

KIC 007200001

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})
007200001-01	OBS	No	0.566766	131.850710	20.2	4.338	12.0	8.6	1.22	6708	0.57	13015.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007200001-01	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.

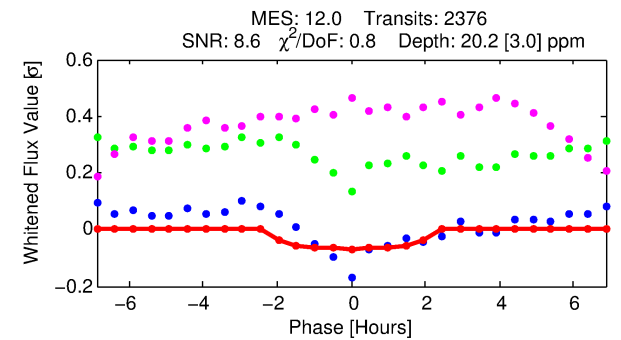
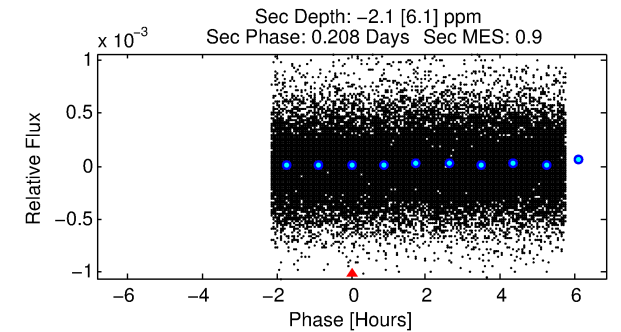
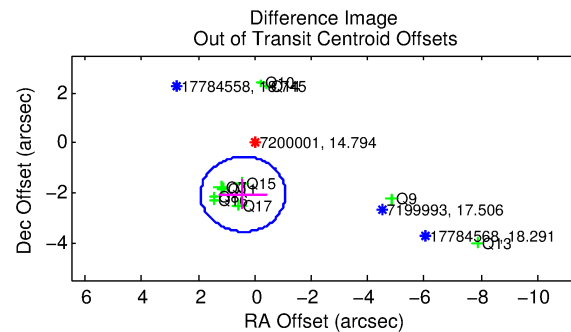
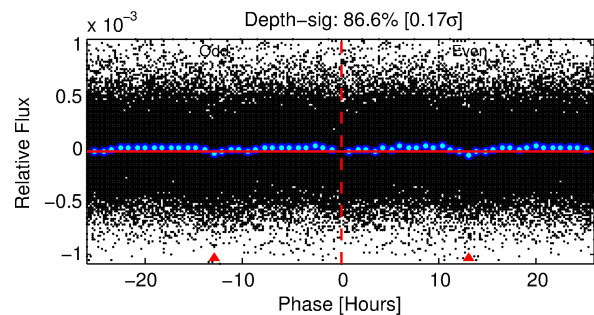
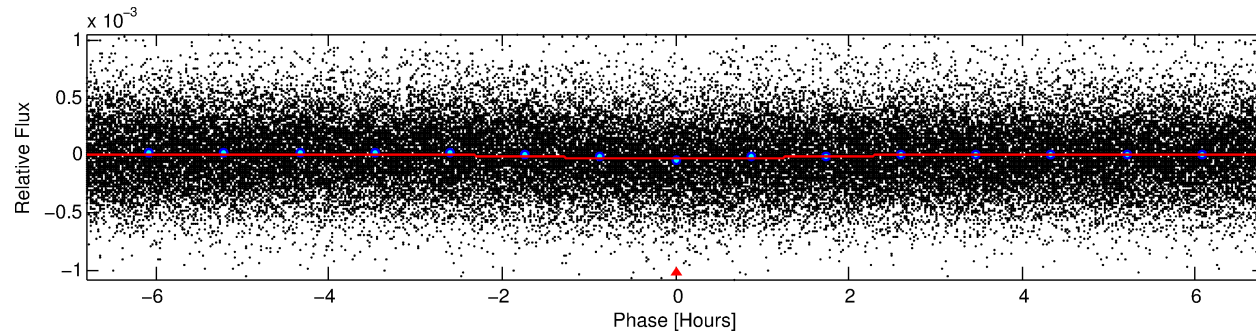
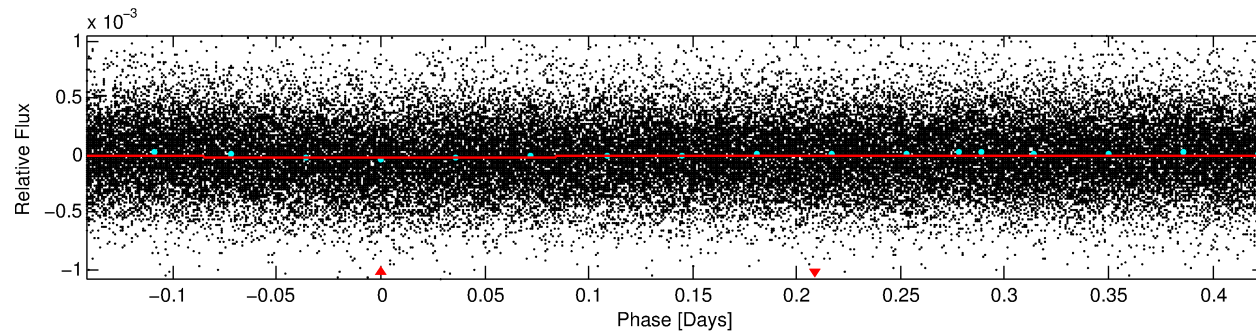
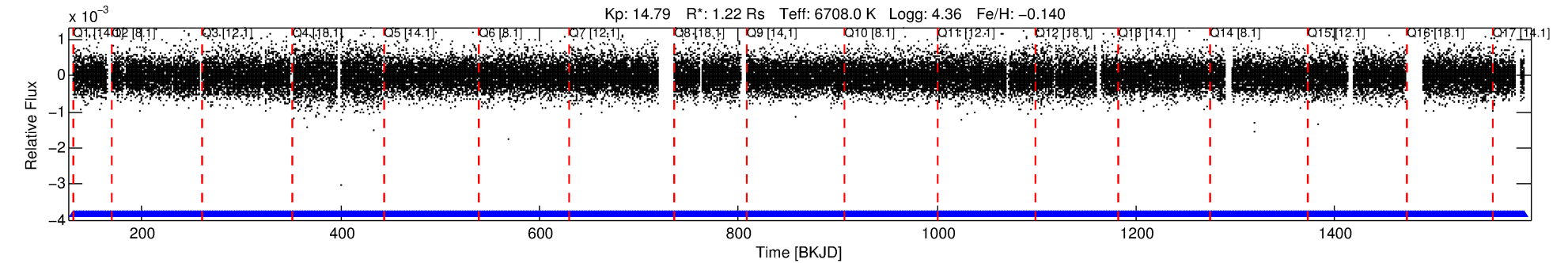
Ephemeris Match Information For 007200001-01

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
007200001-01	7200001	RR-Lyr-pri	7198959	1:1	824.9	132	159	7.86	14.79	31165.00	Direct-PRF	0	3.68	23.21

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: 7200001 Candidate: 1 of 1 Period: 0.567 d



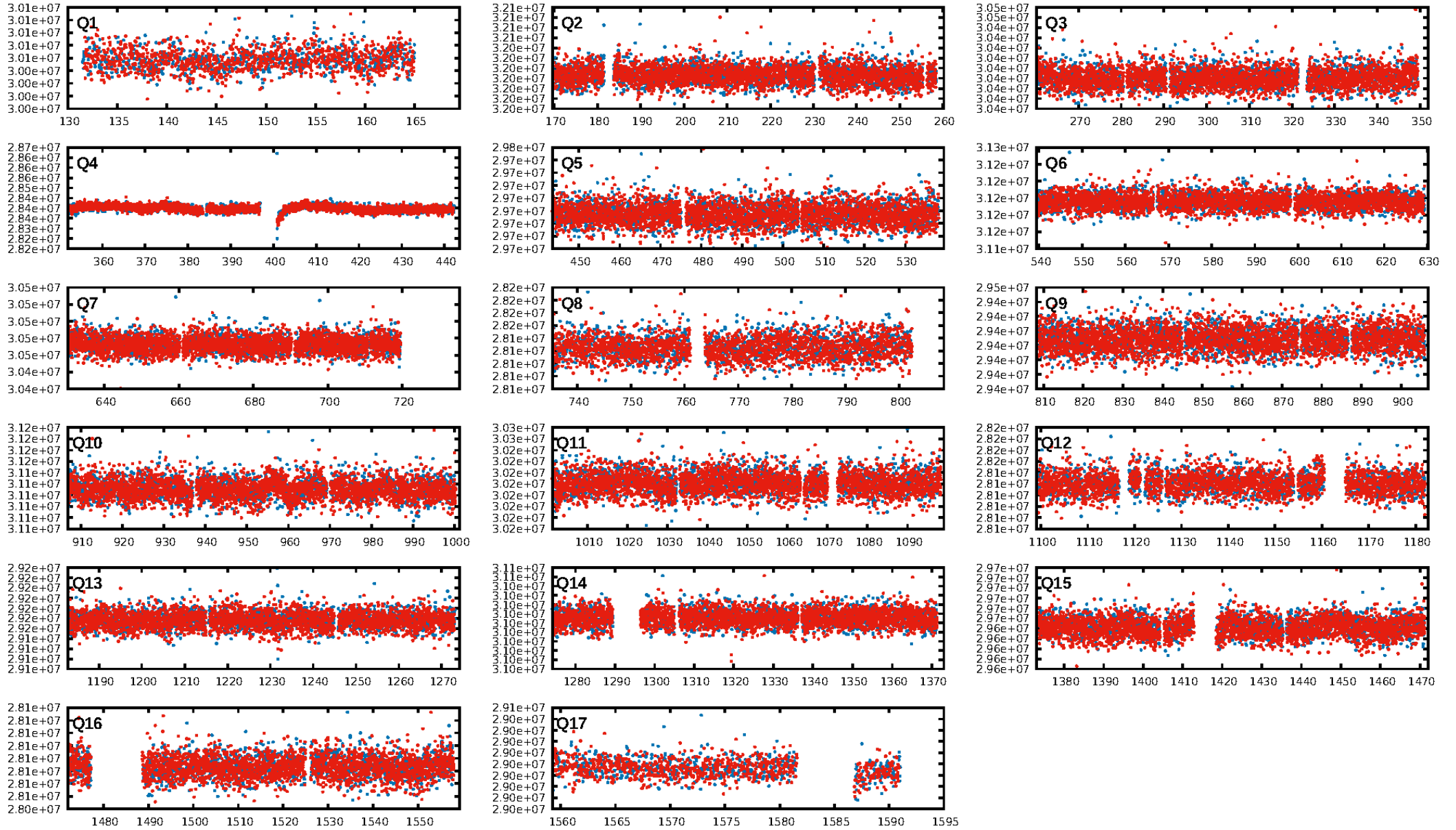
DV Fit Results:

Period = 0.56677 [0.00001] d
Epoch = 131.8507 [0.0056] BKJD
Rp/R* = 0.0043 [0.0040]
a/R* = 1.13 [1.31]
b = 0.58 [6.12]
Seff = 13015.04 [5032.21]
Teq = 2724 [263] K
Rp = 0.57 [0.56] Re
a = 0.0143 [0.0037] AU
Ag = N/A
Teffp = N/A

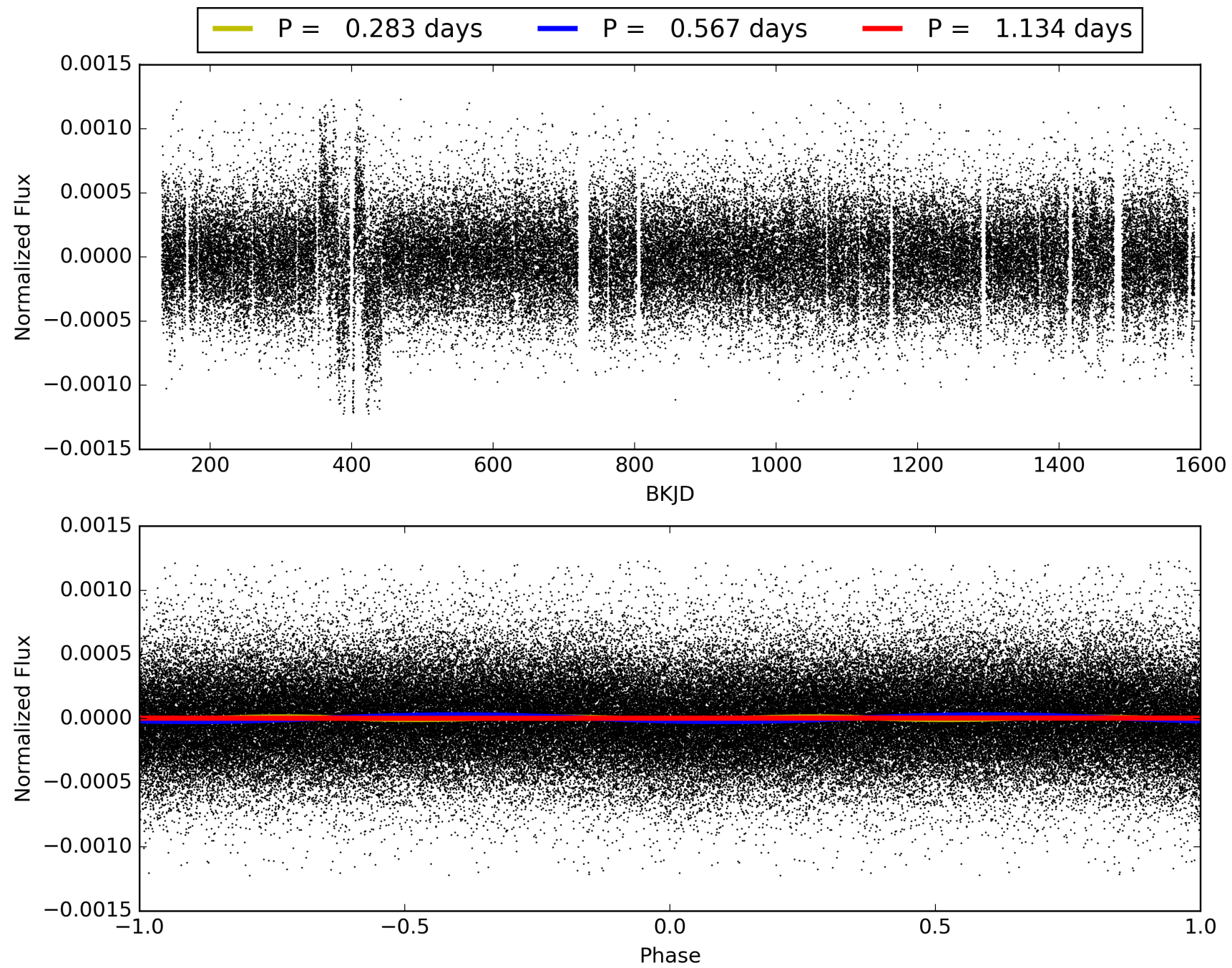
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.31e-39
RollingBand-fgt: 1.00 [2269/2269]
GhostDiagnostic-chr: 0.01211
Centroid-sig: 4.7%
Centroid-so: 2.127 arcsec [1.46 σ]
OotOffset-rm: 2.104 arcsec [4.20 σ]
KicOffset-rm: 2.167 arcsec [3.98 σ]
OotOffset-st: 2/4/2/3 [11]
KicOffset-st: 2/4/2/3 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007200001-01, PDC Light Curves

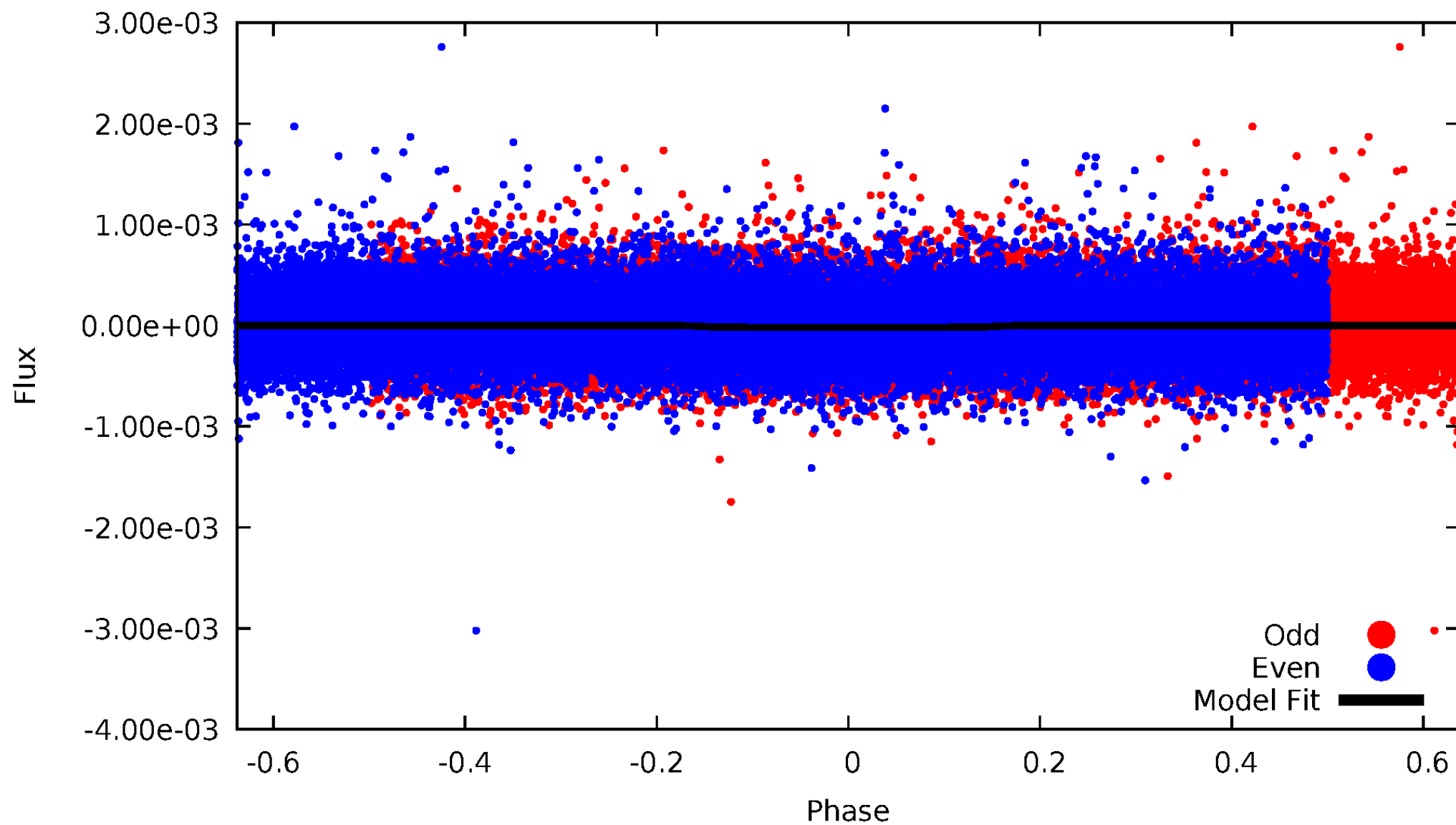


TCE 007200001-01



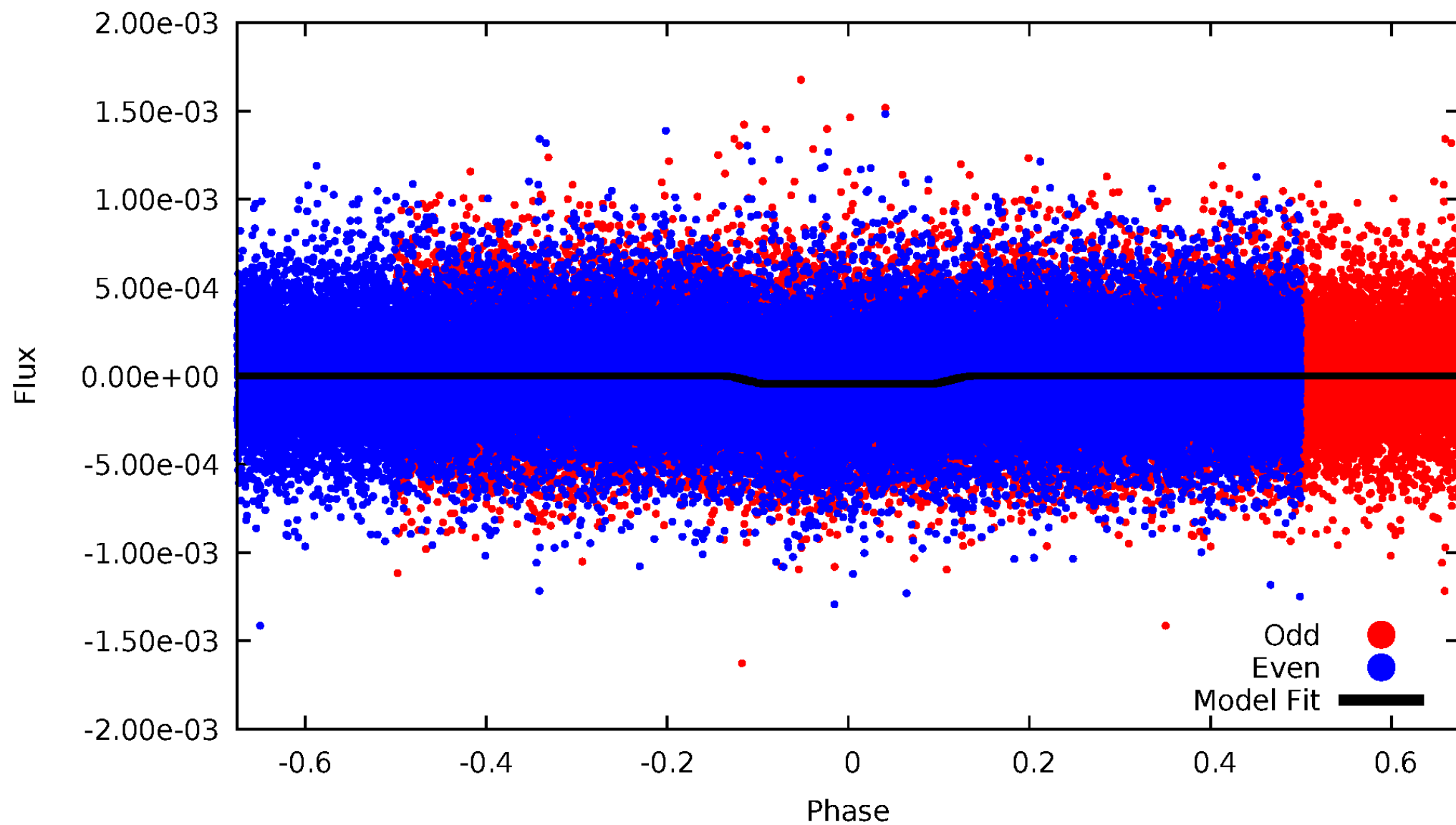
DV Odd/Even

TCE 007200001-01



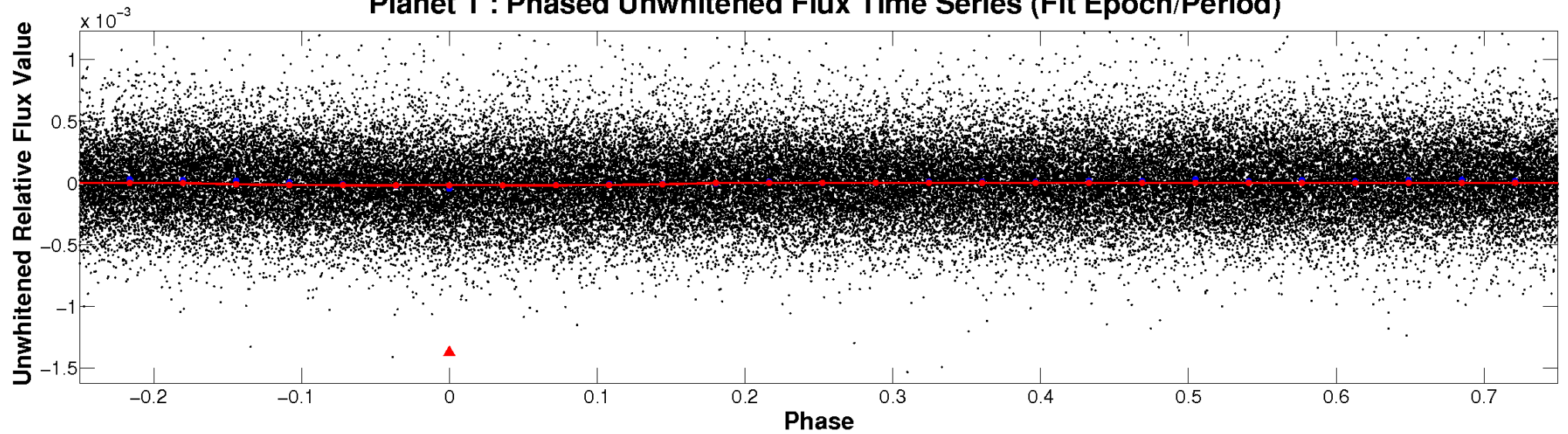
ALT Odd/Even

TCE 007200001-01

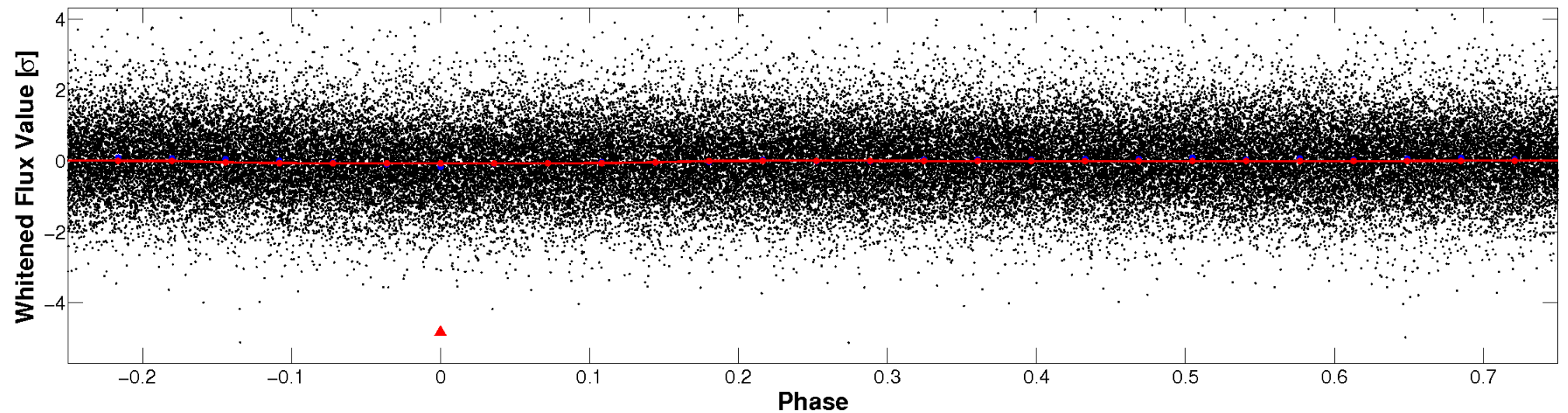


Non-Whitened Vs. Whitened Light Curve

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

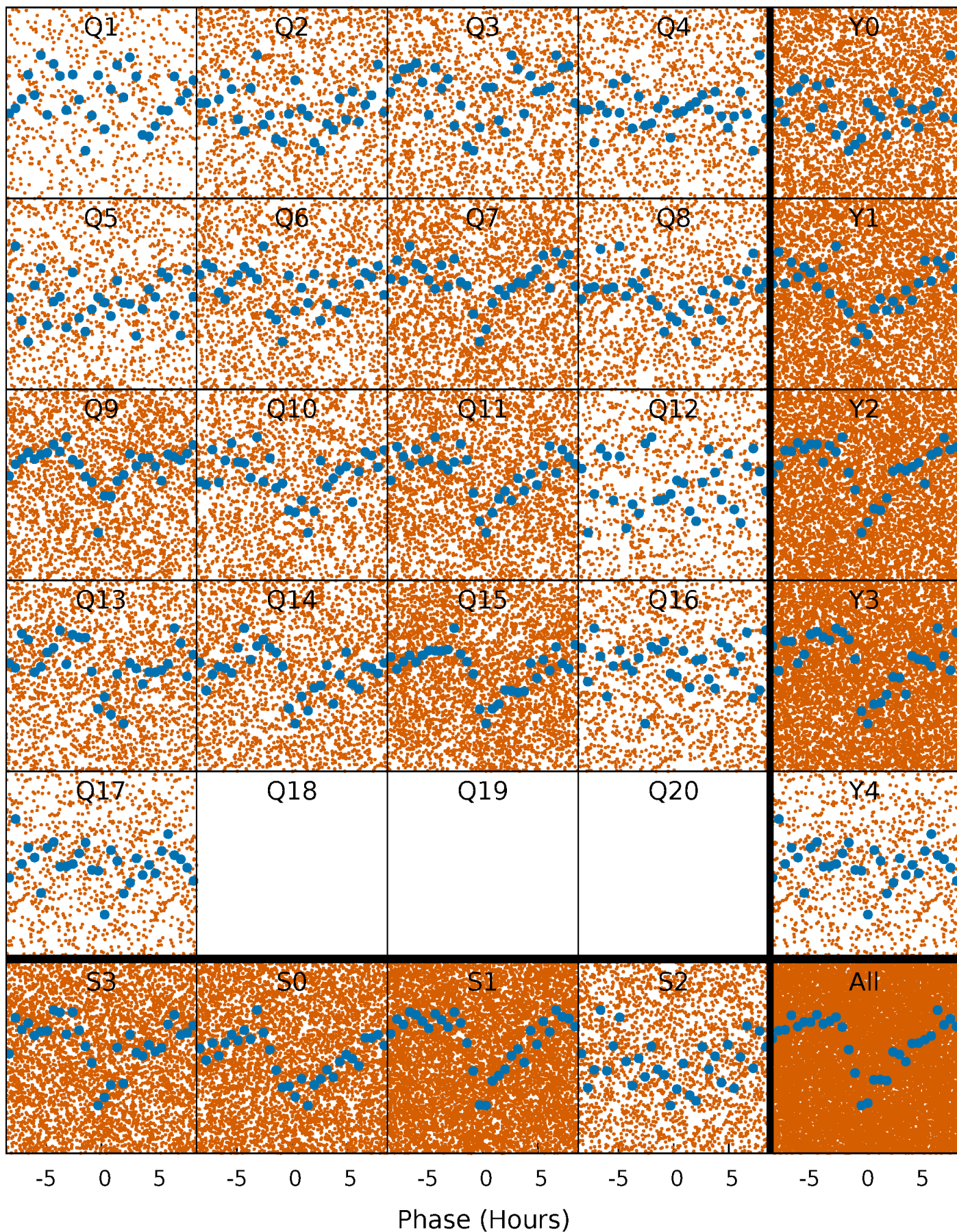


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



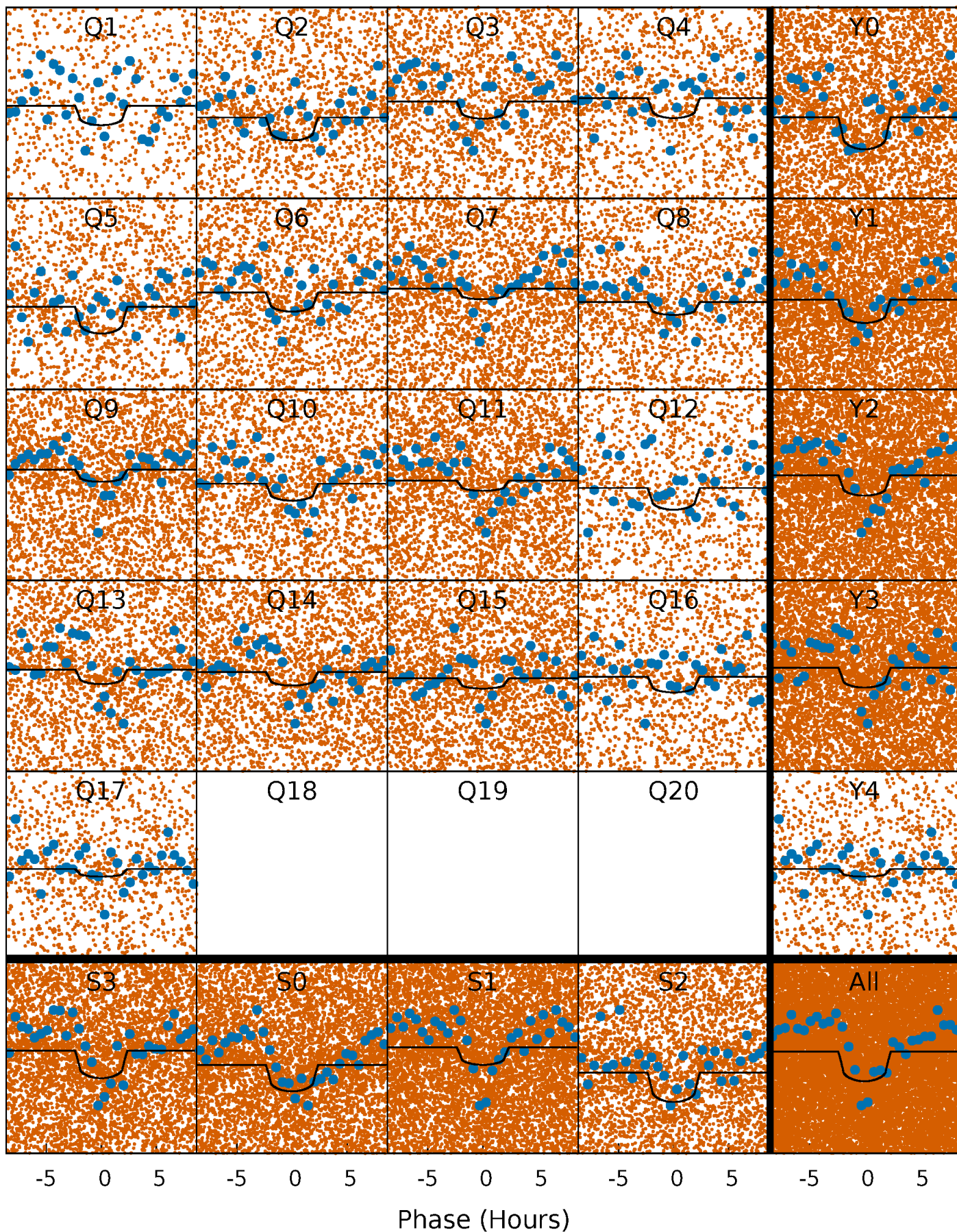
PDC Quarter-Phased Transit Curves

TCE 007200001-01 P= 0.566766 Days $T_0=131.850710$ (BKJD)



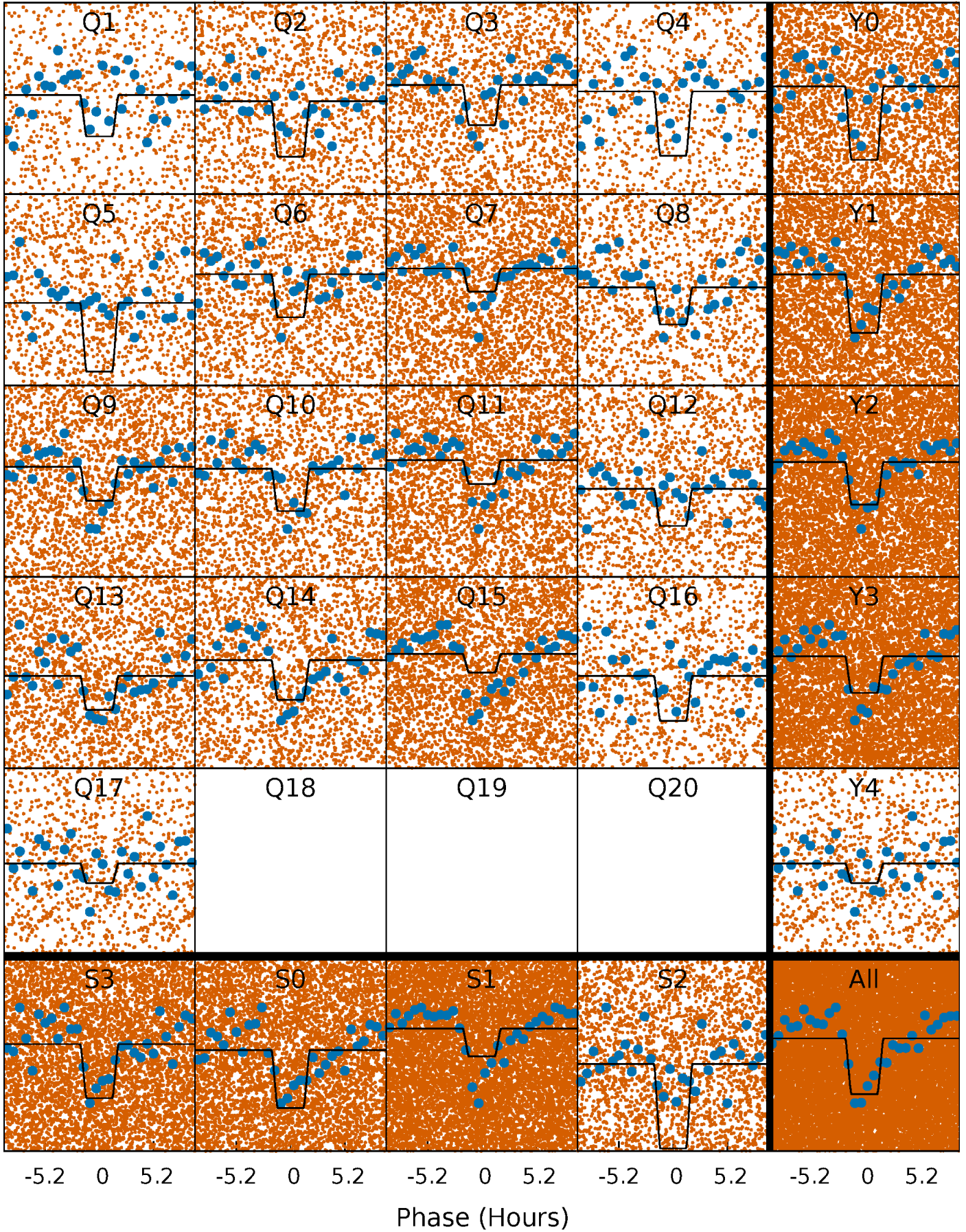
DV Quarter-Phased Transit Curves

TCE 007200001-01 P= 0.566766 Days $T_0=131.850710$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

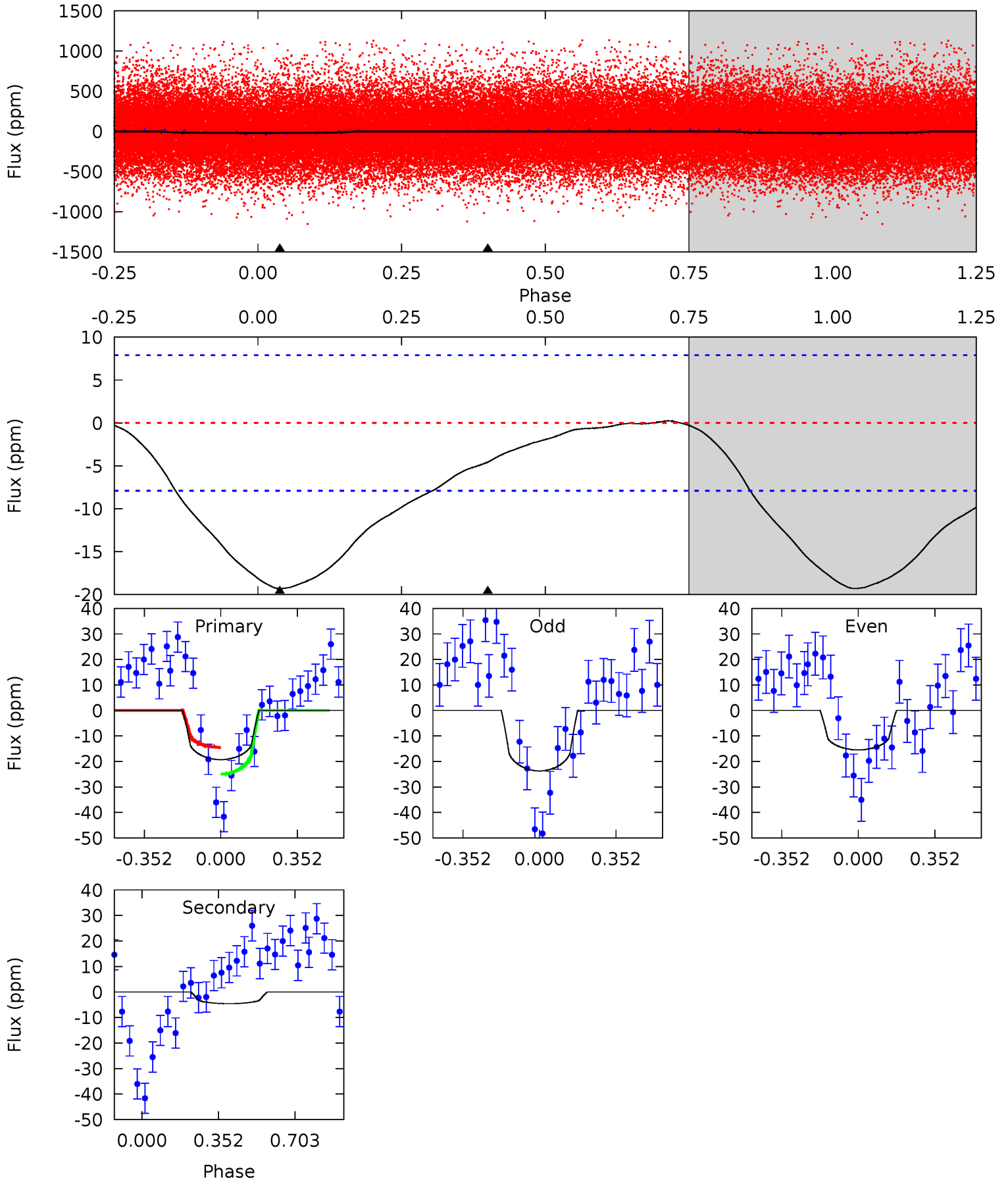
TCE 007200001-01 P= 0.566795 Days $T_0=131.825734$ (BKJD)



DV Model-Shift Uniqueness Test

007200001-01, P = 0.566766 Days, E = 131.283944 Days

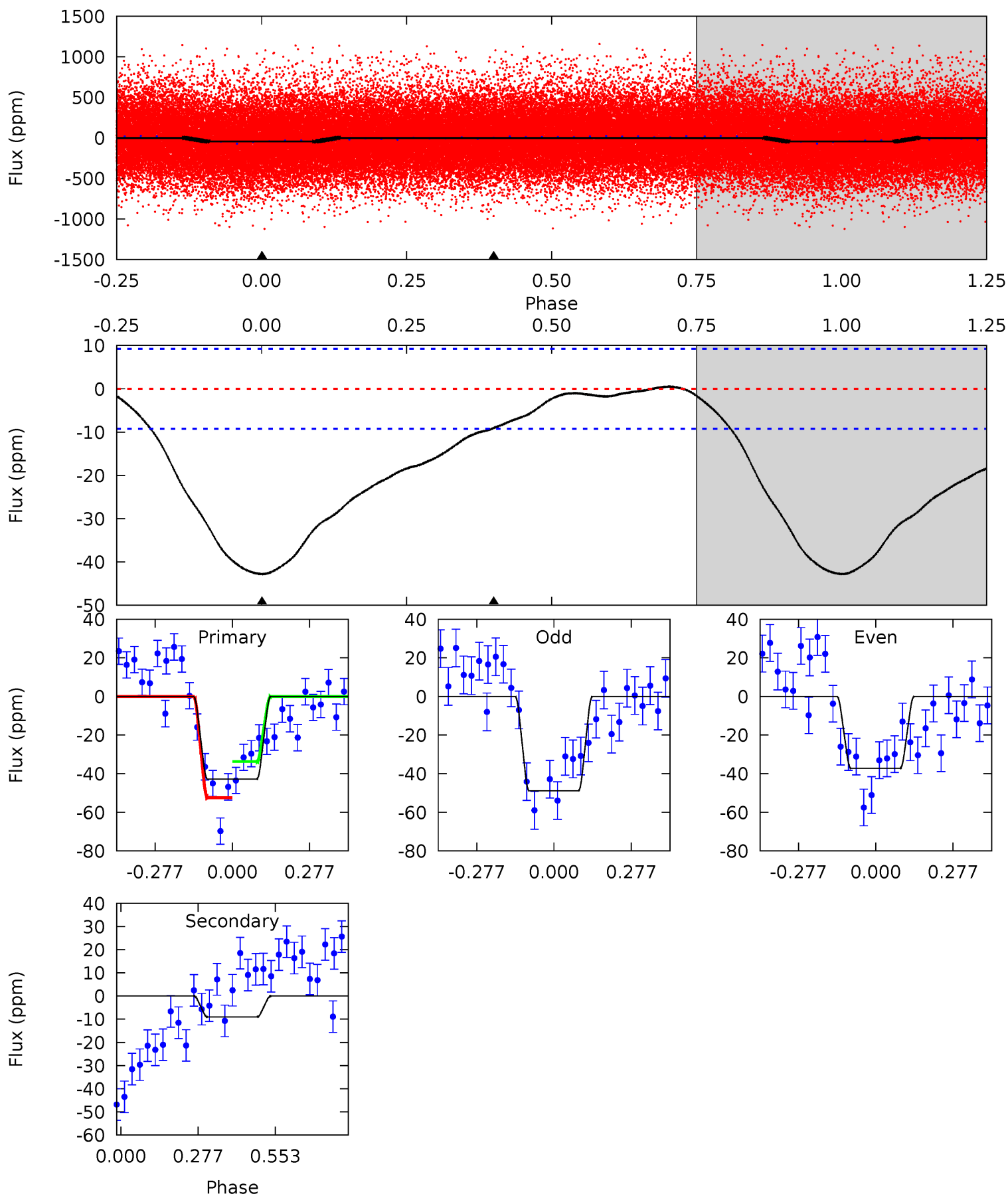
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	2.48	0	0	4.29	0.93	0.15	10.5	10.5	2.48	2.48	2.24	0.91	0.01	2.81



Alt Model-Shift Uniqueness Test

007200001-01, P = 0.566795 Days, E = 131.258939 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.2	4.27	0	0	4.35	1.09	0.26	20.2	20.2	4.27	4.27	2.73	0.97	0.01	4.41



Stellar Parameters For KIC 007200001

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6708^{+181}_{-241}	$4.357^{+0.062}_{-0.188}$	$-0.140^{+0.250}_{-0.350}$	$1.215^{+0.389}_{-0.130}$	$1.236^{+0.177}_{-0.177}$	$0.971^{+0.266}_{-0.502}$
	+3%/-4%	+1%/-4%	+179%/-250%	+32%/-11%	+14%/-14%	+27%/-52%
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 007200001-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 2	$0.66^{+0.56}_{-0.41}$	3866^{+260}_{-203}	4218^{+2898}_{-6529}	$1.058^{+6.604}_{-0.769}$
Alt.	-9 ± 2	$0.96^{+0.59}_{-0.53}$	3867^{+268}_{-195}	4224^{+2166}_{-1159}	$1.070^{+4.190}_{-0.672}$

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

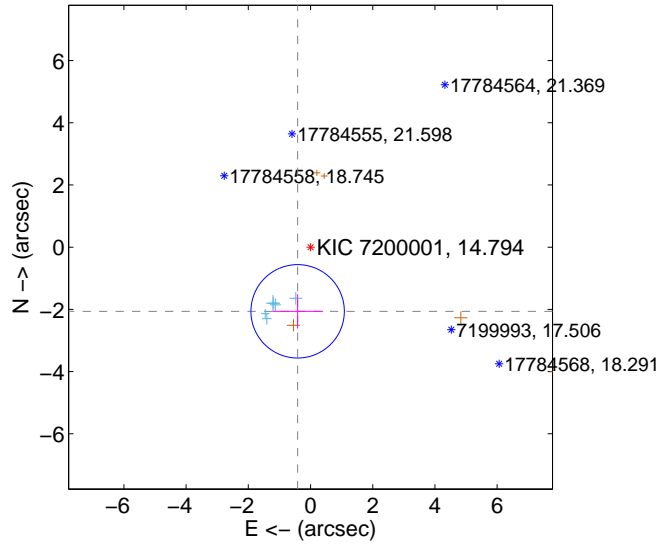
Supplemental centroid analysis for 007200001-01. Kepler magnitude: 14.79. Transit SNR 8.57

There are 6 quarters with good PRF difference image offsets

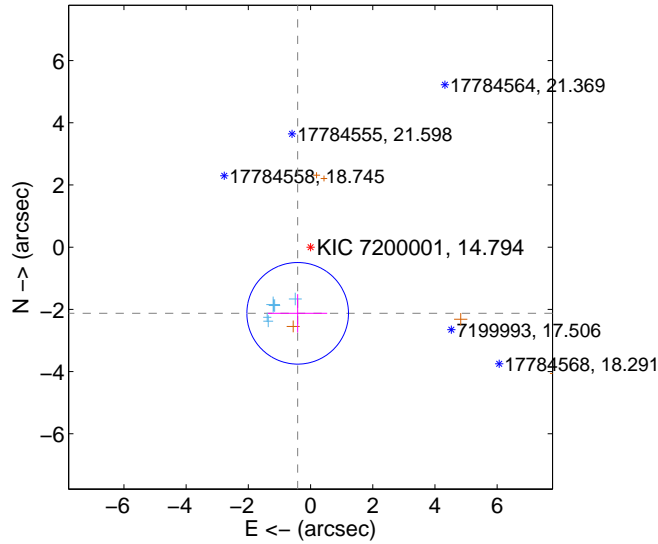
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.104 \pm 0.501	4.20	0.415 \pm 0.815	-2.063 \pm 0.553
PRF-fit source offset from KIC position	2.167 \pm 0.545	3.98	0.414 \pm 0.951	-2.127 \pm 0.615
photometric centroid source offset	2.13 \pm 1.45	1.46	0.88 \pm 1.65	-1.93 \pm 1.41

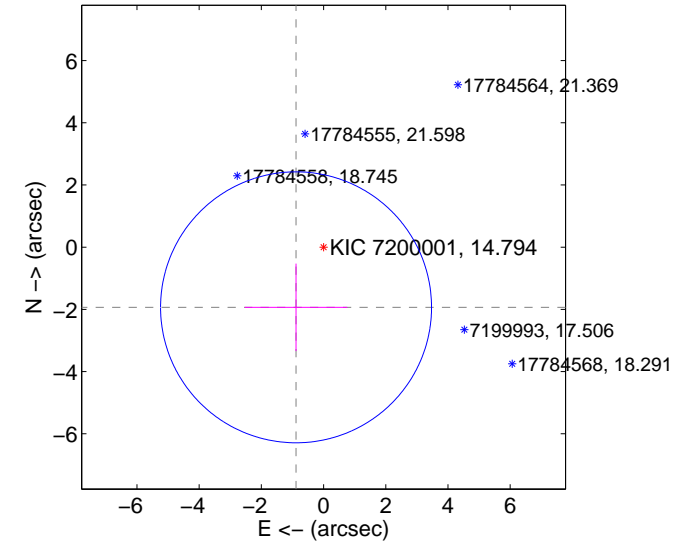
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

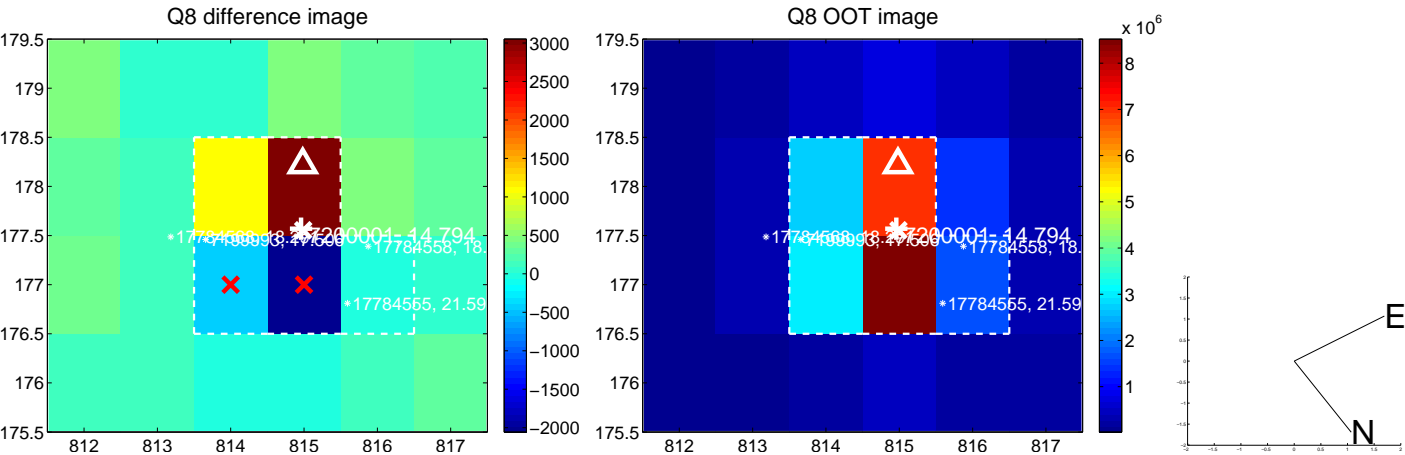
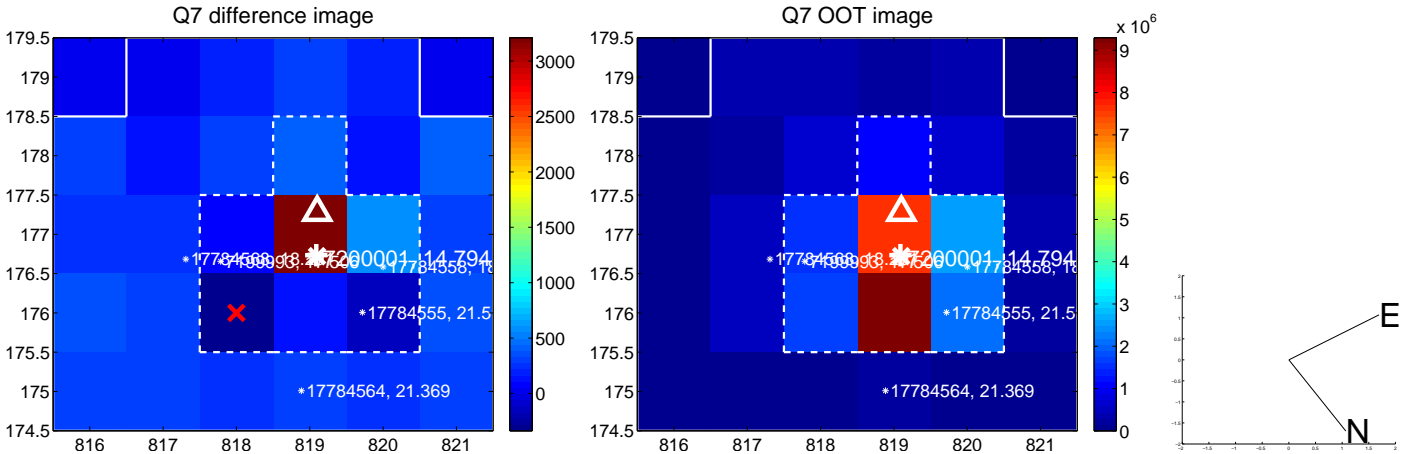
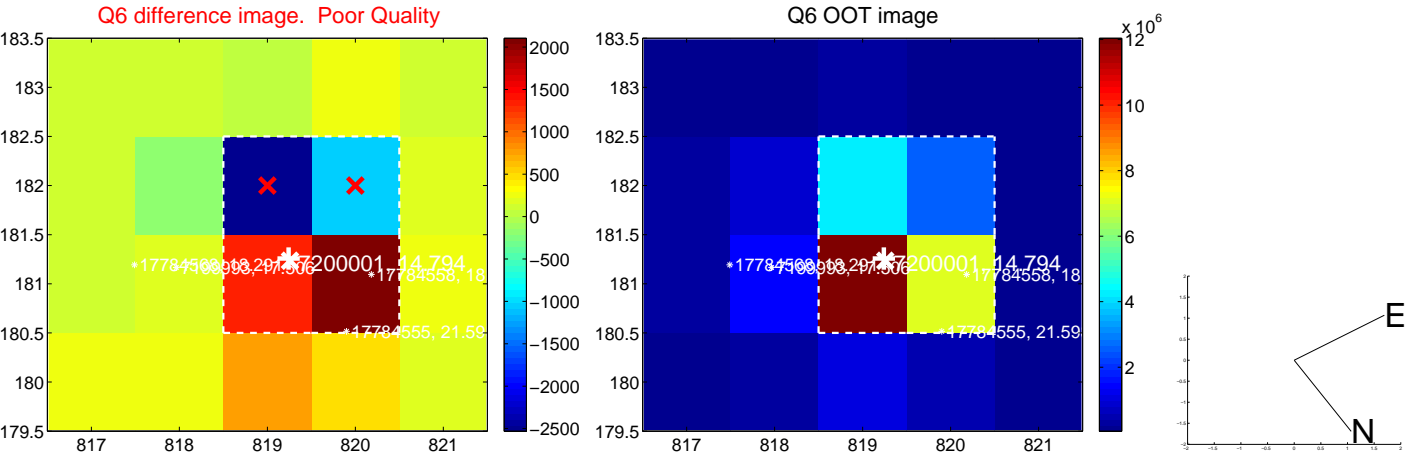
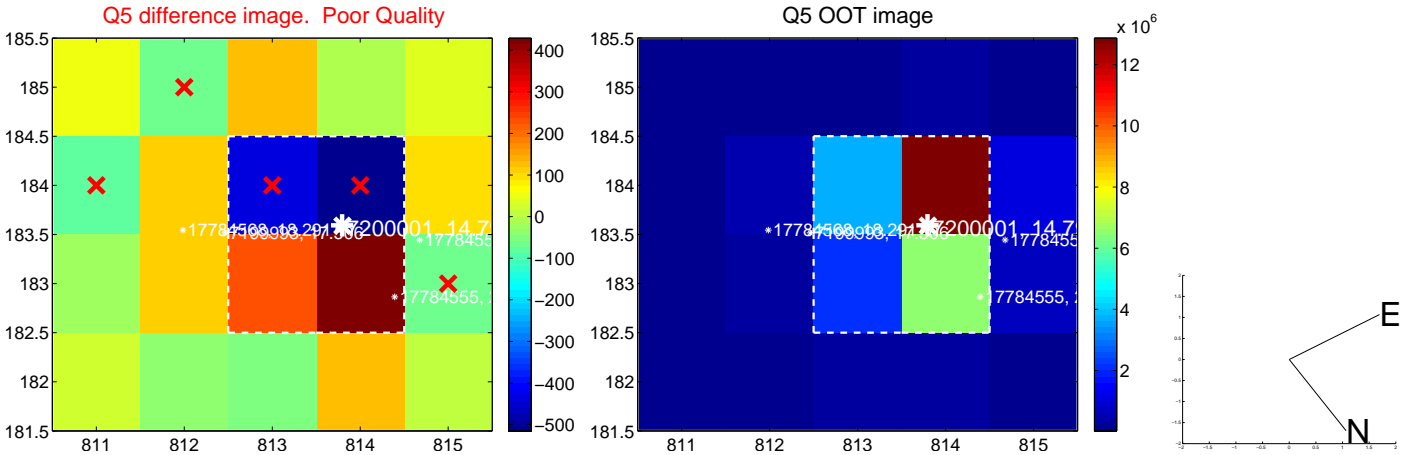


offset from photometric centroids

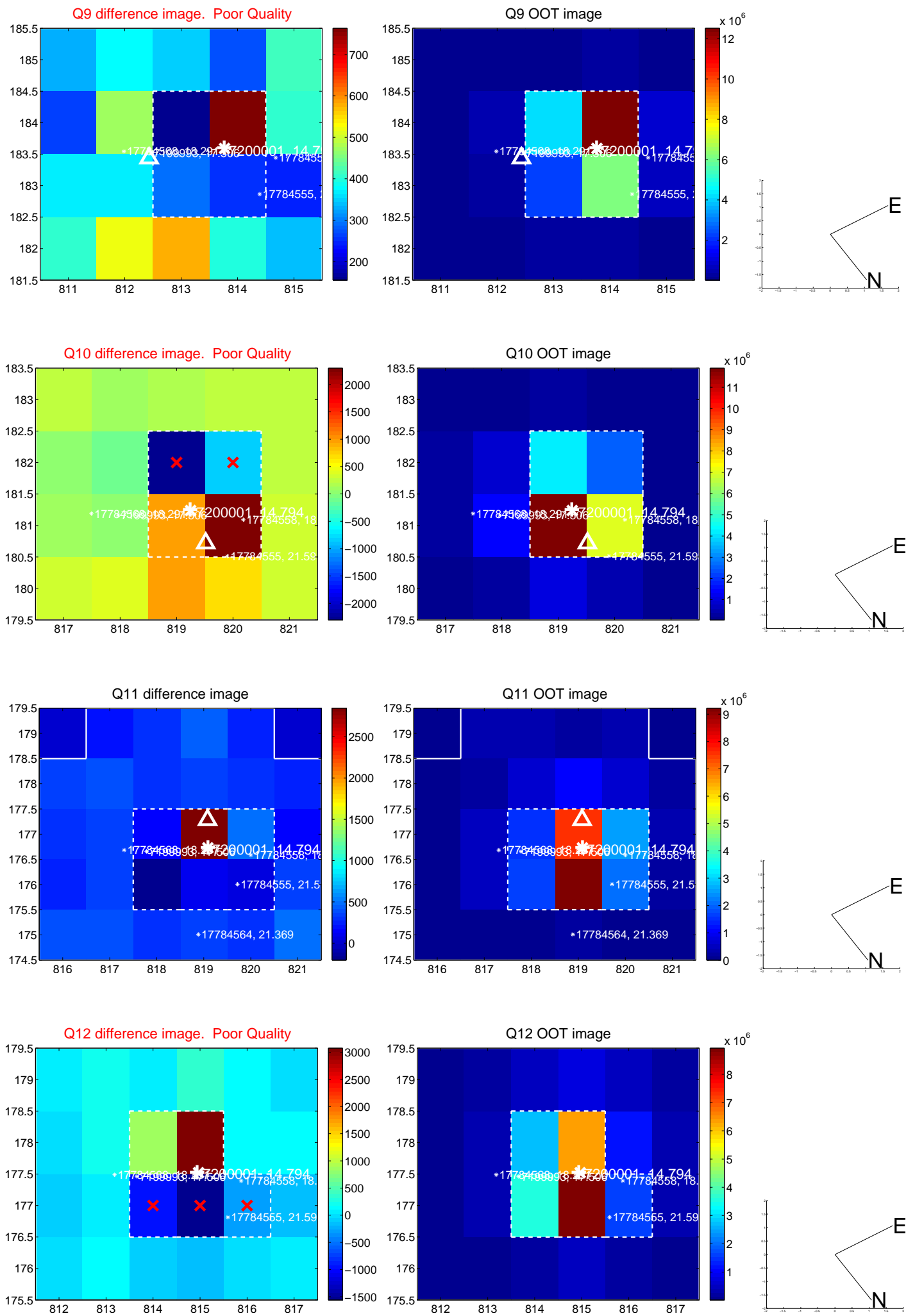


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

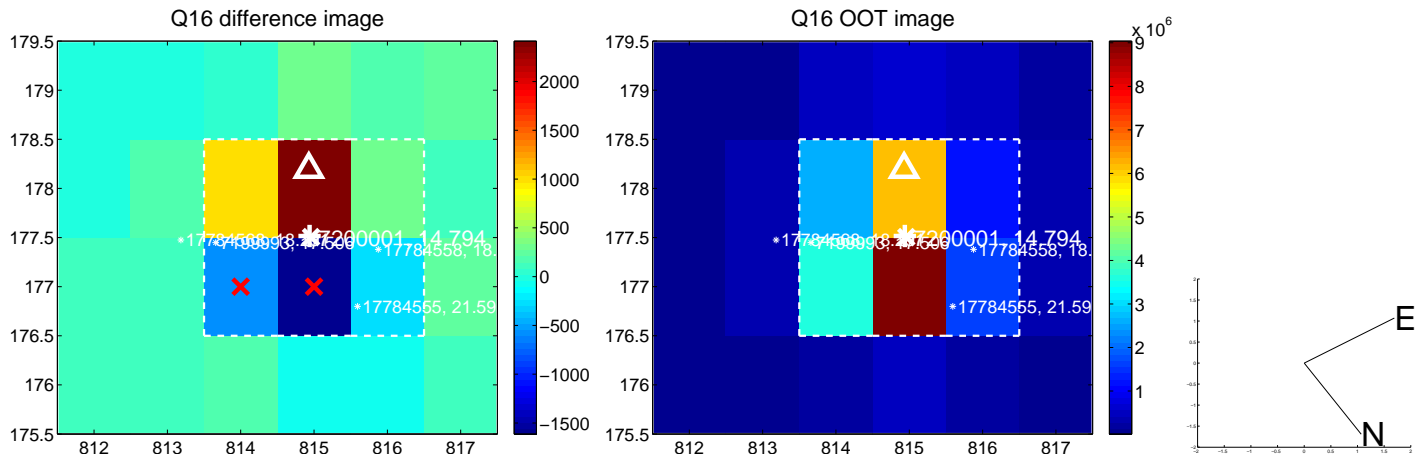
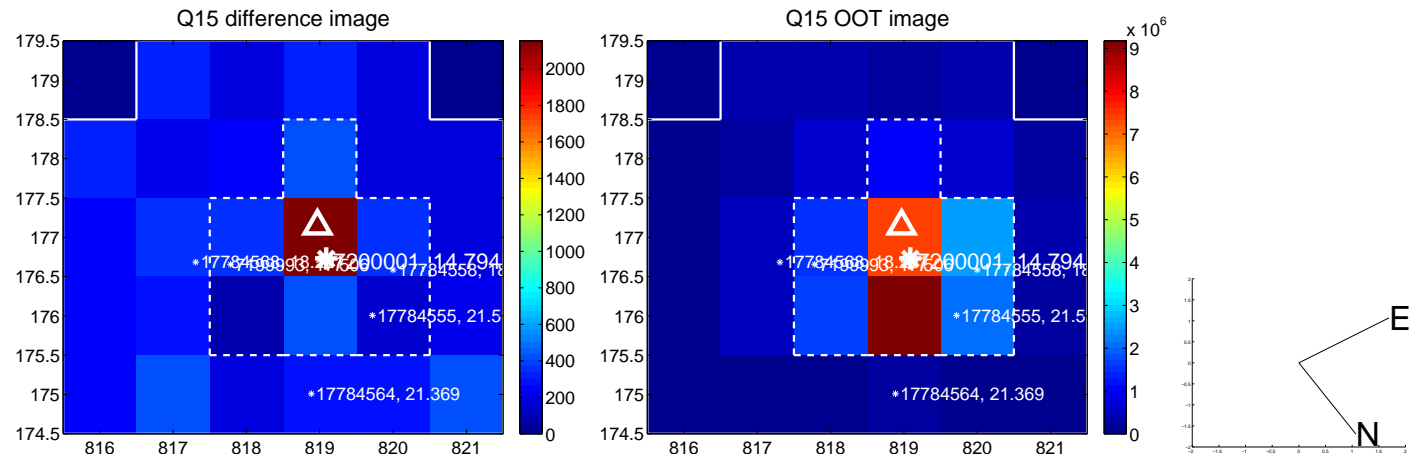
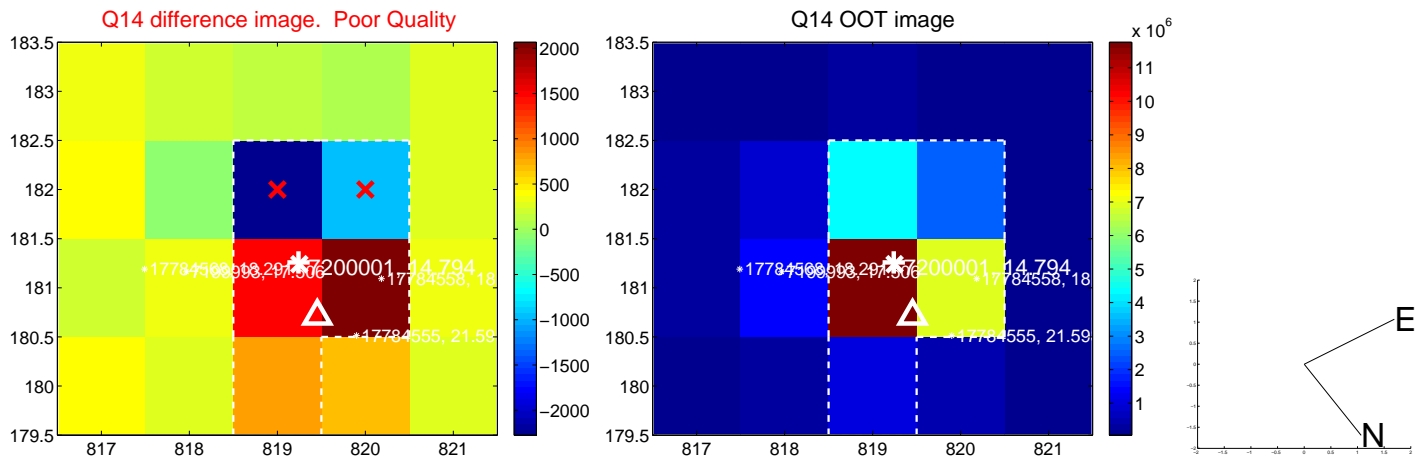
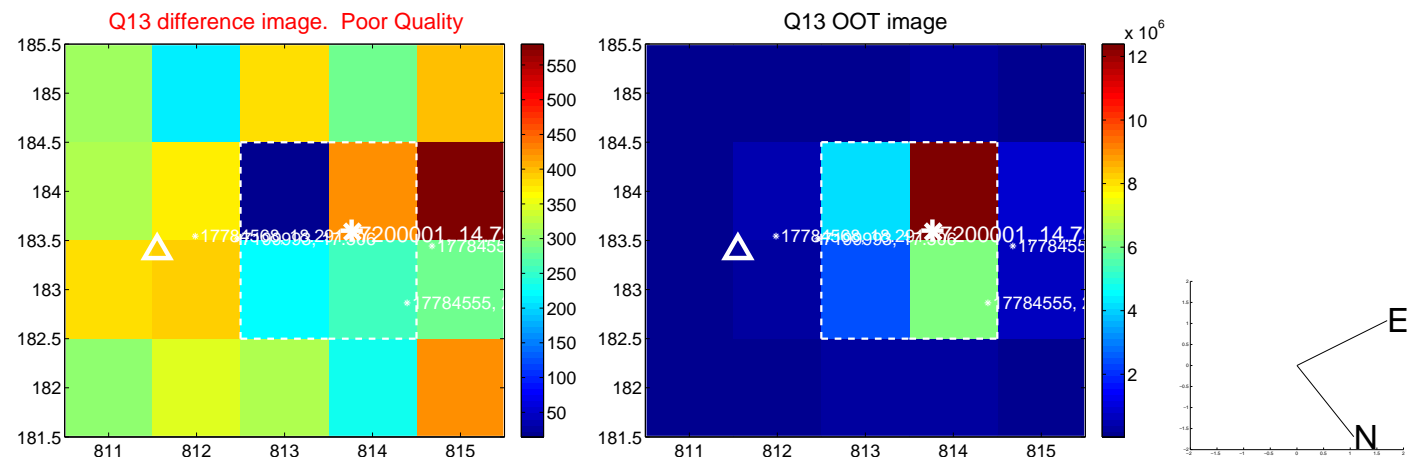
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

