

KIC 006522823

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})
006522823-01	OBS	No	1.628651	132.219879	223.8	12.838	10.3	11.8	1.66	6874	3.25	6213.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006522823-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_UNRESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

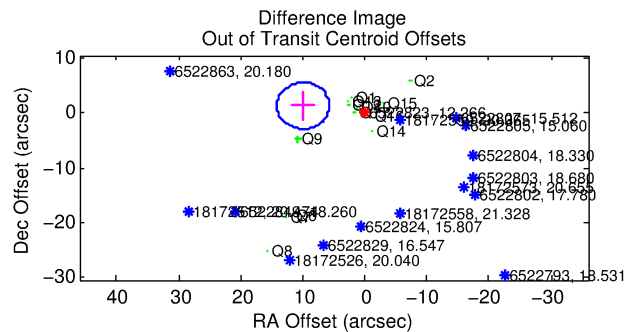
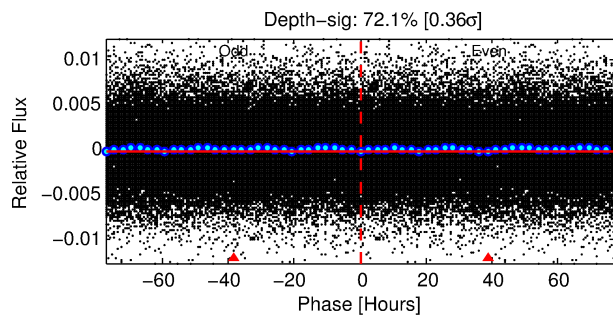
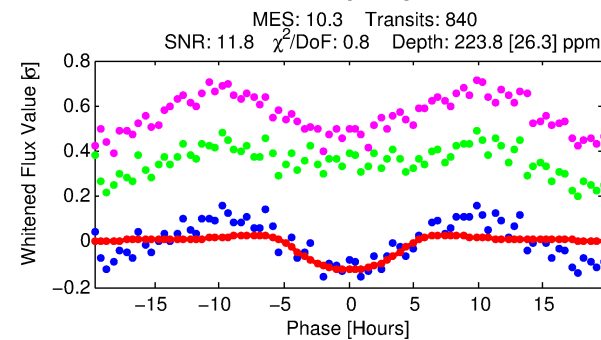
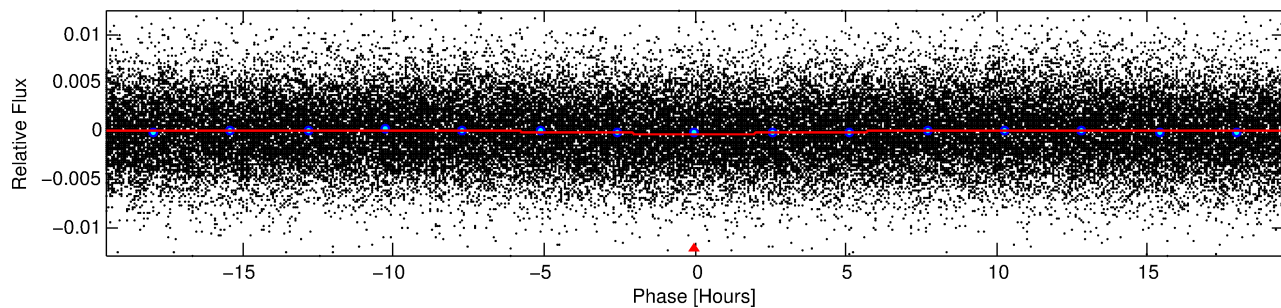
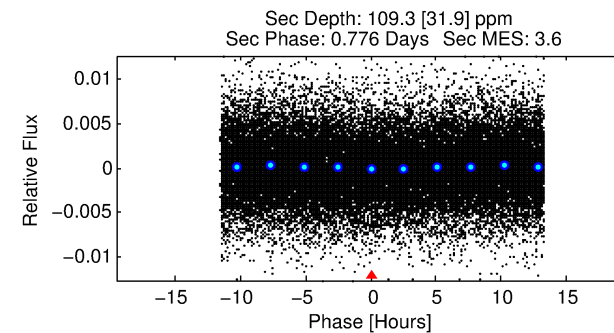
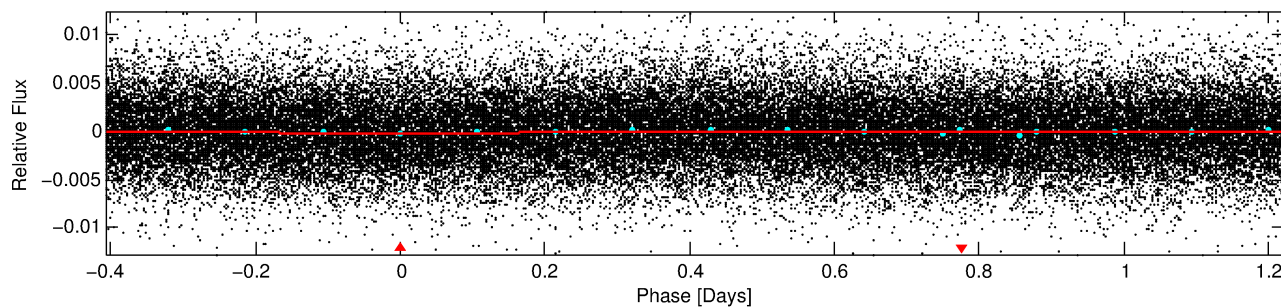
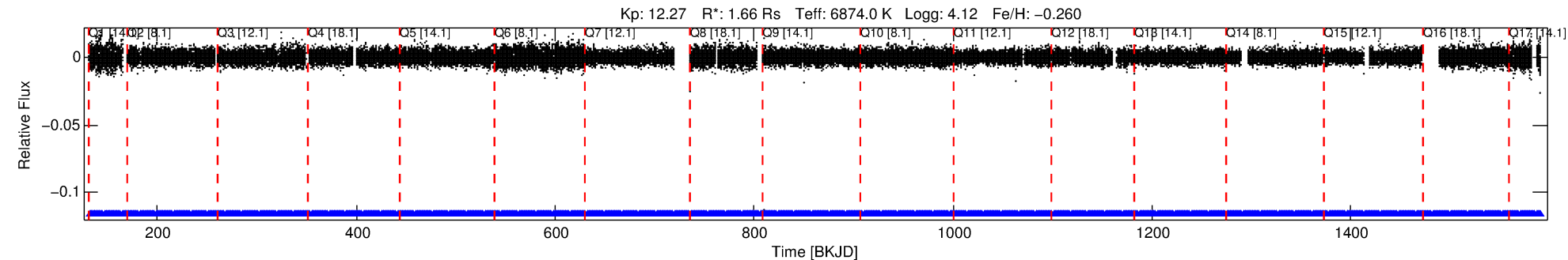
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006522823-01

No Significant Match Found

DV One-Page Summary

KIC: 6522823 Candidate: 1 of 1 Period: 1.629 d



DV Fit Results:

Period = 1.62865 [0.00004] d
Epoch = 132.2199 [0.0196] BKJD
Rp/R* = 0.0180 [0.0015]
a/R* = 1.03 [0.01]
b = 0.98 [0.01]
Seff = 6213.94 [2415.75]
Teq = 2264 [220] K
Rp = 3.25 [1.00] Re
a = 0.0298 [0.0073] AU
Ag = 5.04 [2.45] [1.65σ]
Teffp = 5244 [490] K [5.55σ]

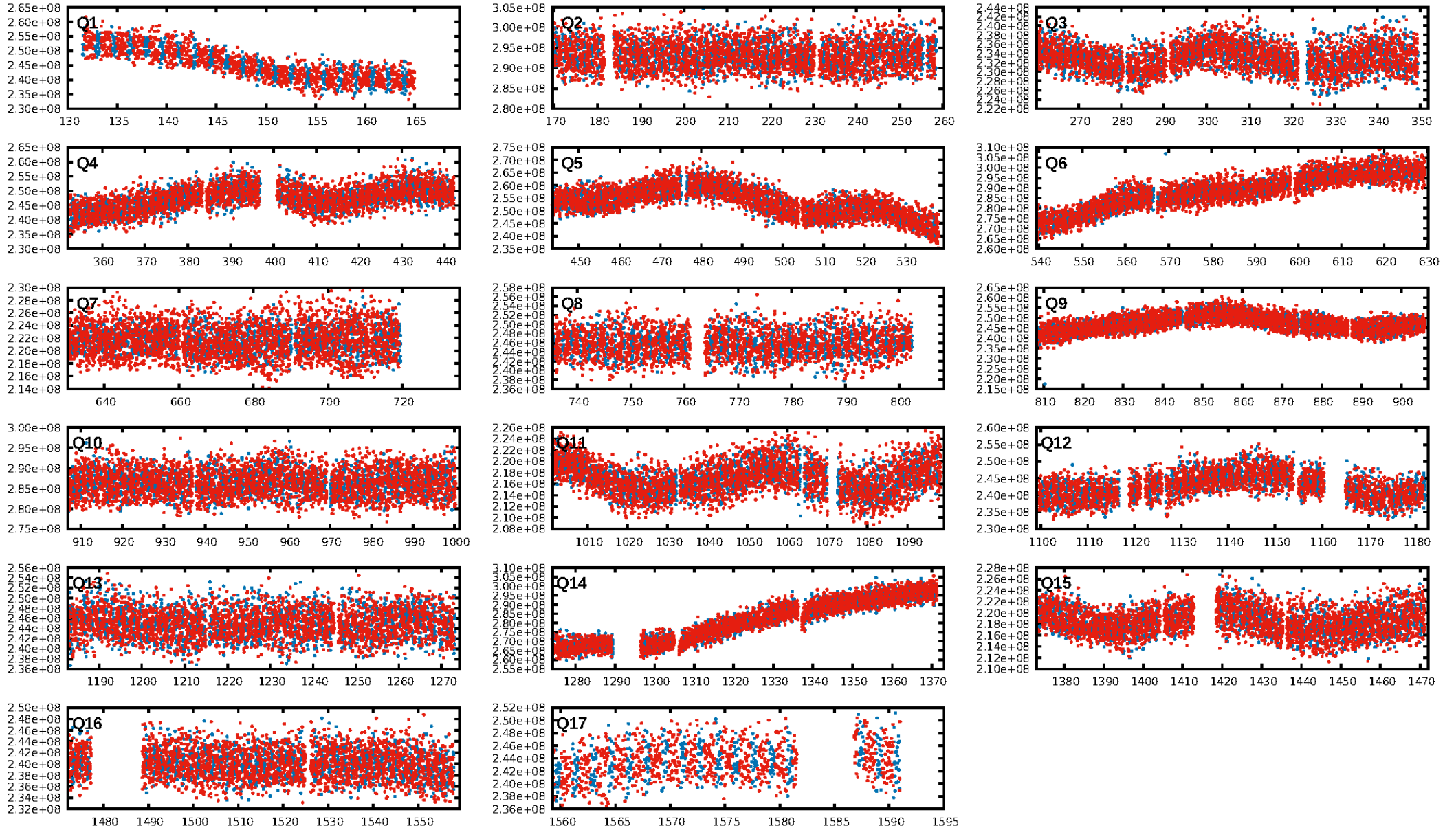
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [802/802]
GhostDiagnostic-chr: 3.994
Centroid-sig: 0.2%
Centroid-so: 0.498 arcsec [9.89σ]
OotOffset-rm: 10.071 arcsec [7.16σ]
KicOffset-rm: 10.381 arcsec [6.64σ]
OotOffset-st: 4/2/3/4 [13]
KicOffset-st: 4/2/3/4 [13]
DiffImageQuality-fgm: 0.31 [4/13]
DiffImageOverlap-fno: 1.00 [17/17]

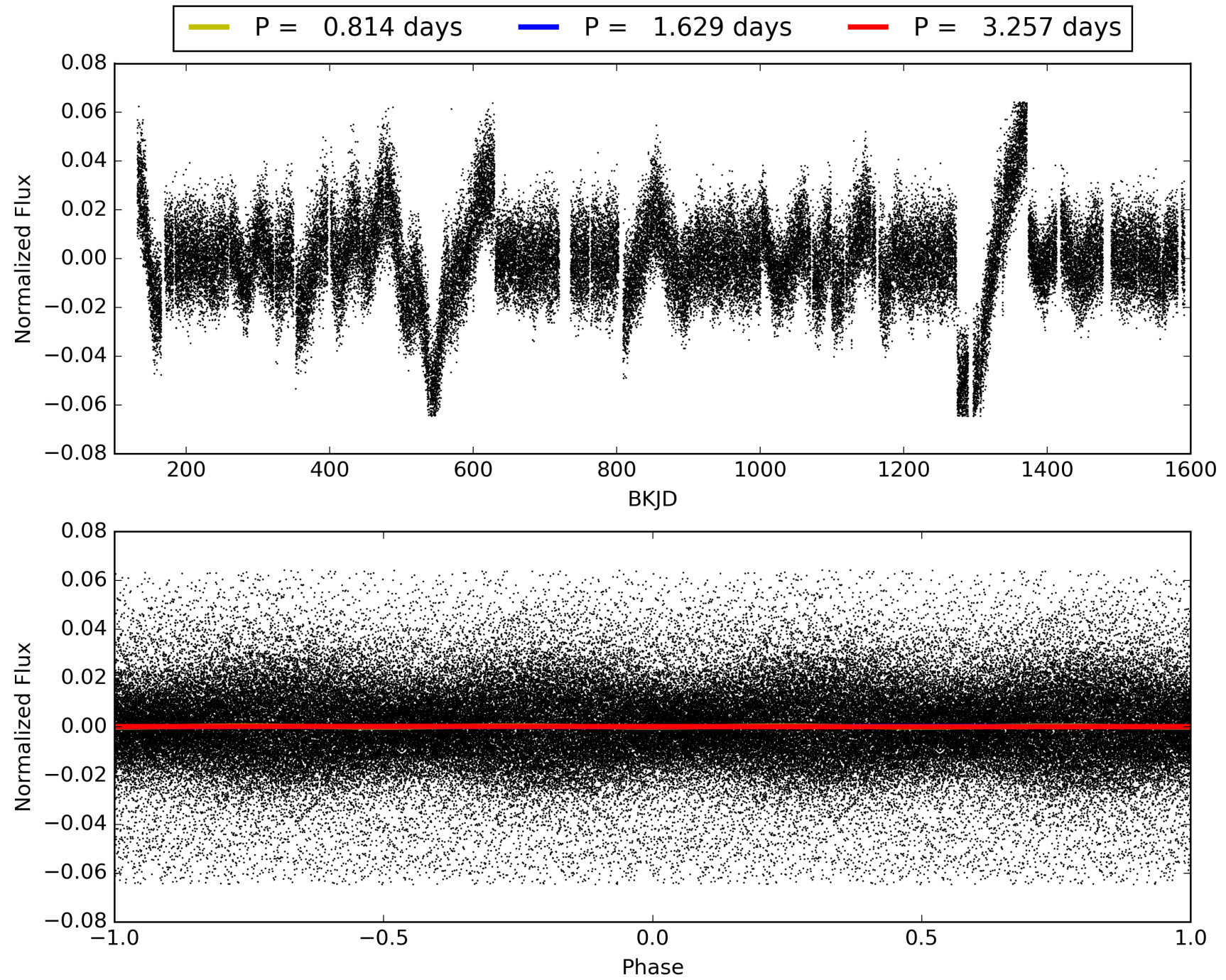
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:17:50 Z

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

TCE 006522823-01, PDC Light Curves

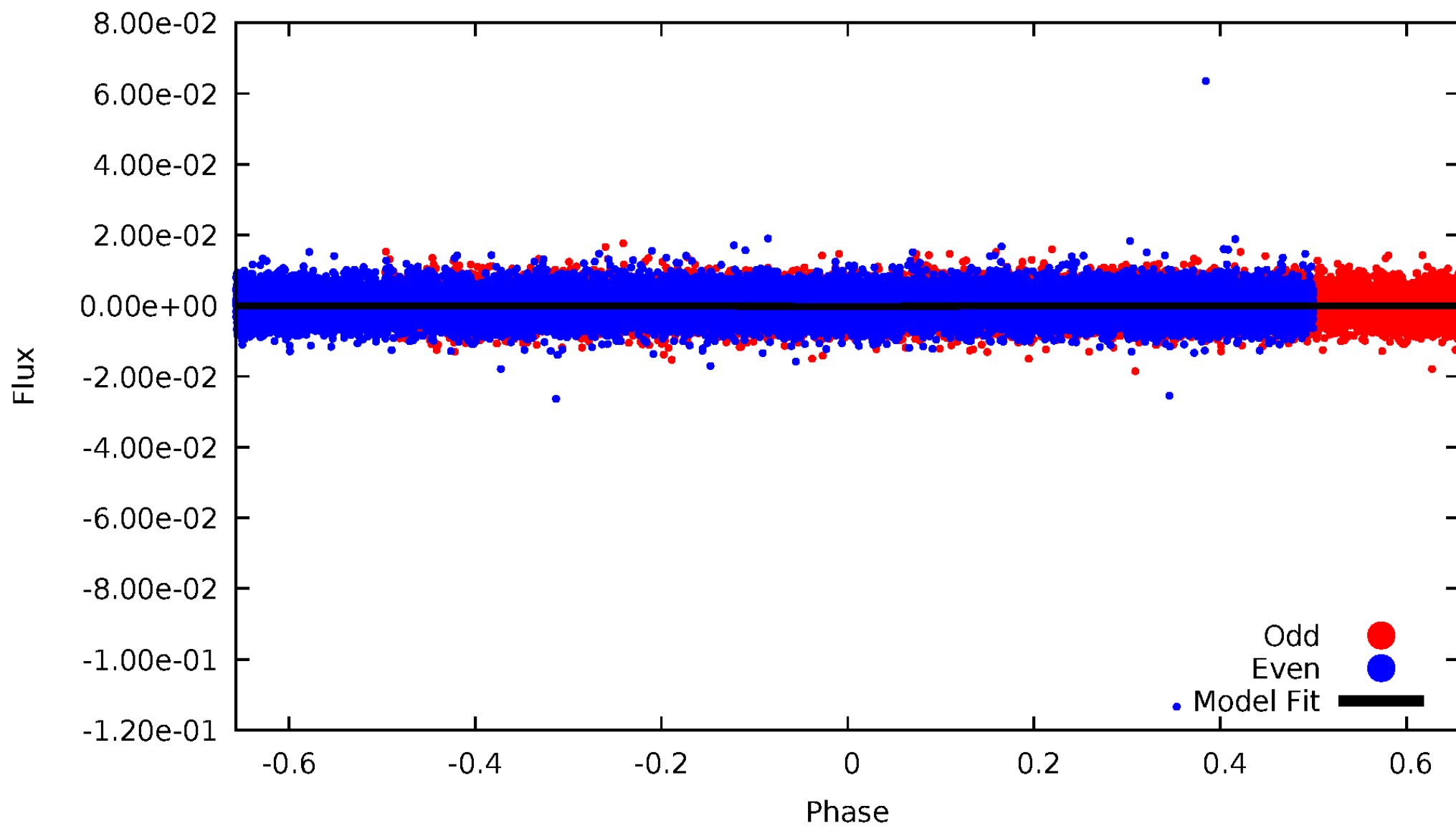


TCE 006522823-01



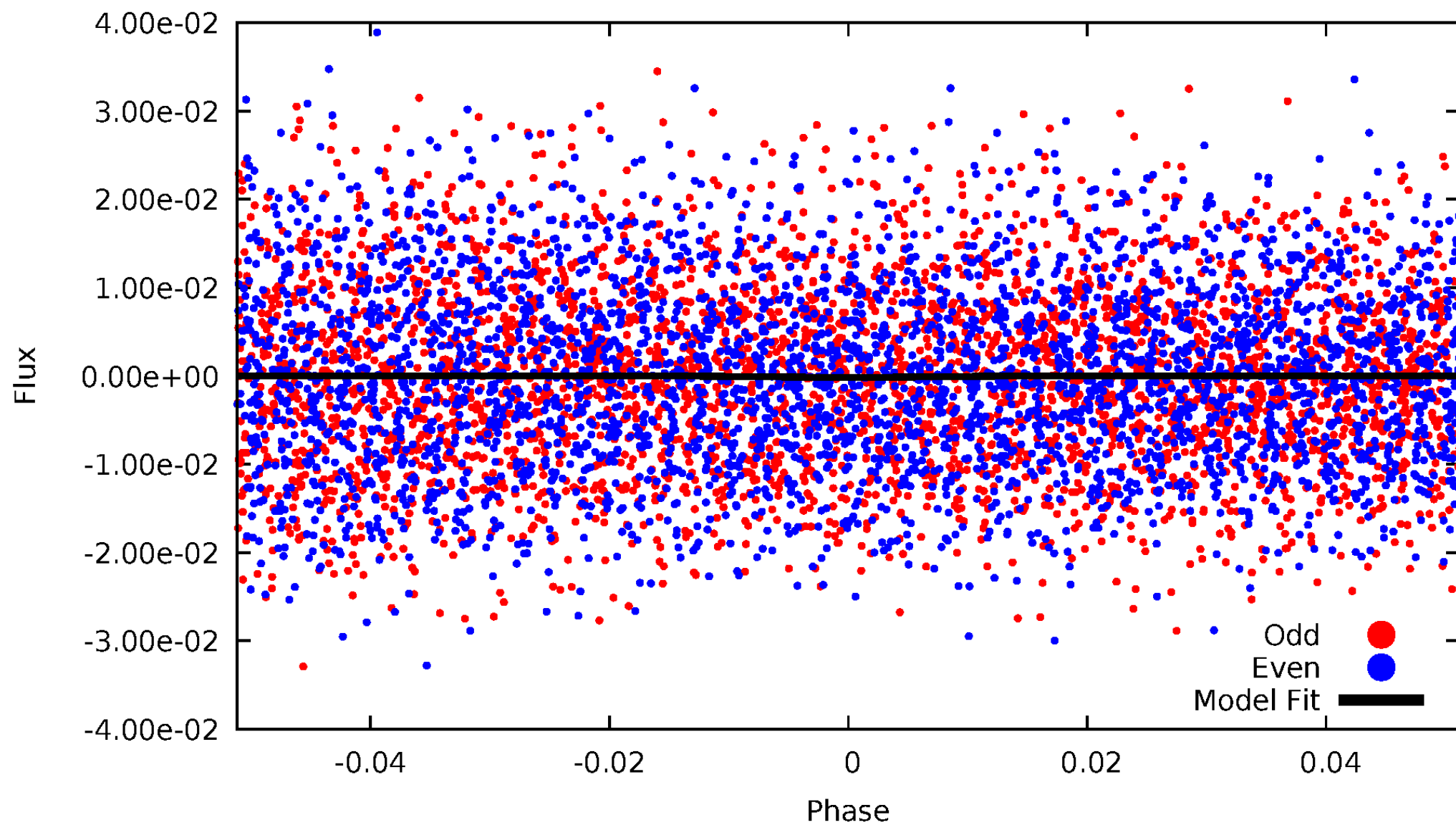
DV Odd/Even

TCE 006522823-01



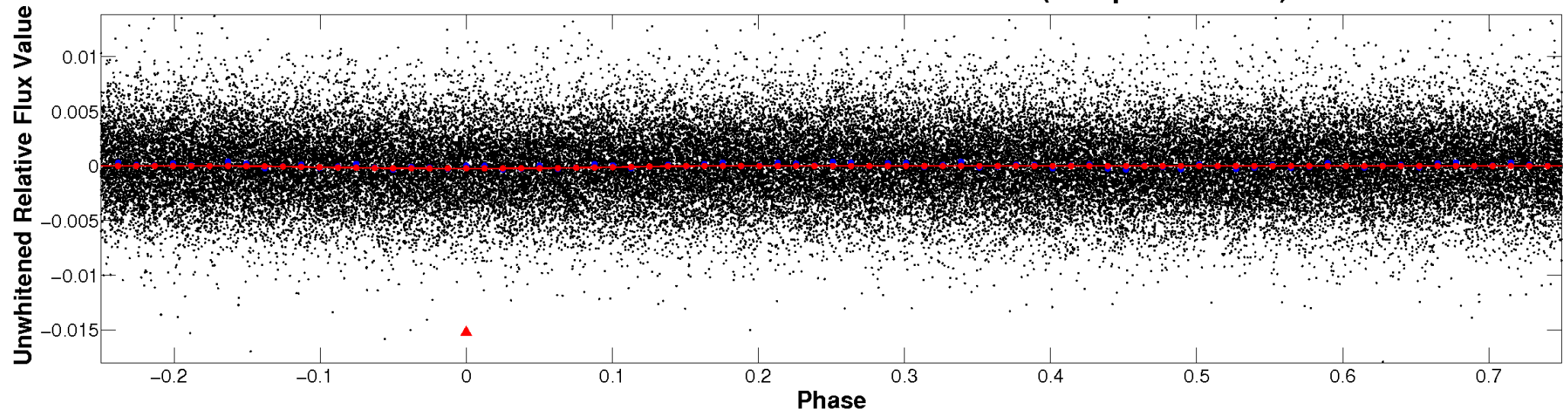
ALT Odd/Even

TCE 006522823-01

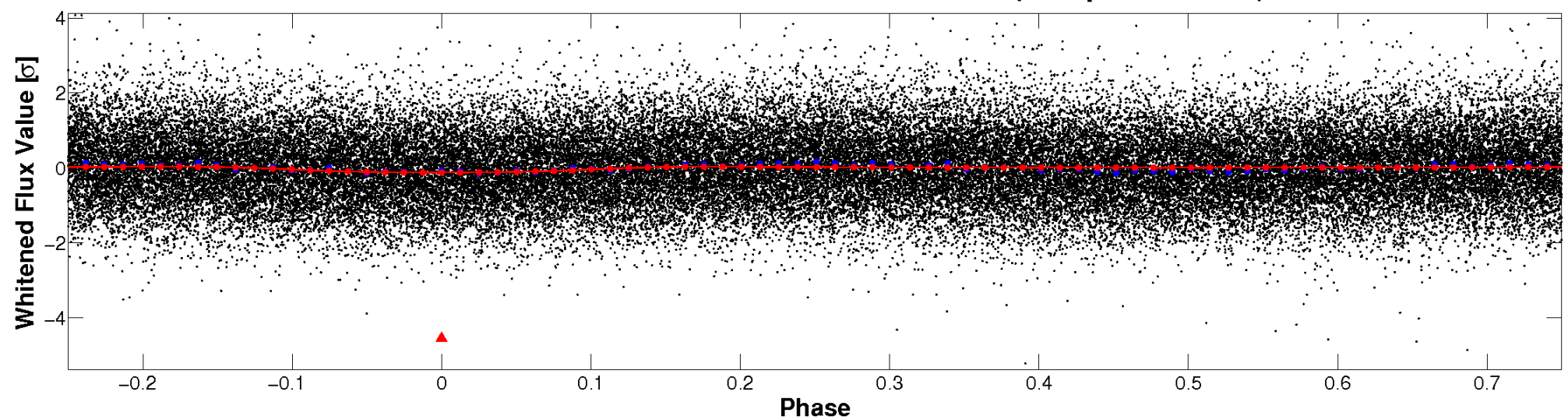


Non-Whitened Vs. Whitened Light Curve

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

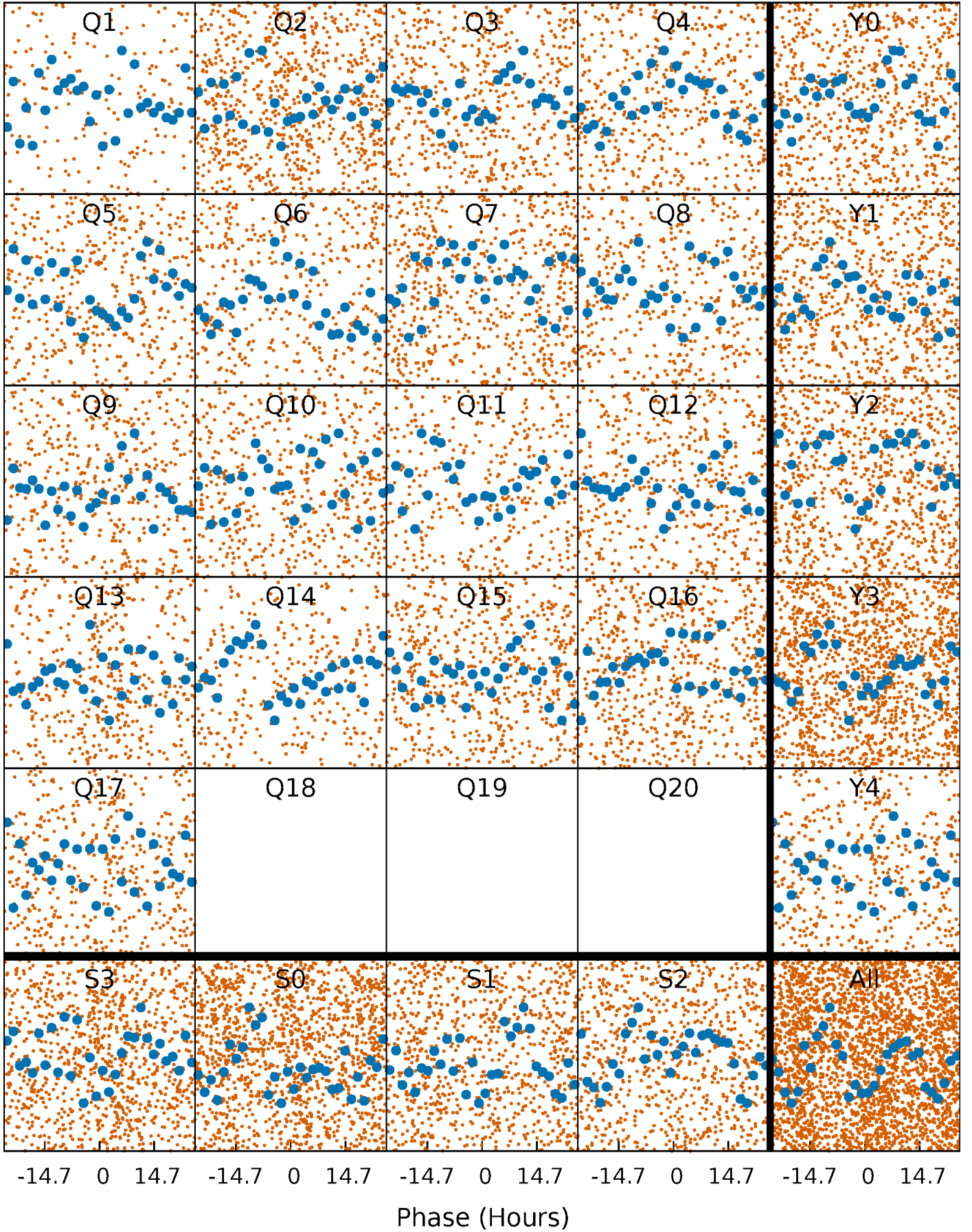


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



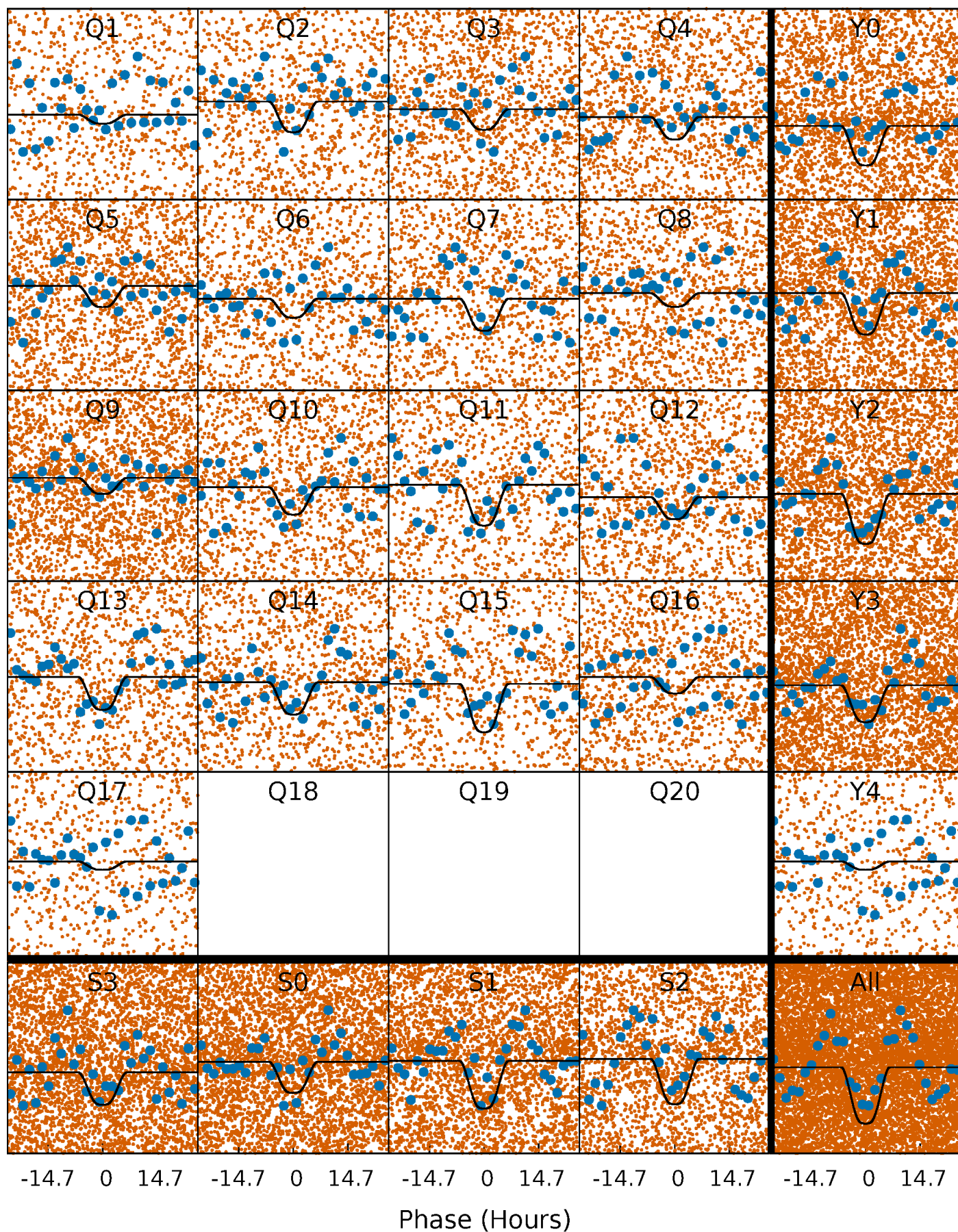
PDC Quarter-Phased Transit Curves

TCE 006522823-01 P= 1.628651 Days $T_0=132.219879$ (BKJD)



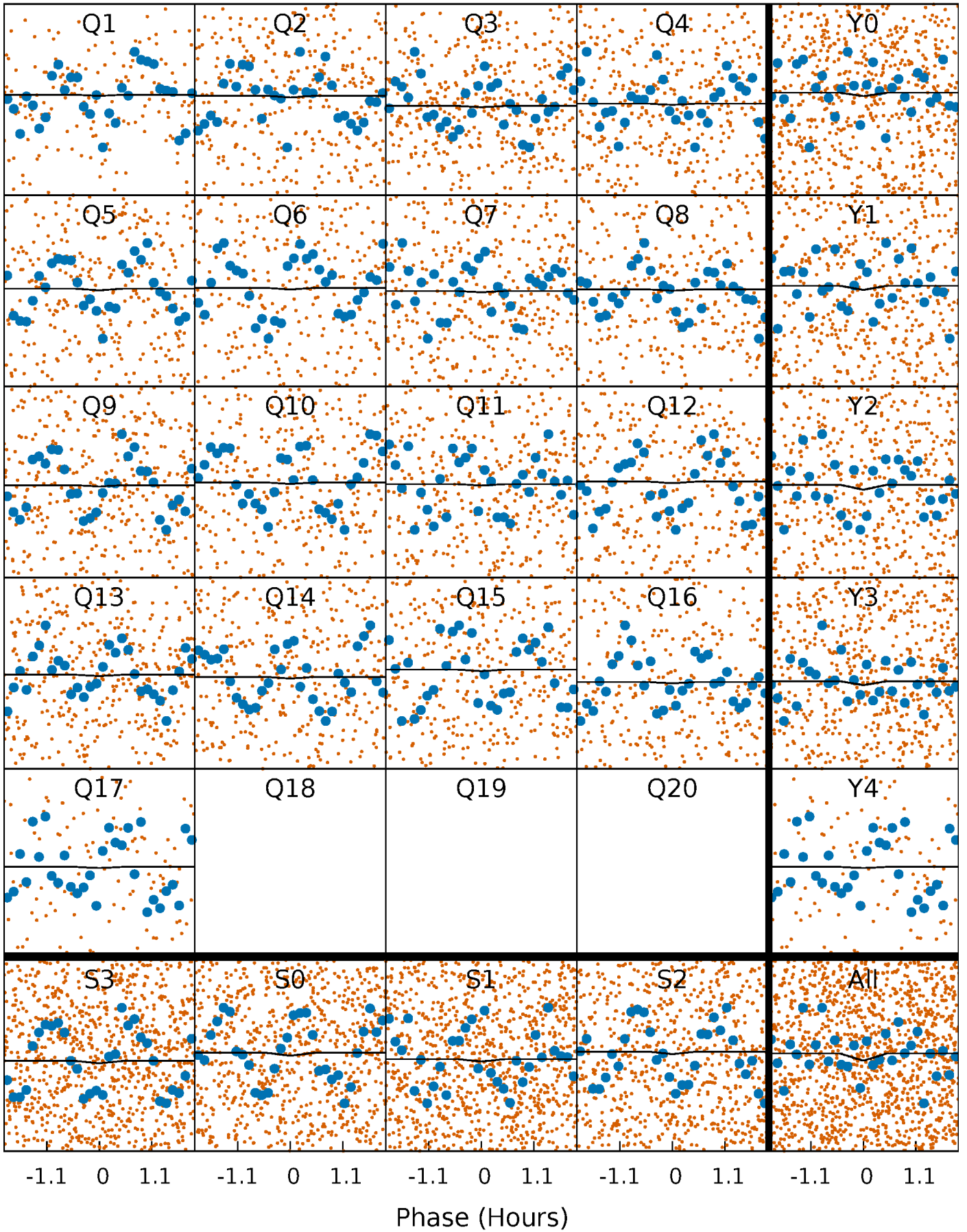
DV Quarter-Phased Transit Curves

TCE 006522823-01 P= 1.628651 Days $T_0=132.219879$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

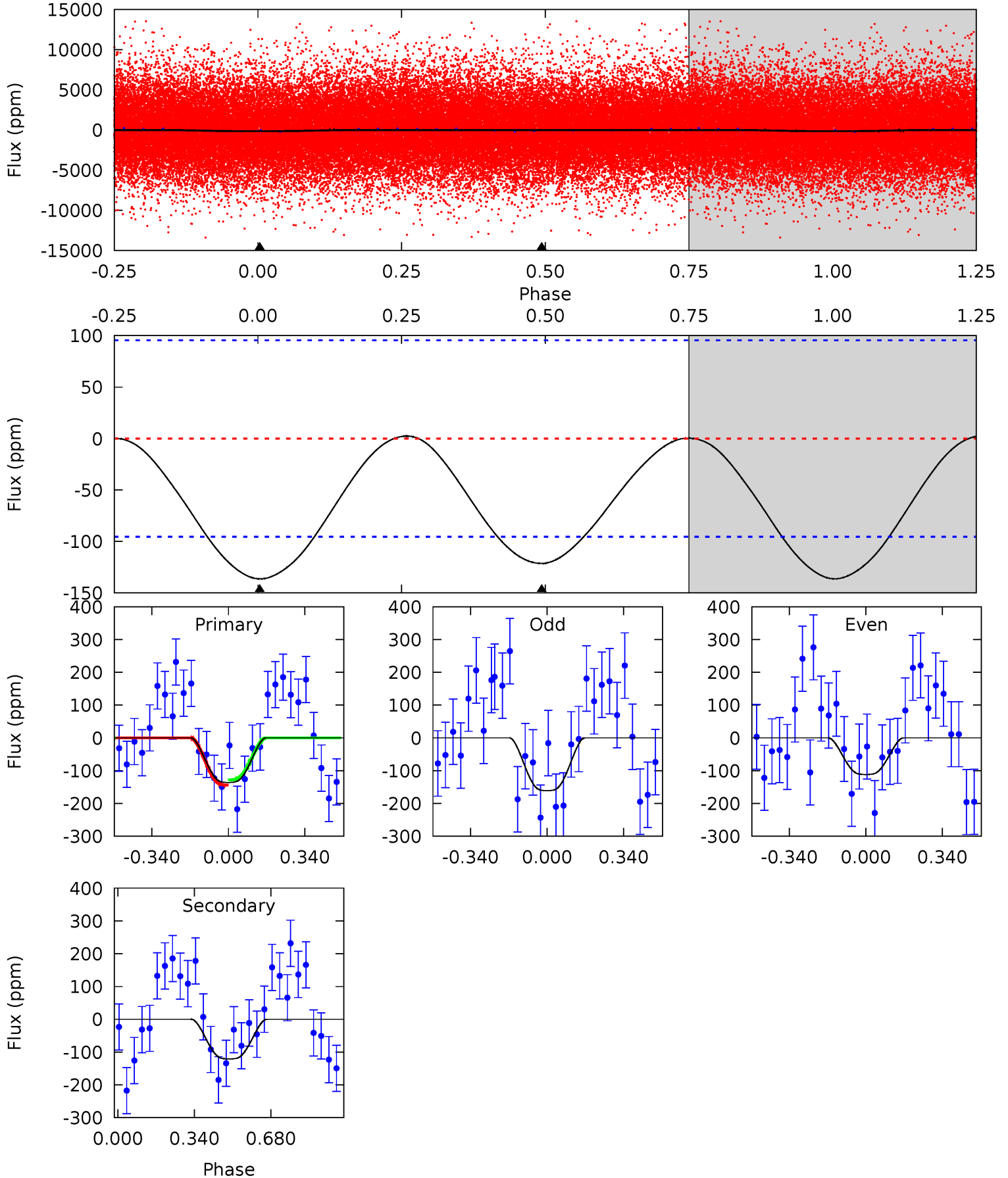
TCE 006522823-01 P= 1.628593 Days $T_0=132.169859$ (BKJD)



DV Model-Shift Uniqueness Test

006522823-01, P = 1.628651 Days, E = 130.591228 Days

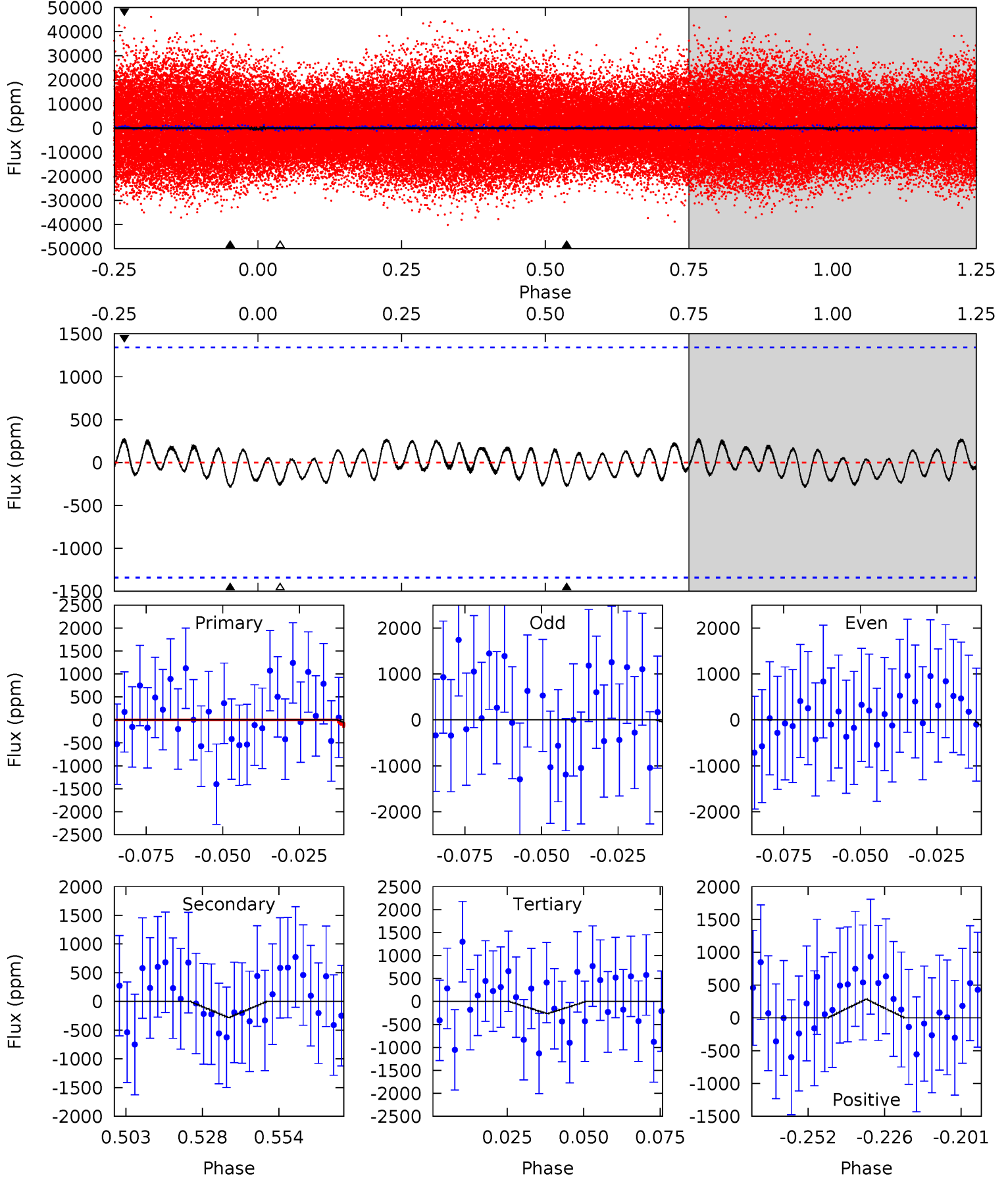
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.14	5.46	0	0	4.30	0.95	0.08	6.14	6.14	5.46	5.46	1.11	1.75	0.02	0.37



Alt Model-Shift Uniqueness Test

006522823-01, P = 1.628593 Days, E = 130.541266 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.05	1.01	0.96	1.02	4.85	2.24	0.47	0.09	0.03	0.05	-0.01	1.01	-0.77	0.49	1.01



Stellar Parameters For KIC 006522823

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6874^{+214}_{-285}	$4.121^{+0.190}_{-0.171}$	$-0.260^{+0.250}_{-0.300}$	$1.660^{+0.489}_{-0.444}$	$1.335^{+0.195}_{-0.238}$	$0.411^{+0.481}_{-0.194}$
	+3%/-4%	+5%/-4%	+96%/-115%	+29%/-27%	+15%/-18%	+117%/-47%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006522823-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-121±22	$3.26^{+0.59}_{-0.53}$	3159^{+251}_{-253}	5305^{+381}_{-340}	$5.540^{+2.670}_{-1.775}$
Alt.	-279±277	$2.46^{+0.47}_{-0.41}$	3158^{+245}_{-226}	7507^{+2216}_{-11549}	21^{+26}_{-22}

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 $A_{obs} \gg 1.0$

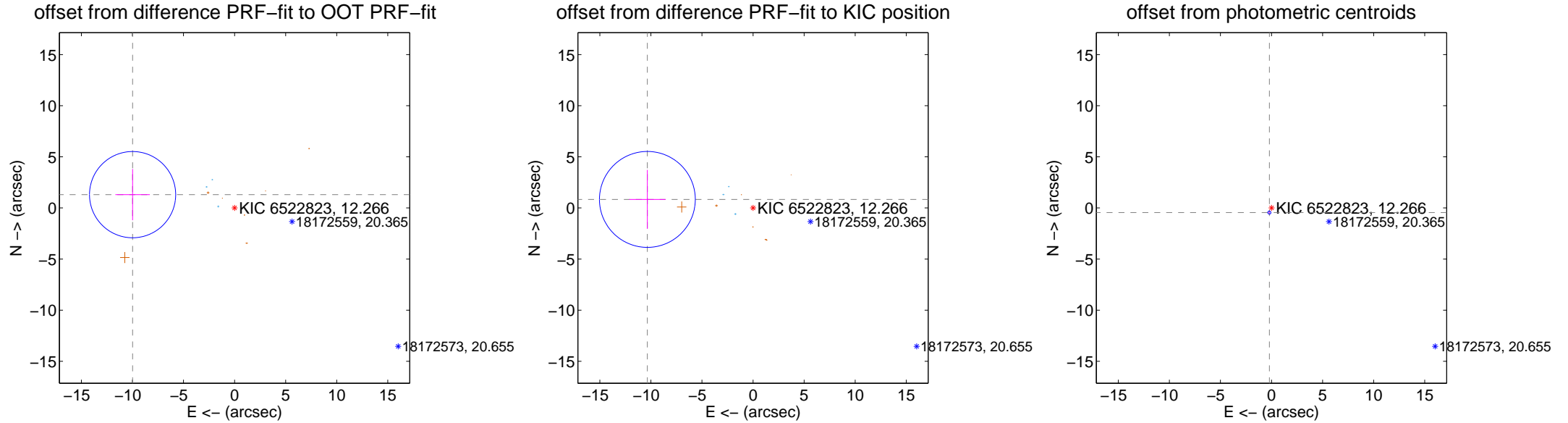
DV Centroid Data

Supplemental centroid analysis for 006522823-01. Kepler magnitude: 12.27. Transit SNR 11.84

There are 4 quarters with good PRF difference image offsets

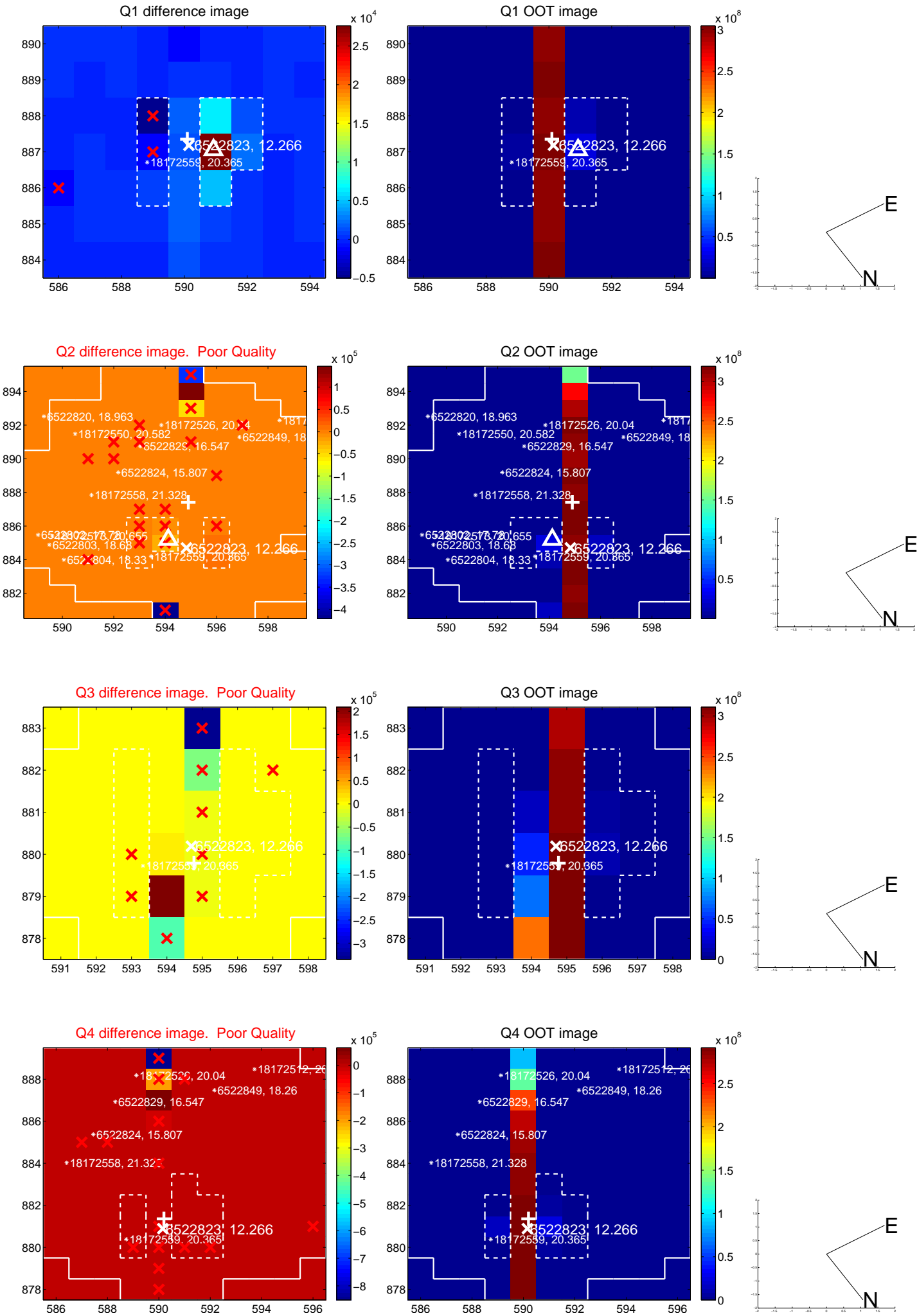
The direct PRF centroid is offset from the target star catalog position by about 0.75 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.071 ± 1.406	7.16	9.987 ± 1.690	1.301 ± 2.510
PRF-fit source offset from KIC position	10.381 ± 1.564	6.64	10.347 ± 1.779	0.835 ± 2.888
photometric centroid source offset	0.50 ± 0.05	9.89	0.21 ± 0.05	-0.45 ± 0.05

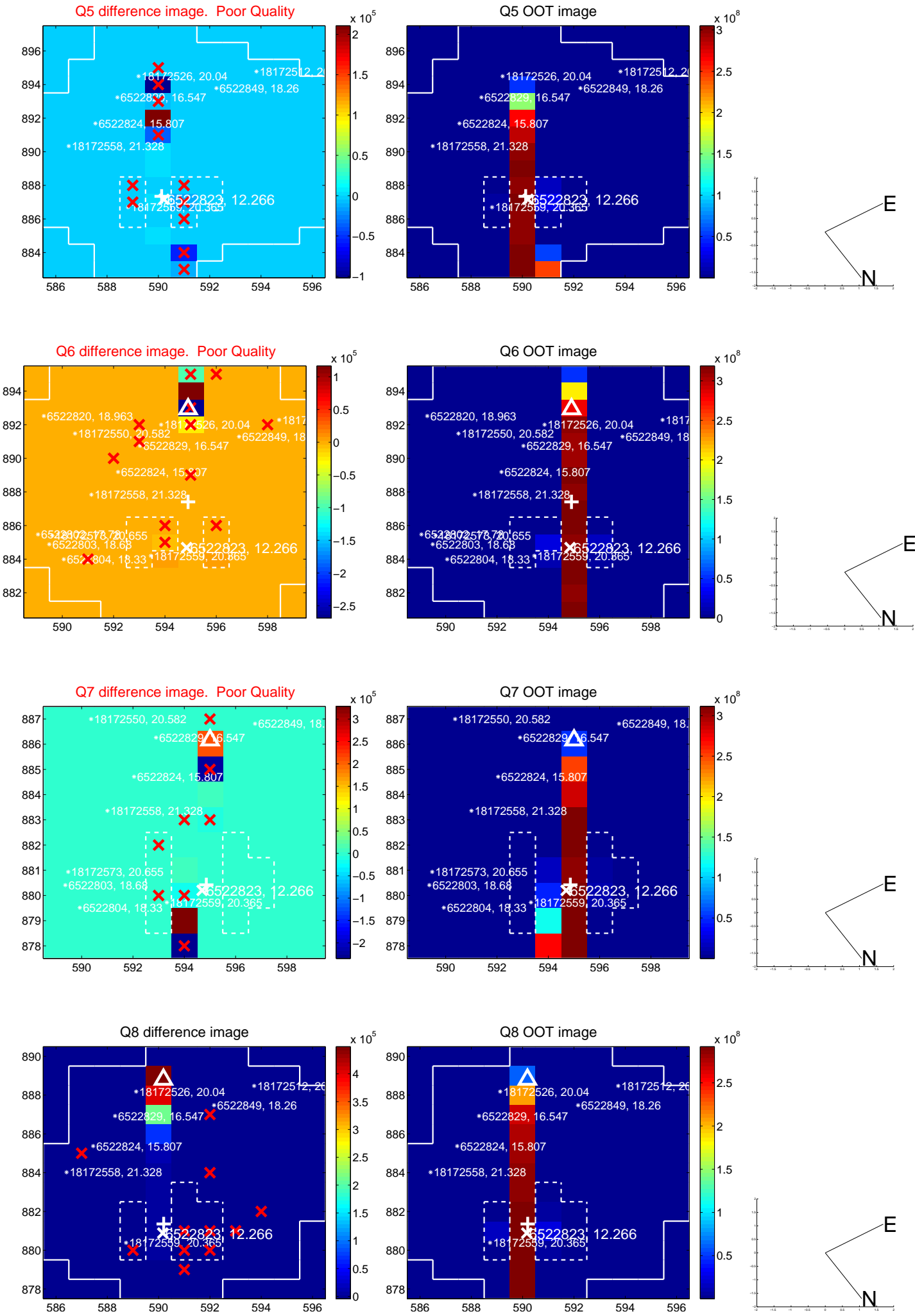


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

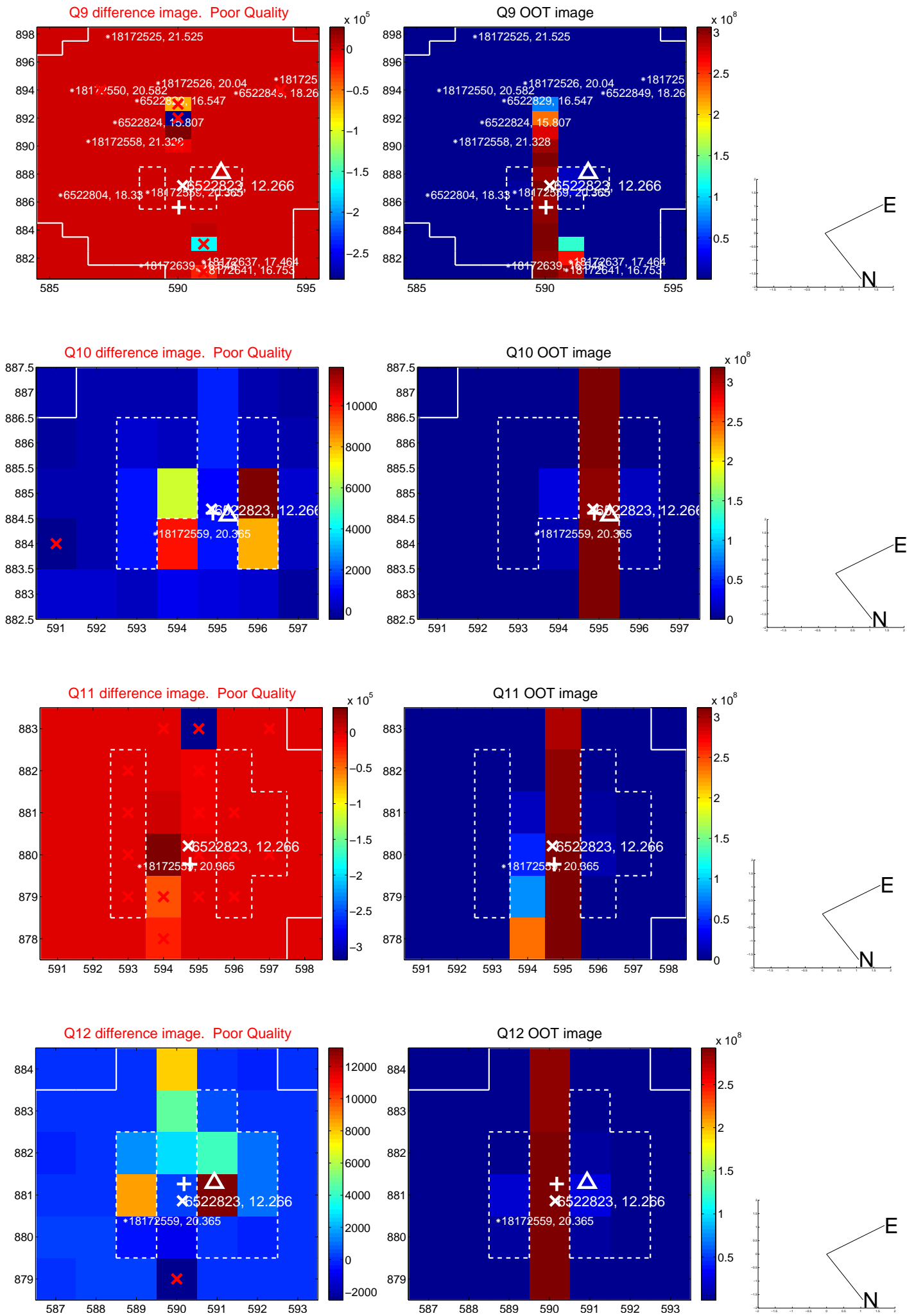
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



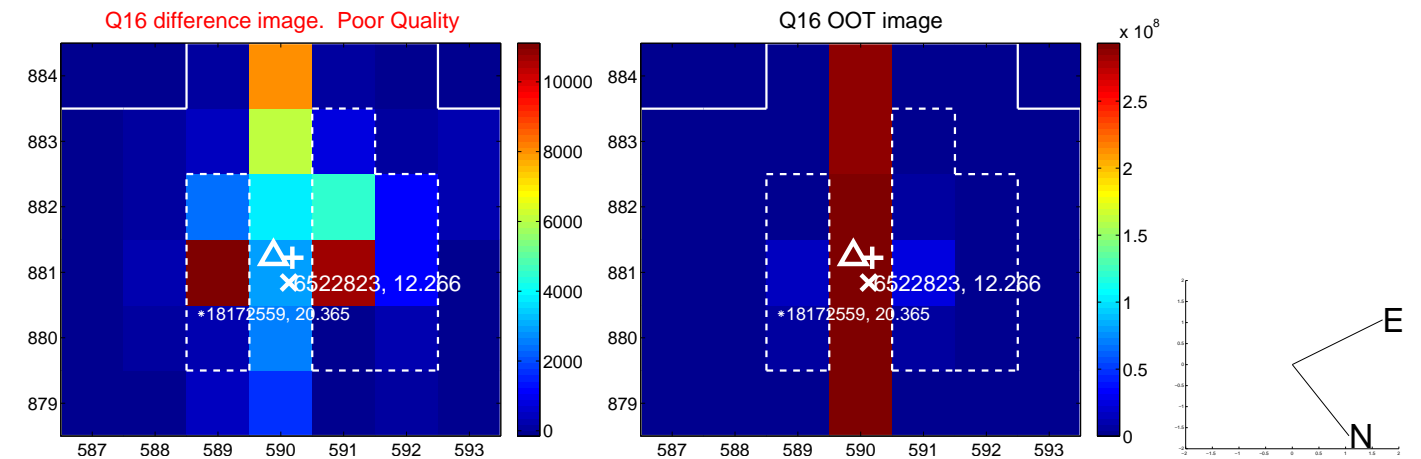
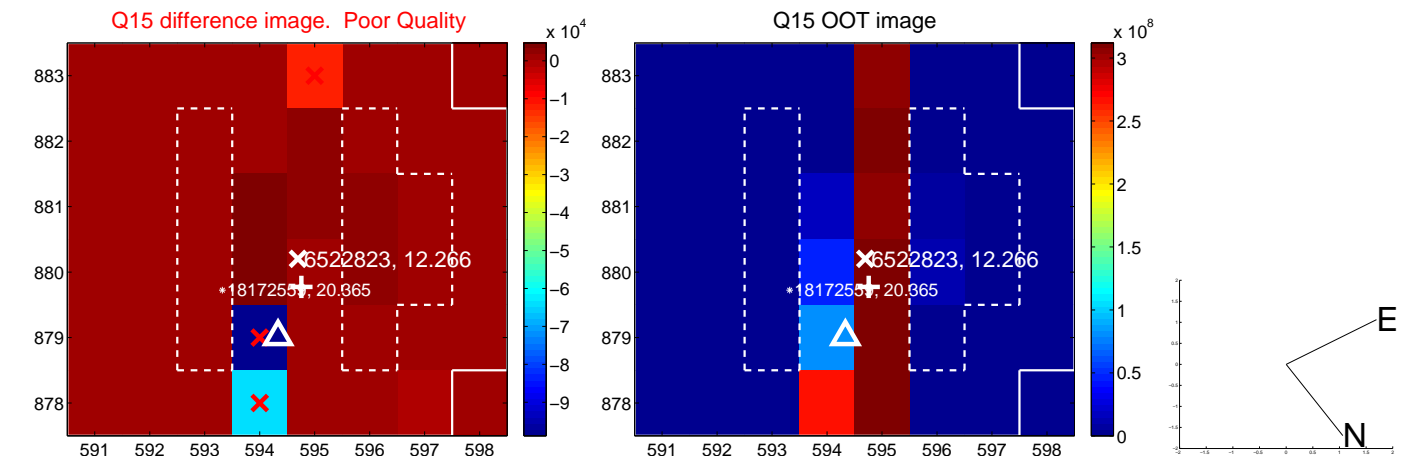
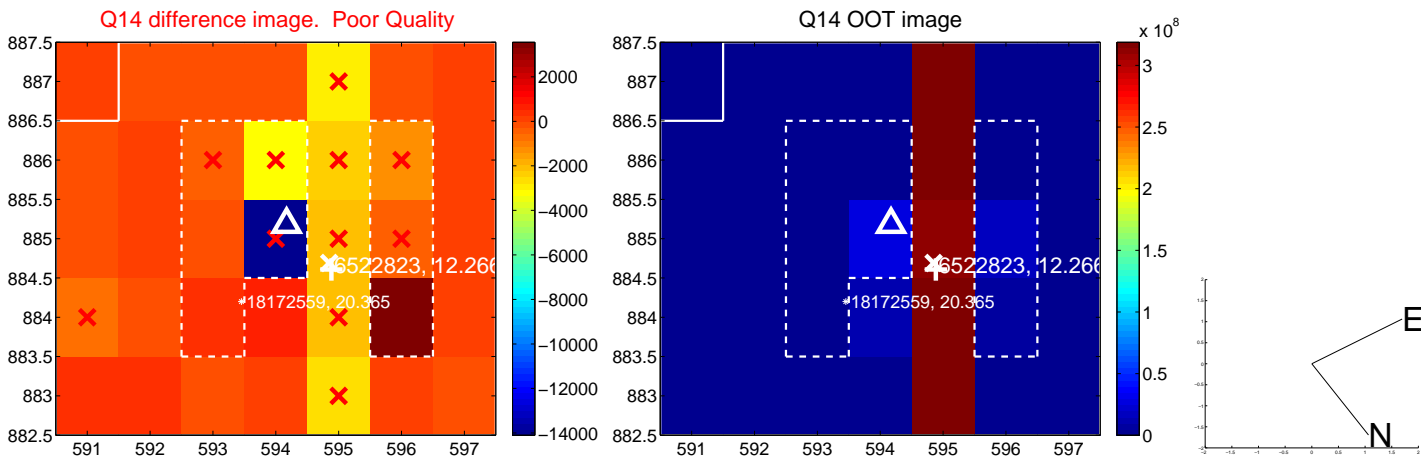
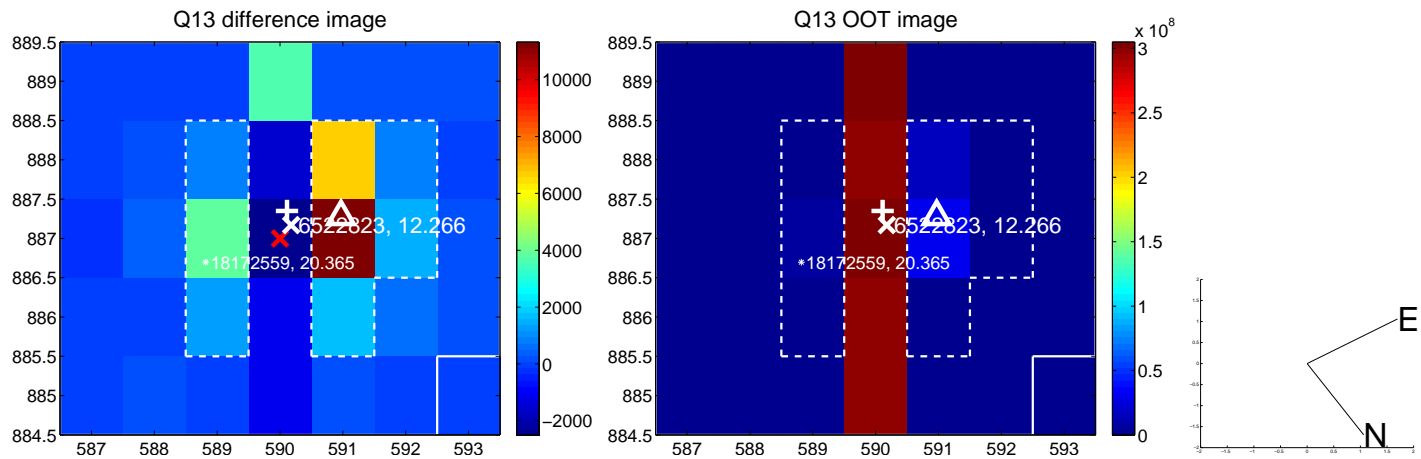
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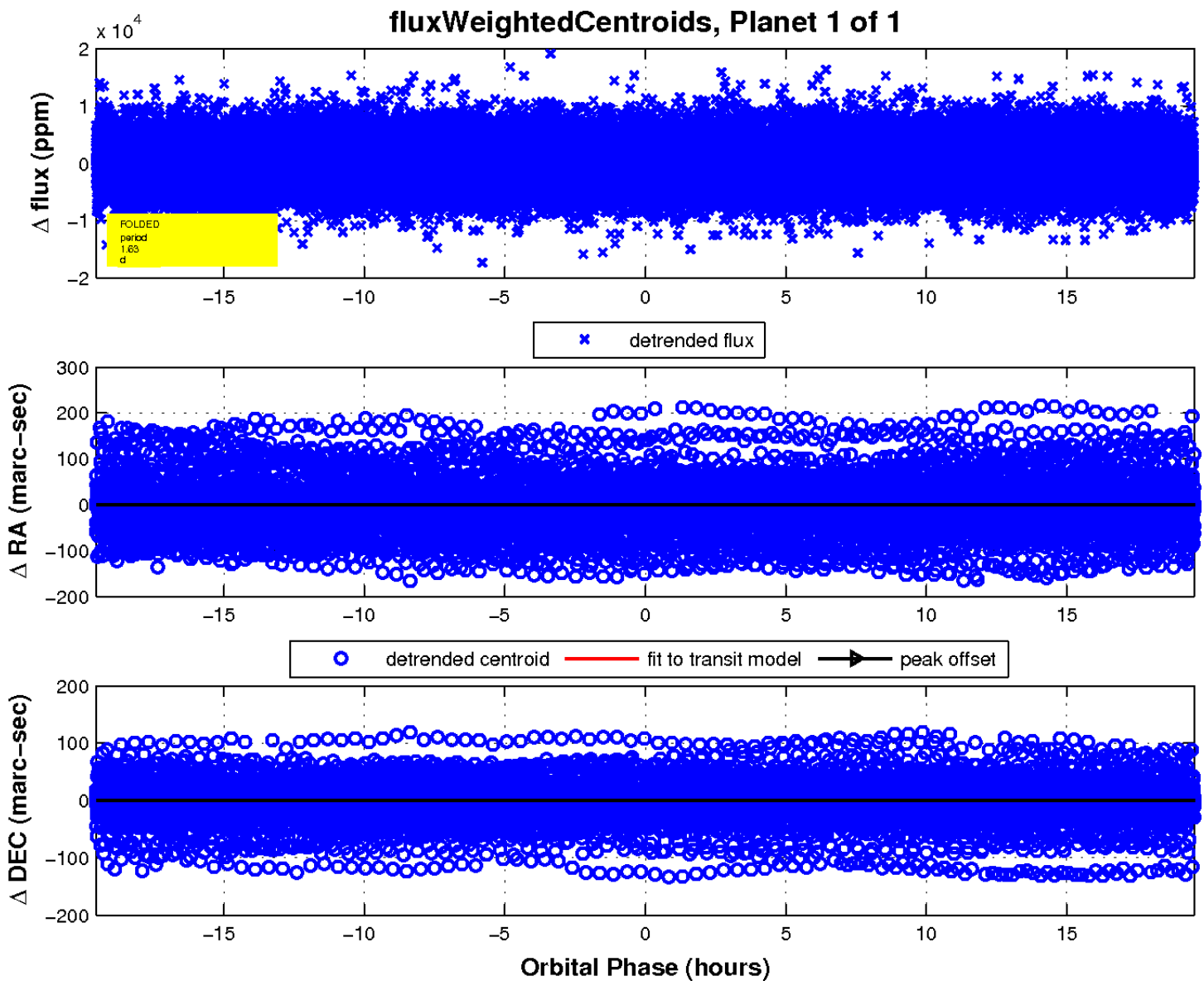
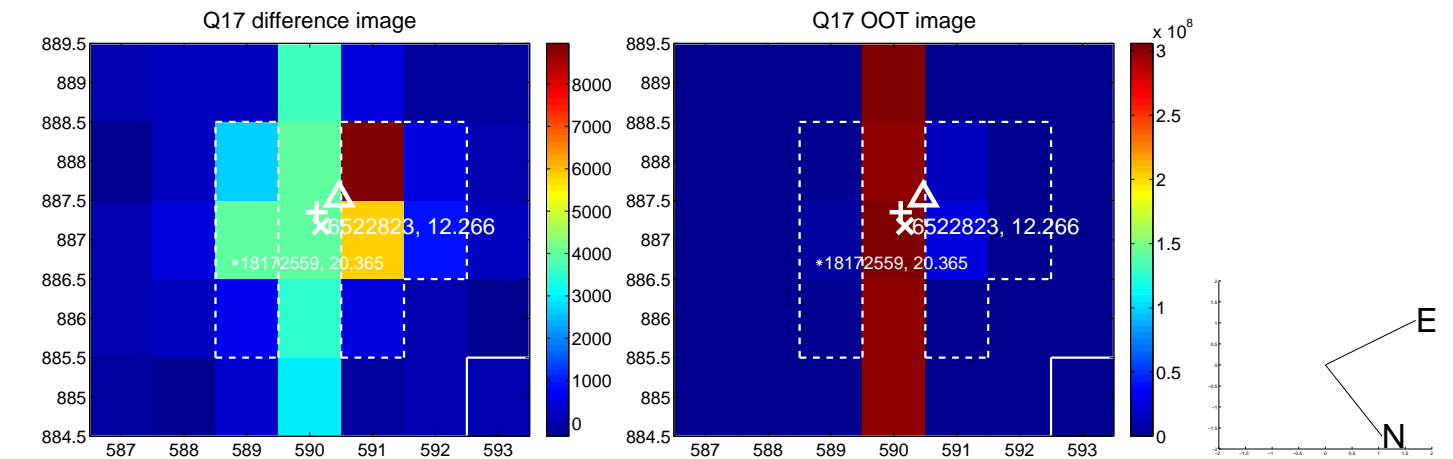
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

