

KIC 007200156

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})
007200156-01	OBS	No	0.566780	131.824995	21.9	2.885	8.1	7.8	0.95	5776	0.54	4786.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007200156-01	OBS	FP	0.00	1	0	0	1	LPP_DV—MOD_NONUNIQ_ALT—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.

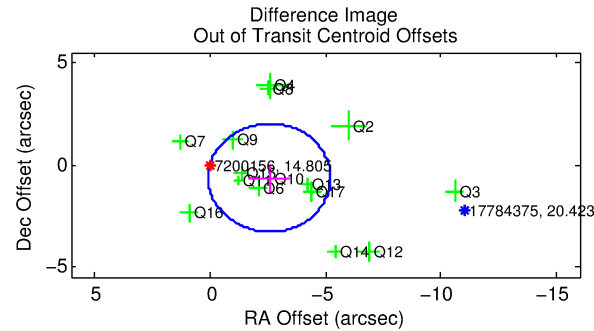
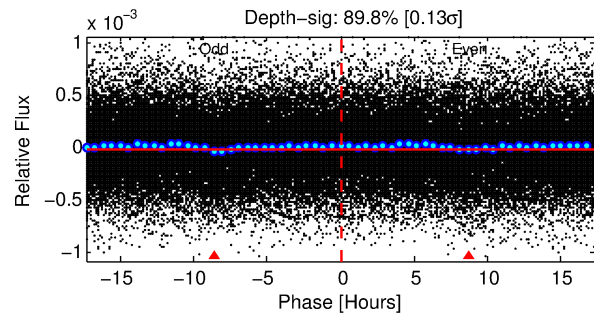
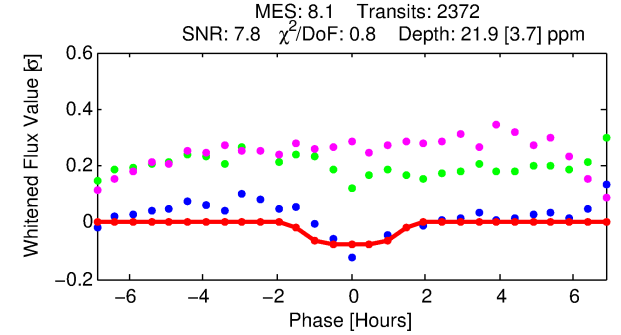
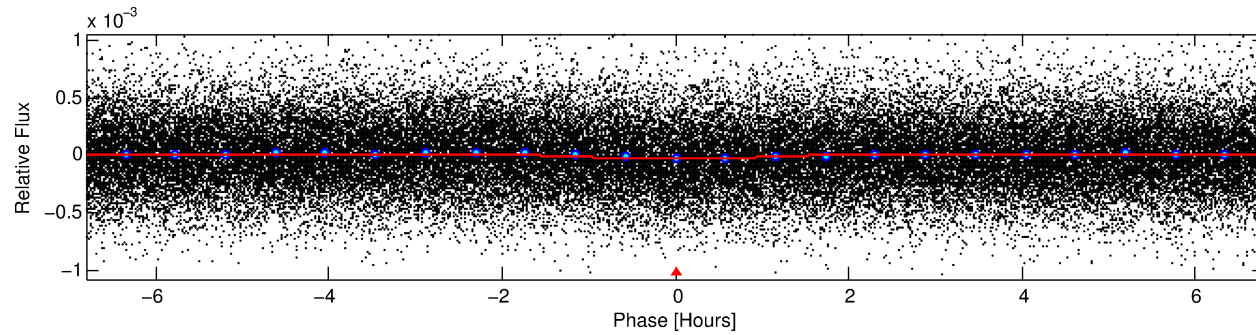
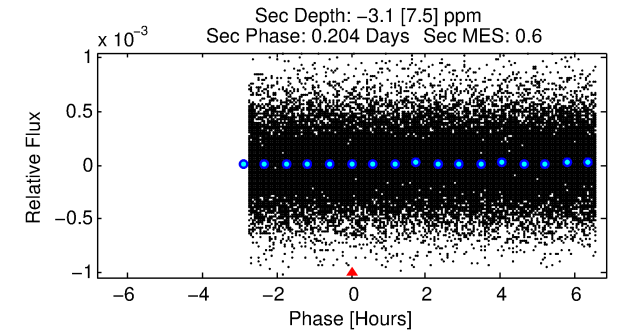
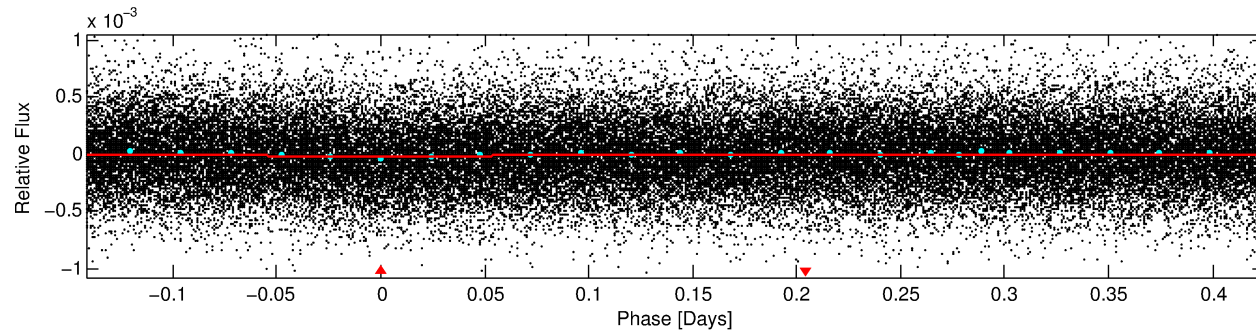
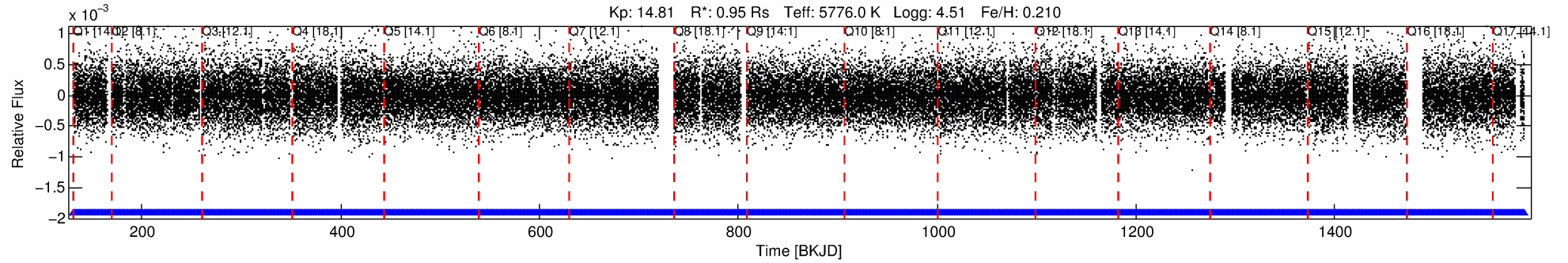
Ephemeris Match Information For 007200156-01

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
007200156-01	7200156	RR-Lyr-pri	7198959	1:1	974.0	167	178	7.86	14.80	28332.00	Direct-PRF	0	3.66	18.94

Notes: P₁:P₂ 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. 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 $\sigma_P < 5.0$ 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: 7200156 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56678 [0.00001] d
Epoch = 131.8250 [0.0048] BKJD
Rp/R* = 0.0052 [0.0051]
a/R* = 1.14 [1.25]
b = 0.91 [0.90]
Seff = 4786.30 [1930.86]
Teff = 2121 [214] K
Rp = 0.54 [0.55] Re
a = 0.0137 [0.0035] AU
Ag = N/A
Teffp = N/A

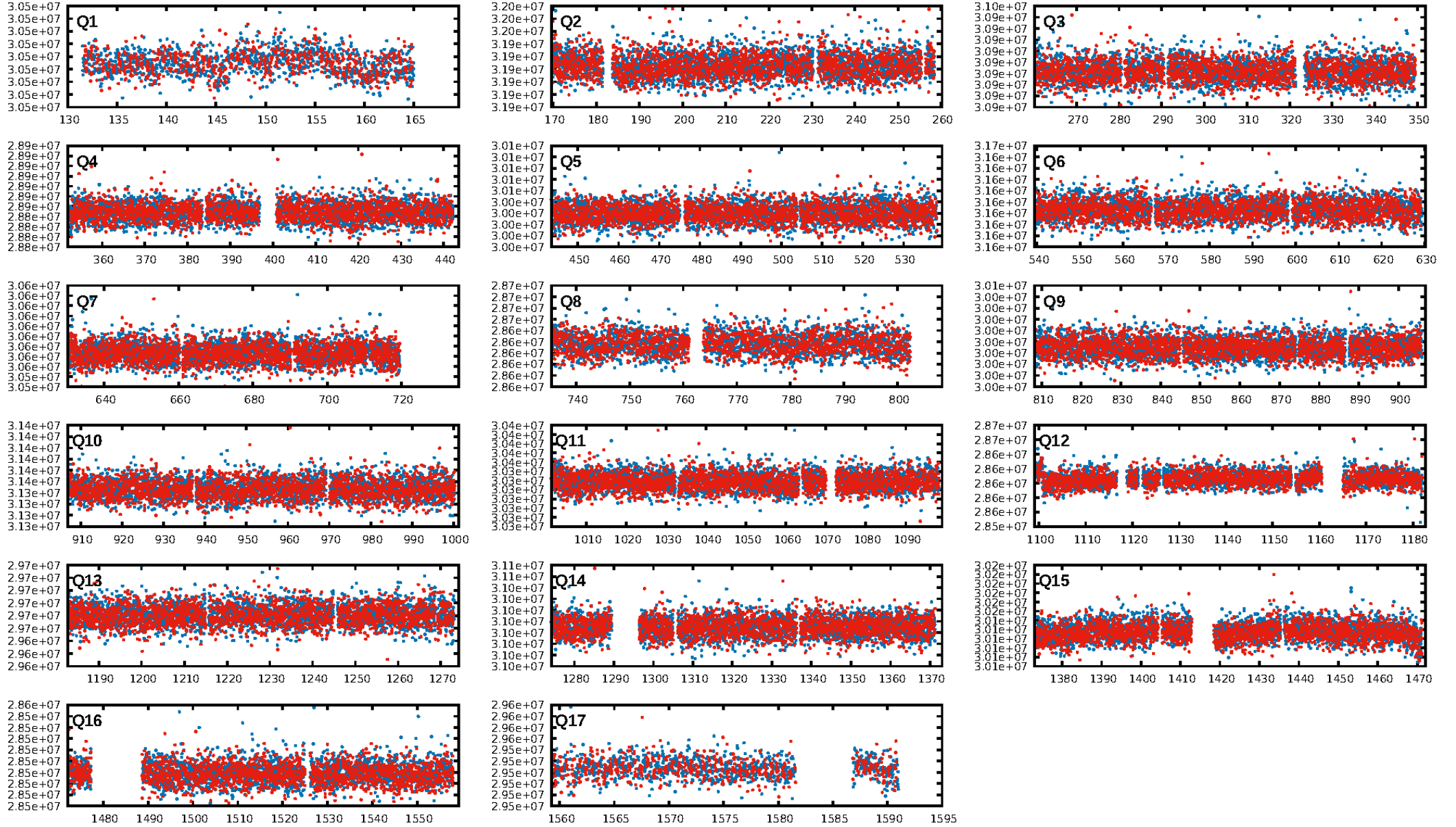
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.44e-15
RollingBand-fgt: 1.00 [2266/2266]
GhostDiagnostic-chr: 0.4701
Centroid-sig: 28.2%
Centroid-so: 1.536 arcsec [0.90σ]
OotOffset-rm: 2.657 arcsec [3.01σ]
KicOffset-rm: 2.856 arcsec [3.76σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.07 [1/15]
DiffImageOverlap-fno: 1.00 [17/17]

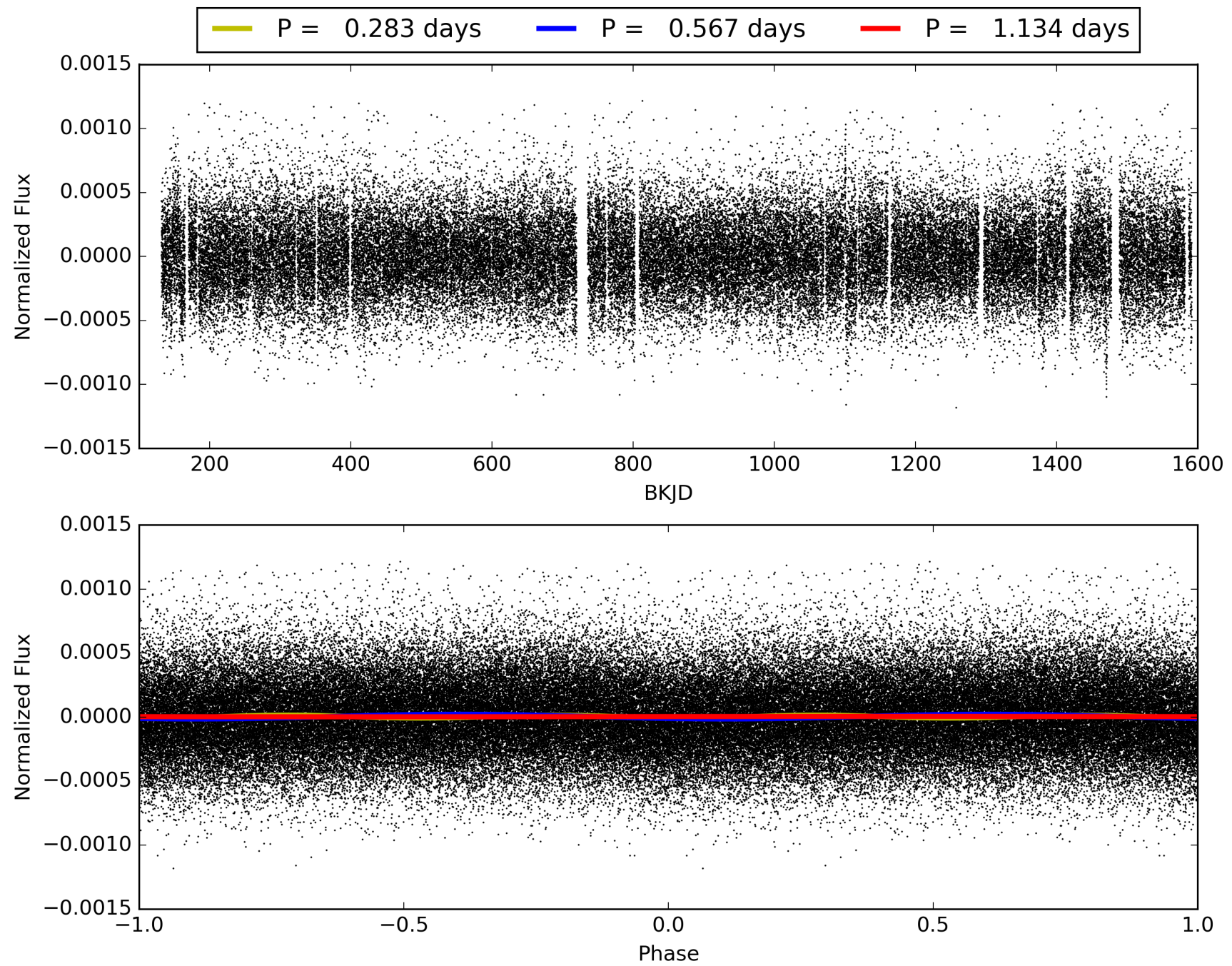
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:23:28 Z

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

TCE 007200156-01, PDC Light Curves

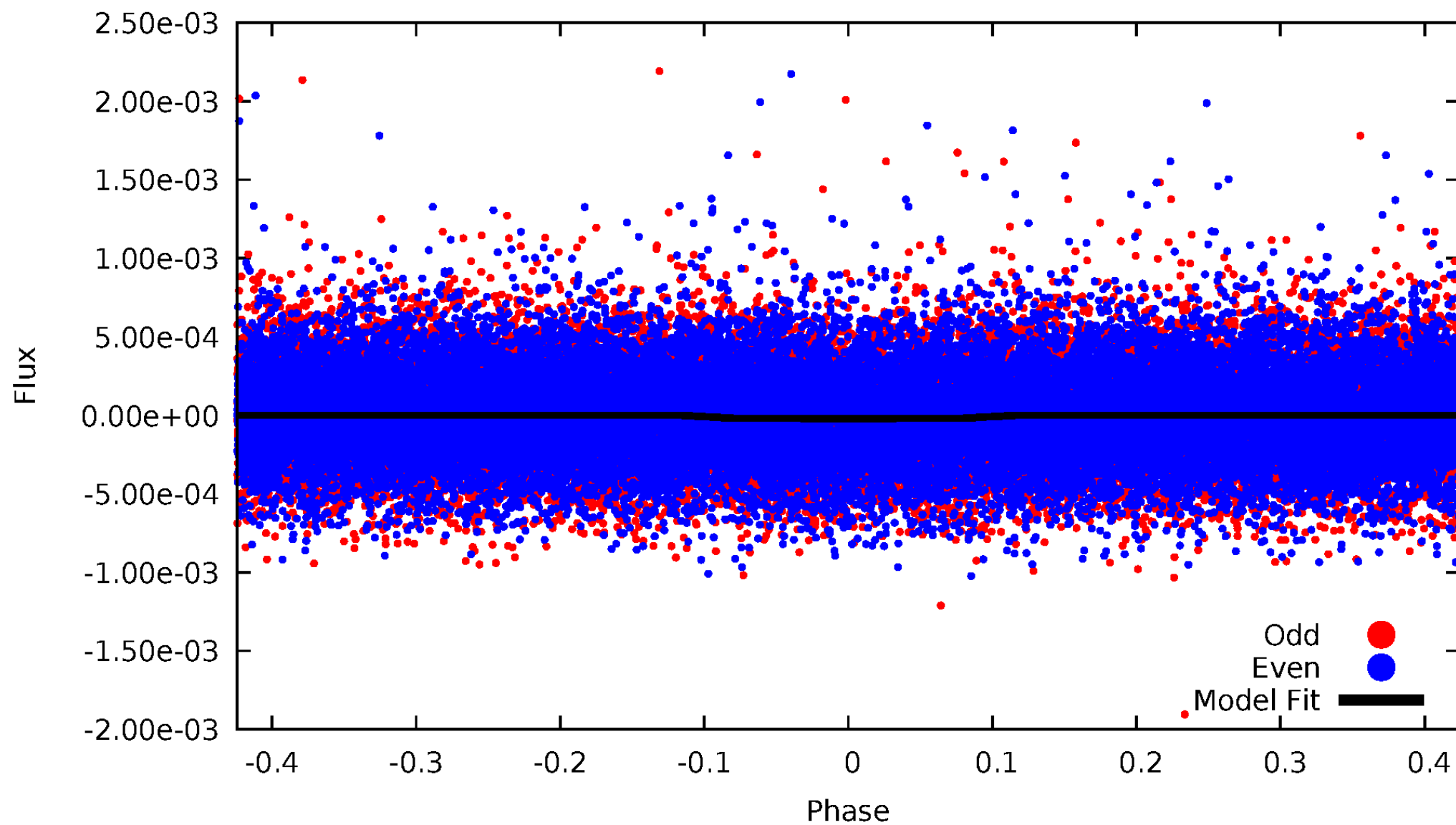


TCE 007200156-01



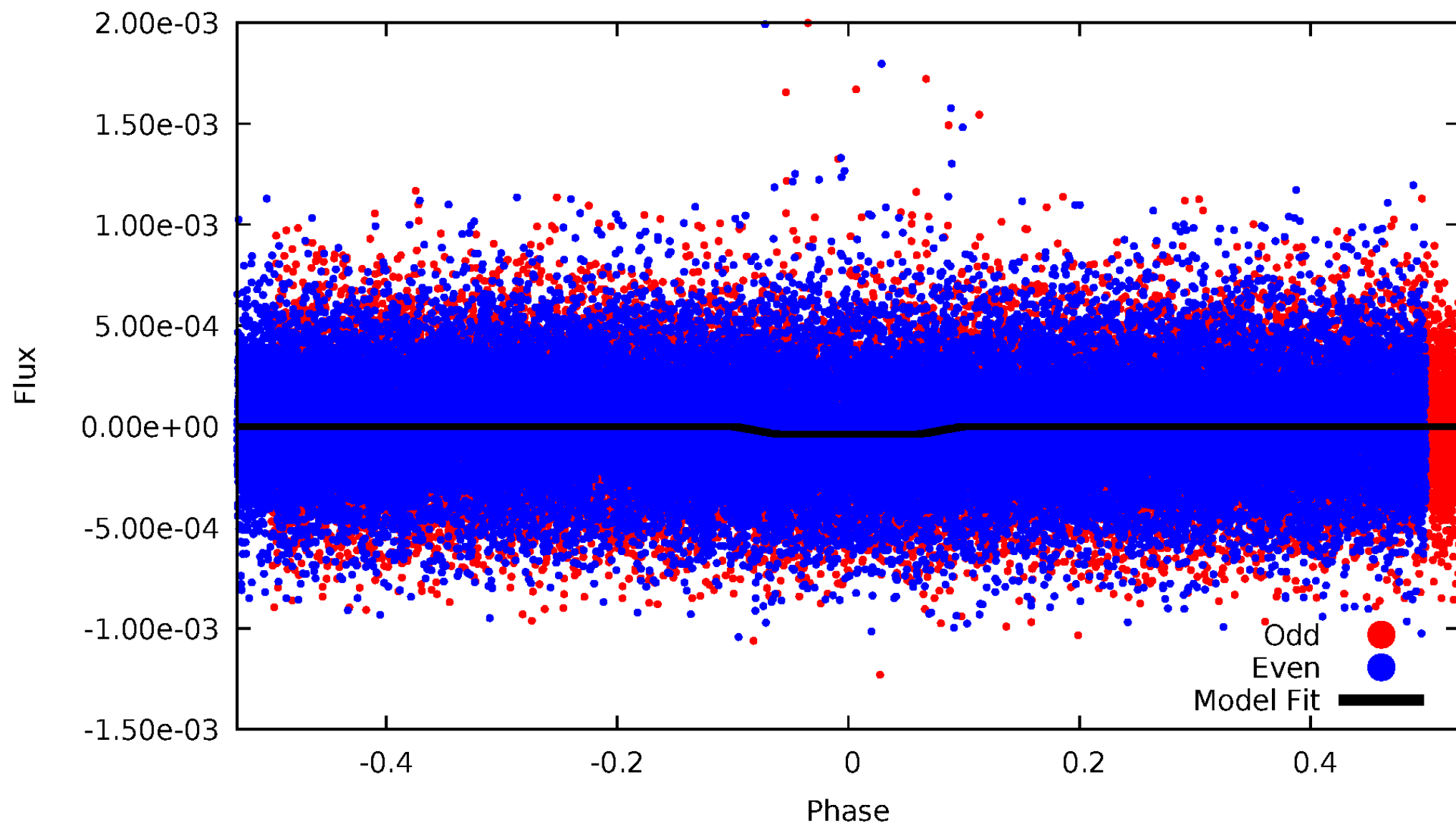
DV Odd/Even

TCE 007200156-01



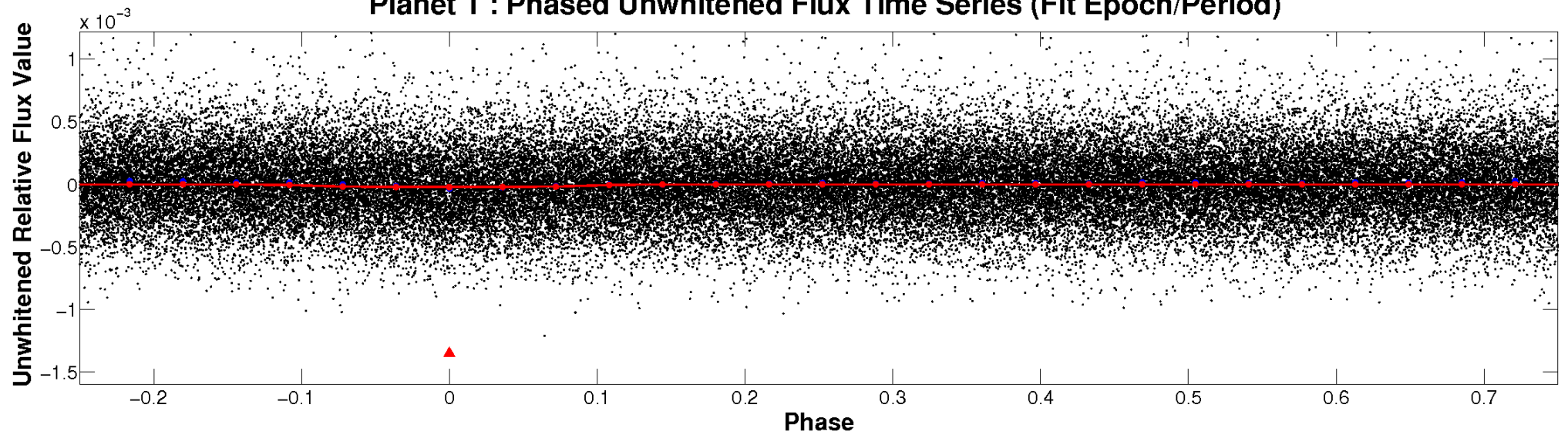
ALT Odd/Even

TCE 007200156-01

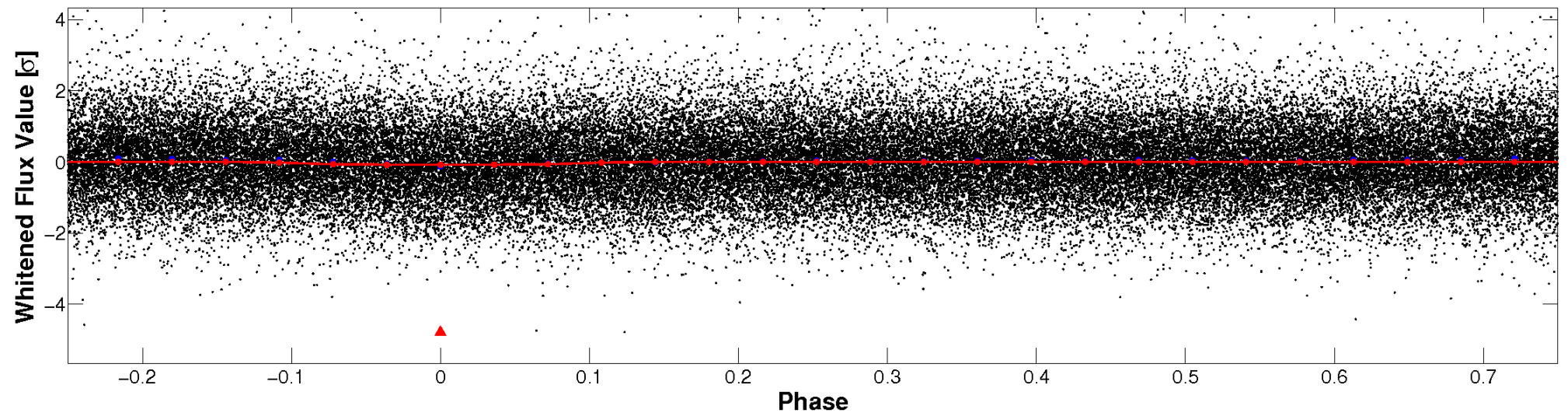


Non-Whitened Vs. Whitened Light Curve

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

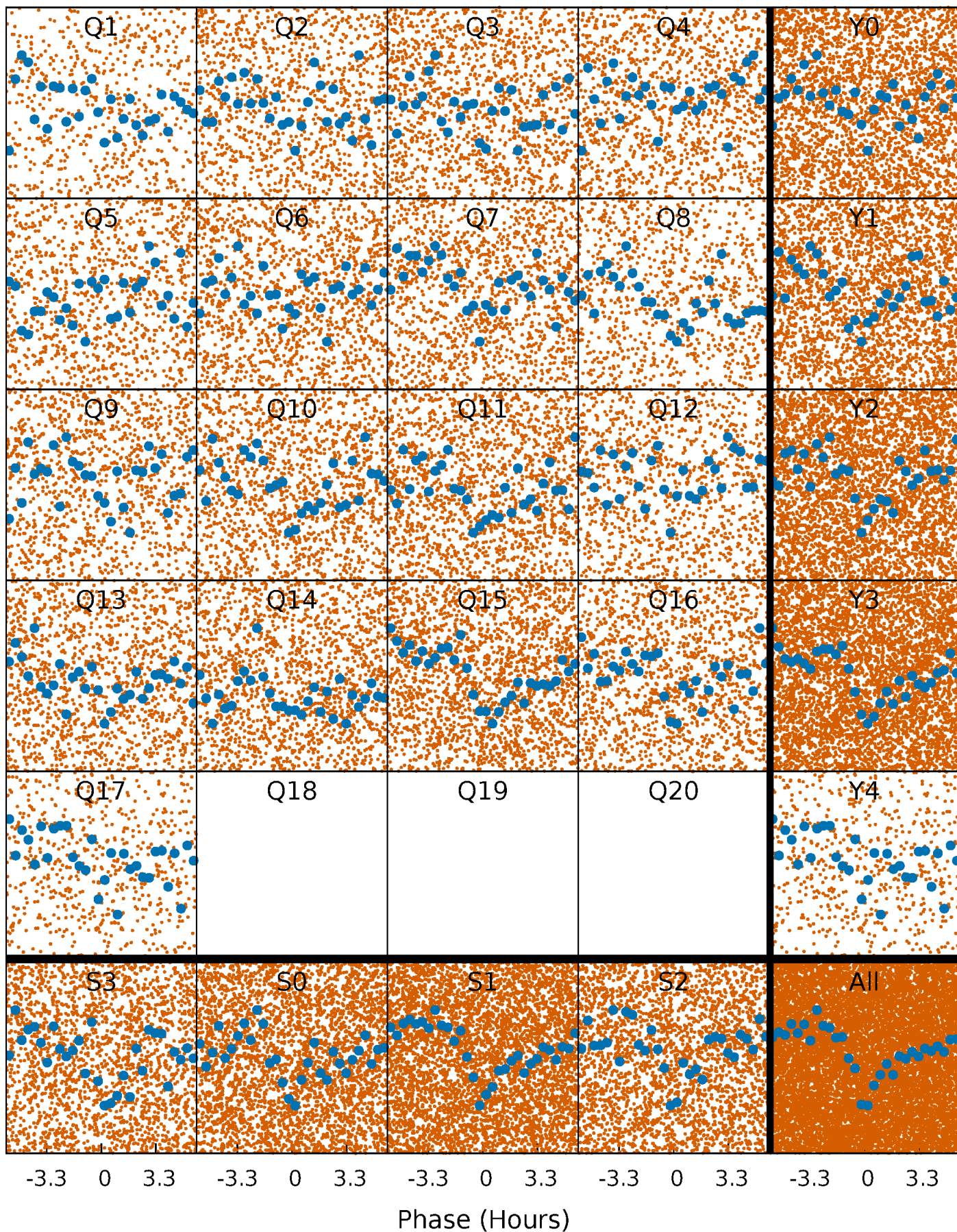


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



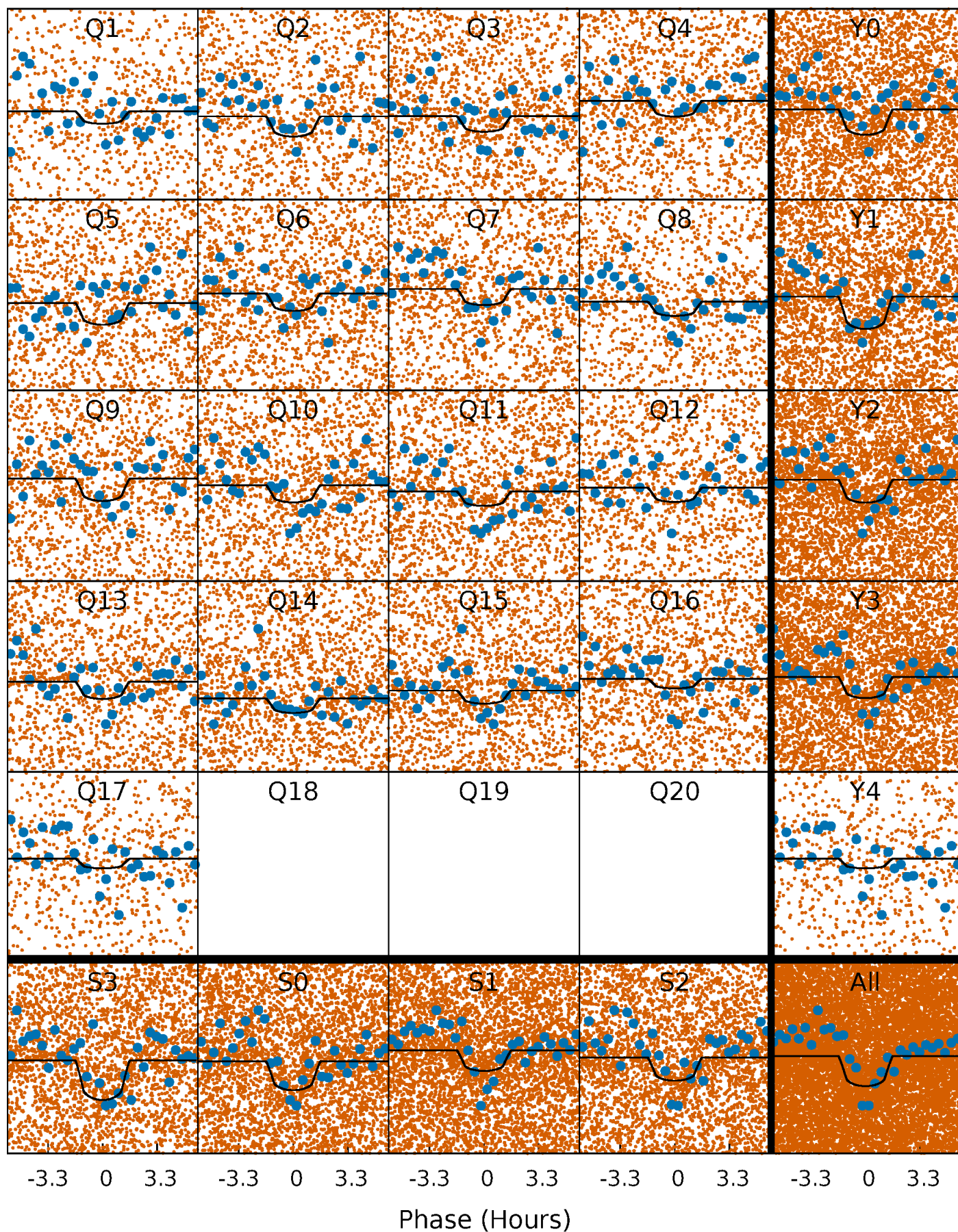
PDC Quarter-Phased Transit Curves

TCE 007200156-01 P= 0.566780 Days $T_0=131.824995$ (BKJD)



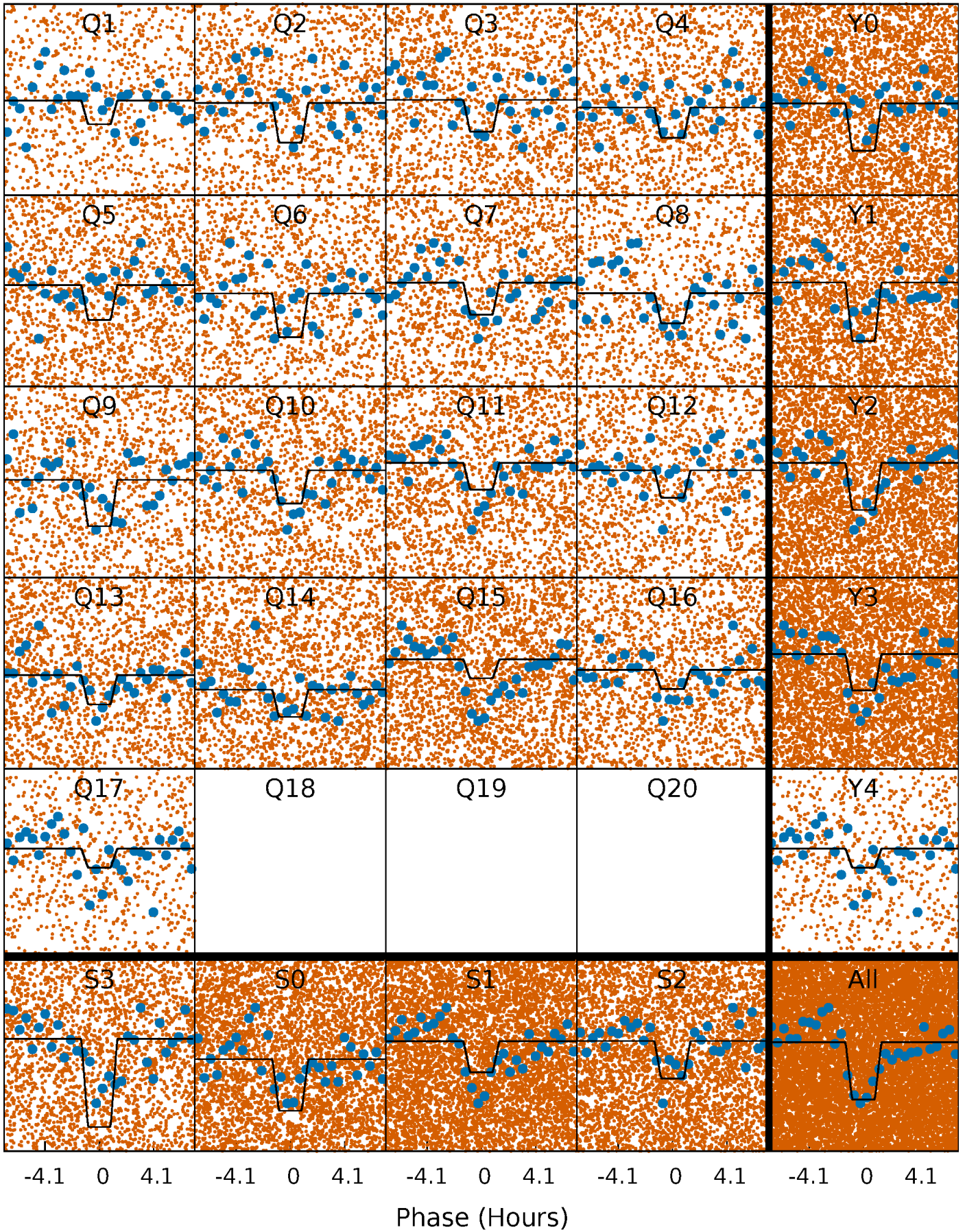
DV Quarter-Phased Transit Curves

TCE 007200156-01 P= 0.566780 Days $T_0=131.824995$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

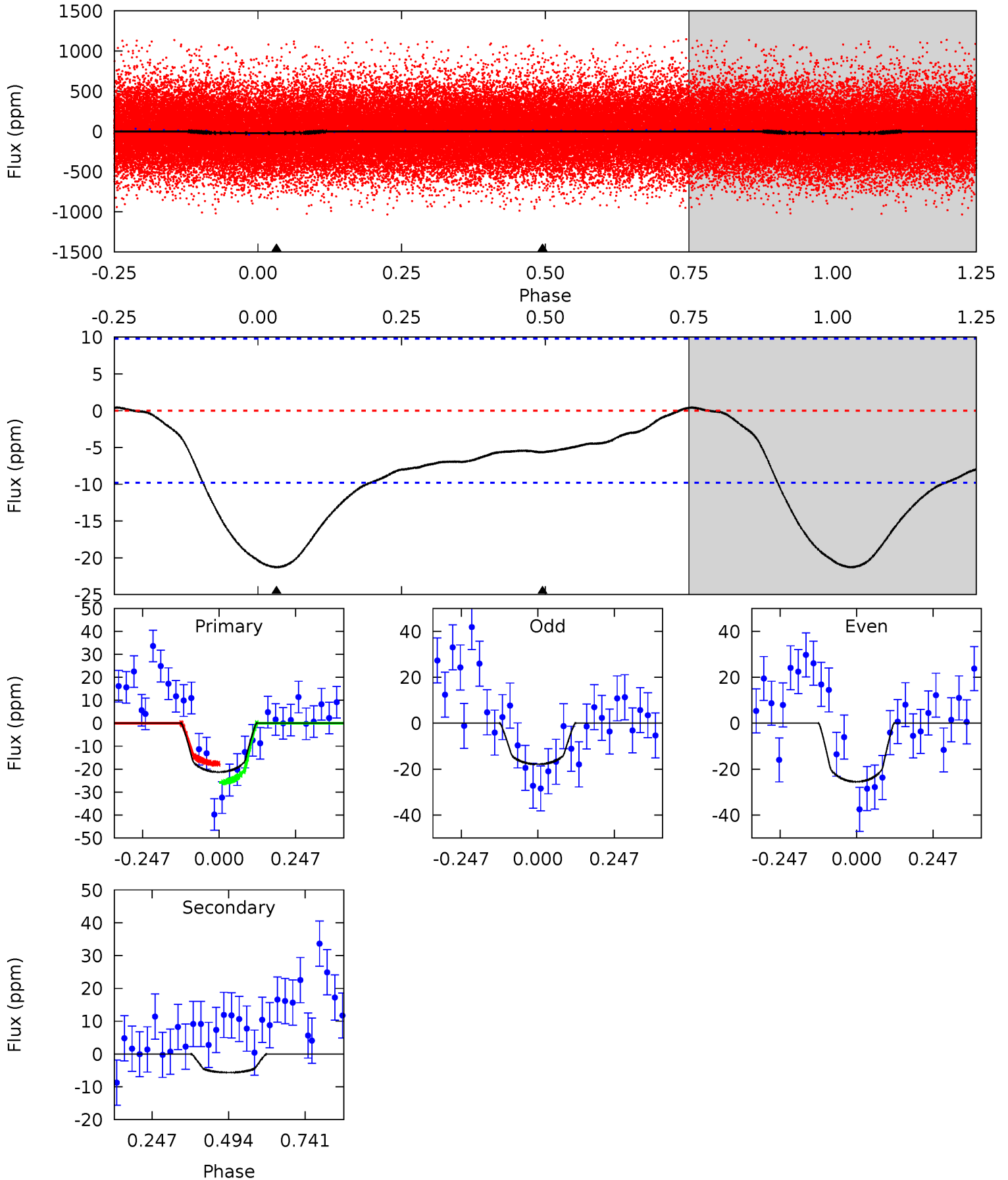
TCE 007200156-01 P= 0.566795 Days $T_0=131.815941$ (BKJD)



DV Model-Shift Uniqueness Test

007200156-01, P = 0.566780 Days, E = 131.258215 Days

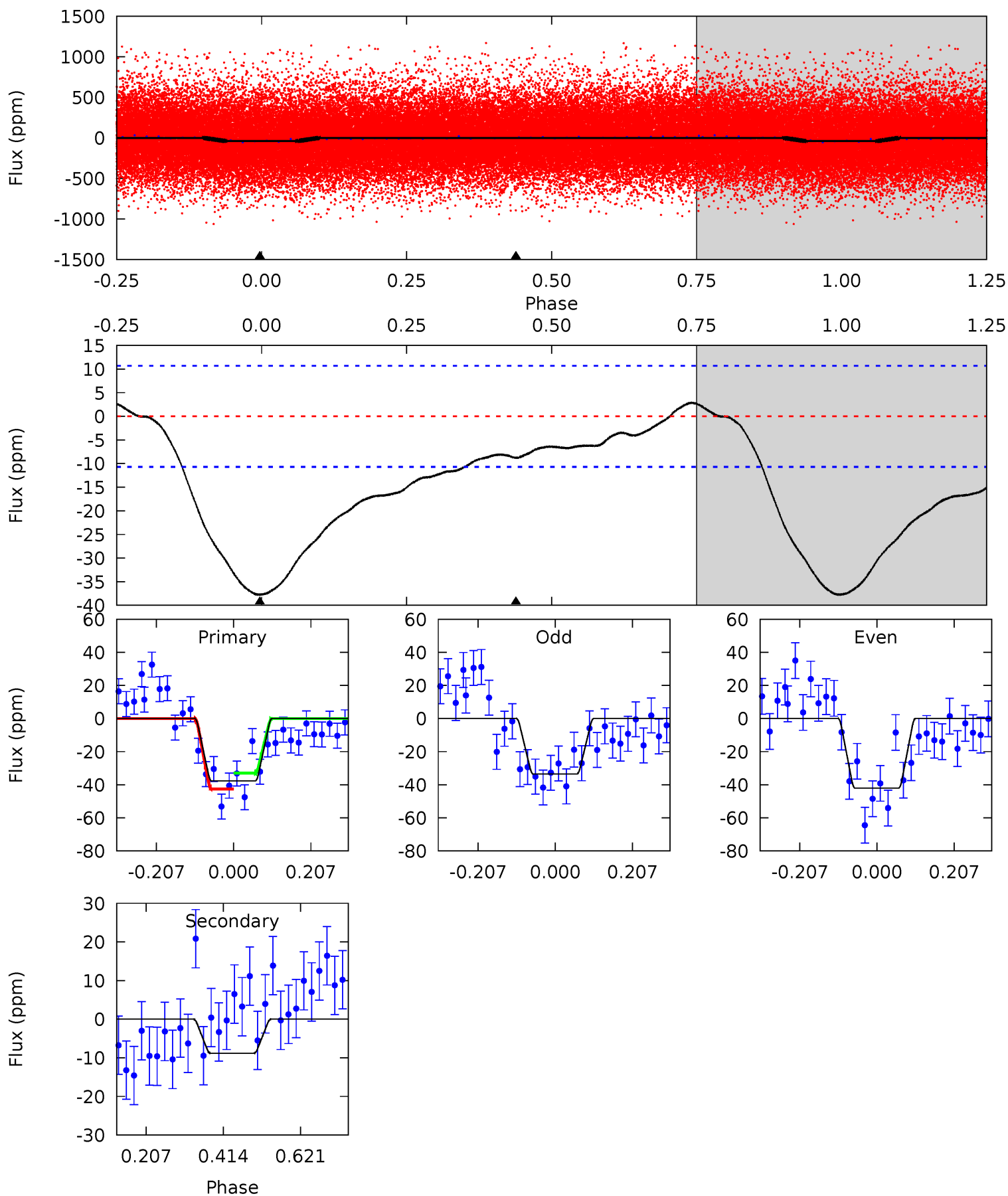
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.50	2.52	0	0	4.37	1.16	1.22	9.50	9.50	2.52	2.52	1.70	1.13	0.02	1.86



Alt Model-Shift Uniqueness Test

007200156-01, P = 0.566795 Days, E = 131.249146 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	3.63	0	0	4.41	1.26	2.64	15.6	15.6	3.63	3.63	1.73	0.98	0.07	1.98



Stellar Parameters For KIC 007200156

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5776^{+154}_{-188}	$4.512^{+0.037}_{-0.213}$	$0.210^{+0.200}_{-0.300}$	$0.950^{+0.281}_{-0.088}$	$1.068^{+0.097}_{-0.134}$	$1.757^{+0.363}_{-0.935}$
	+3%/-3%	+1%/-5%	+95%/-143%	+30%/-9%	+9%/-13%	+21%/-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 007200156-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 2	$0.65^{+0.56}_{-0.40}$	3040^{+187}_{-153}	3703^{+2019}_{-1327}	$1.226^{+7.501}_{-0.882}$
Alt.	-9 ± 2	$0.76^{+0.48}_{-0.46}$	3031^{+240}_{-136}	3893^{+1984}_{-868}	$1.533^{+7.873}_{-1.013}$

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 $A_{obs} \gg 1.0$

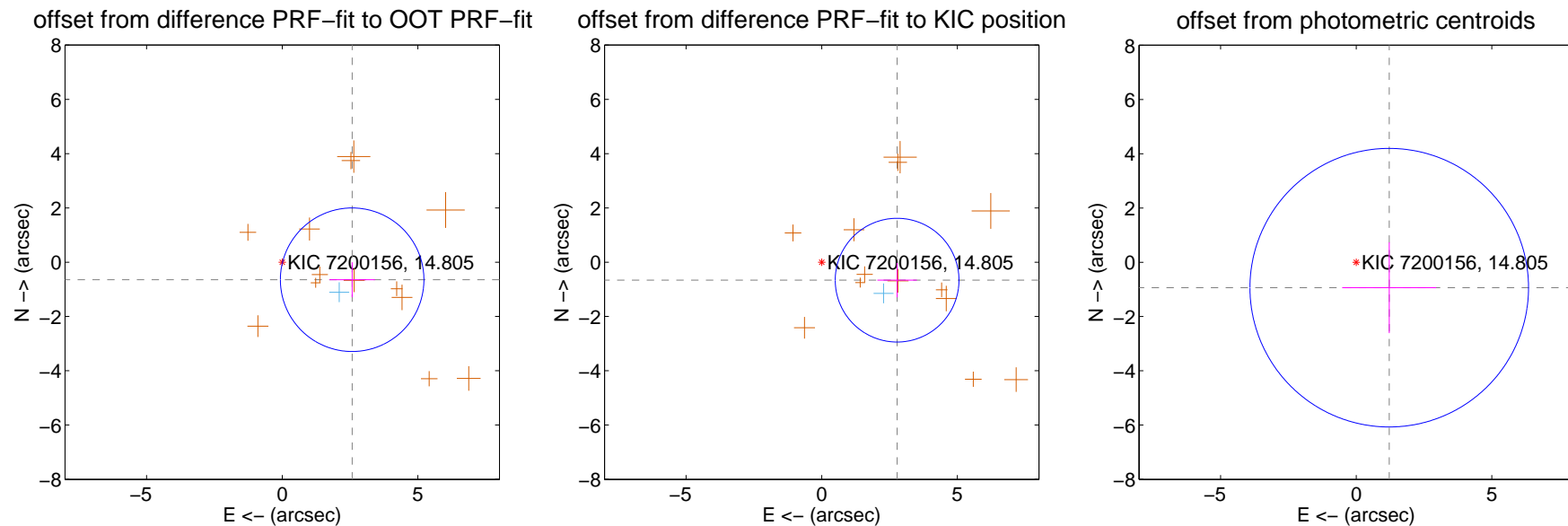
DV Centroid Data

Supplemental centroid analysis for 007200156-01. Kepler magnitude: 14.80. Transit SNR 7.79

There are 1 quarters with good PRF difference image offsets

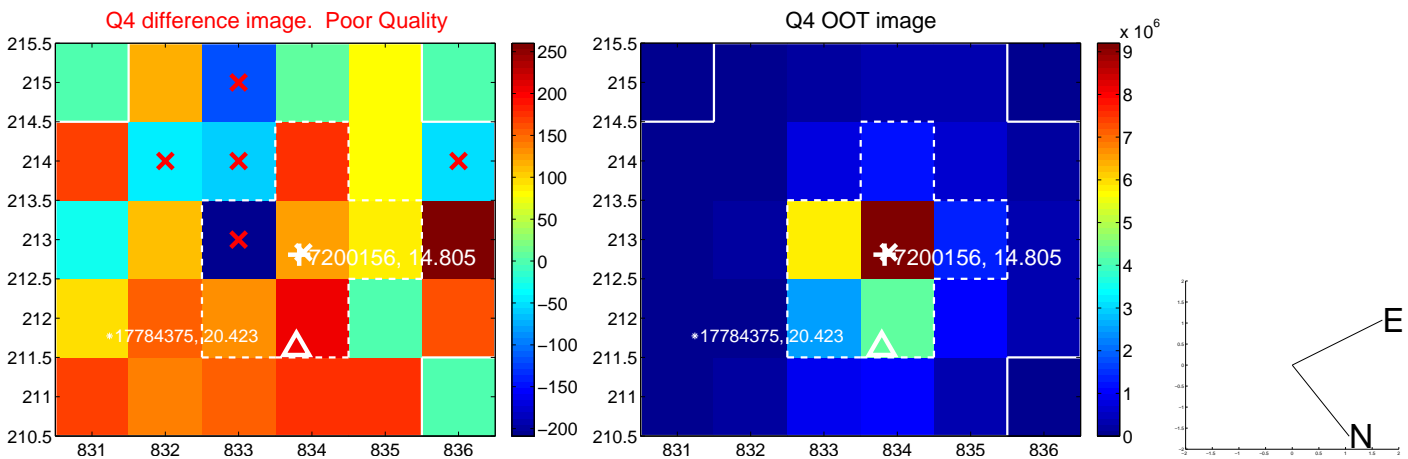
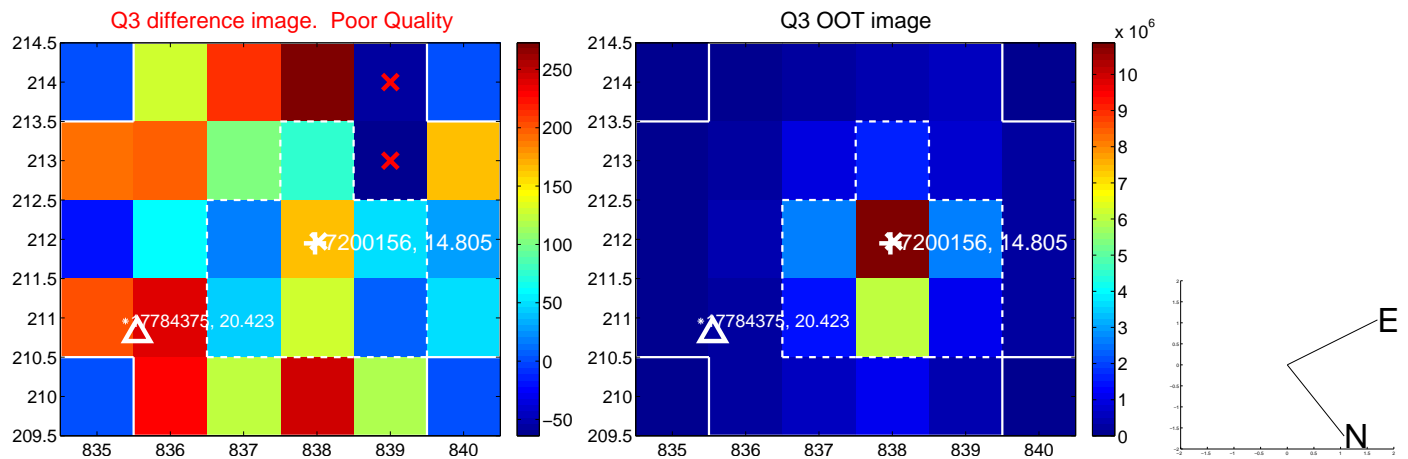
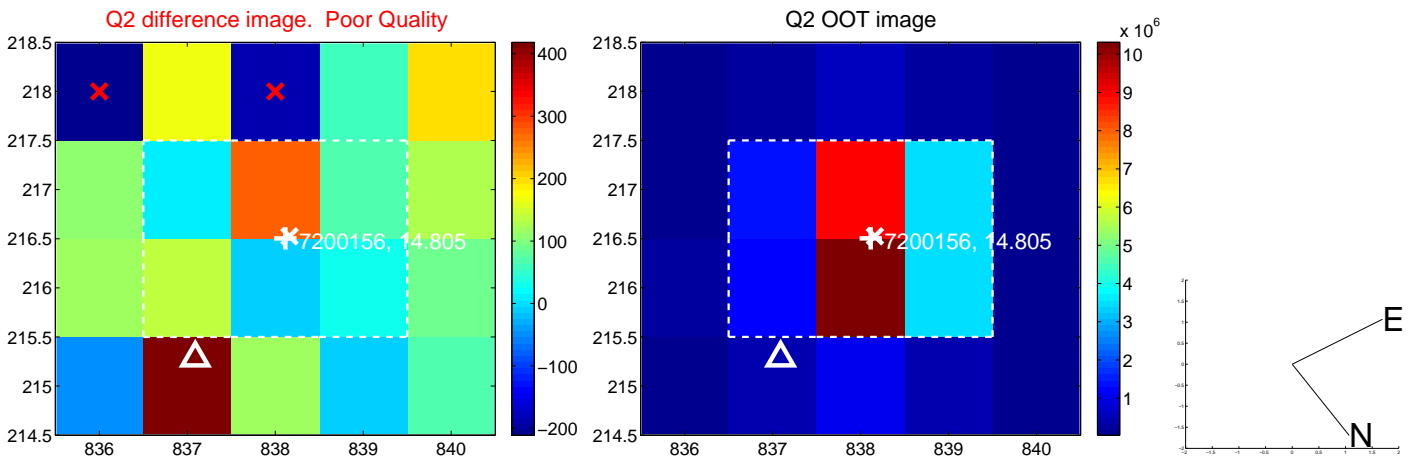
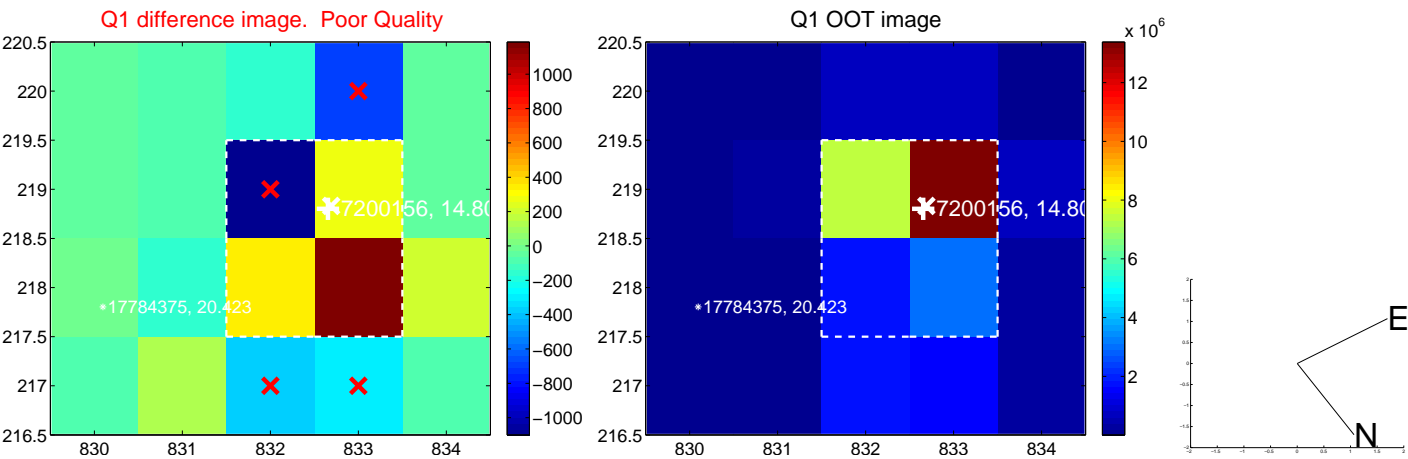
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.657 ± 0.882	3.01	-2.577 ± 0.837	-0.646 ± 0.645
PRF-fit source offset from KIC position	2.856 ± 0.760	3.76	-2.778 ± 0.726	-0.662 ± 0.632
photometric centroid source offset	1.54 ± 1.71	0.90	-1.22 ± 1.73	-0.94 ± 1.67

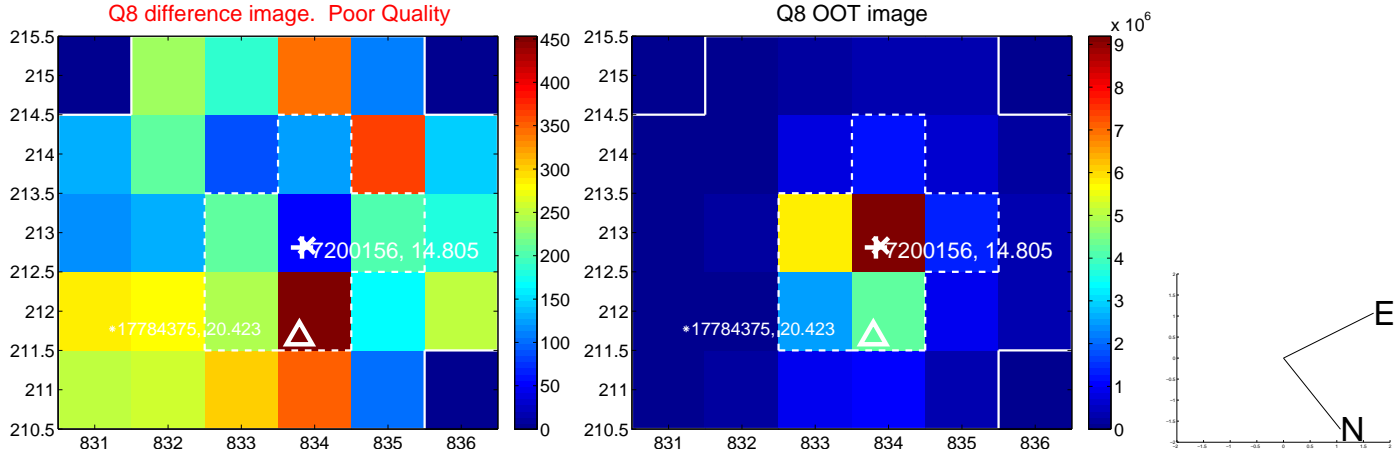
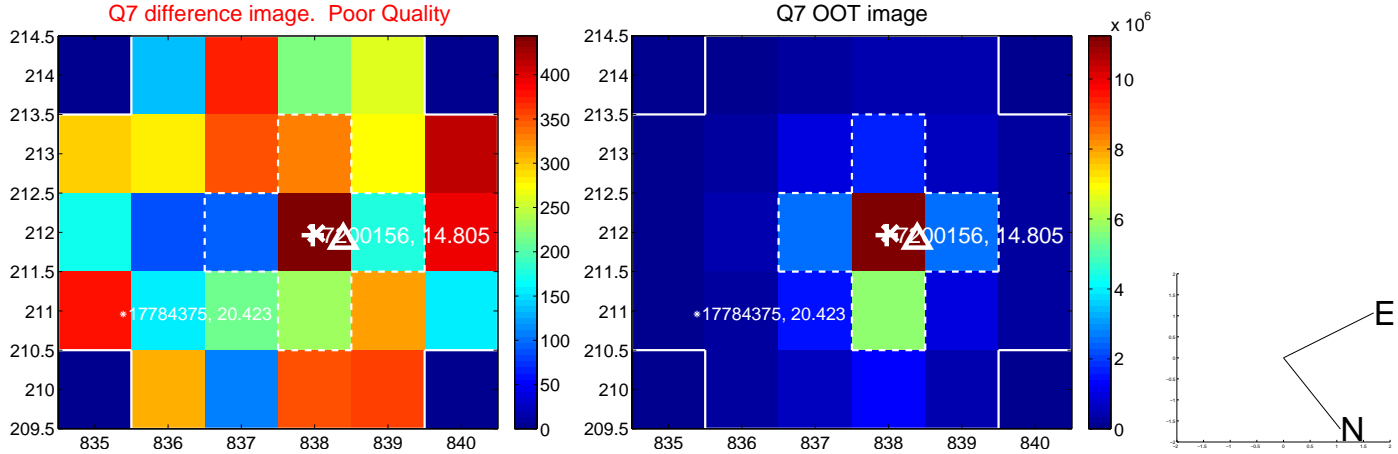
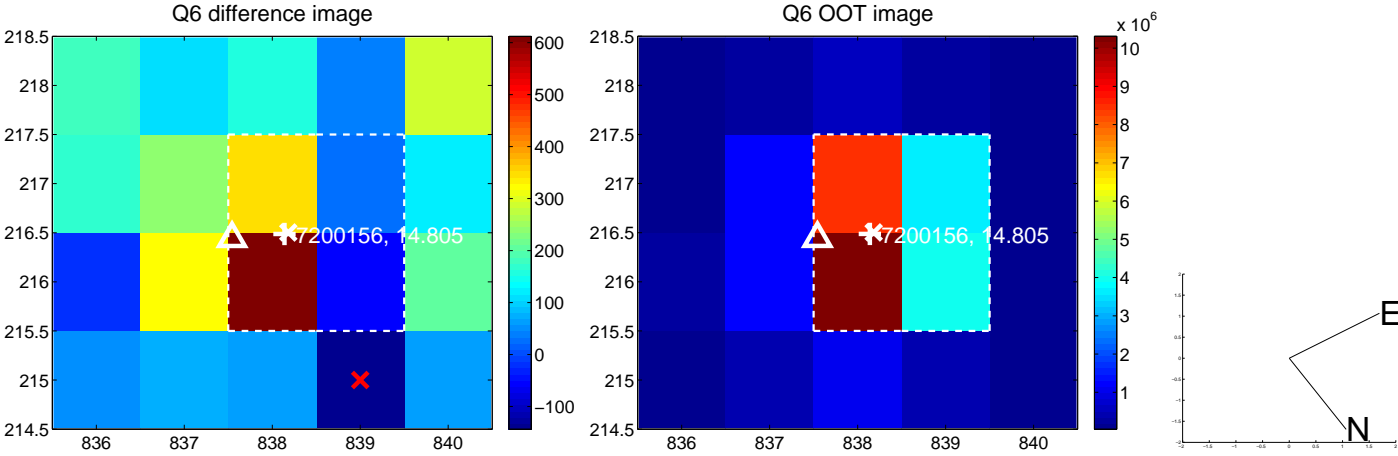
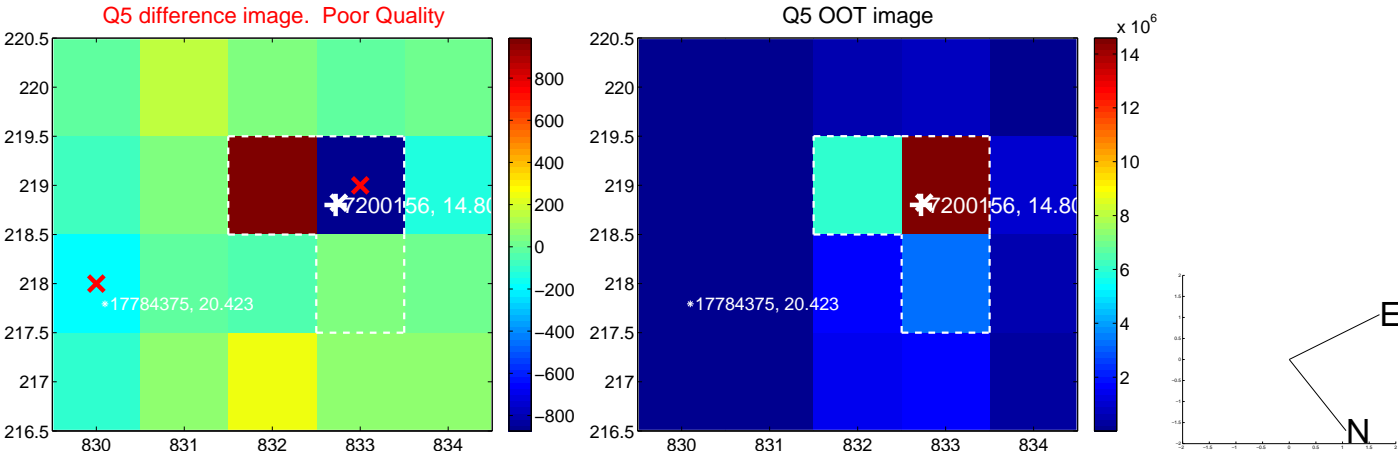


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

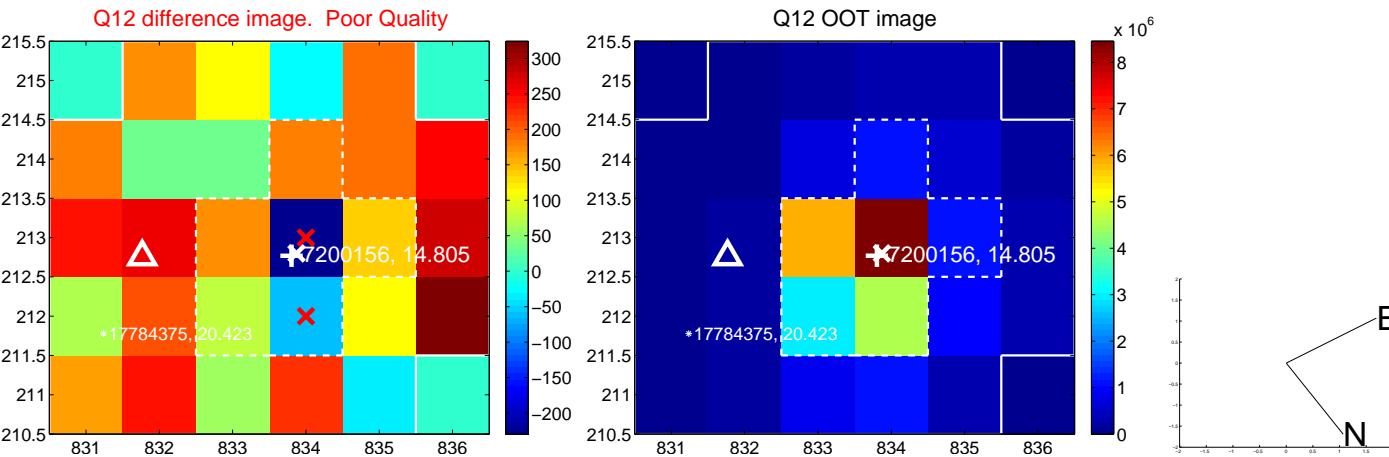
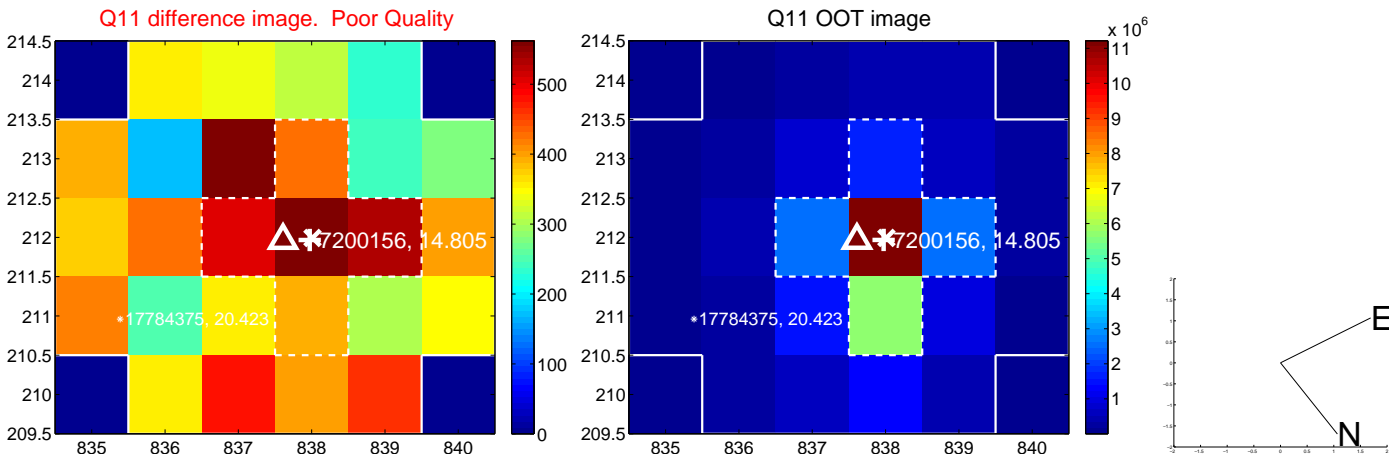
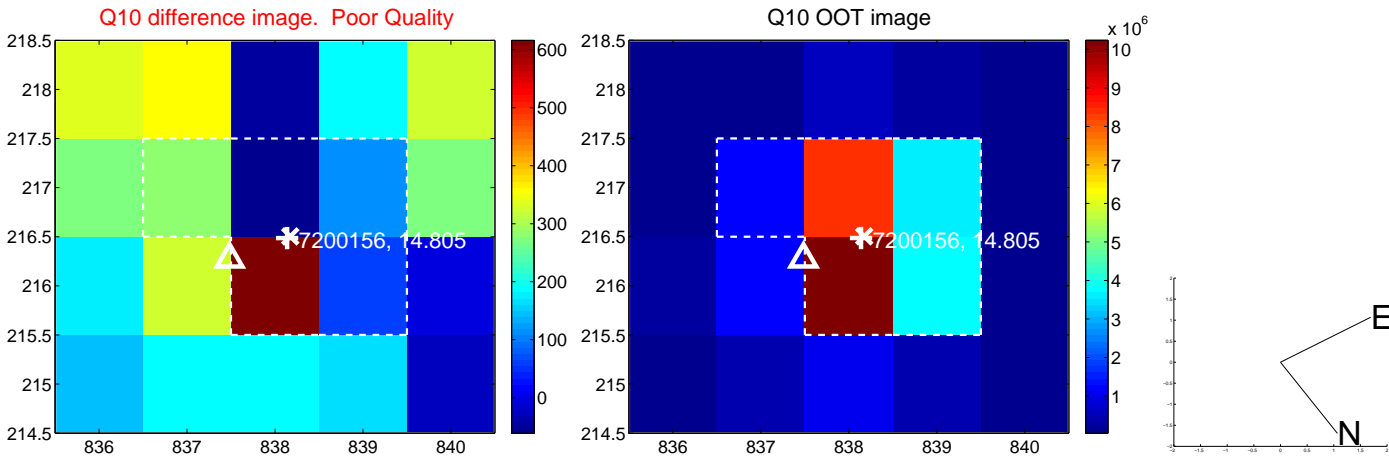
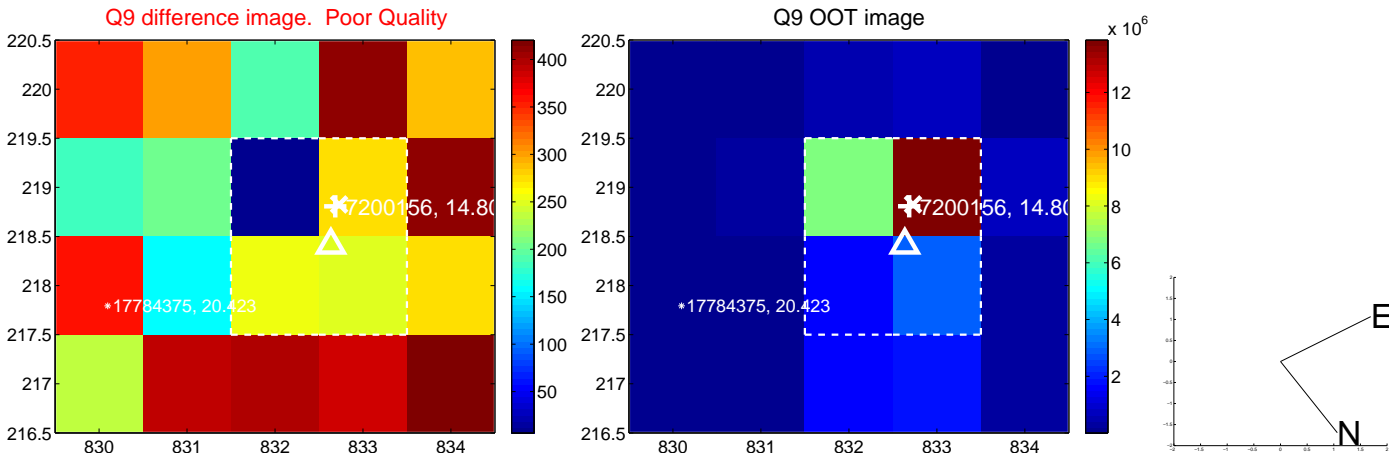
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



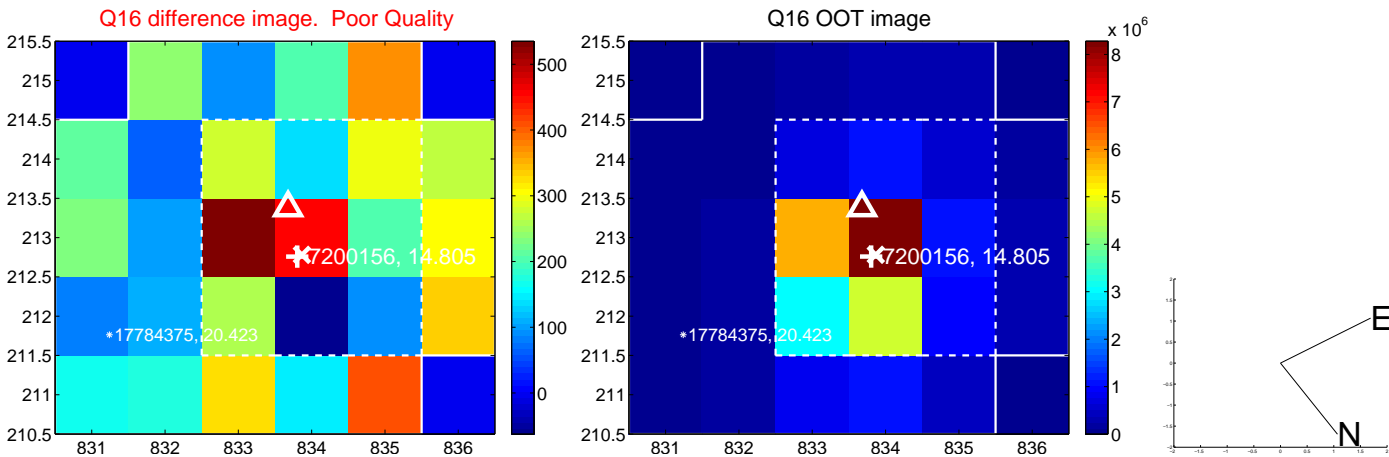
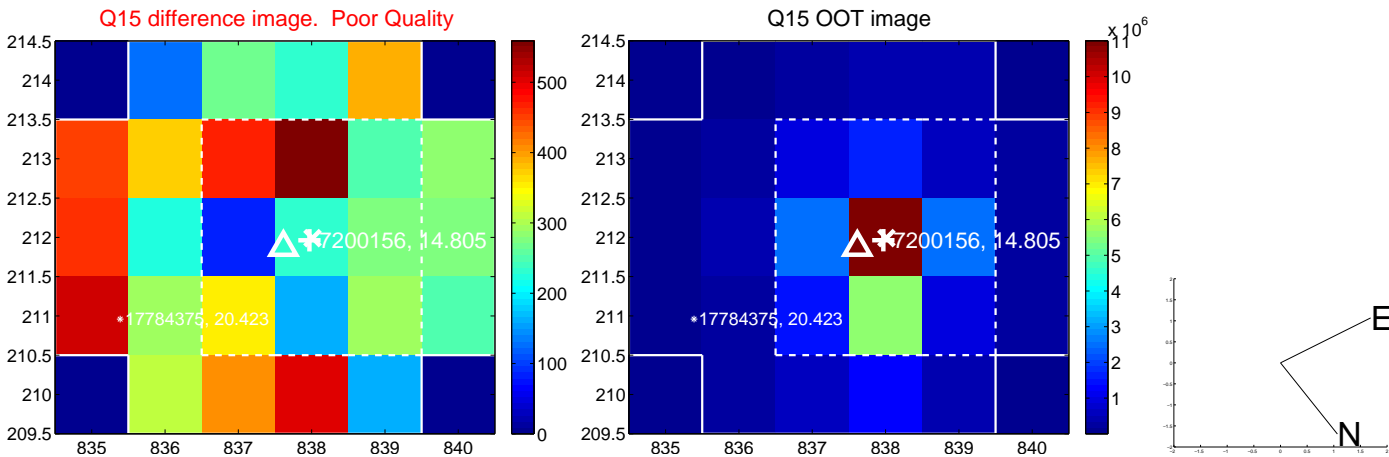
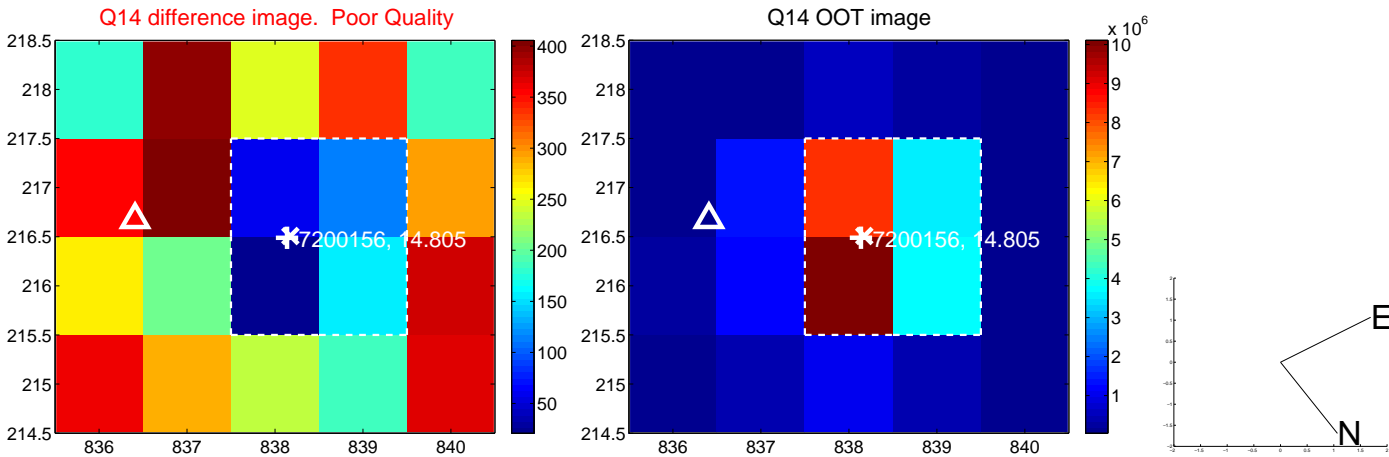
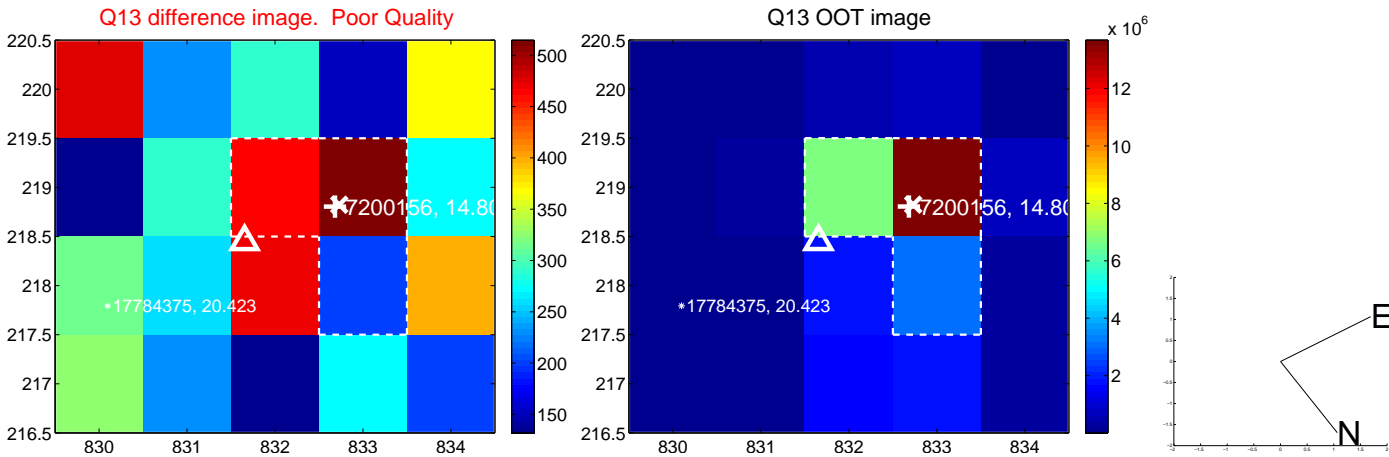
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



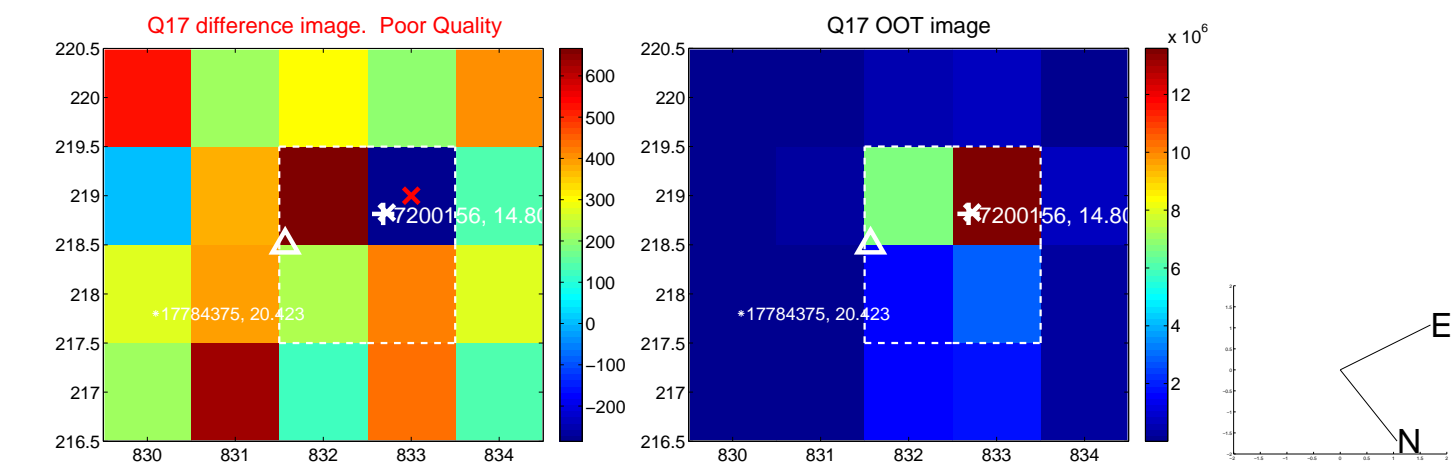
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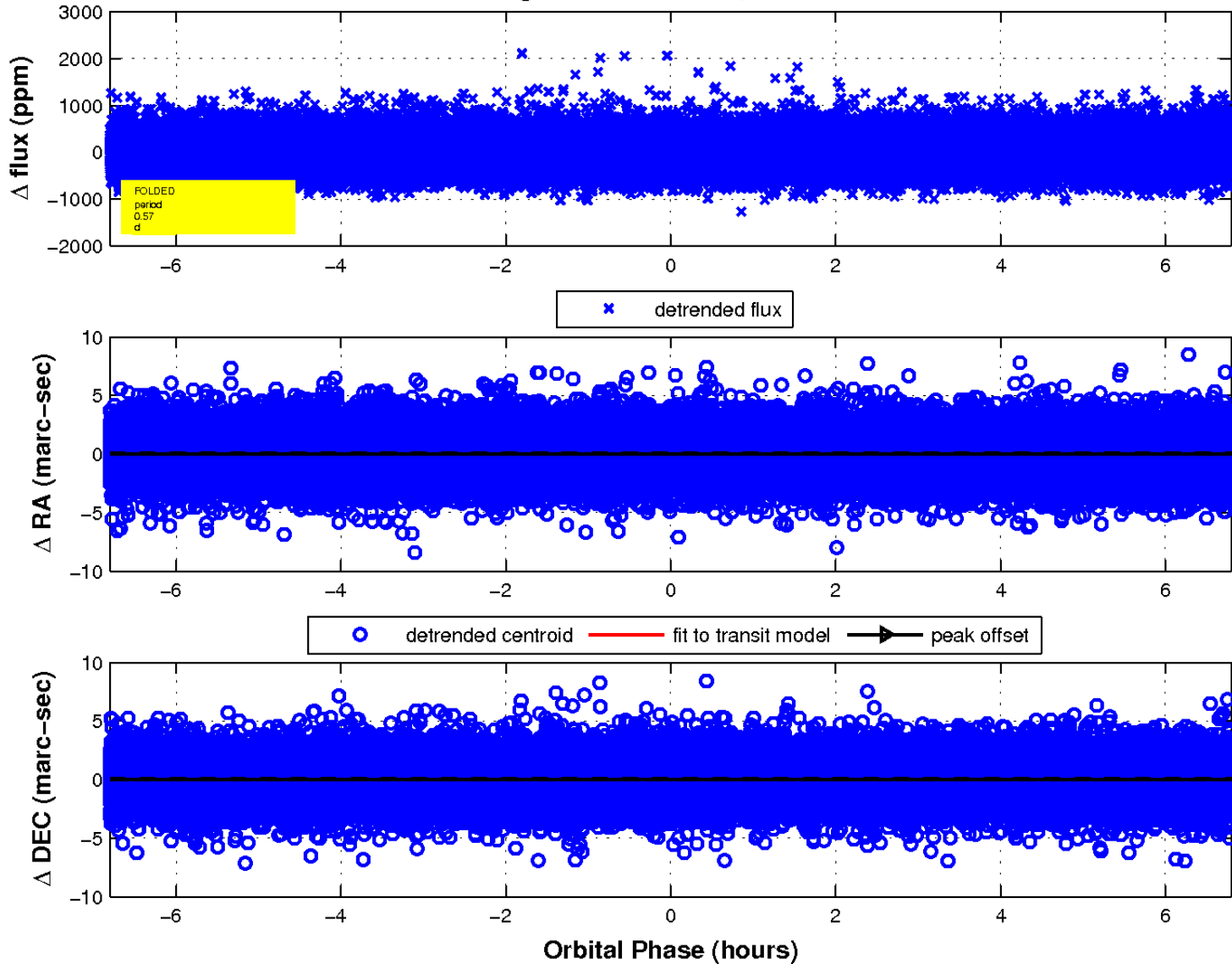
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

