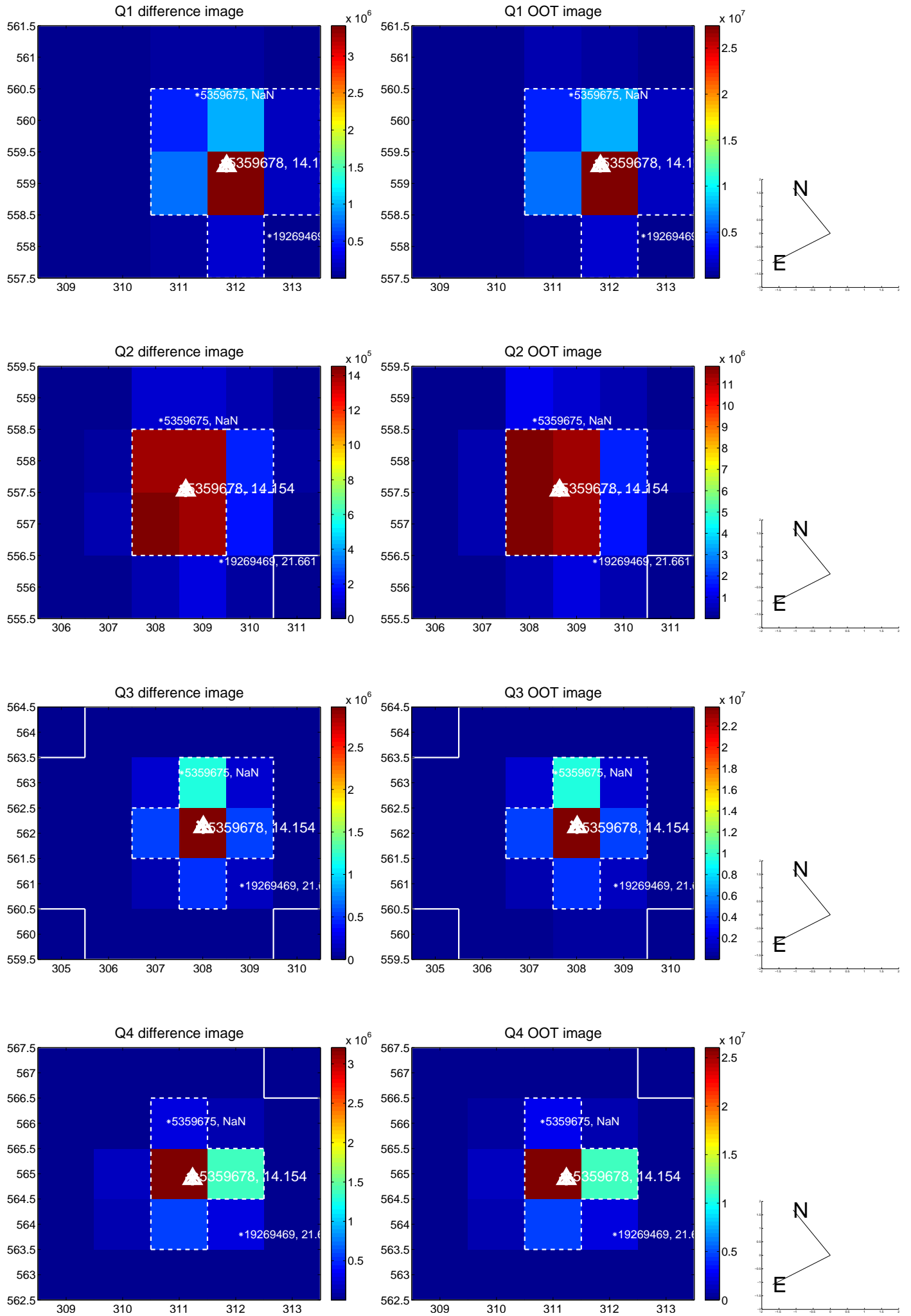
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.036 ± 0.067	0.54	0.004 ± 0.067	-0.036 ± 0.067
PRF-fit source offset from KIC position	0.099 ± 0.067	1.48	-0.030 ± 0.067	-0.094 ± 0.067
photometric centroid source offset	0.14 ± 0.00	278.01	0.01 ± 0.00	-0.14 ± 0.00

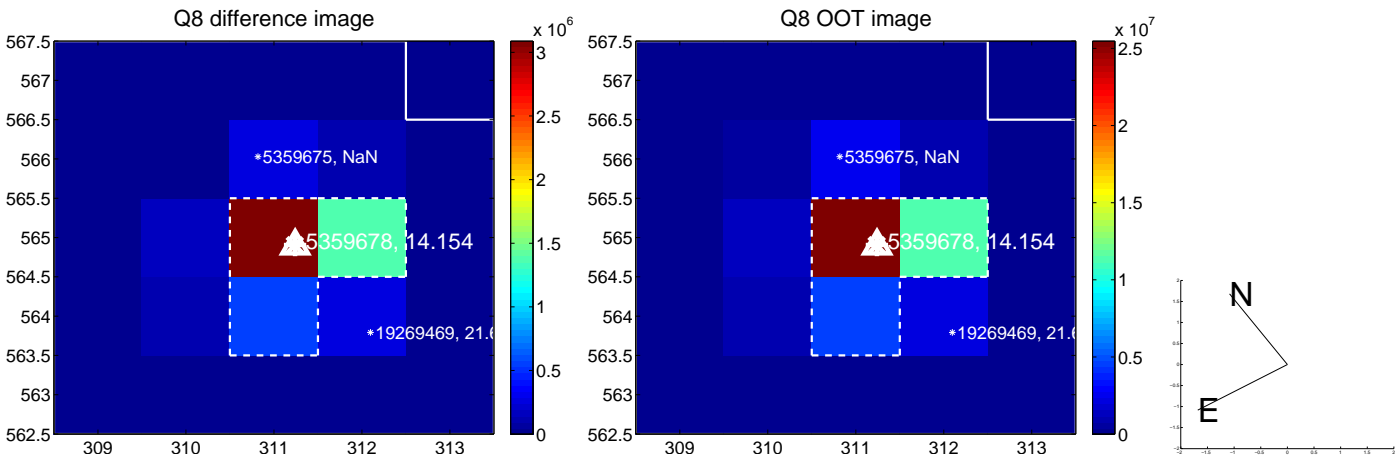
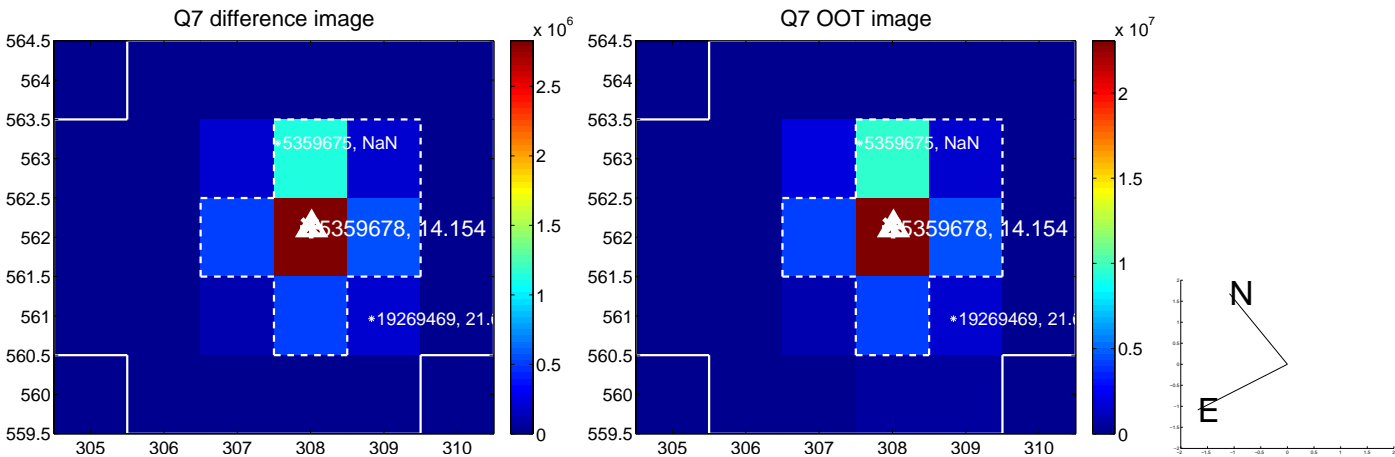
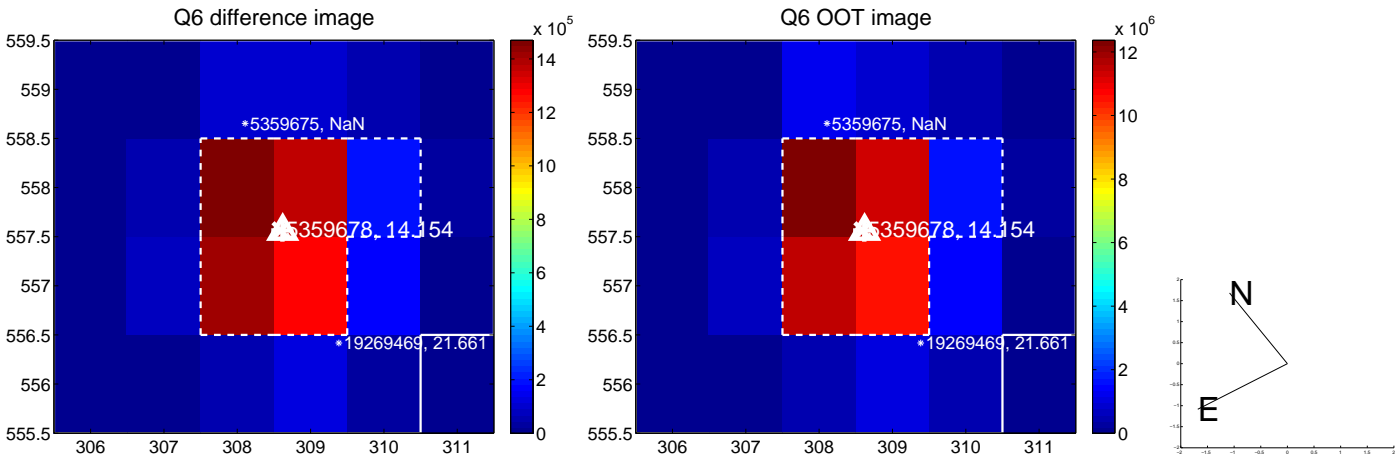
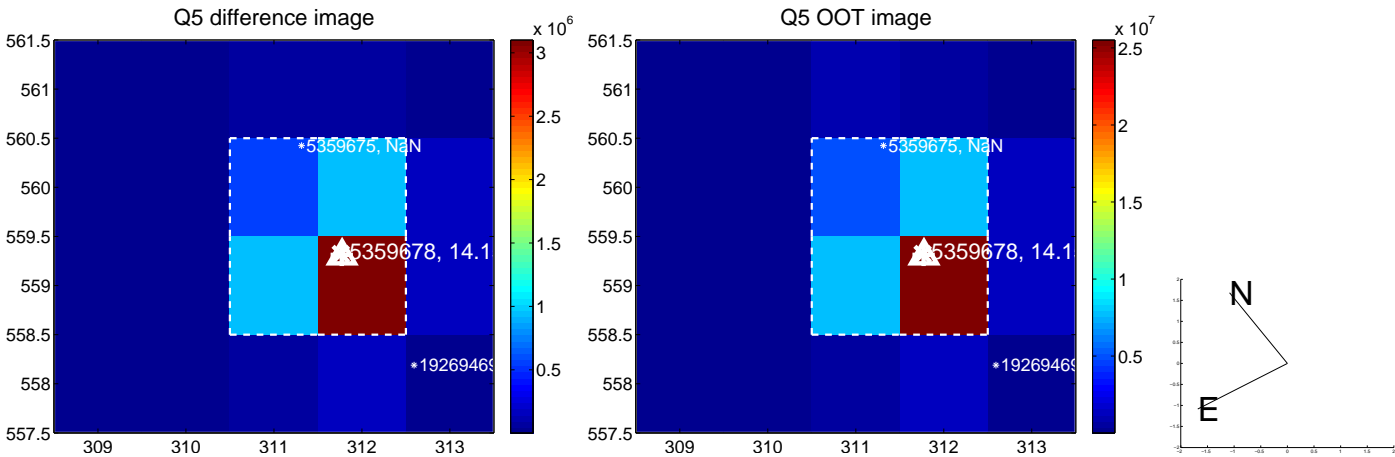


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

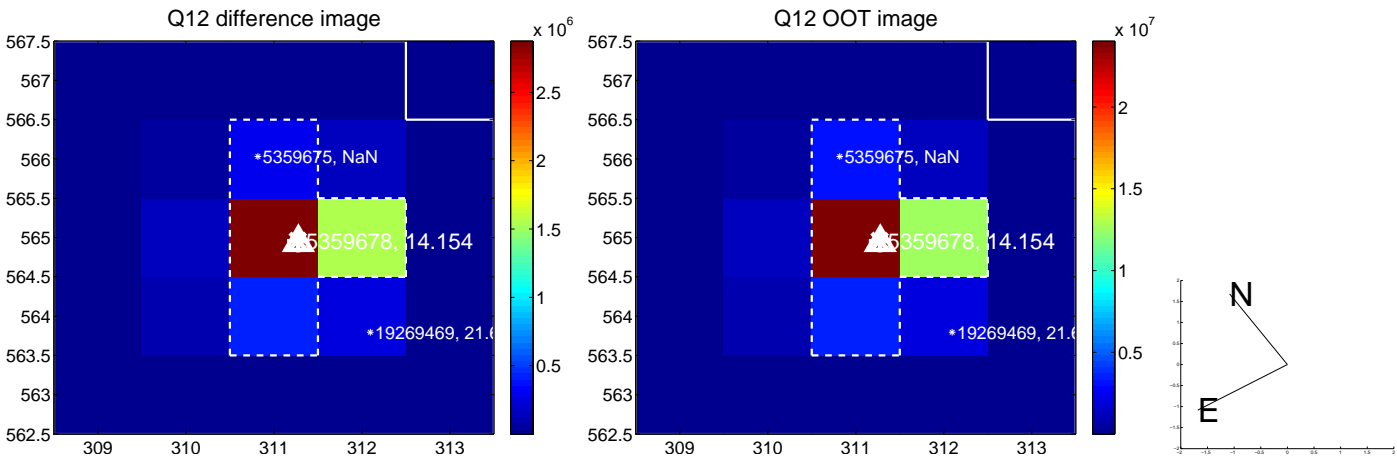
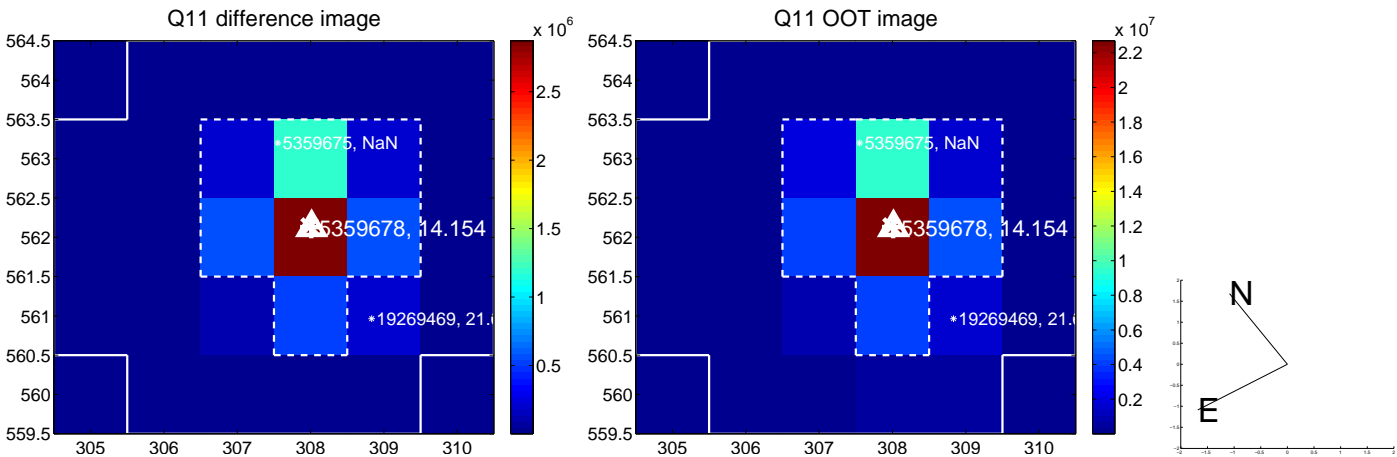
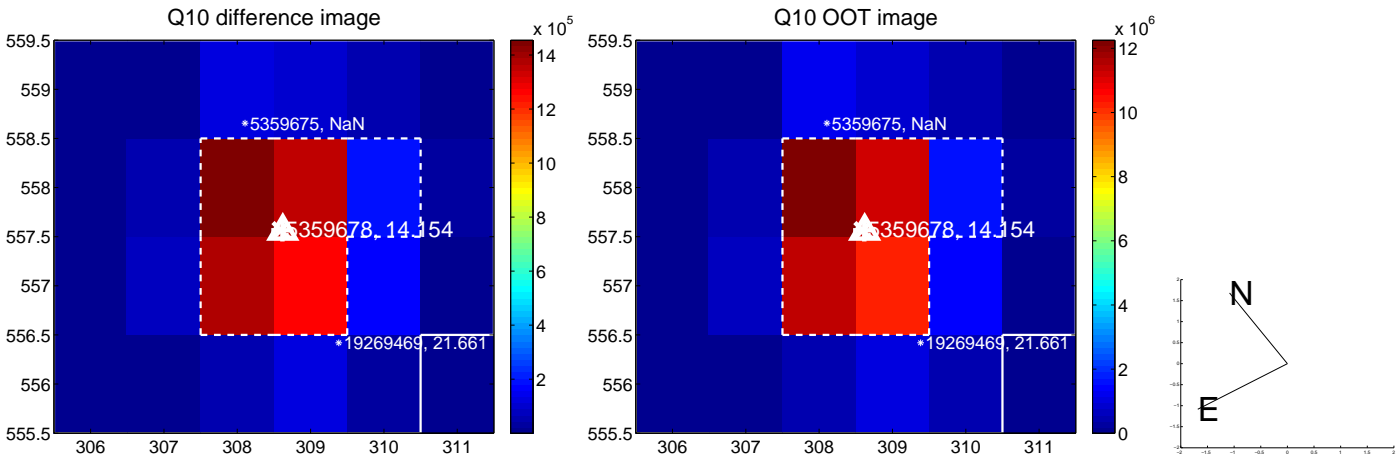
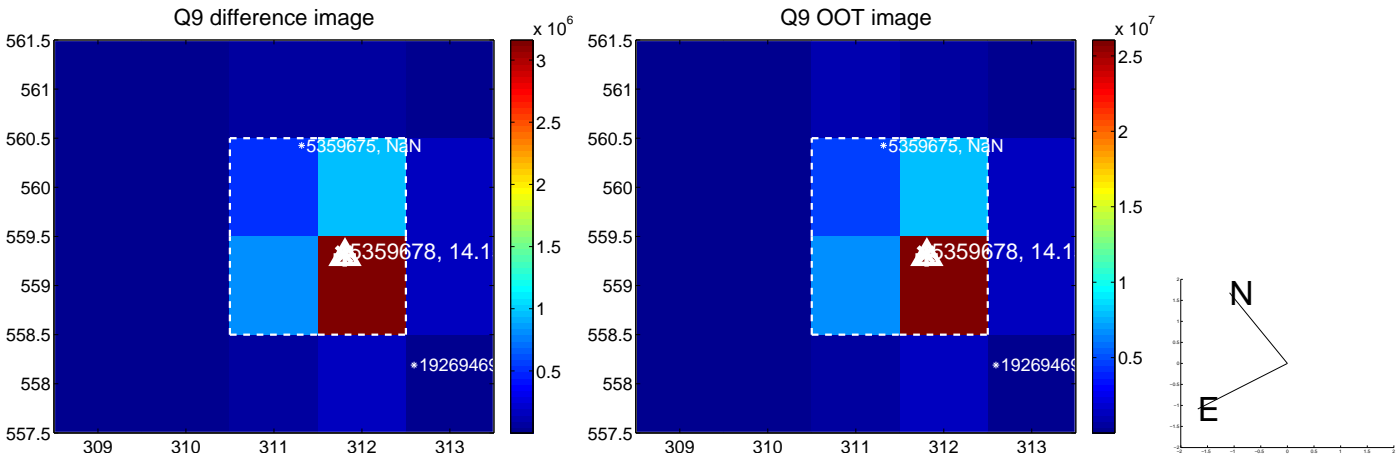
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



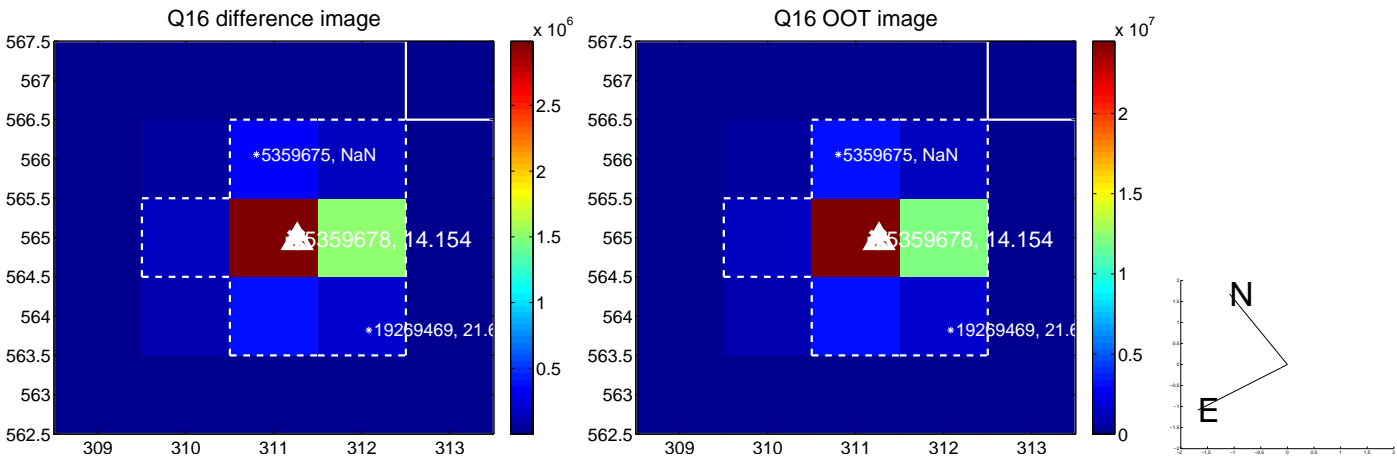
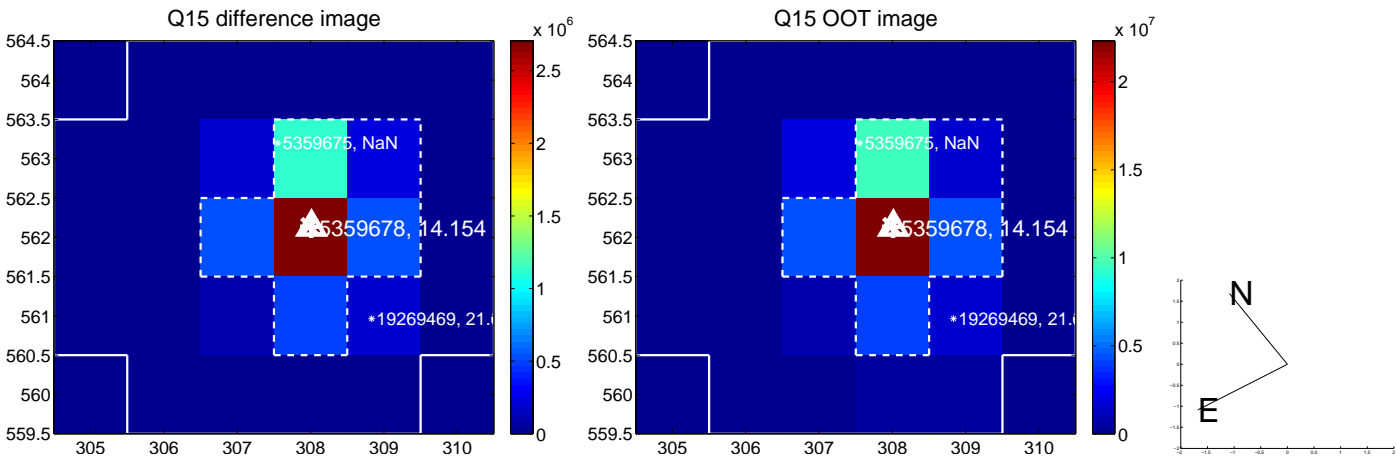
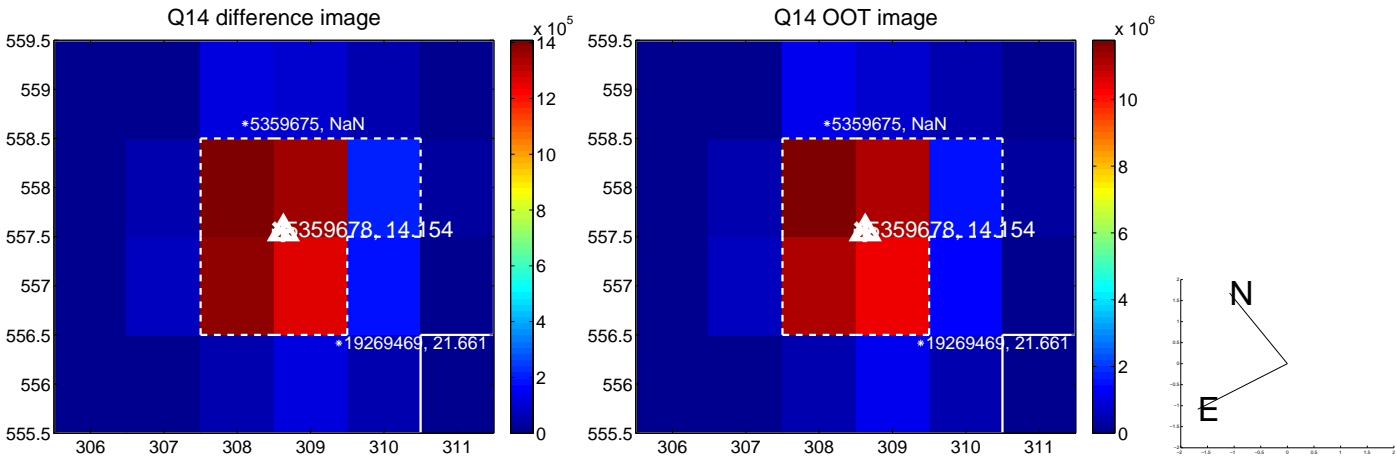
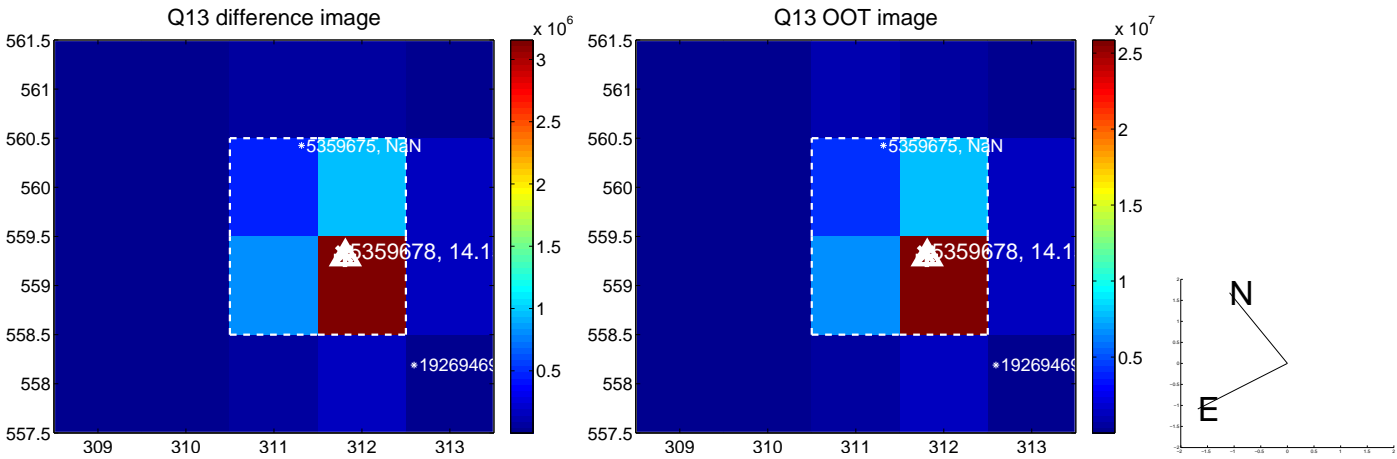
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



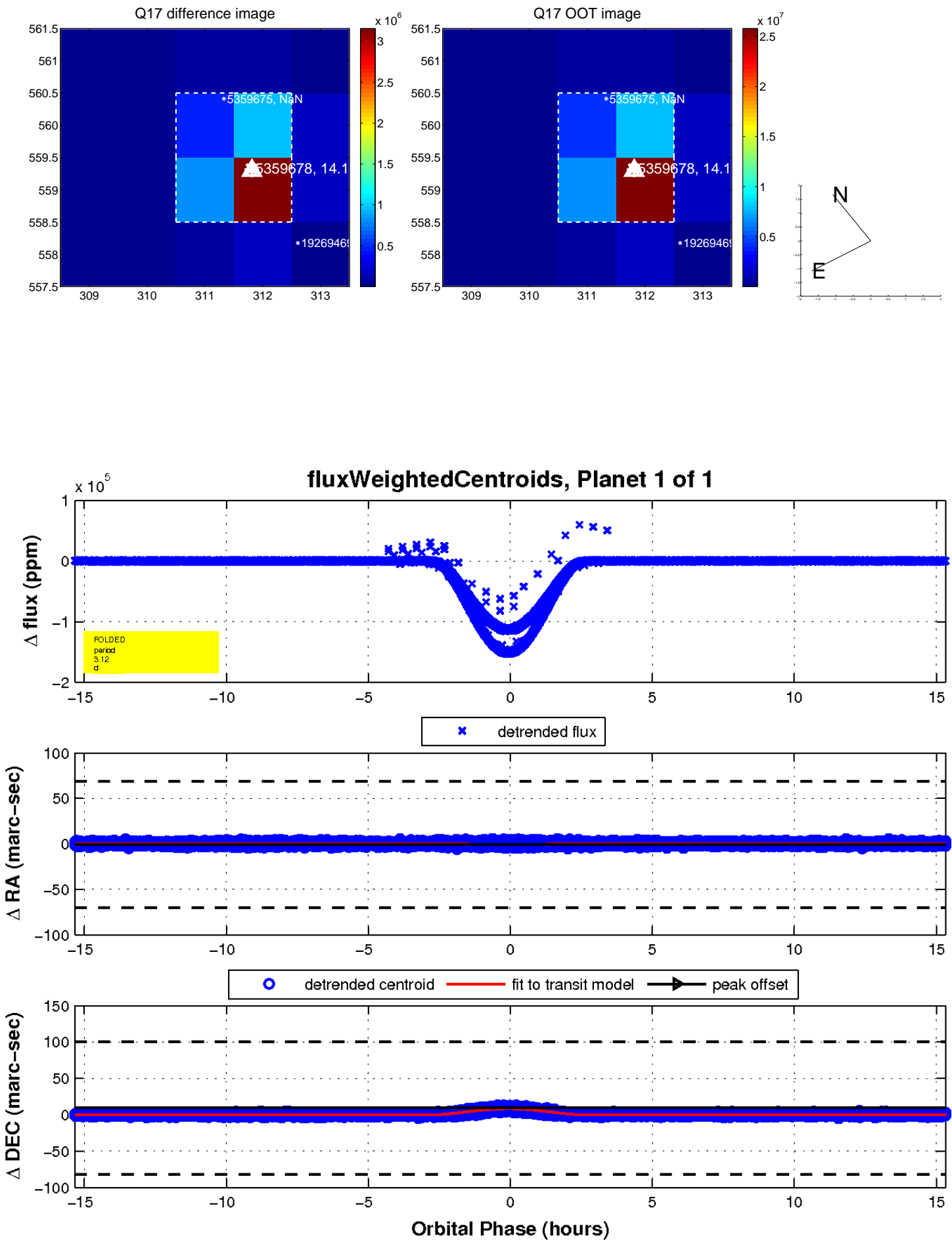
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UKIRT Image

Declination

