

KIC 007117147

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})
007117147-01	OBS	7815.01	0.566802	131.808711	11.7	3.251	9.6	9.8	1.72	6194	0.59	21555.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007117147-01	OBS	FP	0.00	1	0	1	1	LPP_DV—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.

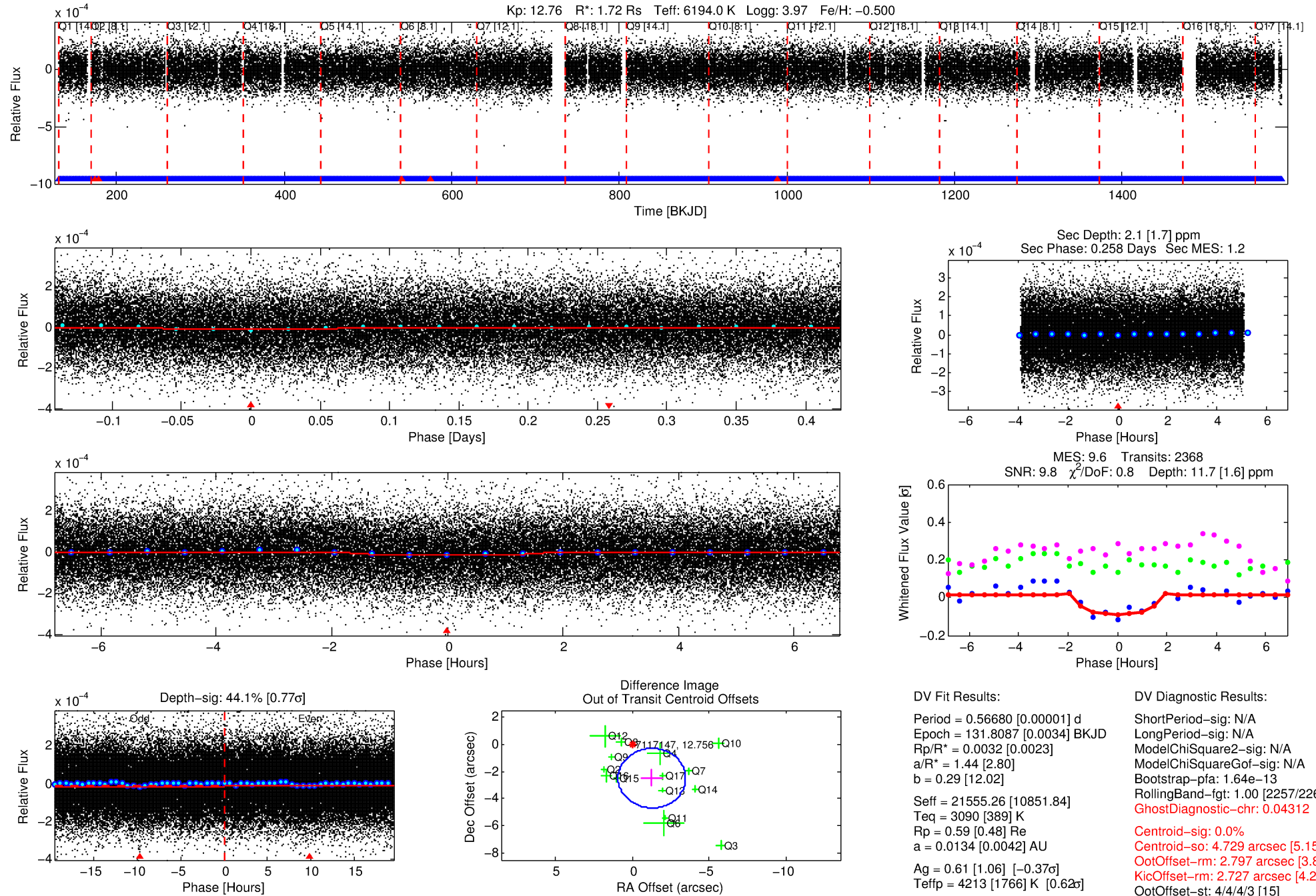
Ephemeris Match Information For 007117147-01

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
007117147-01	7117147	RR-Lyr-pri	7198959	1:1	722.6	167	70	7.86	12.75	51941.00	Direct-PRF	0	0.77	20.59

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: 7117147 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56680 [0.00001] d
Epoch = 131.8087 [0.0034] BKJD
Rp/R* = 0.0032 [0.0023]
a/R* = 1.44 [2.80]
b = 0.29 [12.02]
Seff = 21555.26 [10851.84]
Teq = 3090 [389] K
Rp = 0.59 [0.48] Re
a = 0.0134 [0.0042] AU
Ag = 0.61 [1.06] [-0.37 σ]
Teffp = 4213 [1766] K [0.62 σ]

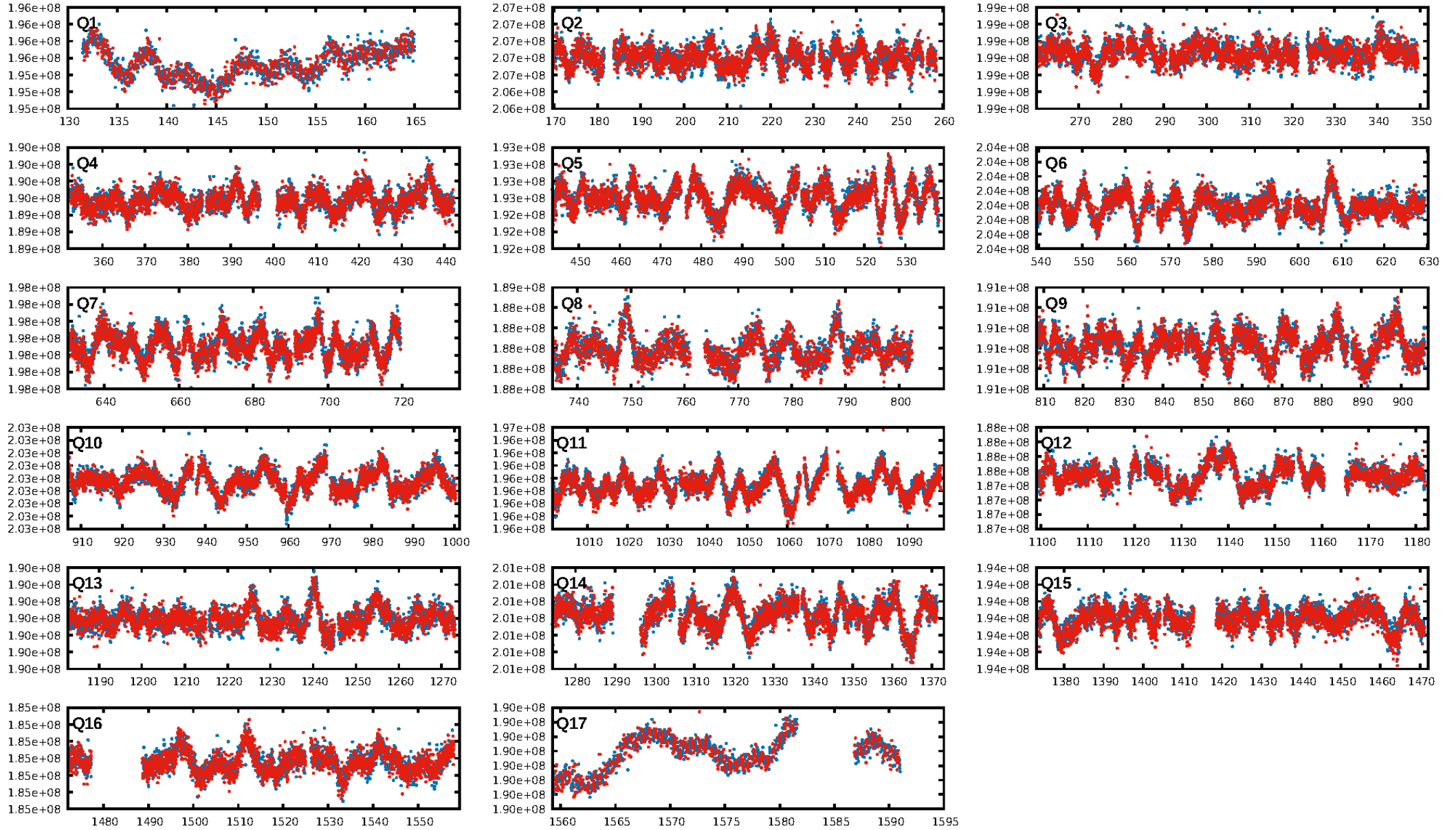
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.64e-13
RollingBand-fgt: 1.00 [2257/2262]
GhostDiagnostic-chr: 0.04312
Centroid-sig: 0.0%
Centroid-so: 4.729 arcsec [5.15 σ]
OotOffset-rm: 2.797 arcsec [3.84 σ]
KicOffset-rm: 2.727 arcsec [4.20 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.20 [3/15]
DiffImageOverlap-fno: 1.00 [17/17]

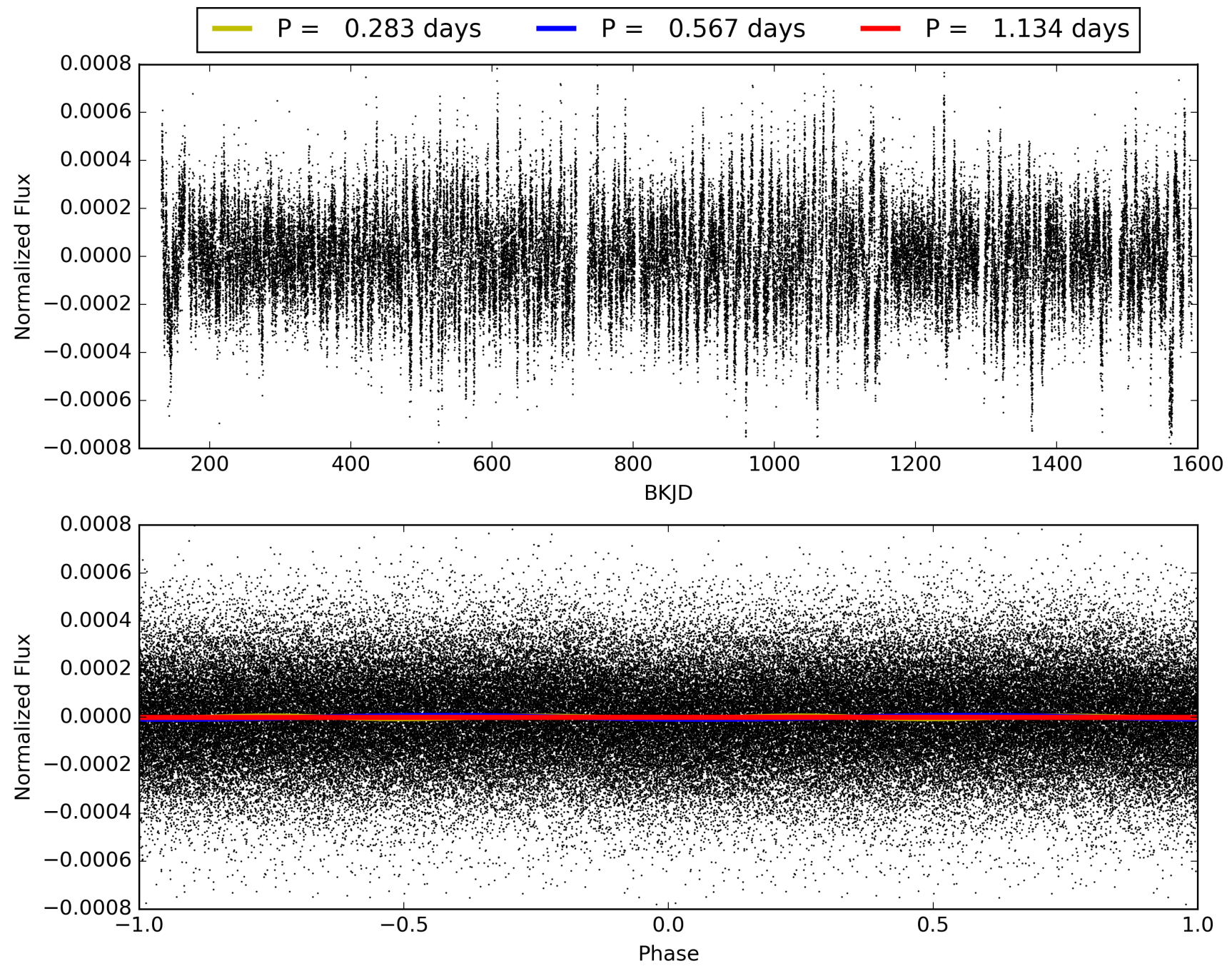
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:39:57 Z

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

TCE 007117147-01, PDC Light Curves

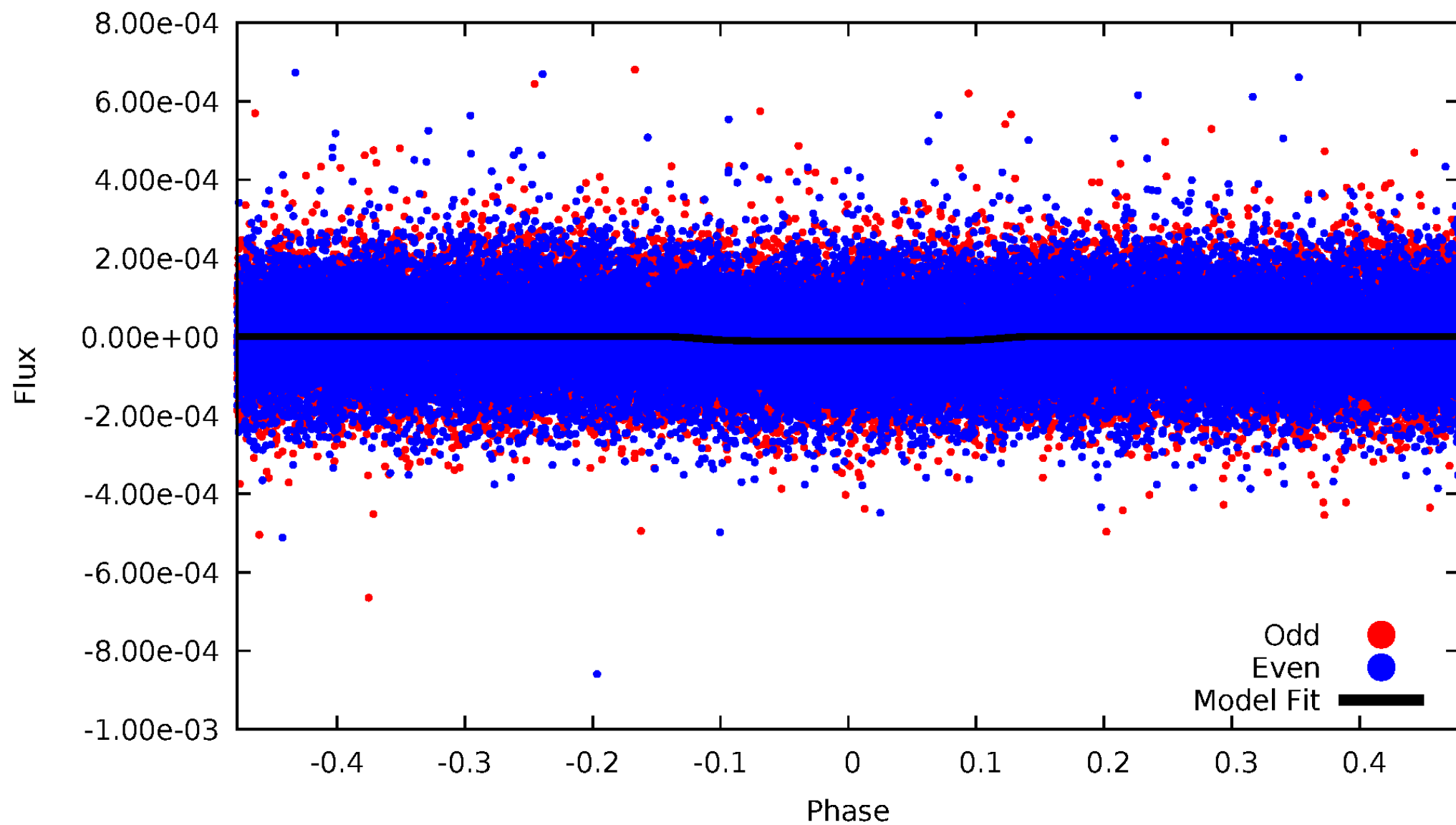


TCE 007117147-01



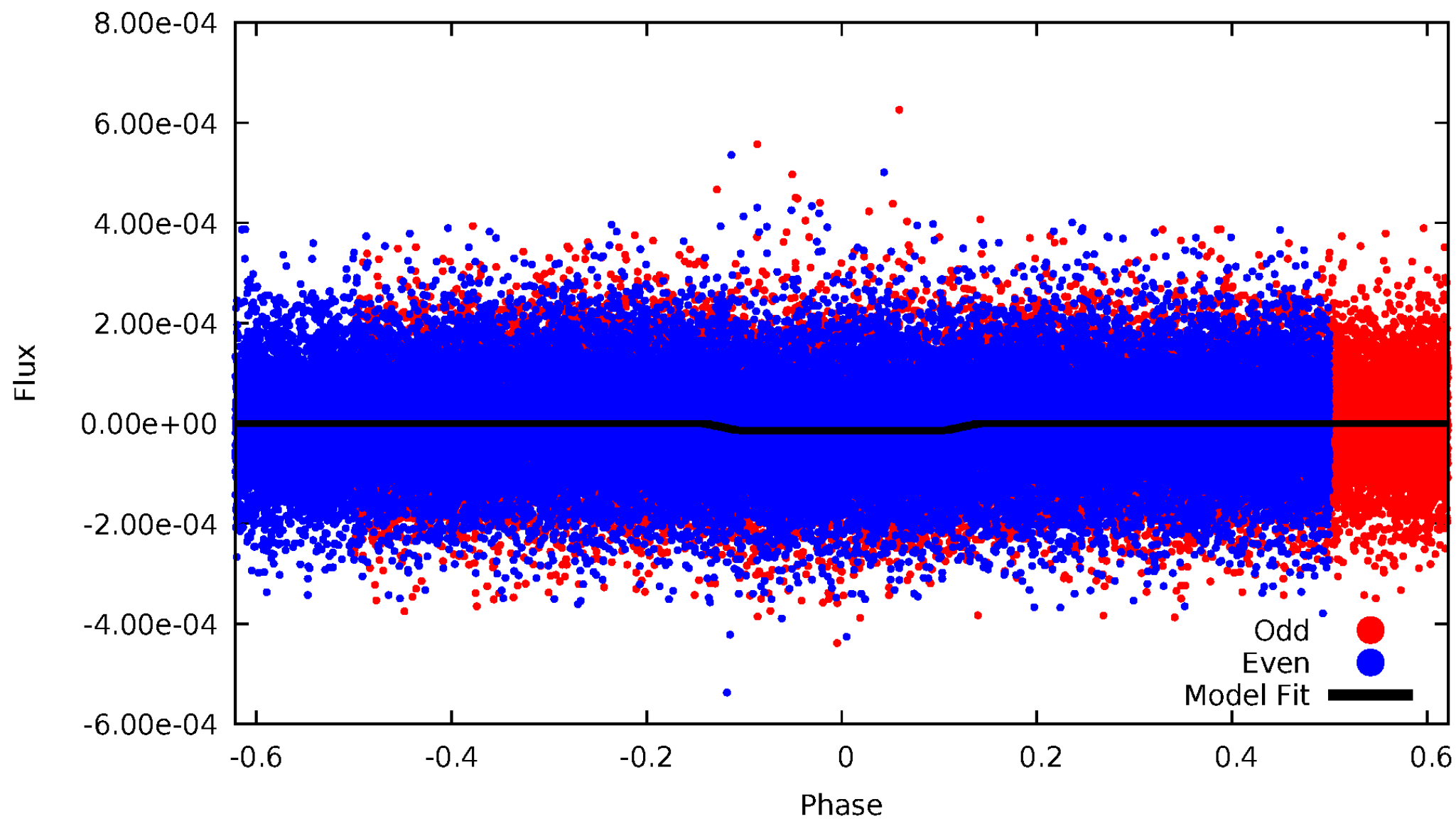
DV Odd/Even

TCE 007117147-01



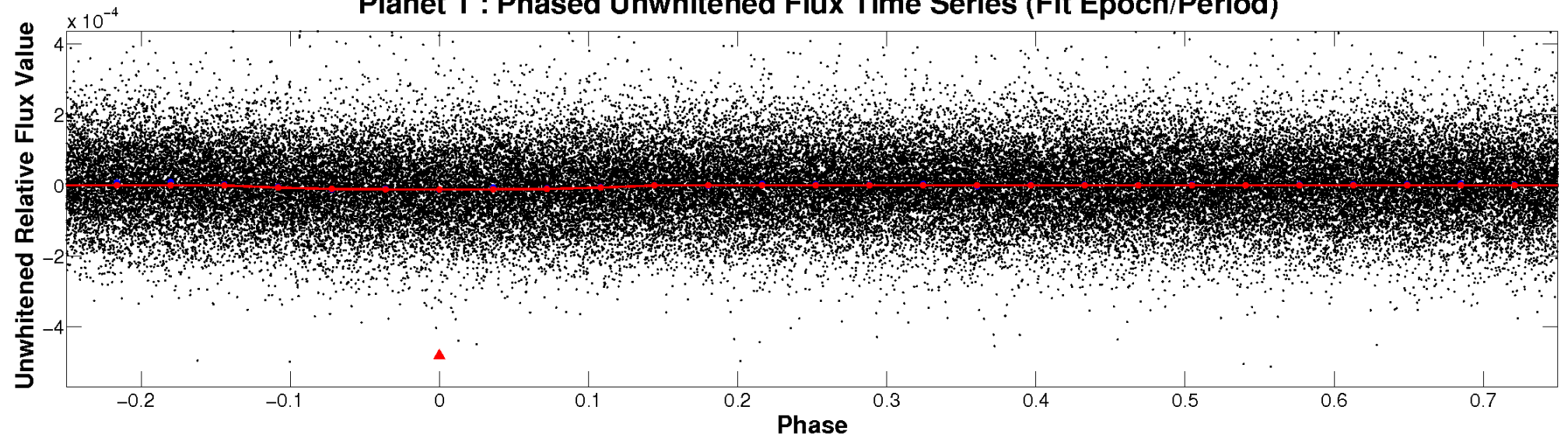
ALT Odd/Even

TCE 007117147-01

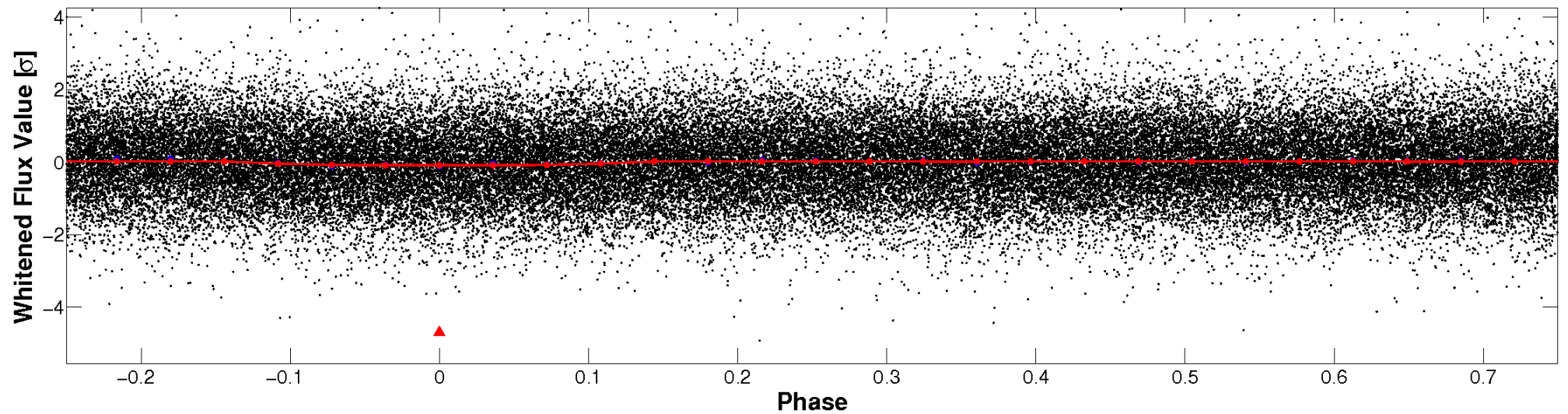


Non-Whitened Vs. Whitened Light Curve

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

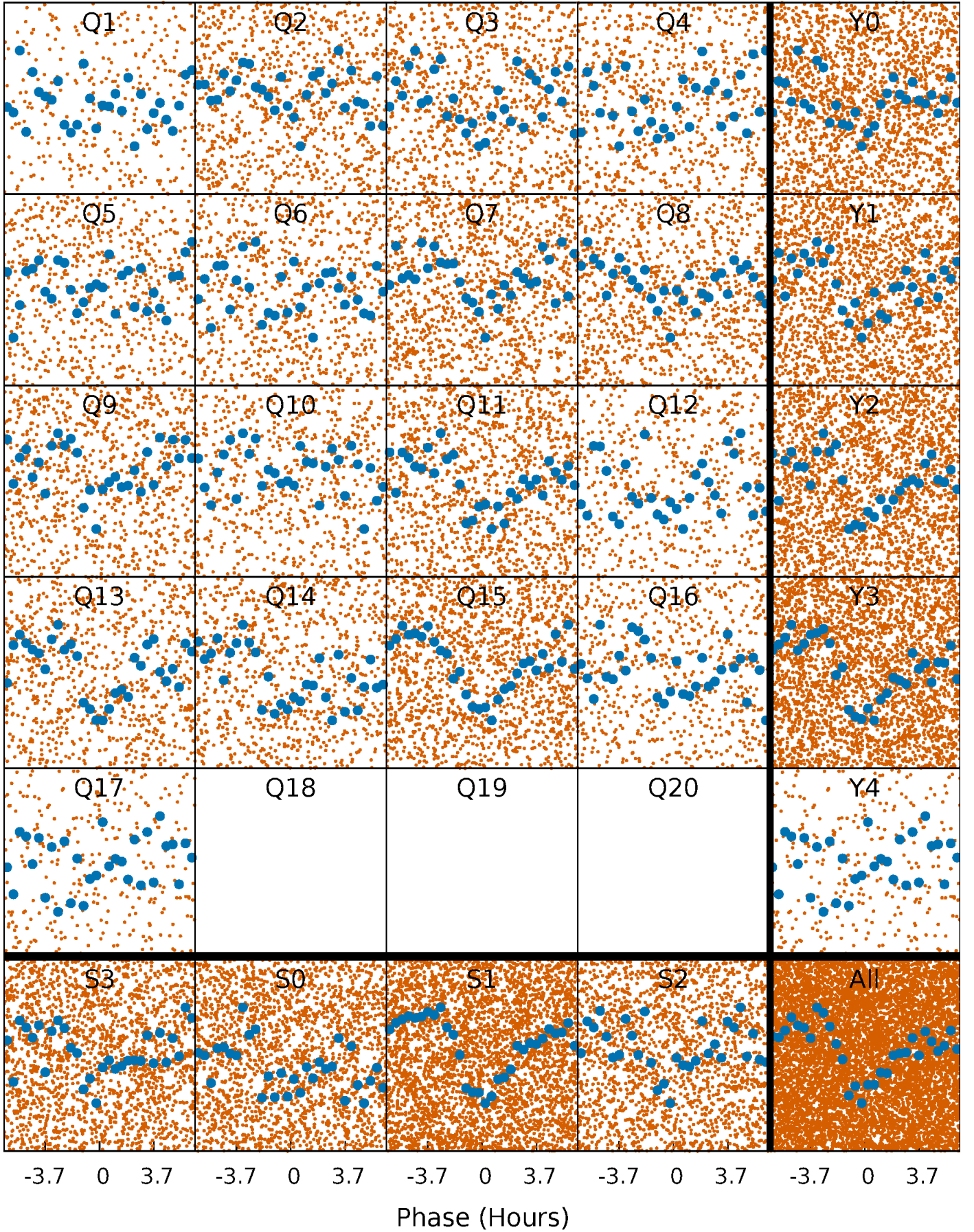


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



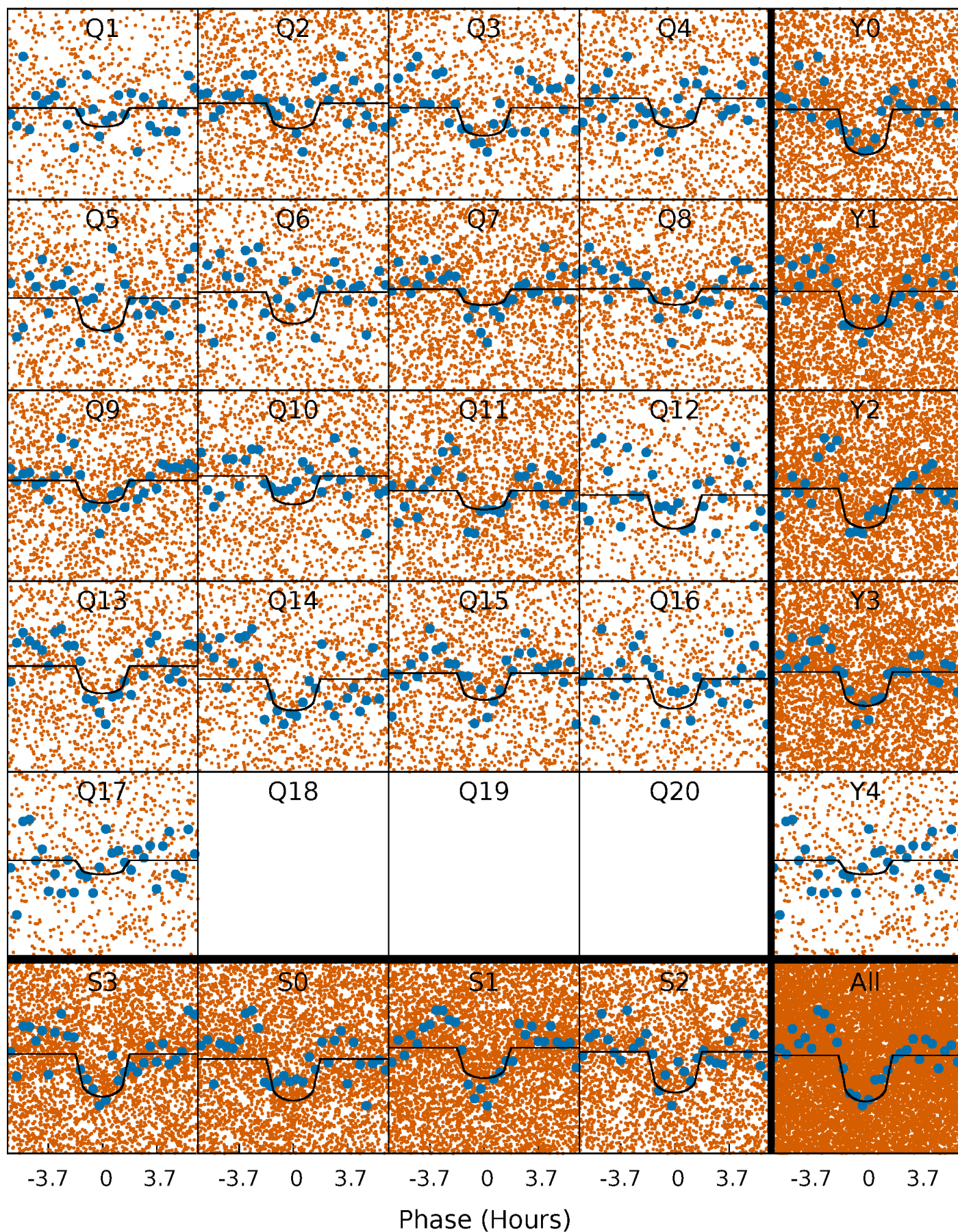
PDC Quarter-Phased Transit Curves

TCE 007117147-01 P= 0.566802 Days $T_0=131.808711$ (BKJD)



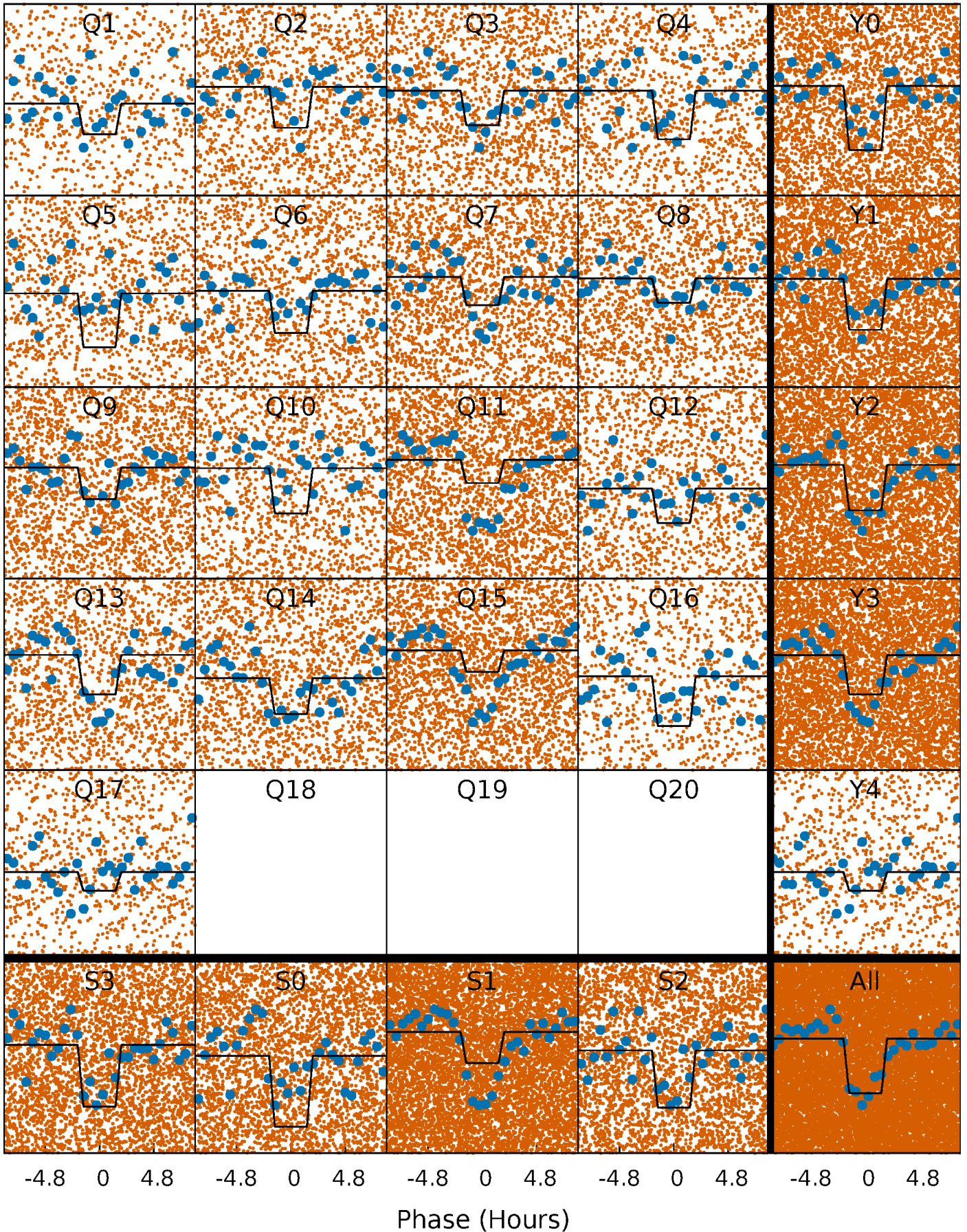
DV Quarter-Phased Transit Curves

TCE 007117147-01 P= 0.566802 Days $T_0=131.808711$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

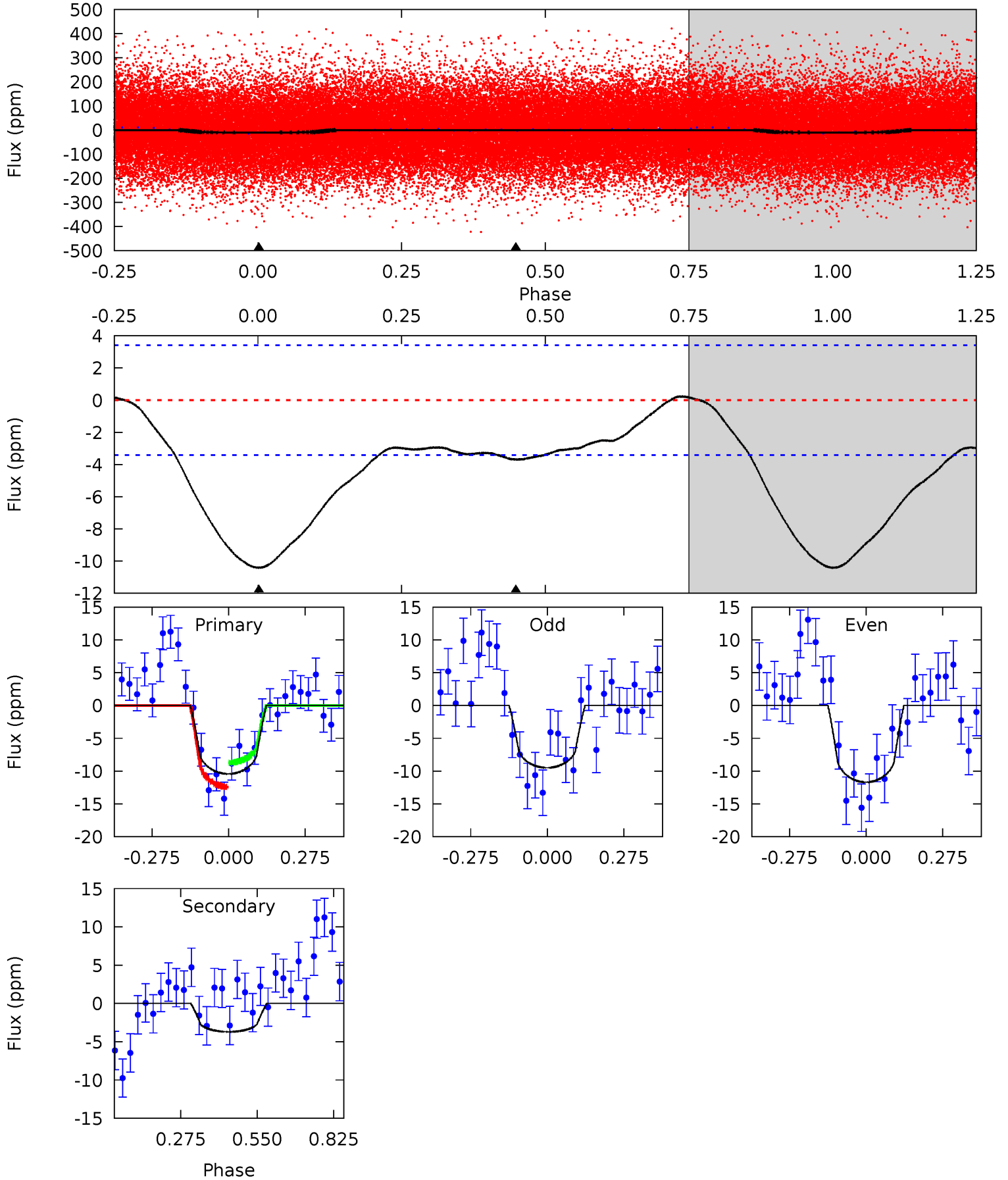
TCE 007117147-01 P= 0.566814 Days $T_0=131.796684$ (BKJD)



DV Model-Shift Uniqueness Test

007117147-01, P = 0.566802 Days, E = 131.241909 Days

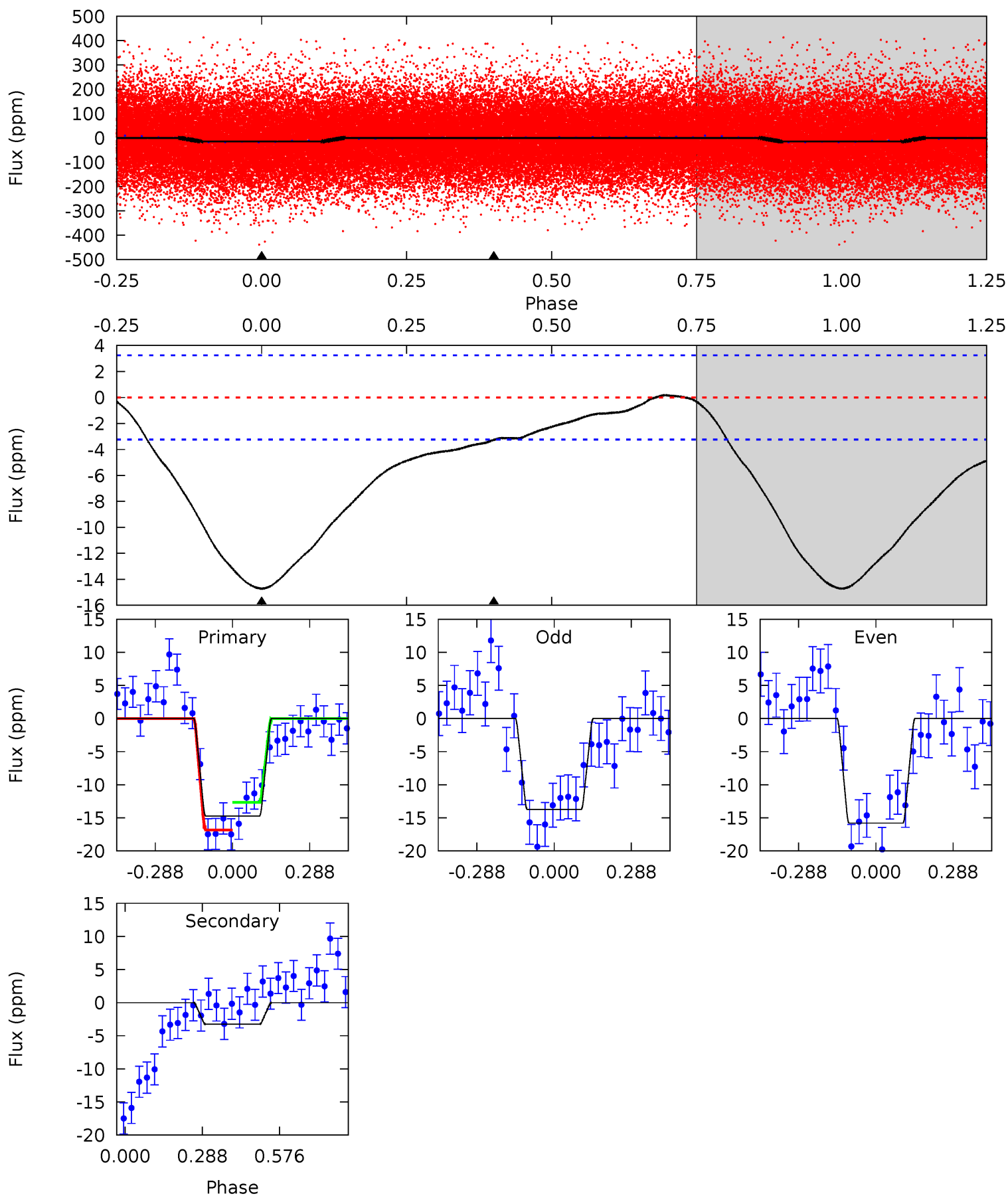
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	4.72	0	0	4.35	1.09	0.51	13.3	13.3	4.72	4.72	1.40	1.03	0.02	2.41



Alt Model-Shift Uniqueness Test

007117147-01, P = 0.566814 Days, E = 131.229870 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	4.37	0	0	4.34	1.06	0.29	19.7	19.7	4.37	4.37	1.37	0.93	0.01	2.73



Stellar Parameters For KIC 007117147

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6194^{+167}_{-167}	$3.971^{+0.287}_{-0.123}$	$-0.500^{+0.350}_{-0.250}$	$1.718^{+0.328}_{-0.563}$	$1.008^{+0.165}_{-0.135}$	$0.280^{+0.506}_{-0.099}$
	+3%/-3%	+7%/-3%	+70%/-50%	+19%/-33%	+16%/-13%	+181%/-35%
Source	PHO1	FLK73	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 007117147-01 / KOI 7815.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$0.61^{+0.43}_{-0.38}$	4290^{+273}_{-380}	4396^{+3117}_{-1612}	$0.981^{+5.375}_{-0.645}$
Alt.	-3 ± 1	$0.72^{+0.46}_{-0.39}$	4271^{+280}_{-370}	3850^{+2102}_{-6951}	$0.619^{+2.381}_{-0.396}$

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 $A_{obs} \gg 1.0$

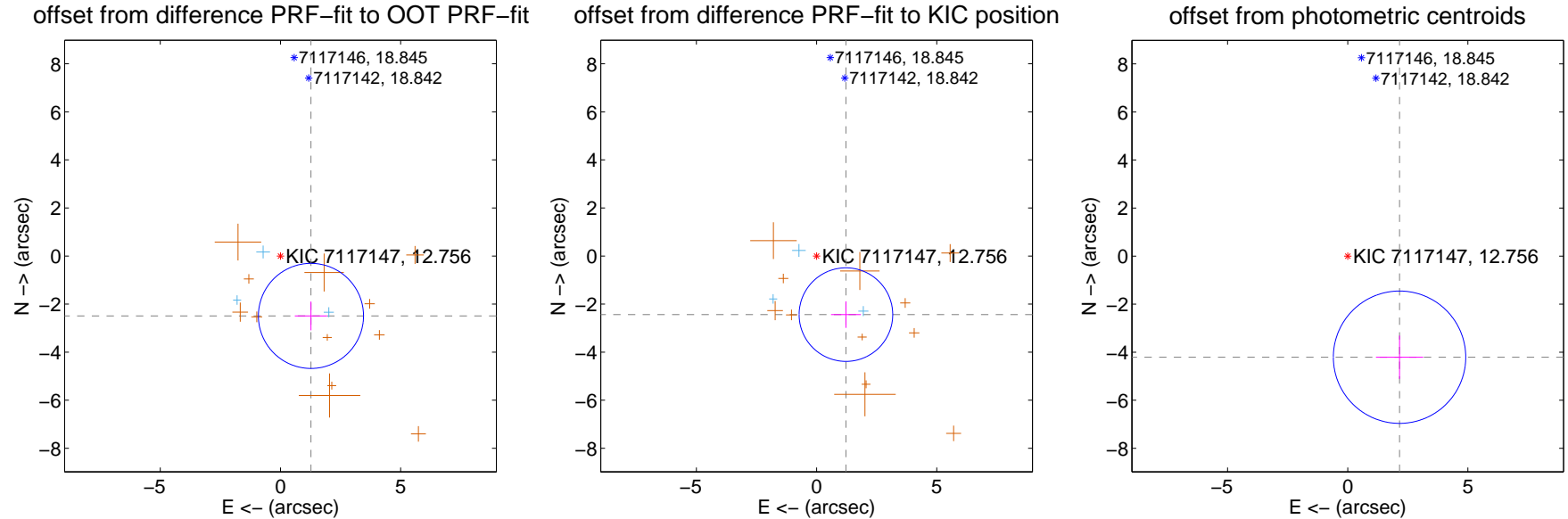
DV Centroid Data

Supplemental centroid analysis for 007117147-01. Kepler magnitude: 12.76. Transit SNR 9.83

There are 3 quarters with good PRF difference image offsets

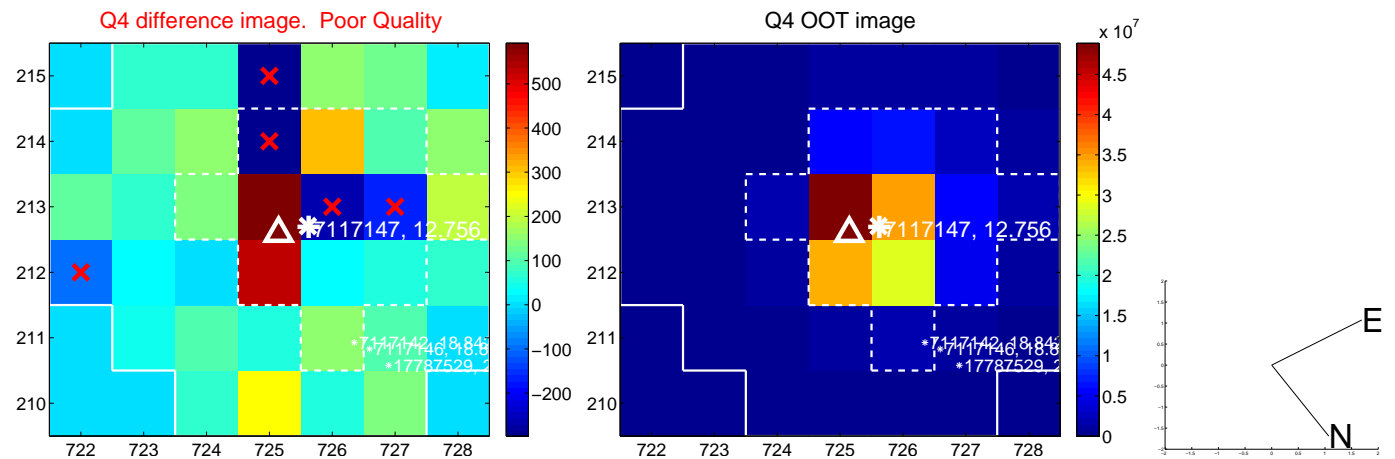
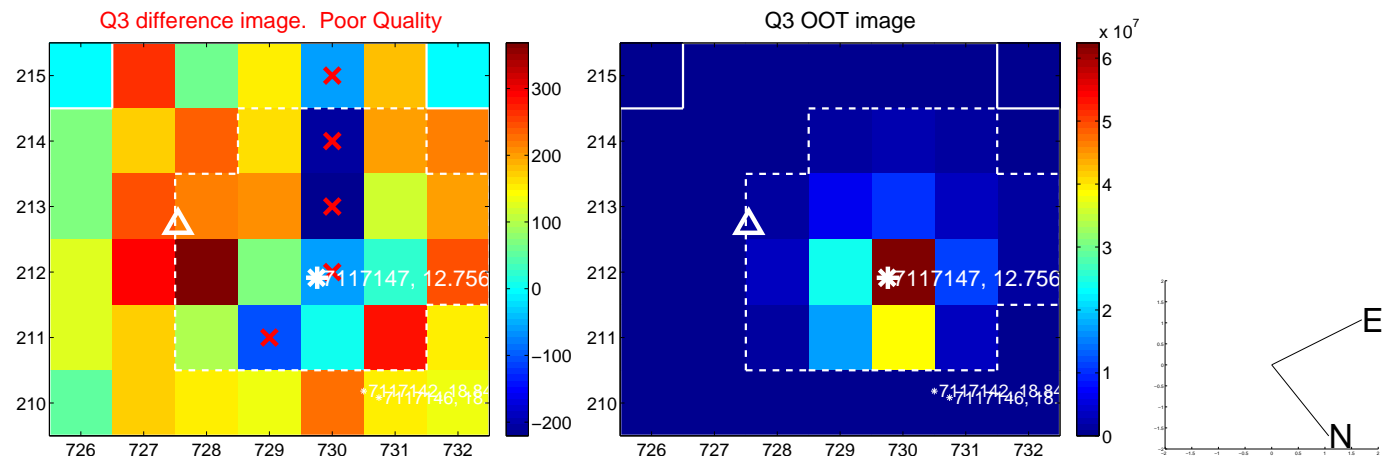
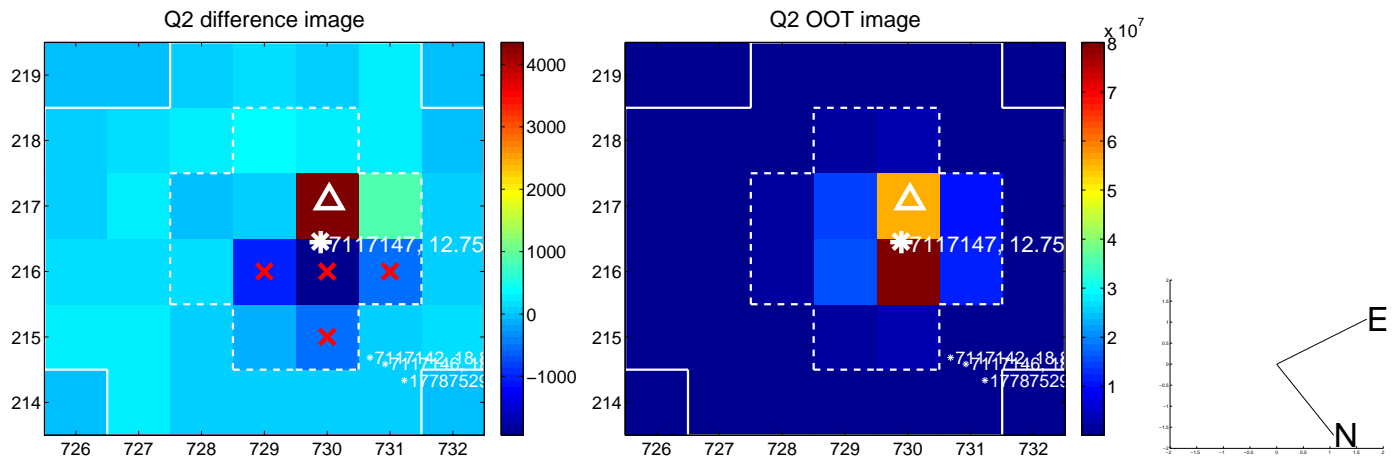
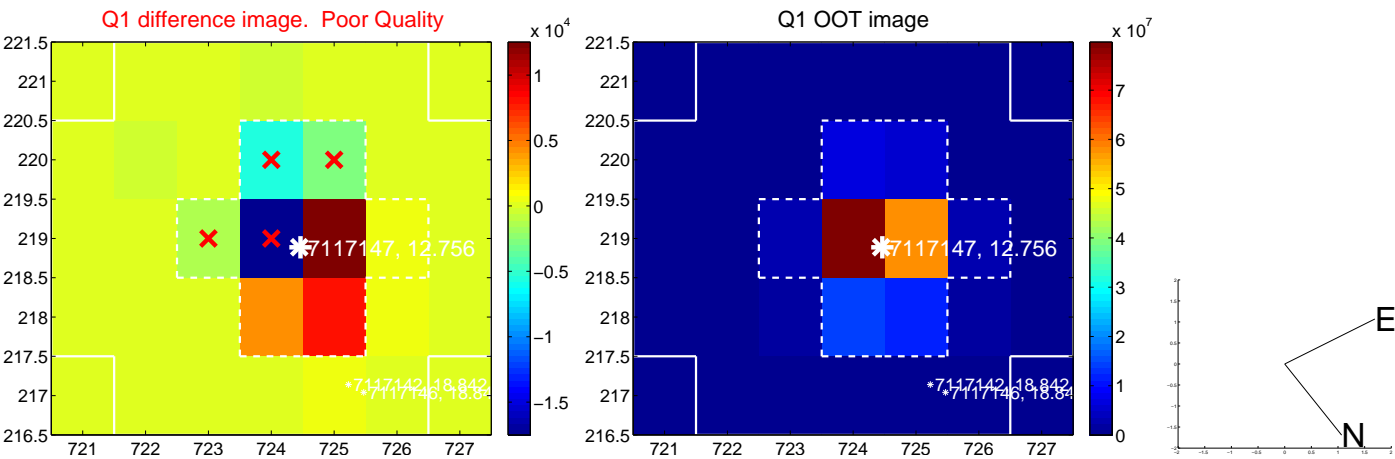
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.797 ± 0.729	3.84	-1.269 ± 0.670	-2.492 ± 0.599
PRF-fit source offset from KIC position	2.727 ± 0.649	4.20	-1.221 ± 0.620	-2.438 ± 0.553
photometric centroid source offset	4.73 ± 0.92	5.15	-2.16 ± 0.98	-4.21 ± 0.90

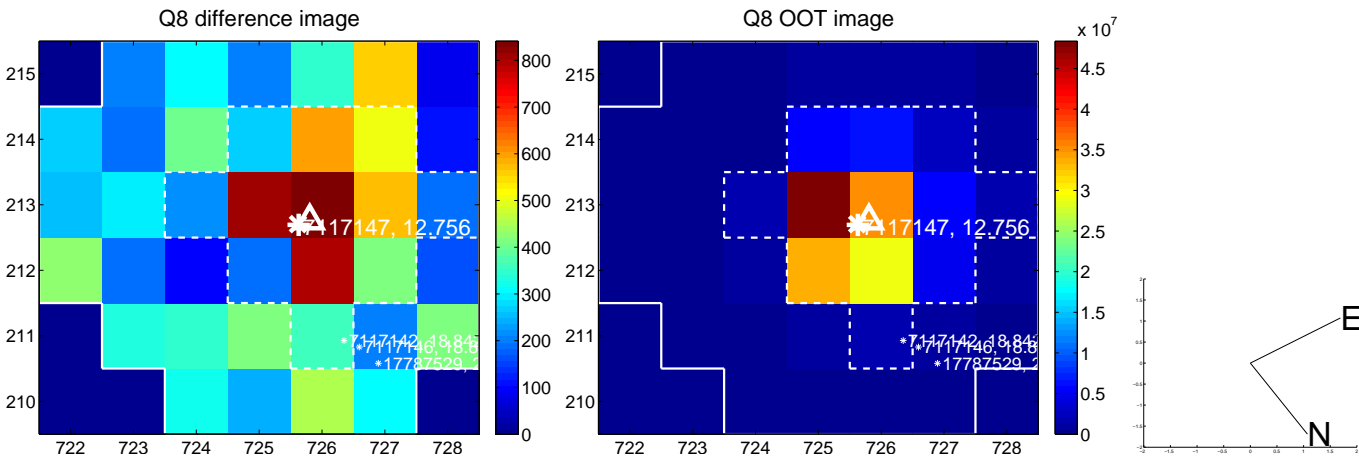
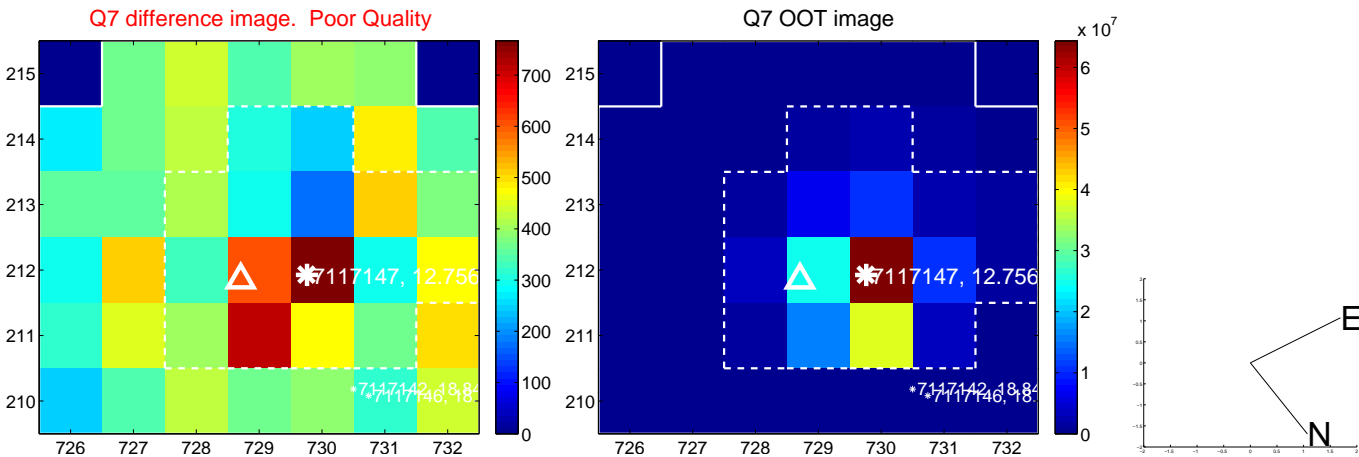
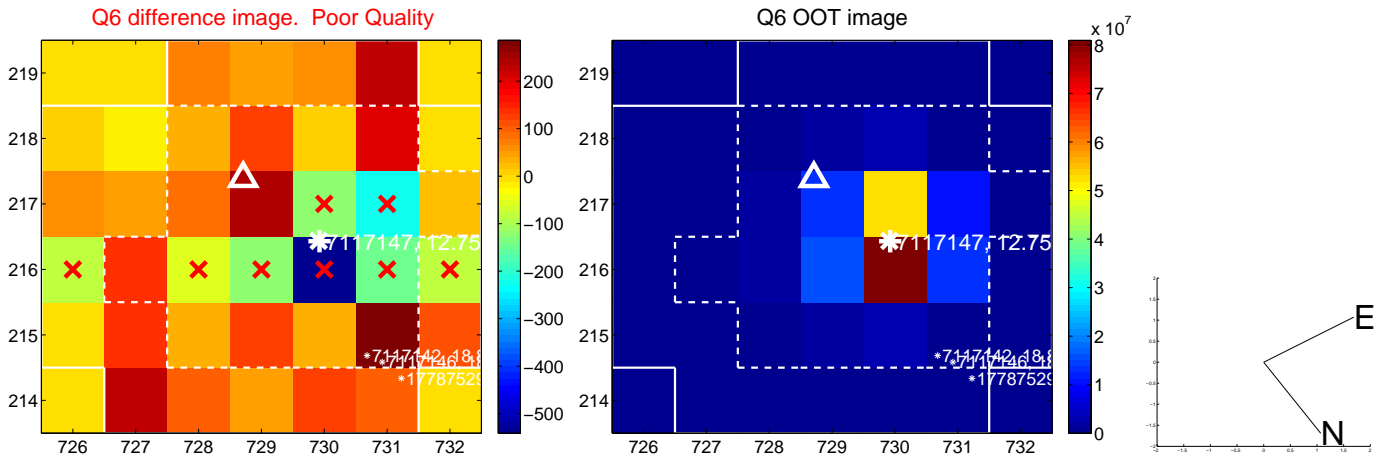
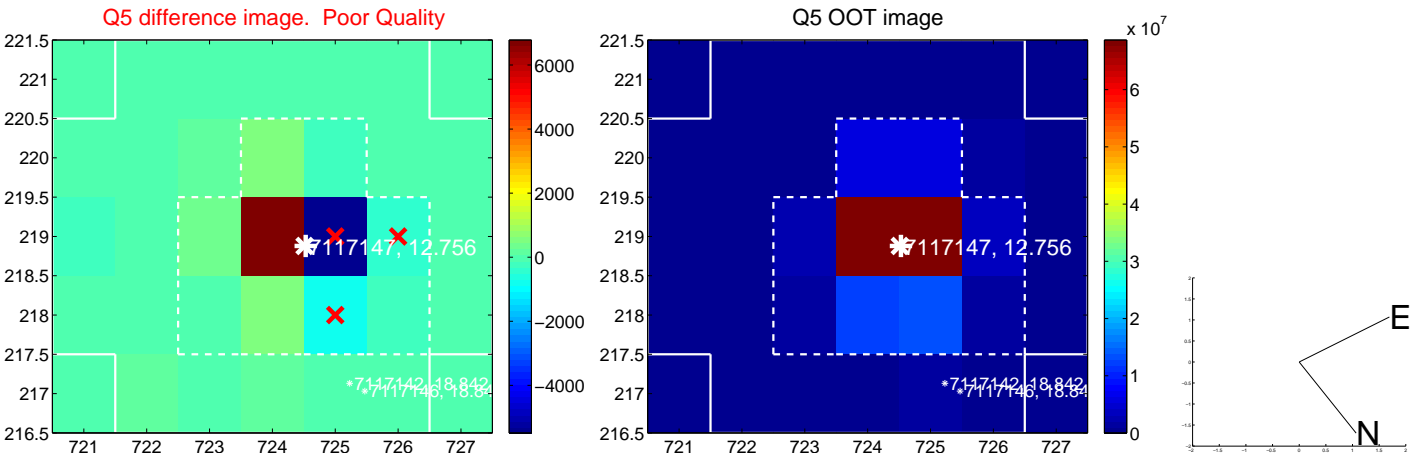


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

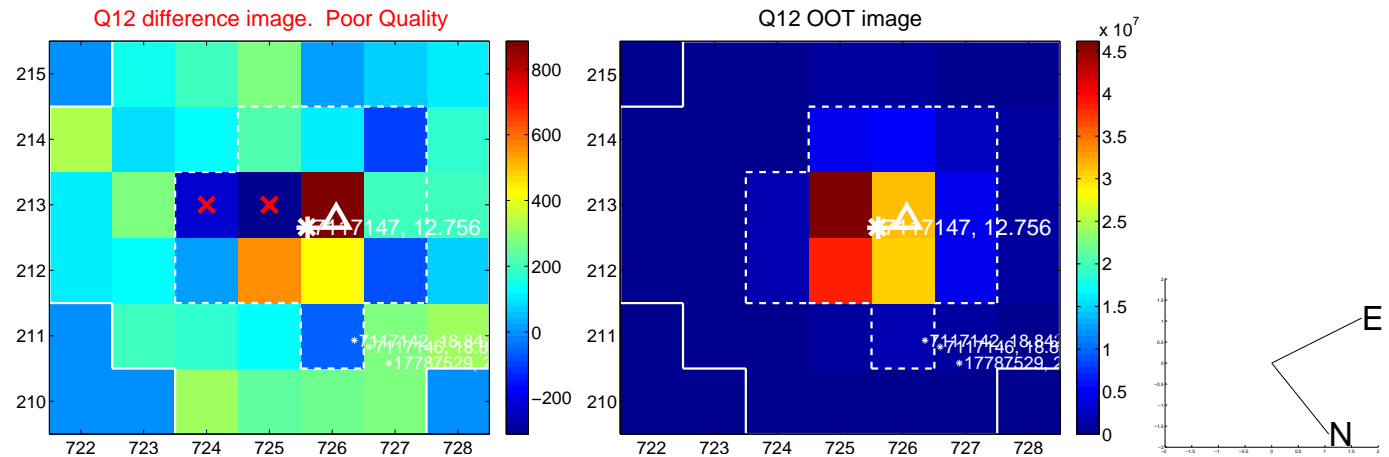
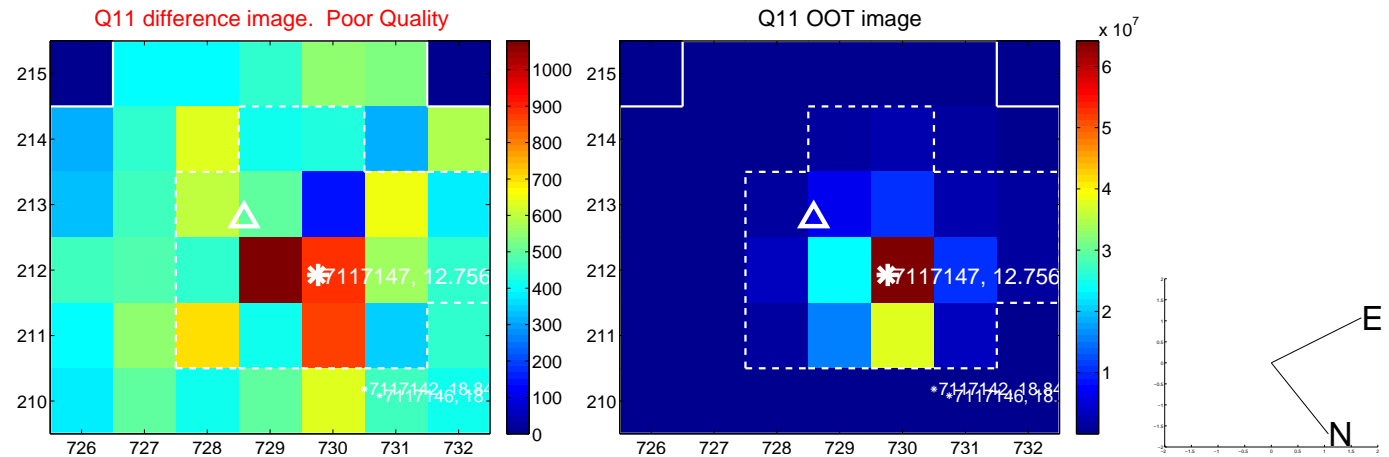
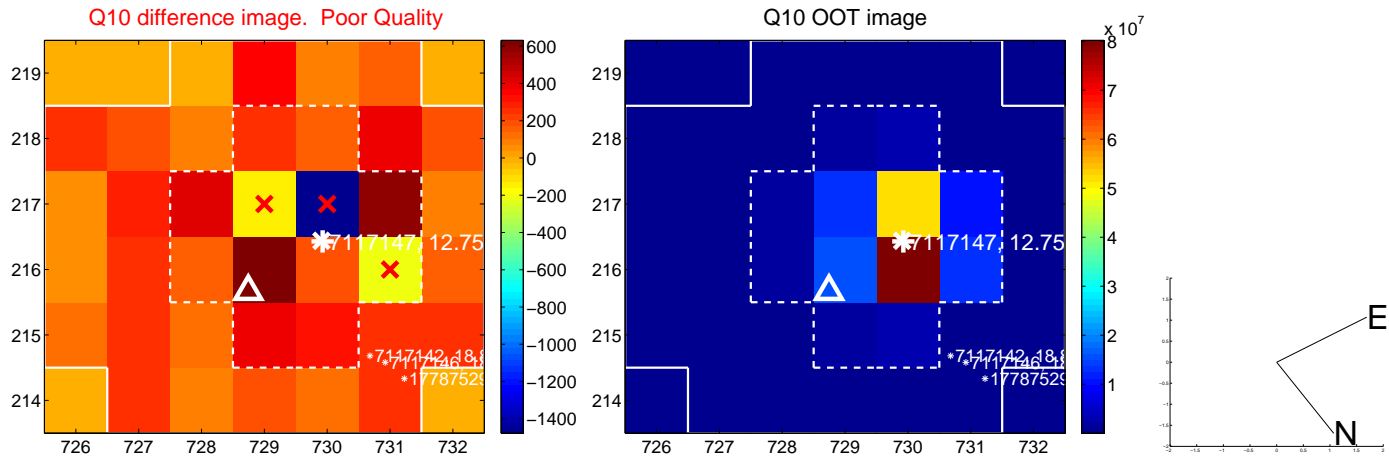
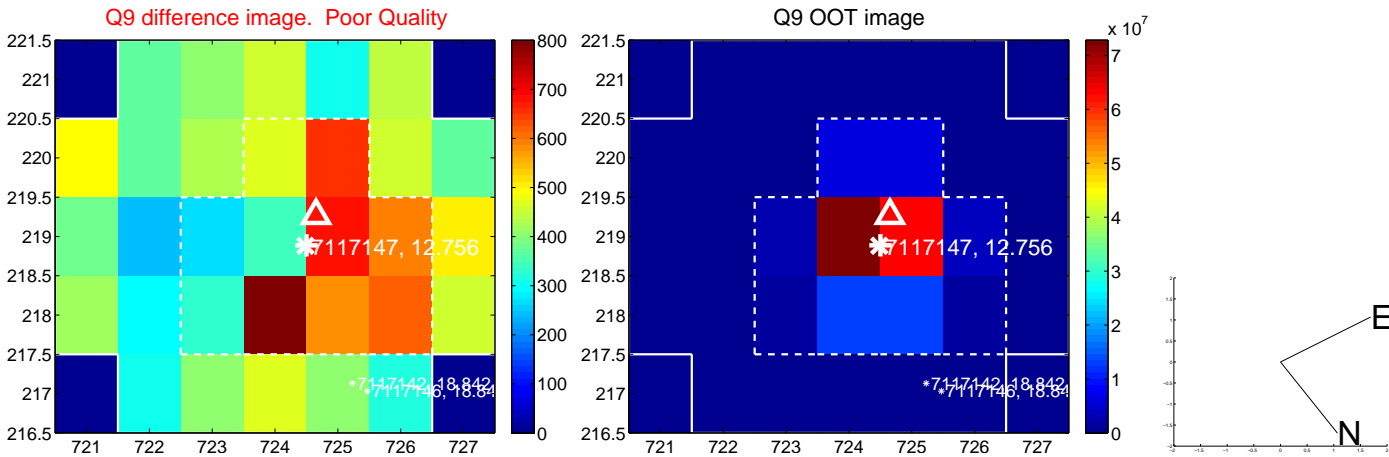
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



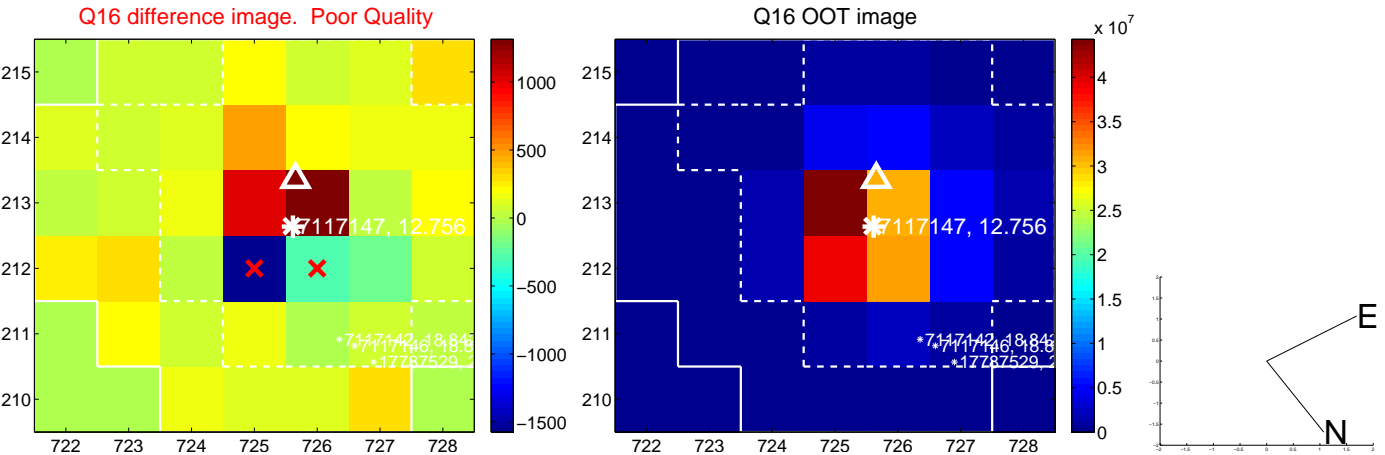
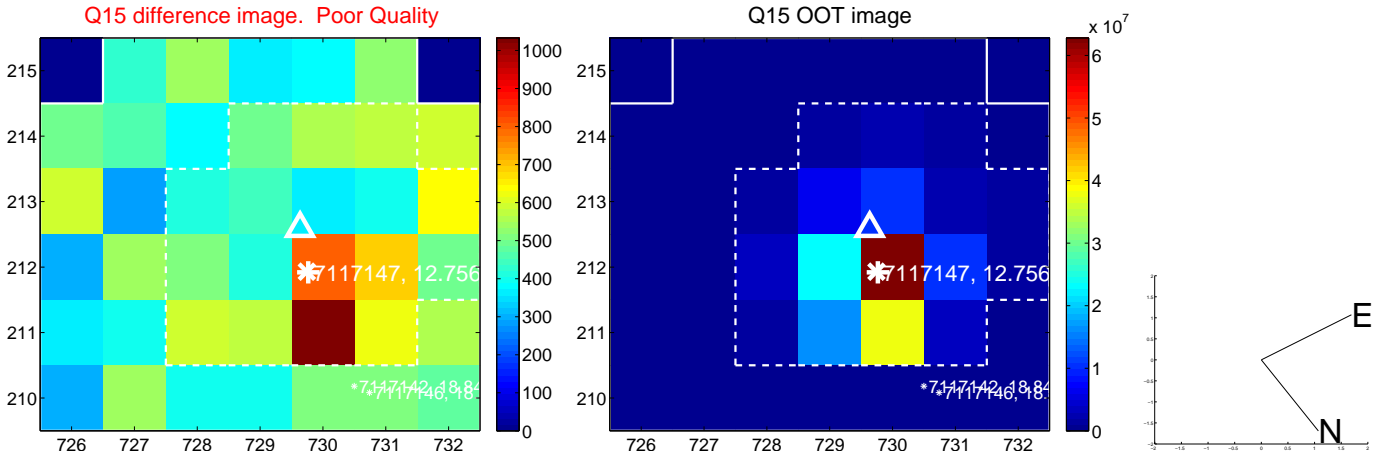
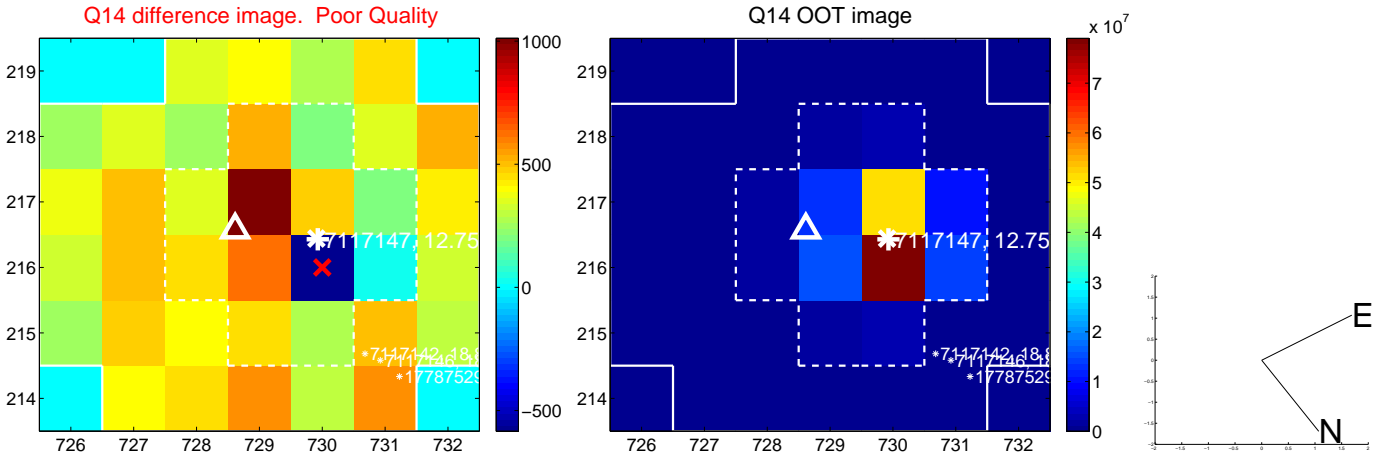
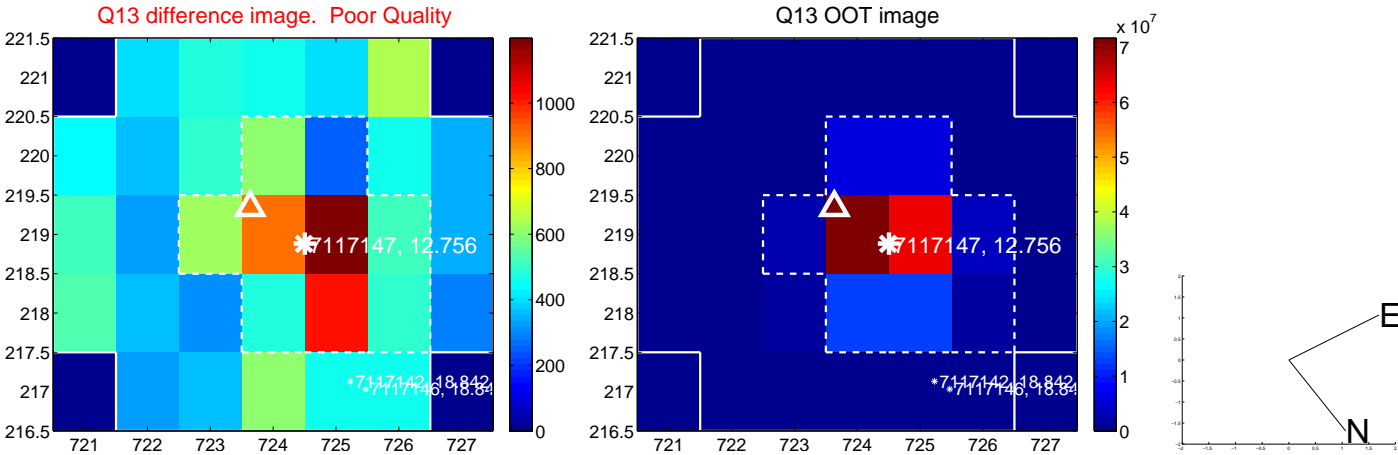
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



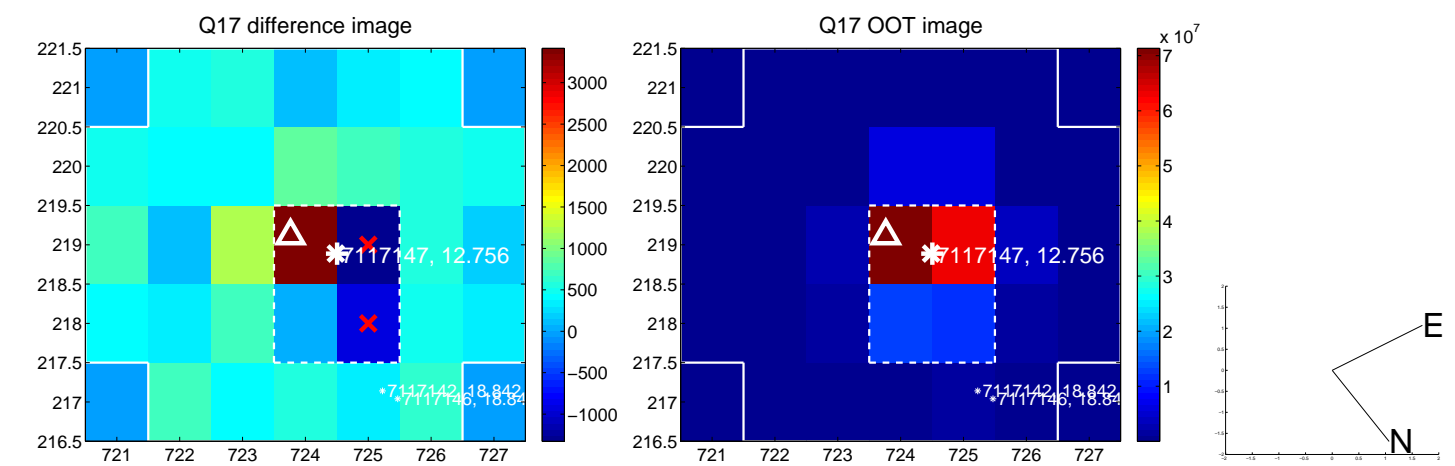
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



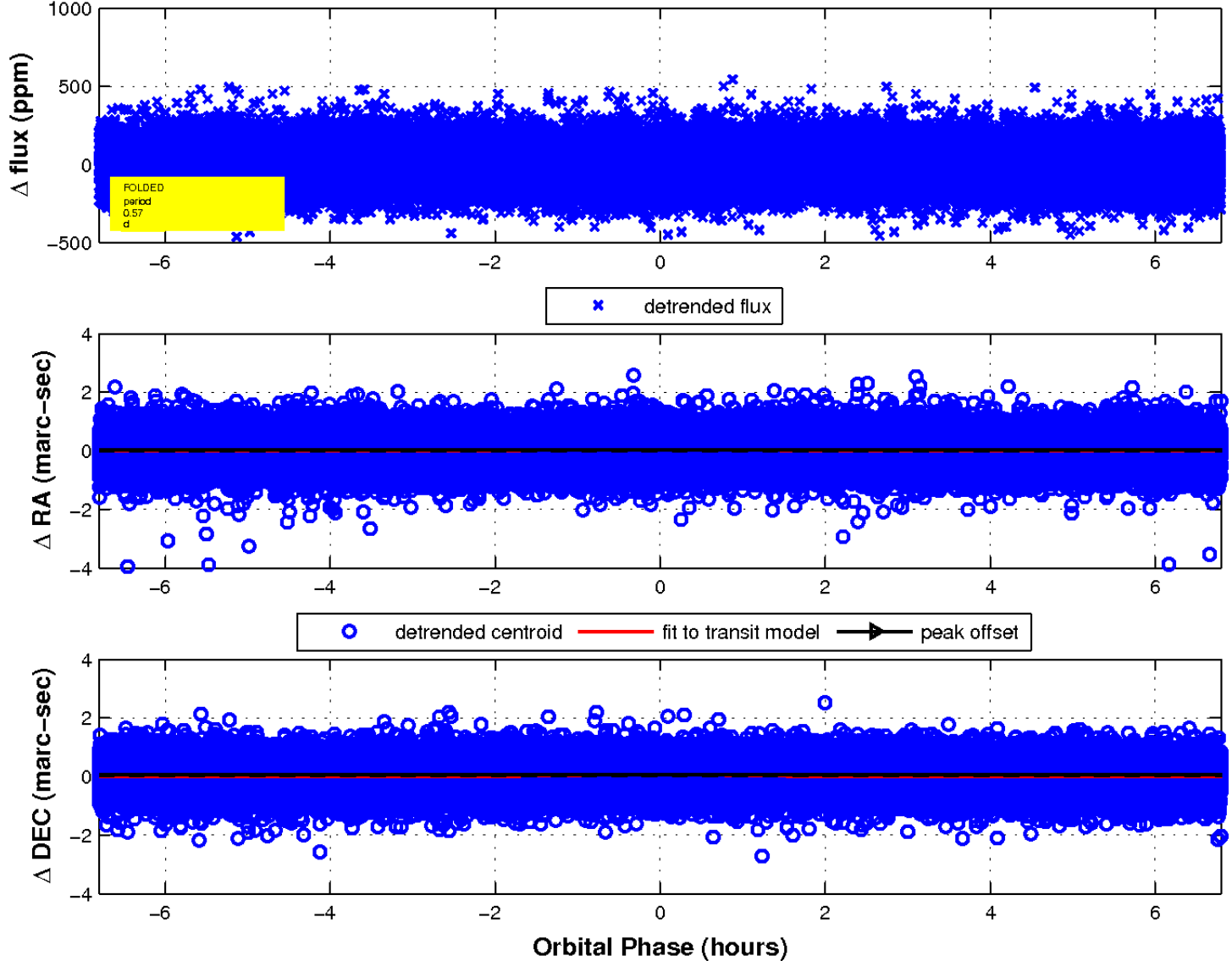
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

