

KIC 007200225

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
007200225-01	OBS	6843.01	0.566704	131.952030	1.0	2.665	9.3	0.2	0.96	5949	0.10	5593.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007200225-01	OBS	FP	0.00	1	0	1	1	LPP_DV—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 007200225-01

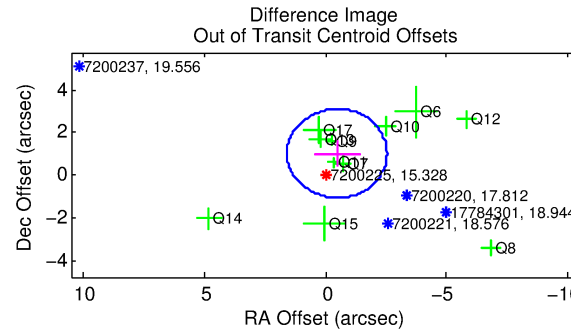
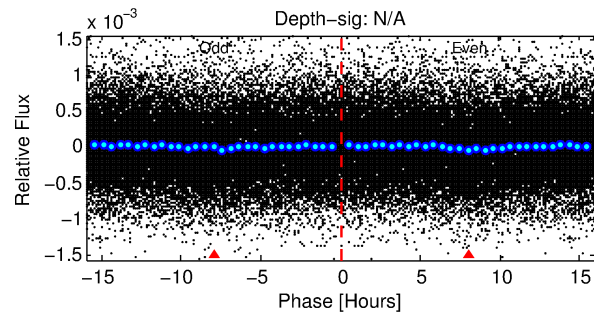
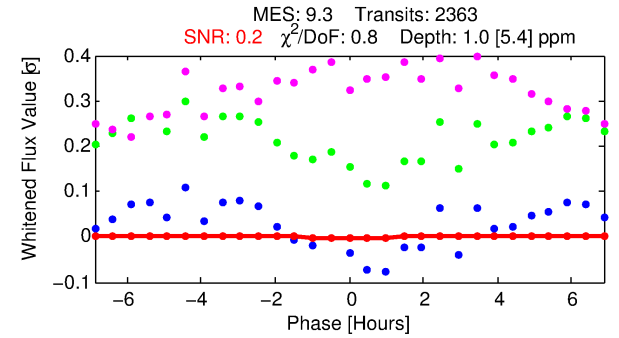
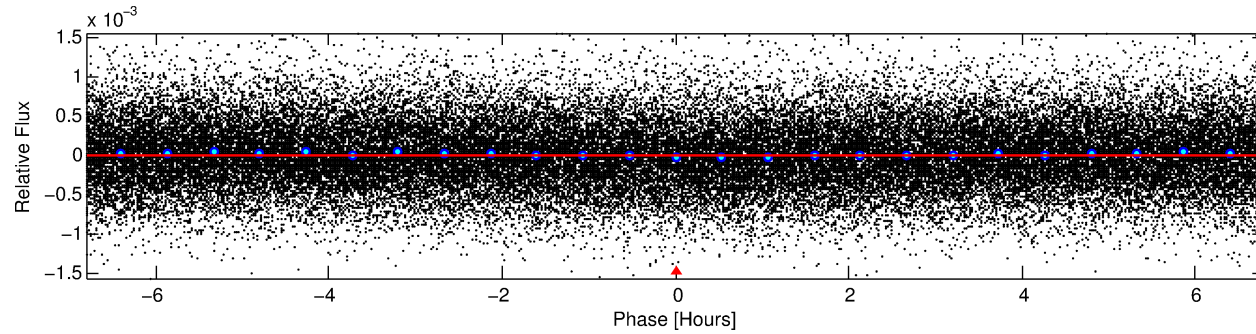
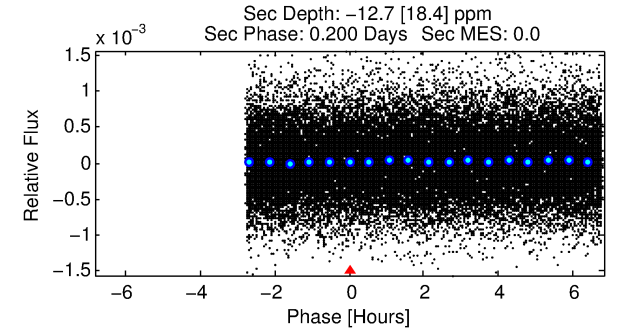
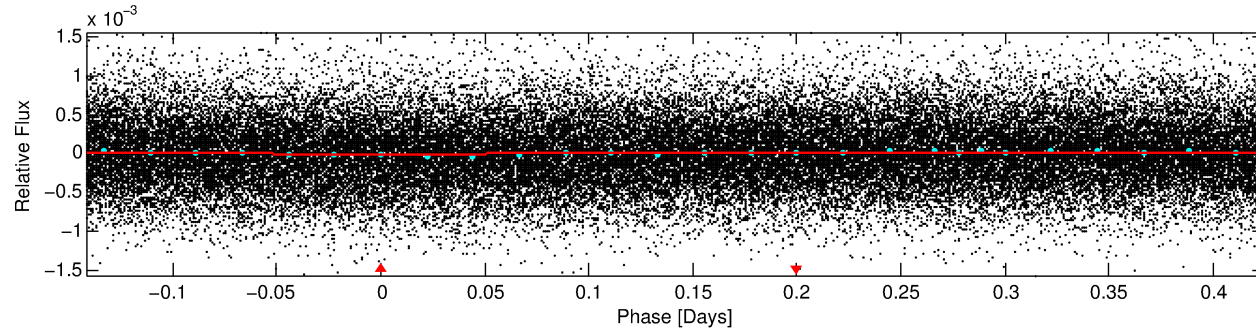
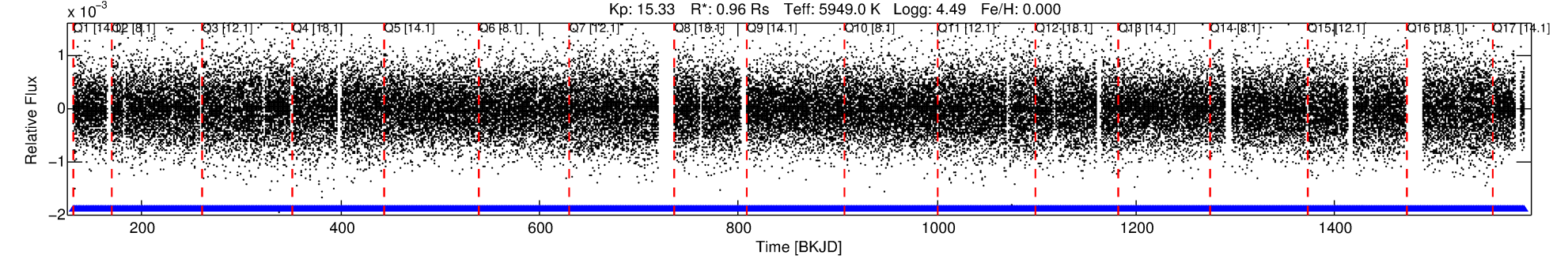
TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
007200225-01	7200225	RR-Lyr-pri	7198959	1:1	997.8	145	204	7.86	15.33	623300.00	Direct-PRF	0	2.80	7.66

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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 σ_P < 5.0 and σ_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: 7200225 Candidate: 1 of 1 Period: 0.567 d
KOI: K06843 Corr: No Ephemeris Match

Kp: 15.33 R*: 0.96 Rs Teff: 5949.0 K Logg: 4.49 Fe/H: 0.000



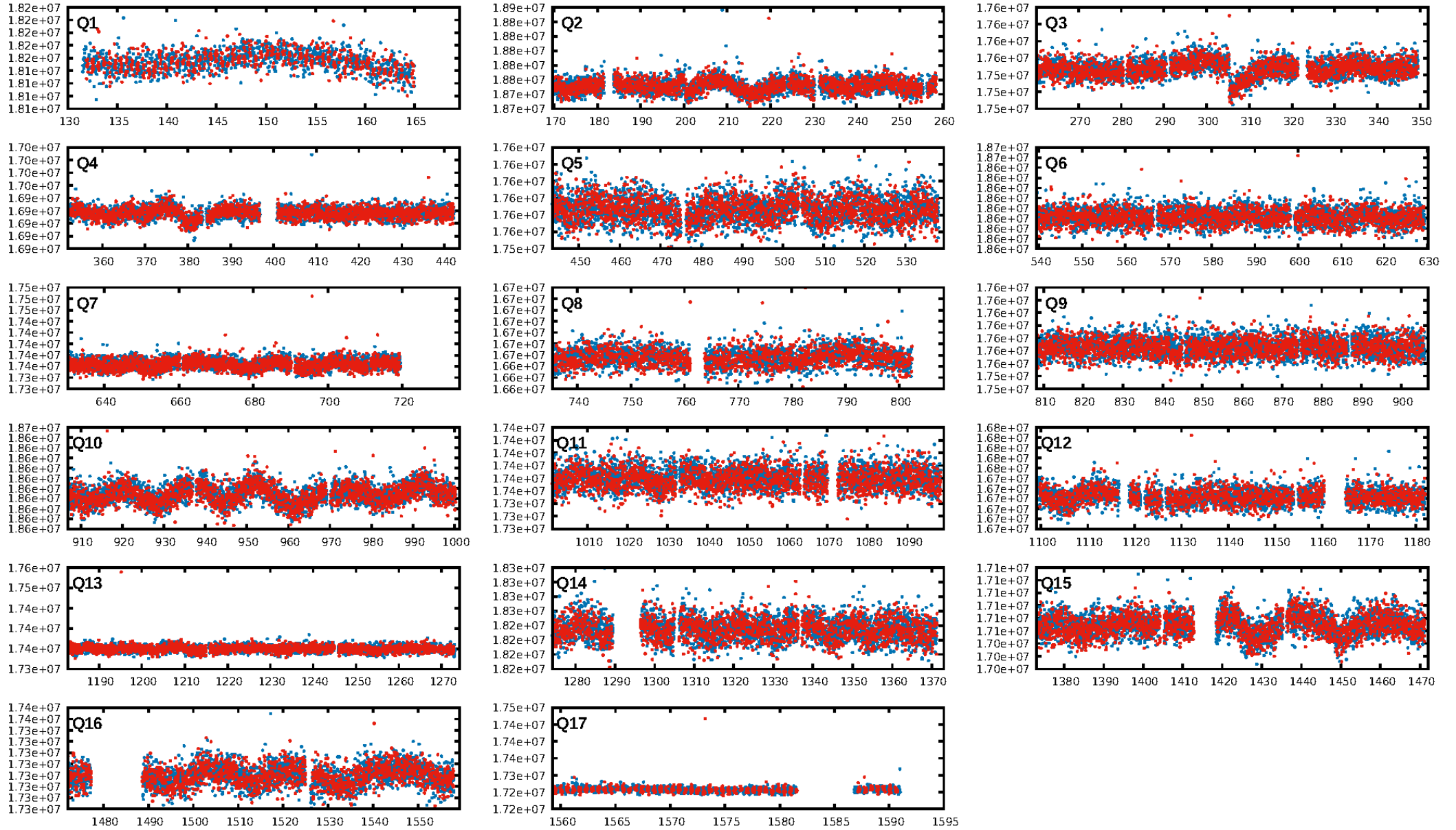
DV Fit Results:

Period = 0.56670 [0.00043] d
Epoch = 131.9520 [0.1527] BKJD
Rp/R* = 0.0009 [0.0379]
a/R* = 1.73 [224.13]
b = 0.06 [3489.90]
Seff = 5593.01 [2205.80]
Teff = 2205 [217] K
Rp = 0.10 [3.98] Re
a = 0.0136 [0.0034] AU
Ag = N/A
Teffp = N/A

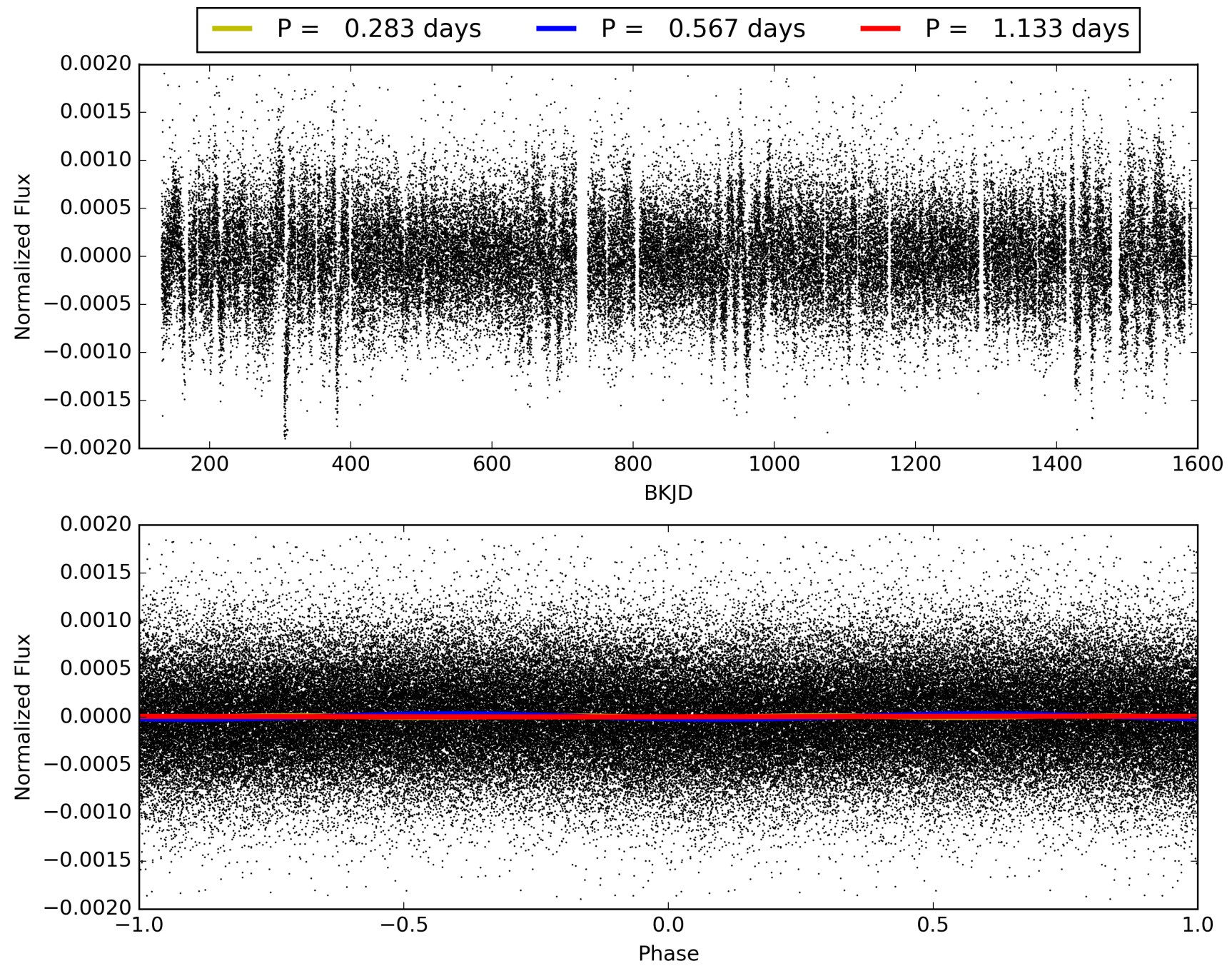
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.06e-18
RollingBand-fgt: 1.00 [2257/2257]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.130 arcsec [1.64σ]
KicOffset-rm: 1.121 arcsec [1.43σ]
OotOffset-st: 3/3/2/3 [11]
KicOffset-st: 3/3/2/3 [11]
DiffImageQuality-fgm: 0.00 [0/11]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007200225-01, PDC Light Curves

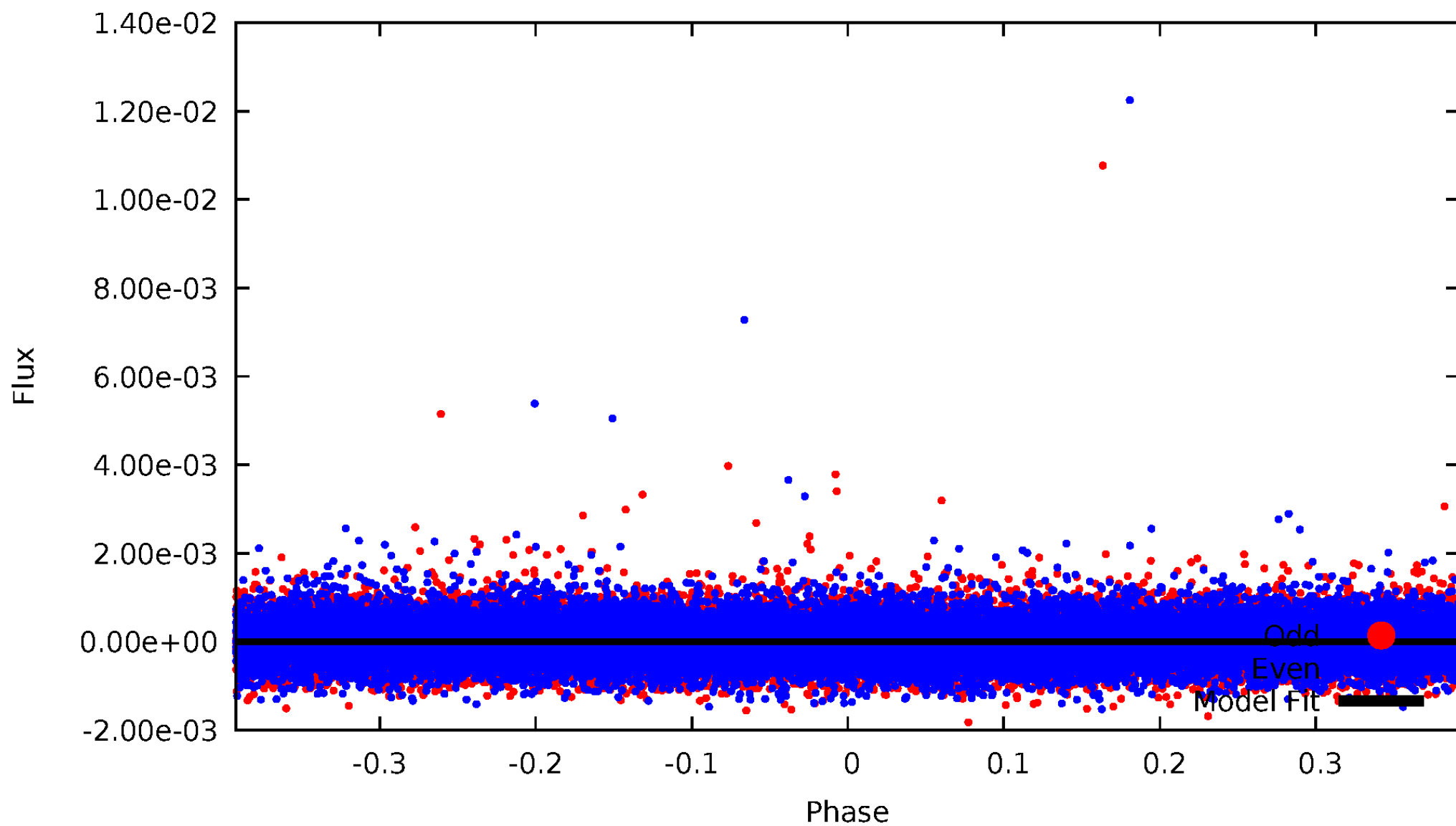


TCE 007200225-01



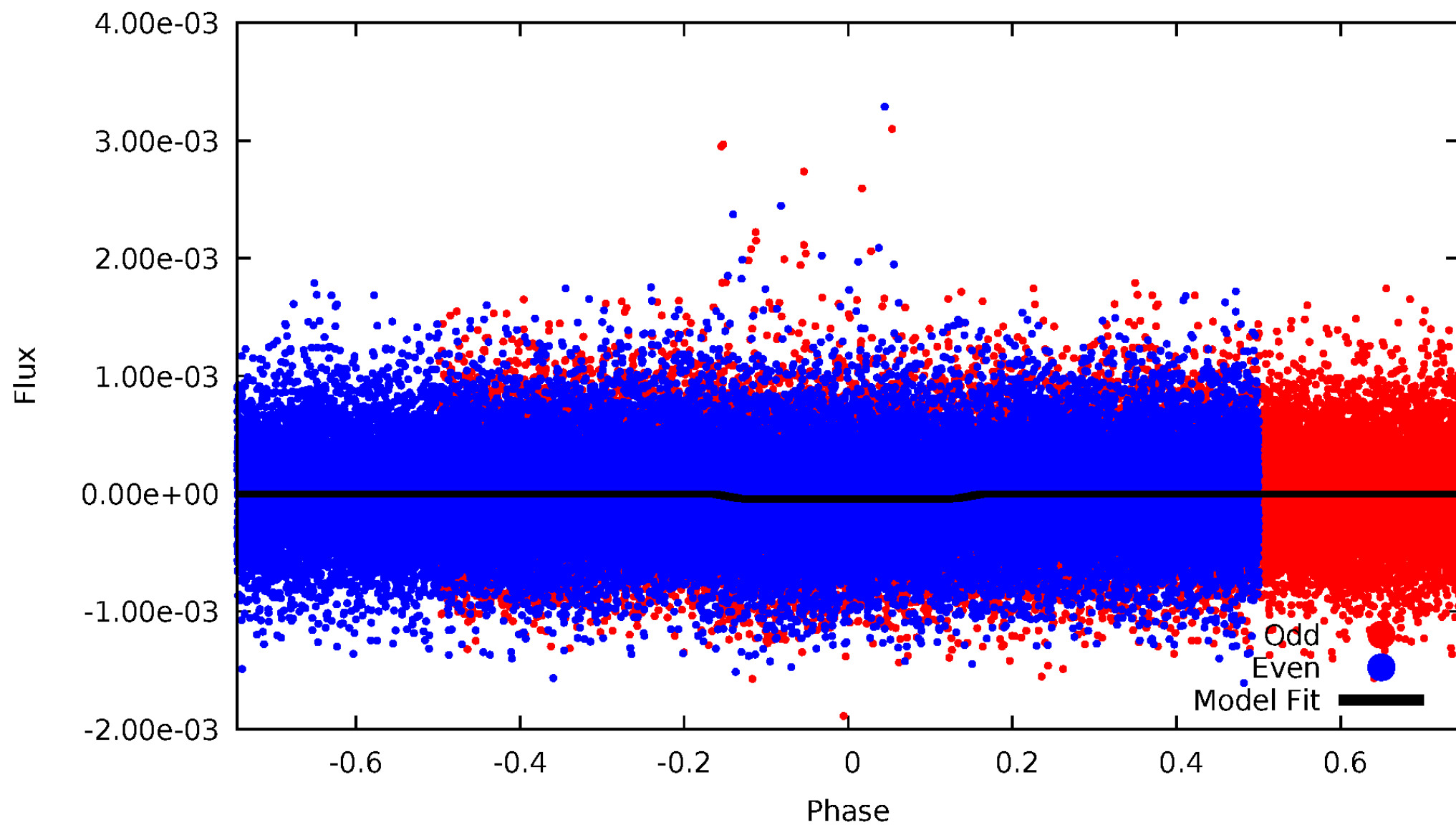
DV Odd/Even

TCE 007200225-01

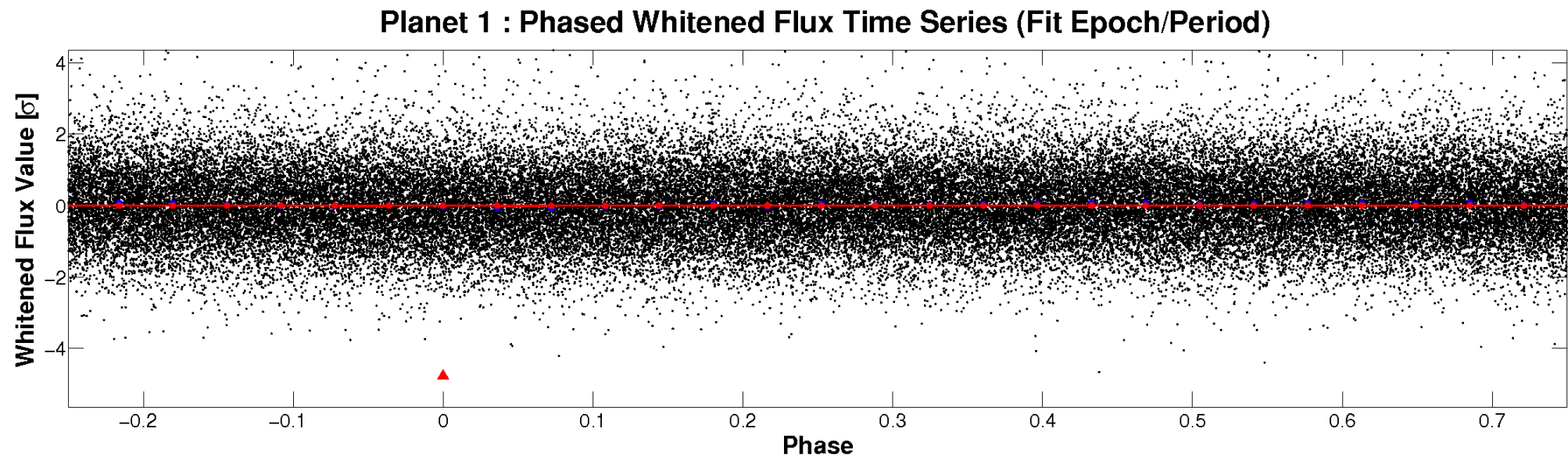
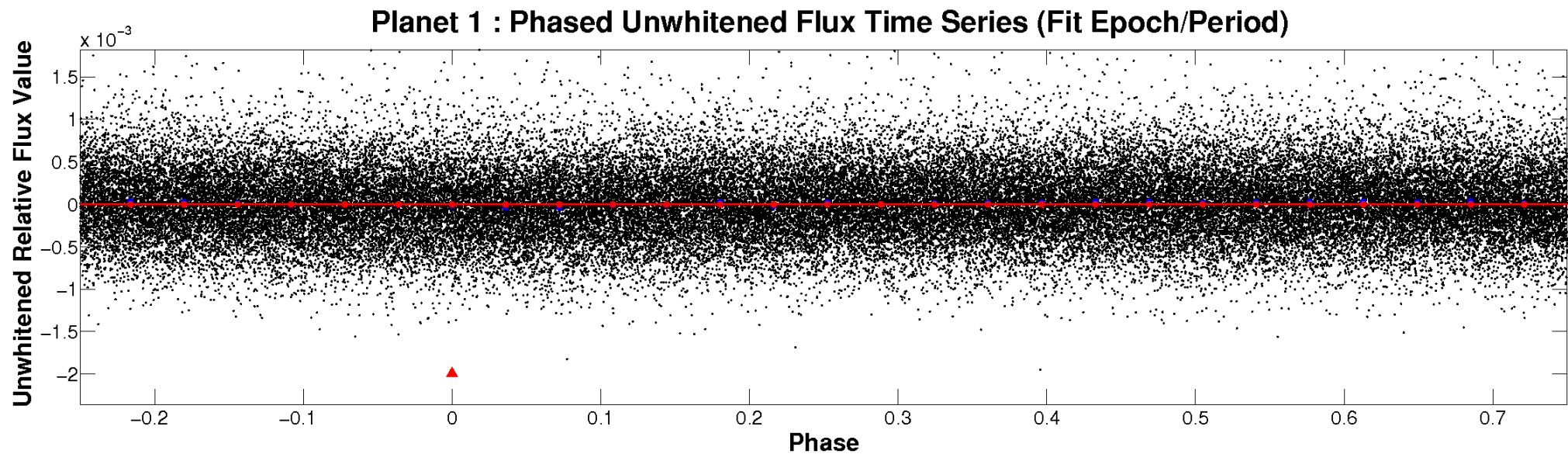


ALT Odd/Even

TCE 007200225-01

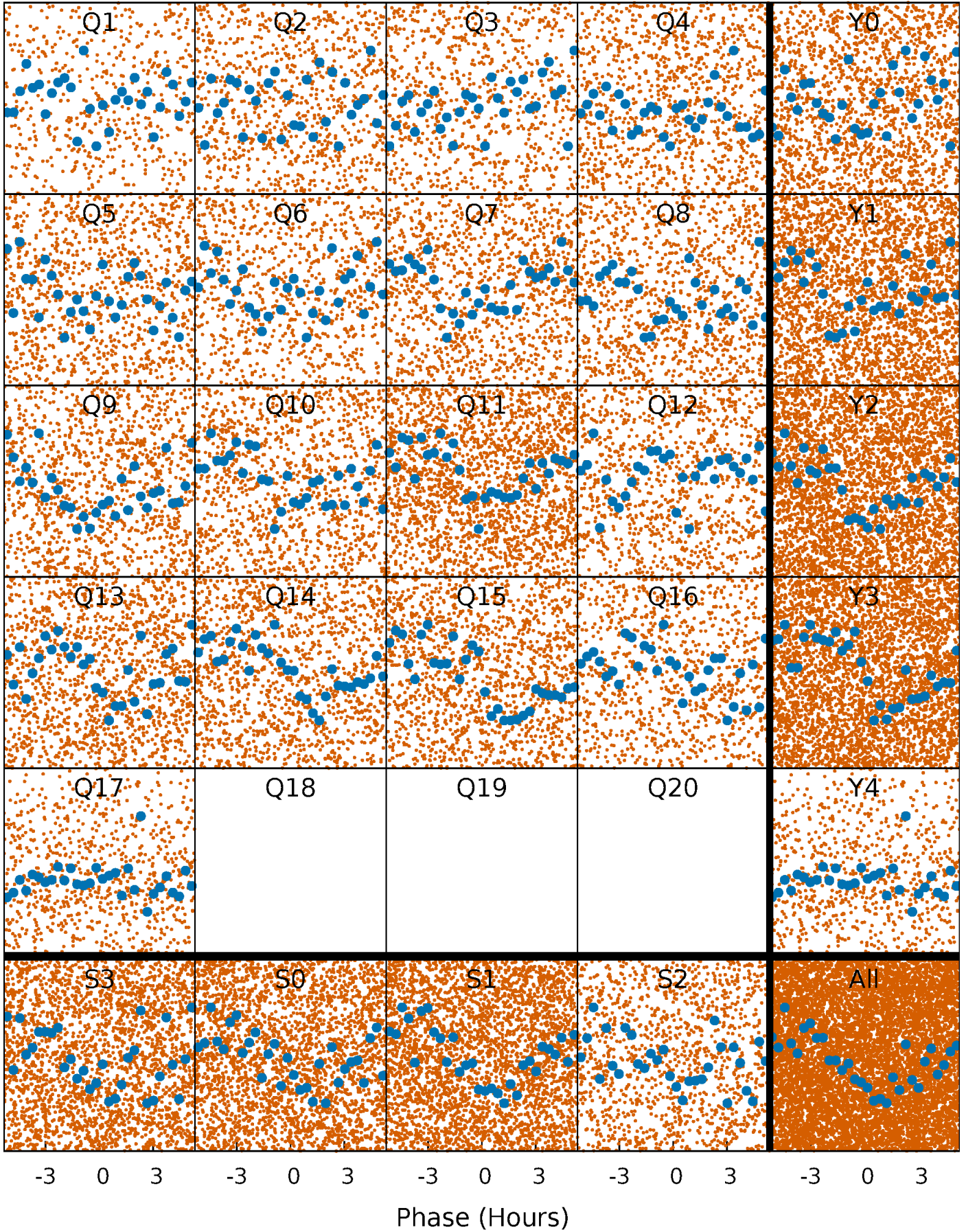


Non-Whitened Vs. Whitened Light Curve



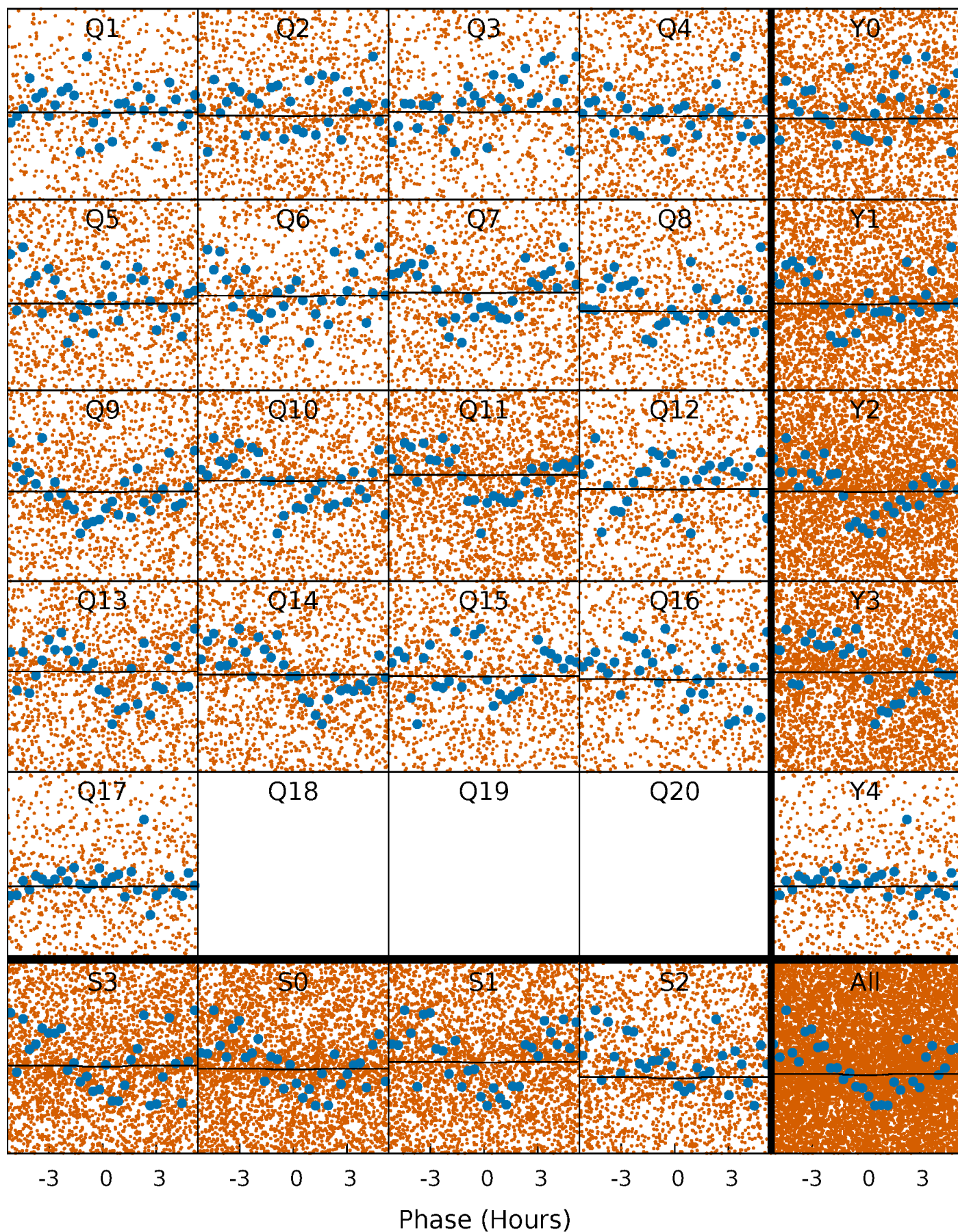
PDC Quarter-Phased Transit Curves

TCE 007200225-01 P= 0.566704 Days $T_0=131.952030$ (BKJD)



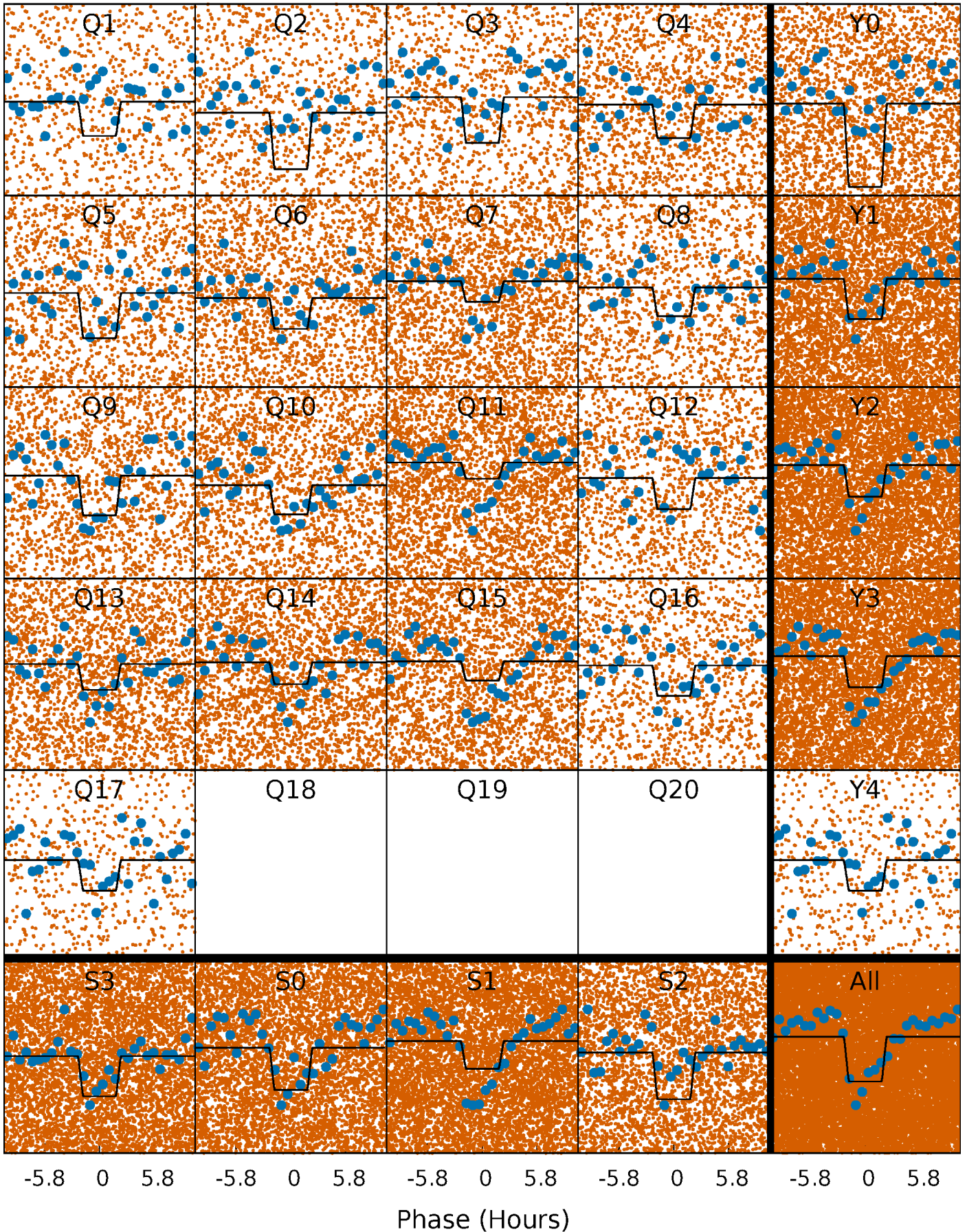
DV Quarter-Phased Transit Curves

TCE 007200225-01 P= 0.566704 Days $T_0=131.952030$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

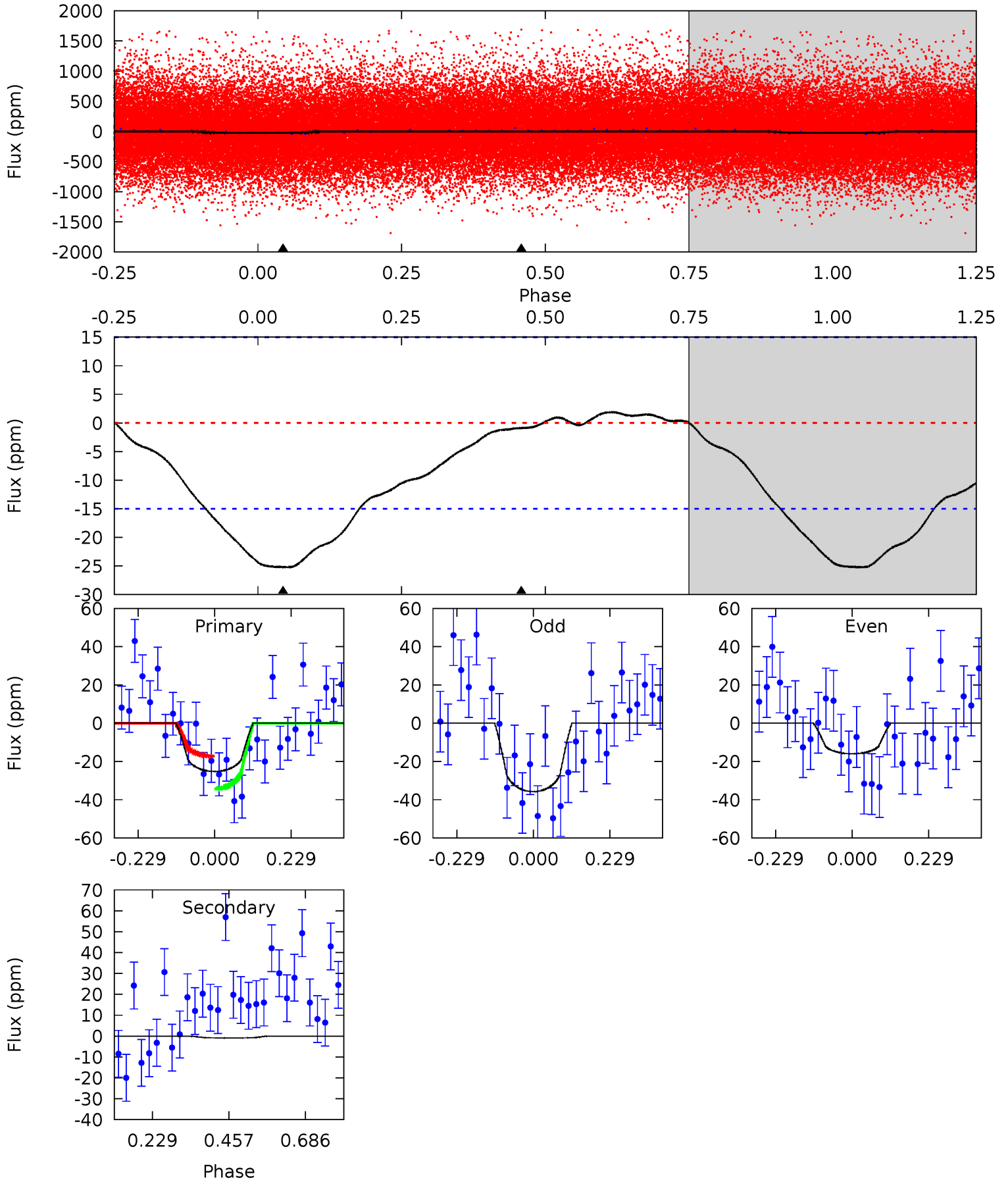
TCE 007200225-01 P= 0.566782 Days $T_0=131.869465$ (BKJD)



DV Model-Shift Uniqueness Test

007200225-01, P = 0.566704 Days, E = 131.385326 Days

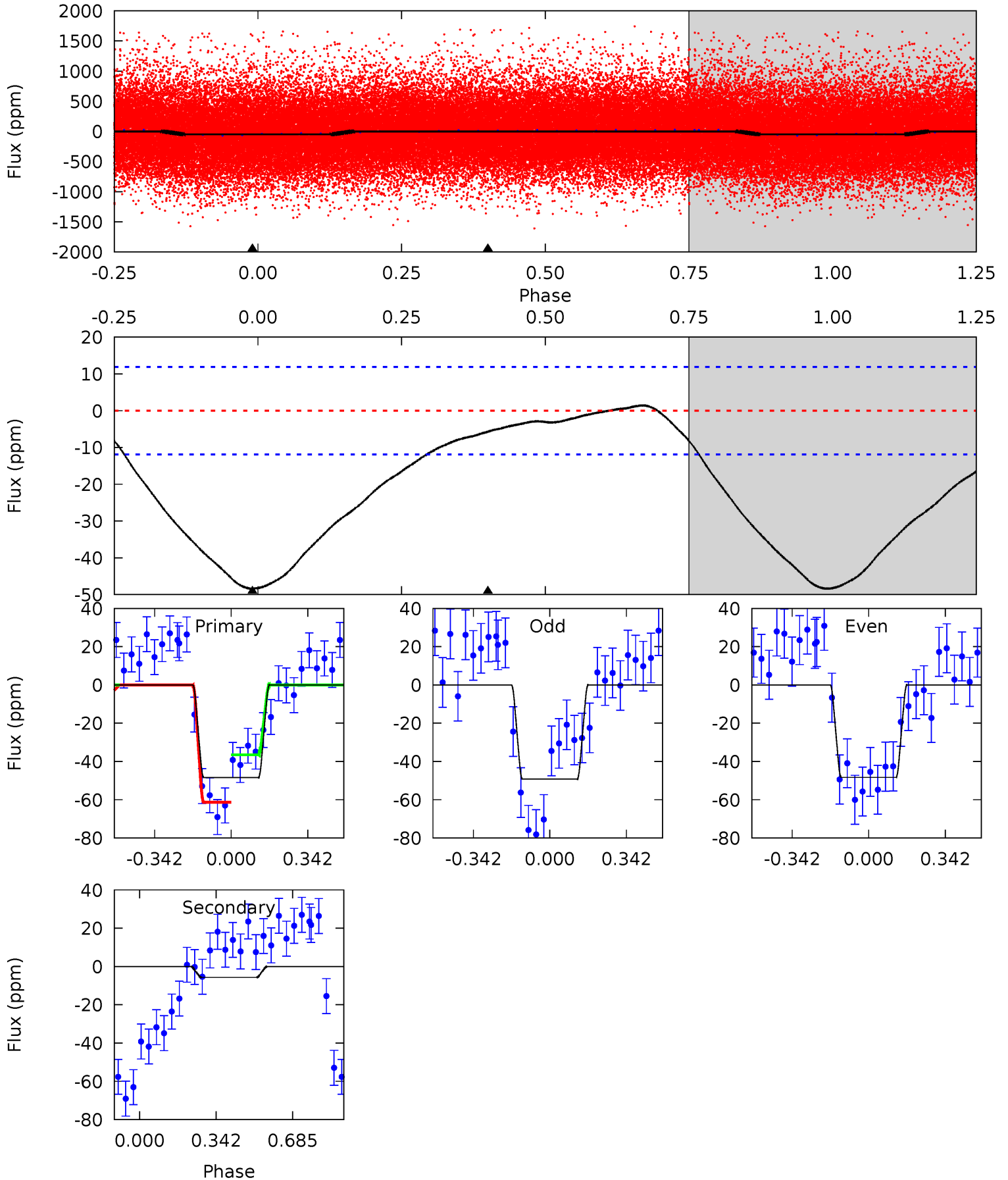
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.39	0.26	0	0	4.39	1.20	0.59	7.39	7.39	0.26	0.26	2.92	0.87	0.07	2.55



Alt Model-Shift Uniqueness Test

007200225-01, P = 0.566782 Days, E = 131.302683 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	2.06	0	0	4.30	0.95	1.00	17.5	17.5	2.06	2.06	0.16	0.93	0.03	4.53



Stellar Parameters For KIC 007200225

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5949^{+184}_{-226}	$4.493^{+0.050}_{-0.200}$	$0.000^{+0.250}_{-0.300}$	$0.962^{+0.282}_{-0.094}$	$1.050^{+0.127}_{-0.140}$	$1.663^{+0.424}_{-0.817}$
	+3%/-4%	+1%/-4%	+inf%/-inf%	+29%/-10%	+12%/-13%	+26%/-49%
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 007200225-01 / KOI 6843.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 3	$2.87^{+3.21}_{-2.00}$	3151^{+239}_{-151}	-3157^{+354}_{-185}	$0.008^{+0.173}_{-0.034}$
Alt.	-6 ± 3	$3.11^{+3.21}_{-2.01}$	3147^{+216}_{-175}	-3043^{+5957}_{-177}	$0.055^{+0.416}_{-0.044}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

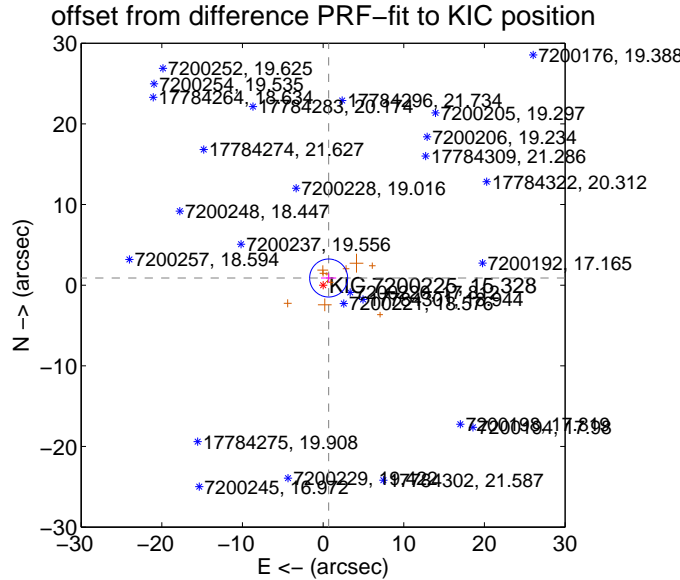
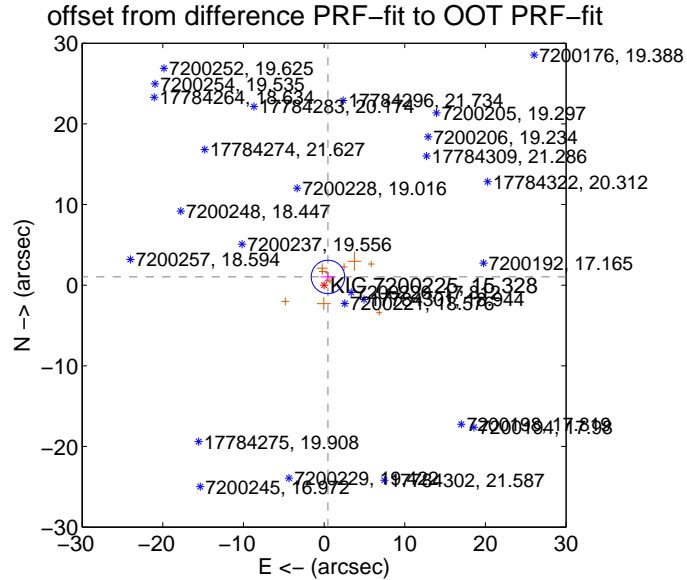
DV Centroid Data

Supplemental centroid analysis for 007200225-01. Kepler magnitude: 15.33. Transit SNR 0.23

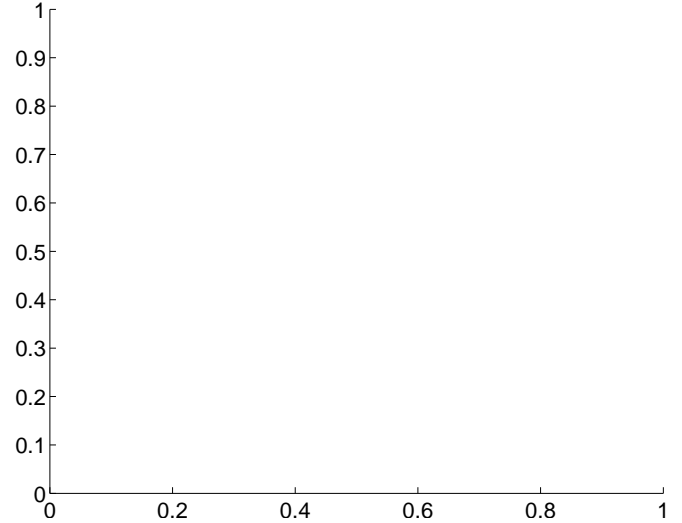
There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.130 ± 0.690	1.64	-0.478 ± 0.914	1.024 ± 0.601
PRF-fit source offset from KIC position	1.121 ± 0.785	1.43	-0.686 ± 0.942	0.887 ± 0.564
photometric centroid source offset	—	—	—	—

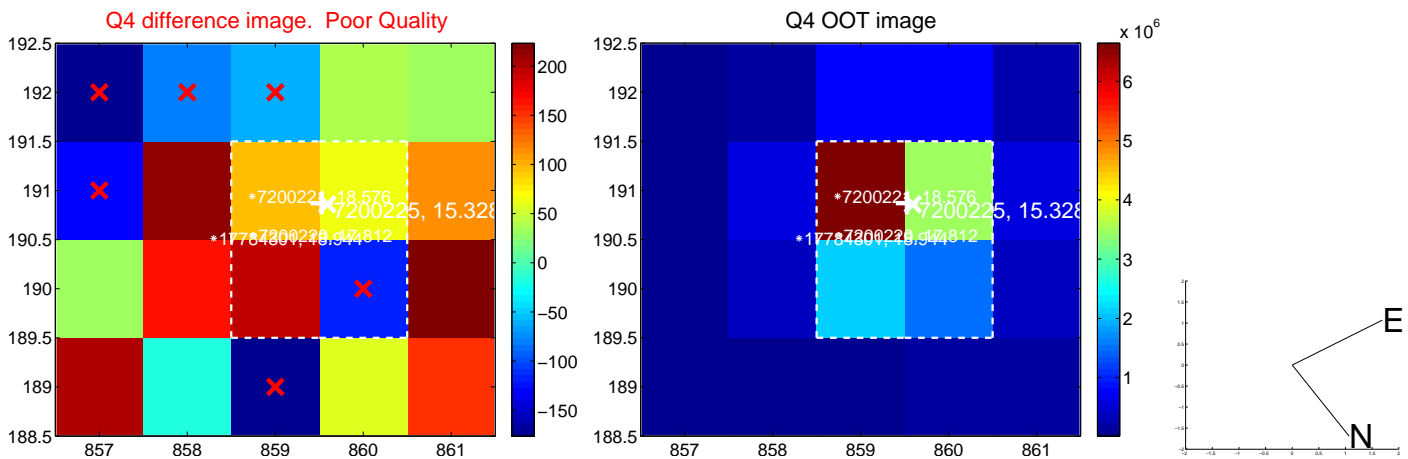
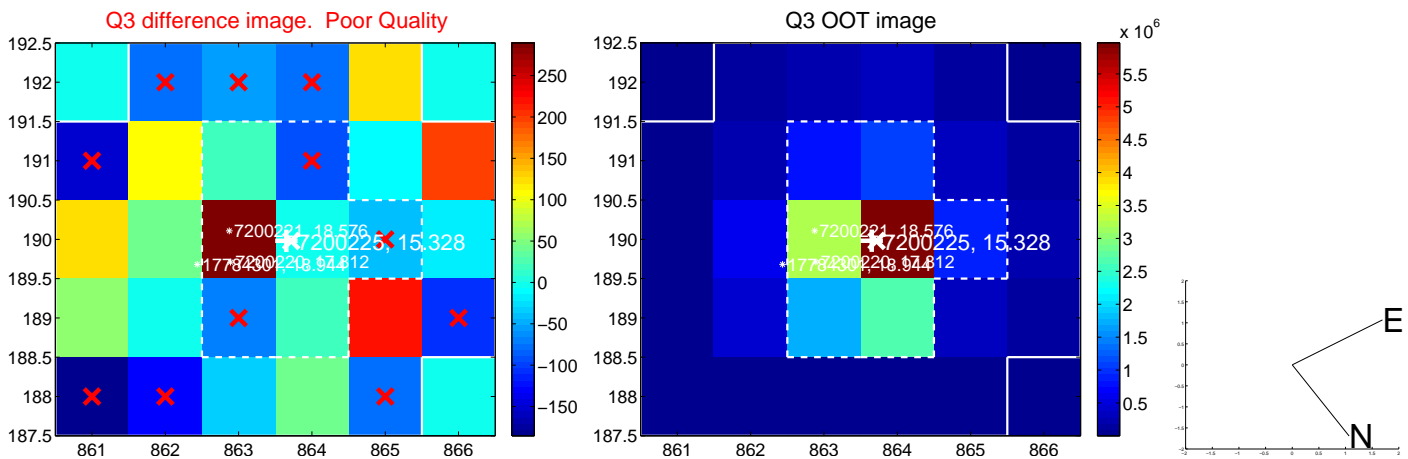
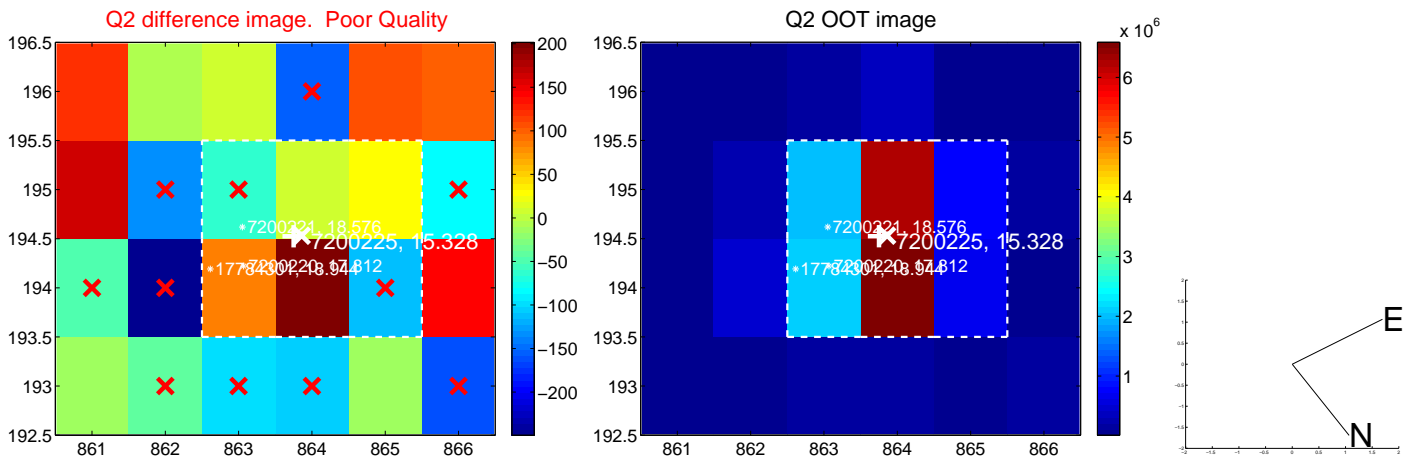
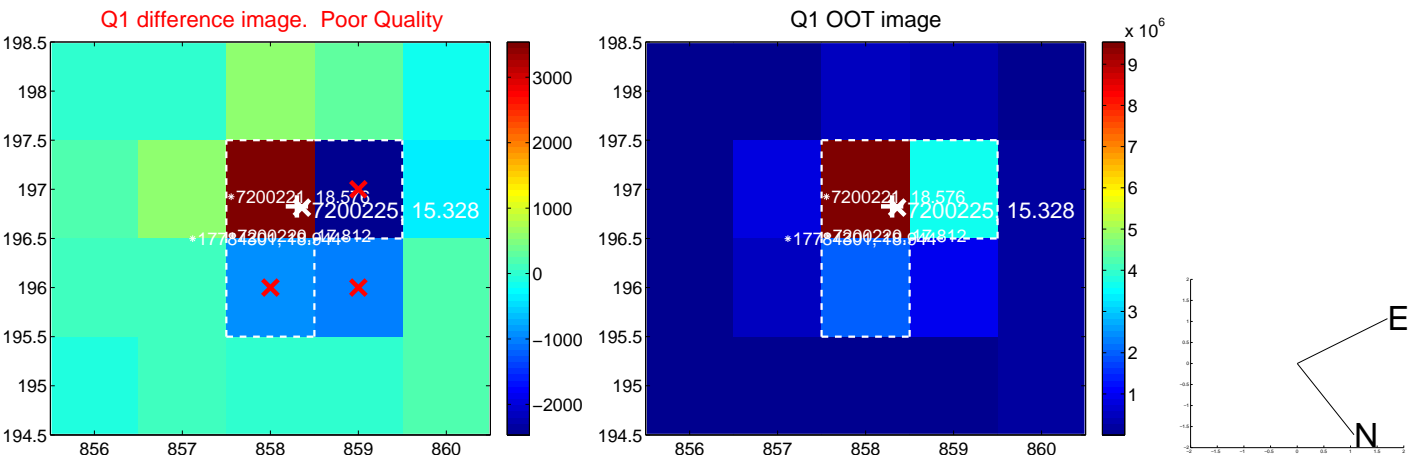


There are no photometric centroids

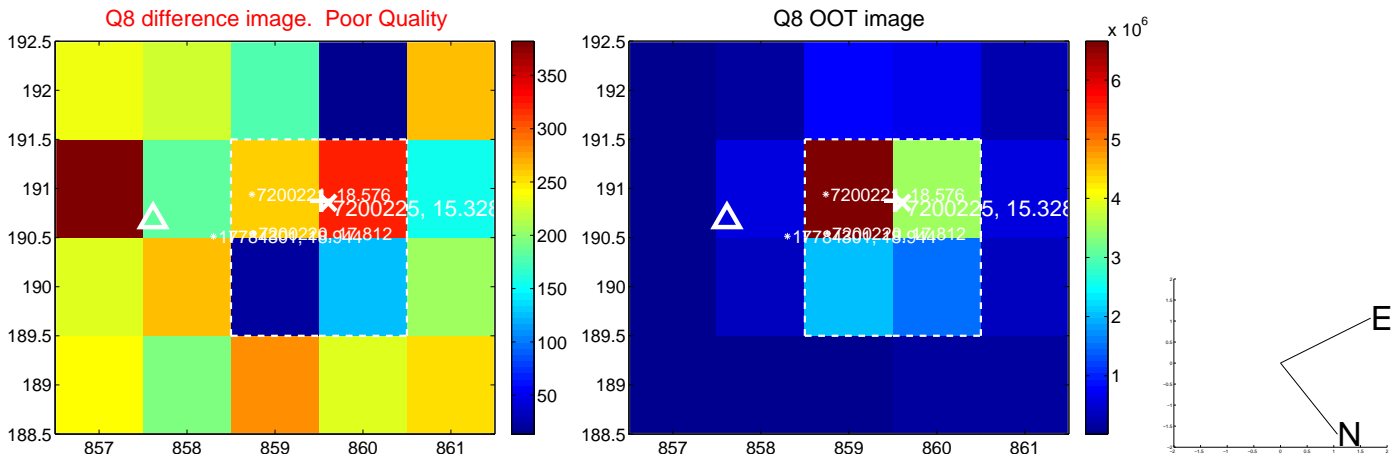
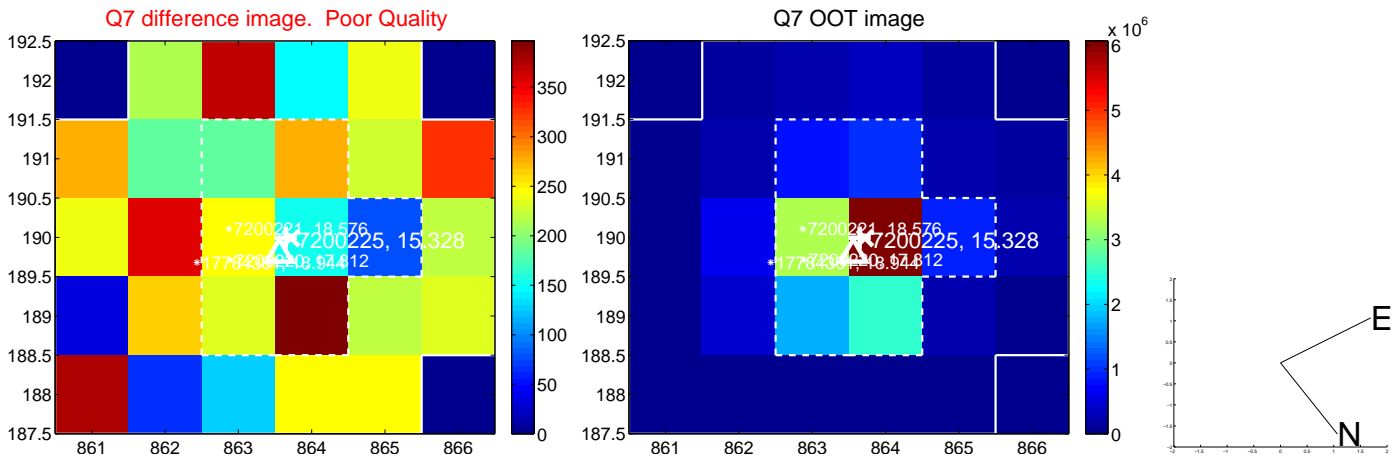
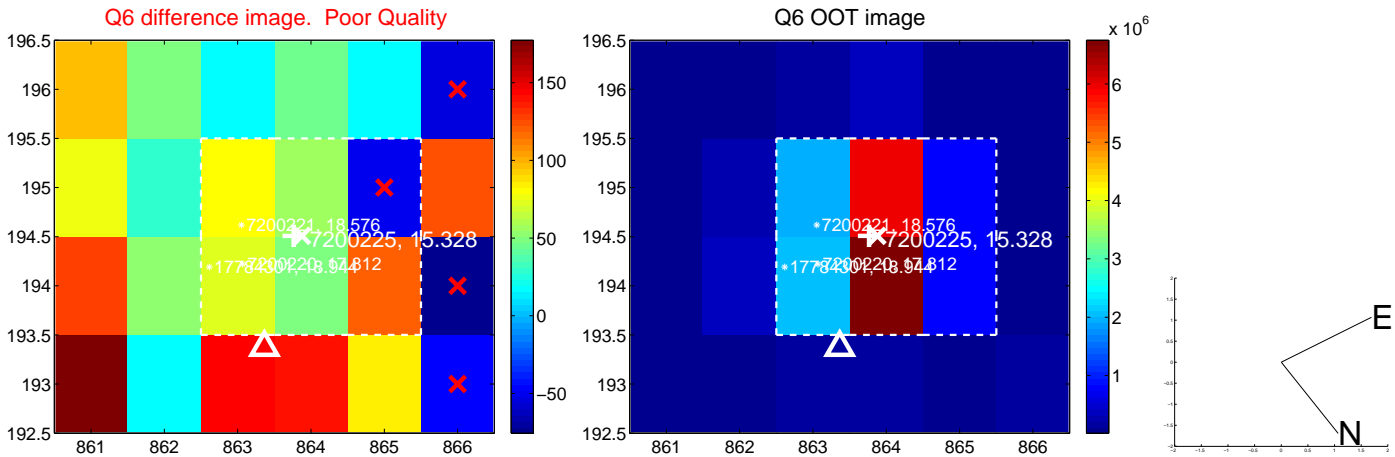
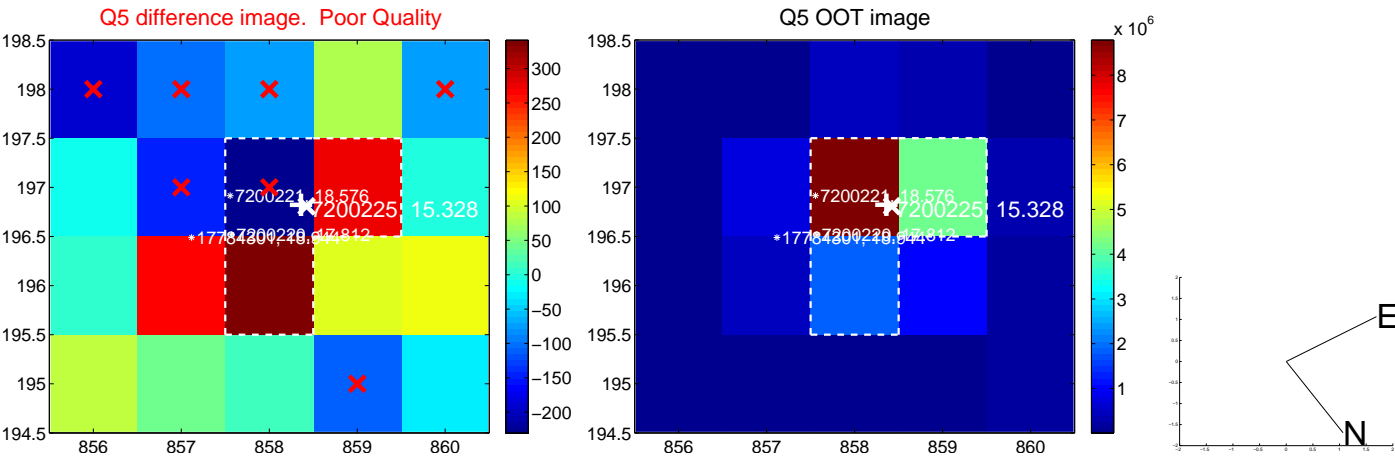


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

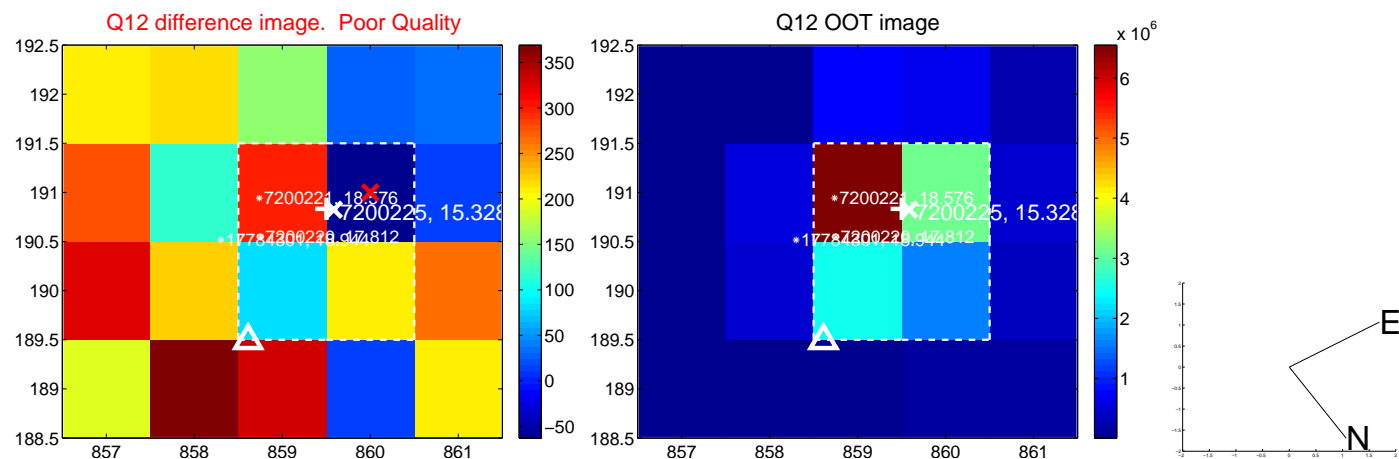
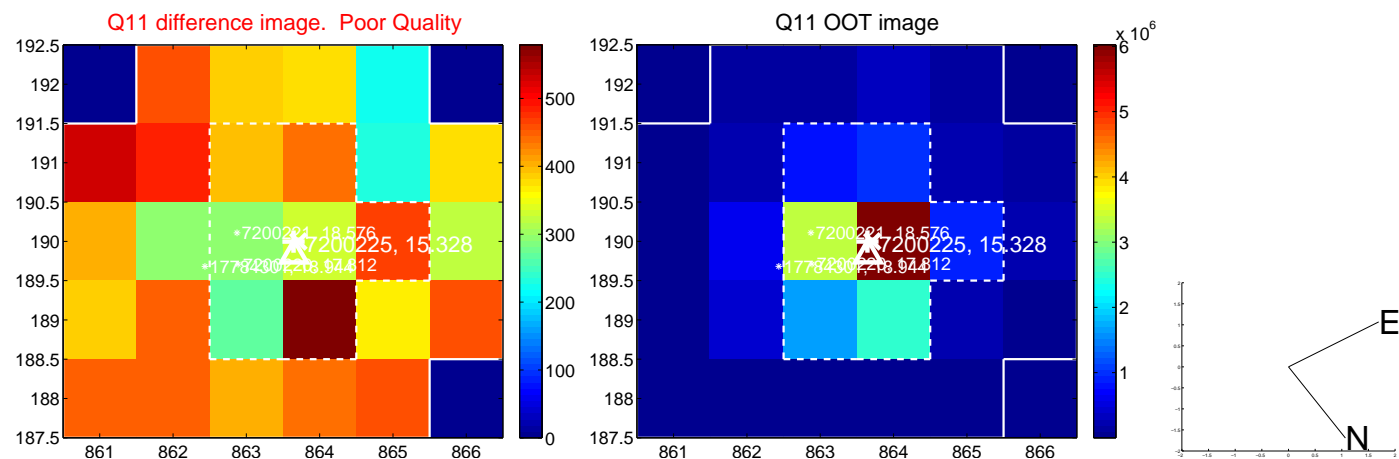
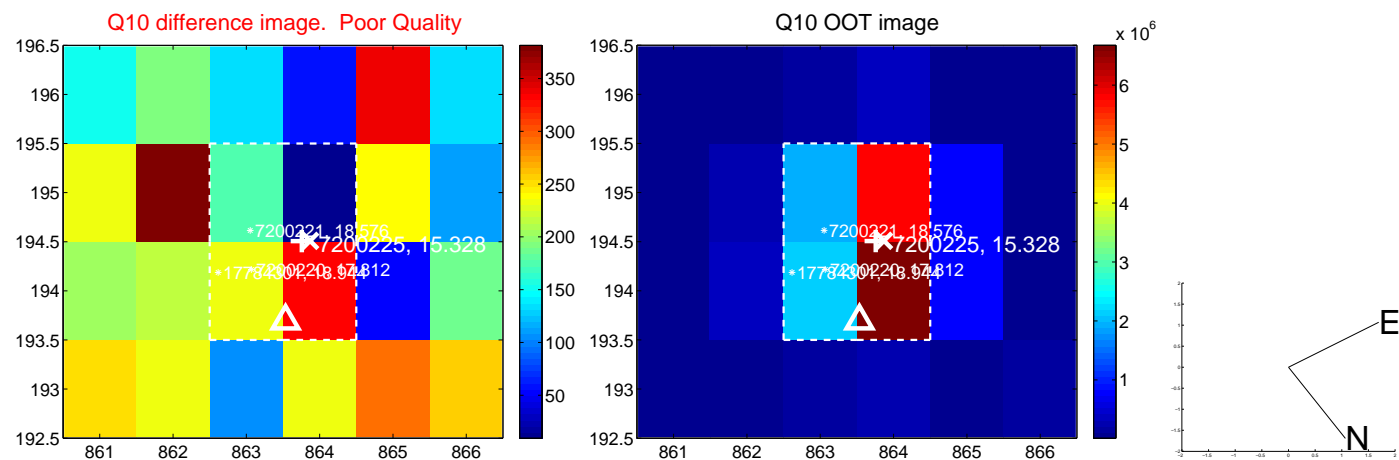
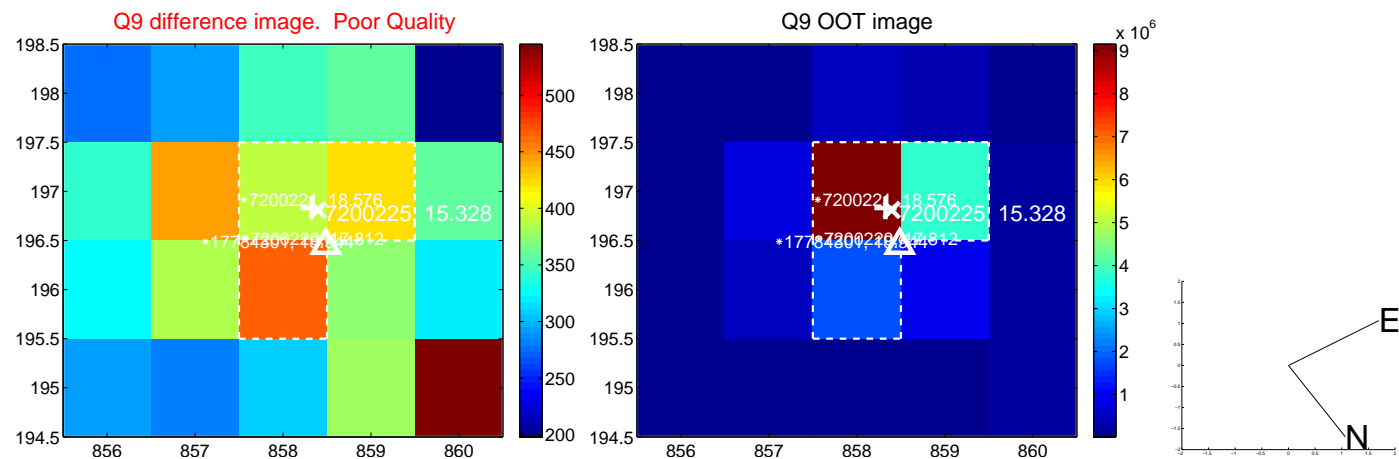
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



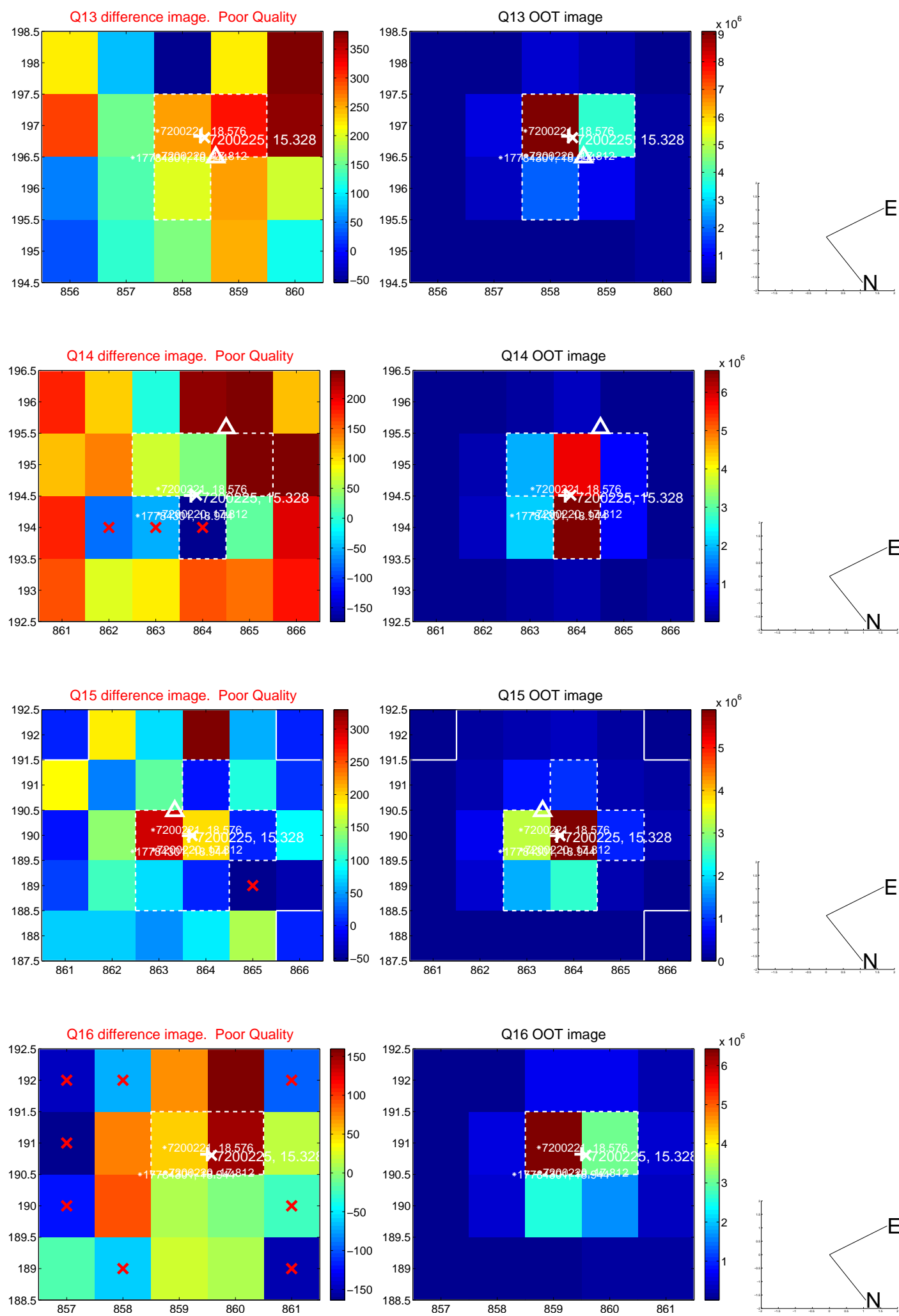
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



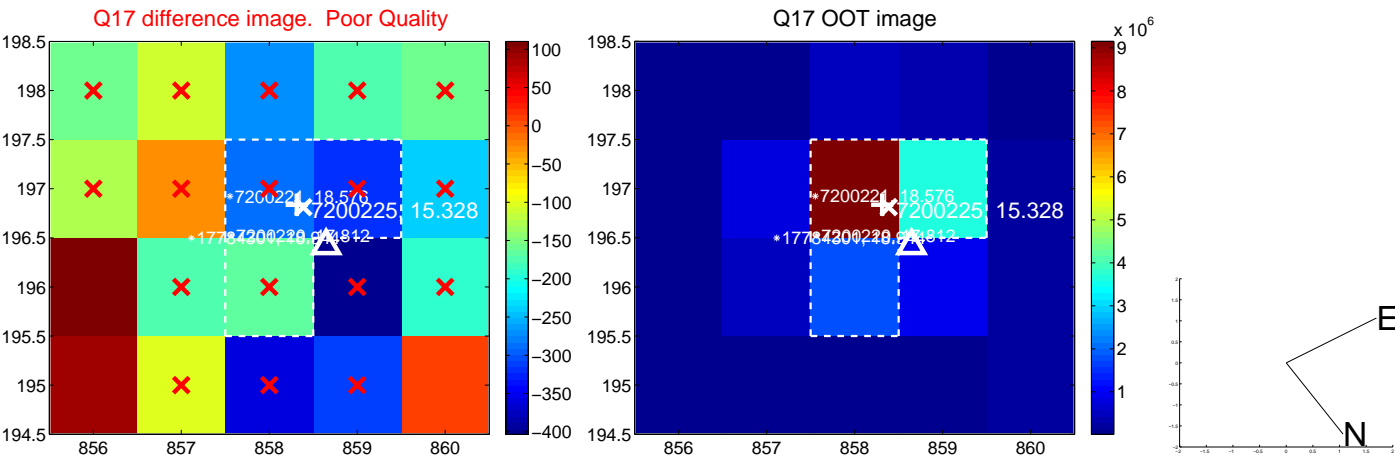
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

