

KIC 005817685

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})
005817685-01	OBS	4652.01	4.205953	132.275604	51.8	7.804	7.5	8.6	1.16	5960	0.98	602.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005817685-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_FEW_DIFFS—HALO_GHOST—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.

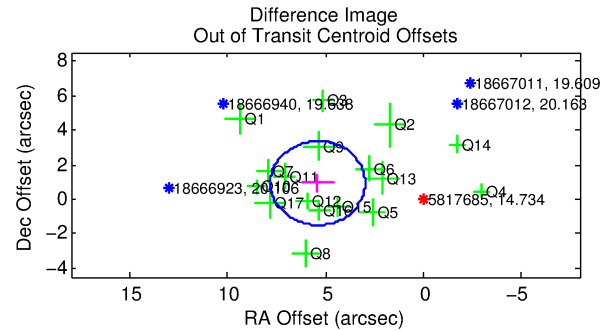
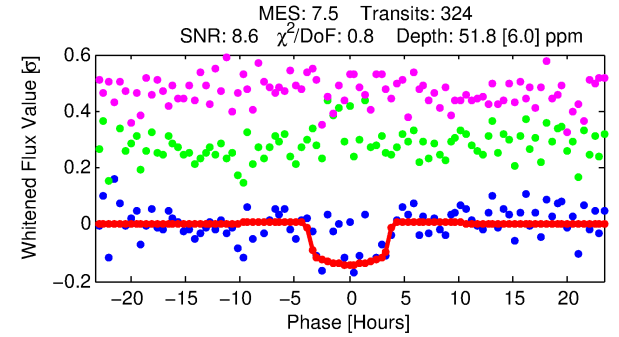
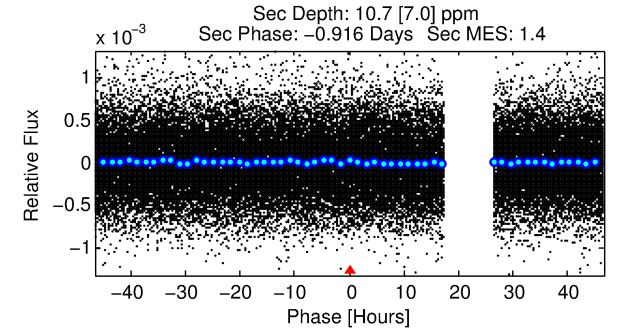
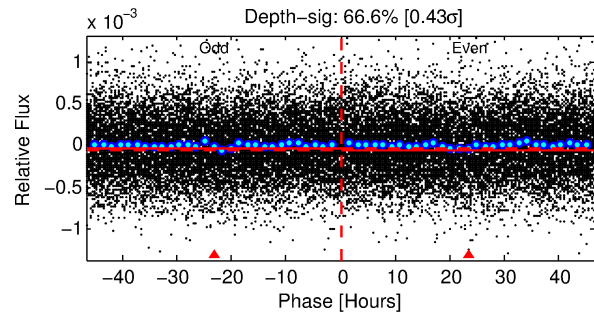
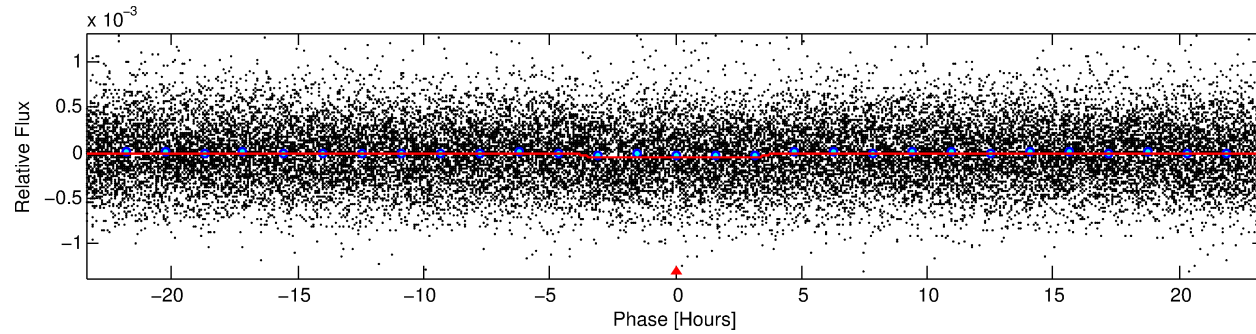
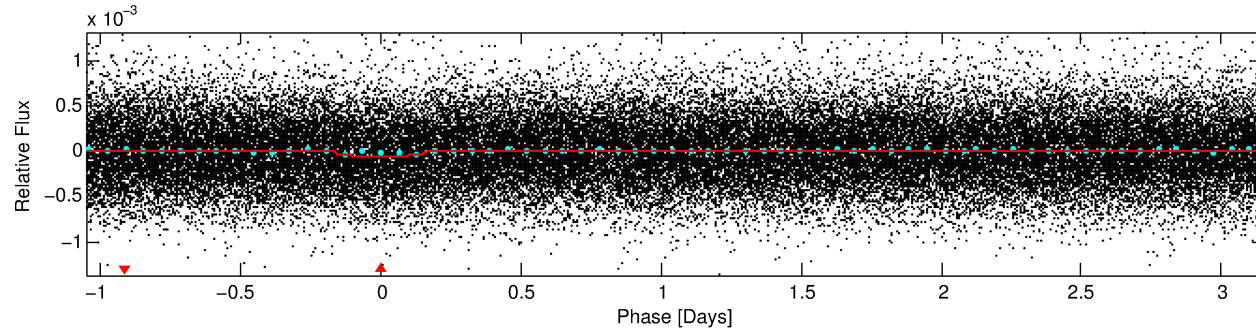
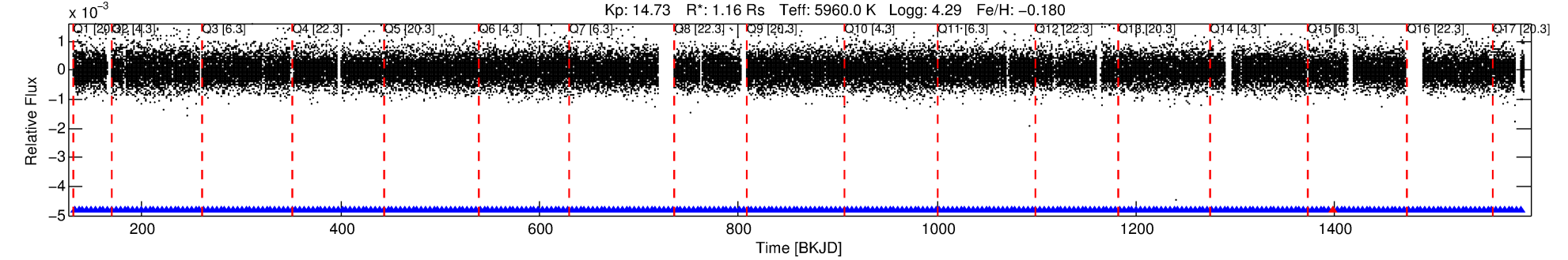
Ephemeris Match Information For 005817685-01

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
005817685-01	5817685	005817566-sec	5817566	1:2	62.2	-4	-15	11.68	14.73	2996.20	Direct-PRF	0	3.74	2.00

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: 5817685 Candidate: 1 of 1 Period: 4.206 d
KOI: K04652.01 Corr: 0.815



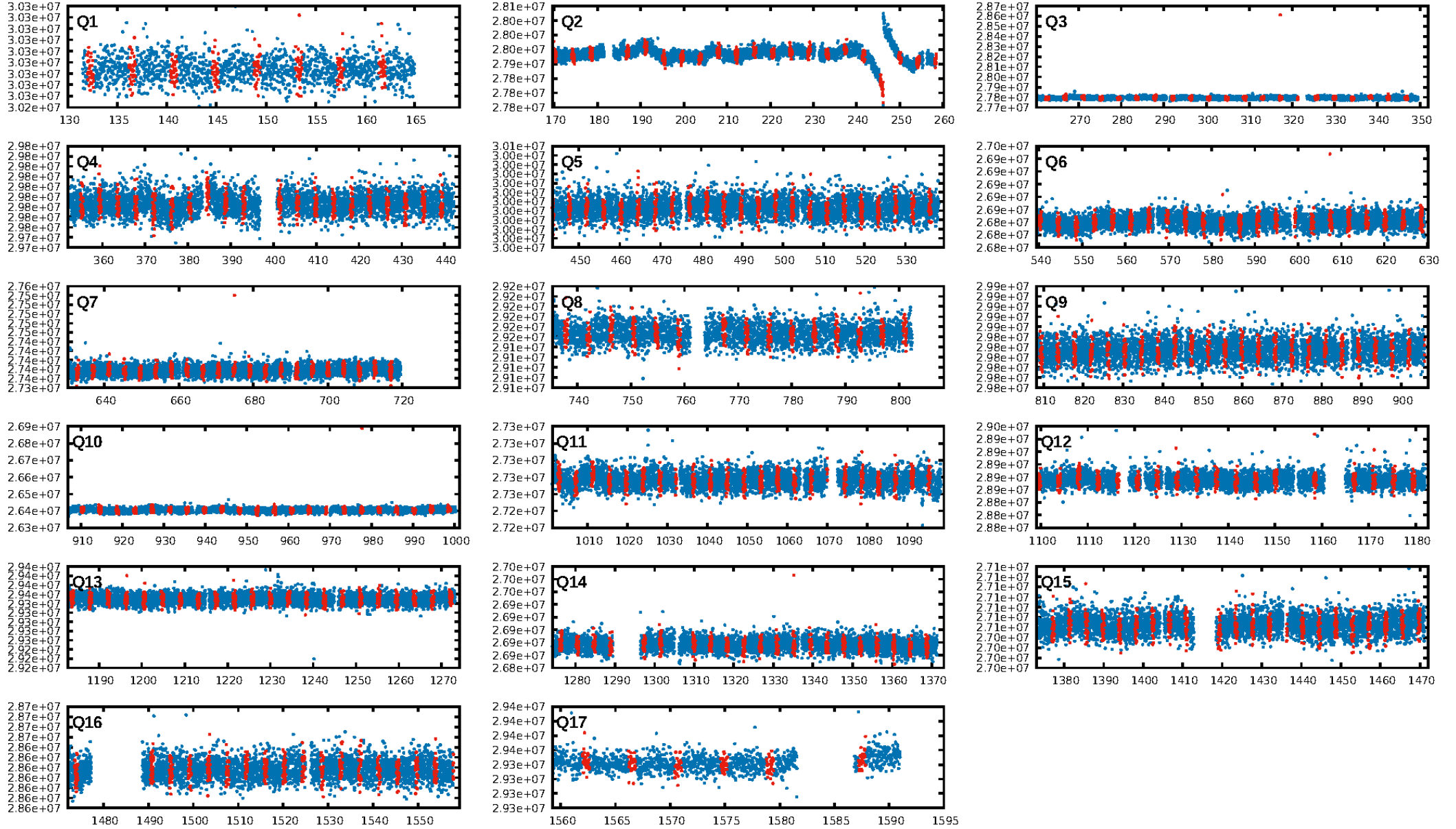
DV Fit Results:

Period = 4.20595 [0.00007] d
Epoch = 132.2756 [0.0113] BKJD
Rp/R* = 0.0077 [0.0033]
a/R* = 2.15 [3.65]
b = 0.89 [0.51]
Seff = 602.25 [220.03]
Teff = 1263 [115] K
Rp = 0.98 [0.50] Re
a = 0.0504 [0.0119] AU
Ag = 15.59 [17.46] [0.84 σ]
Teffp = 3881 [1043] K [2.50 σ]

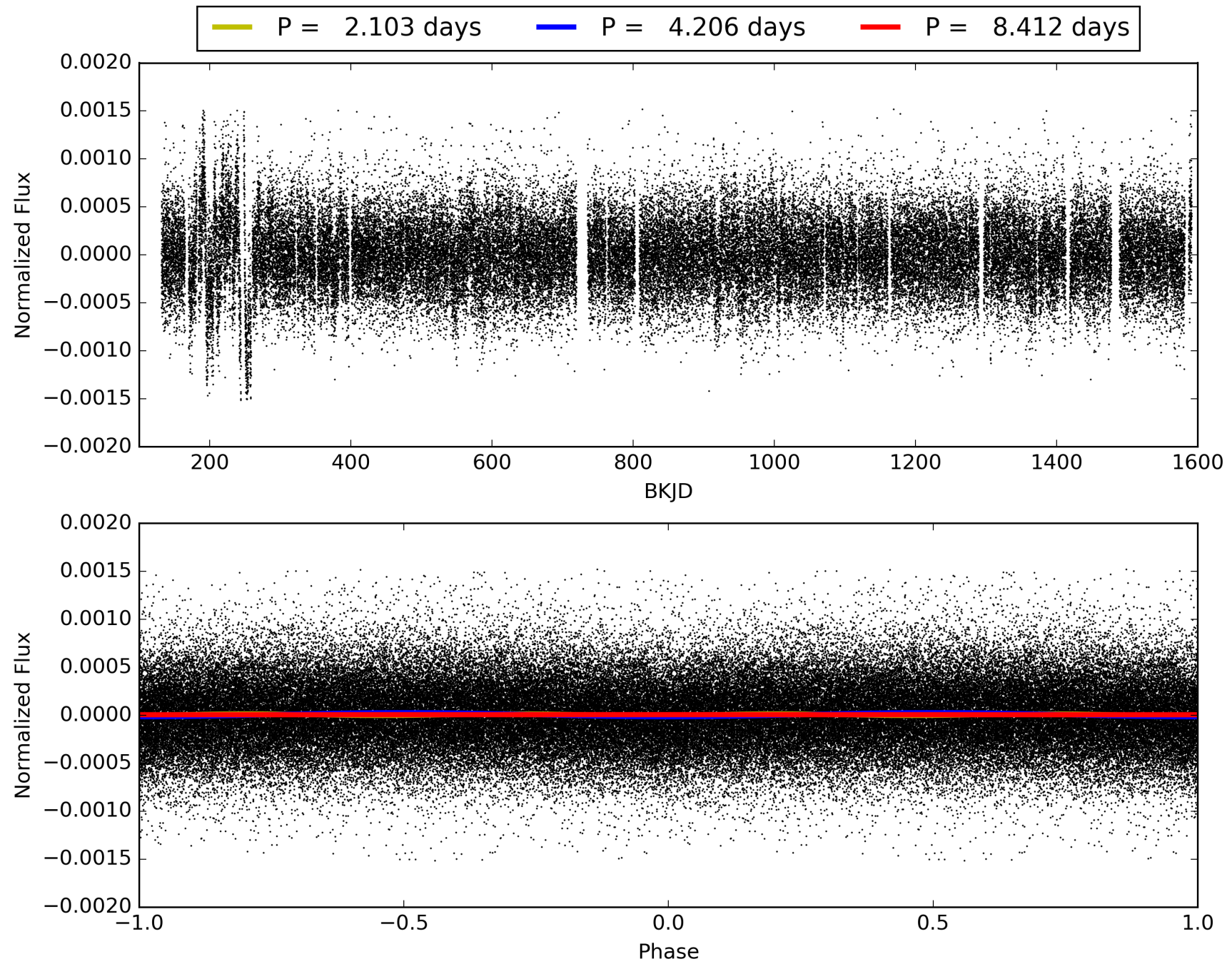
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.52e-15
RollingBand-fgt: 1.00 [309/310]
GhostDiagnostic-chr: 0.05692
Centroid-sig: 79.0%
Centroid-so: 1.259 arcsec [0.81 σ]
OotOffset-rm: 5.479 arcsec [6.77 σ]
KicOffset-rm: 5.326 arcsec [6.51 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005817685-01, PDC Light Curves

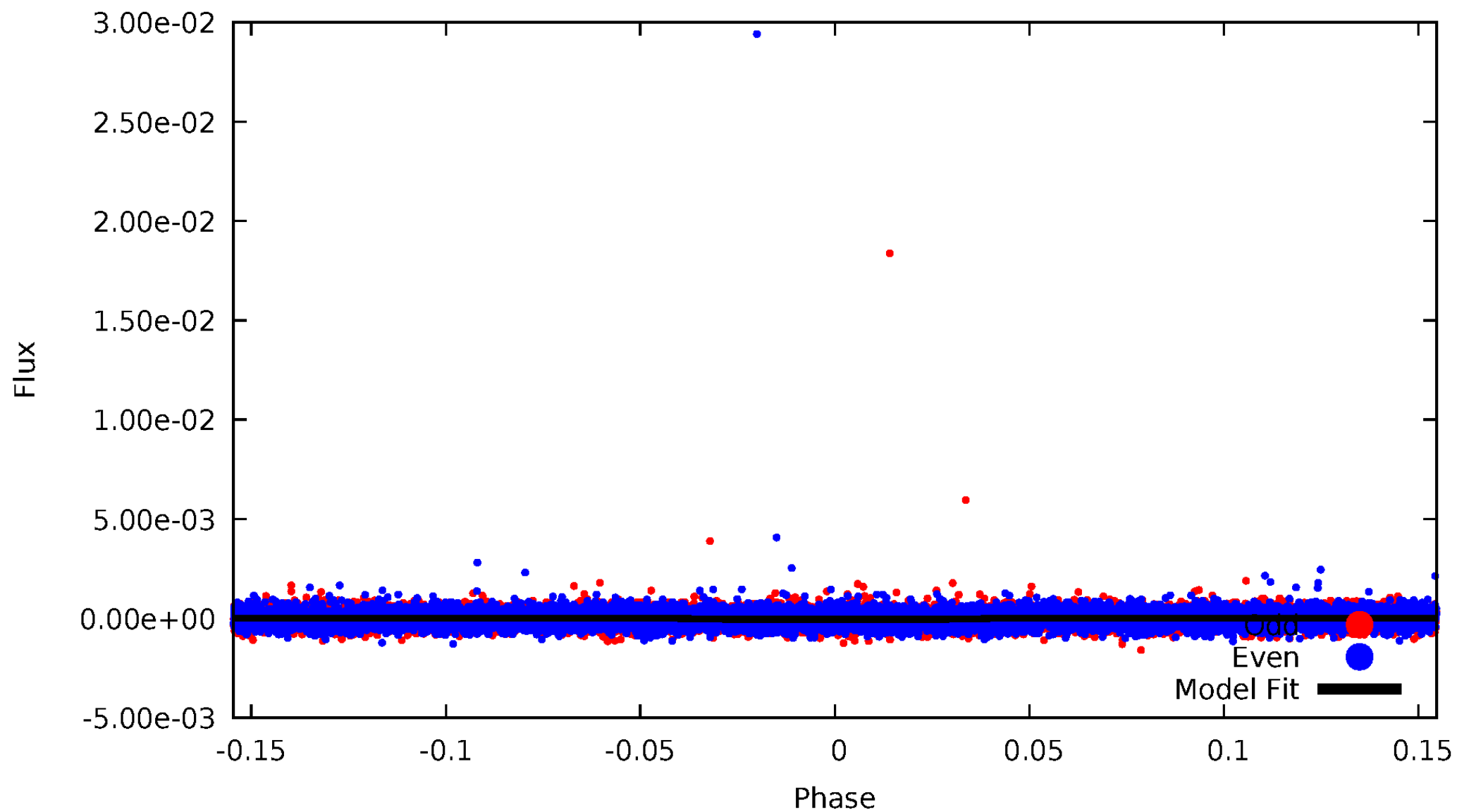


TCE 005817685-01



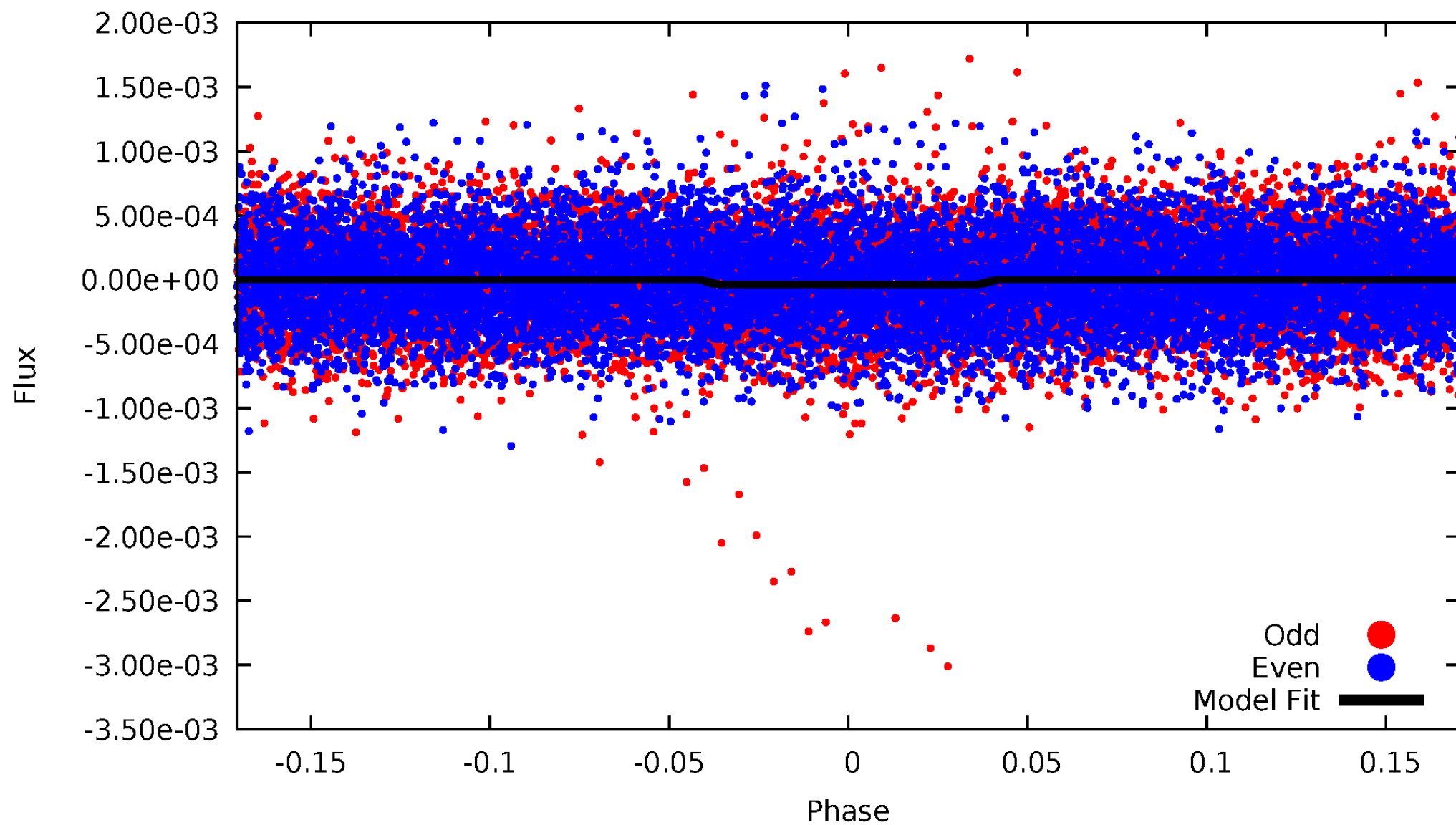
DV Odd/Even

TCE 005817685-01



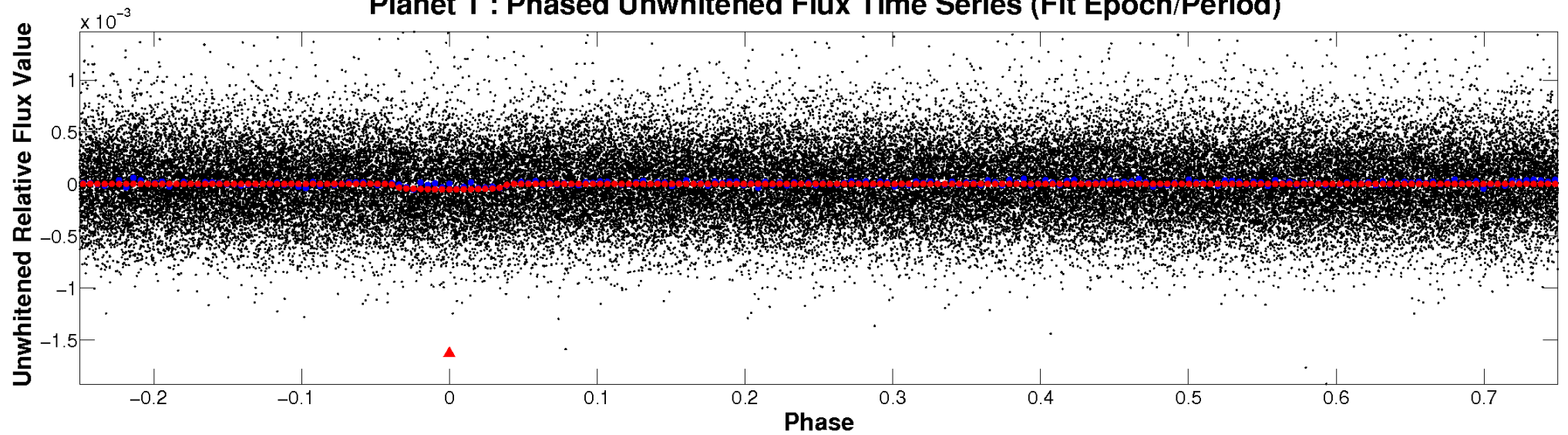
ALT Odd/Even

TCE 005817685-01

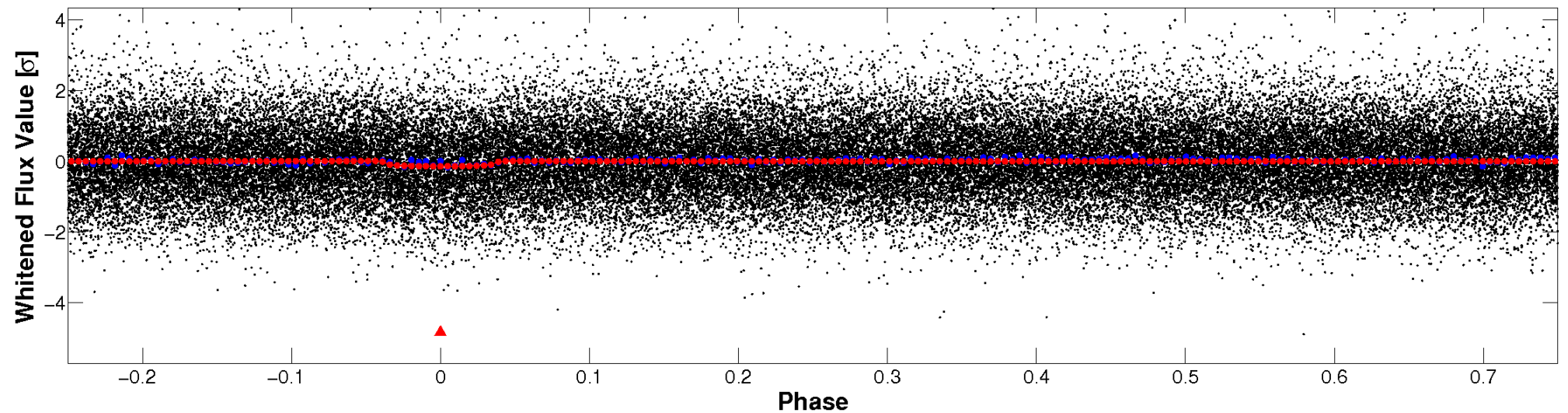


Non-Whitened Vs. Whitened Light Curve

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

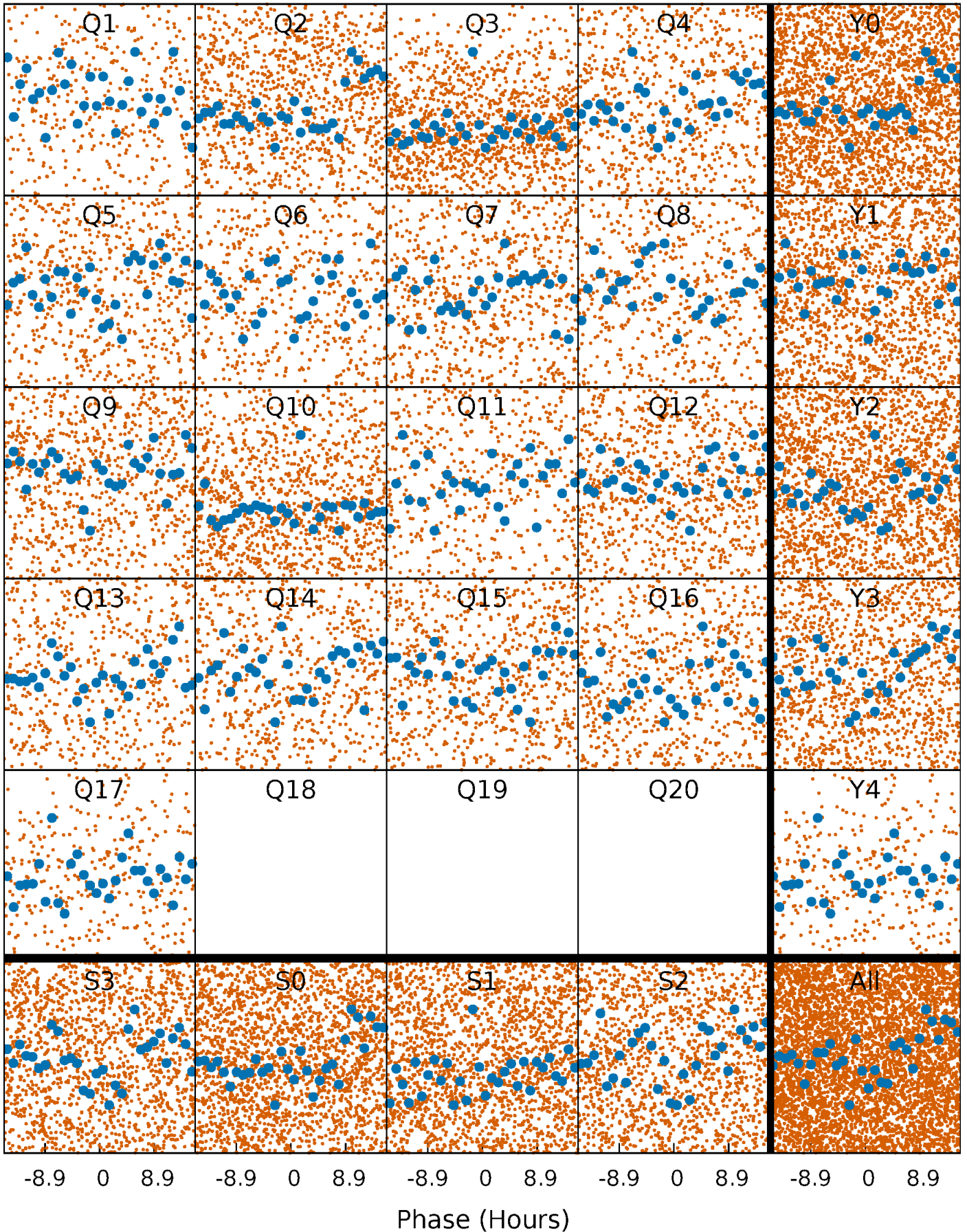


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



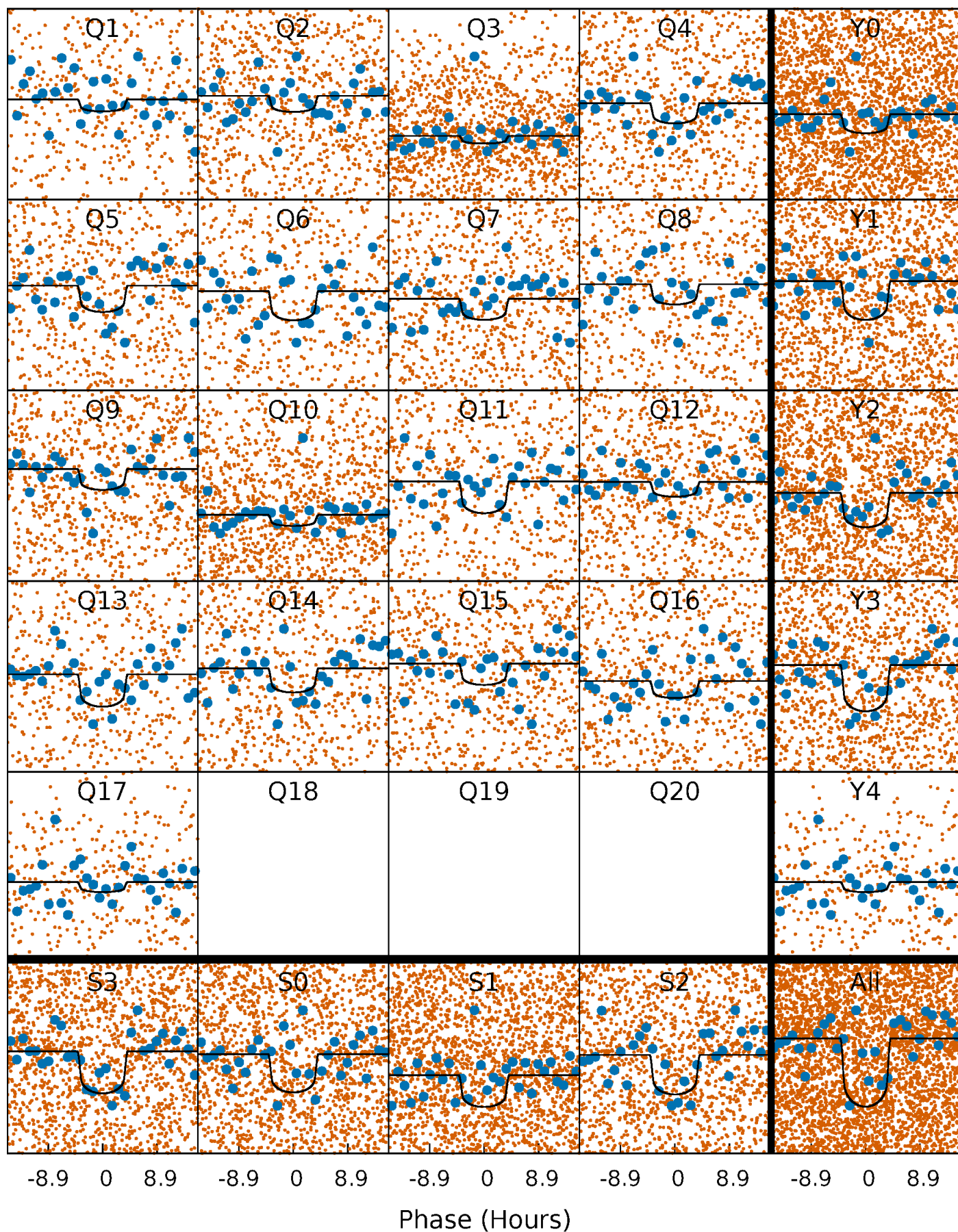
PDC Quarter-Phased Transit Curves

TCE 005817685-01 P= 4.205953 Days $T_0=132.275604$ (BKJD)



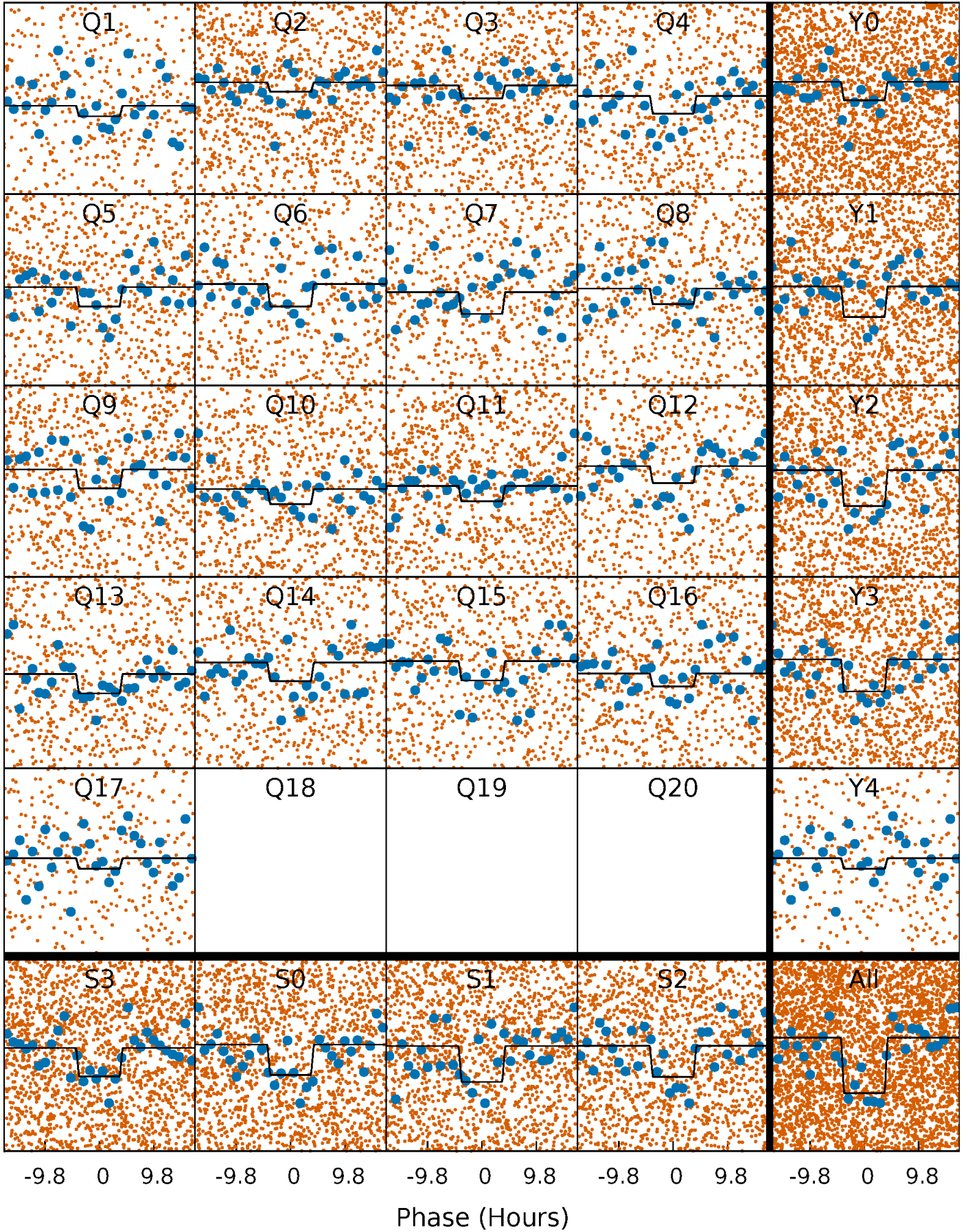
DV Quarter-Phased Transit Curves

TCE 005817685-01 P= 4.205953 Days $T_0=132.275604$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

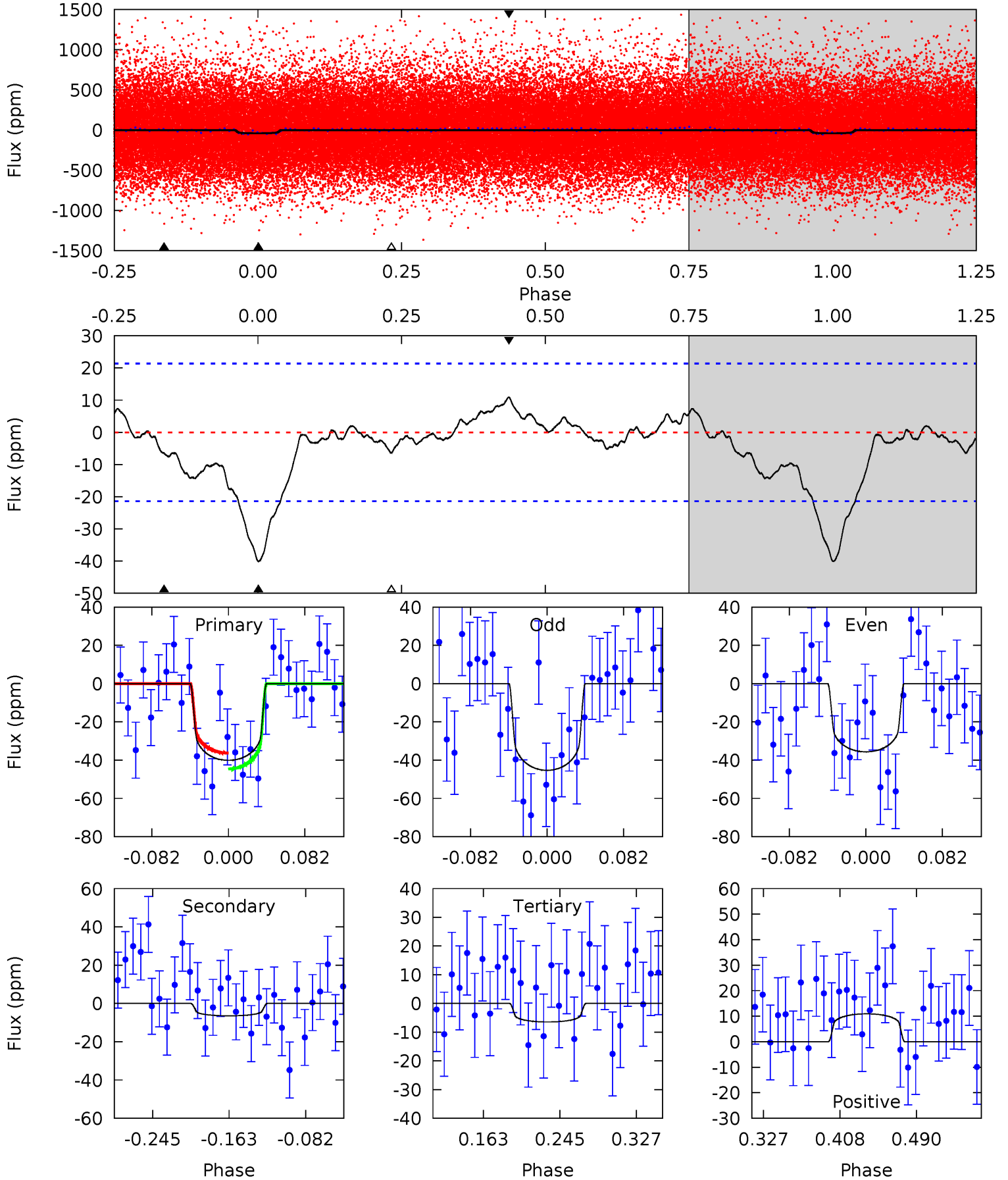
TCE 005817685-01 P= 4.205750 Days $T_0=132.311559$ (BKJD)



DV Model-Shift Uniqueness Test

005817685-01, P = 4.205953 Days, E = 128.069651 Days

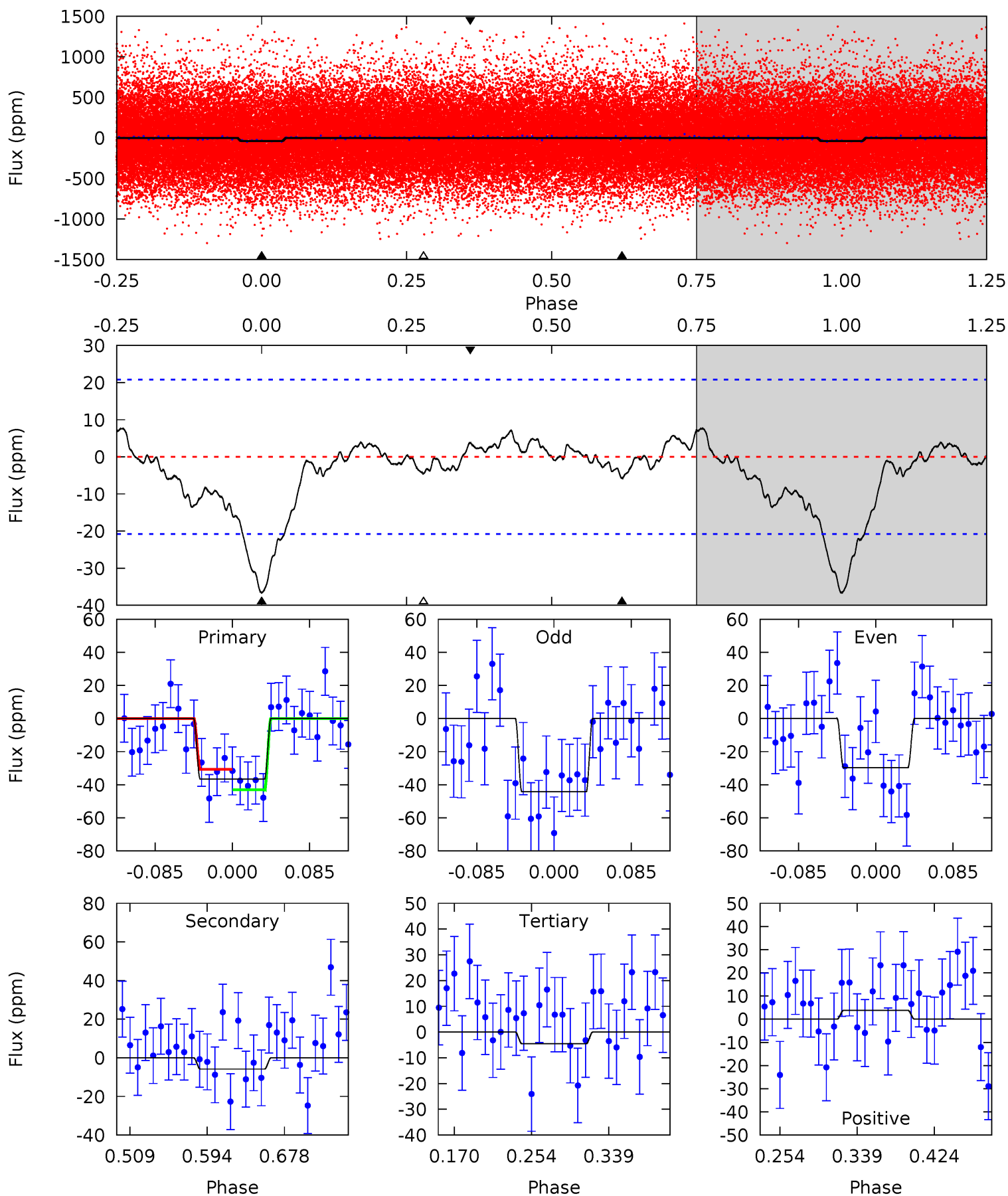
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.63	1.39	1.39	2.36	4.61	1.74	0.80	7.24	6.27	0.00	-0.96	1.04	0.67	0.21	0.90



Alt Model-Shift Uniqueness Test

005817685-01, P = 4.205750 Days, E = 128.105809 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.09	1.29	1.00	0.85	4.60	1.72	0.98	7.09	7.24	0.28	0.44	1.61	1.25	0.17	1.37



Stellar Parameters For KIC 005817685

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5960^{+179}_{-197}	$4.291^{+0.185}_{-0.185}$	$-0.180^{+0.300}_{-0.300}$	$1.163^{+0.328}_{-0.238}$	$0.964^{+0.145}_{-0.118}$	$0.864^{+0.808}_{-0.414}$
	+3%/-3%	+4%/-4%	+167%/-167%	+28%/-20%	+15%/-12%	+94%/-48%
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 005817685-01 / KOI 4652.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 5	$0.98^{+0.44}_{-0.40}$	1766^{+136}_{-123}	3698^{+964}_{-846}	$8.333^{+20.056}_{-6.783}$
Alt.	-6 ± 5	$0.78^{+0.44}_{-0.38}$	1767^{+131}_{-117}	3952^{+1156}_{-989}	12^{+35}_{-10}

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

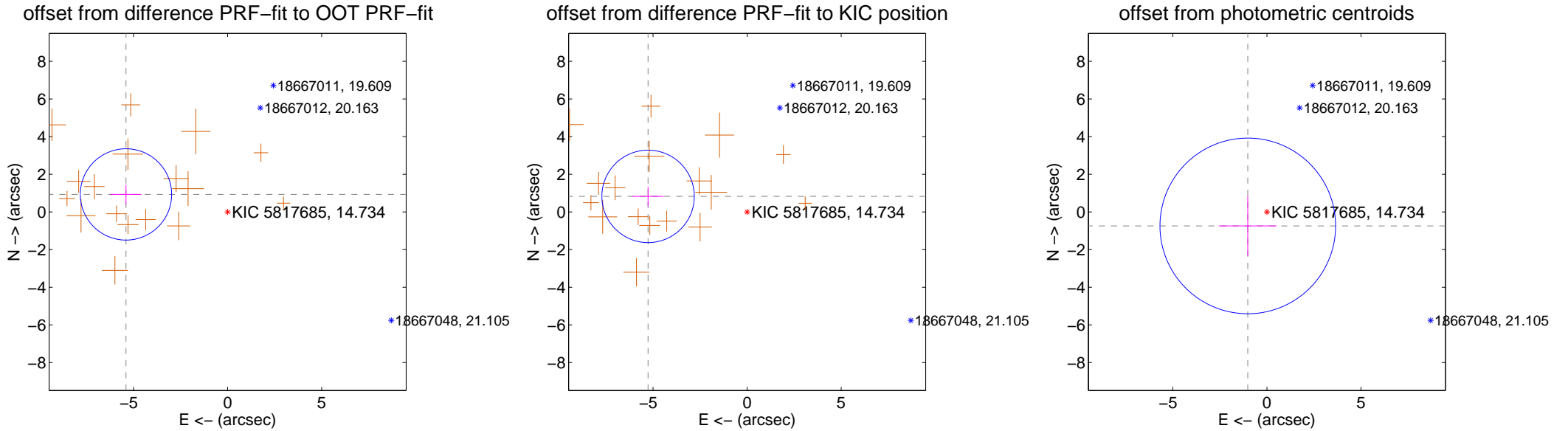
DV Centroid Data

Supplemental centroid analysis for 005817685-01. Kepler magnitude: 14.73. Transit SNR 8.59

There are 0 quarters with good PRF difference image offsets

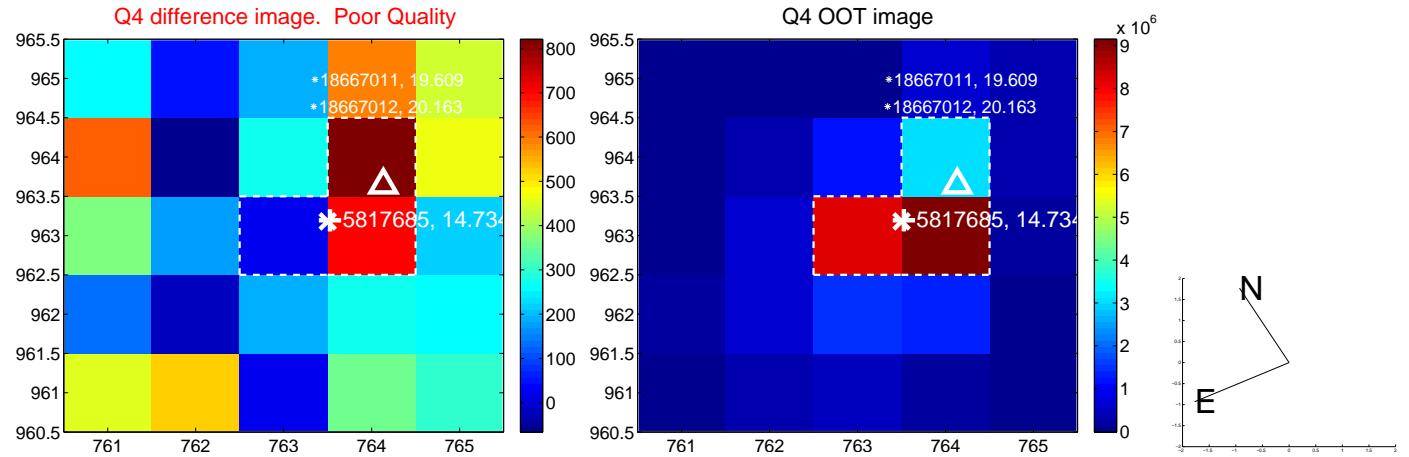
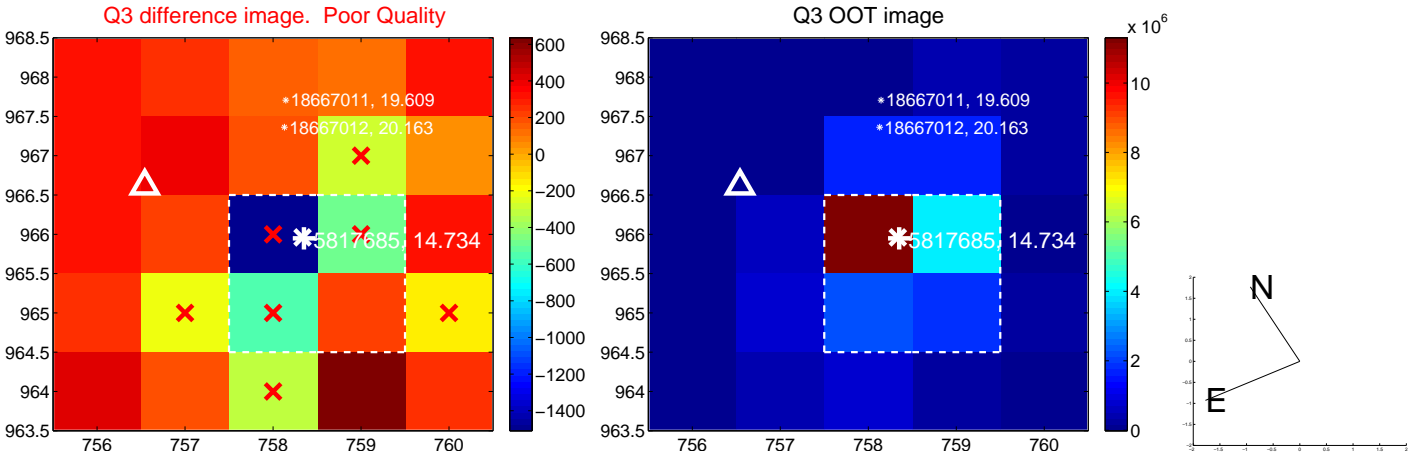
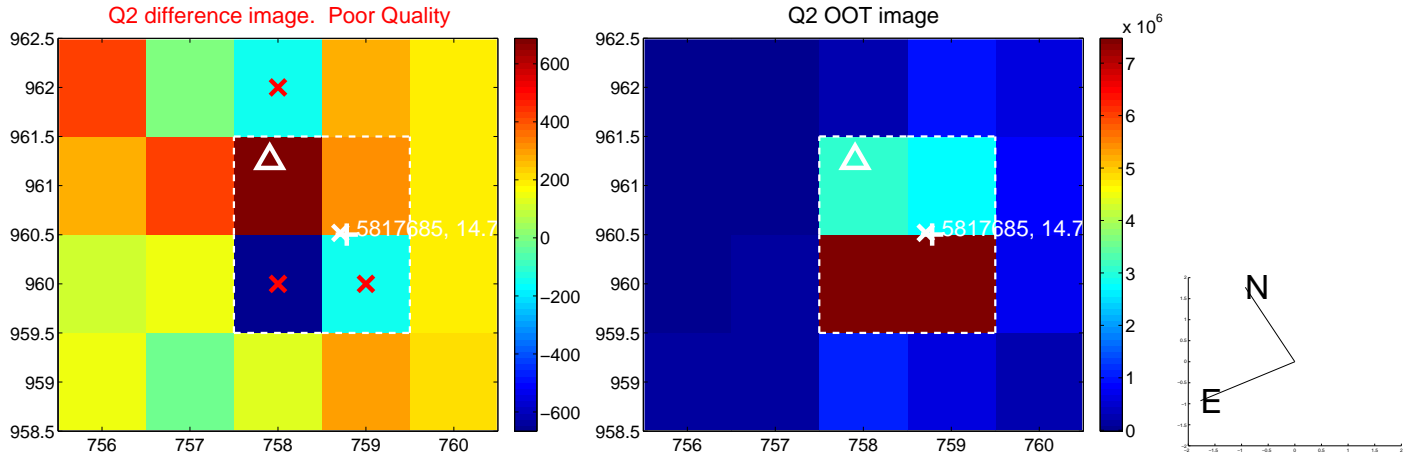
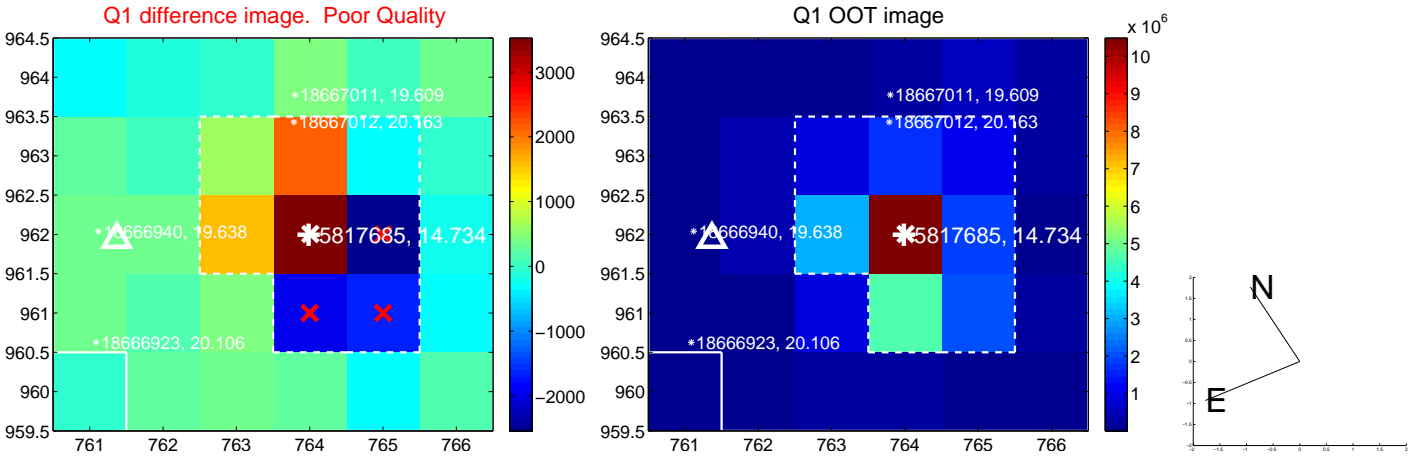
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.479 ± 0.809	6.77	5.399 ± 0.822	0.930 ± 0.509
PRF-fit source offset from KIC position	5.326 ± 0.818	6.51	5.262 ± 0.822	0.826 ± 0.514
photometric centroid source offset	1.26 ± 1.56	0.81	1.02 ± 1.53	-0.74 ± 1.59

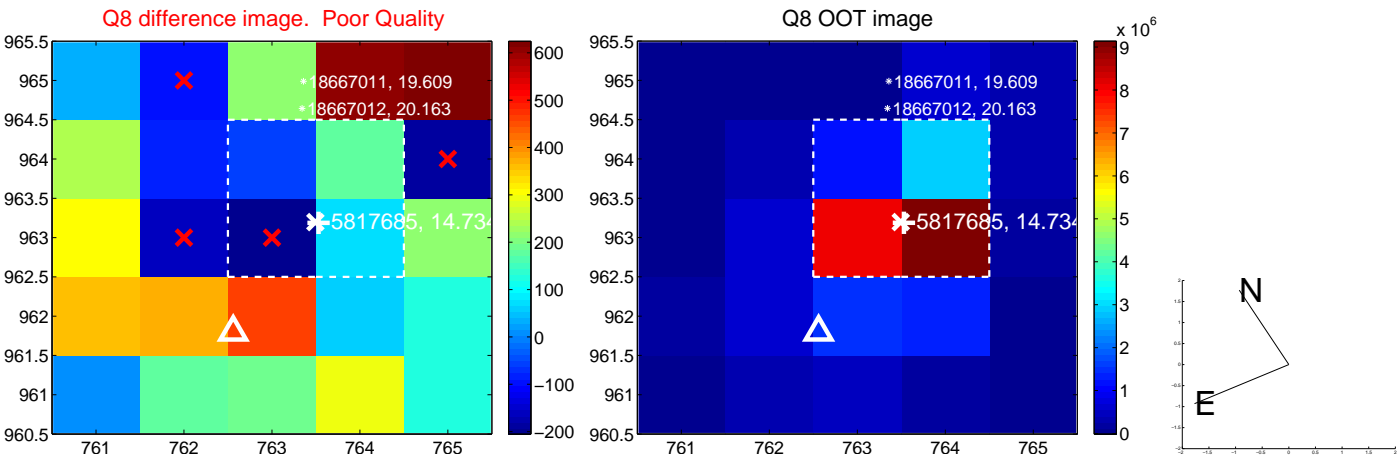
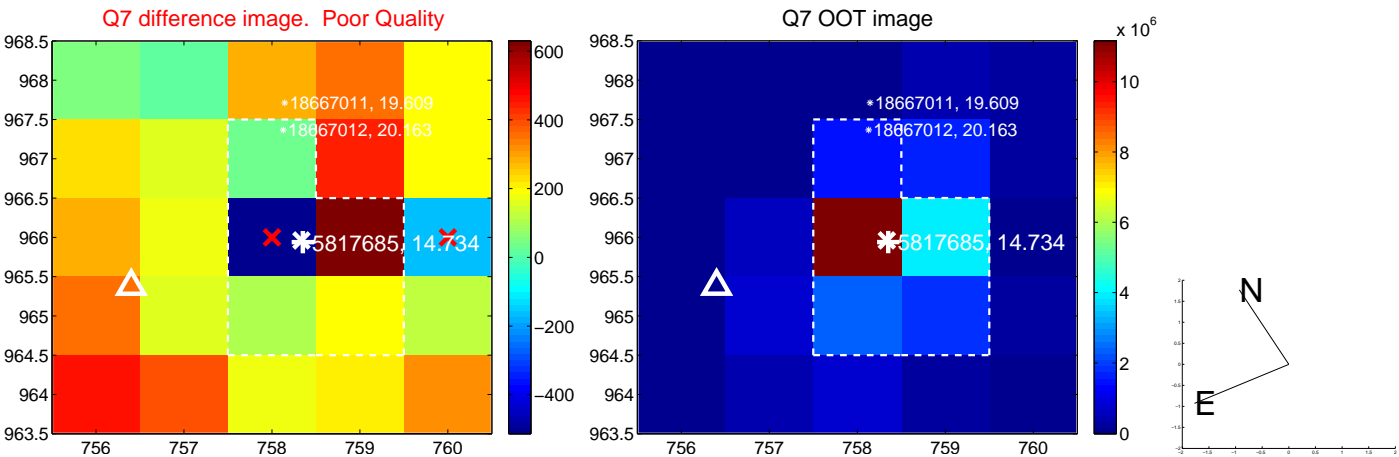
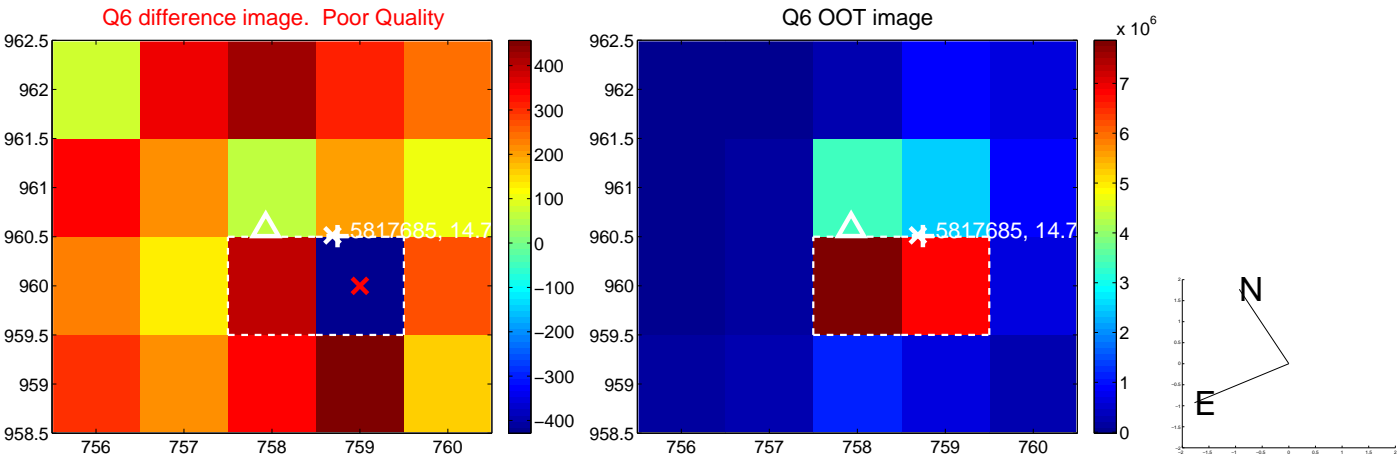
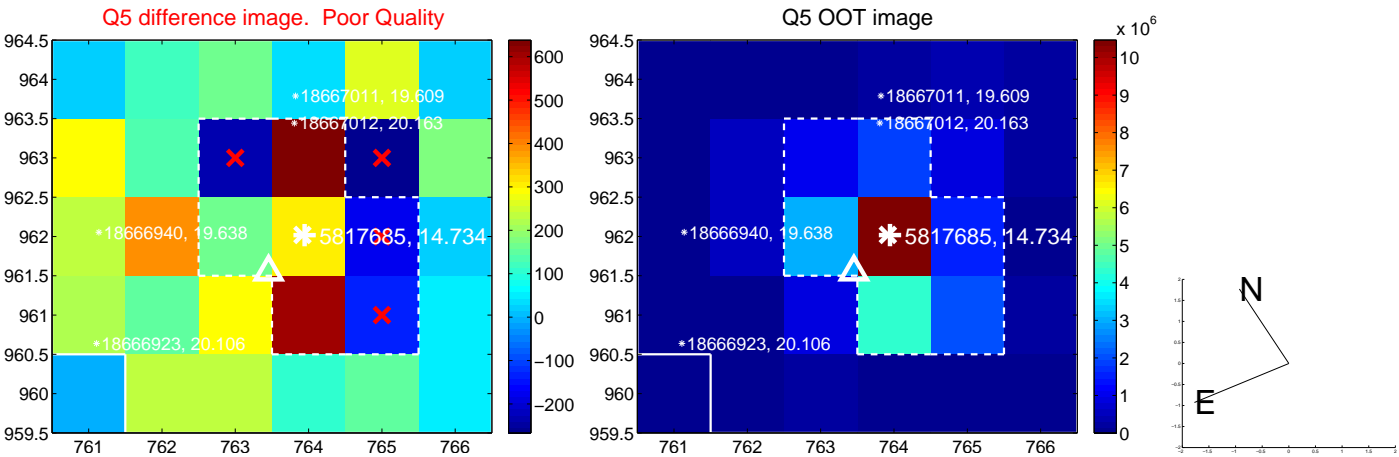


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

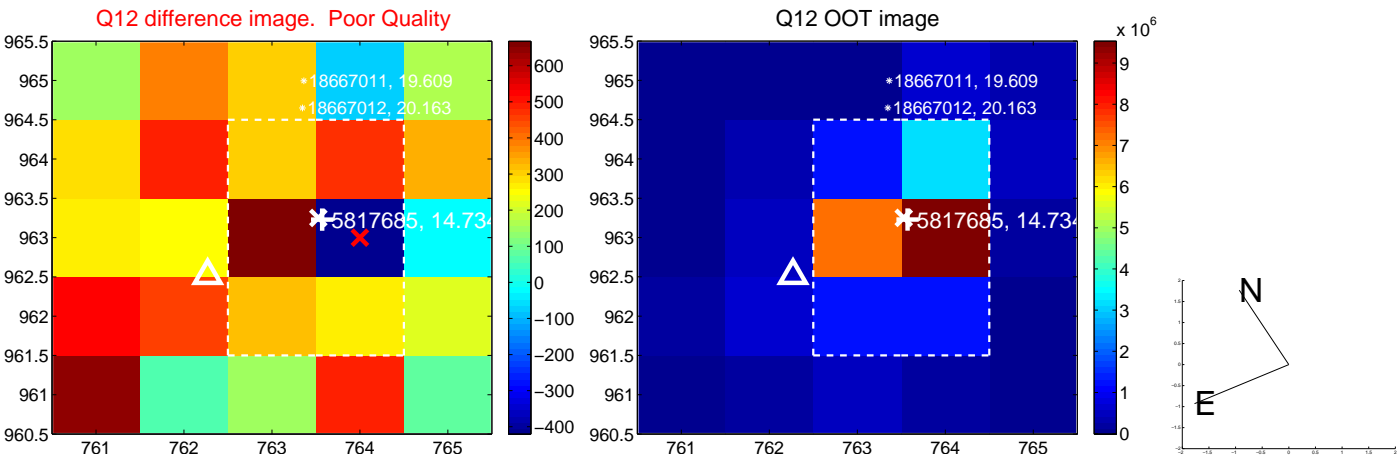
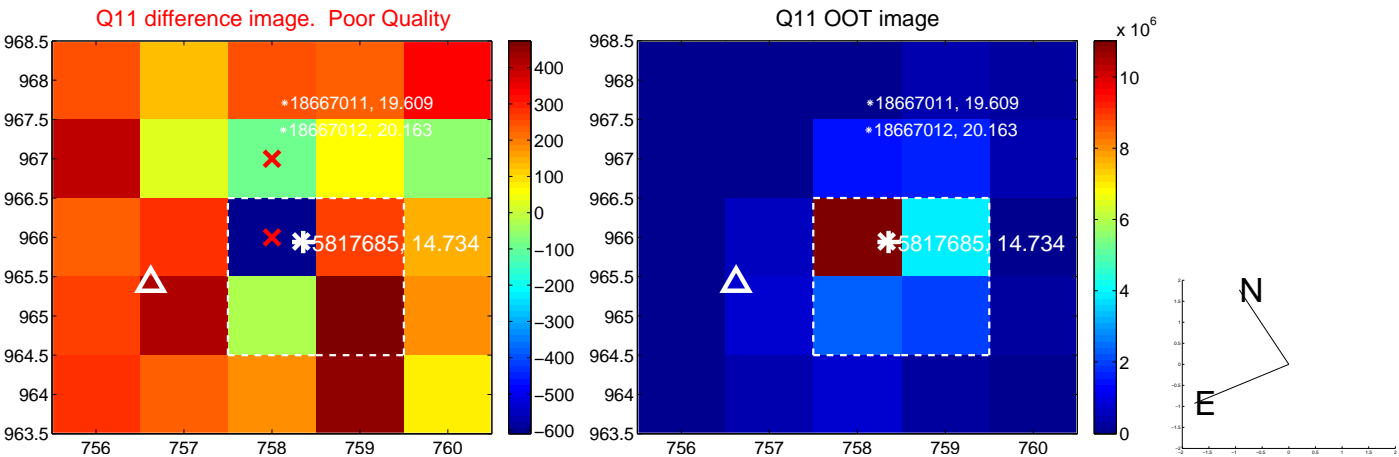
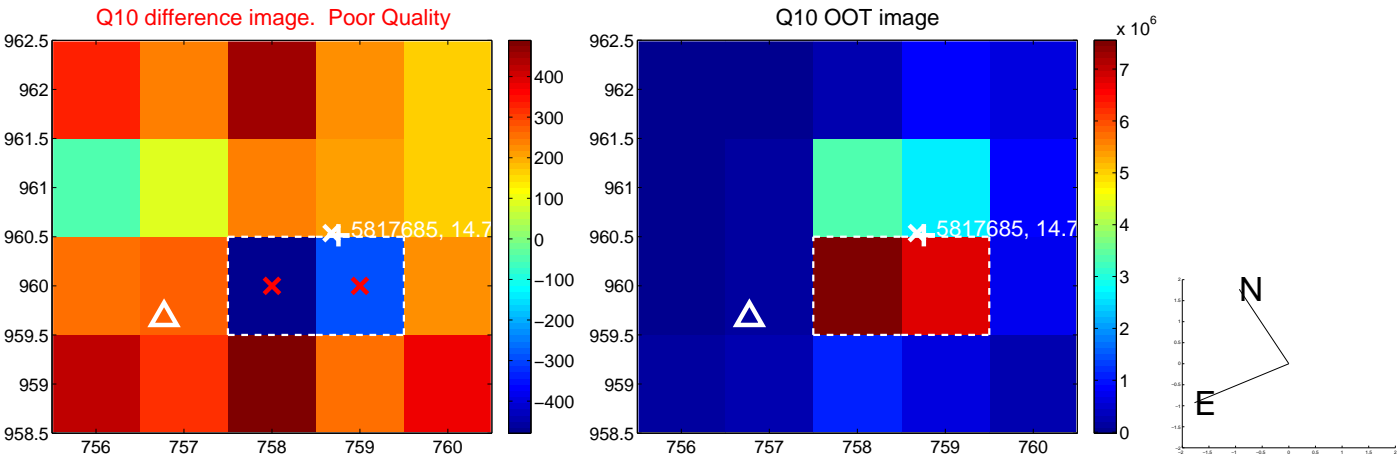
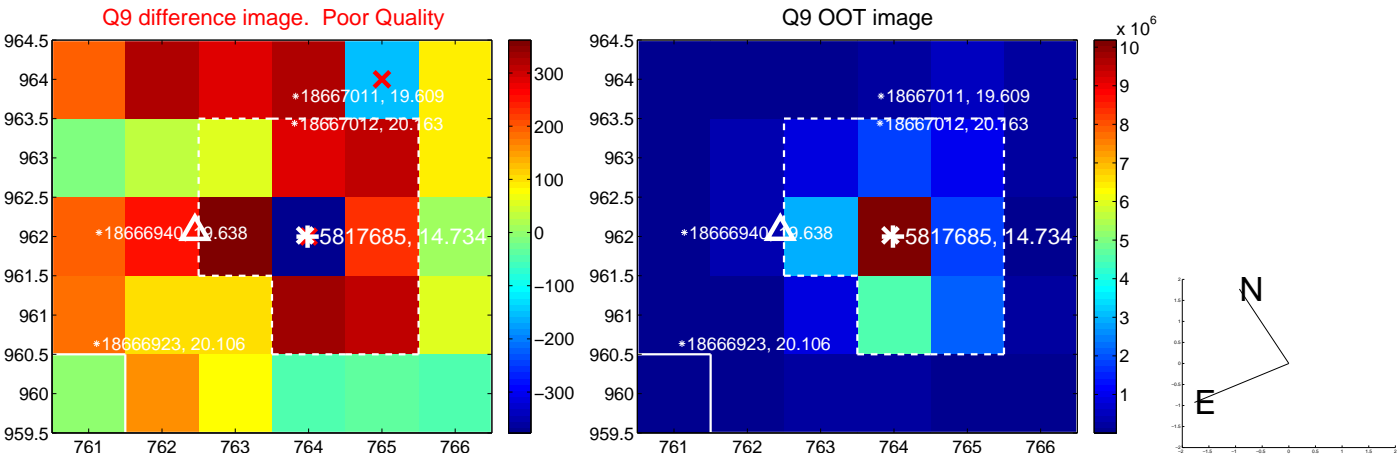
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



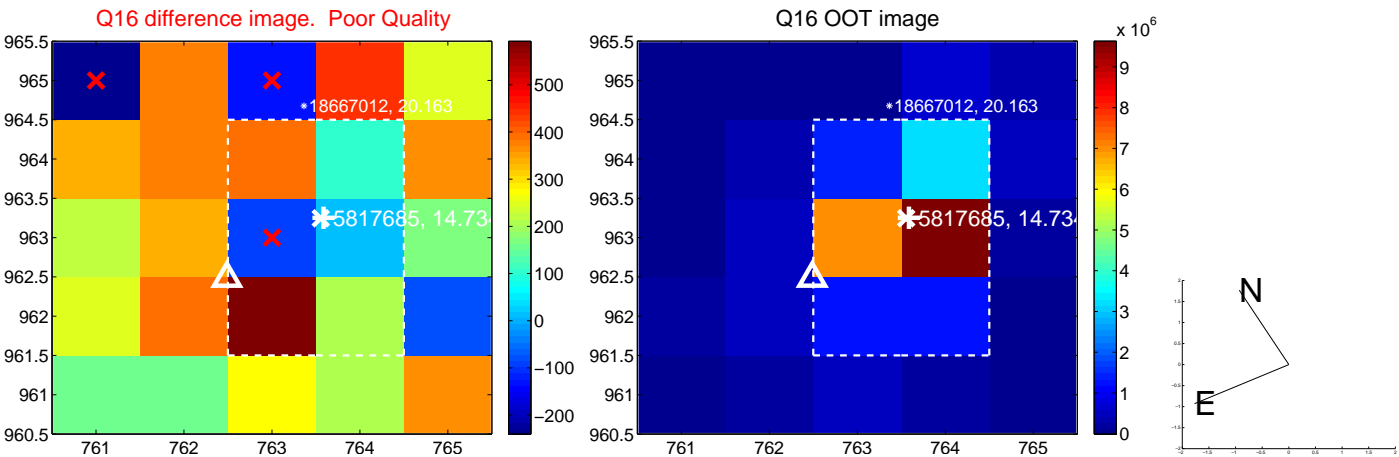
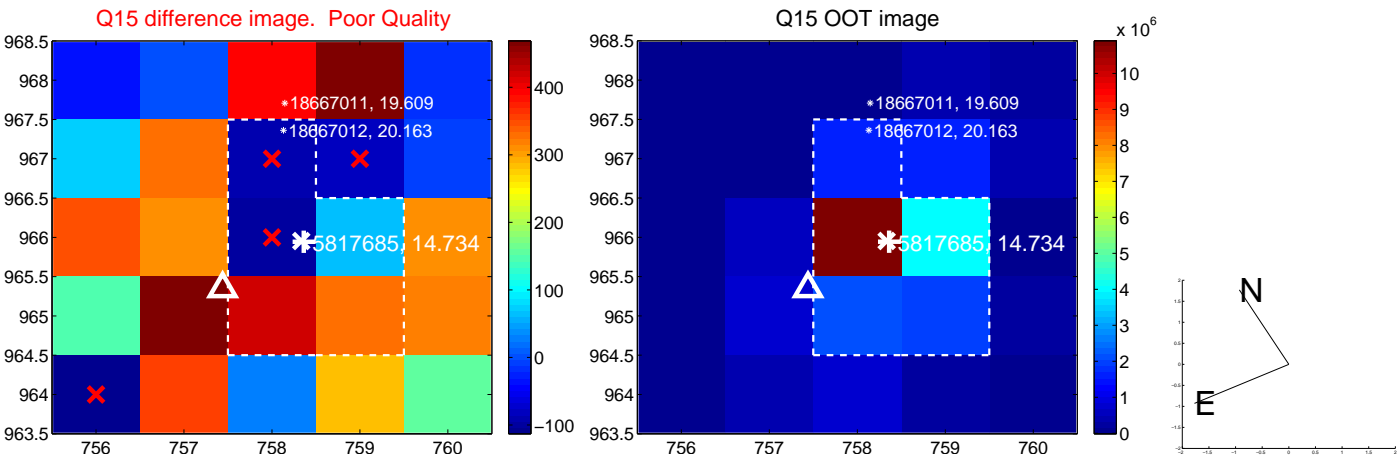
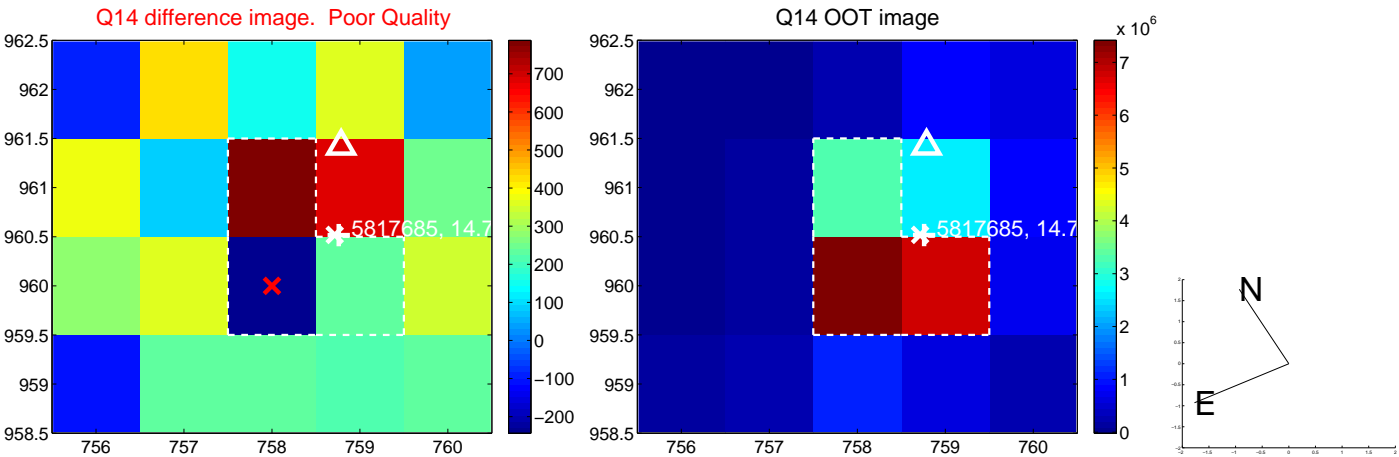
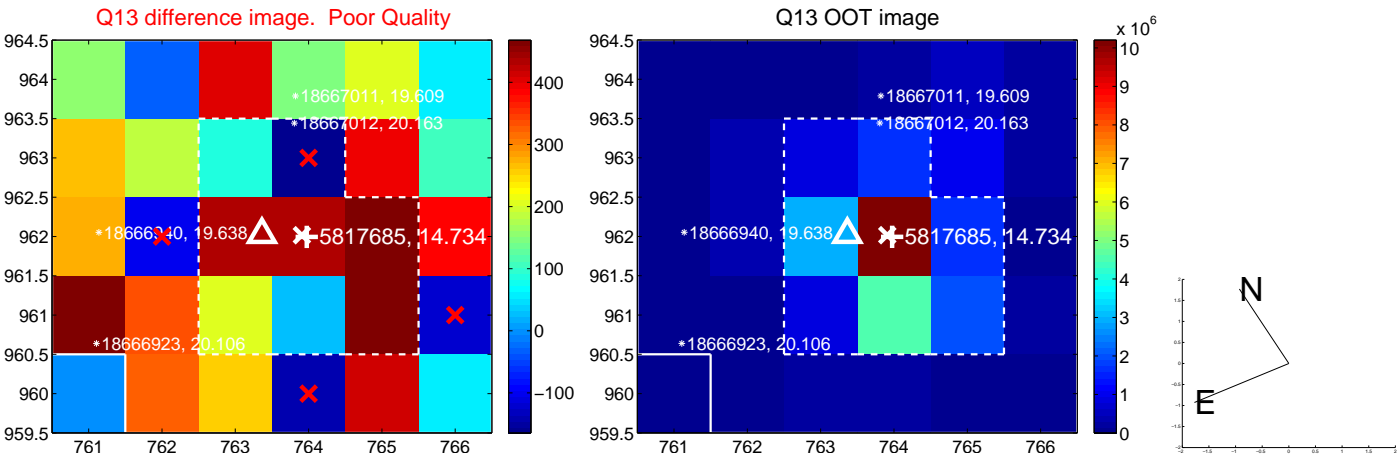
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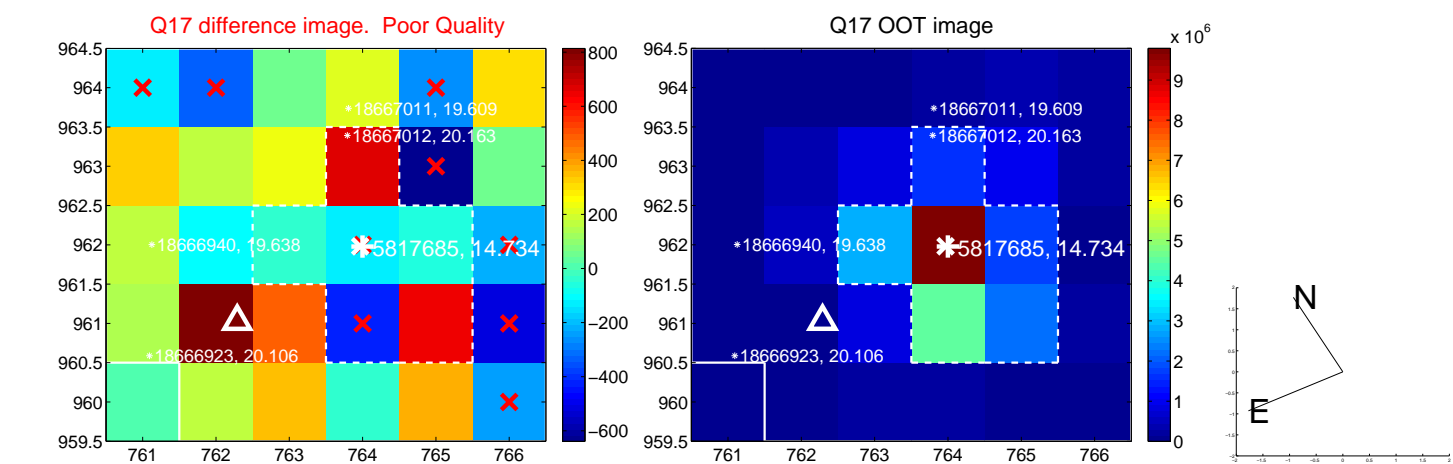
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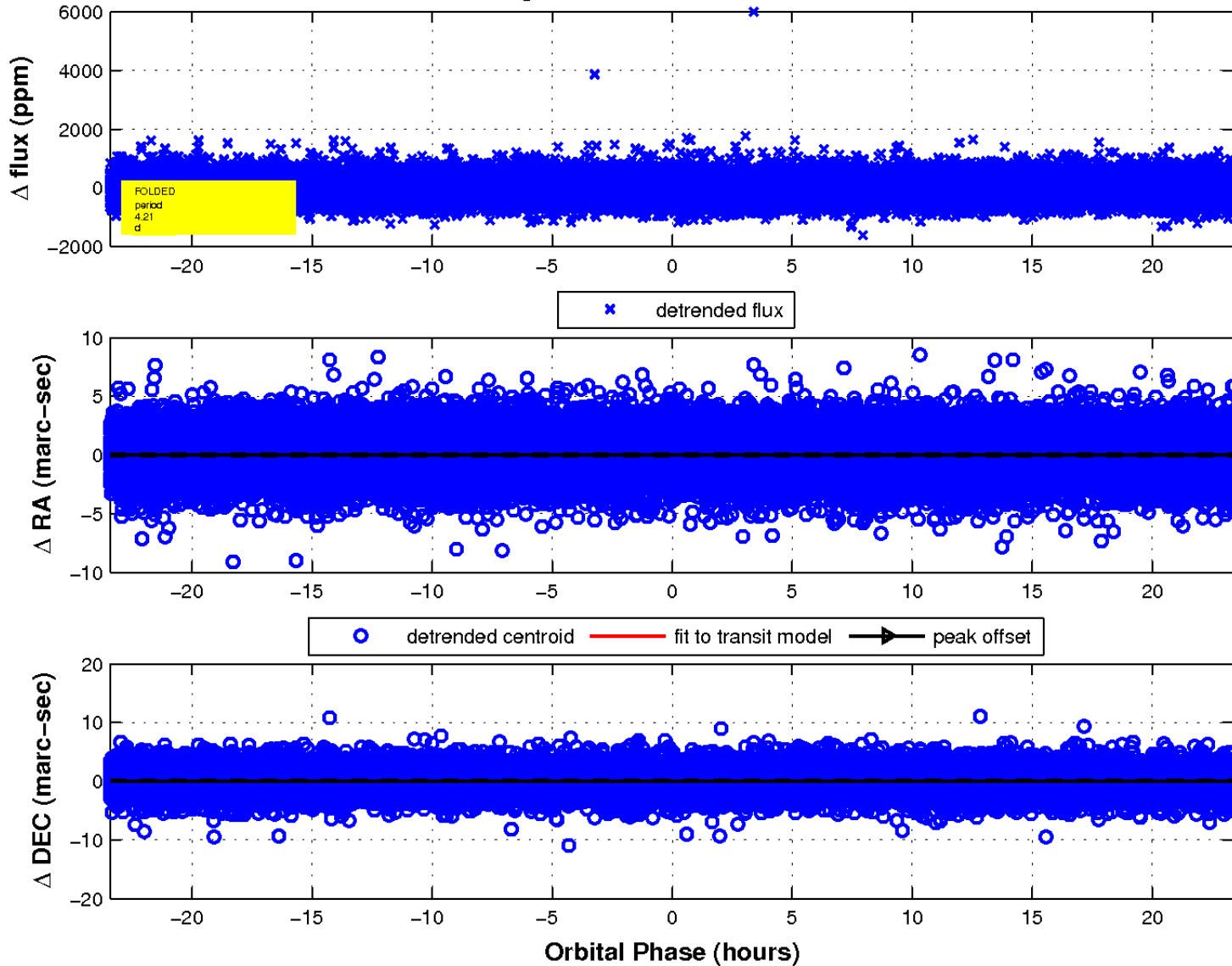
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

