

KIC 007115869

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})
007115869-01	OBS	No	0.566745	131.873374	6.6	3.464	10.6	5.3	1.43	6660	0.40	16949.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007115869-01	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.

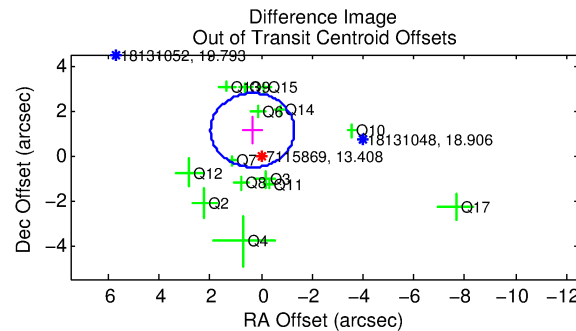
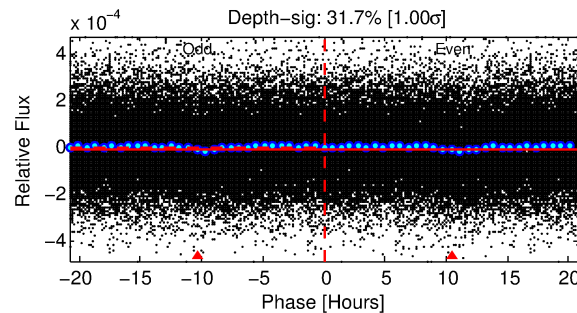
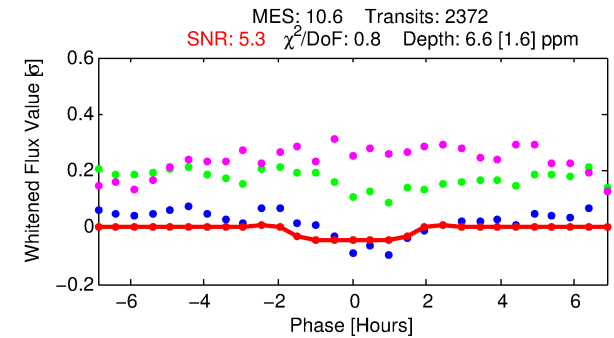
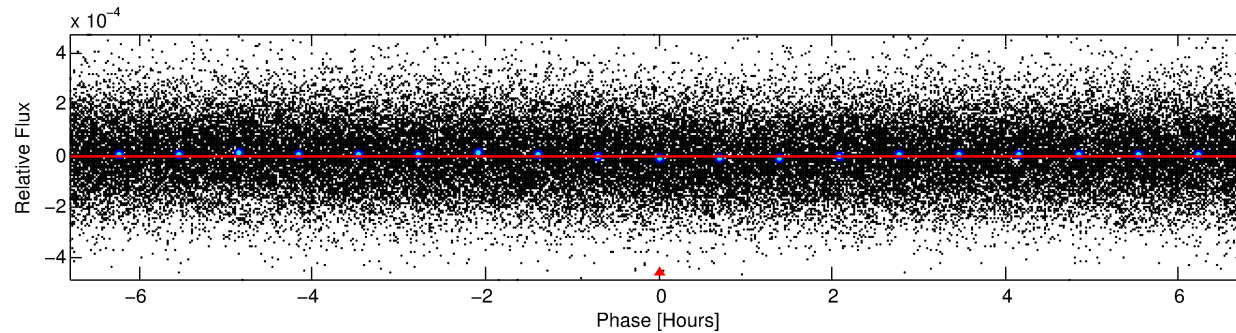
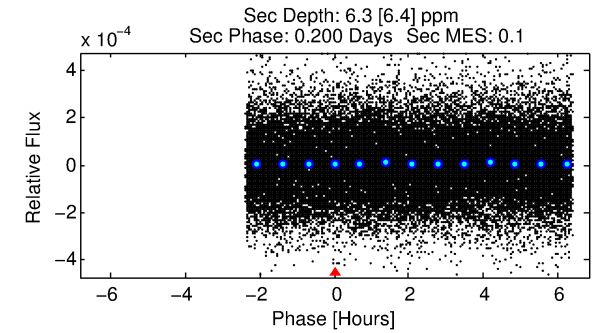
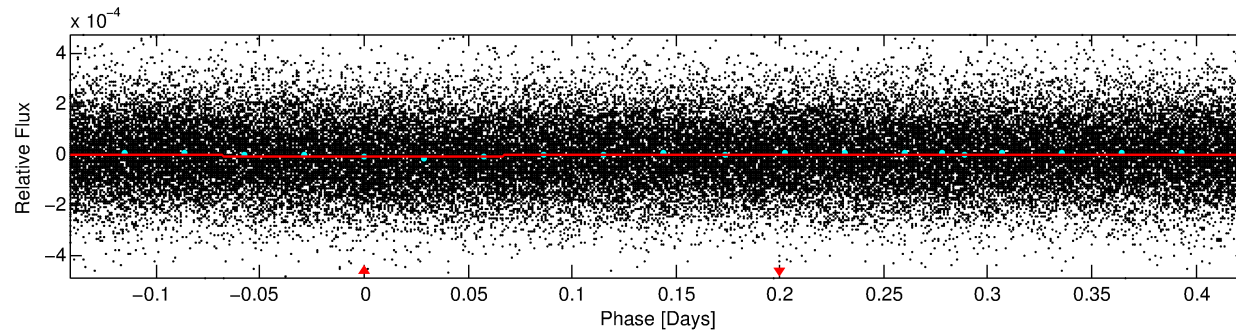
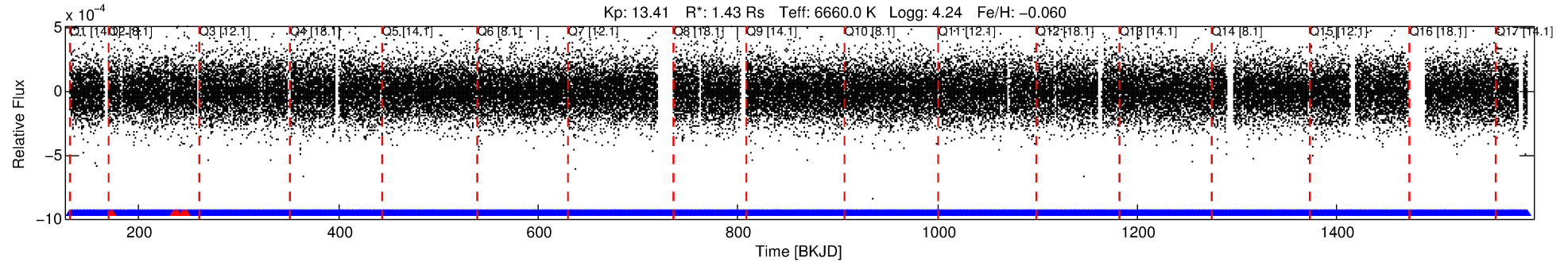
Ephemeris Match Information For 007115869-01

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
007115869-01	7115869	RR-Lyr-pri	7198959	1:1	791.2	77	-184	7.86	13.41	89042.00	Direct-PRF	0	0.67	21.14

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: 7115869 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56674 [0.00002] d
Epoch = 131.8734 [0.0073] BKJD
Rp/R* = 0.0026 [0.0012]
a/R* = 1.18 [0.85]
b = 0.77 [1.35]
Seff = 16949.84 [4944.92]
Teq = 2909 [212] K
Rp = 0.40 [0.21] Re
a = 0.0146 [0.0026] AU
Ag = 4.56 [6.39] [0.56σ]
Teffp = 6574 [2275] K [1.60σ]

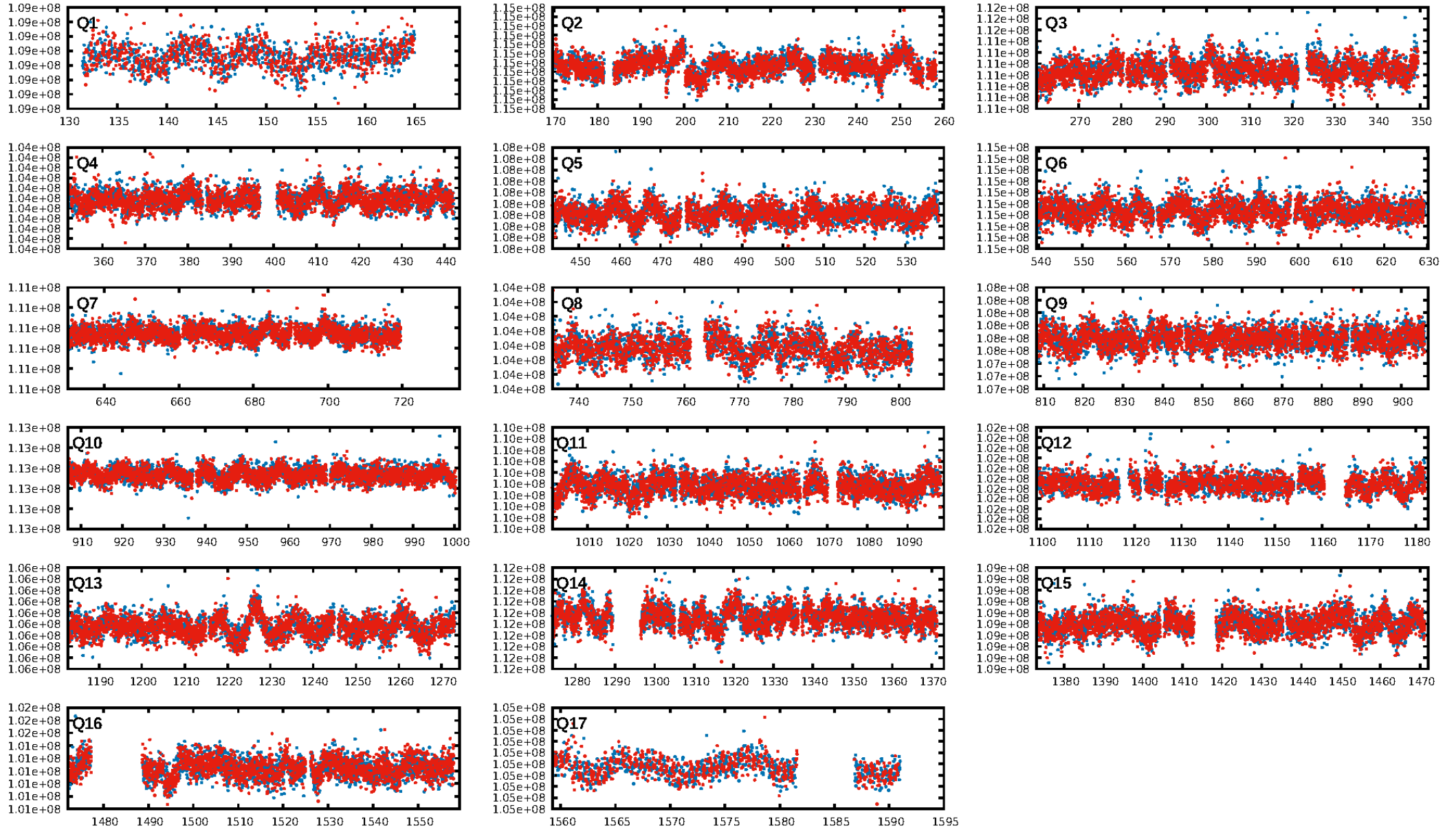
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.13e-16
RollingBand-fgt: 1.00 [2261/2266]
GhostDiagnostic-chr: 0.1569
Centroid-sig: 79.8%
Centroid-so: 0.994 arcsec [0.46σ]
OotOffset-rm: 1.171 arcsec [2.13σ]
KicOffset-rm: 1.263 arcsec [1.89σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [17/17]

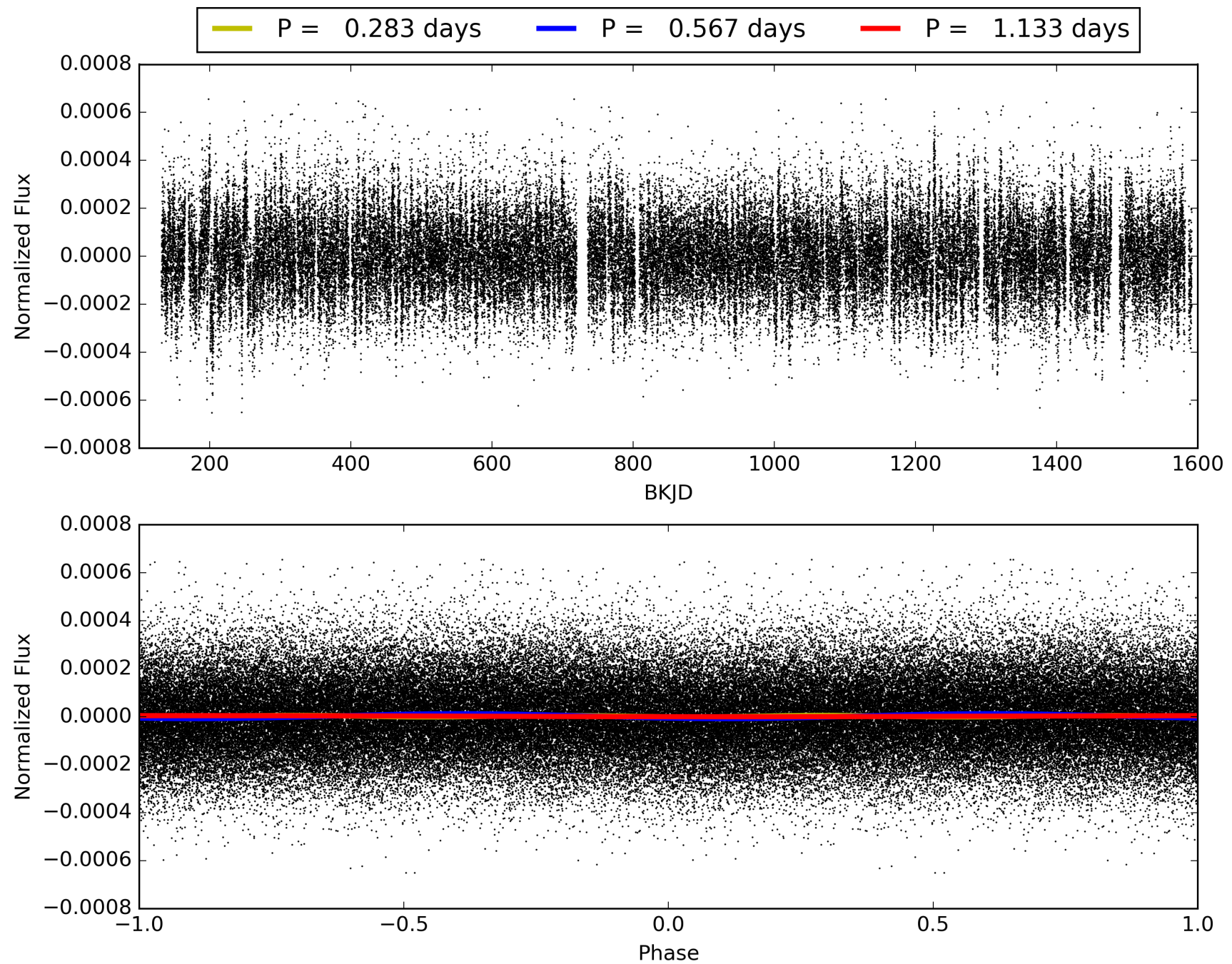
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:32:45 Z

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

TCE 007115869-01, PDC Light Curves

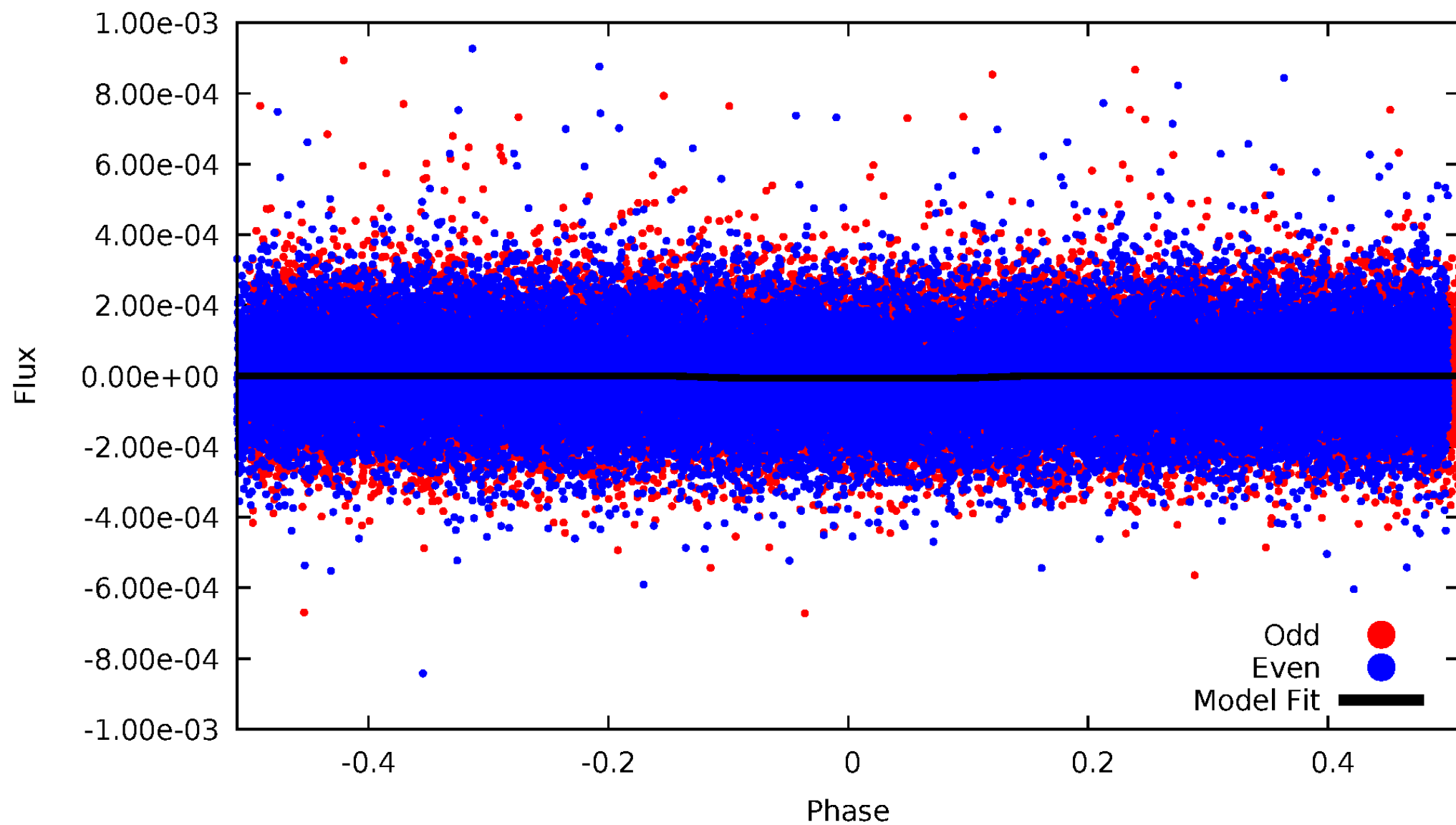


TCE 007115869-01



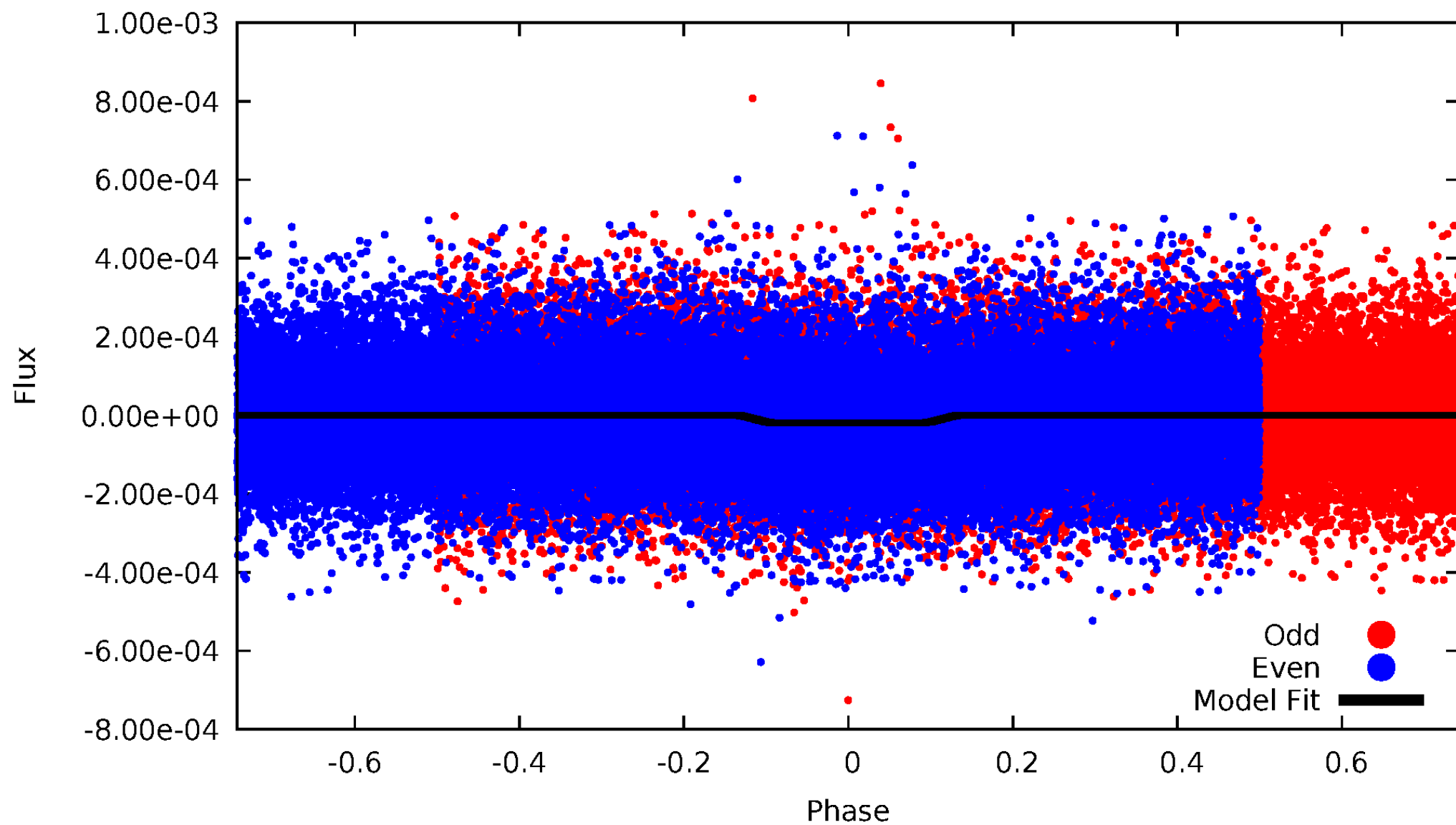
DV Odd/Even

TCE 007115869-01



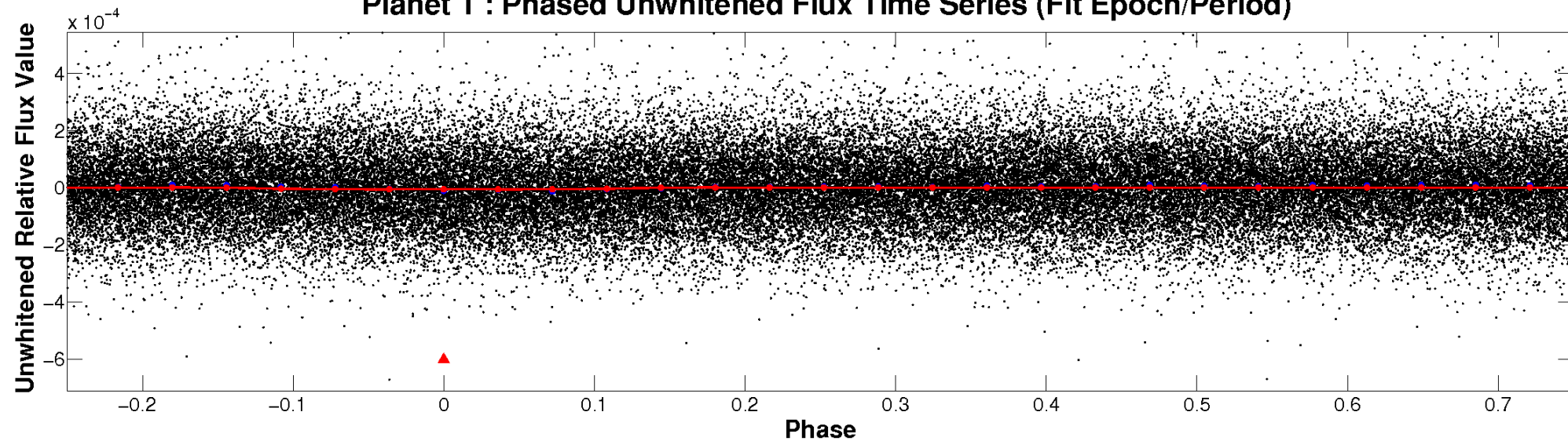
ALT Odd/Even

TCE 007115869-01

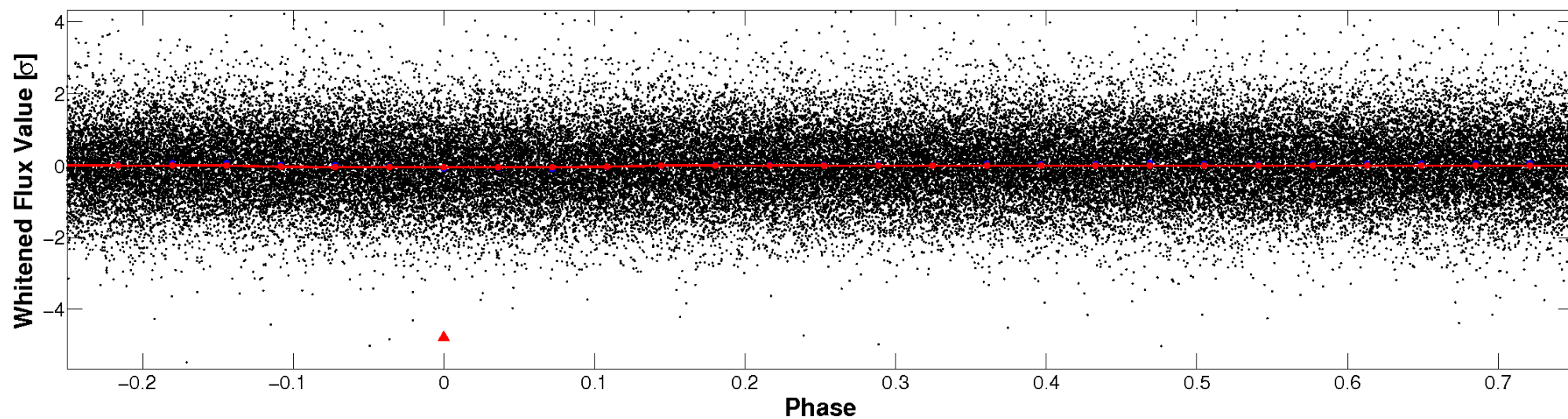


Non-Whitened Vs. Whitened Light Curve

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

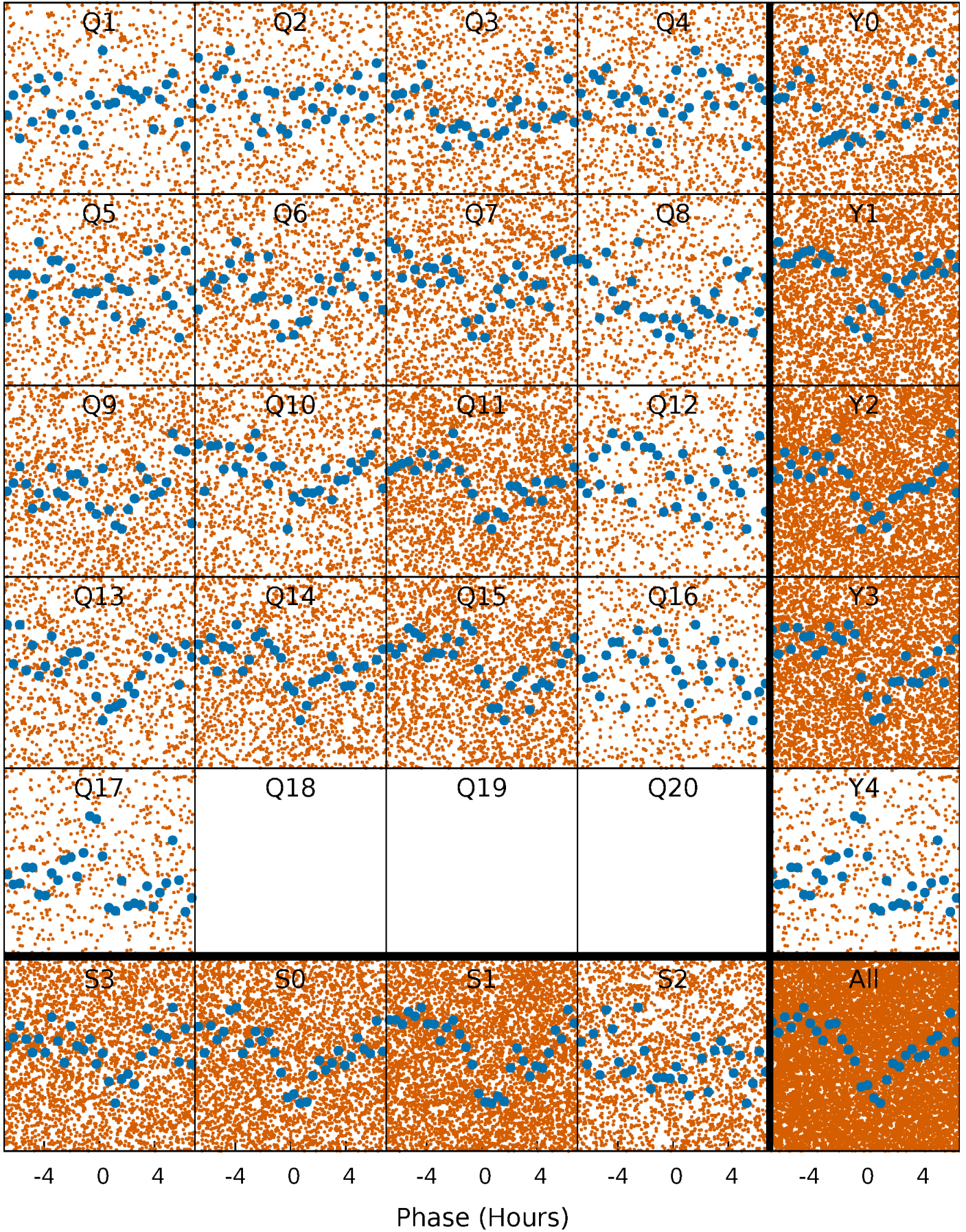


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



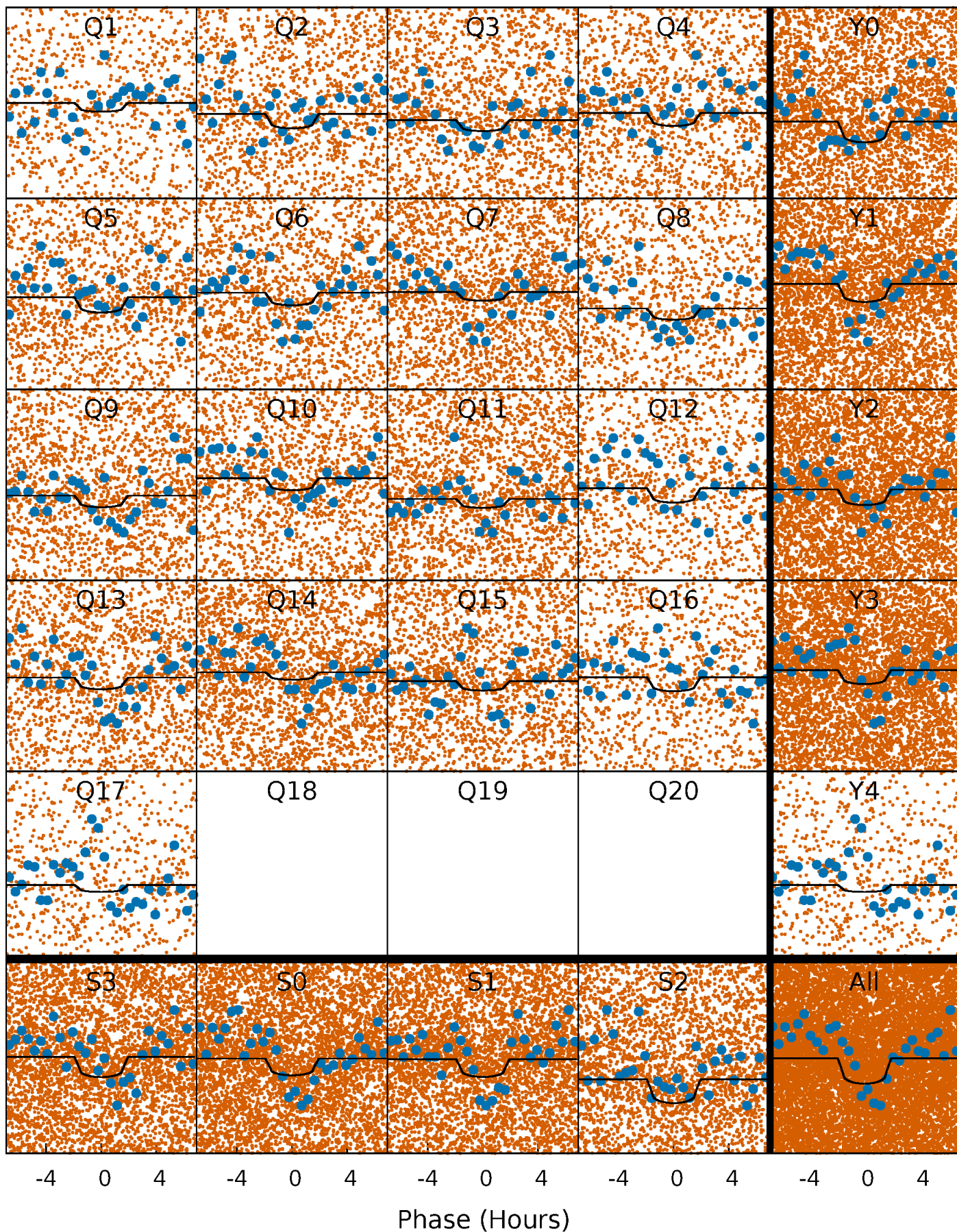
PDC Quarter-Phased Transit Curves

TCE 007115869-01 P= 0.566745 Days $T_0=131.873374$ (BKJD)



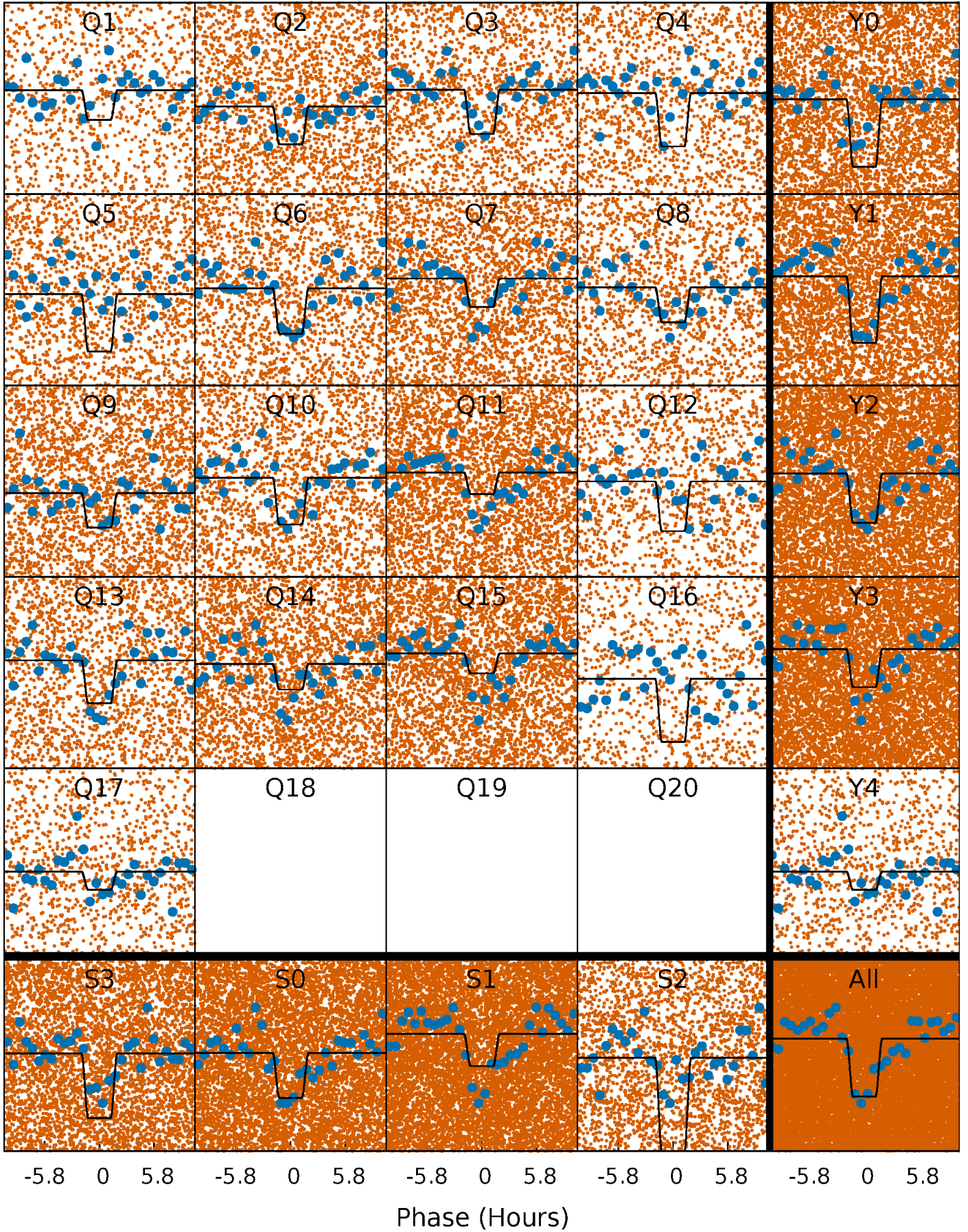
DV Quarter-Phased Transit Curves

TCE 007115869-01 P= 0.566745 Days $T_0=131.873374$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

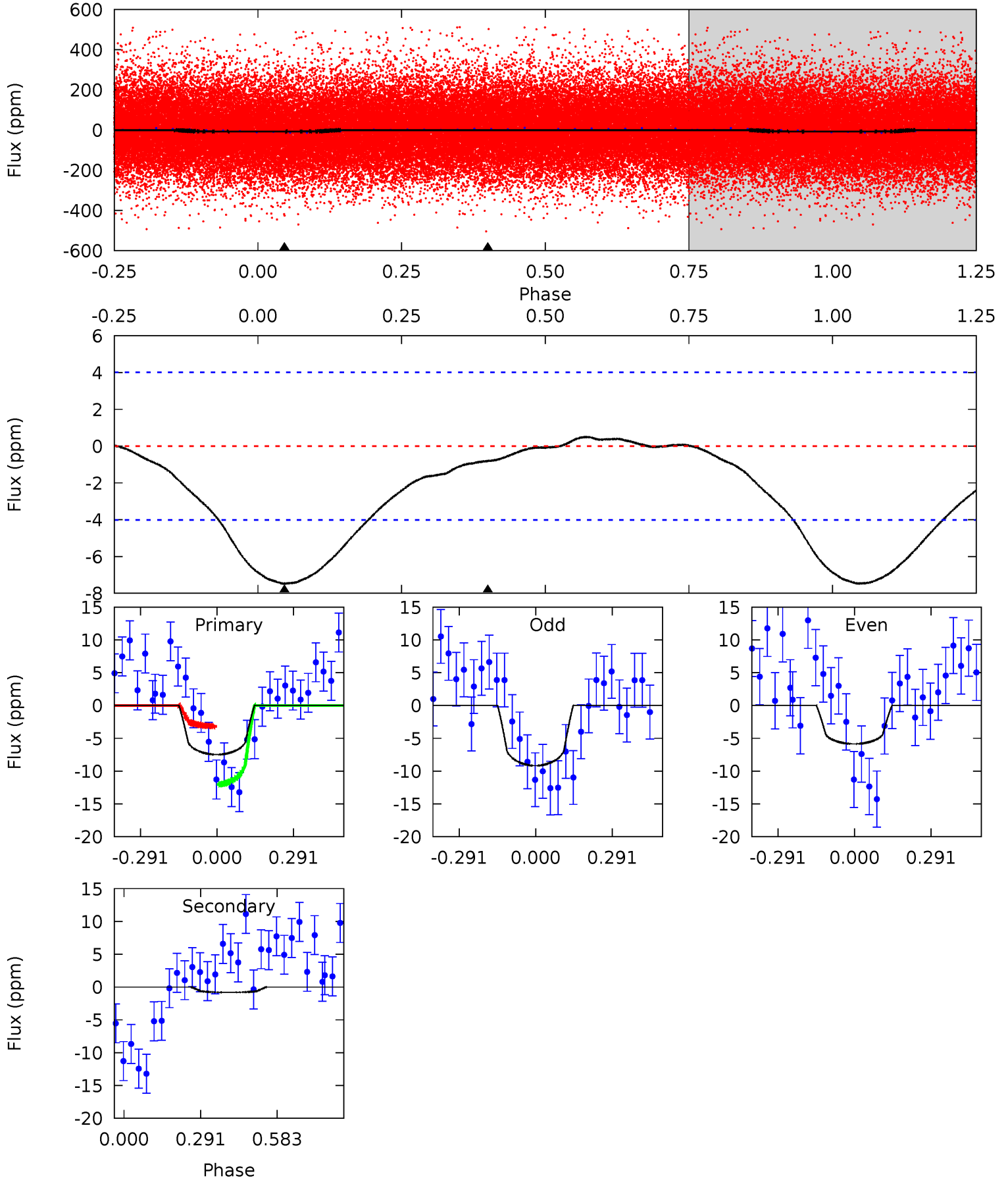
TCE 007115869-01 P= 0.566788 Days $T_0=131.835039$ (BKJD)



DV Model-Shift Uniqueness Test

007115869-01, P = 0.566745 Days, E = 131.306629 Days

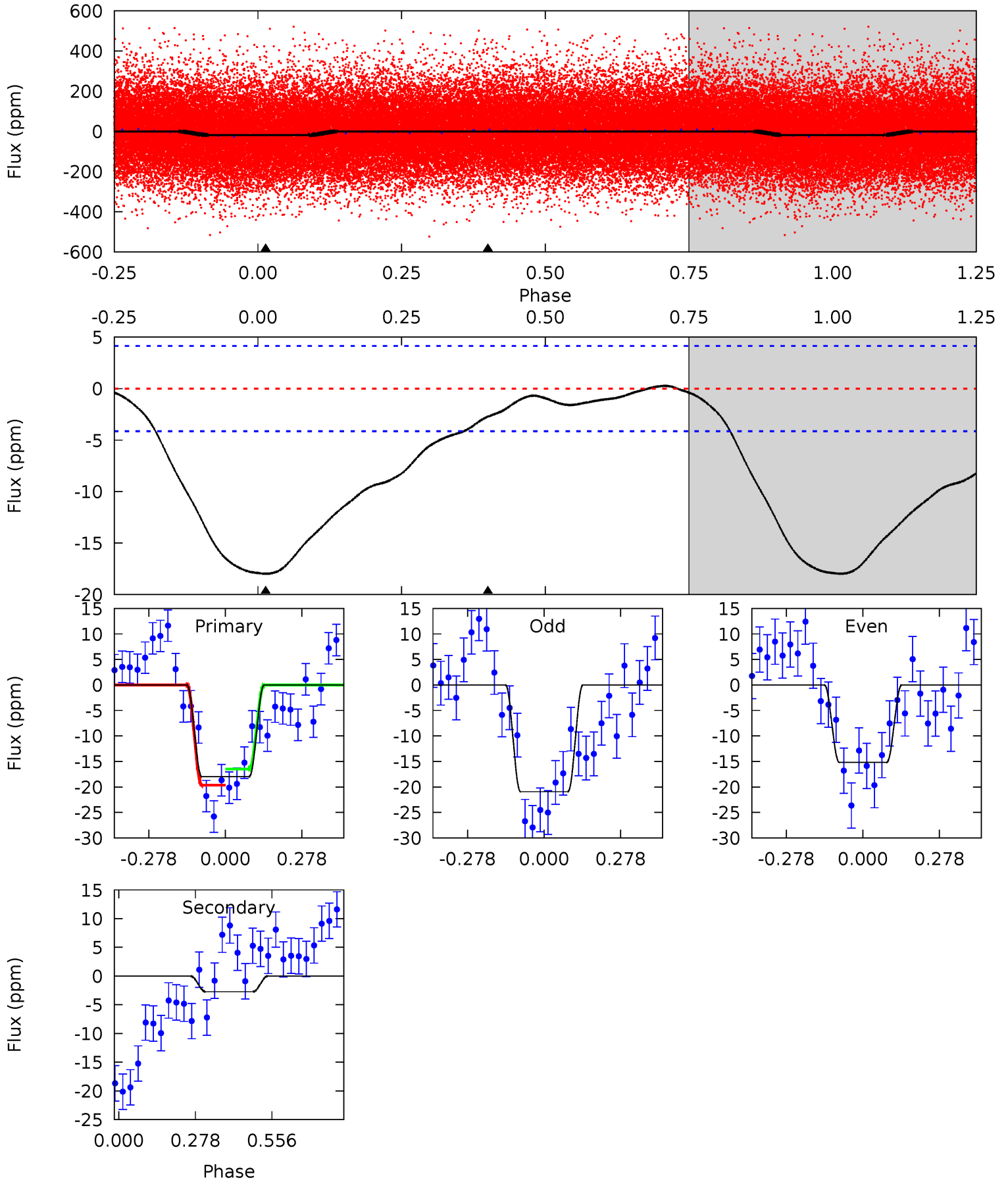
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.09	0.88	0	0	4.34	1.05	0.06	8.09	8.09	0.88	0.88	1.80	0.95	0.06	4.81



Alt Model-Shift Uniqueness Test

007115869-01, P = 0.566788 Days, E = 131.268251 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	2.86	0	0	4.35	1.09	0.24	18.8	18.8	2.86	2.86	3.02	0.95	0.02	1.63



Stellar Parameters For KIC 007115869

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6660^{+150}_{-234}	$4.237^{+0.112}_{-0.138}$	$-0.060^{+0.250}_{-0.300}$	$1.430^{+0.307}_{-0.223}$	$1.292^{+0.150}_{-0.187}$	$0.623^{+0.328}_{-0.251}$
	+2%/-4%	+3%/-3%	+417%/-500%	+21%/-16%	+12%/-14%	+53%/-40%
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 007115869-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 1	$0.40^{+0.20}_{-0.18}$	4059^{+233}_{-207}	3378^{+1912}_{-7235}	$0.468^{+1.827}_{-0.524}$
Alt.	-3 ± 1	$0.69^{+0.20}_{-0.20}$	4069^{+242}_{-218}	3854^{+839}_{-1109}	$0.669^{+0.724}_{-0.333}$

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

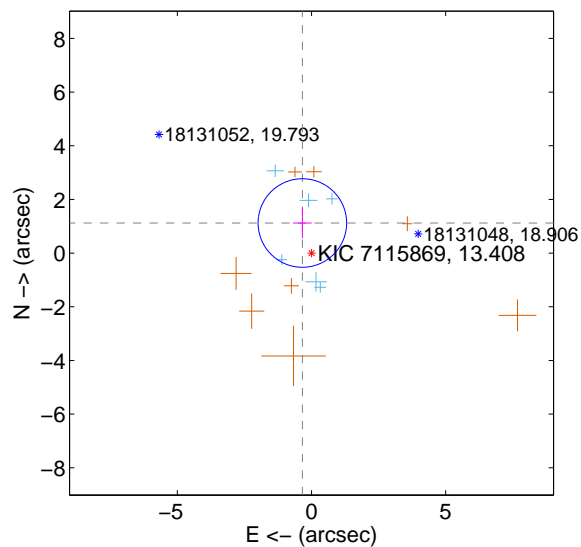
Supplemental centroid analysis for 007115869-01. Kepler magnitude: 13.41. Transit SNR 5.26

There are 6 quarters with good PRF difference image offsets

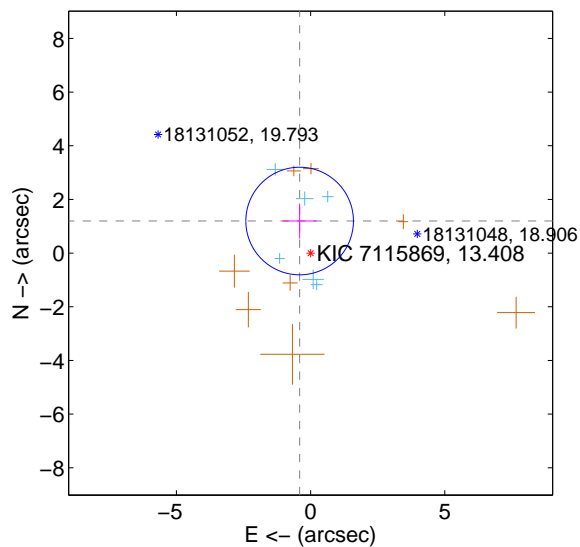
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.171 ± 0.550	2.13	0.340 ± 0.349	1.121 ± 0.565
PRF-fit source offset from KIC position	1.263 ± 0.668	1.89	0.408 ± 0.630	1.195 ± 0.653
photometric centroid source offset	0.99 ± 2.17	0.46	-0.99 ± 2.17	0.02 ± 2.18

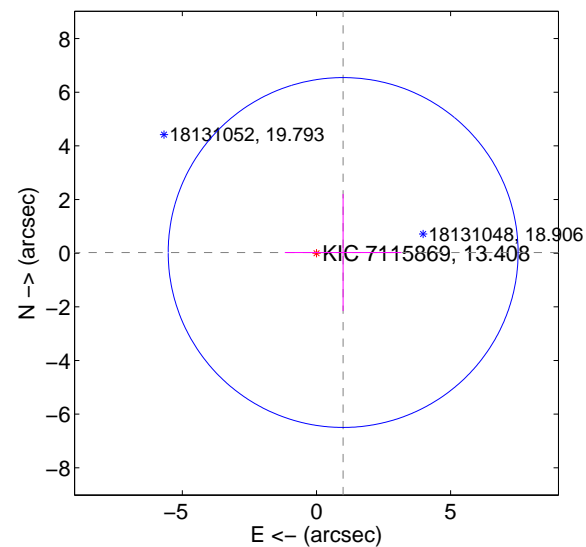
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

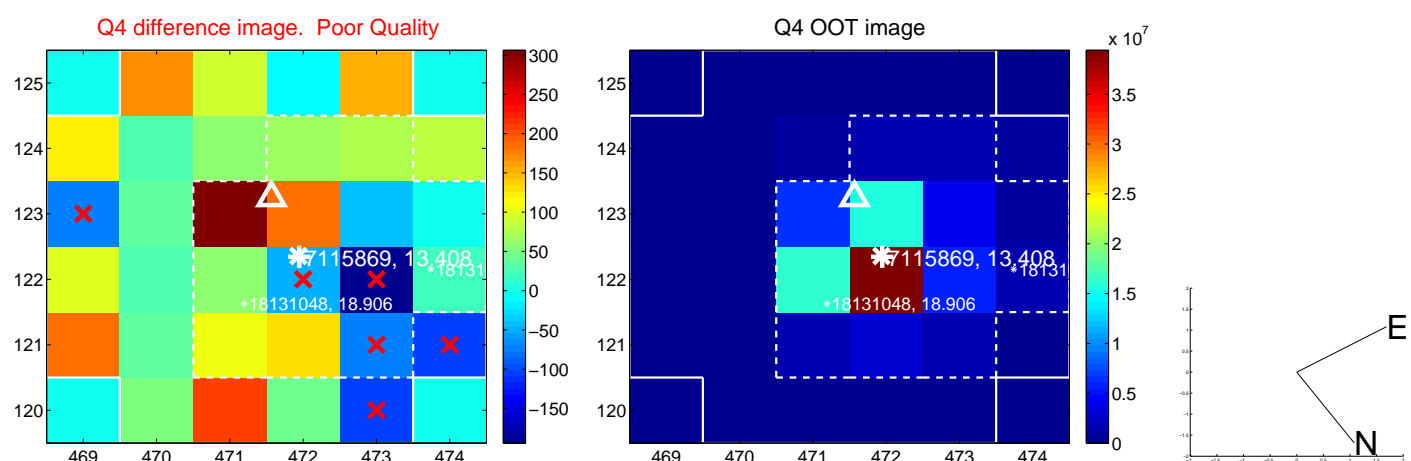
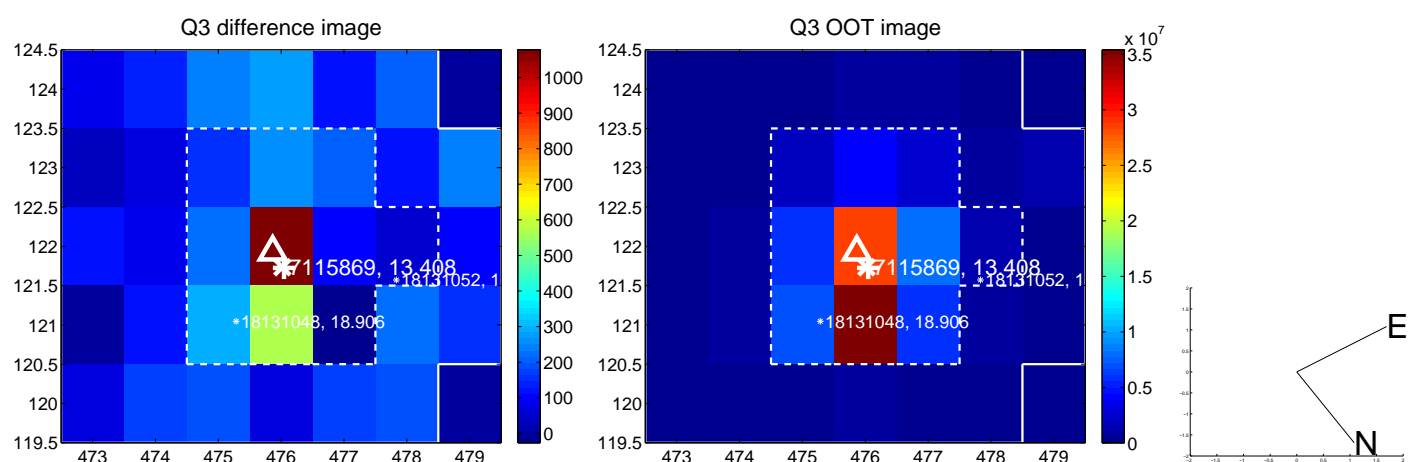
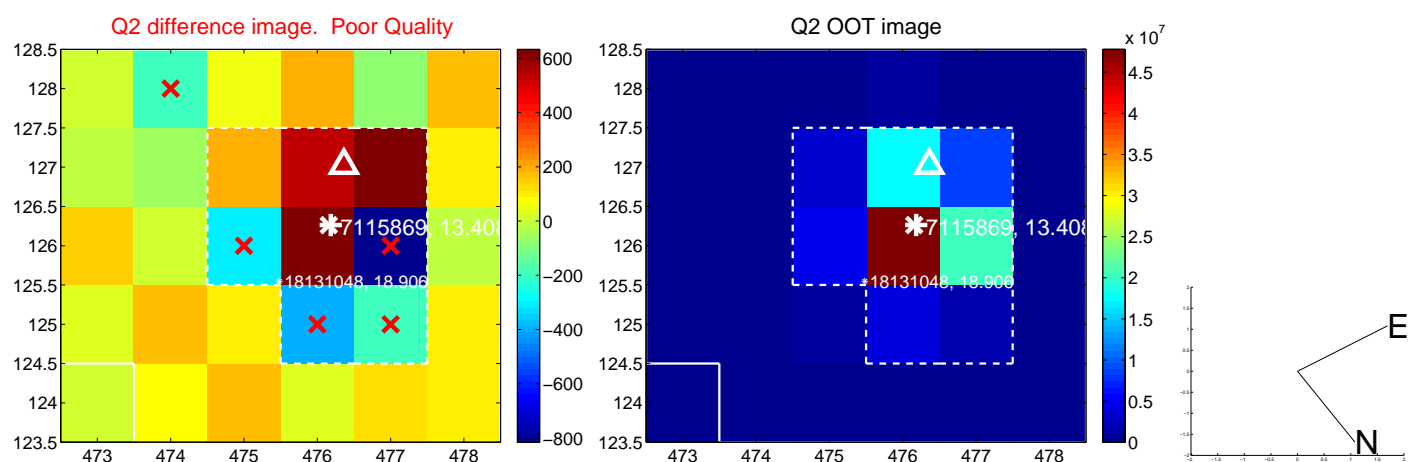
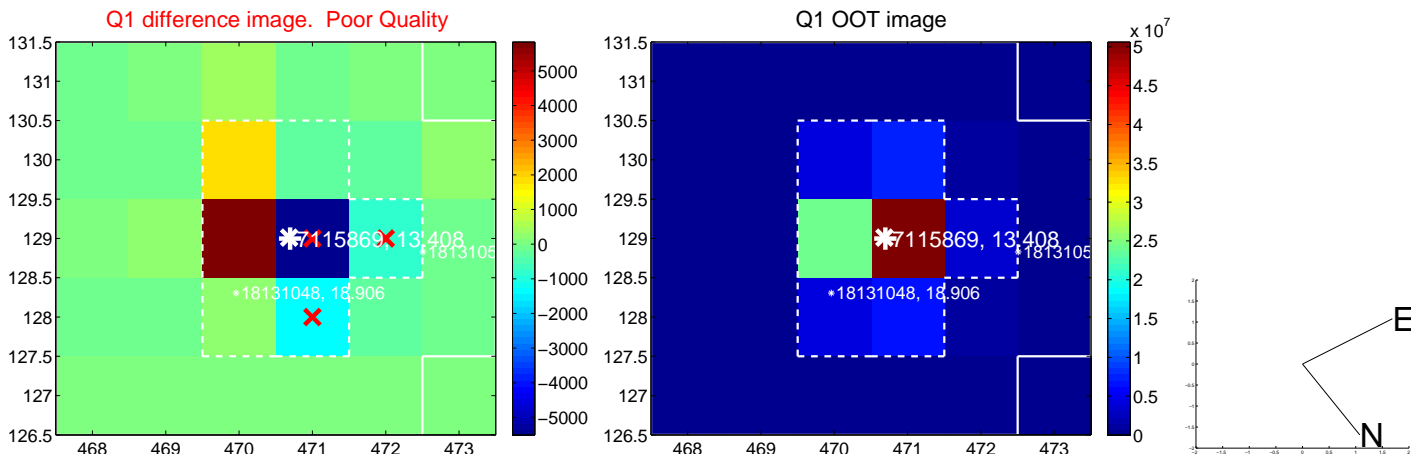


offset from photometric centroids

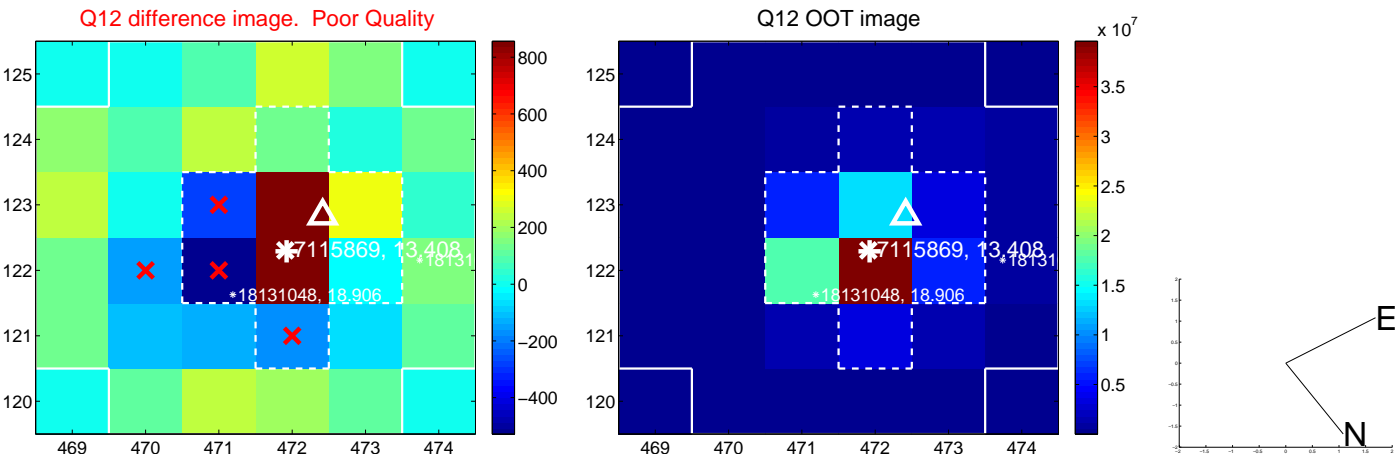
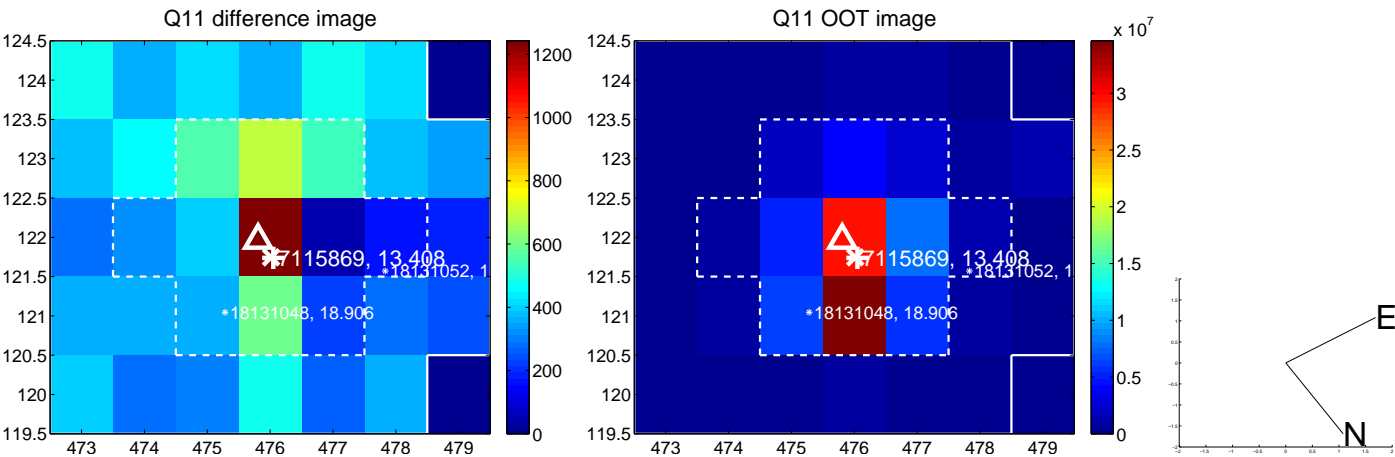
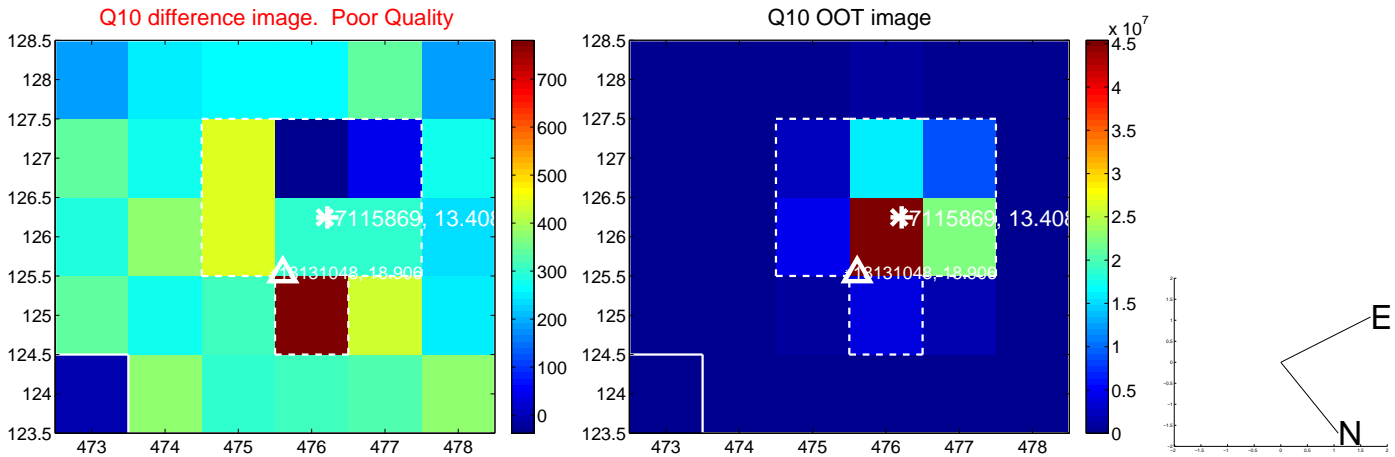
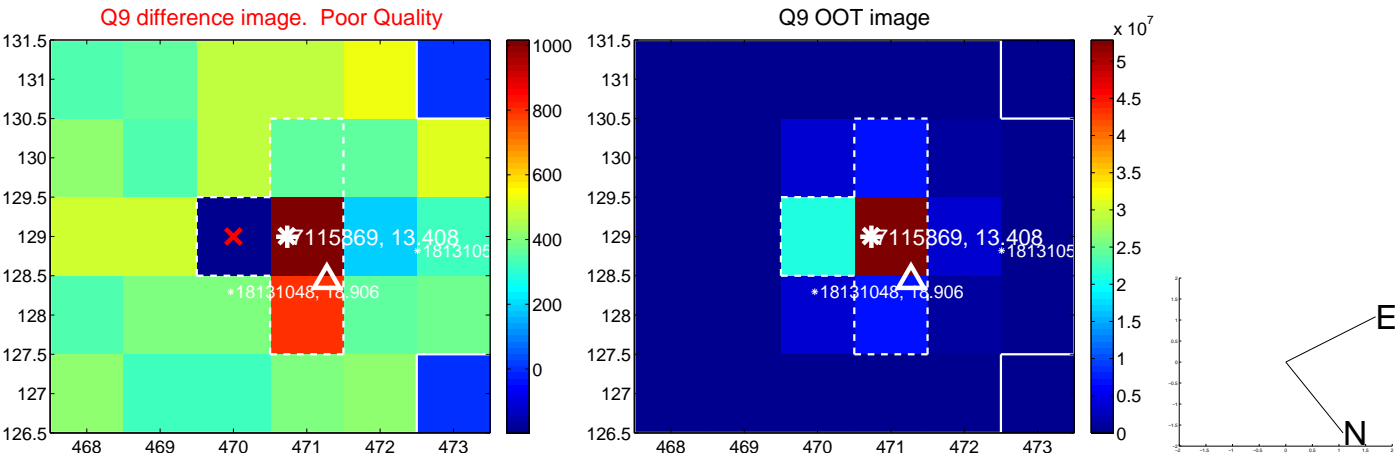


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

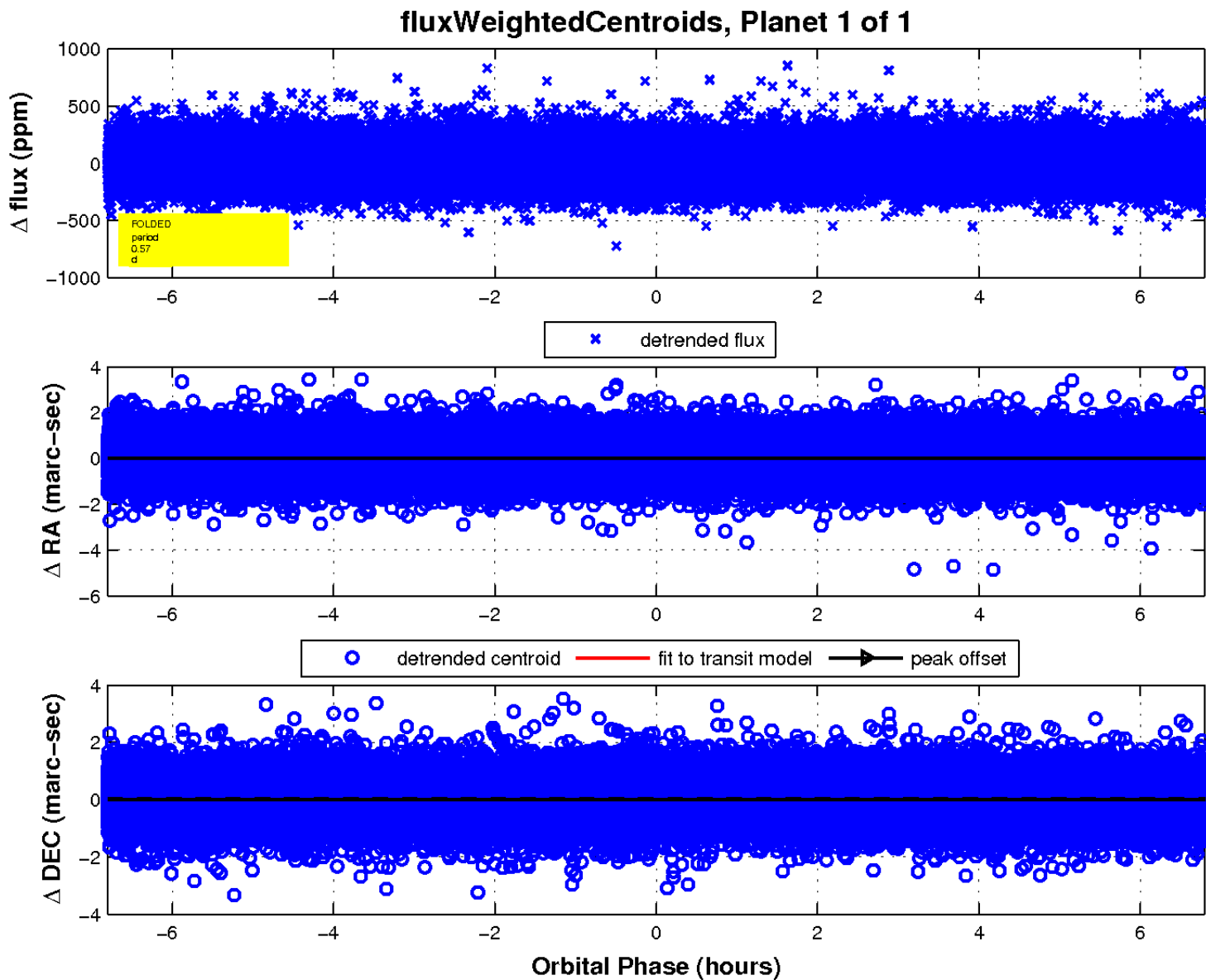
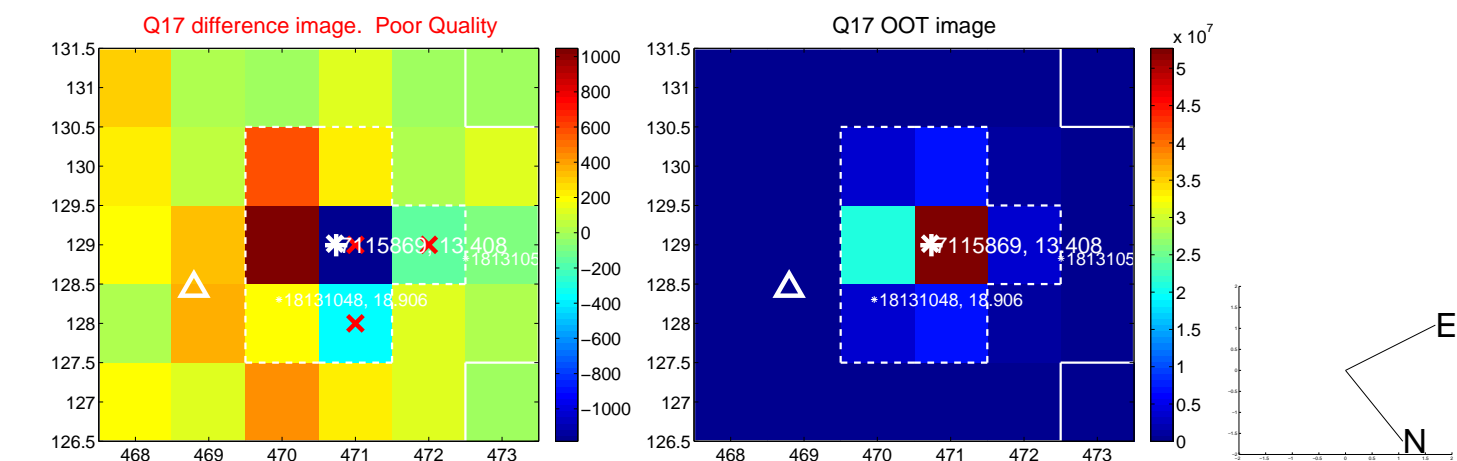
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

