

KIC 003230206

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})
003230206-01	OBS	6310.01	7.047152	132.746446	295.9	1.430	9.4	10.4	0.91	5941	1.58	178.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003230206-01	OBS	FP	0.00	0	0	1	1	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.

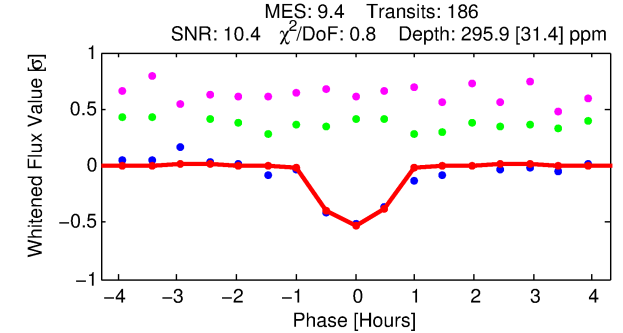
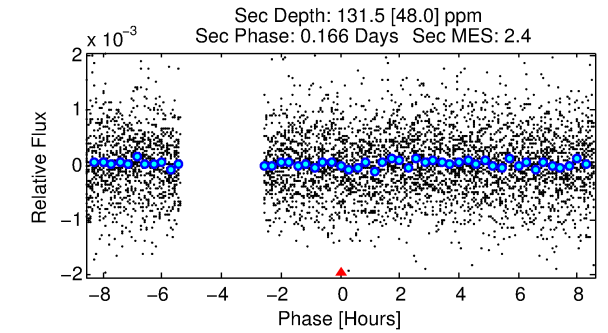
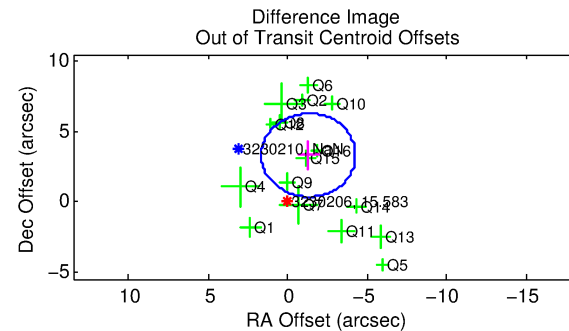
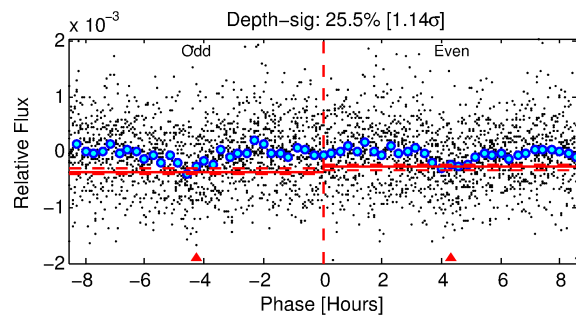
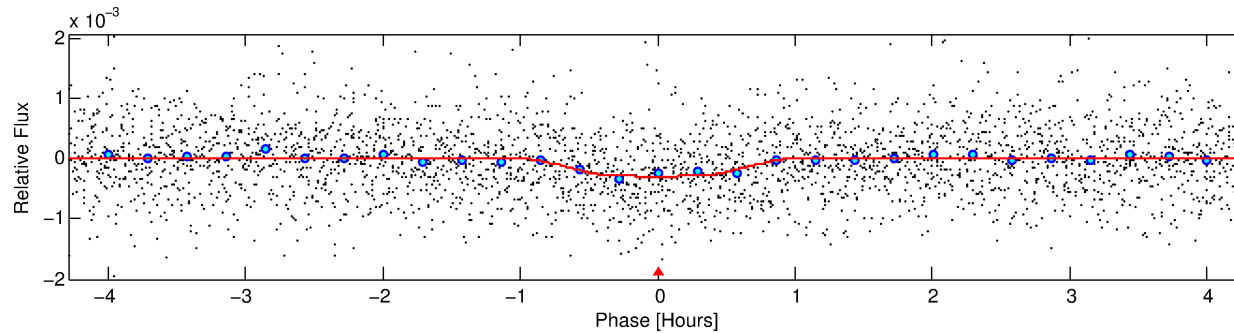
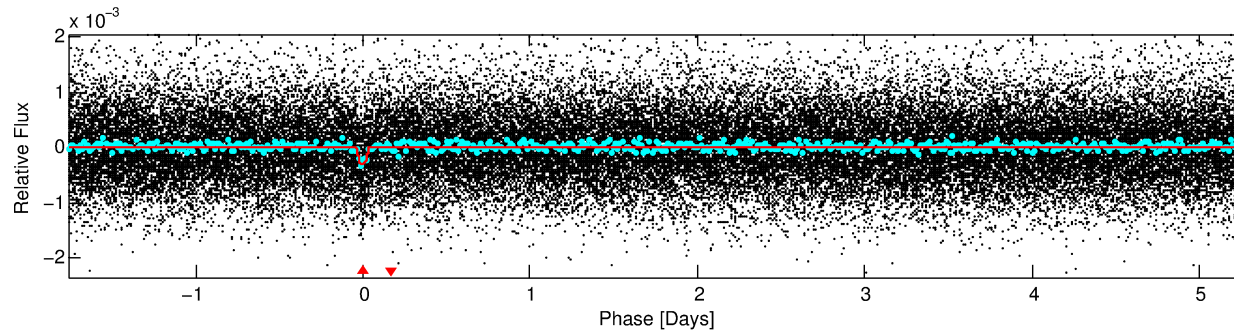
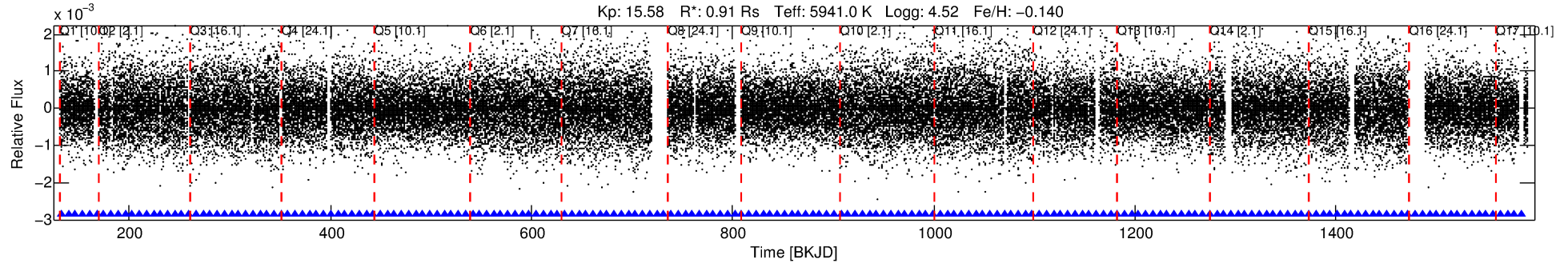
Ephemeris Match Information For 003230206-01

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
003230206-01	3230206	6311.01	3230227	1:1	92.9	17	-16	9.00	15.58	237.37	Direct-PRF	0	0.29	0.14

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: 3230206 Candidate: 1 of 1 Period: 7.047 d
KOI: K06310.01 Corr: 0.959



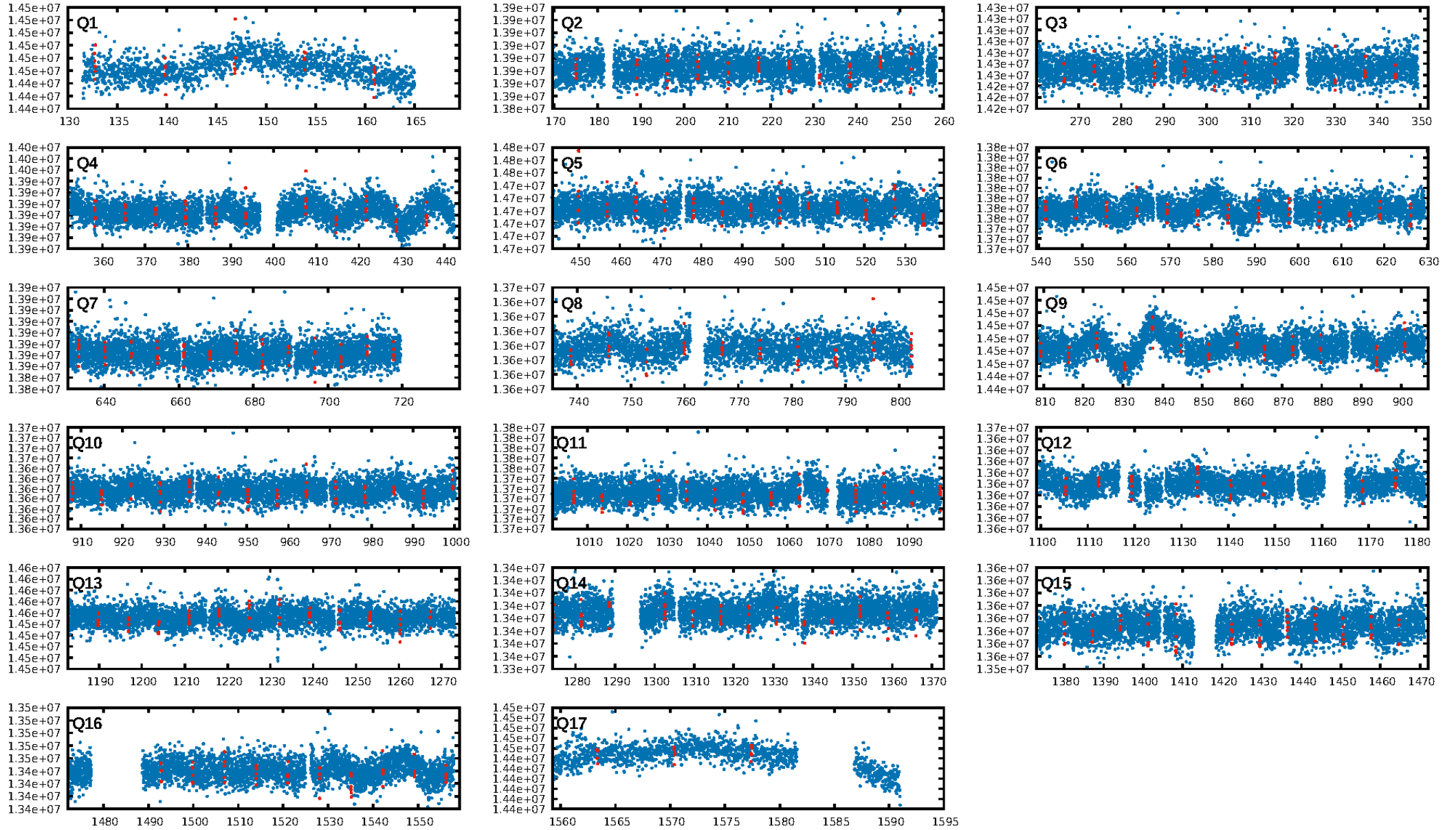
DV Fit Results:

Period = 7.04715 [0.00003] d
Epoch = 132.7464 [0.0036] BKJD
Rp/R* = 0.0159 [0.0184]
a/R* = 37.02 [201.20]
b = 0.26 [20.04]
Seff = 178.92 [69.71]
Teq = 933 [91] K
Rp = 1.58 [1.88] Re
a = 0.0720 [0.0180] AU
Ag = 150.68 [357.47] [0.42 σ]
Teffp = 5052 [2964] K [1.39 σ]

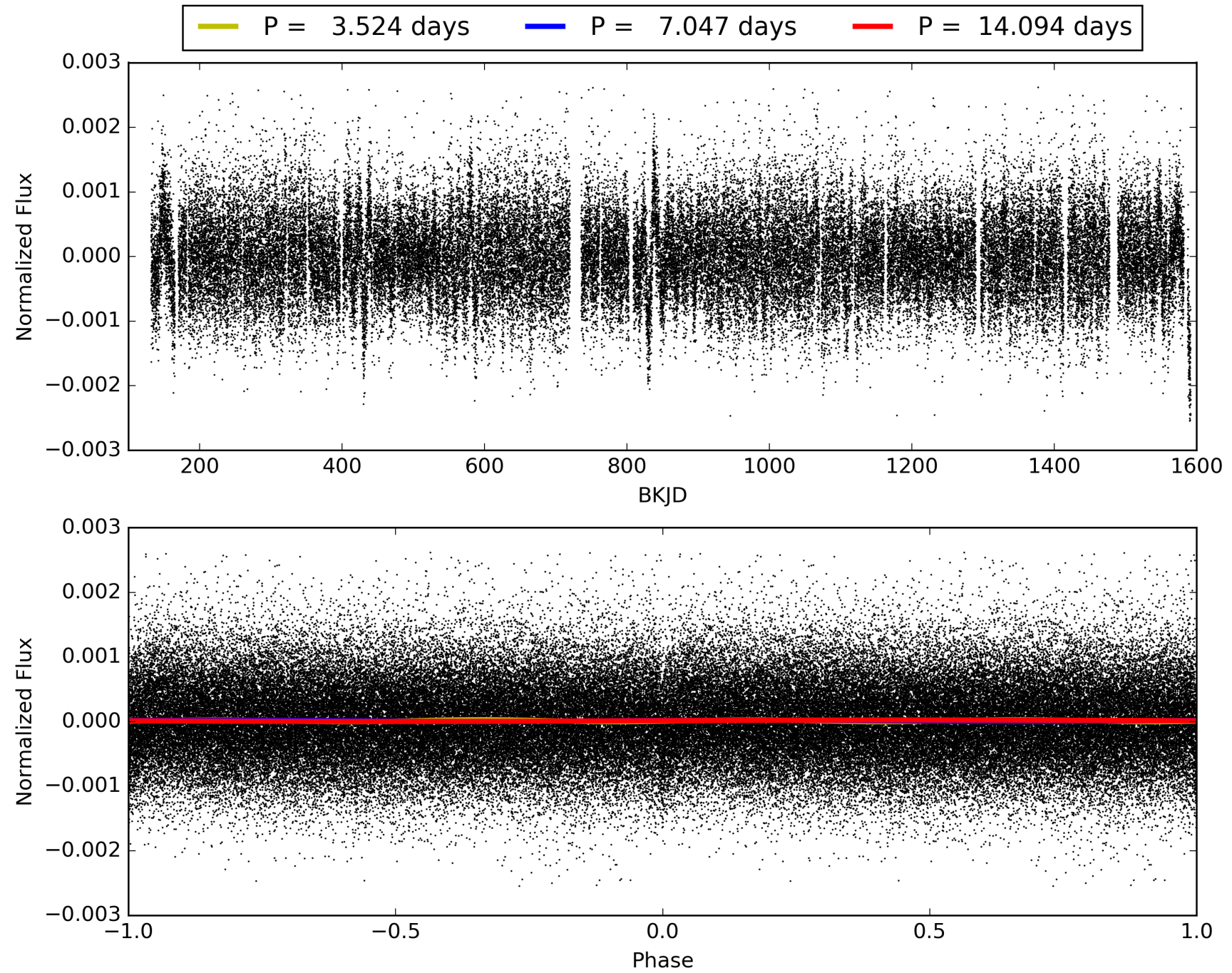
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.03e-20
RollingBand-fgt: 1.00 [178/178]
GhostDiagnostic-chr: -0.01119
Centroid-sig: 0.0%
Centroid-so: 5.526 arcsec [3.42 σ]
OotOffset-rm: 3.559 arcsec [3.60 σ]
KicOffset-rm: 3.622 arcsec [3.66 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003230206-01, PDC Light Curves

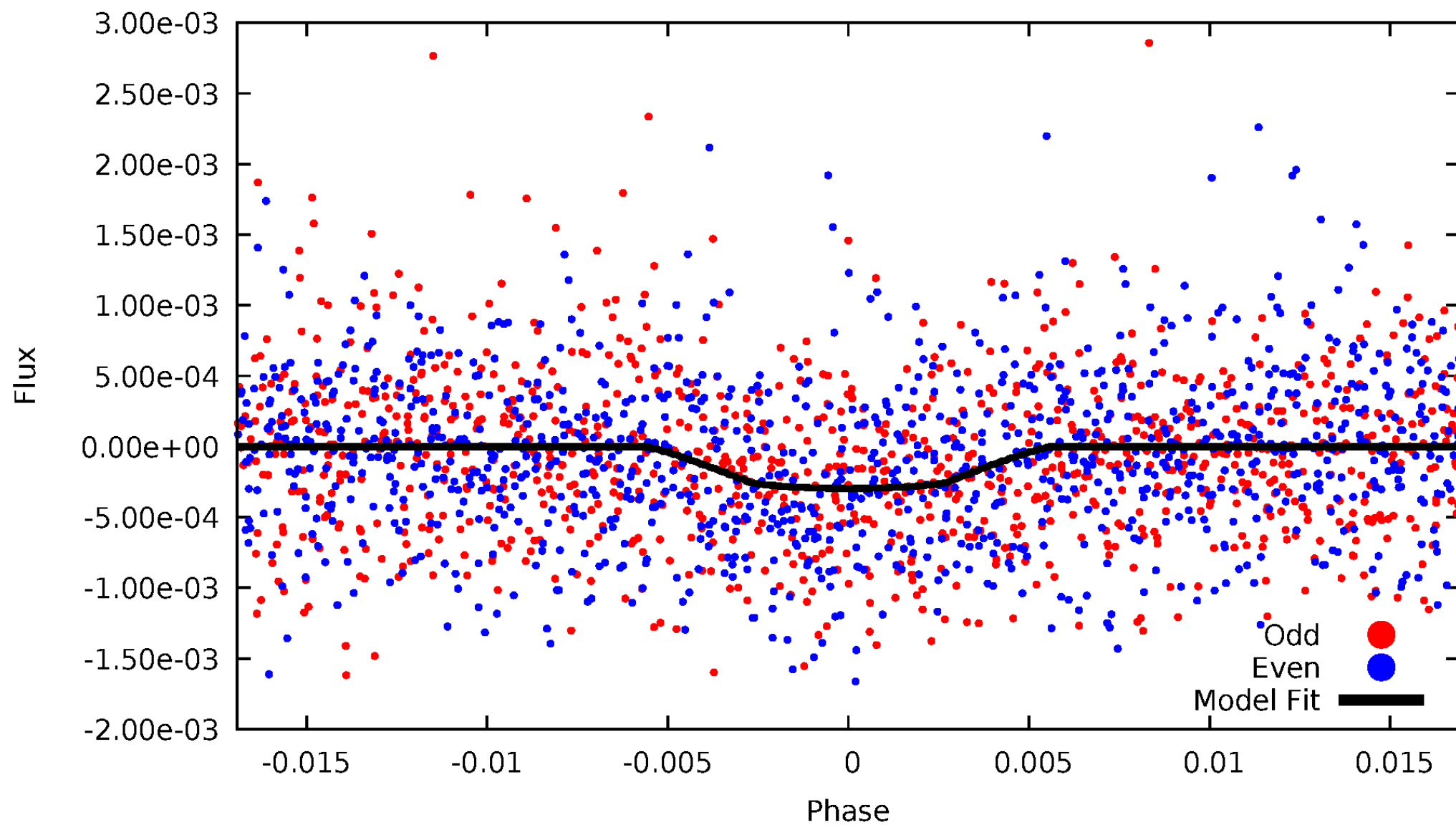


TCE 003230206-01



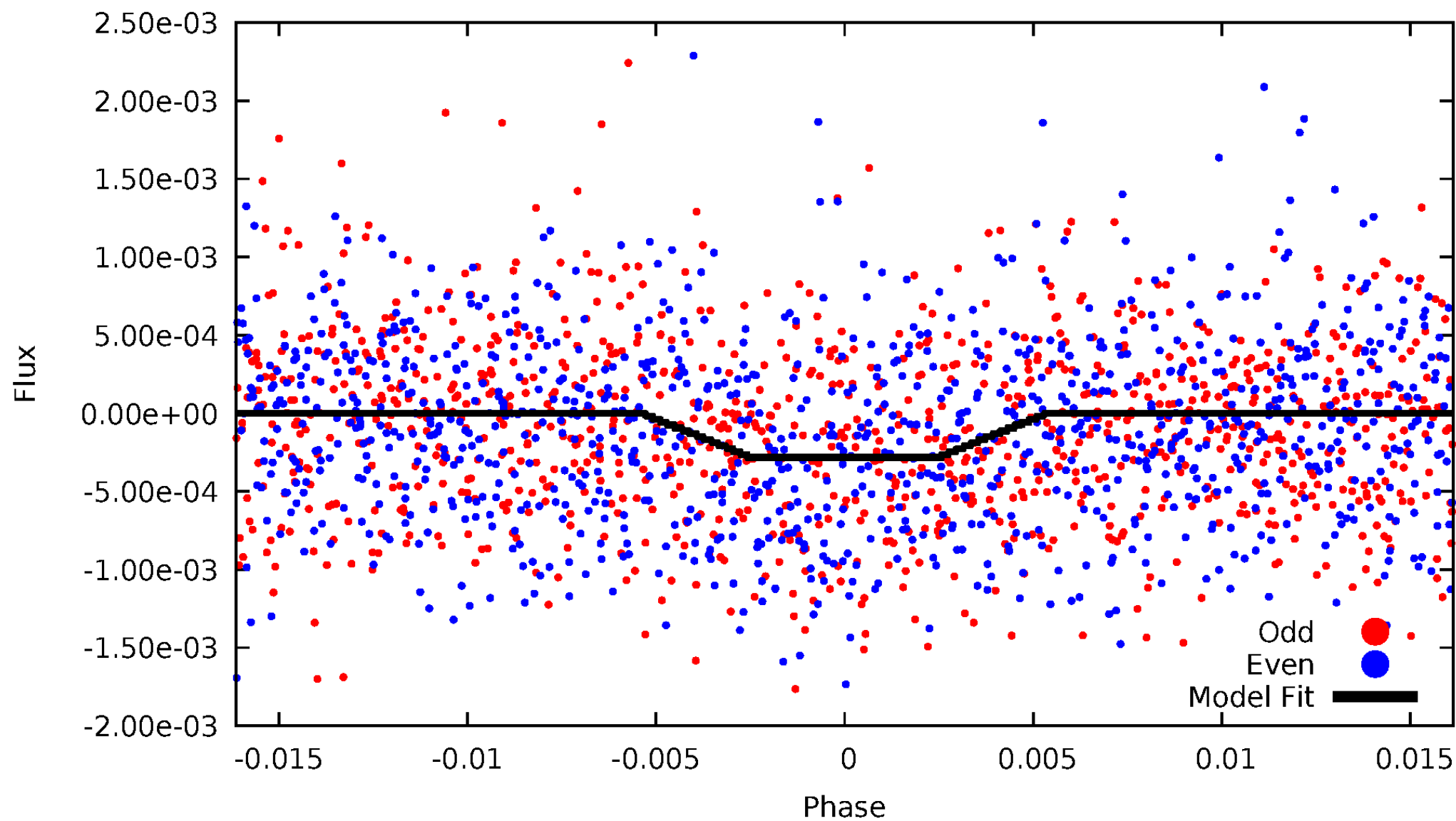
DV Odd/Even

TCE 003230206-01

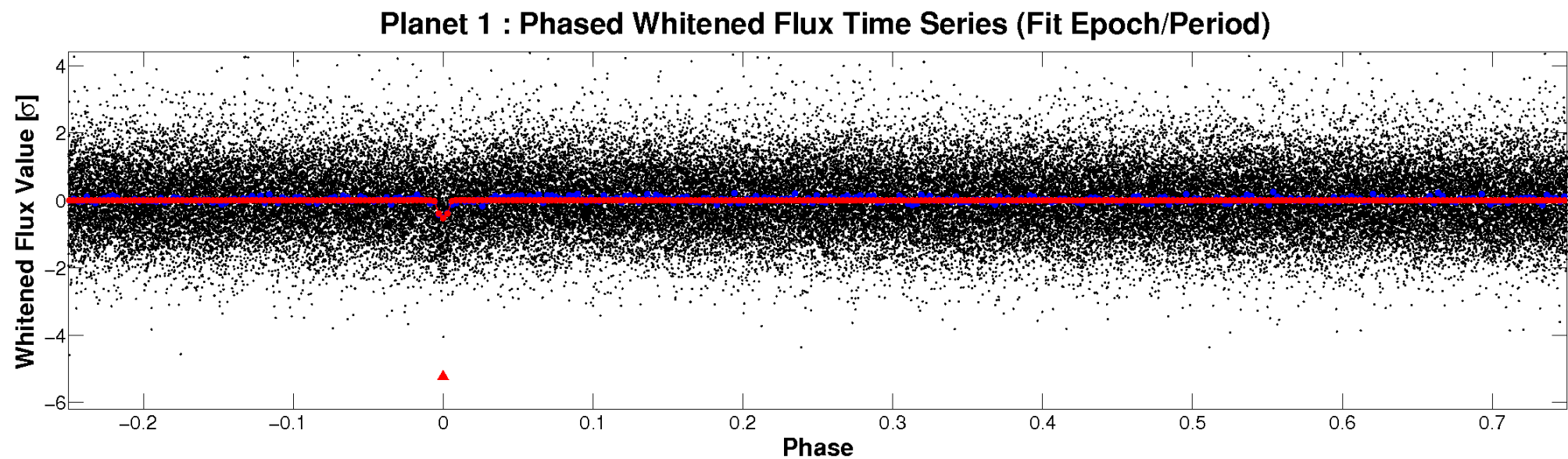
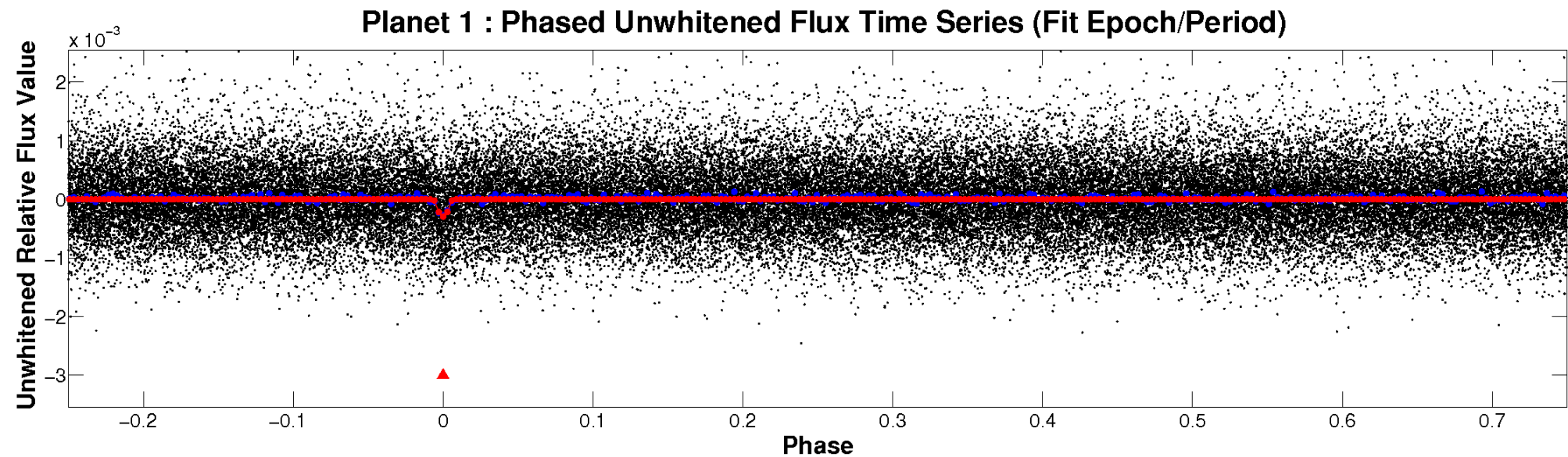


ALT Odd/Even

TCE 003230206-01

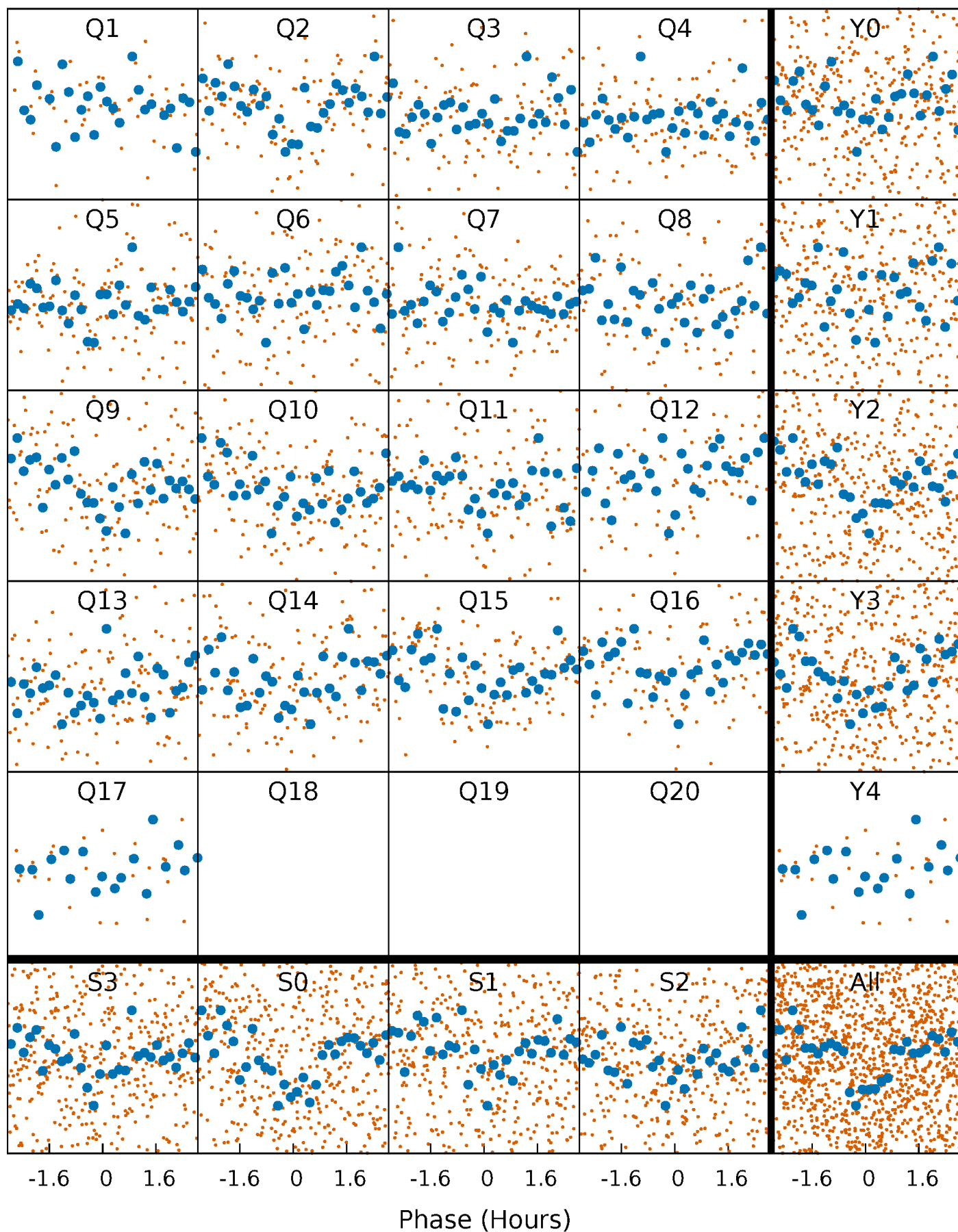


Non-Whitened Vs. Whitened Light Curve



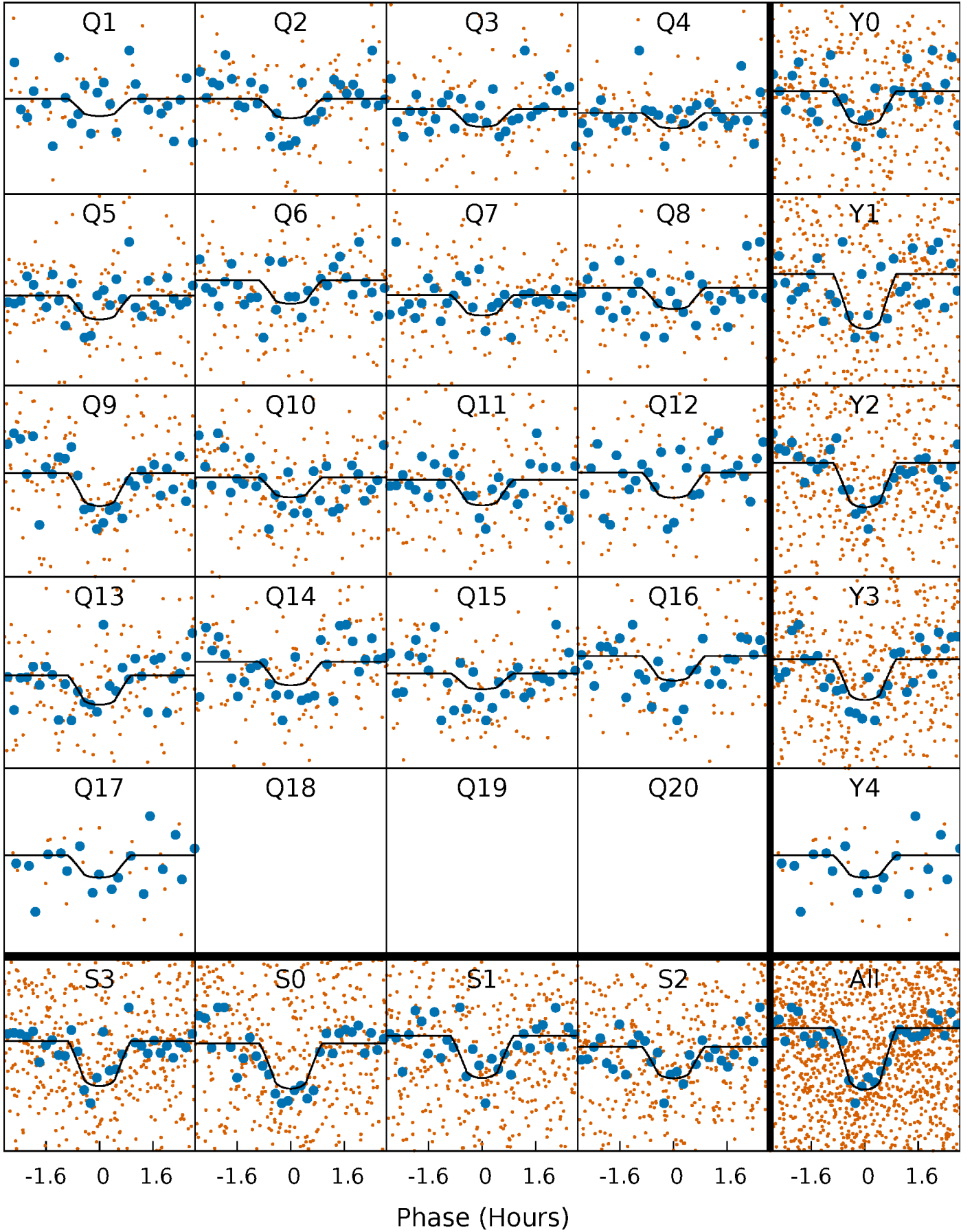
PDC Quarter-Phased Transit Curves

TCE 003230206-01 P= 7.047152 Days $T_0=132.746446$ (BKJD)



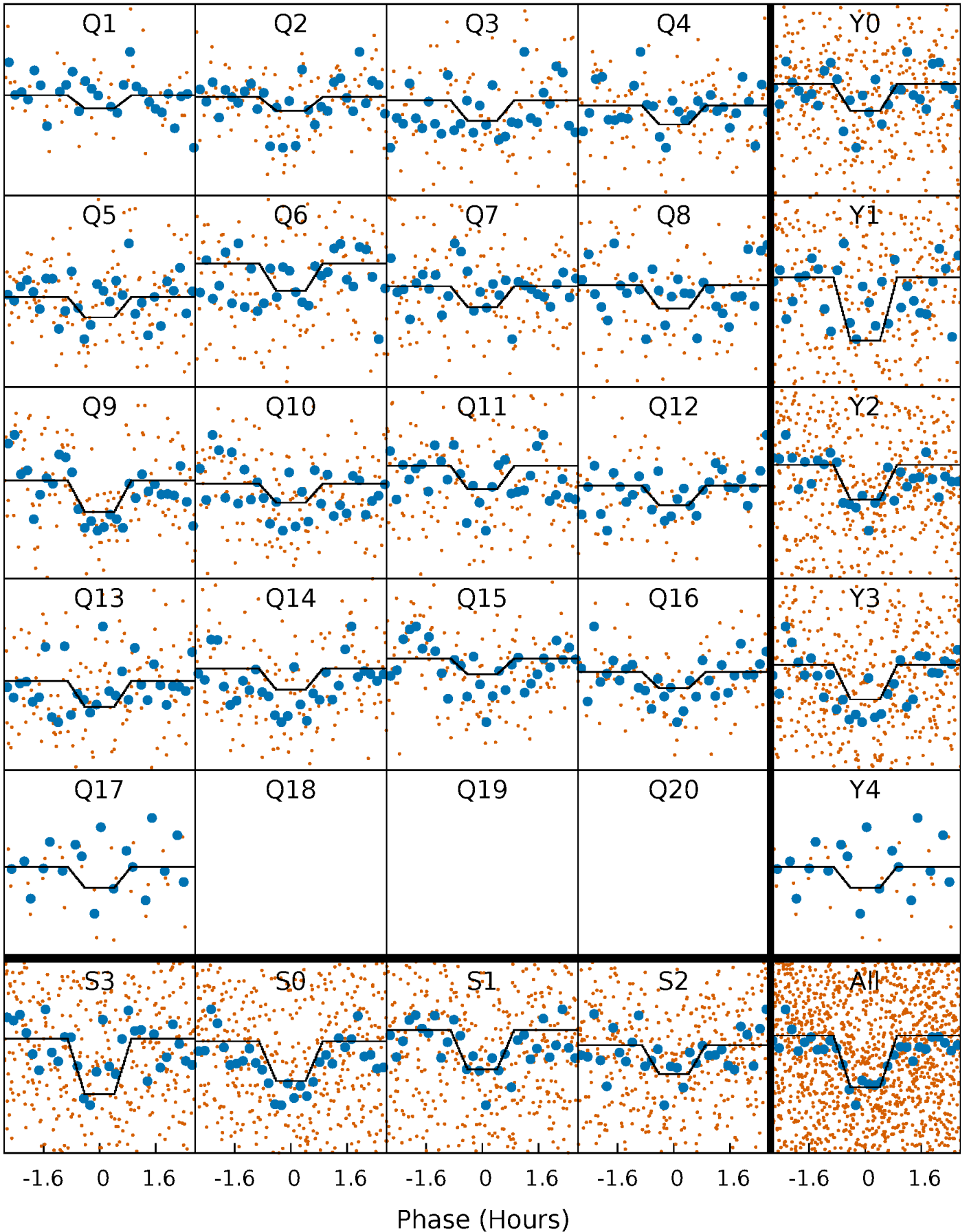
DV Quarter-Phased Transit Curves

TCE 003230206-01 P= 7.047152 Days $T_0=132.746446$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

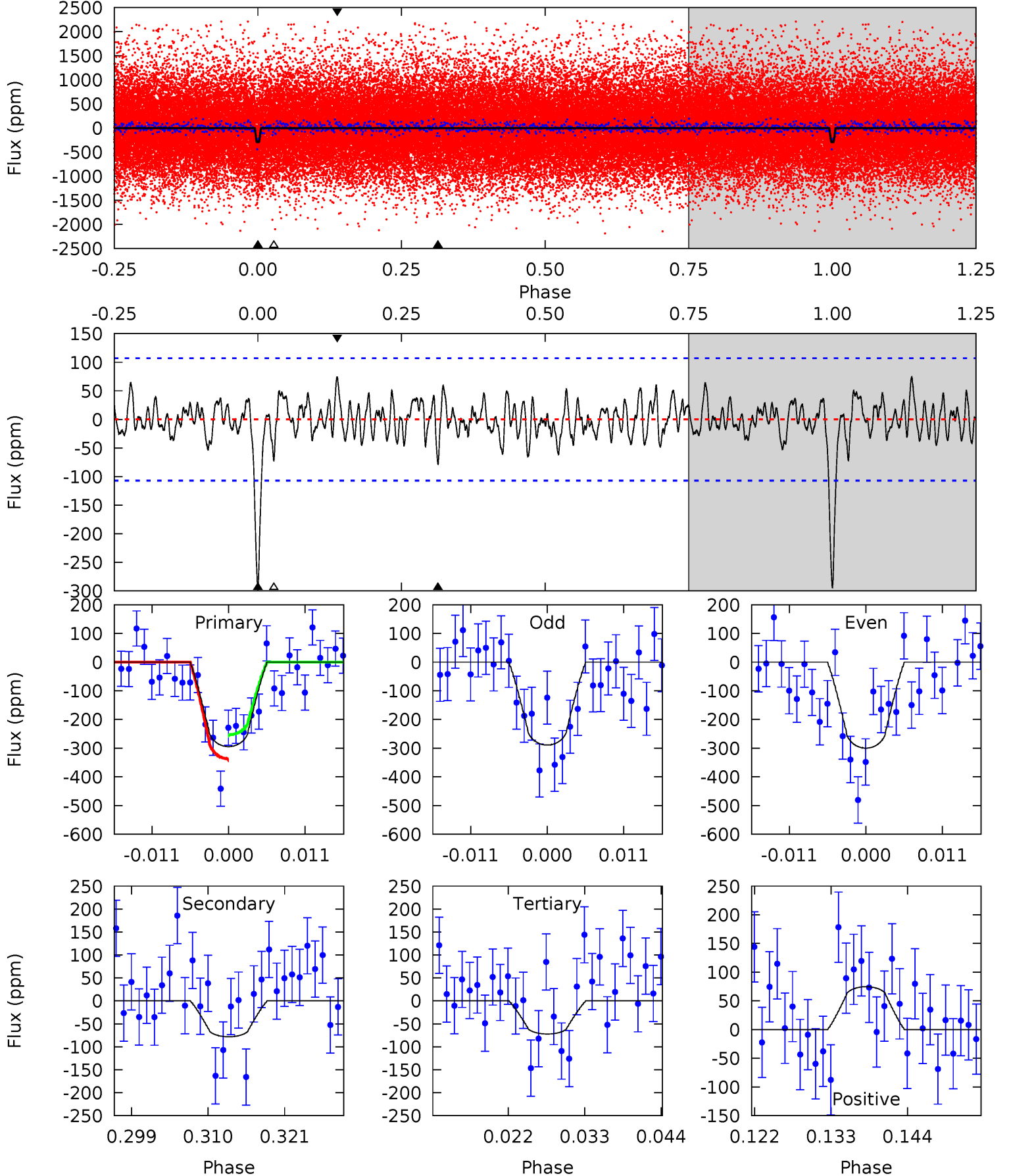
TCE 003230206-01 P= 7.047146 Days $T_0=132.748118$ (BKJD)



DV Model-Shift Uniqueness Test

003230206-01, P = 7.047152 Days, E = 125.699294 Days

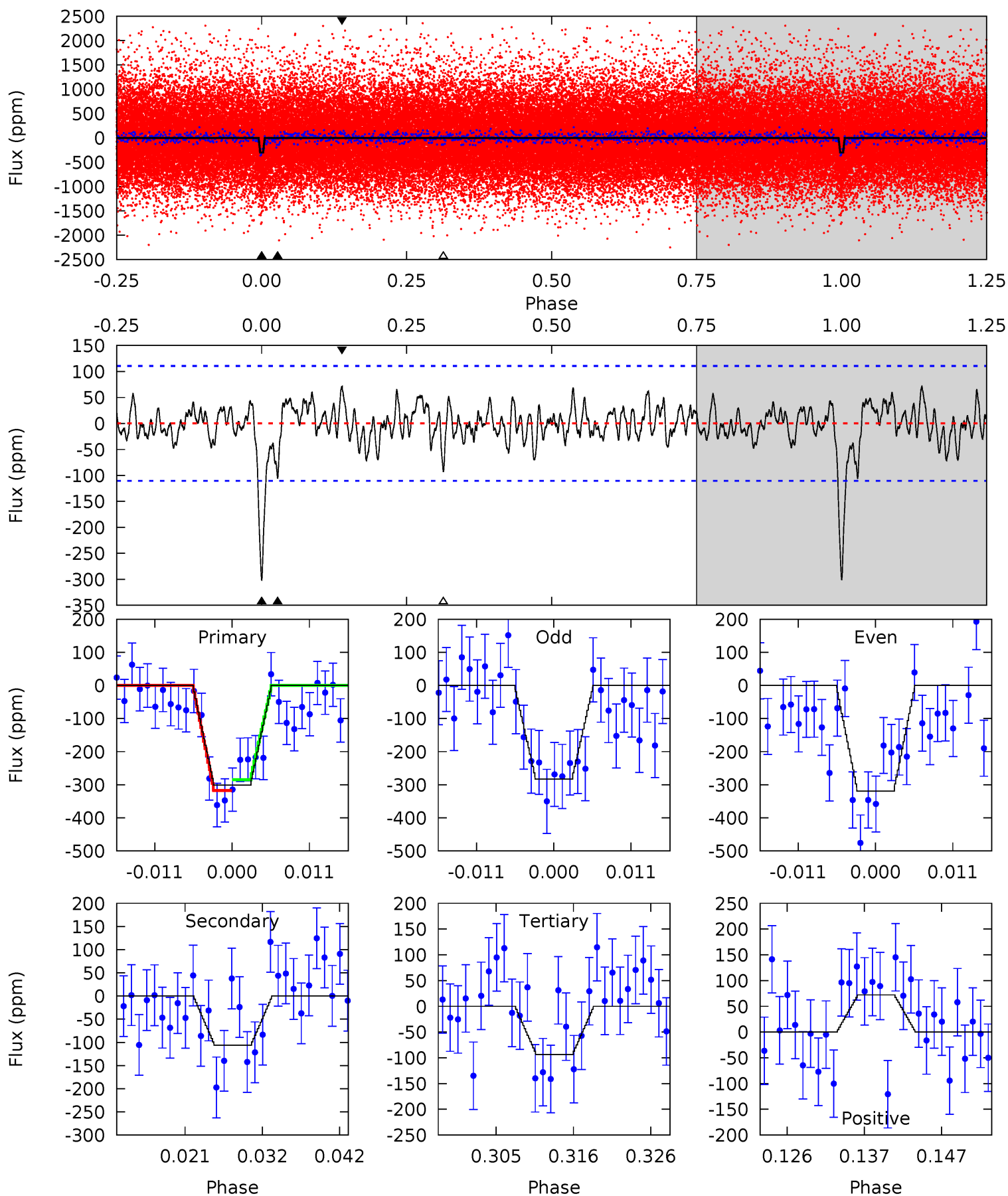
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	3.66	3.37	3.49	5.01	2.54	1.17	10.4	10.3	0.28	0.16	0.25	1.03	0.20	1.97



Alt Model-Shift Uniqueness Test

003230206-01, P = 7.047146 Days, E = 125.700972 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	4.81	4.24	3.27	5.02	2.56	1.23	9.43	10.4	0.57	1.54	0.82	1.05	0.19	0.74



Stellar Parameters For KIC 003230206

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5941^{+166}_{-187}	$4.519^{+0.048}_{-0.204}$	$-0.140^{+0.300}_{-0.300}$	$0.911^{+0.266}_{-0.089}$	$1.001^{+0.122}_{-0.122}$	$1.865^{+0.382}_{-0.985}$
	+3%/-3%	+1%/-5%	+214%/-214%	+29%/-10%	+12%/-12%	+20%/-53%
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 003230206-01 / KOI 6310.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-78 ± 21	$1.99^{+1.74}_{-1.22}$	1333^{+89}_{-65}	4267^{+2066}_{-828}	54^{+303}_{-39}
Alt.	-106 ± 22	$2.22^{+1.89}_{-1.40}$	1338^{+82}_{-64}	4356^{+2449}_{-842}	60^{+385}_{-42}

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

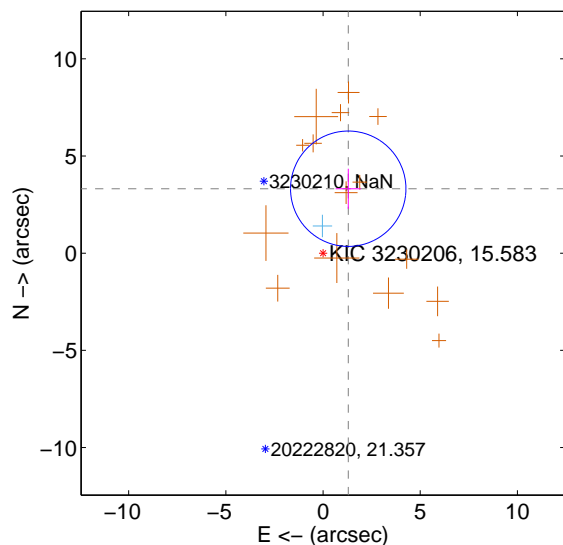
Supplemental centroid analysis for 003230206-01. Kepler magnitude: 15.58. Transit SNR 10.38

There are 1 quarters with good PRF difference image offsets

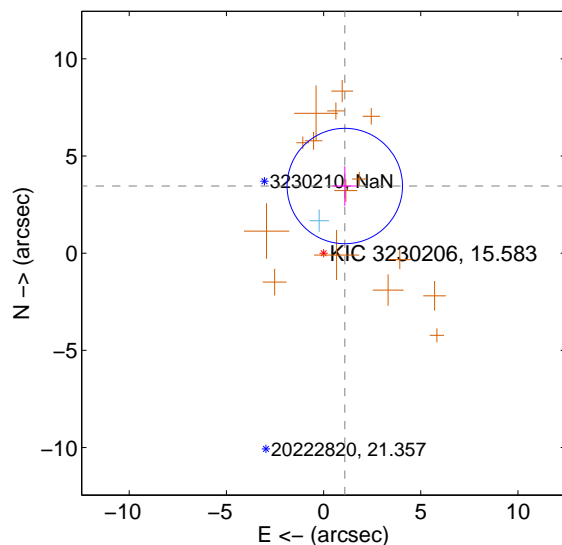
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.559 ± 0.989	3.60	-1.296 ± 0.649	3.315 ± 1.031
PRF-fit source offset from KIC position	3.622 ± 0.989	3.66	-1.092 ± 0.625	3.454 ± 1.018
photometric centroid source offset	5.53 ± 1.61	3.42	-5.26 ± 1.61	1.68 ± 1.66

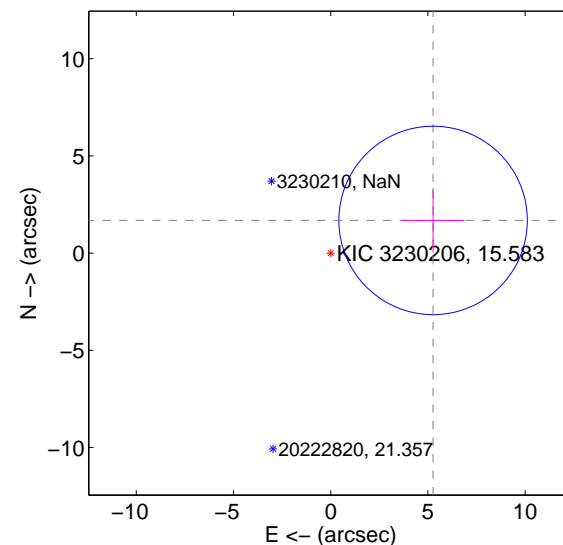
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

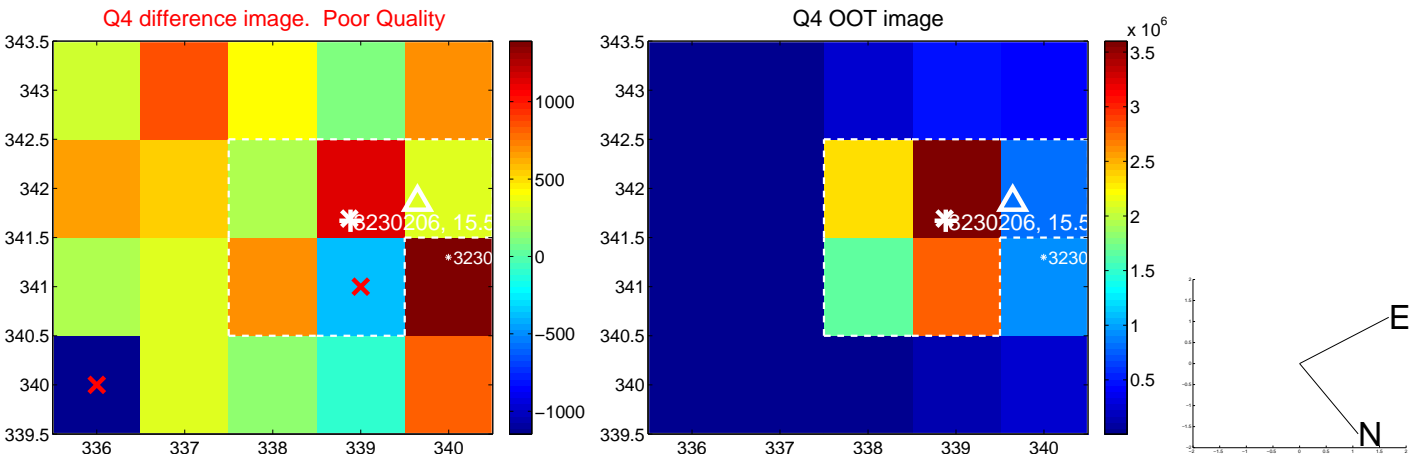
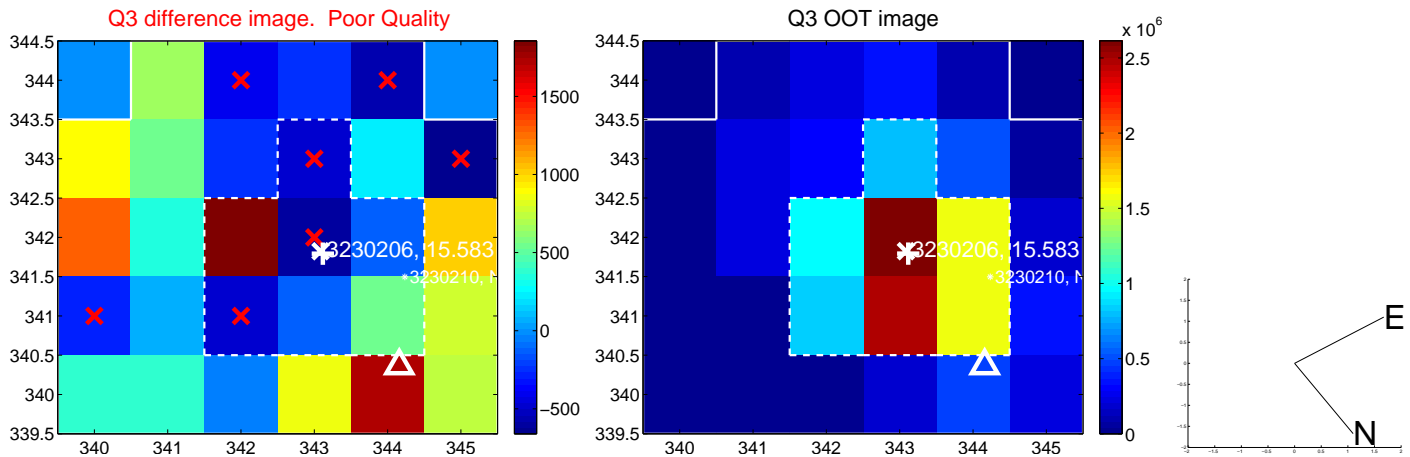
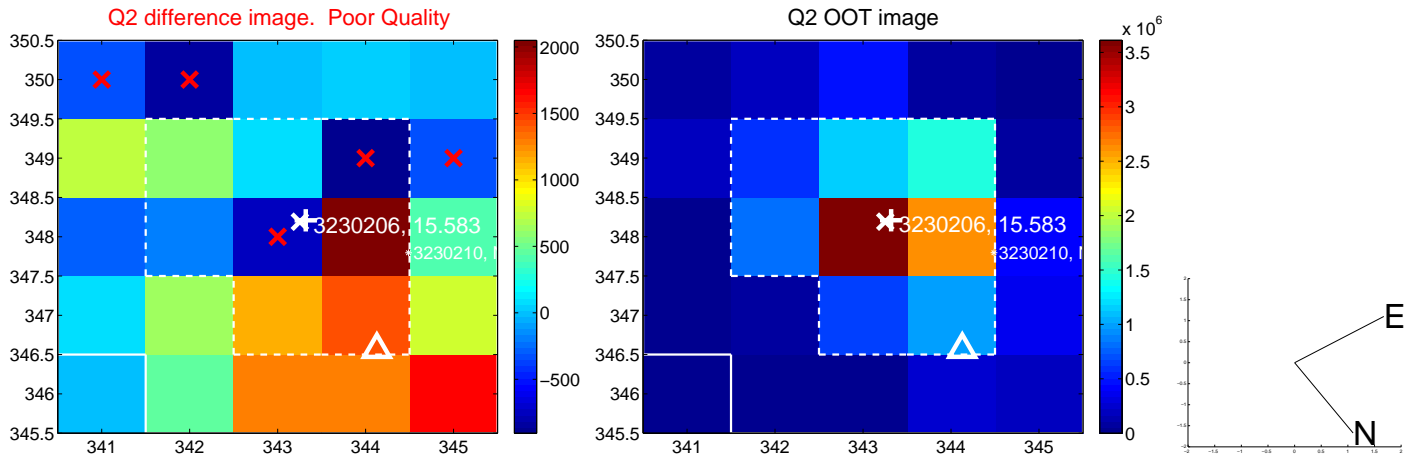
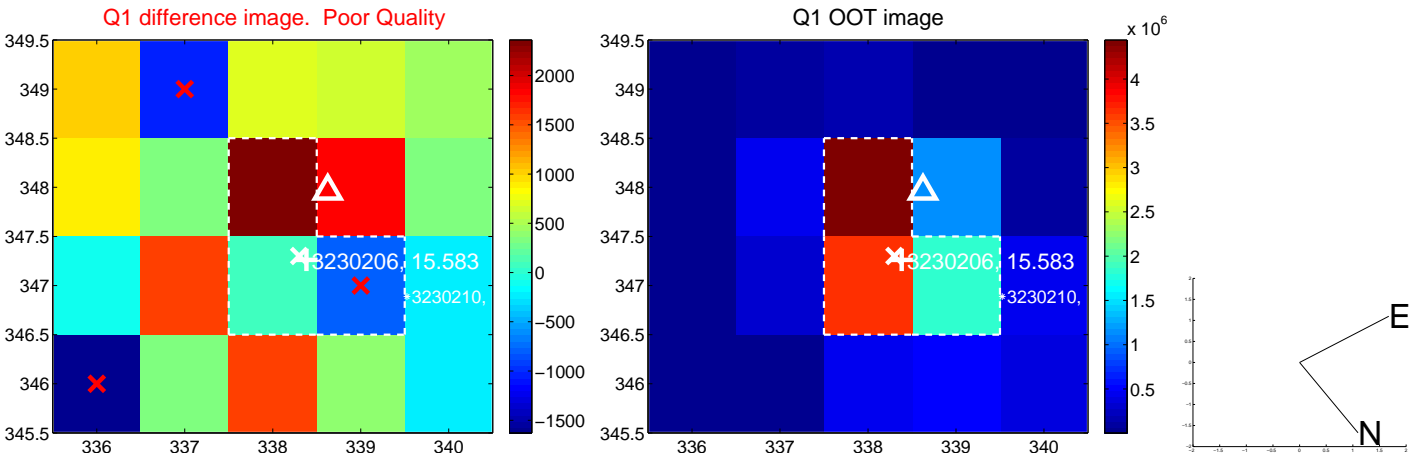


offset from photometric centroids

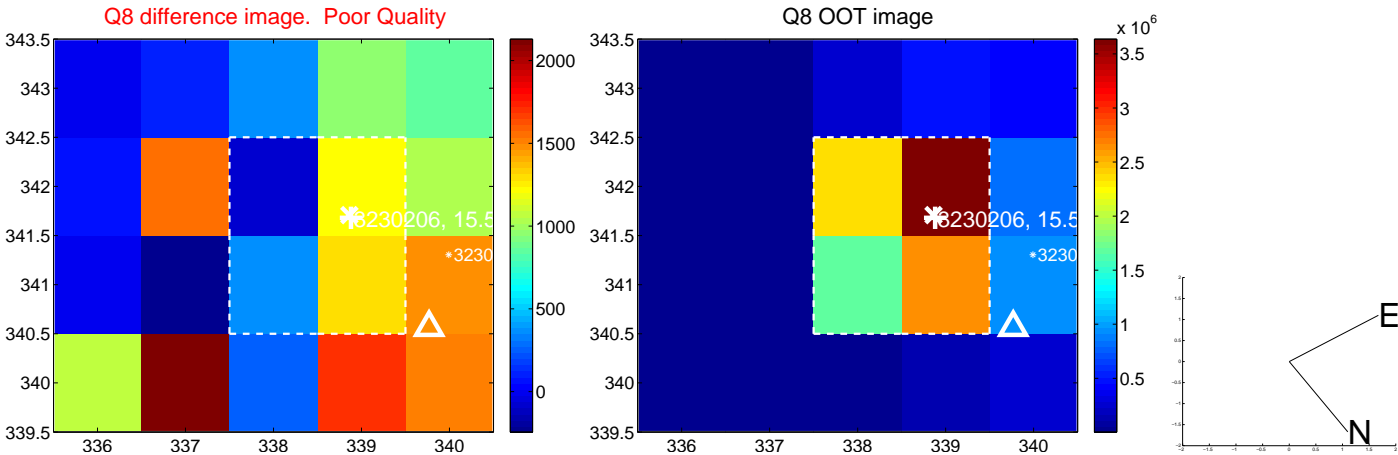
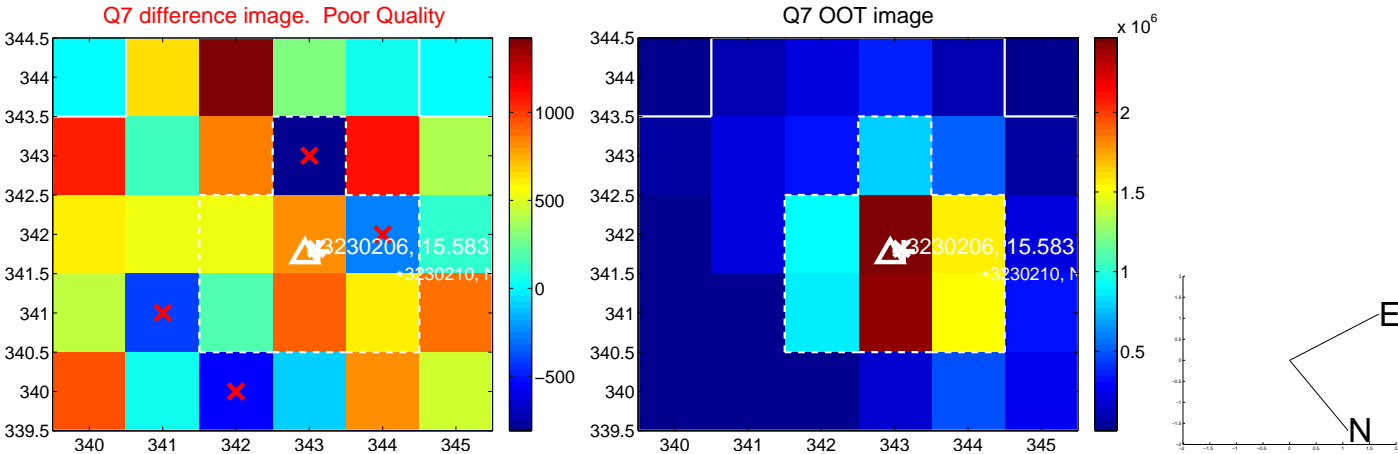
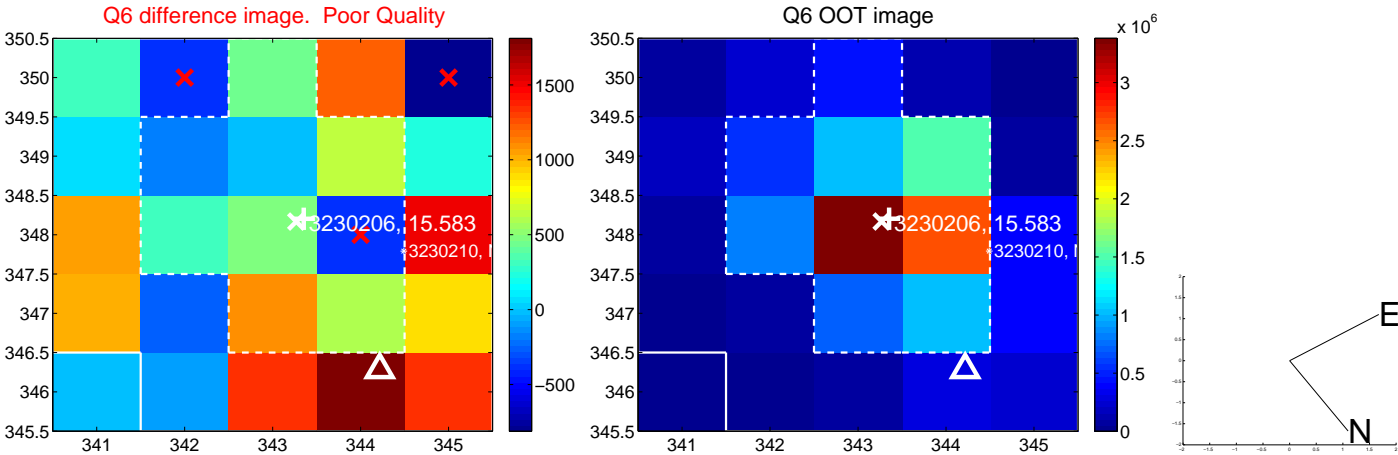
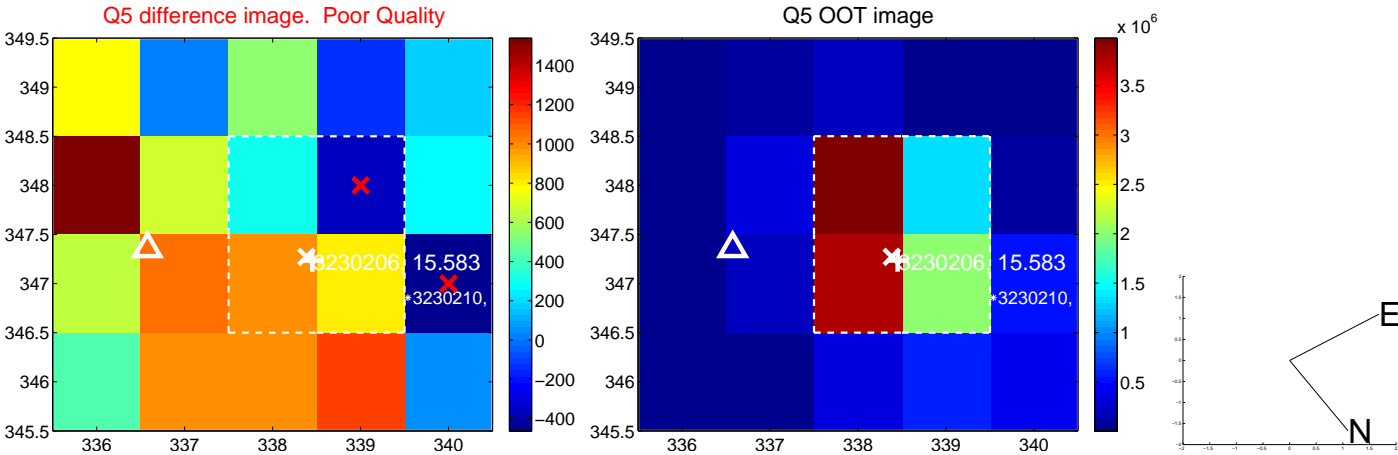


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

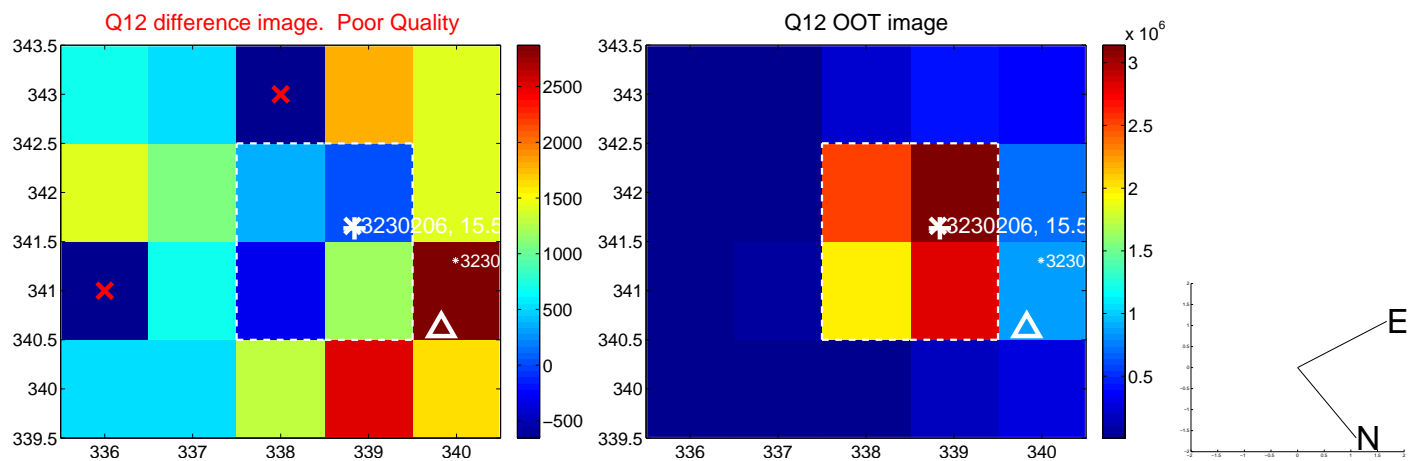
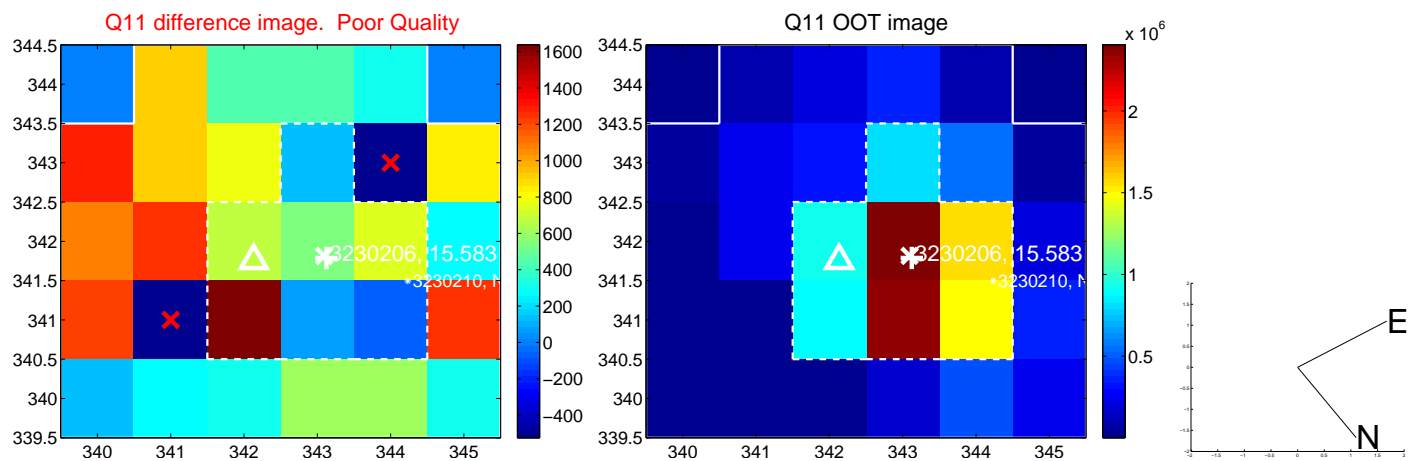
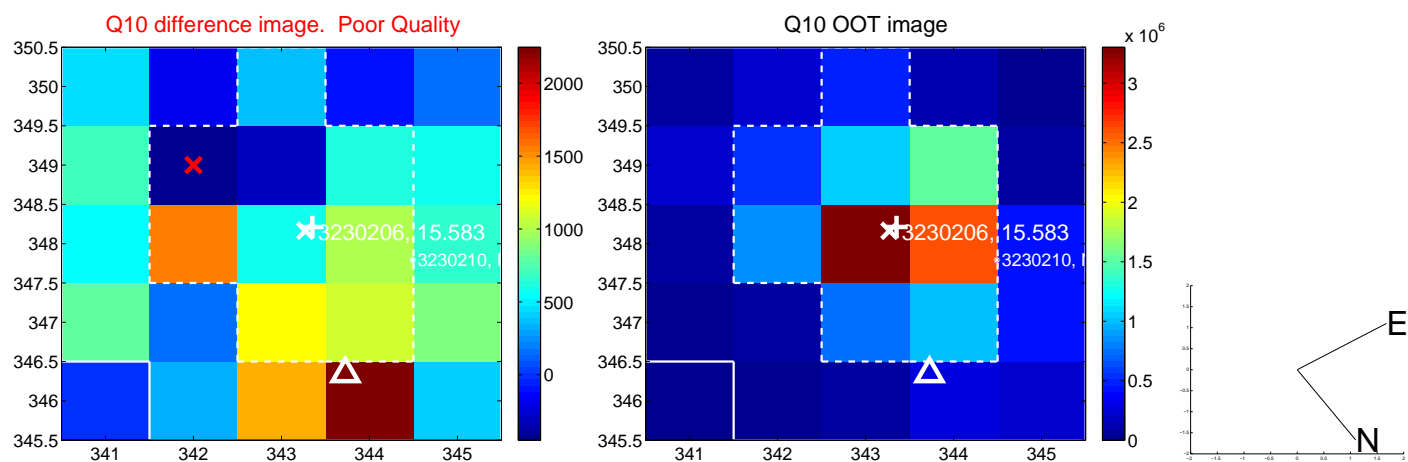
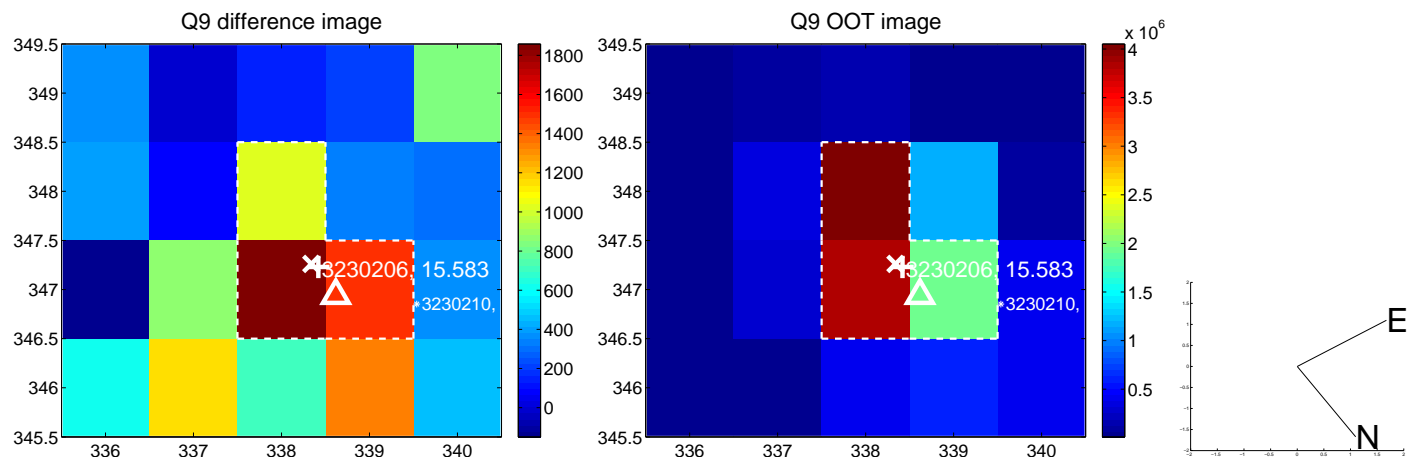
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



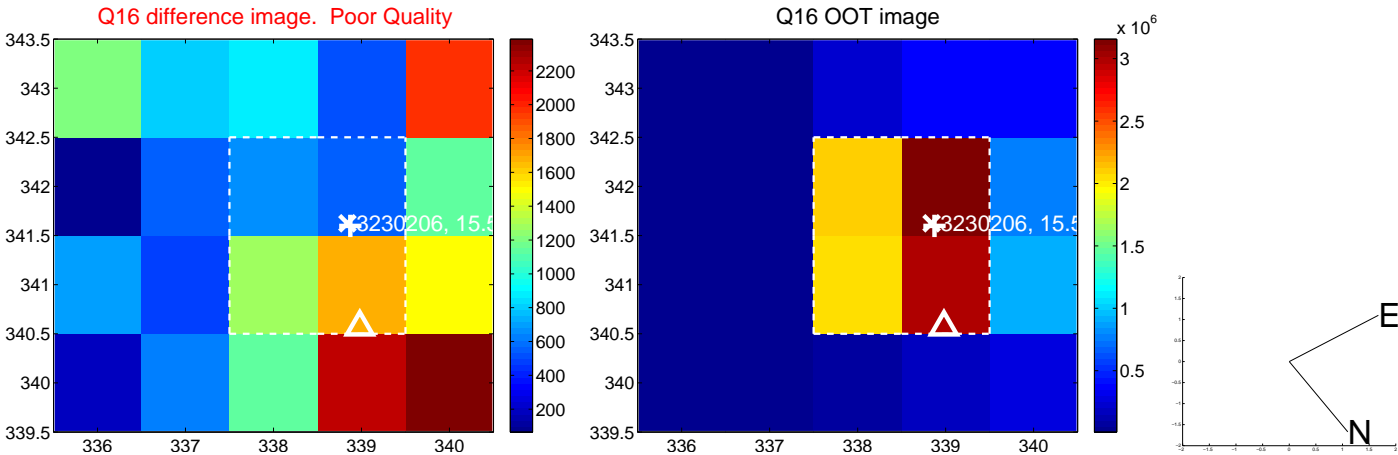
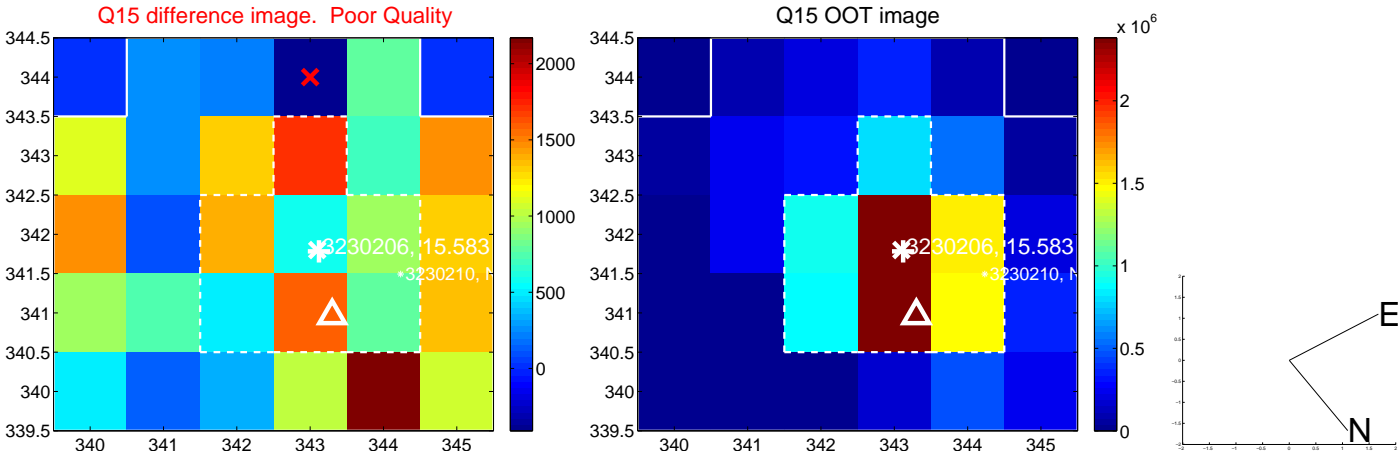
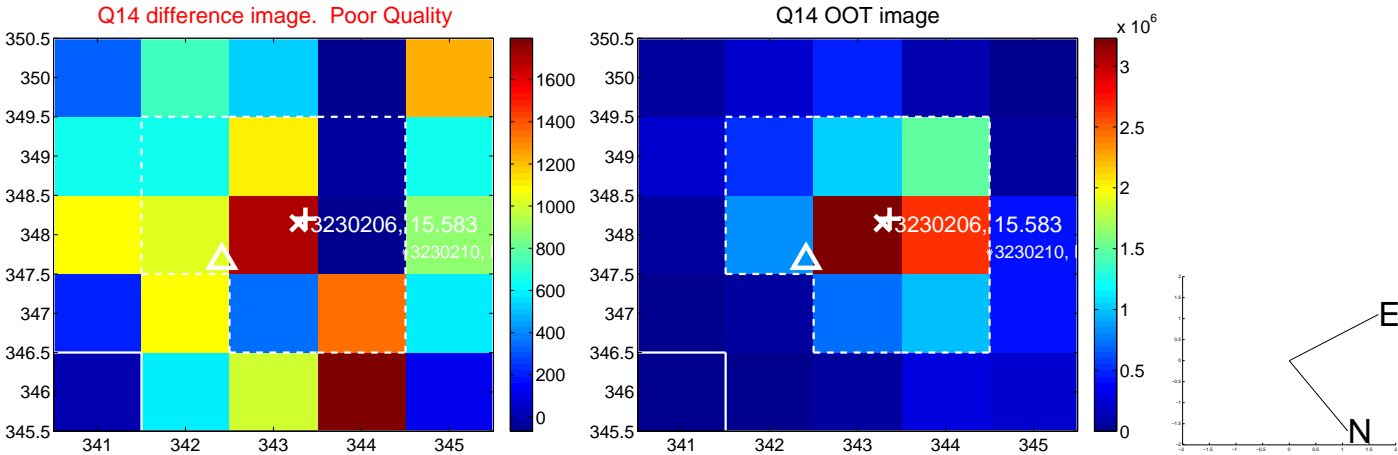
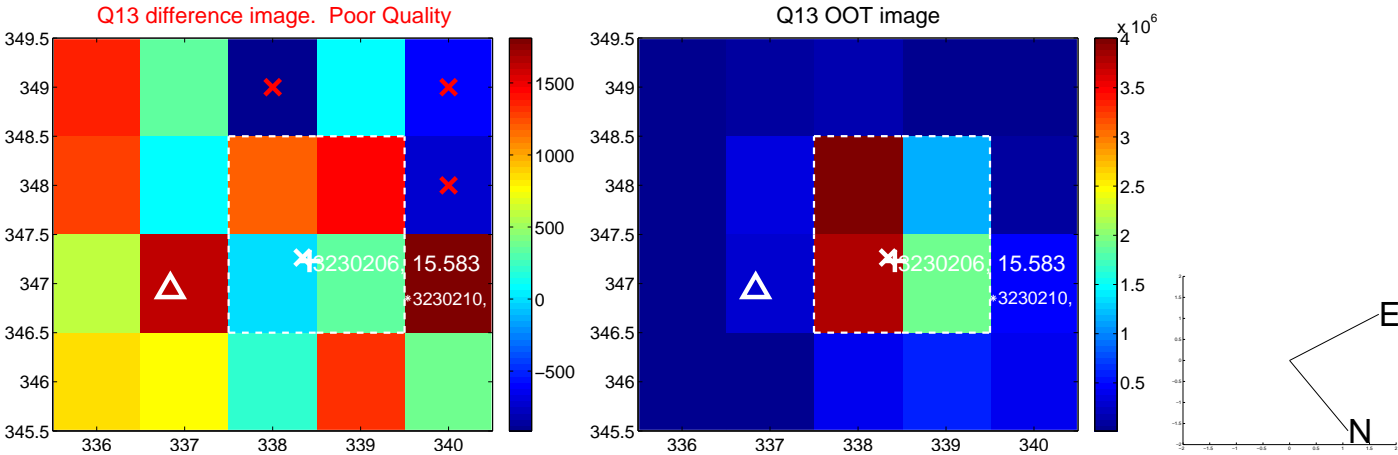
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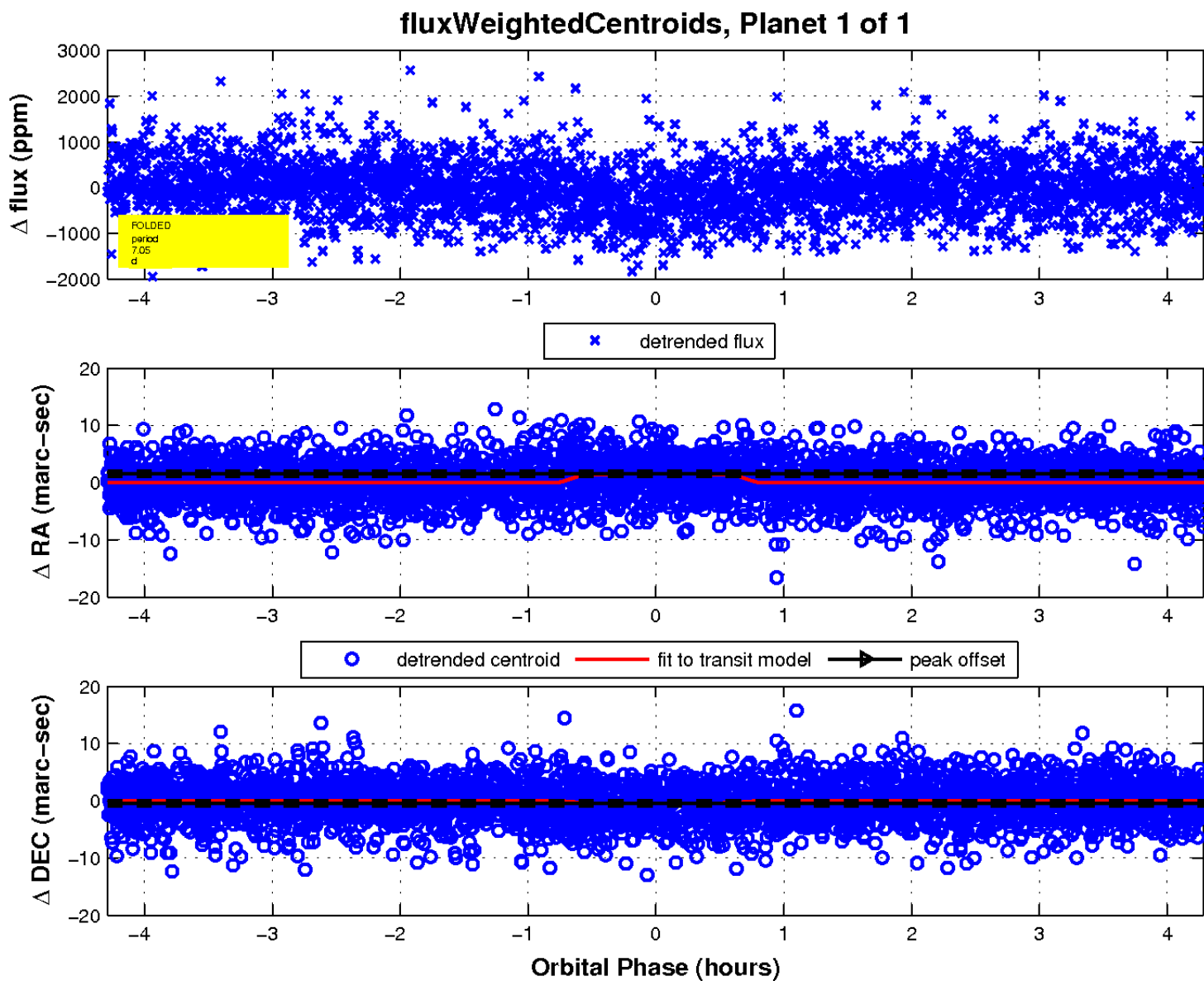
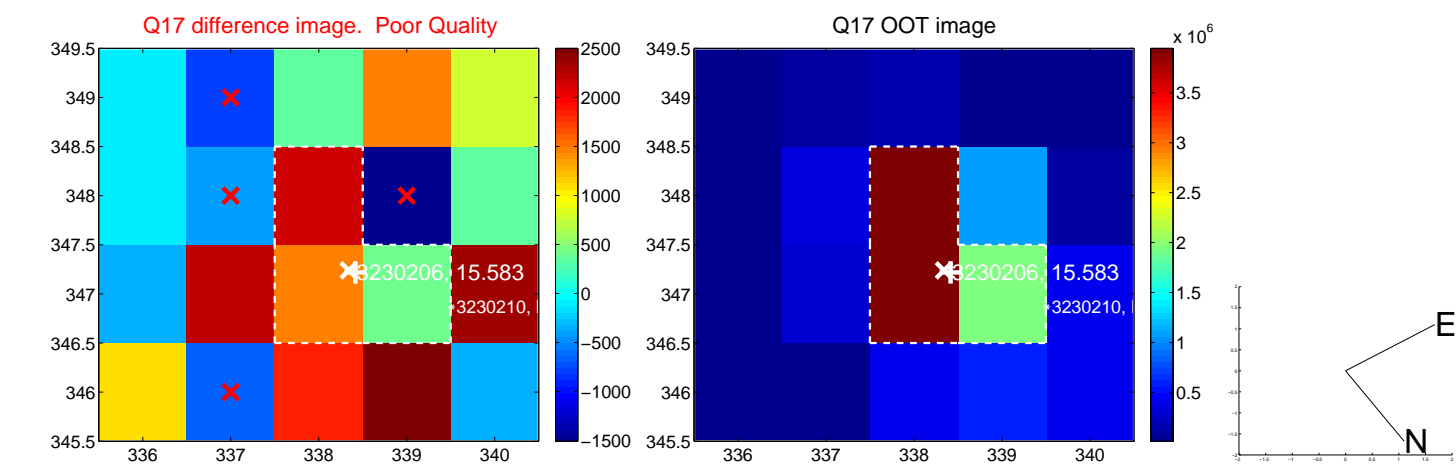
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

