

KIC 008382223

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})
008382223-01	OBS	No	1.258698	132.507435	82.8	5.381	9.4	10.4	0.82	5611	0.77	1260.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008382223-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—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.

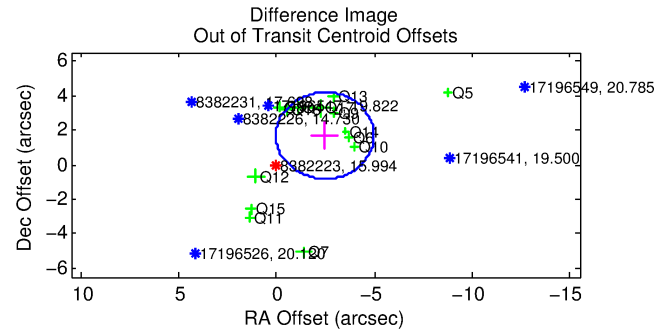
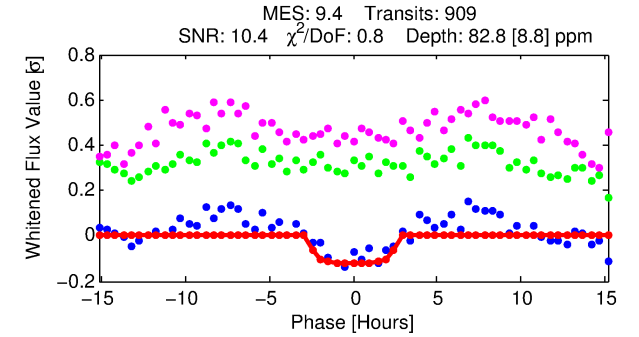
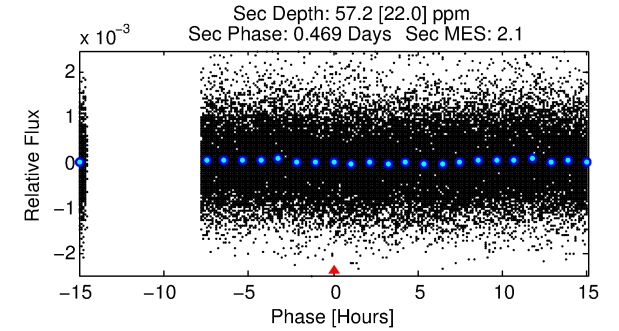
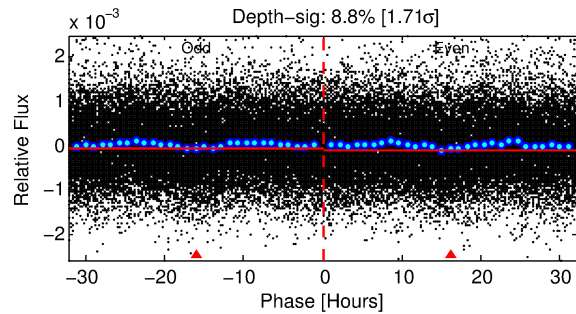
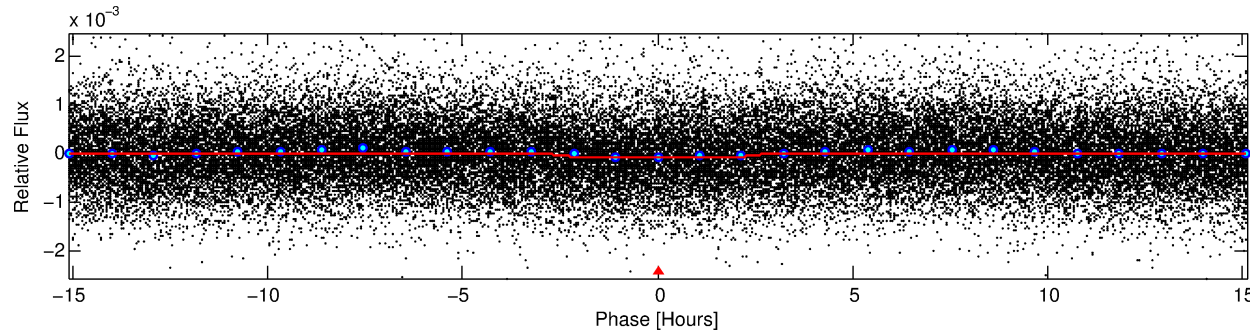
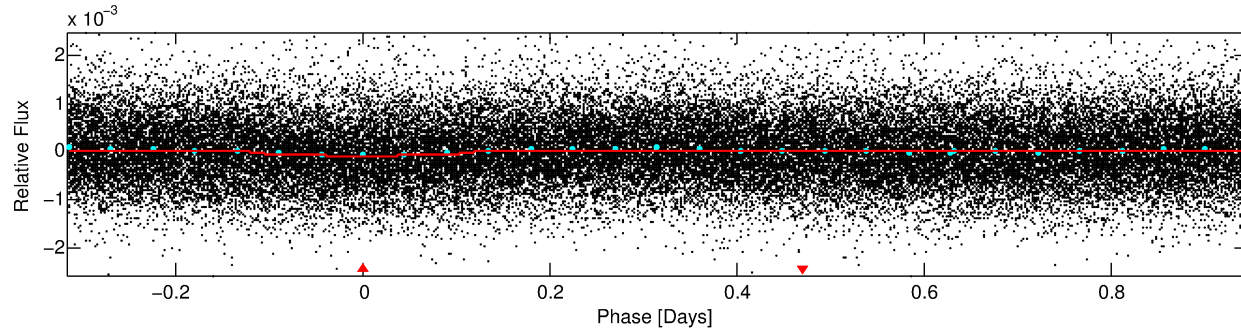
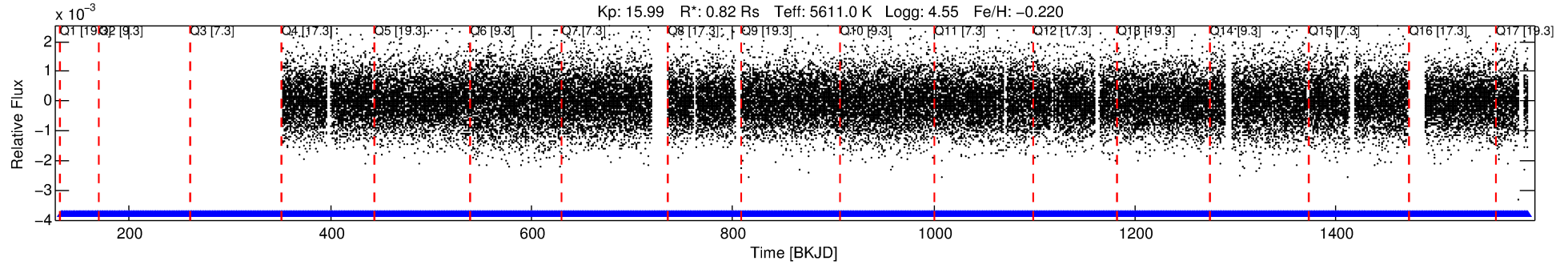
Ephemeris Match Information For 008382223-01

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
008382223-01	8382223	008382182-pri	8382182	1:1	82.9	5	20	8.18	15.99	177.11	Direct-PRF	0	1.09	1.77

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: 8382223 Candidate: 1 of 1 Period: 1.259 d



DV Fit Results:

Period = 1.25870 [0.00002] d
Epoch = 132.5074 [0.0063] BKJD
Rp/R* = 0.0085 [0.0107]
a/R* = 1.72 [6.08]
b = 0.51 [7.88]
Seff = 1260.11 [404.90]
Teff = 1519 [122] K
Rp = 0.76 [0.97] Re
a = 0.0218 [0.0044] AU
Ag = 25.66 [65.31] [0.38 σ]
Teffp = 5287 [3347] K [1.12 σ]

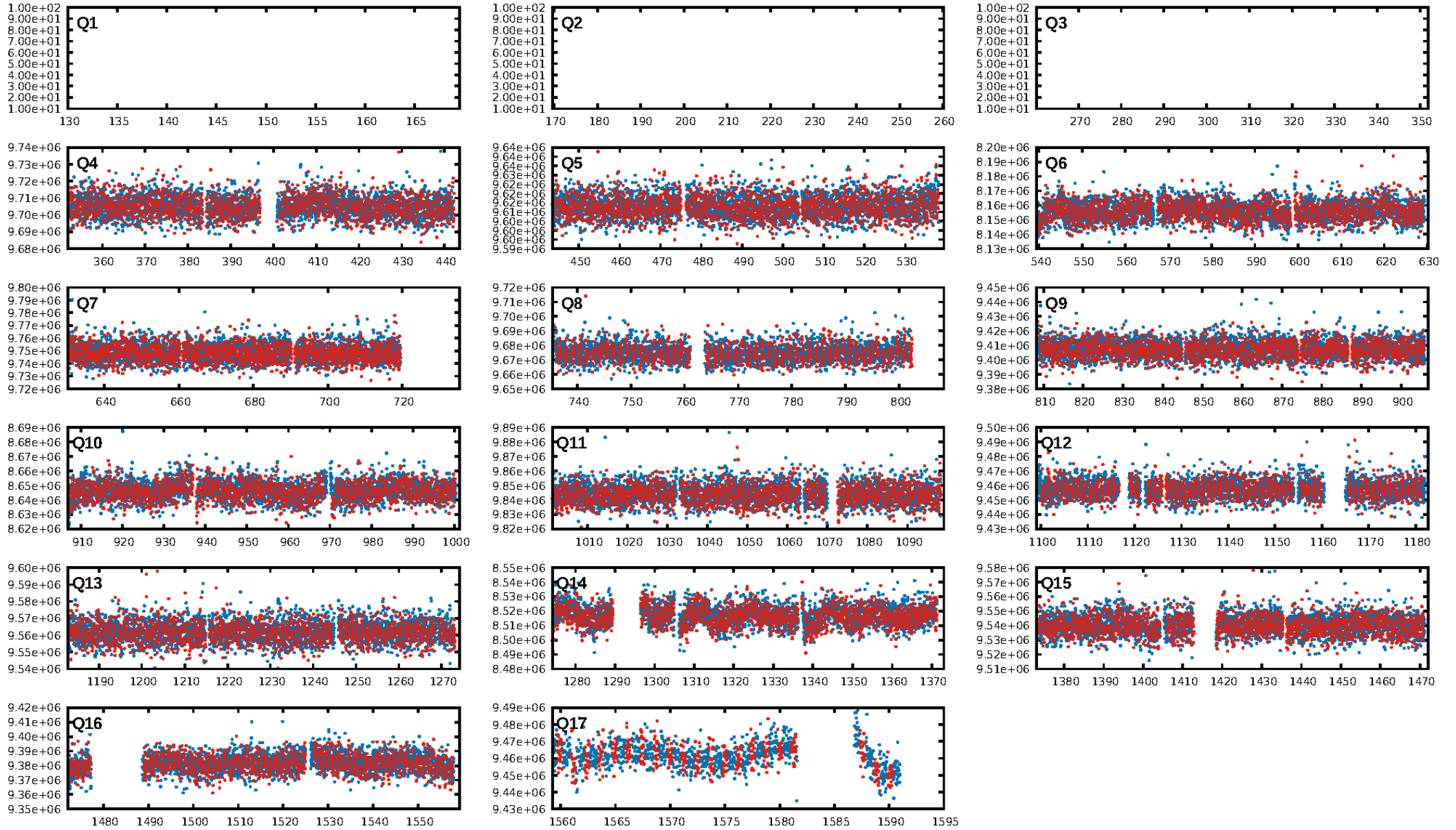
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.58e-19
RollingBand-fgt: 1.00 [888/888]
GhostDiagnostic-chr: -0.1577
Centroid-sig: 0.0%
Centroid-so: 3.403 arcsec [2.81 σ]
OotOffset-rm: 2.988 arcsec [3.58 σ]
KicOffset-rm: 3.021 arcsec [3.86 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

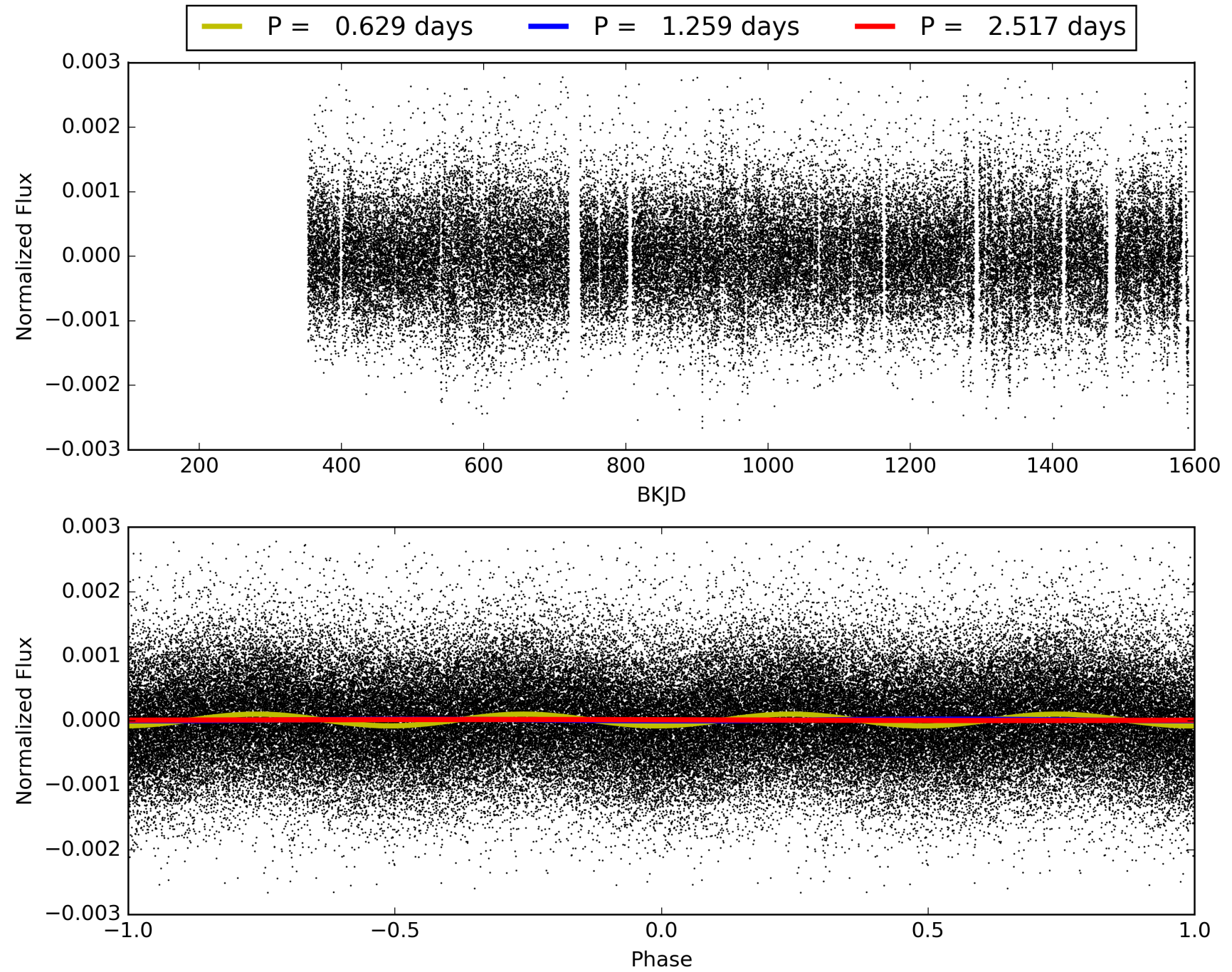
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:04:52 Z

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

TCE 008382223-01, PDC Light Curves

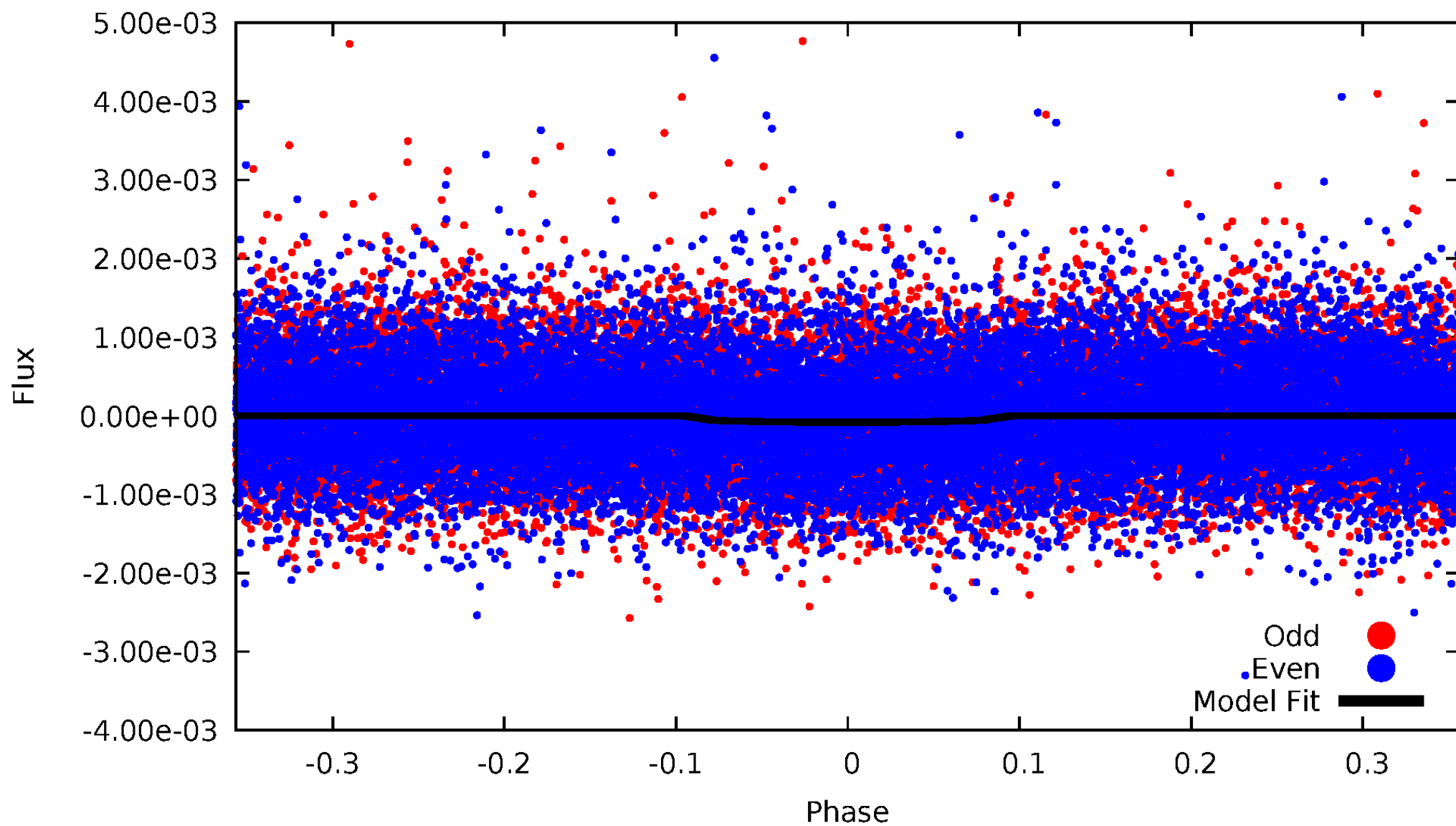


TCE 008382223-01



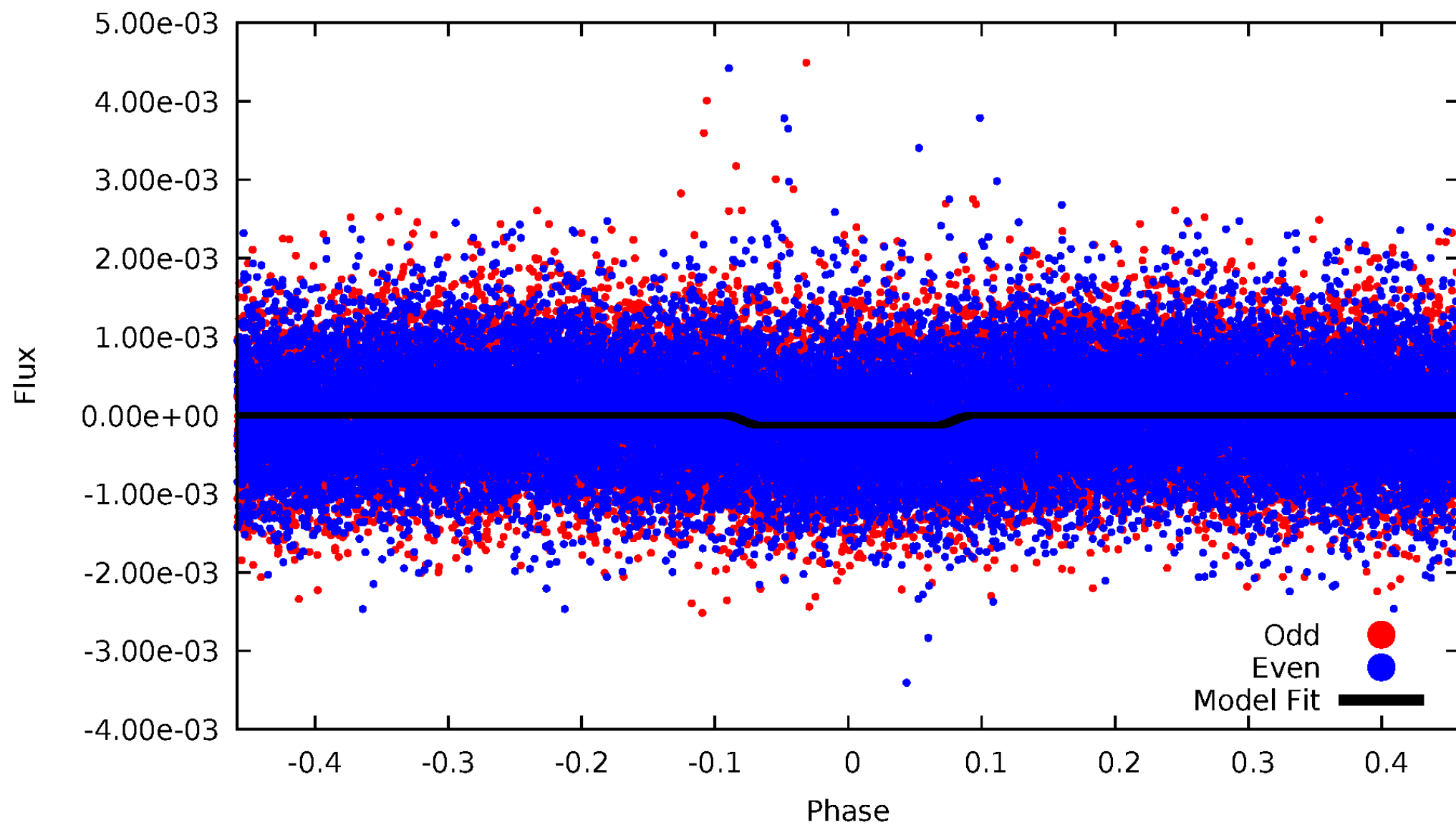
DV Odd/Even

TCE 008382223-01



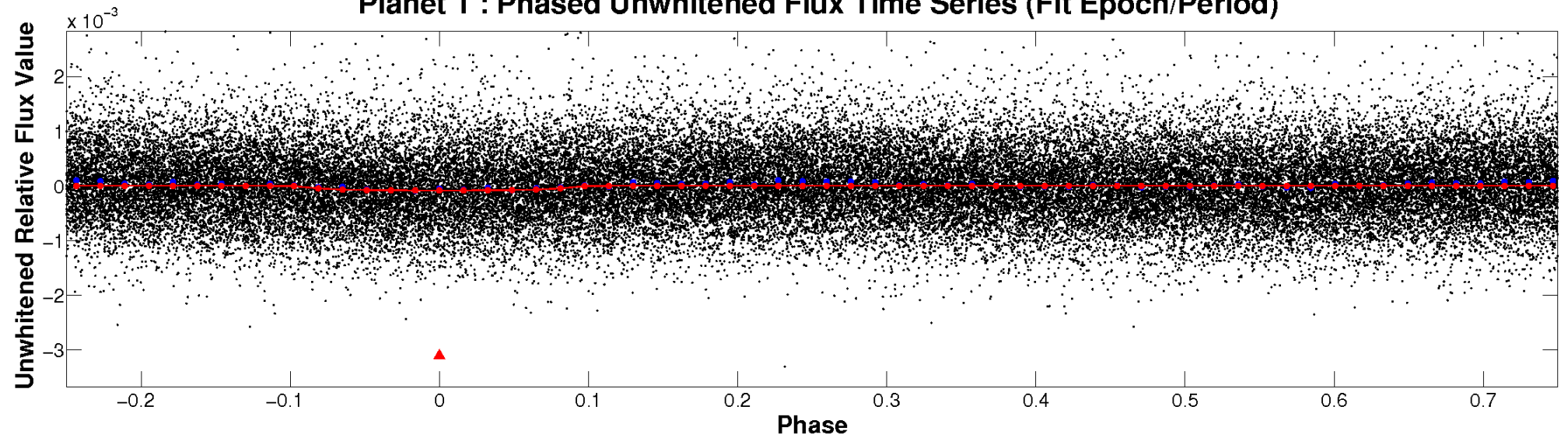
ALT Odd/Even

TCE 008382223-01

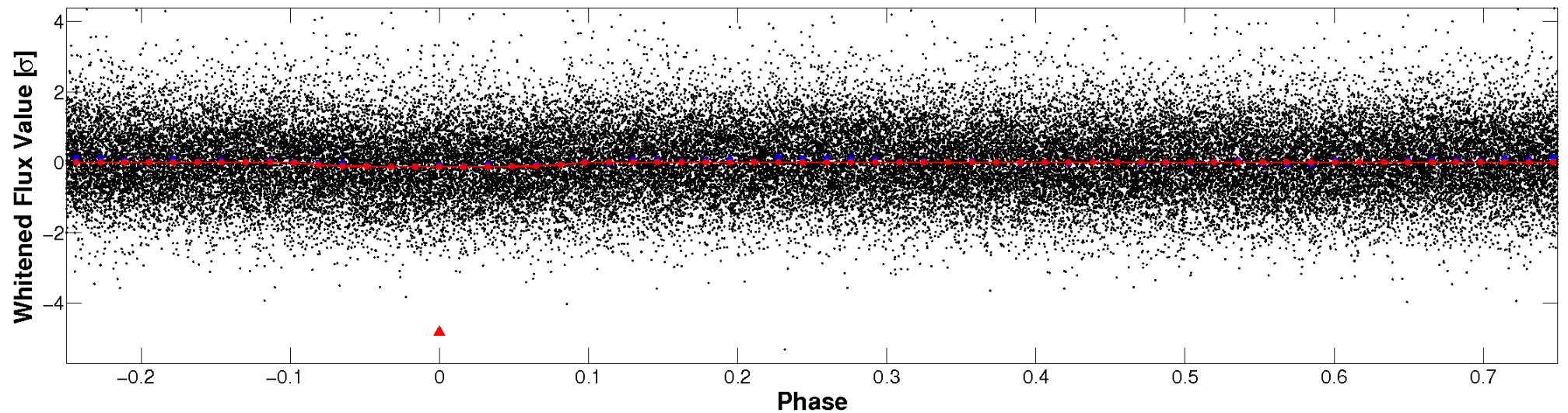


Non-Whitened Vs. Whitened Light Curve

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

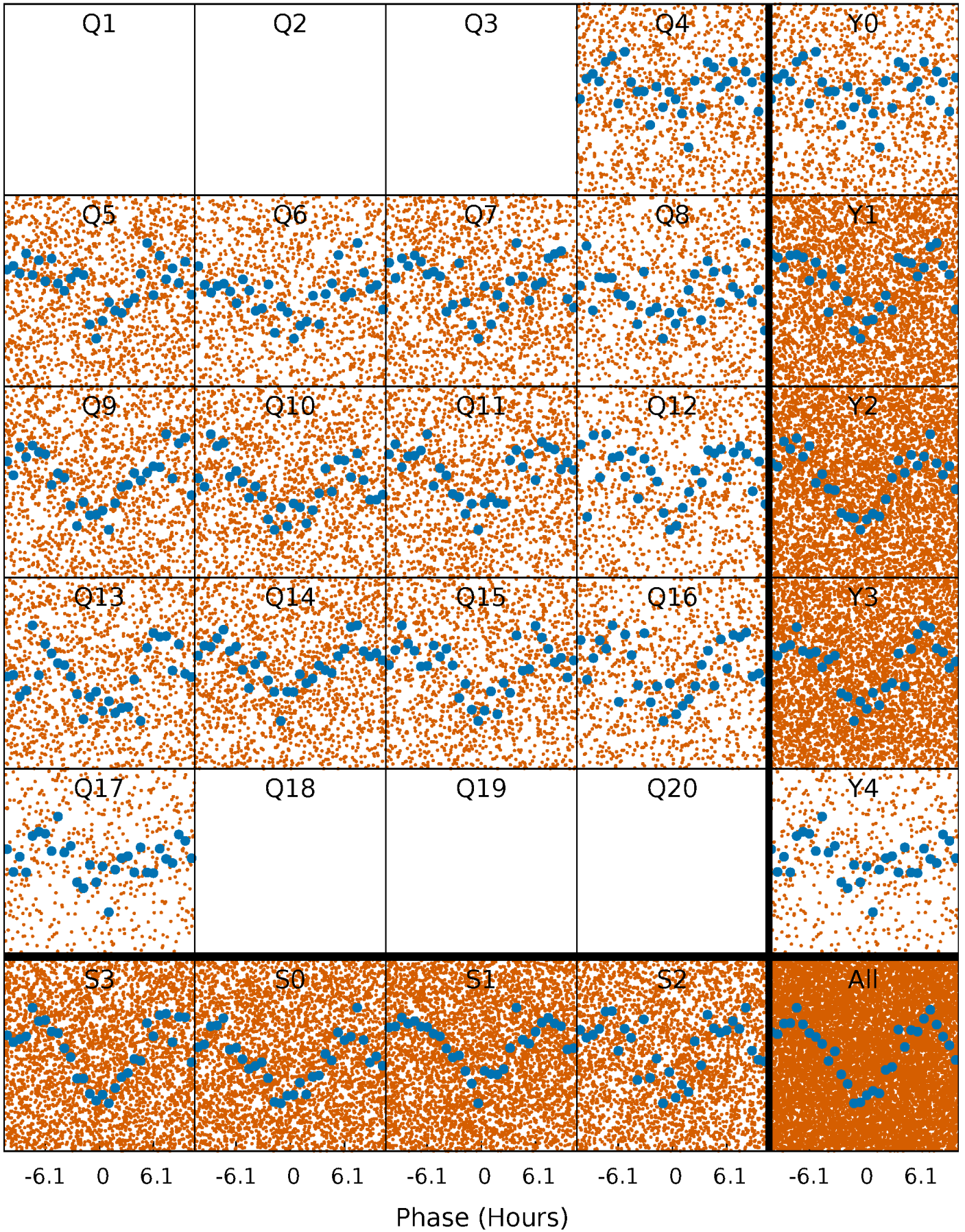


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



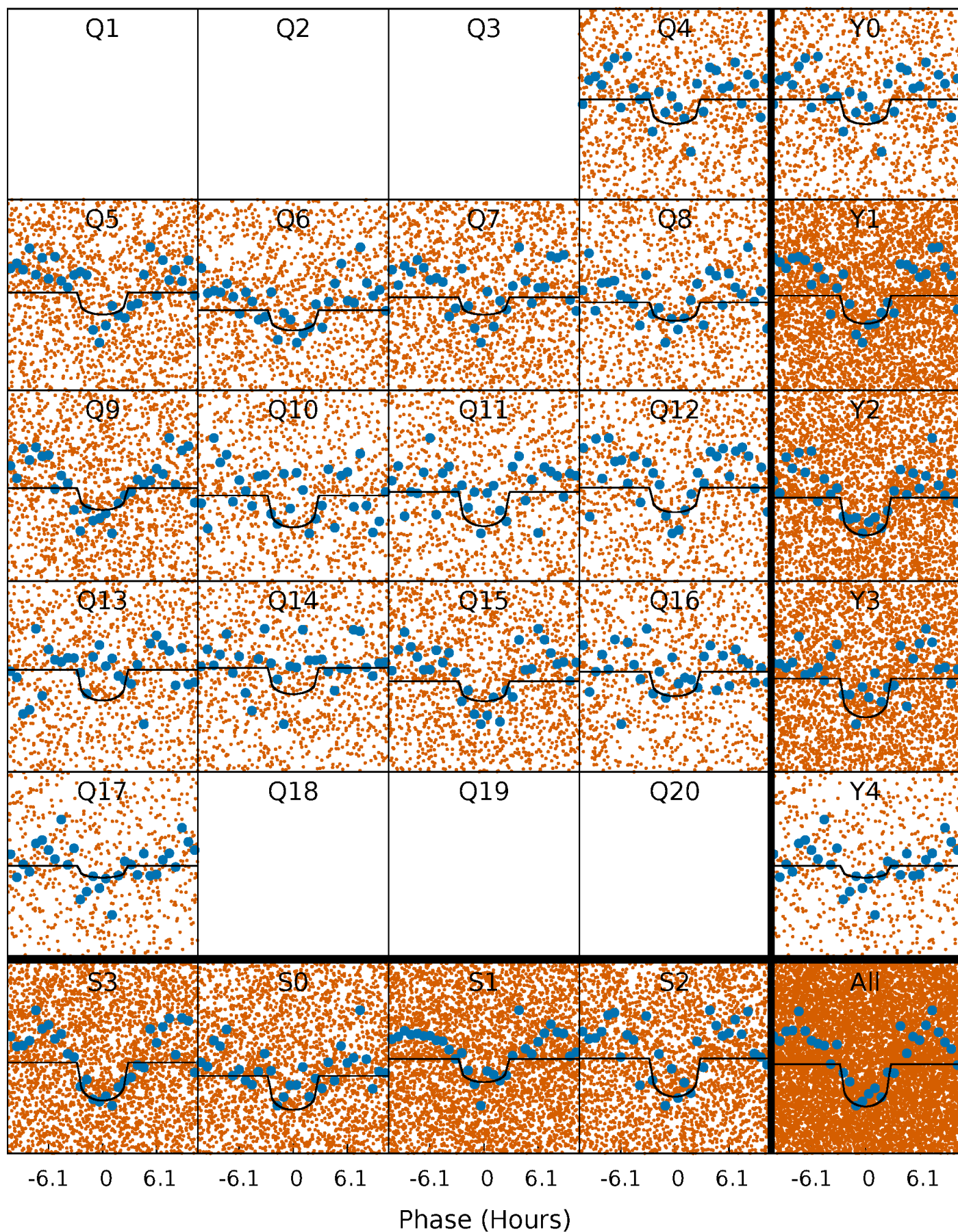
PDC Quarter-Phased Transit Curves

TCE 008382223-01 P= 1.258698 Days $T_0=132.507435$ (BKJD)



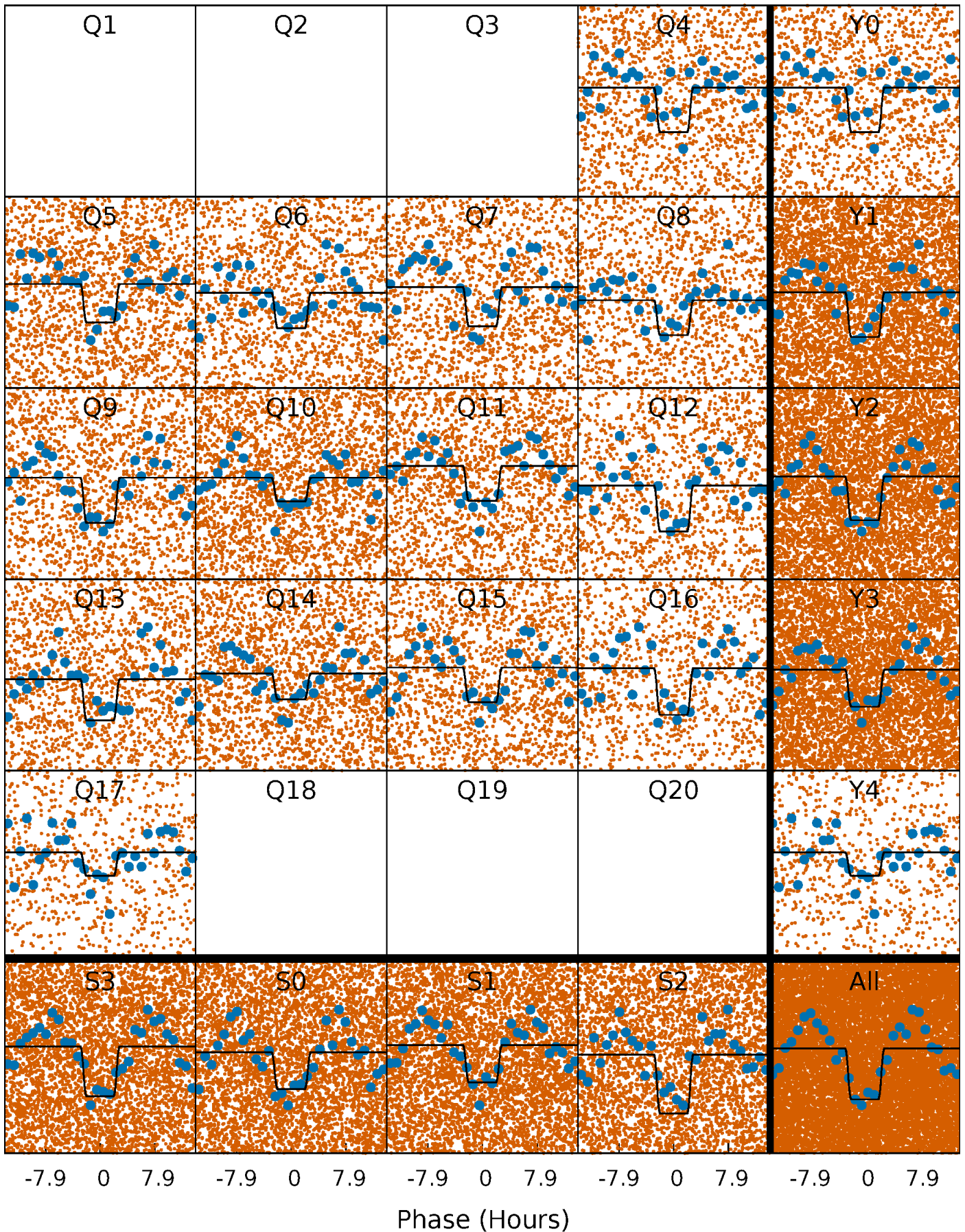
DV Quarter-Phased Transit Curves

TCE 008382223-01 P= 1.258698 Days $T_0=132.507435$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

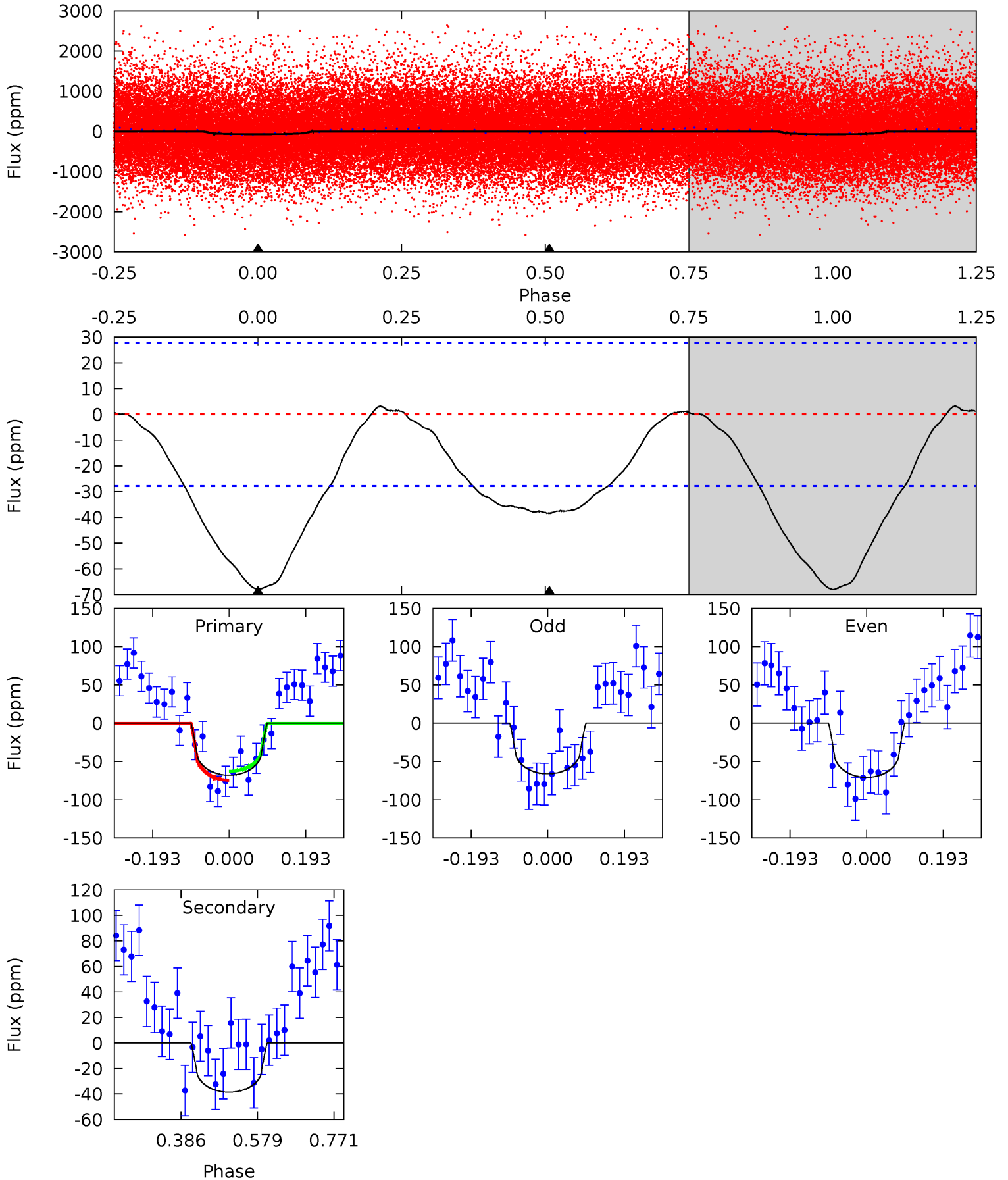
TCE 008382223-01 P= 1.258668 Days $T_0=132.533856$ (BKJD)



DV Model-Shift Uniqueness Test

008382223-01, P = 1.258698 Days, E = 132.507435 Days

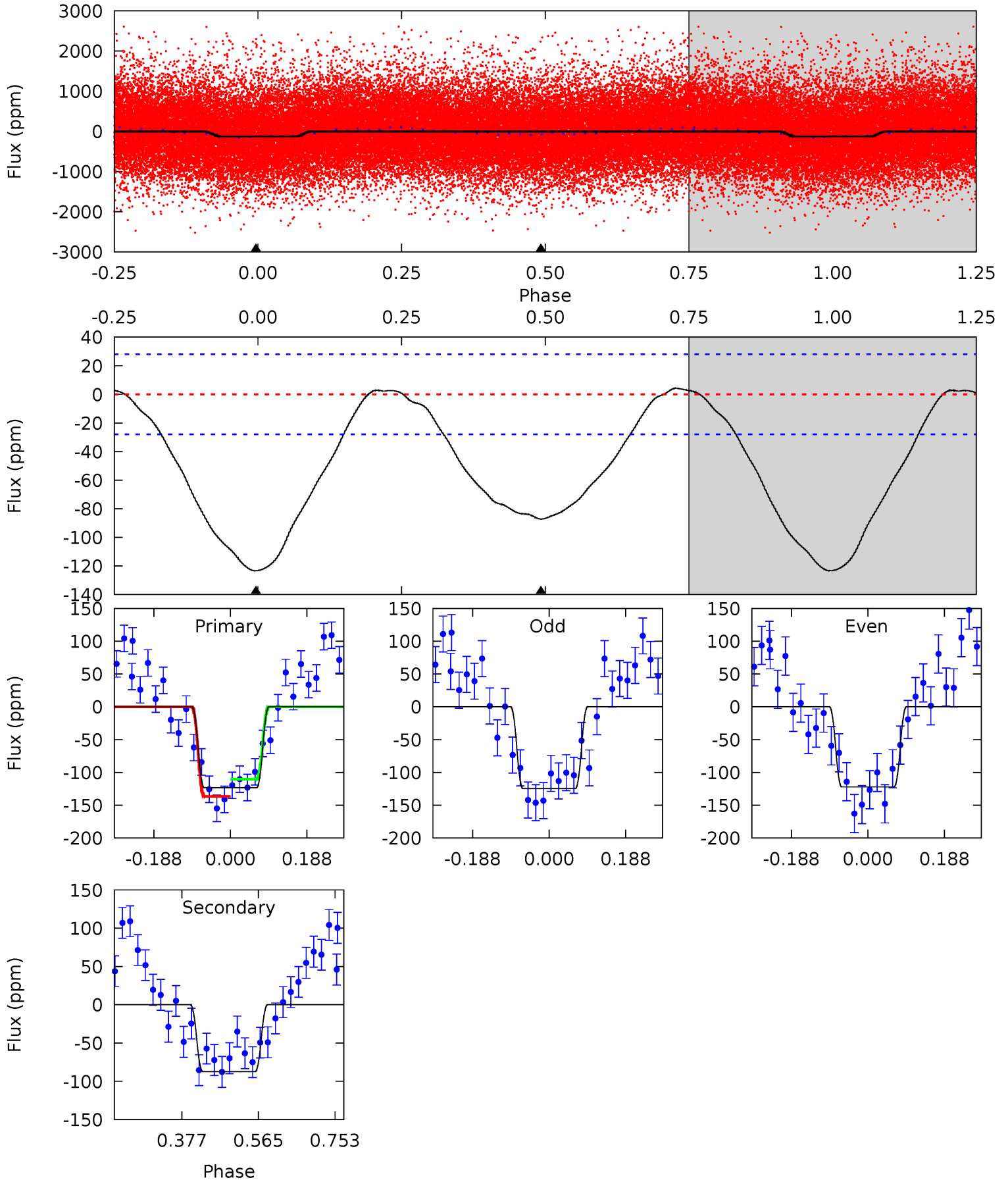
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	6.13	0	0	4.43	1.30	0.47	10.8	10.8	6.13	6.13	0.37	0.90	0.04	0.93



Alt Model-Shift Uniqueness Test

008382223-01, P = 1.258668 Days, E = 132.533856 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	13.8	0	0	4.43	1.32	0.84	19.5	19.5	13.8	13.8	0.21	1.04	0.03	2.09



Stellar Parameters For KIC 008382223

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5611^{+186}_{-186}	$4.550^{+0.042}_{-0.158}$	$-0.220^{+0.300}_{-0.300}$	$0.822^{+0.202}_{-0.072}$	$0.875^{+0.102}_{-0.093}$	$2.221^{+0.499}_{-1.013}$
	+3%/-3%	+1%/-3%	+136%/-136%	+25%/-9%	+12%/-11%	+22%/-46%
Source	KIC0	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 008382223-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-38 ± 6	$1.05^{+0.89}_{-0.70}$	2168^{+116}_{-92}	4290^{+2823}_{-849}	$8.647^{+64.296}_{-6.068}$
Alt.	-87 ± 6	$1.18^{+0.87}_{-0.72}$	2160^{+115}_{-97}	4908^{+3055}_{-982}	16^{+88}_{-11}

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

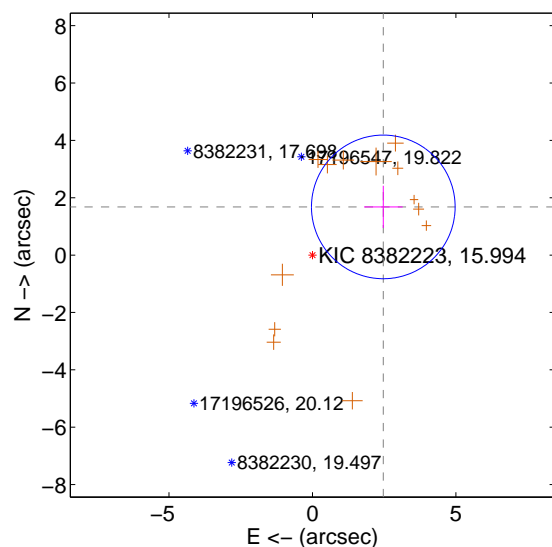
Supplemental centroid analysis for 008382223-01. Kepler magnitude: 15.99. Transit SNR 10.38

There are 0 quarters with good PRF difference image offsets

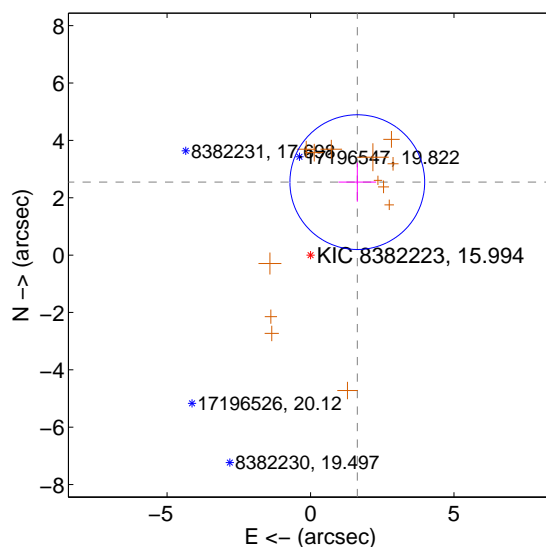
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.988 ± 0.835	3.58	-2.471 ± 0.673	1.680 ± 0.737
PRF-fit source offset from KIC position	3.021 ± 0.783	3.86	-1.630 ± 0.655	2.544 ± 0.682
photometric centroid source offset	3.40 ± 1.21	2.81	-2.83 ± 1.20	-1.89 ± 1.22

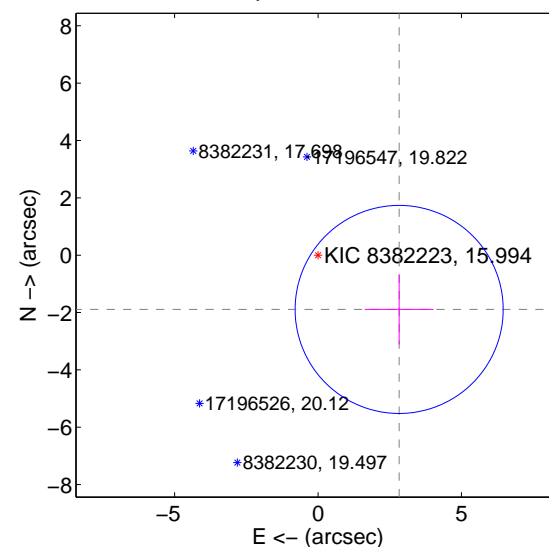
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

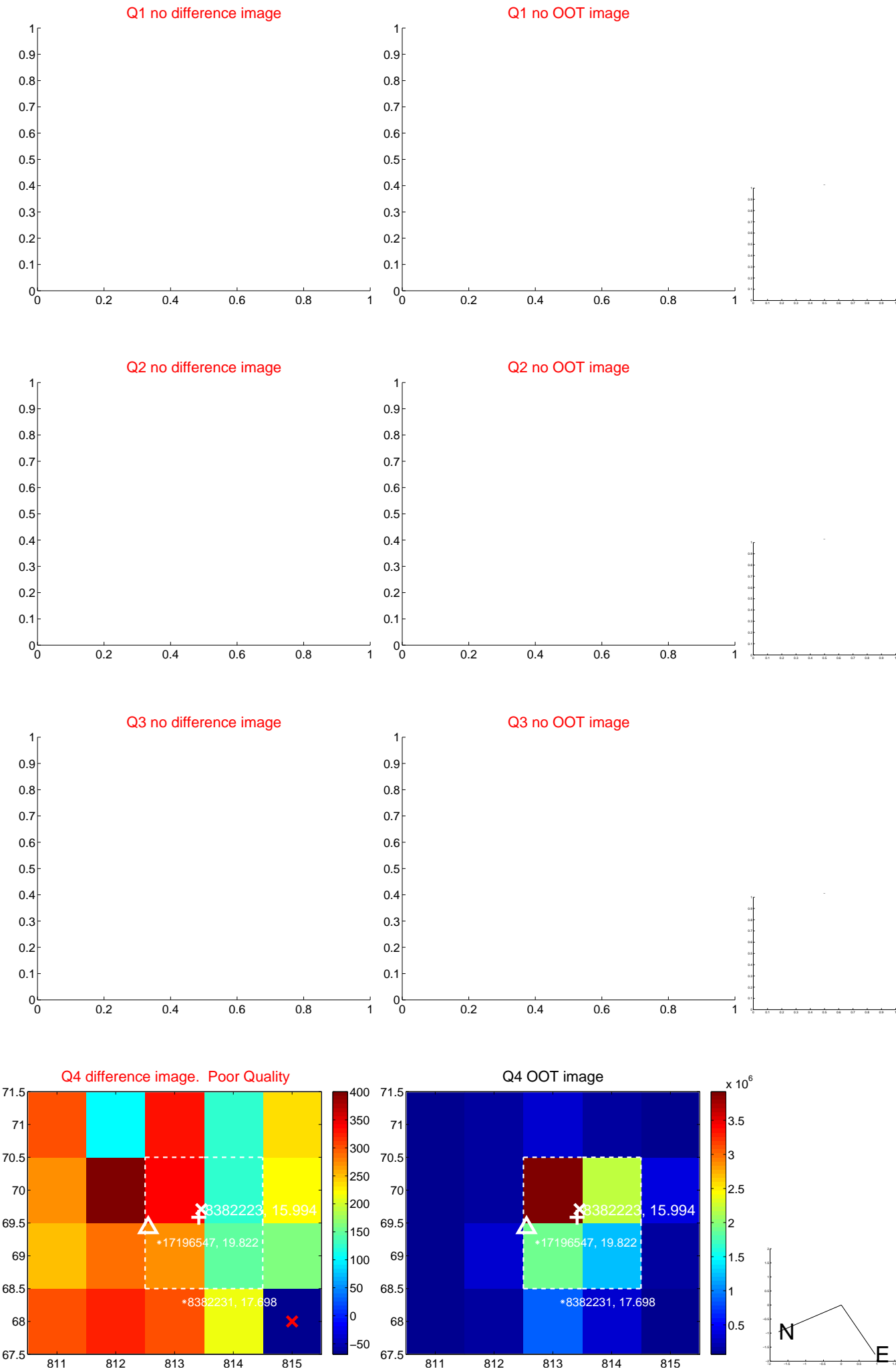


offset from photometric centroids

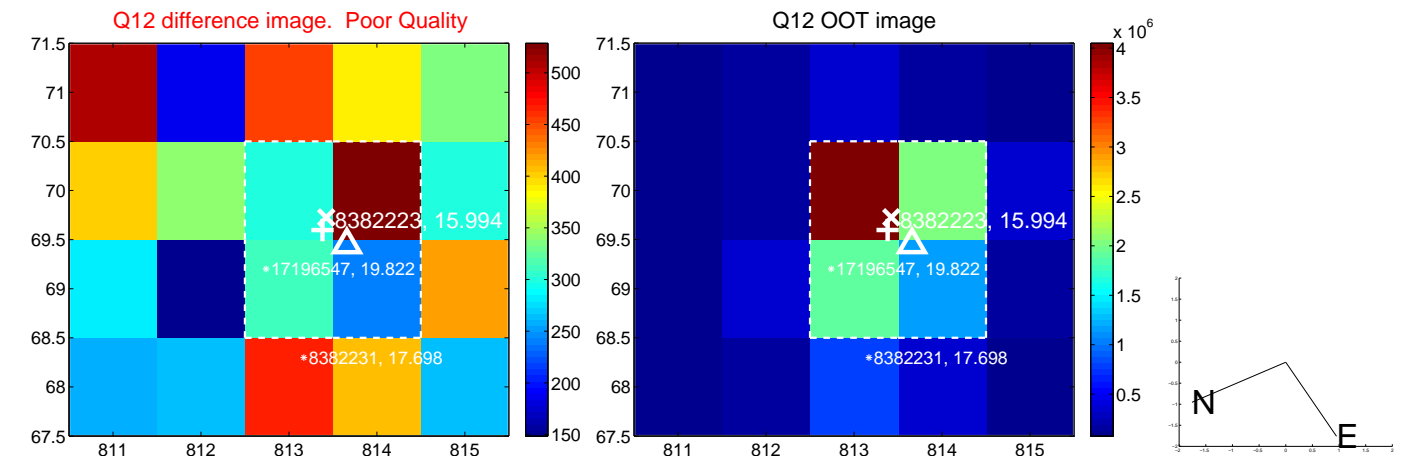
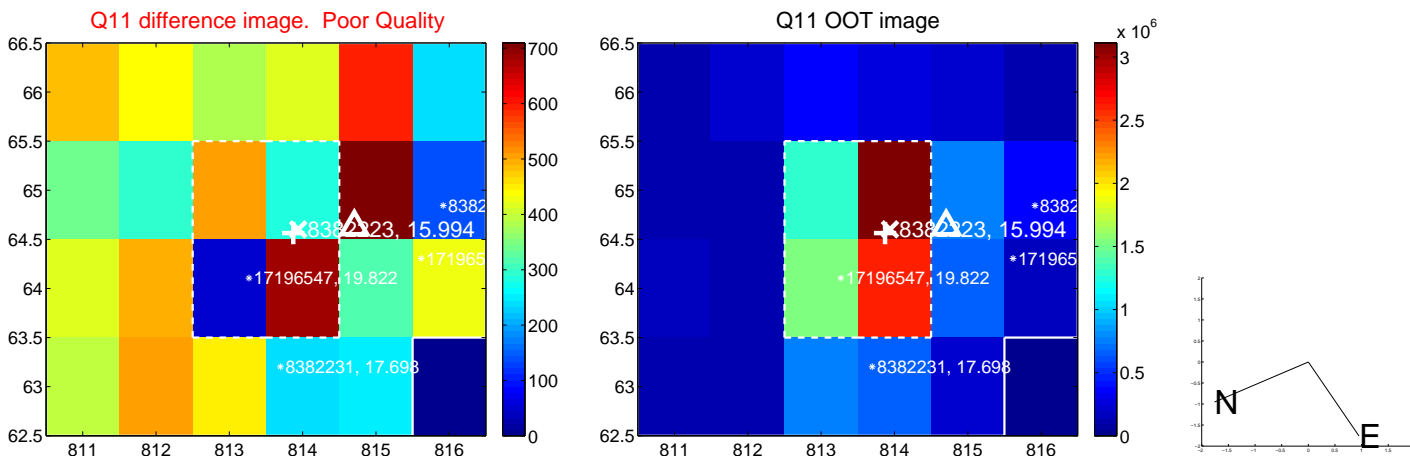
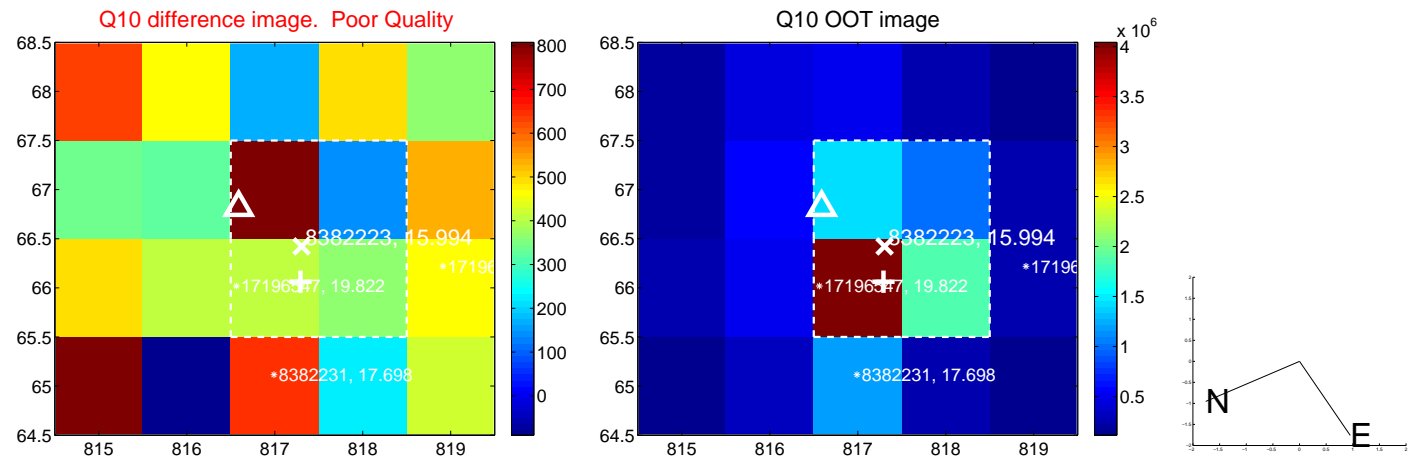
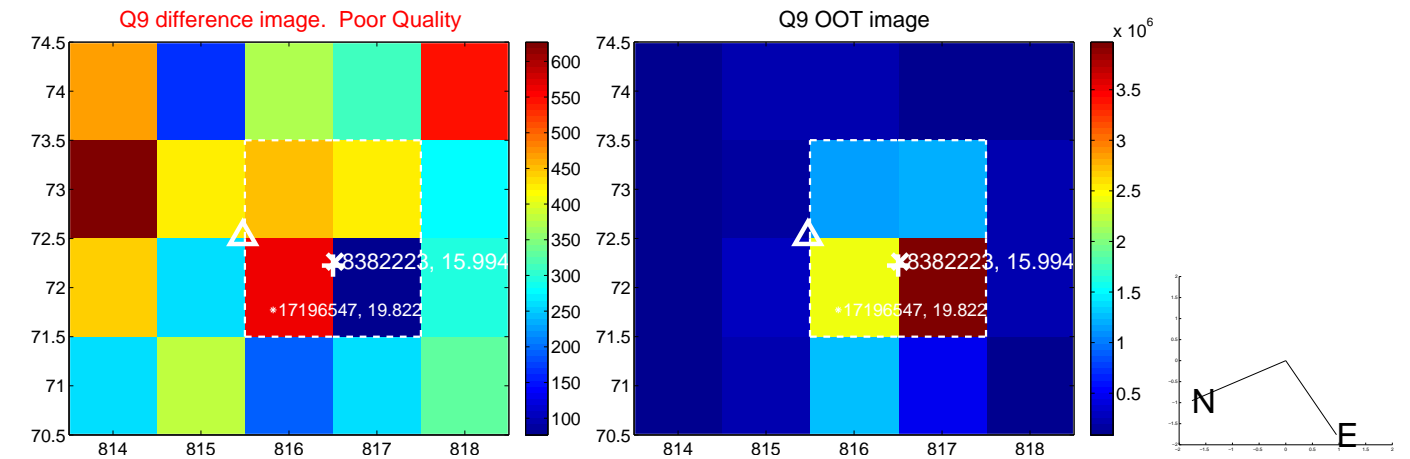


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15, 000, are from the UKIRT catalog.

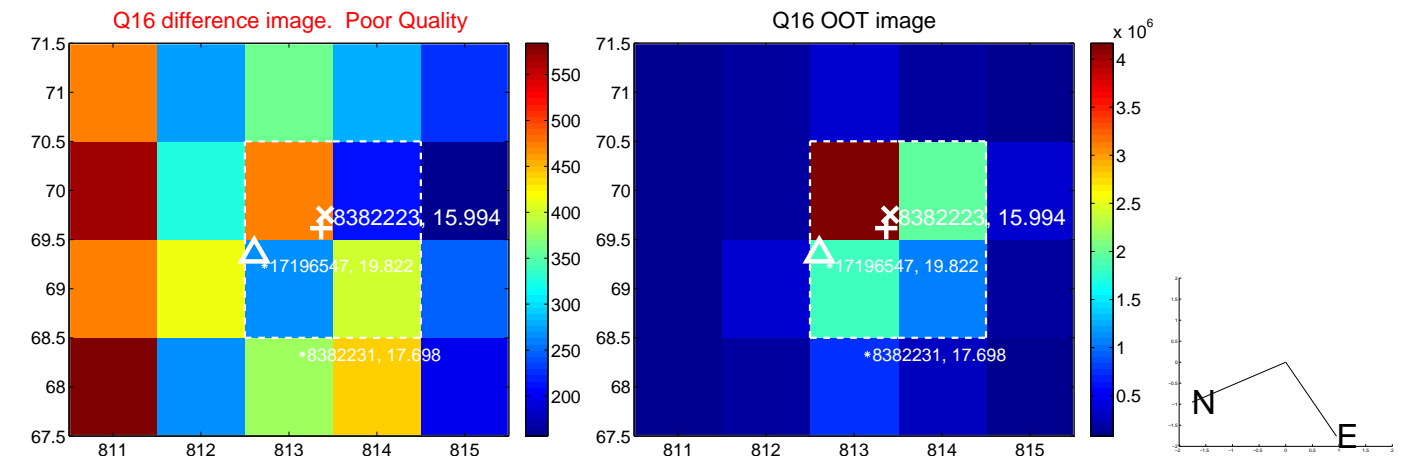
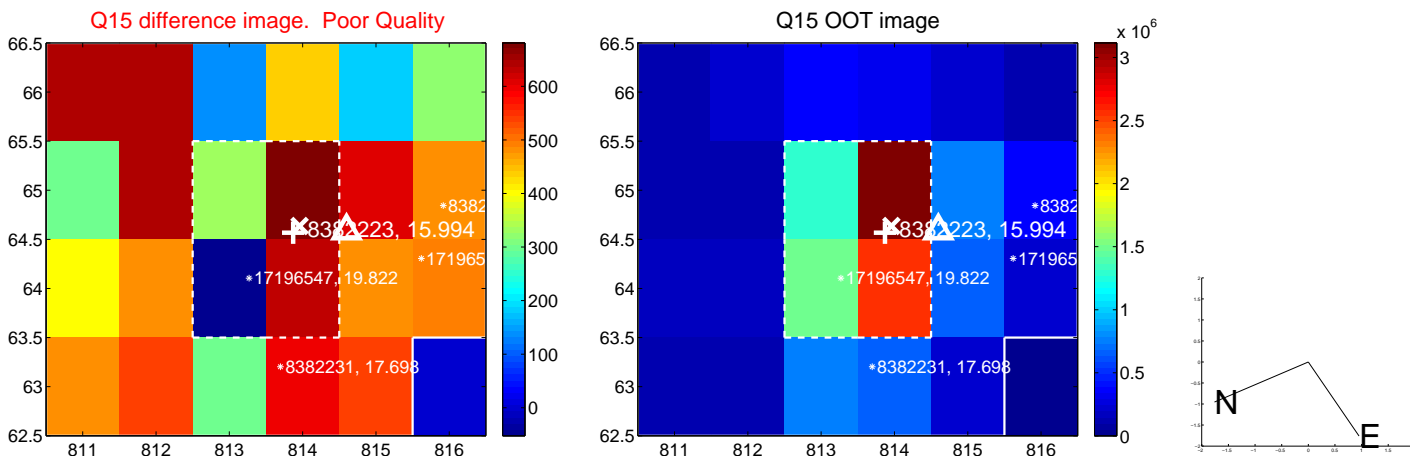
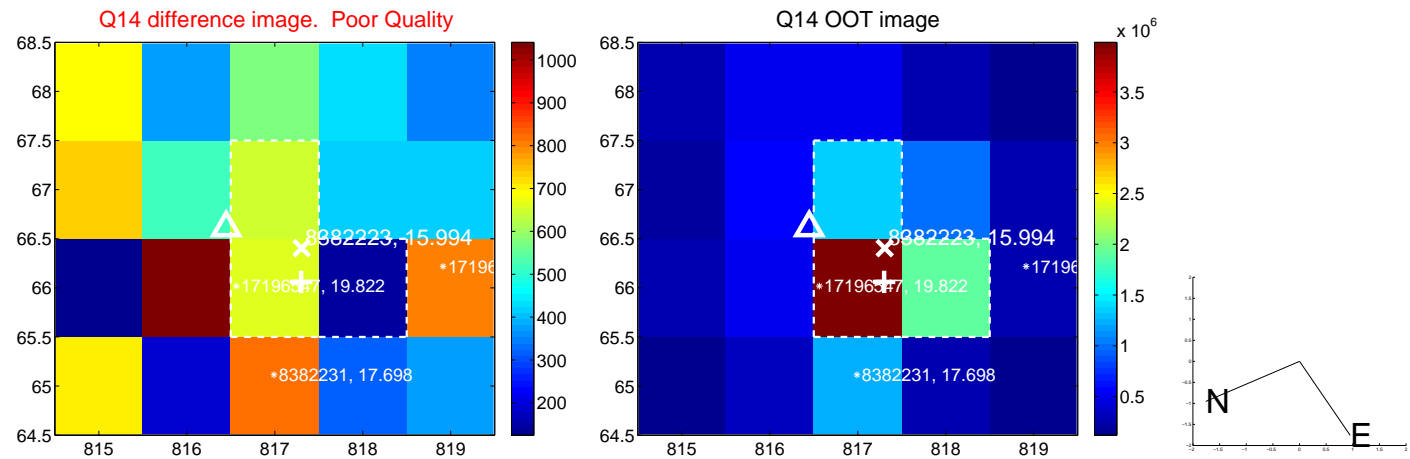
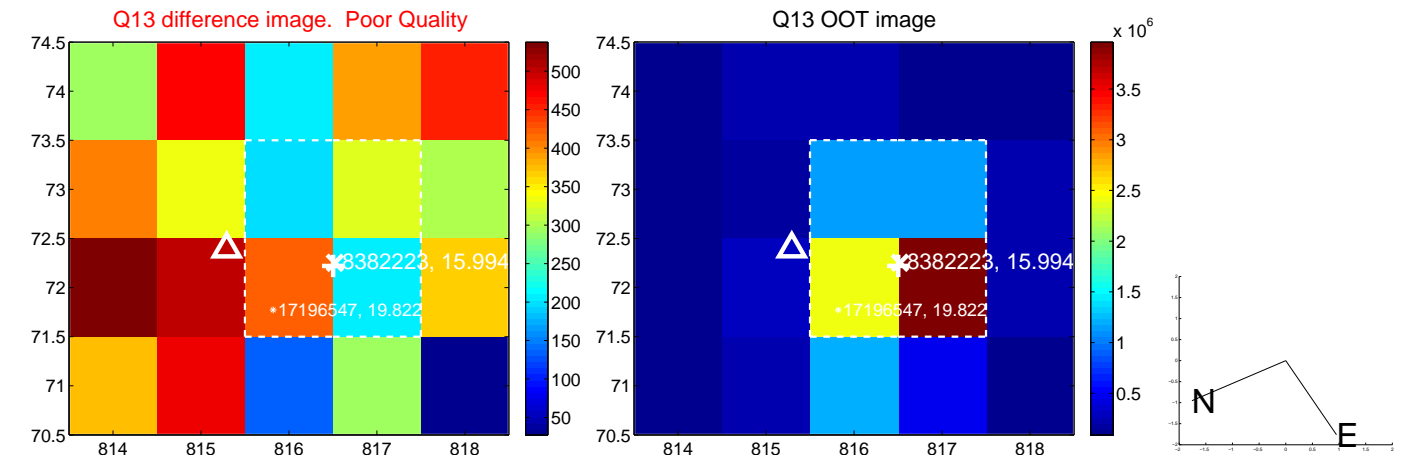
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



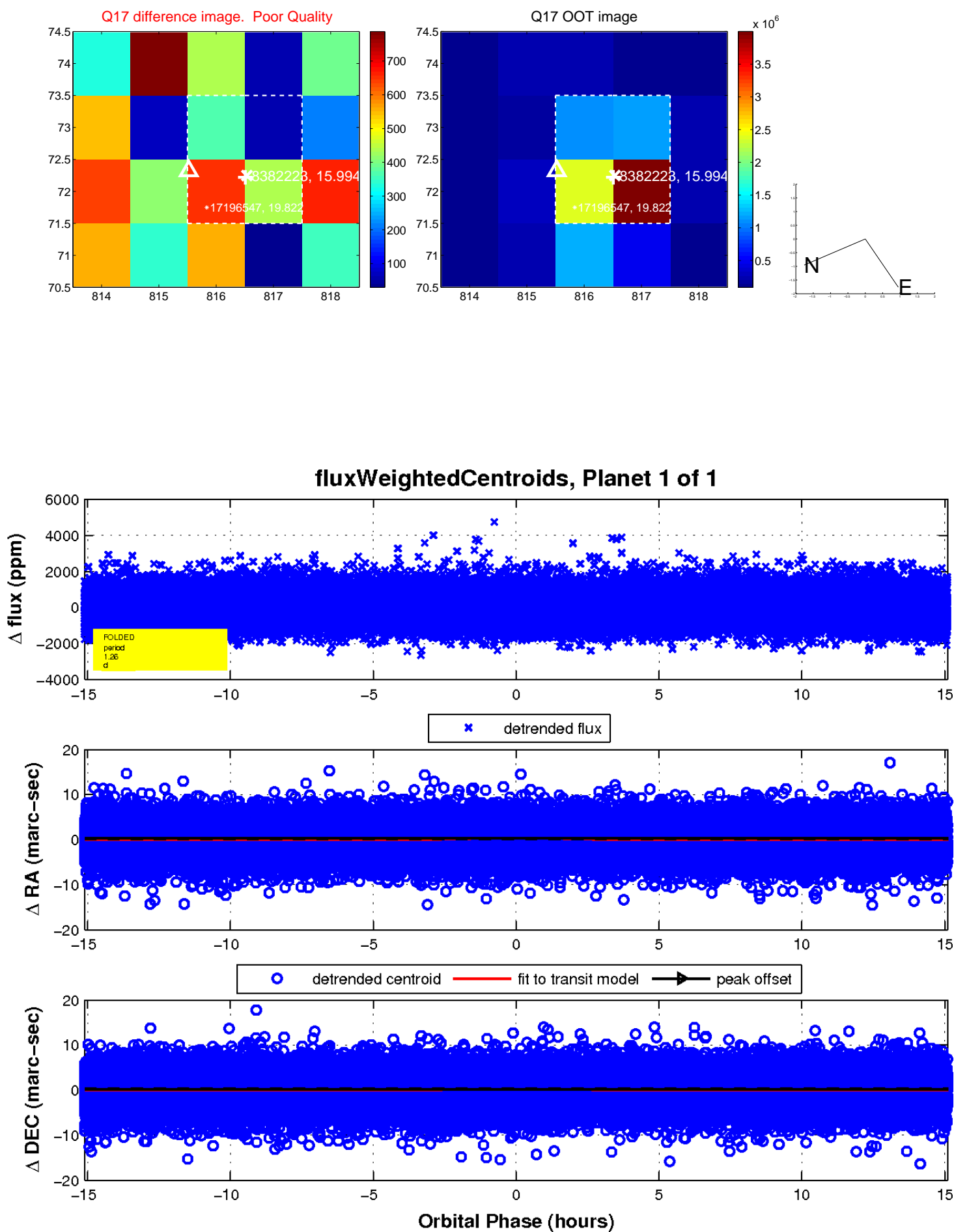
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

