

KIC 007115733

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})
007115733-01	OBS	No	0.566788	131.834735	41.4	3.764	11.8	12.9	1.73	4858	1.10	8620.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115733-01	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.

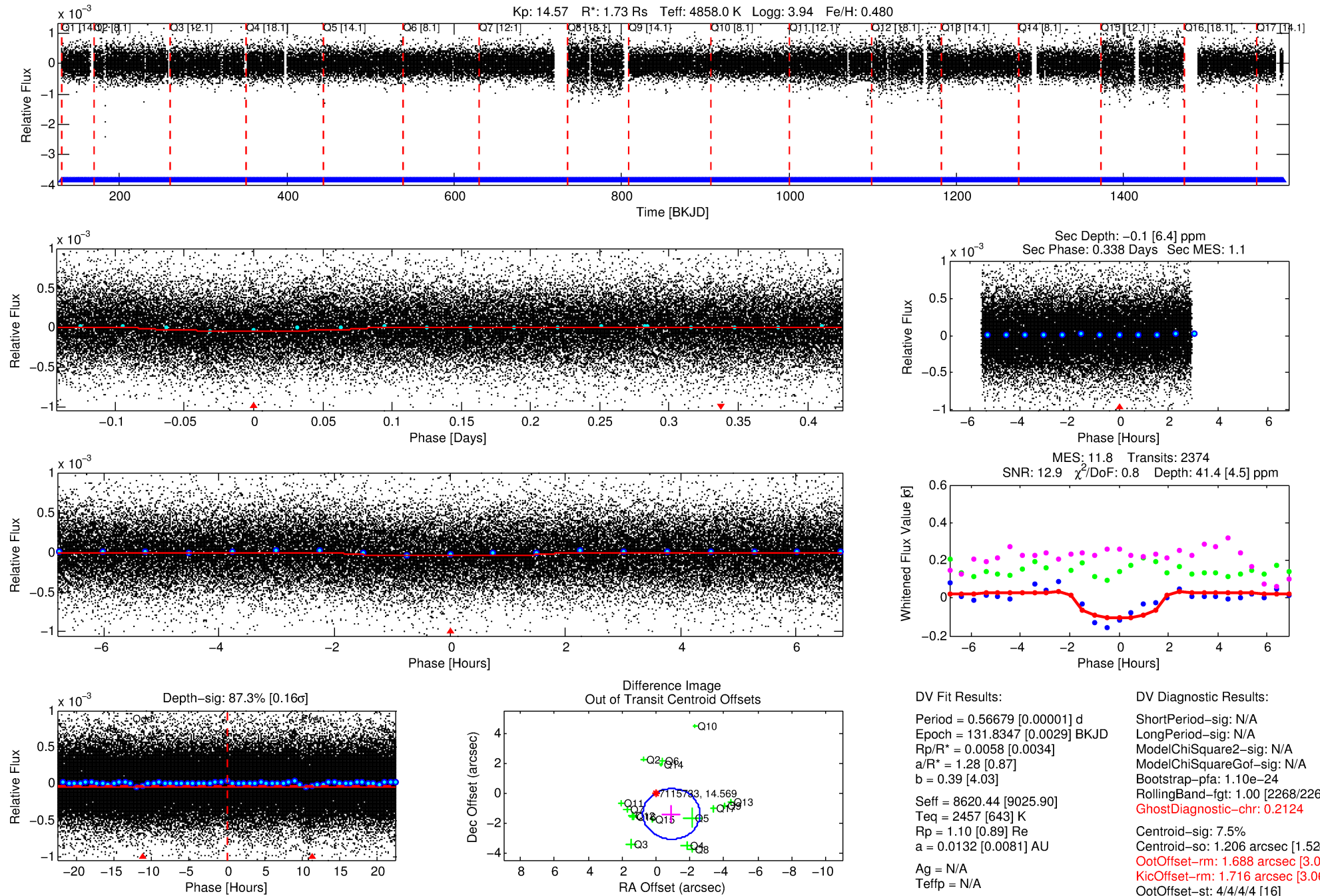
Ephemeris Match Information For 007115733-01

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
007115733-01	7115733	RR-Lyr-pri	7198959	1:1	811.1	43	-200	7.86	14.57	15202.00	Direct-PRF	0	1.97	18.16

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: 7115733 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56679 [0.00001] d
Epoch = 131.8347 [0.0029] BKJD
Rp/R* = 0.0058 [0.0034]
a/R* = 1.28 [0.87]
b = 0.39 [4.03]
Seff = 8620.44 [9025.90]
Teff = 2457 [643] K
Rp = 1.10 [0.89] Re
a = 0.0132 [0.0081] AU
Ag = N/A
Teffp = N/A

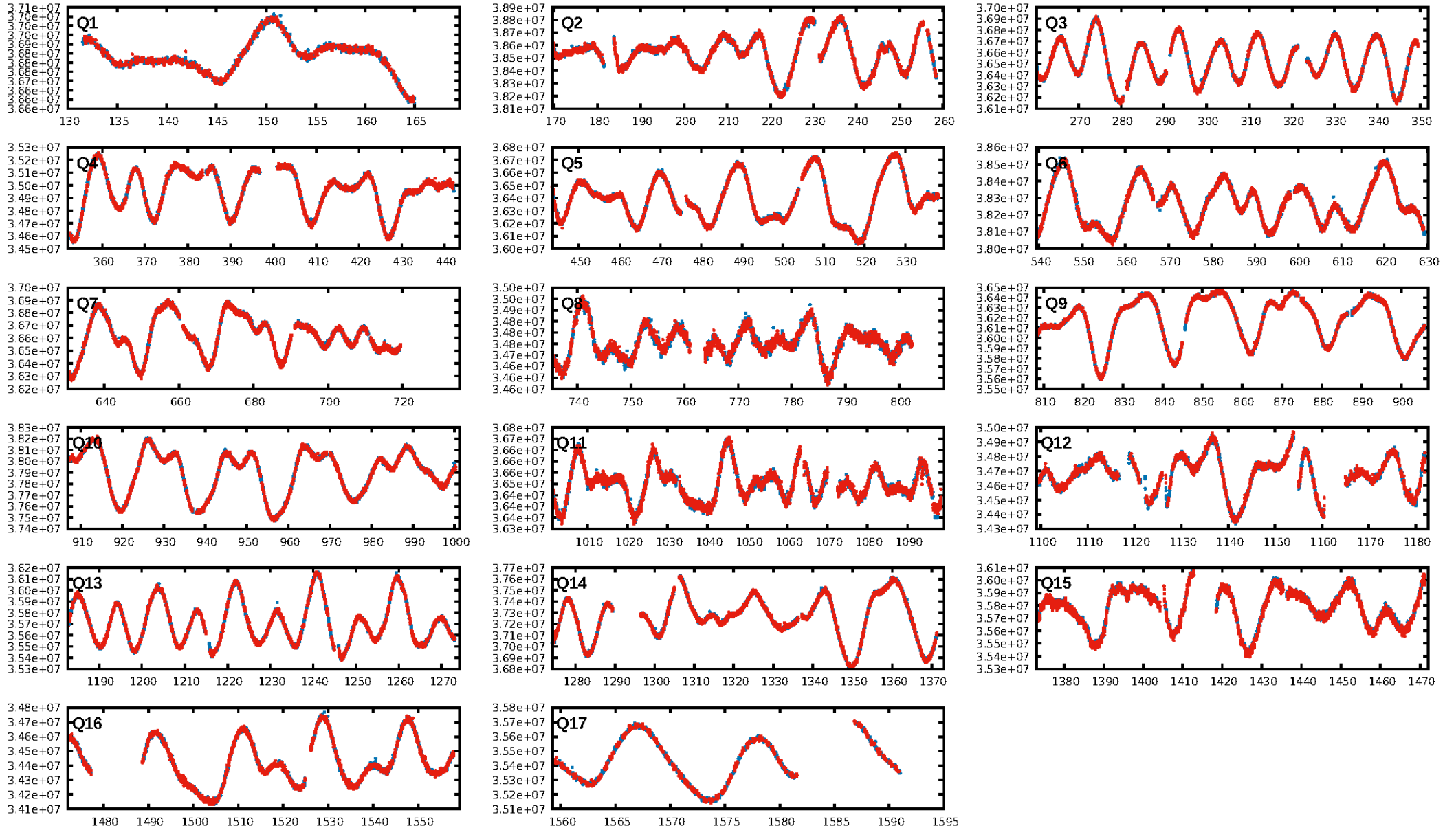
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: $1.10\text{e-}24$
RollingBand-fgt: 1.00 [2268/2268]
GhostDiagnostic-chr: 0.2124
Centroid-sig: 7.5%
Centroid-so: 1.206 arcsec [1.52σ]
OotOffset-rm: 1.688 arcsec [3.00σ]
KicOffset-rm: 1.716 arcsec [3.06σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 1.00 [17/17]

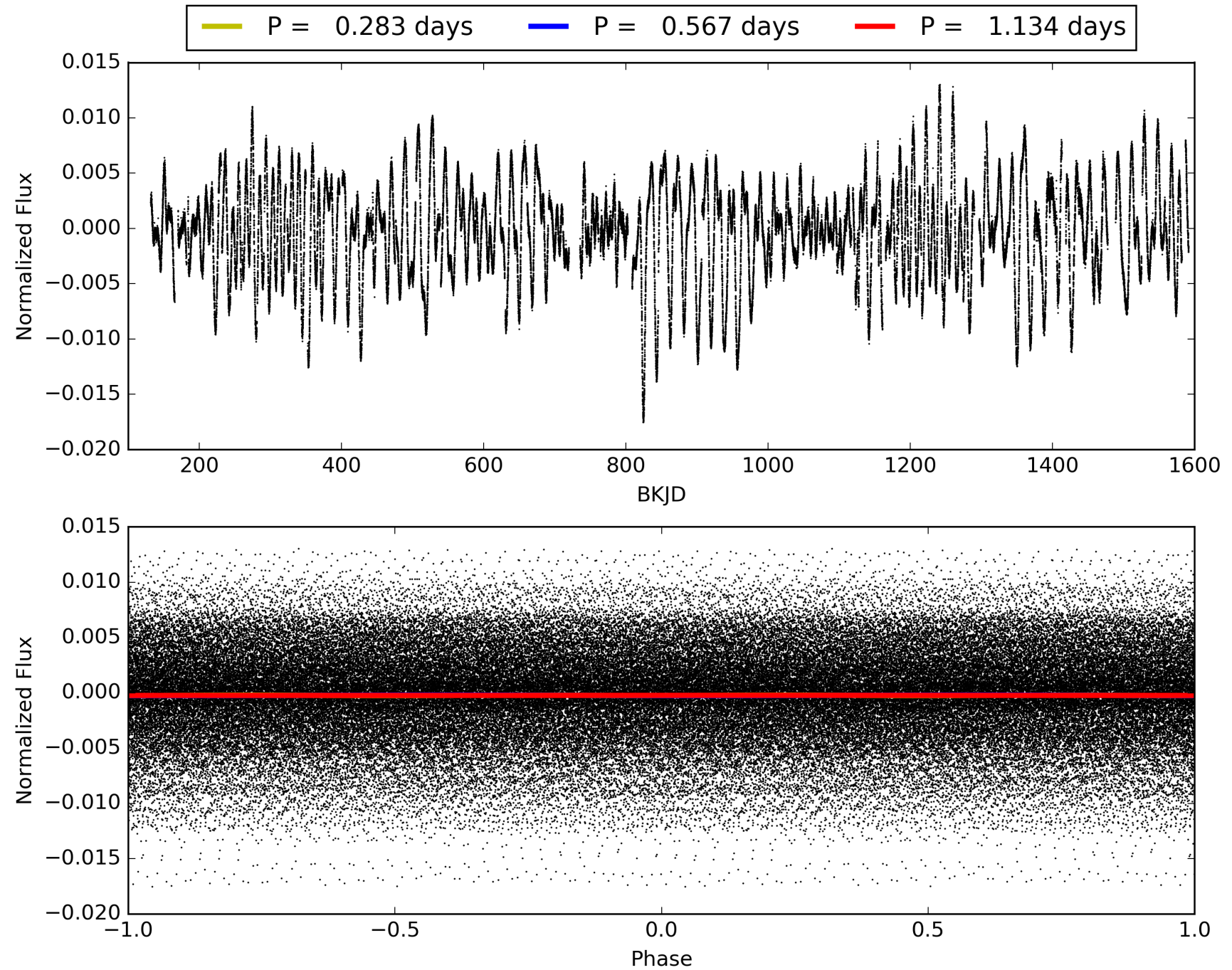
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:33:28 Z

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

TCE 007115733-01, PDC Light Curves

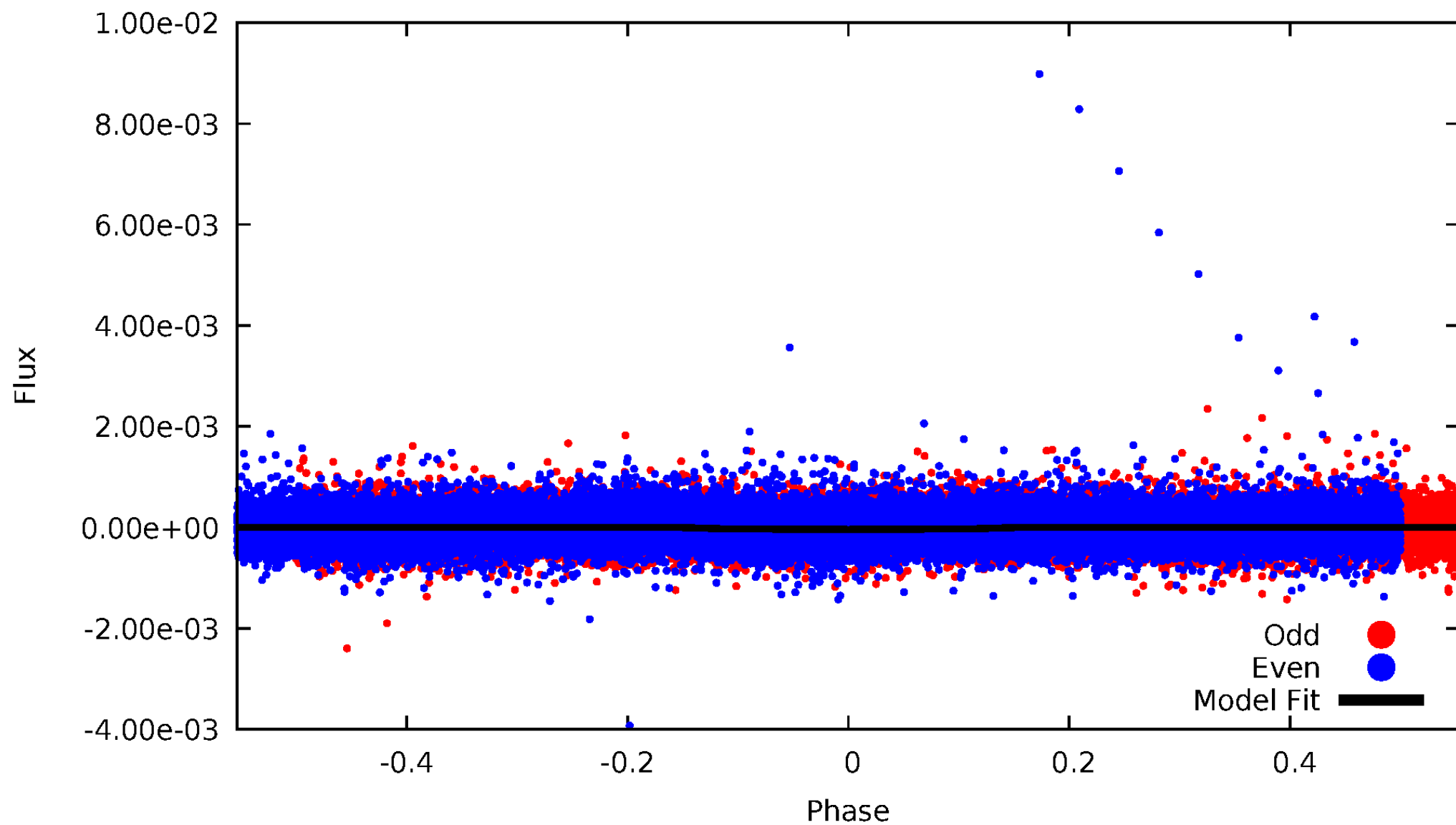


TCE 007115733-01



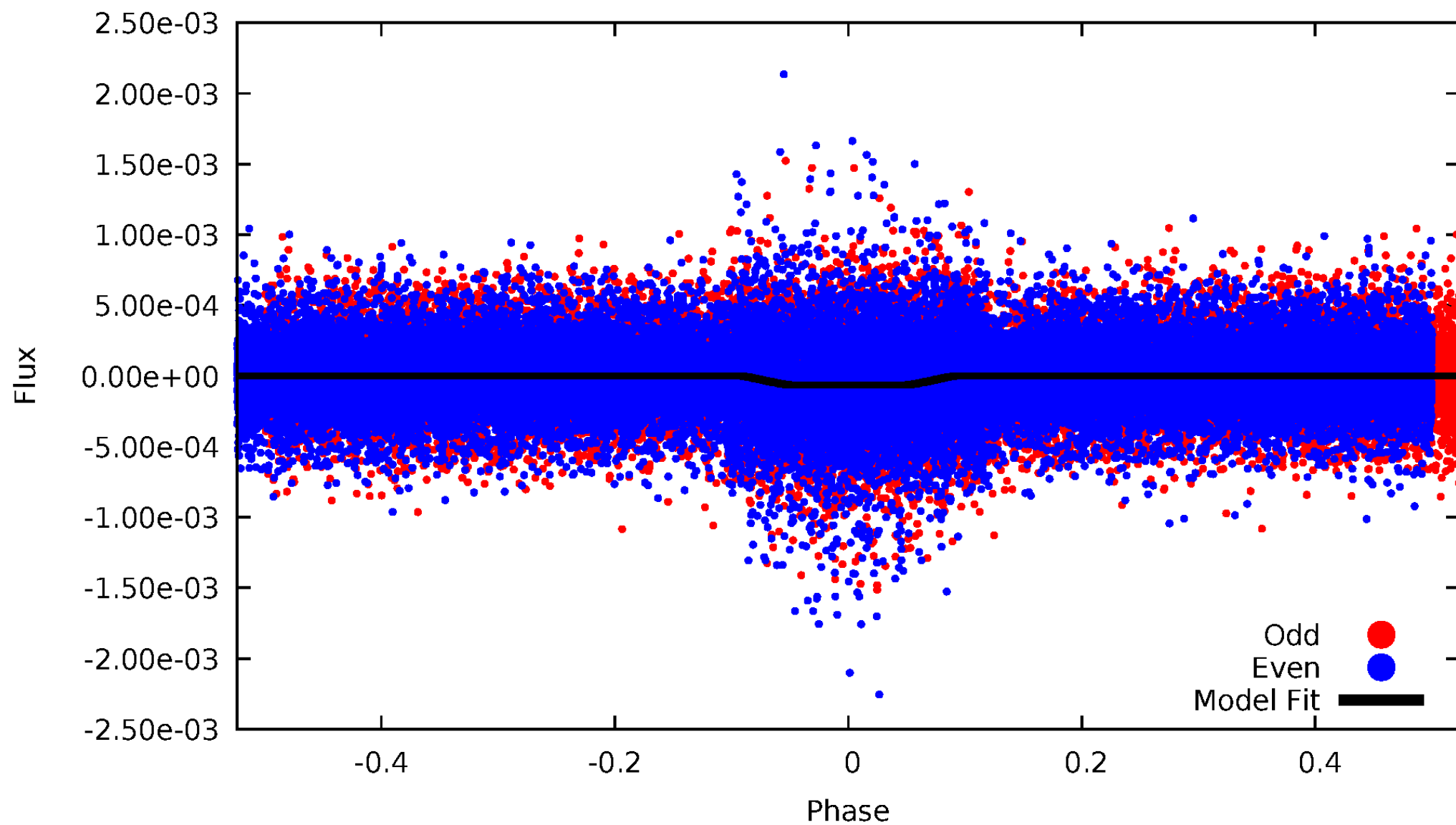
DV Odd/Even

TCE 007115733-01



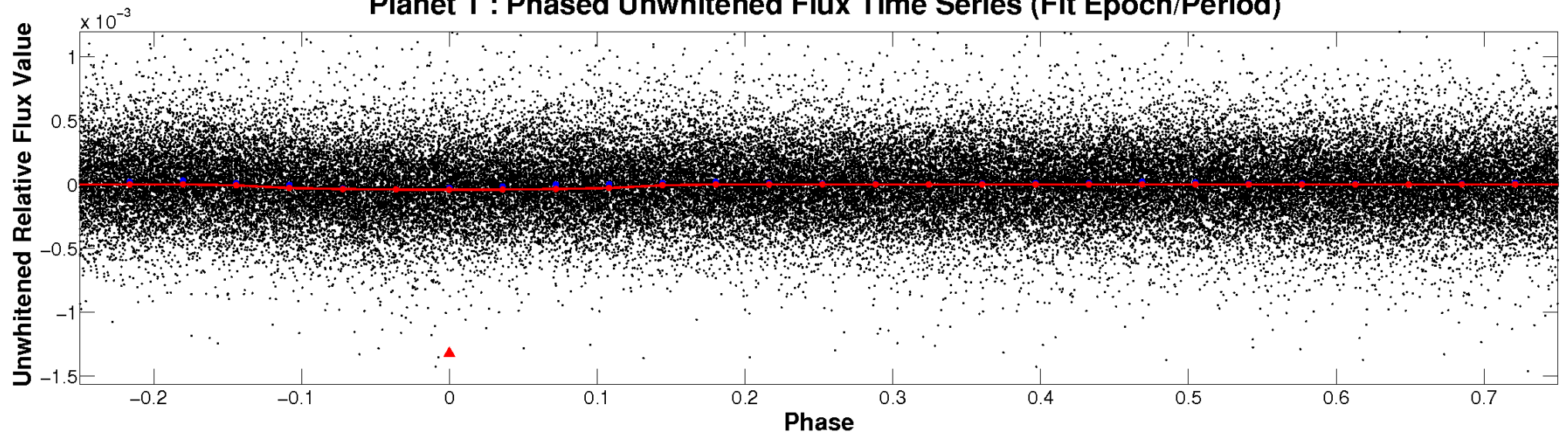
ALT Odd/Even

TCE 007115733-01

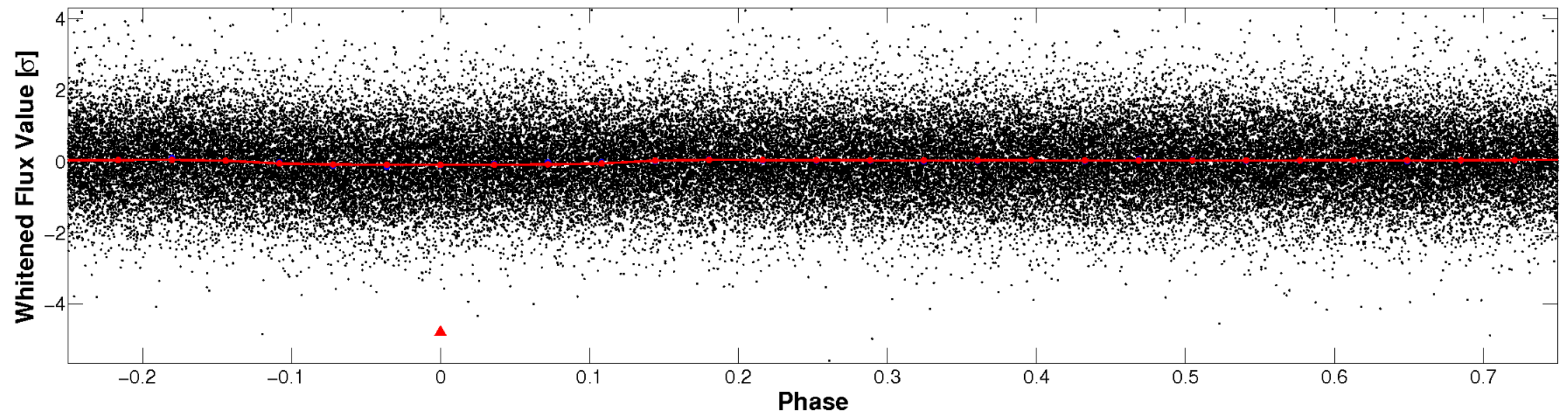


Non-Whitened Vs. Whitened Light Curve

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

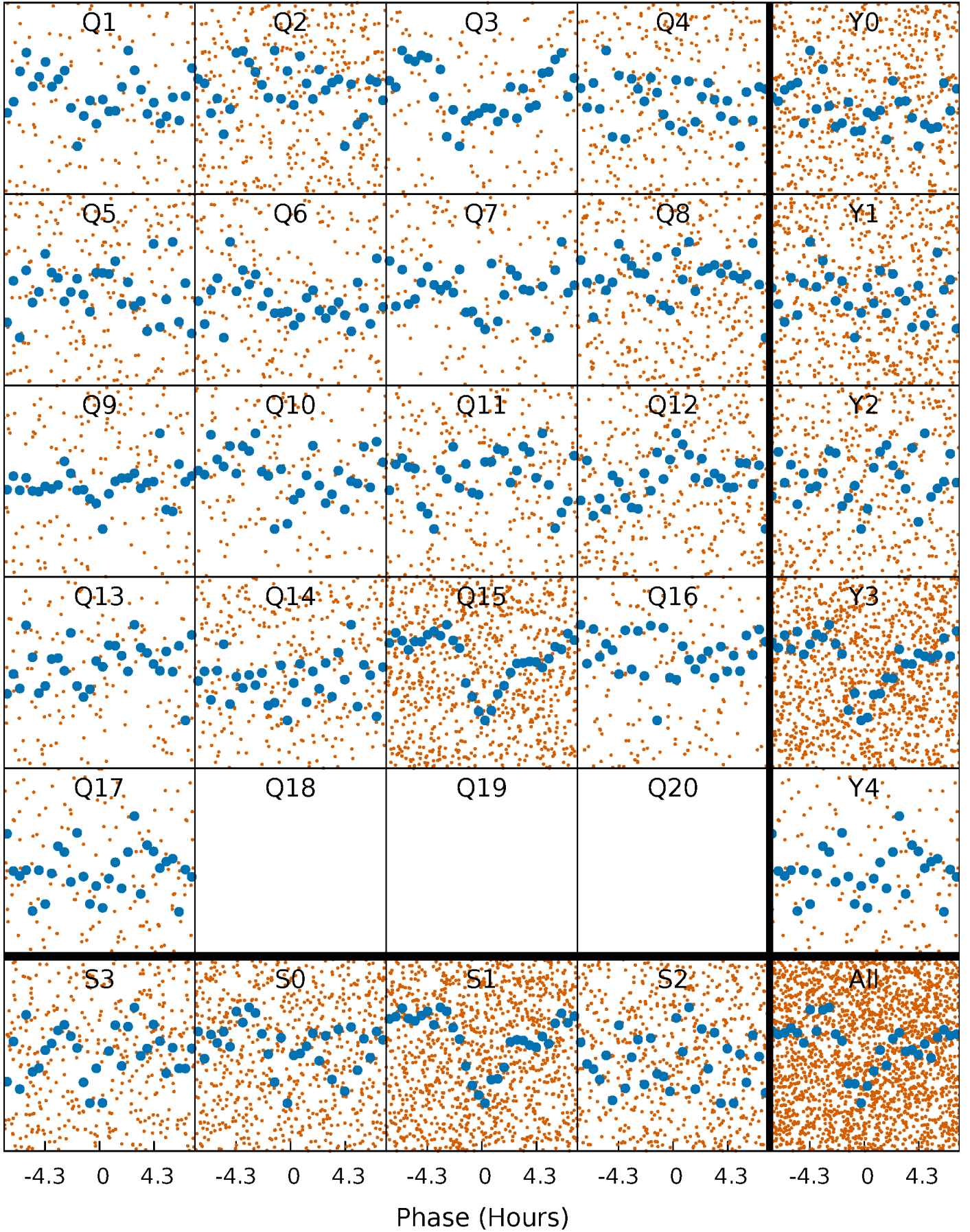


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



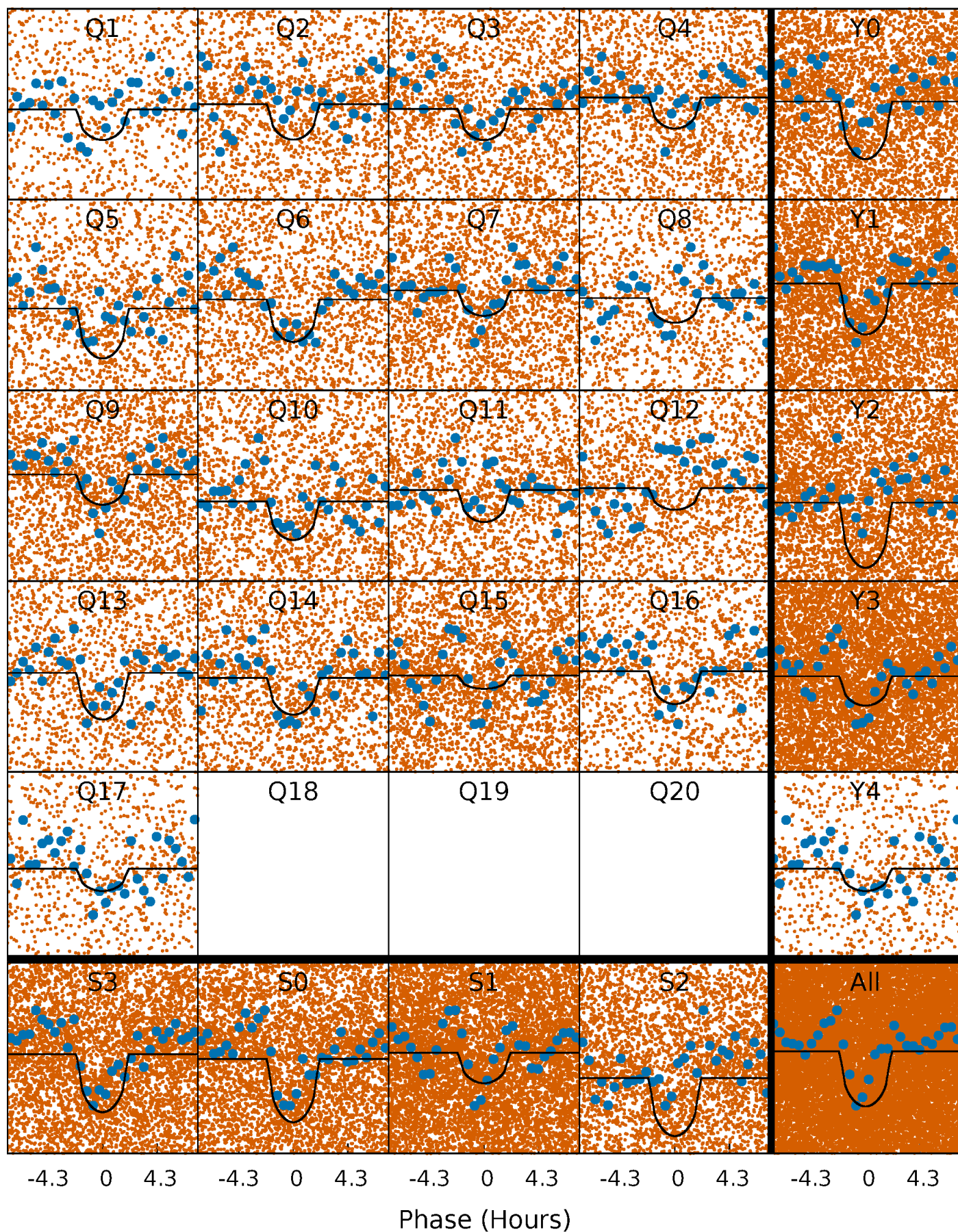
PDC Quarter-Phased Transit Curves

TCE 007115733-01 P= 0.566788 Days $T_0=131.834735$ (BKJD)



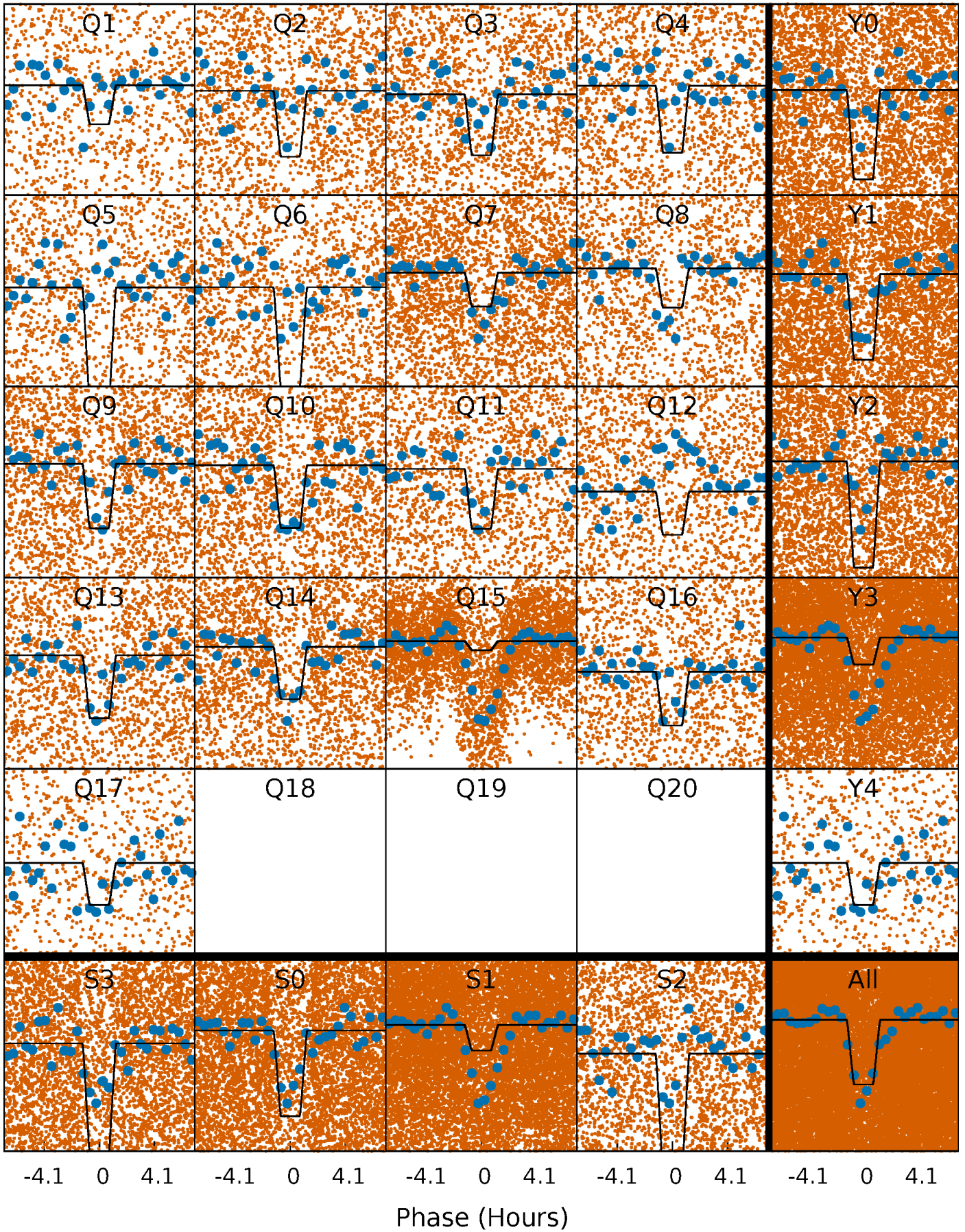
DV Quarter-Phased Transit Curves

TCE 007115733-01 P= 0.566788 Days $T_0=131.834735$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

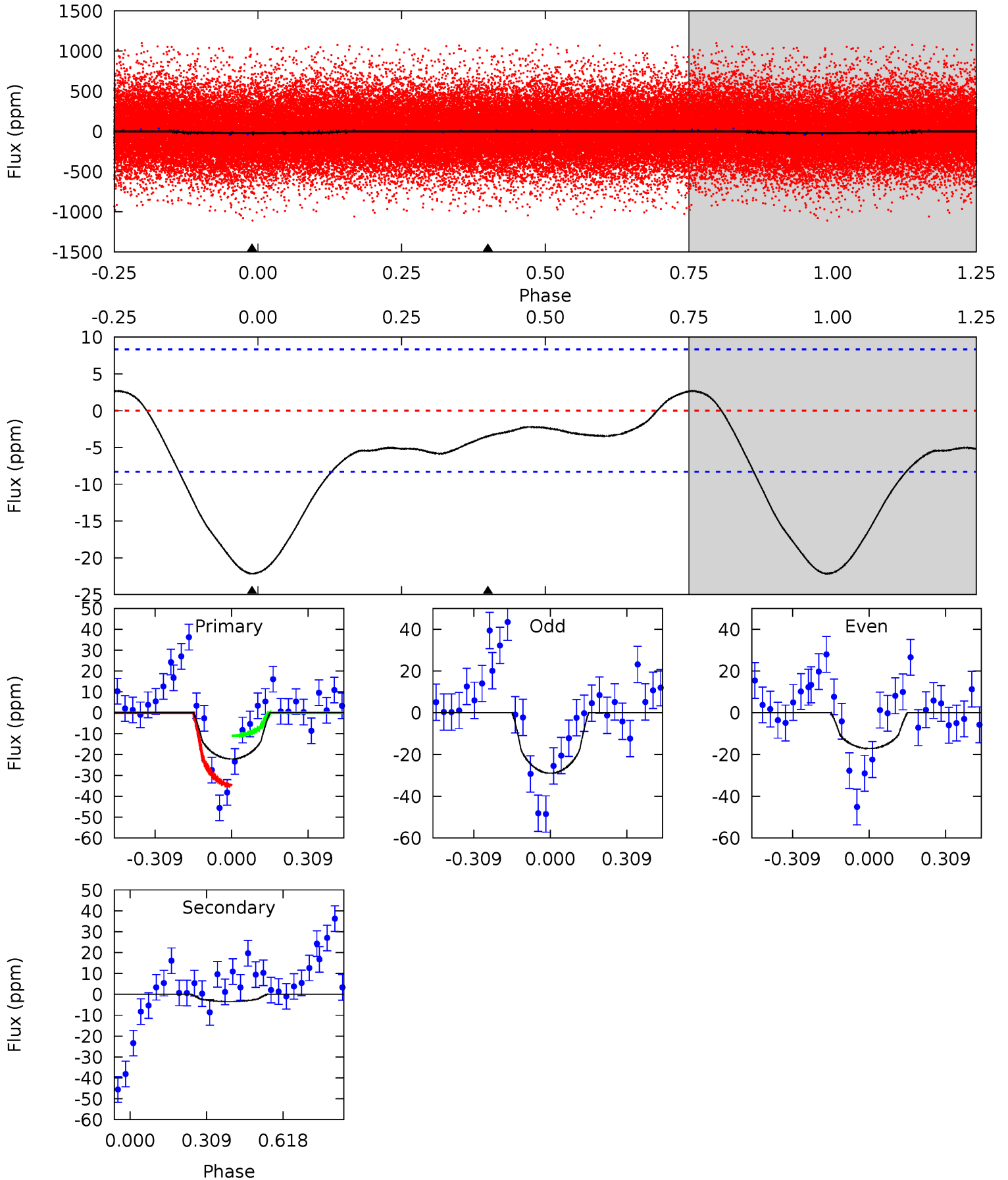
TCE 007115733-01 P= 0.566788 Days $T_0=131.815159$ (BKJD)



DV Model-Shift Uniqueness Test

007115733-01, P = 0.566788 Days, E = 131.267947 Days

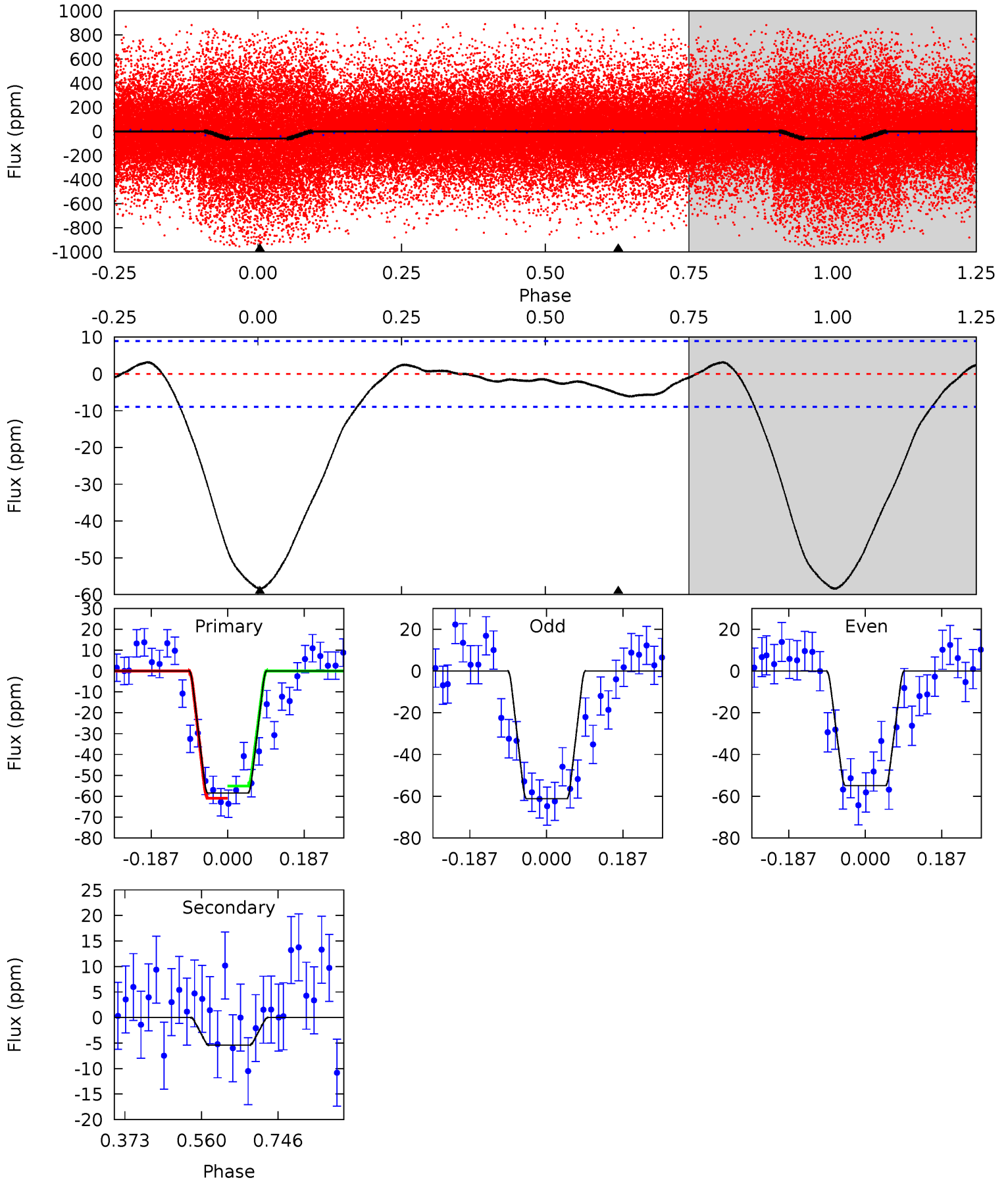
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	1.80	0	0	4.32	1.02	0.94	11.5	11.5	1.80	1.80	3.09	0.73	0.11	6.07



Alt Model-Shift Uniqueness Test

007115733-01, P = 0.566788 Days, E = 131.248371 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	2.69	0	0	4.43	1.32	0.85	29.0	29.0	2.69	2.69	1.56	1.13	0.05	1.46



Stellar Parameters For KIC 007115733

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4858^{+129}_{-144}	$3.939^{+0.631}_{-0.340}$	$0.480^{+0.050}_{-0.250}$	$1.734^{+0.987}_{-0.987}$	$0.954^{+0.180}_{-0.162}$	$0.258^{+2.326}_{-0.188}$
	+3%/-3%	+16%/-9%	+10%/-52%	+57%/-57%	+19%/-17%	+903%/-73%
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 007115733-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 2	$1.02^{+0.82}_{-0.54}$	3385^{+534}_{-555}	-2324^{+6115}_{-957}	$0.268^{+1.120}_{-0.199}$
Alt.	-5 ± 2	$1.42^{+0.86}_{-0.69}$	3433^{+526}_{-579}	-2537^{+6017}_{-793}	$0.246^{+0.719}_{-0.163}$

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 $A_{obs} \gg 1.0$

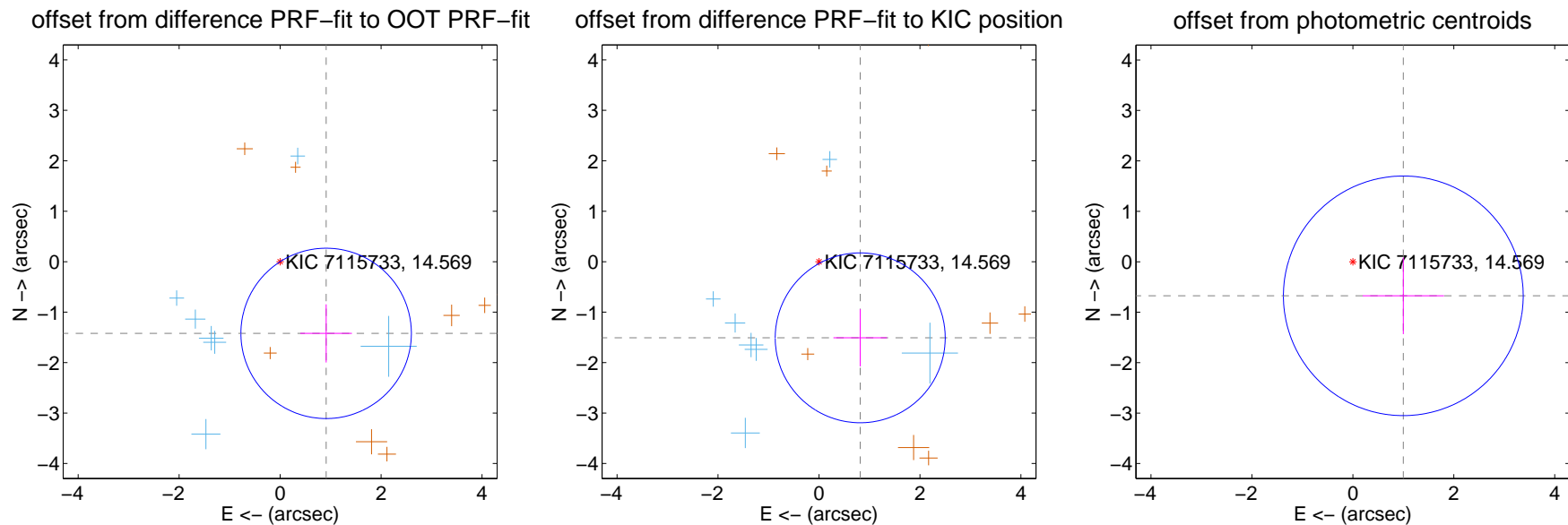
DV Centroid Data

Supplemental centroid analysis for 007115733-01. Kepler magnitude: 14.57. Transit SNR 12.85

There are 7 quarters with good PRF difference image offsets

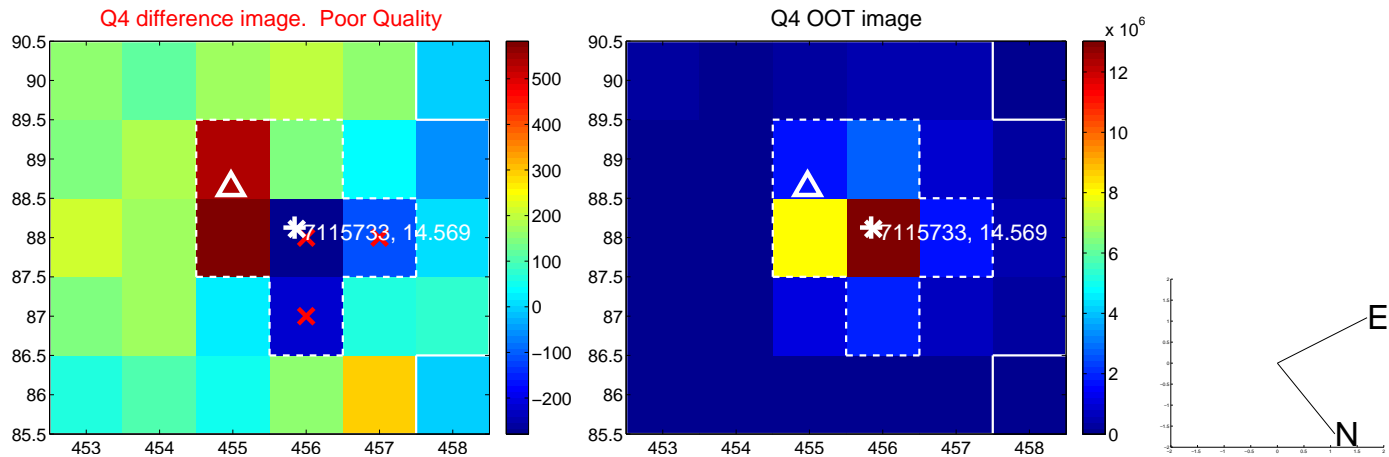
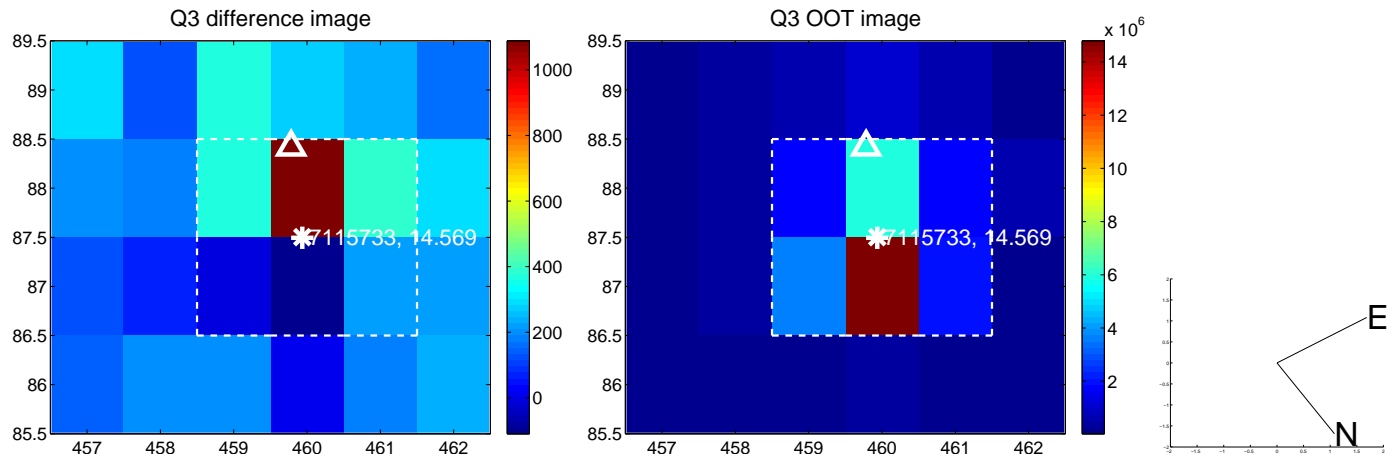
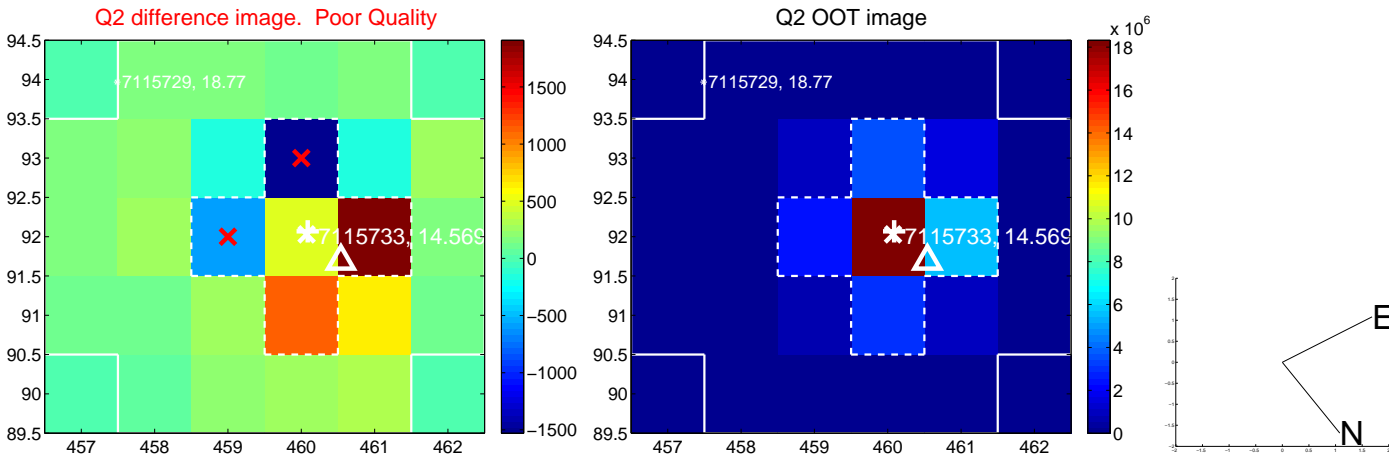
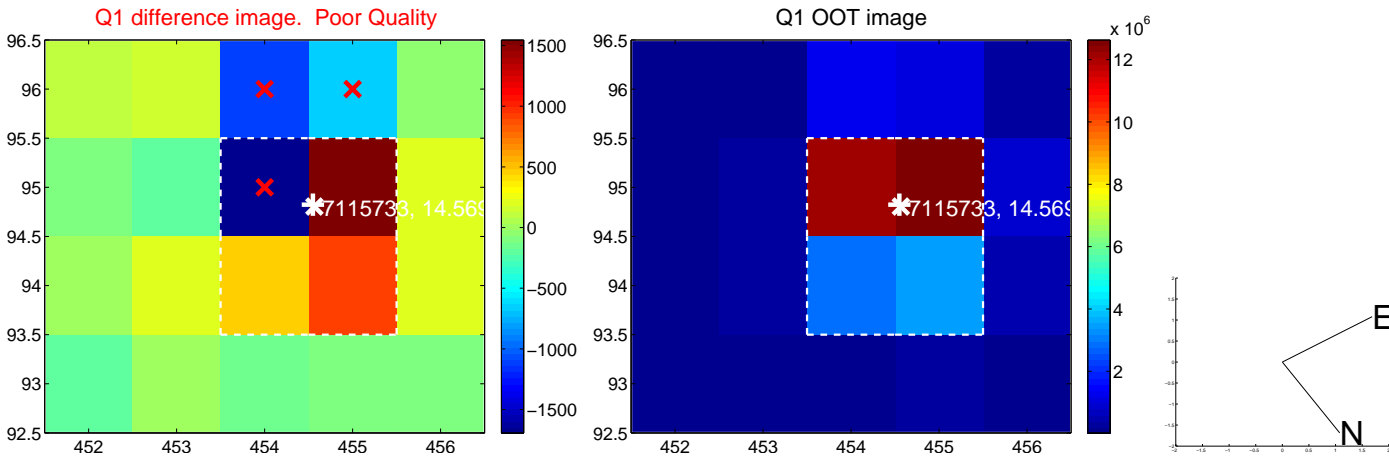
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.688 ± 0.563	3.00	-0.912 ± 0.511	-1.421 ± 0.576
PRF-fit source offset from KIC position	1.716 ± 0.561	3.06	-0.816 ± 0.531	-1.509 ± 0.566
photometric centroid source offset	1.21 ± 0.79	1.52	-1.00 ± 0.81	-0.67 ± 0.76

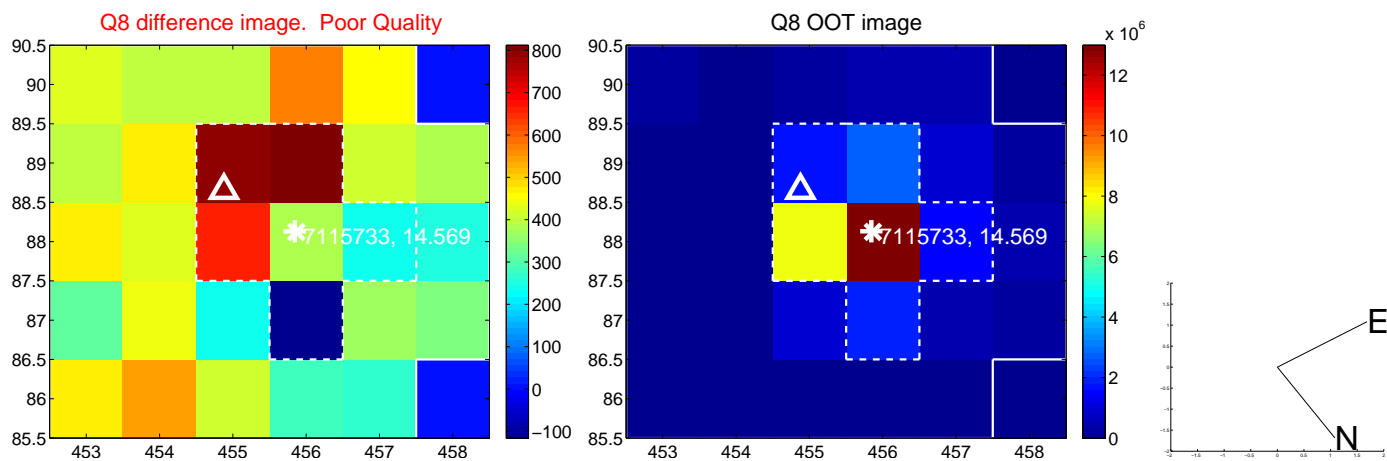
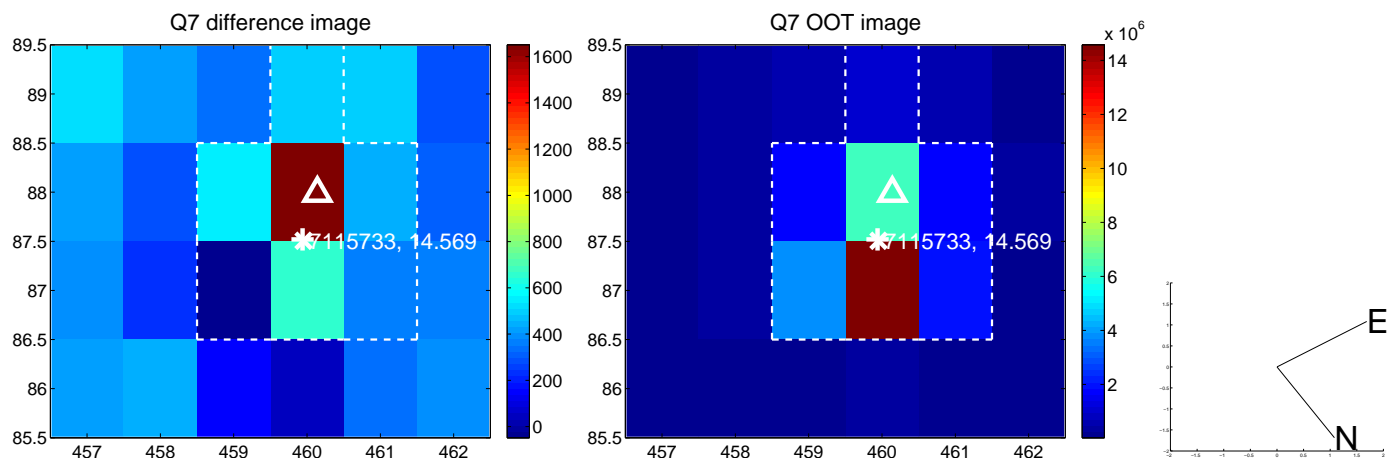
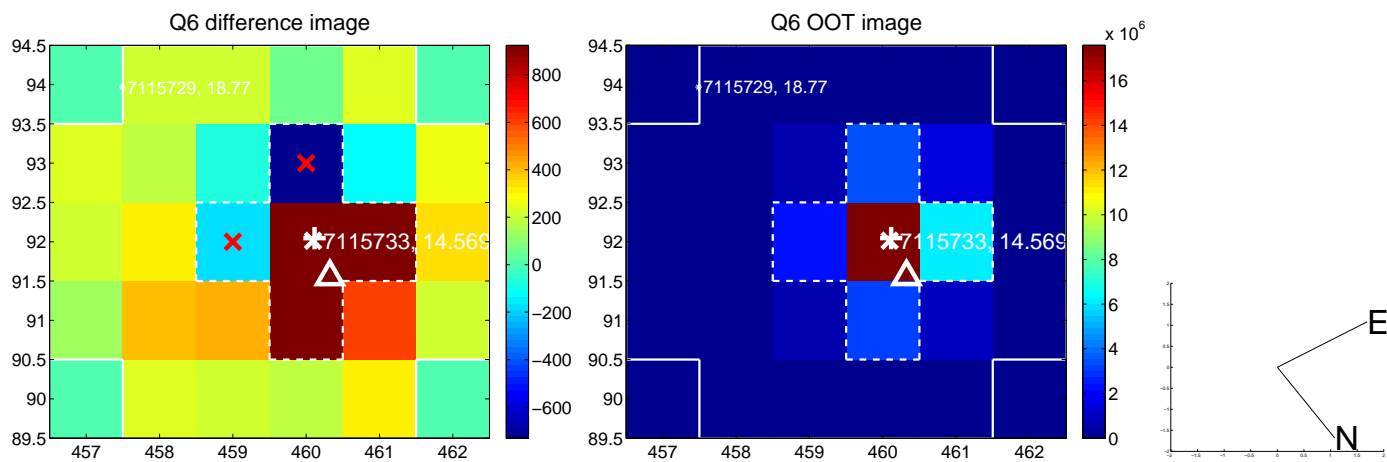
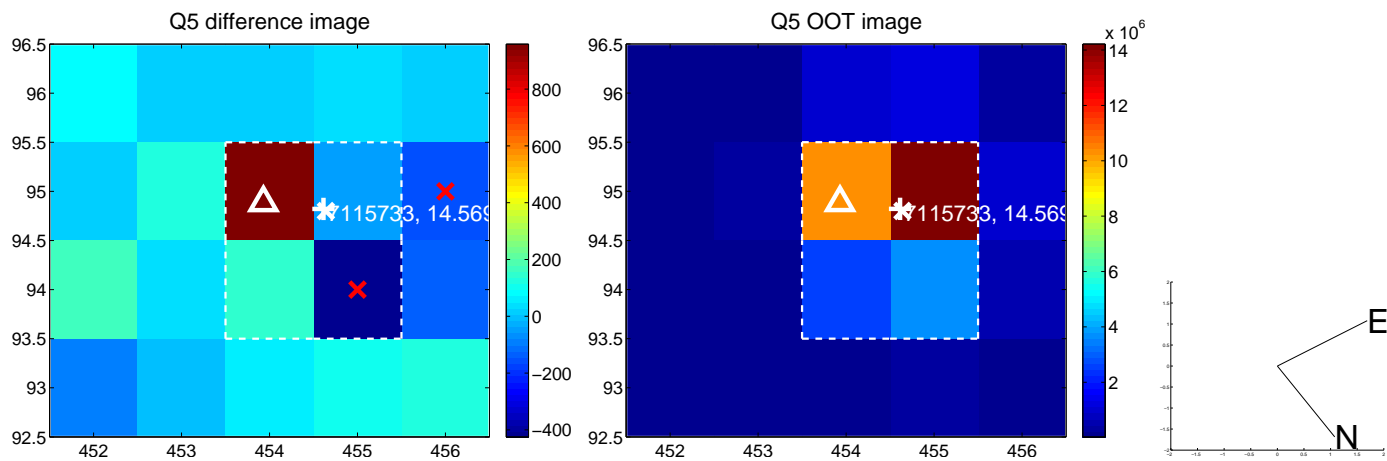


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

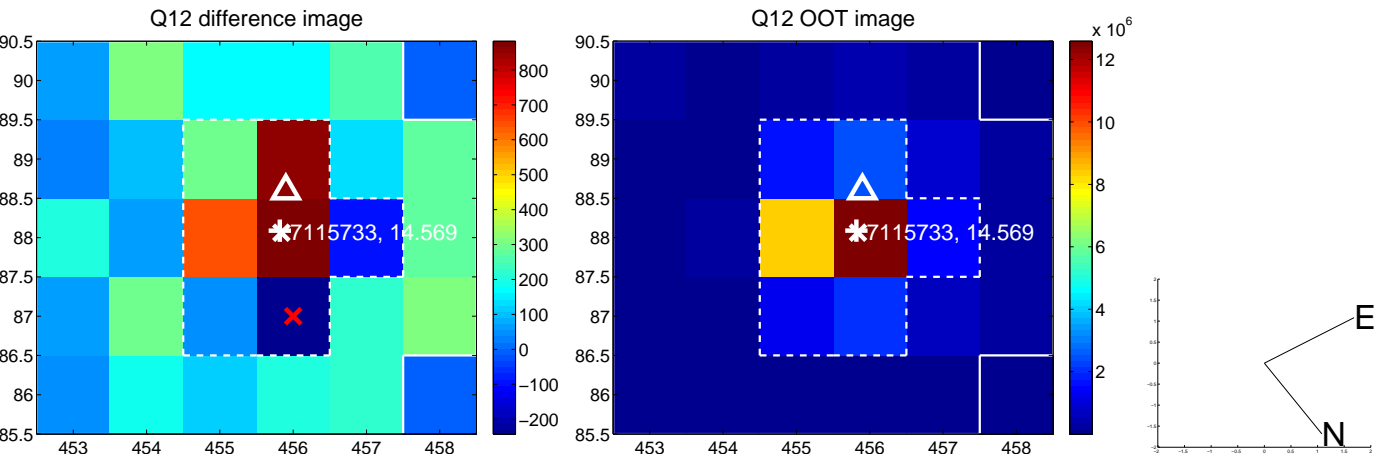
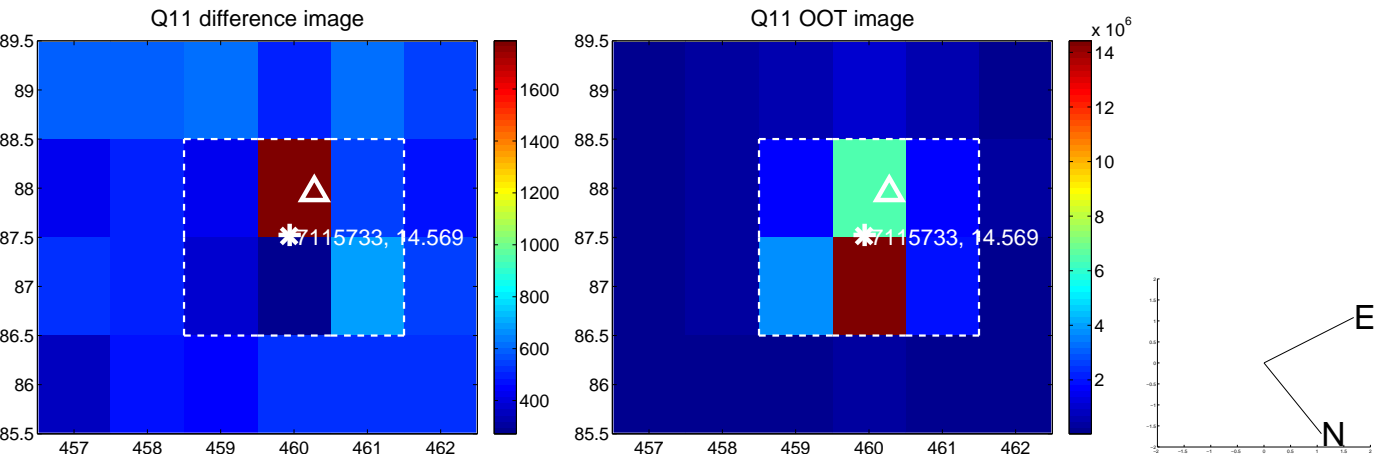
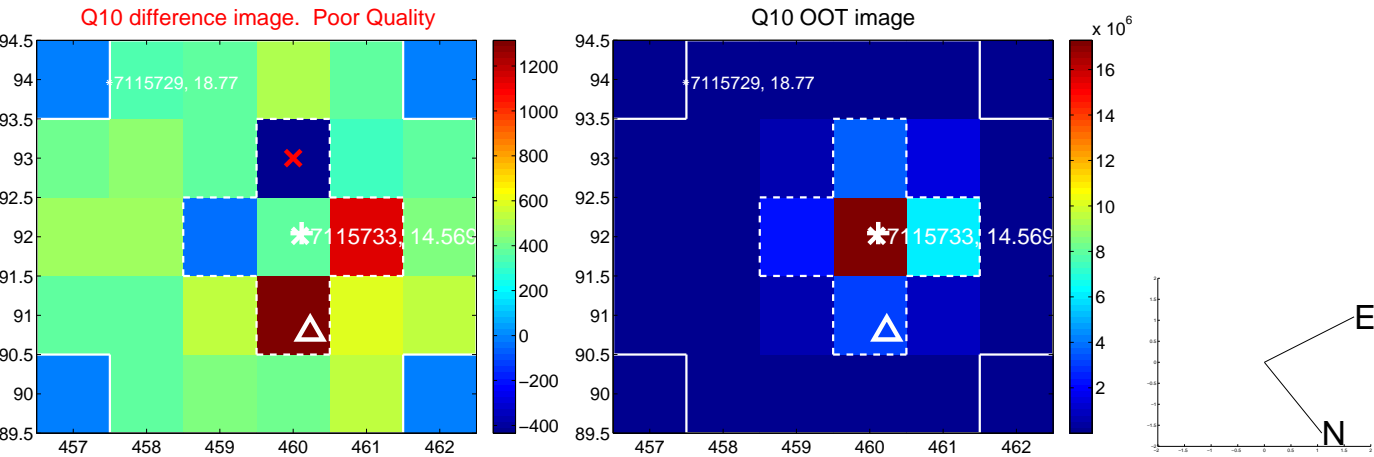
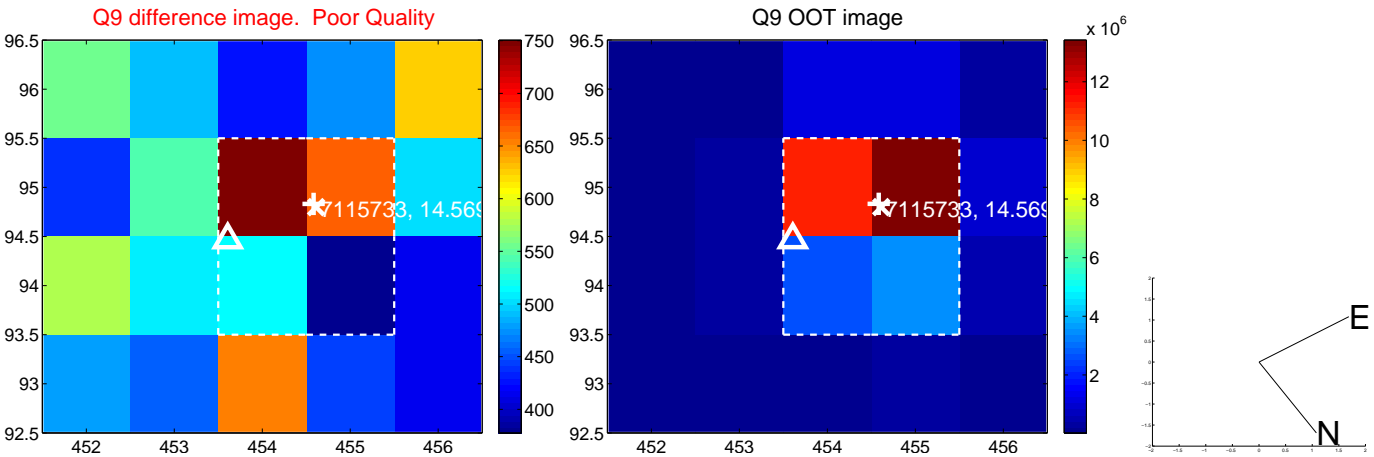
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



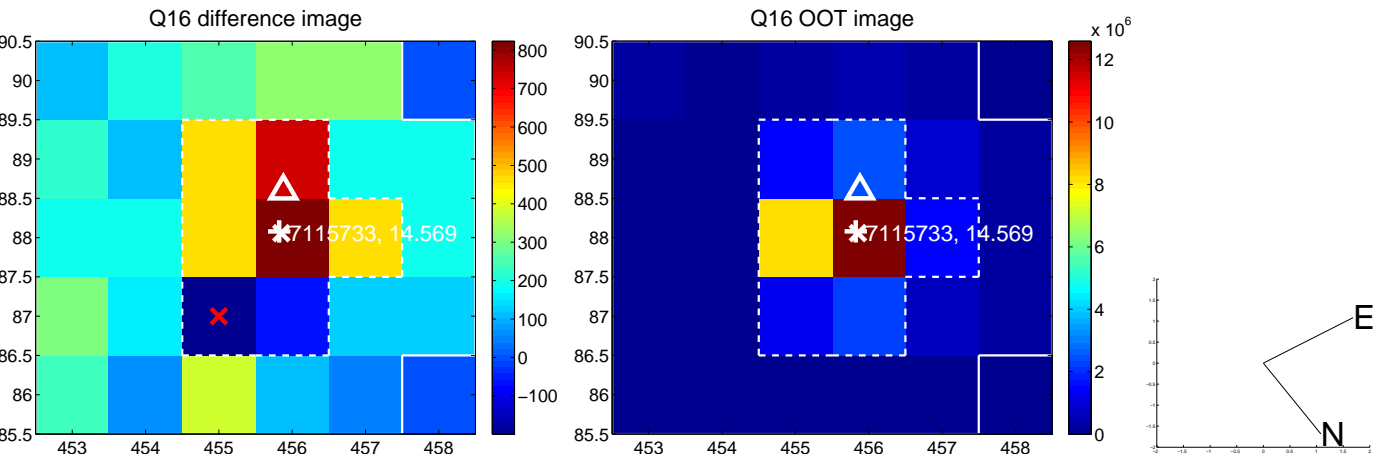
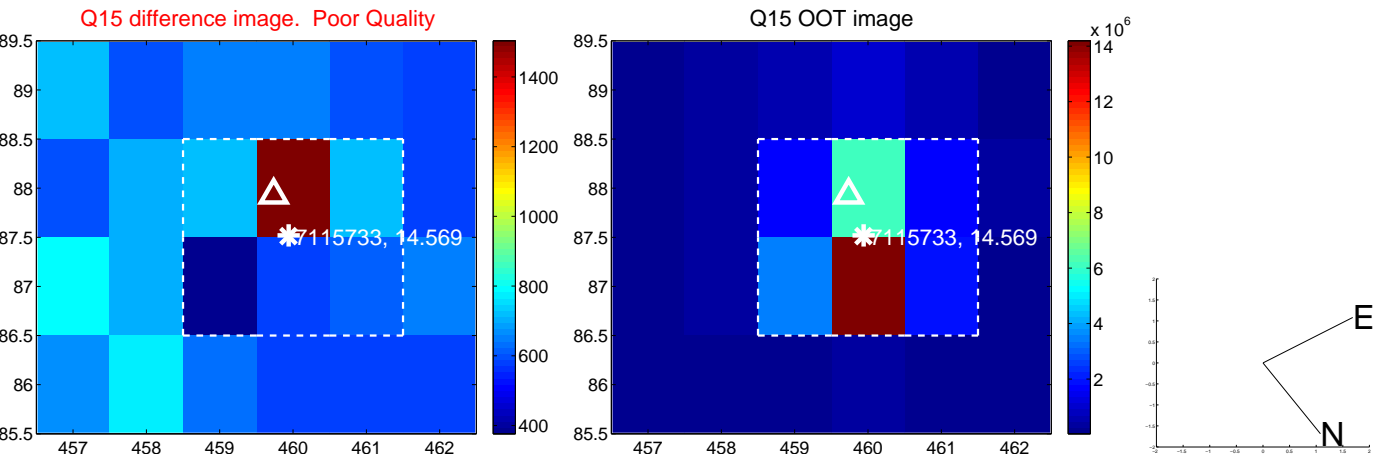
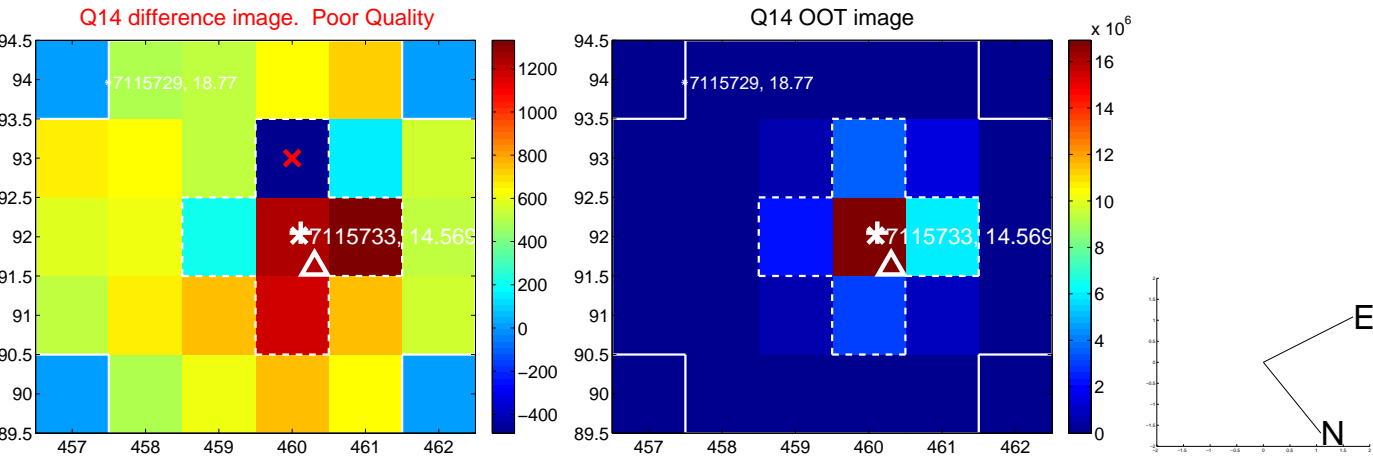
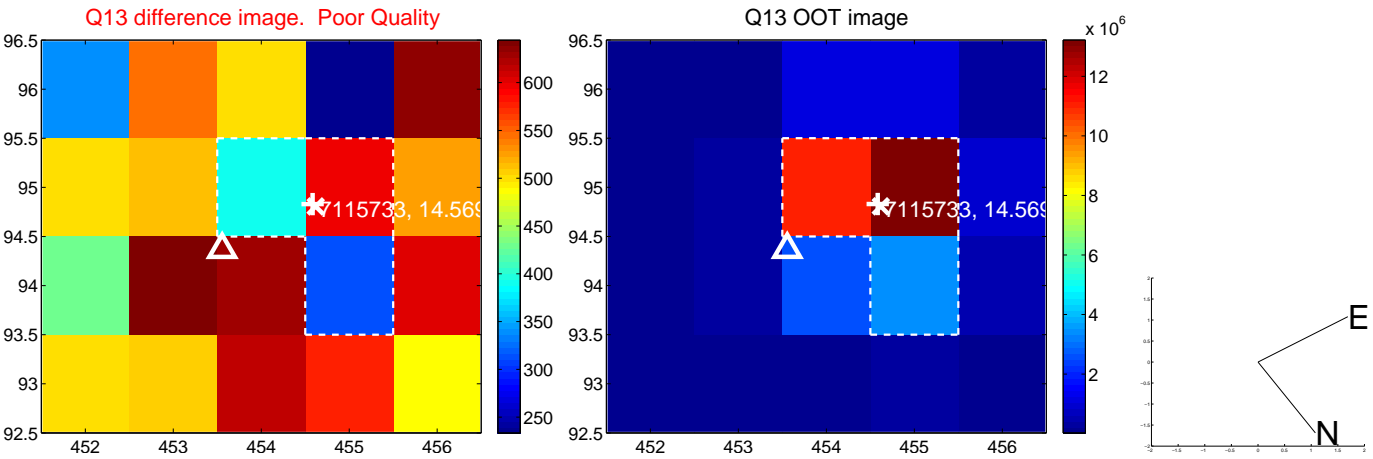
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



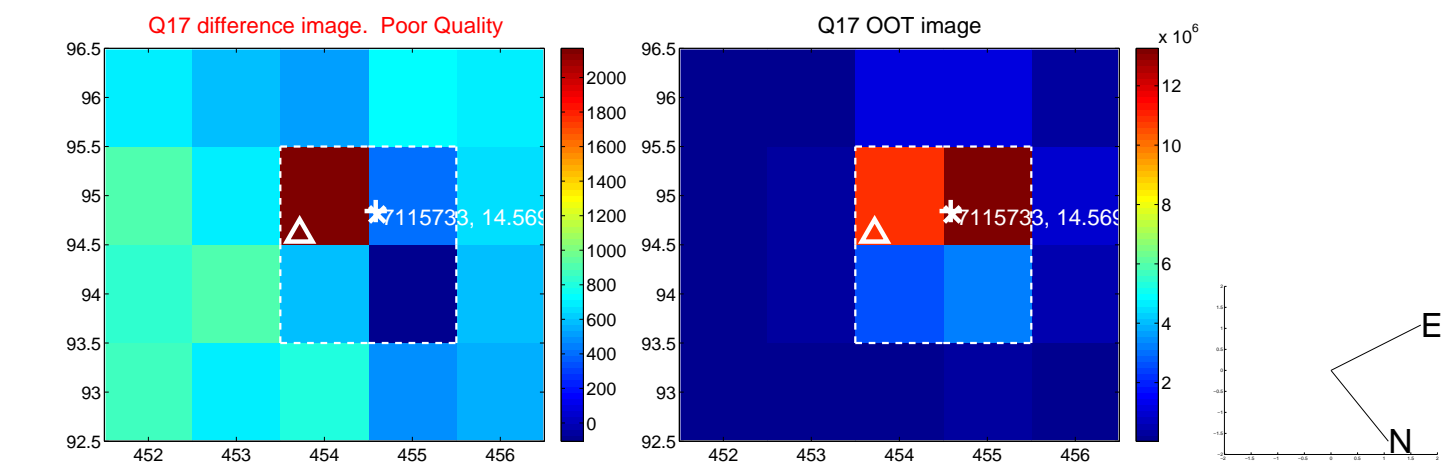
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



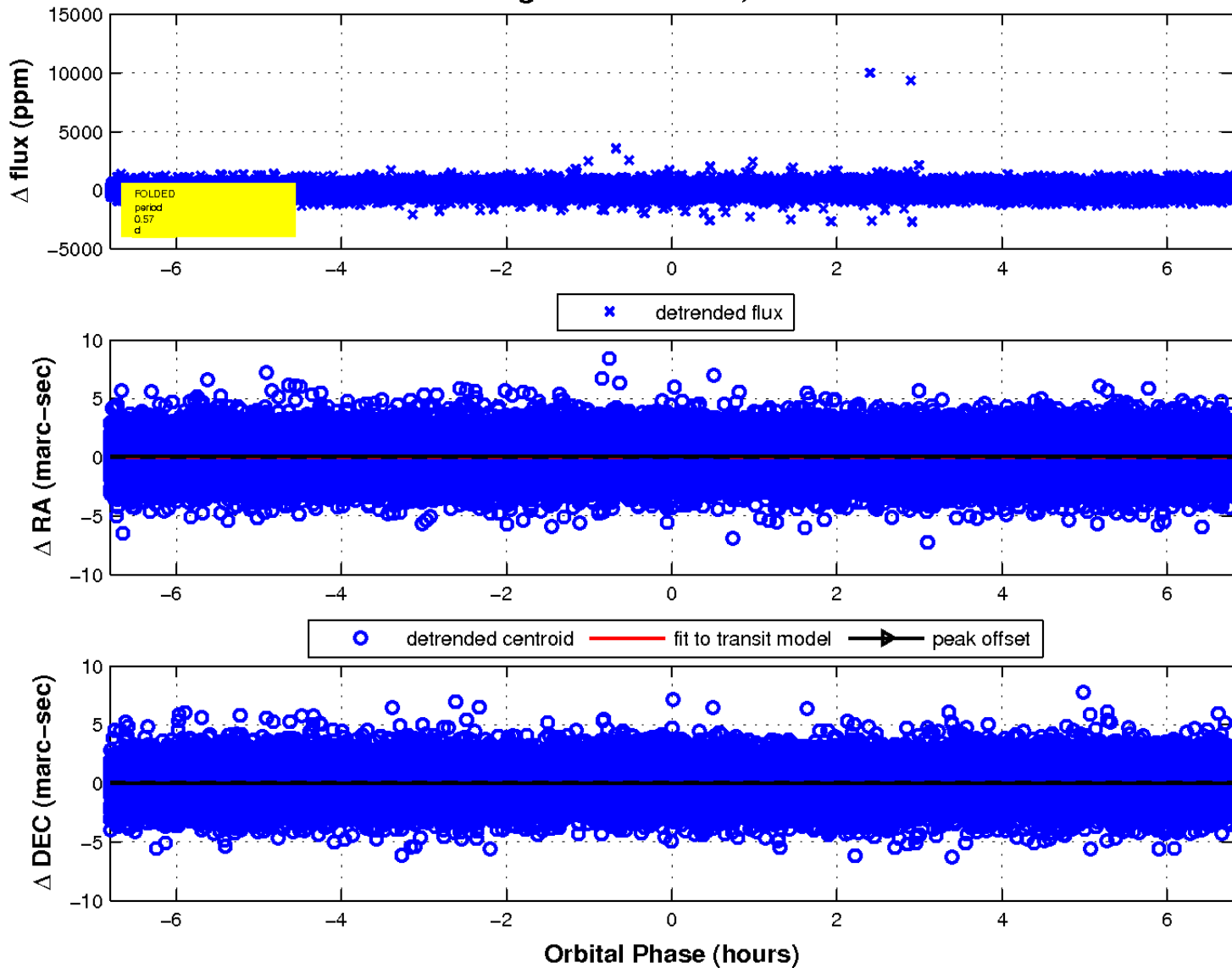
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

