

KIC 005632701

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})
005632701-01	OBS	4213.01	3.675119	131.684018	51.3	7.149	13.7	14.5	0.88	5968	0.74	414.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005632701-01	OBS	FP	0.00	0	0	1	1	CENT_KIC_POS—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 005632701-01

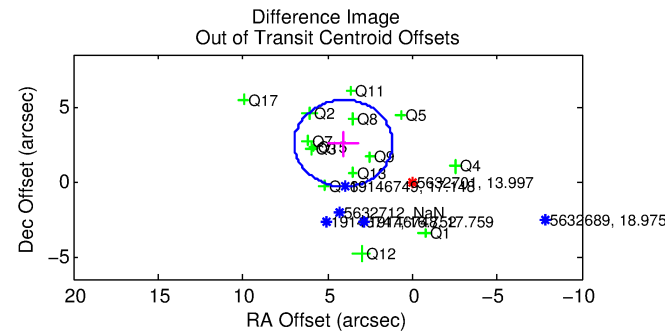
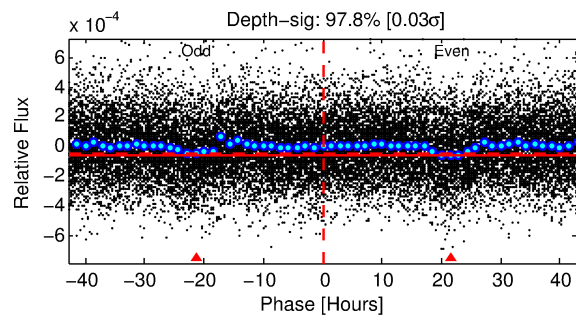
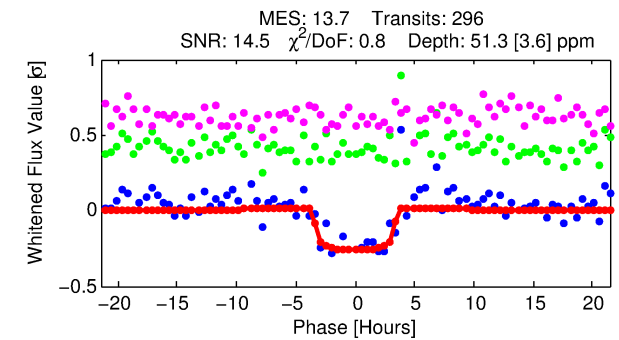
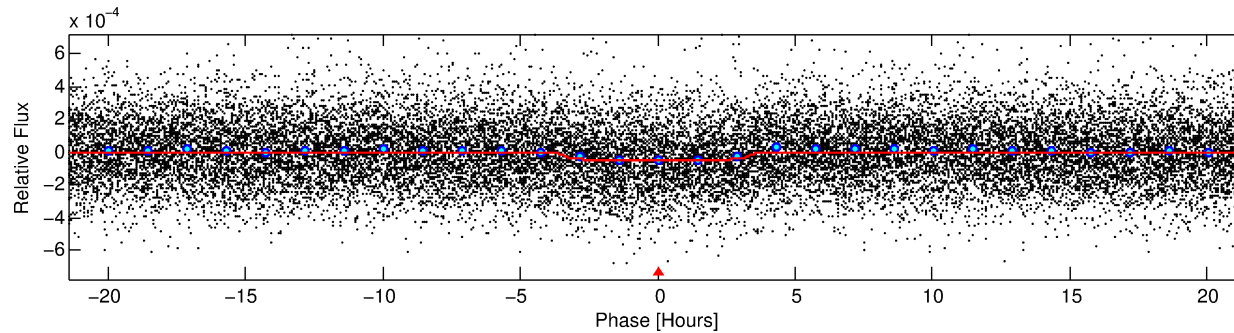
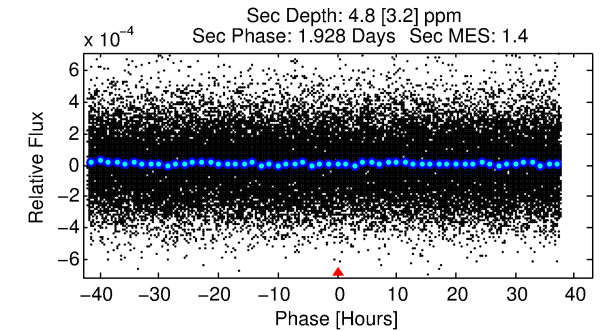
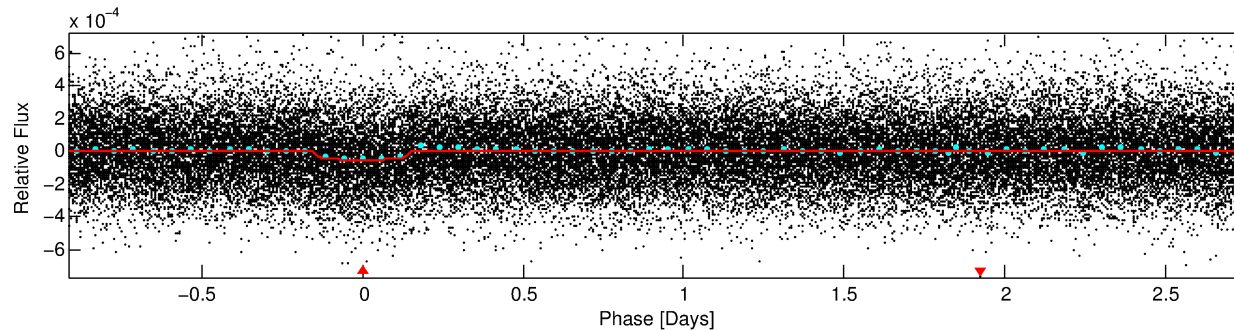
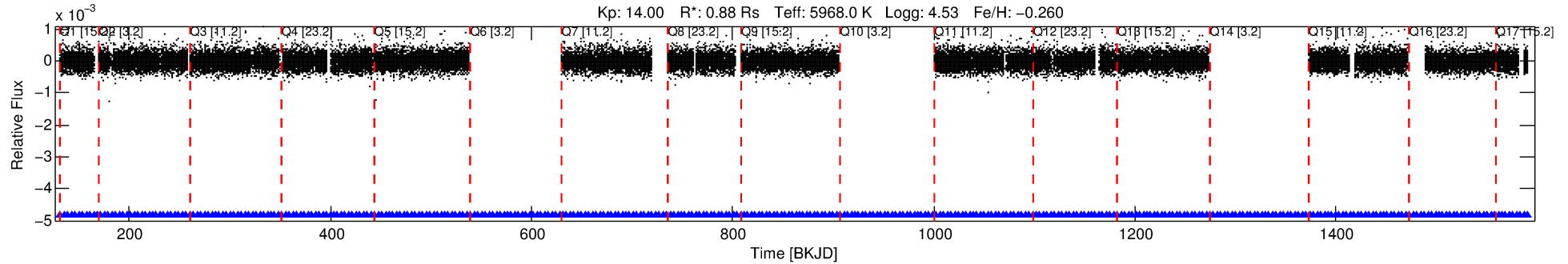
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
005632701-01	5632701	6609.01	5632781	1:3	48.7	-5	11	12.11	13.99	8457.10	Direct-PRF	0	2.29	1.42

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: 5632701 Candidate: 1 of 1 Period: 3.675 d
KOI: K04213.01 Corr: 0.989

Kp: 14.00 R*: 0.88 Rs Teff: 5968.0 K Logg: 4.53 Fe/H: -0.260



DV Fit Results:

Period = 3.67512 [0.00003] d
Epoch = 131.6840 [0.0062] BKJD
Rp/R* = 0.0077 [0.0020]
a/R* = 2.02 [2.07]
b = 0.90 [0.29]
Seff = 414.79 [72.03]
Teff = 1151 [50] K
Rp = 0.74 [0.21] Re
a = 0.0461 [0.0050] AU
Ag = 10.14 [8.82] [1.04σ]
Teffp = 3175 [679] K [2.97σ]

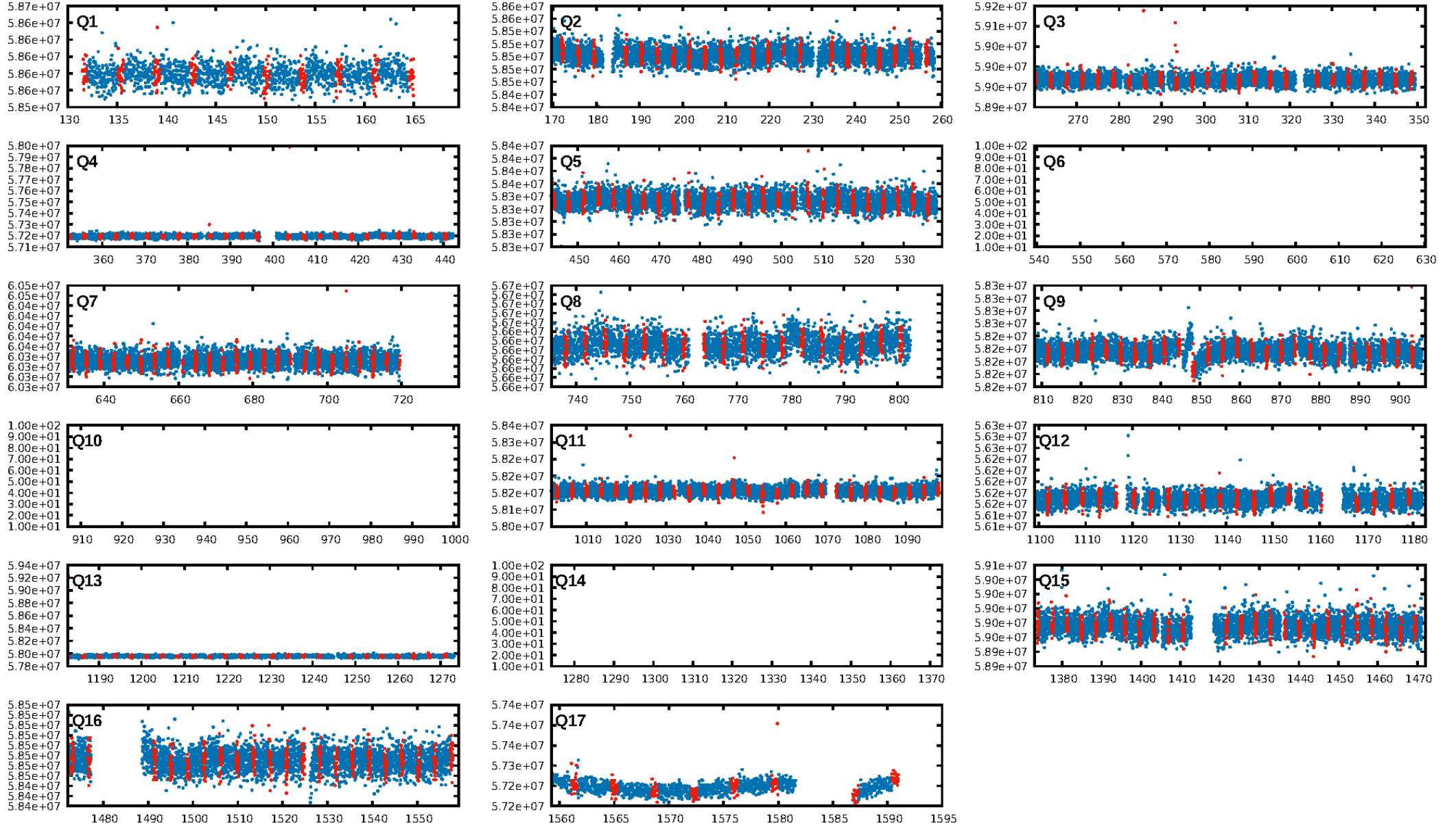
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.92e-44
RollingBand-fgt: 1.00 [278/278]
GhostDiagnostic-chr: -0.04813
Centroid-sig: 0.7%
Centroid-so: 1.841 arcsec [2.07σ]
OotOffset-rm: 4.806 arcsec [4.98σ]
KicOffset-rm: 4.818 arcsec [4.88σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.07 [1/14]
DiffImageOverlap-fno: 1.00 [14/14]

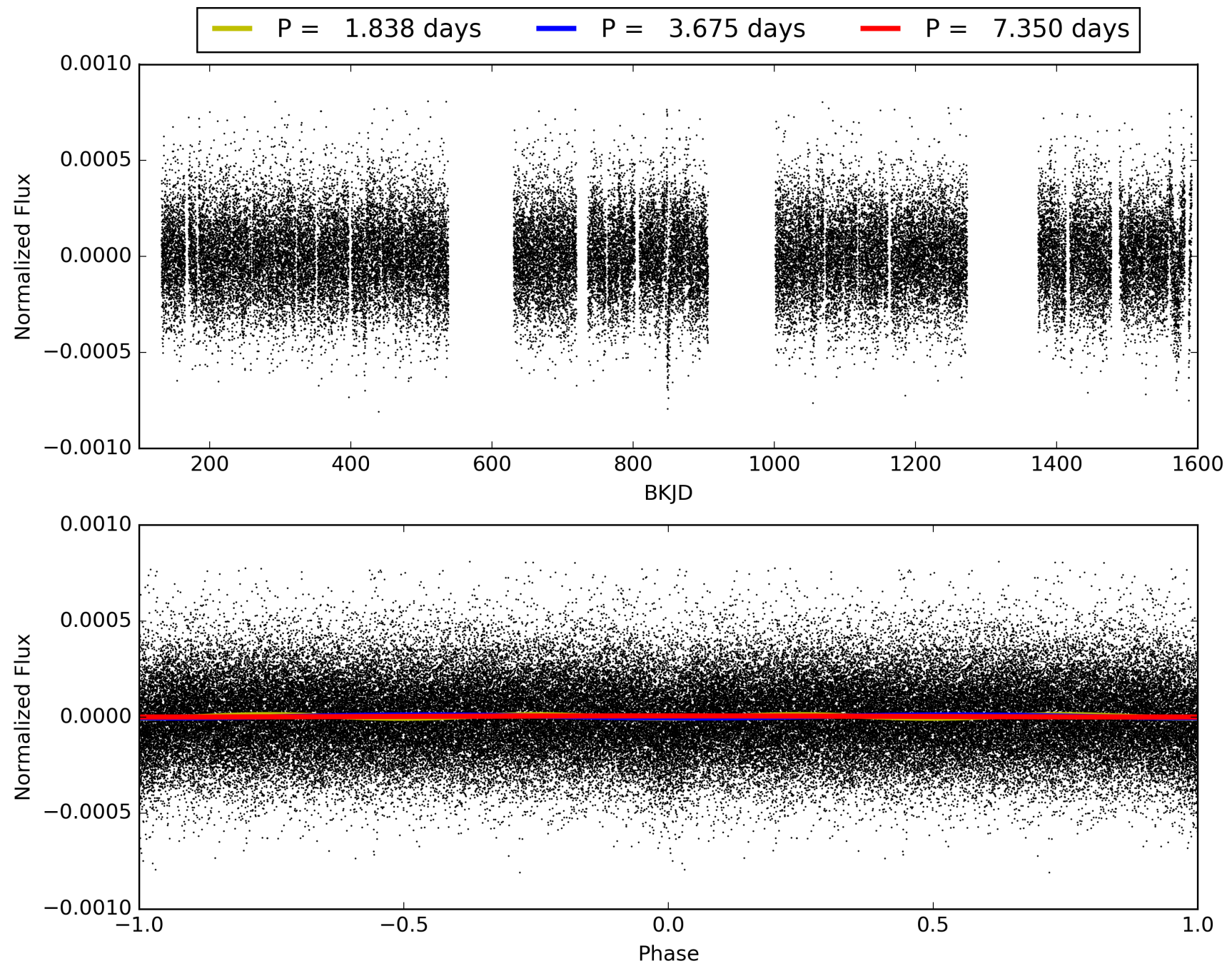
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 22:37:01 Z

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

TCE 005632701-01, PDC Light Curves

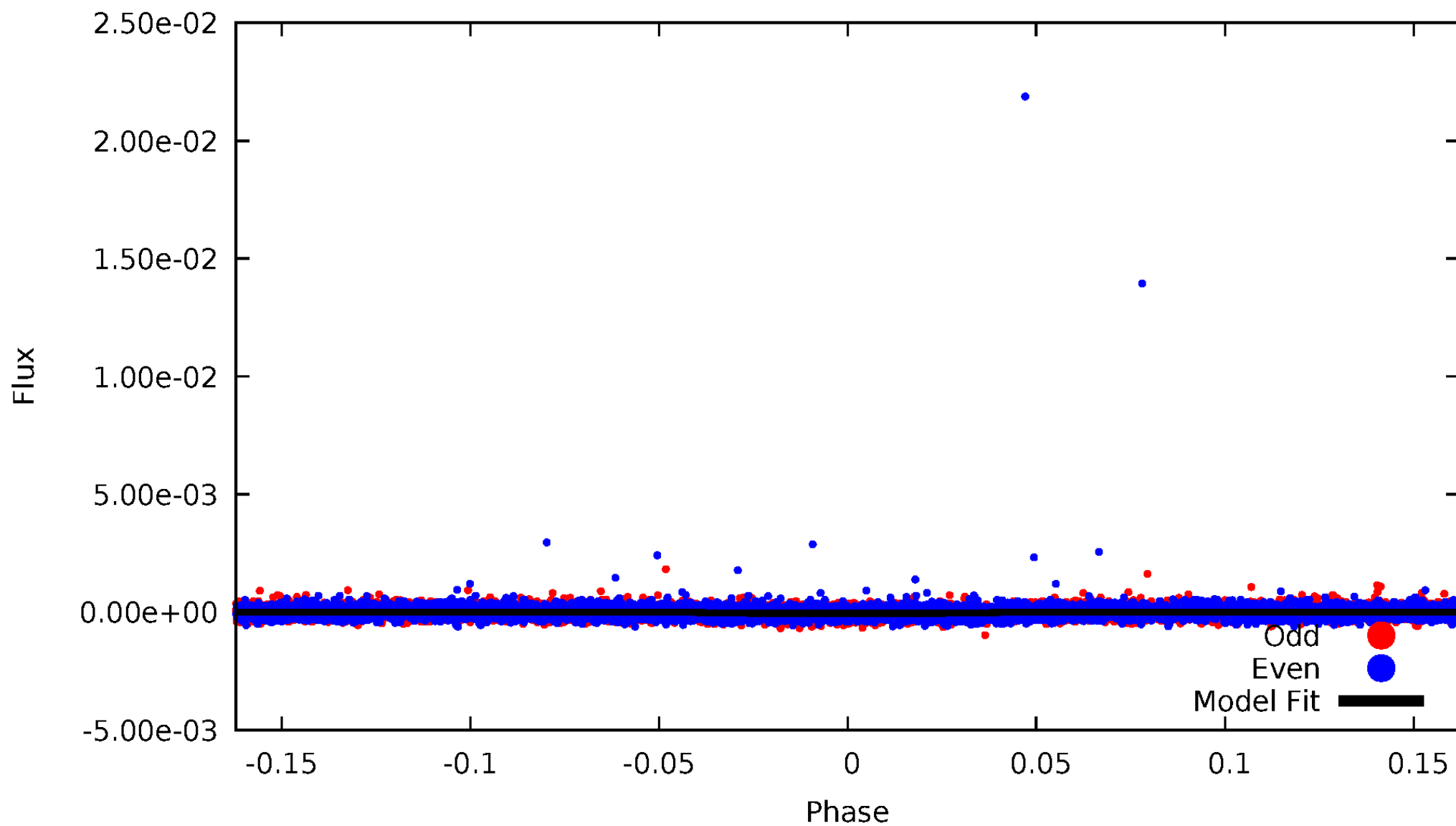


TCE 005632701-01



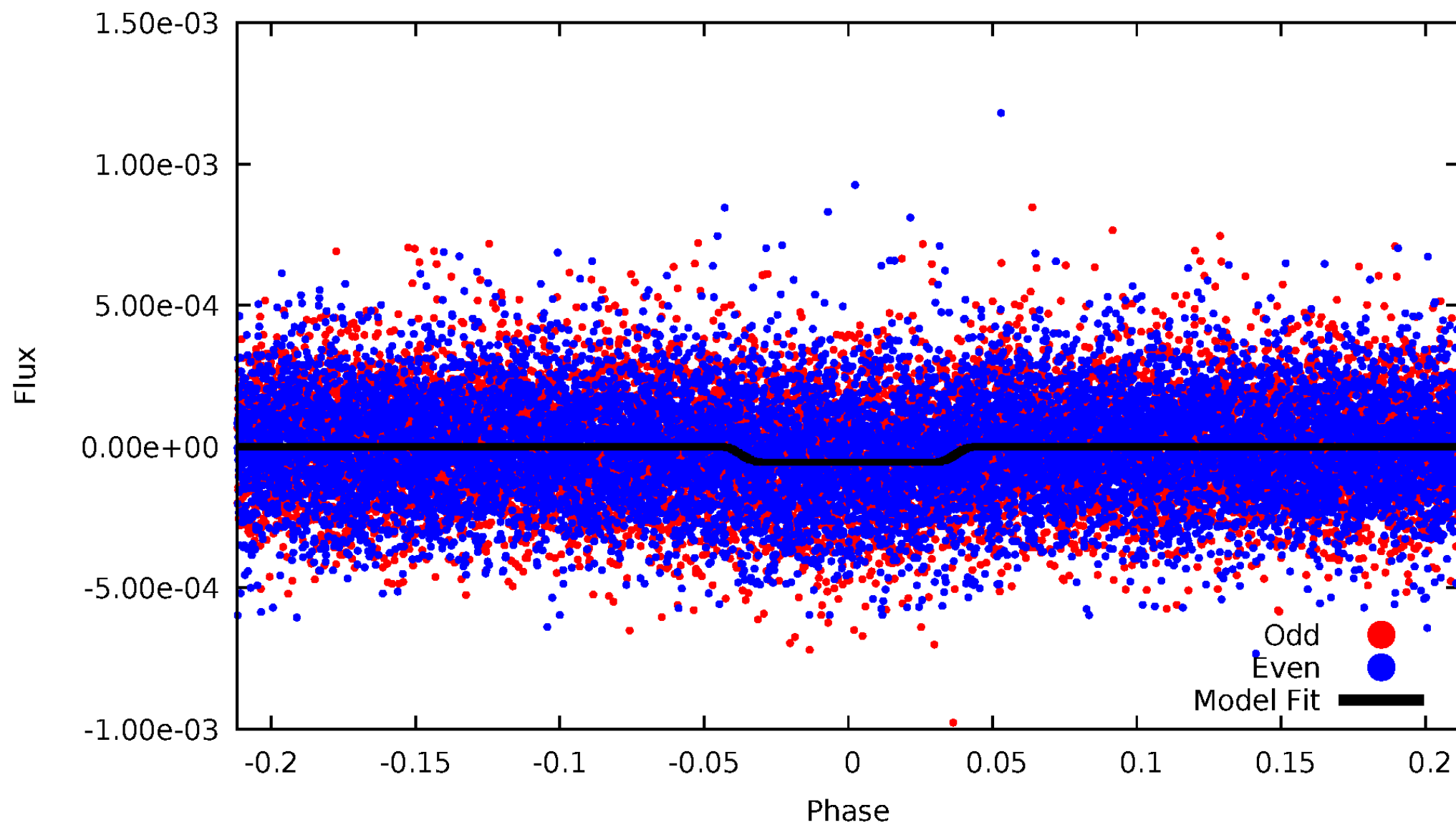
DV Odd/Even

TCE 005632701-01



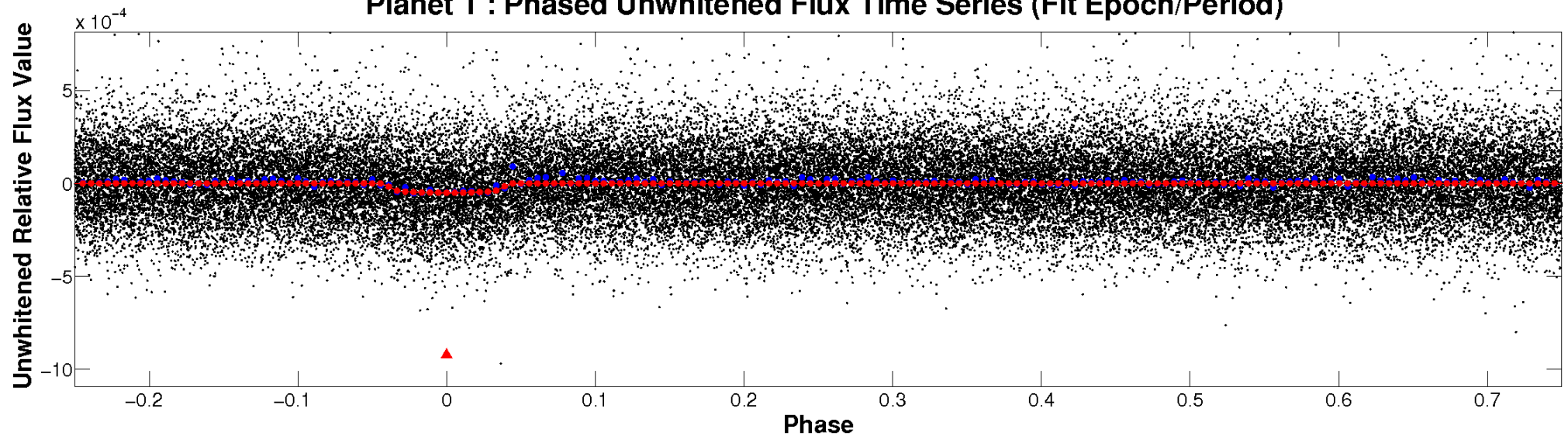
ALT Odd/Even

TCE 005632701-01

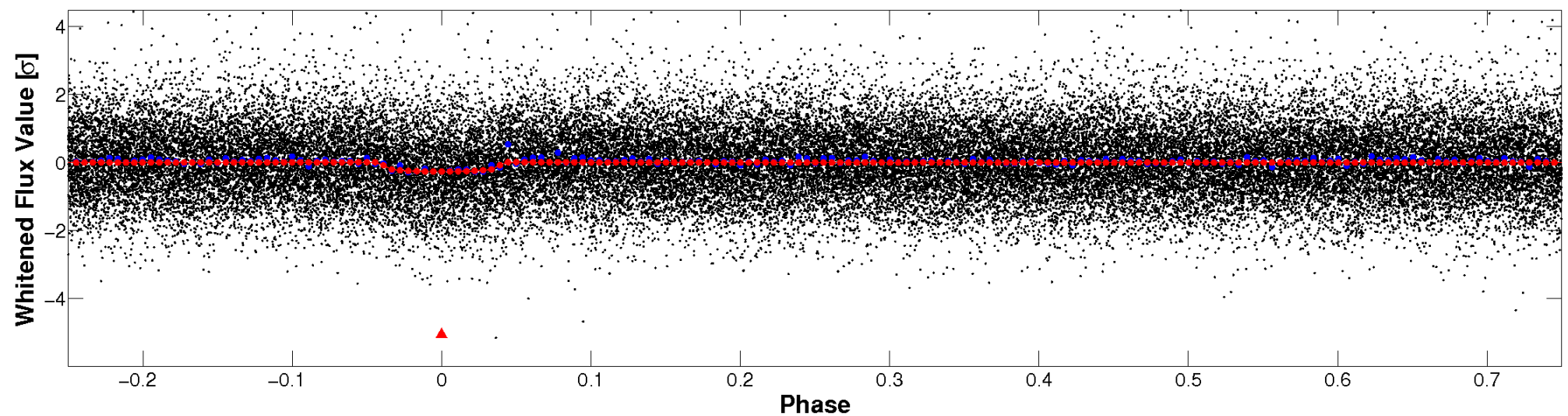


Non-Whitened Vs. Whitened Light Curve

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

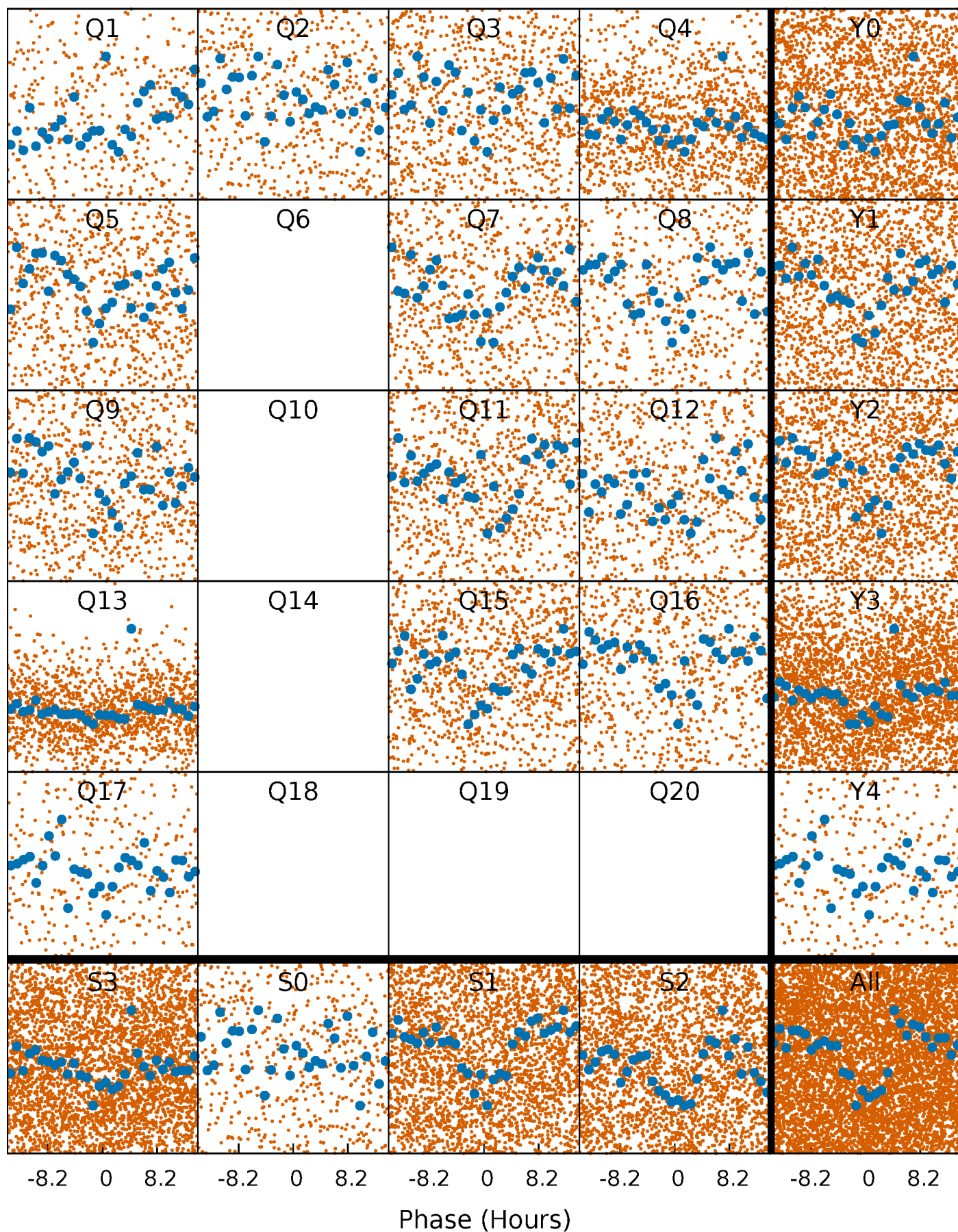


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



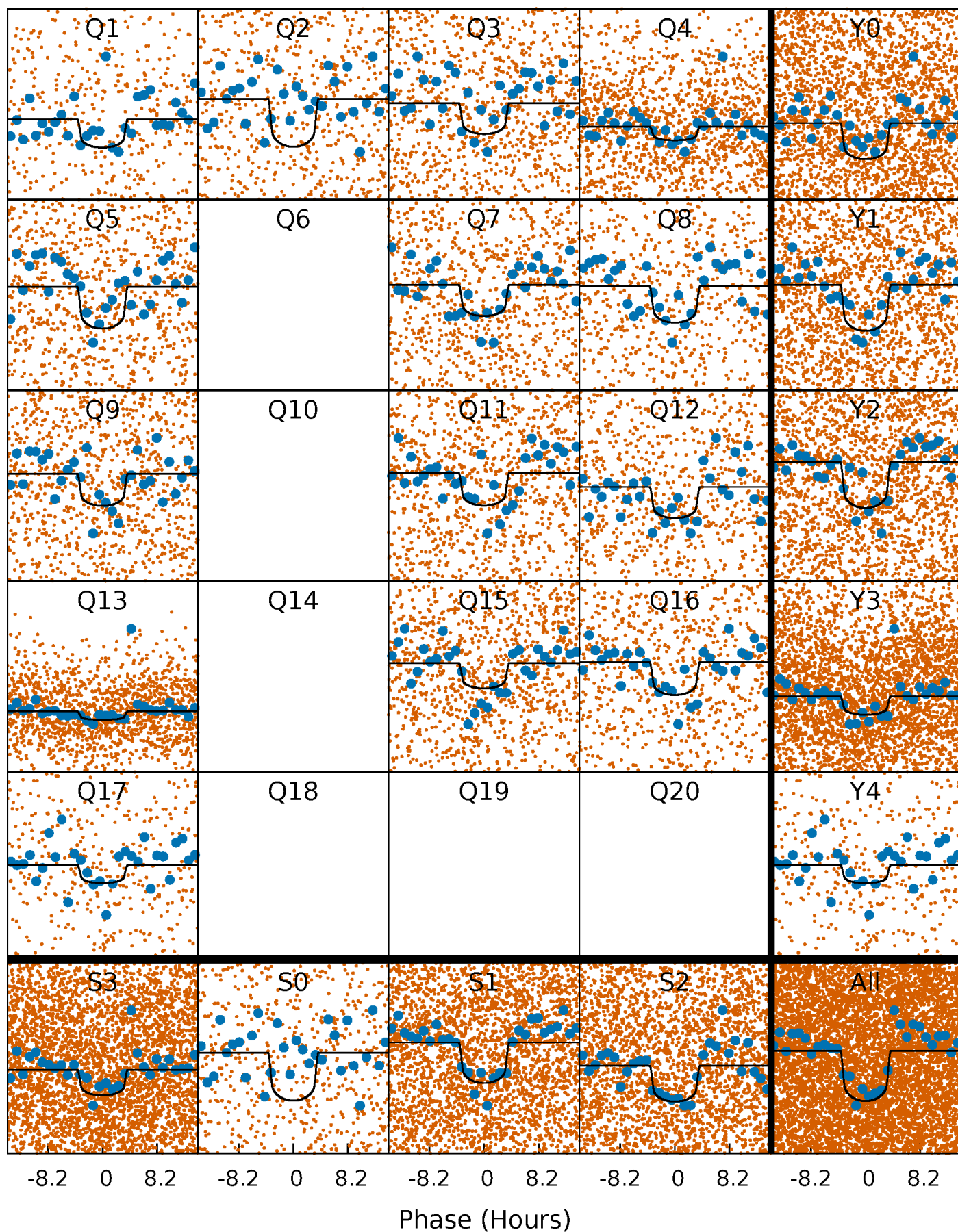
PDC Quarter-Phased Transit Curves

TCE 005632701-01 P= 3.675119 Days $T_0=131.684018$ (BKJD)



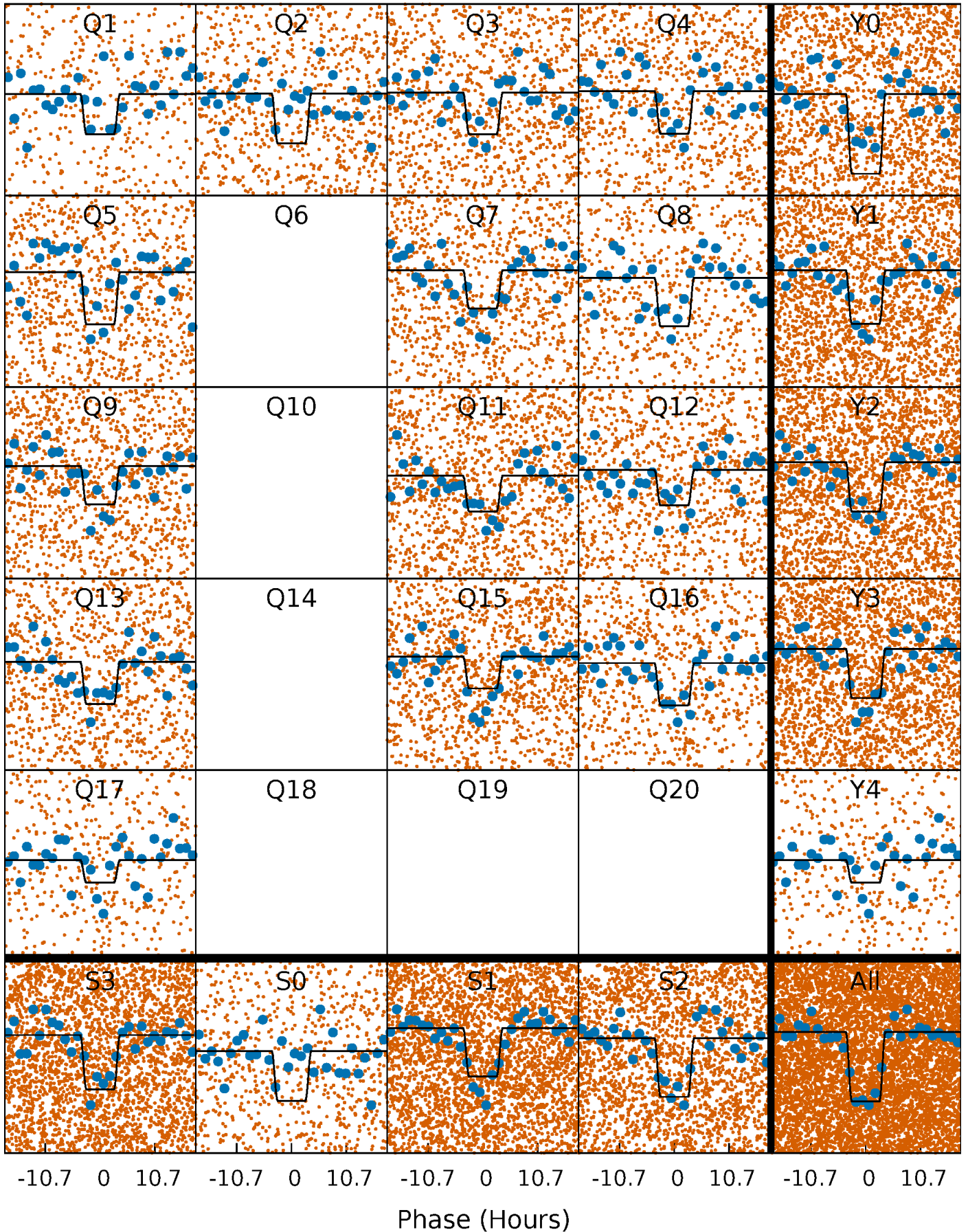
DV Quarter-Phased Transit Curves

TCE 005632701-01 P= 3.675119 Days $T_0=131.684018$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

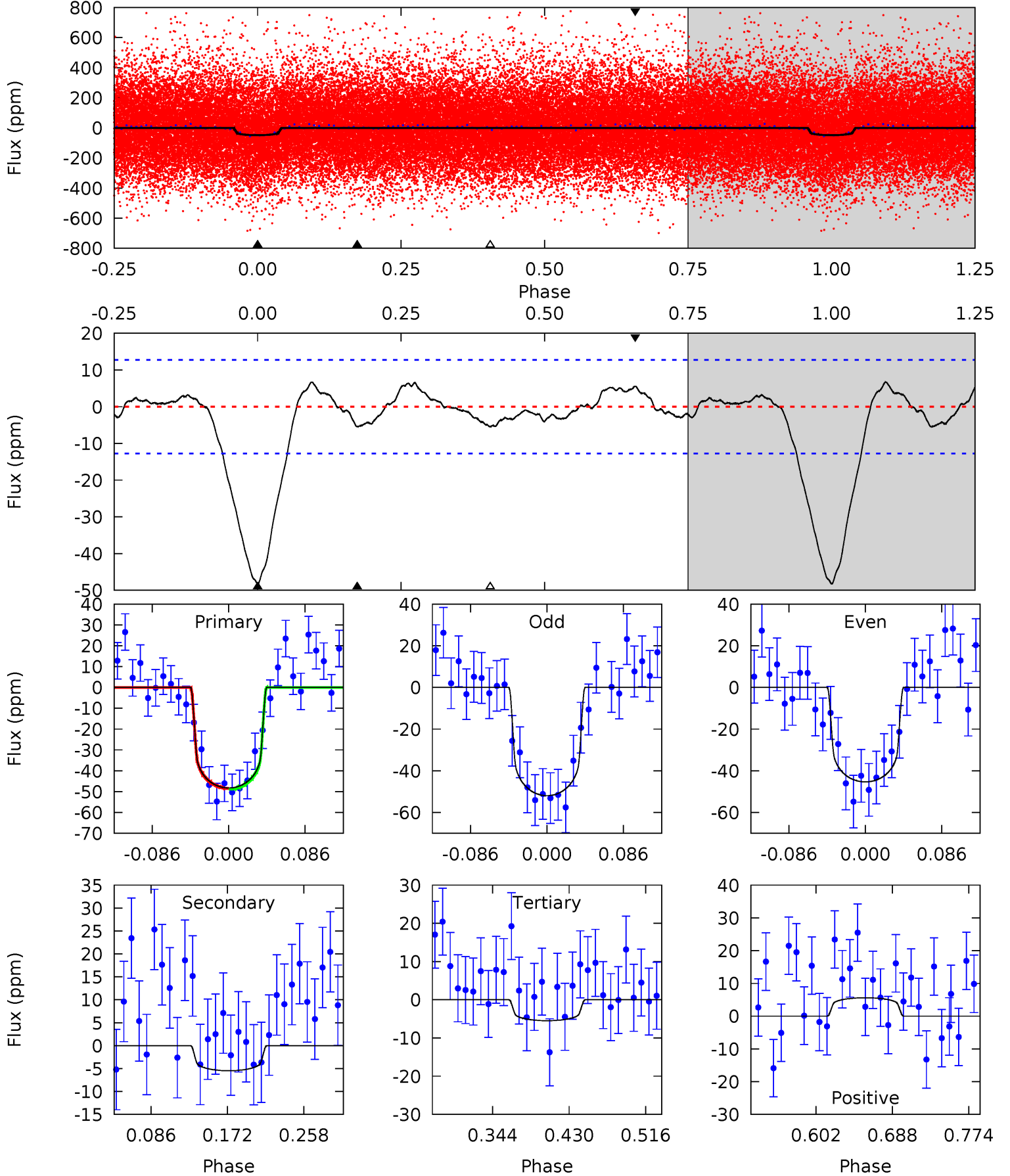
TCE 005632701-01 P= 3.675080 Days $T_0=131.693942$ (BKJD)



DV Model-Shift Uniqueness Test

005632701-01, P = 3.675119 Days, E = 128.008899 Days

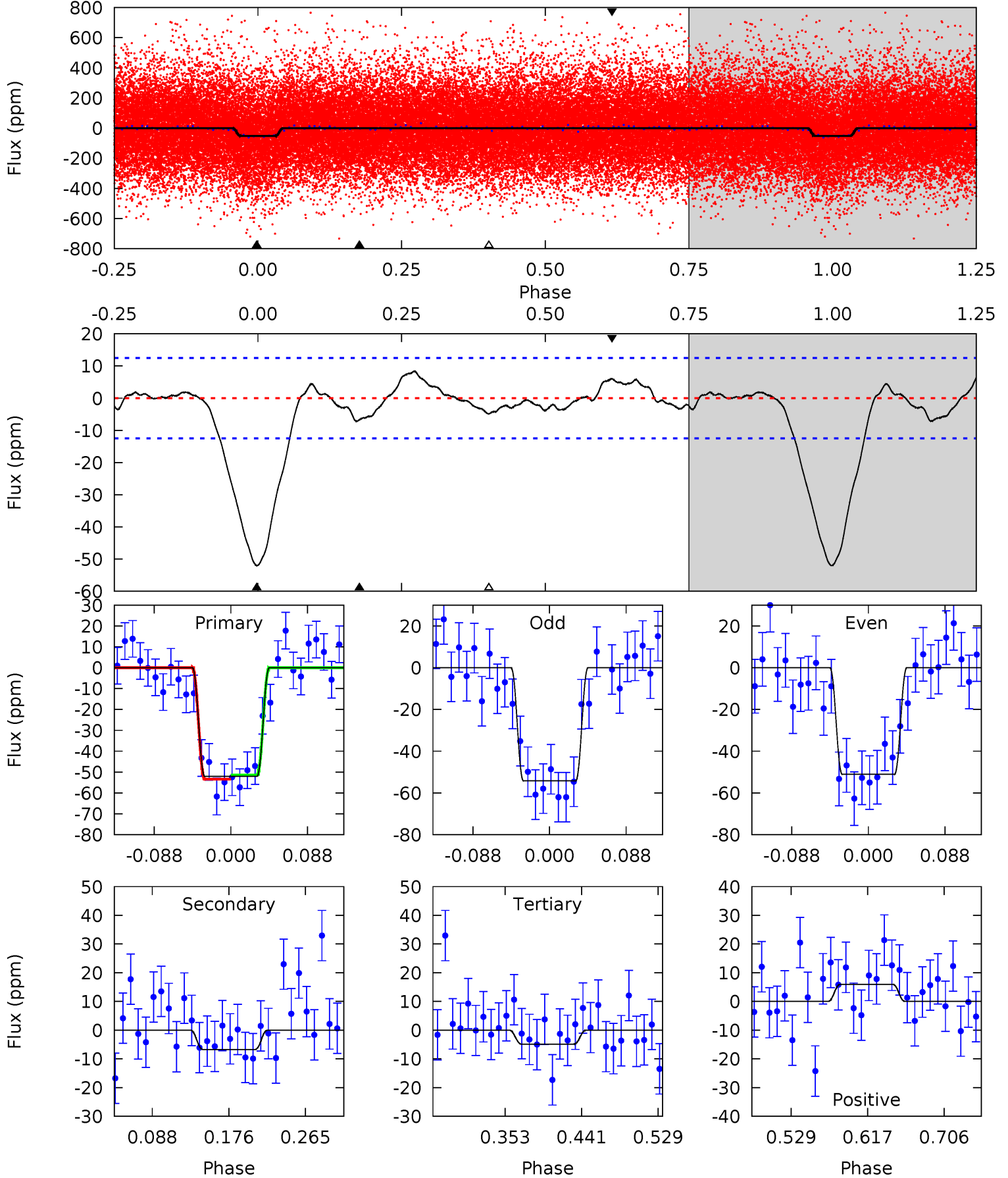
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	1.97	1.97	2.02	4.60	1.72	1.05	15.4	15.4	0.00	-0.05	1.19	0.95	0.12	0.07



Alt Model-Shift Uniqueness Test

005632701-01, P = 3.675080 Days, E = 128.018862 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	2.47	1.79	2.21	4.59	1.70	1.11	17.3	16.9	0.68	0.27	0.57	0.99	0.14	0.37



Stellar Parameters For KIC 005632701

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5968^{+77}_{-83}	$4.534^{+0.022}_{-0.093}$	$-0.260^{+0.150}_{-0.150}$	$0.881^{+0.108}_{-0.043}$	$0.970^{+0.047}_{-0.065}$	$1.995^{+0.216}_{-0.529}$
	+1%/-1%	+0%/-2%	+58%/-58%	+12%/-5%	+5%/-7%	+11%/-27%
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 005632701-01 / KOI 4213.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 3	$0.75^{+0.20}_{-0.21}$	1623^{+49}_{-35}	3677^{+522}_{-492}	11^{+12}_{-7}
Alt.	-7 ± 3	$0.73^{+0.20}_{-0.19}$	1624^{+44}_{-35}	3868^{+544}_{-461}	15^{+16}_{-8}

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 $A_{obs} \gg 1.0$

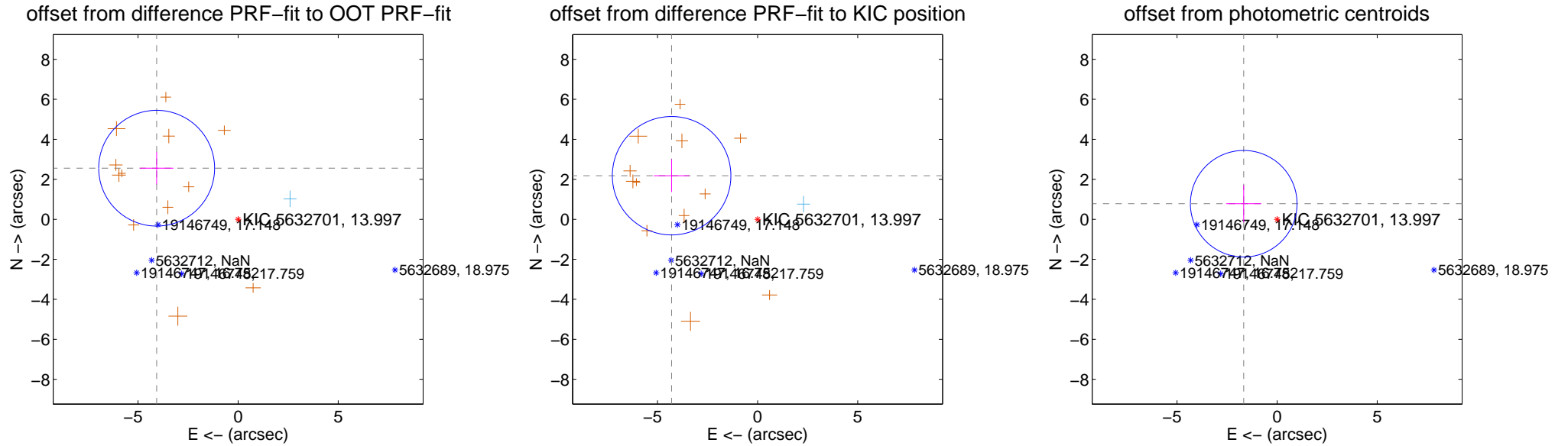
DV Centroid Data

Supplemental centroid analysis for 005632701-01. Kepler magnitude: 14.00. Transit SNR 14.51

There are 1 quarters with good PRF difference image offsets

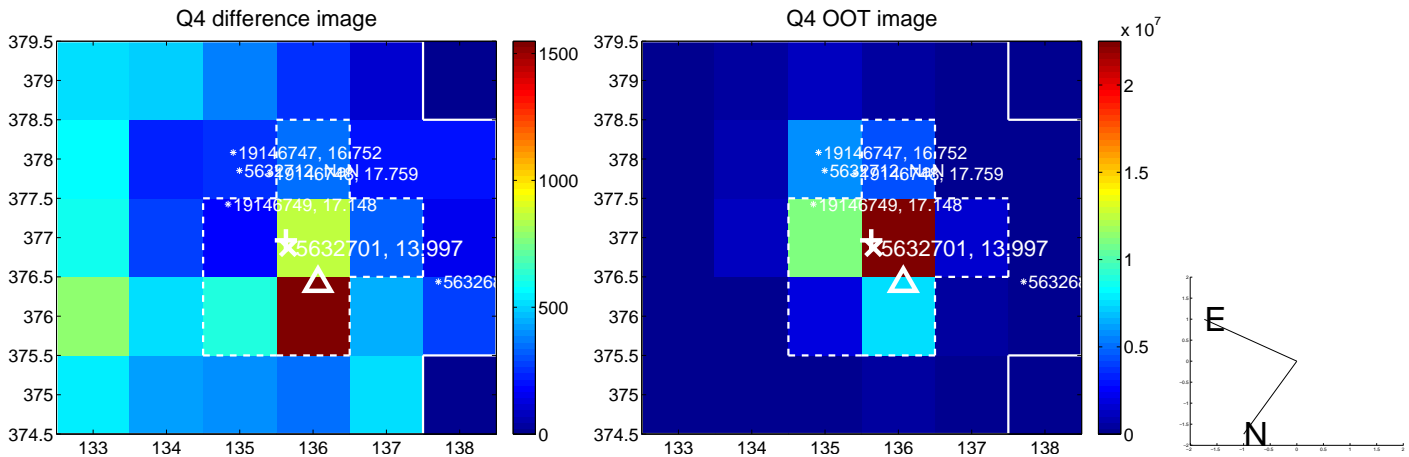
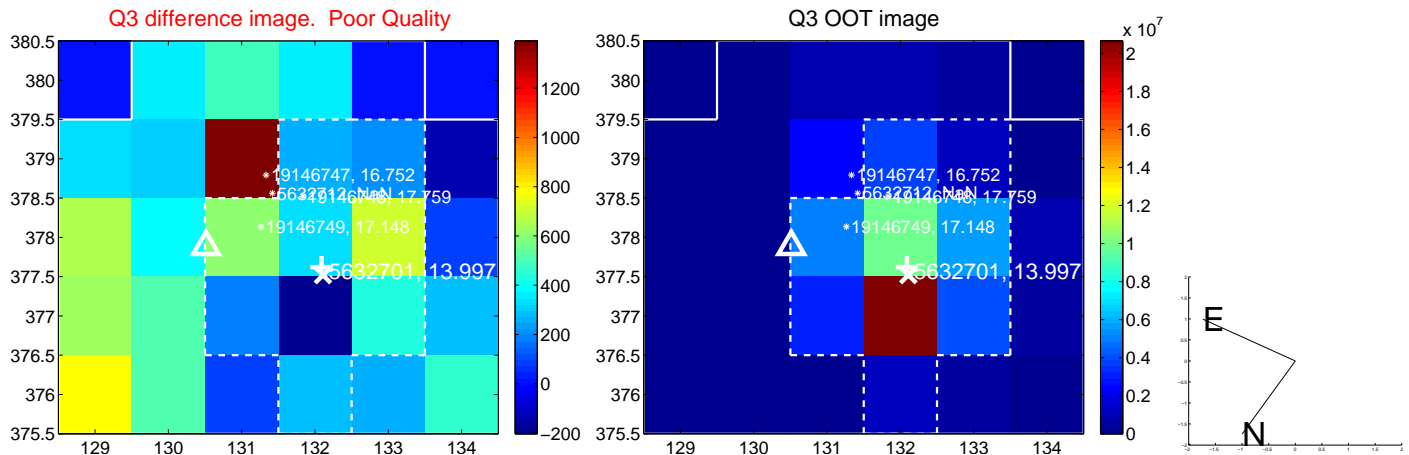
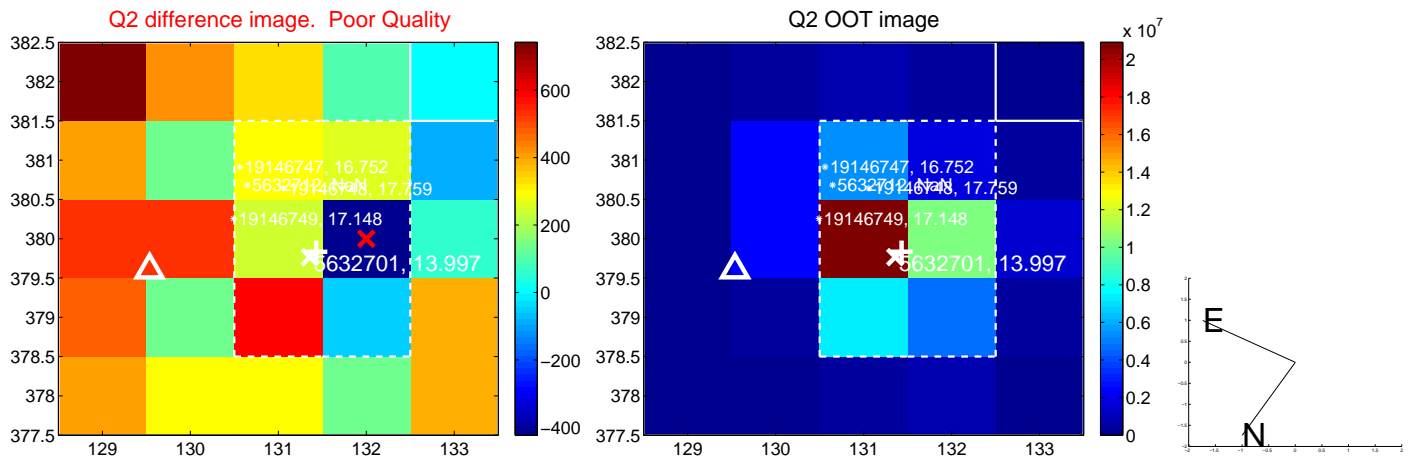
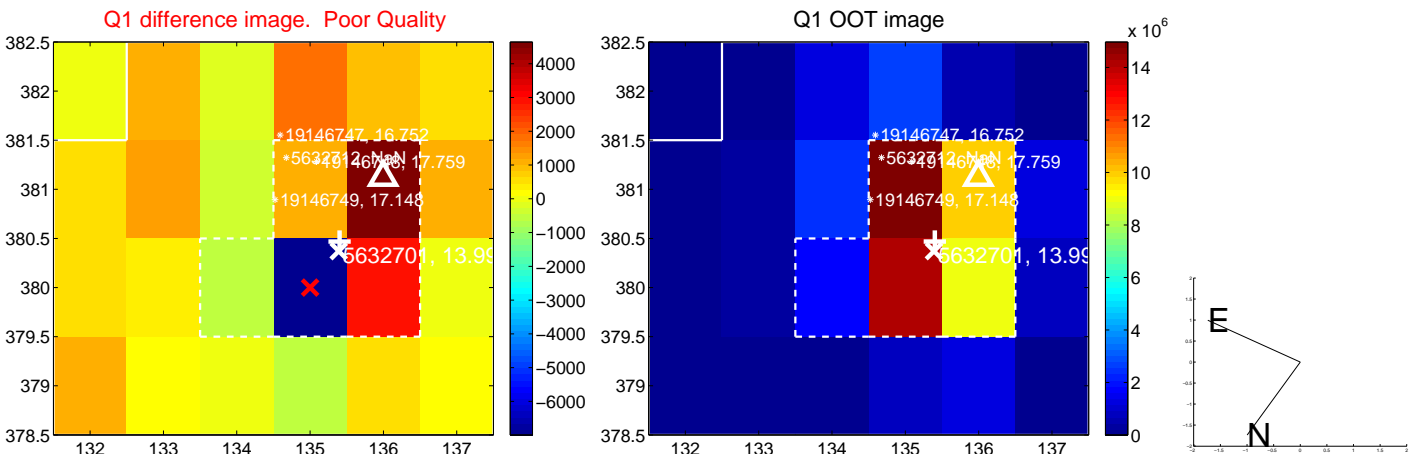
The direct PRF centroid is offset from the target star catalog position by about 0.51 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.806 ± 0.965	4.98	4.069 ± 0.842	2.556 ± 0.808
PRF-fit source offset from KIC position	4.818 ± 0.987	4.88	4.296 ± 0.889	2.180 ± 0.817
photometric centroid source offset	1.84 ± 0.89	2.07	1.67 ± 0.88	0.78 ± 0.93

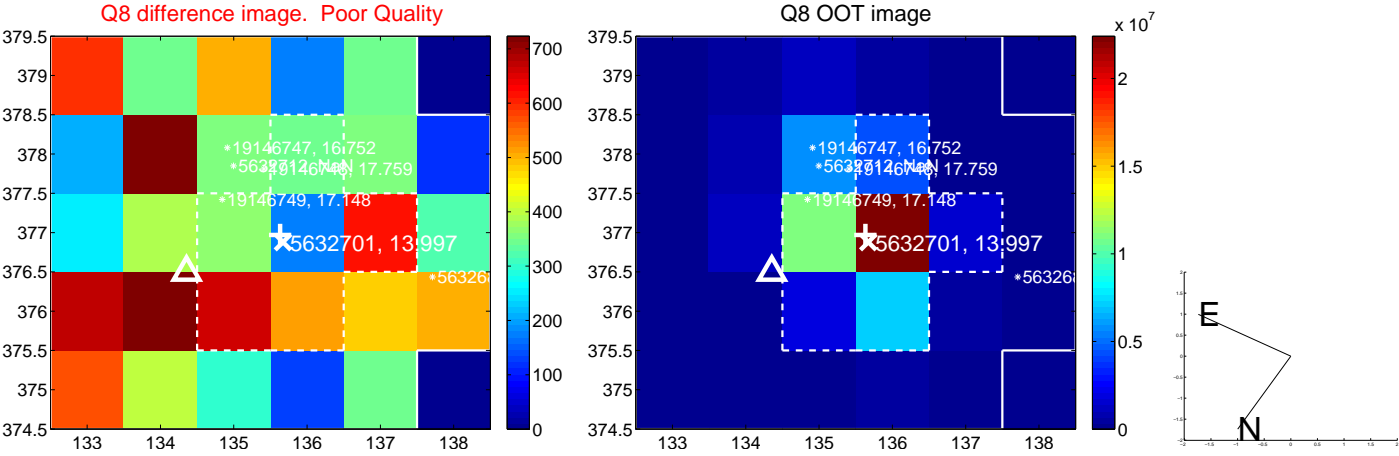
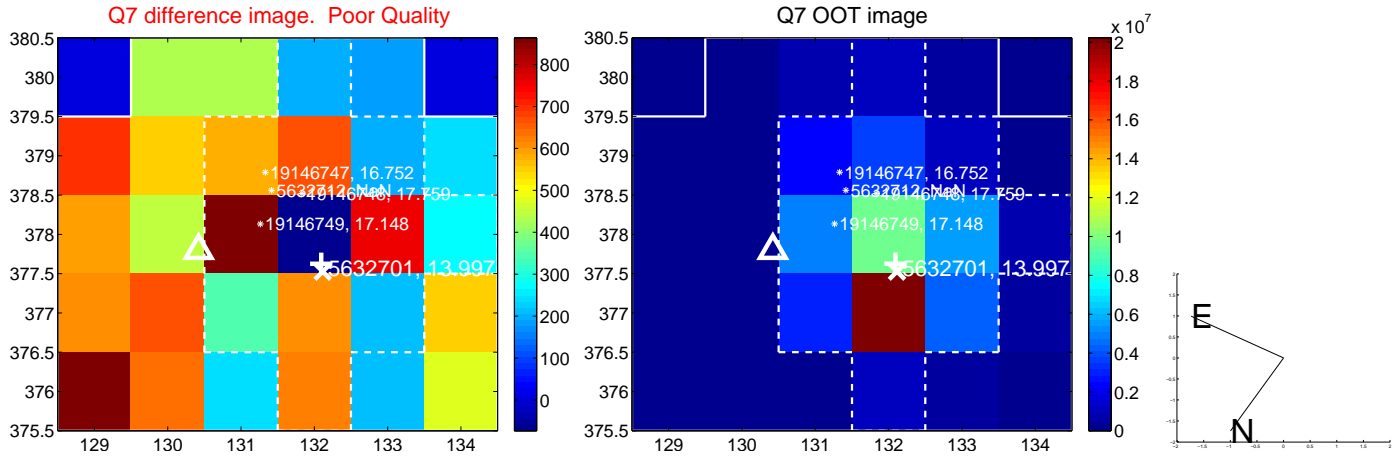
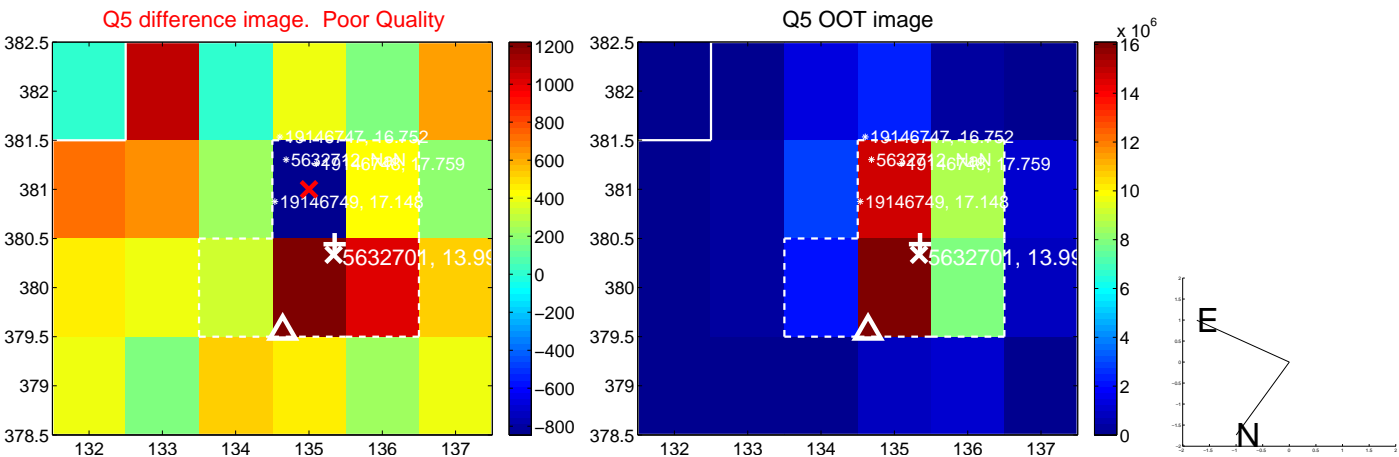


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

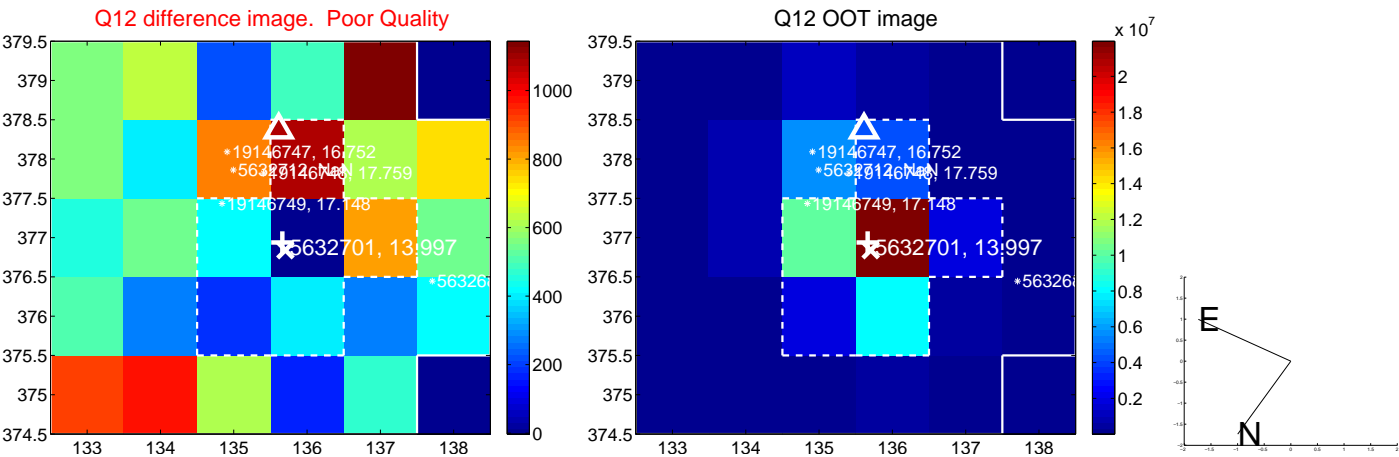
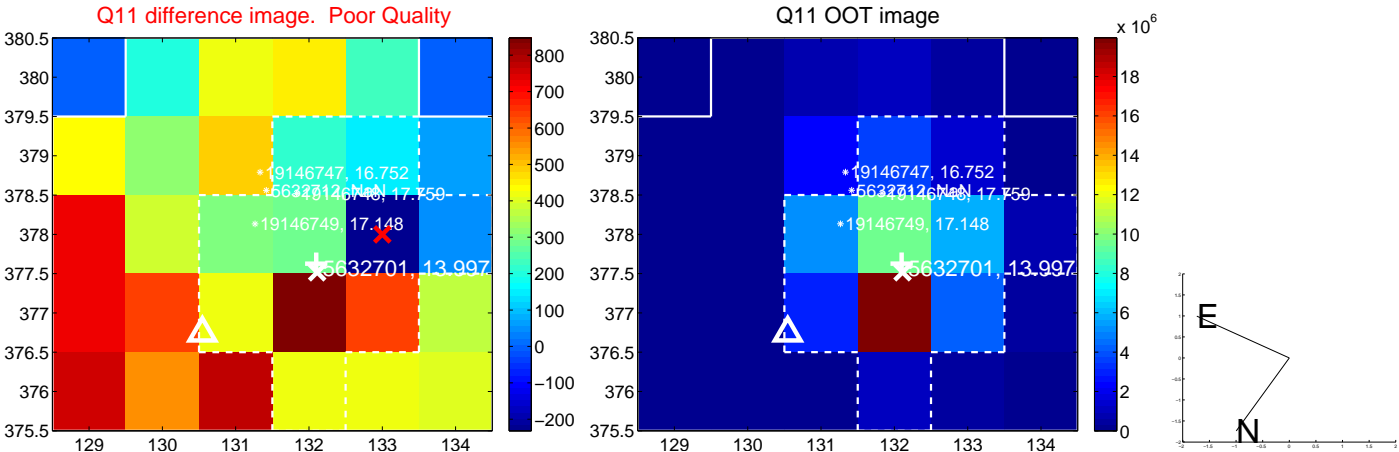
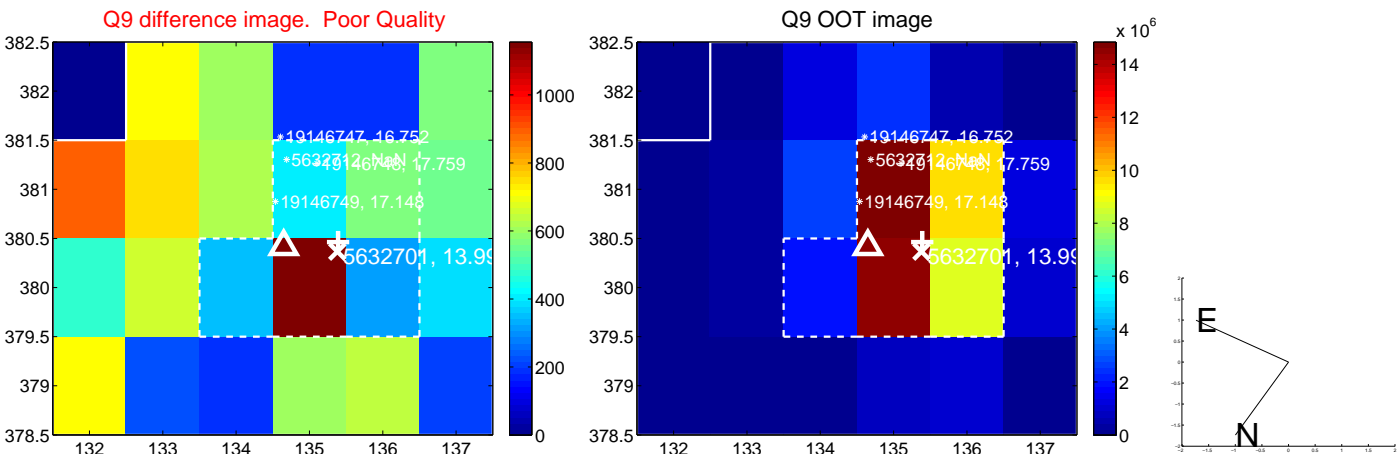
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



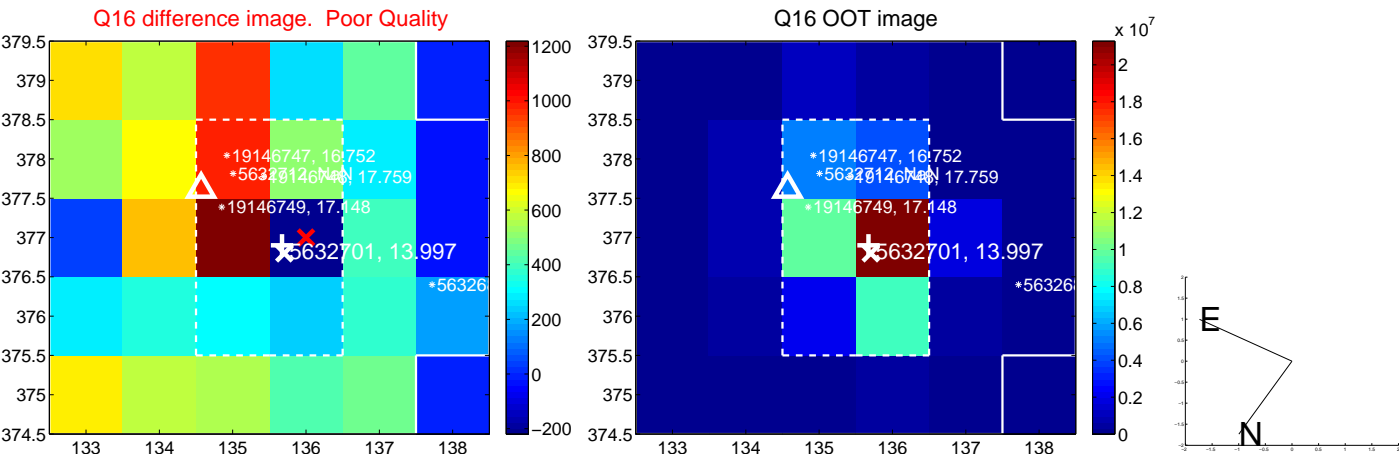
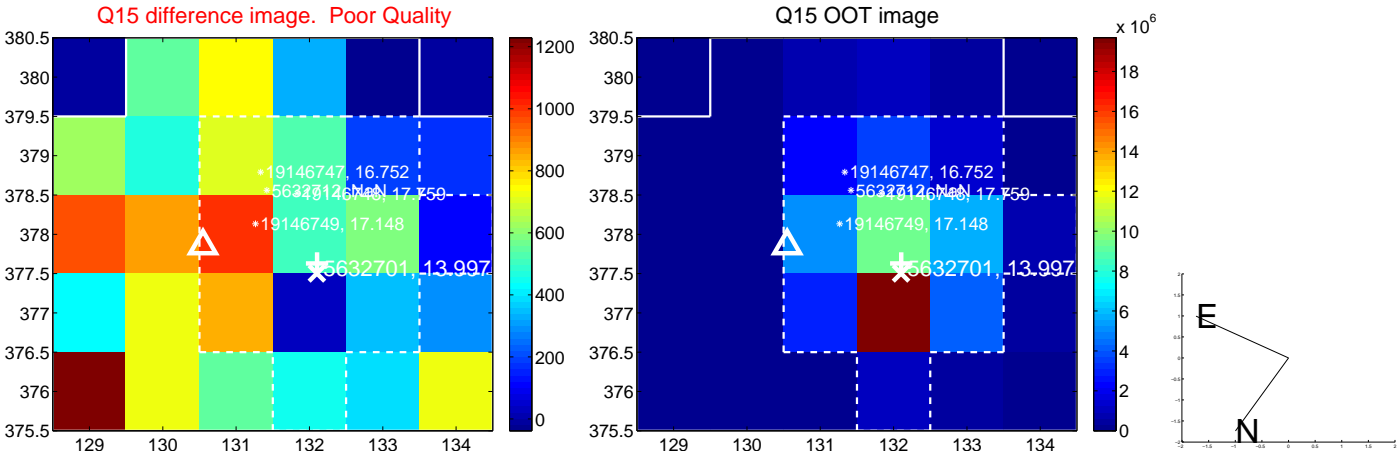
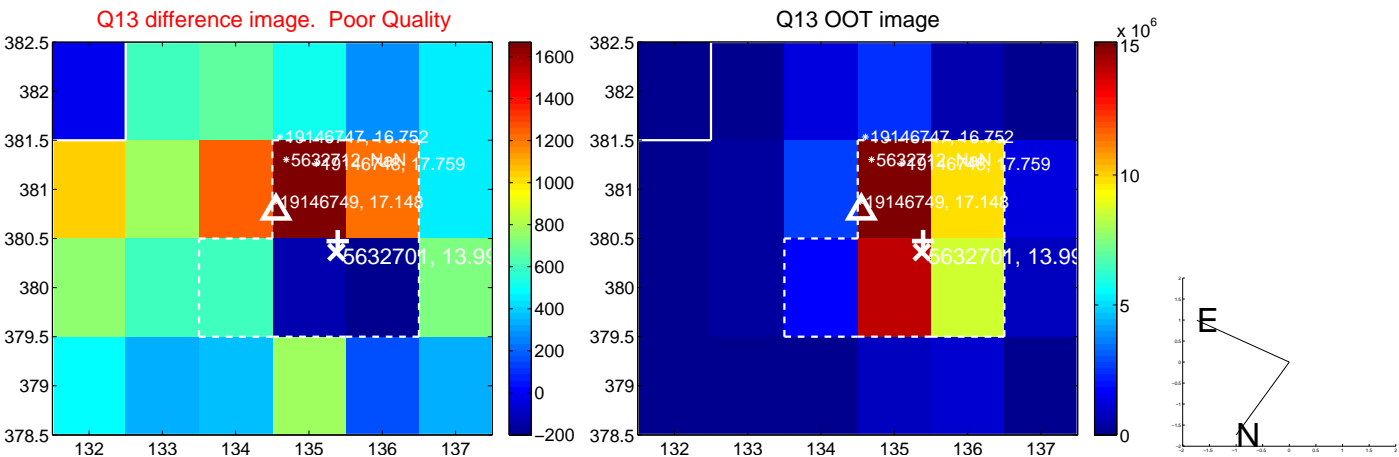
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



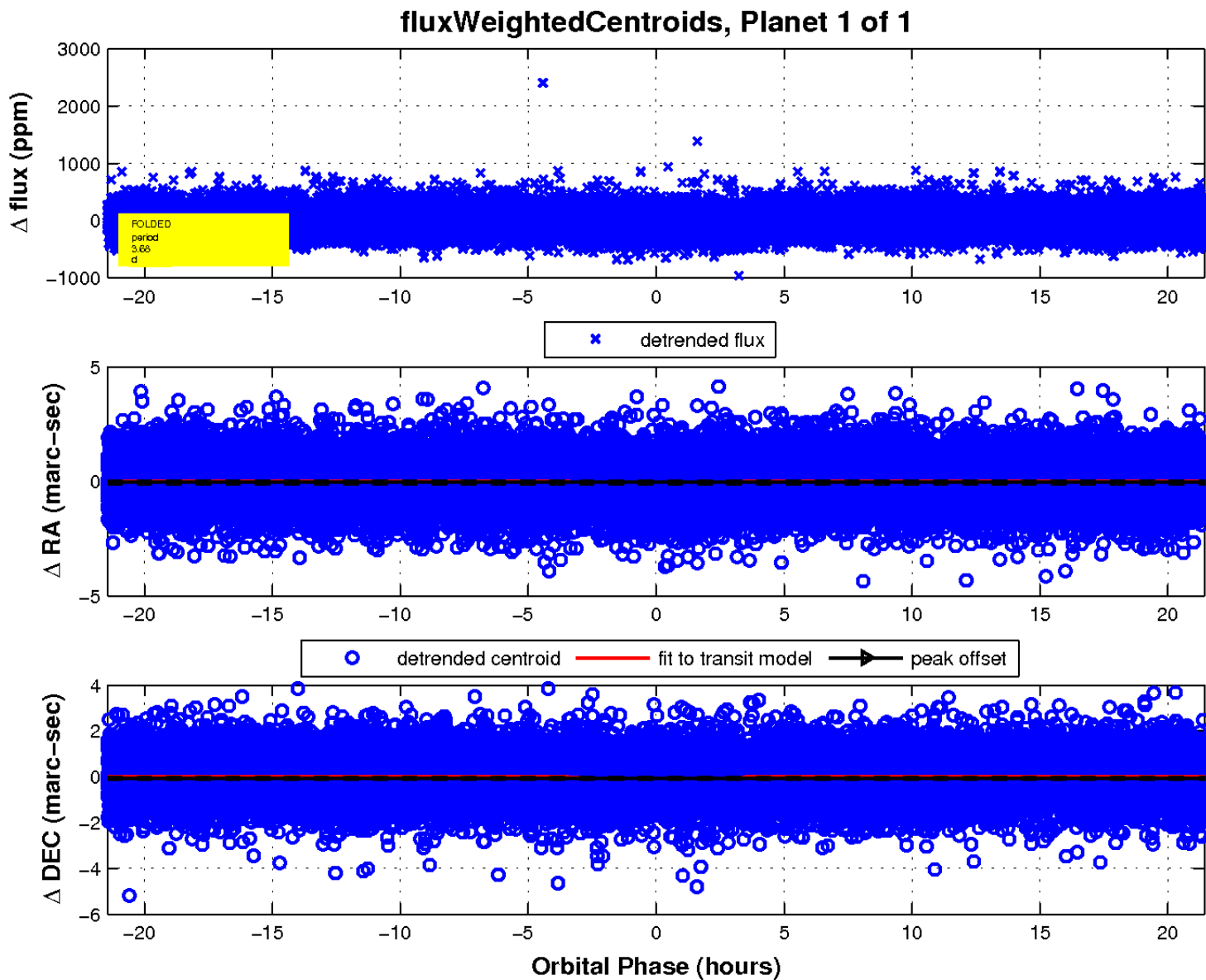
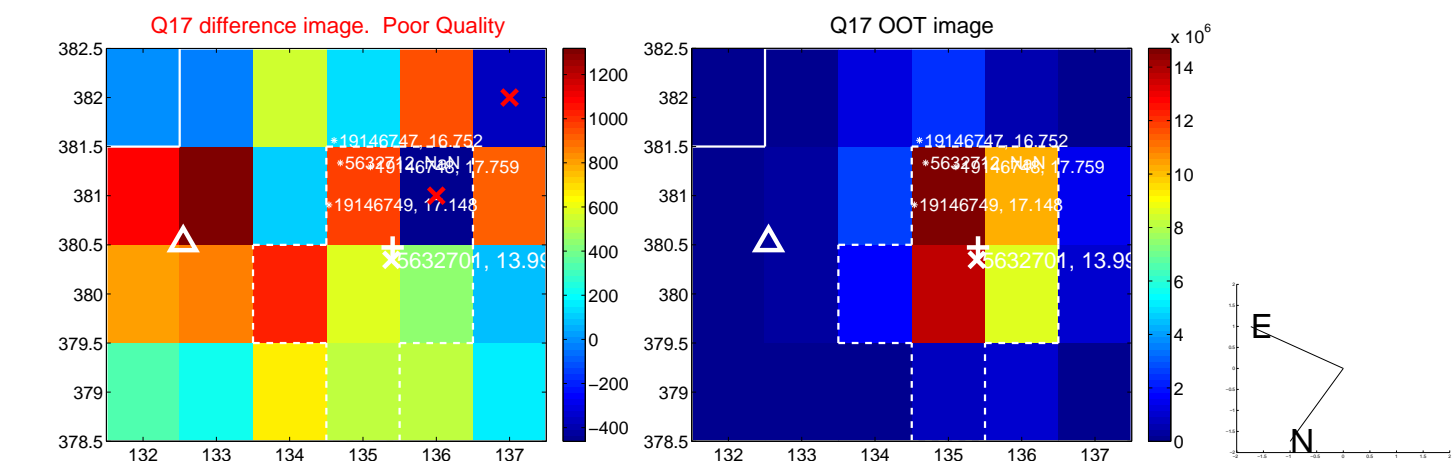
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

