

KIC 004832175

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})
004832175-01	OBS	2846.01	0.947742	132.386890	214.1	1.456	12.4	16.4	0.64	4464	1.16	539.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004832175-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—EPHEM_MATCH

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.

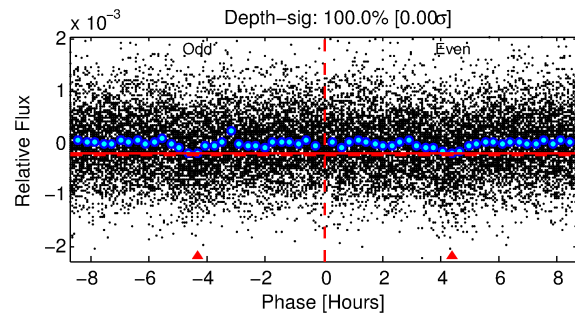
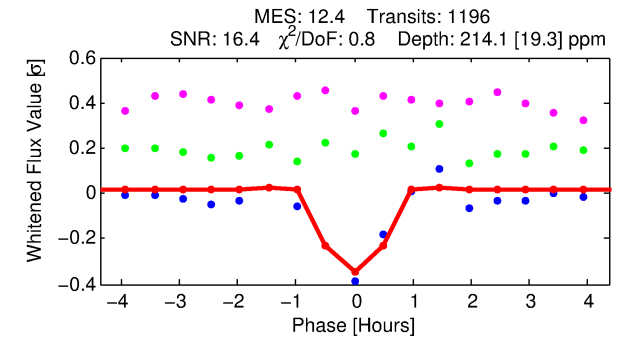
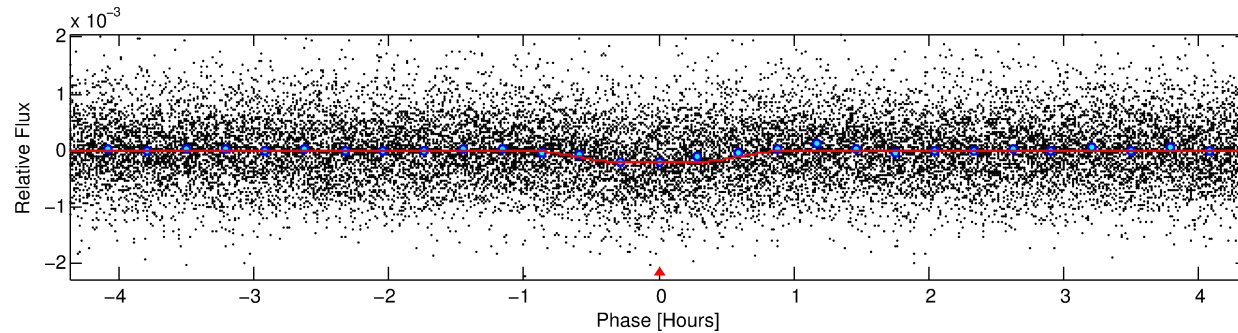
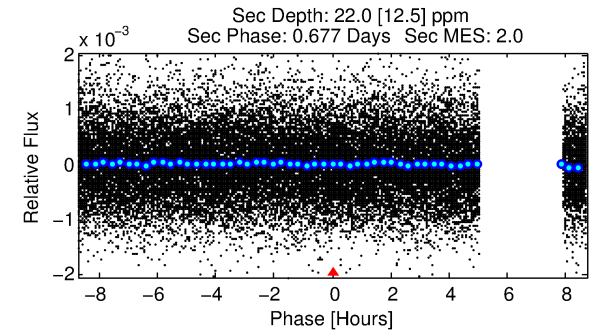
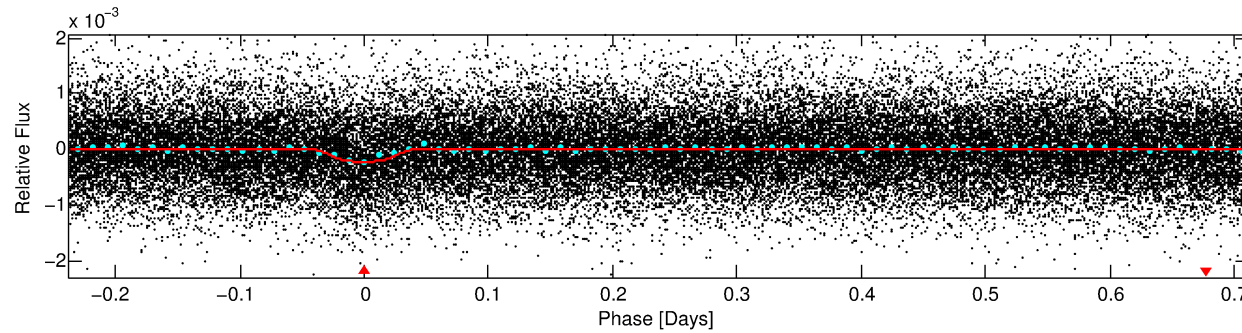
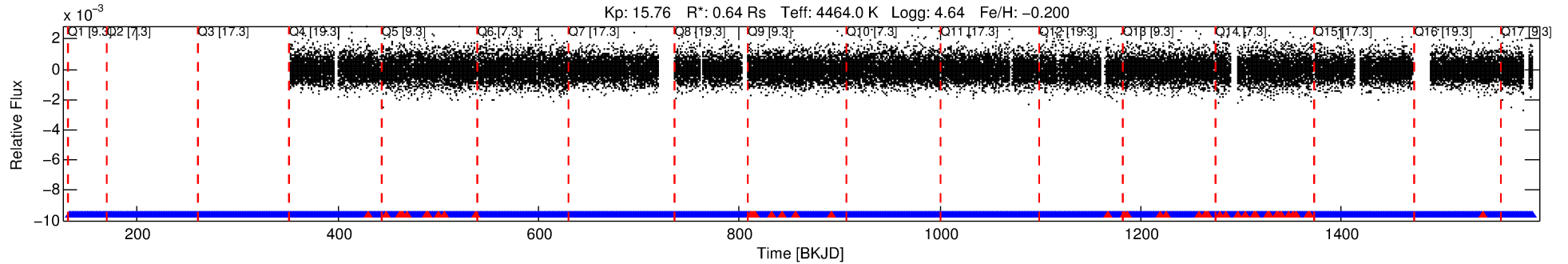
Ephemeris Match Information For 004832175-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
004832175-01	4832175	004832197-pri	4832197	1:2	18.2	3	4	11.51	15.76	55.14	Direct-PRF	0	1.85	0.30

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 4832175 Candidate: 1 of 1 Period: 0.948 d
KOI: K02846.01 Corr: 0.938



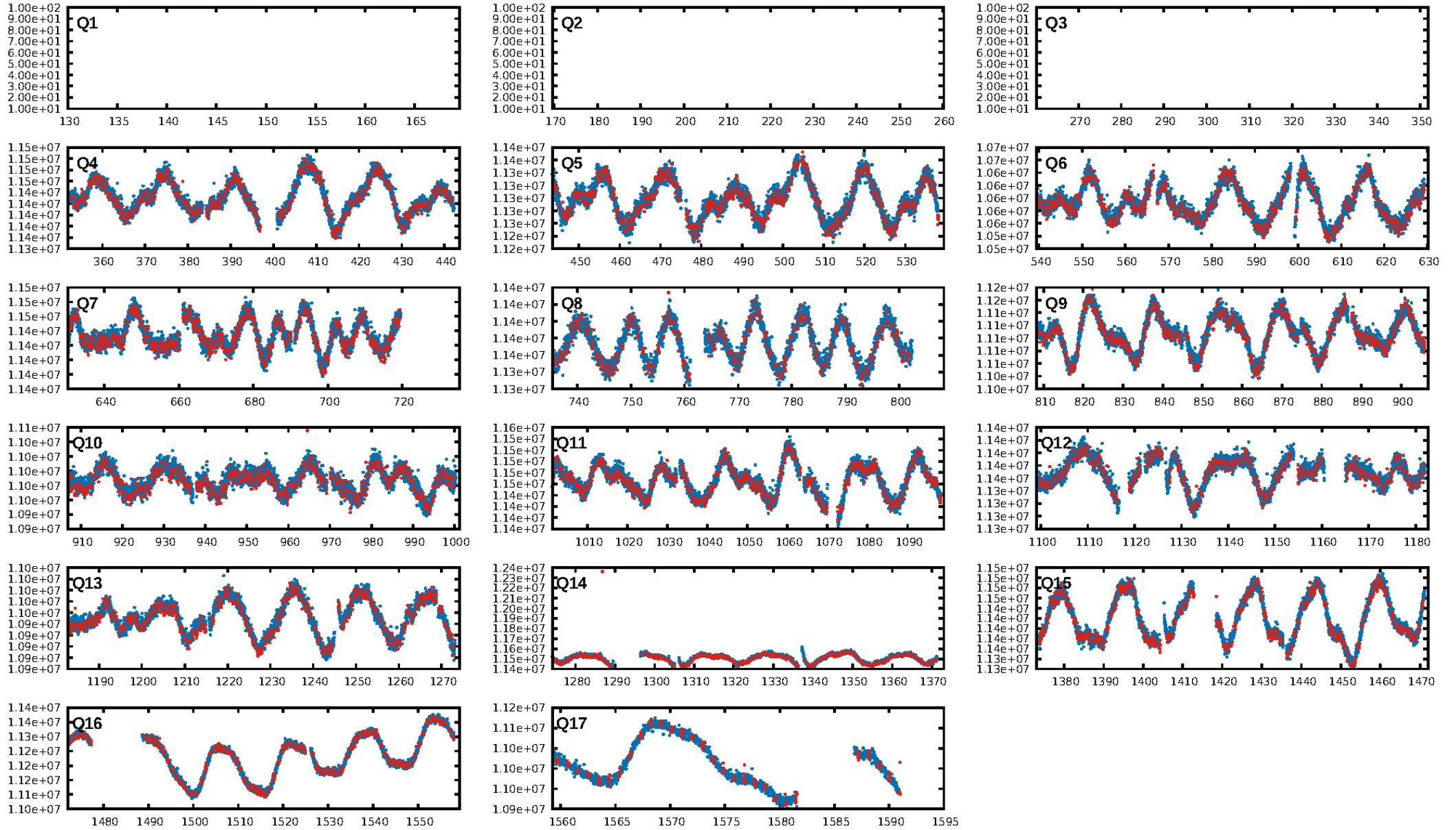
DV Fit Results:

Period = 0.94774 [0.00001] d
Epoch = 132.3869 [0.0013] BKJD
Rp/R* = 0.0166 [0.0118]
a/R* = 2.53 [5.66]
b = 0.90 [0.58]
Seff = 539.62 [88.30]
Teff = 1229 [50] K
Rp = 1.15 [0.83] Re
a = 0.0164 [0.0011] AU
Ag = 2.43 [3.72] [0.38σ]
Teffp = 2373 [911] K [1.25σ]

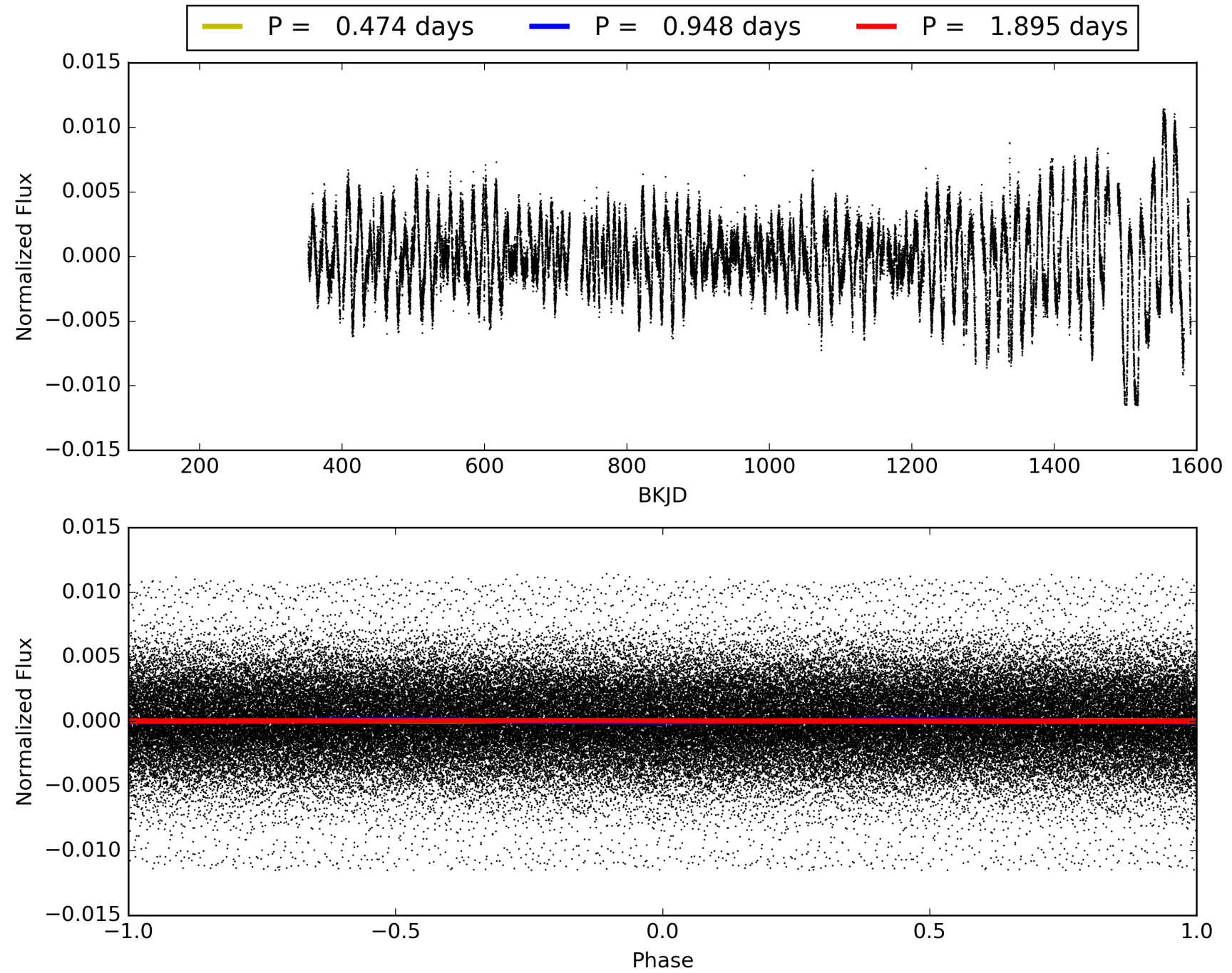
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.16e-36
RollingBand-fgt: 0.96 [1119/1167]
GhostDiagnostic-chr: -0.3884
Centroid-sig: 0.0%
Centroid-so: 7.233 arcsec [12.91σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004832175-01, PDC Light Curves

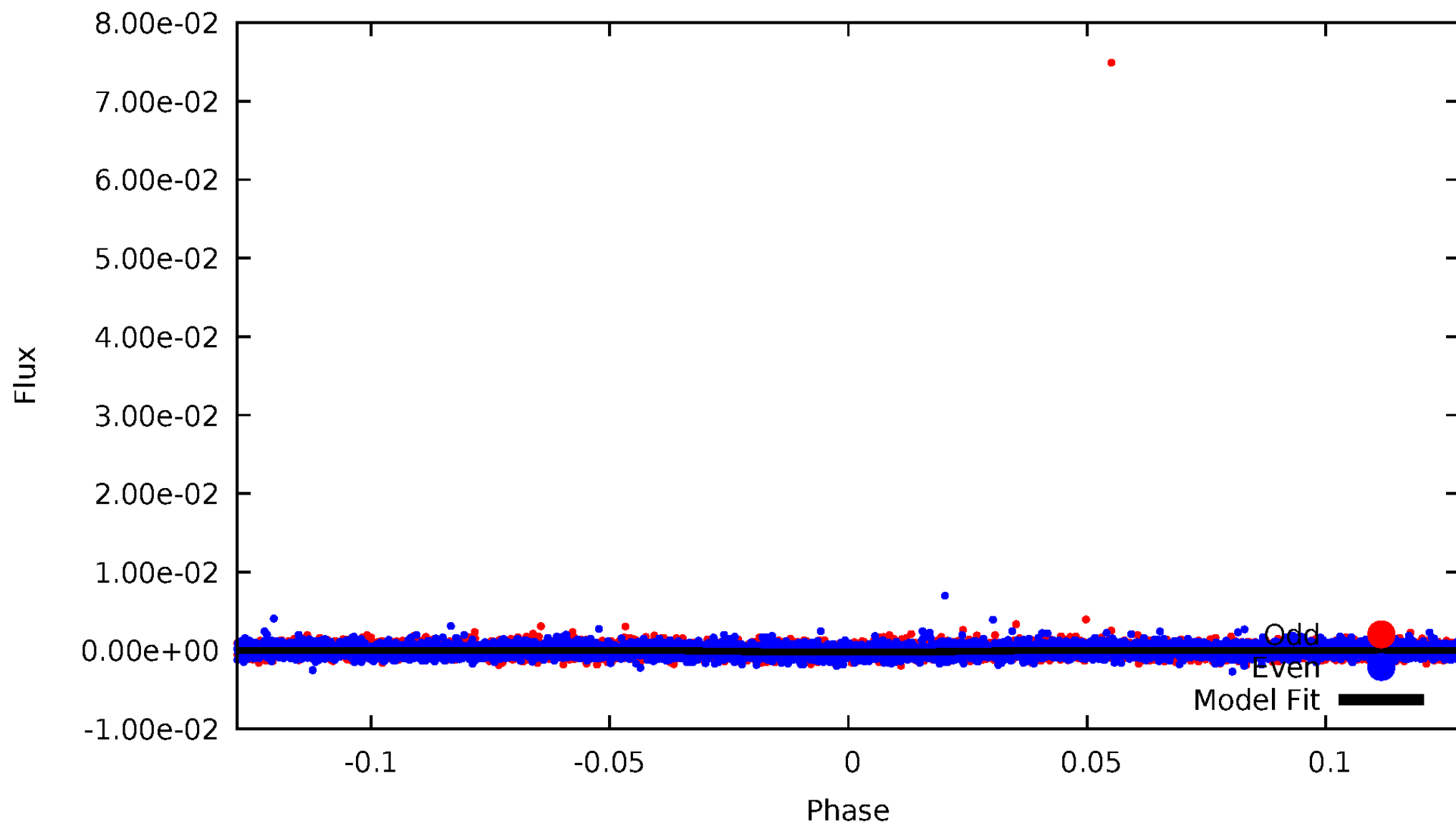


TCE 004832175-01



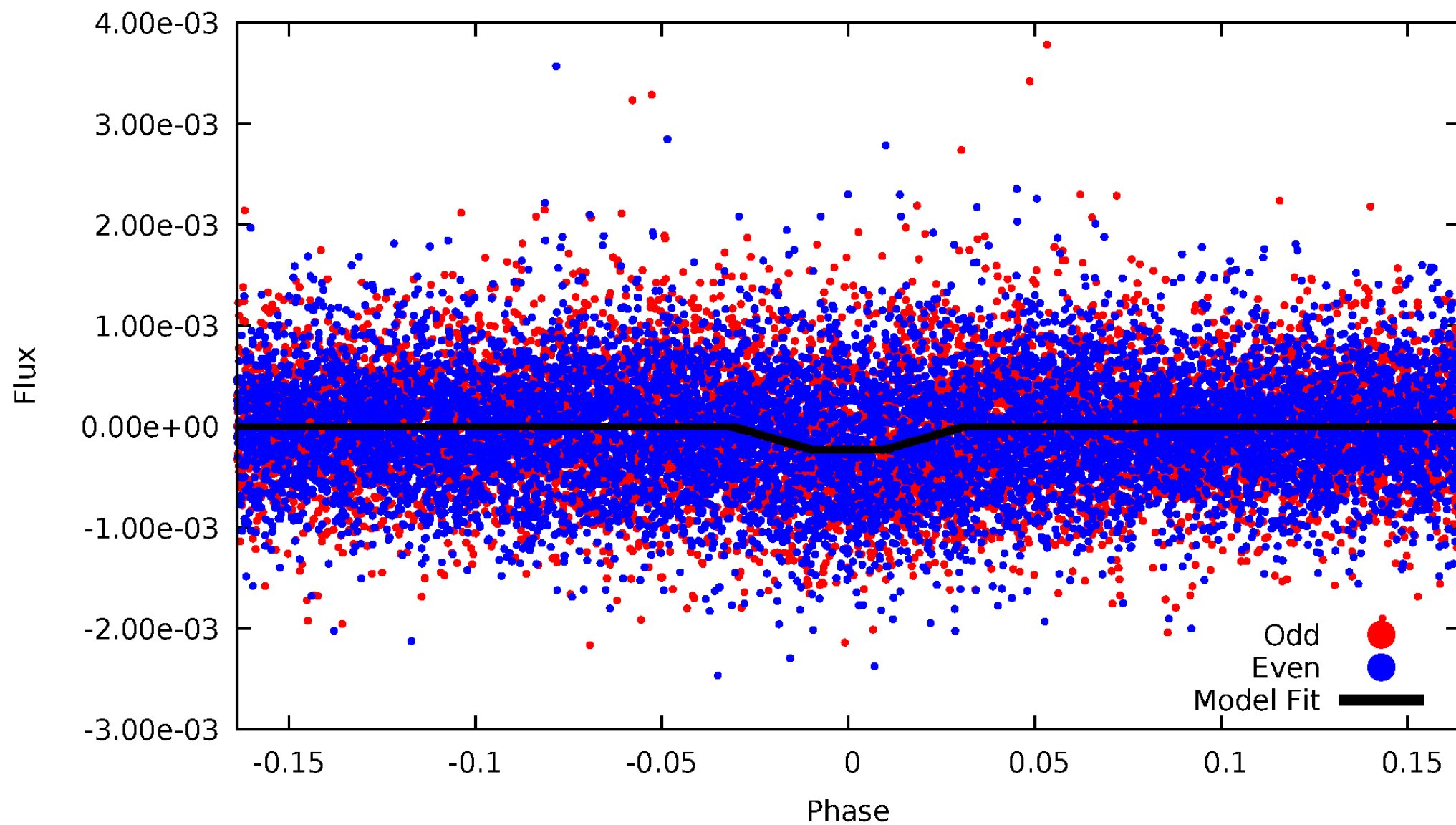
DV Odd/Even

TCE 004832175-01



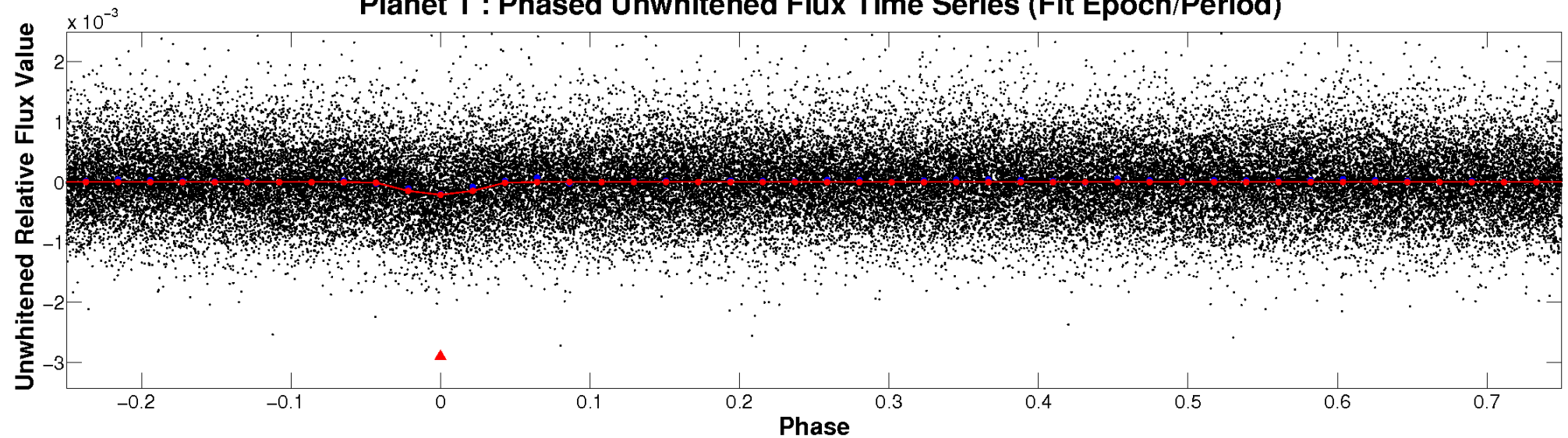
ALT Odd/Even

TCE 004832175-01

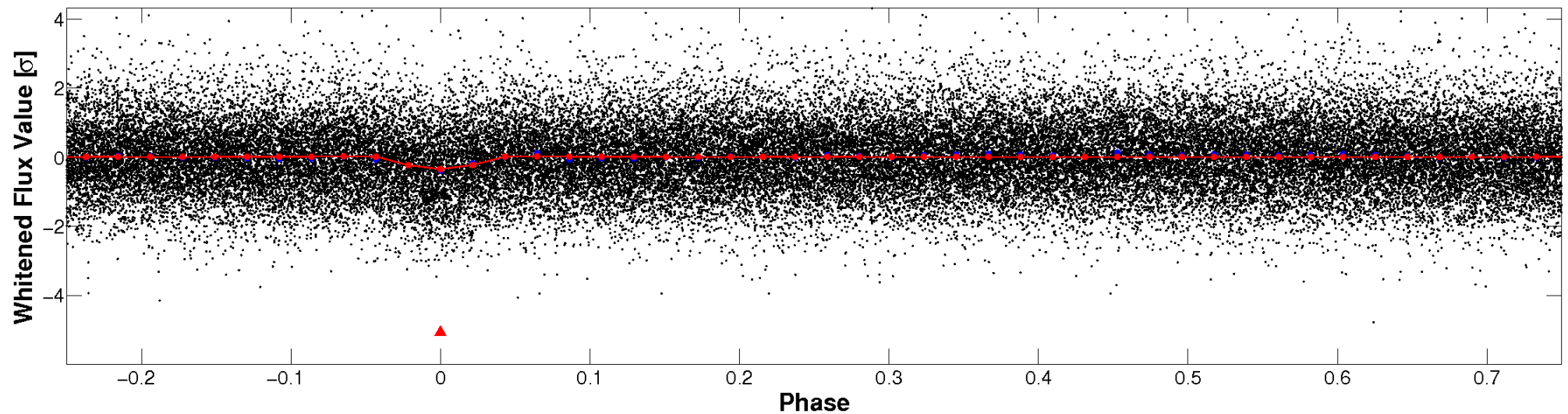


Non-Whitened Vs. Whitened Light Curve

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

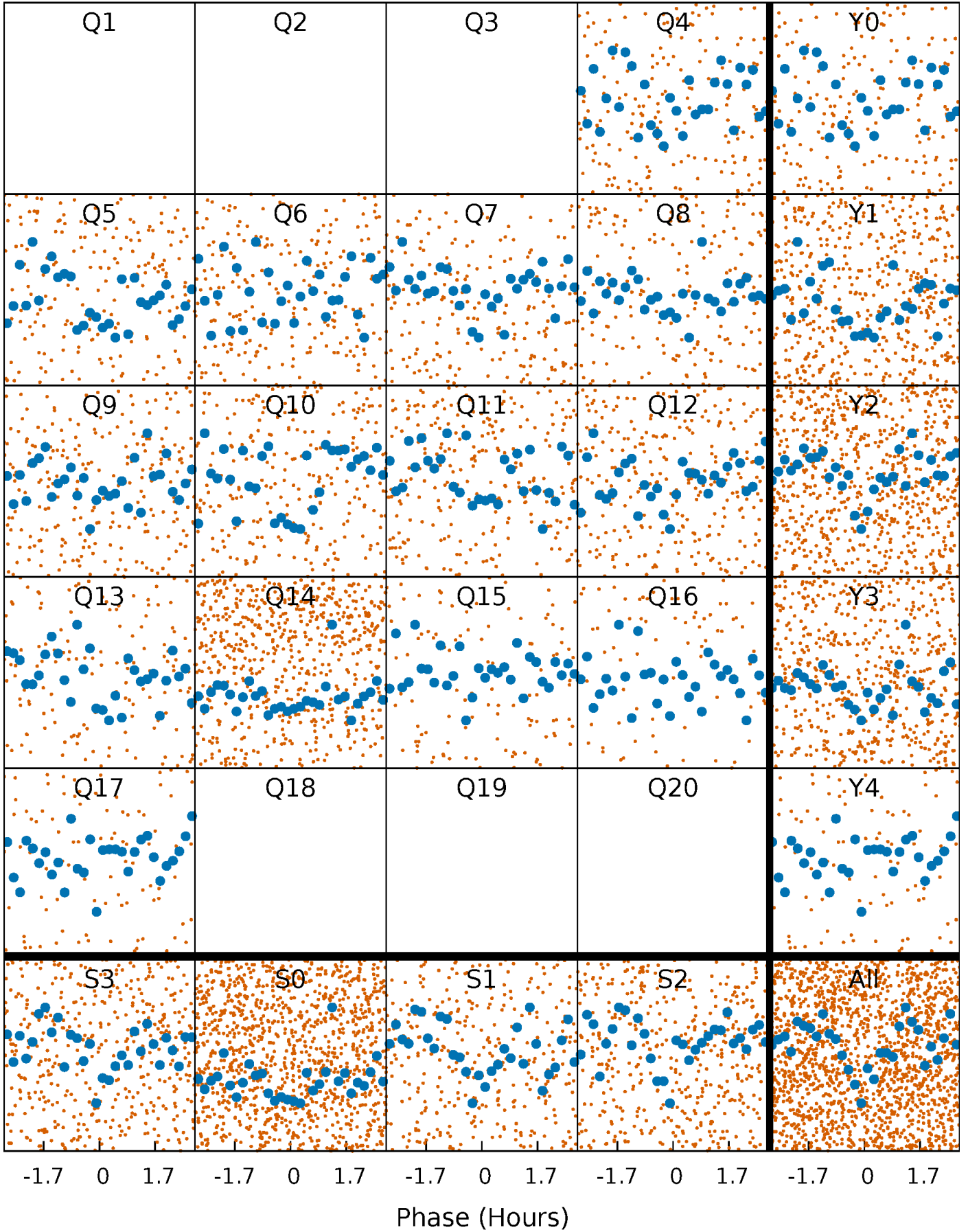


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



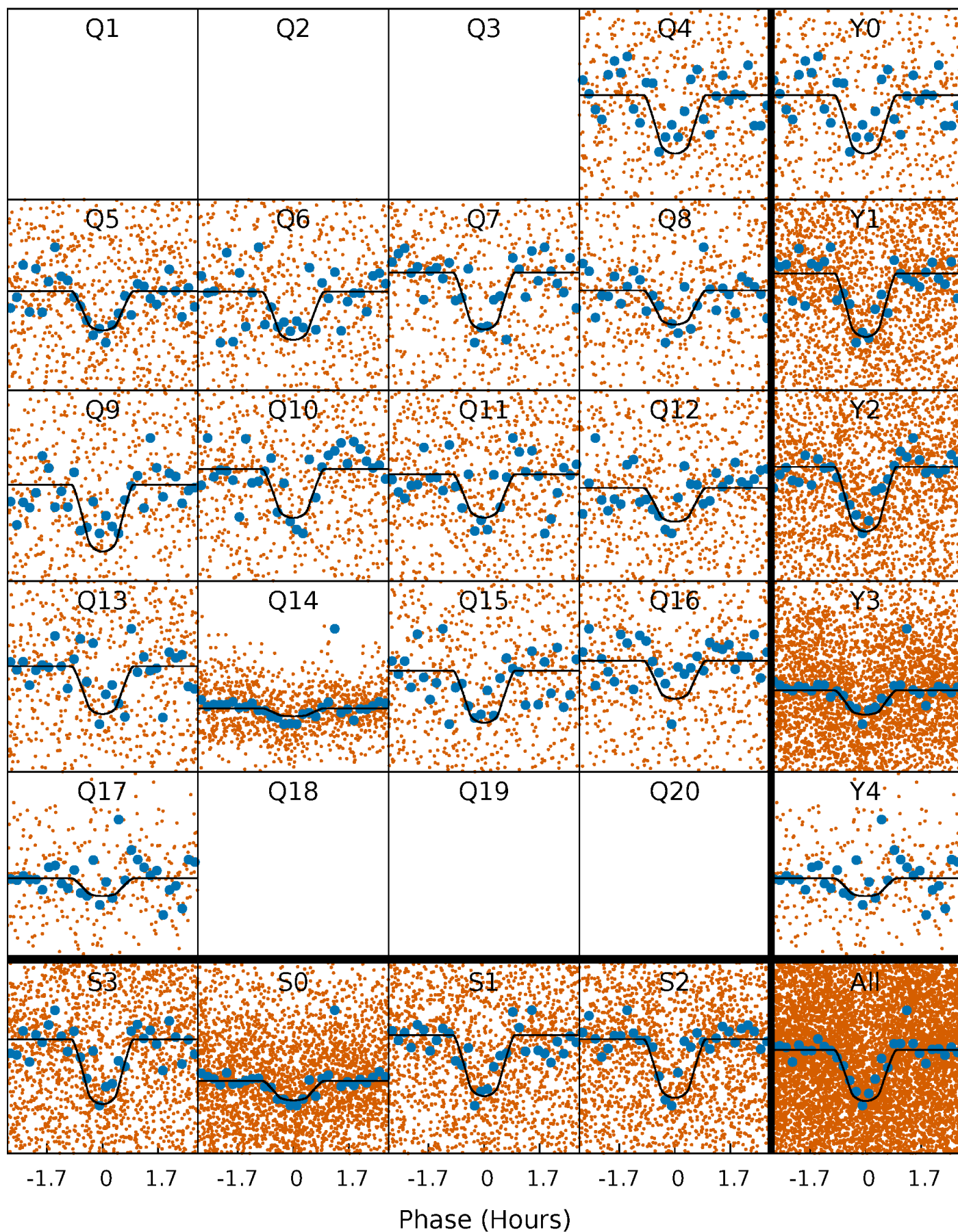
PDC Quarter-Phased Transit Curves

TCE 004832175-01 P= 0.947742 Days $T_0=132.386890$ (BKJD)



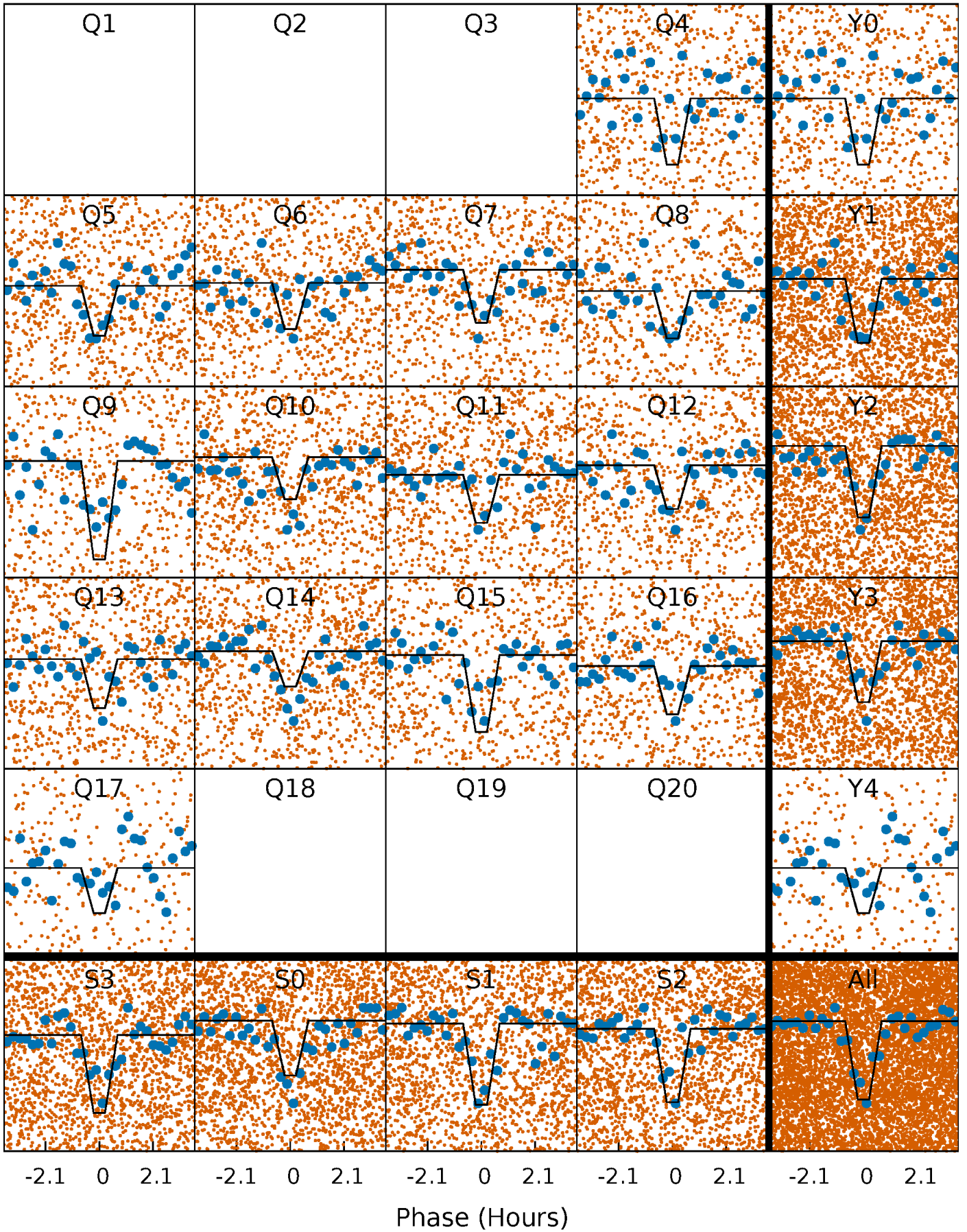
DV Quarter-Phased Transit Curves

TCE 004832175-01 P= 0.947742 Days $T_0=132.386890$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

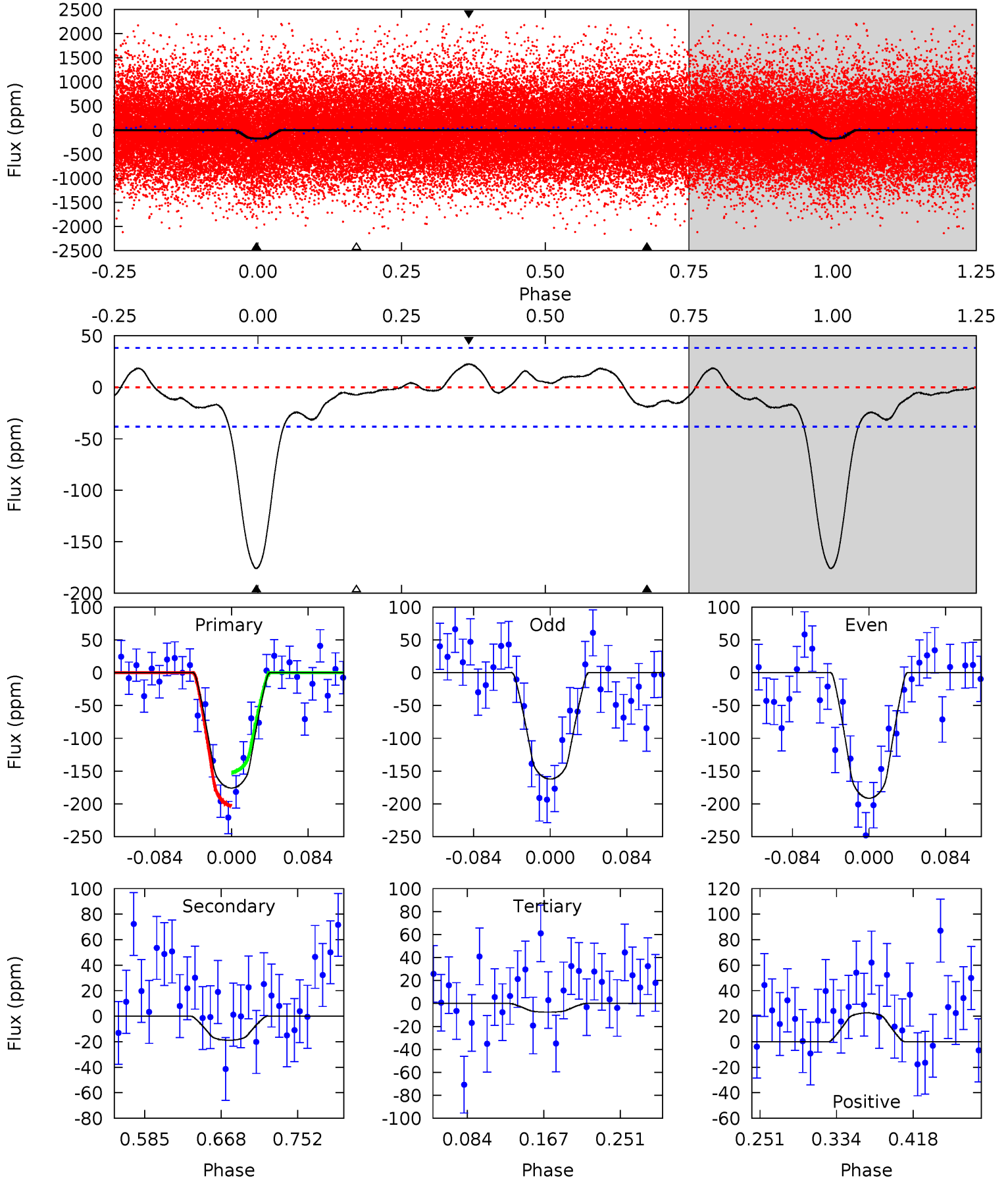
TCE 004832175-01 P= 0.947727 Days $T_0=132.396407$ (BKJD)



DV Model-Shift Uniqueness Test

004832175-01, P = 0.947742 Days, E = 132.386890 Days

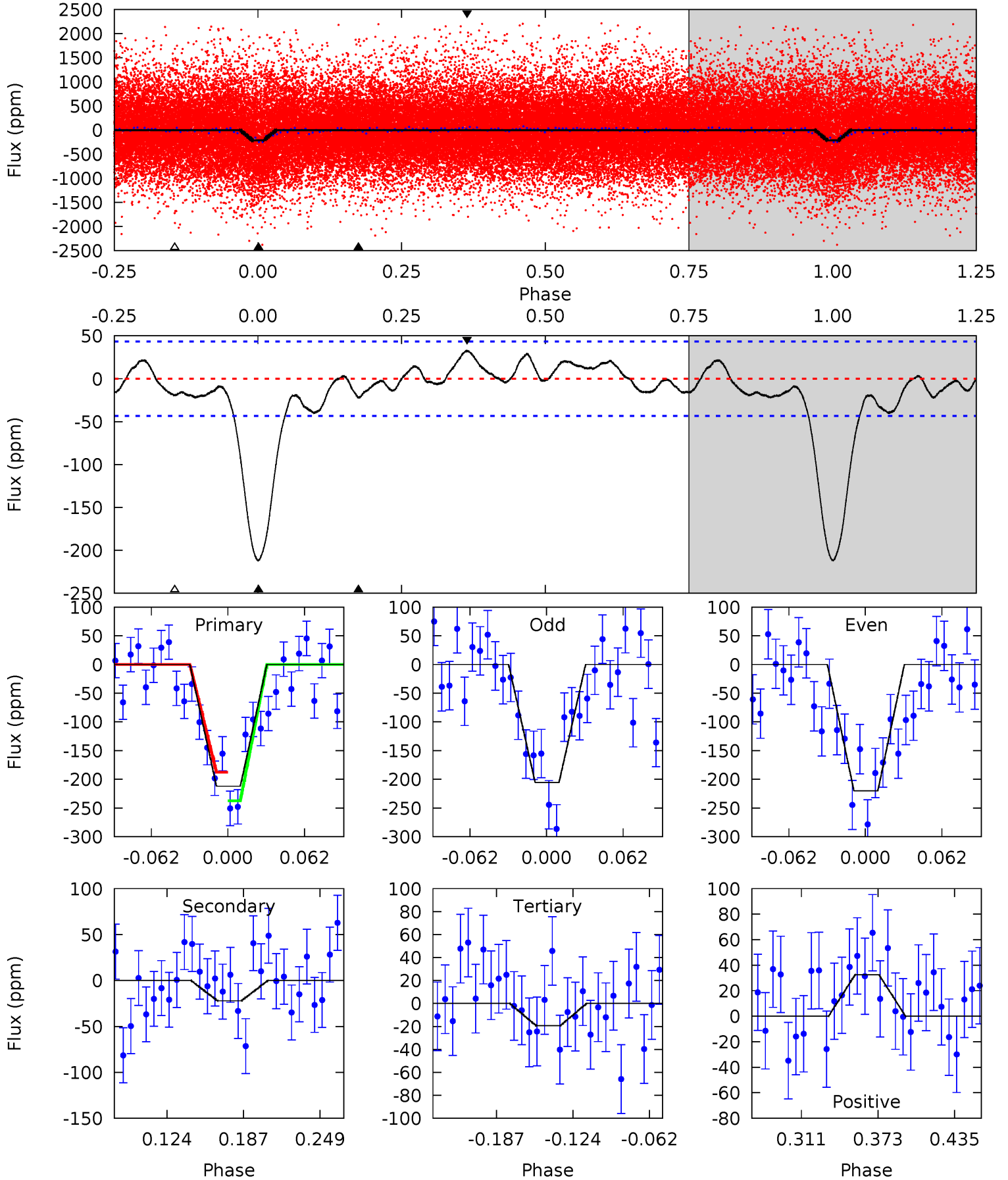
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	2.27	0.91	2.72	4.60	1.73	1.47	20.3	18.5	1.36	-0.44	1.77	0.86	0.11	3.09



Alt Model-Shift Uniqueness Test

004832175-01, P = 0.947727 Days, E = 132.396407 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	2.39	2.10	3.51	4.66	1.87	1.75	20.8	19.4	0.29	-1.12	0.79	0.92	0.13	2.70



Stellar Parameters For KIC 004832175

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4464^{+159}_{-159}	$4.643^{+0.036}_{-0.036}$	$-0.200^{+0.300}_{-0.300}$	$0.638^{+0.056}_{-0.051}$	$0.654^{+0.063}_{-0.063}$	$3.544^{+0.683}_{-0.524}$
	+4%/-4%	+1%/-1%	+150%/-150%	+9%/-8%	+10%/-10%	+19%/-15%
Source	KIC0	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 004832175-01 / KOI 2846.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 8	$1.26^{+0.84}_{-0.70}$	1717^{+69}_{-62}	2755^{+754}_{-567}	$1.682^{+6.688}_{-1.171}$
Alt.	-22 ± 9	$1.16^{+0.77}_{-0.67}$	1720^{+67}_{-74}	2877^{+988}_{-467}	$2.288^{+12.140}_{-1.495}$

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

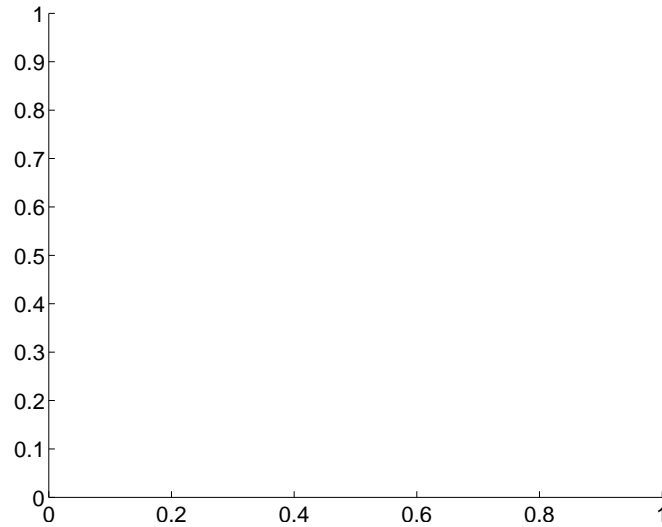
Supplemental centroid analysis for 004832175-01. Kepler magnitude: 15.76. Transit SNR 16.35

There are 0 quarters with good PRF difference image offsets

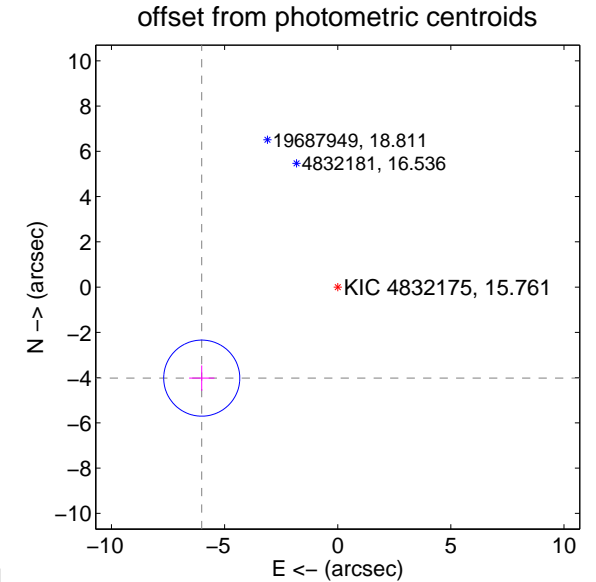
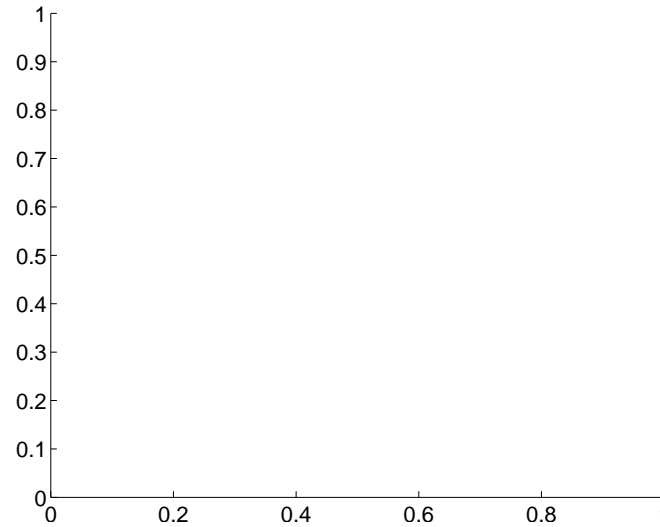
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	7.23 ± 0.56	12.91	6.01 ± 0.56	-4.02 ± 0.56

There is no PRF-fit offset from OOT-fit

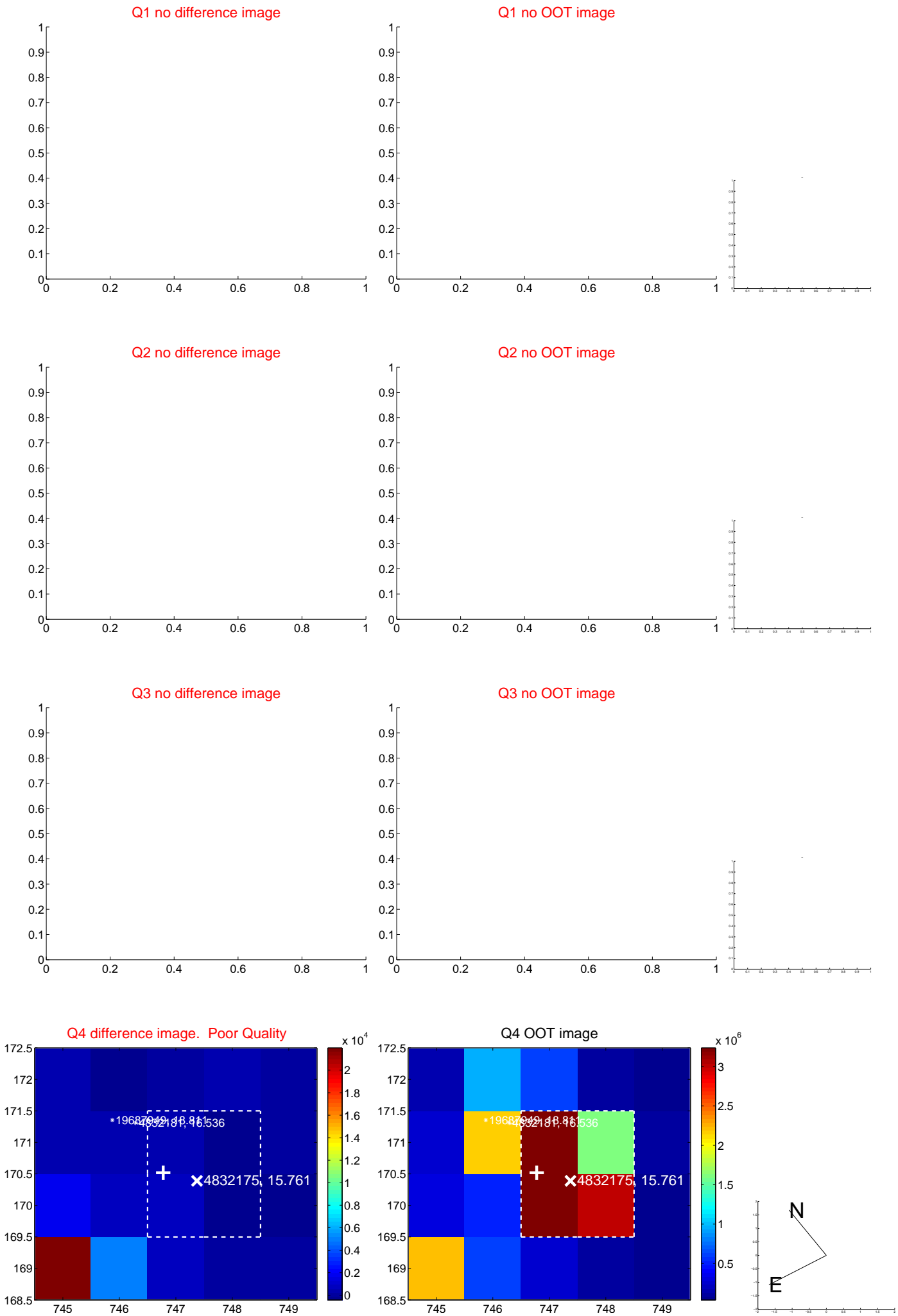


There is no PRF-fit offset from KIC

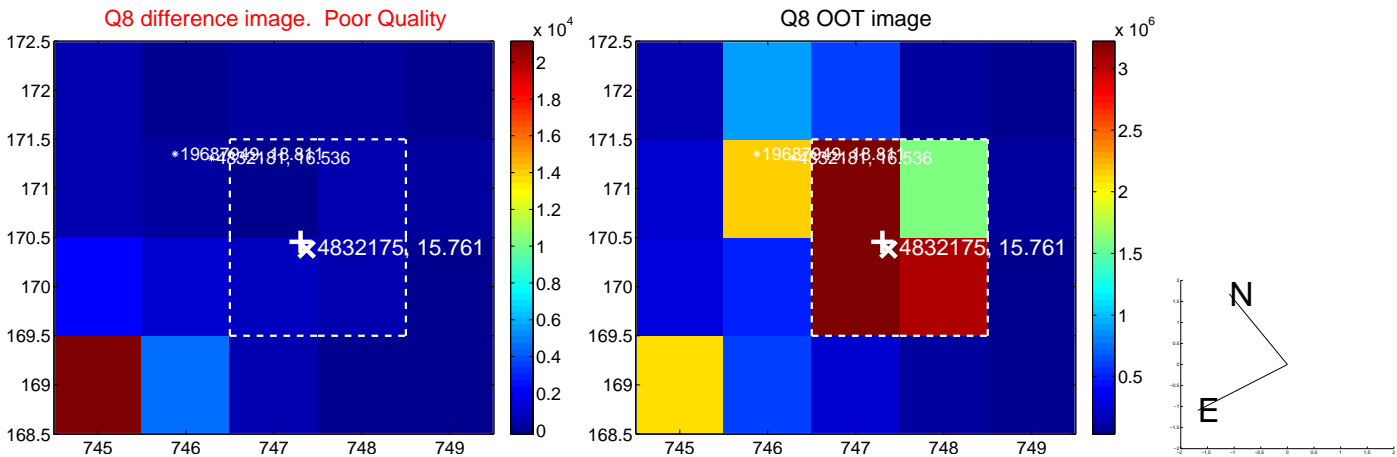
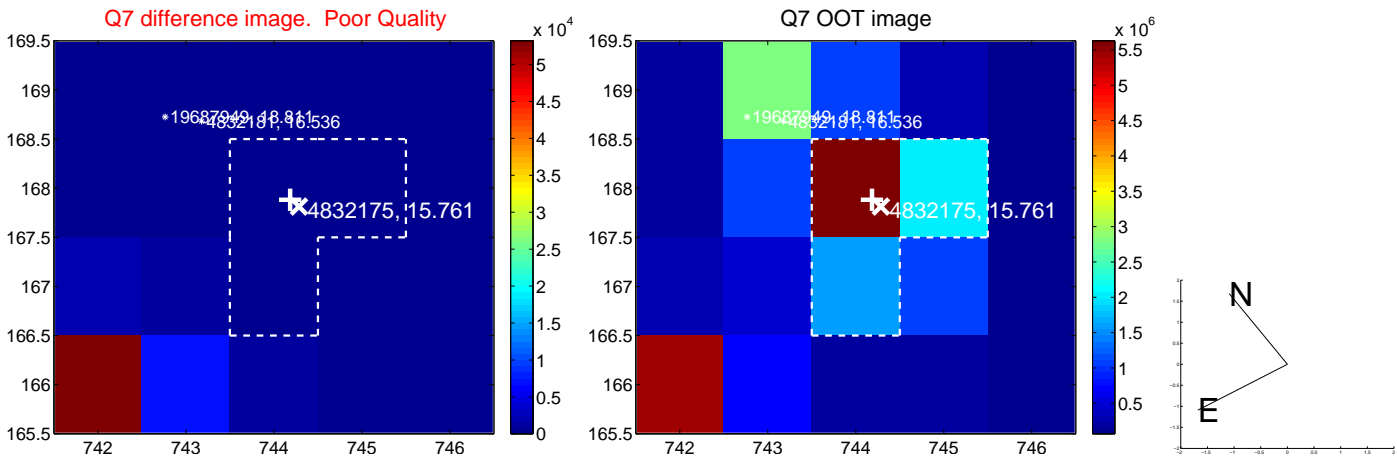
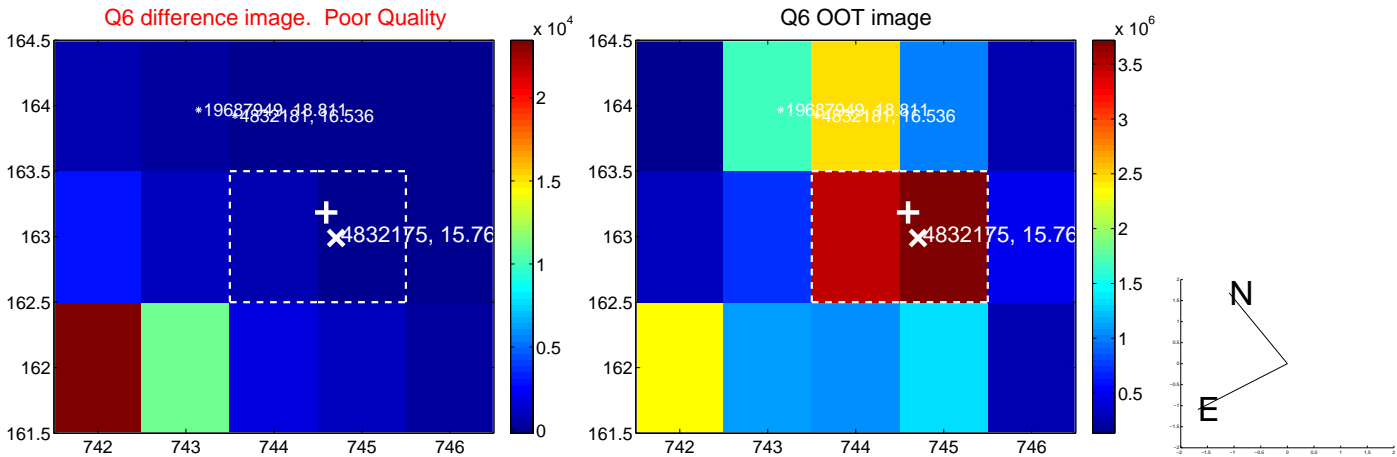
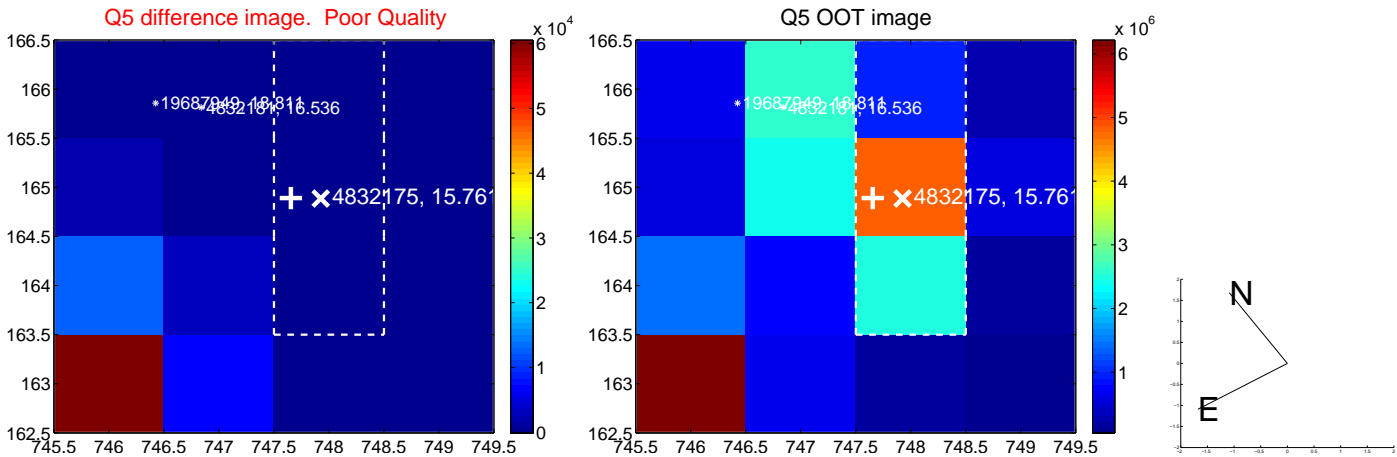


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

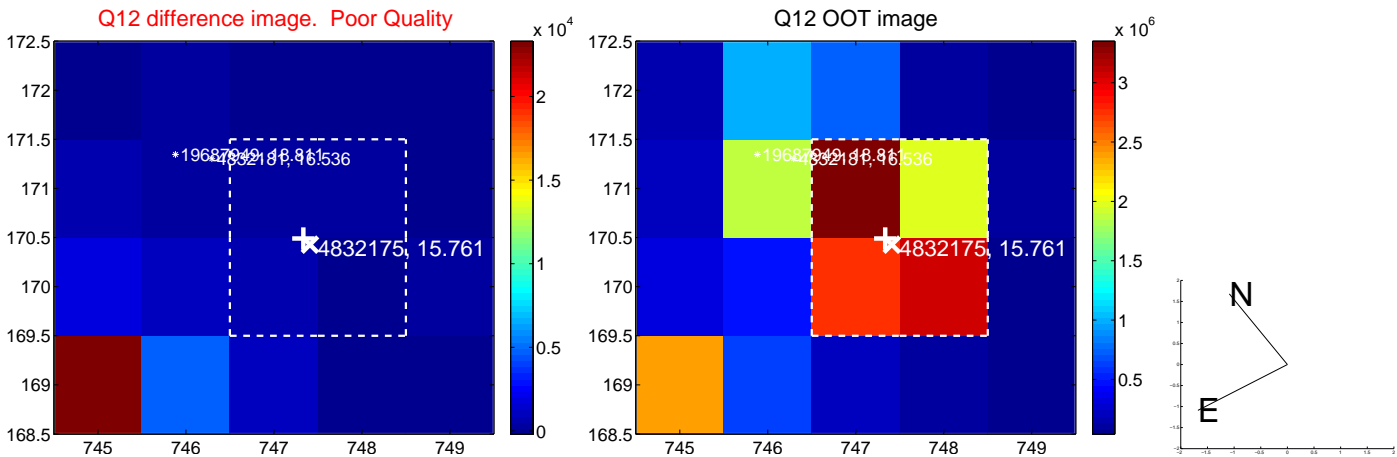
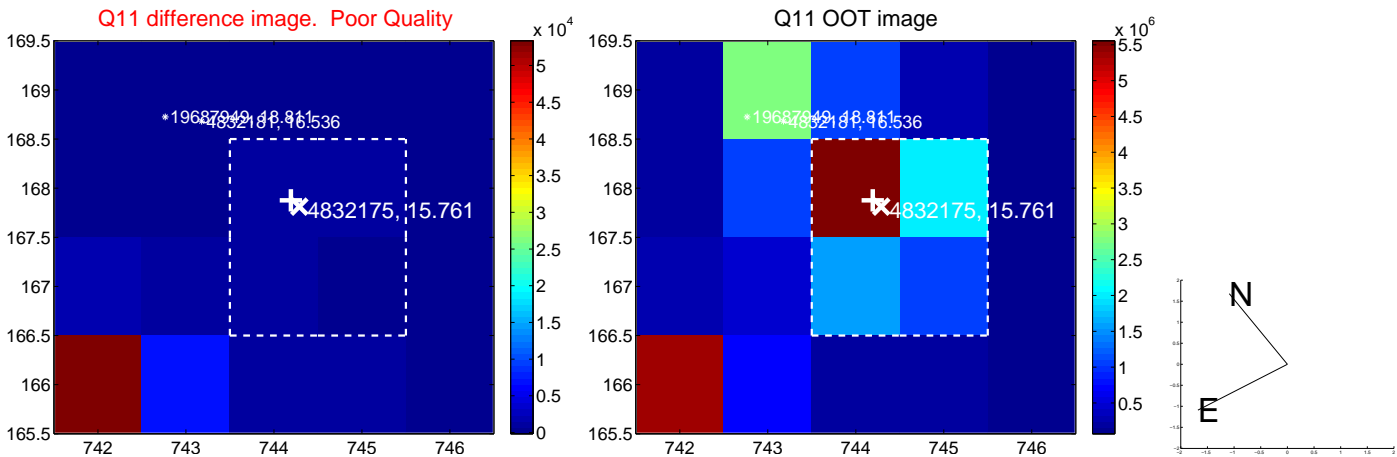
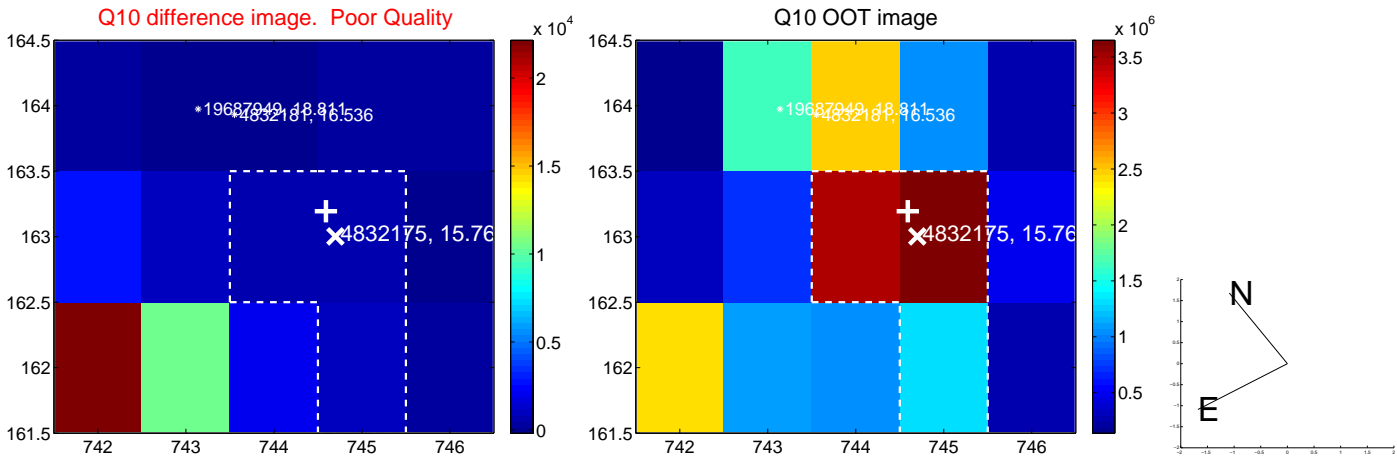
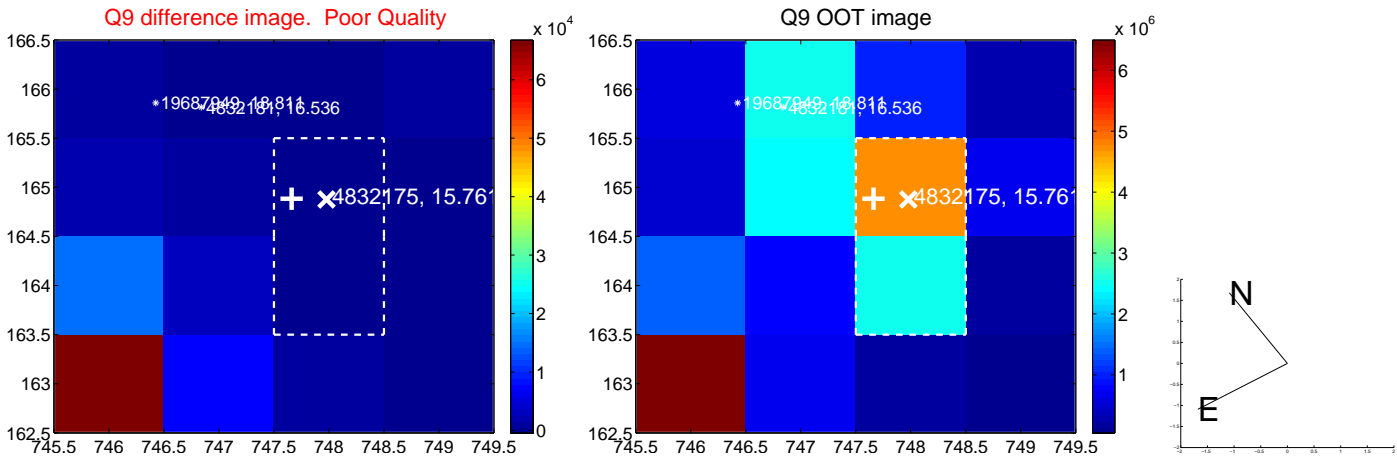
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



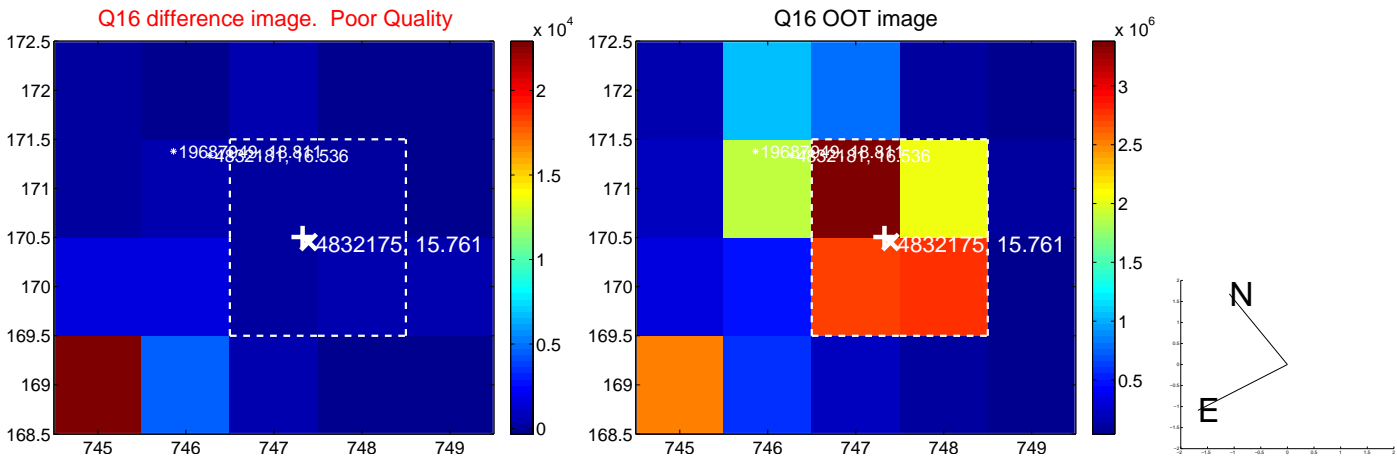
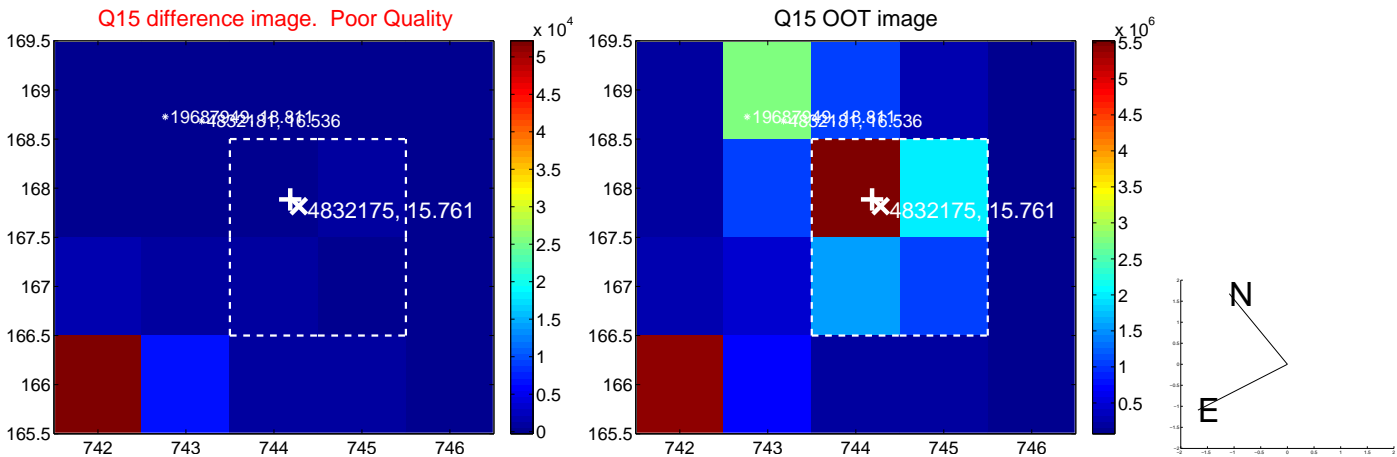
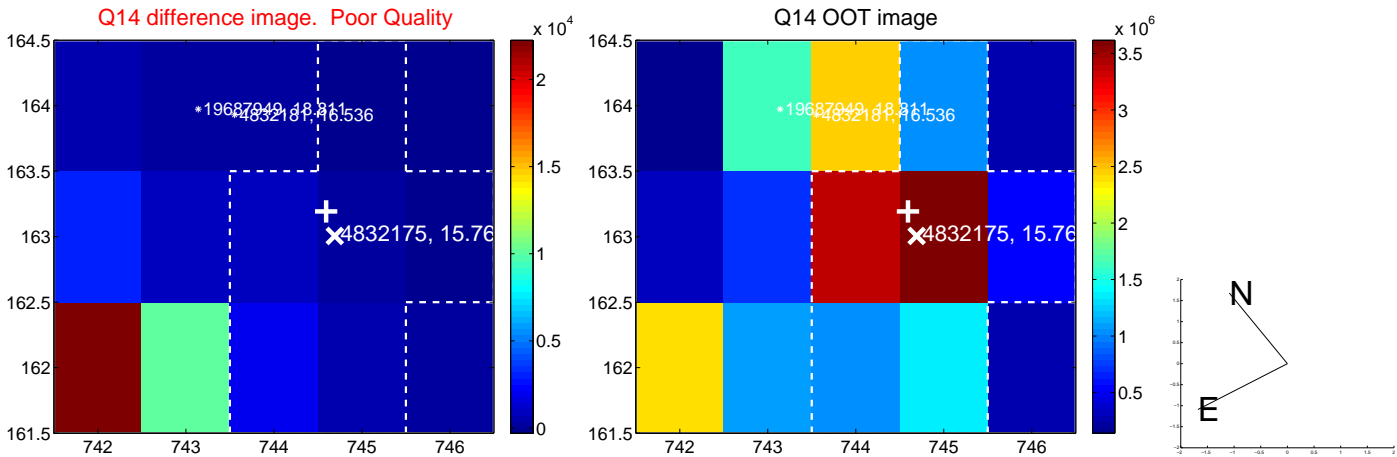
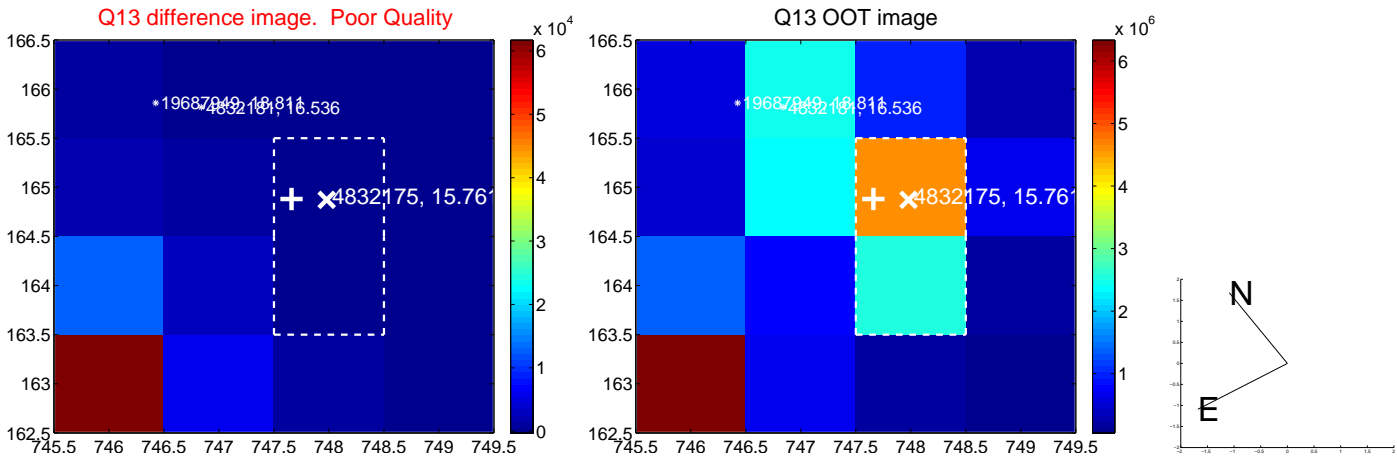
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



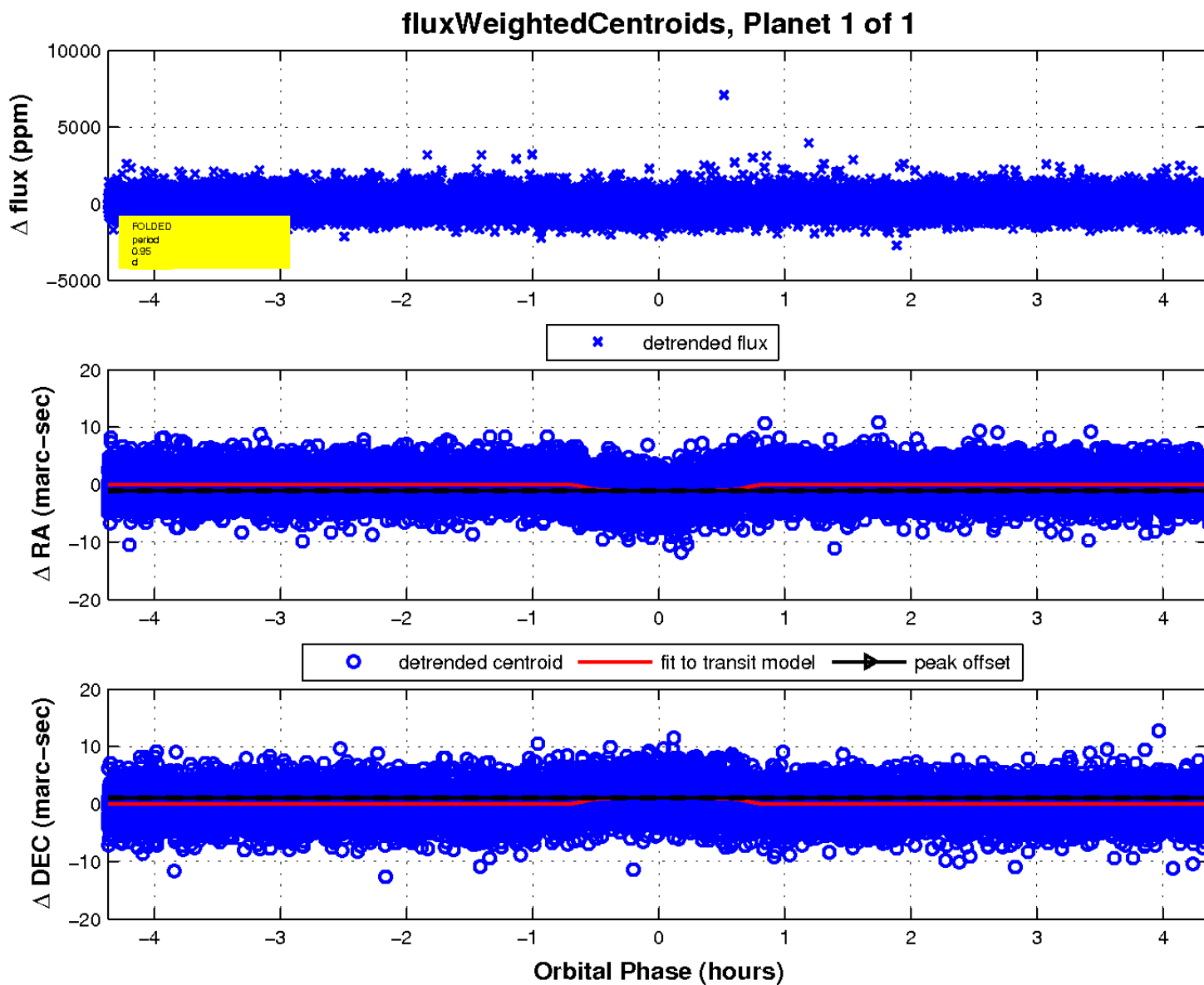
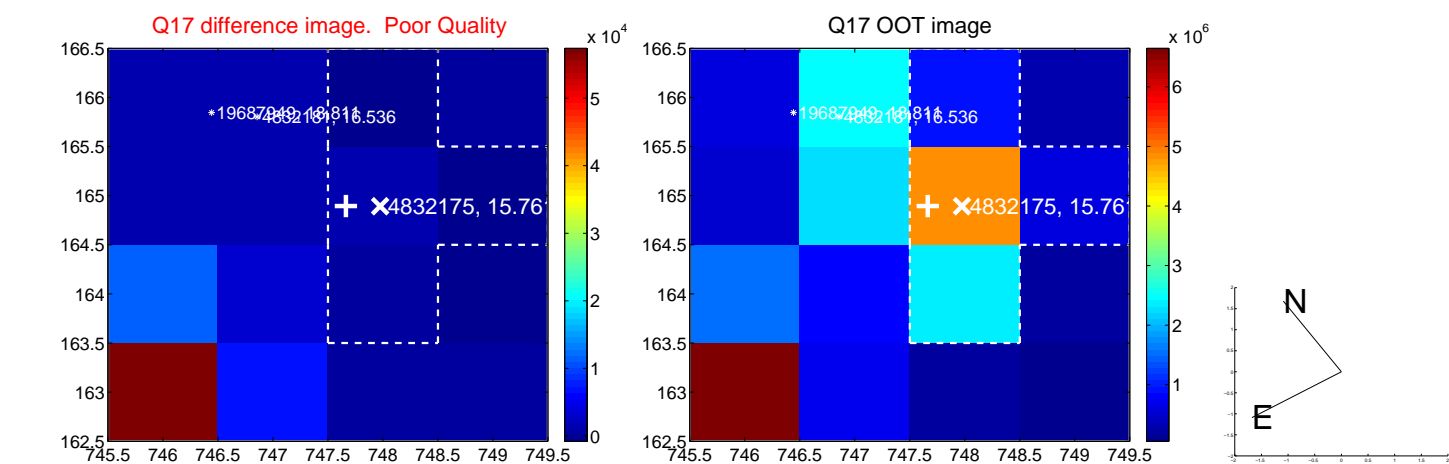
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UKIRT Image

Declination

