

KIC 008155654

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})
008155654-01	OBS	6980.01	6.293417	133.868975	98.7	3.094	8.1	8.7	1.08	6214	1.27	313.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008155654-01	OBS	PC	0.94	0	0	0	0	NO_COMMENT

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

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

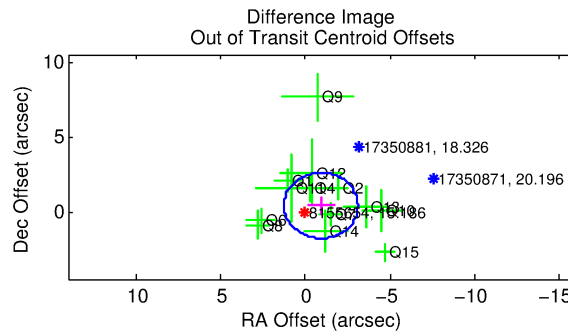
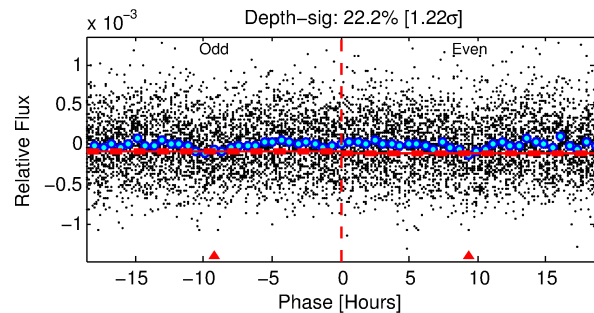
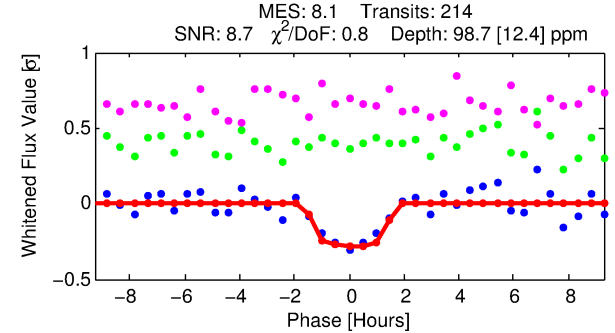
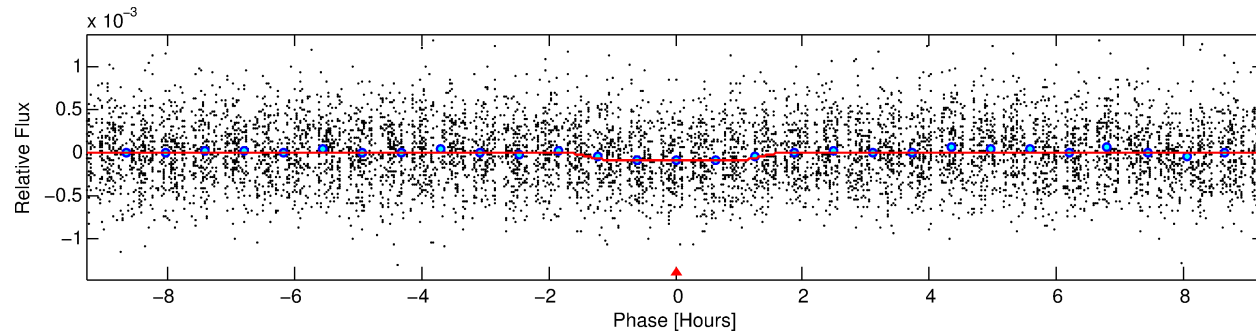
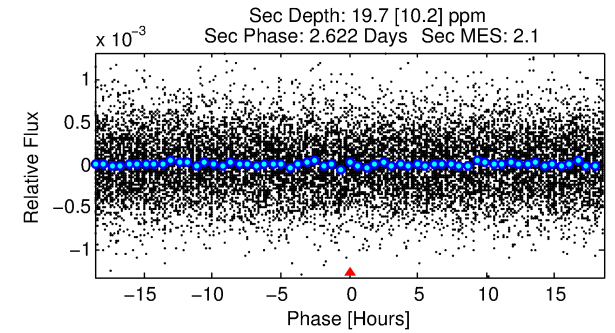
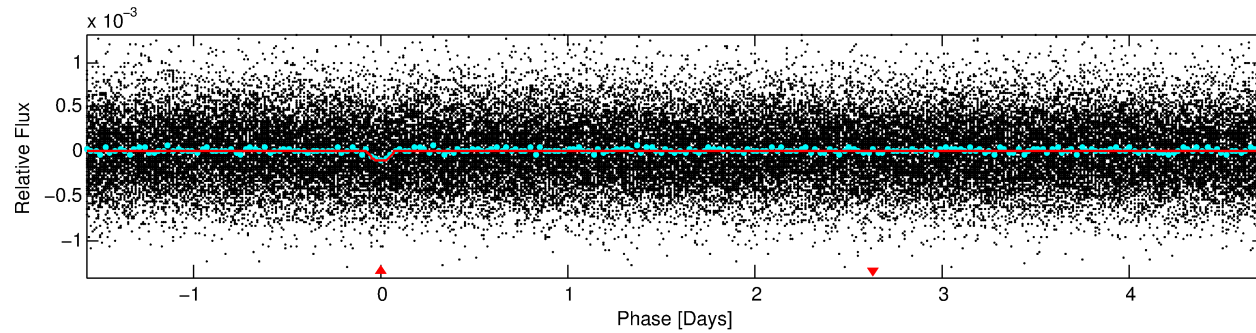
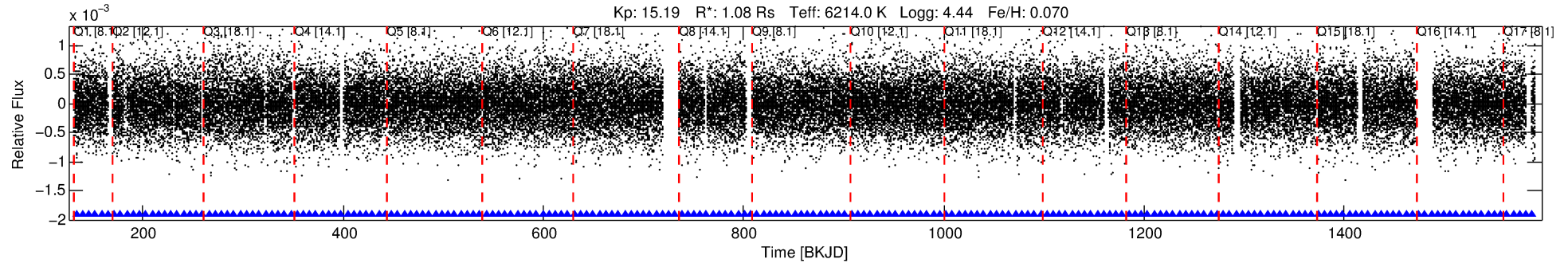
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008155654-01

No Significant Match Found

DV One-Page Summary

KIC: 8155654 Candidate: 1 of 1 Period: 6.293 d
KOI: K06980.01 Corr: 0.950



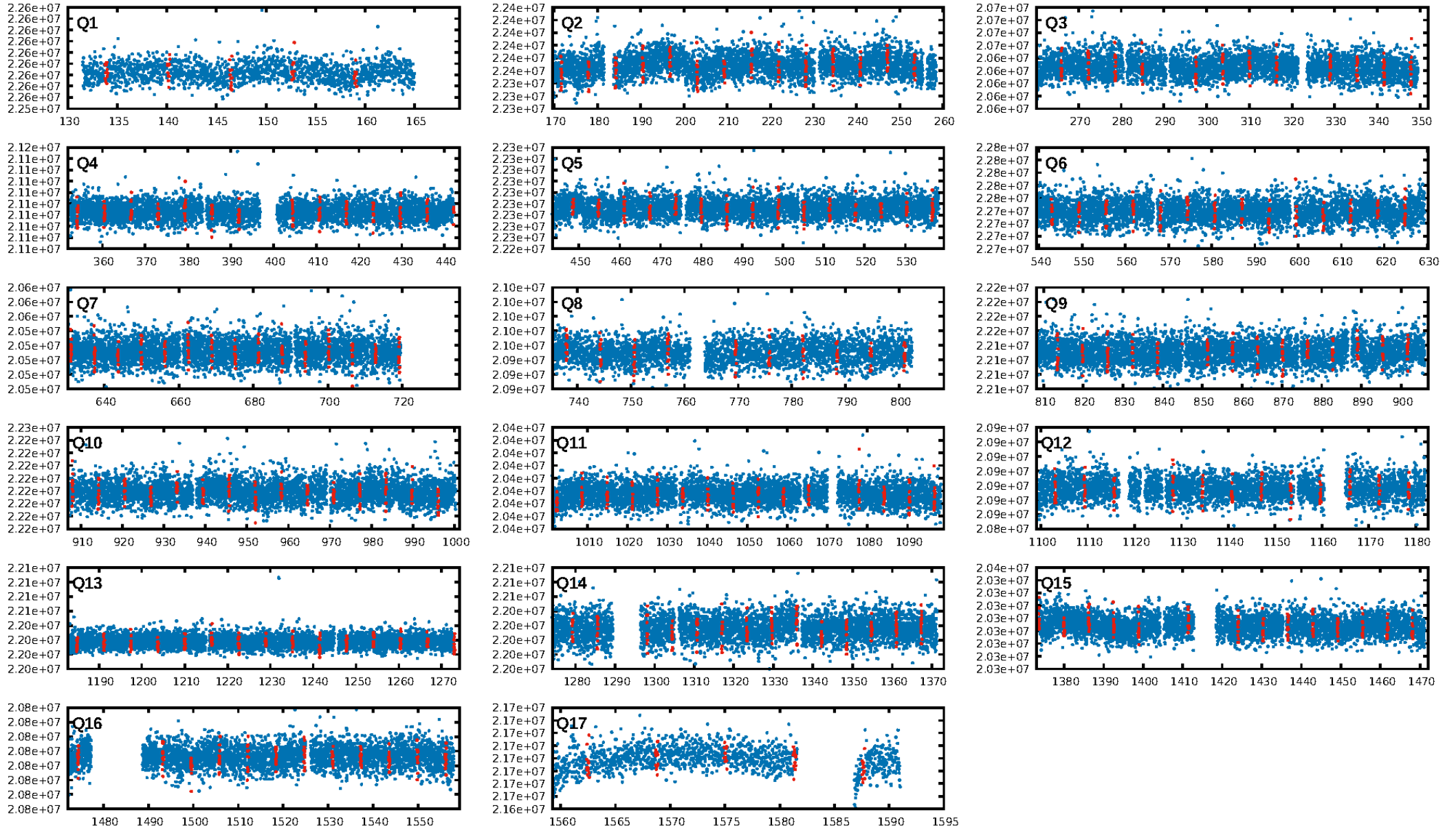
DV Fit Results:

Period = 6.29342 [0.00006] d
Epoch = 133.8690 [0.0069] BKJD
Rp/R* = 0.0108 [0.0076]
a/R* = 6.96 [26.02]
b = 0.91 [0.75]
Seff = 313.14 [138.44]
Teff = 1073 [119] K
Rp = 1.27 [1.01] Re
a = 0.0703 [0.0206] AU
Ag = 33.26 [52.09] [0.62σ]
Teffp = 3983 [1510] K [1.92σ]

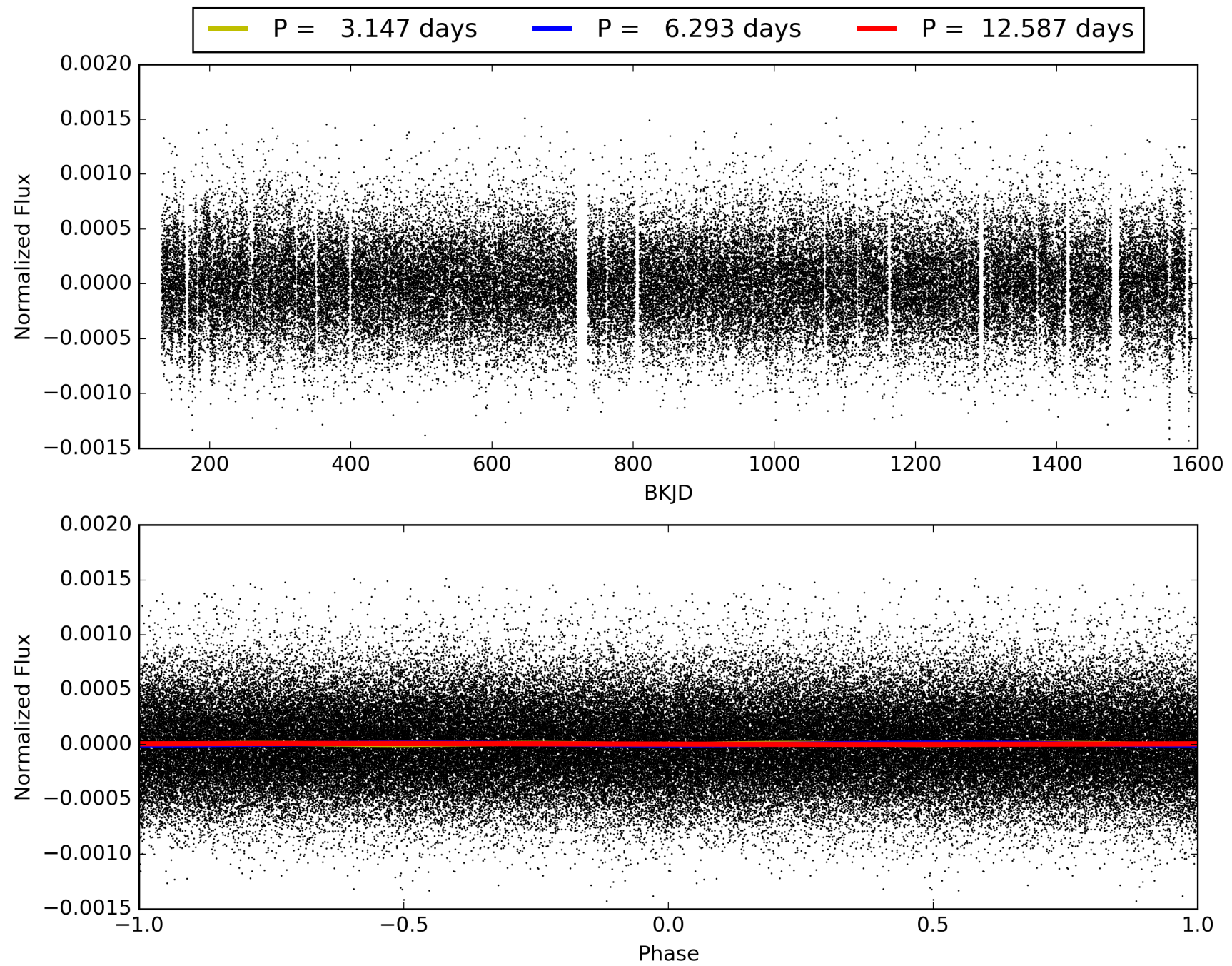
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.80e-16
RollingBand-fgt: 1.00 [204/204]
GhostDiagnostic-chr: 1.829
Centroid-sig: 43.6%
Centroid-so: 1.483 arcsec [0.93σ]
OotOffset-rm: 0.993 arcsec [1.36σ]
KicOffset-rm: 0.975 arcsec [1.32σ]
OotOffset-st: 4/3/3 [13]
KicOffset-st: 4/3/3 [13]
DiffImageQuality-fgm: 0.31 [4/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008155654-01, PDC Light Curves

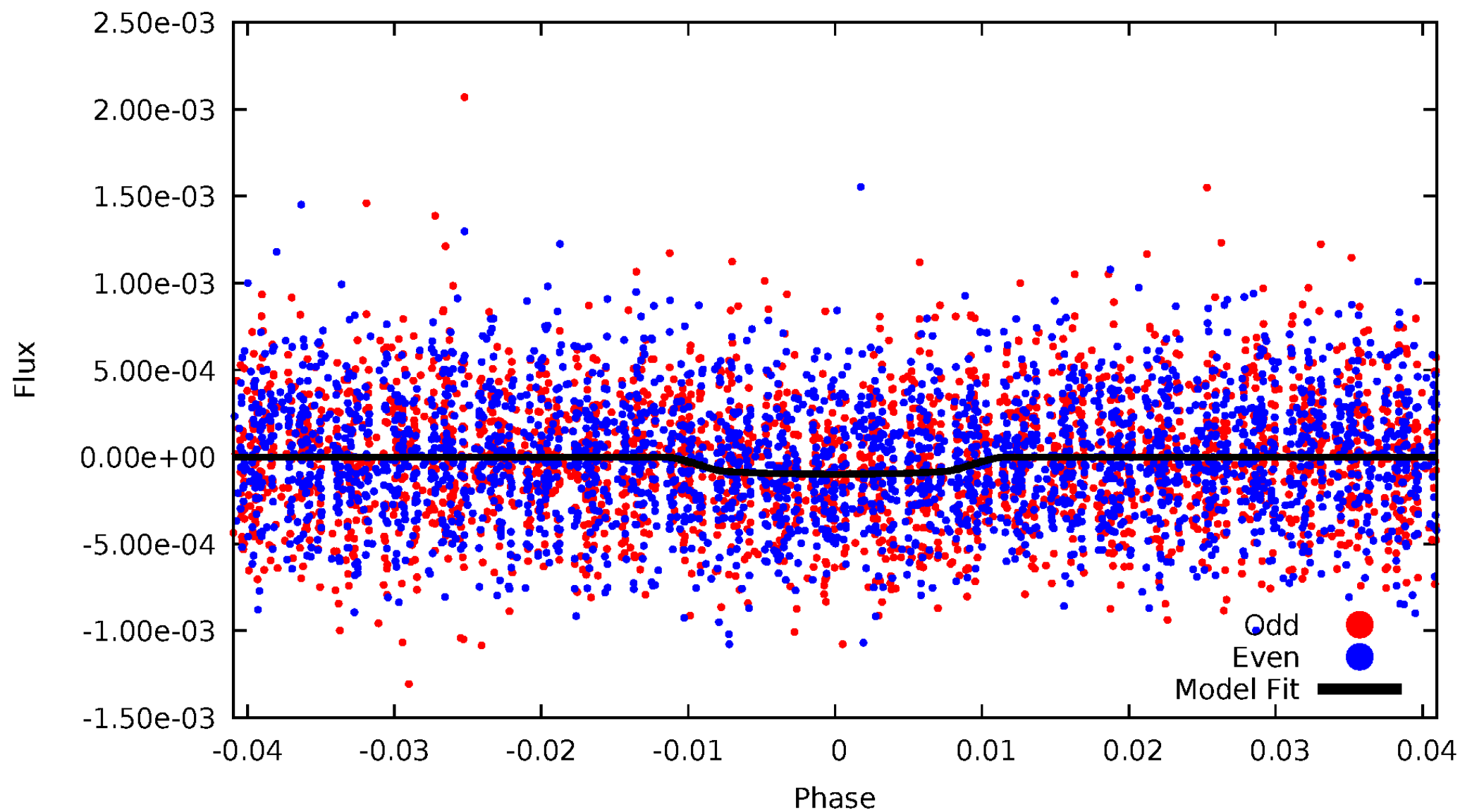


TCE 008155654-01



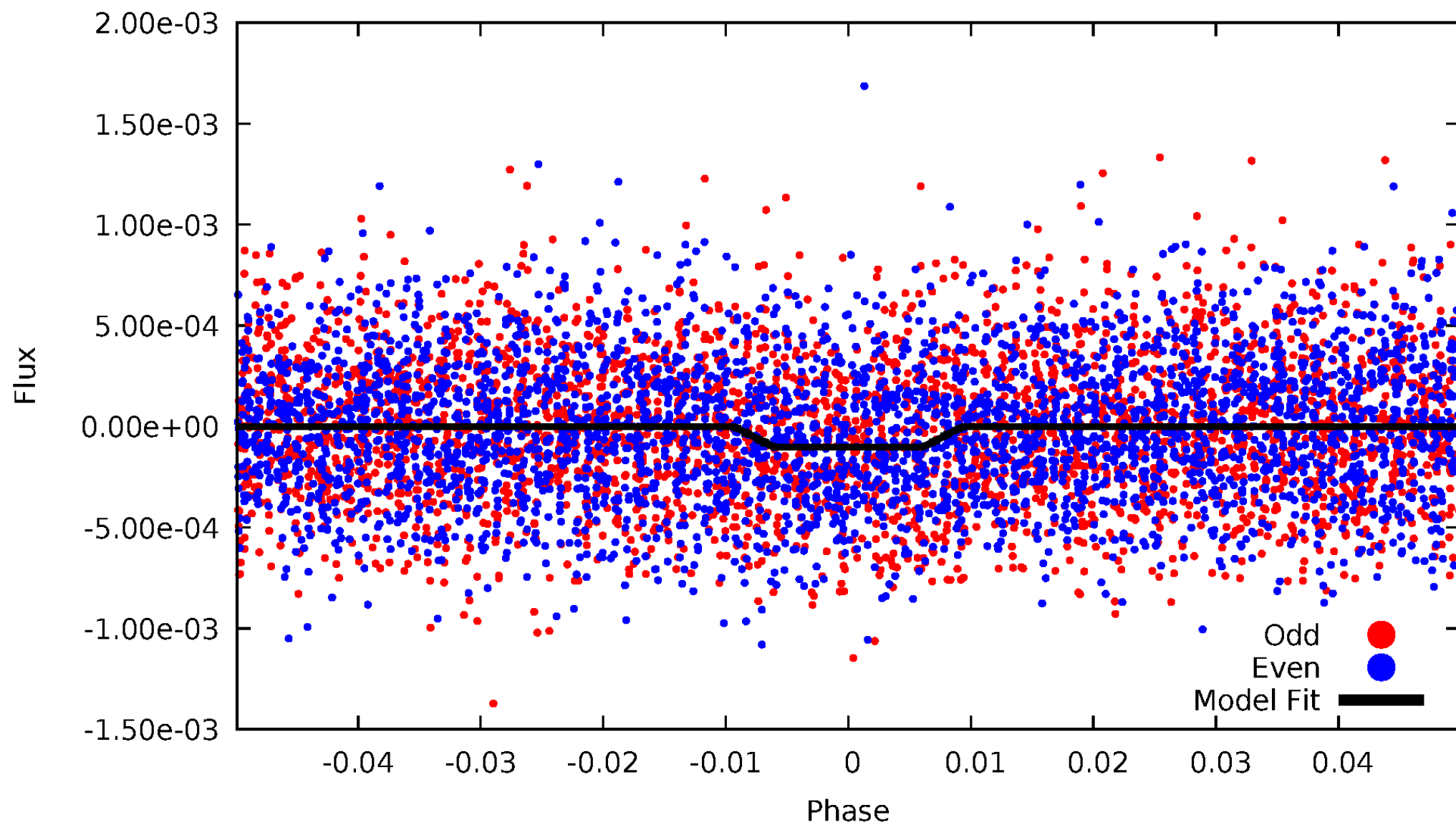
DV Odd/Even

TCE 008155654-01



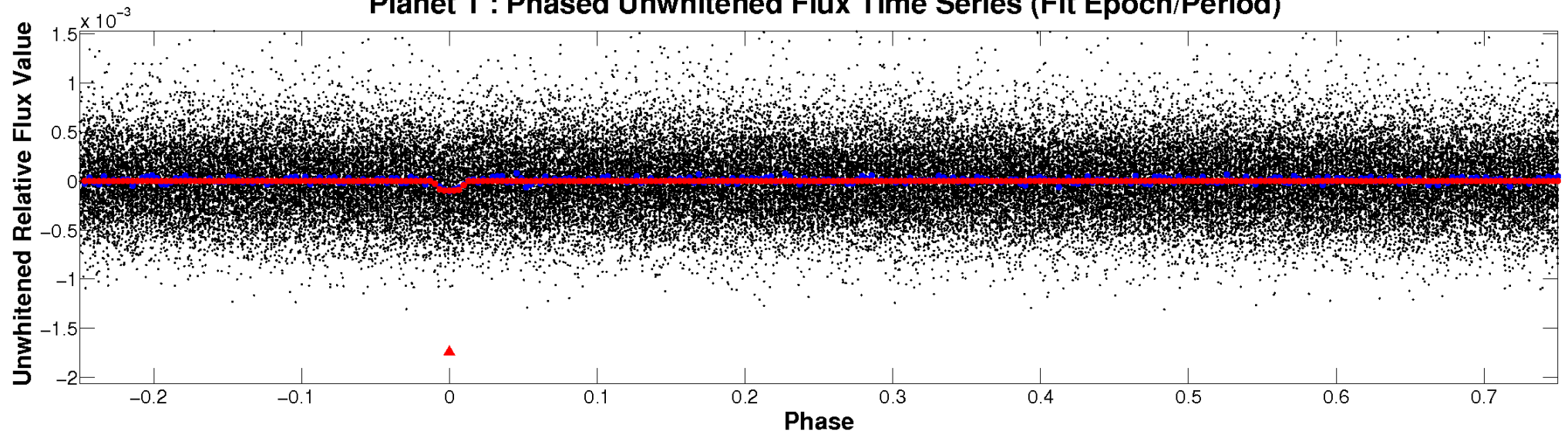
ALT Odd/Even

TCE 008155654-01

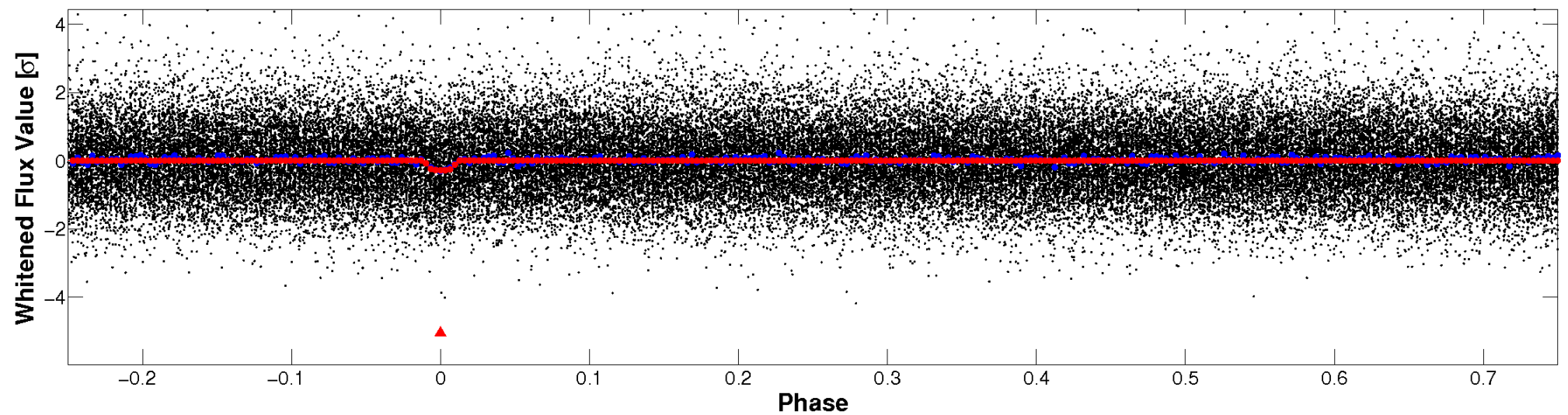


Non-Whitened Vs. Whitened Light Curve

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

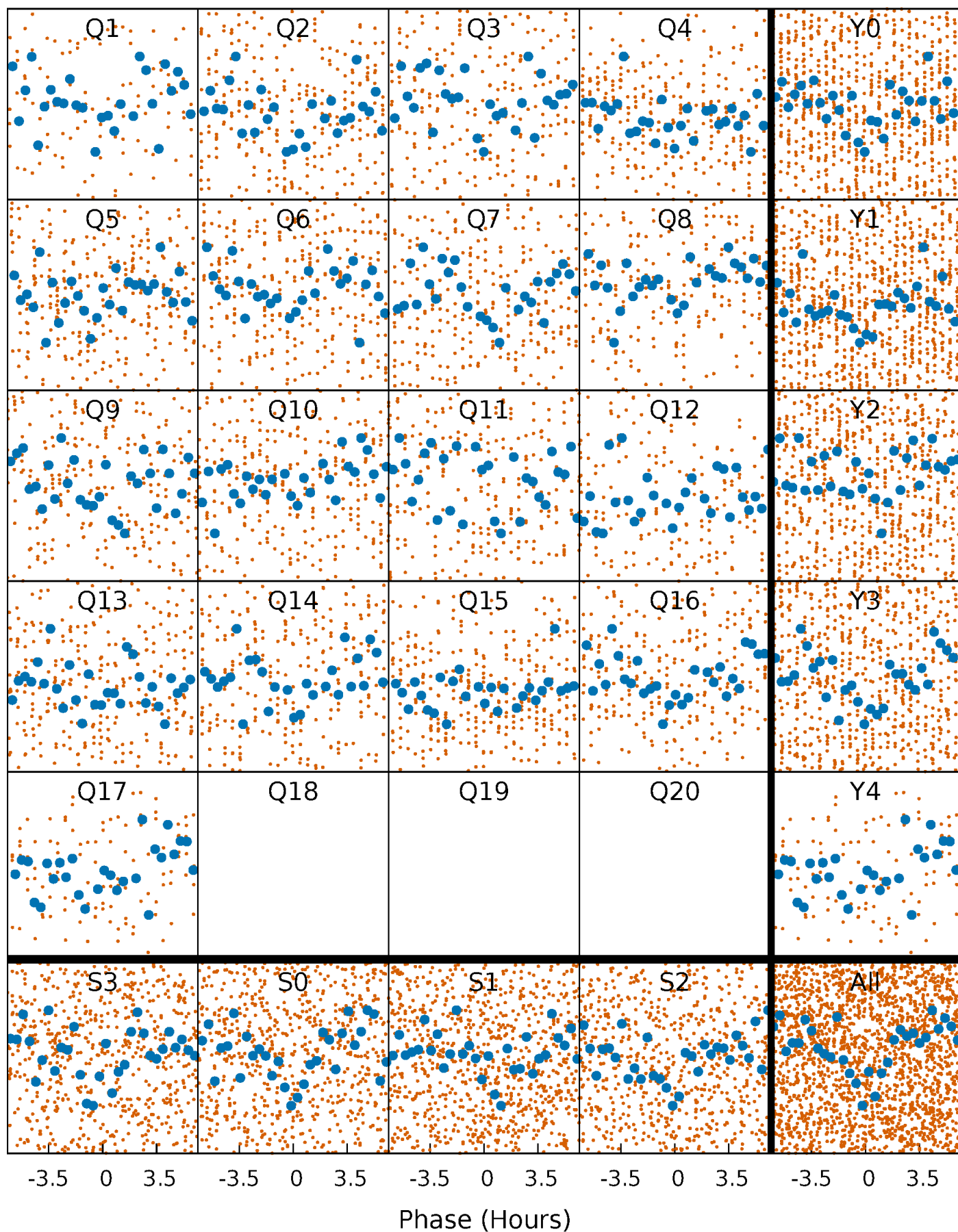


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



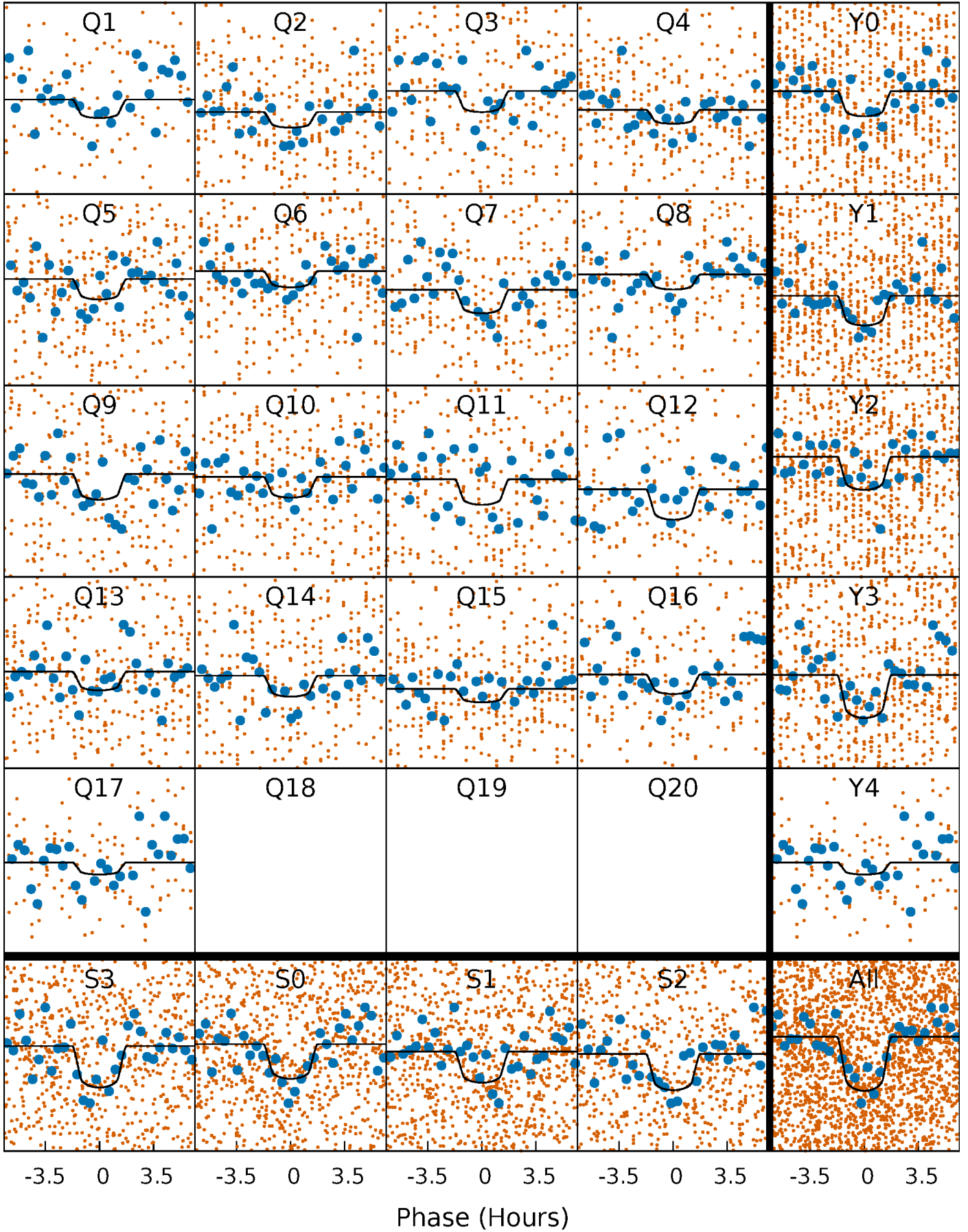
PDC Quarter-Phased Transit Curves

TCE 008155654-01 P= 6.293417 Days $T_0=133.868975$ (BKJD)



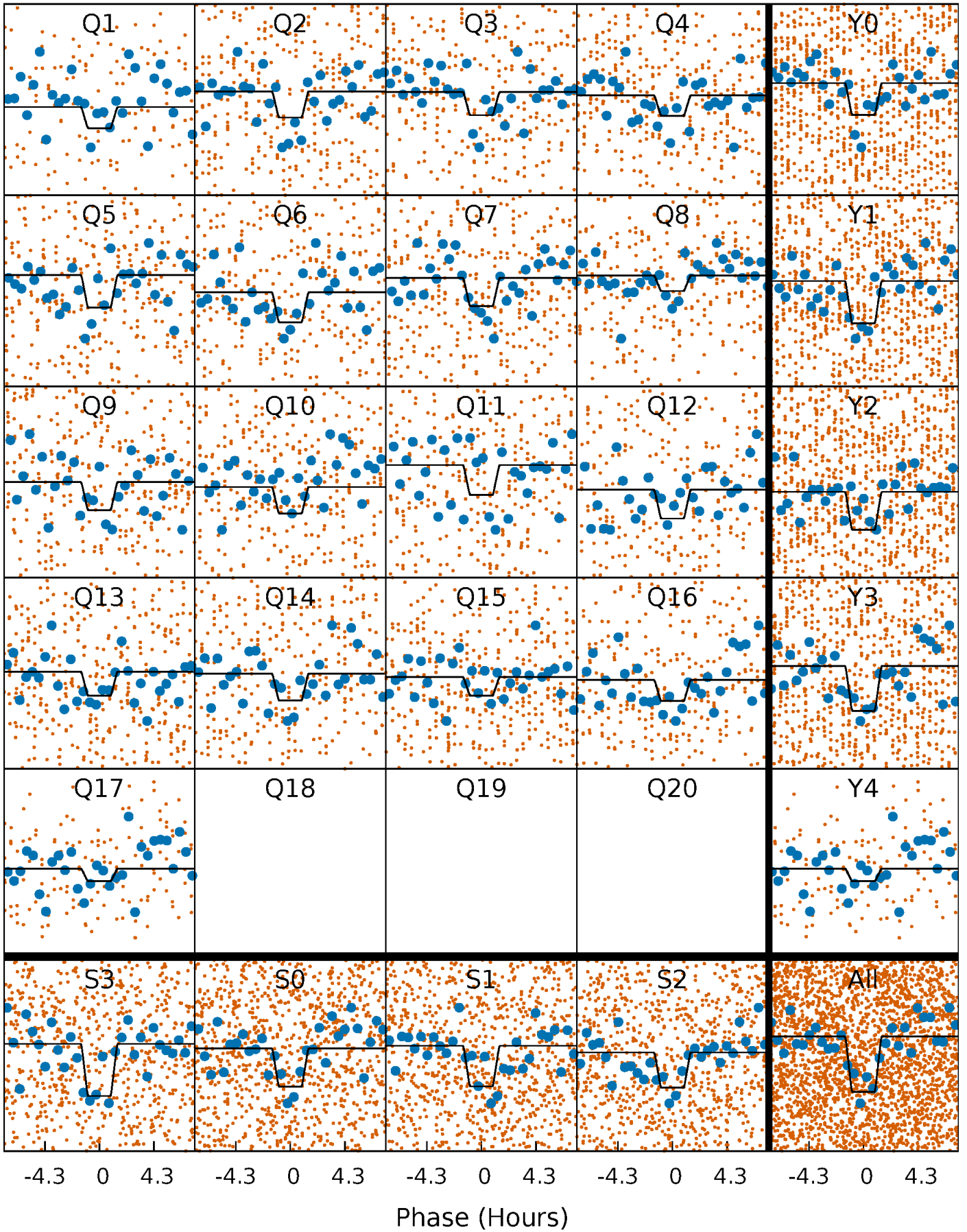
DV Quarter-Phased Transit Curves

TCE 008155654-01 P= 6.293417 Days $T_0=133.868975$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

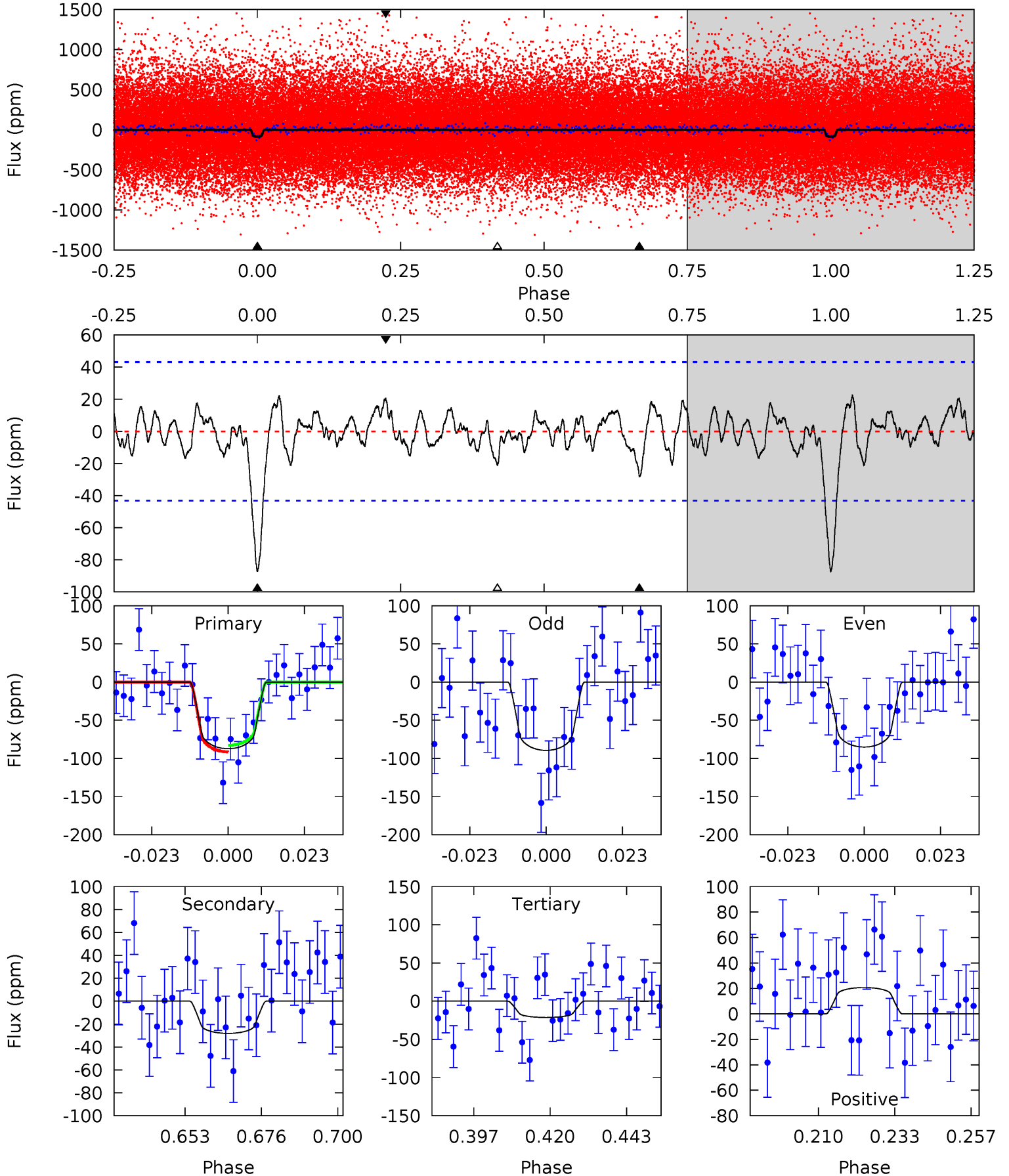
TCE 008155654-01 P= 6.293451 Days $T_0=133.866627$ (BKJD)



DV Model-Shift Uniqueness Test

008155654-01, P = 6.293417 Days, E = 127.575558 Days

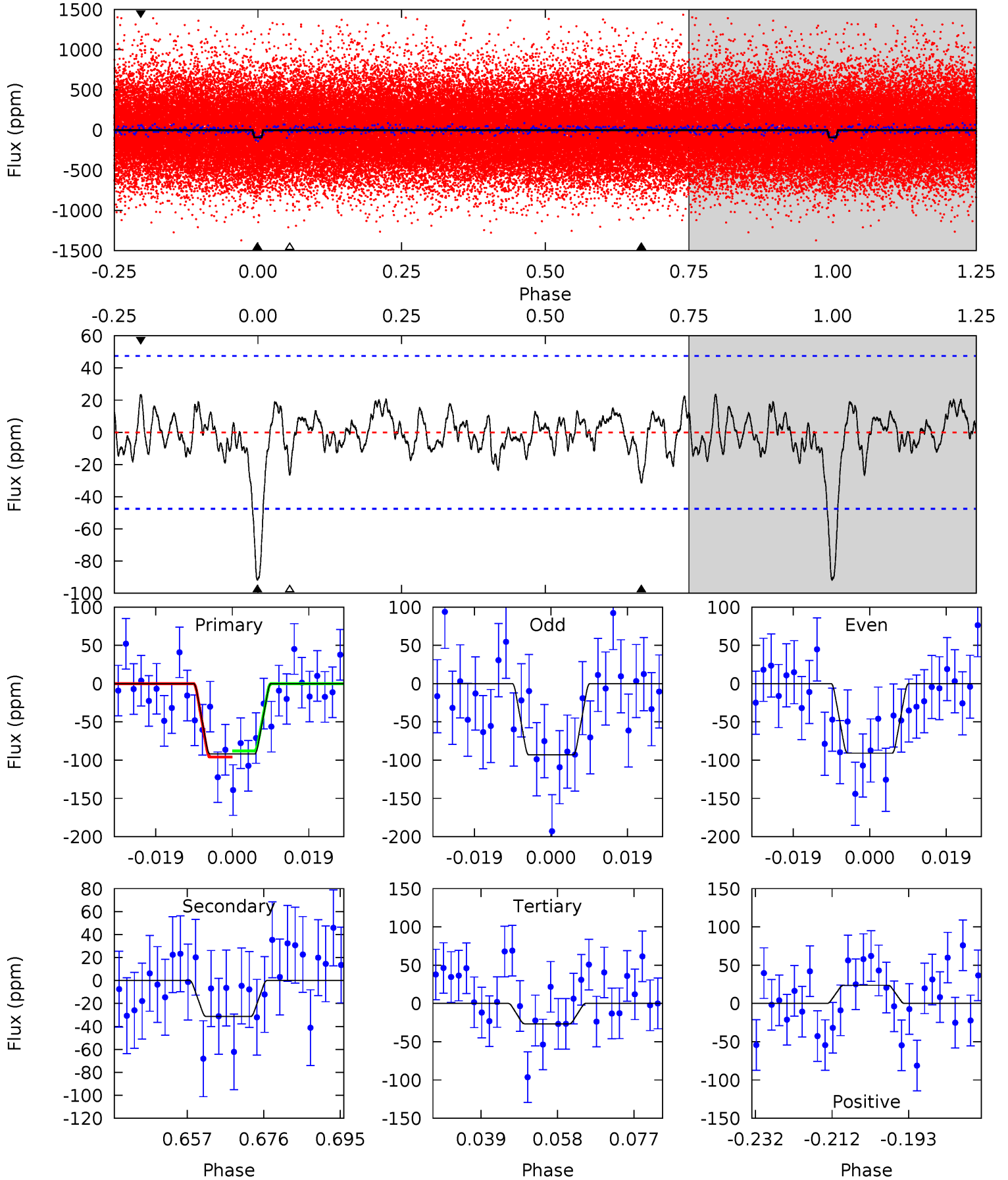
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.83	3.17	2.40	2.33	4.86	2.27	0.98	7.43	7.50	0.77	0.84	0.25	0.94	0.20	0.48



Alt Model-Shift Uniqueness Test

008155654-01, P = 6.293451 Days, E = 127.573176 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.48	3.23	2.74	2.44	4.90	2.34	0.97	6.74	7.04	0.49	0.79	0.11	1.21	0.20	0.41



Stellar Parameters For KIC 008155654

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6214^{+167}_{-223}	$4.442^{+0.056}_{-0.224}$	$0.070^{+0.250}_{-0.300}$	$1.076^{+0.384}_{-0.102}$	$1.169^{+0.158}_{-0.158}$	$1.321^{+0.310}_{-0.752}$
	+3%/-4%	+1%/-5%	+357%/-429%	+36%/-9%	+14%/-14%	+23%/-57%
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 008155654-01 / KOI 6980.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-28 ± 9	$1.37^{+0.94}_{-0.86}$	1527^{+109}_{-75}	4411^{+2440}_{-773}	38^{+252}_{-26}
Alt.	-31 ± 10	$1.37^{+0.92}_{-0.81}$	1528^{+123}_{-76}	4530^{+2457}_{-781}	43^{+228}_{-28}

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

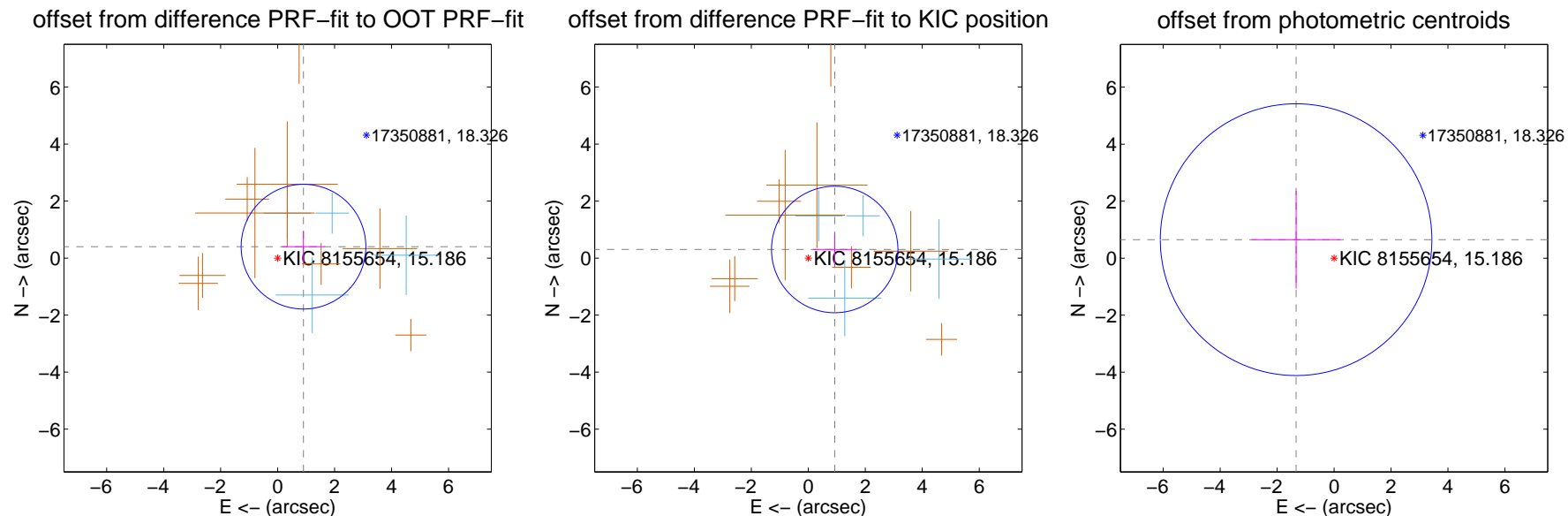
DV Centroid Data

Supplemental centroid analysis for 008155654-01. Kepler magnitude: 15.19. Transit SNR 8.67

There are 4 quarters with good PRF difference image offsets

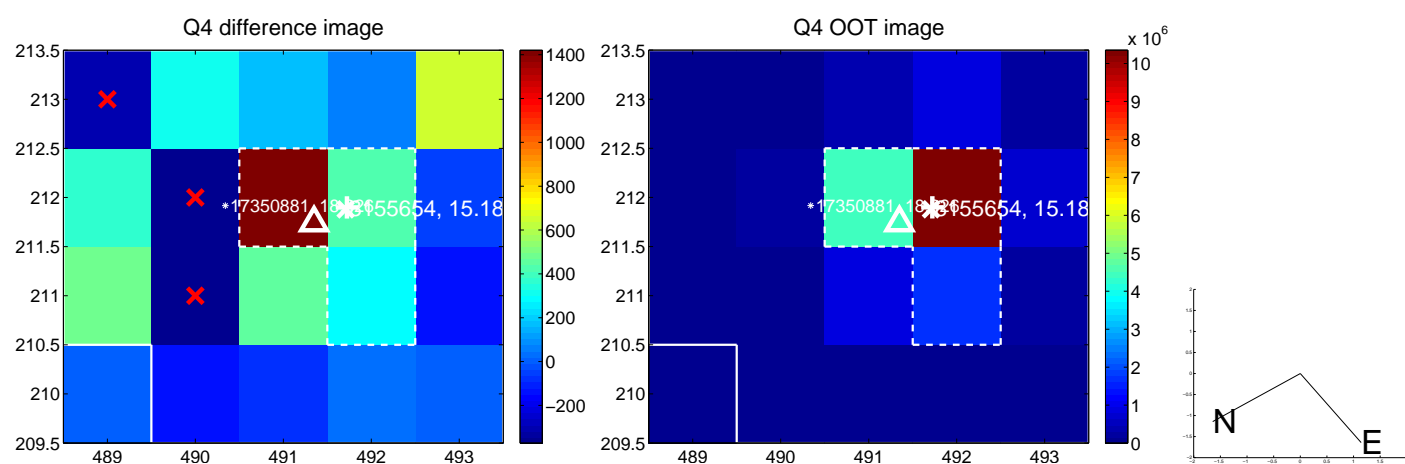
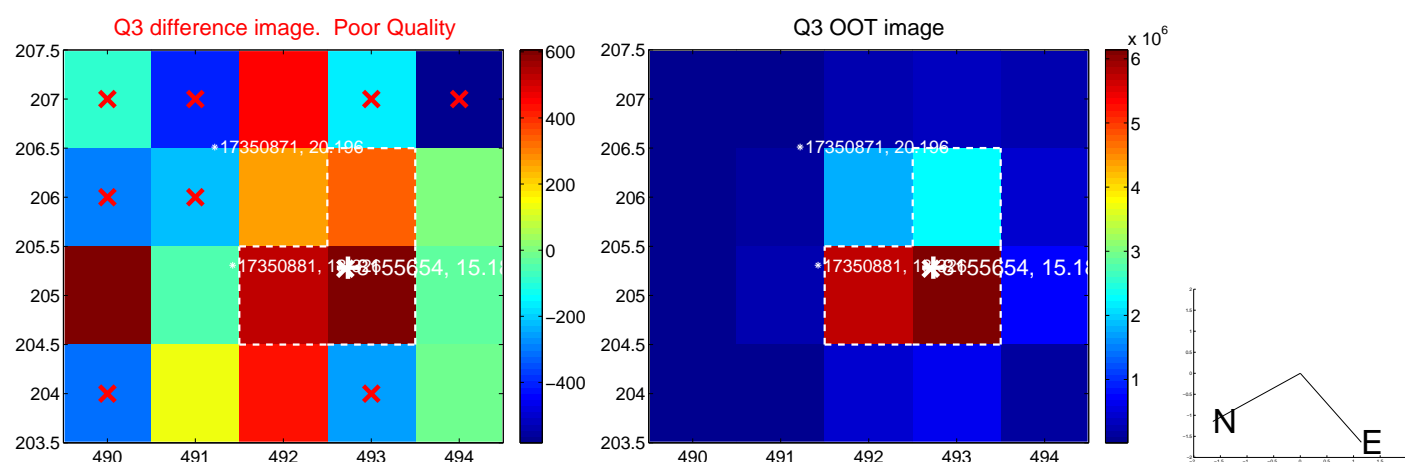
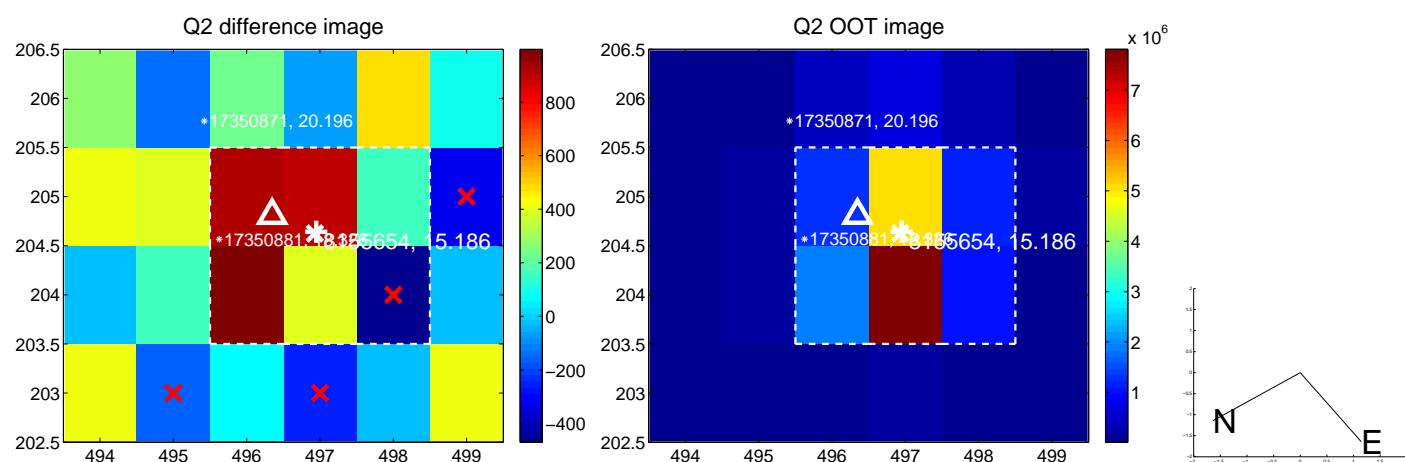
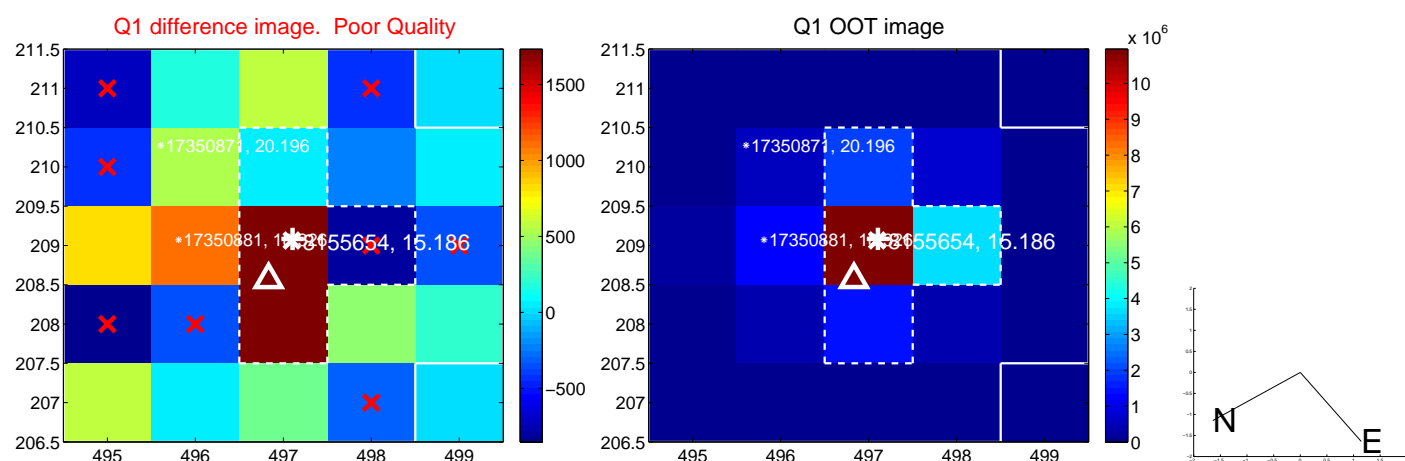
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.993 ± 0.729	1.36	-0.908 ± 0.758	0.401 ± 0.560
PRF-fit source offset from KIC position	0.975 ± 0.740	1.32	-0.927 ± 0.756	0.302 ± 0.566
photometric centroid source offset	1.48 ± 1.59	0.93	1.33 ± 1.56	0.65 ± 1.72

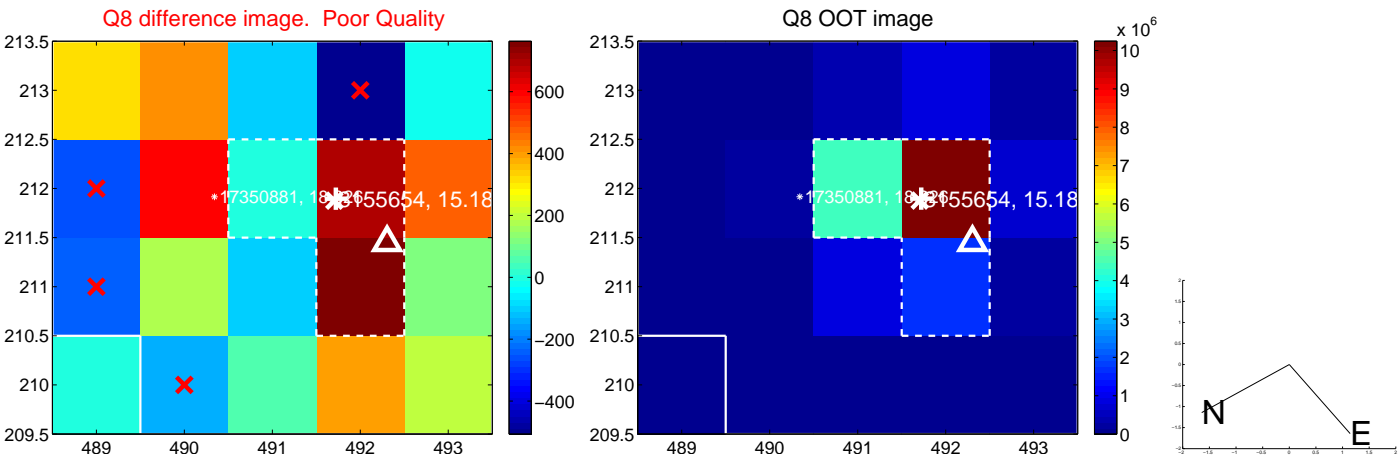
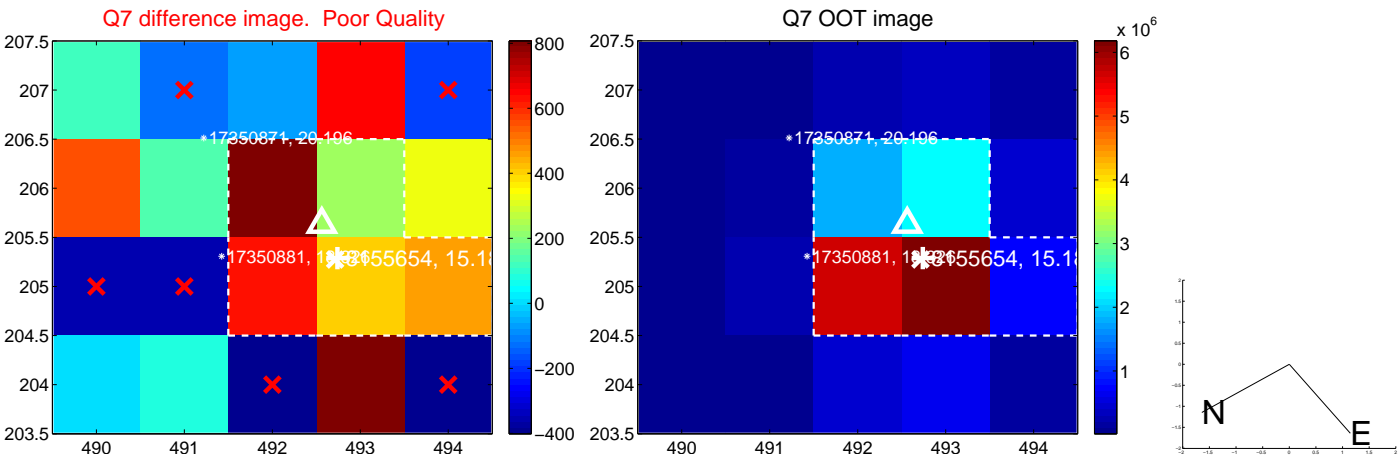
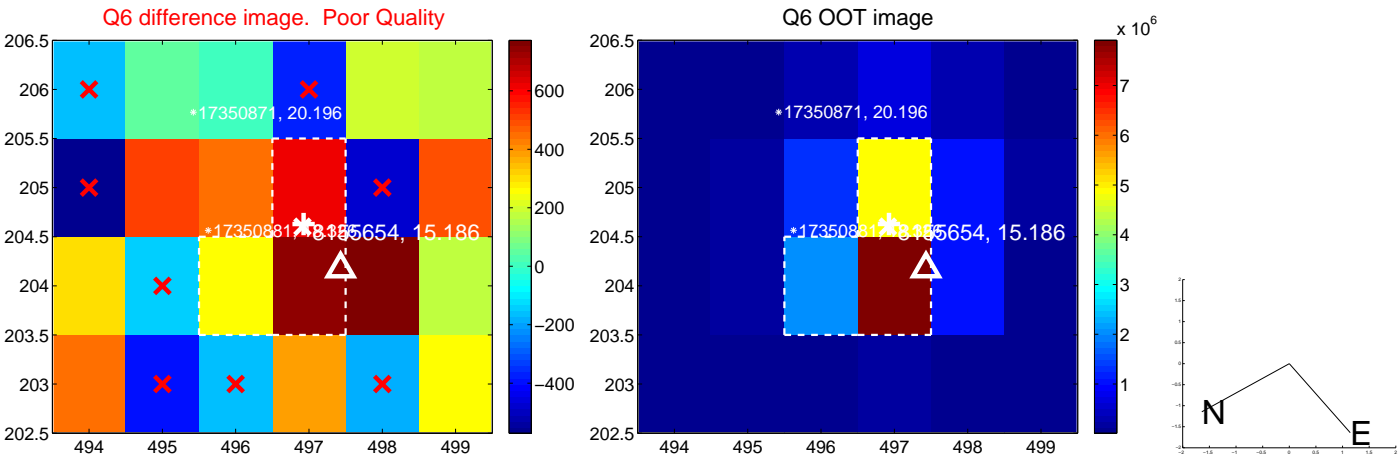
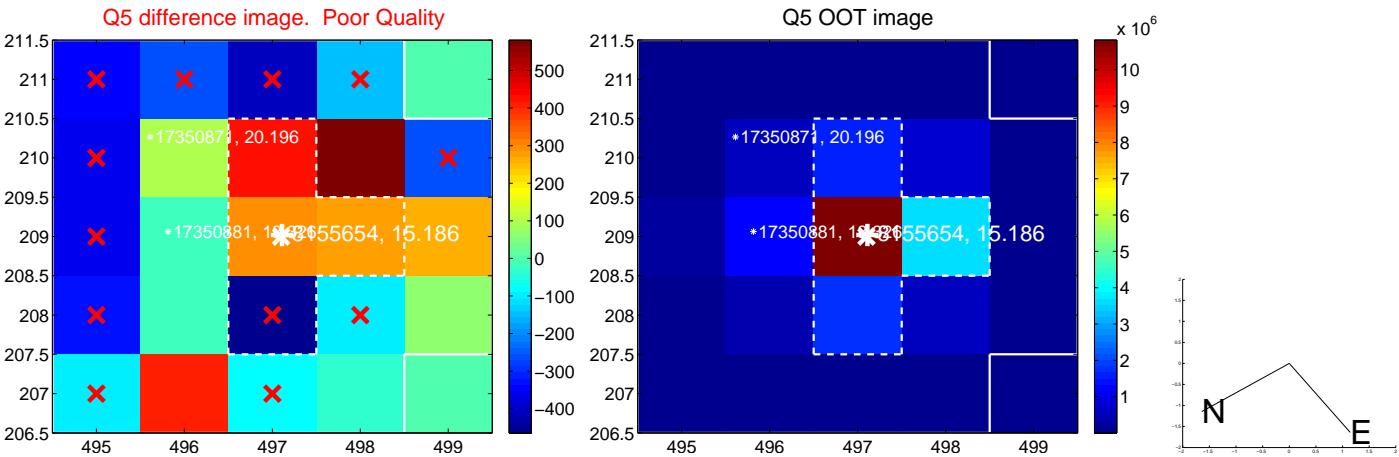


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

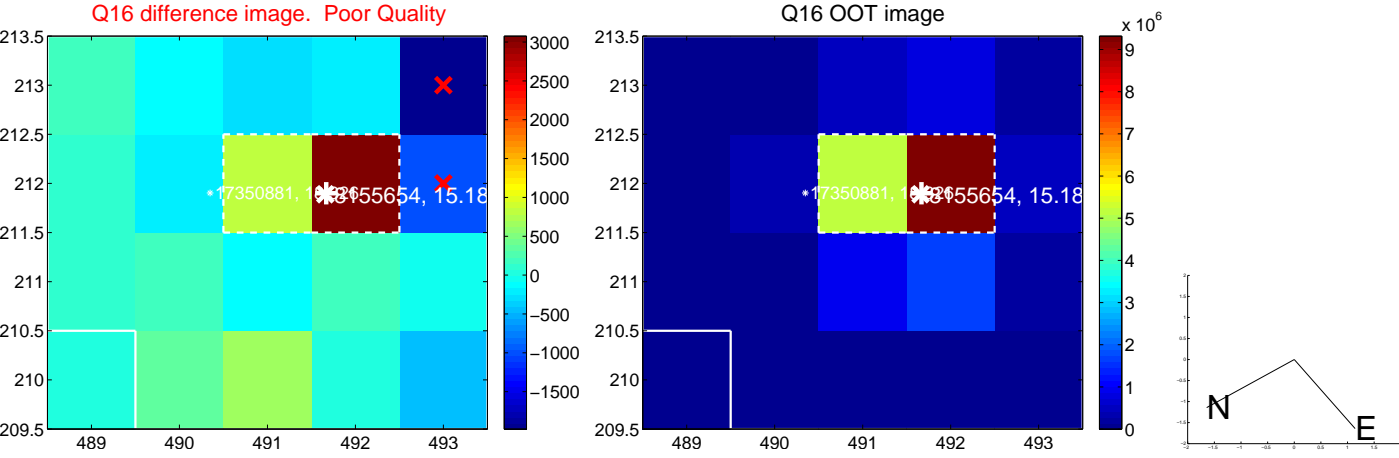
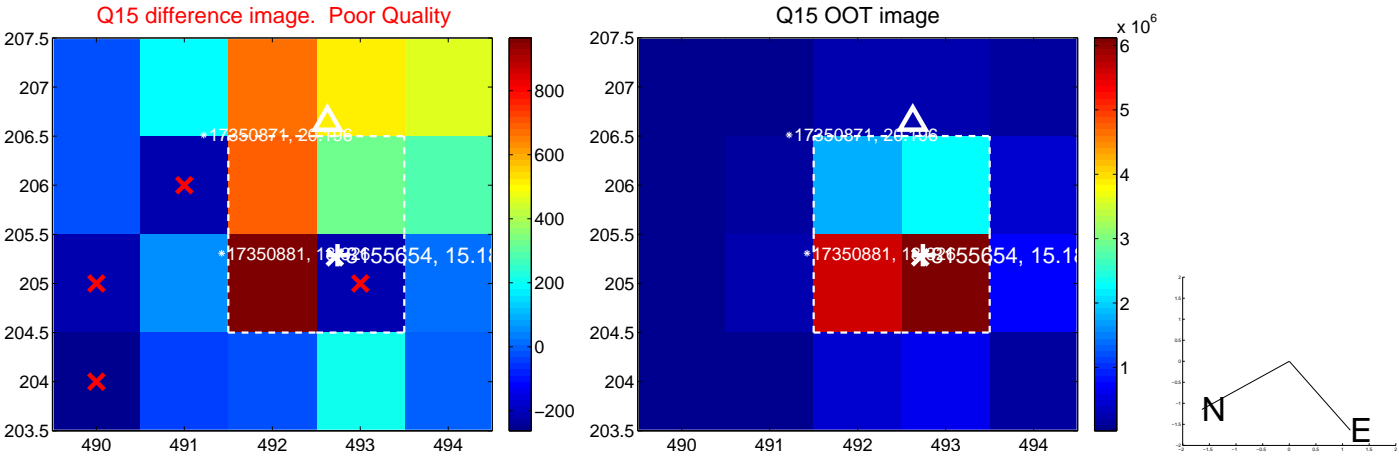
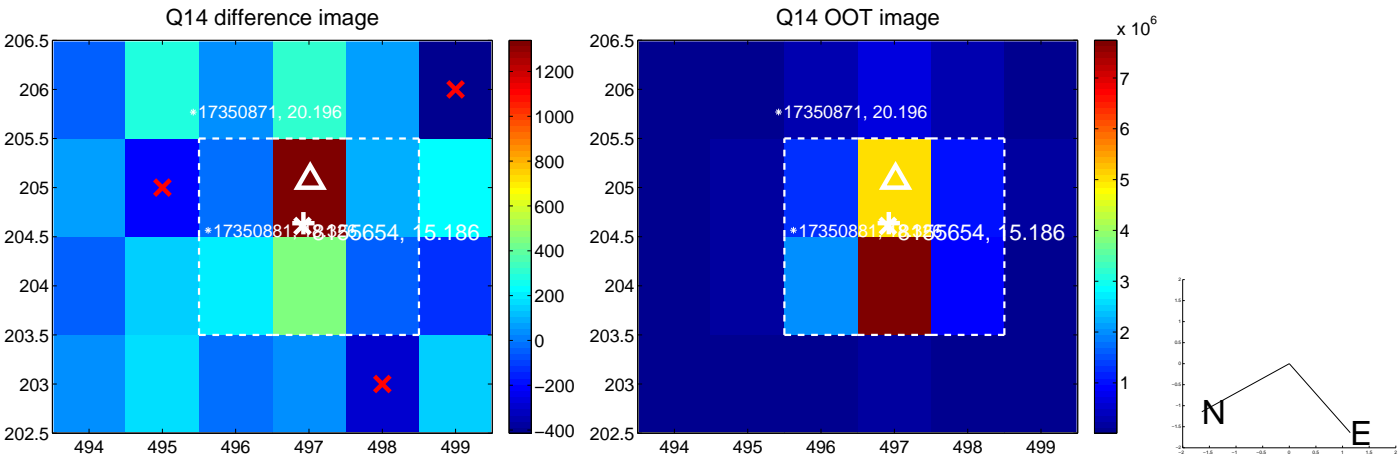
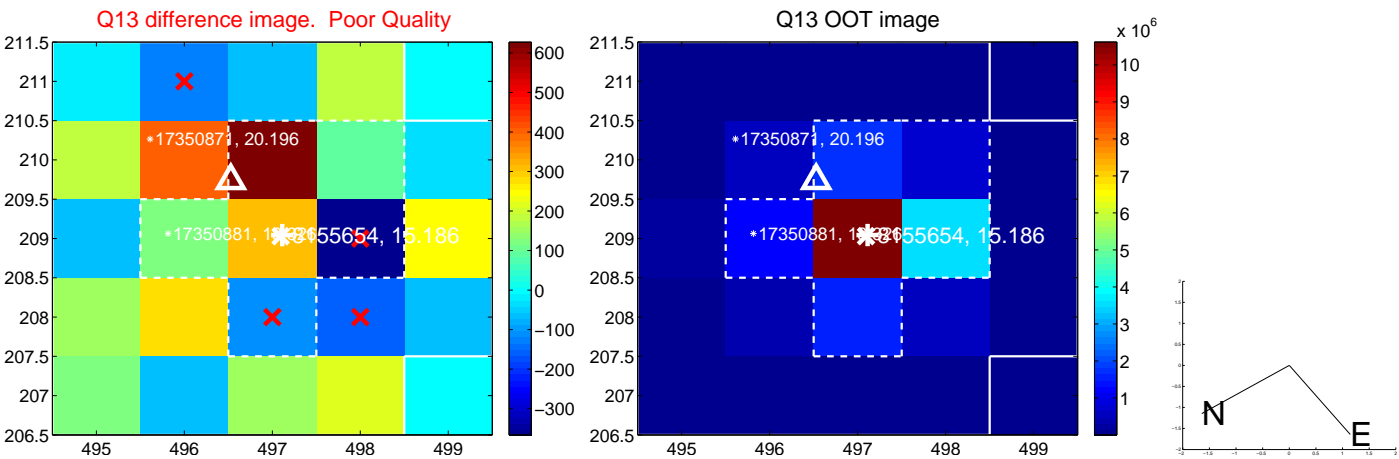
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



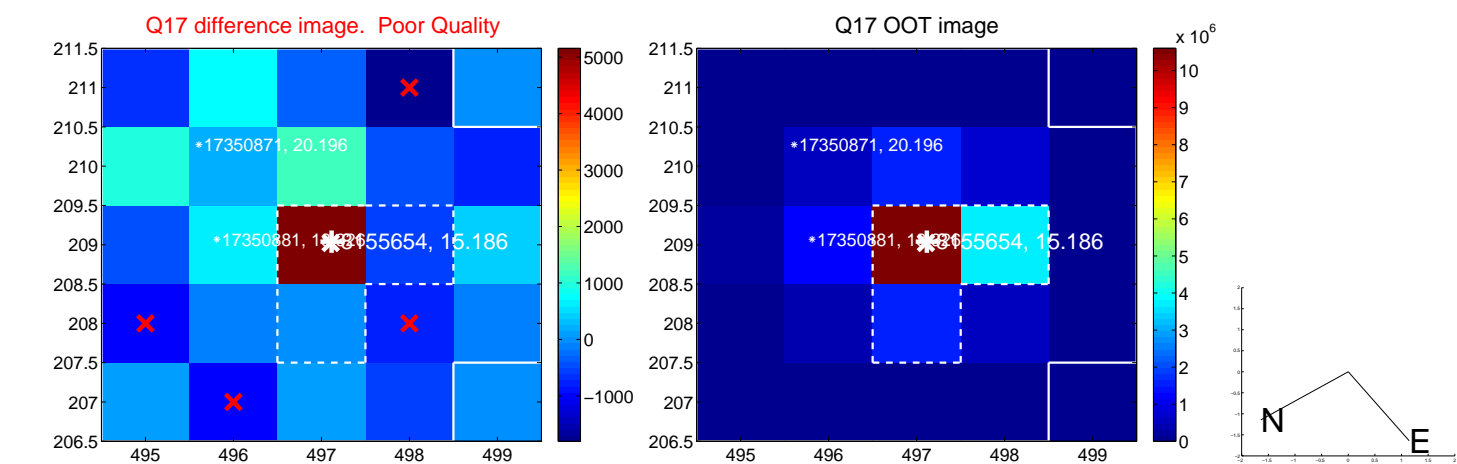
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



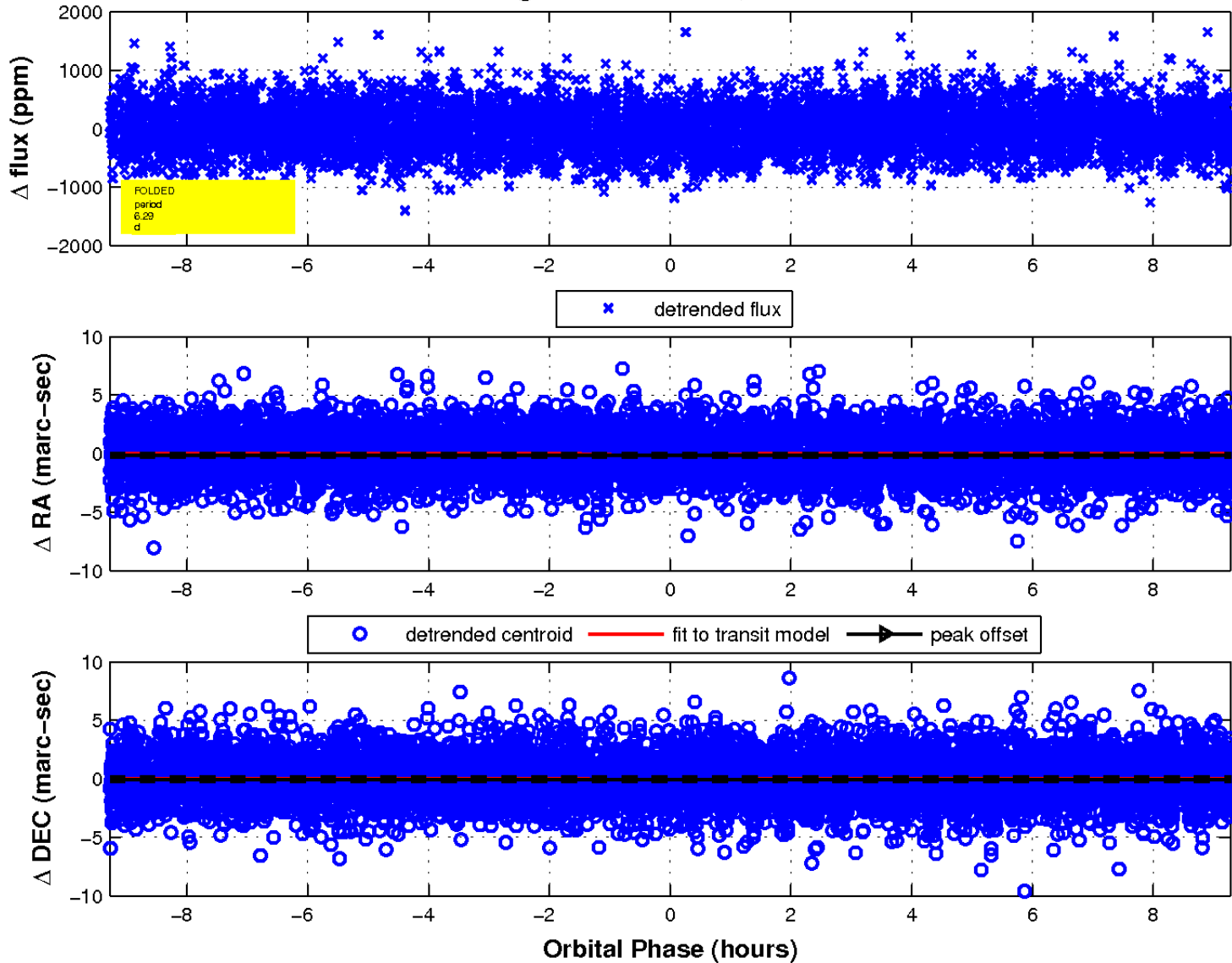
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

