

KIC 008245108

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})
008245108-01	OBS	7876.01	0.579104	131.779056	61.1	2.031	7.8	8.7	0.50	4604	0.47	851.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008245108-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—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.

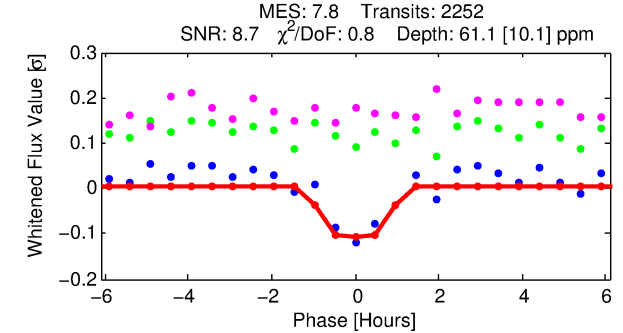
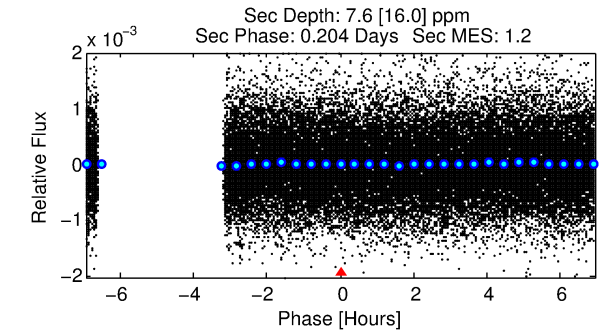
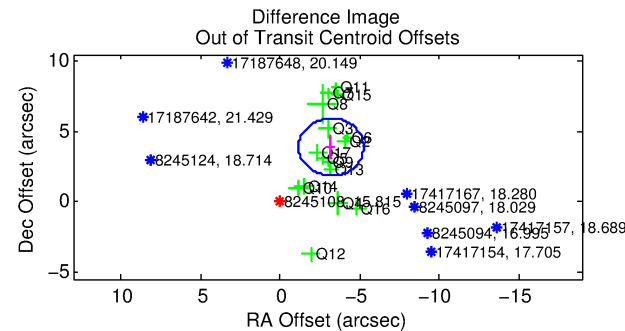
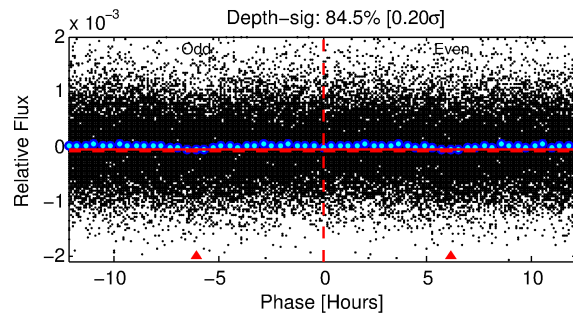
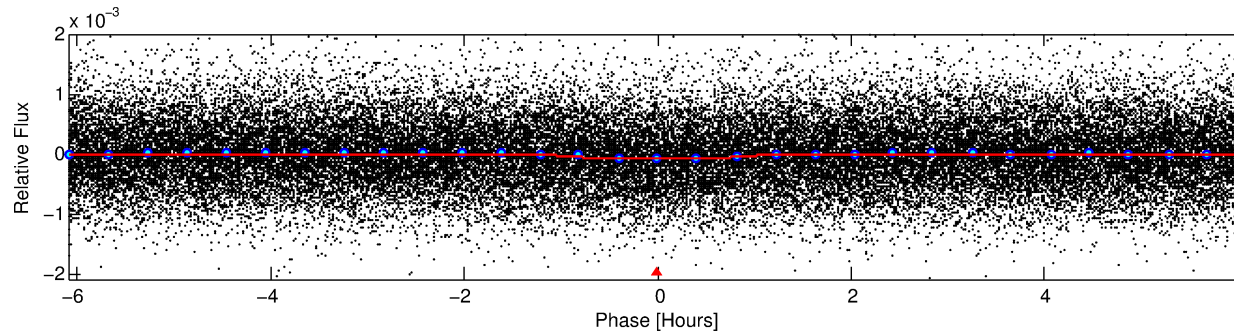
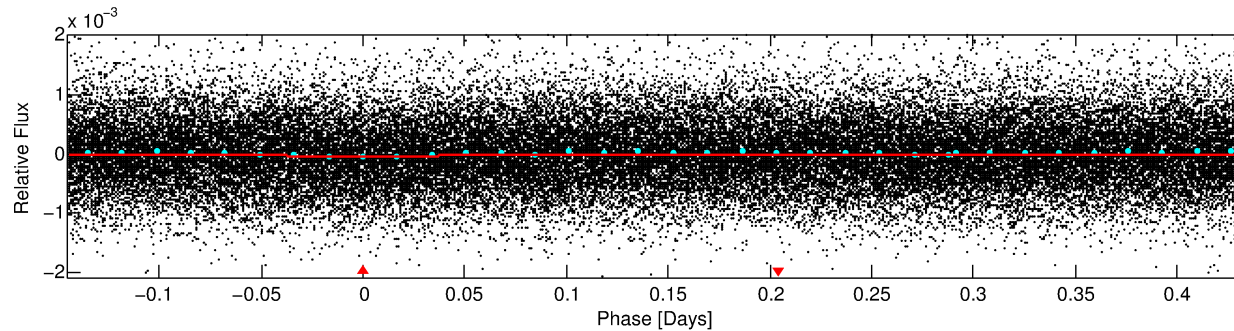
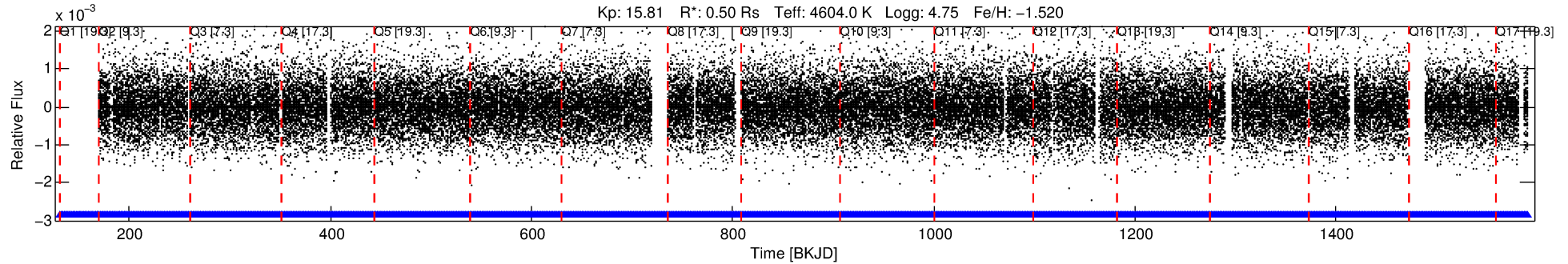
Ephemeris Match Information For 008245108-01

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
008245108-01	8245108	008311255-pri	8311255	1:1	46.7	7	9	13.67	15.82	5485.20	Direct-PRF	0	2.28	1.35

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: 8245108 Candidate: 1 of 1 Period: 0.579 d



DV Fit Results:

Period = 0.57910 [0.00001] d
Epoch = 131.7791 [0.0032] BKJD
Rp/R* = 0.0085 [0.0079]
a/R* = 1.36 [2.72]
b = 0.90 [0.92]
Seff = 851.76 [134.45]
Teq = 1378 [54] K
Rp = 0.47 [0.43] Re
a = 0.0109 [0.0006] AU
Ag = 2.27 [6.35] [0.20σ]
Teffp = 2613 [1833] K [0.67σ]

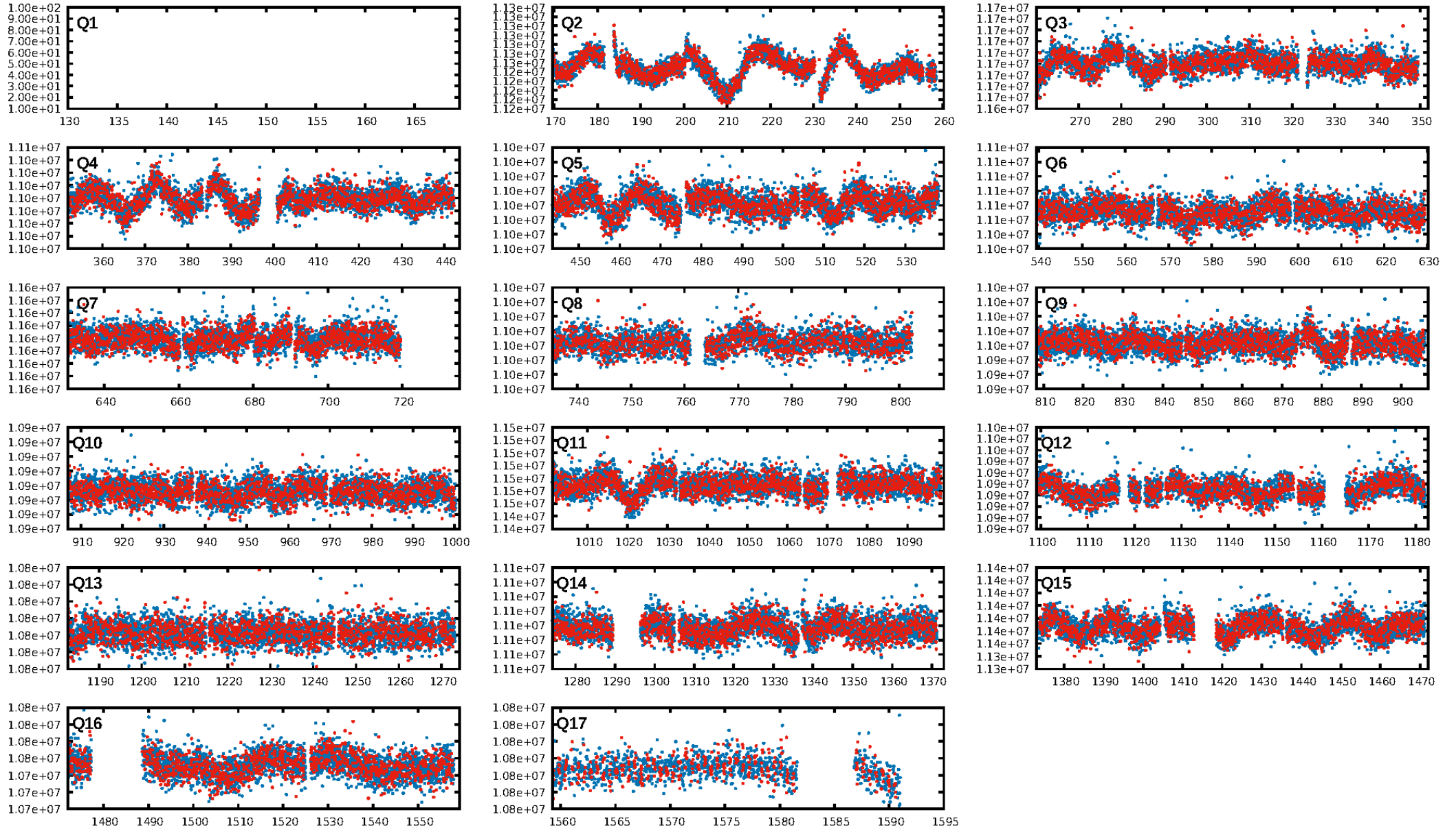
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.88e-15
RollingBand-fgt: 1.00 [2206/2206]
GhostDiagnostic-chr: -0.09263
Centroid-sig: 0.0%
Centroid-so: 6.886 arcsec [5.24σ]
OotOffset-rm: 5.054 arcsec [7.43σ]
KicOffset-rm: 5.223 arcsec [7.79σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 1.00 [16/16]

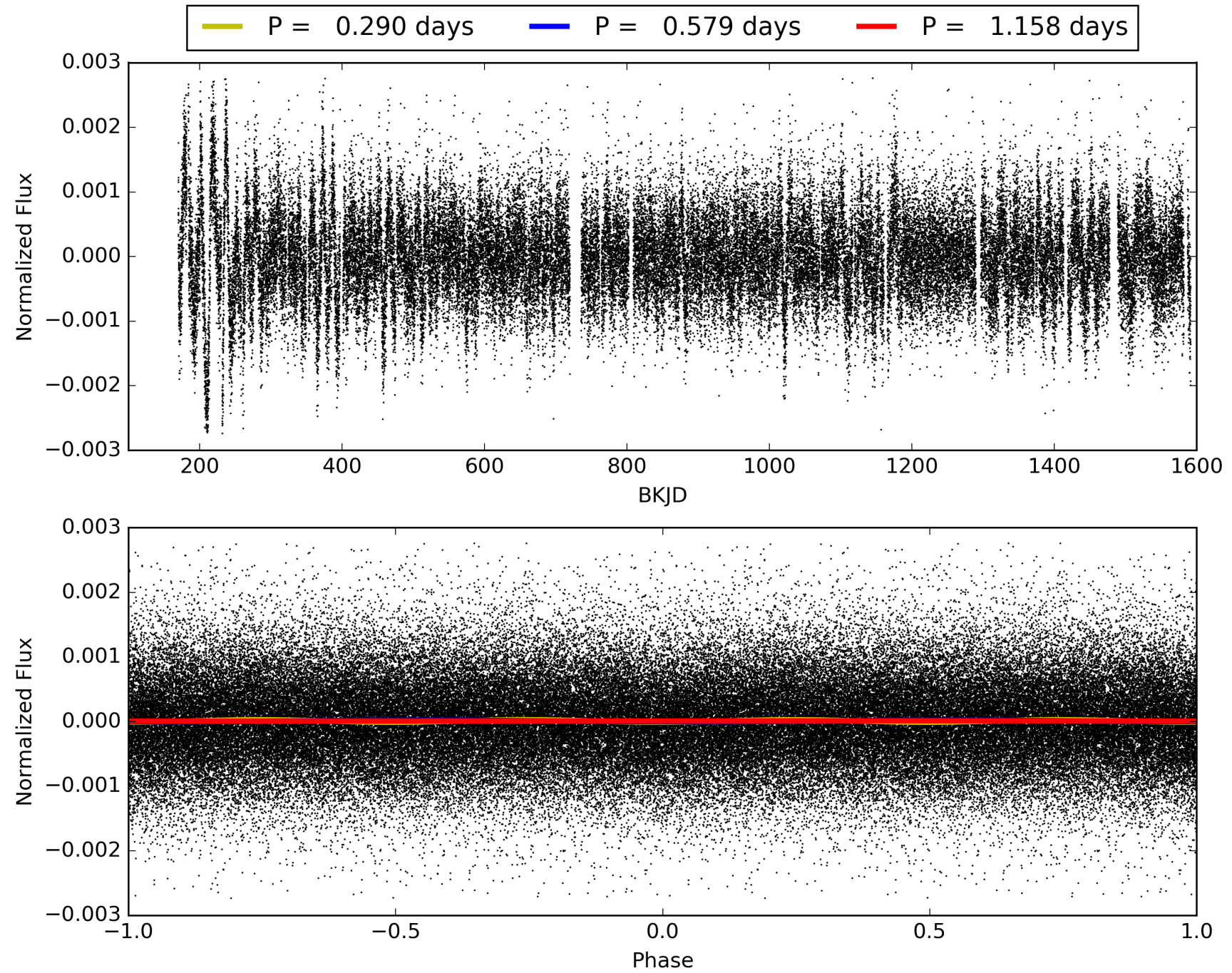
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:52:46 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008245108-01, PDC Light Curves

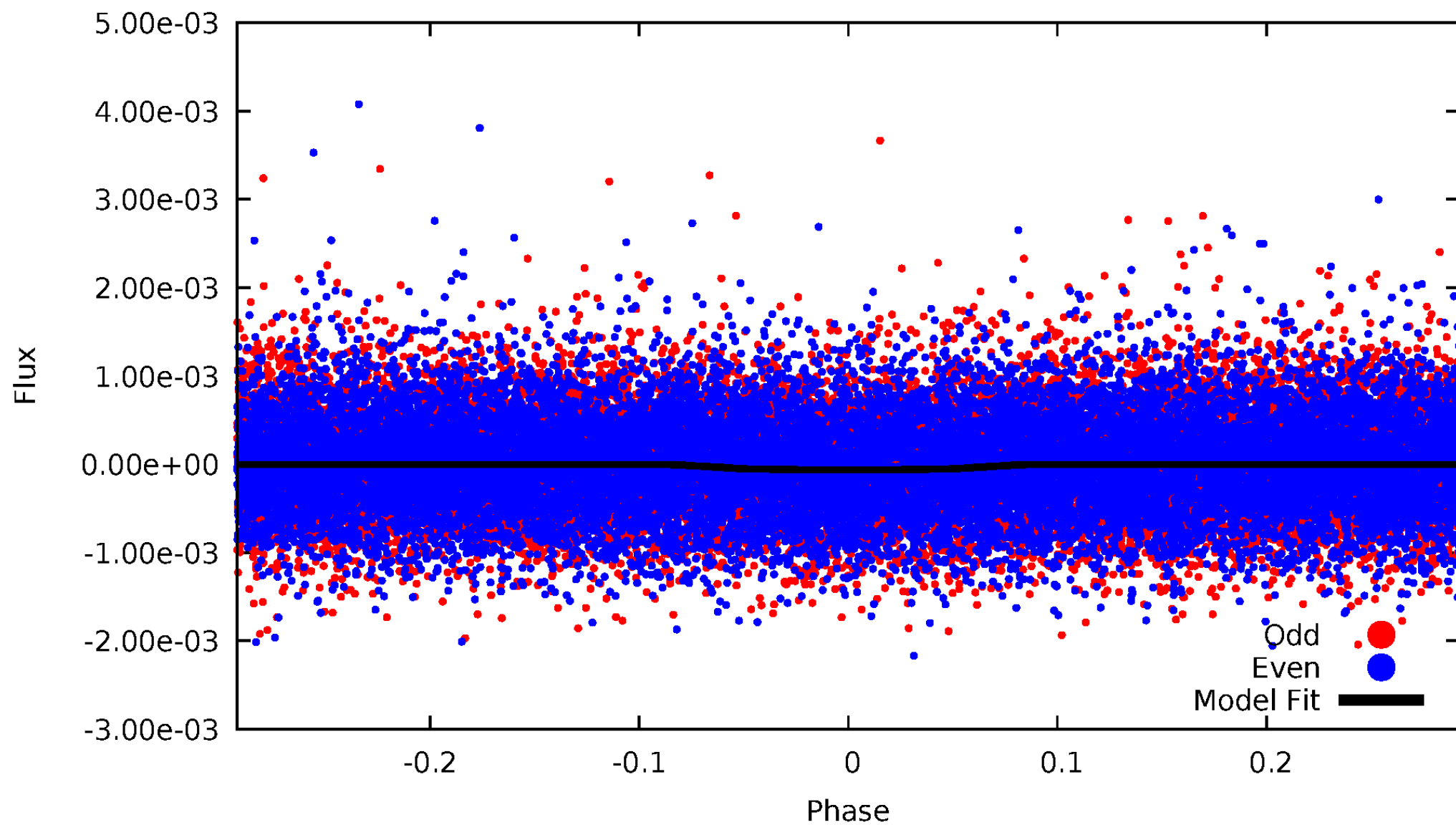


TCE 008245108-01



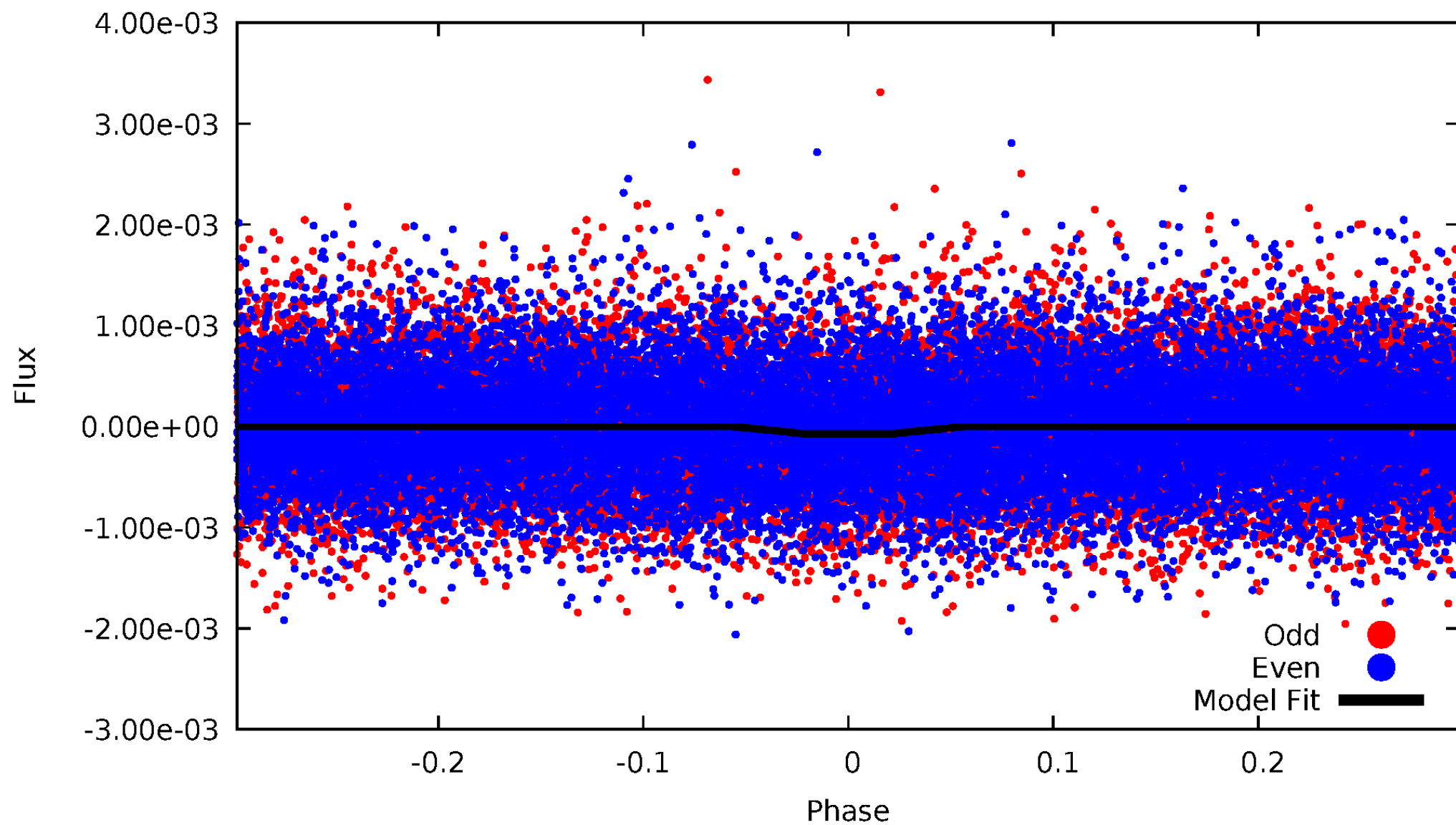
DV Odd/Even

TCE 008245108-01

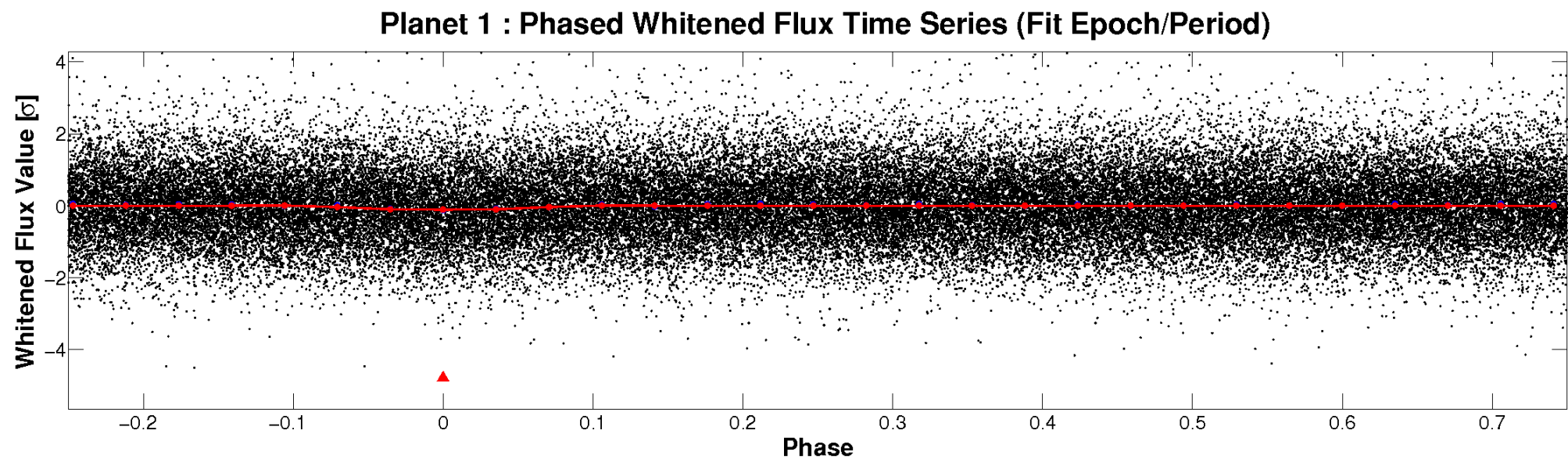
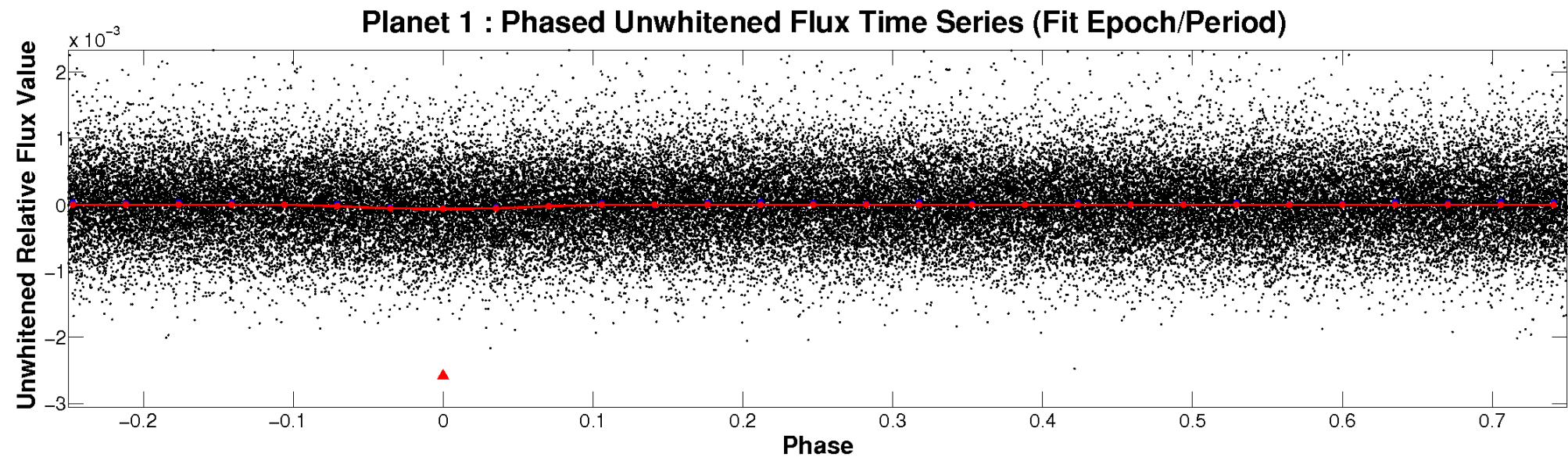


ALT Odd/Even

TCE 008245108-01

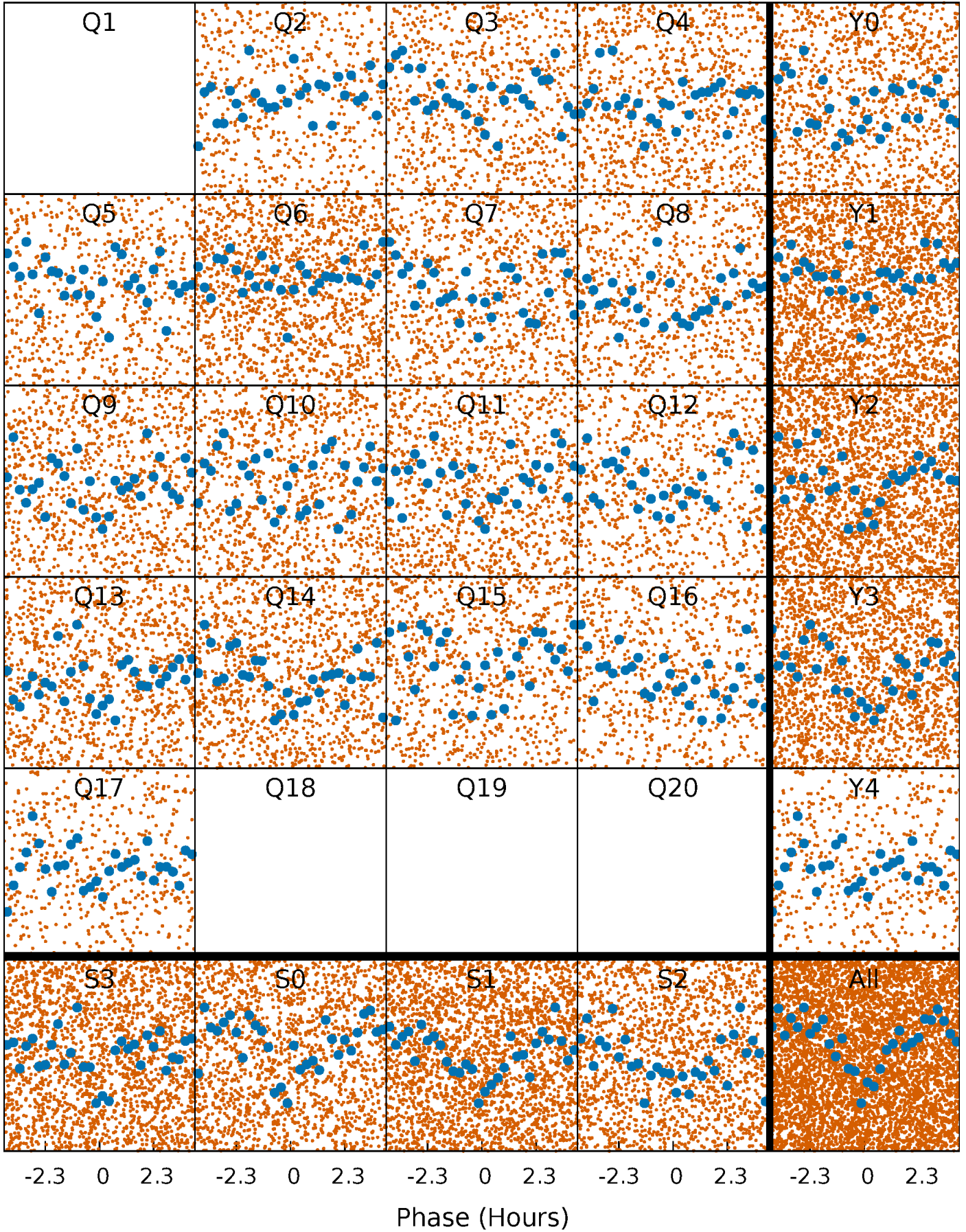


Non-Whitened Vs. Whitened Light Curve



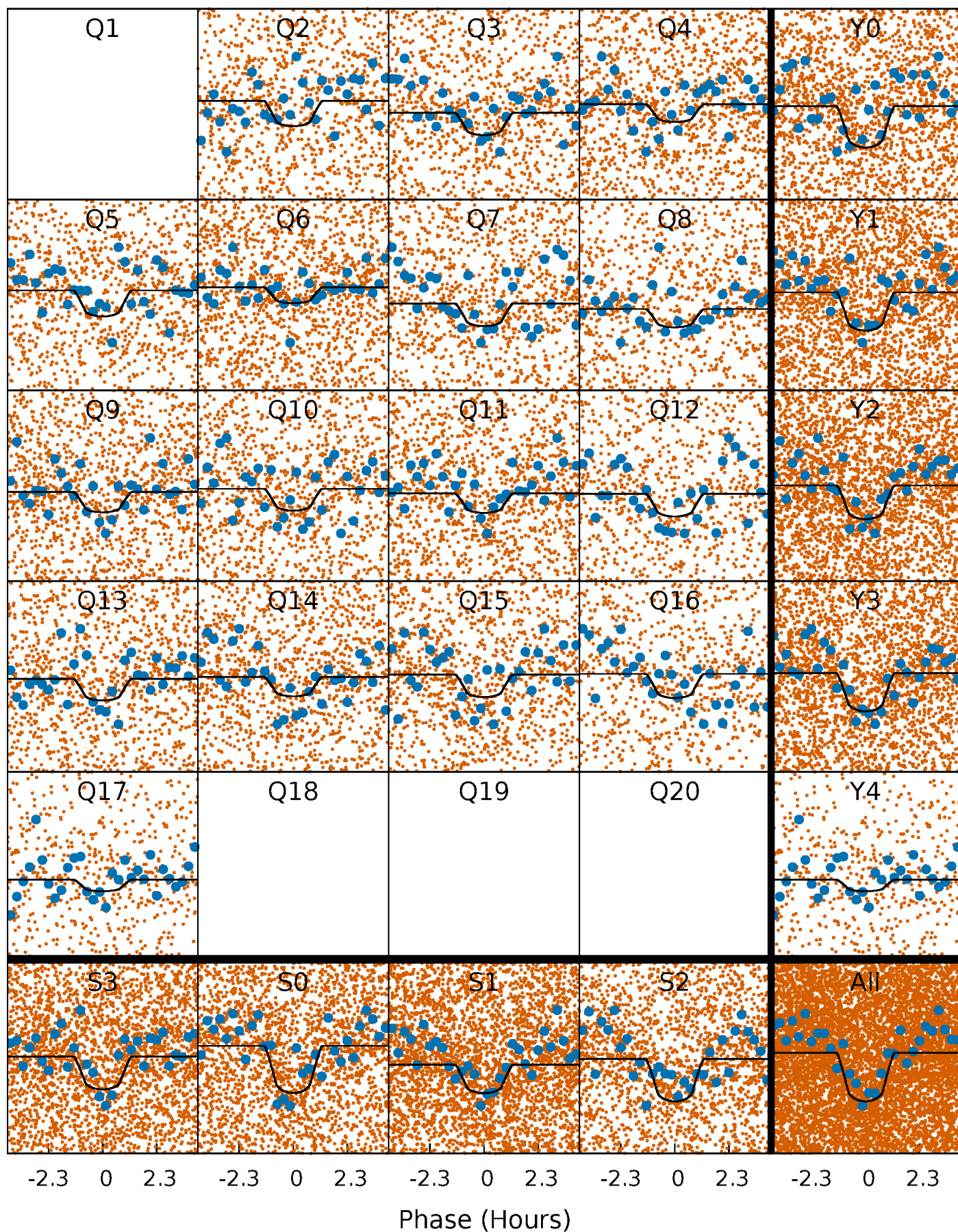
PDC Quarter-Phased Transit Curves

TCE 008245108-01 P= 0.579104 Days $T_0=131.779056$ (BKJD)



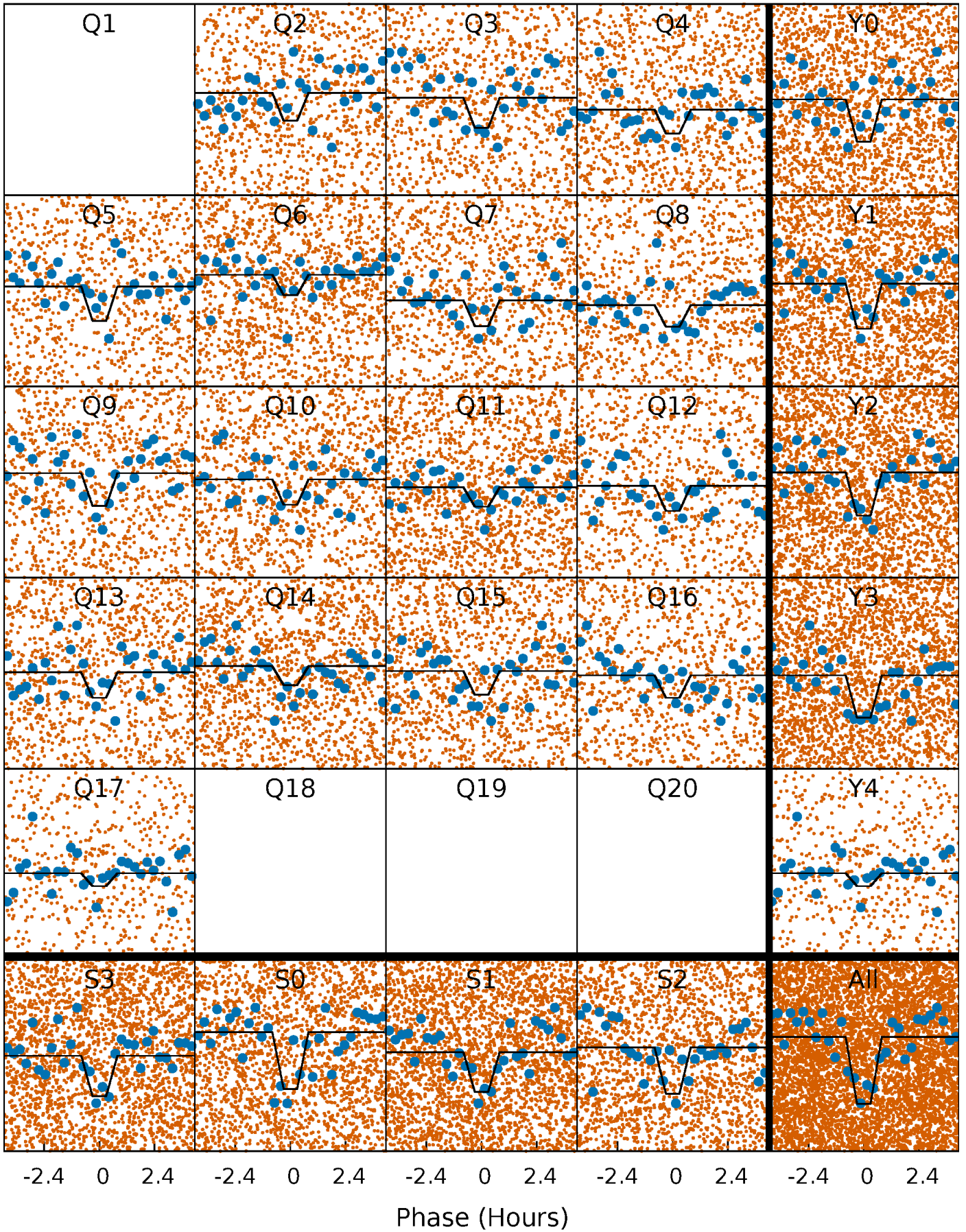
DV Quarter-Phased Transit Curves

TCE 008245108-01 P= 0.579104 Days $T_0=131.779056$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

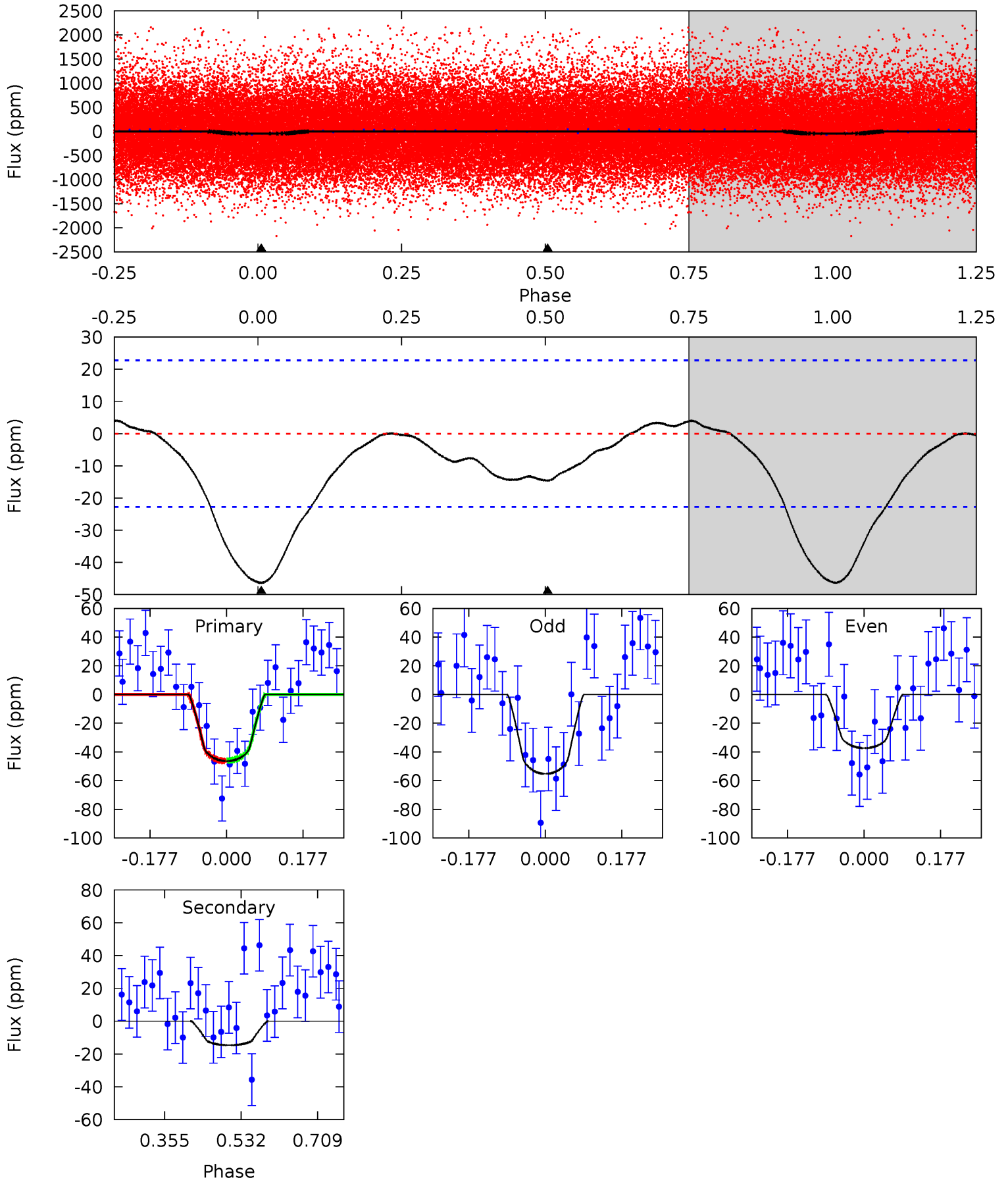
TCE 008245108-01 P= 0.579105 Days $T_0=131.778650$ (BKJD)



DV Model-Shift Uniqueness Test

008245108-01, P = 0.579104 Days, E = 131.779056 Days

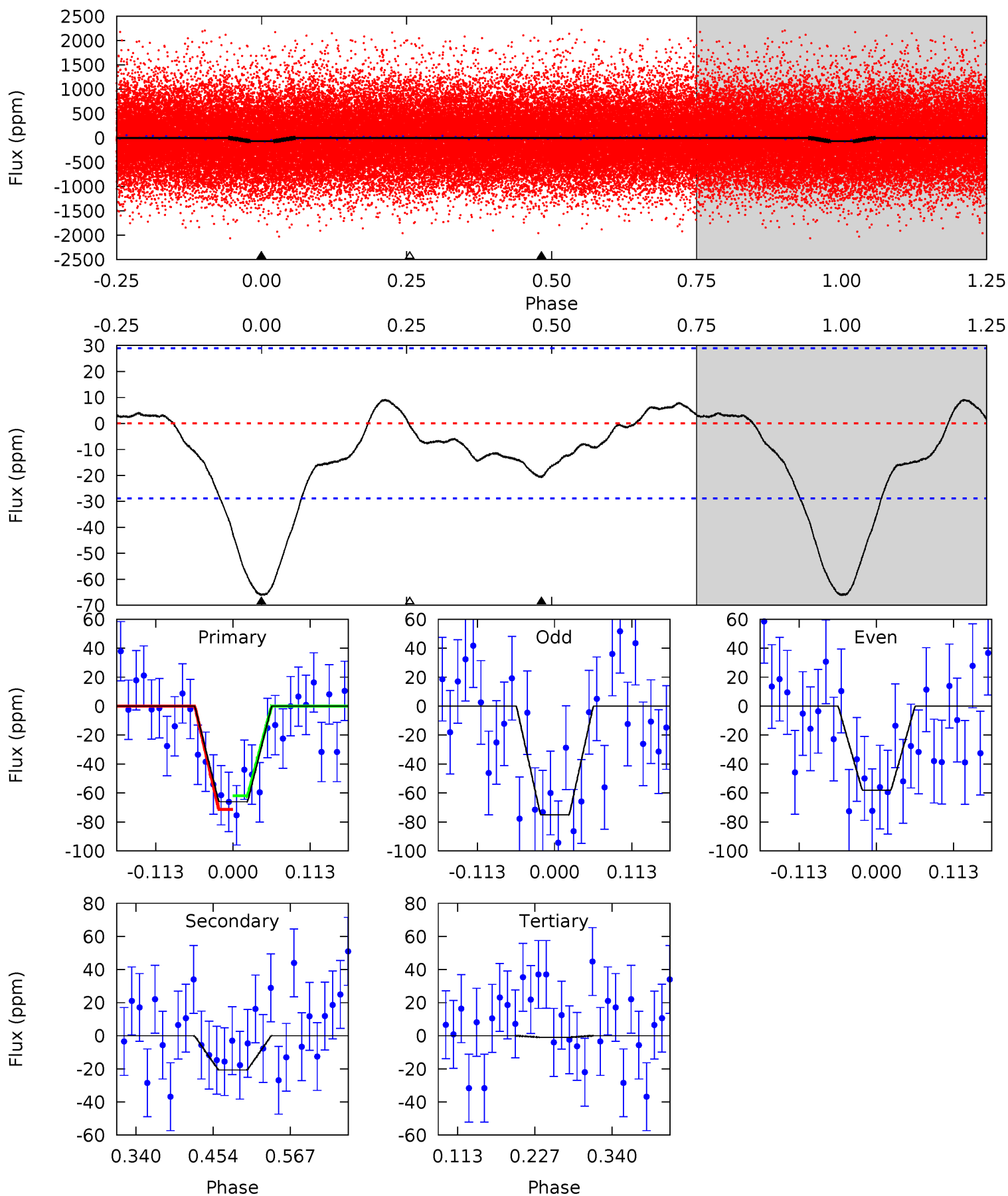
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.05	2.86	0	0	4.44	1.35	0.57	9.05	9.05	2.86	2.86	1.76	0.79	0.08	0.04



Alt Model-Shift Uniqueness Test

008245108-01, P = 0.579105 Days, E = 131.778650 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	3.25	0.15	0	4.54	1.58	1.06	10.2	10.4	3.10	3.25	1.33	0.76	0.12	0.74



Stellar Parameters For KIC 008245108

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4604^{+138}_{-152}	$4.749^{+0.048}_{-0.024}$	$-1.520^{+0.300}_{-0.250}$	$0.501^{+0.028}_{-0.034}$	$0.514^{+0.034}_{-0.024}$	$5.754^{+1.124}_{-0.569}$
	+3%/-3%	+1%/-1%	+20%/-16%	+6%/-7%	+7%/-5%	+20%/-10%
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 008245108-01 / KOI 7876.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 5	$0.55^{+0.38}_{-0.33}$	1912^{+73}_{-64}	3233^{+1277}_{-593}	$3.154^{+16.396}_{-2.157}$
Alt.	-21 ± 6	$0.52^{+0.41}_{-0.32}$	1912^{+65}_{-73}	3438^{+1497}_{-615}	$4.422^{+27.452}_{-3.020}$

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

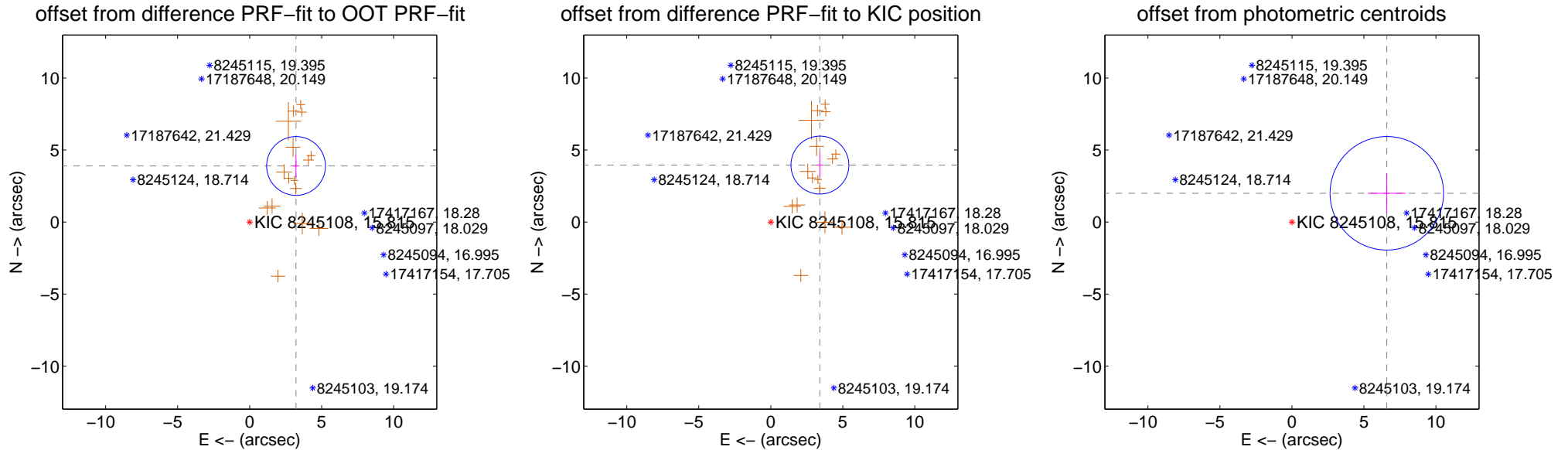
DV Centroid Data

Supplemental centroid analysis for 008245108-01. Kepler magnitude: 15.81. Transit SNR 8.72

There are 0 quarters with good PRF difference image offsets

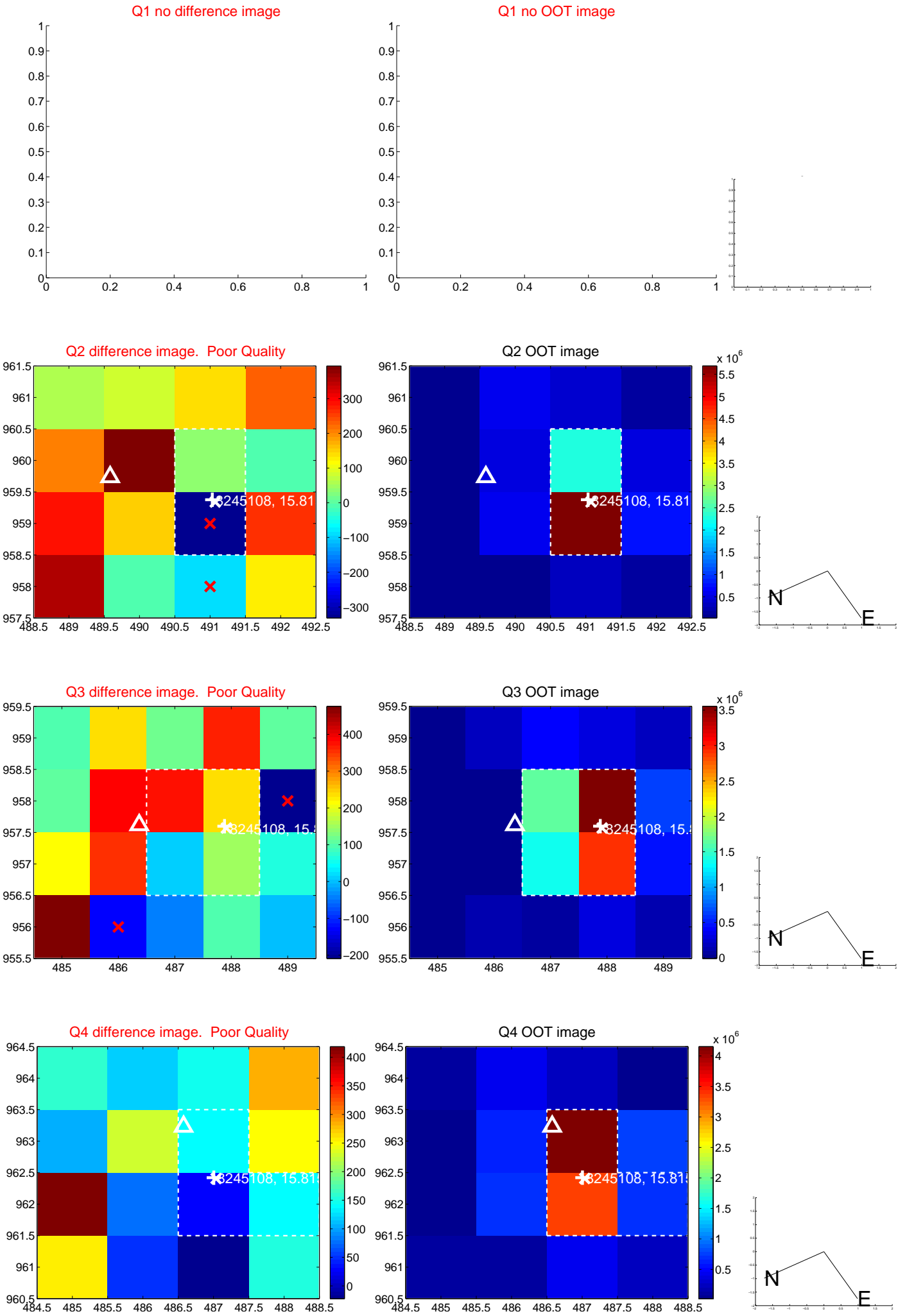
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.054 ± 0.681	7.43	-3.222 ± 0.230	3.894 ± 0.804
PRF-fit source offset from KIC position	5.223 ± 0.670	7.79	-3.412 ± 0.242	3.955 ± 0.812
photometric centroid source offset	6.89 ± 1.31	5.24	-6.59 ± 1.31	2.00 ± 1.38

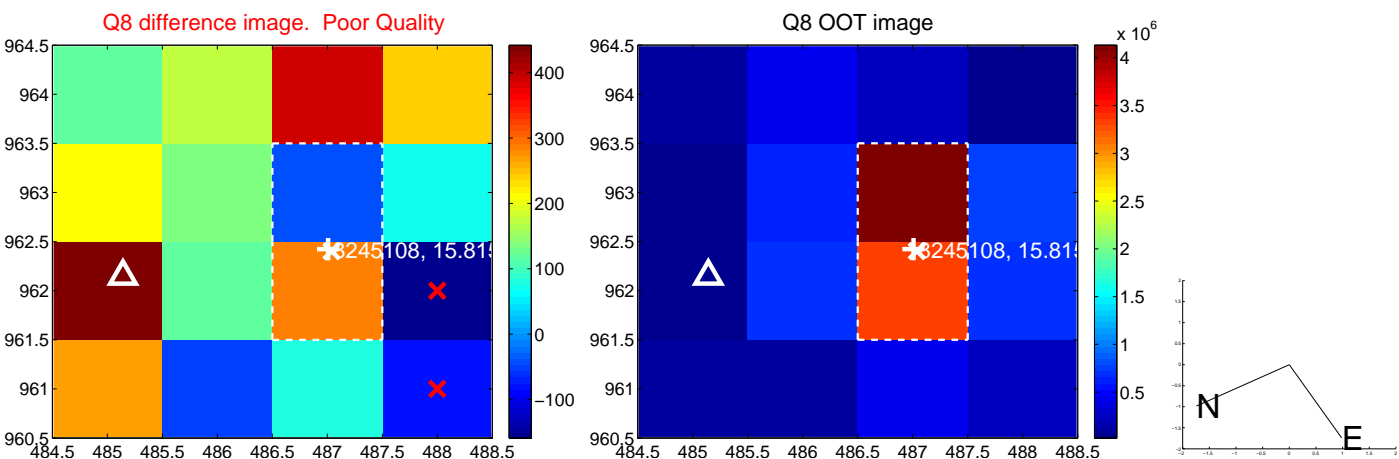
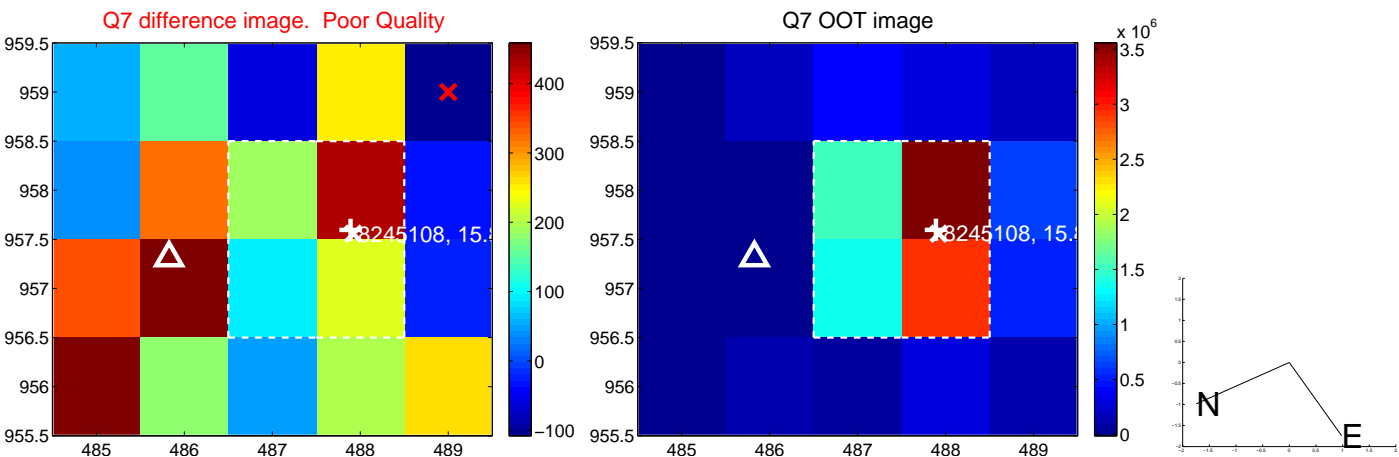
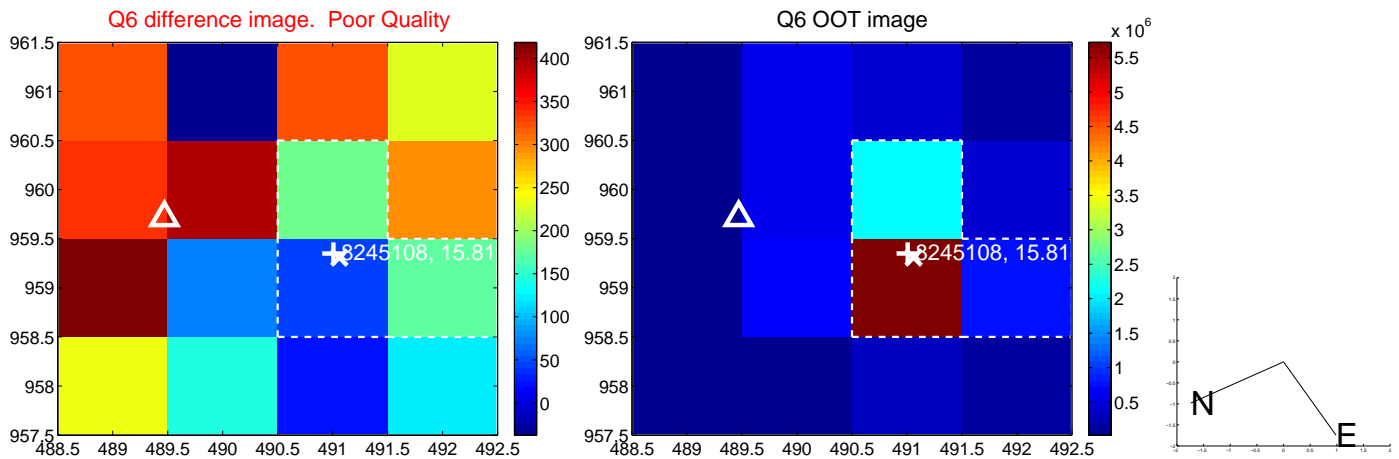
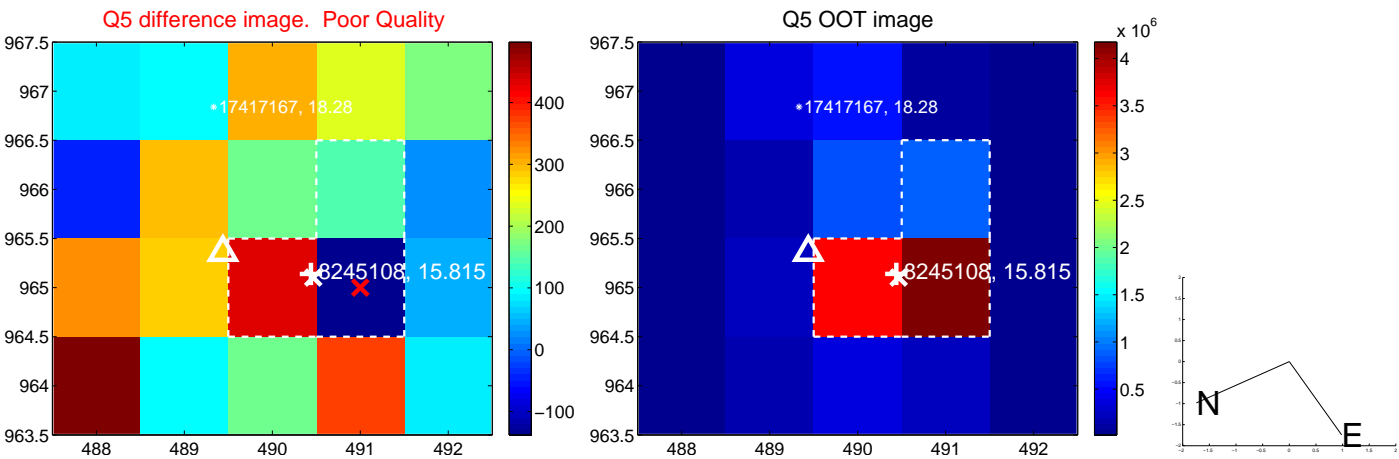


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

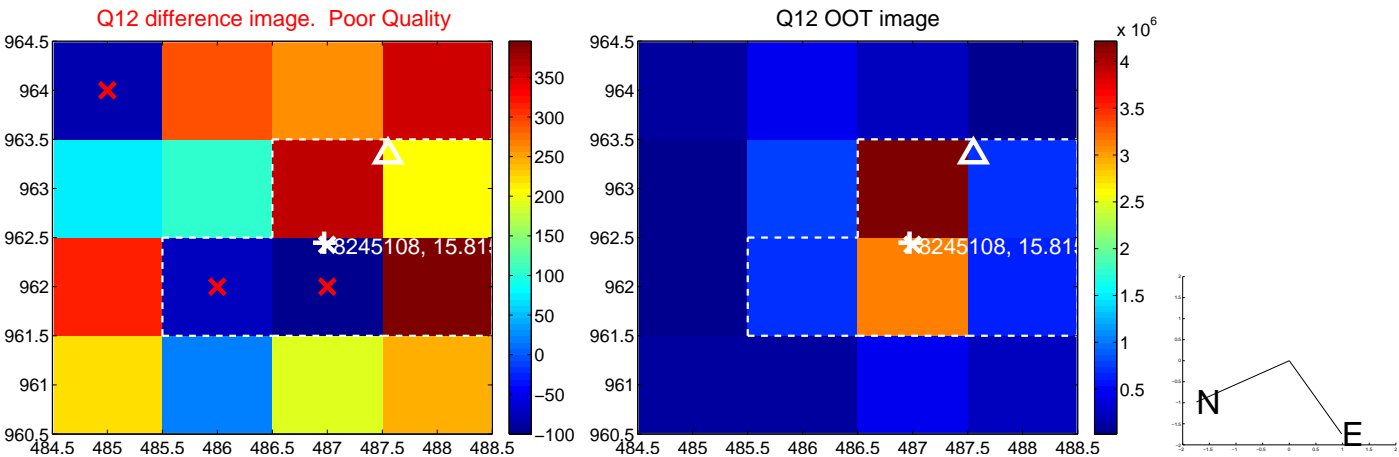
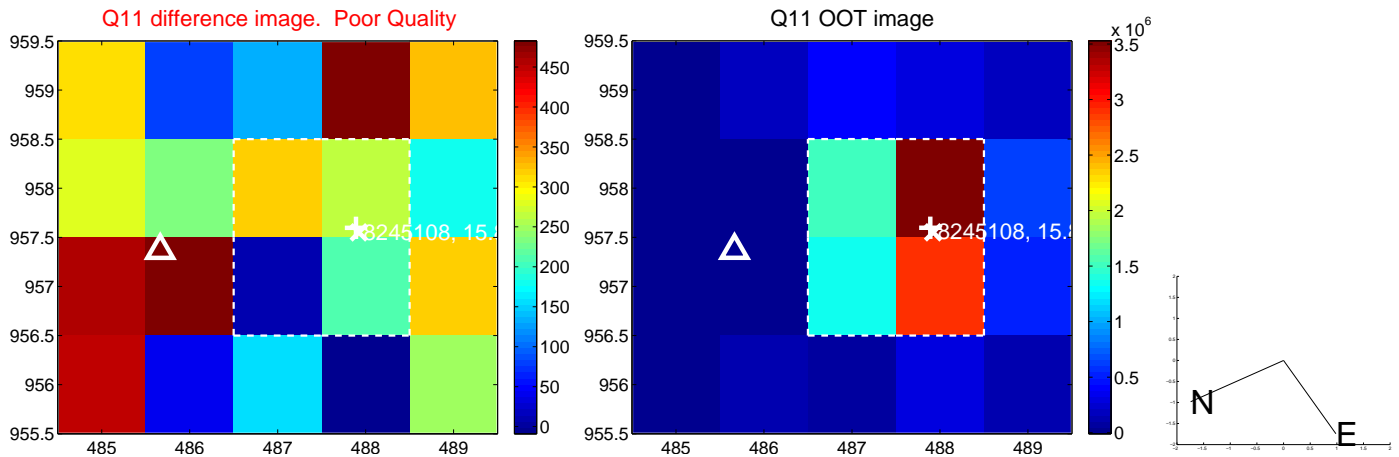
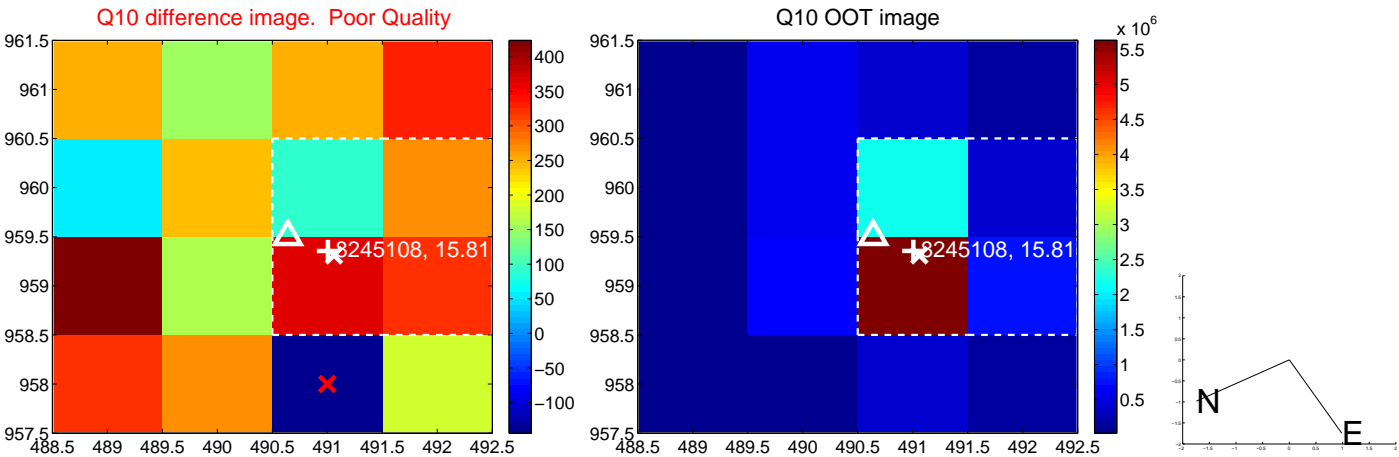
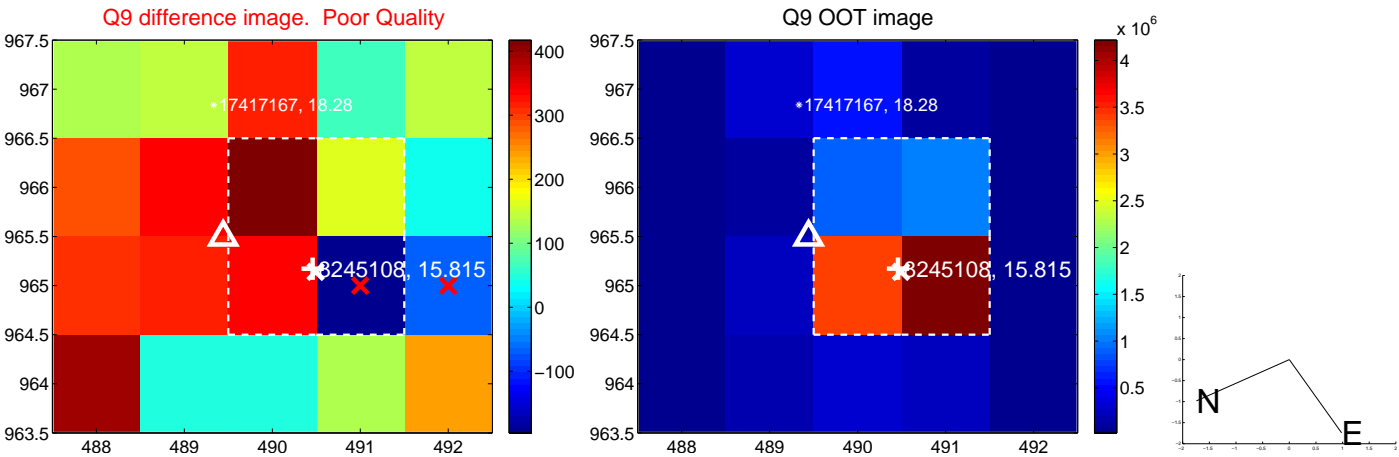
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



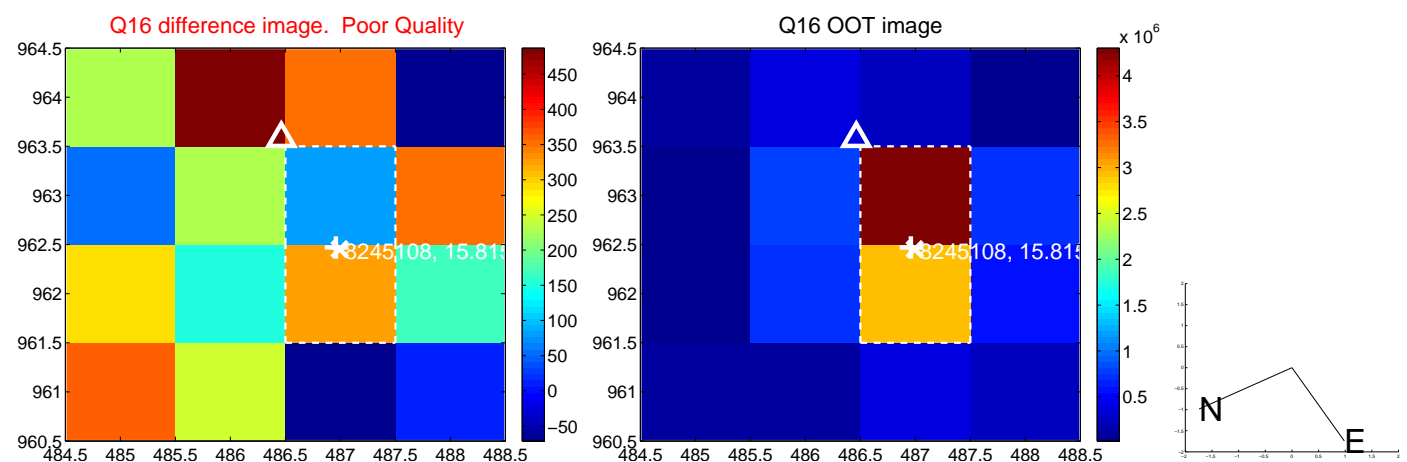
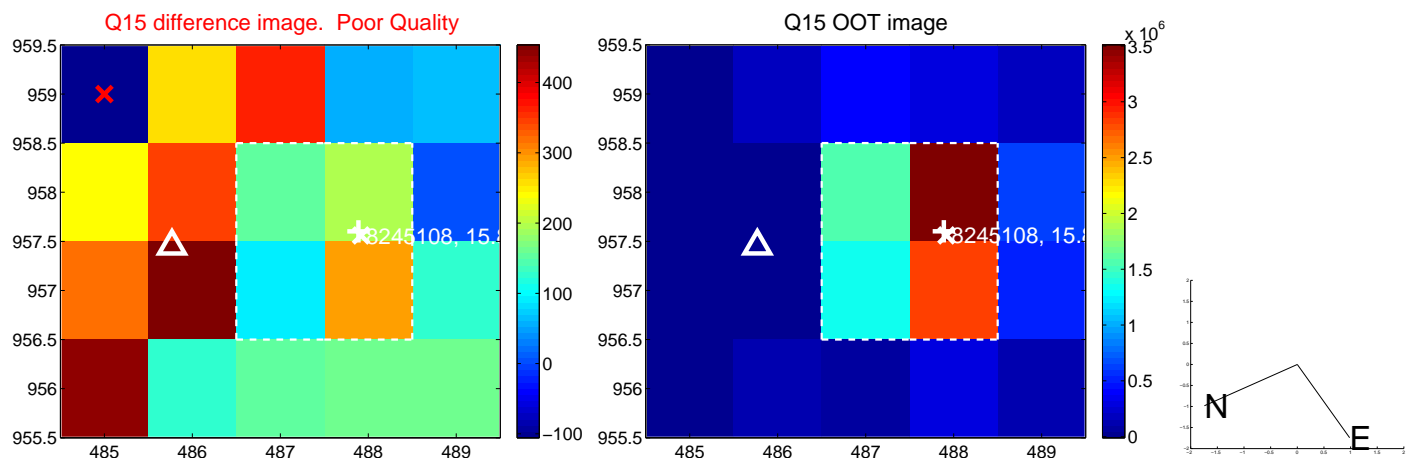
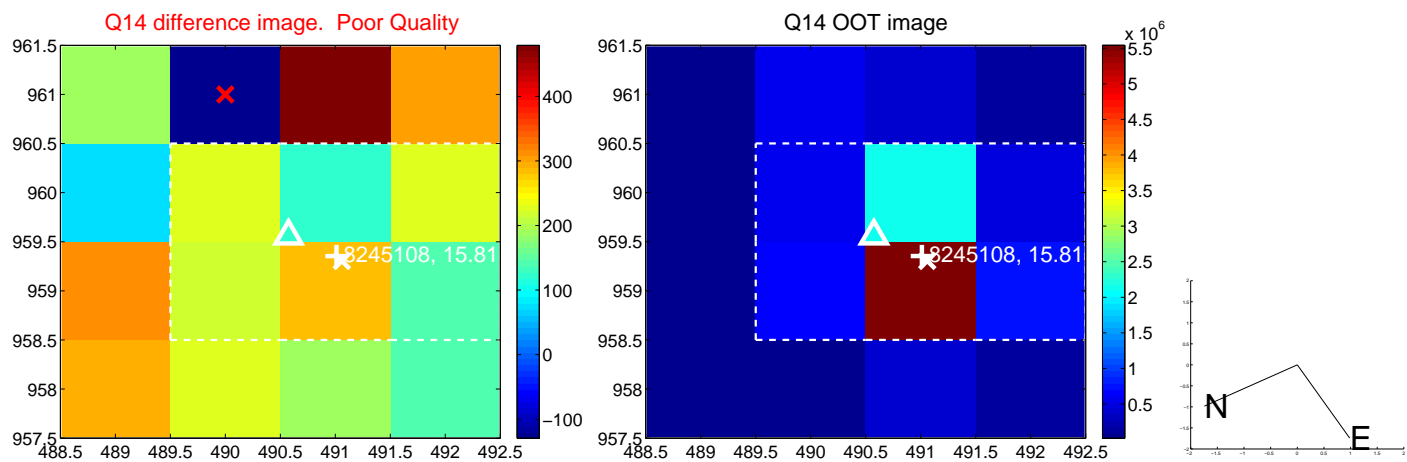
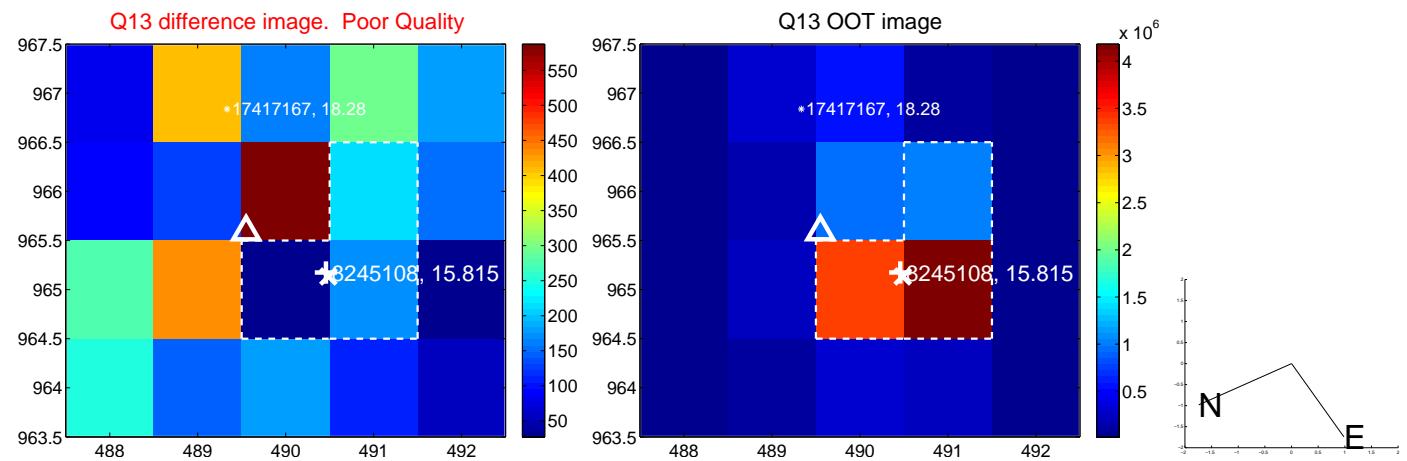
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



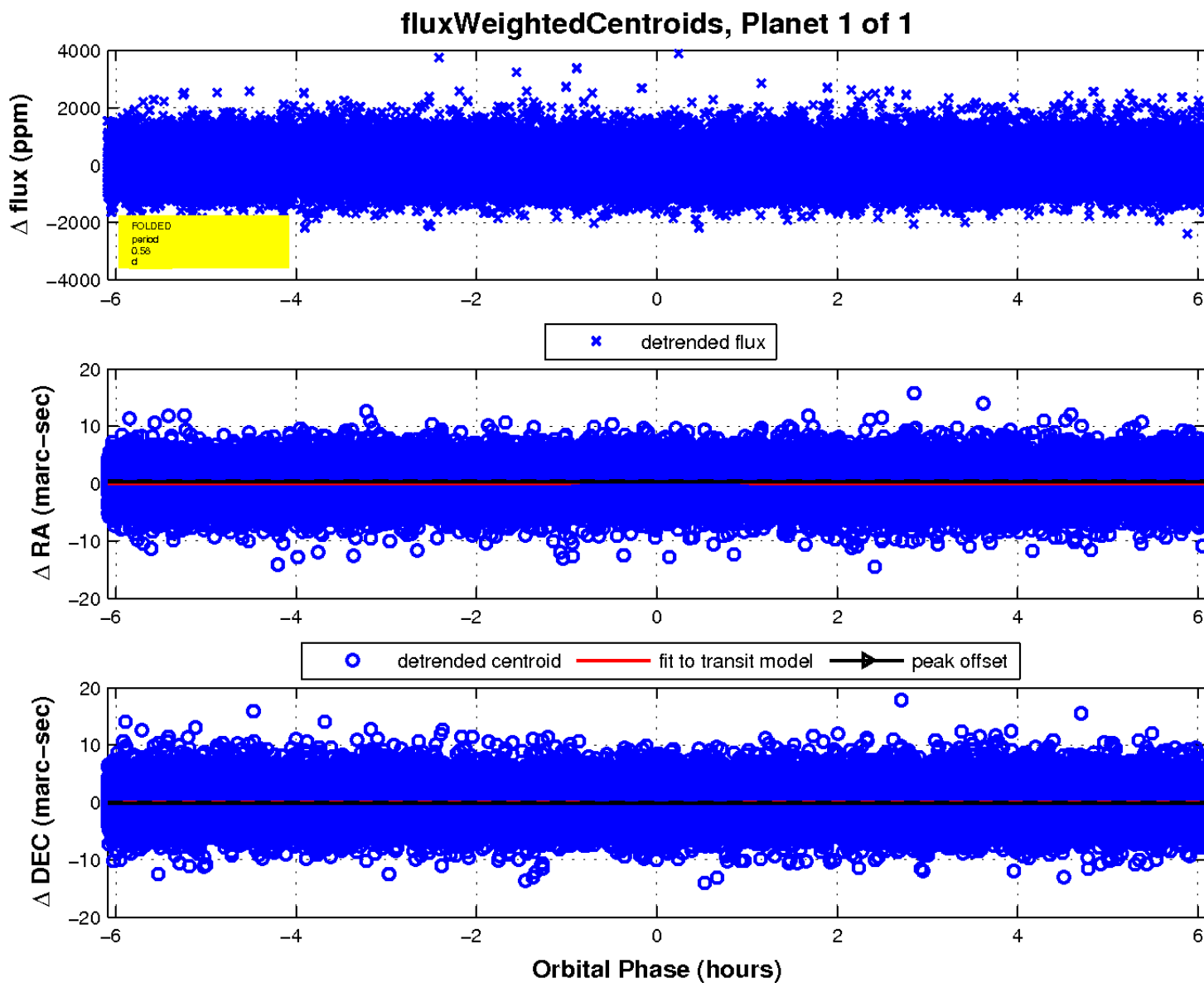
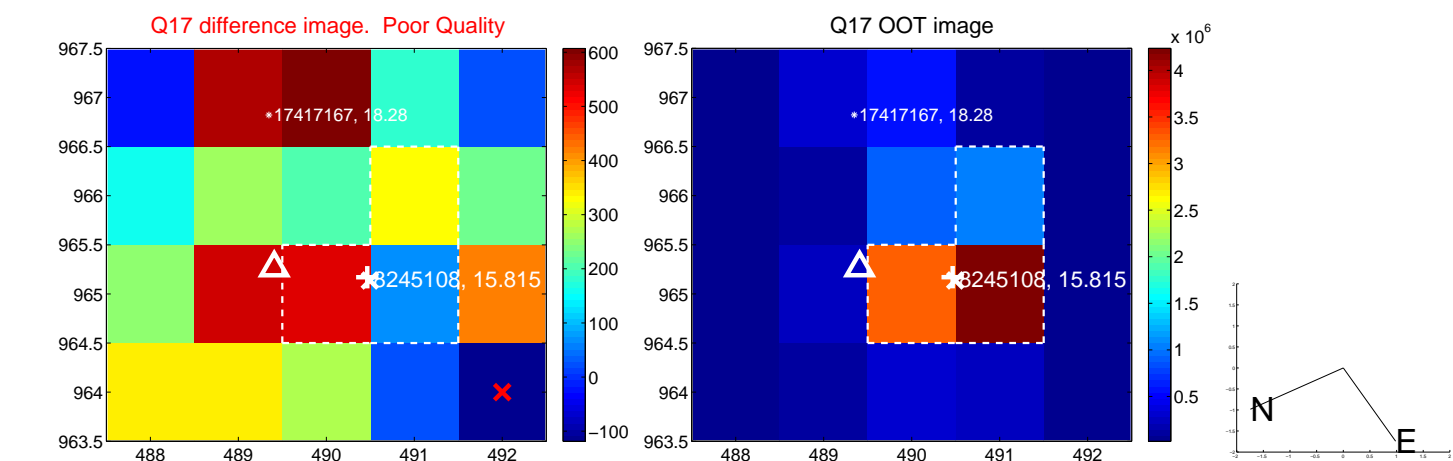
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UKIRT Image

Declination

