

KIC 005015913

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})
005015913-01	OBS	1667.01	1.179961	132.206291	940.3	1.677	267.6	231.6	3.90	5500	14.39	18189.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005015913-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

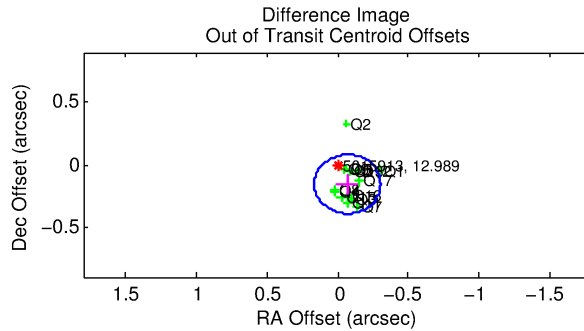
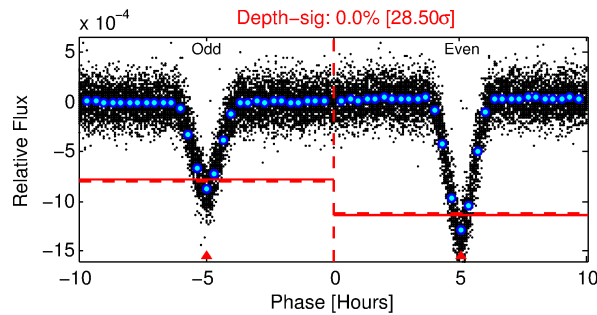
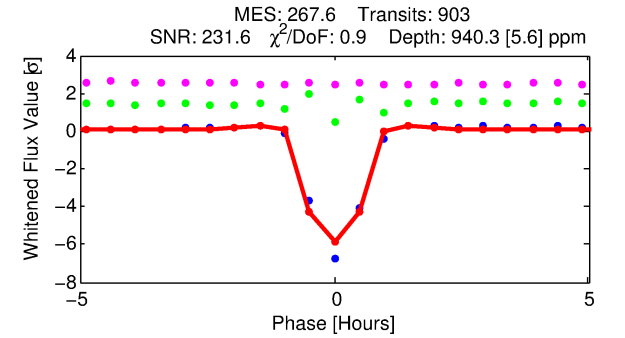
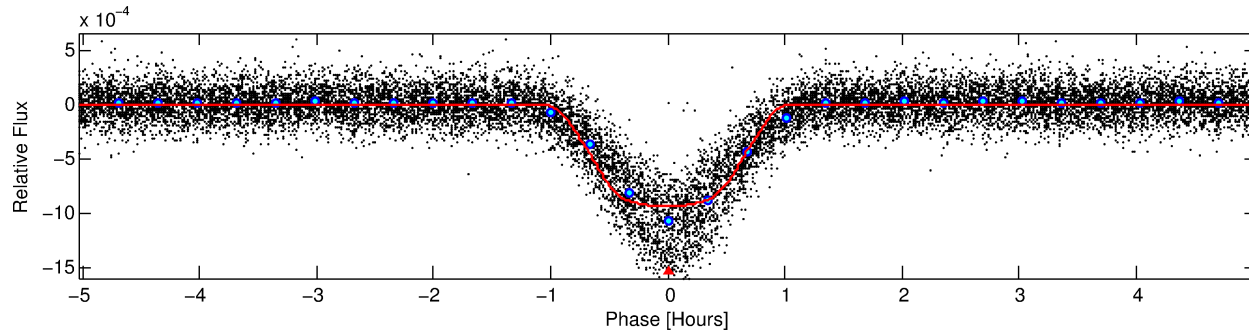
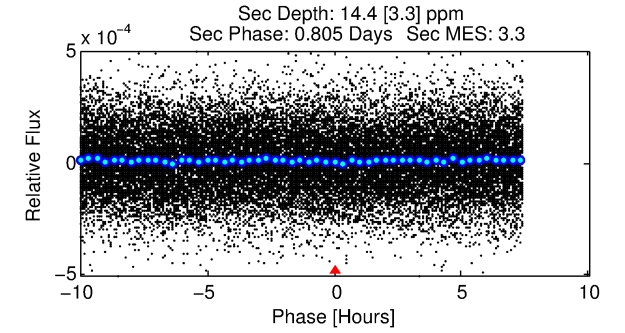
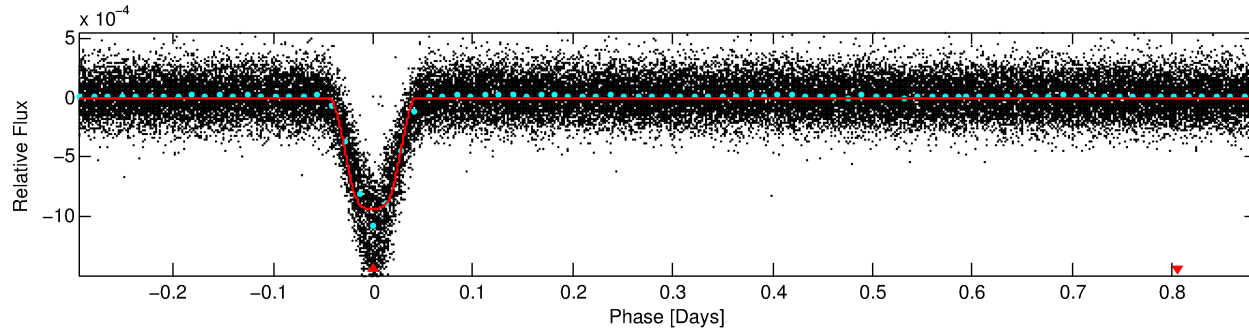
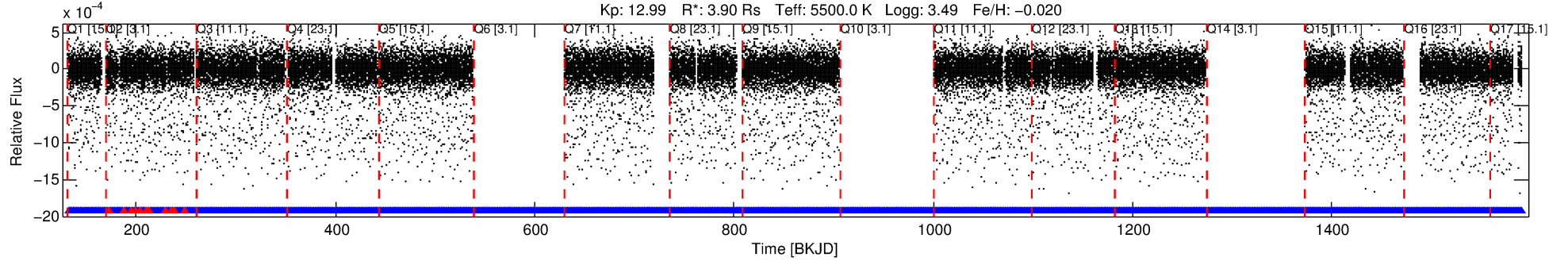
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005015913-01

No Significant Match Found

DV One-Page Summary

KIC: 5015913 Candidate: 1 of 1 Period: 1.180 d
KOI: K01667.01 Corr: 0.899



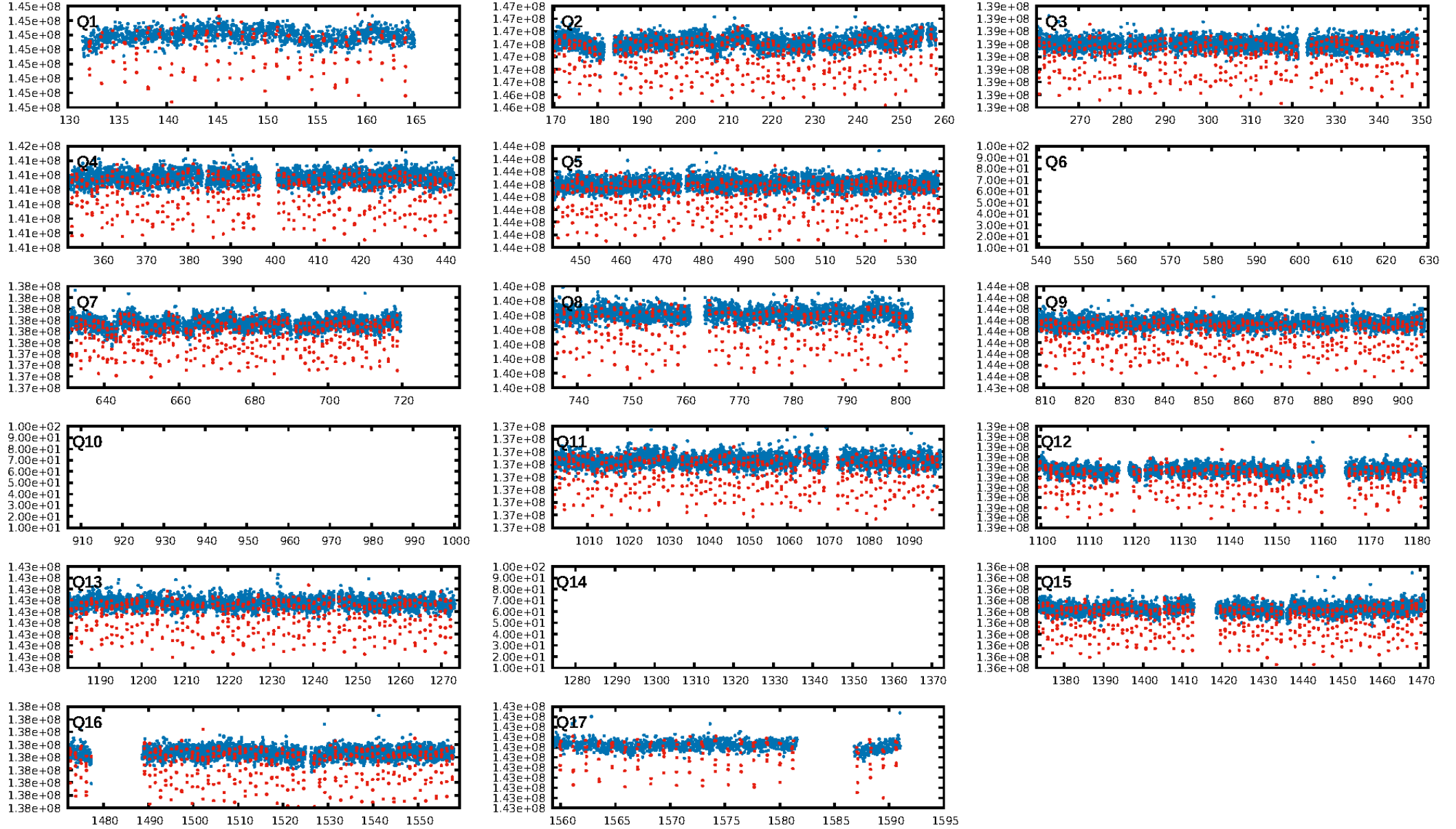
DV Fit Results:

Period = 1.17996 [0.00000] d
Epoch = 132.2063 [0.0001] BKJD
Rp/R* = 0.0338 [0.0005]
a/R* = 2.88 [0.16]
b = 0.90 [0.01]
Seff = 18189.63 [8397.52]
Teq = 2961 [342] K
Rp = 14.39 [5.18] Re
a = 0.0262 [0.0081] AU
Ag = 0.03 [0.01] [-72.67σ]
Teffp = 1842 [109] K [-3.12σ]

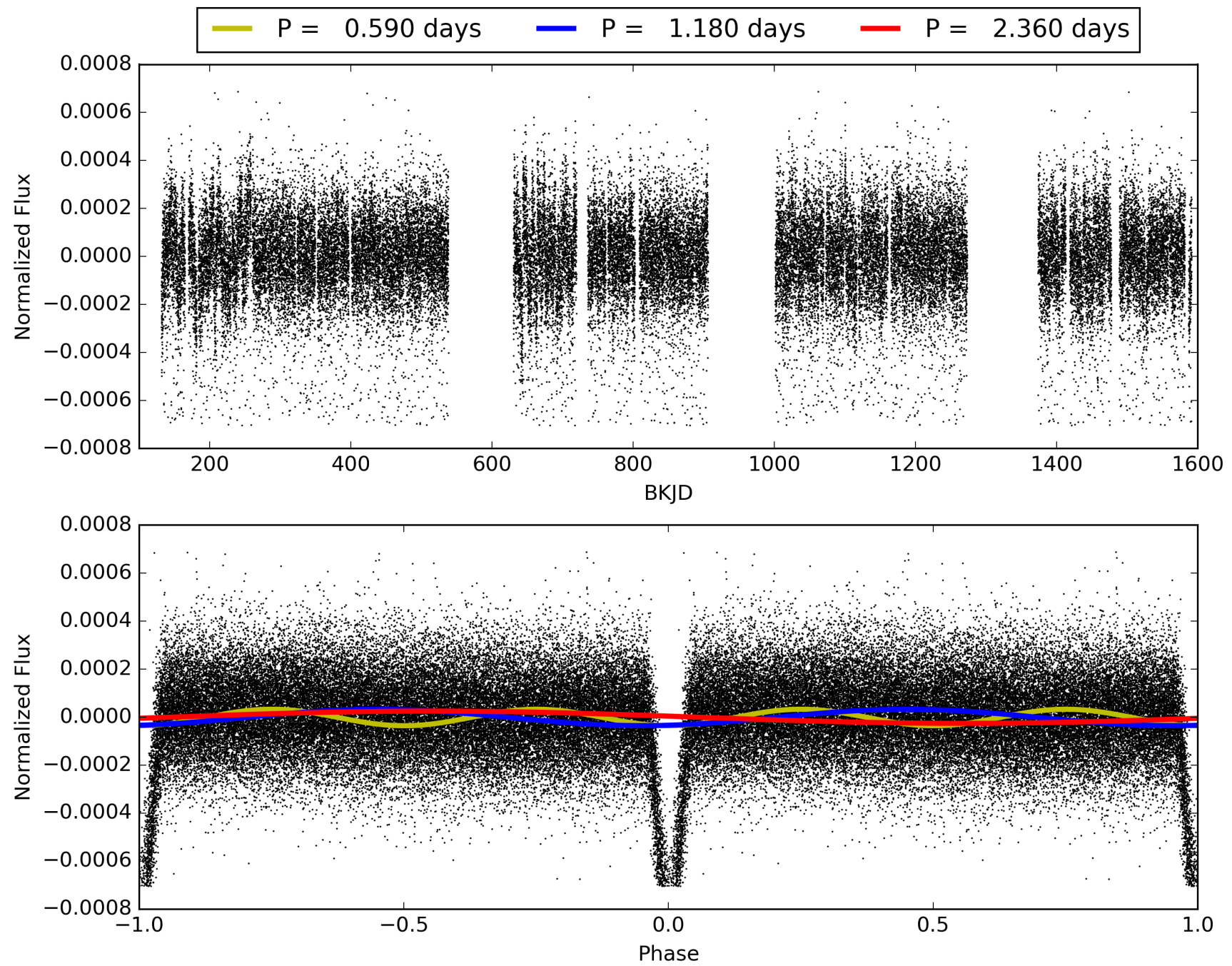
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.98 [839/852]
GhostDiagnostic-chr: 10.47
Centroid-sig: 0.0%
Centroid-so: 0.017 arcsec [0.47σ]
OotOffset-rm: 0.171 arcsec [2.17σ]
KicOffset-rm: 0.073 arcsec [0.94σ]
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 005015913-01, PDC Light Curves

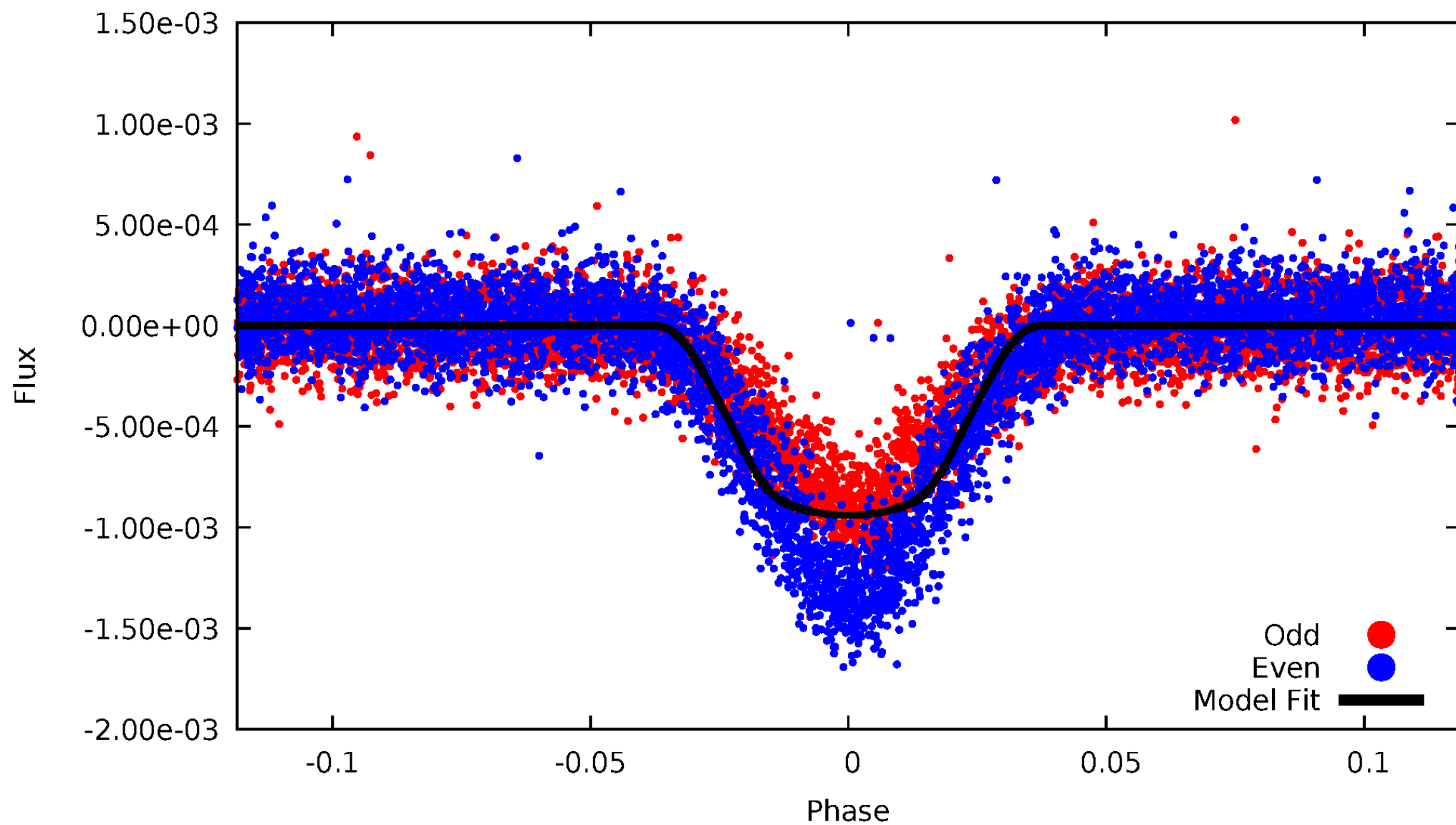


TCE 005015913-01



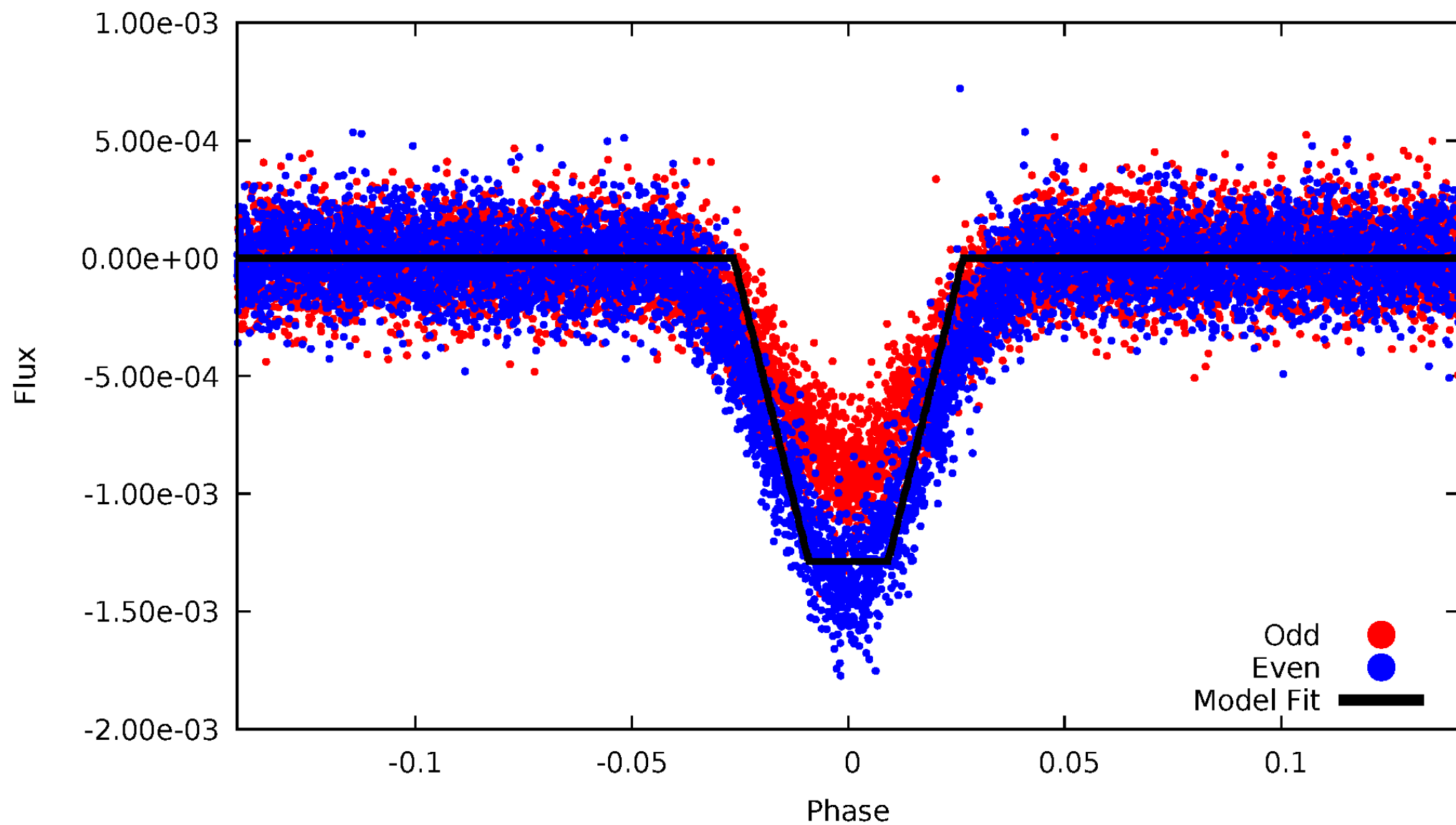
DV Odd/Even

TCE 005015913-01



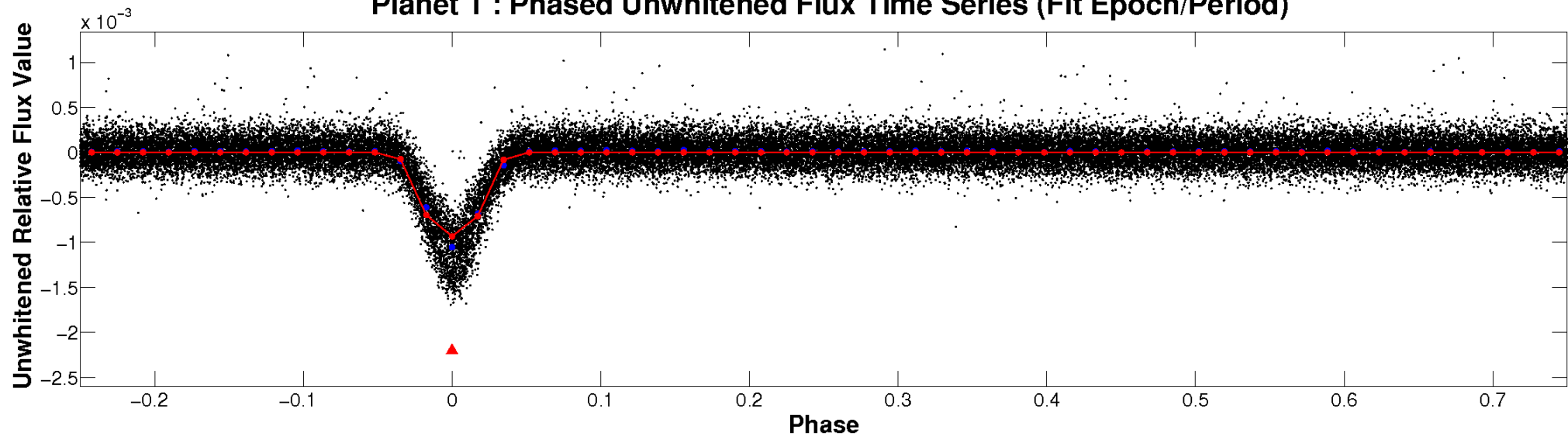
ALT Odd/Even

TCE 005015913-01

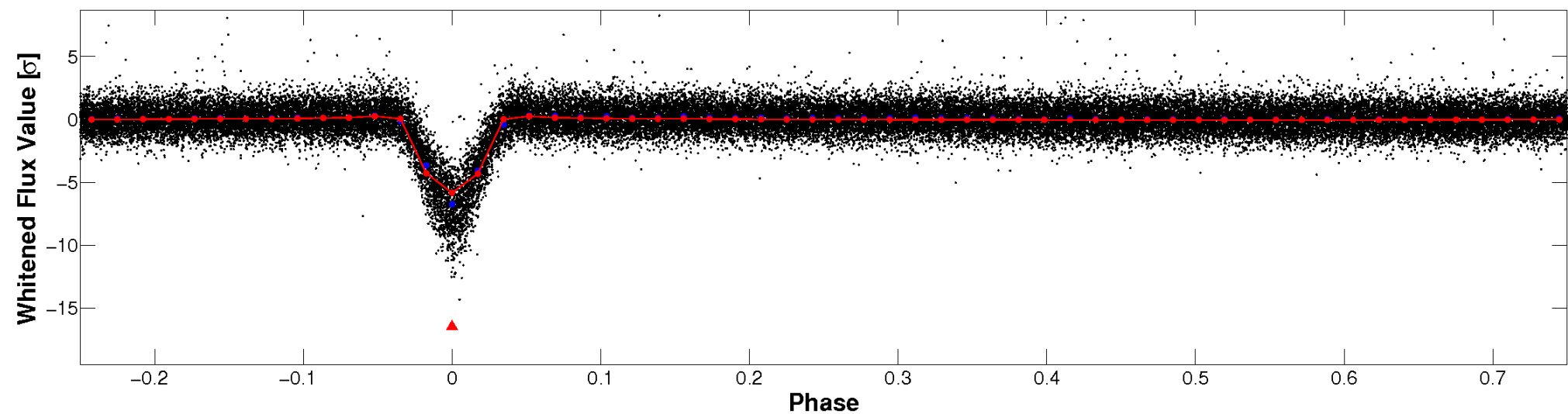


Non-Whitened Vs. Whitened Light Curve

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

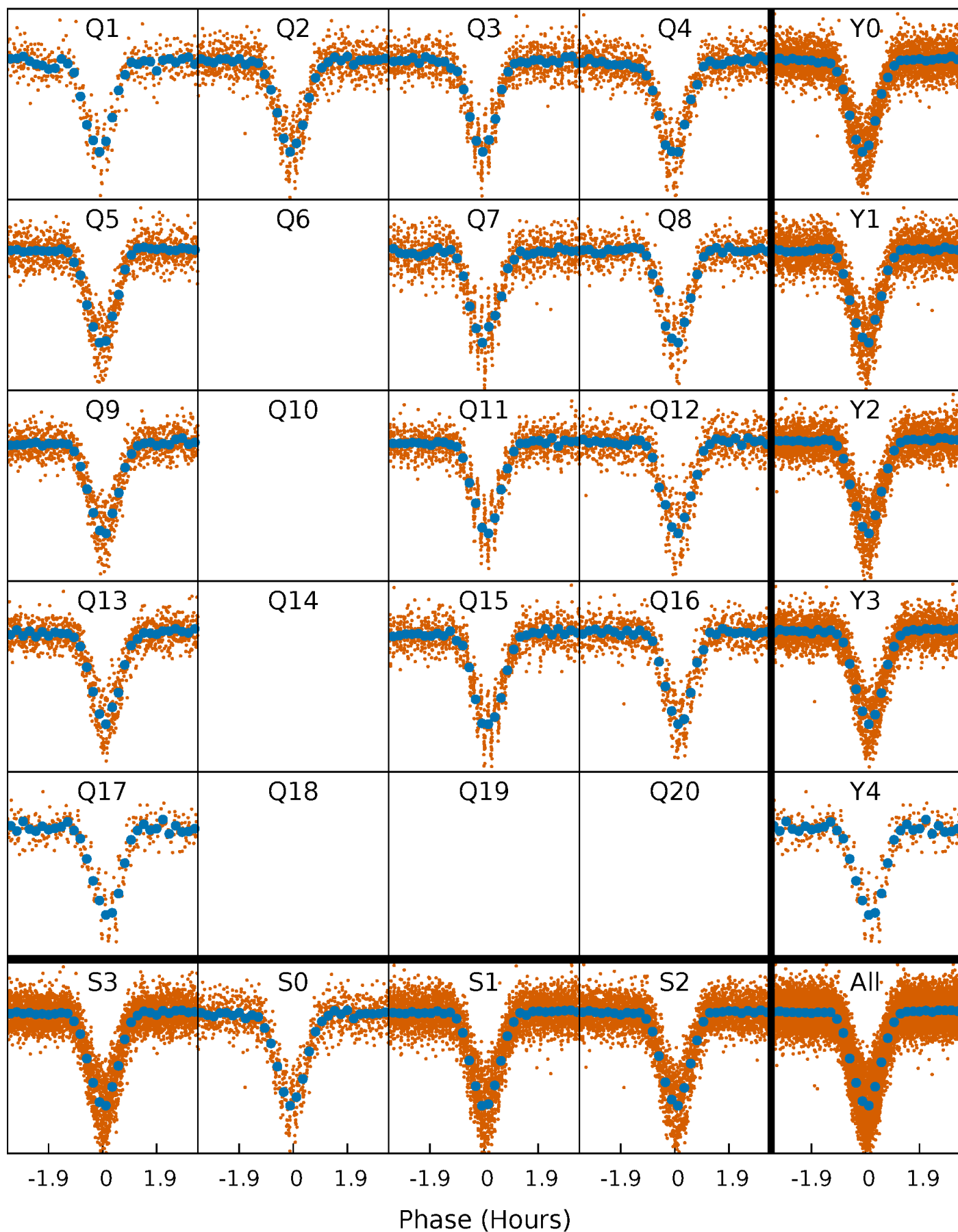


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



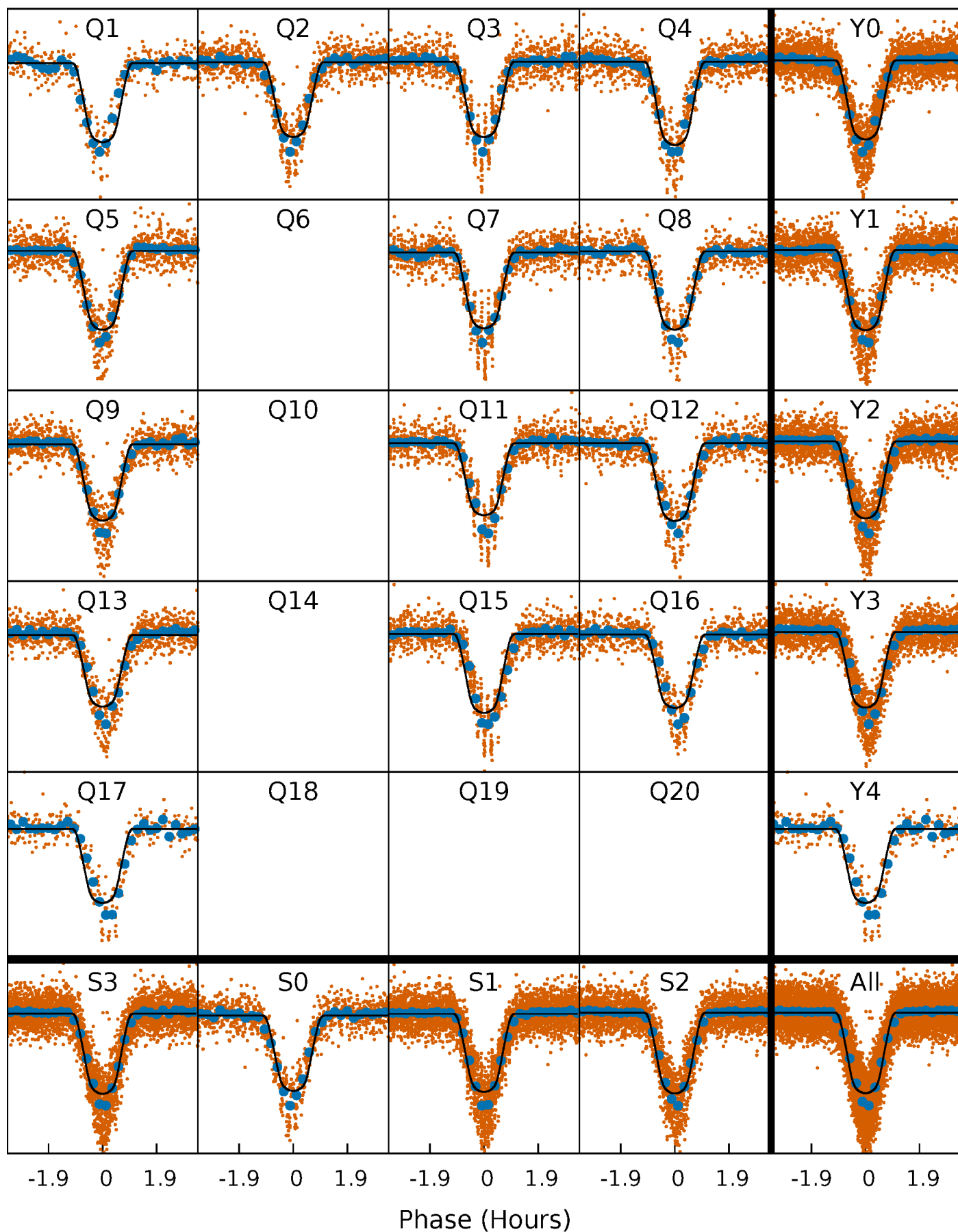
PDC Quarter-Phased Transit Curves

TCE 005015913-01 P= 1.179961 Days $T_0=132.206291$ (BKJD)



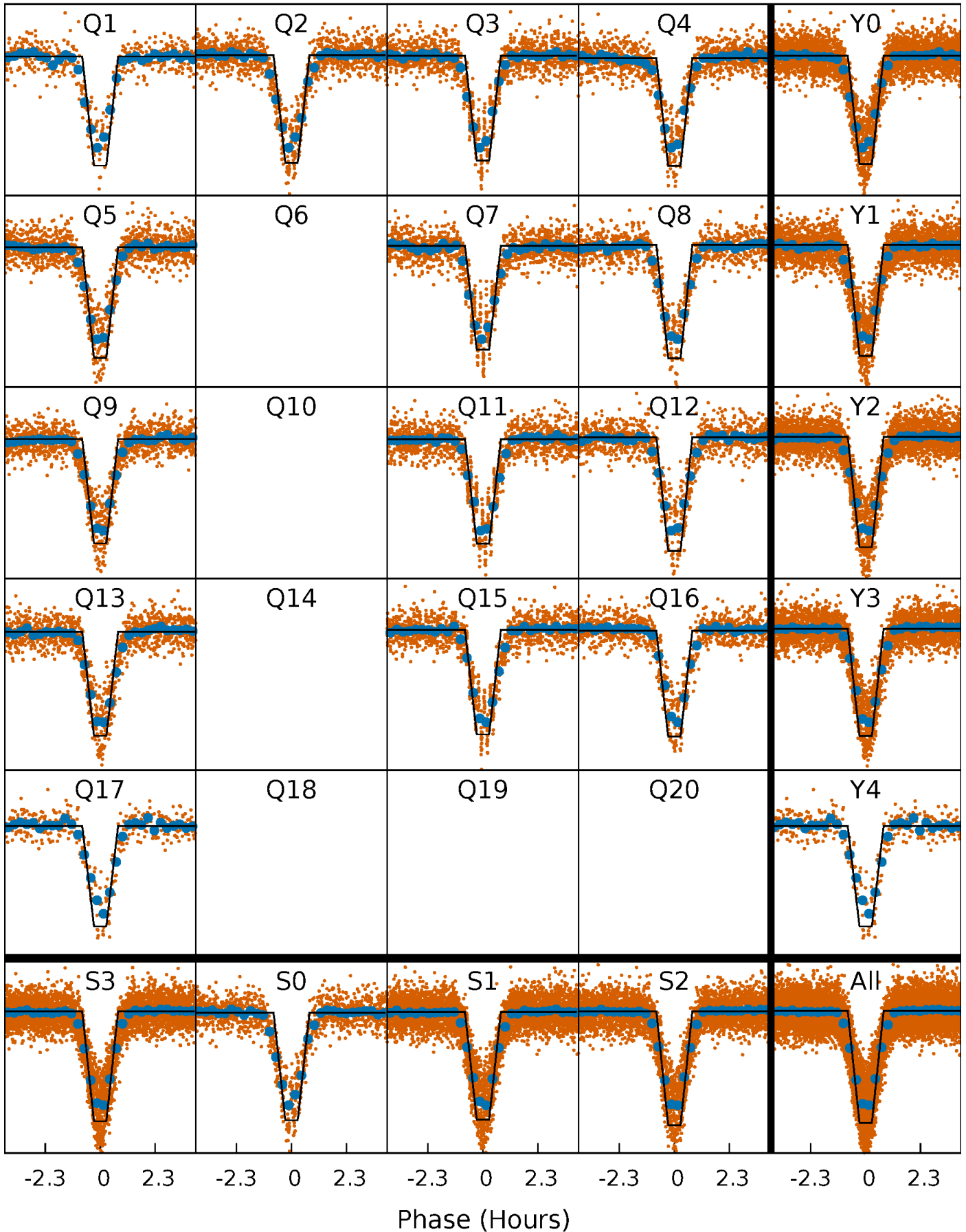
DV Quarter-Phased Transit Curves

TCE 005015913-01 P= 1.179961 Days $T_0=132.206291$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

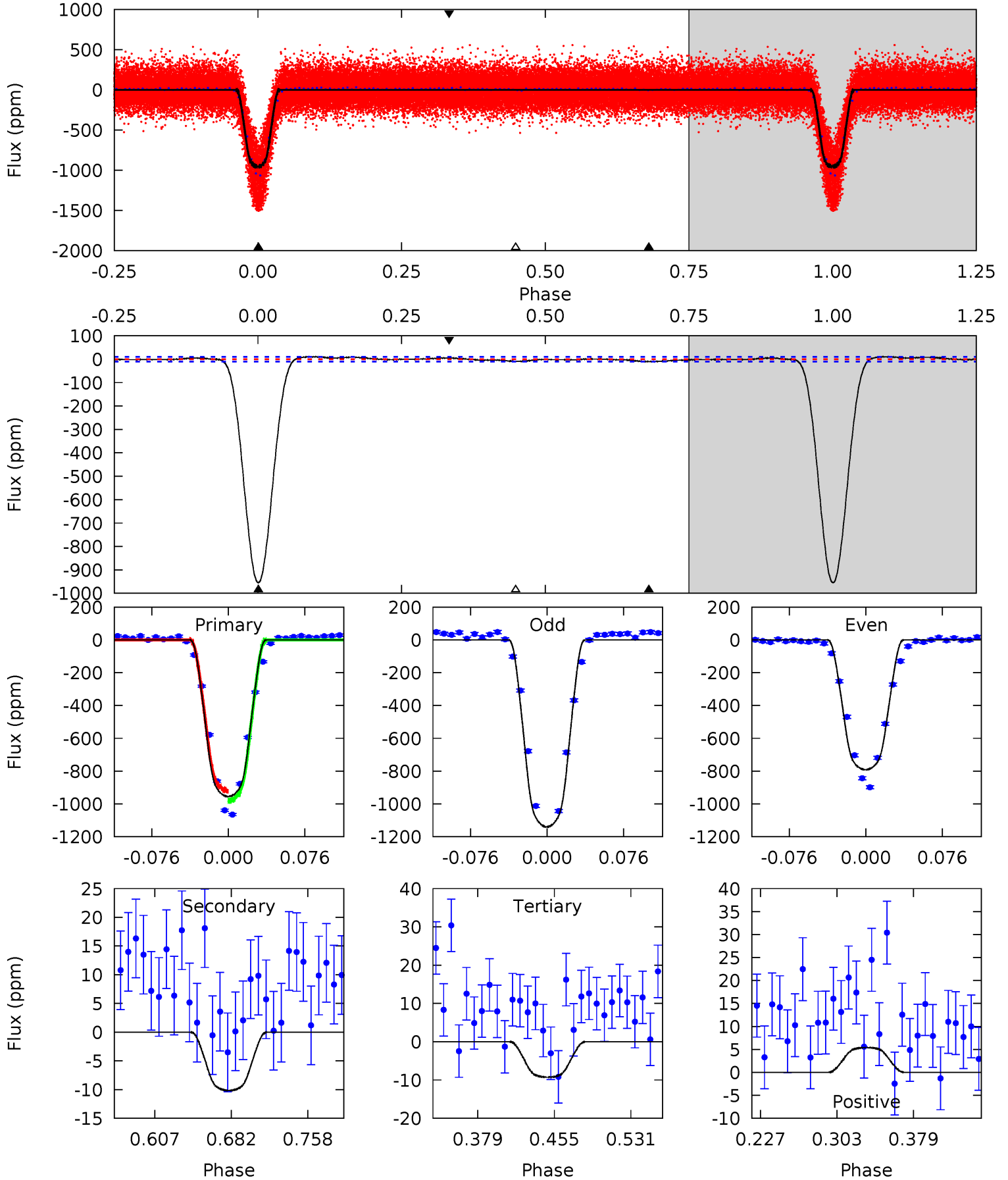
TCE 005015913-01 P= 1.179965 Days $T_0=132.204746$ (BKJD)



DV Model-Shift Uniqueness Test

005015913-01, P = 1.179961 Days, E = 131.026330 Days

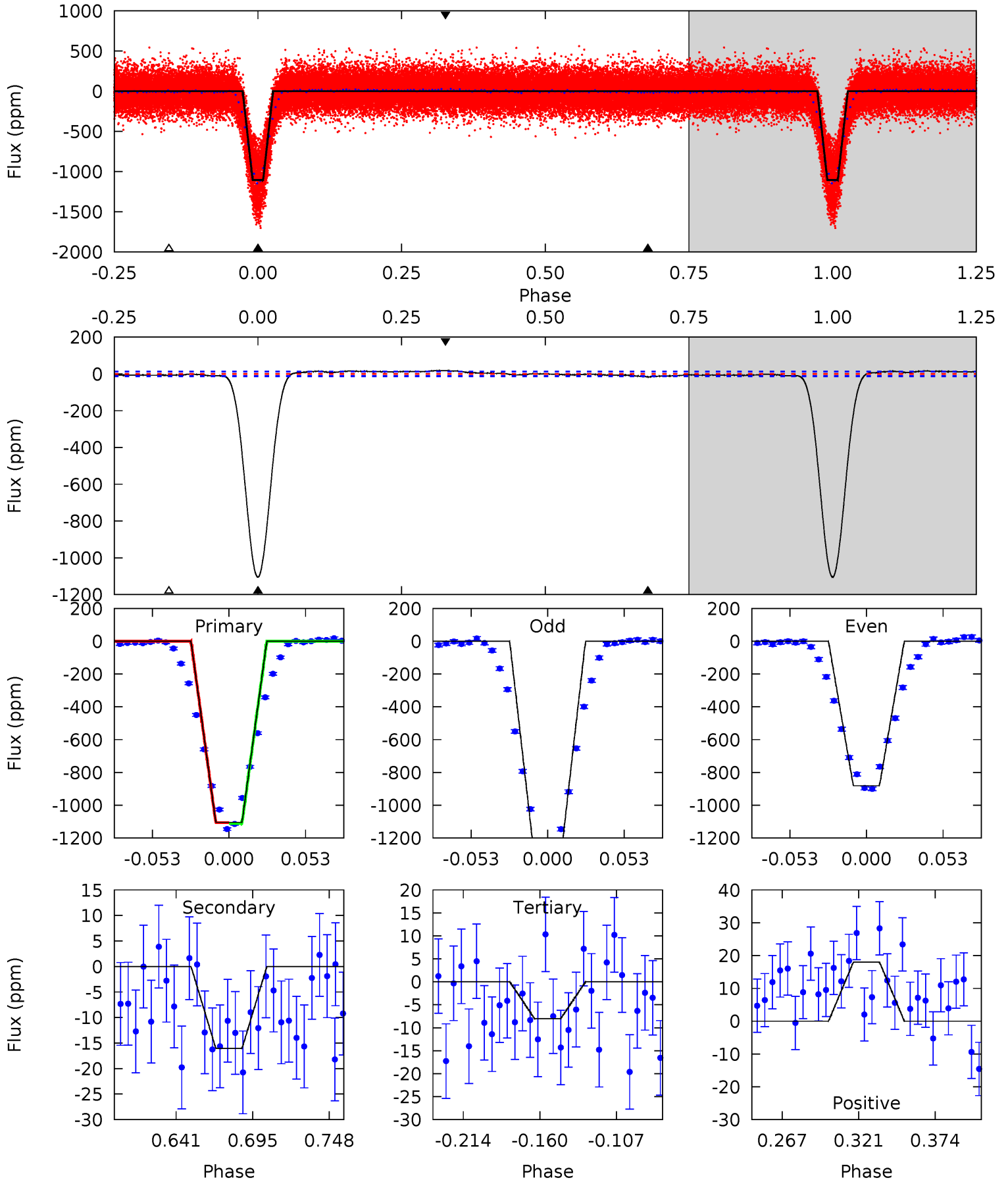
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
438.8	4.67	4.27	2.48	4.62	1.78	2.00	434.6	436.4	0.40	2.19	80.6	1.01	0.01	14.6



Alt Model-Shift Uniqueness Test

005015913-01, P = 1.179965 Days, E = 131.024781 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
417.3	6.07	3.03	6.80	4.69	1.93	3.37	414.3	410.6	3.04	-0.73	83.9	1.01	0.02	0.97



Stellar Parameters For KIC 005015913

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5500^{+83}_{-83}	$3.491^{+0.254}_{-0.117}$	$-0.020^{+0.150}_{-0.200}$	$3.899^{+0.935}_{-1.402}$	$1.719^{+0.185}_{-0.432}$	$0.041^{+0.071}_{-0.017}$
	+2%/-2%	+7%/-3%	+750%/-1000%	+24%/-36%	+11%/-25%	+174%/-42%
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 005015913-01 / KOI 1667.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 2	$13.99^{+1.81}_{-2.40}$	4086^{+234}_{-323}	-3693^{+210}_{-154}	$0.020^{+0.009}_{-0.006}$
Alt.	-16 ± 3	$14.64^{+2.12}_{-2.56}$	4068^{+247}_{-297}	-3663^{+199}_{-165}	$0.028^{+0.011}_{-0.007}$

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 $A_{obs} \gg 1.0$

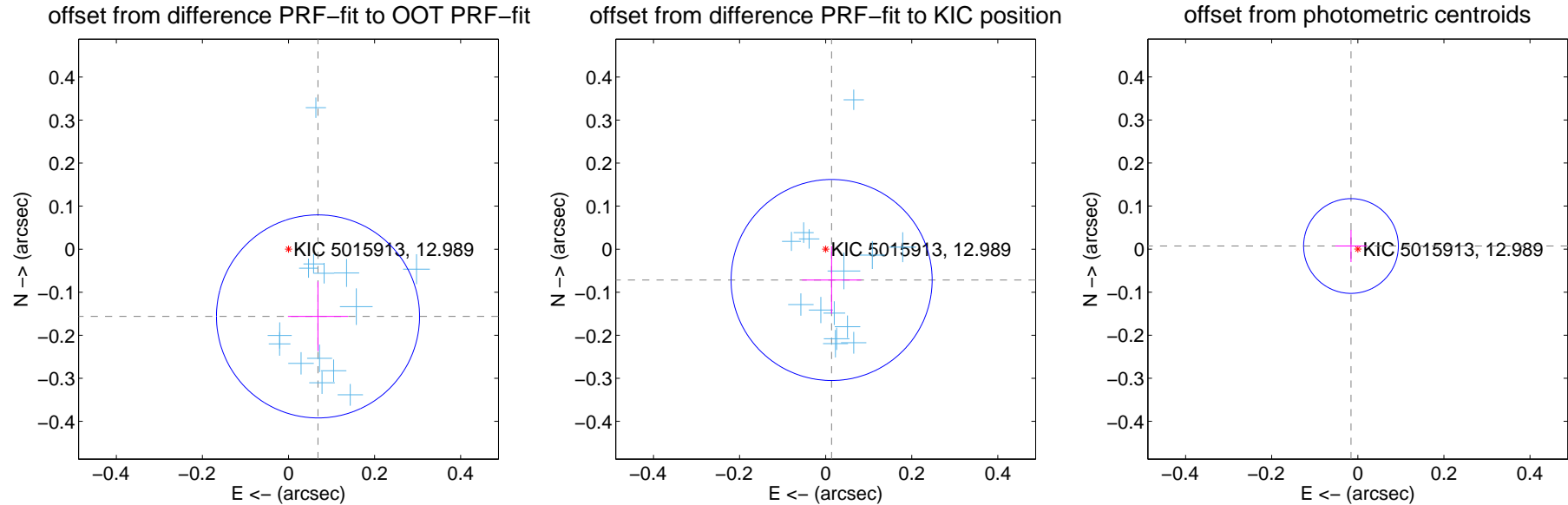
DV Centroid Data

Supplemental centroid analysis for 005015913-01. Kepler magnitude: 12.99. Transit SNR 231.64

There are 14 quarters with good PRF difference image offsets

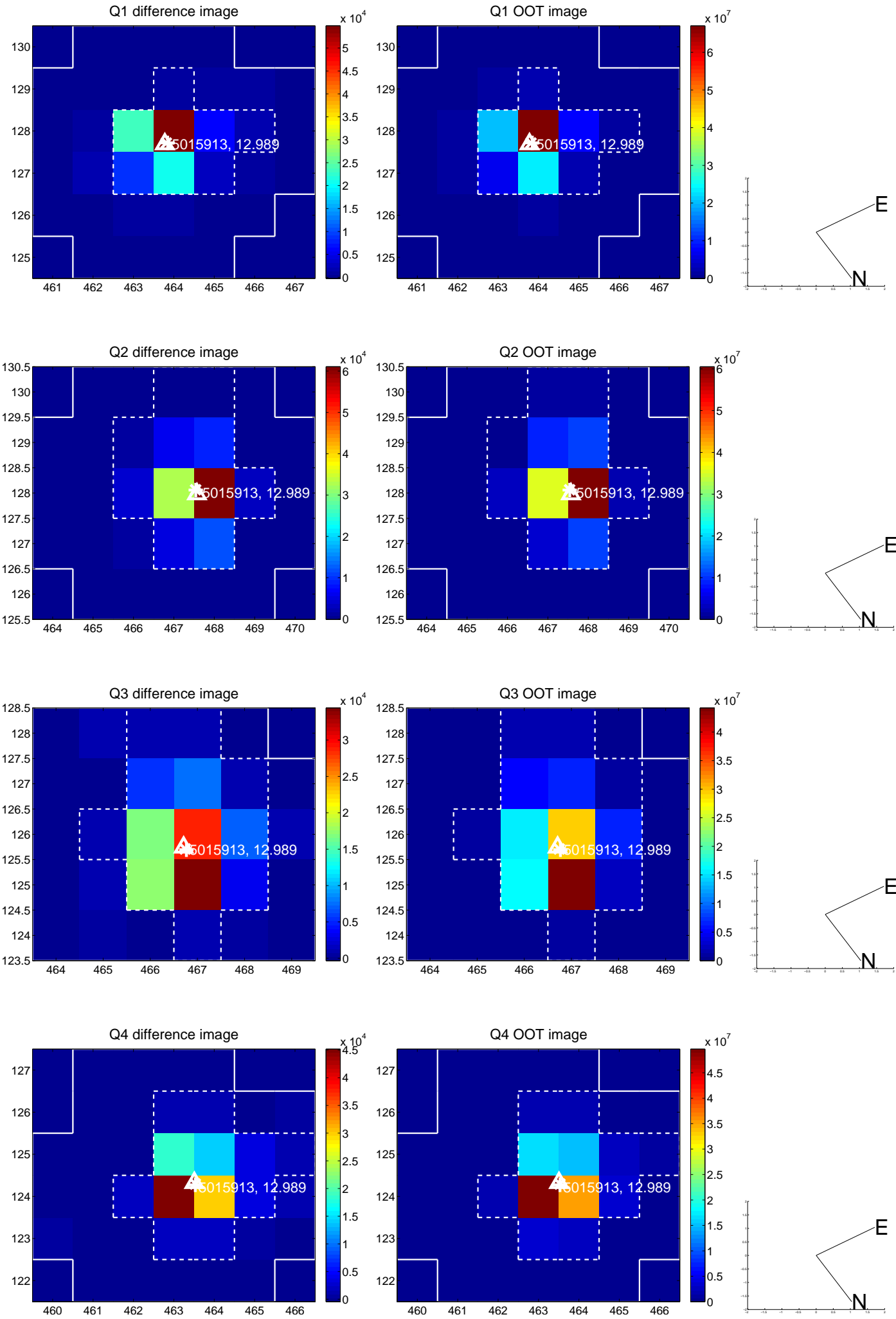
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.171 ± 0.079	2.17	-0.069 ± 0.070	-0.156 ± 0.081
PRF-fit source offset from KIC position	0.073 ± 0.078	0.94	-0.014 ± 0.069	-0.072 ± 0.079
photometric centroid source offset	0.02 ± 0.04	0.47	0.02 ± 0.04	0.01 ± 0.04

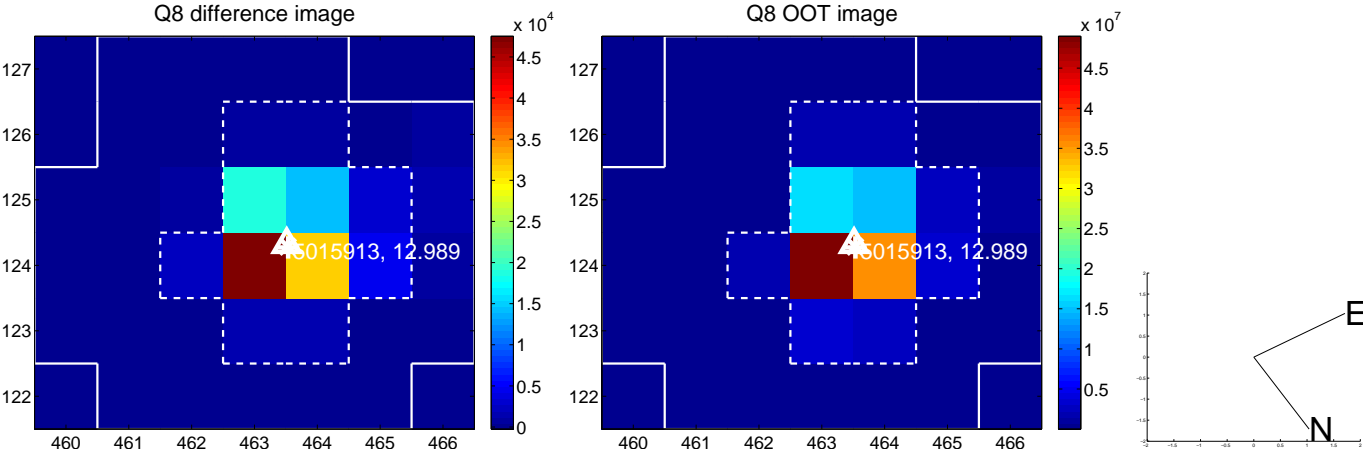
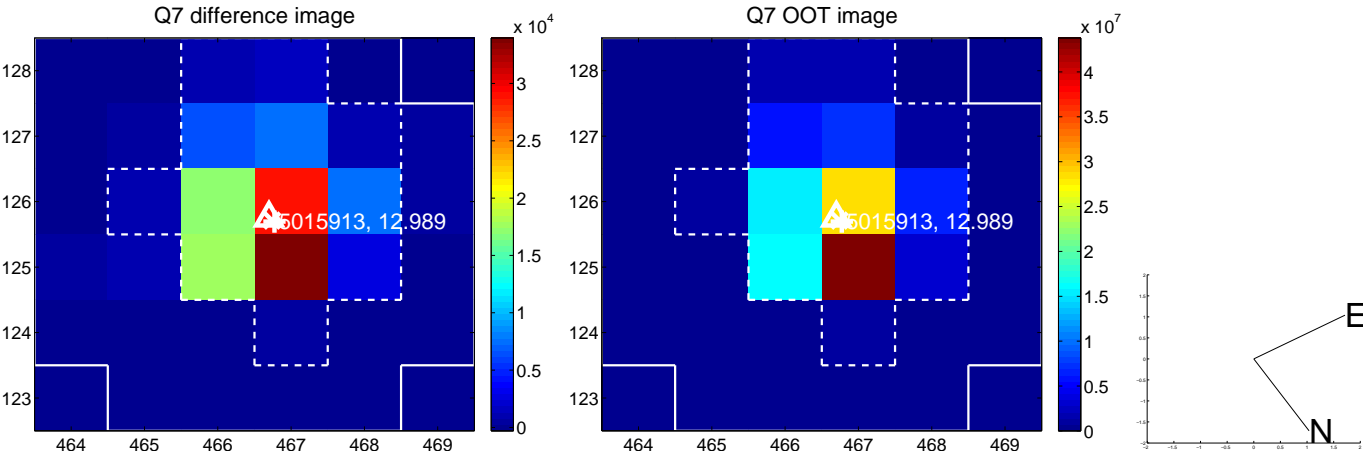
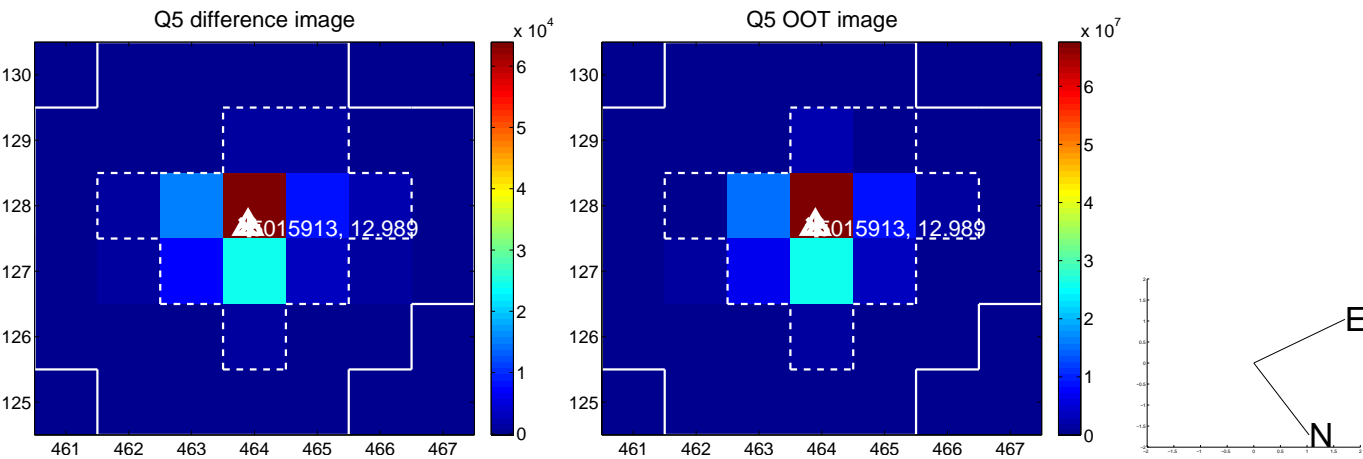


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

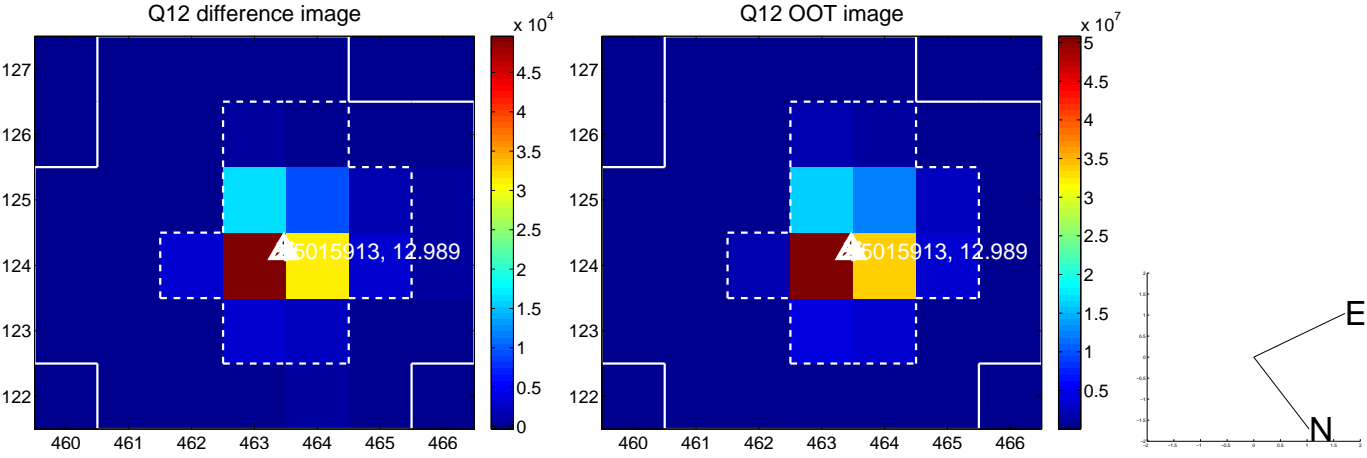
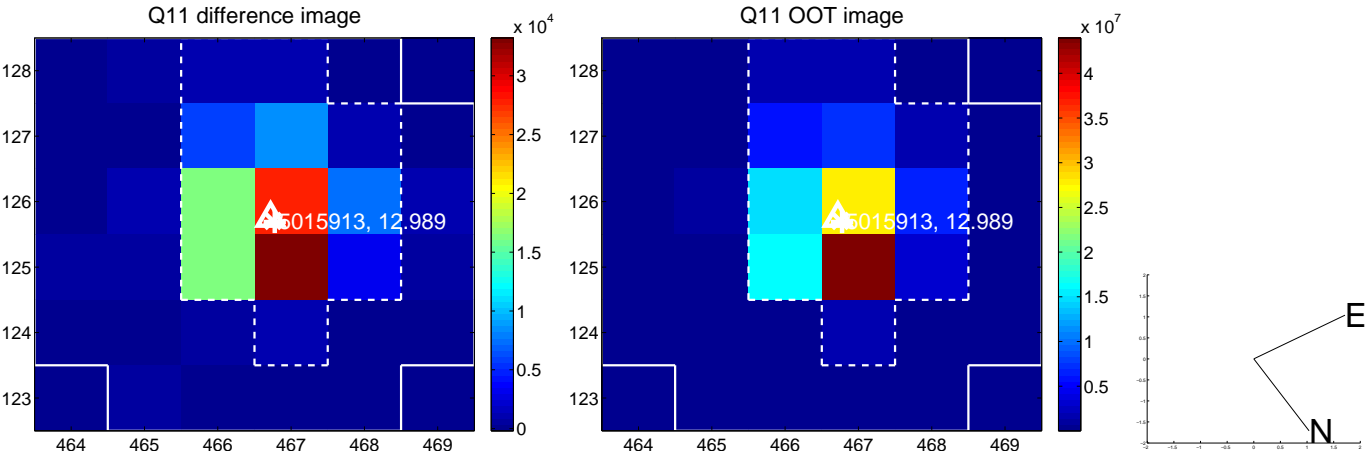
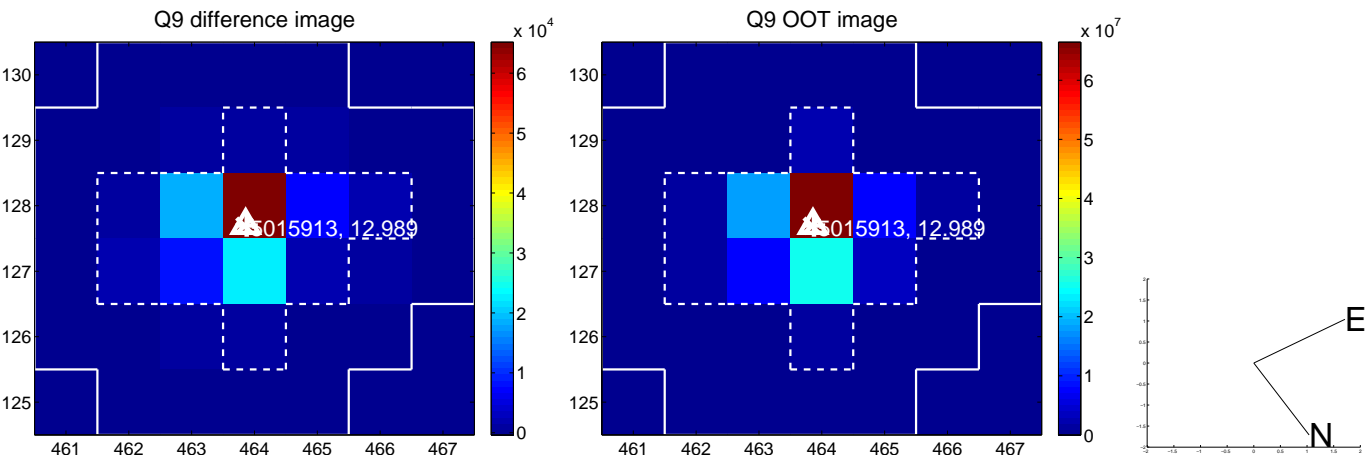
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



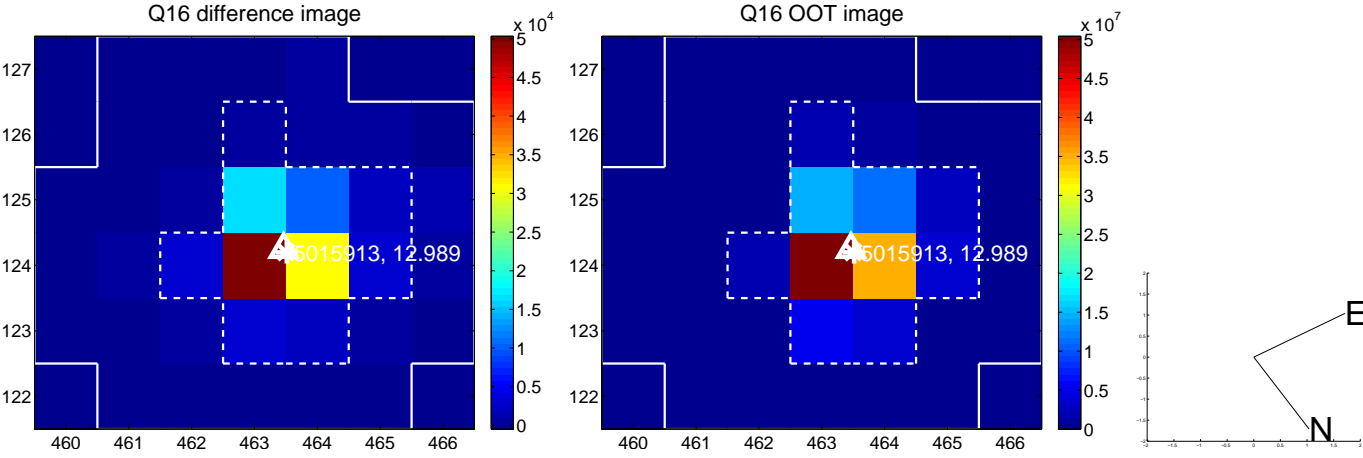
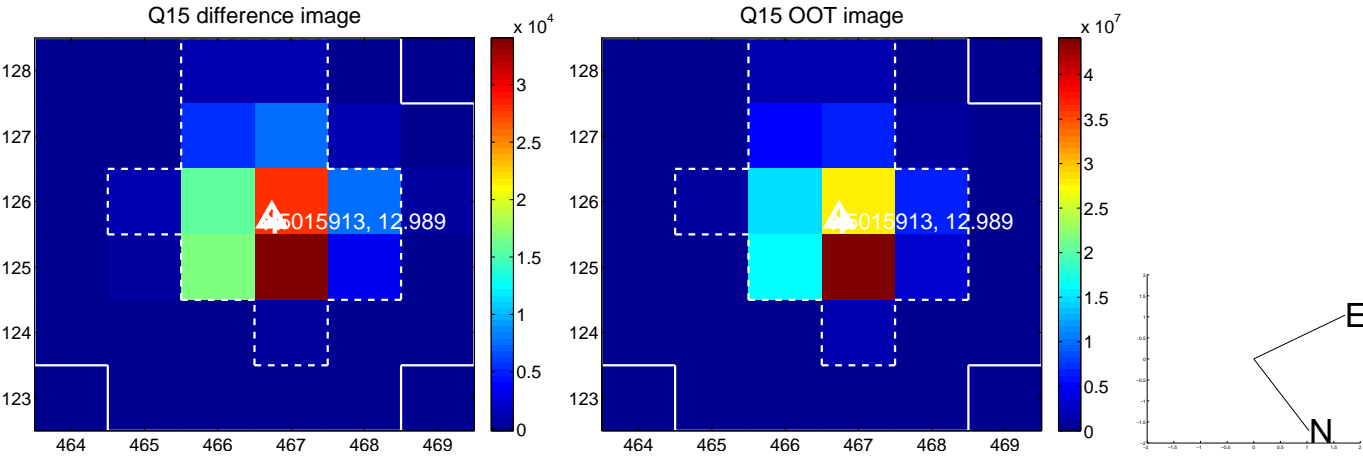
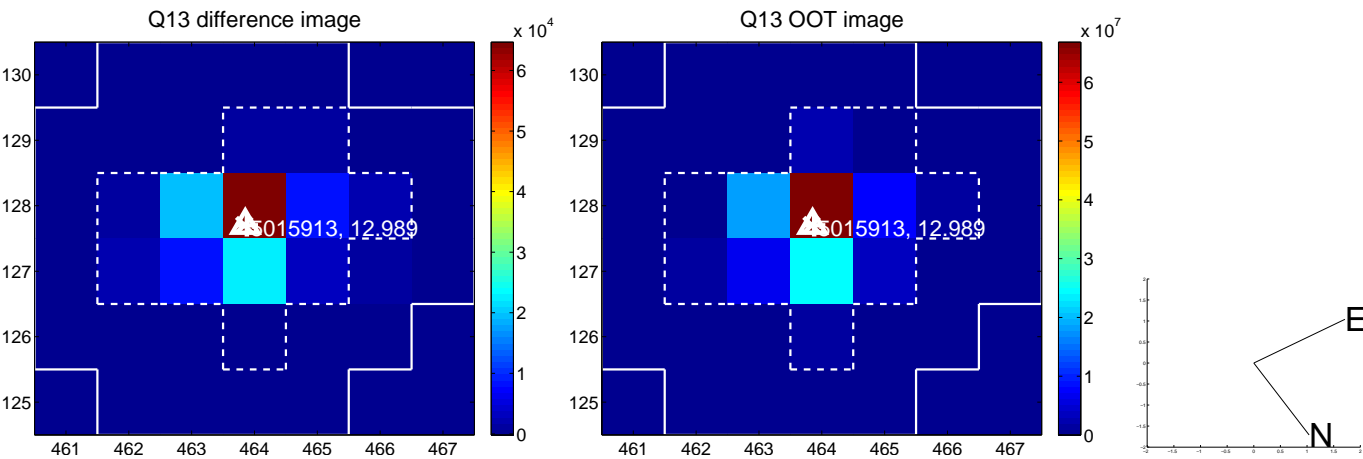
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



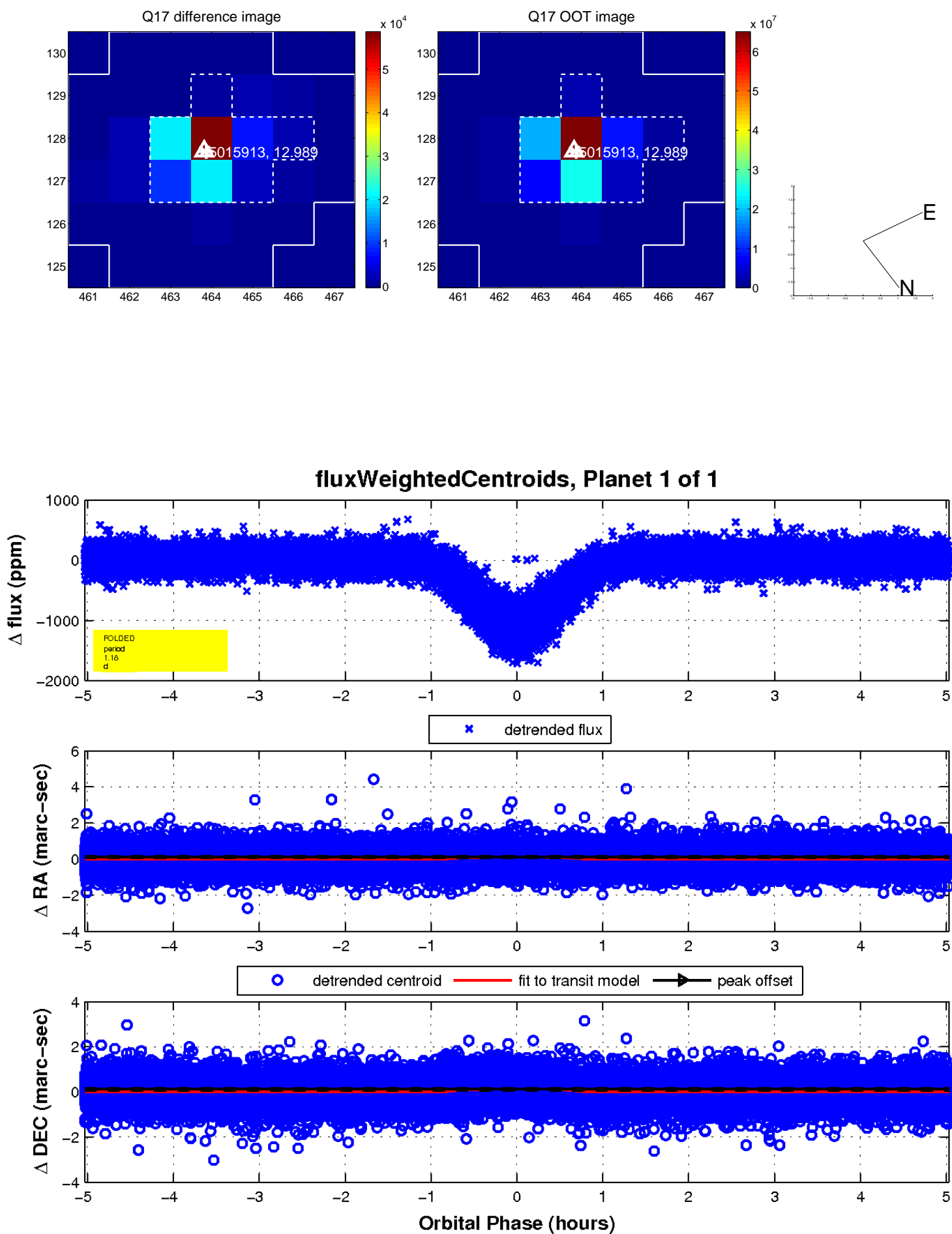
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UKIRT Image

Declination

