

KIC 007115842

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})
007115842-01	OBS	No	0.566754	131.878063	15.0	3.562	12.5	8.5	1.24	5964	0.50	9011.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115842-01	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.

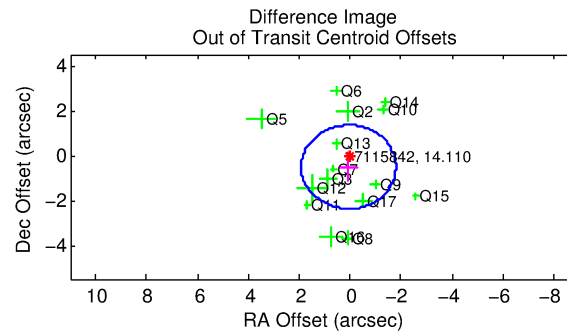
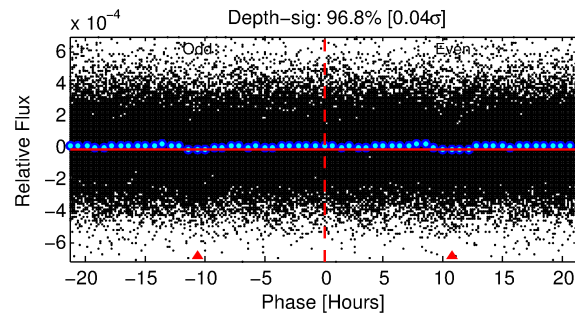
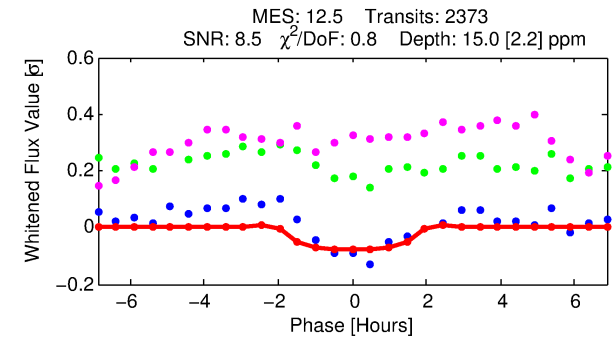
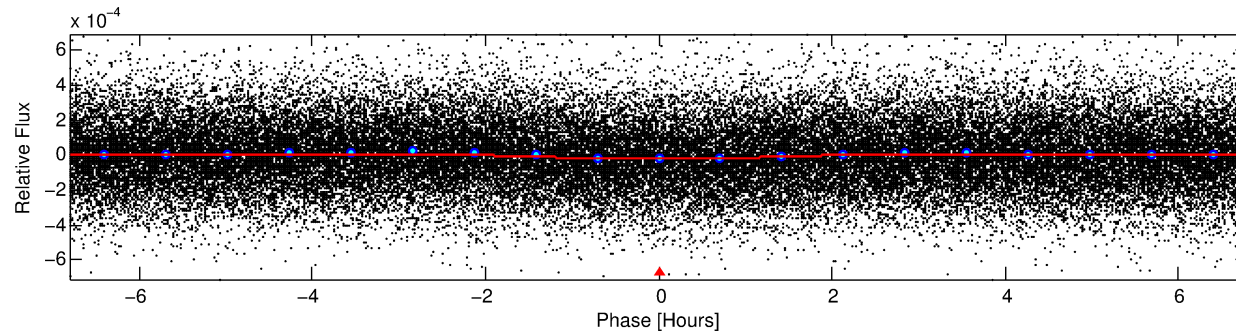
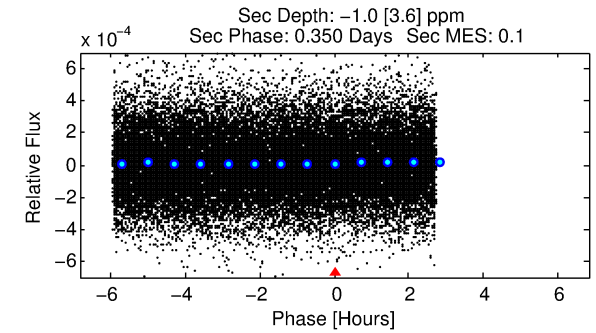
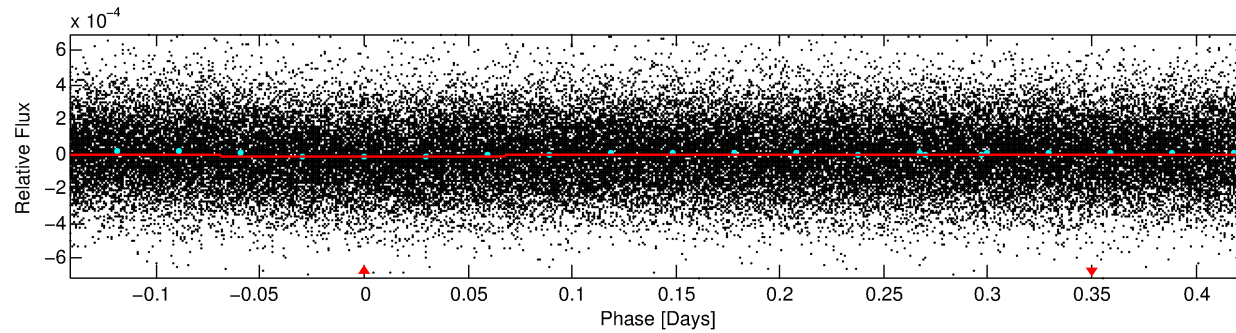
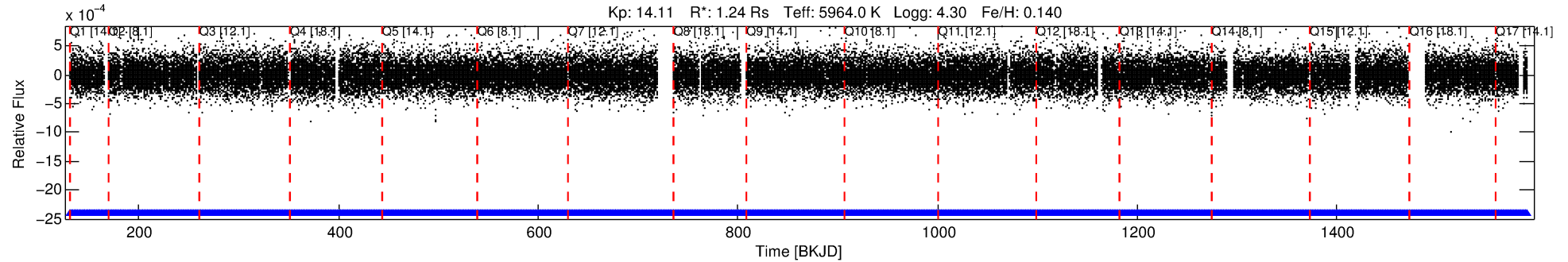
Ephemeris Match Information For 007115842-01

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
007115842-01	7115842	RR-Lyr-pri	7198959	1:1	687.3	41	-168	7.86	14.11	41553.00	Direct-PRF	0	1.18	20.76

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: 7115842 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56675 [0.00001] d
Epoch = 131.8781 [0.0049] BKJD
Rp/R* = 0.0037 [0.0025]
a/R* = 1.25 [1.41]
b = 0.60 [3.38]
Seff = 9011.57 [3388.15]
Teq = 2484 [234] K
Rp = 0.50 [0.37] Re
a = 0.0139 [0.0034] AU
Ag = N/A
Teffp = N/A

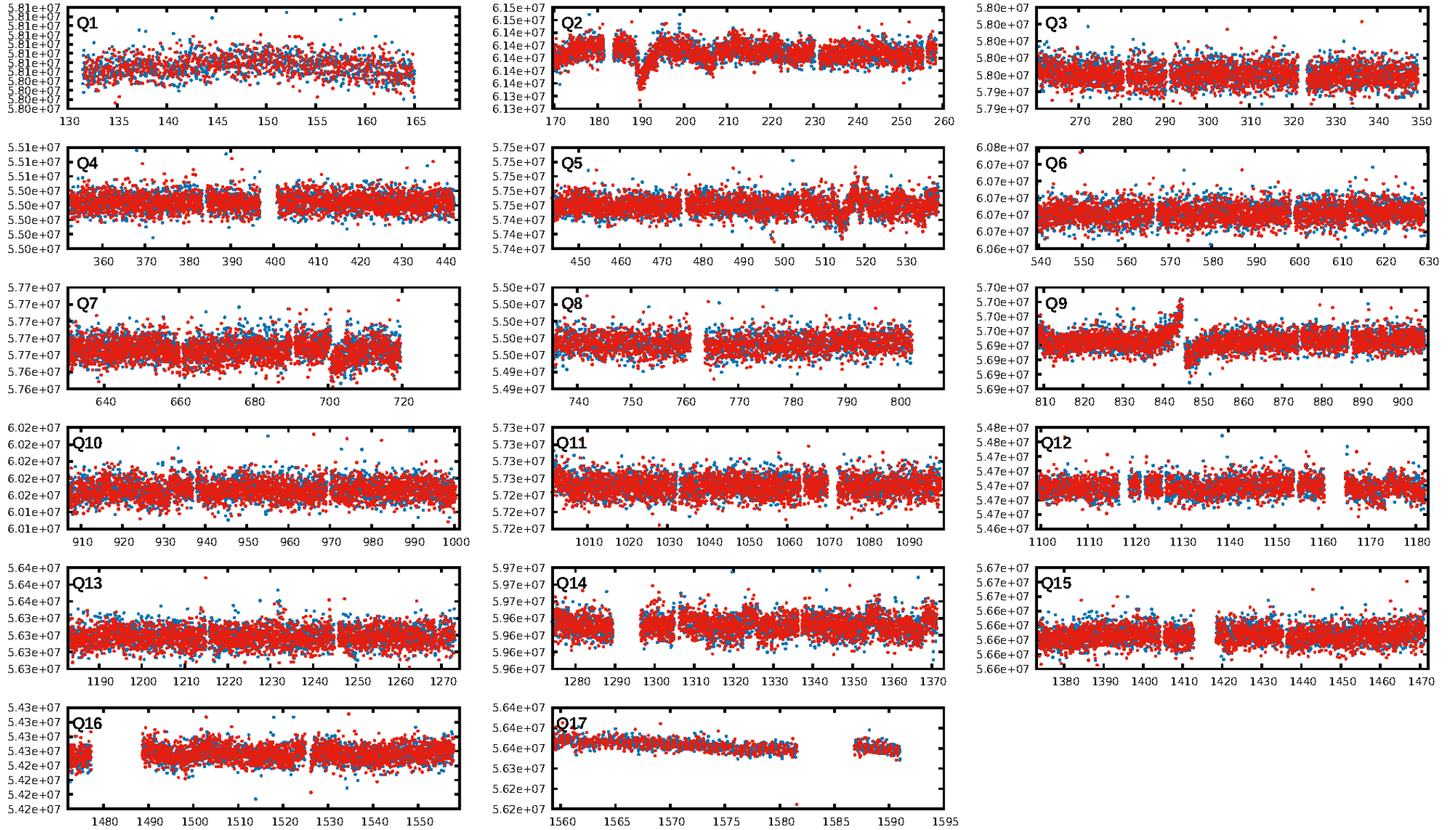
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.87e-18
RollingBand-fgt: 1.00 [2267/2267]
GhostDiagnostic-chr: 0.2436
Centroid-sig: 0.0%
Centroid-so: 5.040 arcsec [3.75σ]
OotOffset-rm: 0.516 arcsec [0.83σ]
KicOffset-rm: 0.799 arcsec [1.31σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 1.00 [17/17]

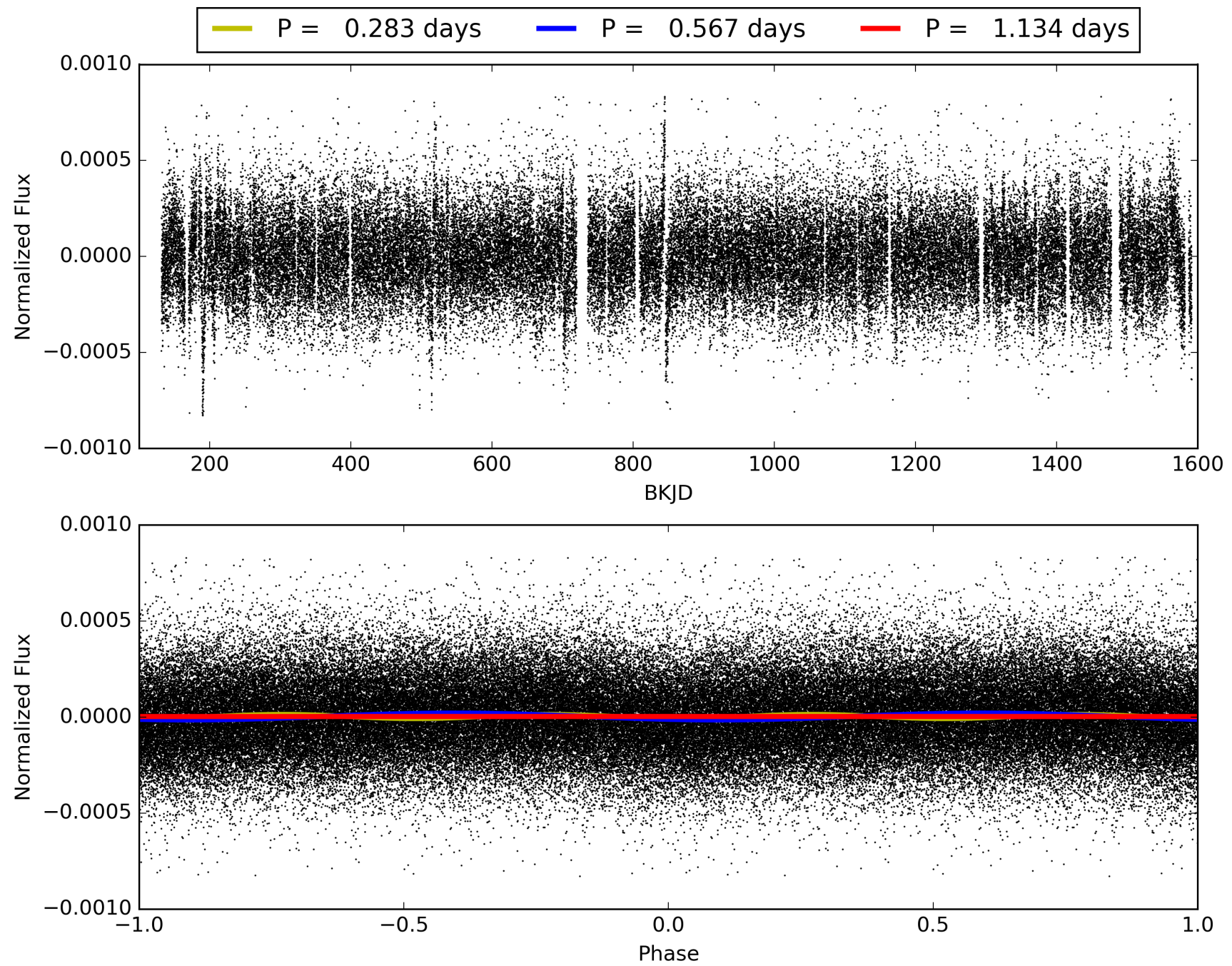
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:42:31 Z

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

TCE 007115842-01, PDC Light Curves

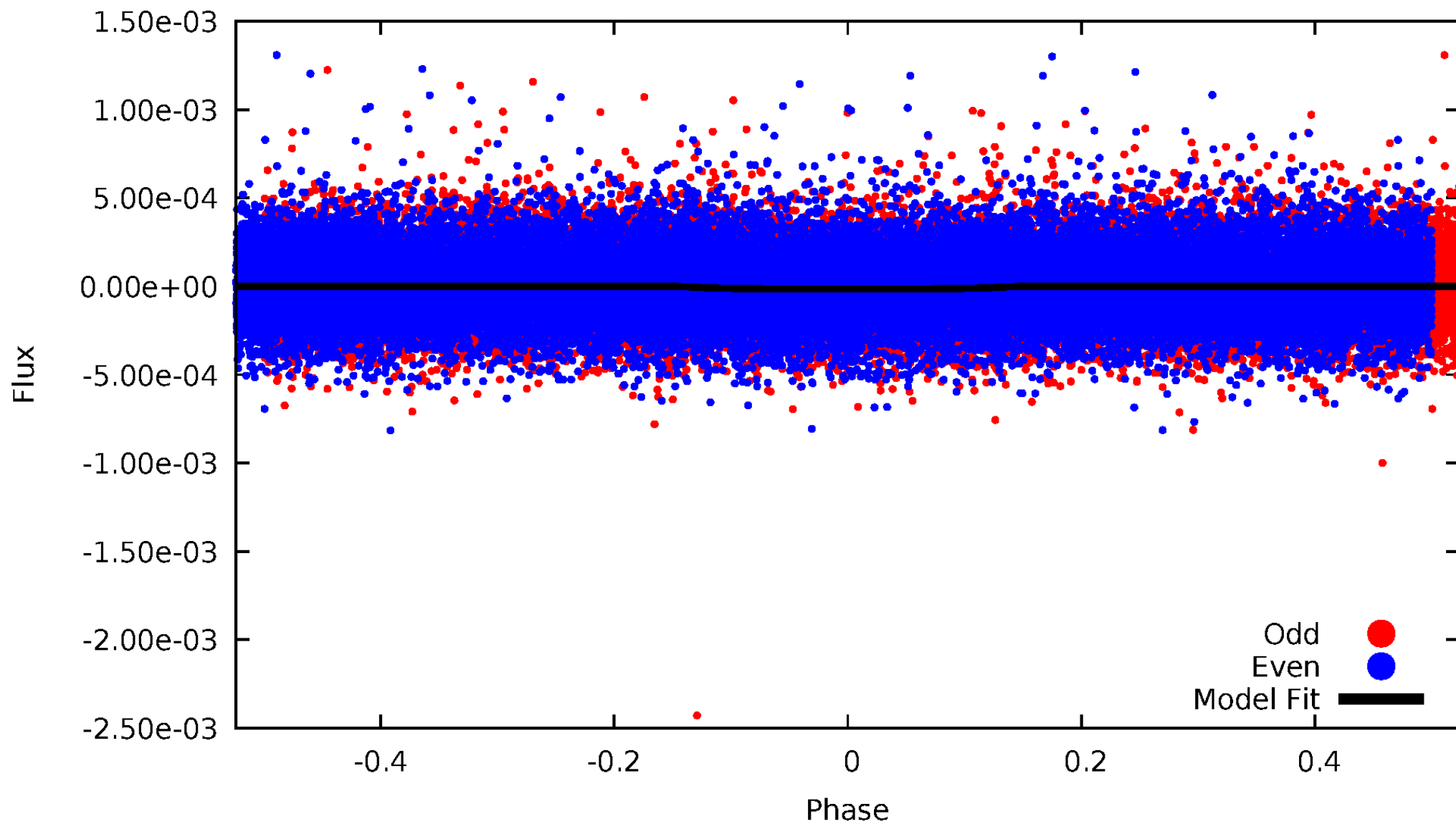


TCE 007115842-01



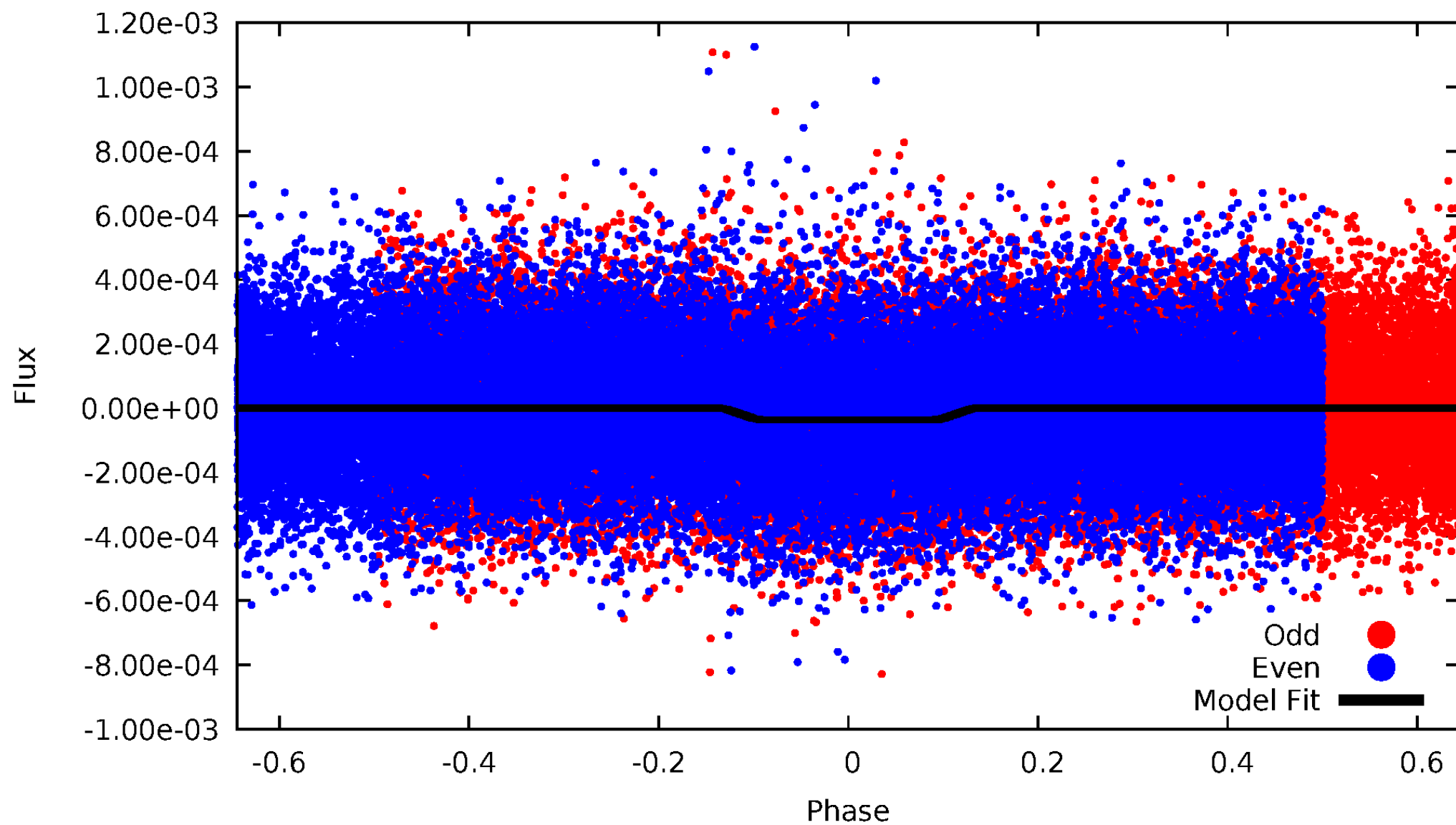
DV Odd/Even

TCE 007115842-01



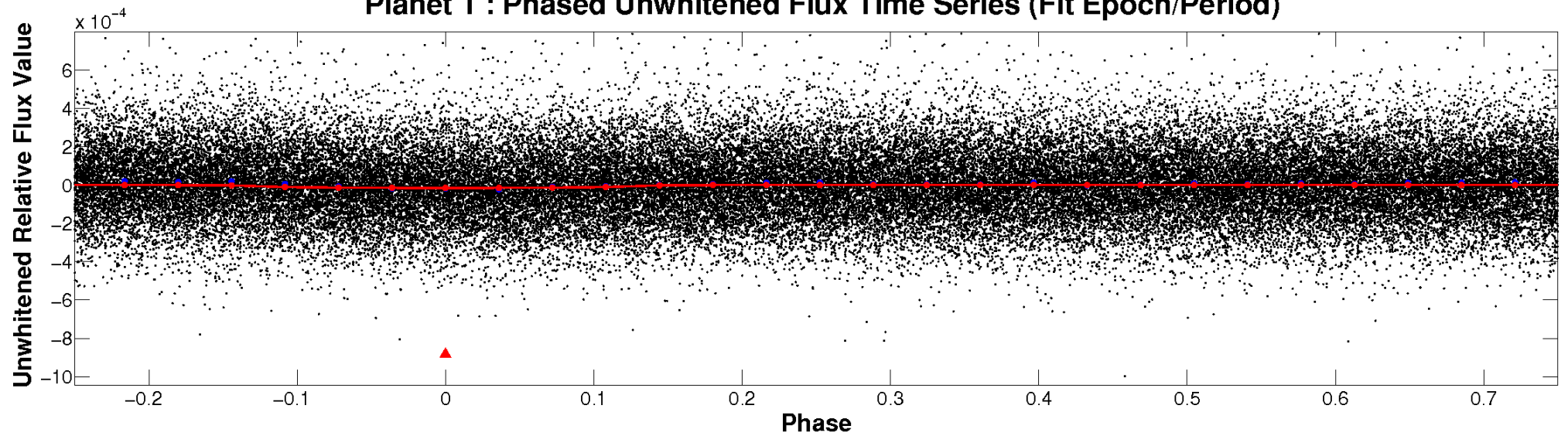
ALT Odd/Even

TCE 007115842-01

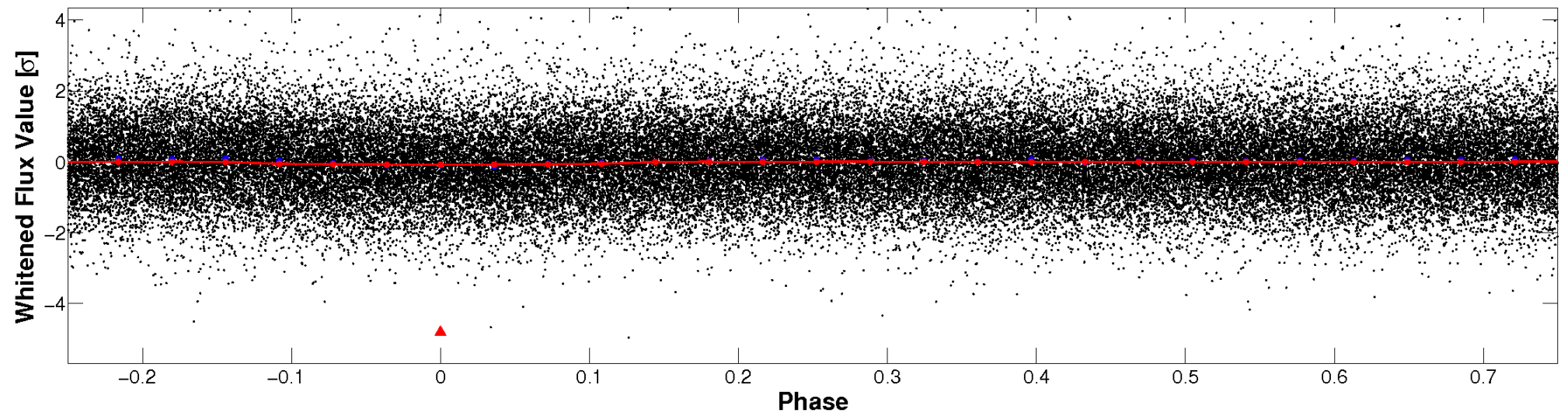


Non-Whitened Vs. Whitened Light Curve

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

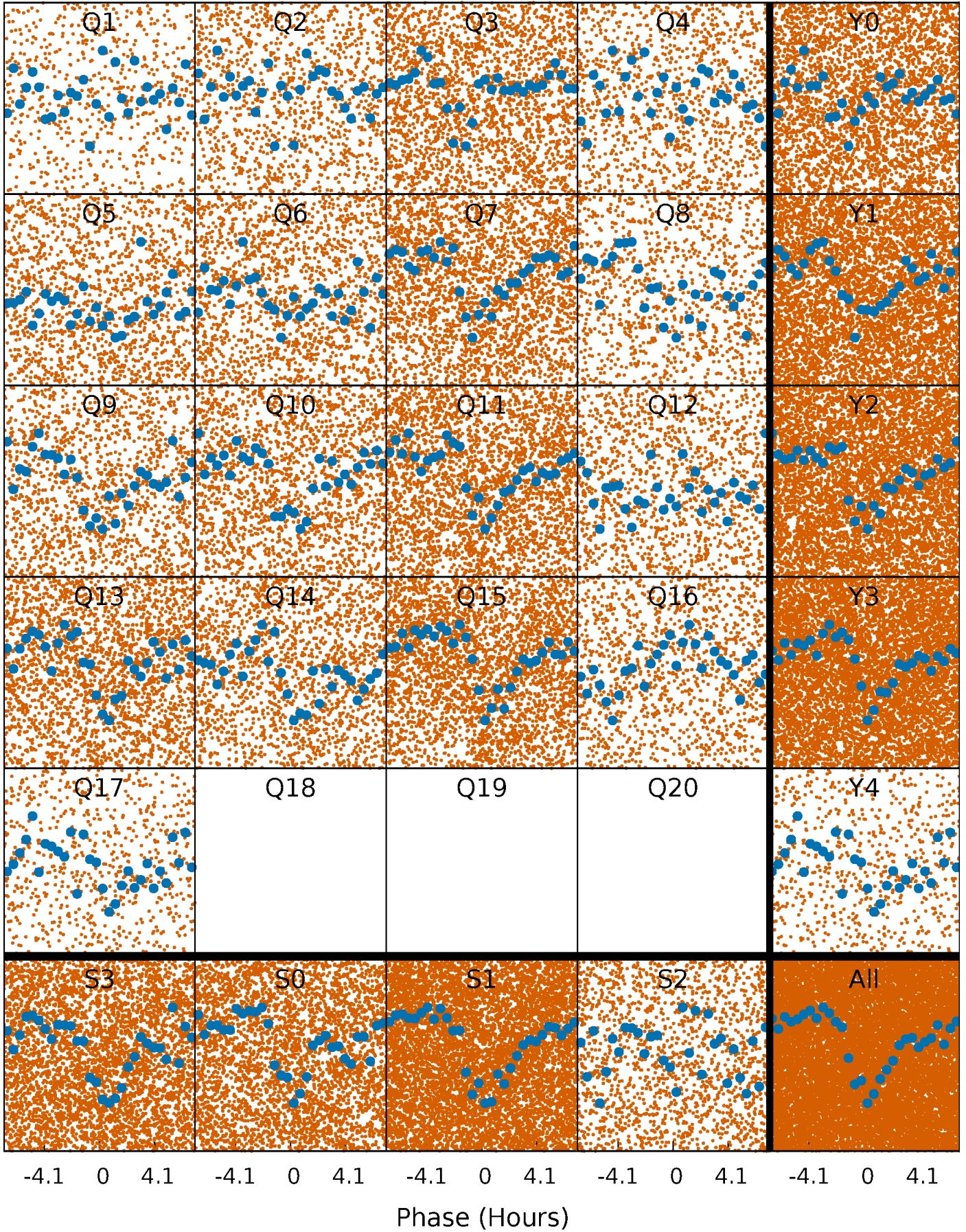


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



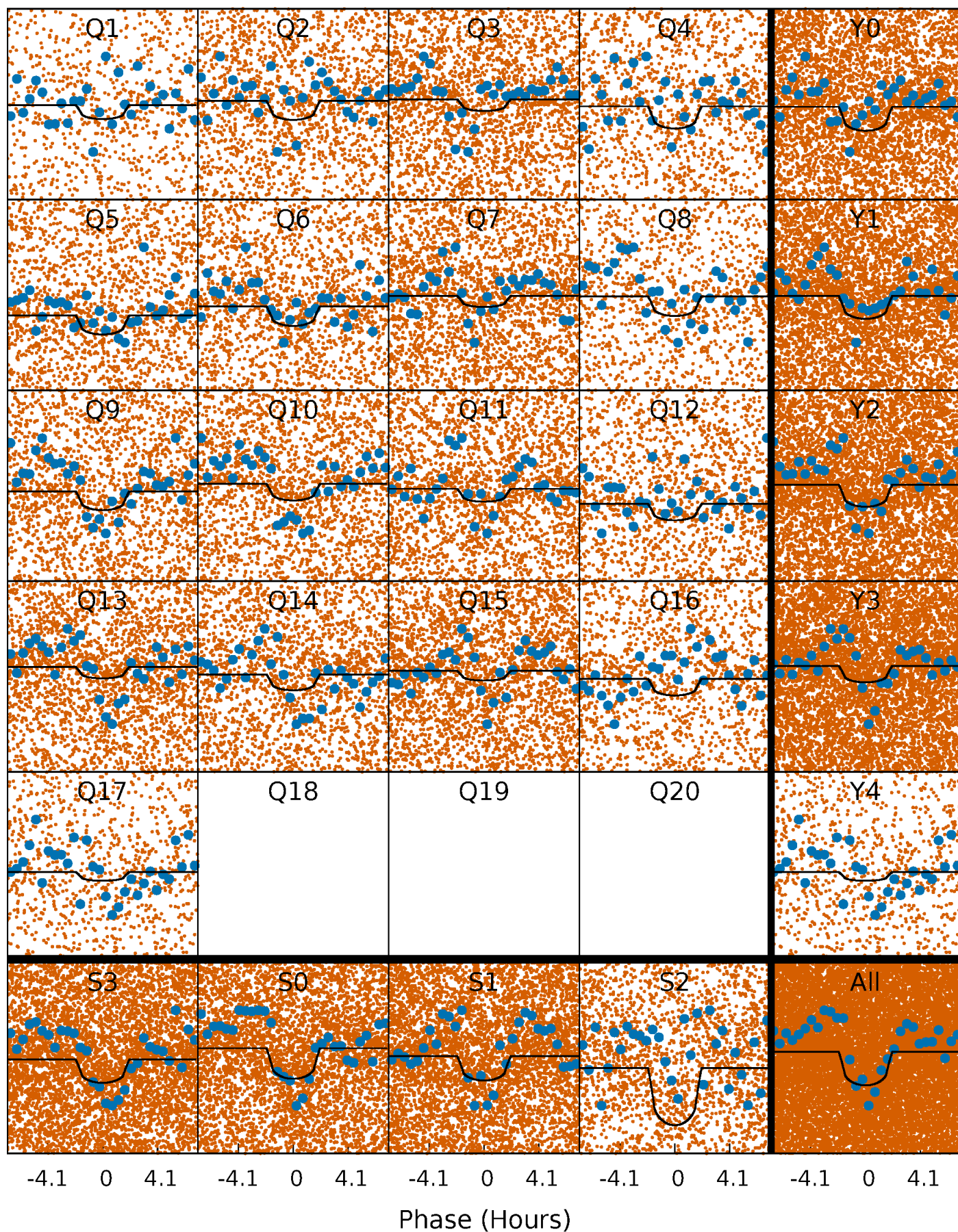
PDC Quarter-Phased Transit Curves

TCE 007115842-01 P= 0.566754 Days $T_0=131.878063$ (BKJD)



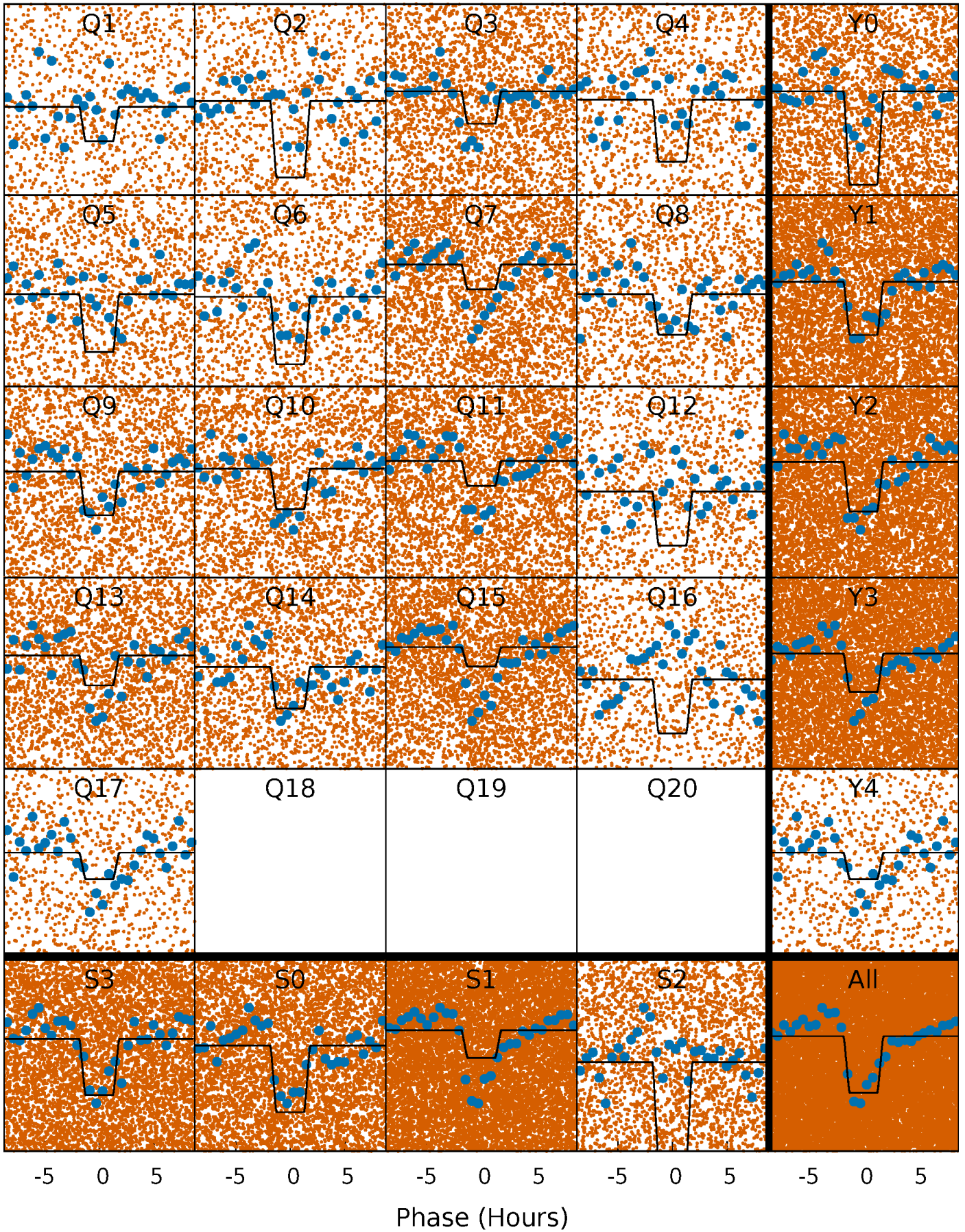
DV Quarter-Phased Transit Curves

TCE 007115842-01 P= 0.566754 Days $T_0=131.878063$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

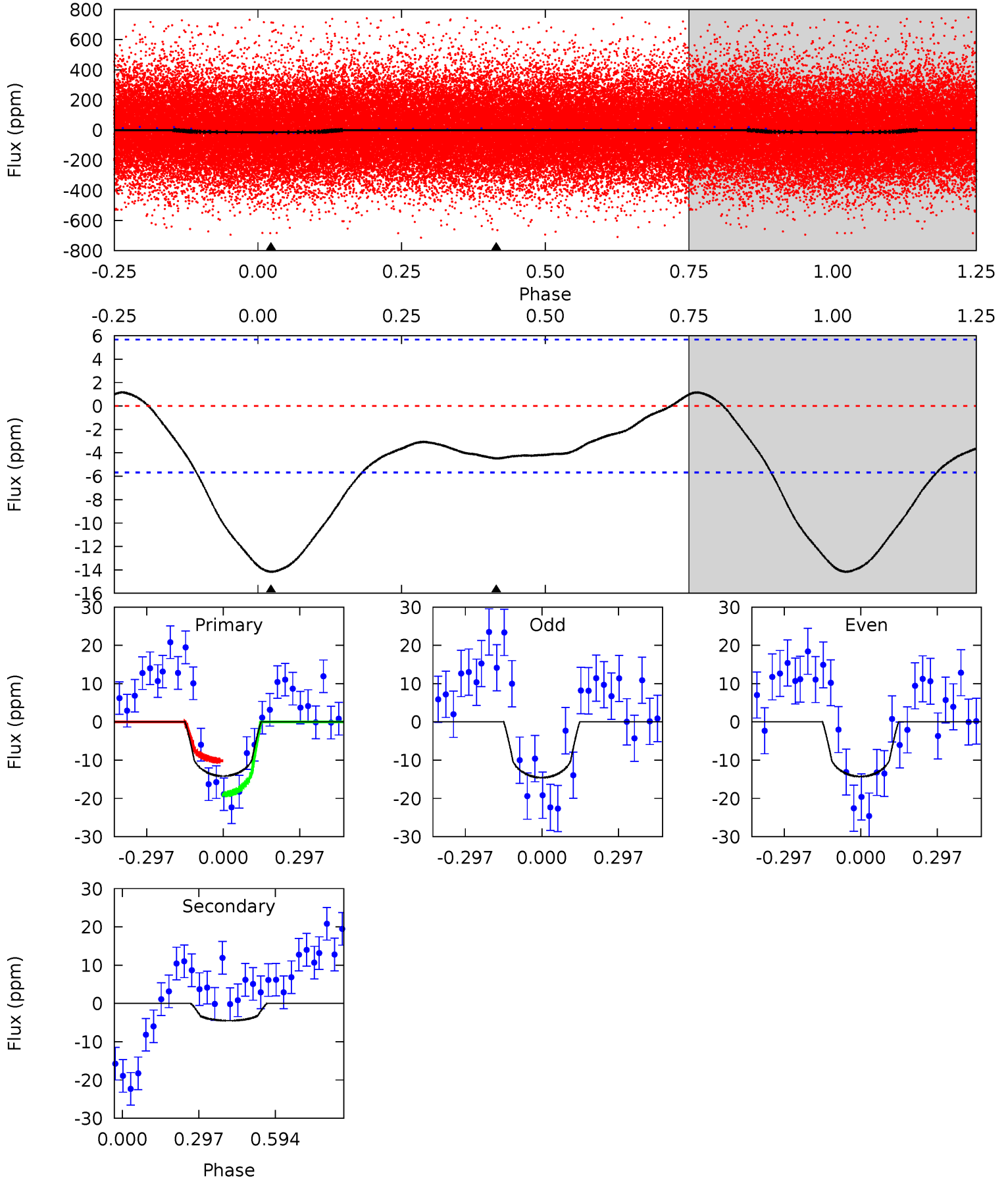
TCE 007115842-01 P= 0.566788 Days $T_0=131.844591$ (BKJD)



DV Model-Shift Uniqueness Test

007115842-01, P = 0.566754 Days, E = 131.311309 Days

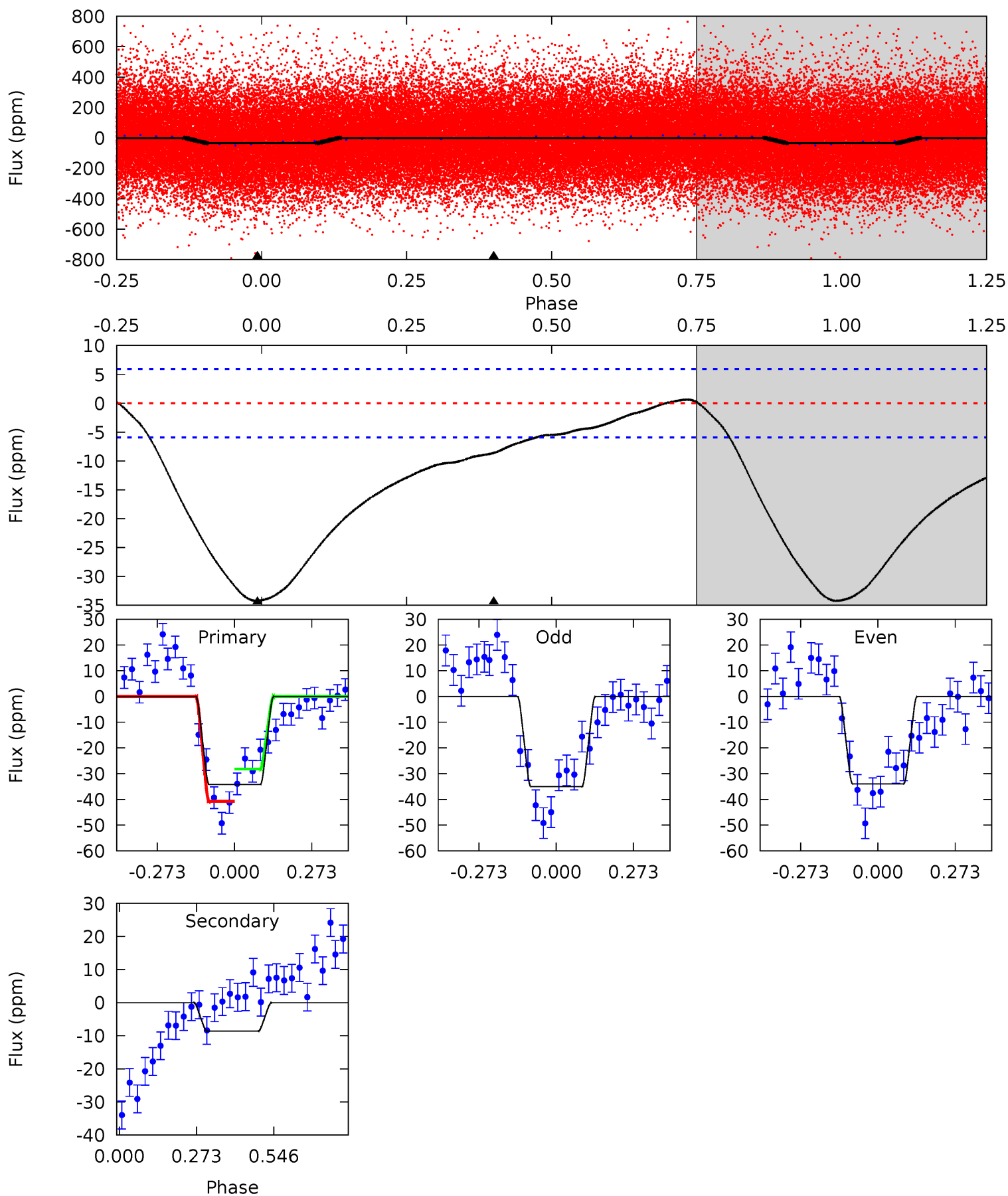
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	3.43	0	0	4.33	1.04	0.57	10.8	10.8	3.43	3.43	0.11	0.87	0.08	3.31



Alt Model-Shift Uniqueness Test

007115842-01, P = 0.566788 Days, E = 131.277803 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	6.30	0	0	4.35	1.10	0.55	25.1	25.1	6.30	6.30	0.37	1.02	0.02	4.50



Stellar Parameters For KIC 007115842

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5964^{+169}_{-211}	$4.299^{+0.136}_{-0.187}$	$0.140^{+0.200}_{-0.300}$	$1.240^{+0.367}_{-0.245}$	$1.116^{+0.136}_{-0.151}$	$0.825^{+0.599}_{-0.400}$
	+3%/-4%	+3%/-4%	+143%/-214%	+30%/-20%	+12%/-14%	+73%/-48%
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 007115842-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 1	$0.52^{+0.36}_{-0.29}$	3485^{+257}_{-216}	4452^{+2231}_{-1097}	$1.812^{+6.744}_{-1.244}$
Alt.	-9 ± 1	$0.82^{+0.40}_{-0.32}$	3496^{+261}_{-226}	4160^{+1093}_{-753}	$1.320^{+2.475}_{-0.723}$

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 $A_{obs} \gg 1.0$

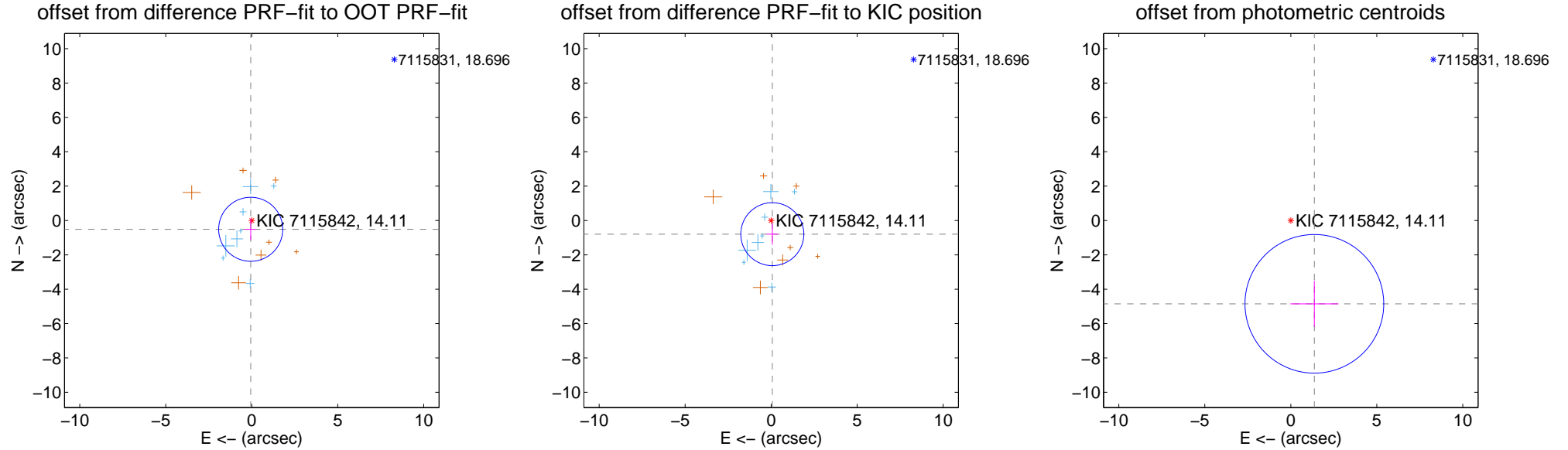
DV Centroid Data

Supplemental centroid analysis for 007115842-01. Kepler magnitude: 14.11. Transit SNR 8.50

There are 8 quarters with good PRF difference image offsets

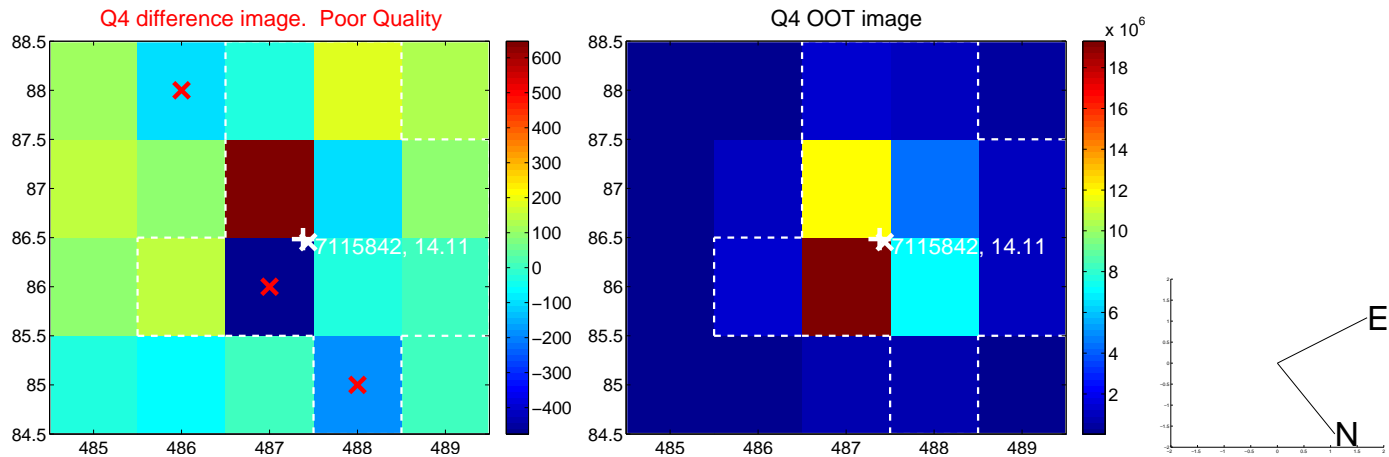
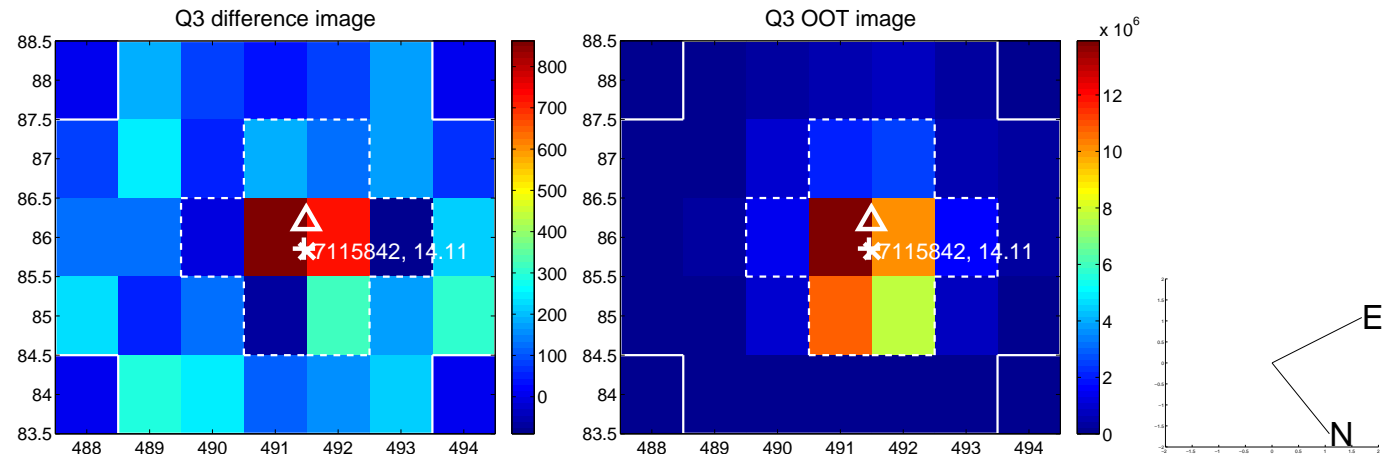
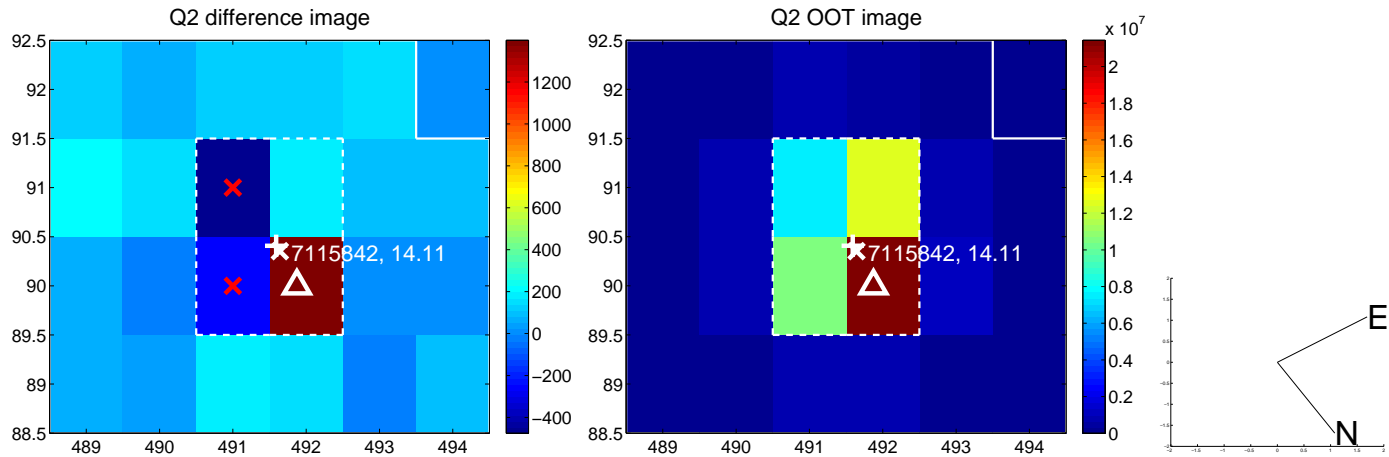
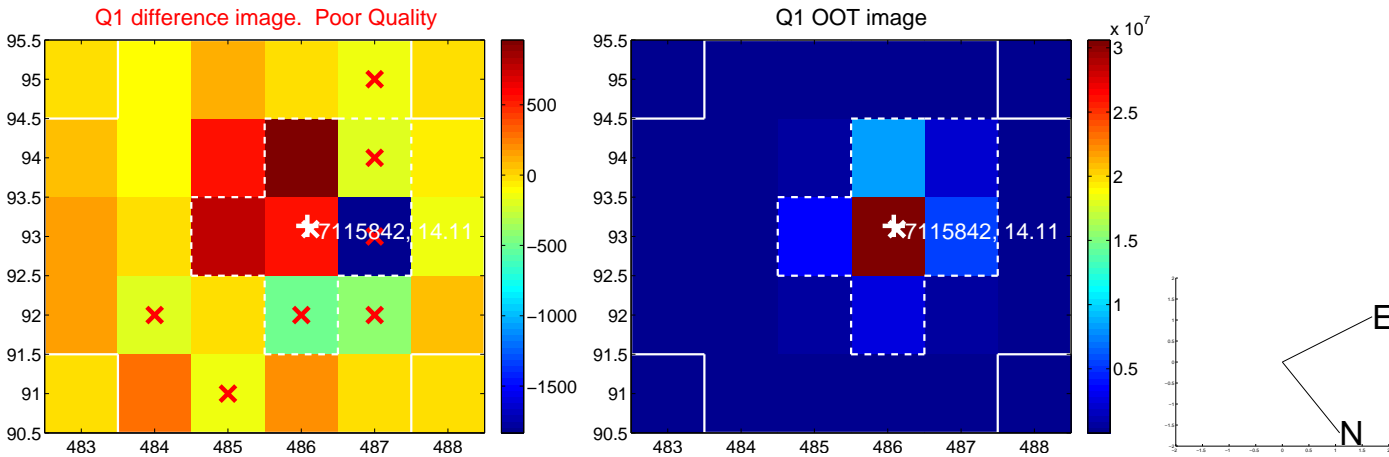
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.516 ± 0.621	0.83	0.061 ± 0.331	-0.512 ± 0.624
PRF-fit source offset from KIC position	0.799 ± 0.611	1.31	-0.068 ± 0.325	-0.796 ± 0.612
photometric centroid source offset	5.04 ± 1.34	3.75	-1.37 ± 1.40	-4.85 ± 1.34

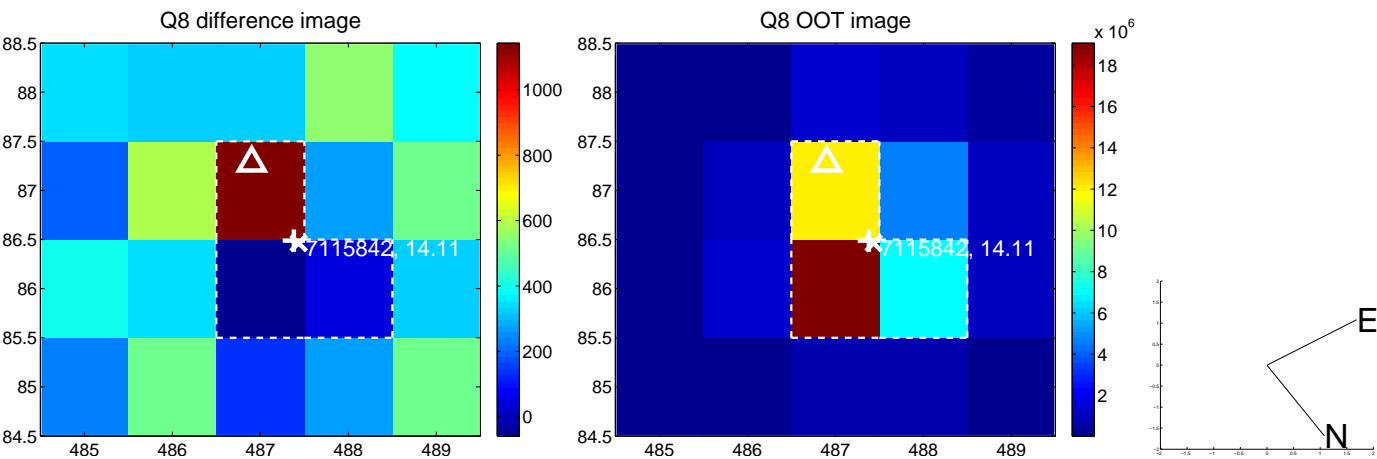
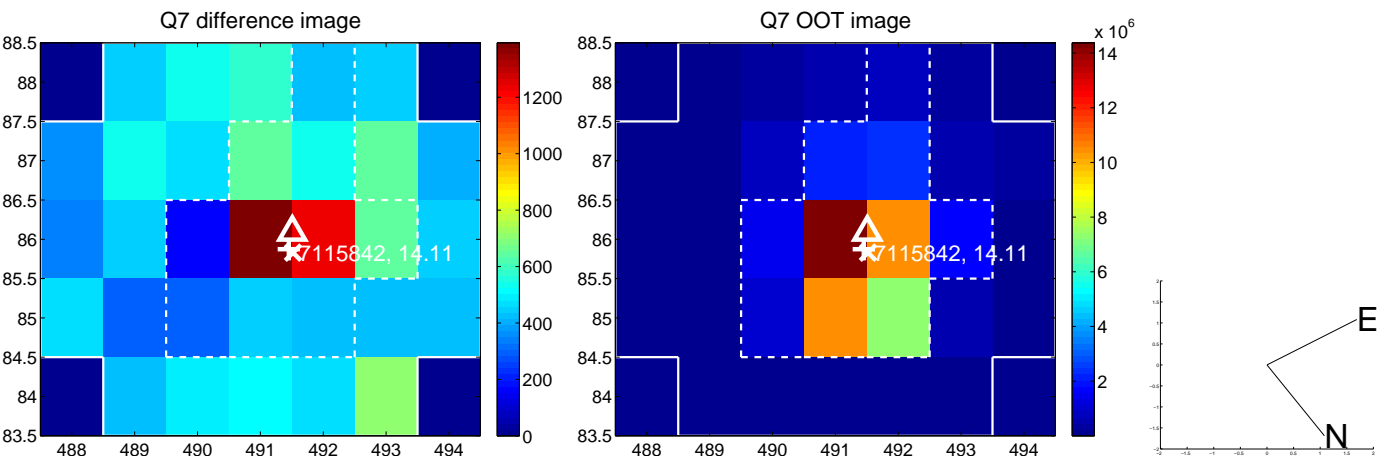
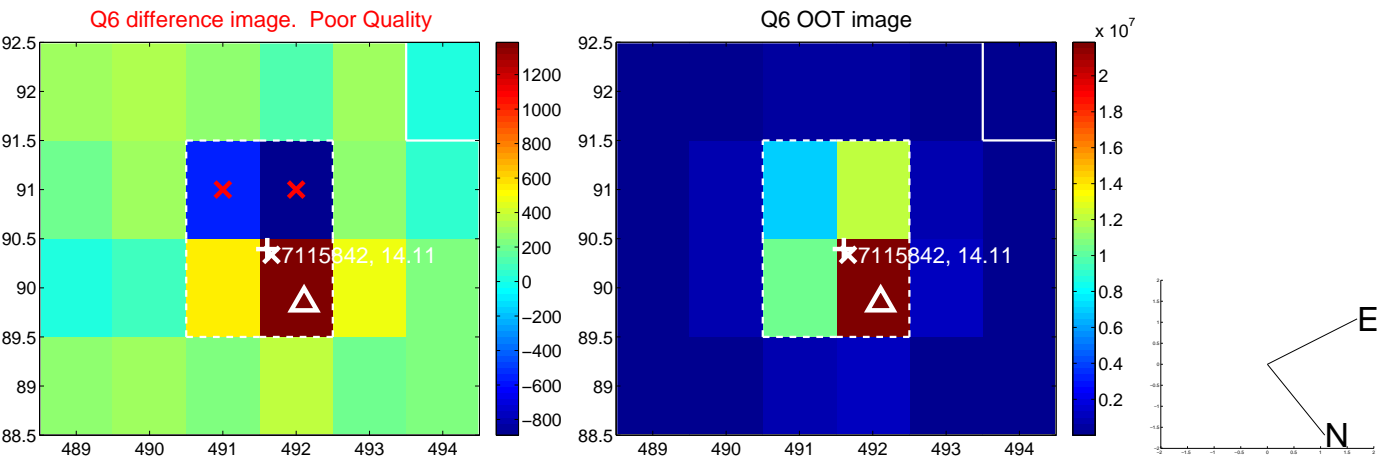
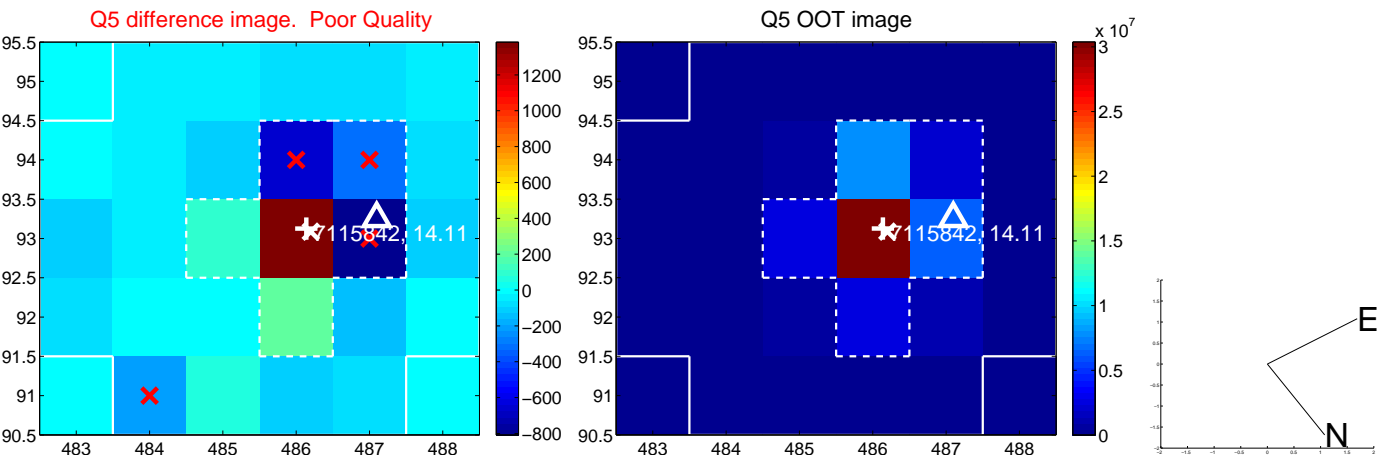


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

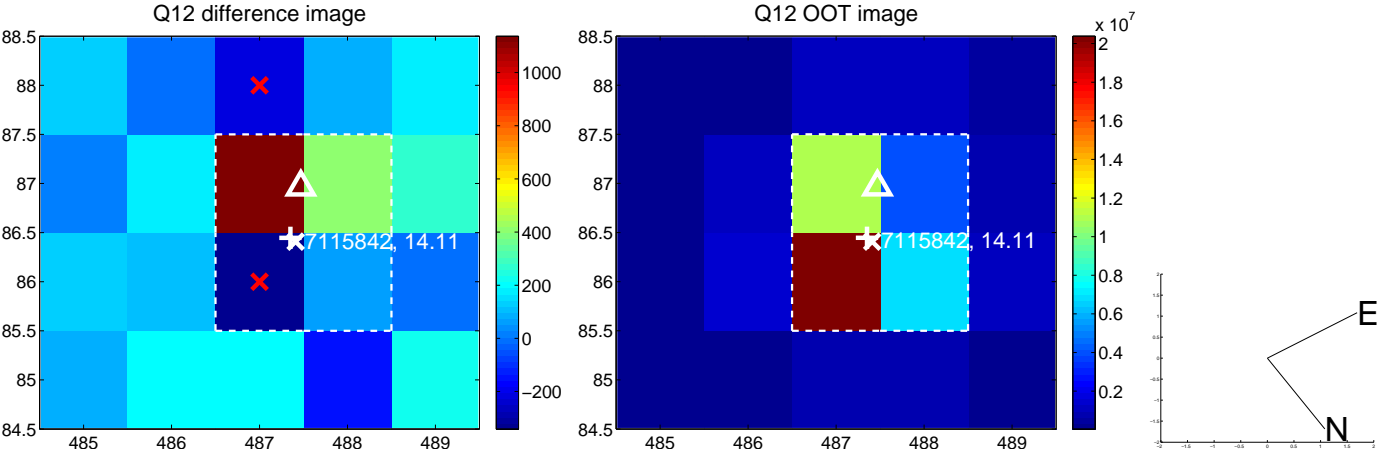
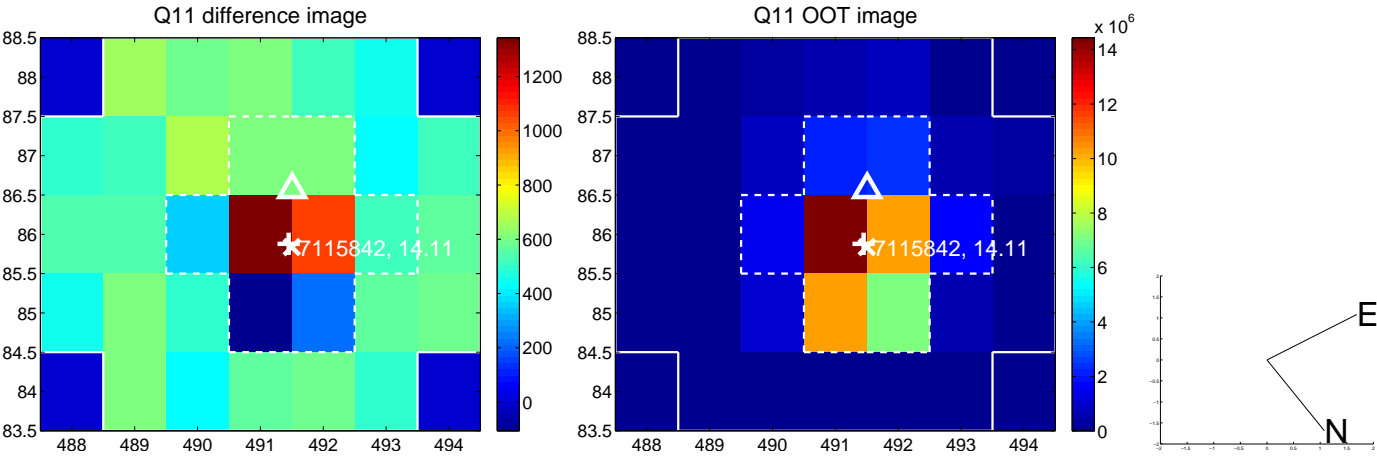
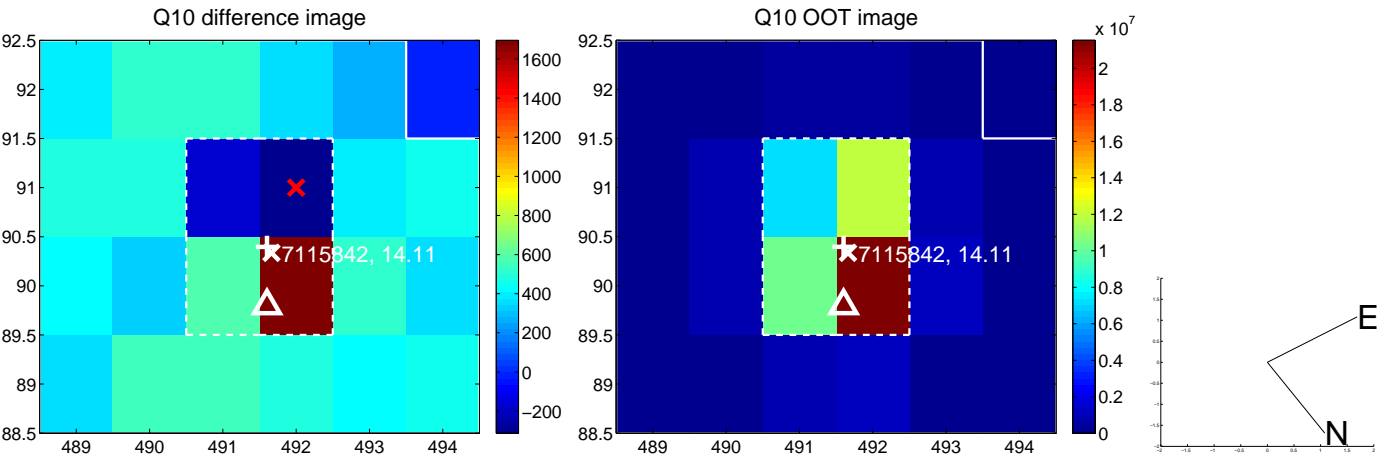
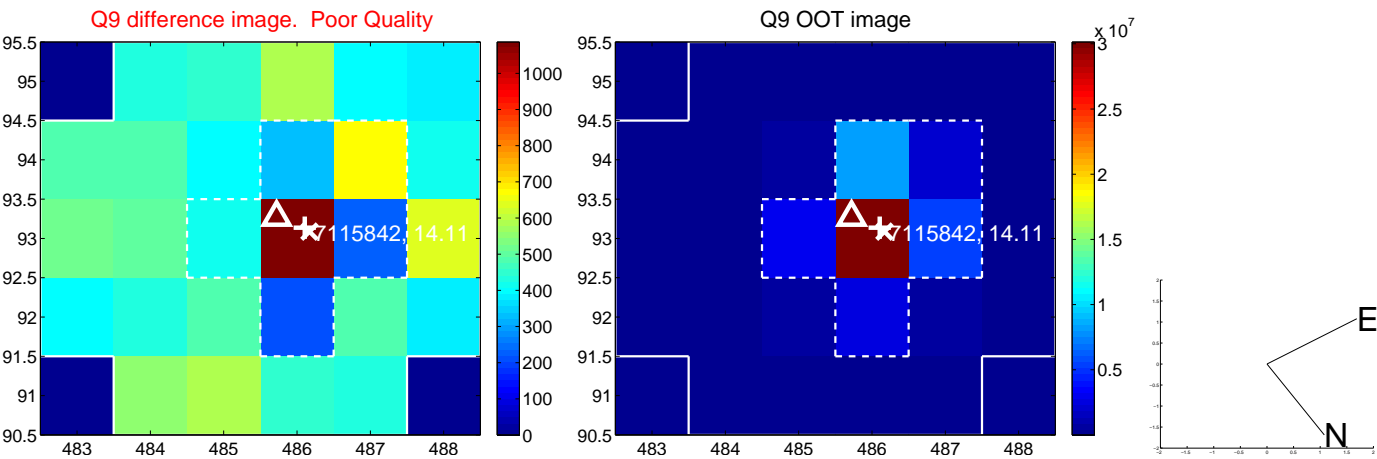
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



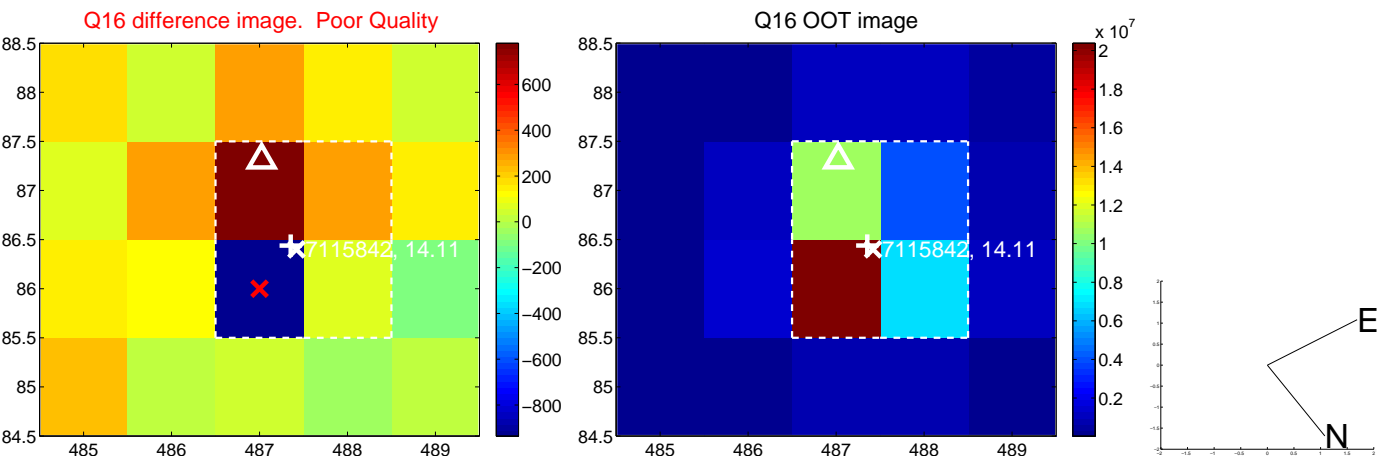
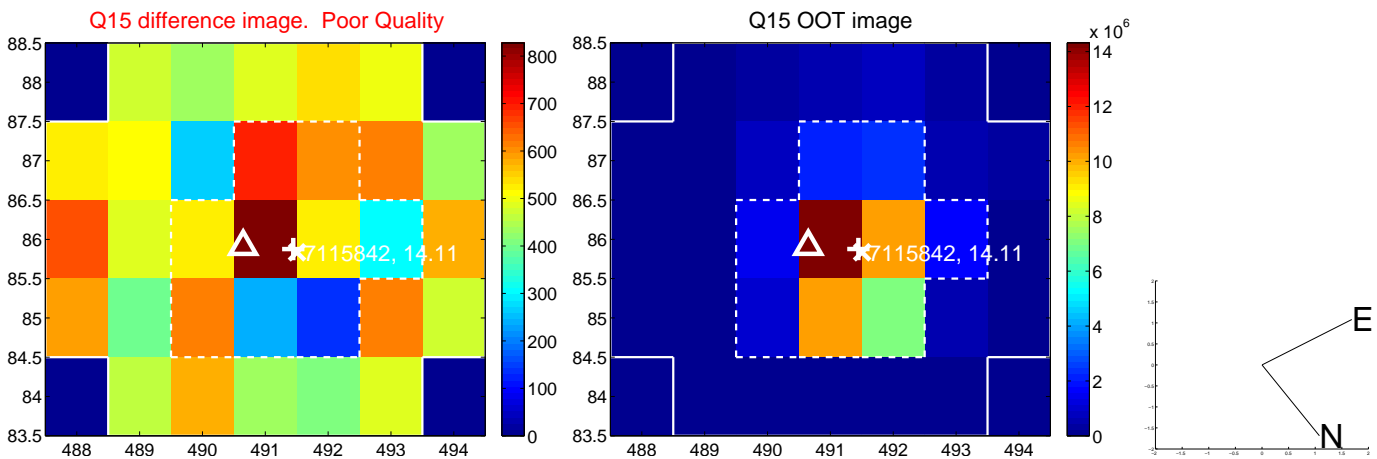
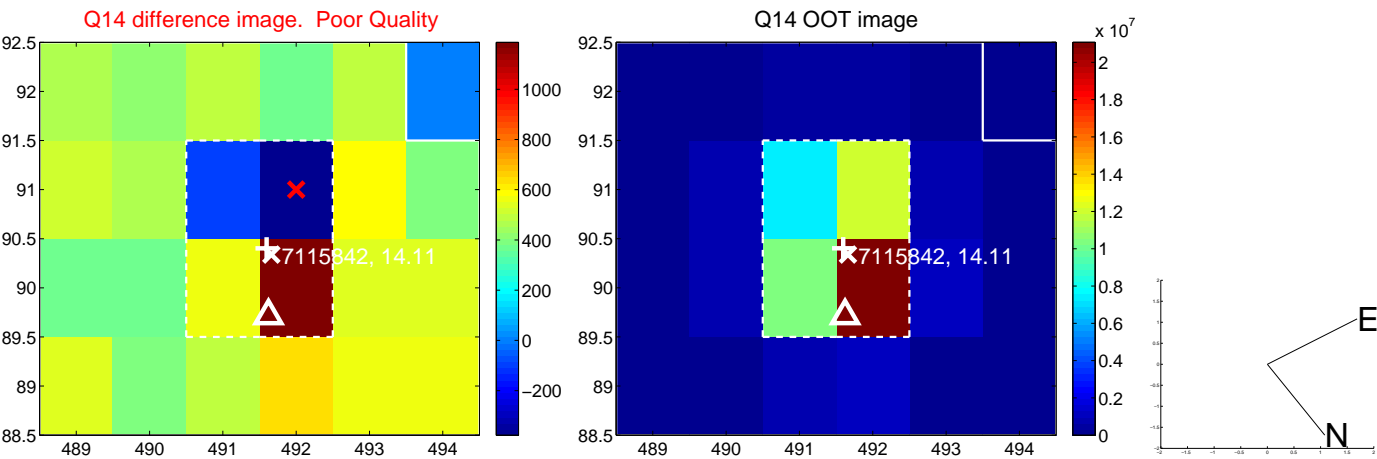
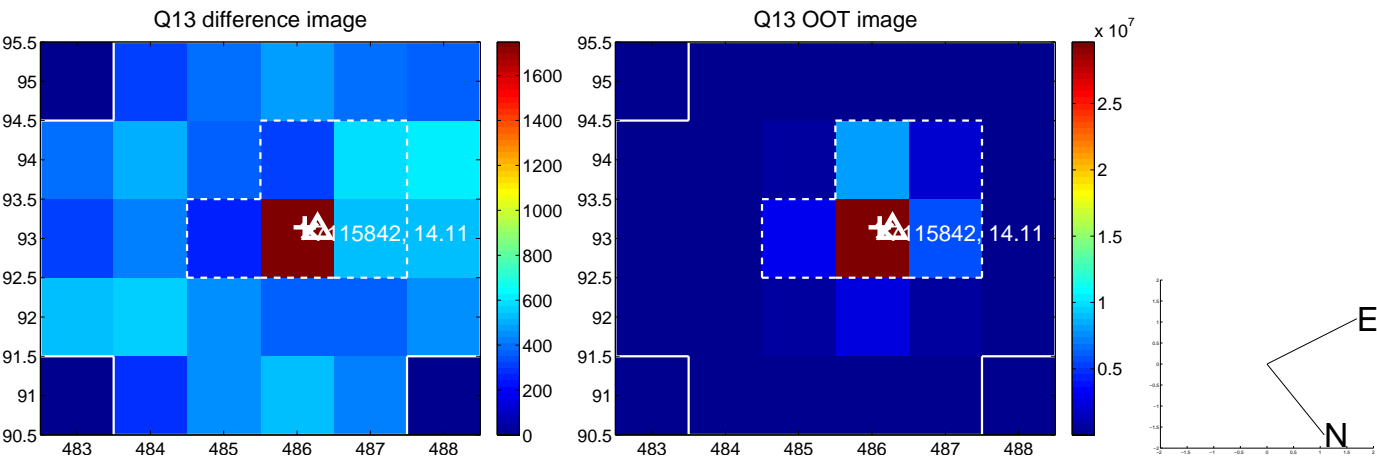
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



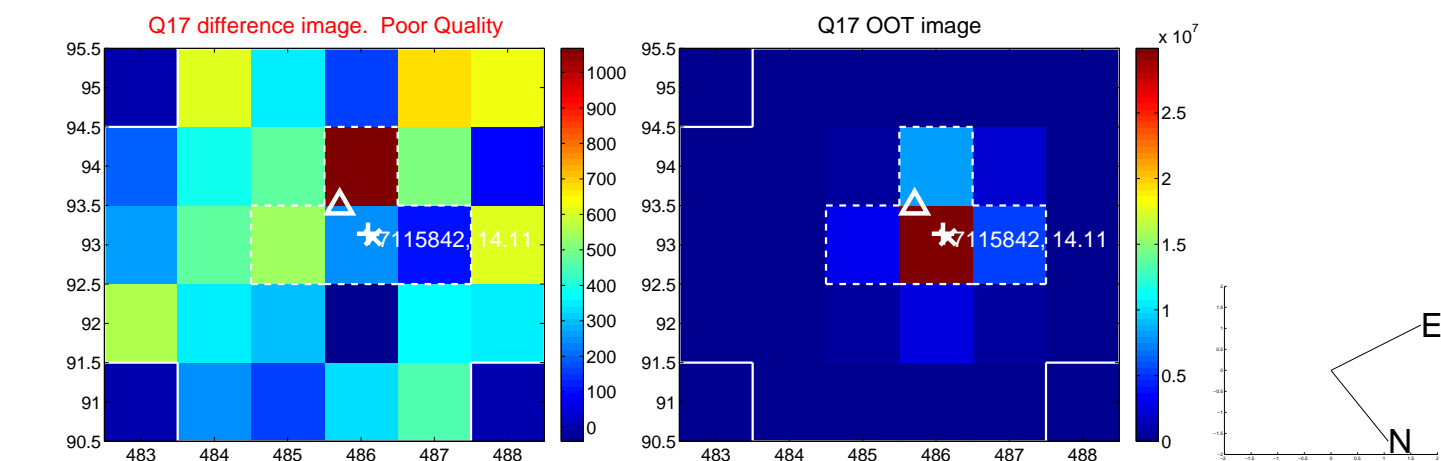
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



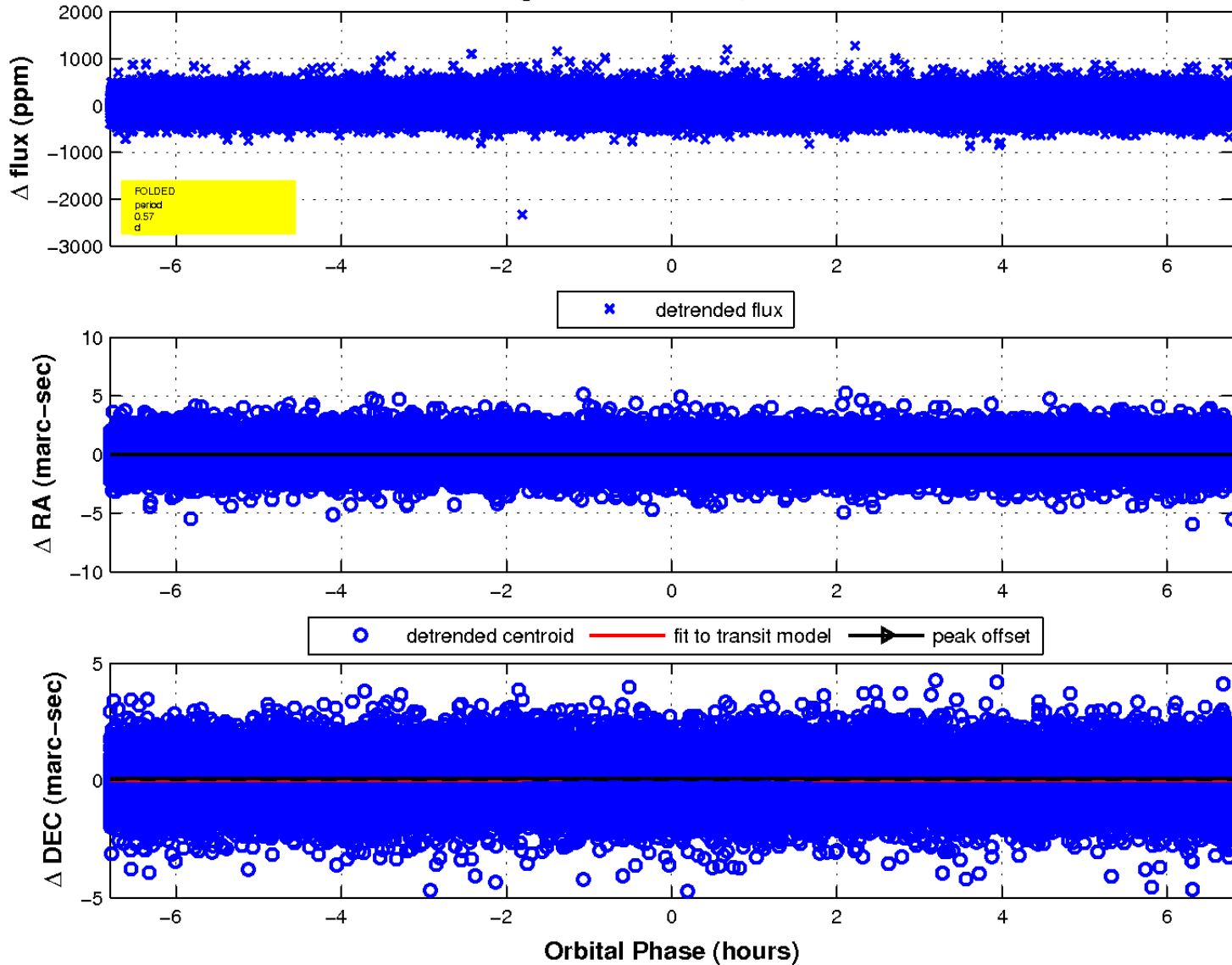
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

