

KIC 007032116

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})
007032116-01	OBS	No	0.566761	131.844762	13.0	4.072	11.1	6.5	1.05	6151	0.39	7641.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007032116-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—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.

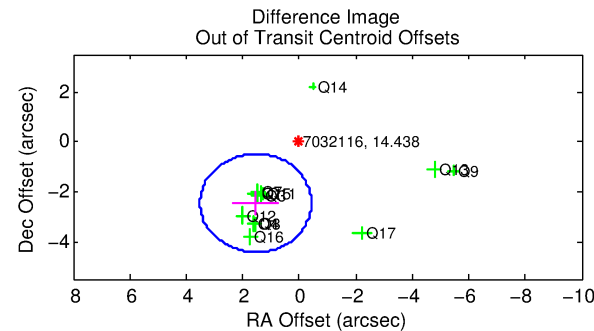
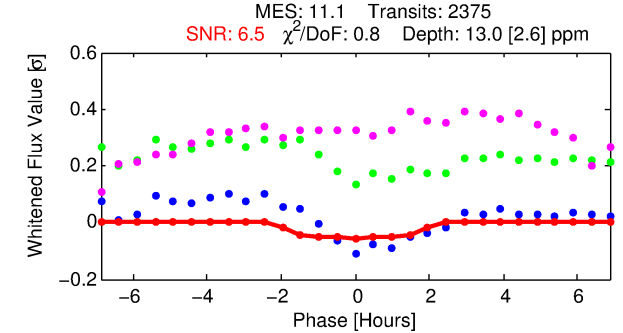
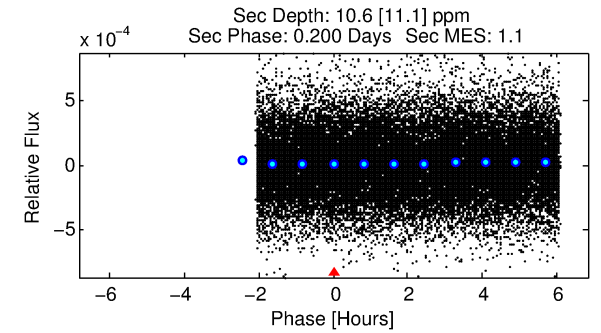
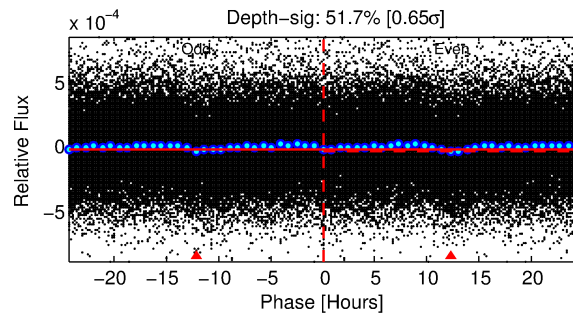
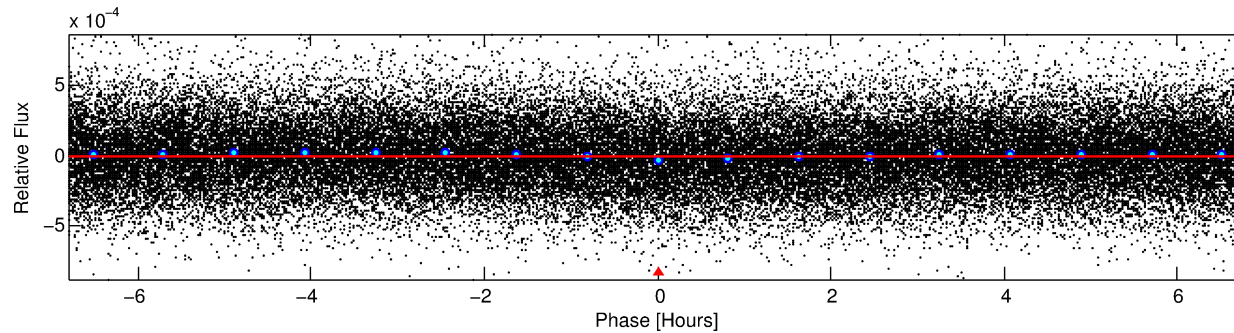
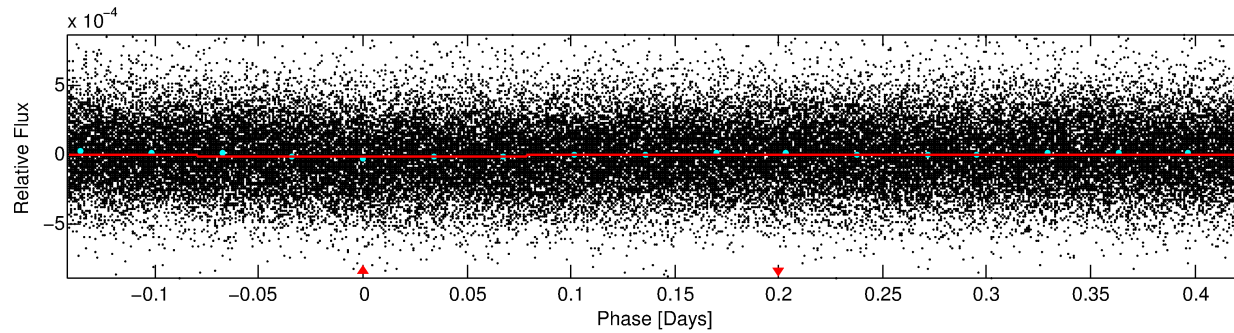
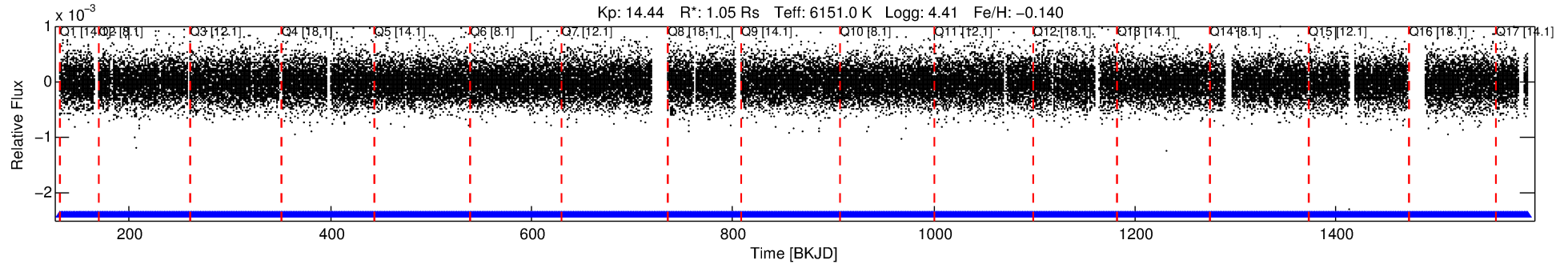
Ephemeris Match Information For 007032116-01

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
007032116-01	7032116	RR-Lyr-pri	7198959	1:1	830.2	157	-138	7.86	14.44	47946.00	Direct-PRF	0	2.76	23.74

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: 7032116 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56676 [0.00002] d
Epoch = 131.8448 [0.0072] BKJD
Rp/R* = 0.0034 [0.0042]
a/R* = 1.19 [2.11]
b = 0.50 [9.29]
Seff = 7641.25 [3083.97]
Teff = 2384 [241] K
Rp = 0.39 [0.49] Re
a = 0.0136 [0.0036] AU
Ag = 7.08 [19.10] [0.32 σ]
Teffp = 6013 [4022] K [0.90 σ]

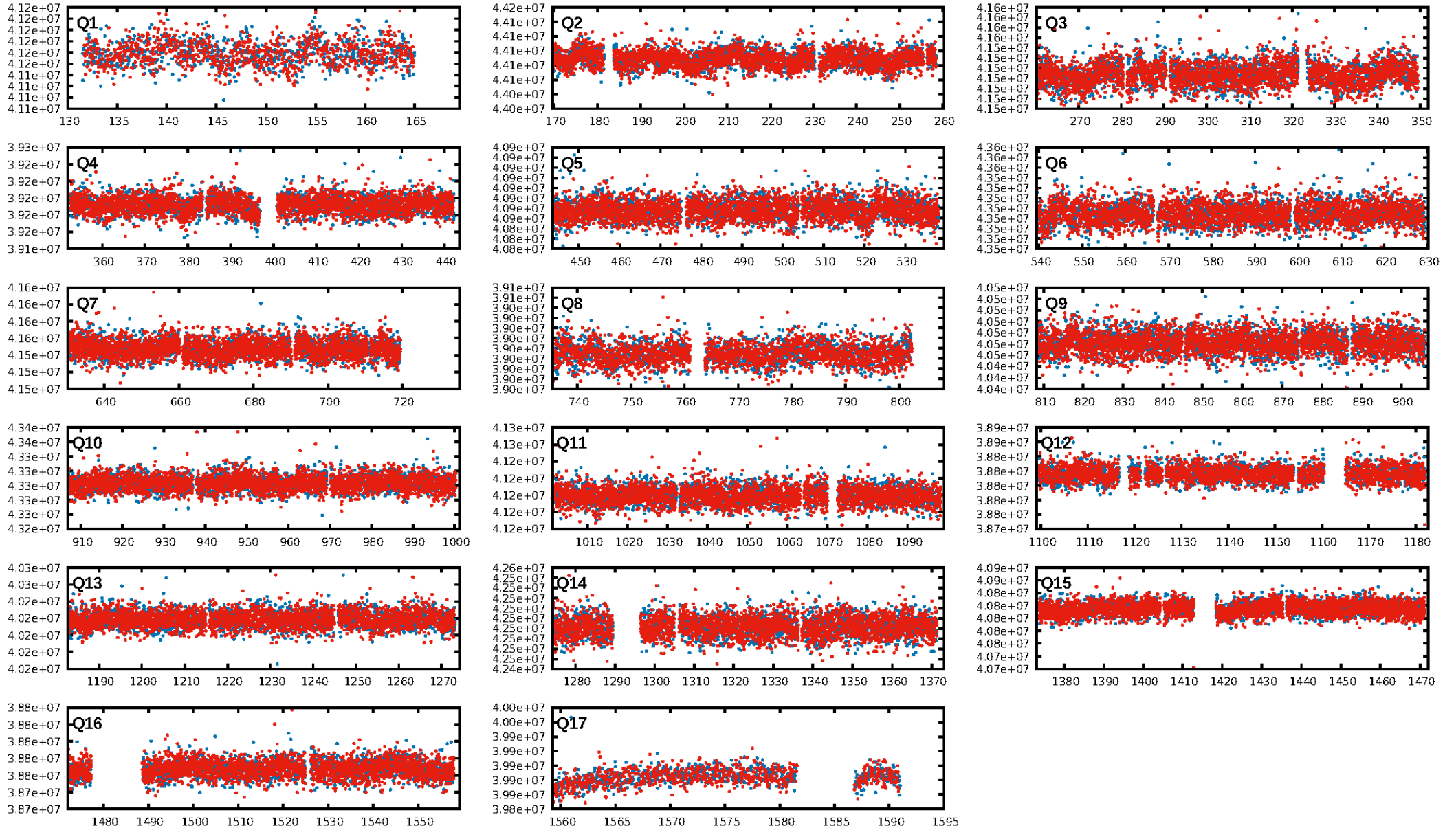
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.47e-14
RollingBand-fgt: 1.00 [2269/2269]
GhostDiagnostic-chr: 0.1354
Centroid-sig: 4.4%
Centroid-so: 3.551 arcsec [1.68 σ]
OotOffset-rm: 2.900 arcsec [4.42 σ]
KicOffset-rm: 3.070 arcsec [4.54 σ]
OotOffset-st: 1/4/4/3 [12]
KicOffset-st: 1/4/4/3 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [17/17]

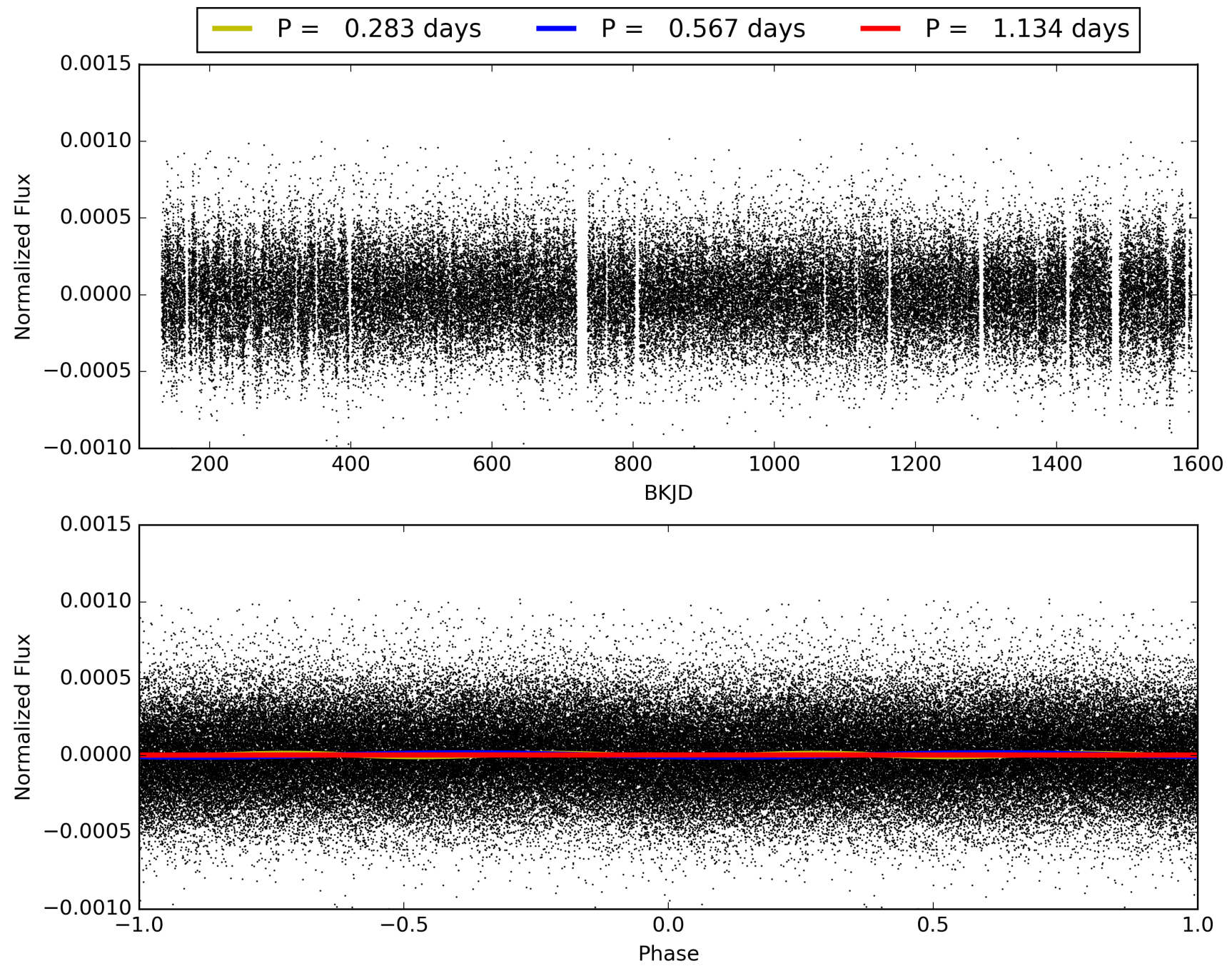
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:45:34 Z

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

TCE 007032116-01, PDC Light Curves

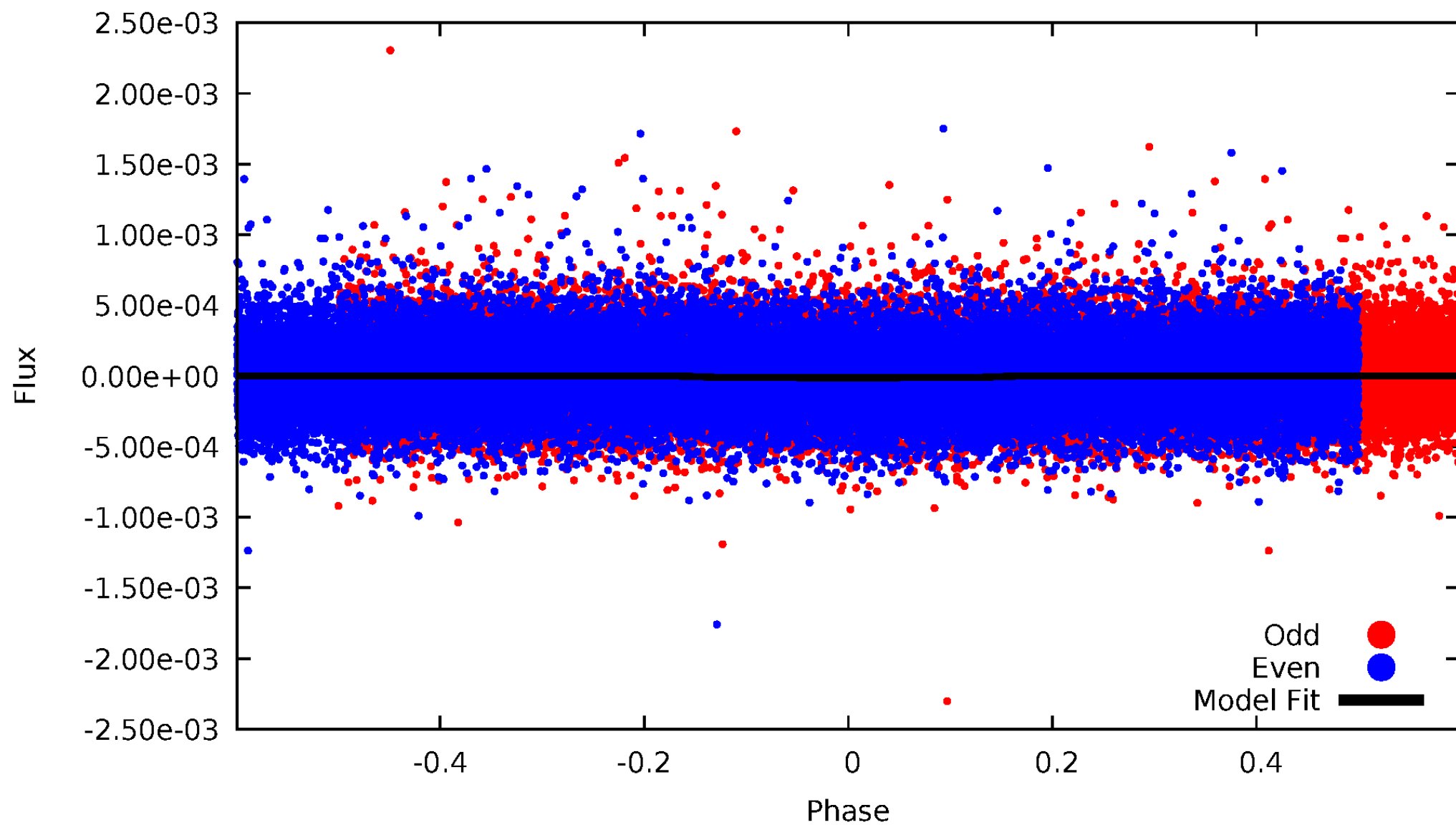


TCE 007032116-01



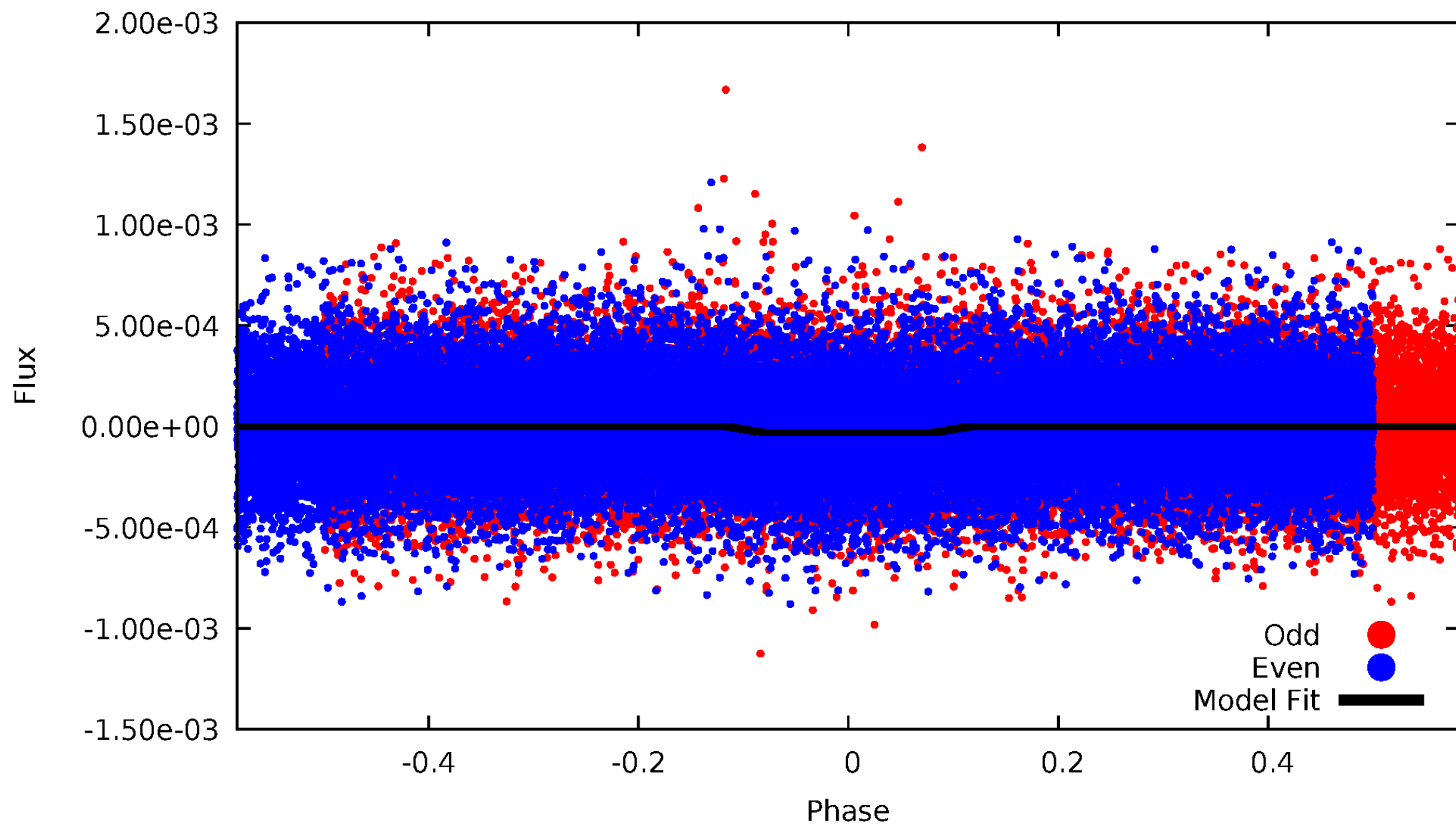
DV Odd/Even

TCE 007032116-01



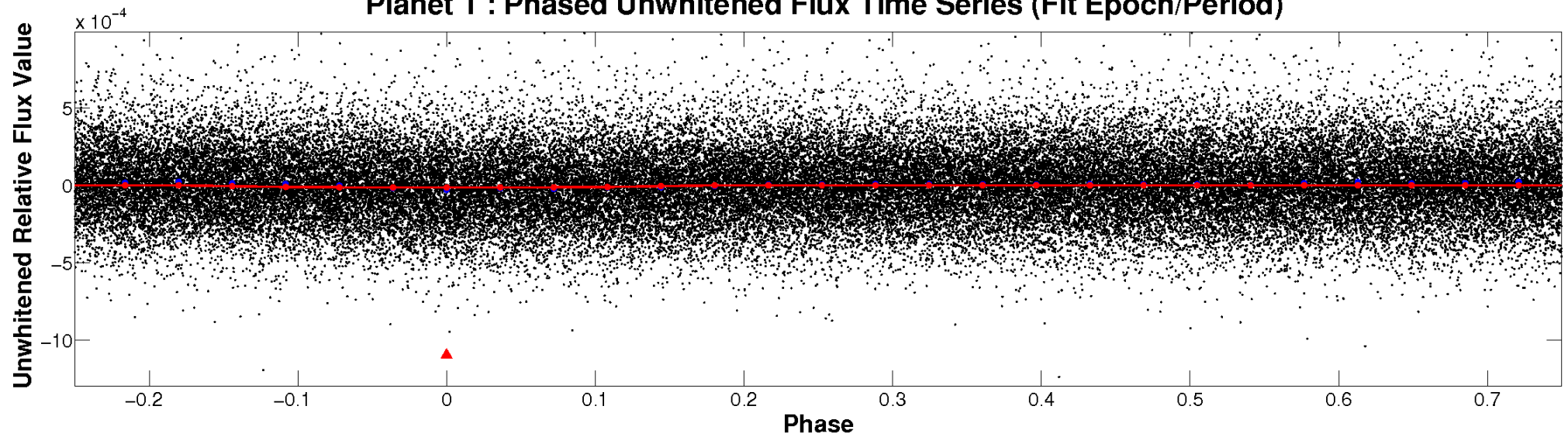
ALT Odd/Even

TCE 007032116-01

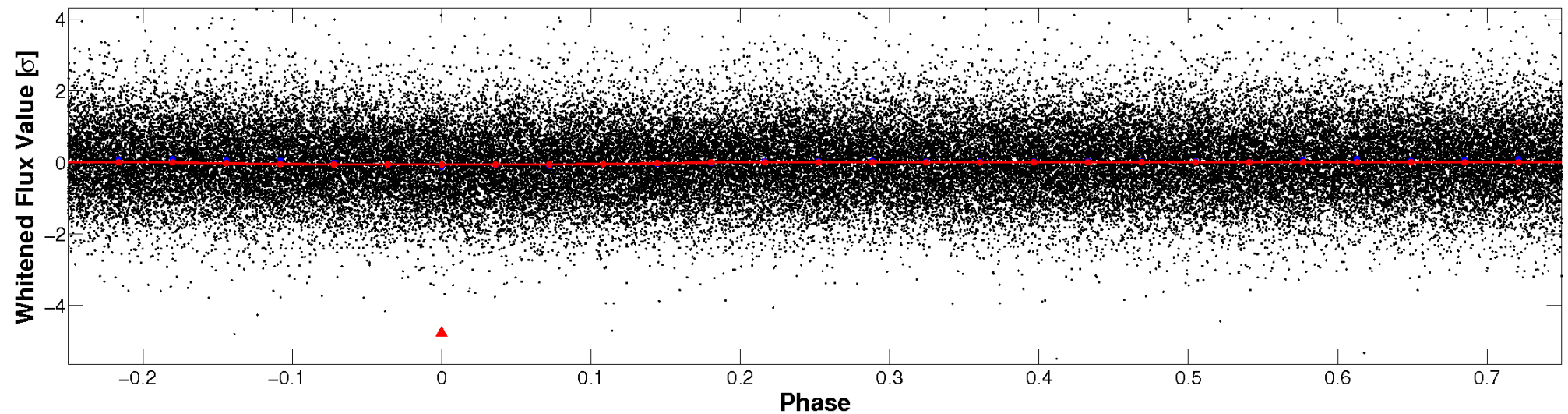


Non-Whitened Vs. Whitened Light Curve

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

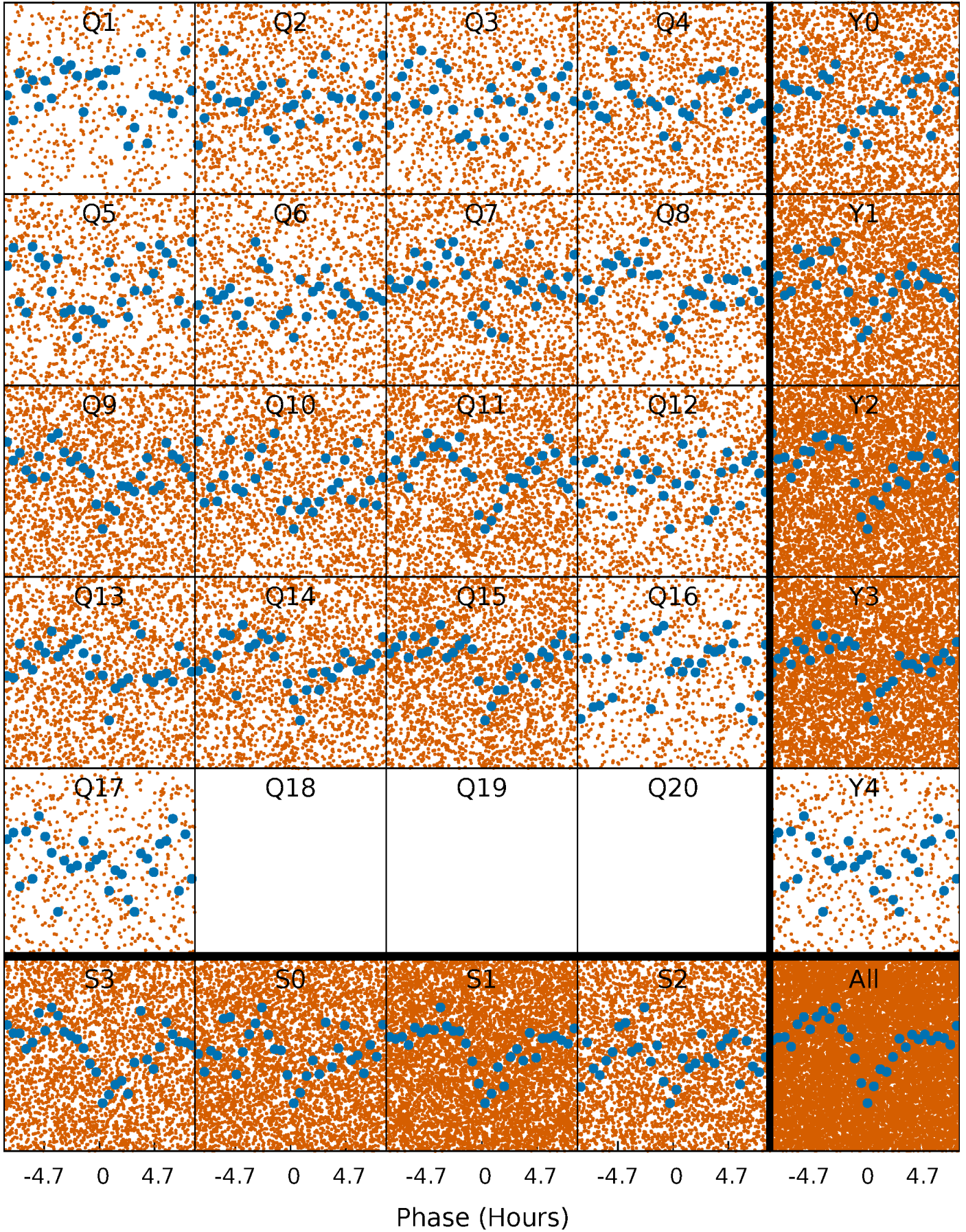


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



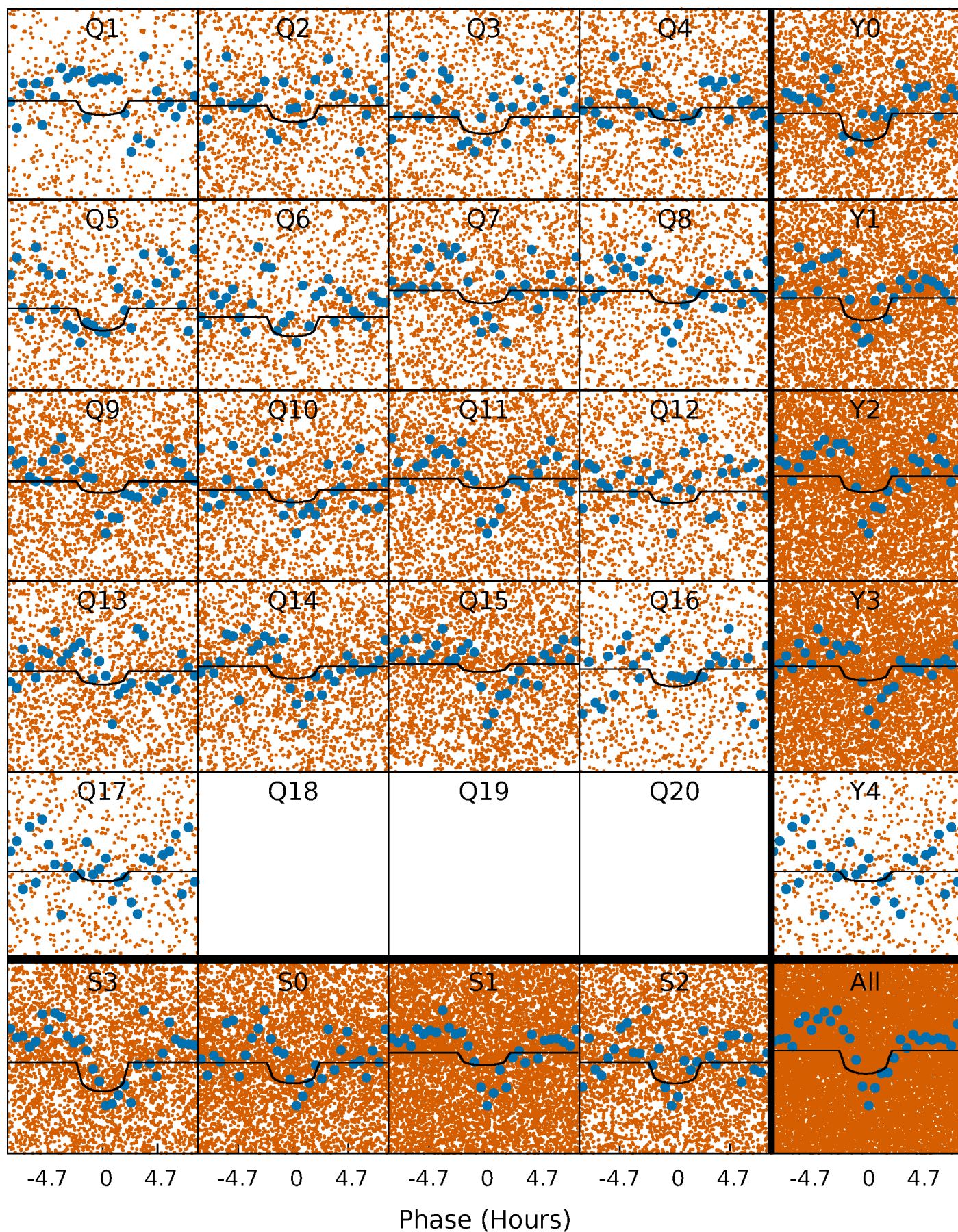
PDC Quarter-Phased Transit Curves

TCE 007032116-01 P= 0.566761 Days $T_0=131.844762$ (BKJD)



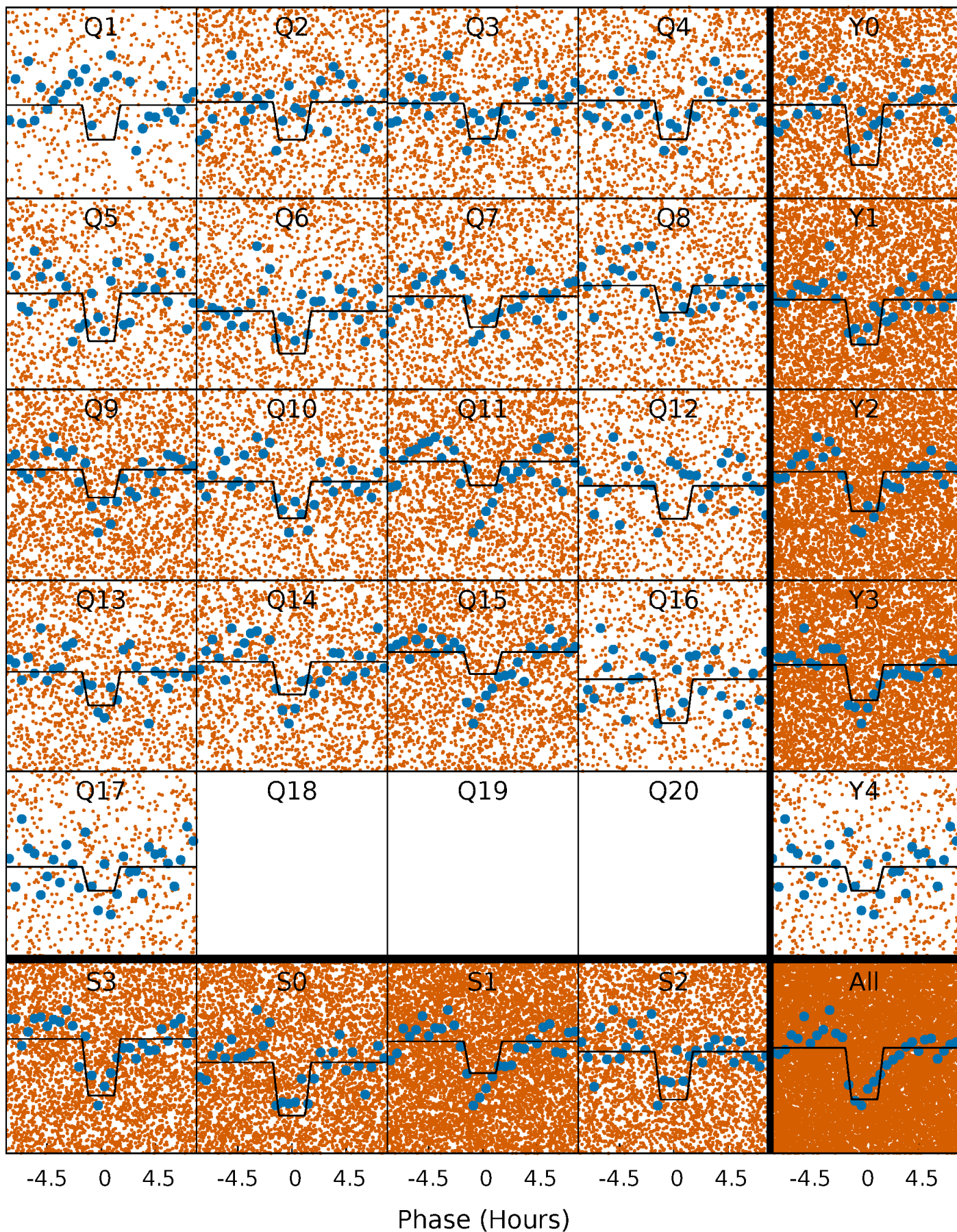
DV Quarter-Phased Transit Curves

TCE 007032116-01 P= 0.566761 Days $T_0=131.844762$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

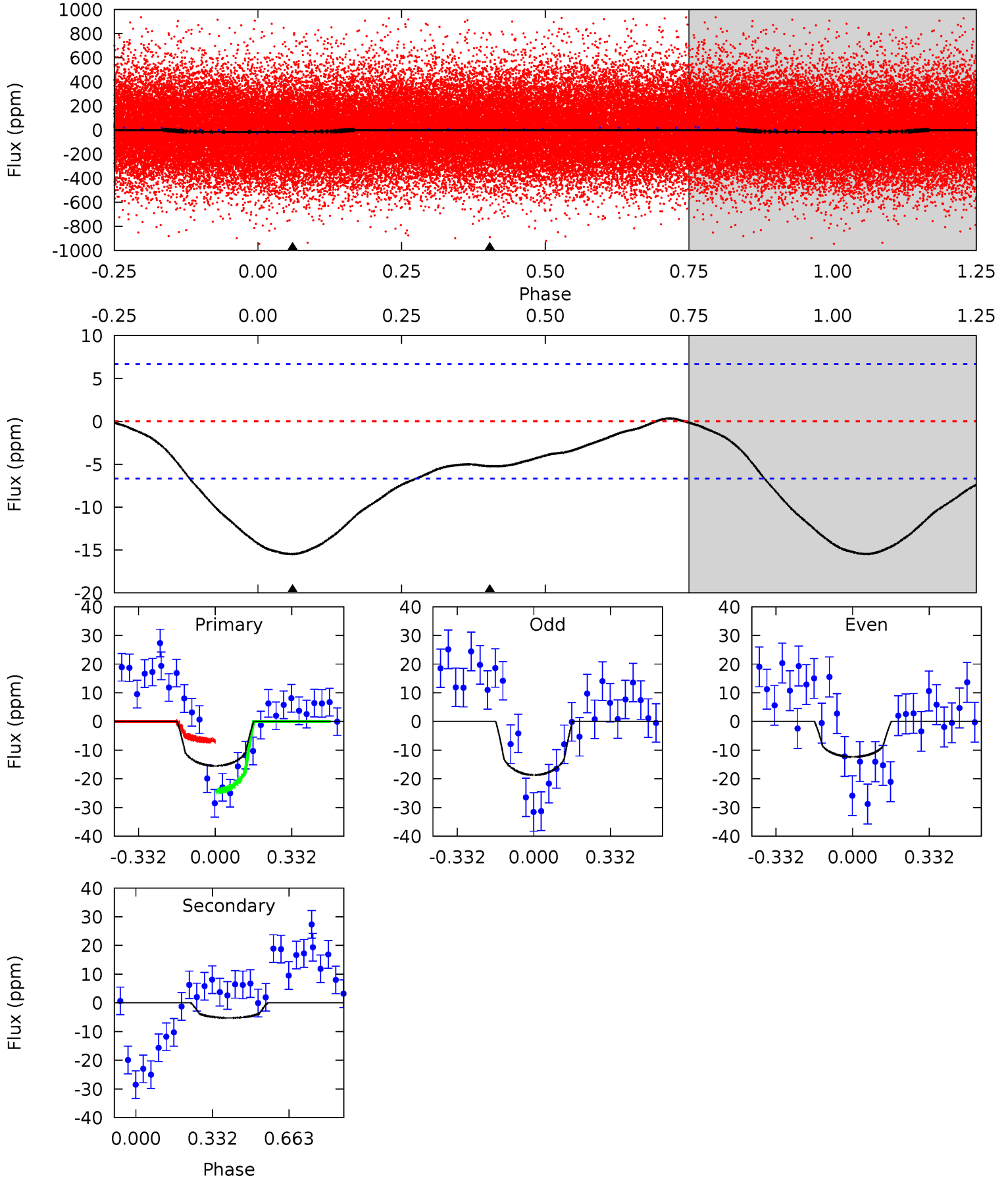
TCE 007032116-01 P= 0.566795 Days $T_0=131.818039$ (BKJD)



DV Model-Shift Uniqueness Test

007032116-01, P = 0.566761 Days, E = 131.278001 Days

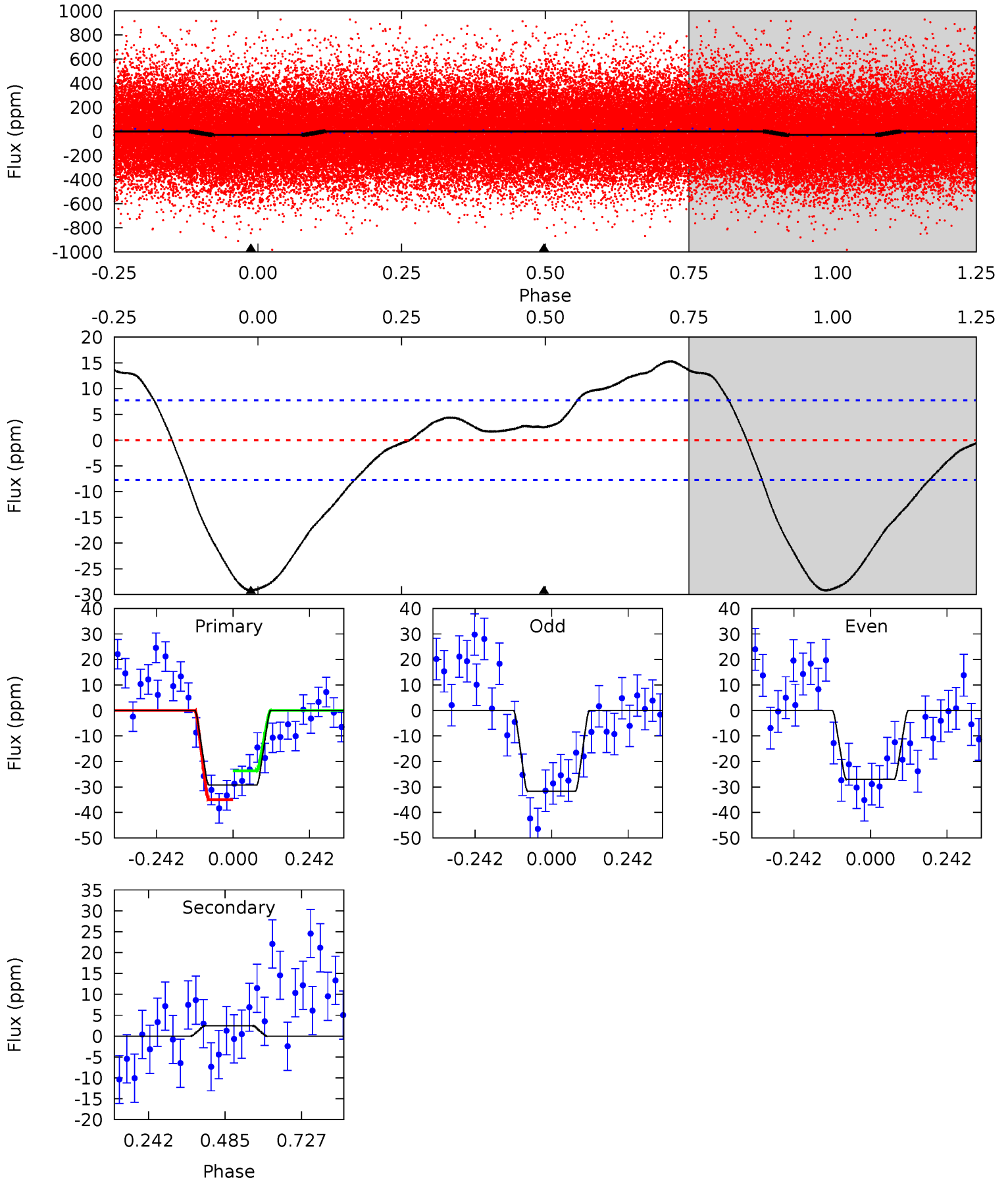
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.98	3.38	0	0	4.31	0.97	0.23	9.98	9.98	3.38	3.38	2.05	0.89	0.02	5.64



Alt Model-Shift Uniqueness Test

007032116-01, P = 0.566795 Days, E = 131.251244 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	-1.39	0	0	4.38	1.17	4.21	16.5	16.5	-1.39	-1.39	1.31	0.91	0.34	3.17



Stellar Parameters For KIC 007032116

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6151^{+165}_{-220}	$4.413^{+0.087}_{-0.203}$	$-0.140^{+0.250}_{-0.300}$	$1.046^{+0.334}_{-0.119}$	$1.028^{+0.166}_{-0.120}$	$1.264^{+0.481}_{-0.666}$
	+3%/-4%	+2%/-5%	+179%/-214%	+32%/-11%	+16%/-12%	+38%/-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 007032116-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 2	$0.54^{+0.44}_{-0.36}$	3358^{+271}_{-183}	4306^{+3231}_{-1190}	$1.739^{+14.087}_{-1.233}$
Alt.	2 ± 2	$0.71^{+0.51}_{-0.40}$	3370^{+222}_{-181}	-3843^{+425}_{-1067}	$-0.437^{+0.360}_{-1.841}$

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

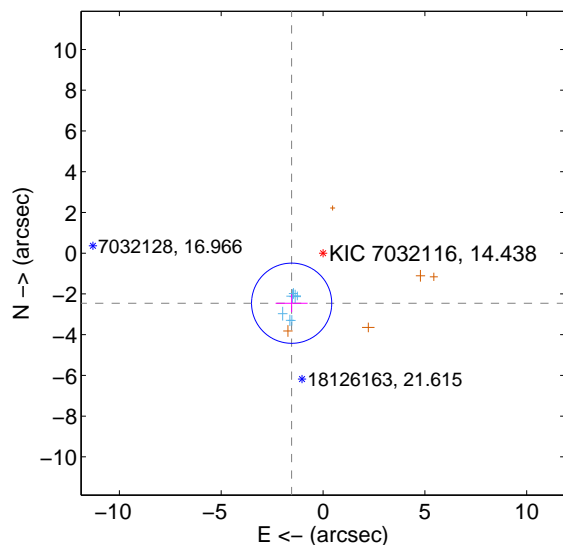
Supplemental centroid analysis for 007032116-01. Kepler magnitude: 14.44. Transit SNR 6.48

There are 7 quarters with good PRF difference image offsets

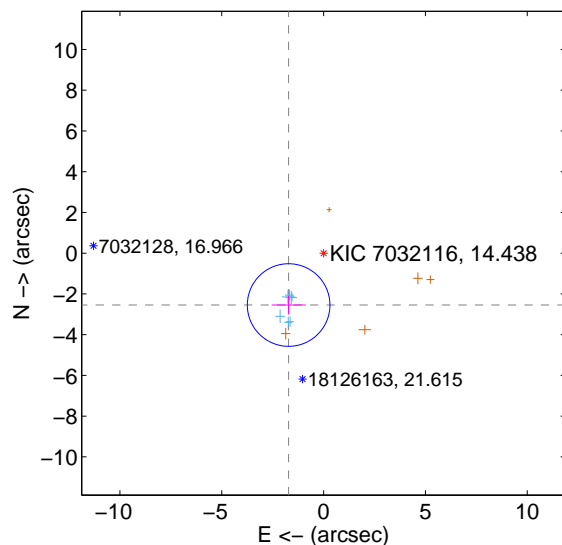
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.900 ± 0.656	4.42	1.541 ± 0.787	-2.457 ± 0.435
PRF-fit source offset from KIC position	3.070 ± 0.676	4.54	1.716 ± 0.834	-2.546 ± 0.457
photometric centroid source offset	3.55 ± 2.12	1.68	-3.51 ± 2.12	0.51 ± 1.91

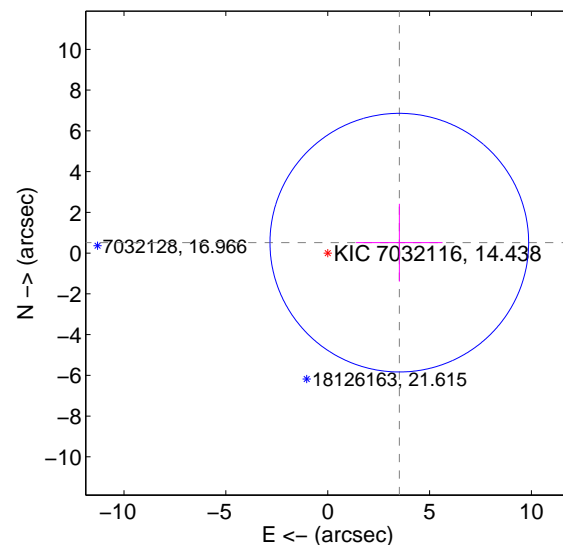
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

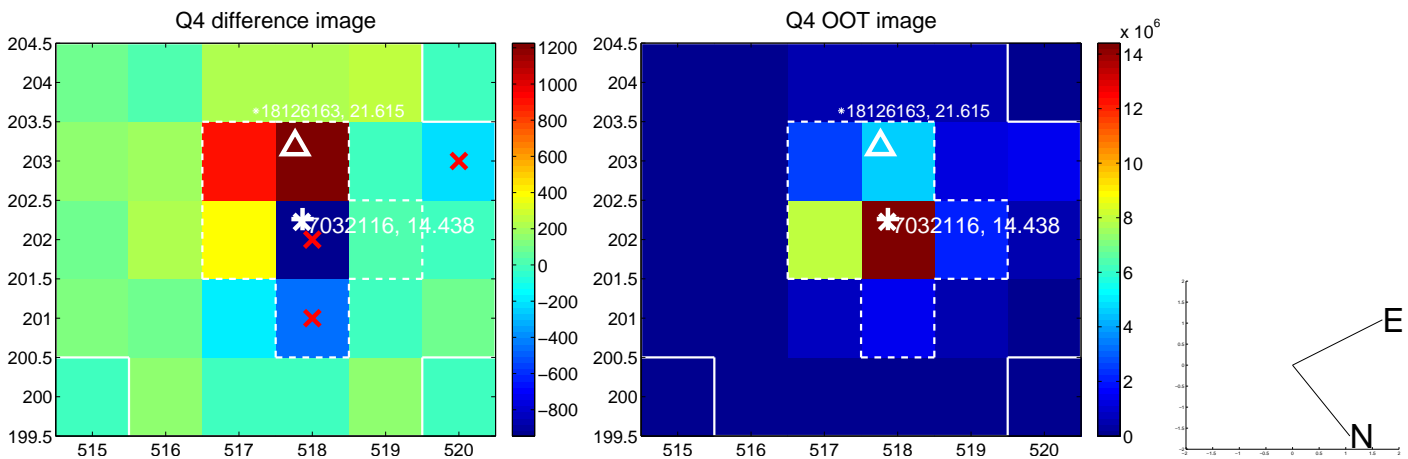
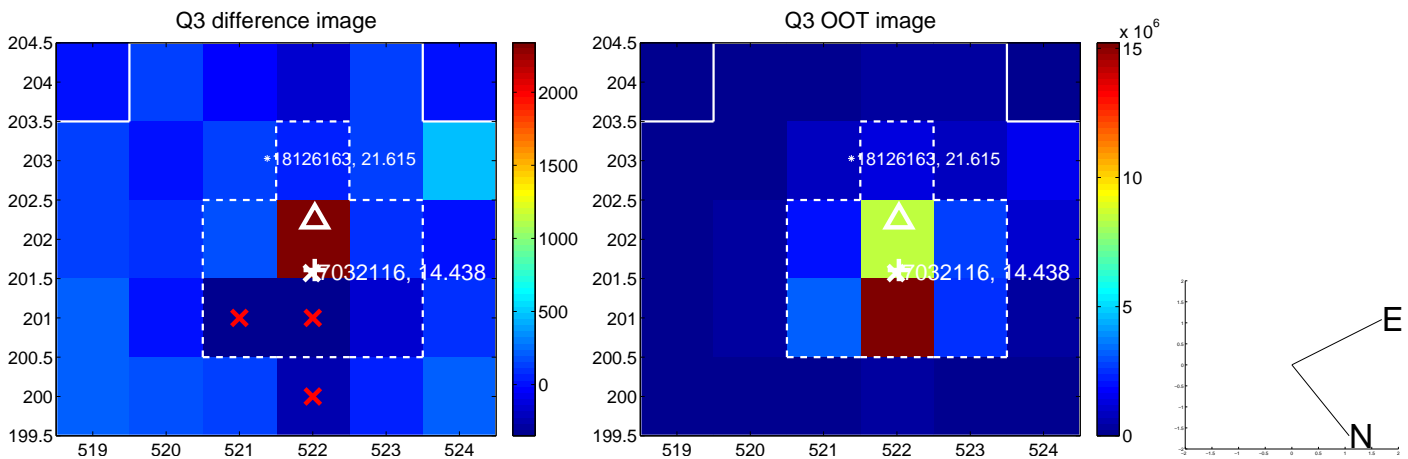
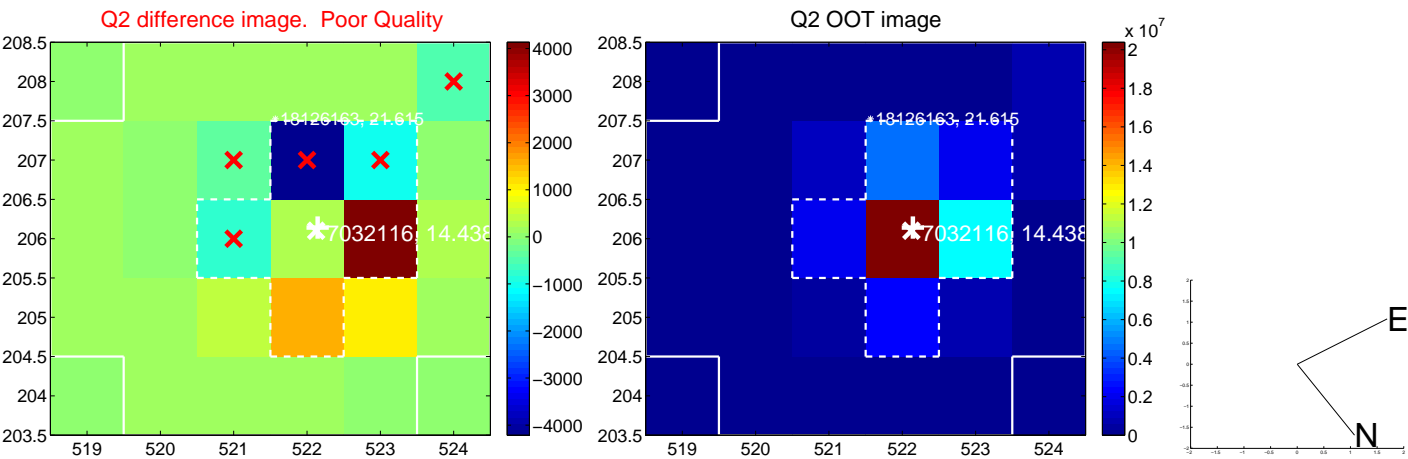
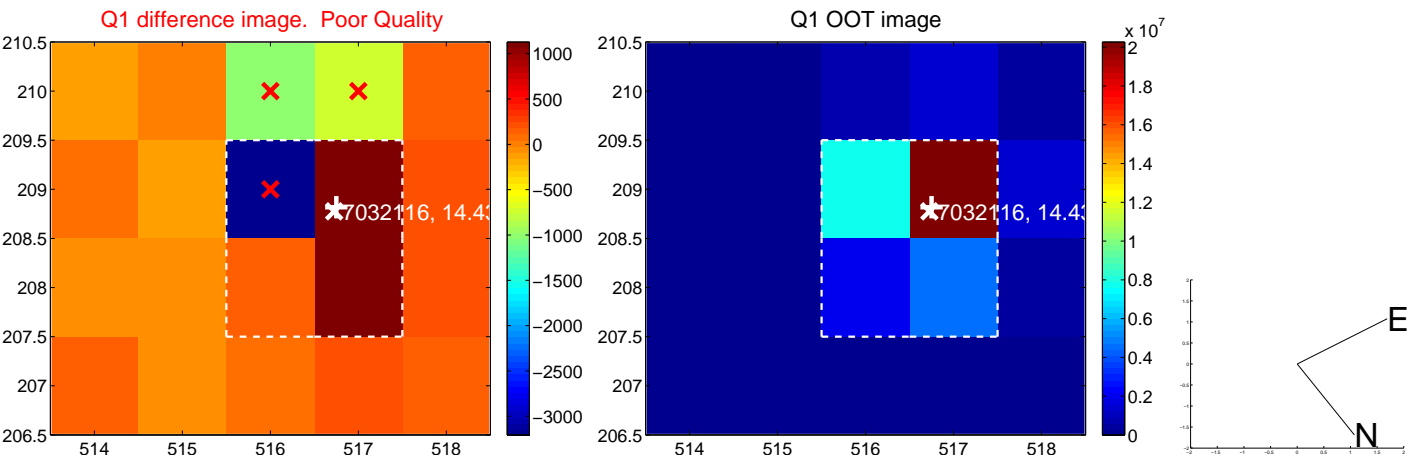


offset from photometric centroids

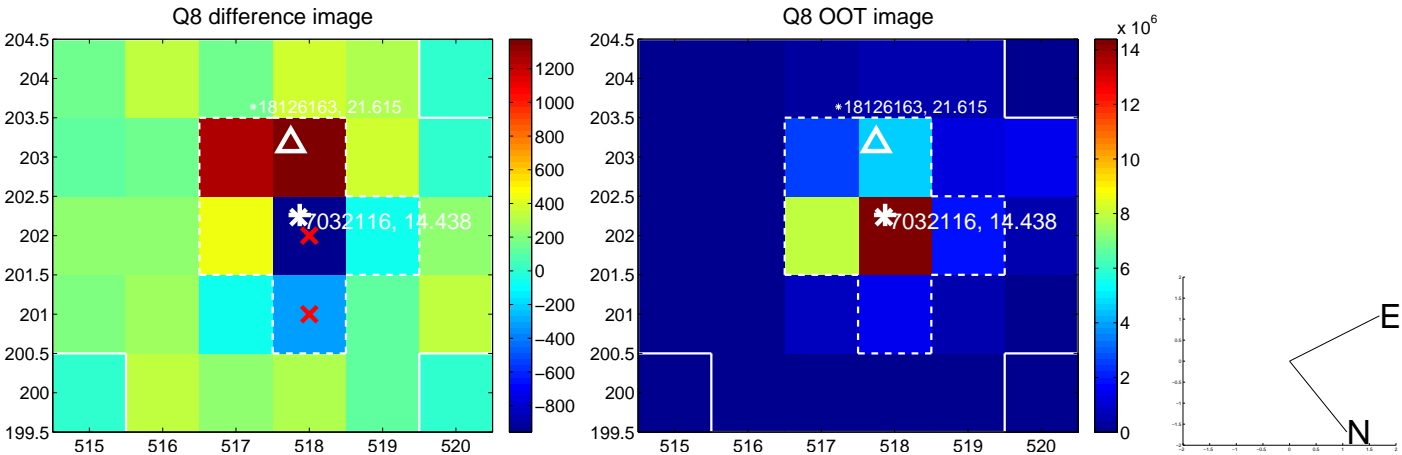
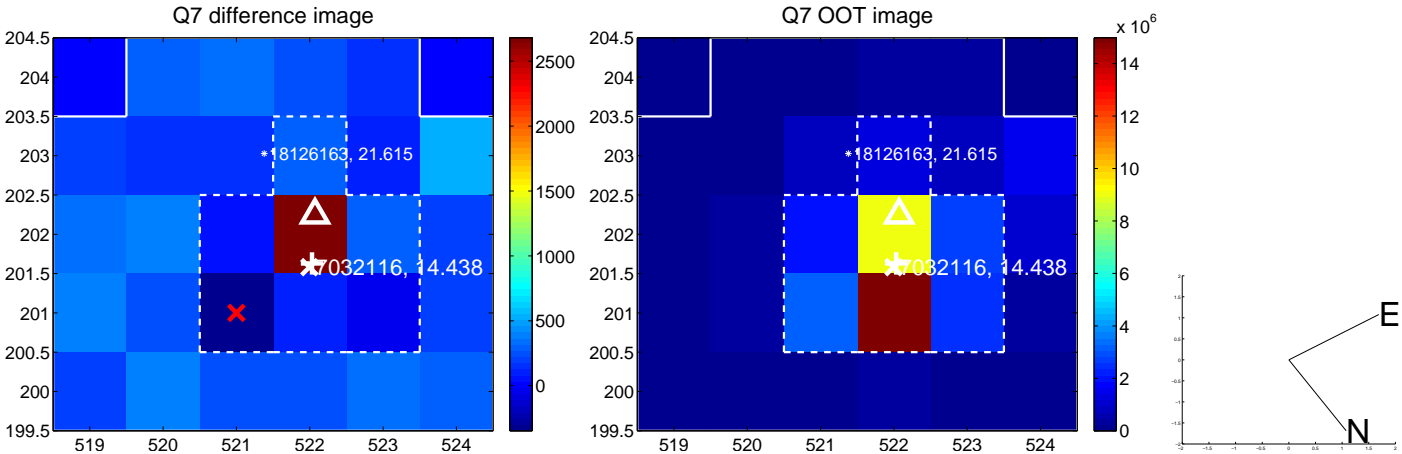
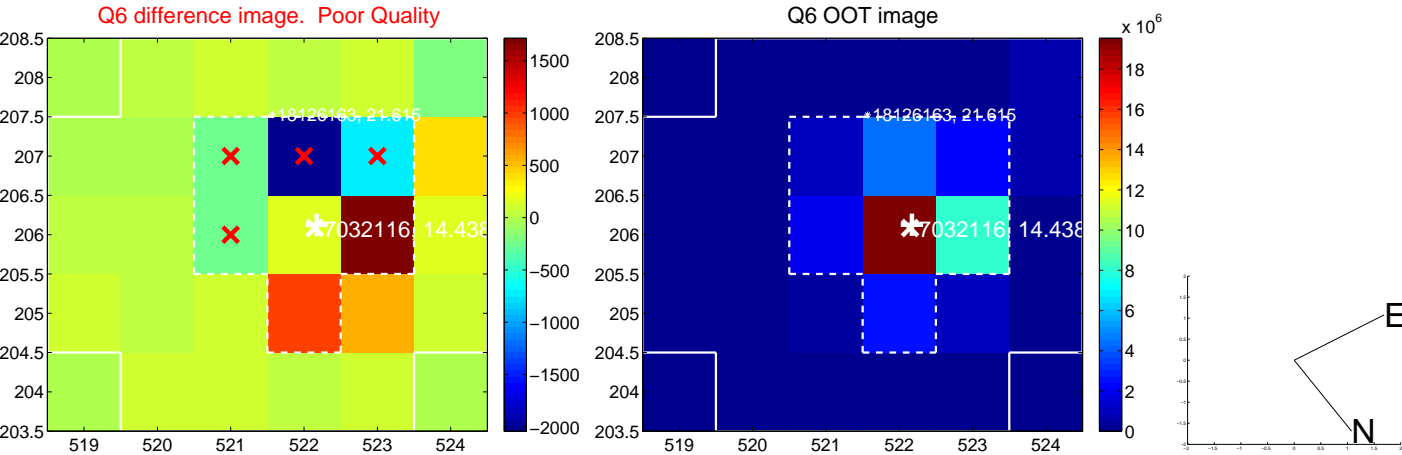
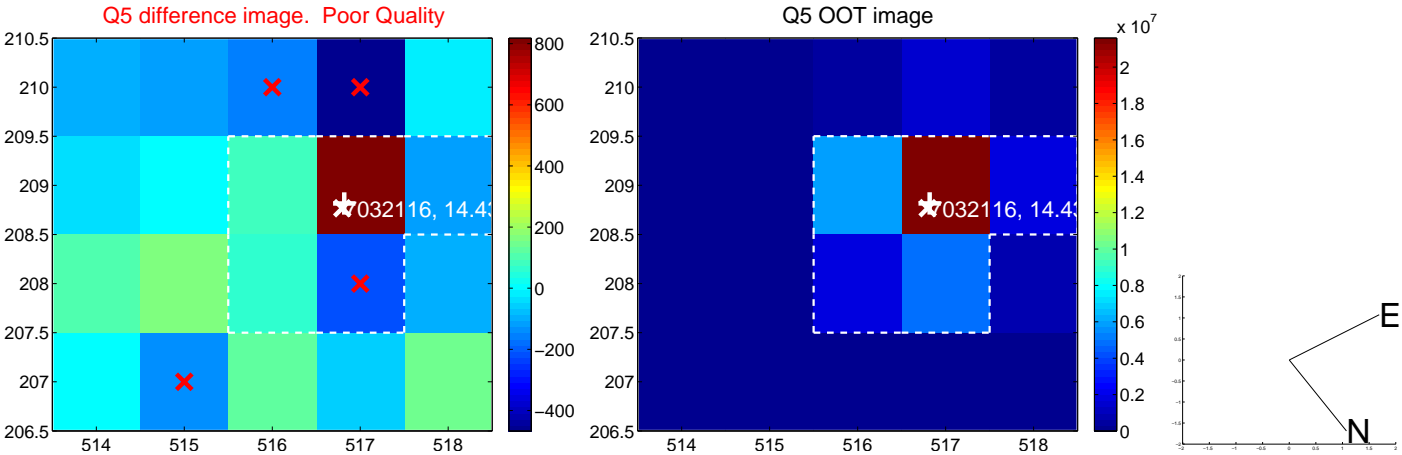


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

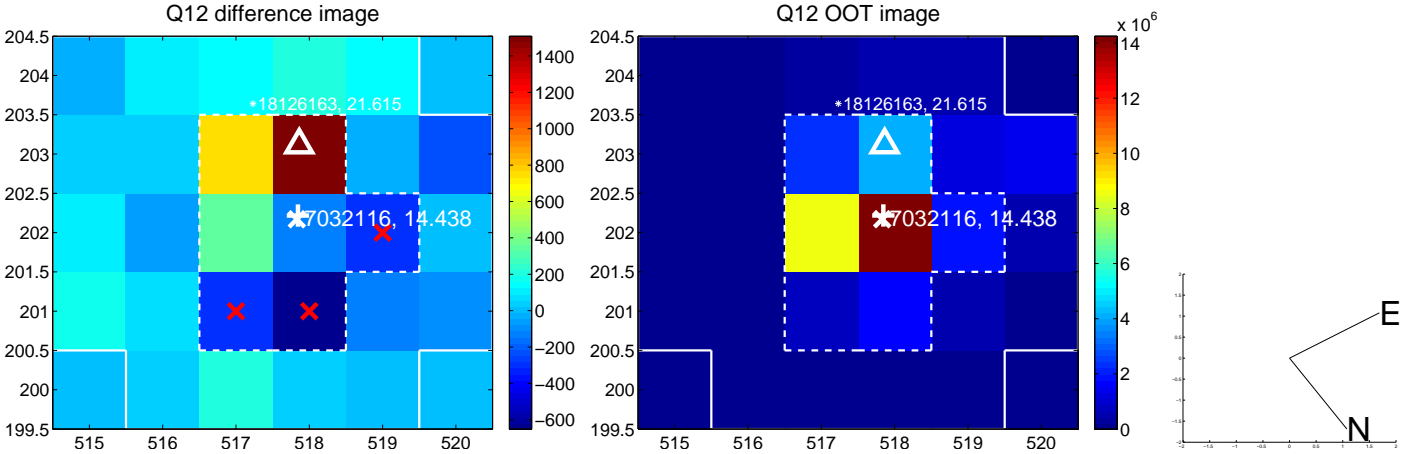
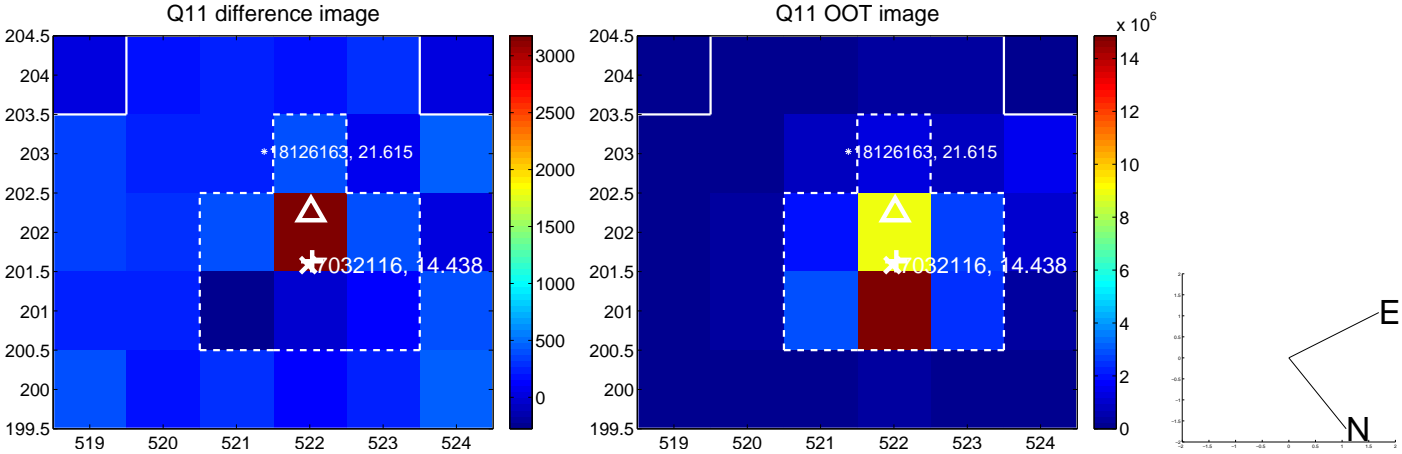
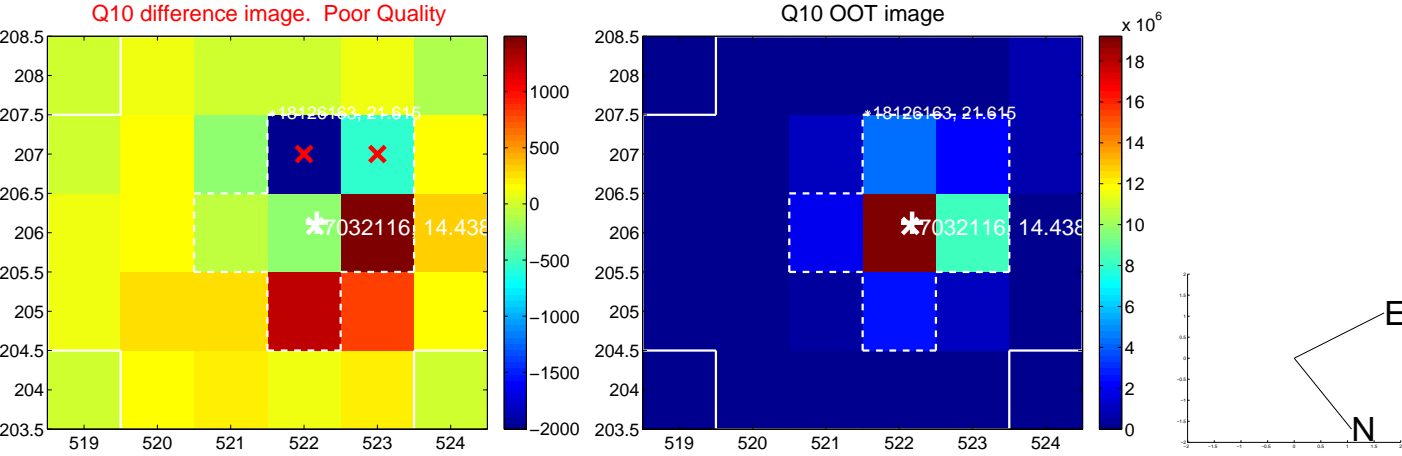
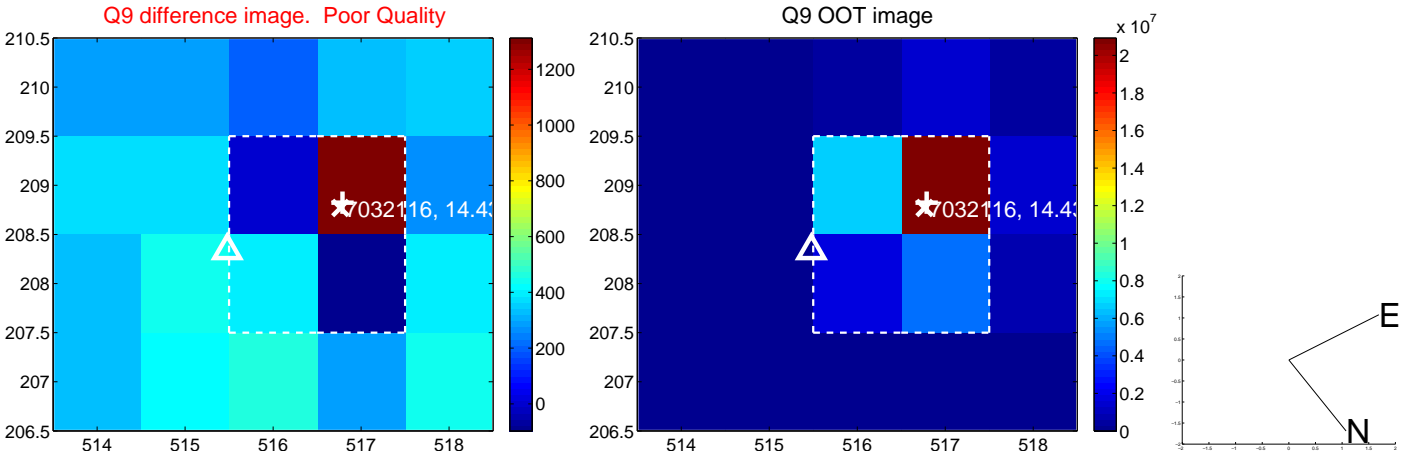
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



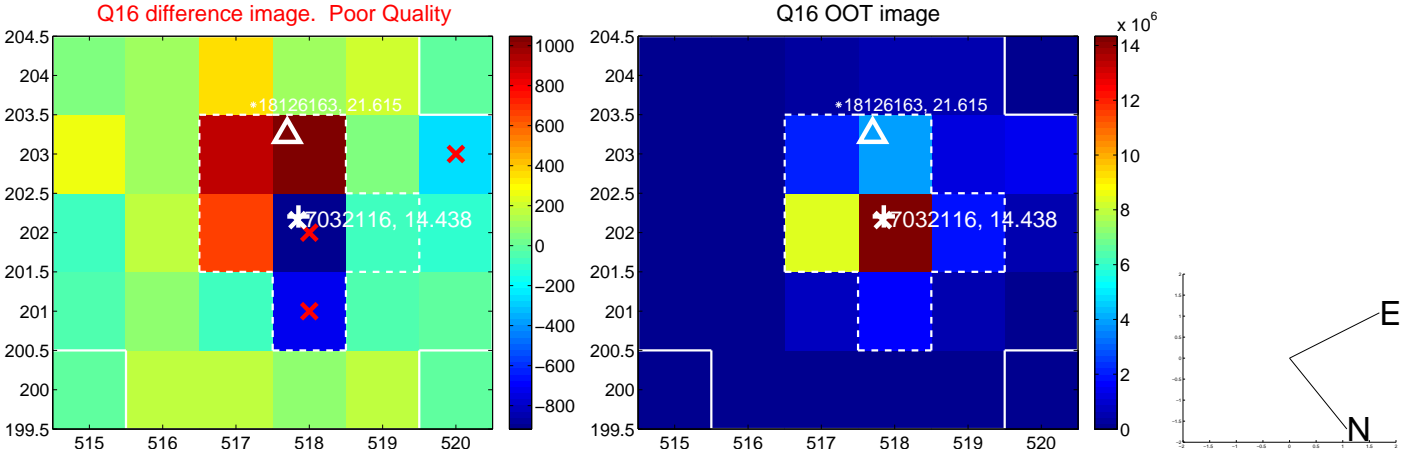
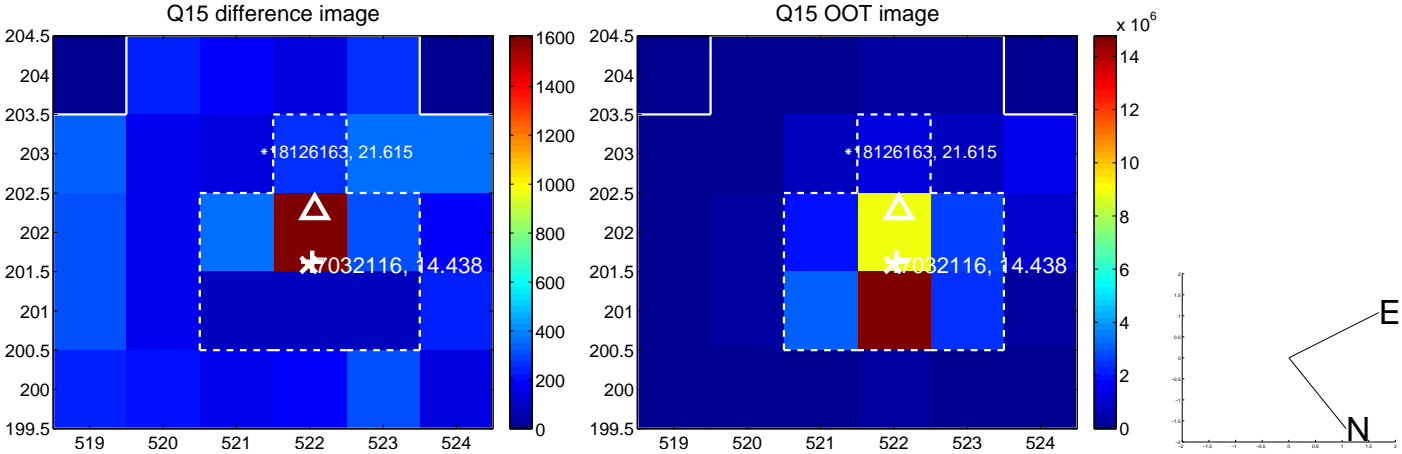
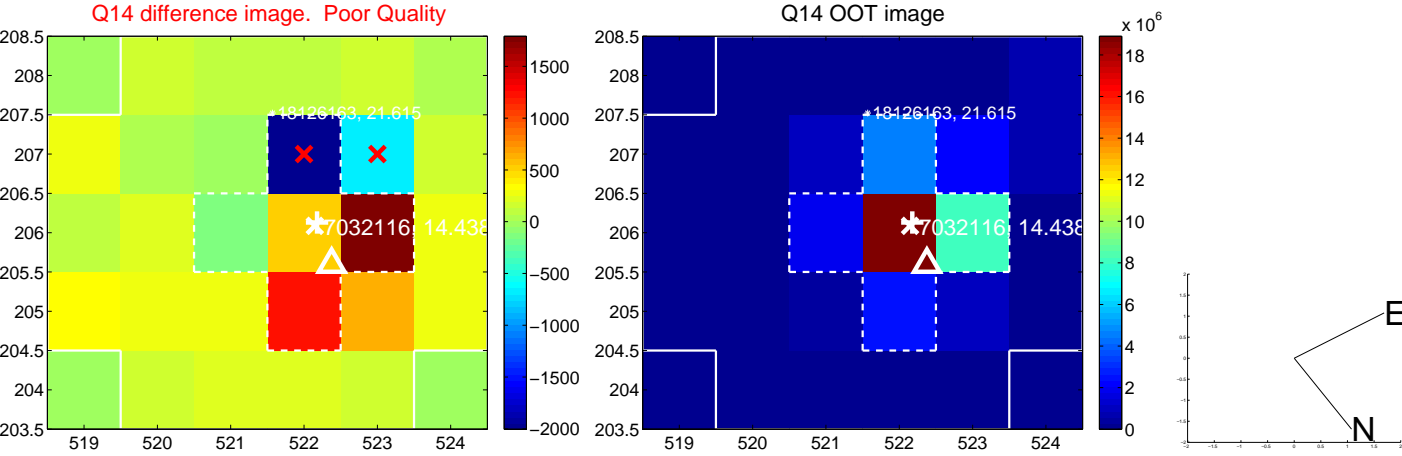
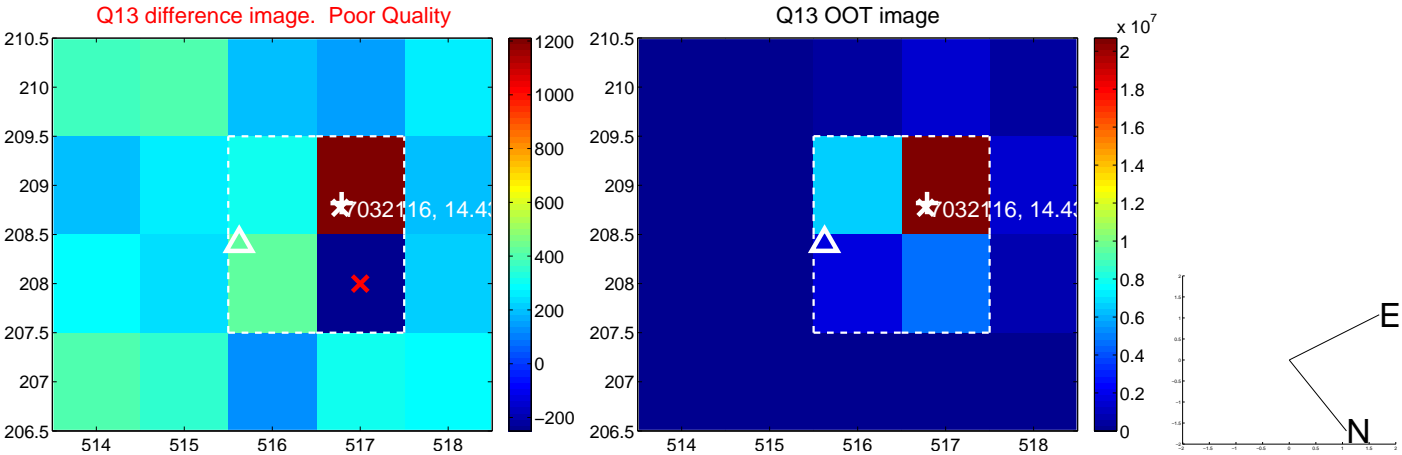
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



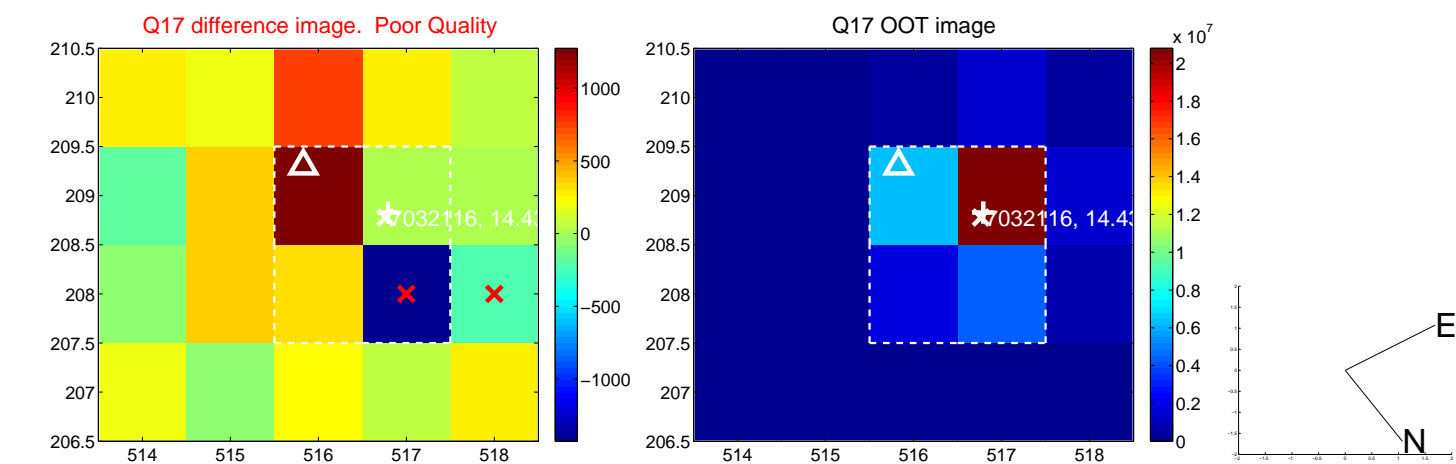
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



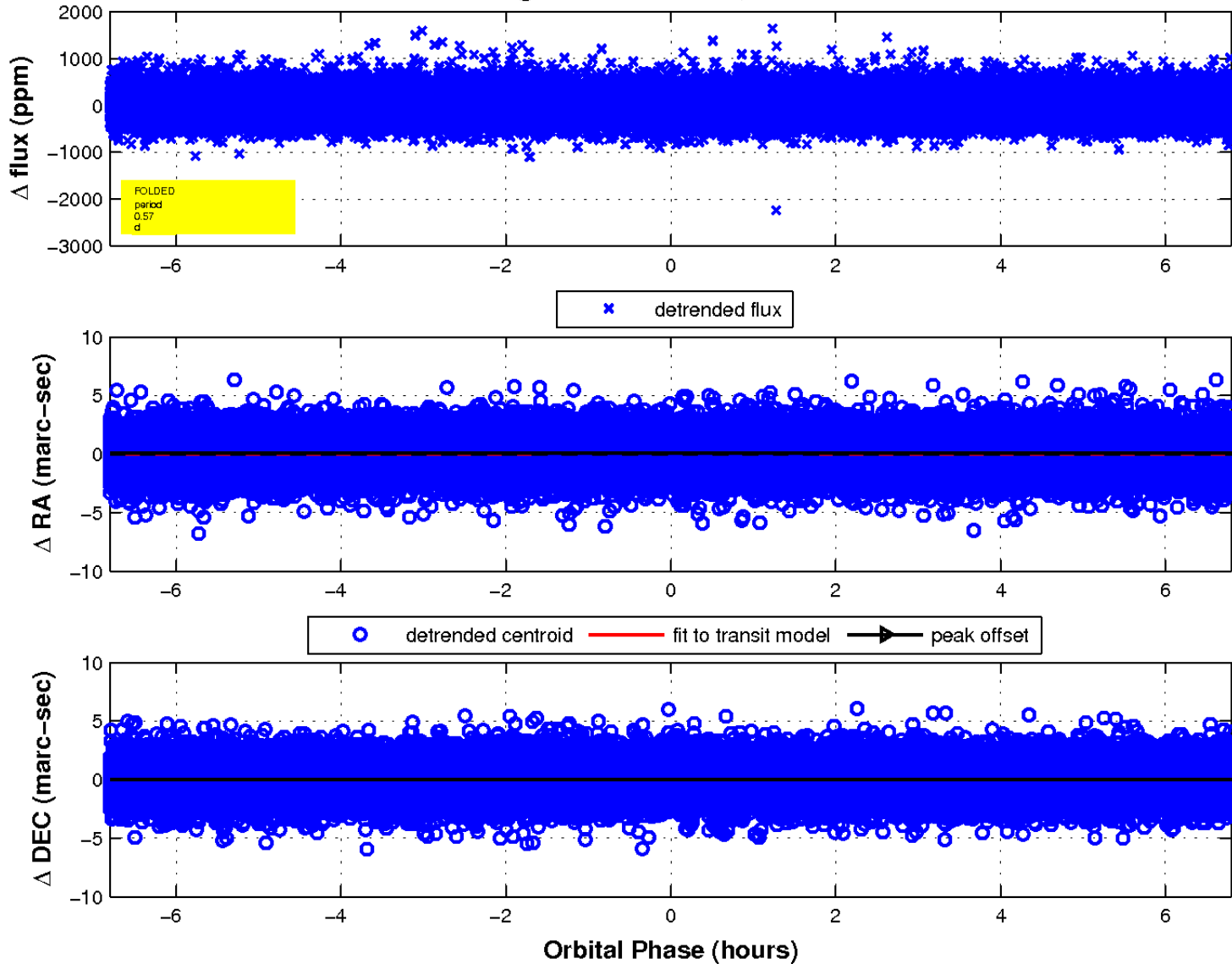
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

