

KIC 005696918

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})
005696918-01	OBS	4594.01	0.643009	131.683628	72.0	0.619	7.5	10.4	0.42	3925	0.37	310.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005696918-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—CENT_RESOLVED_OFFSET—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 005696918-01

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
005696918-01	5696918	6614.01	5696909	1:1	8.6	2	0	14.98	14.80	38.85	Direct-PRF	0	1.01	0.51

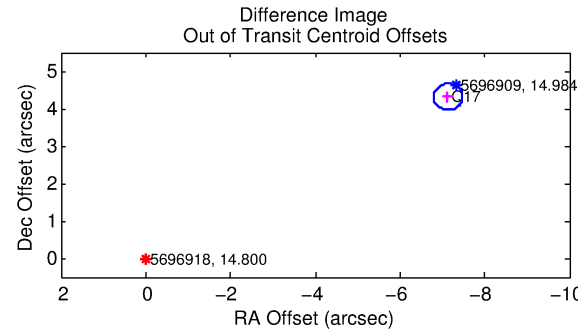
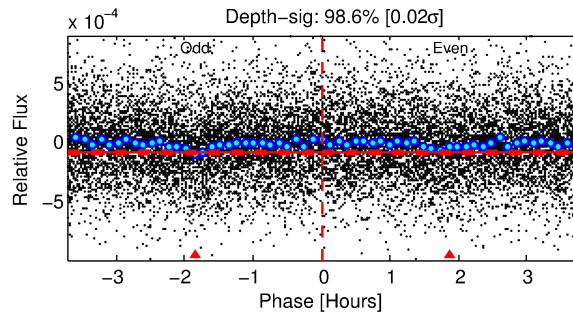
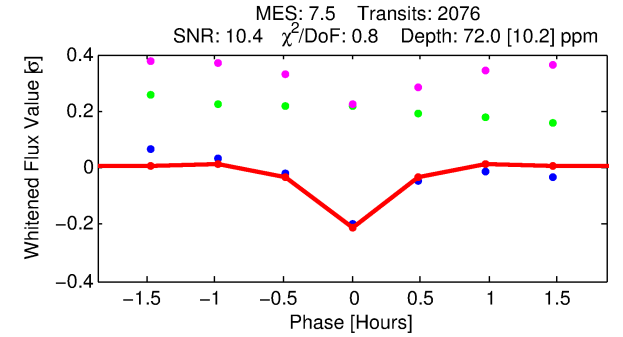
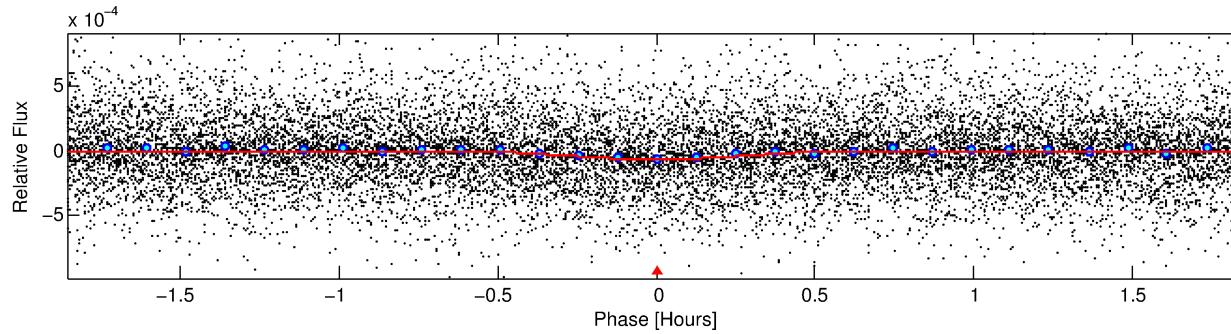
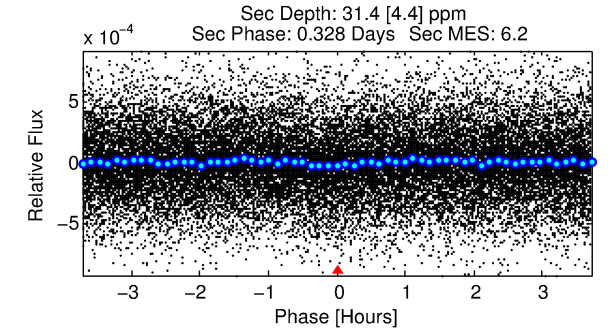
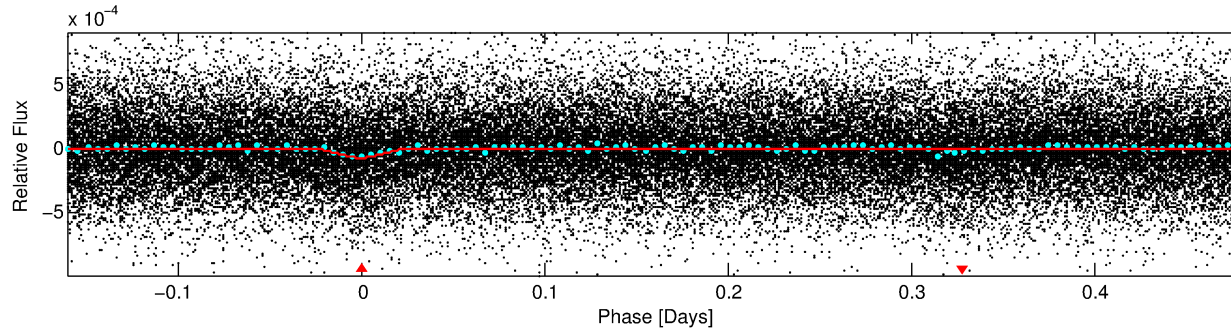
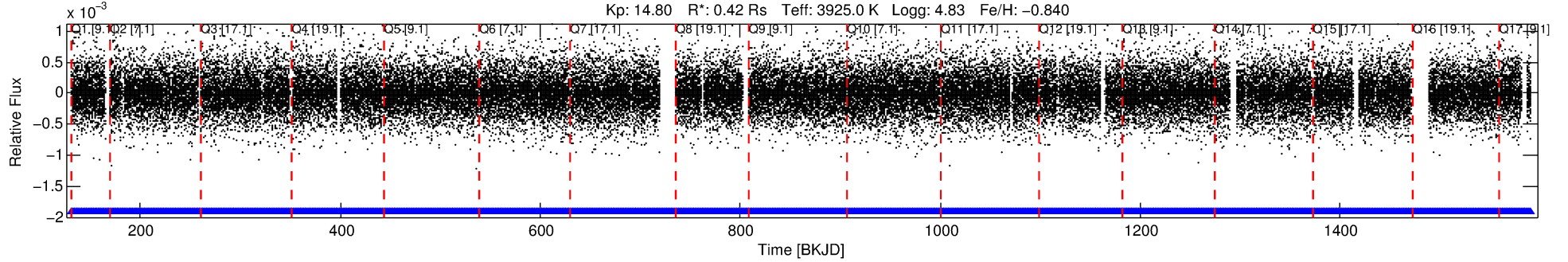
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 5696918 Candidate: 1 of 1 Period: 0.643 d

KOI: K04594 Corr: No Ephemeris Match

Kp: 14.80 R*: 0.42 Rs Teff: 3925.0 K Logg: 4.83 Fe/H: -0.840



DV Fit Results:

Period = 0.64301 [0.00001] d
Epoch = 131.6836 [0.0012] BKJD
Rp/R* = 0.0080 [0.0135]
a/R* = 7.99 [73.24]
b = 0.10 [92.32]
Seff = 310.09 [47.94]
Teff = 1070 [41] K
Rp = 0.37 [0.62] Re
a = 0.0110 [0.0010] AU
Ag = 15.46 [52.26] [0.28σ]
Teffp = 3280 [2772] K [0.80σ]

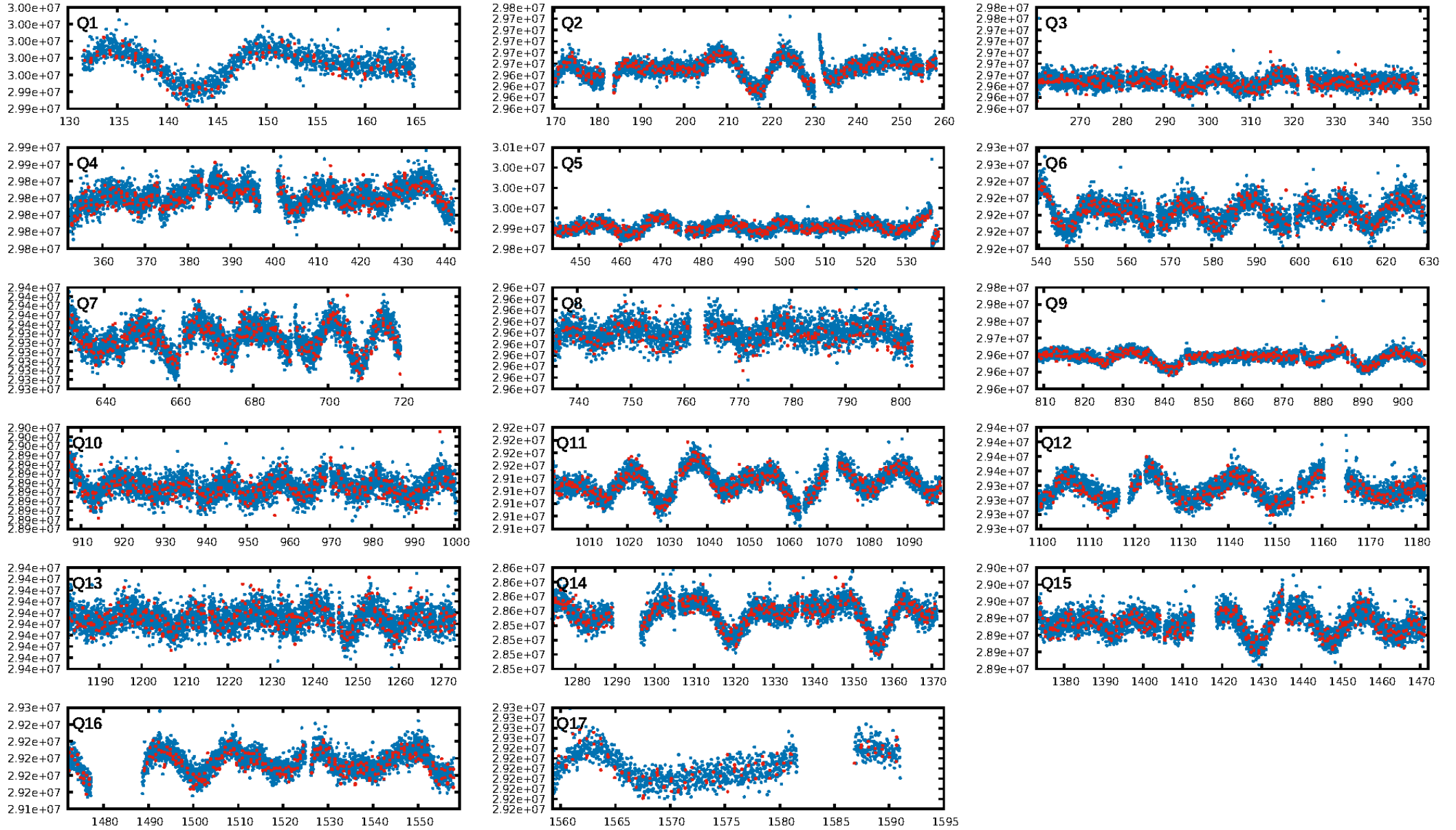
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.26e-13
RollingBand-fgt: 1.00 [1983/1983]
GhostDiagnostic-chr: -0.6278
Centroid-sig: 0.0%
Centroid-so: 21.257 arcsec [24.03σ]
OotOffset-rm: 8.331 arcsec [72.05σ]
KicOffset-rm: 8.755 arcsec [75.98σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [17/17]

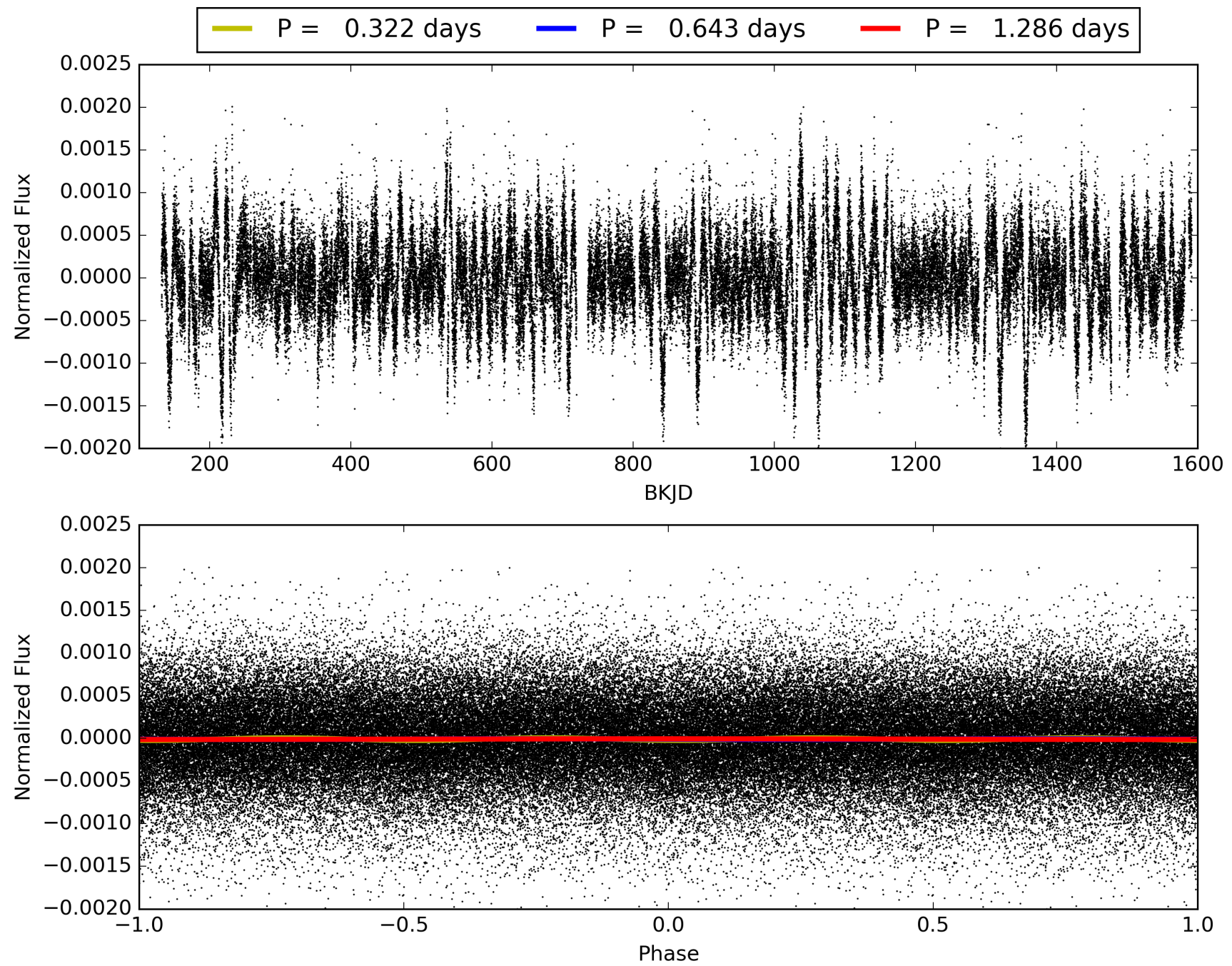
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:13:17 Z

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

TCE 005696918-01, PDC Light Curves

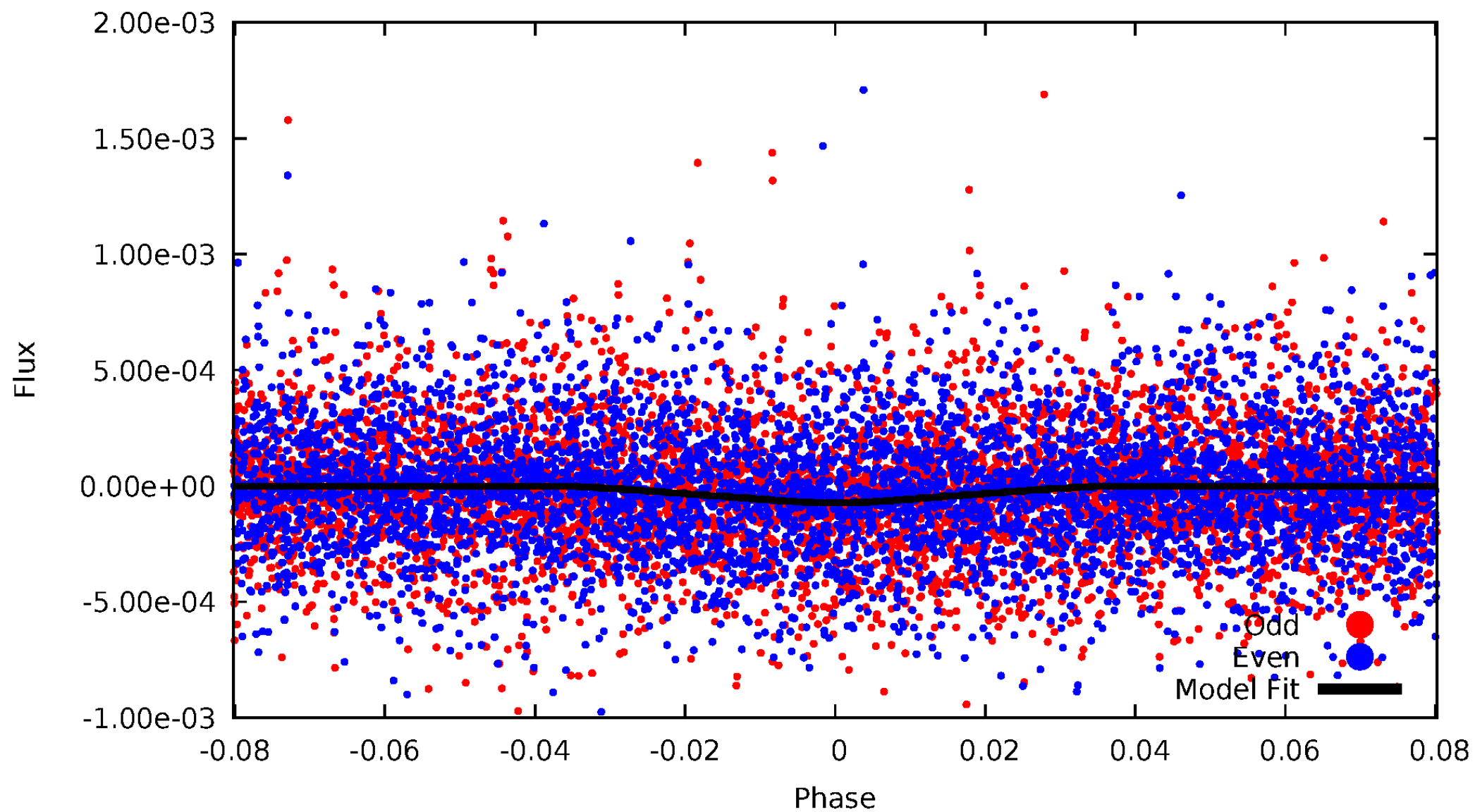


TCE 005696918-01



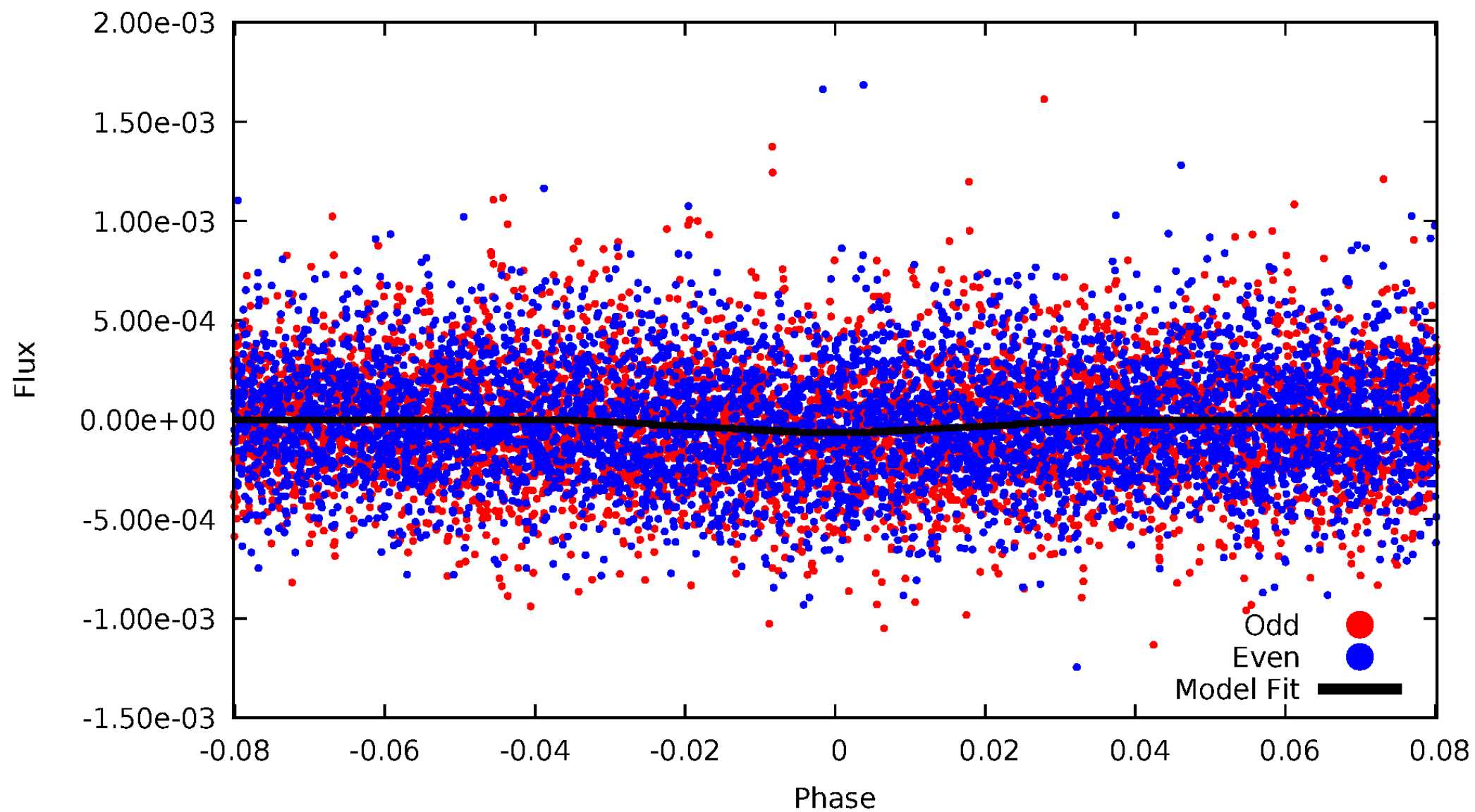
DV Odd/Even

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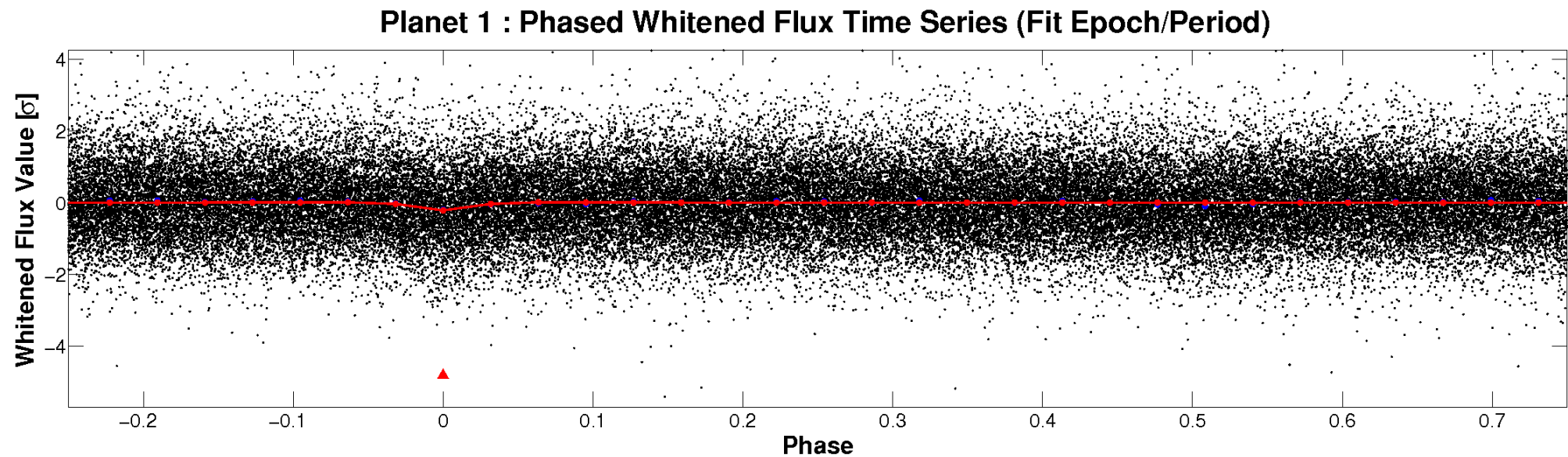
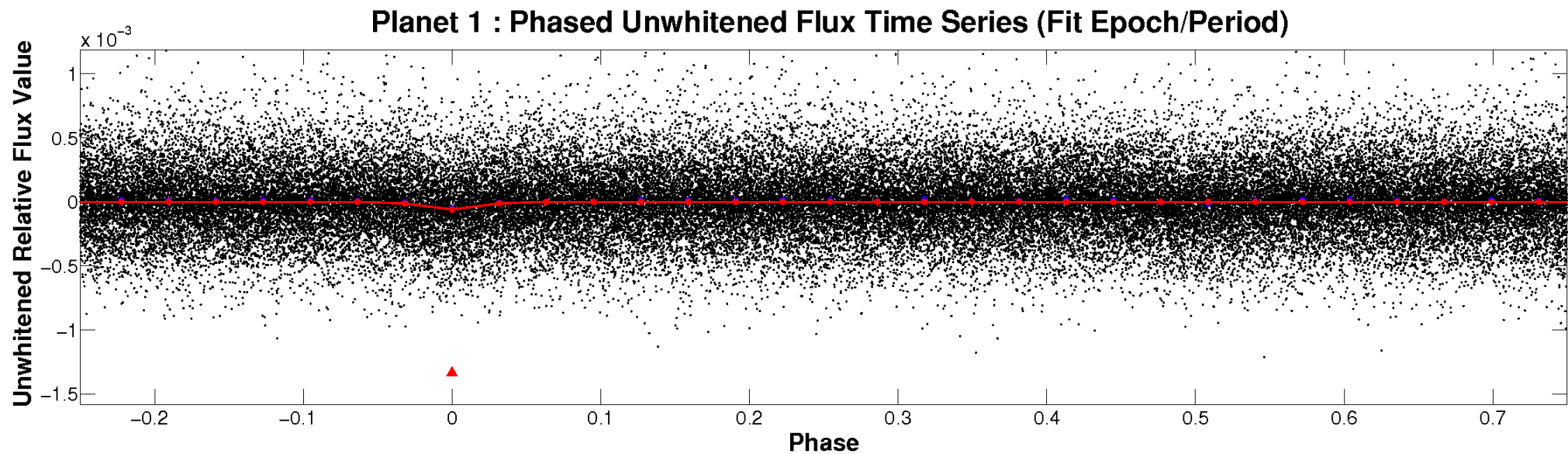


ALT Odd/Even

TCE 005696918-01

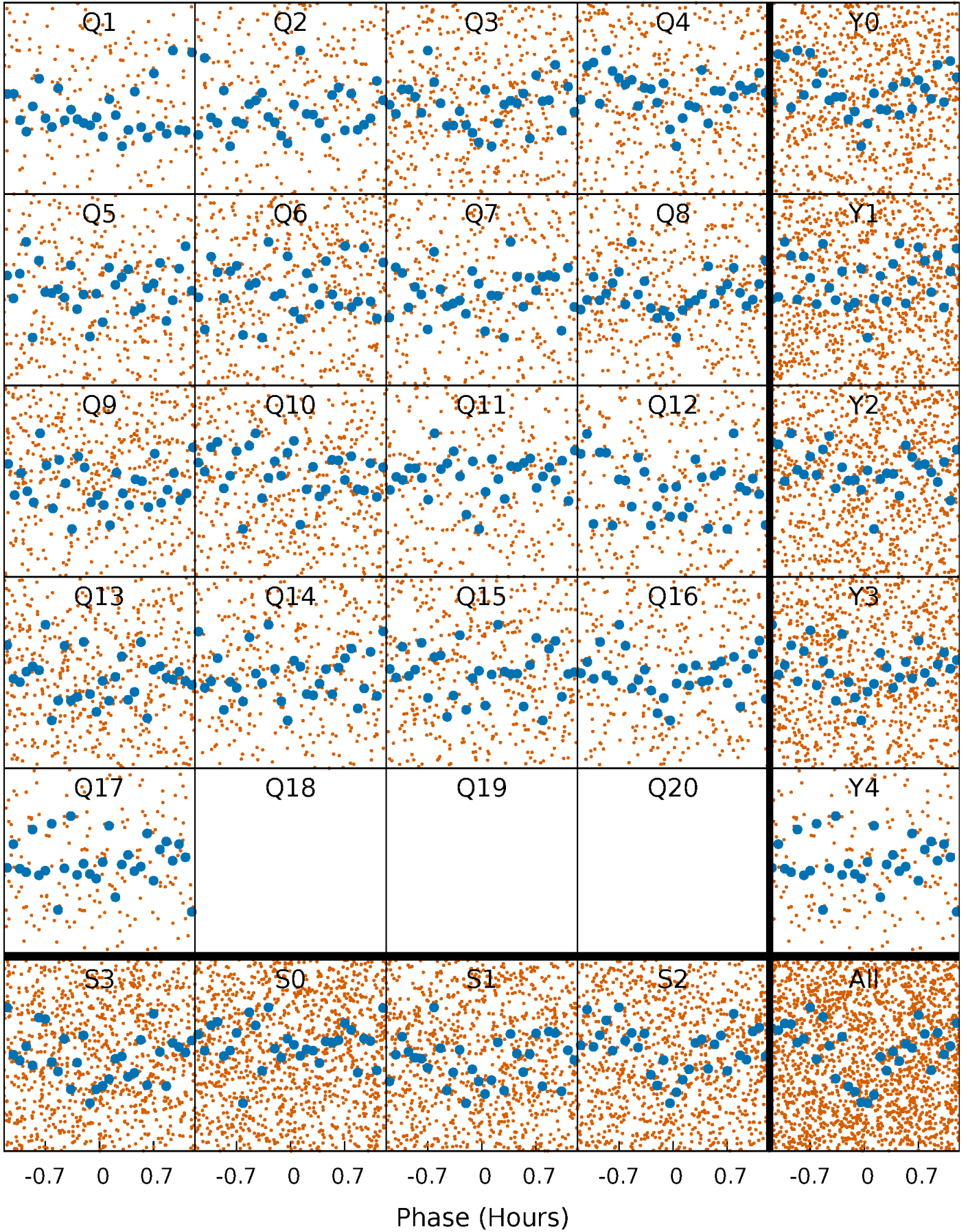


Non-Whitened Vs. Whitened Light Curve



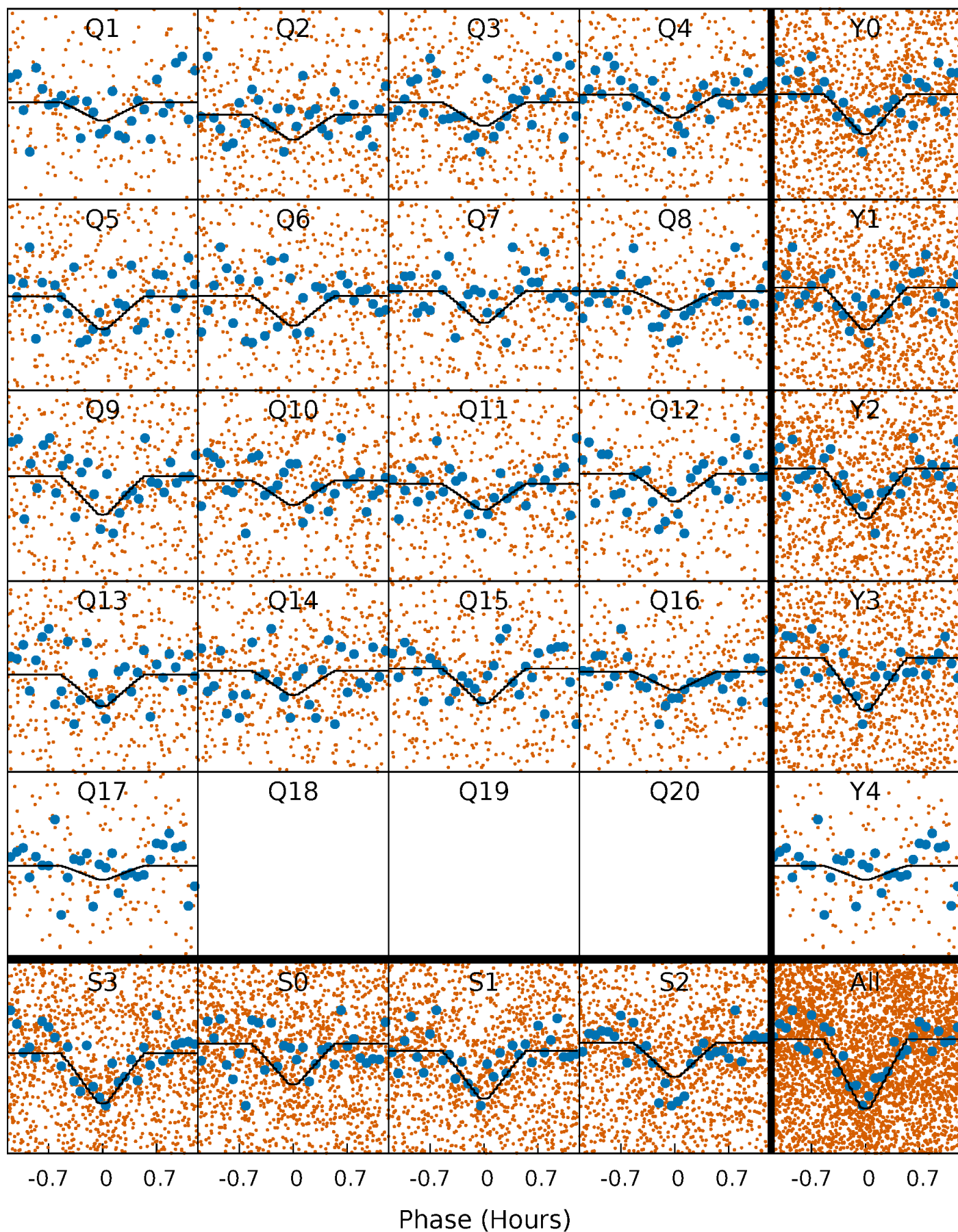
PDC Quarter-Phased Transit Curves

TCE 005696918-01 P= 0.643009 Days $T_0=131.683628$ (BKJD)



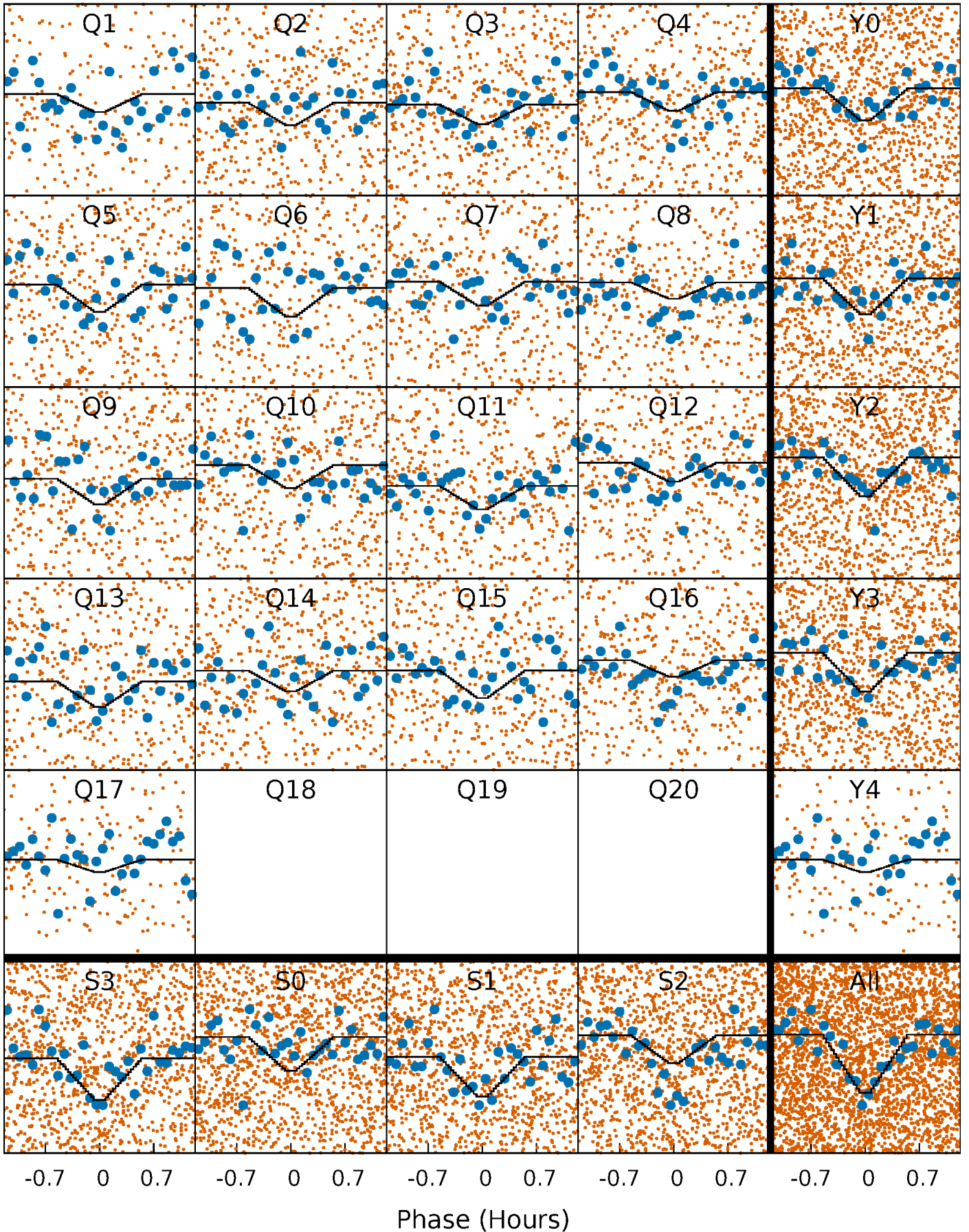
DV Quarter-Phased Transit Curves

TCE 005696918-01 P= 0.643009 Days $T_0=131.683628$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

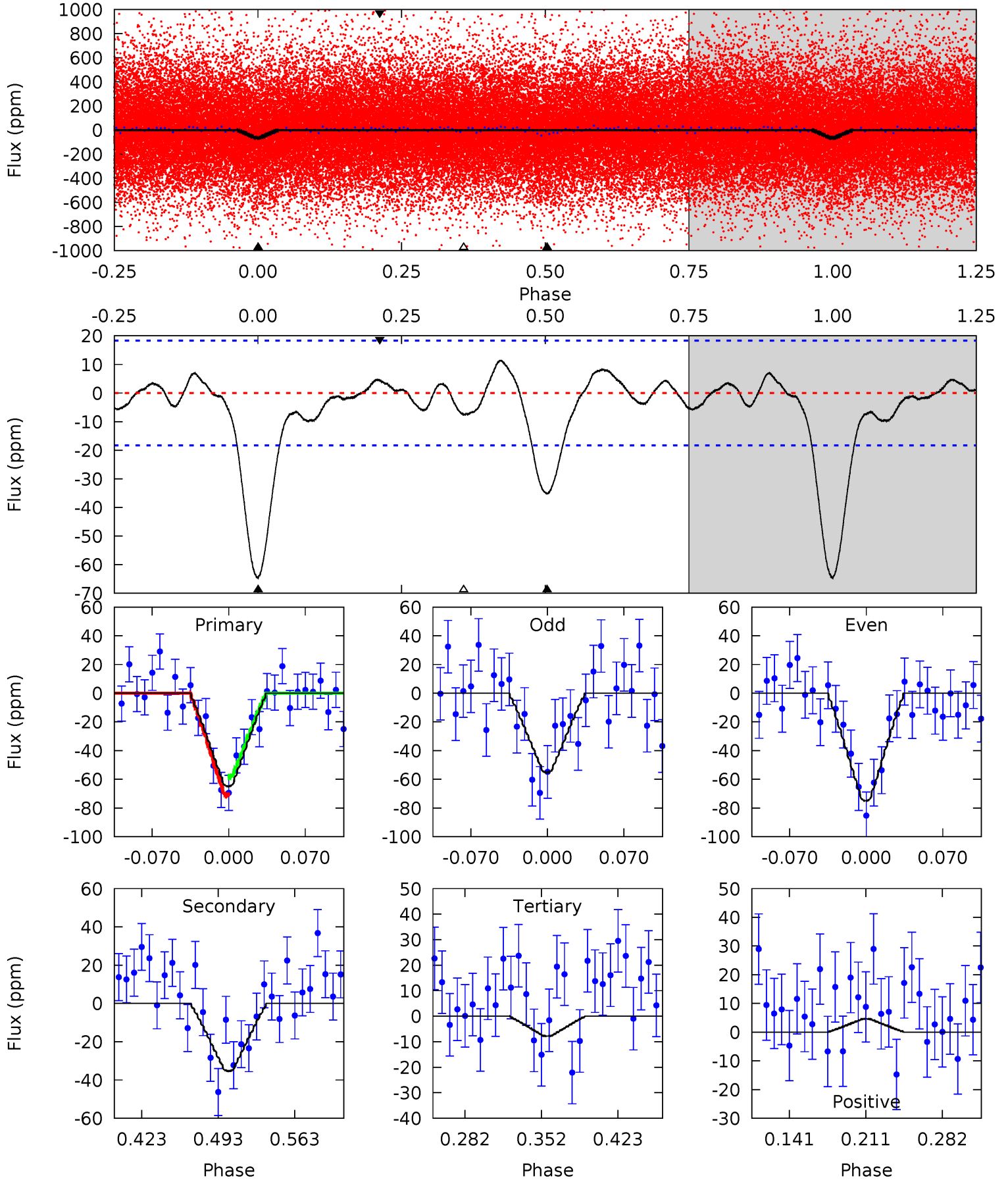
TCE 005696918-01 P= 0.643009 Days $T_0=131.683628$ (BKJD)



DV Model-Shift Uniqueness Test

005696918-01, P = 0.643009 Days, E = 131.040619 Days

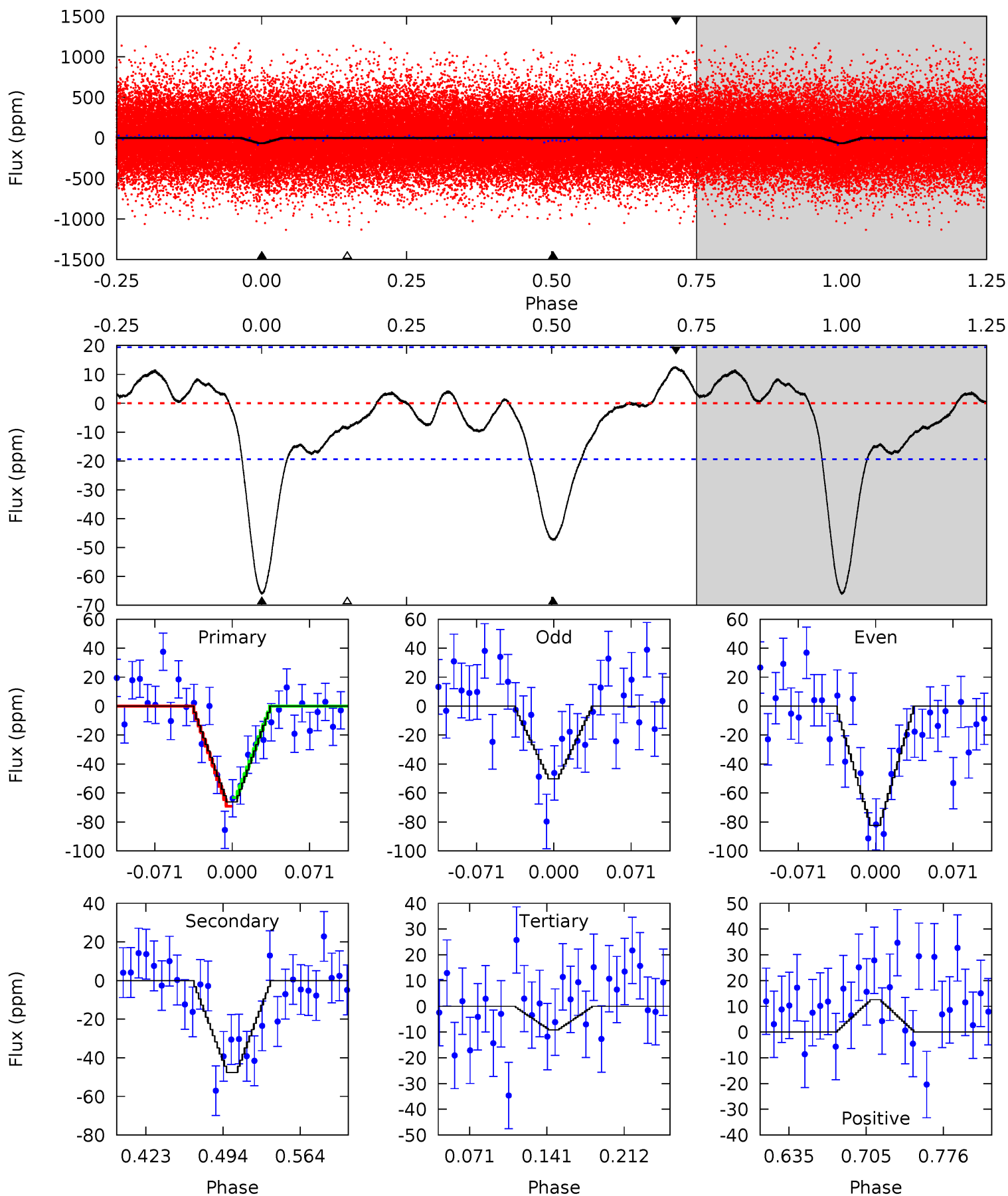
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	8.94	1.97	1.17	4.64	1.81	1.17	14.4	15.2	6.96	7.77	2.52	0.86	0.15	1.63



Alt Model-Shift Uniqueness Test

005696918-01, P = 0.643009 Days, E = 131.040619 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	11.4	2.18	3.01	4.64	1.81	1.69	13.7	12.8	9.19	8.36	3.84	0.86	0.16	0.72



Stellar Parameters For KIC 005696918

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3925^{+62}_{-86}	$4.825^{+0.065}_{-0.035}$	$-0.840^{+0.150}_{-0.150}$	$0.421^{+0.029}_{-0.050}$	$0.432^{+0.031}_{-0.043}$	$8.142^{+2.495}_{-1.090}$
	+2%/-2%	+1%/-1%	+18%/-18%	+7%/-12%	+7%/-10%	+31%/-13%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005696918-01 / KOI 4594.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-35 ± 4	$0.57^{+0.53}_{-0.36}$	1487^{+38}_{-46}	3056^{+1225}_{-519}	$7.093^{+46.909}_{-5.198}$
Alt.	-48 ± 4	$0.59^{+0.52}_{-0.40}$	1485^{+36}_{-42}	3174^{+1550}_{-535}	$9.170^{+77.527}_{-6.596}$

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 $A_{obs} \gg 1.0$

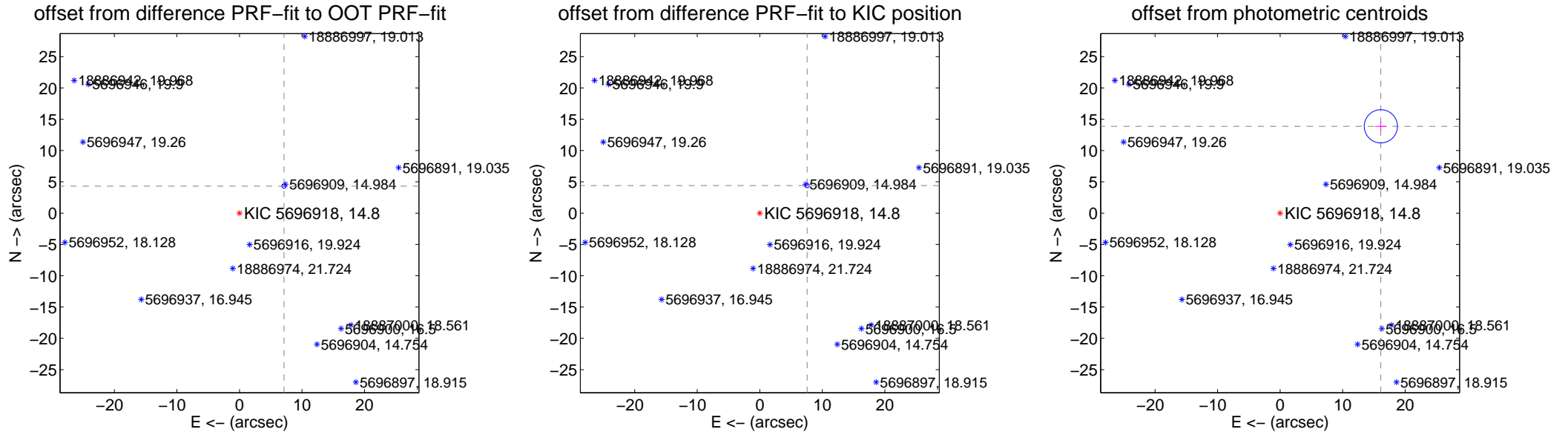
DV Centroid Data

Supplemental centroid analysis for 005696918-01. Kepler magnitude: 14.80. Transit SNR 10.42

There are 1 quarters with good PRF difference image offsets

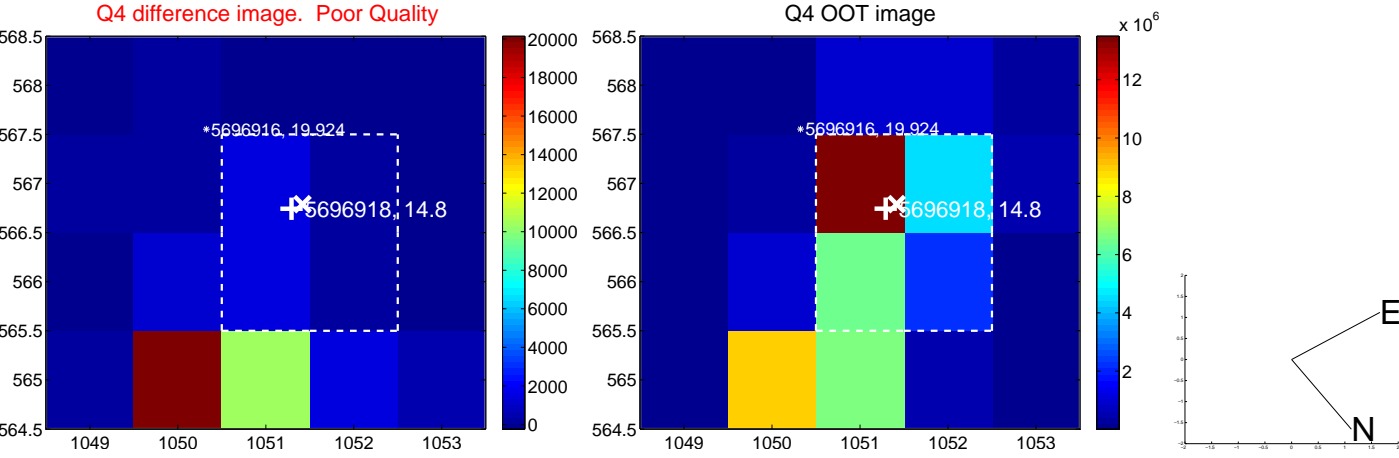
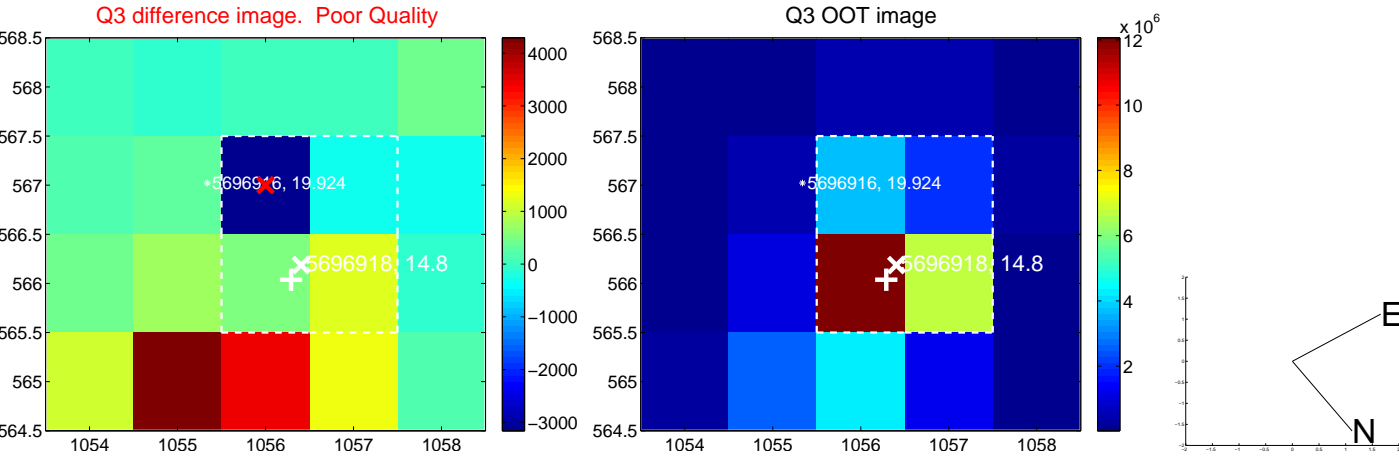
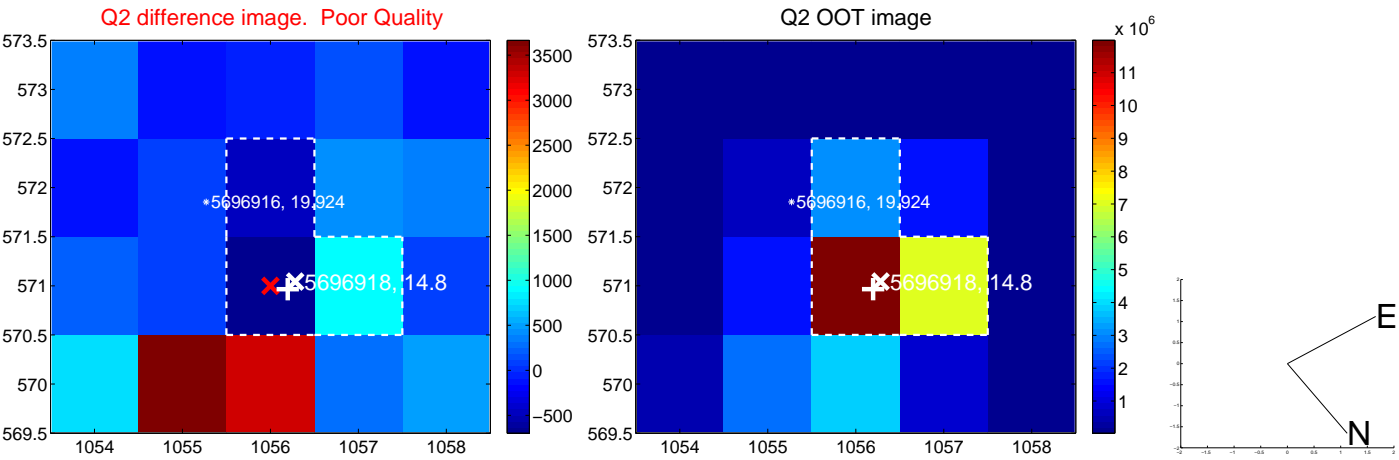
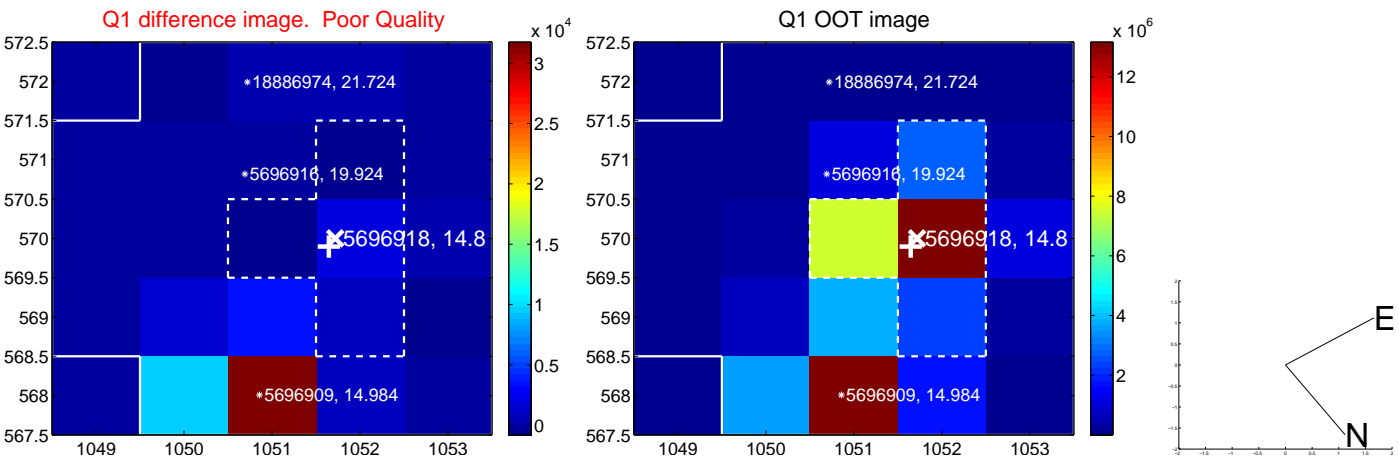
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.331 \pm 0.116	72.05	-7.126 \pm 0.109	4.316 \pm 0.133
PRF-fit source offset from KIC position	8.755 \pm 0.115	75.98	-7.568 \pm 0.109	4.402 \pm 0.133
photometric centroid source offset	21.26 \pm 0.88	24.03	-16.10 \pm 0.94	13.87 \pm 0.81

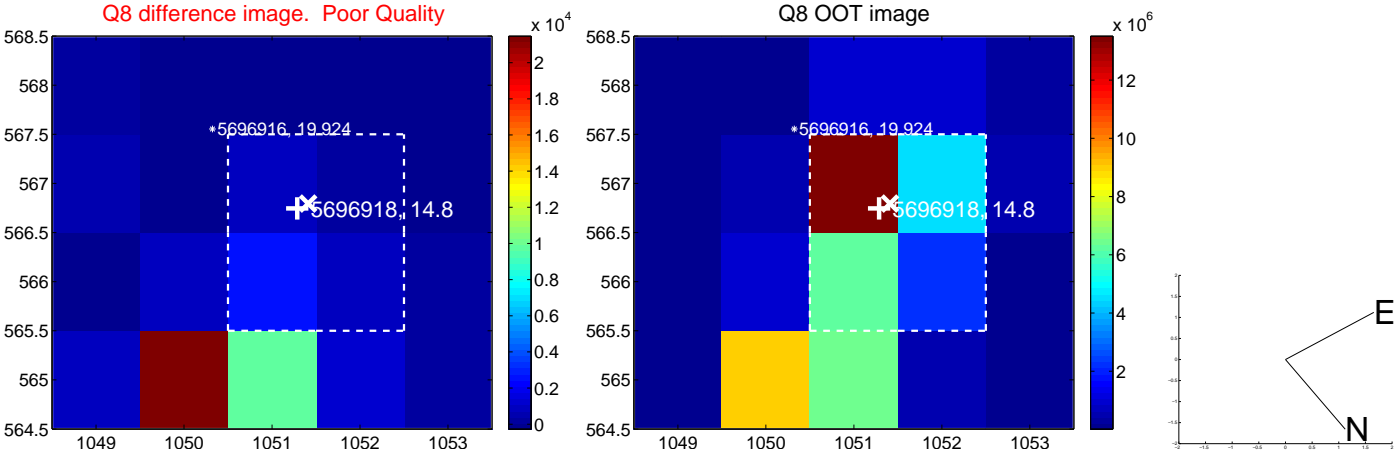
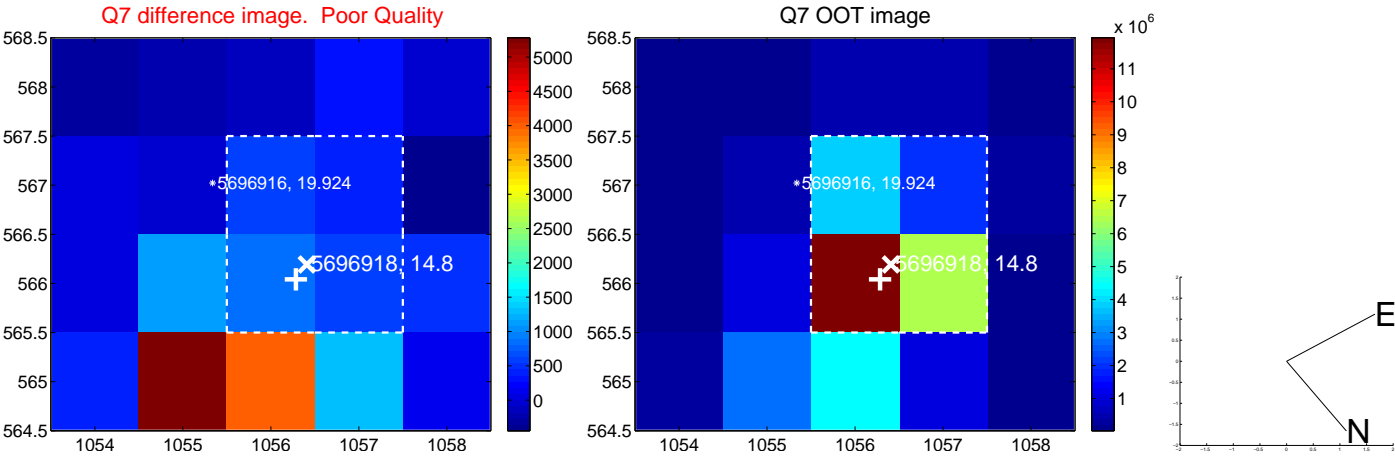
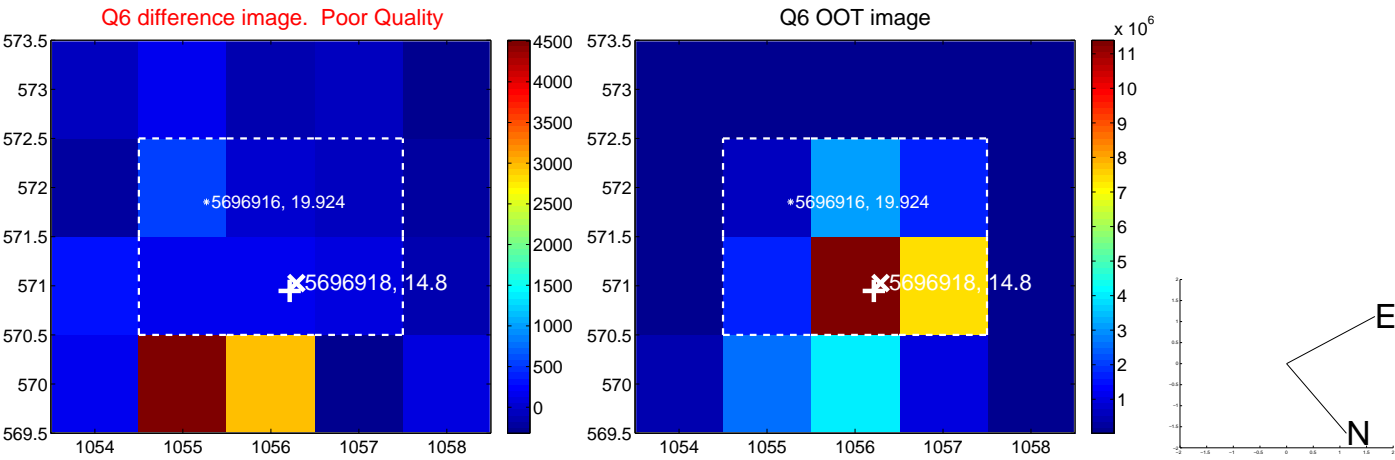
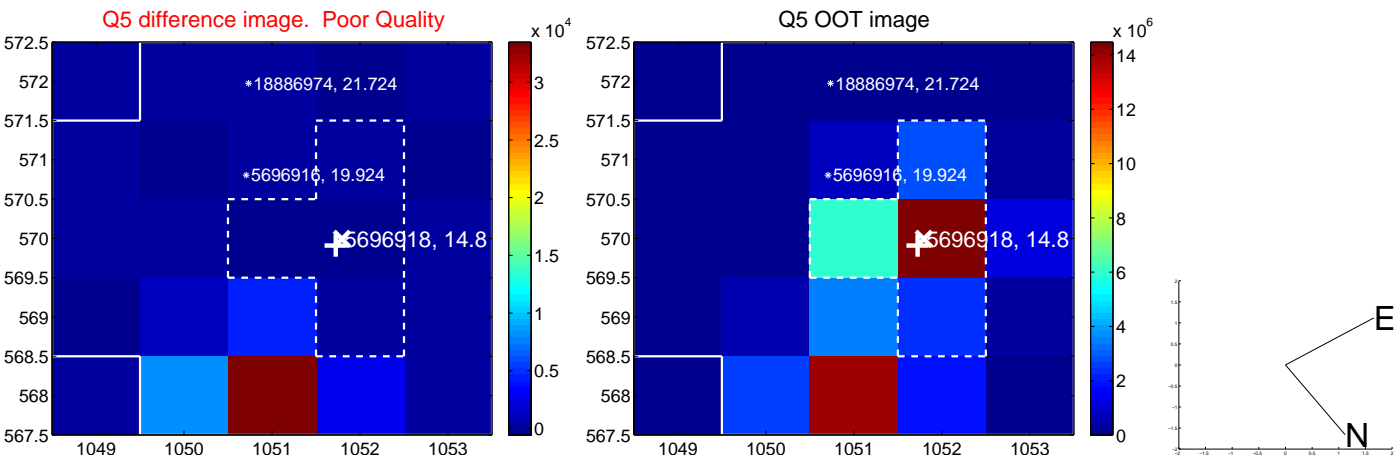


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

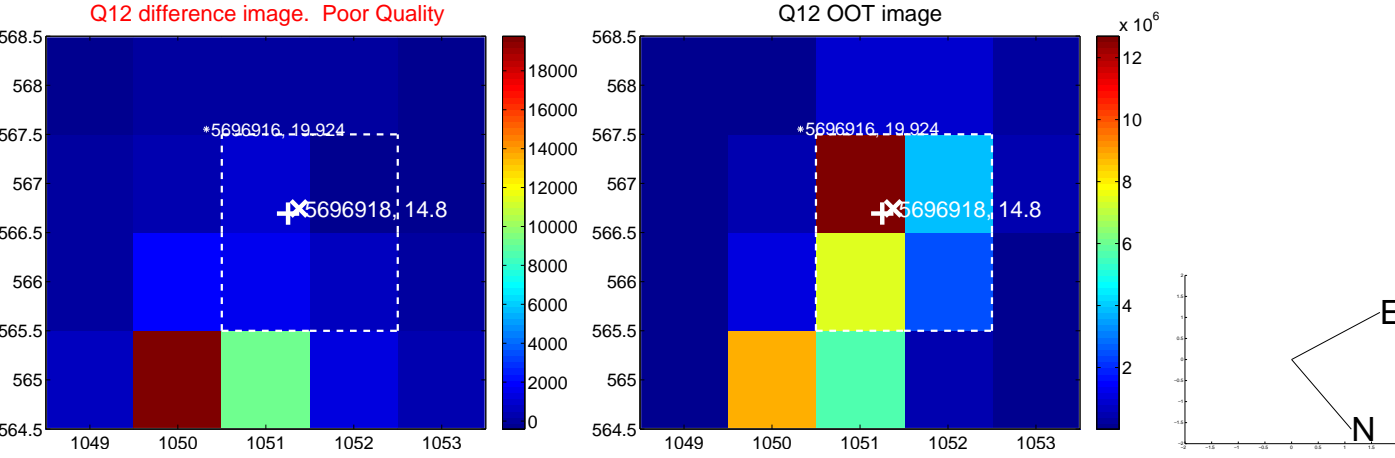
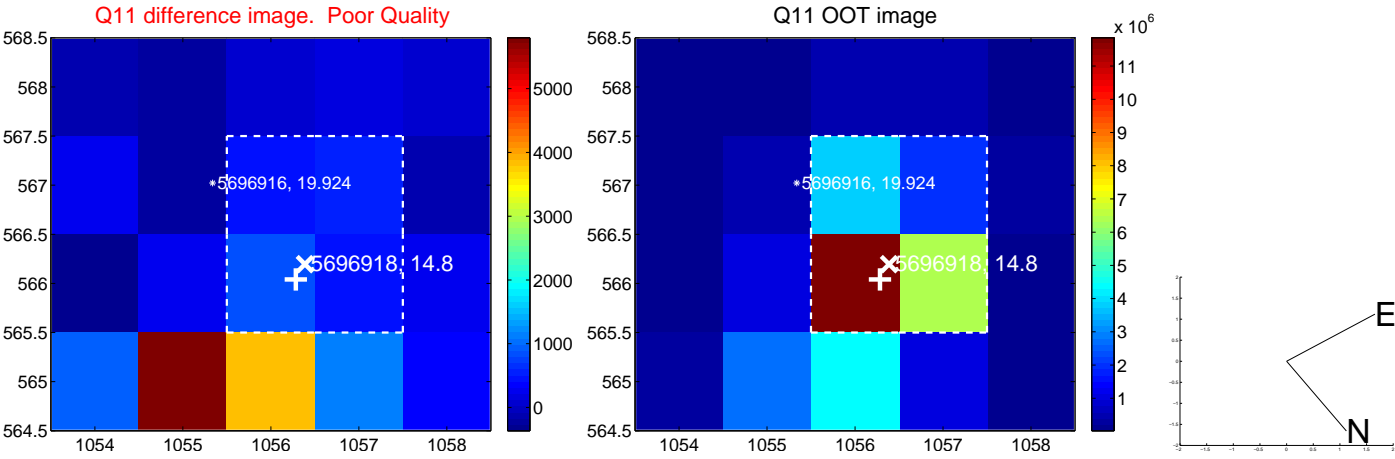
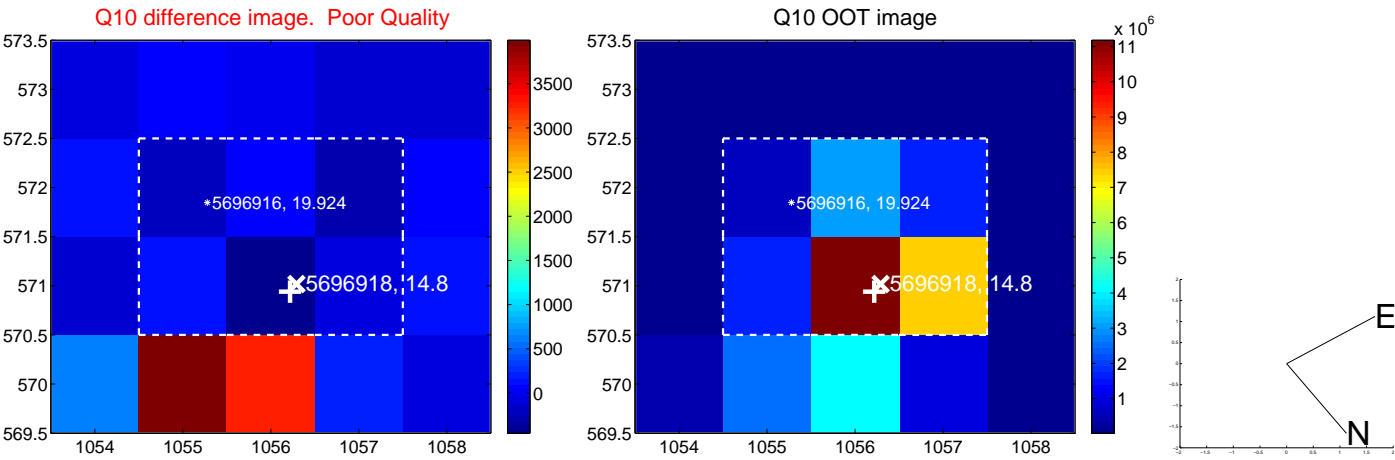
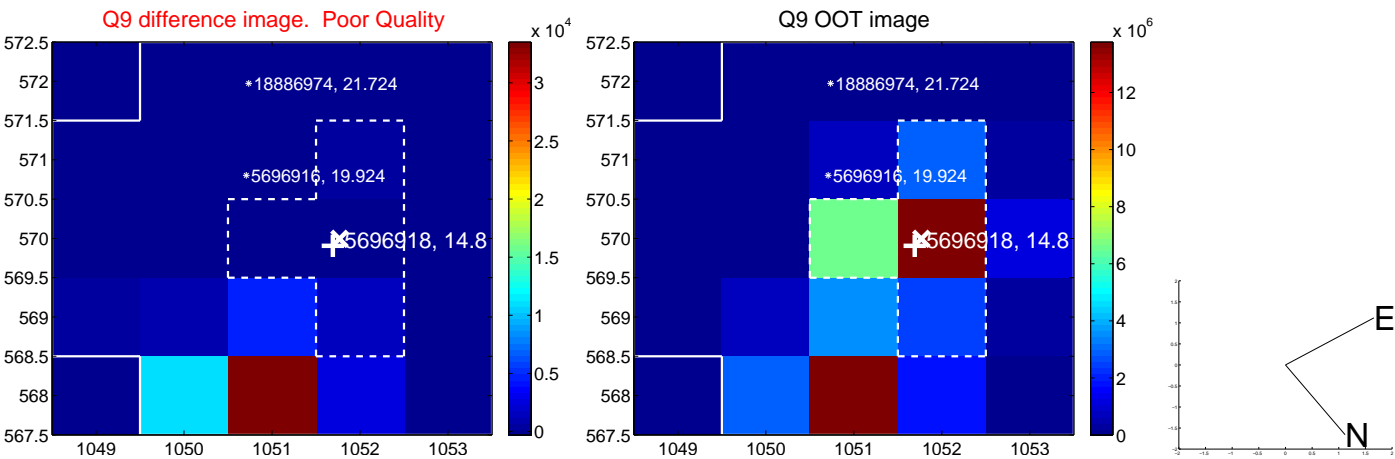
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



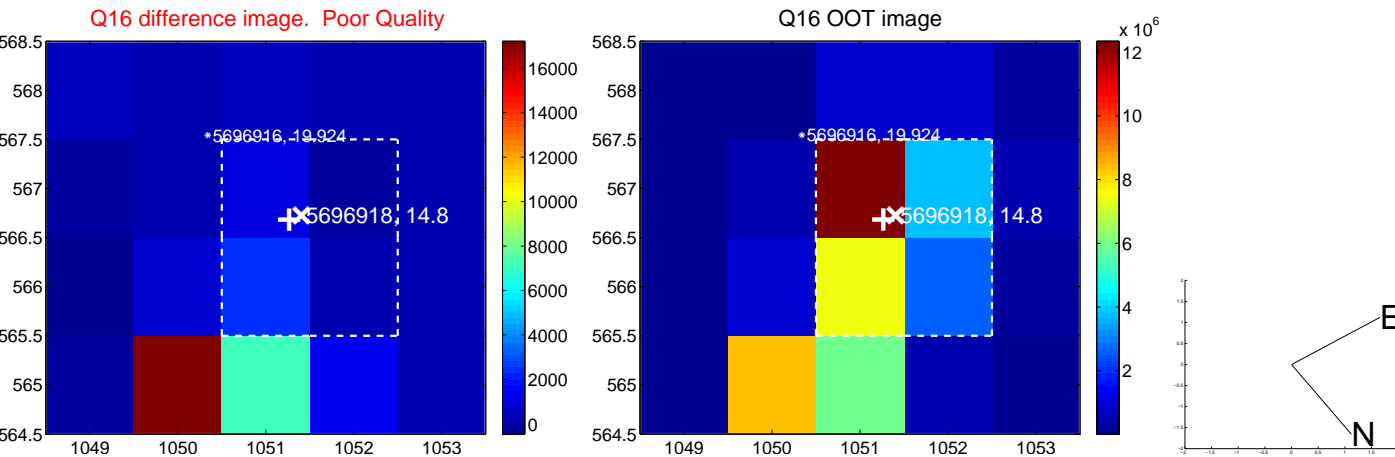
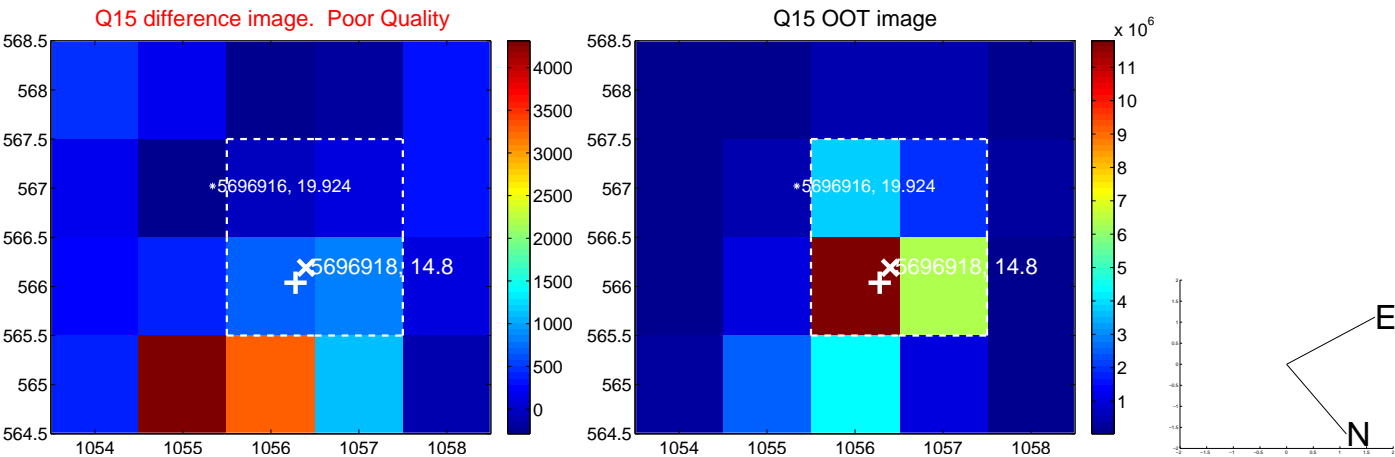
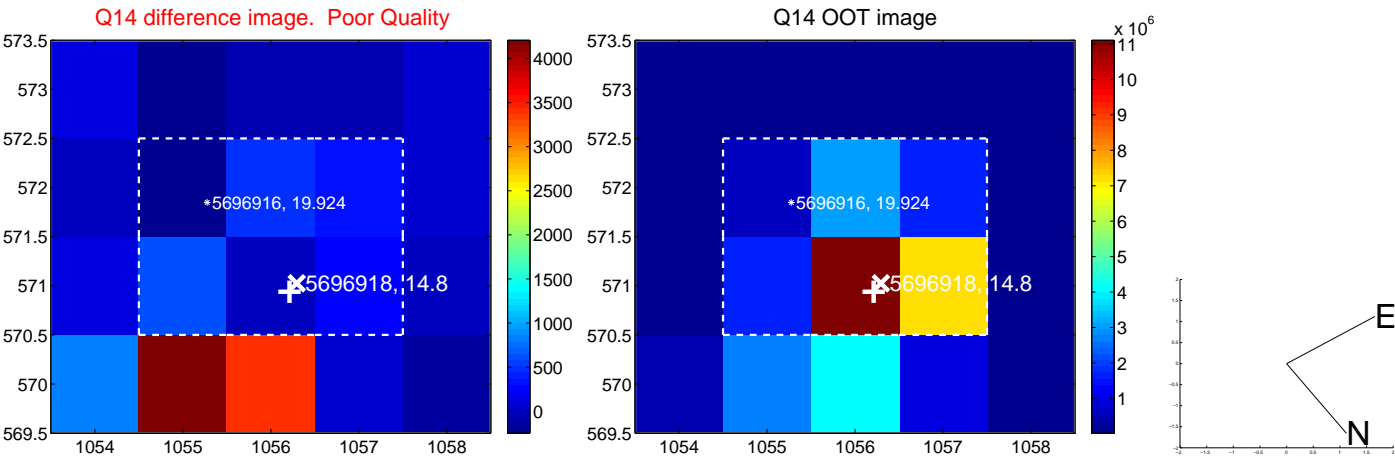
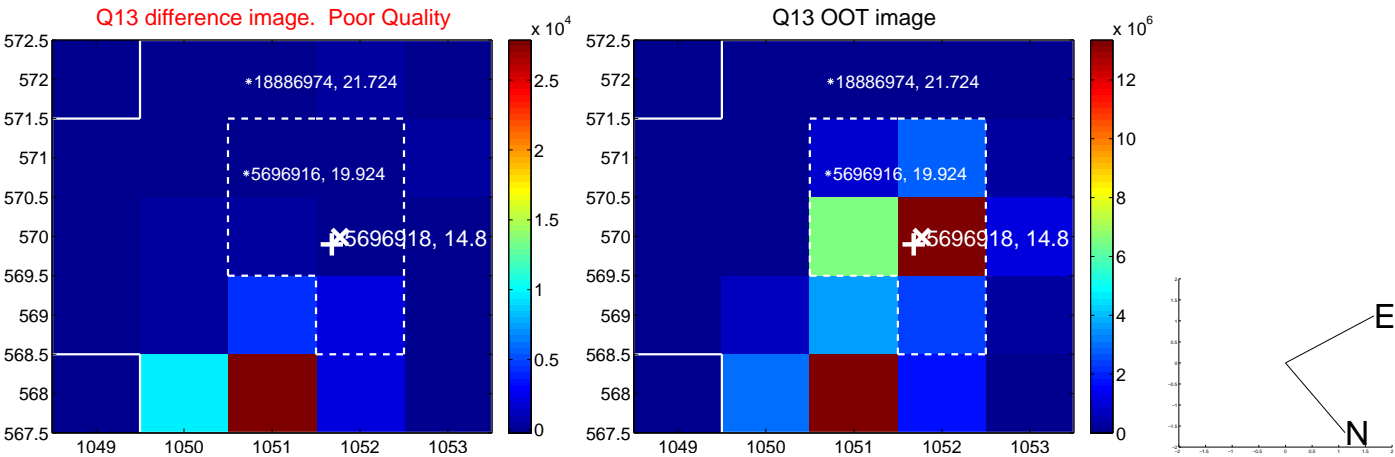
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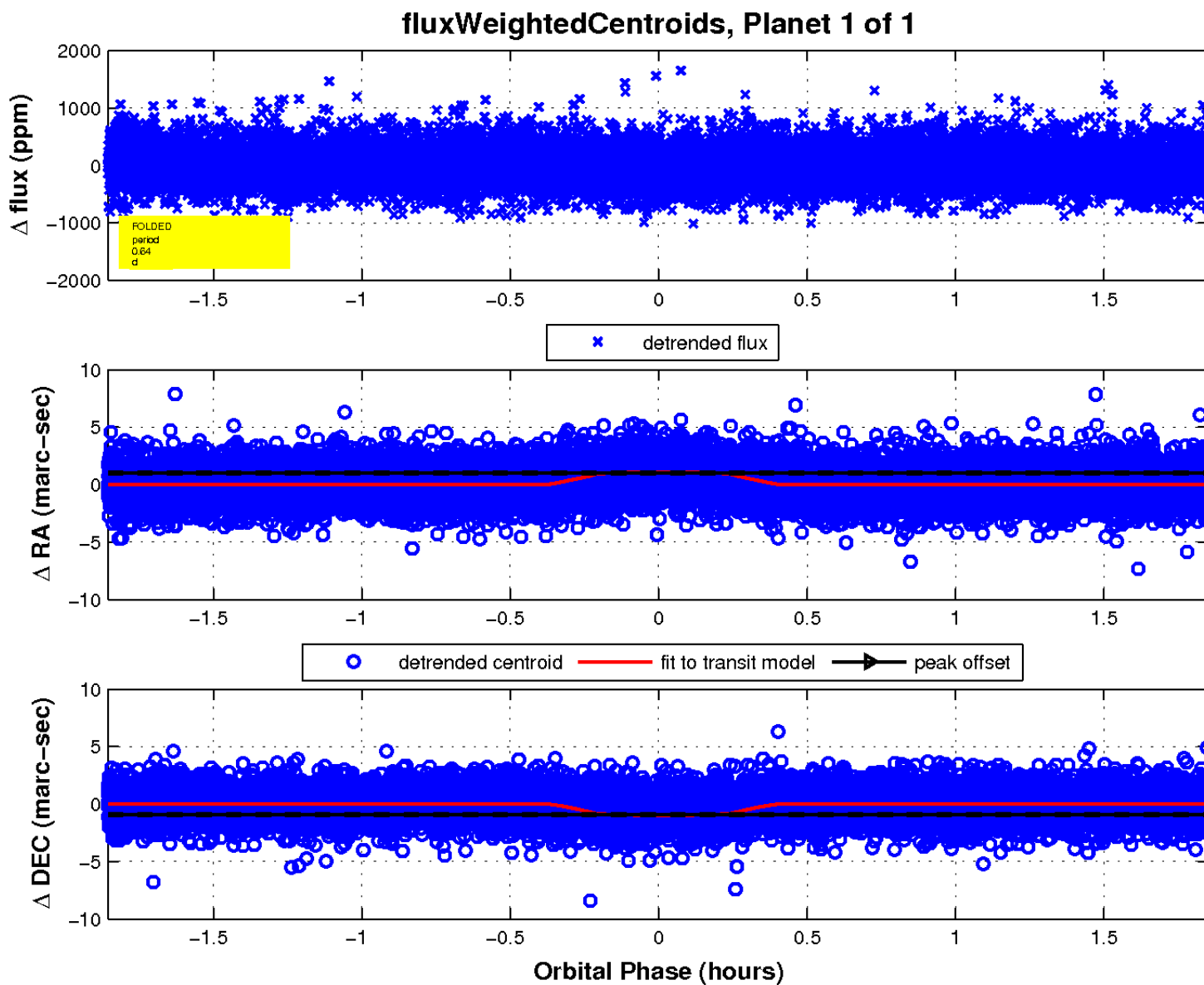
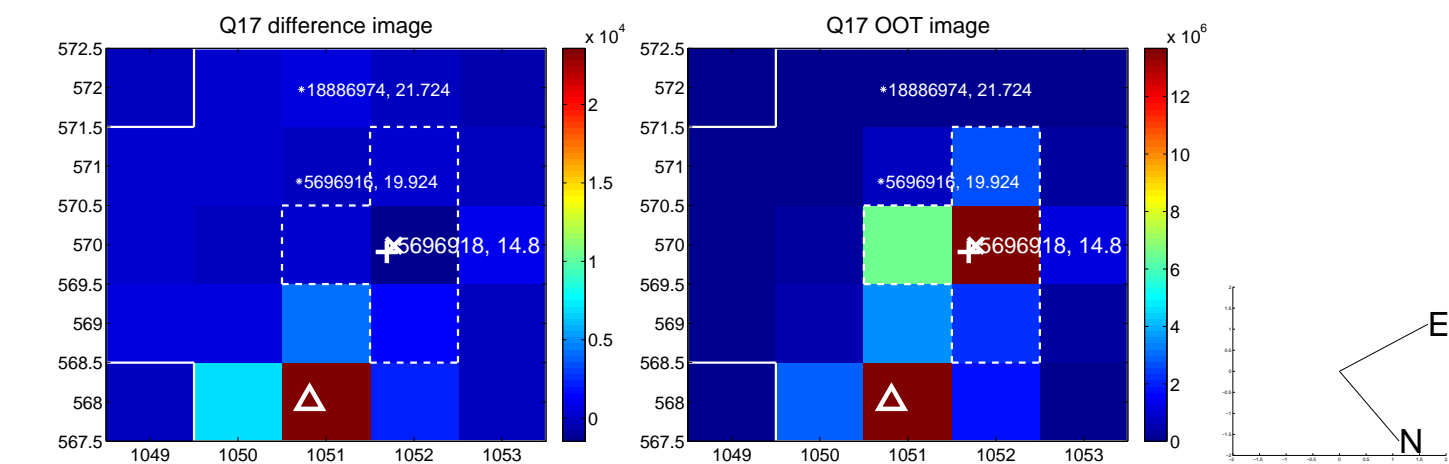
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

