

KIC 007115308

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})
007115308-01	OBS	No	0.566749	131.871249	15.6	3.939	11.6	6.1	0.95	6089	0.39	6067.91

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115308-01	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.

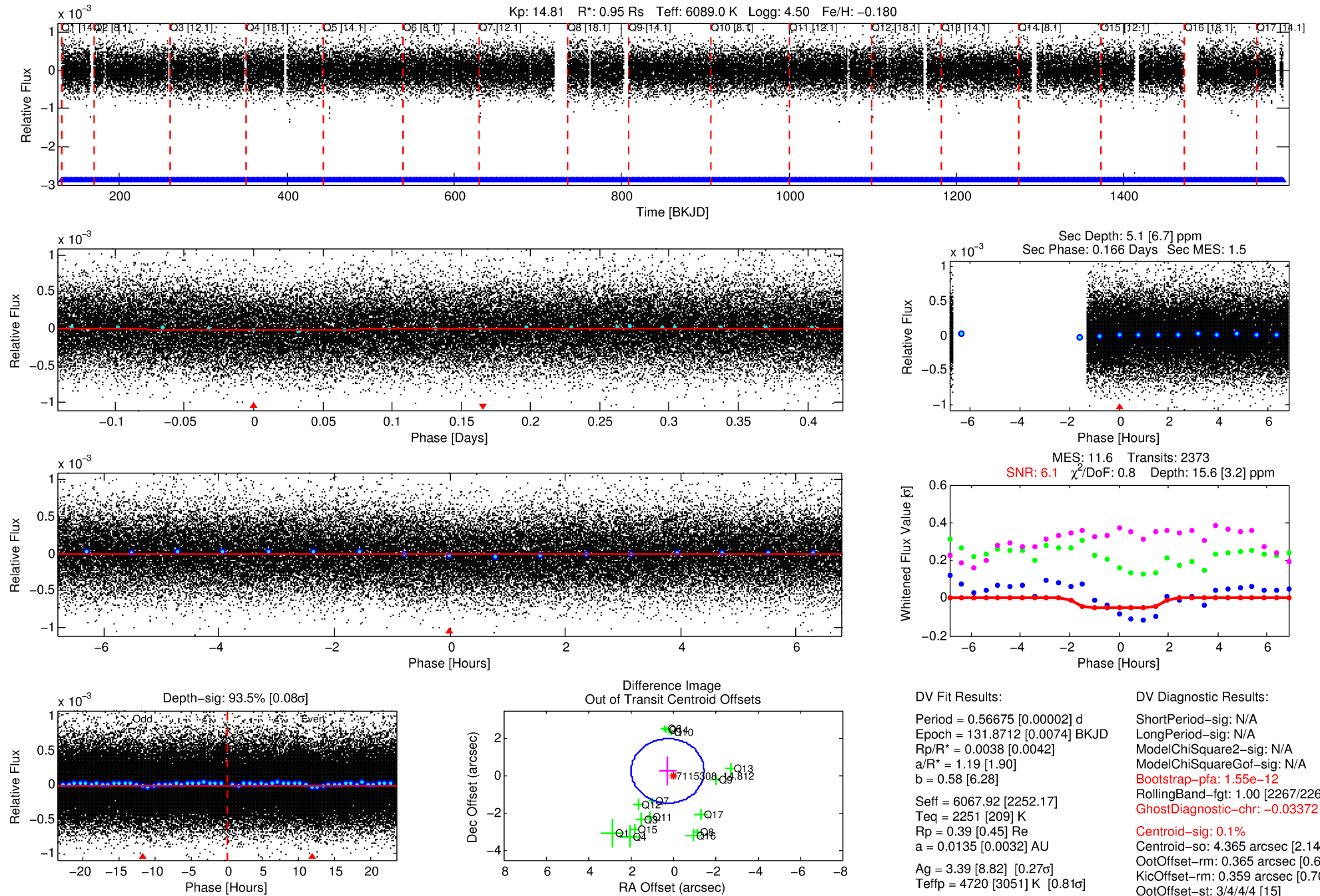
Ephemeris Match Information For 007115308-01

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
007115308-01	7115308	RR-Lyr-pri	7198959	1:1	1123.8	-2	-283	7.86	14.81	38956.00	Direct-PRF	0	0.27	21.37

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: 7115308 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56675 [0.00002] d
Epoch = 131.8712 [0.0074] BKJD
Rp/R* = 0.0038 [0.0042]
a/R* = 1.19 [1.90]
b = 0.58 [6.28]
Seff = 6067.92 [2252.17]
Teff = 2251 [209] K
Rp = 0.39 [0.45] Re
a = 0.0135 [0.0032] AU
Ag = 3.39 [8.82] [0.27 σ]
Teffp = 4720 [3051] K [0.81 σ]

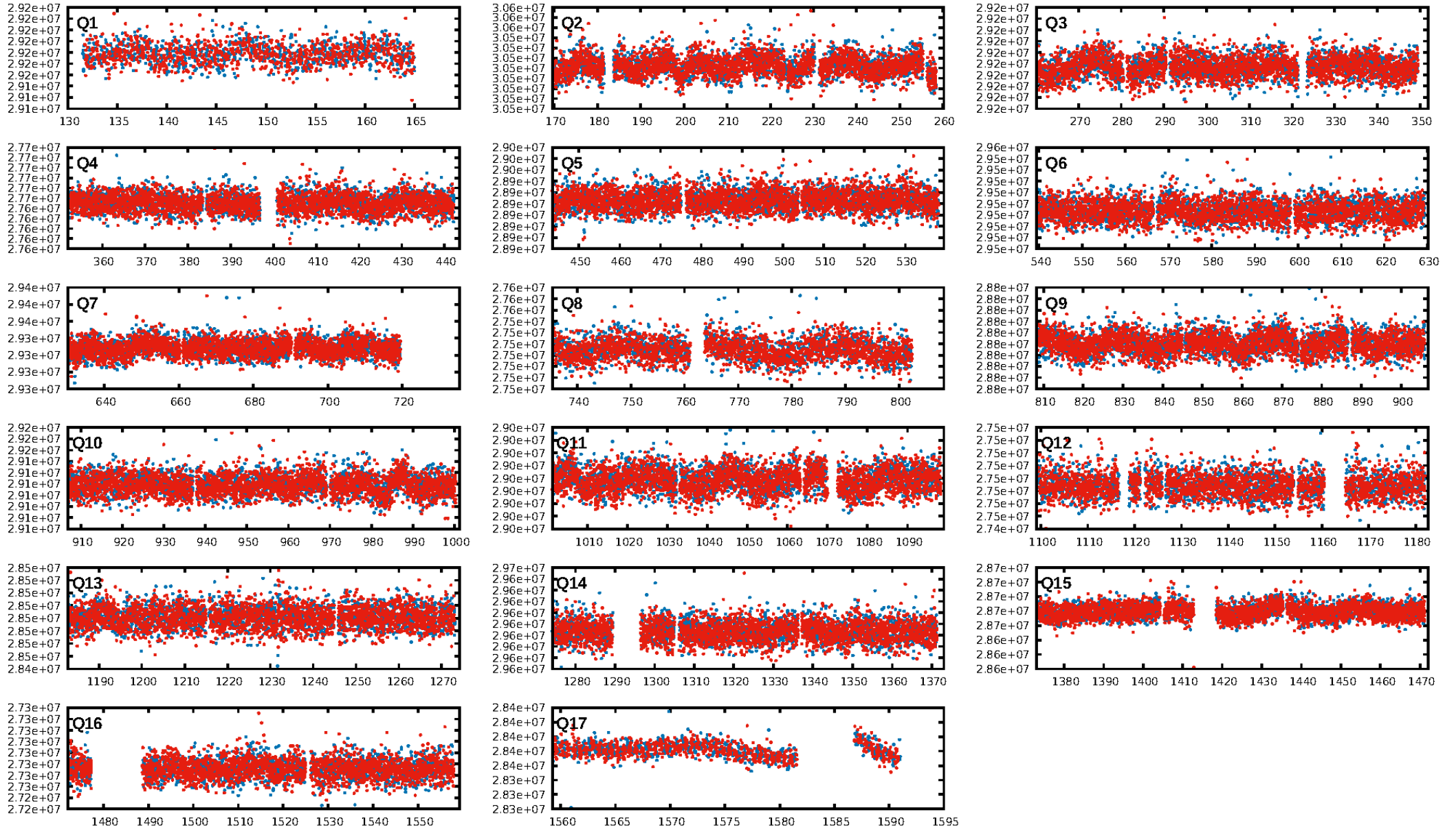
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.55e-12
RollingBand-fgt: 1.00 [2267/2267]
GhostDiagnostic-chr: -0.03372
Centroid-sig: 0.1%
Centroid-so: 4.365 arcsec [2.14 σ]
OotOffset-rm: 0.365 arcsec [0.64 σ]
KicOffset-rm: 0.359 arcsec [0.70 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 1.00 [17/17]

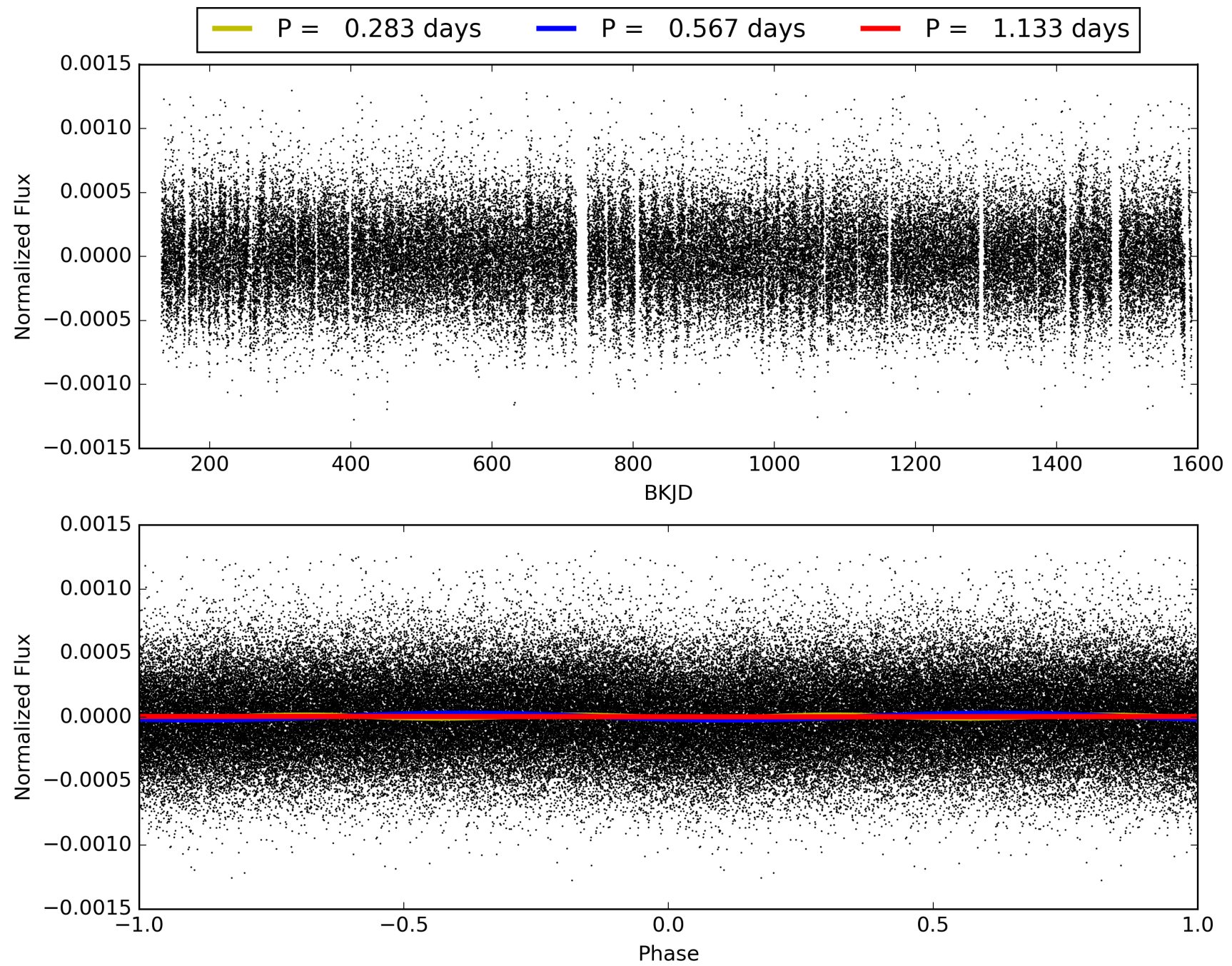
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:59:25 Z

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

TCE 007115308-01, PDC Light Curves

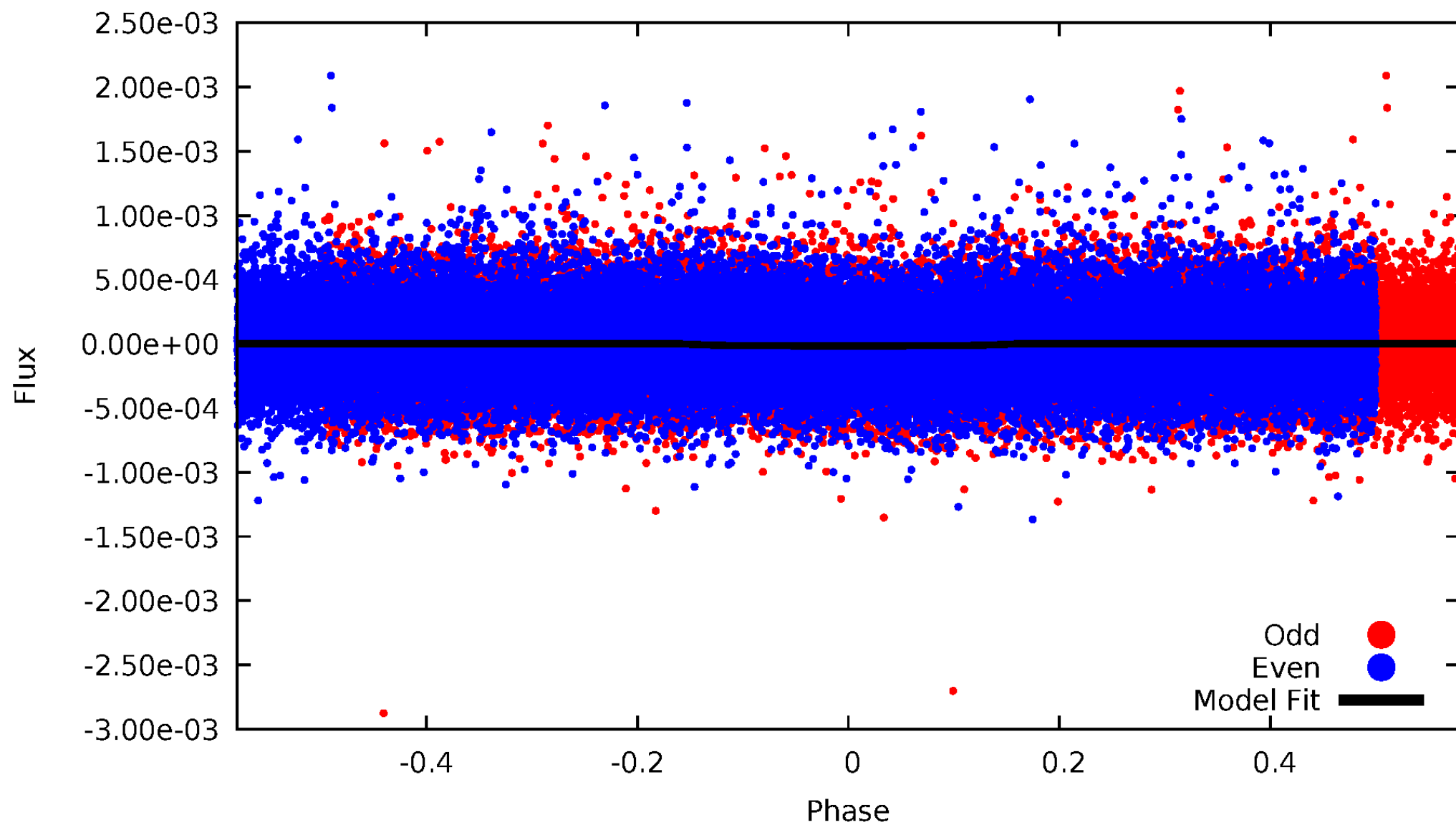


TCE 007115308-01



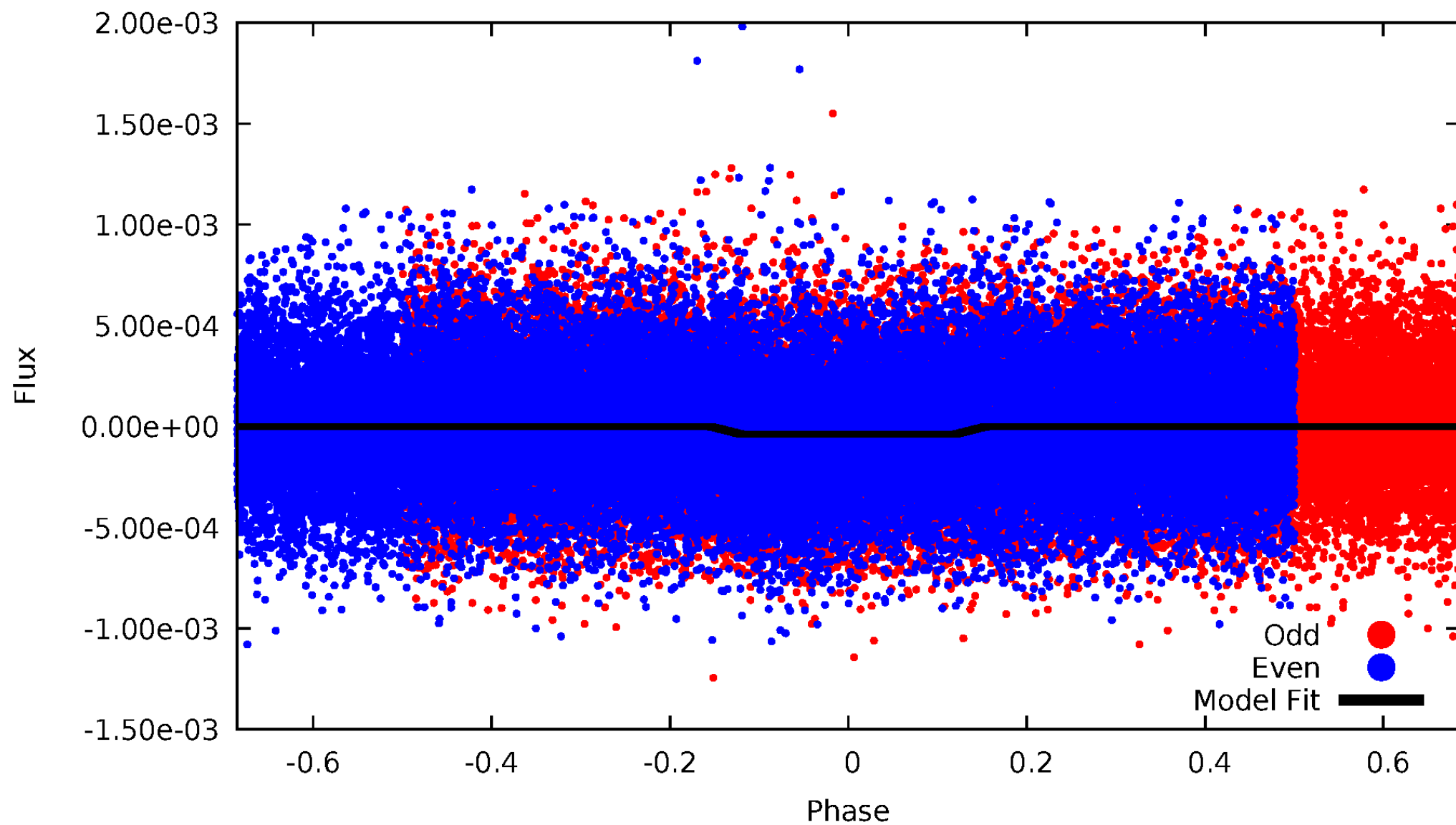
DV Odd/Even

TCE 007115308-01



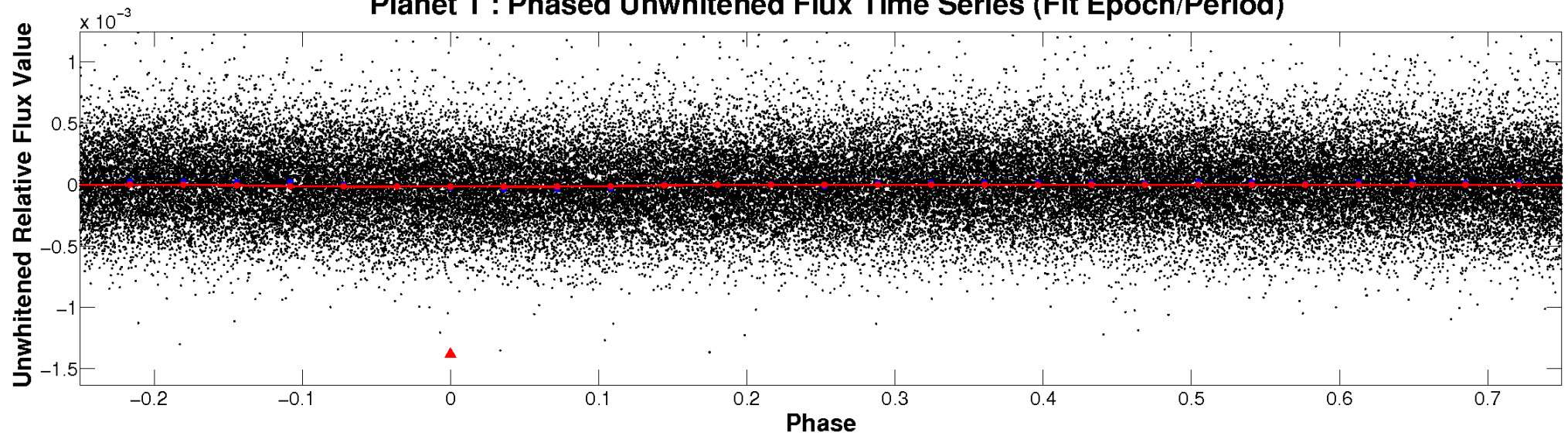
ALT Odd/Even

TCE 007115308-01

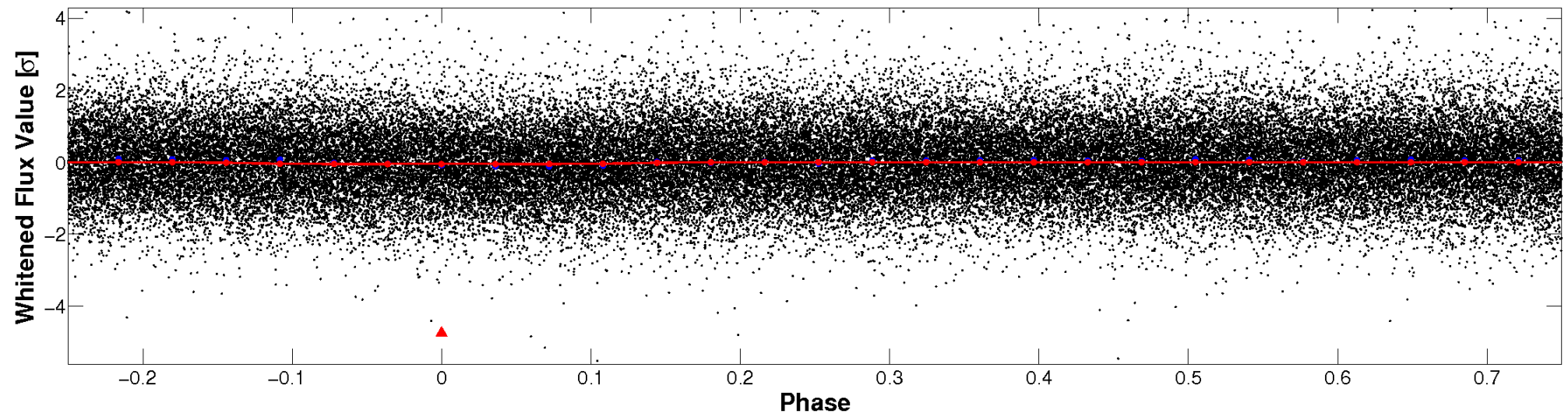


Non-Whitened Vs. Whitened Light Curve

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

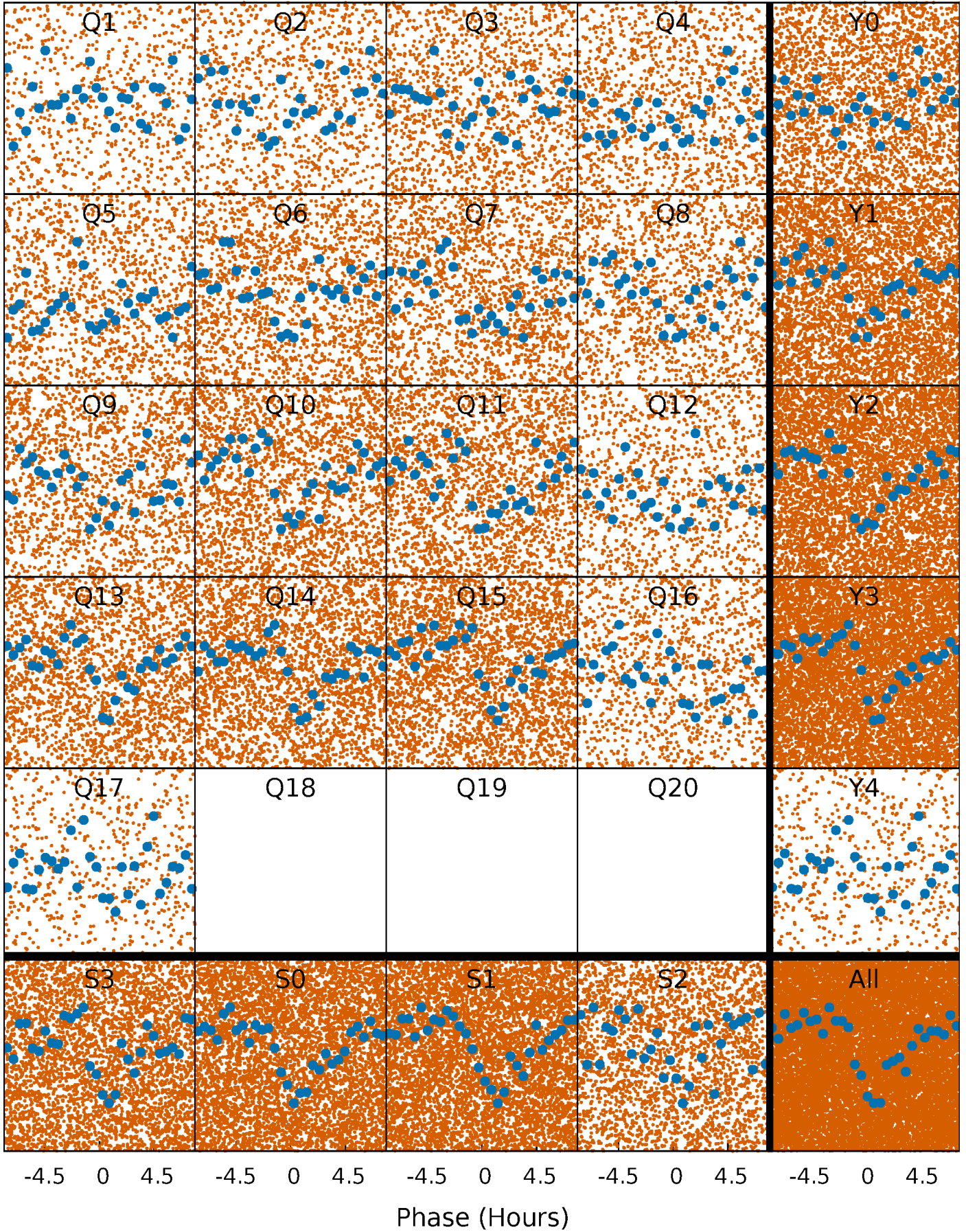


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



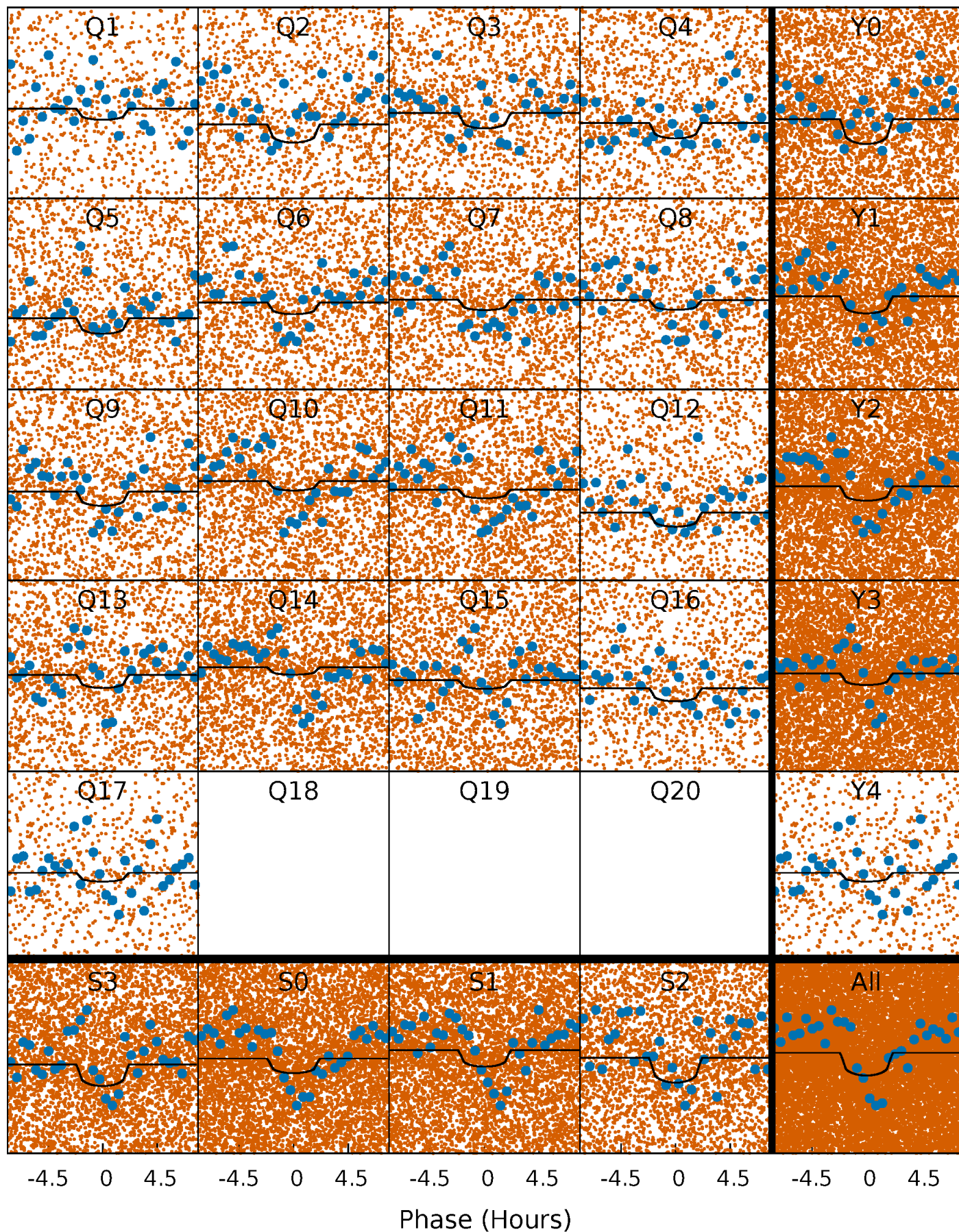
PDC Quarter-Phased Transit Curves

TCE 007115308-01 P= 0.566749 Days $T_0=131.871249$ (BKJD)



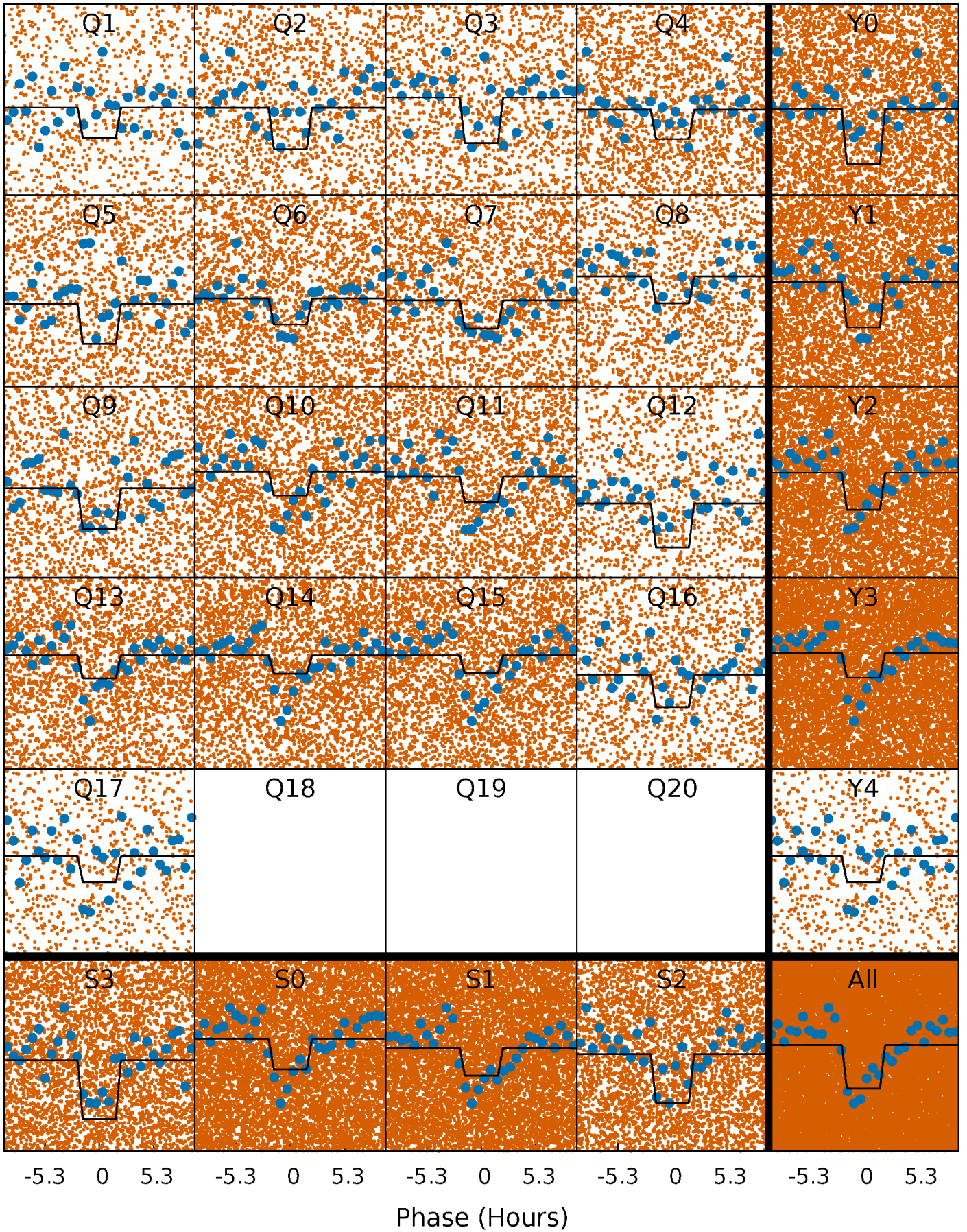
DV Quarter-Phased Transit Curves

TCE 007115308-01 P= 0.566749 Days $T_0=131.871249$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

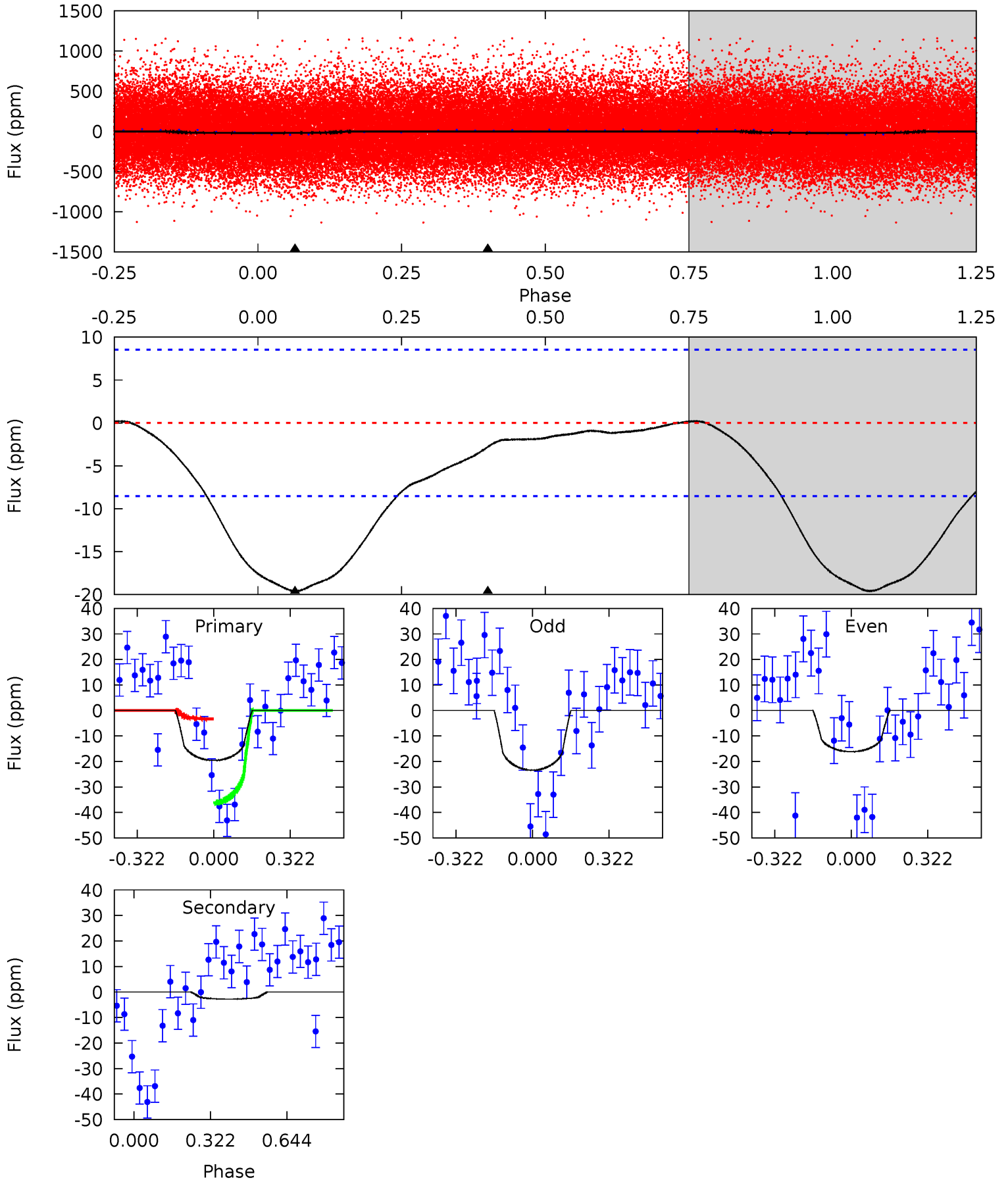
TCE 007115308-01 P= 0.566803 Days $T_0=131.827479$ (BKJD)



DV Model-Shift Uniqueness Test

007115308-01, P = 0.566749 Days, E = 131.304500 Days

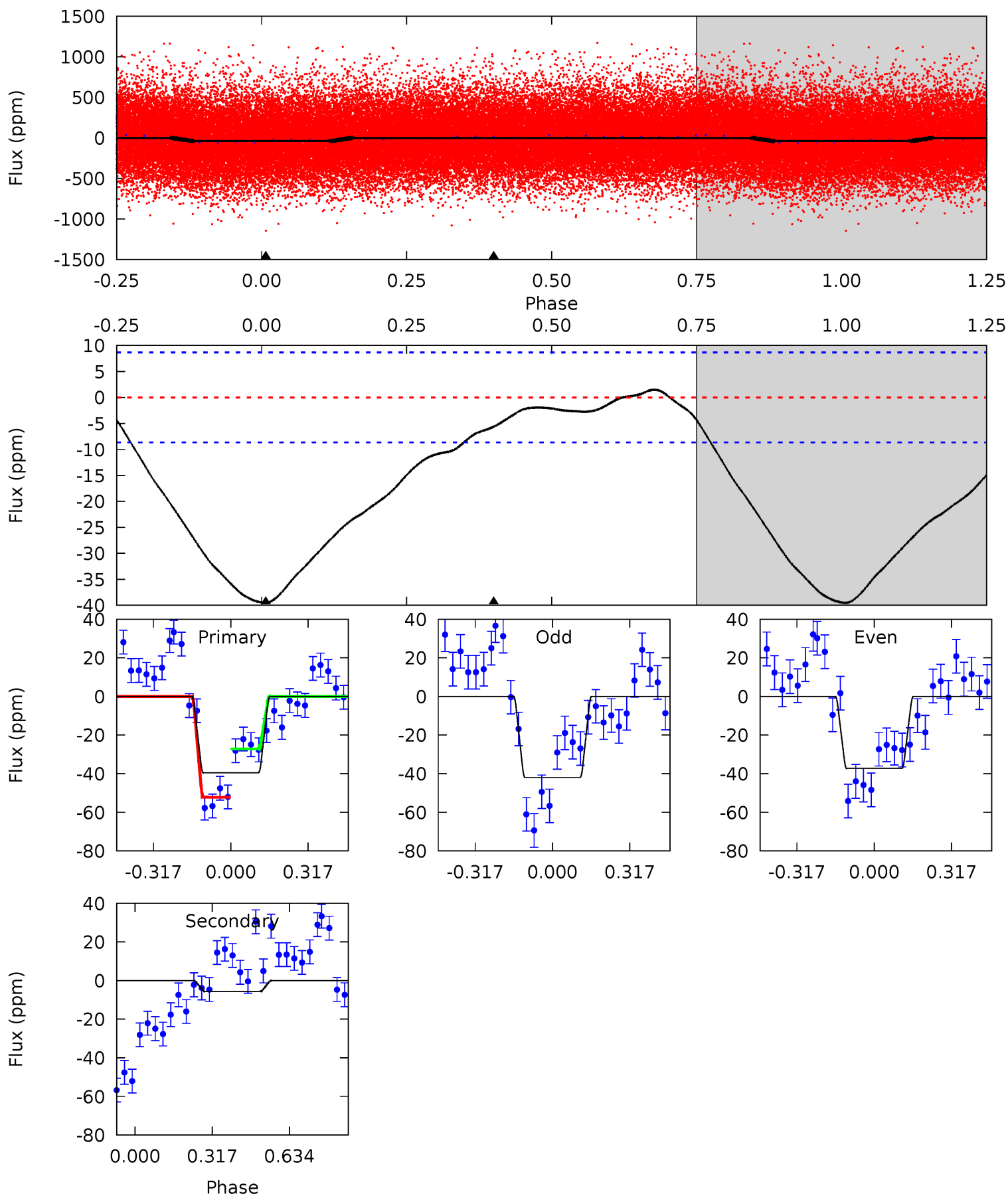
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.89	1.41	0	0	4.31	0.99	0.14	9.89	9.89	1.41	1.41	1.83	0.91	0.01	8.35



Alt Model-Shift Uniqueness Test

007115308-01, P = 0.566803 Days, E = 131.260676 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	2.81	0	0	4.32	1.00	0.96	19.7	19.7	2.81	2.81	1.16	0.94	0.04	6.30



Stellar Parameters For KIC 007115308

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6089^{+163}_{-199}	$4.495^{+0.048}_{-0.192}$	$-0.180^{+0.250}_{-0.350}$	$0.950^{+0.262}_{-0.105}$	$1.031^{+0.130}_{-0.143}$	$1.692^{+0.431}_{-0.839}$
	+3%/-3%	+1%/-4%	+139%/-194%	+28%/-11%	+13%/-14%	+25%/-50%
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 007115308-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 2	$0.50^{+0.46}_{-0.31}$	3206^{+212}_{-158}	3580^{+2083}_{-6469}	$0.892^{+5.287}_{-0.733}$
Alt.	-6 ± 2	$0.71^{+0.44}_{-0.36}$	3211^{+213}_{-155}	3693^{+1547}_{-1268}	$1.025^{+3.476}_{-0.690}$

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 $A_{obs} \gg 1.0$

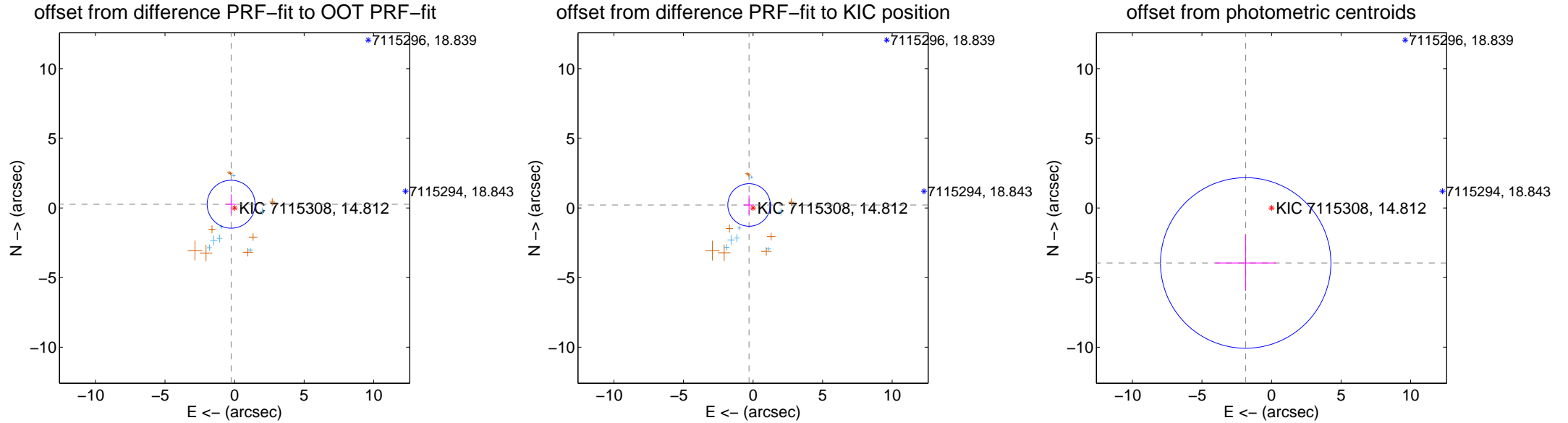
DV Centroid Data

Supplemental centroid analysis for 007115308-01. Kepler magnitude: 14.81. Transit SNR 6.08

There are 7 quarters with good PRF difference image offsets

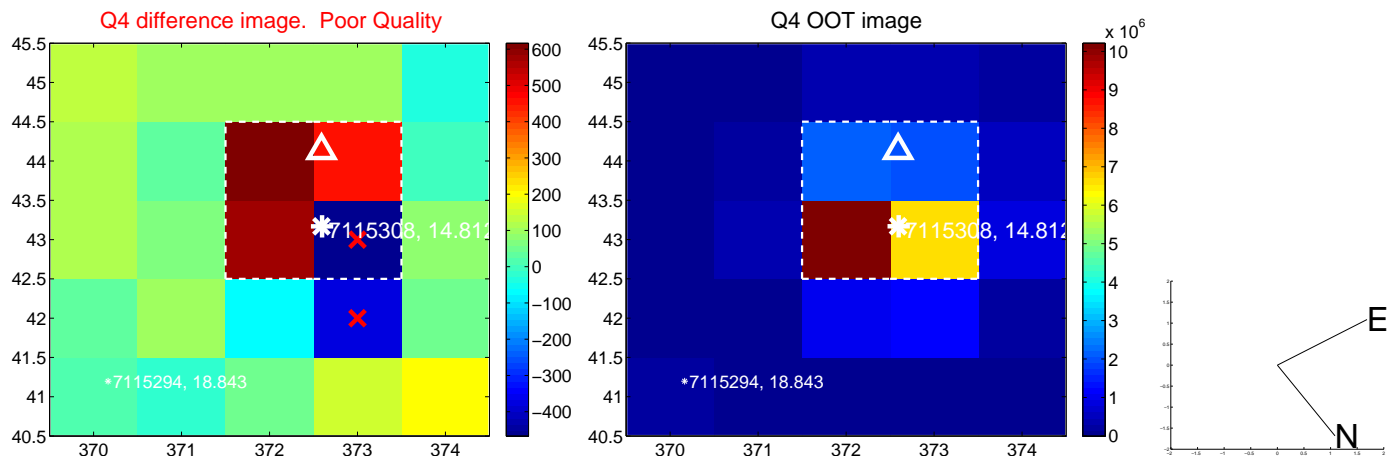
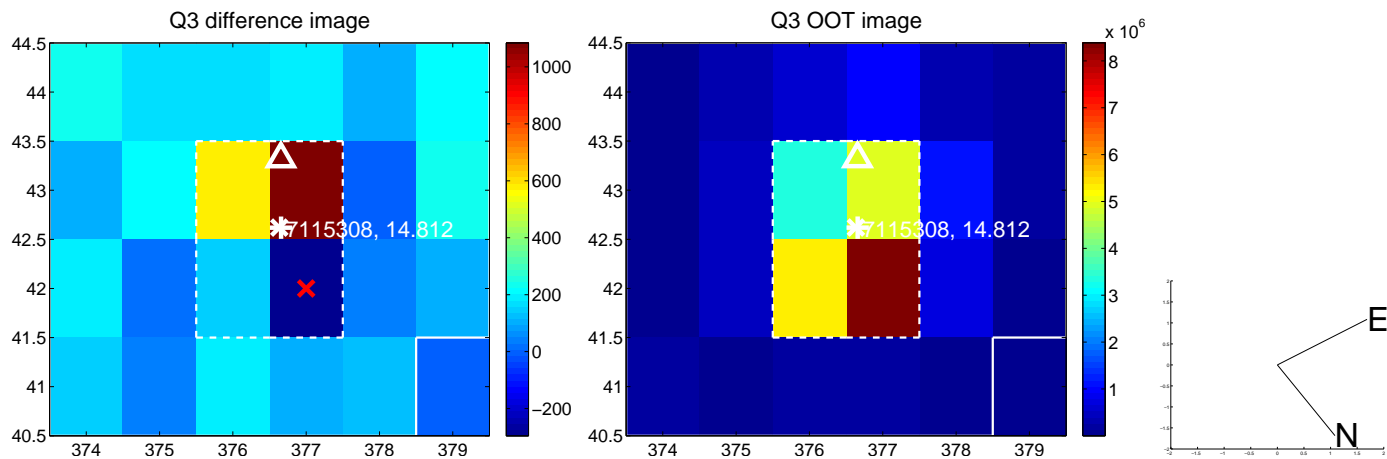
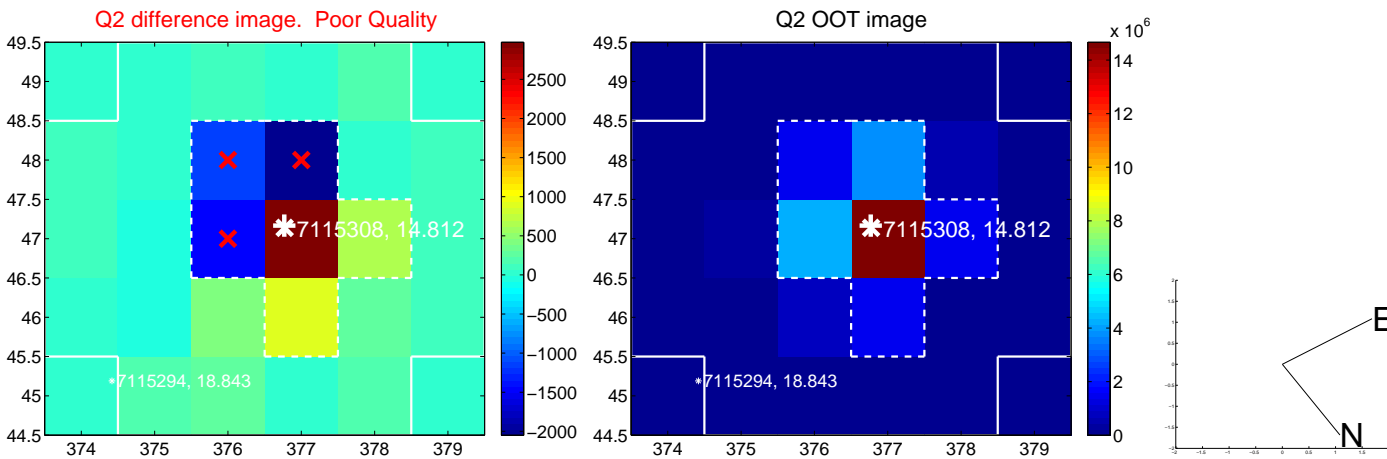
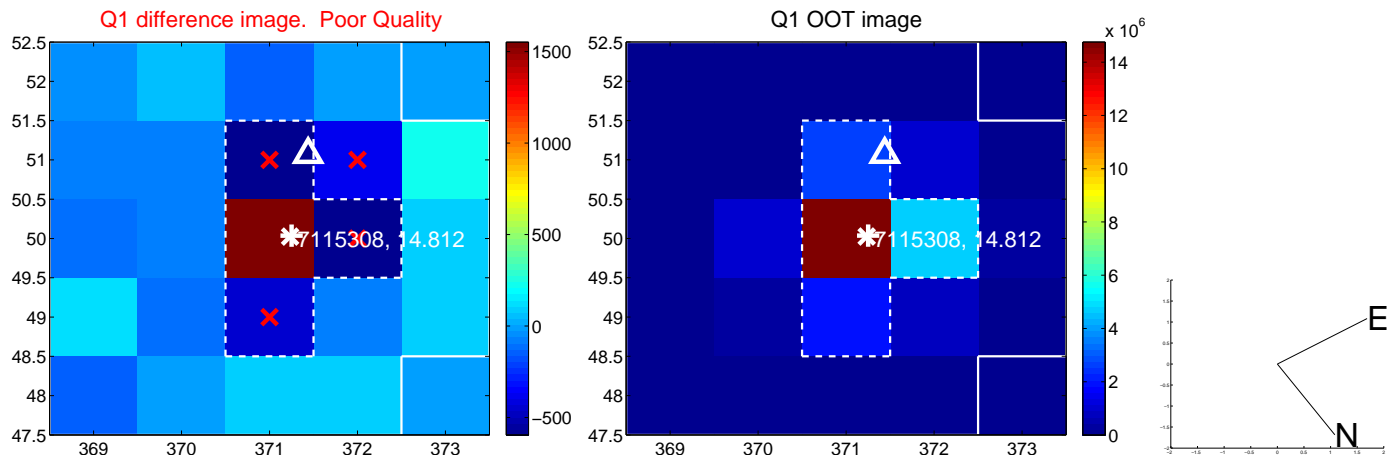
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.365 ± 0.574	0.64	0.248 ± 0.368	0.267 ± 0.704
PRF-fit source offset from KIC position	0.359 ± 0.509	0.70	0.288 ± 0.375	0.214 ± 0.687
photometric centroid source offset	4.37 ± 2.04	2.14	1.86 ± 2.18	-3.95 ± 2.01

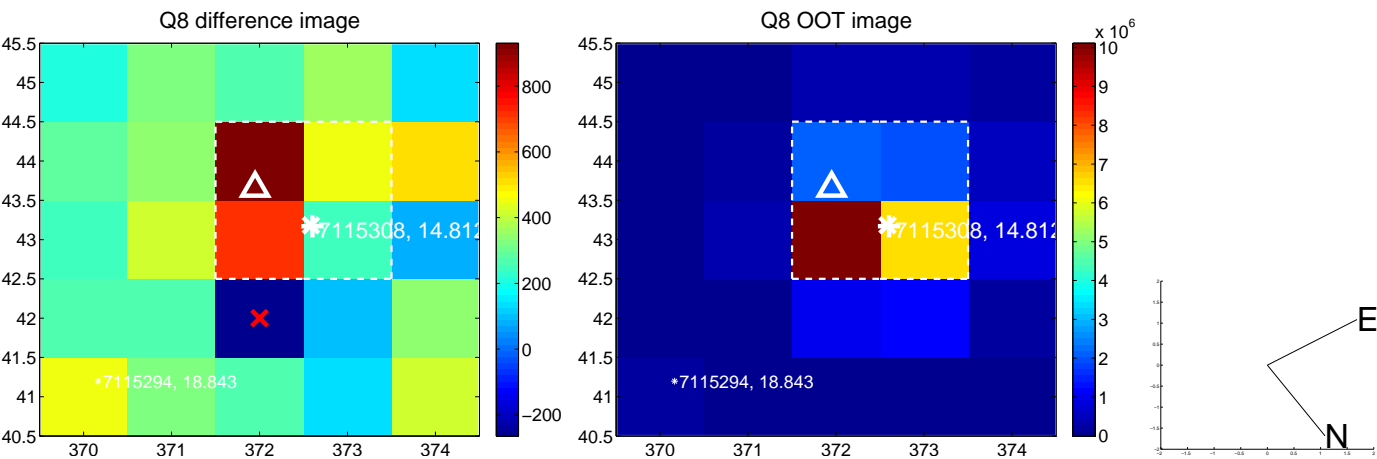
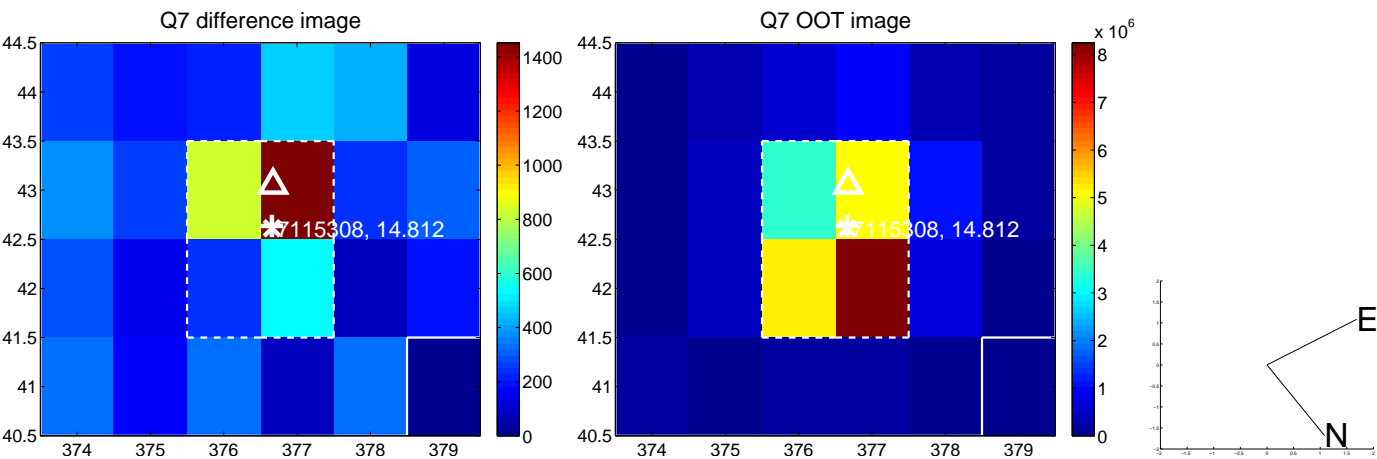
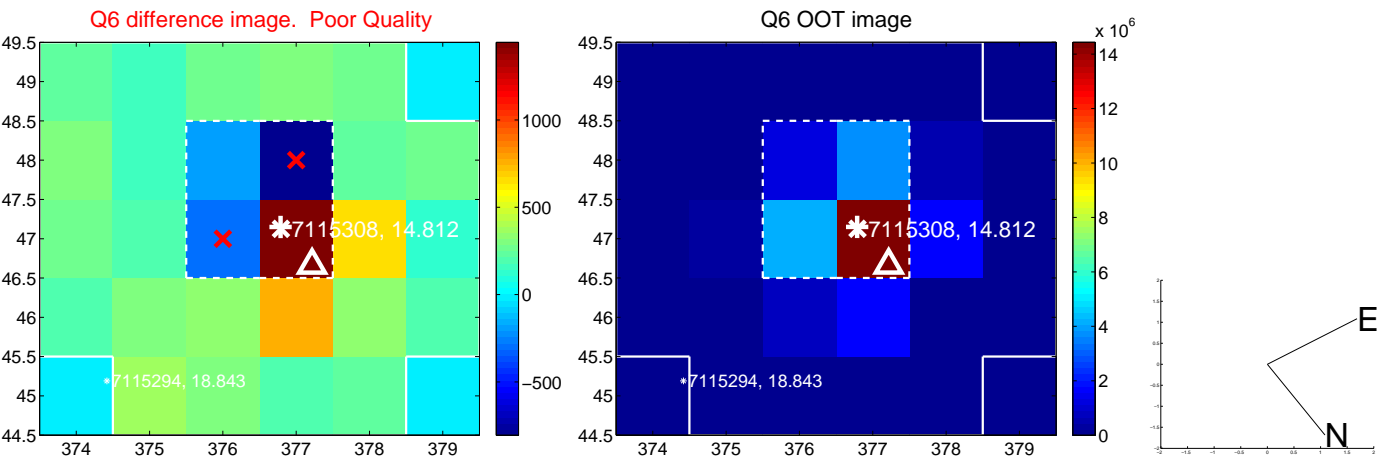
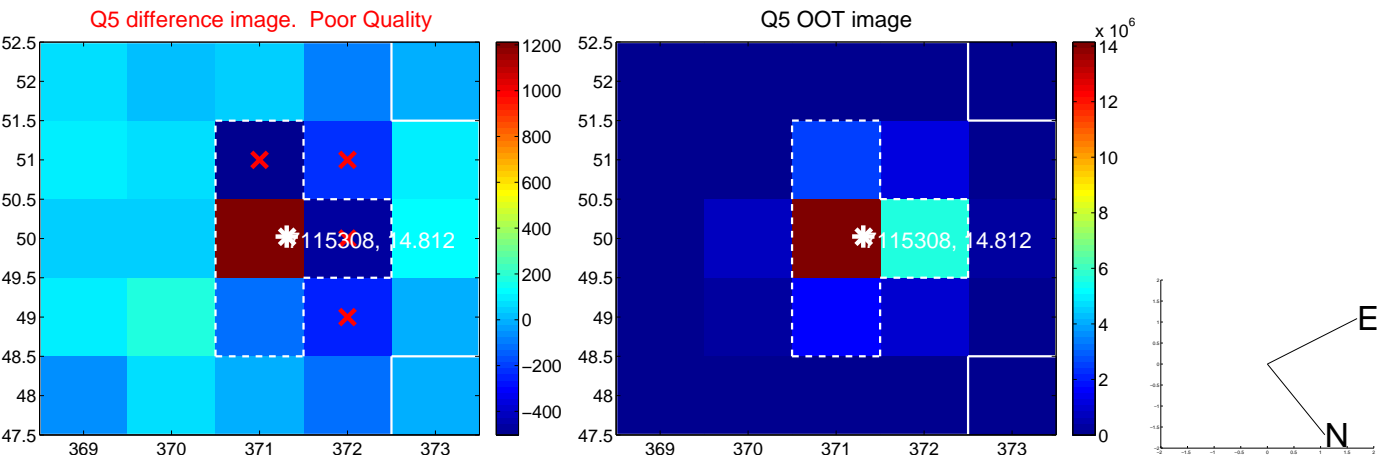


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

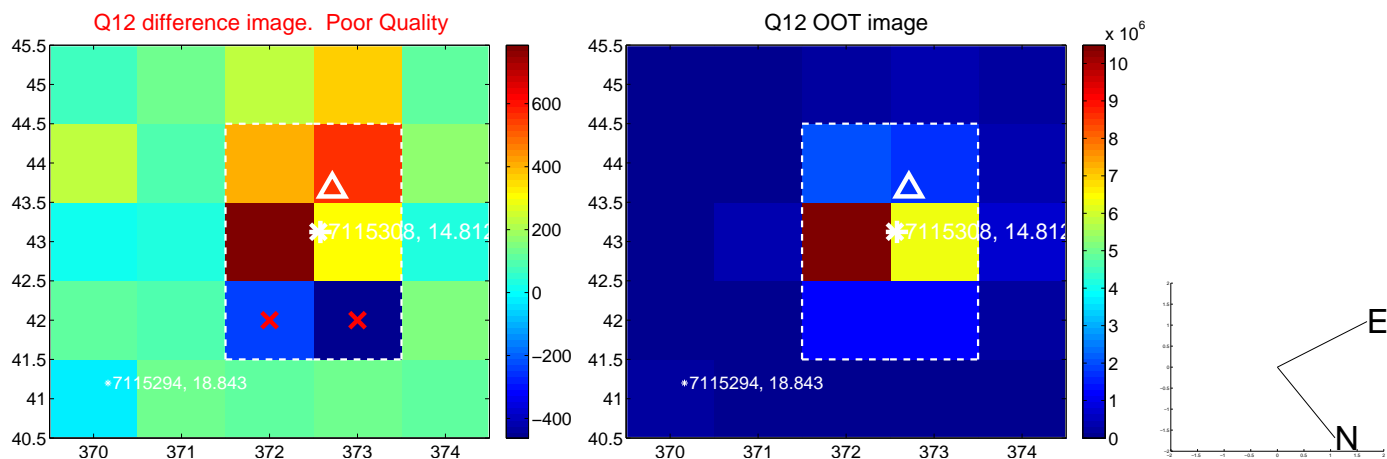
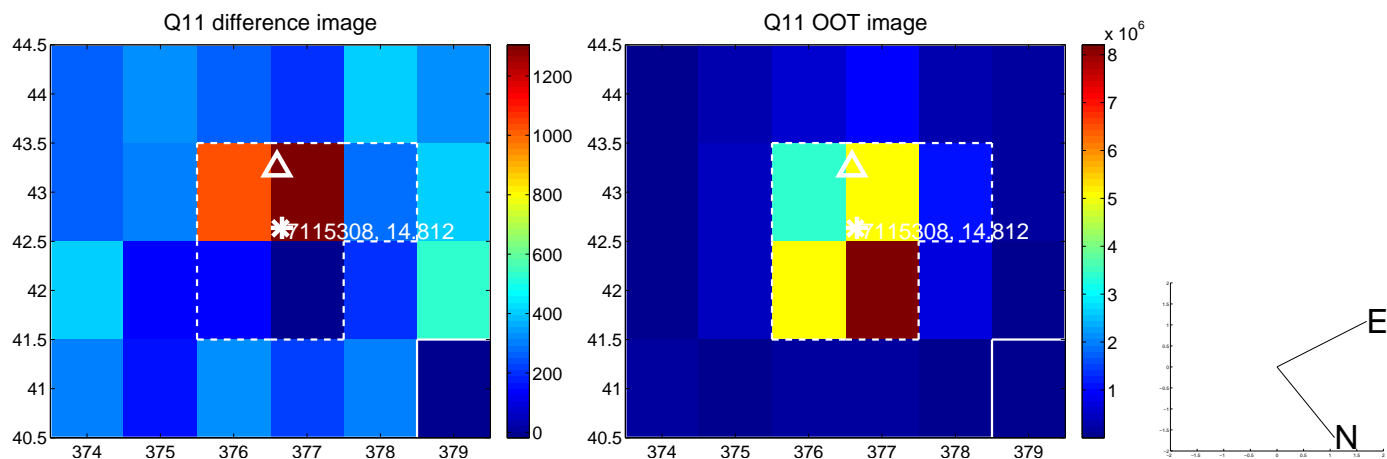
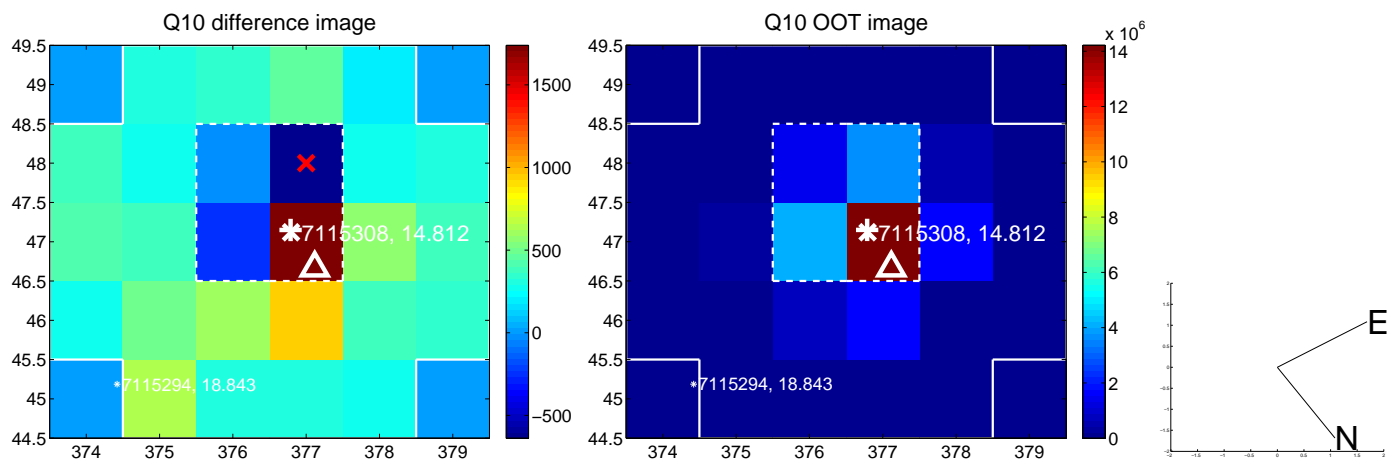
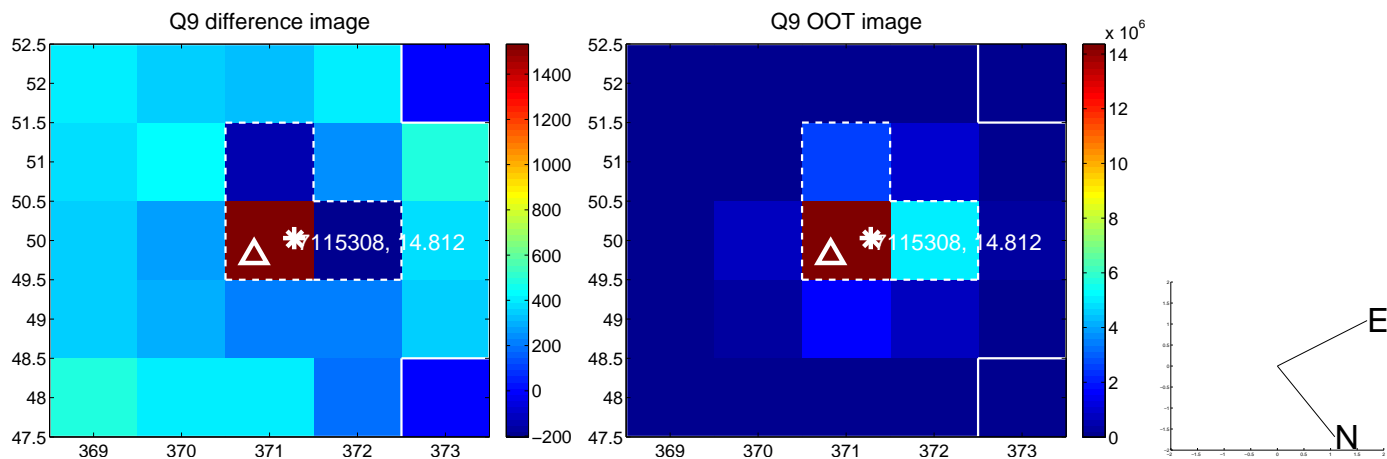
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



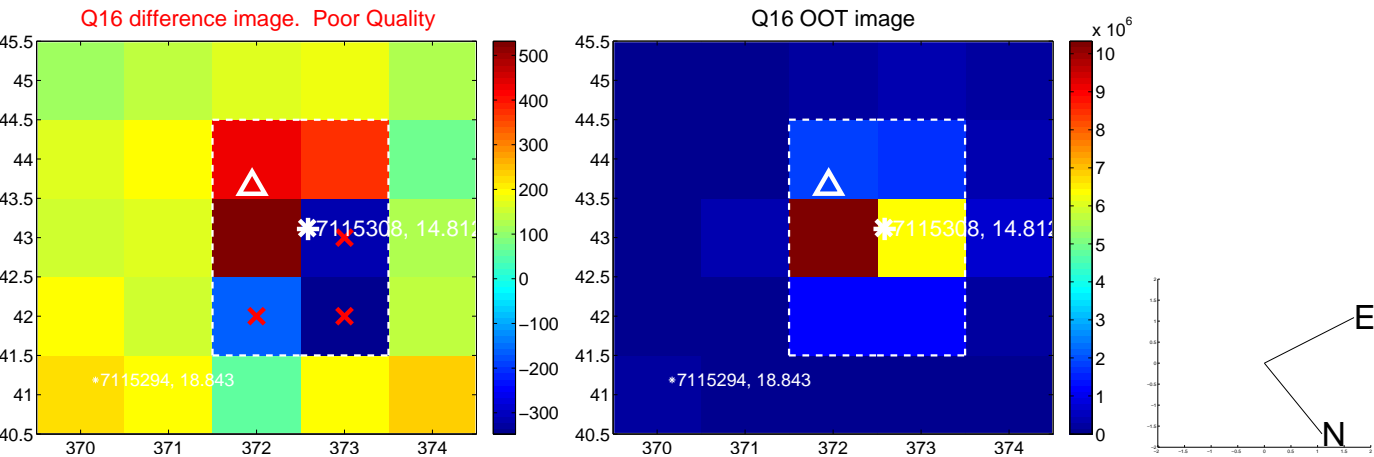
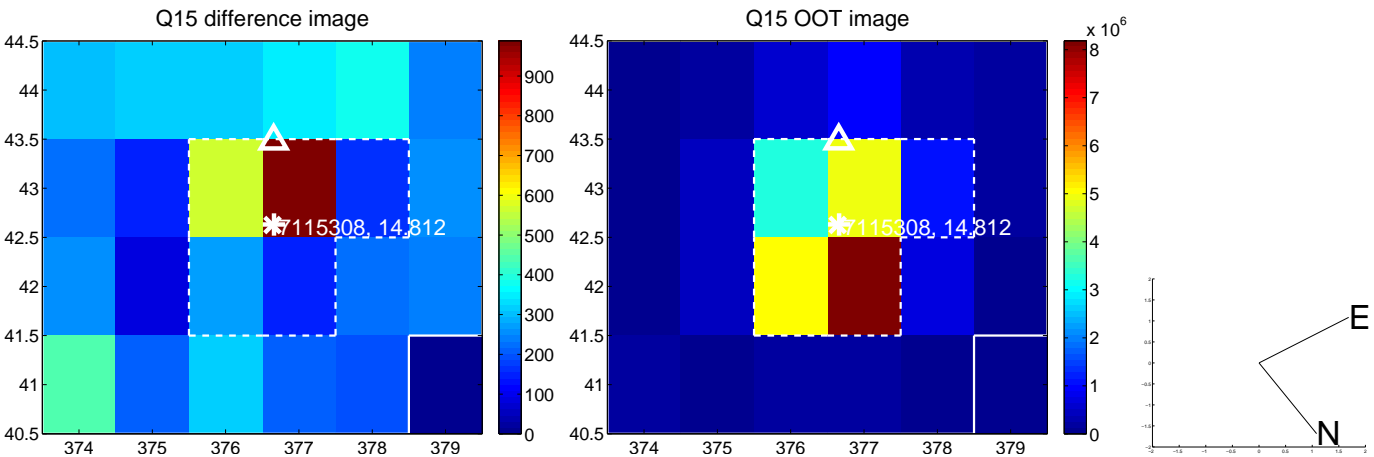
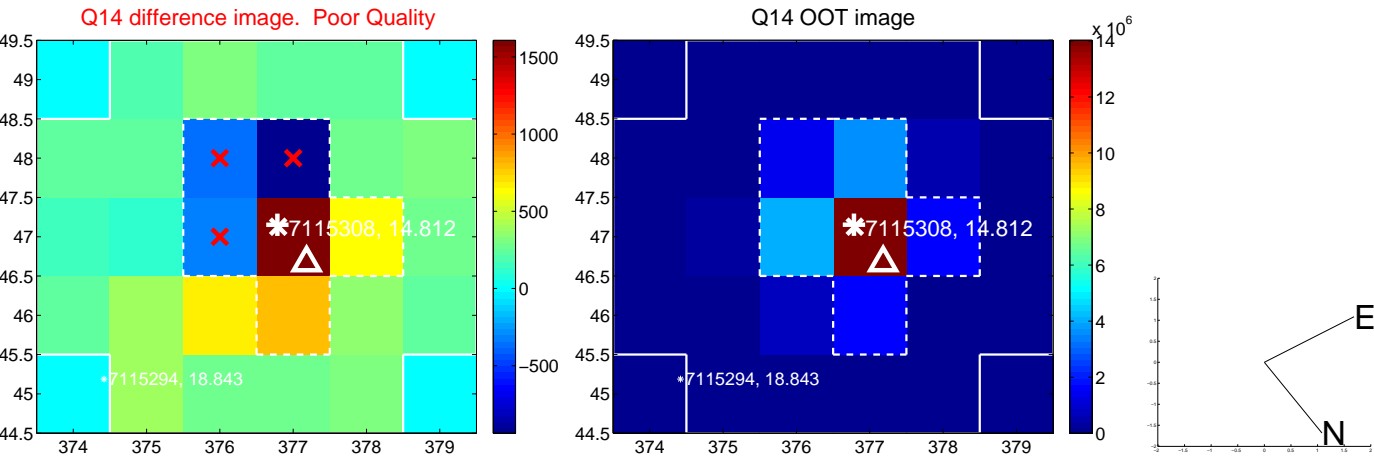
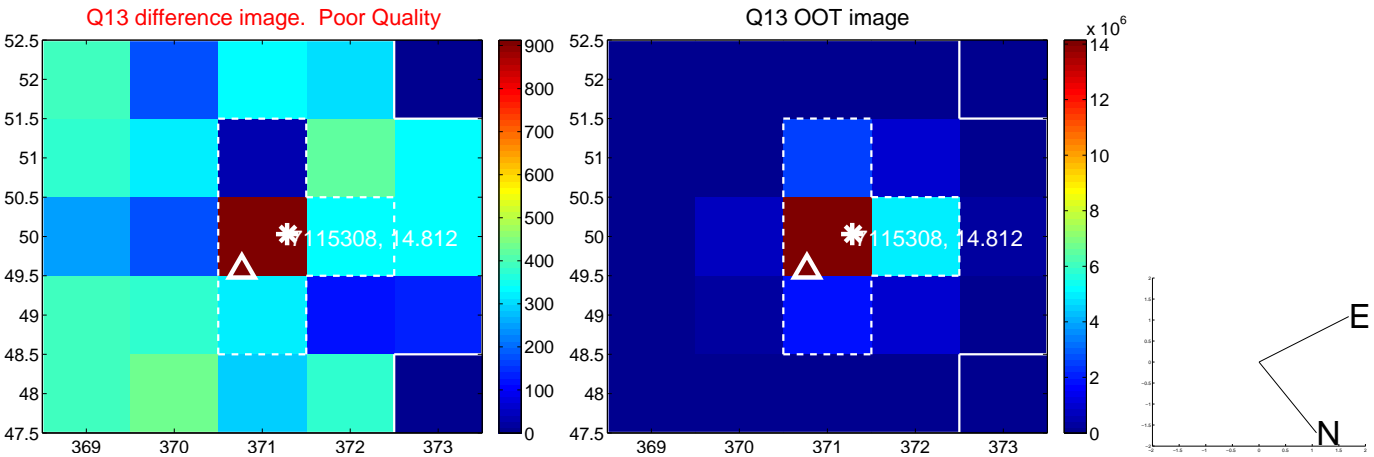
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



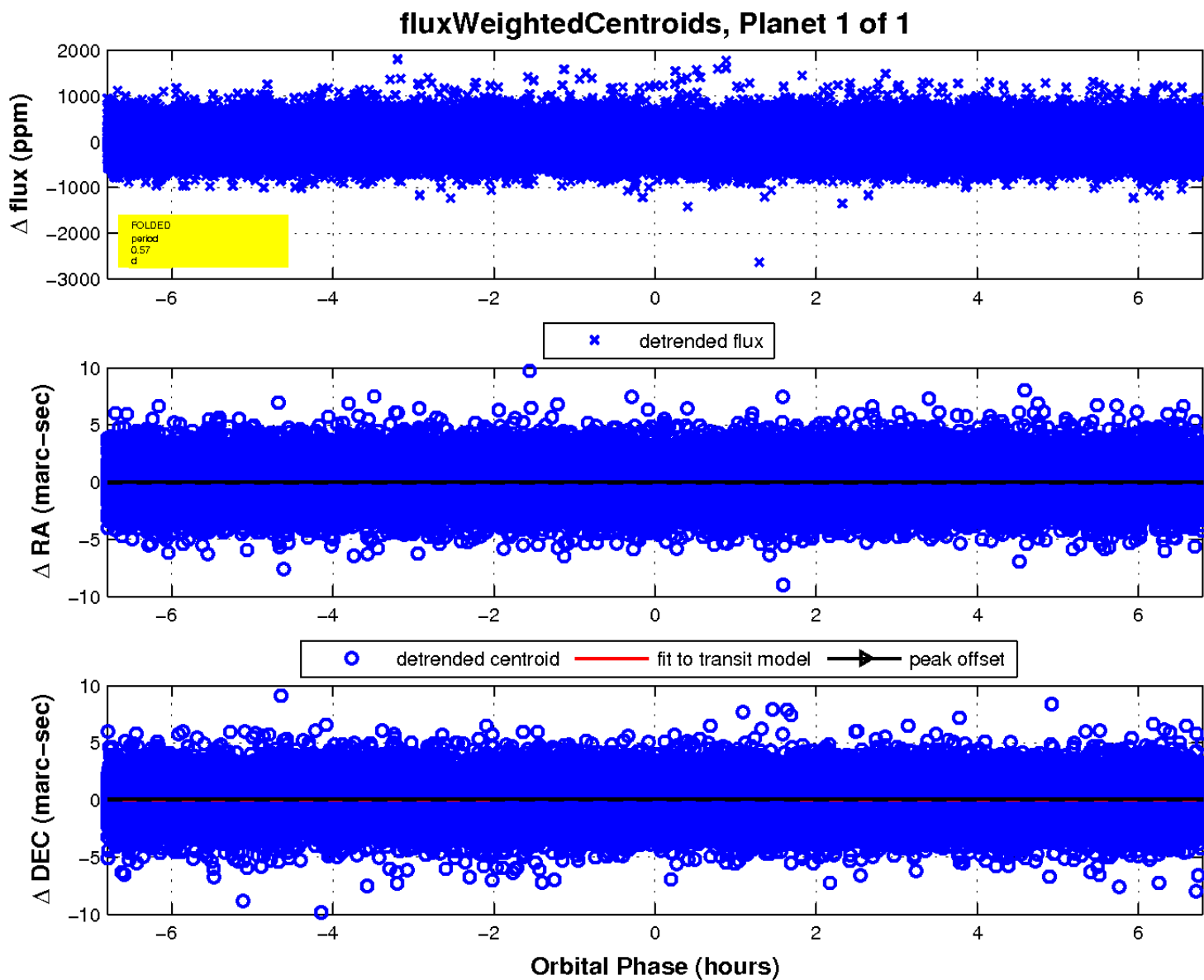
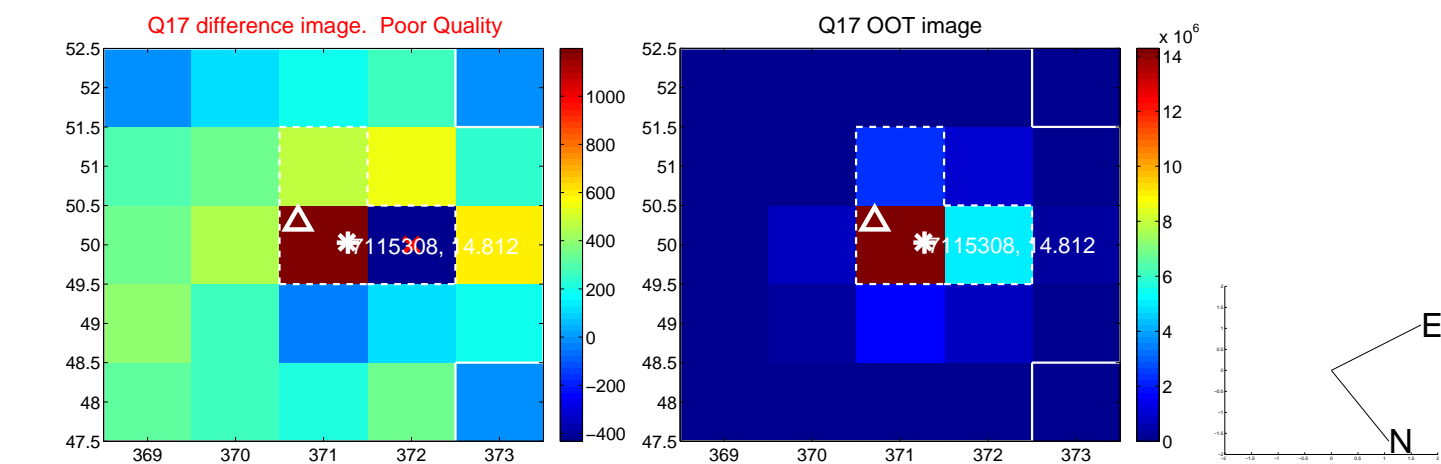
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

