

KIC 010535886

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})
010535886-01	OBS	8021.01	0.933755	132.447224	57.8	3.412	7.5	8.7	0.54	3885	0.46	254.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010535886-01	OBS	FP	0.00	0	0	0	1	CENT_KIC_POS—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.

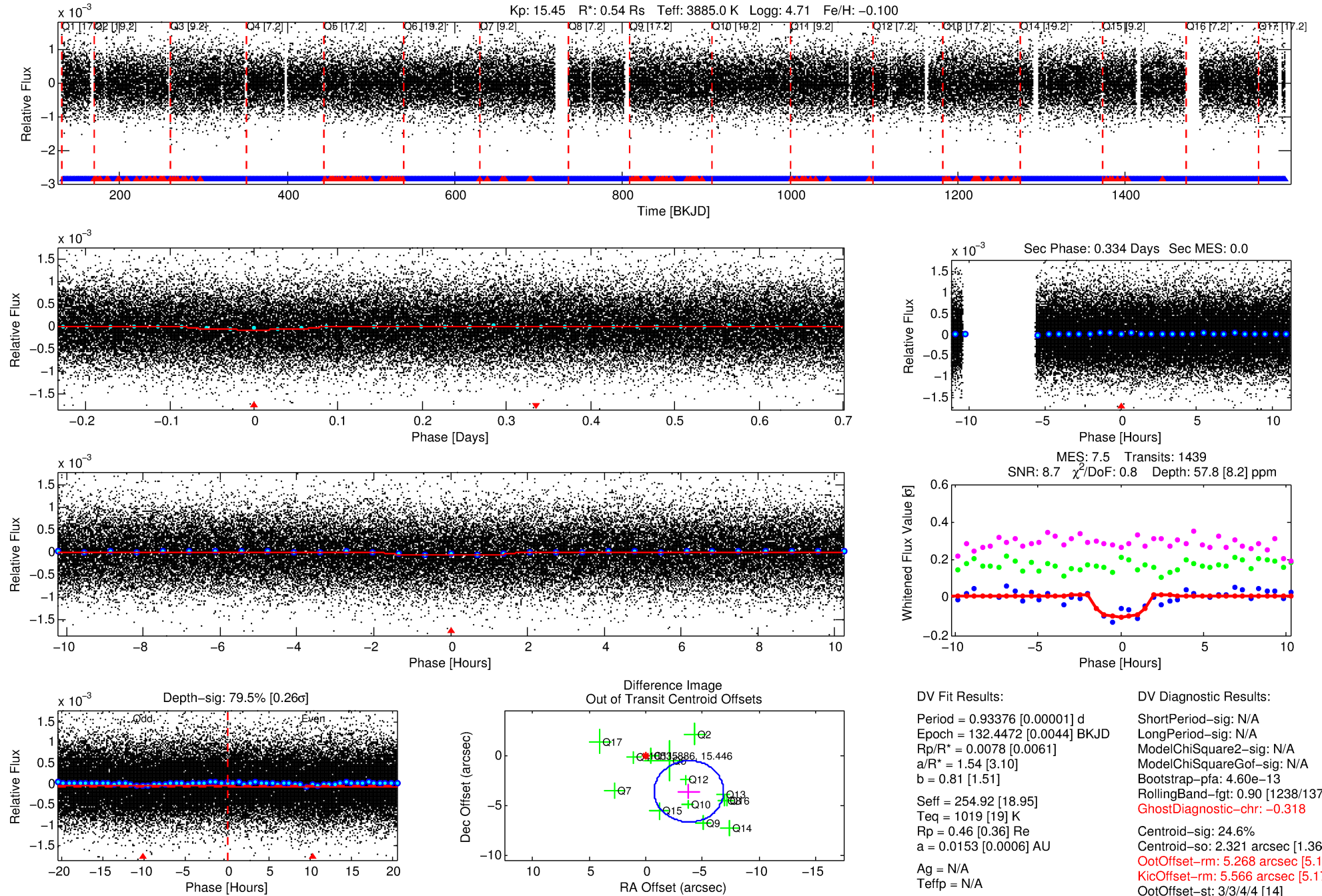
Ephemeris Match Information For 010535886-01

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
010535886-01	10535886	V2083-Cyg-pri	10342012	1:2	1830.9	413	-204	6.90	15.44	3419.30	Direct-PRF	0	1.24	0.43

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: 10535886 Candidate: 1 of 1 Period: 0.934 d



DV Fit Results:

Period = 0.93376 [0.00001] d
Epoch = 132.4472 [0.0044] BKJD
Rp/R* = 0.0078 [0.0061]
a/R* = 1.54 [3.10]
b = 0.81 [1.51]
Seff = 254.92 [18.95]
Teff = 1019 [19] K
Rp = 0.46 [0.36] Re
a = 0.0153 [0.0006] AU
Ag = N/A
Teffp = N/A

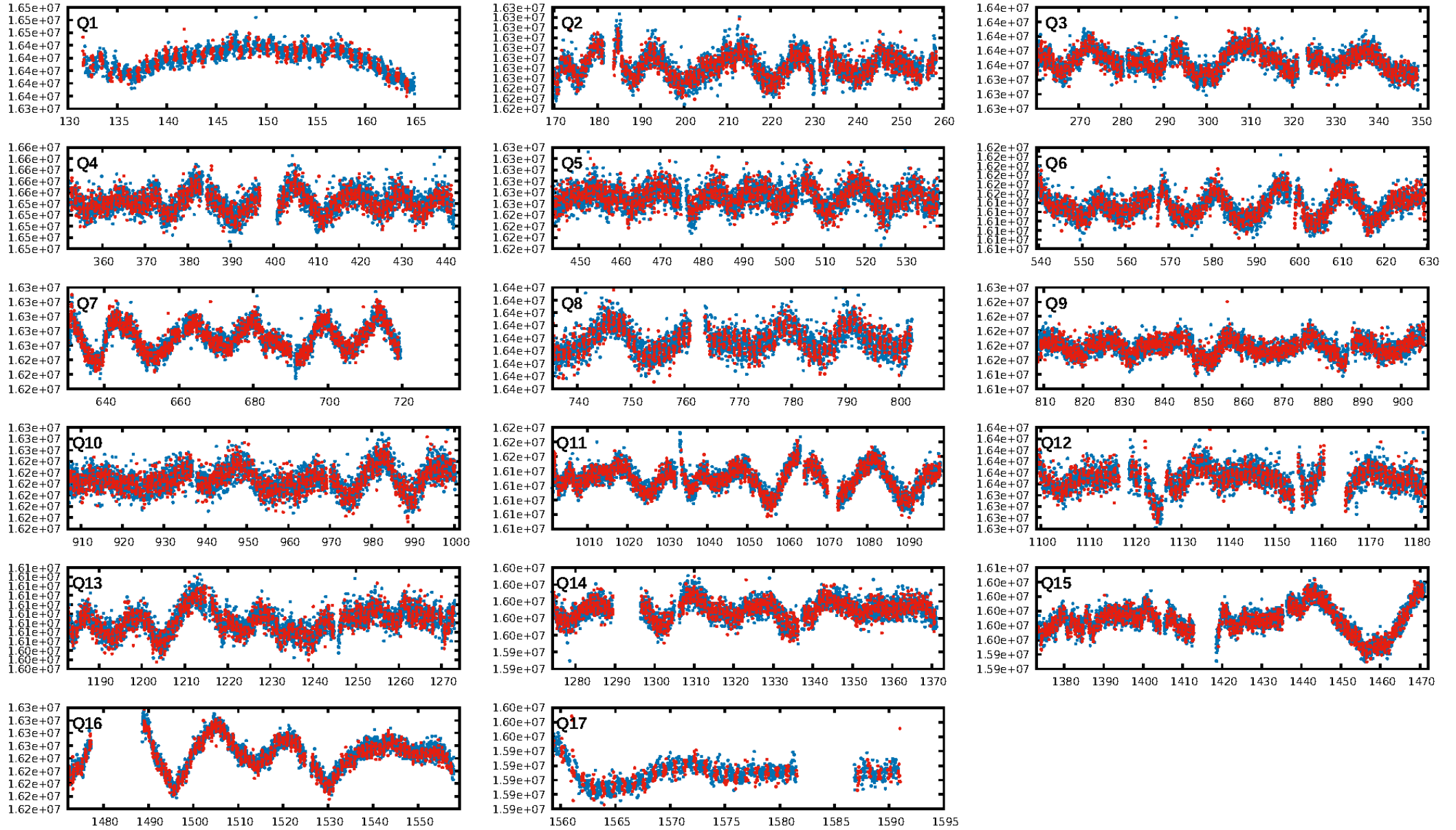
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.60e-13
RollingBand-fgt: 0.90 [1238/1373]
GhostDiagnostic-chr: -0.318
Centroid-sig: 24.6%
Centroid-so: 2.321 arcsec [1.36 σ]
OotOffset-rm: 5.268 arcsec [5.15 σ]
KicOffset-rm: 5.566 arcsec [5.17 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 [17/17]

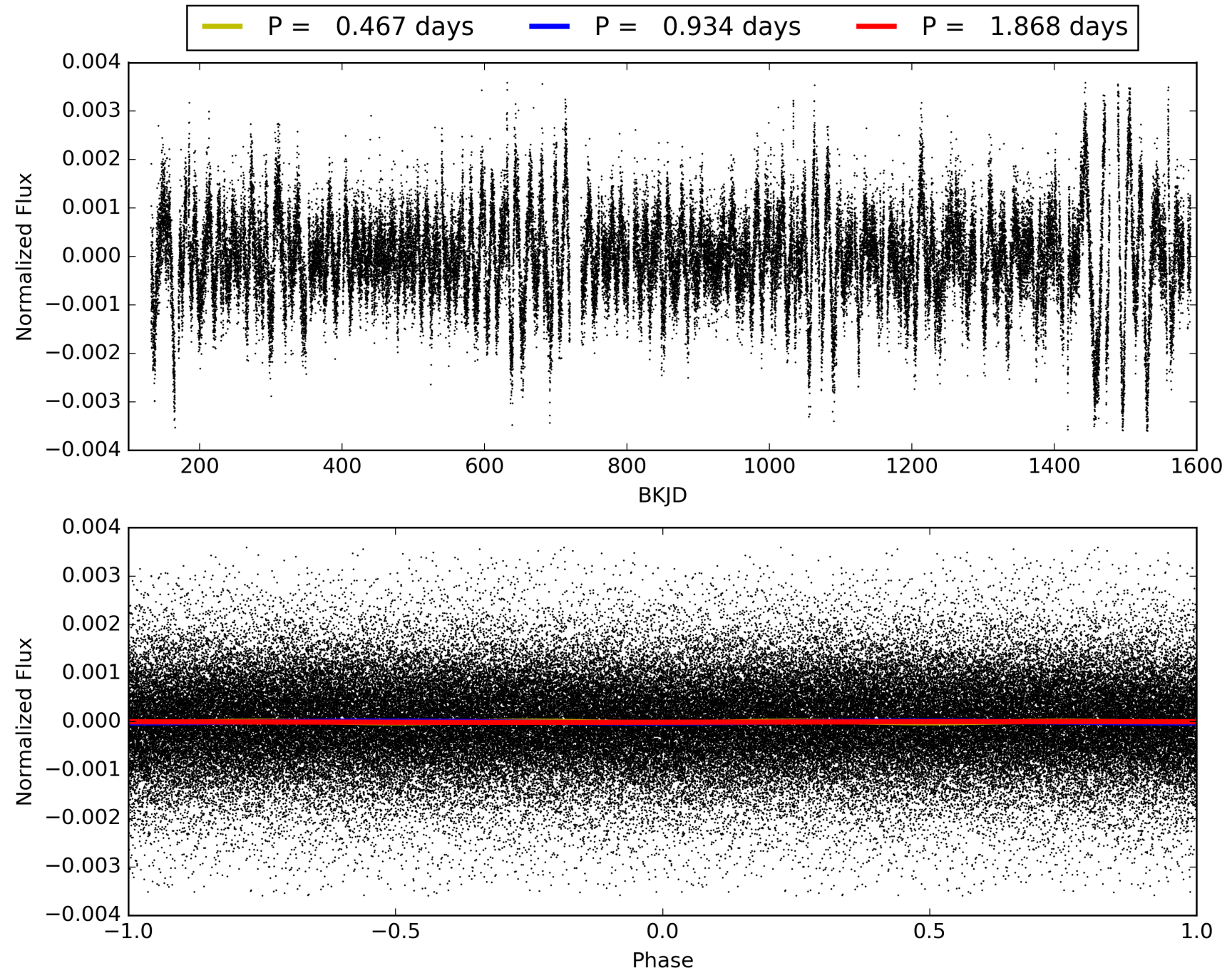
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:01:07 Z

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

TCE 010535886-01, PDC Light Curves

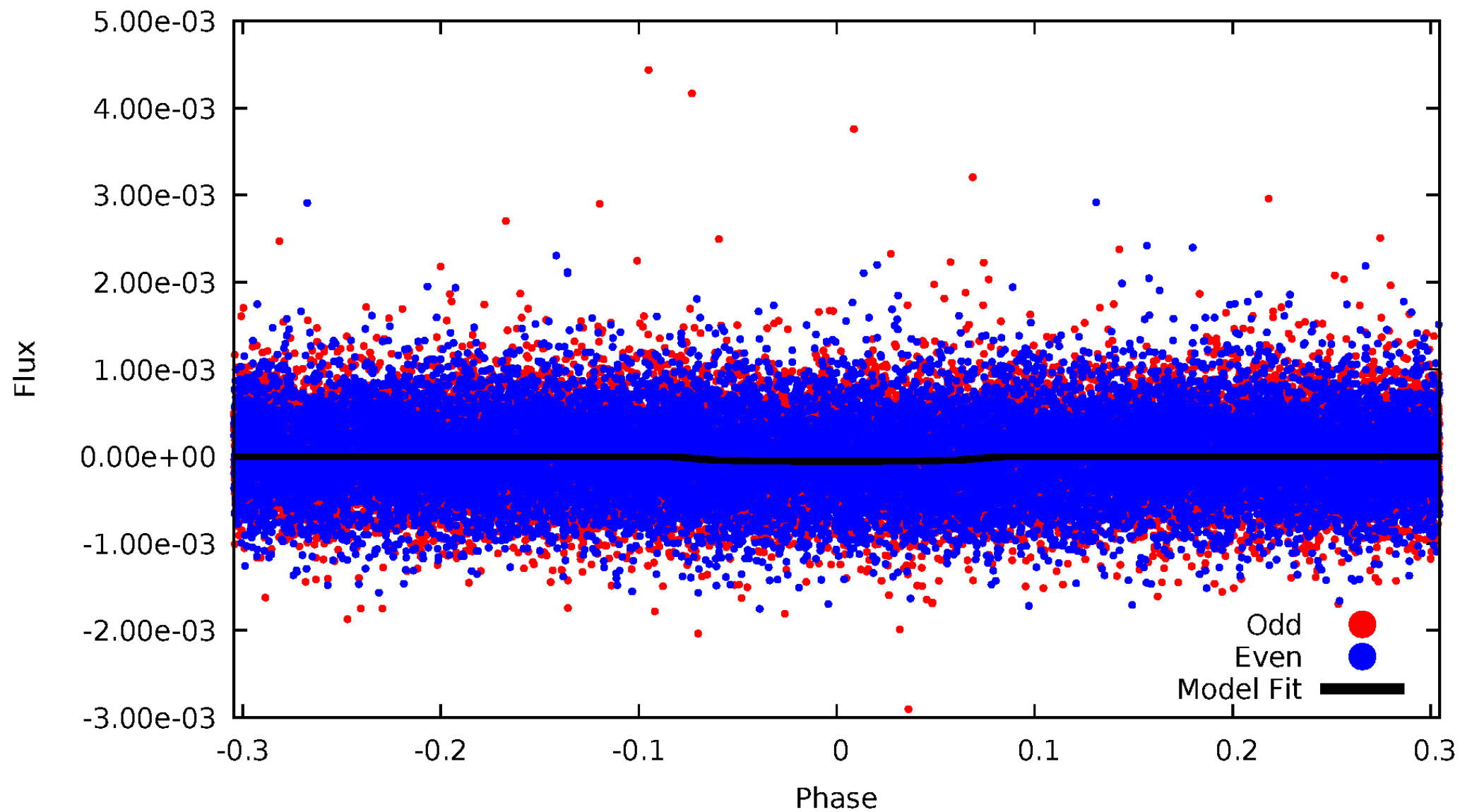


TCE 010535886-01



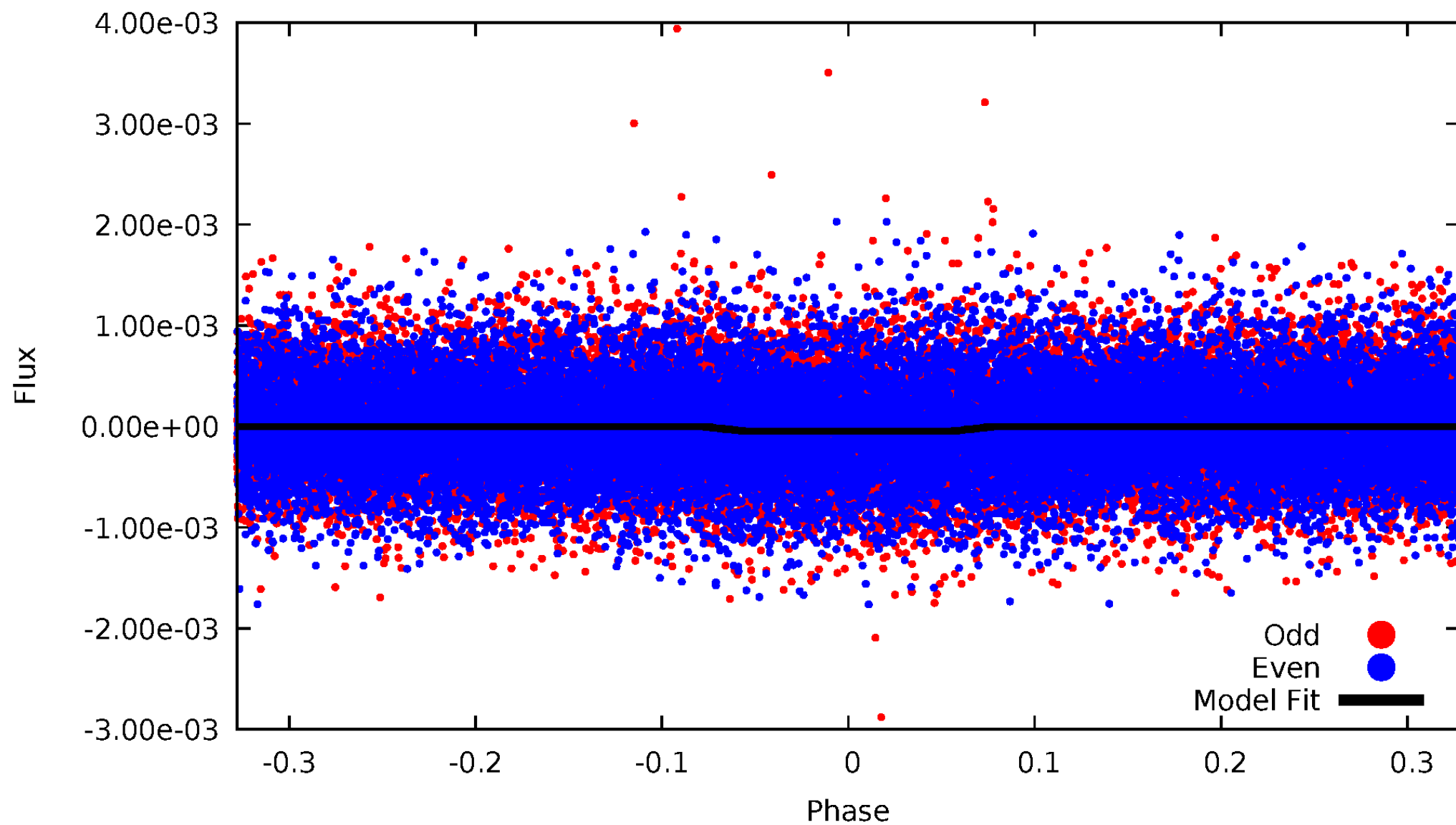
DV Odd/Even

TCE 010535886-01



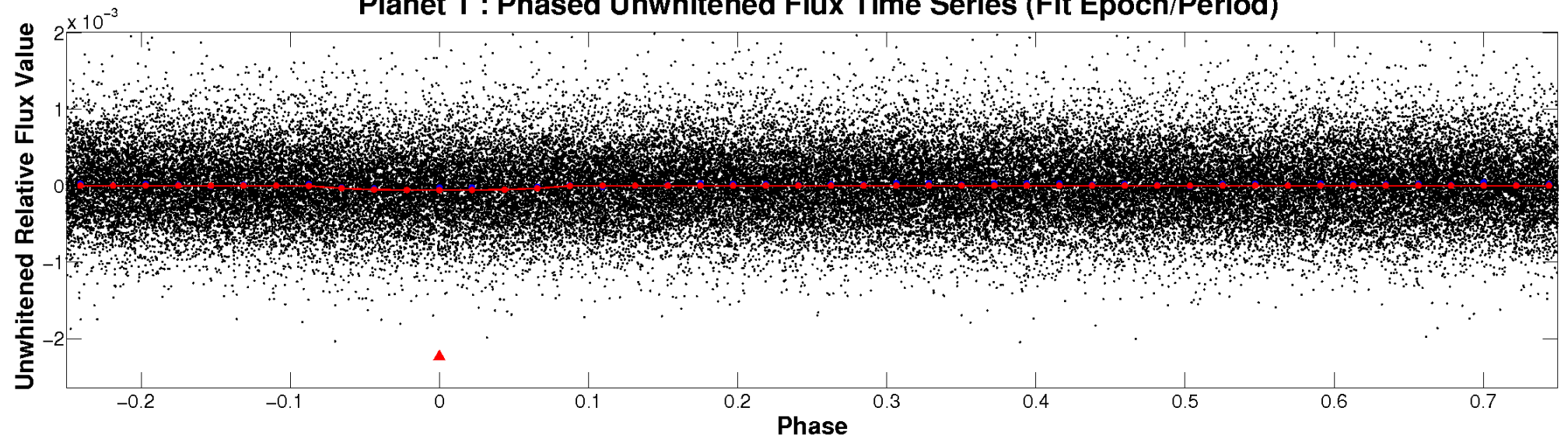
ALT Odd/Even

TCE 010535886-01

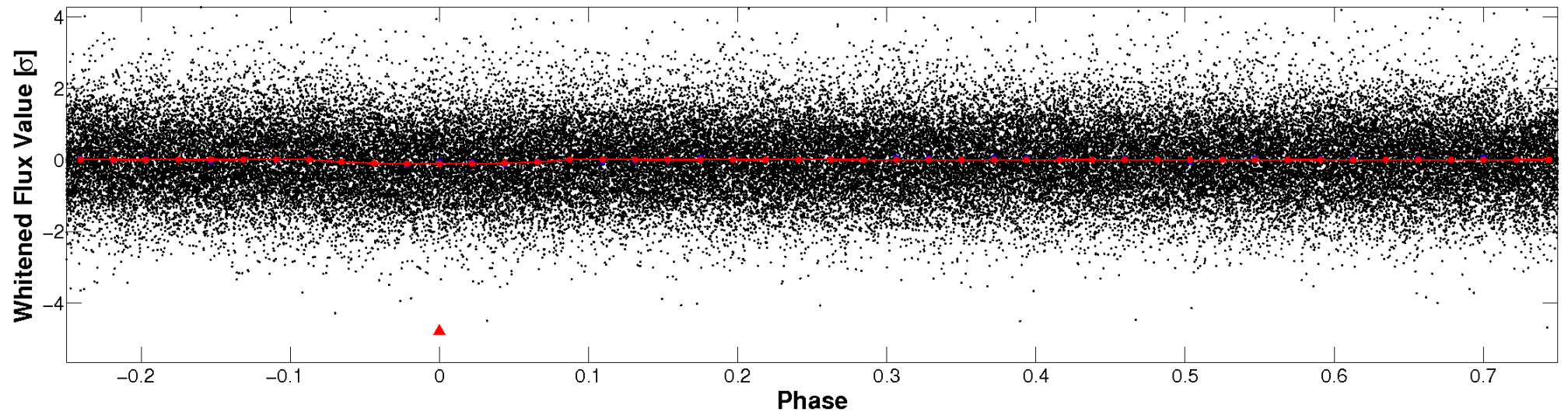


Non-Whitened Vs. Whitened Light Curve

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

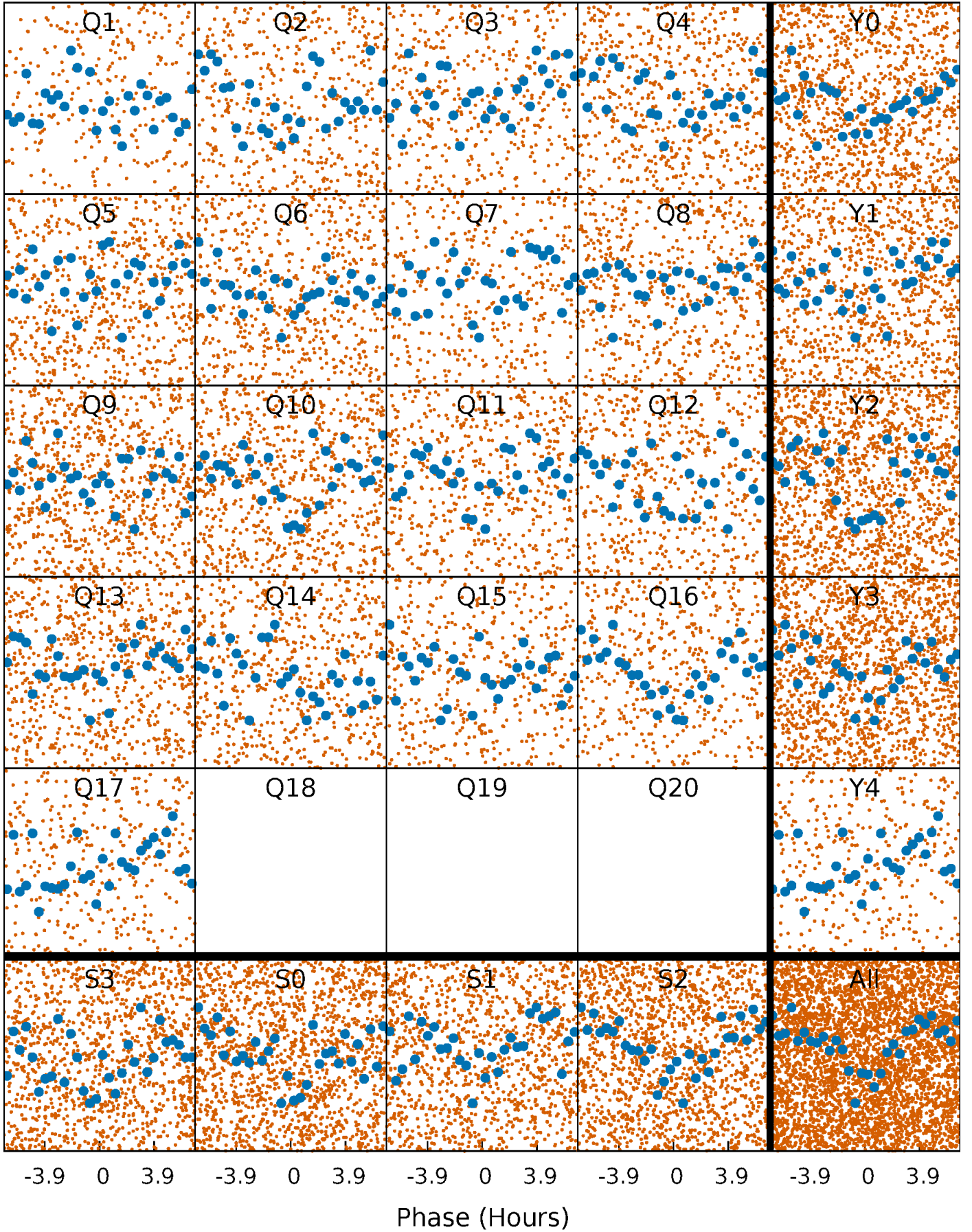


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



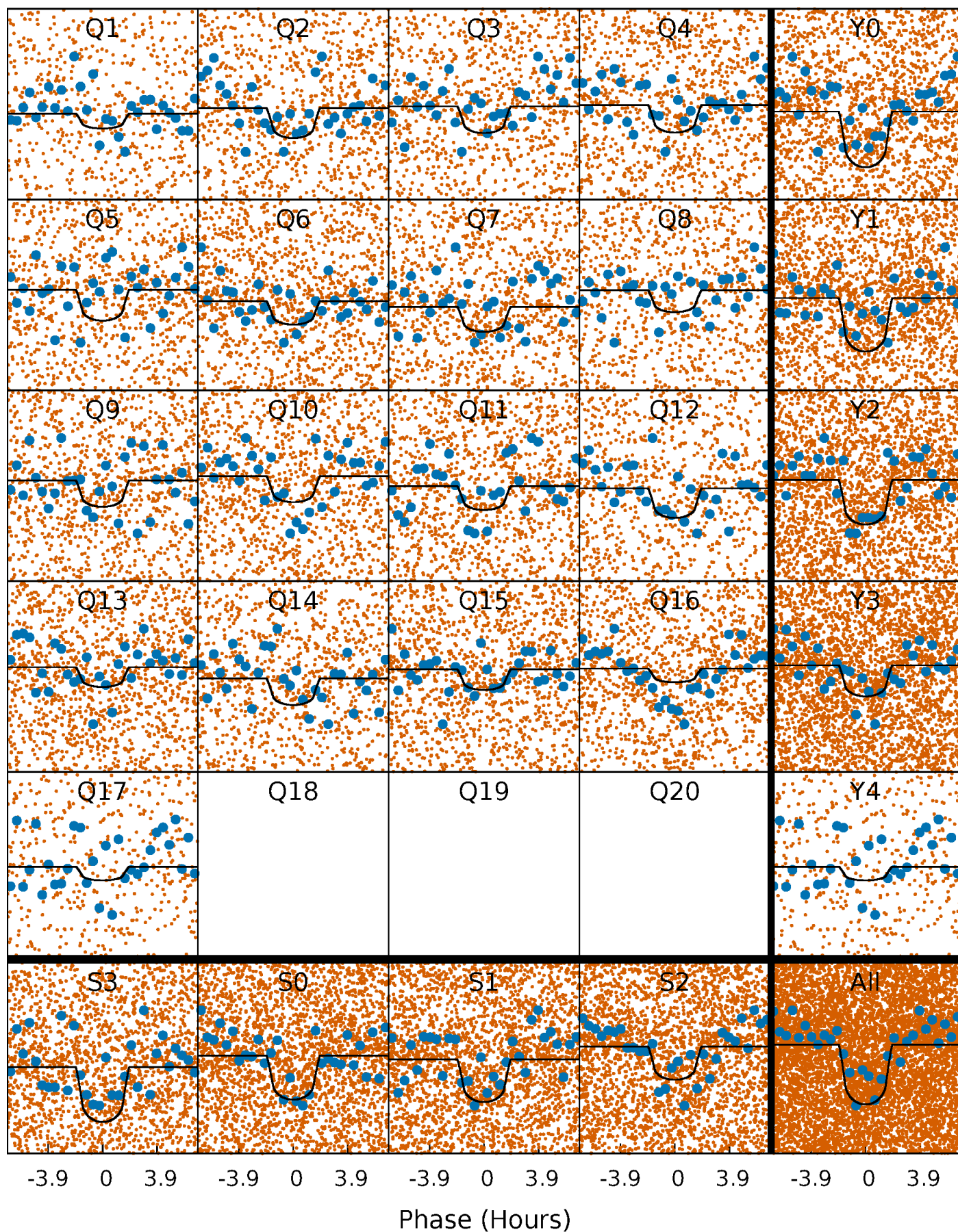
PDC Quarter-Phased Transit Curves

TCE 010535886-01 P= 0.933755 Days $T_0=132.447224$ (BKJD)



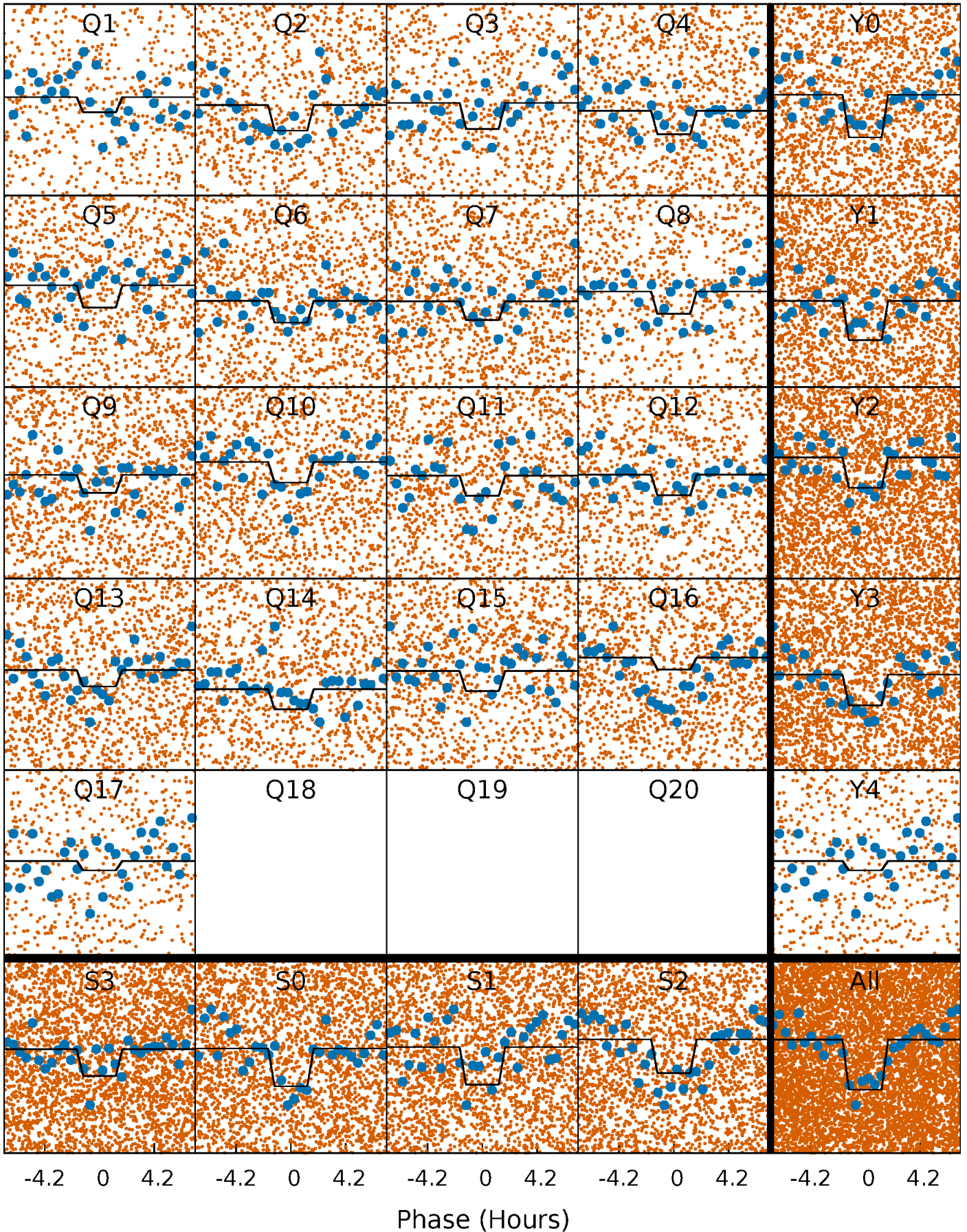
DV Quarter-Phased Transit Curves

TCE 010535886-01 P= 0.933755 Days $T_0=132.447224$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

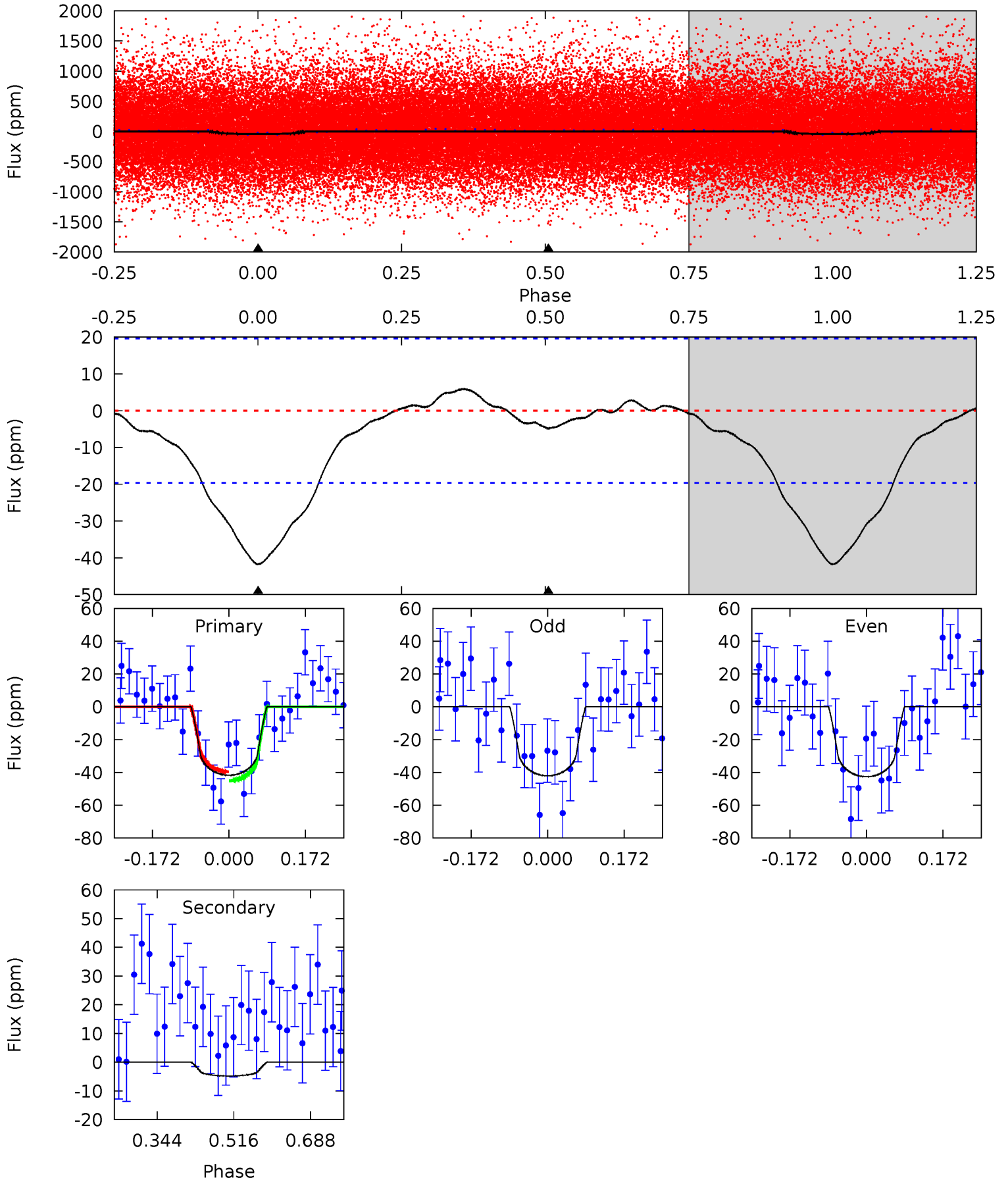
TCE 010535886-01 P= 0.933778 Days $T_0=132.429995$ (BKJD)



DV Model-Shift Uniqueness Test

010535886-01, $P = 0.933755$ Days, $E = 130.579714$ Days

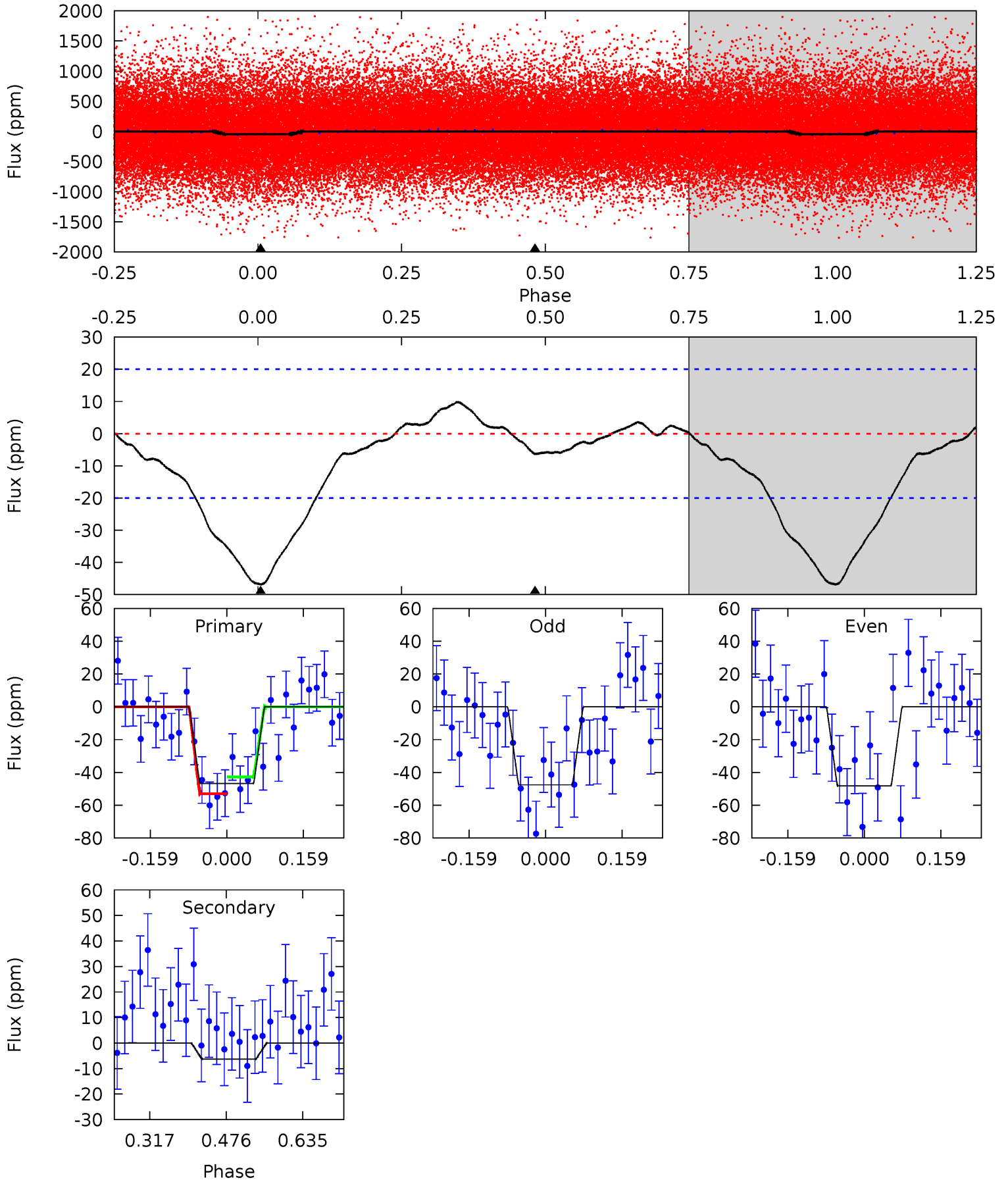
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.47	1.09	0	0	4.45	1.37	0.65	9.47	9.47	1.09	1.09	0.07	0.95	0.12	0.62



Alt Model-Shift Uniqueness Test

010535886-01, P = 0.933778 Days, E = 131.496217 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	1.41	0	0	4.47	1.41	0.97	10.5	10.5	1.41	1.41	0.08	0.93	0.17	1.15



Stellar Parameters For KIC 010535886

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3885^{+50}_{-46}	$4.710^{+0.028}_{-0.016}$	$-0.100^{+0.100}_{-0.100}$	$0.540^{+0.019}_{-0.026}$	$0.545^{+0.022}_{-0.022}$	$4.882^{+0.571}_{-0.305}$
	+1%/-1%	+1%/-0%	+100%/-100%	+4%/-5%	+4%/-4%	+12%/-6%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 010535886-01 / KOI 8021.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-5 ± 4	$0.52^{+0.33}_{-0.30}$	1419^{+21}_{-22}	2489^{+774}_{-4138}	$1.996^{+11.367}_{-1.723}$
Alt.	-6 ± 4	$0.46^{+0.35}_{-0.29}$	1421^{+21}_{-23}	2676^{+840}_{-619}	$3.350^{+17.705}_{-2.717}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

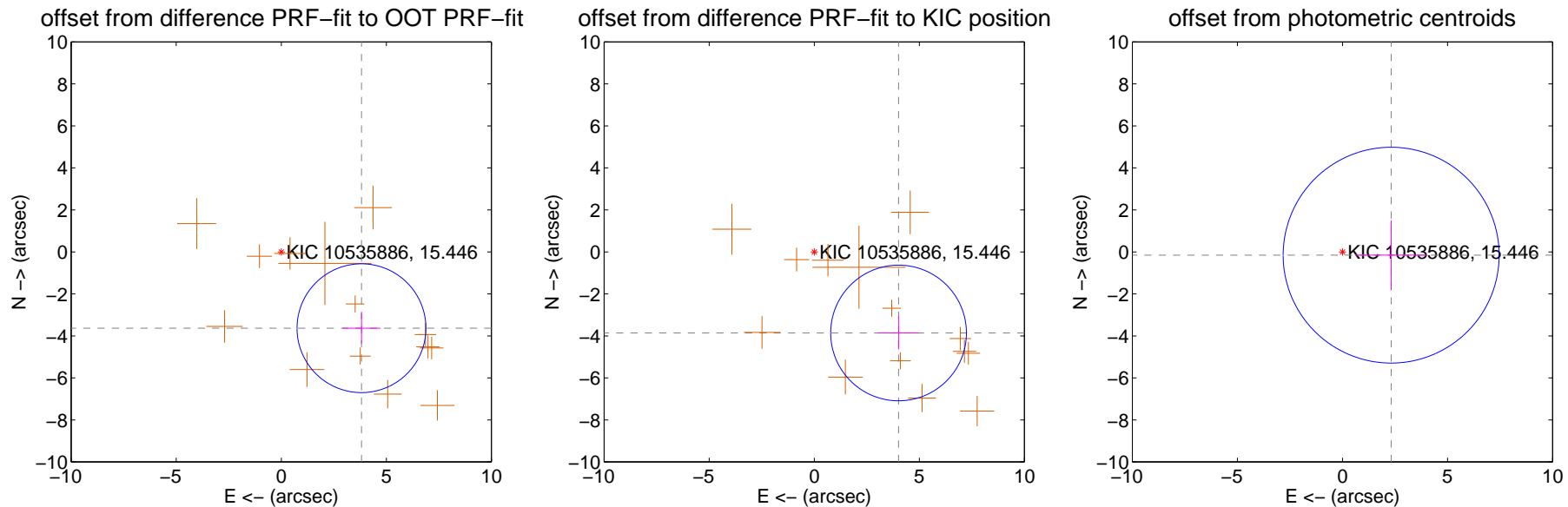
DV Centroid Data

Supplemental centroid analysis for 010535886-01. Kepler magnitude: 15.45. Transit SNR 8.72

There are 0 quarters with good PRF difference image offsets

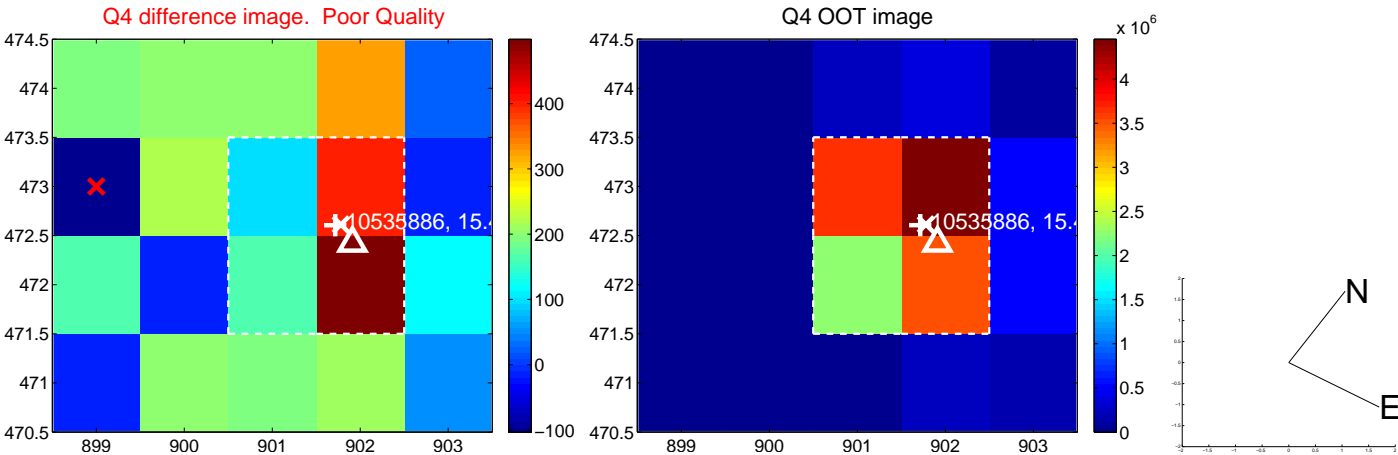
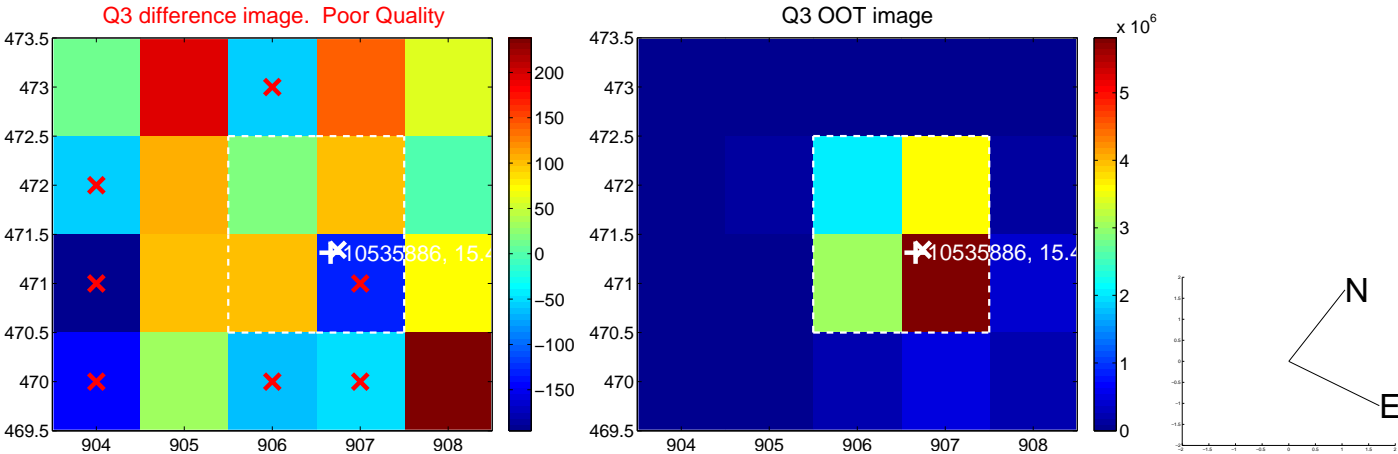
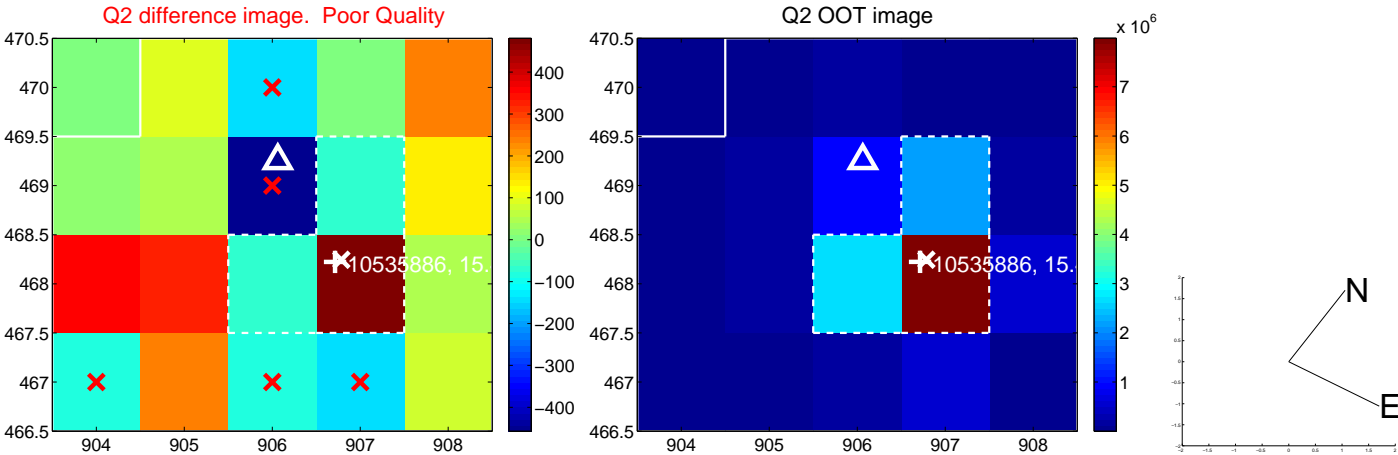
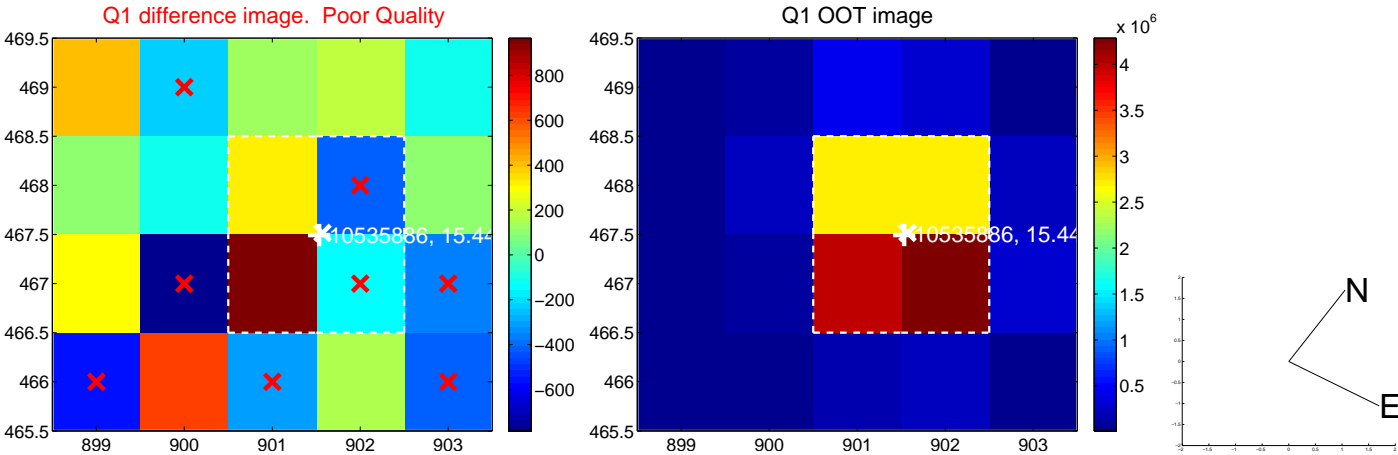
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.268 ± 1.022	5.15	-3.816 ± 0.899	-3.633 ± 0.729
PRF-fit source offset from KIC position	5.566 ± 1.077	5.17	-4.010 ± 0.963	-3.860 ± 0.787
photometric centroid source offset	2.32 ± 1.71	1.36	-2.32 ± 1.71	-0.15 ± 1.66

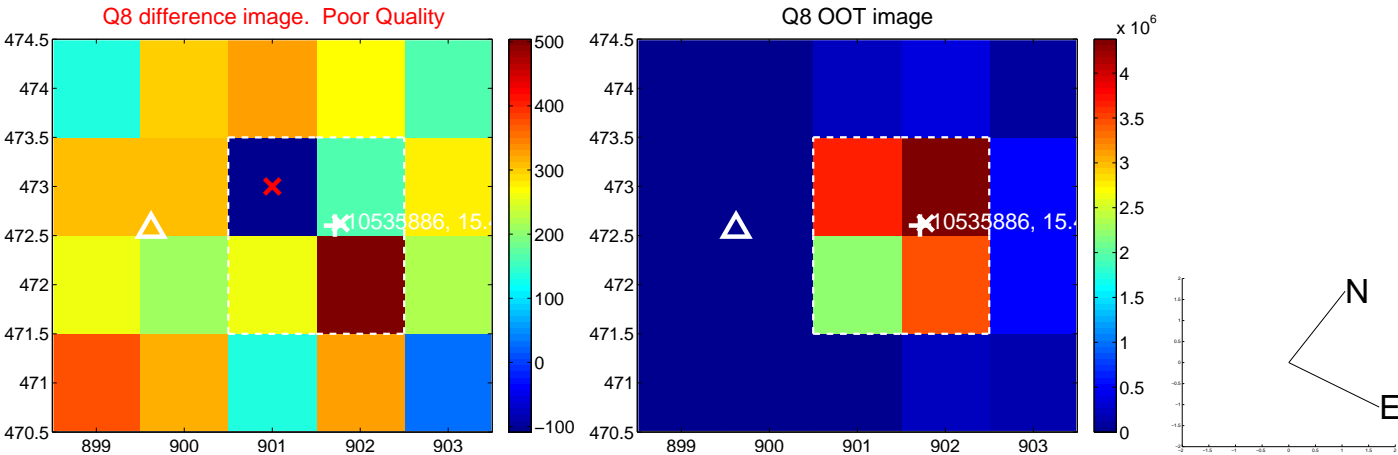
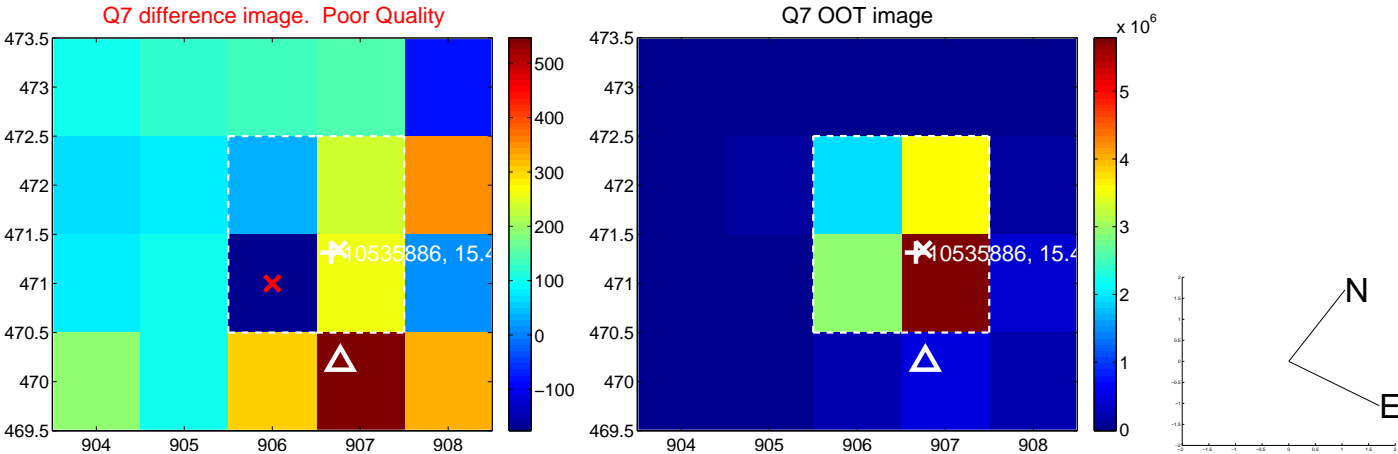
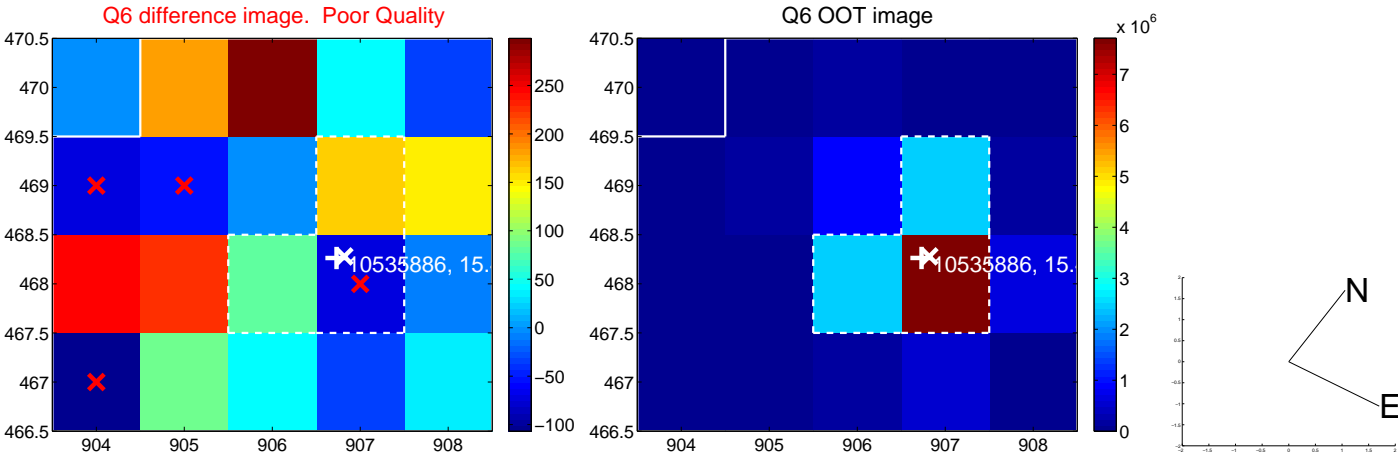
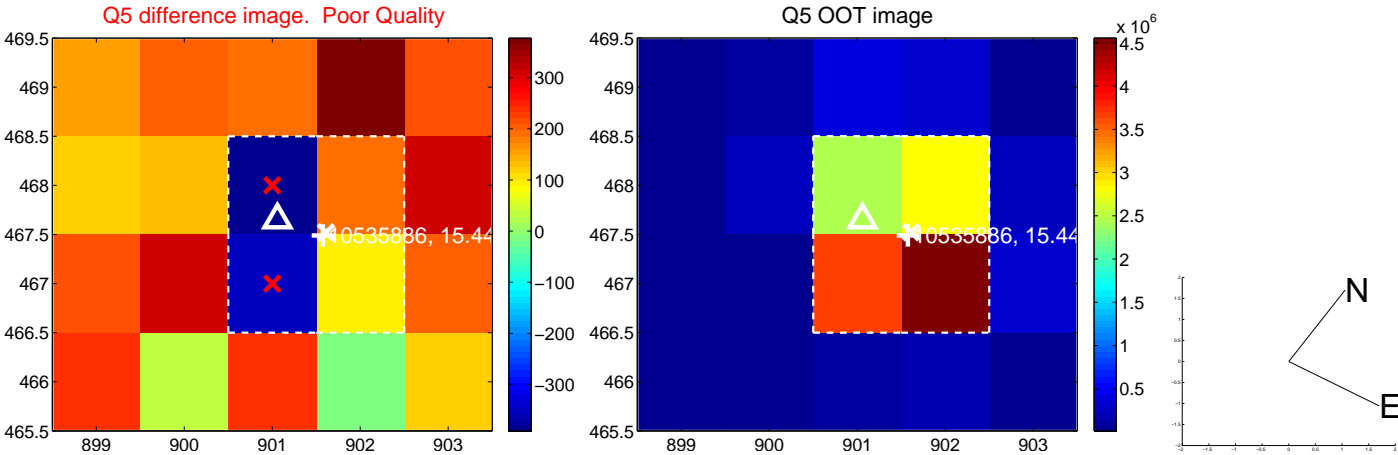


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

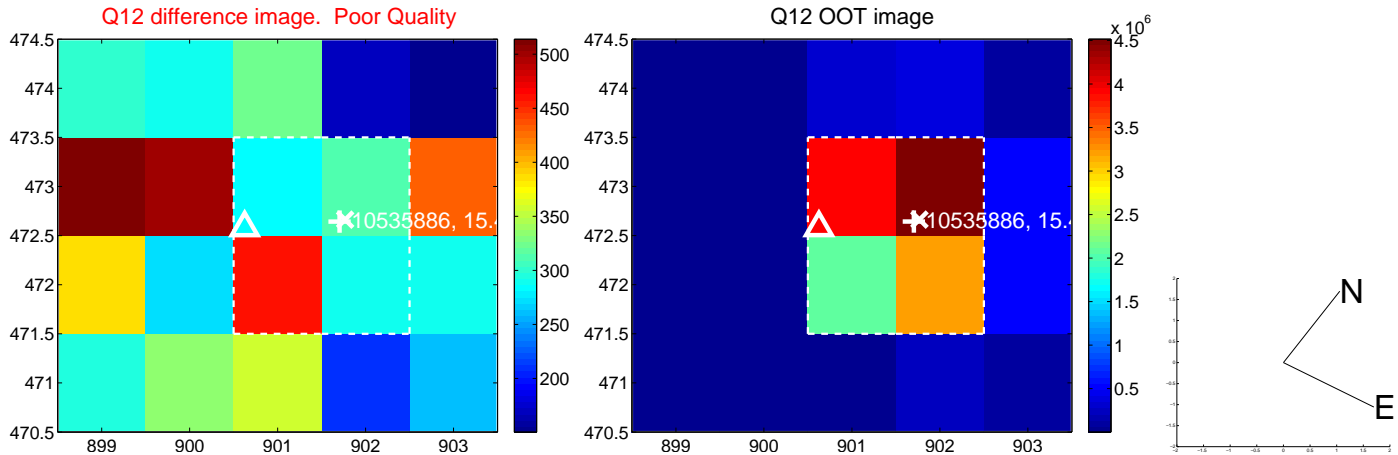
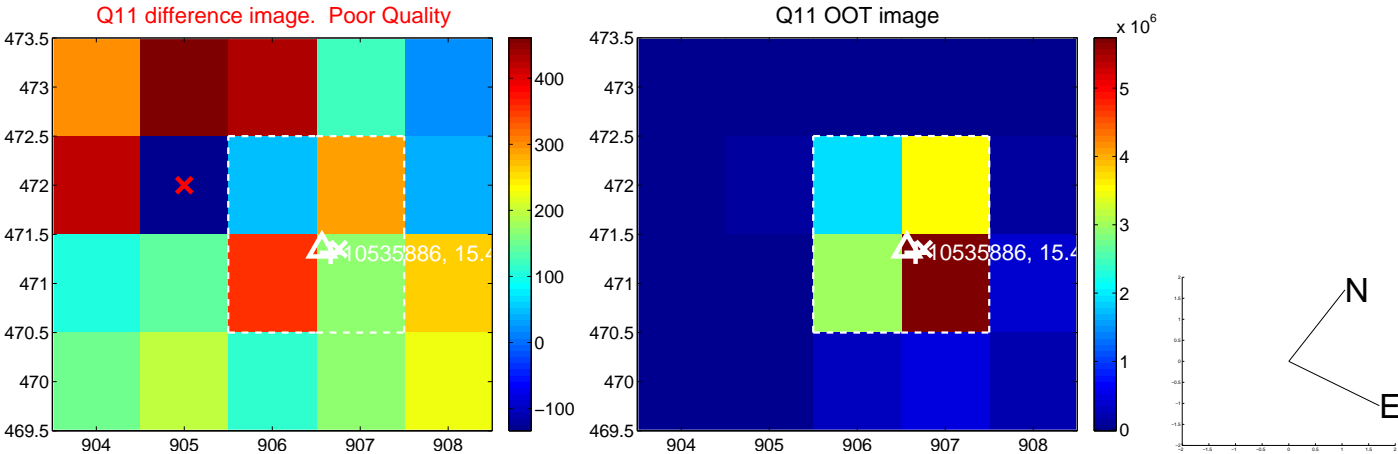
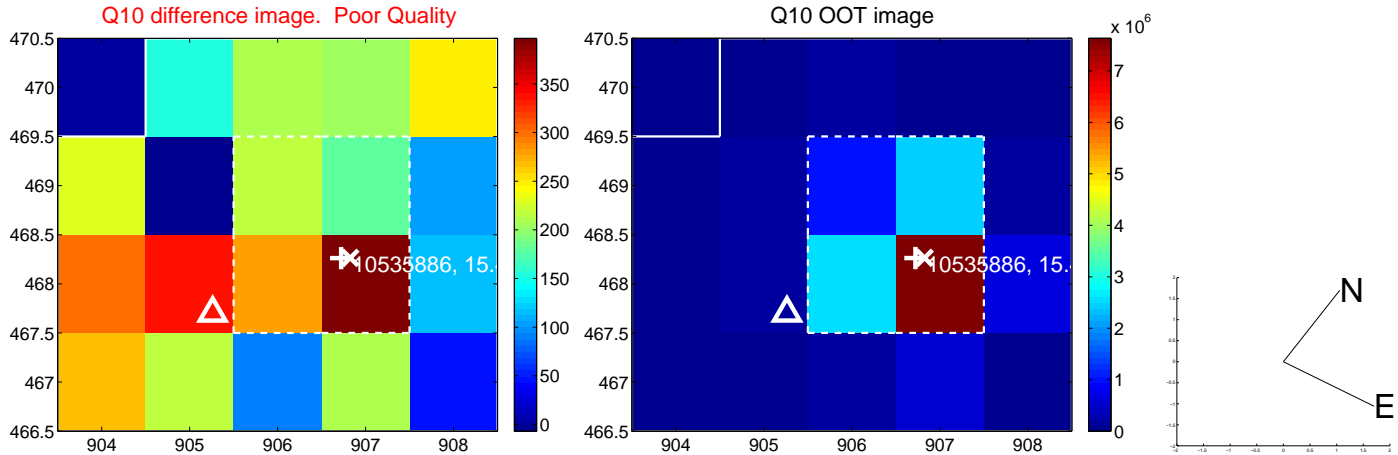
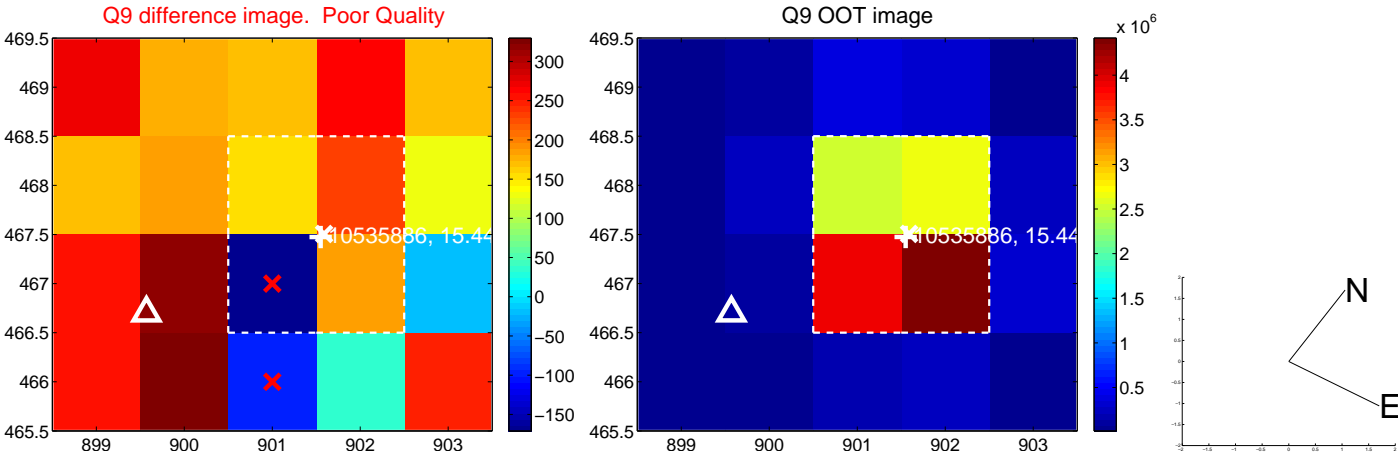
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



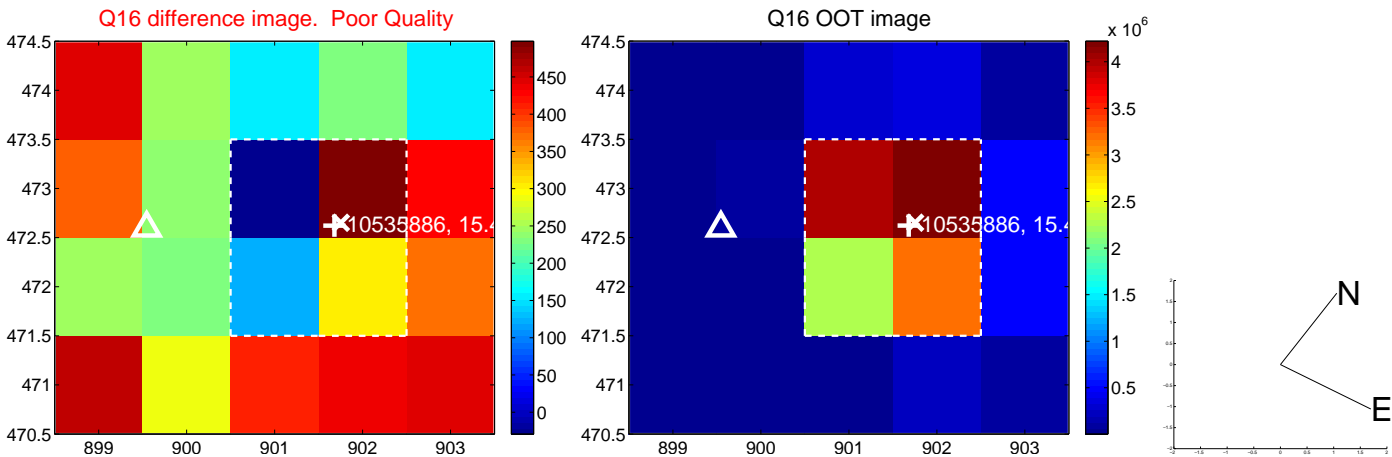
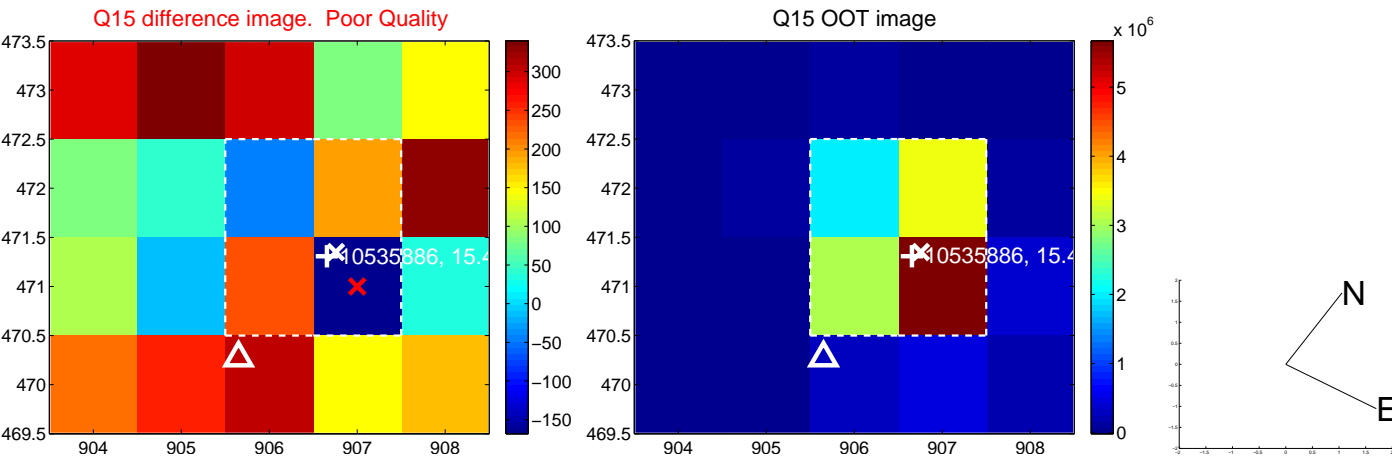
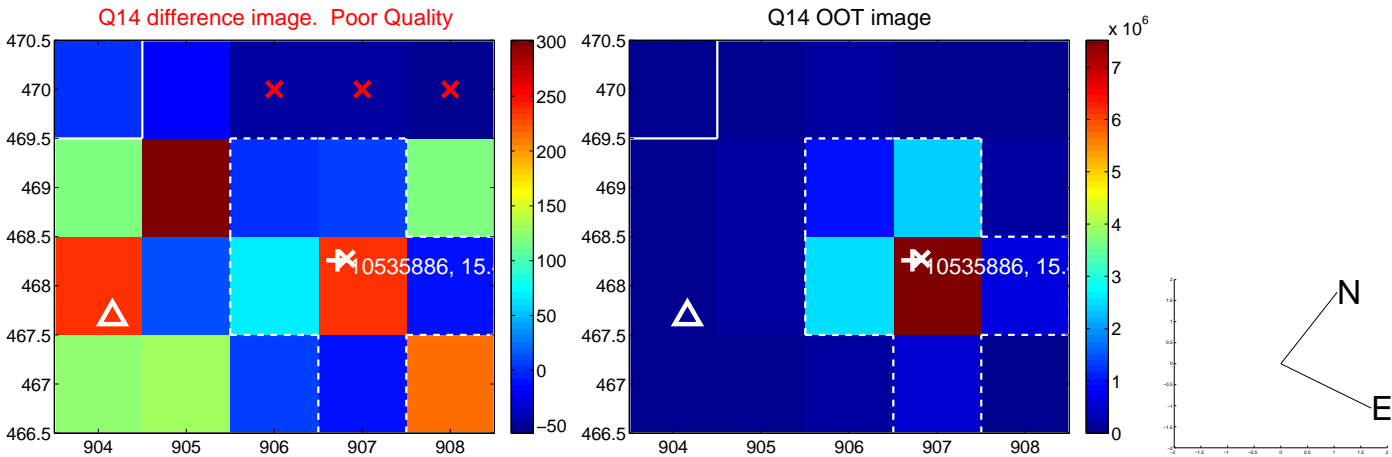
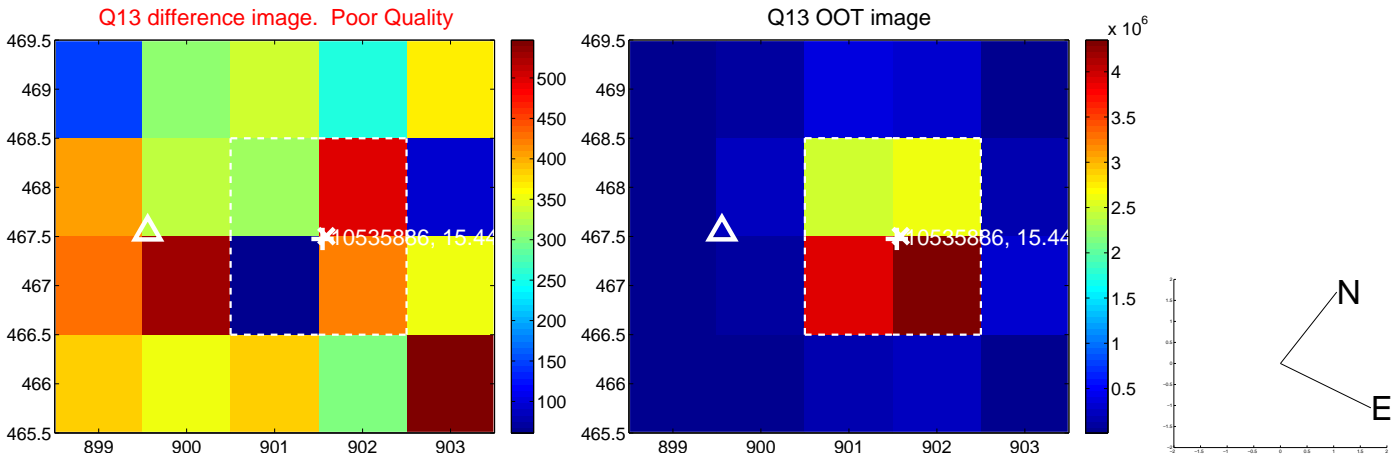
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



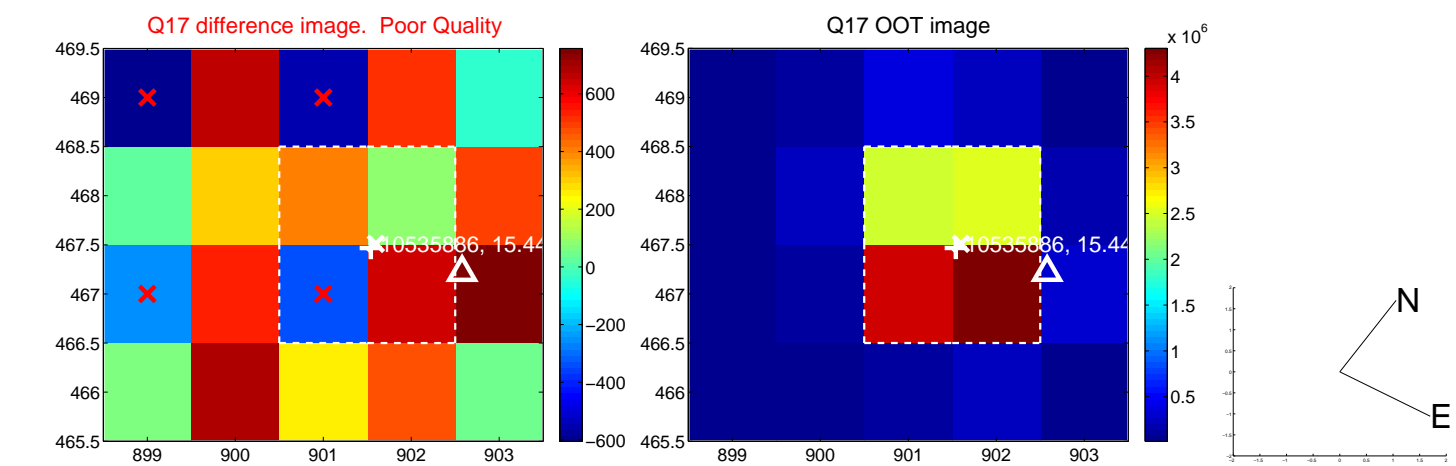
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



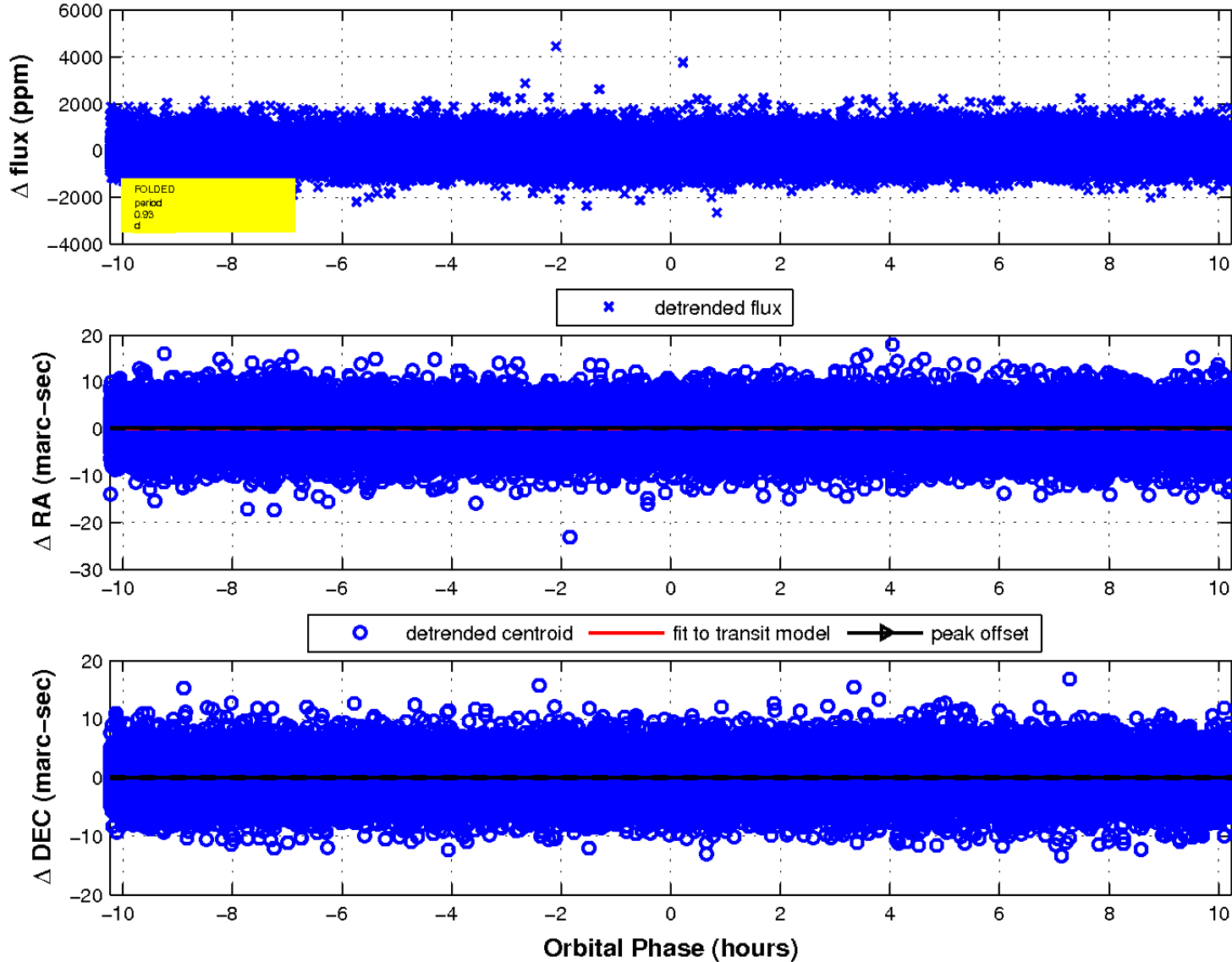
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

