

KIC 007816935

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})
007816935-01	OBS	6921.01	6.877815	133.035876	105.8	3.149	7.8	8.1	1.06	6274	1.23	290.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007816935-01	OBS	PC	0.95	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.

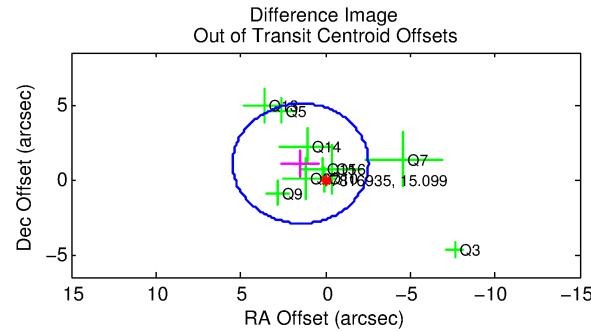
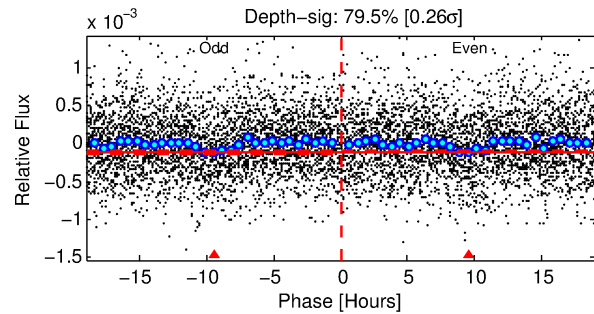
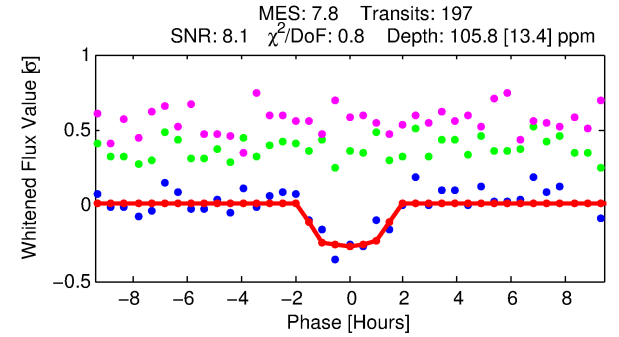
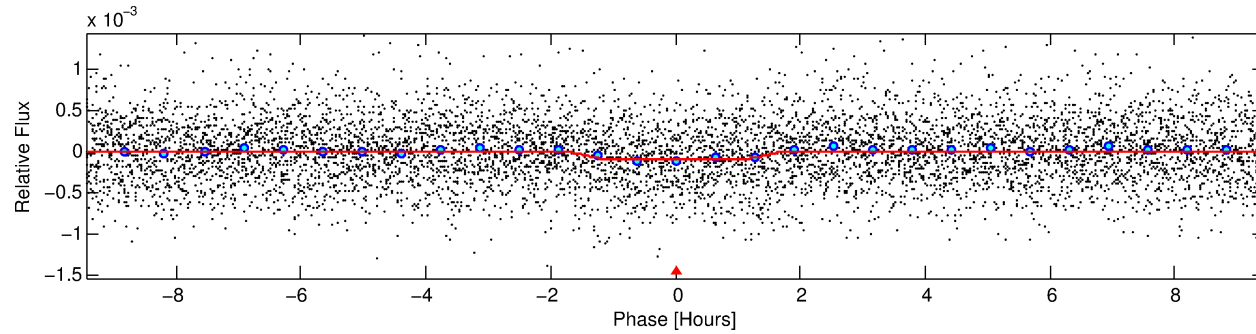
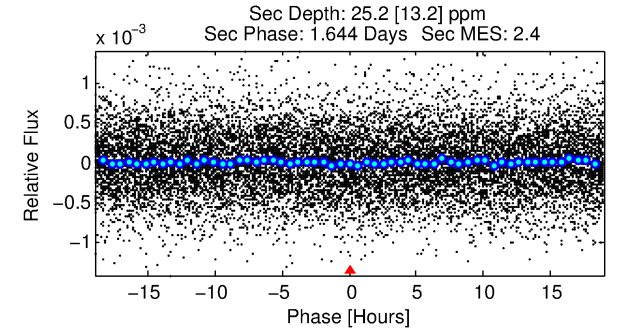
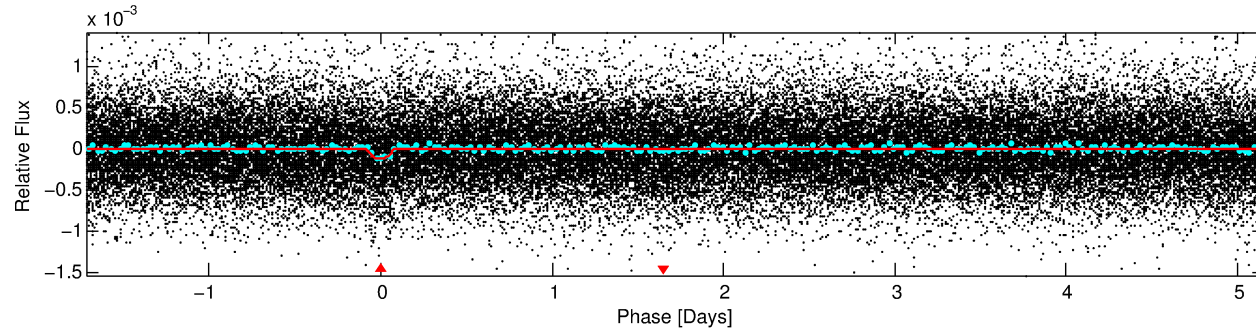
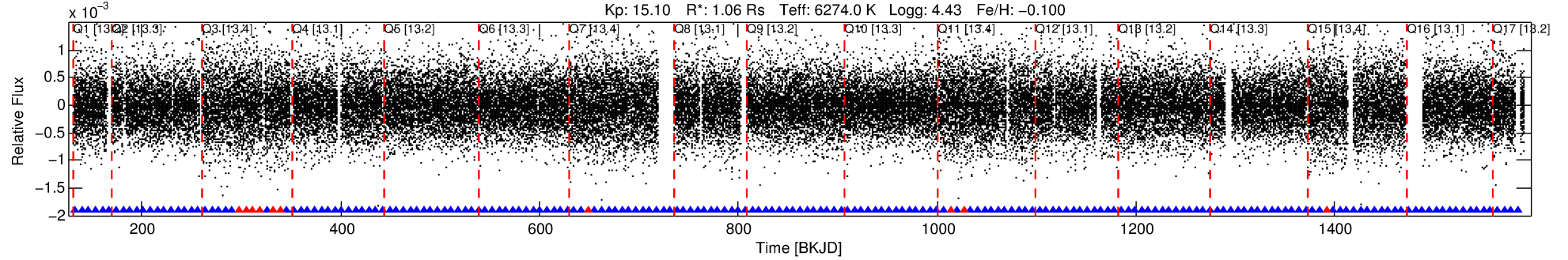
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007816935-01

No Significant Match Found

DV One-Page Summary

KIC: 7816935 Candidate: 1 of 1 Period: 6.878 d
KOI: K06921.01 Corr: 0.978



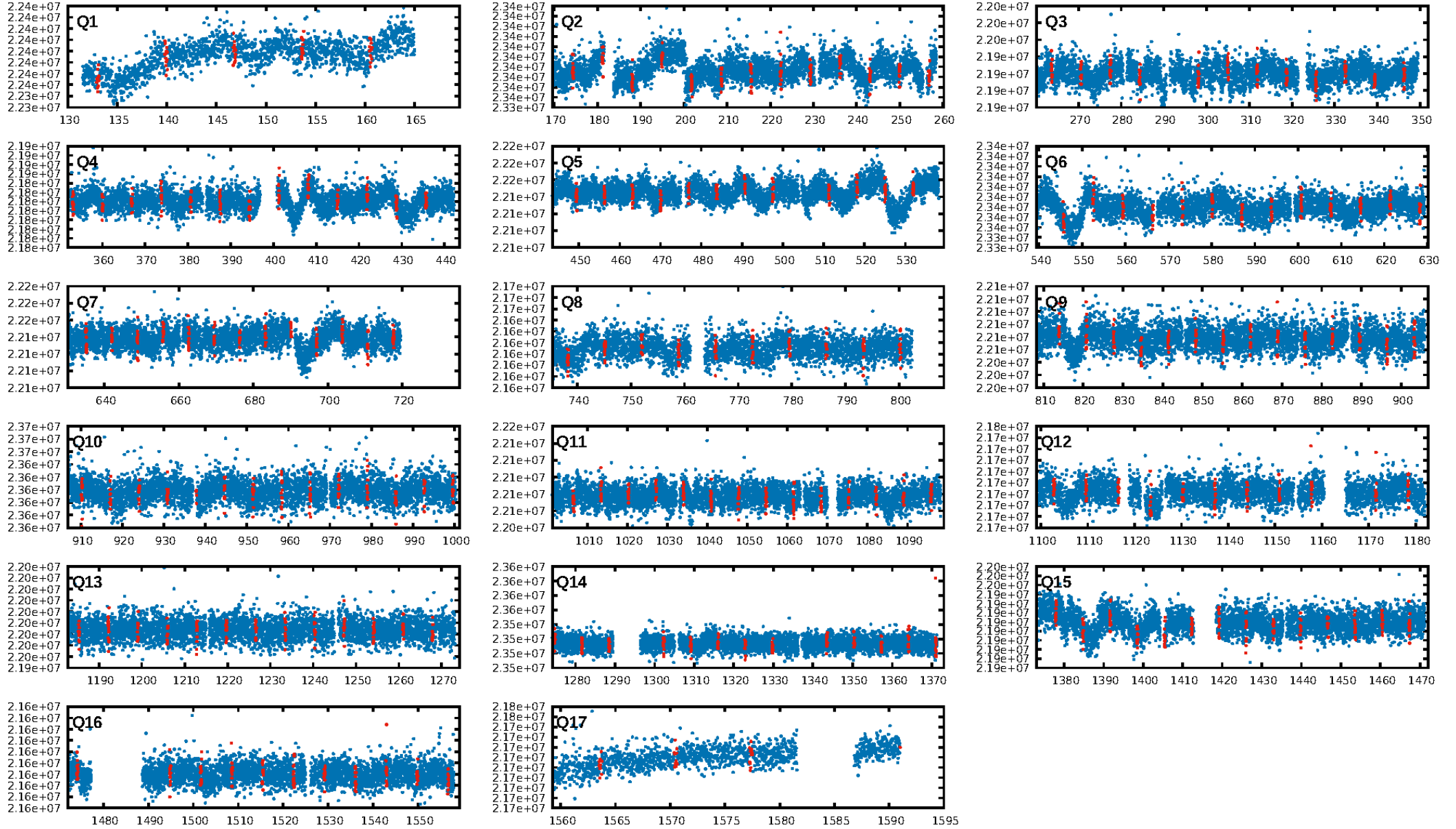
DV Fit Results:

Period = 6.87781 [0.00007] d
Epoch = 133.0359 [0.0075] BKJD
Rp/R* = 0.0106 [0.0094]
a/R* = 9.59 [44.96]
b = 0.83 [1.76]
Seff = 290.10 [126.09]
Teff = 1052 [114] K
Rp = 1.23 [1.17] Re
a = 0.0735 [0.0209] AU
Ag = 49.68 [94.30] [0.52σ]
Teffp = 4320 [2007] K [1.63σ]

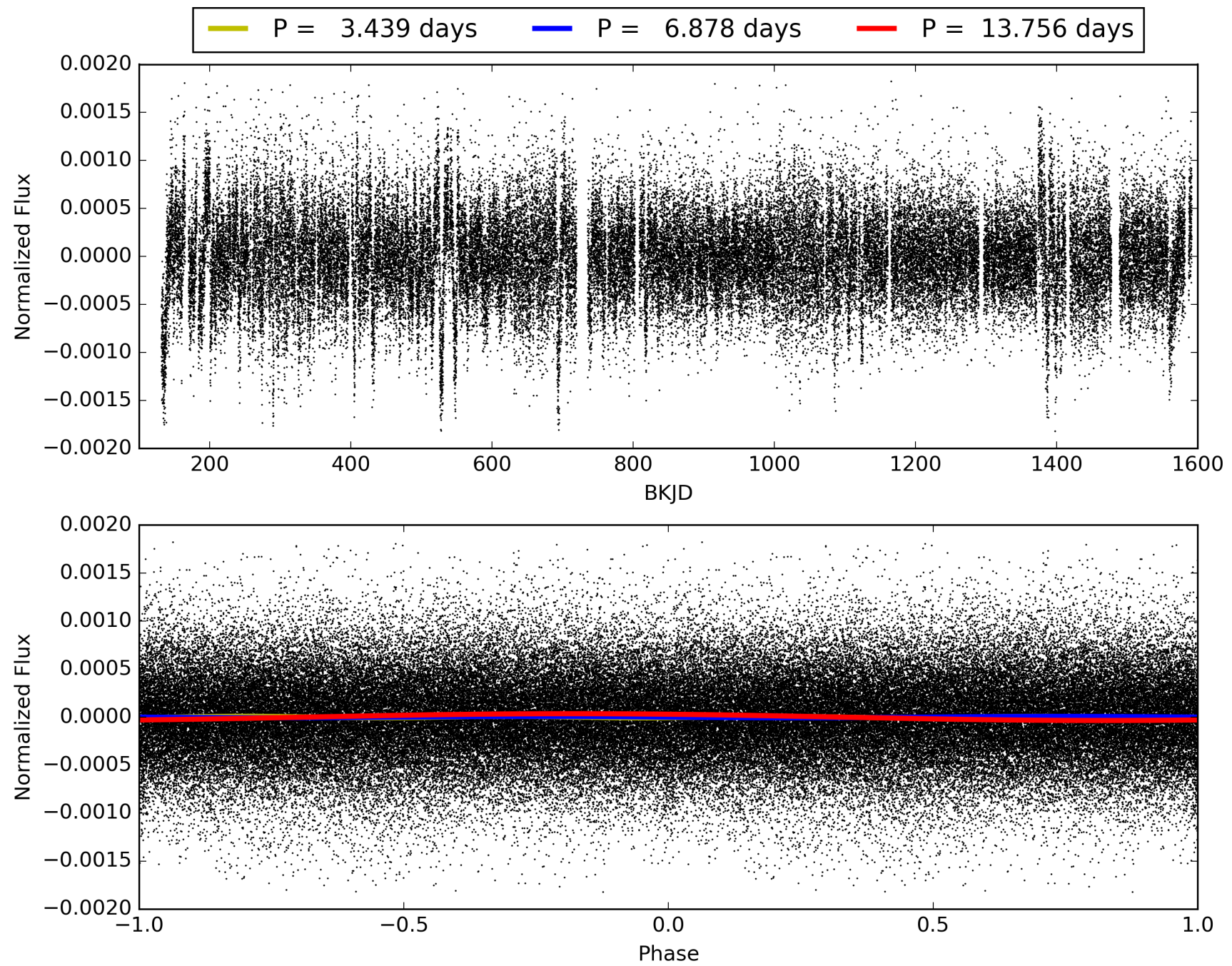
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.32e-15
RollingBand-fgt: 0.95 [179/189]
GhostDiagnostic-chr: 0.3801
Centroid-sig: 13.4%
Centroid-so: 2.366 arcsec [1.36σ]
OotOffset-rm: 1.814 arcsec [1.36σ]
KicOffset-rm: 1.814 arcsec [1.50σ]
OotOffset-st: 3/3/1/3 [10]
KicOffset-st: 3/3/1/3 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007816935-01, PDC Light Curves

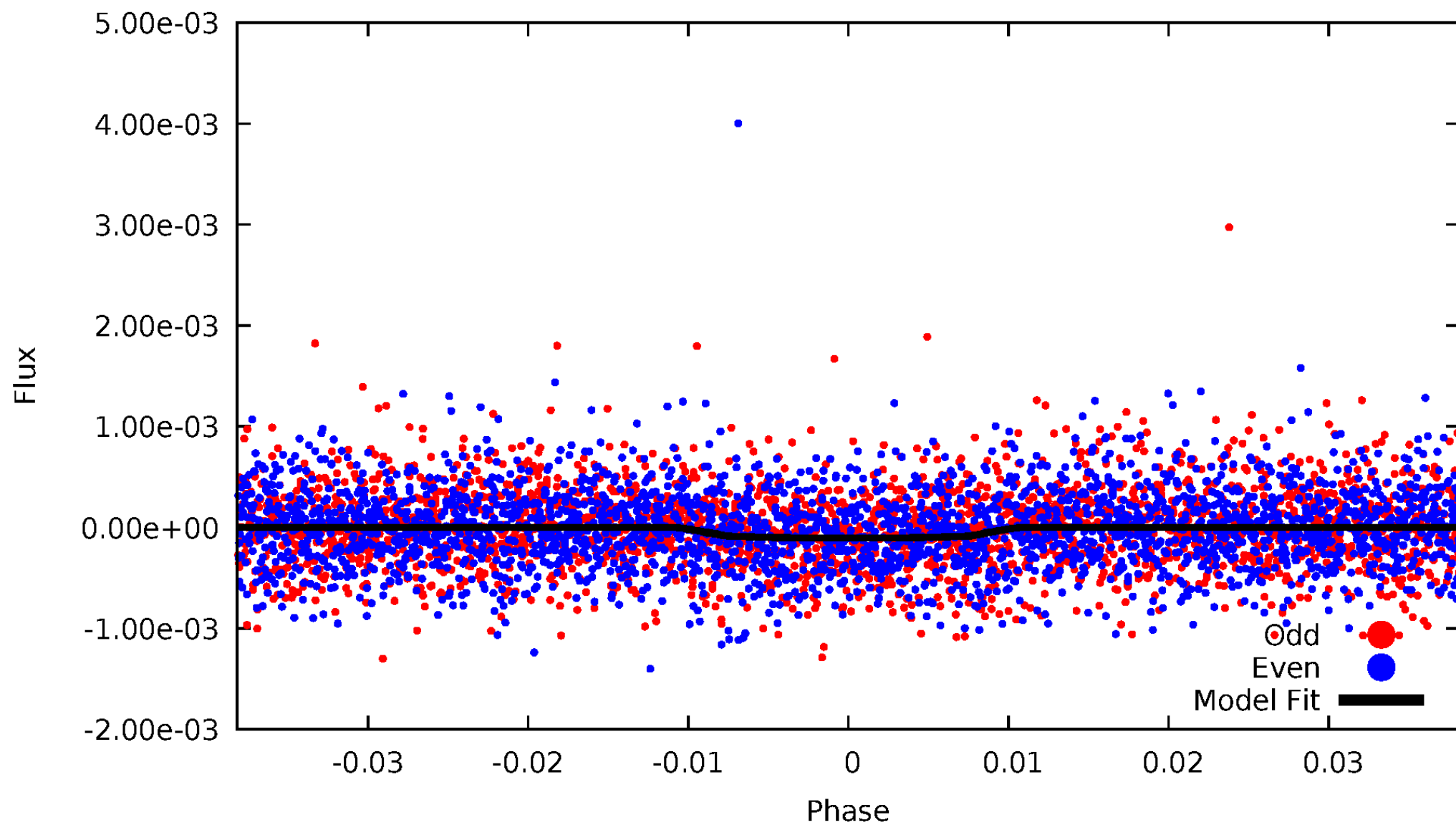


TCE 007816935-01



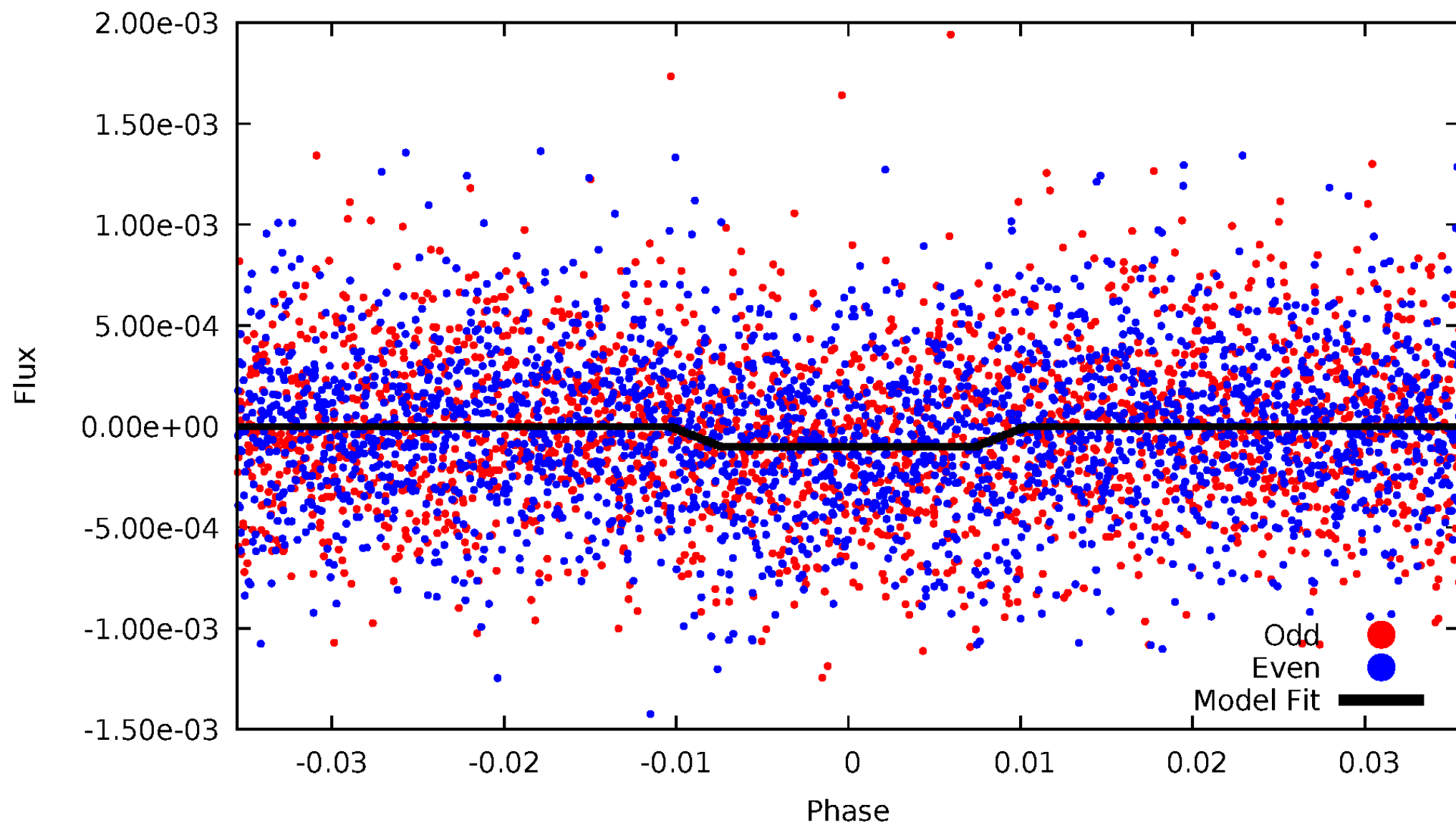
DV Odd/Even

TCE 007816935-01



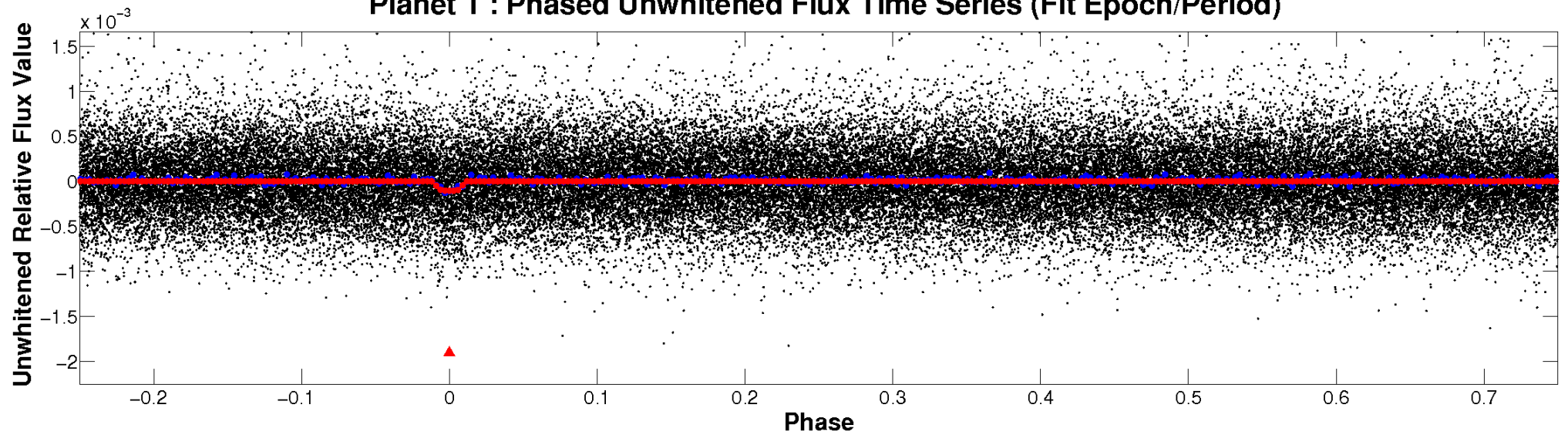
ALT Odd/Even

TCE 007816935-01

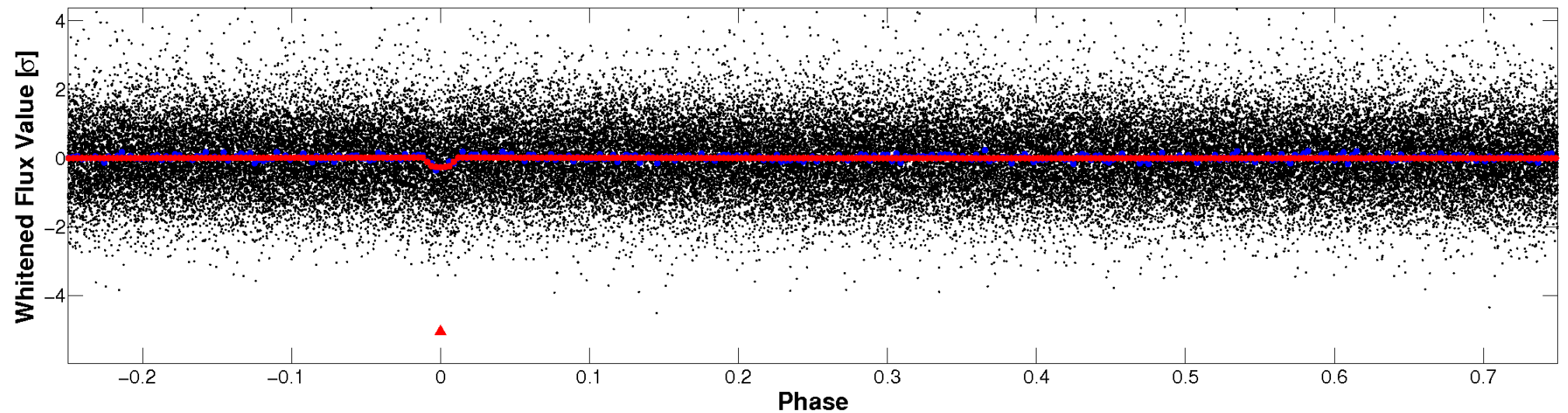


Non-Whitened Vs. Whitened Light Curve

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

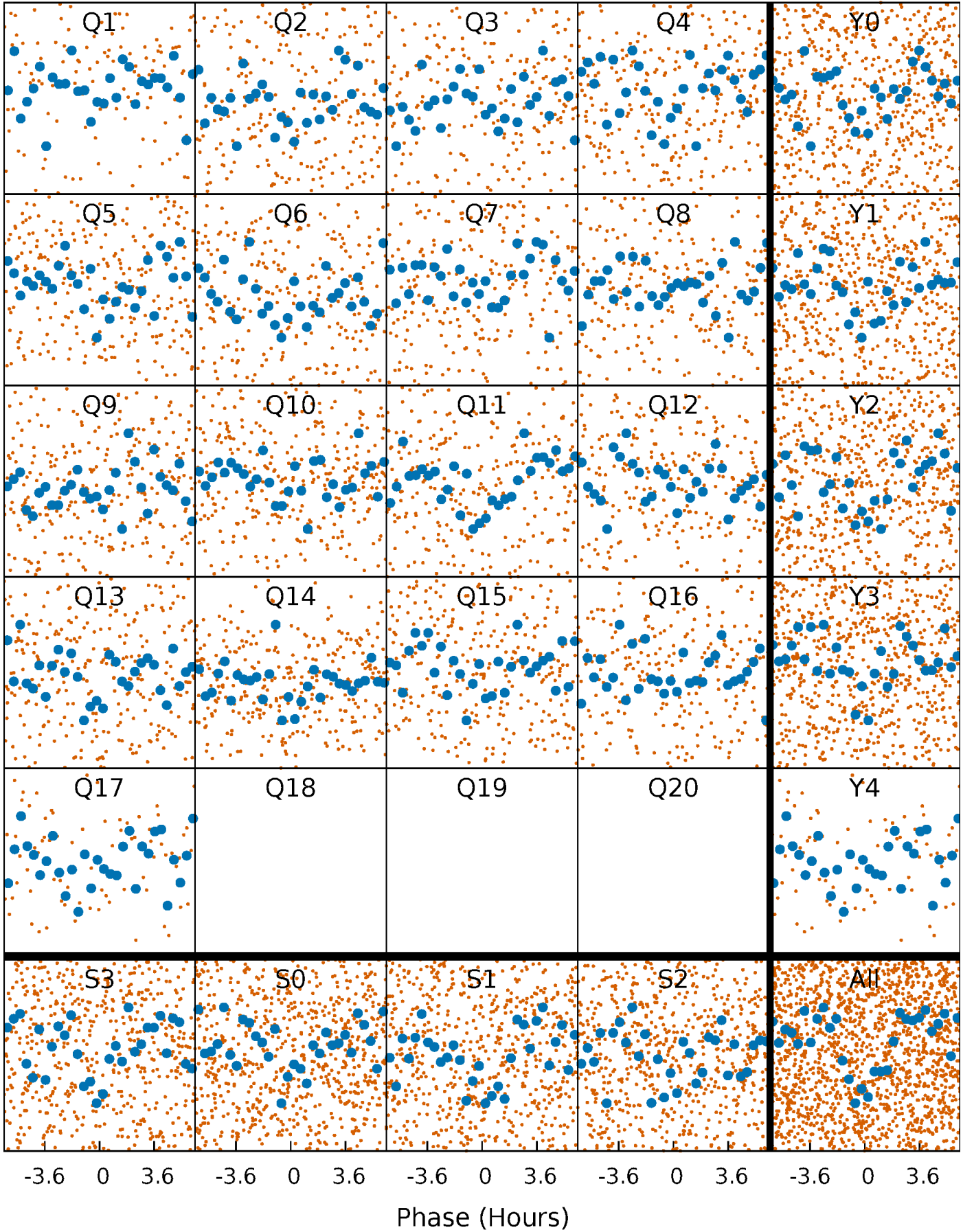


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



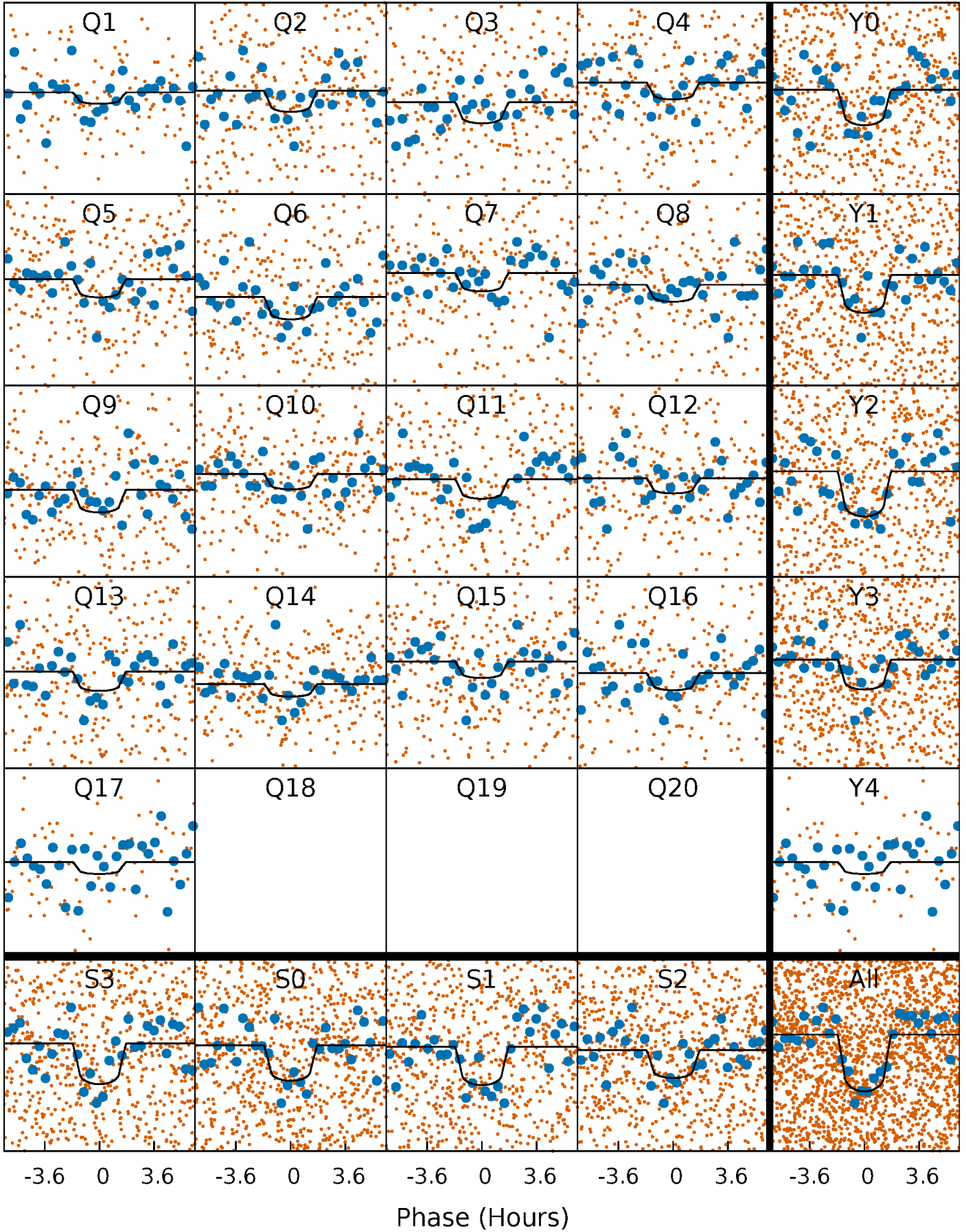
PDC Quarter-Phased Transit Curves

TCE 007816935-01 P= 6.877815 Days $T_0=133.035876$ (BKJD)



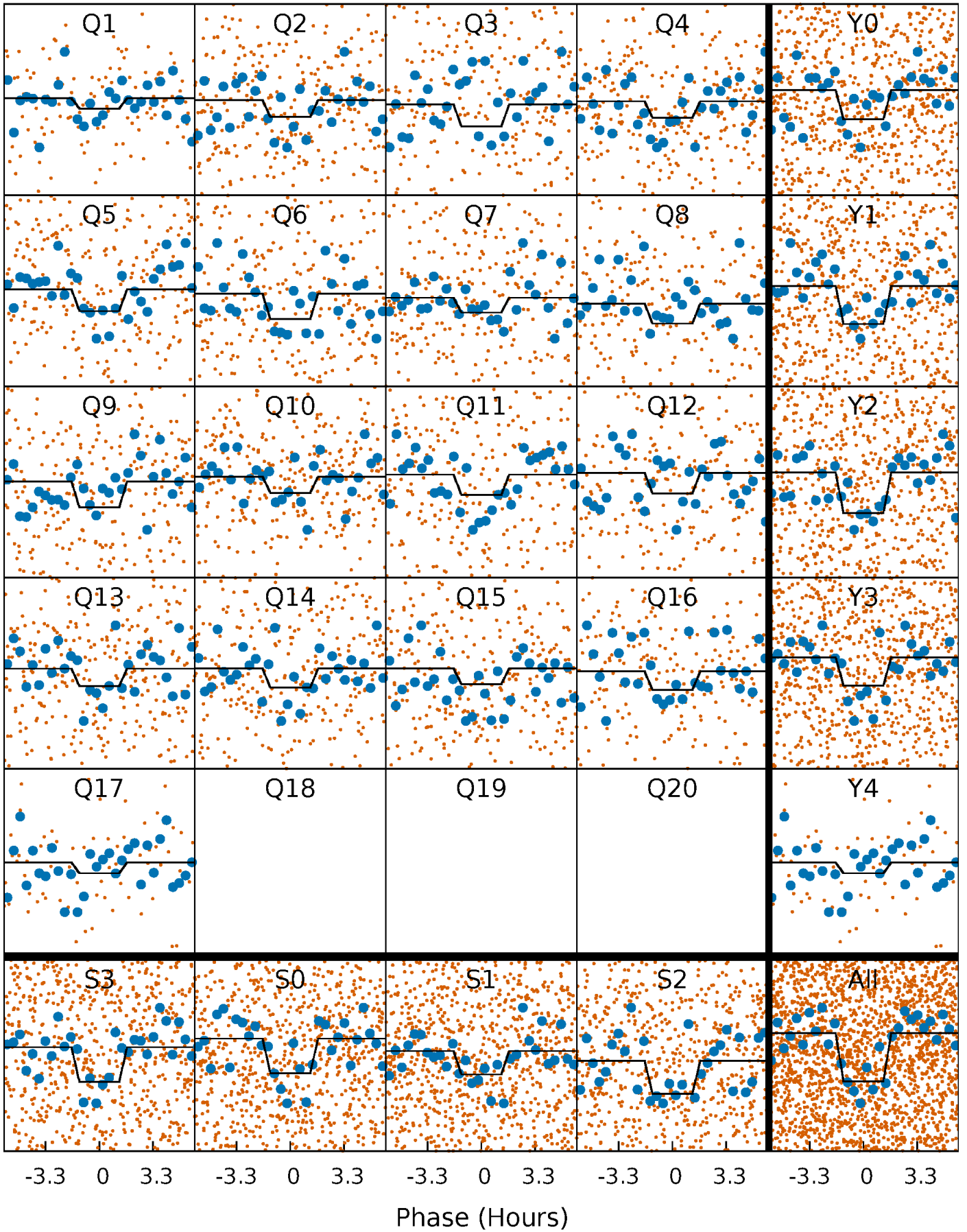
DV Quarter-Phased Transit Curves

TCE 007816935-01 P= 6.877815 Days $T_0=133.035876$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

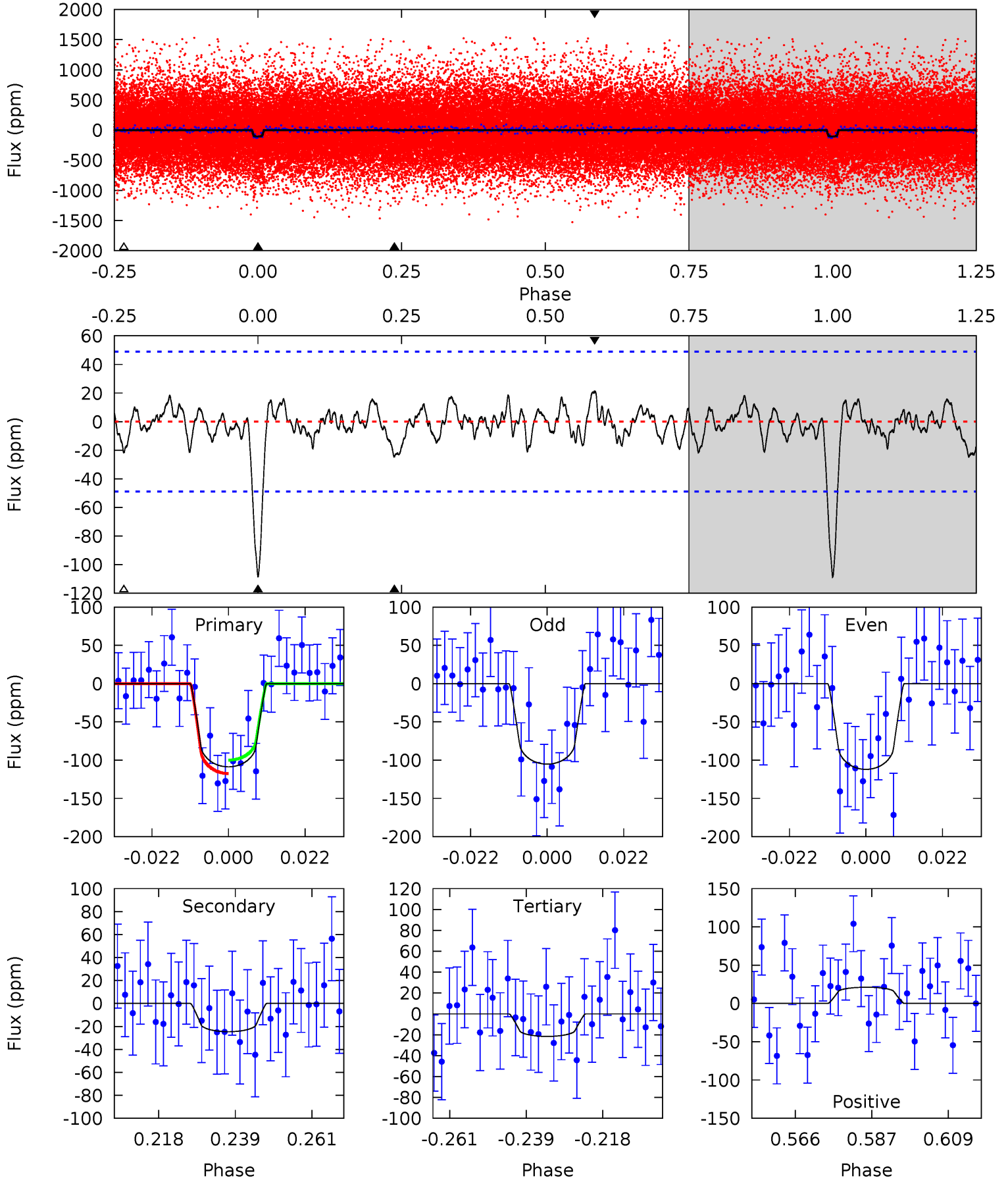
TCE 007816935-01 P= 6.877747 Days $T_0=133.042636$ (BKJD)



DV Model-Shift Uniqueness Test

007816935-01, P = 6.877815 Days, E = 126.158061 Days

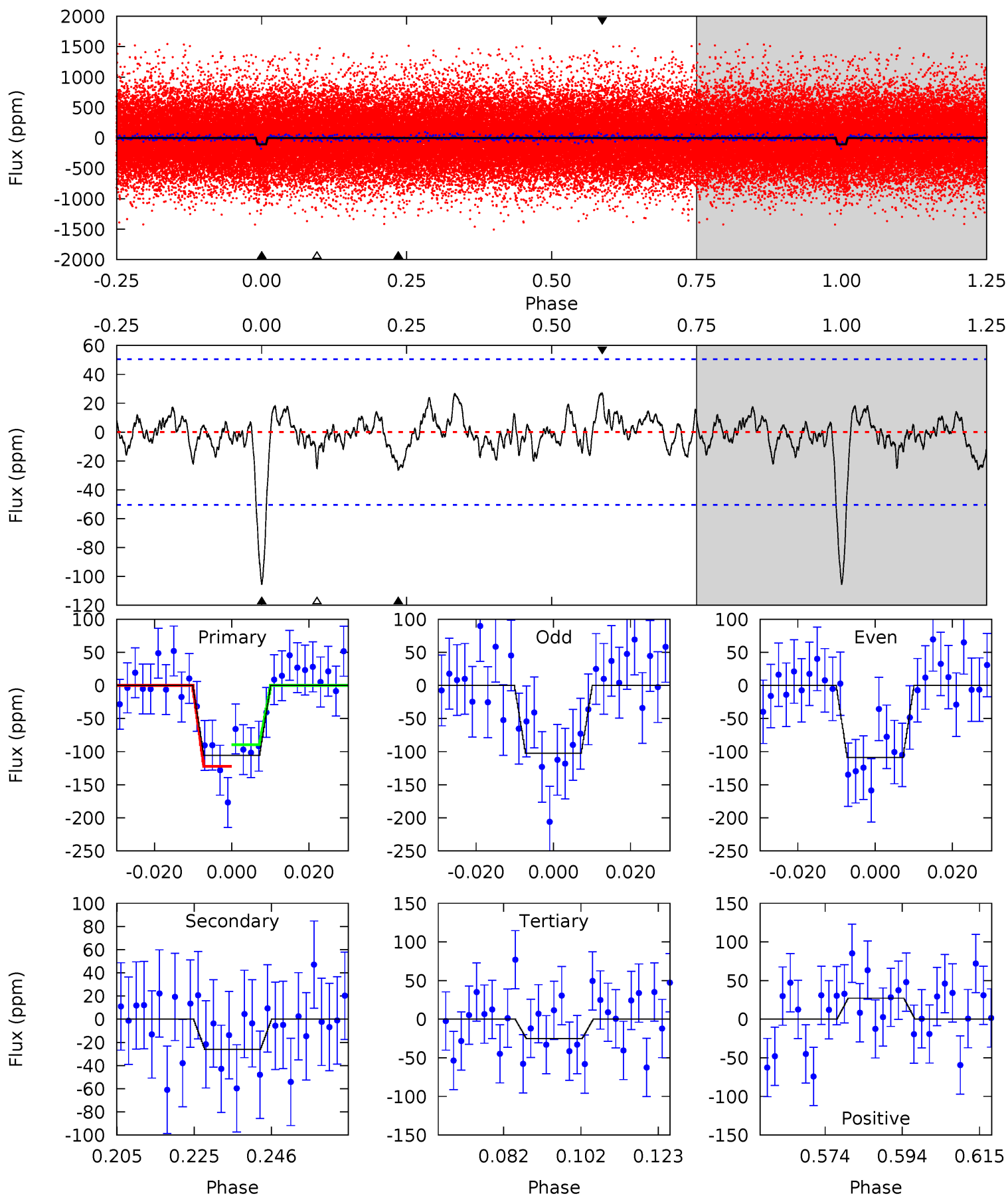
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	2.45	2.15	2.11	4.88	2.29	0.83	8.69	8.73	0.30	0.34	0.34	1.02	0.16	0.88



Alt Model-Shift Uniqueness Test

007816935-01, P = 6.877747 Days, E = 126.164889 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	2.53	2.45	2.63	4.89	2.32	0.89	7.79	7.61	0.08	-0.10	0.31	0.96	0.20	1.58



Stellar Parameters For KIC 007816935

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6274^{+174}_{-218}	$4.434^{+0.056}_{-0.224}$	$-0.100^{+0.250}_{-0.300}$	$1.062^{+0.361}_{-0.120}$	$1.115^{+0.156}_{-0.156}$	$1.313^{+0.405}_{-0.731}$
	+3%/-3%	+1%/-5%	+250%/-300%	+34%/-11%	+14%/-14%	+31%/-56%
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 007816935-01 / KOI 6921.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 10	$1.48^{+1.09}_{-0.91}$	1502^{+120}_{-75}	4230^{+2235}_{-823}	31^{+186}_{-22}
Alt.	-26 ± 10	$1.44^{+1.18}_{-0.89}$	1504^{+123}_{-81}	4278^{+2425}_{-818}	33^{+217}_{-23}

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

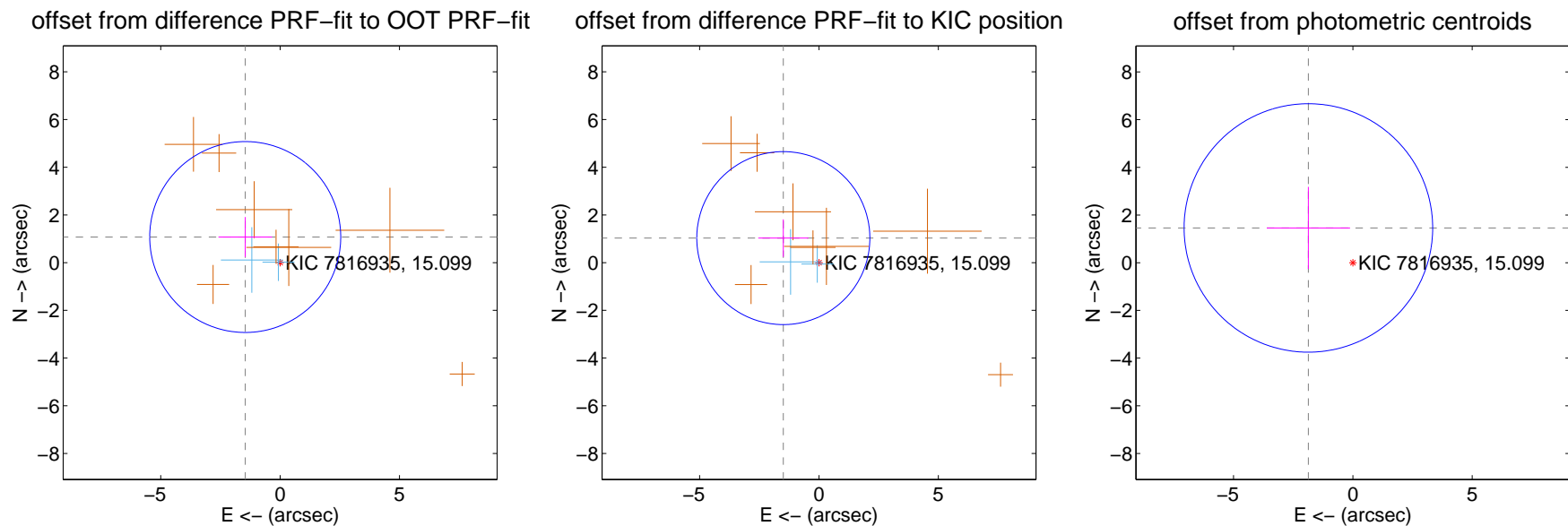
DV Centroid Data

Supplemental centroid analysis for 007816935-01. Kepler magnitude: 15.10. Transit SNR 8.07

There are 2 quarters with good PRF difference image offsets

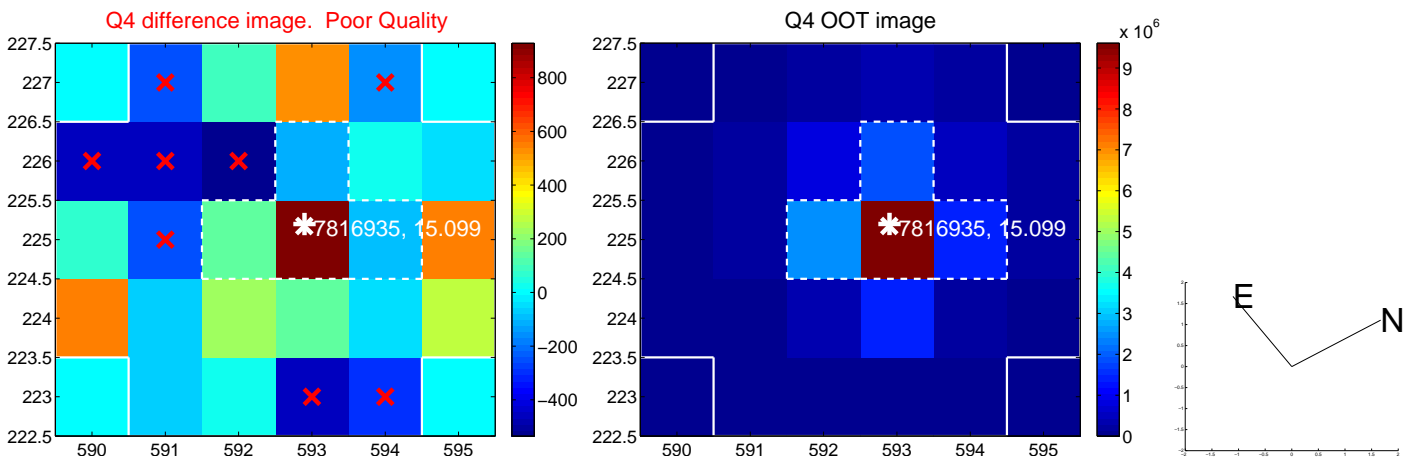
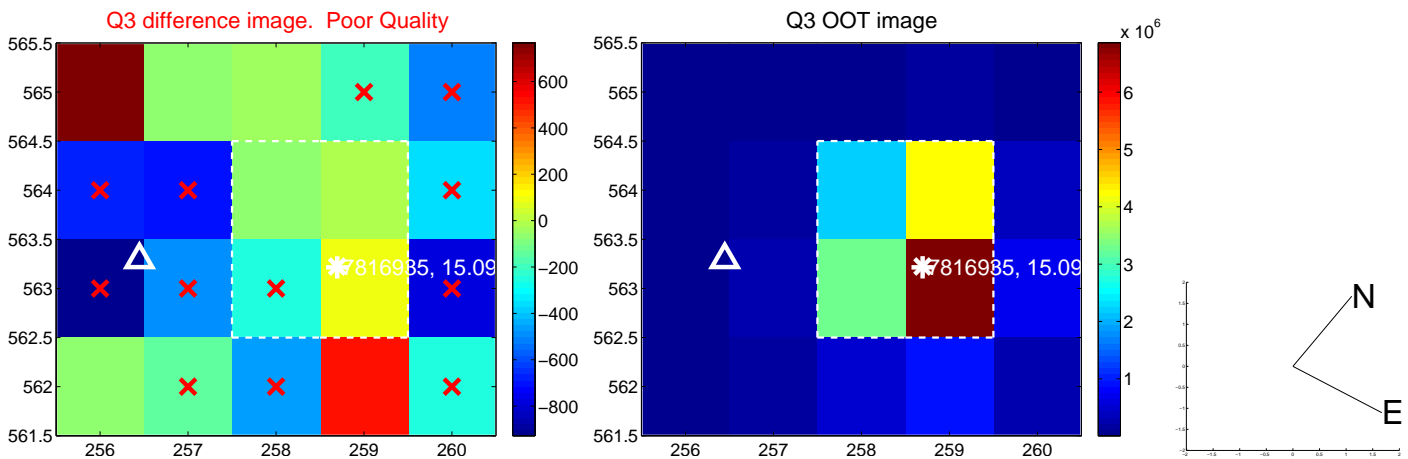
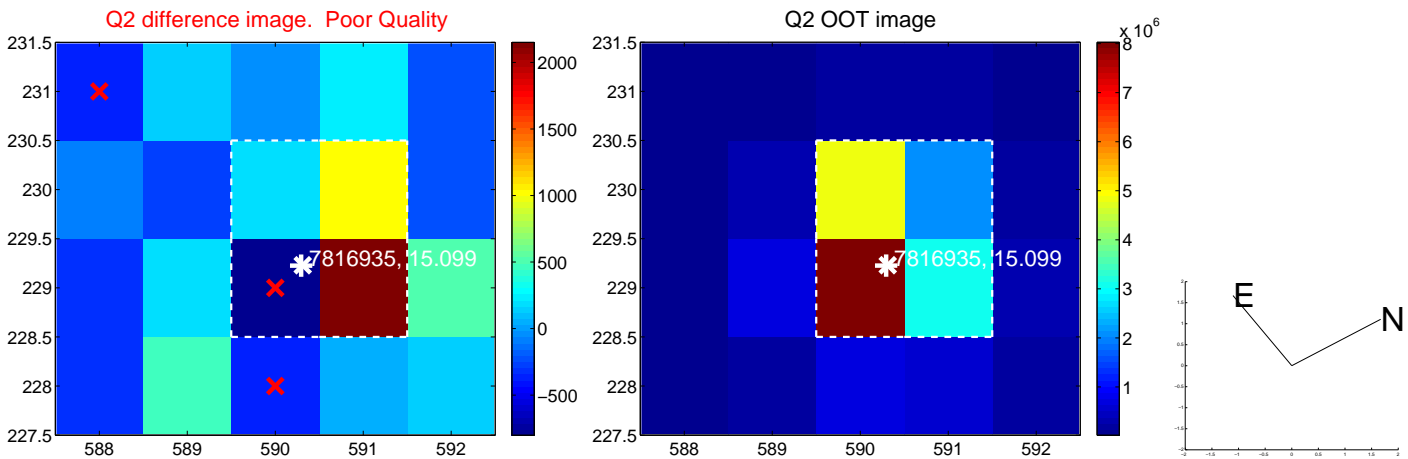
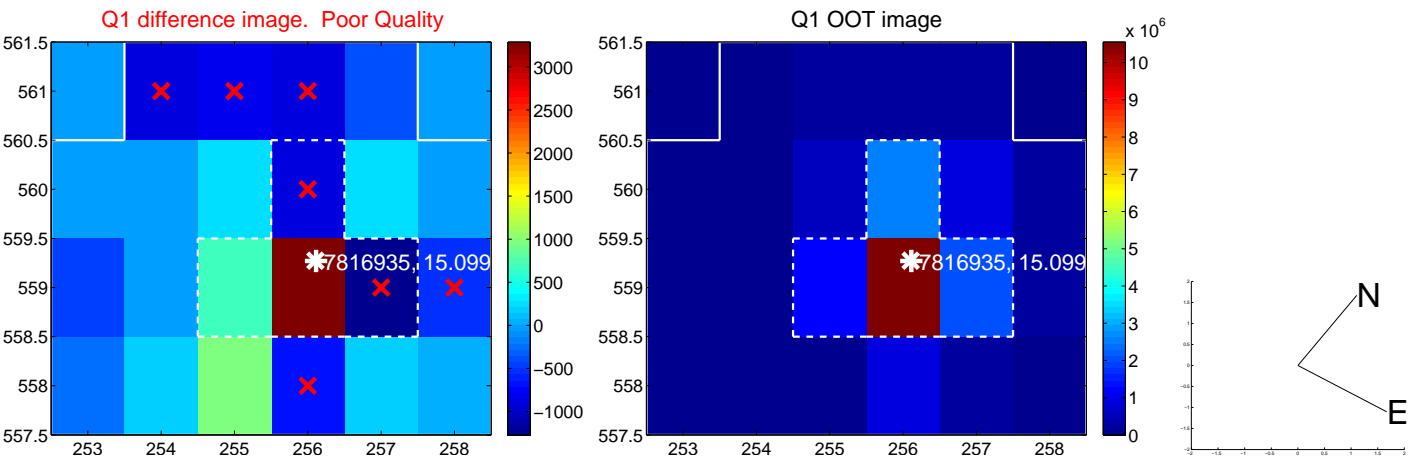
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.814 ± 1.334	1.36	1.461 ± 1.122	1.074 ± 0.839
PRF-fit source offset from KIC position	1.814 ± 1.208	1.50	1.494 ± 1.050	1.028 ± 0.784
photometric centroid source offset	2.37 ± 1.74	1.36	1.86 ± 1.74	1.46 ± 1.72

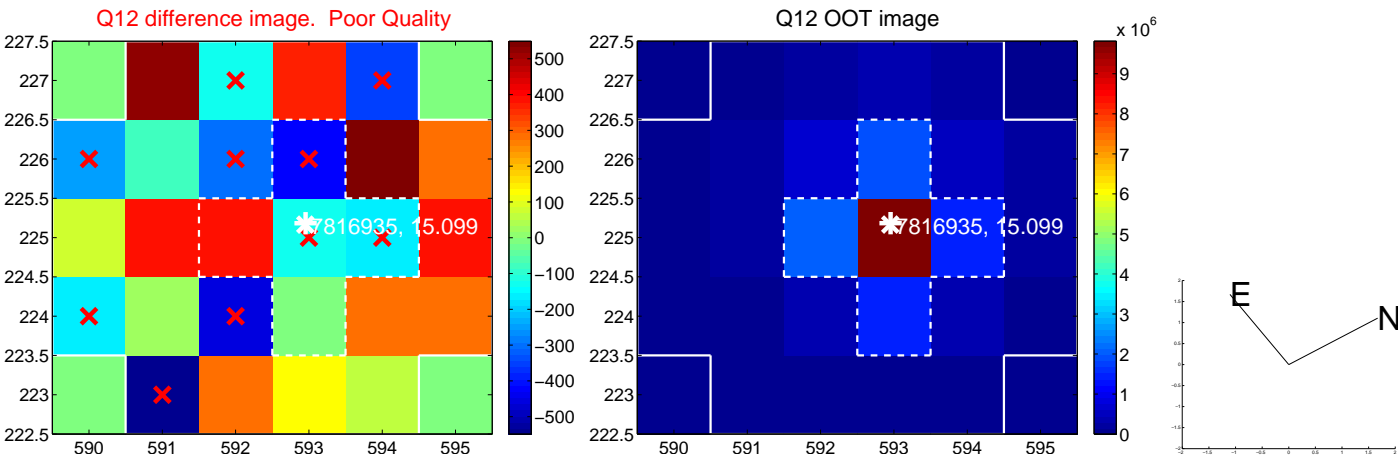
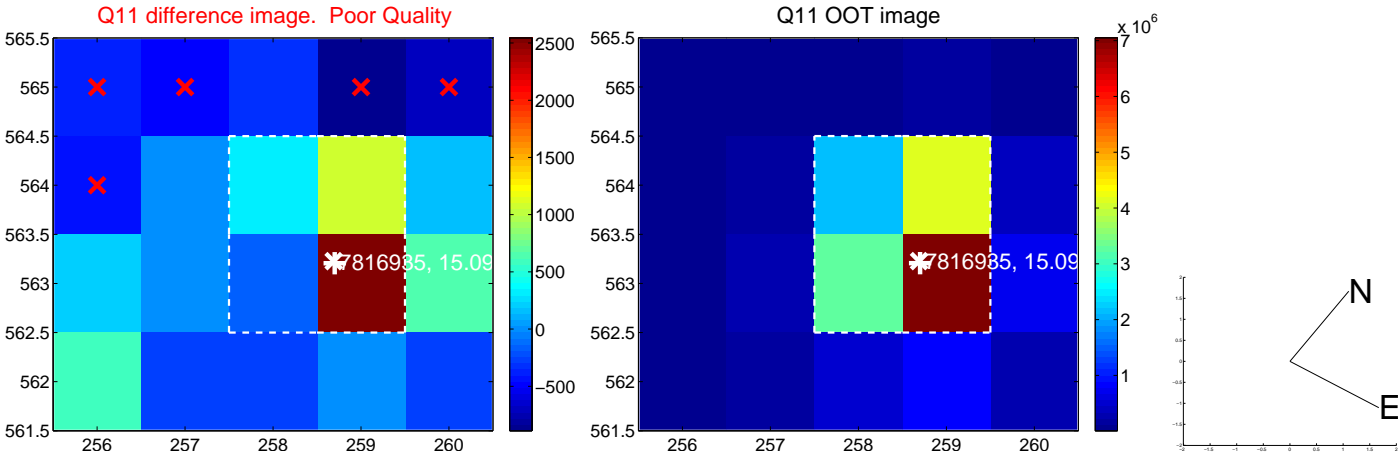
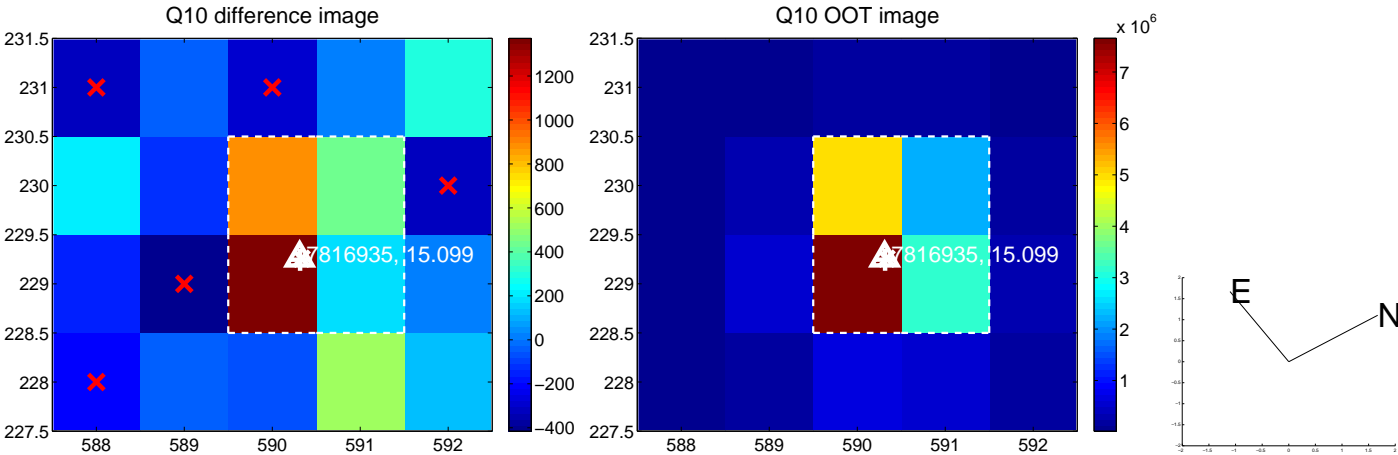
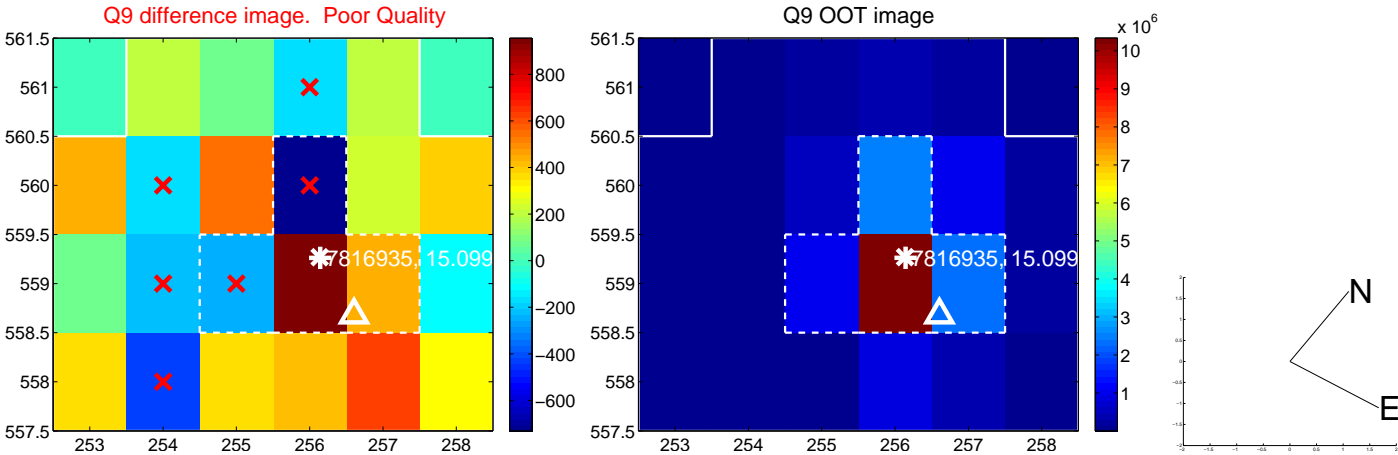


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

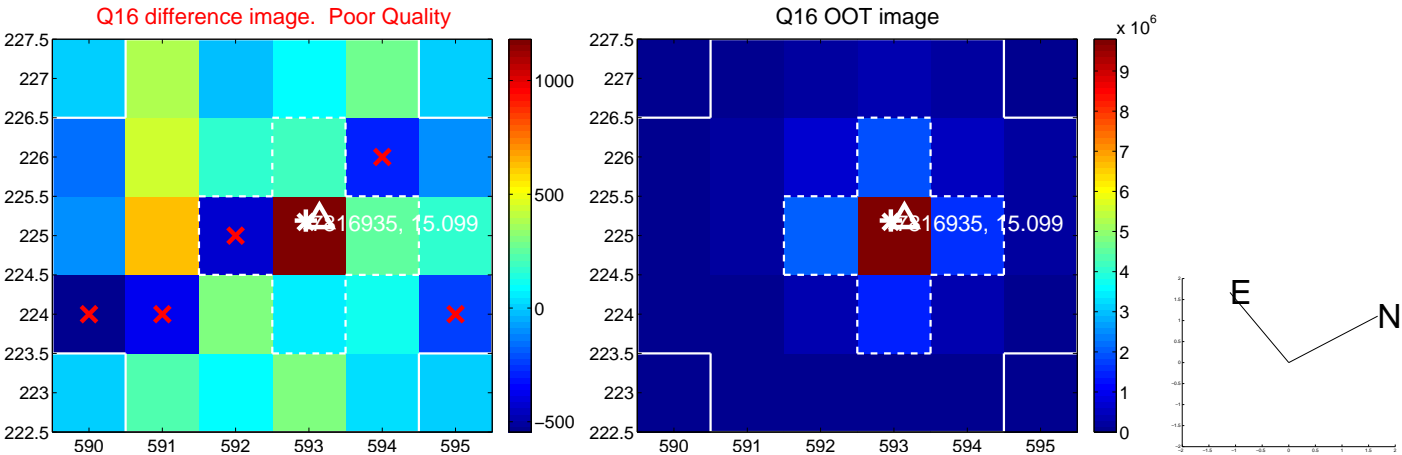
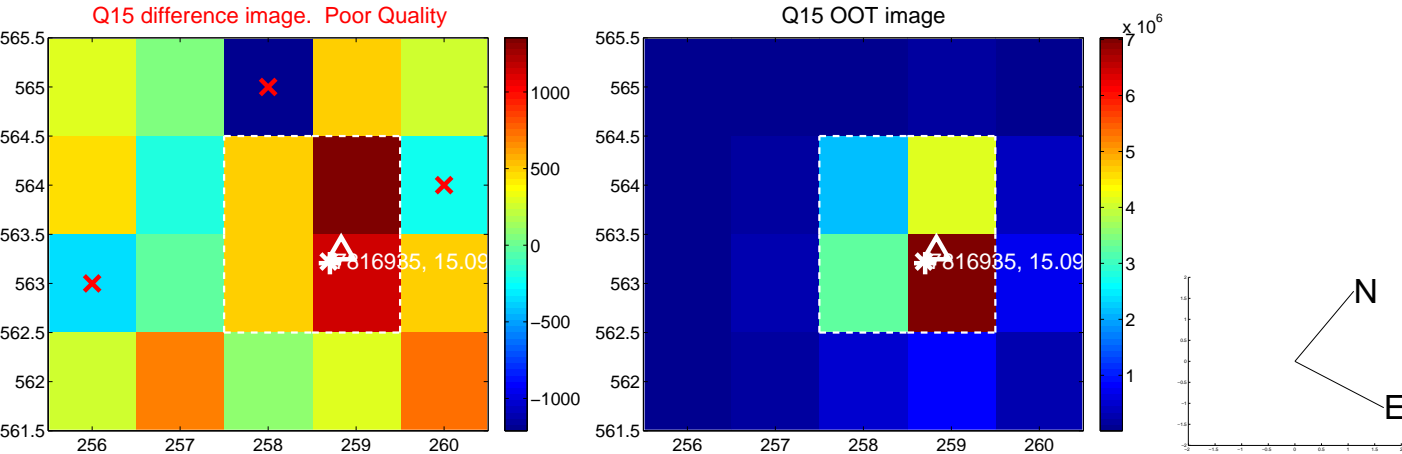
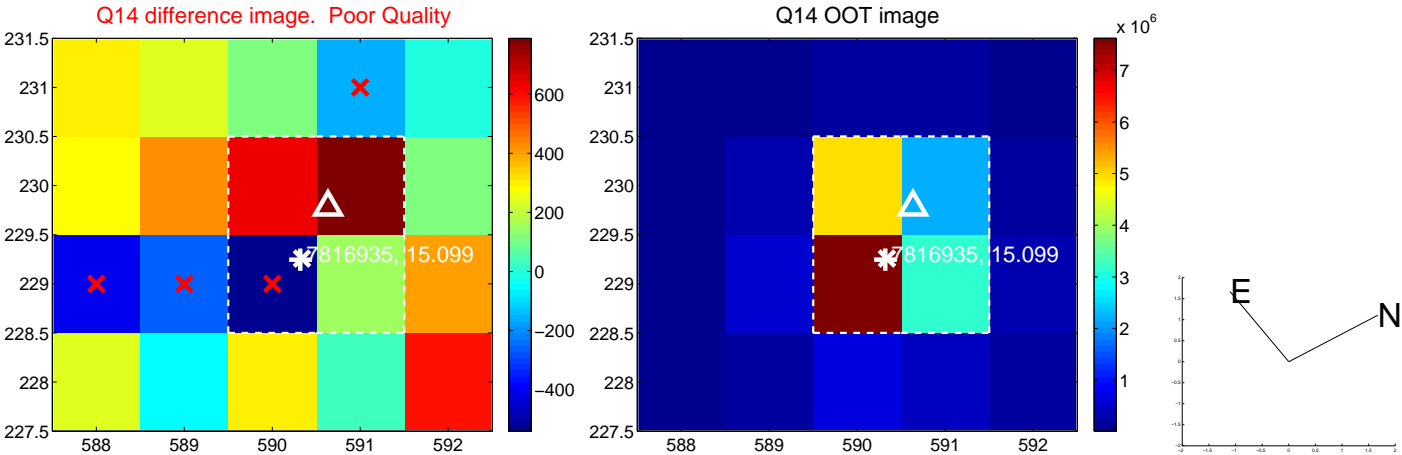
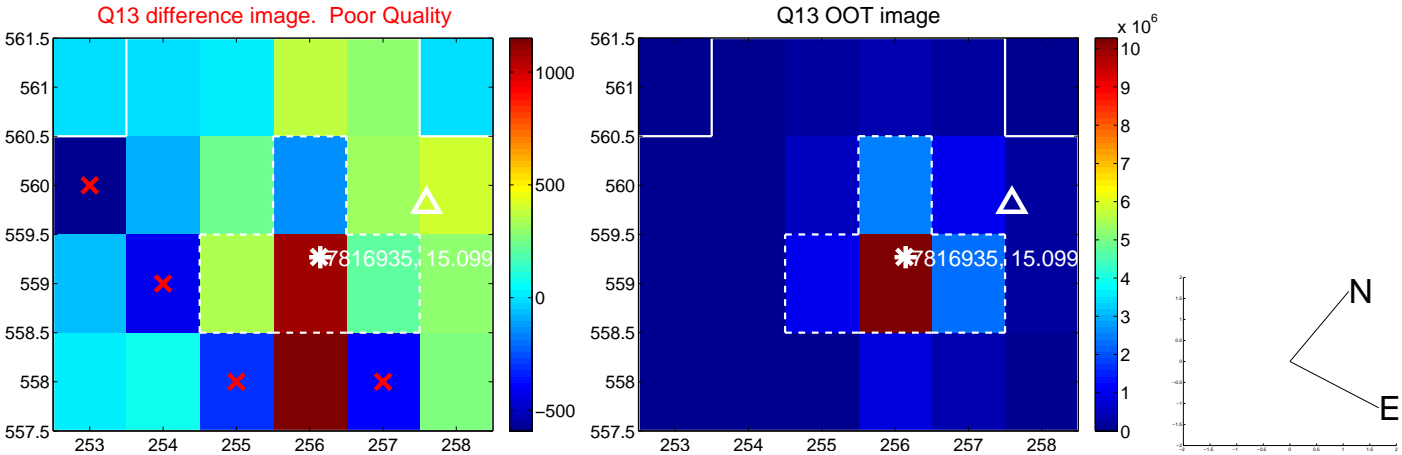
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



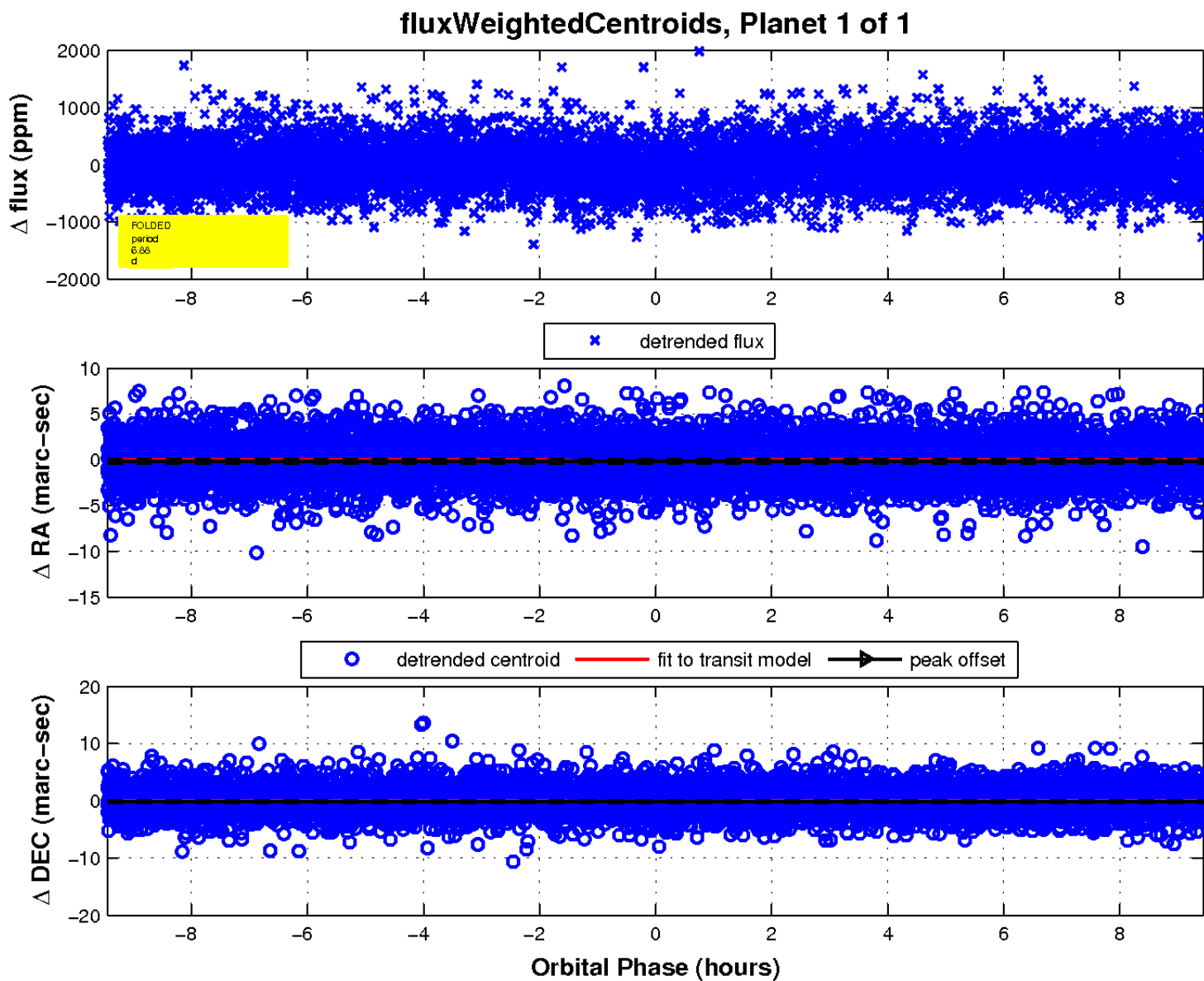
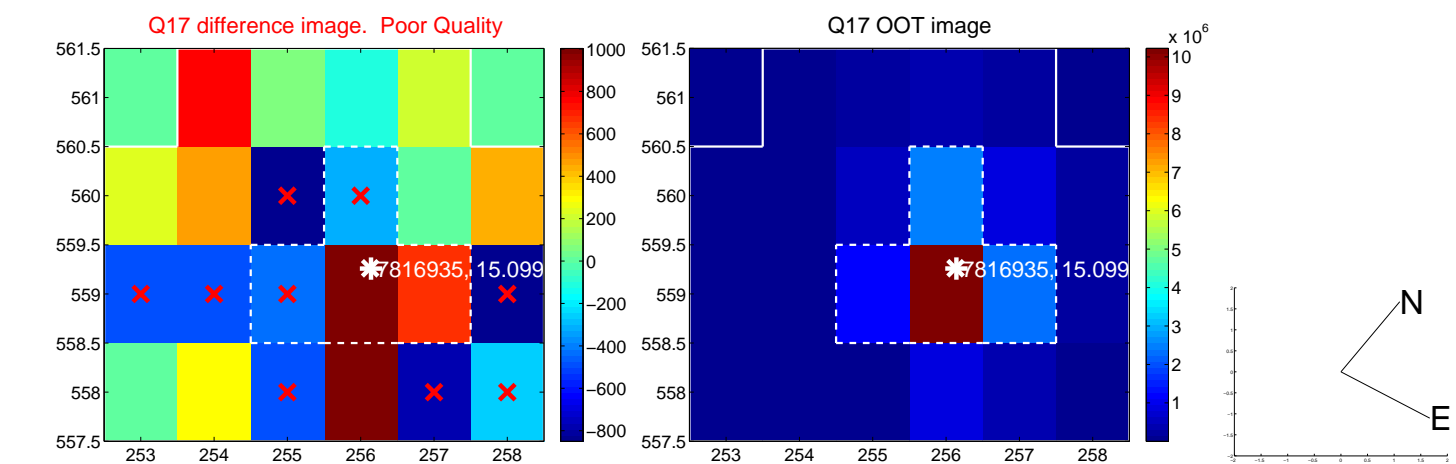
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

