

KIC 003448230

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})
003448230-01	OBS	No	1.026973	131.739073	20.3	2.850	7.3	7.2	2.02	6103	1.07	11584.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003448230-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

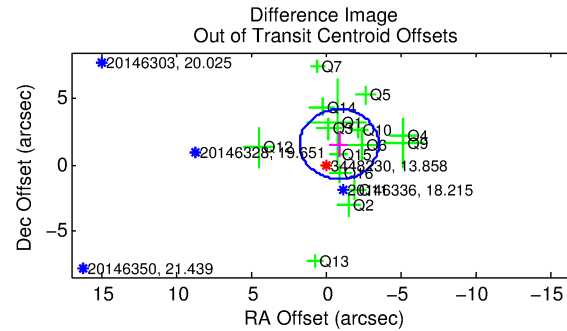
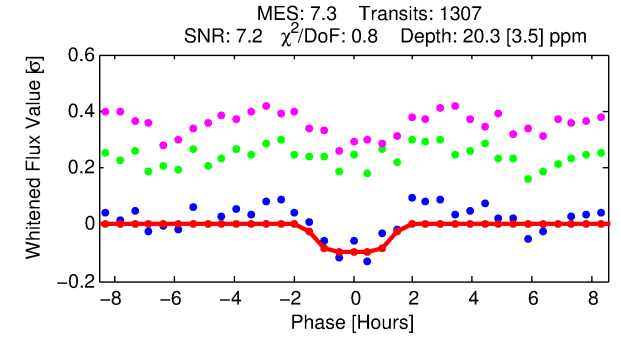
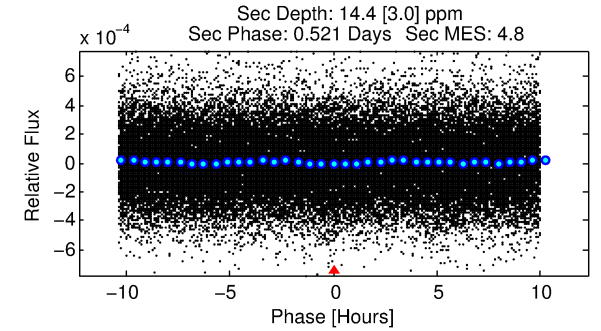
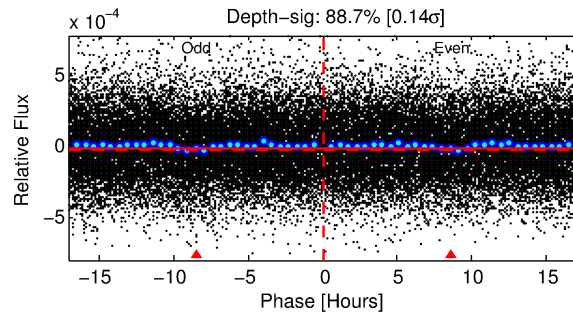
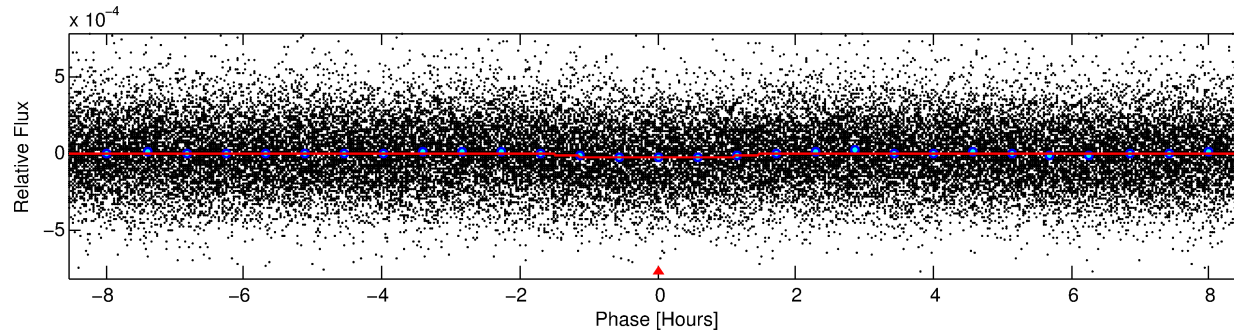
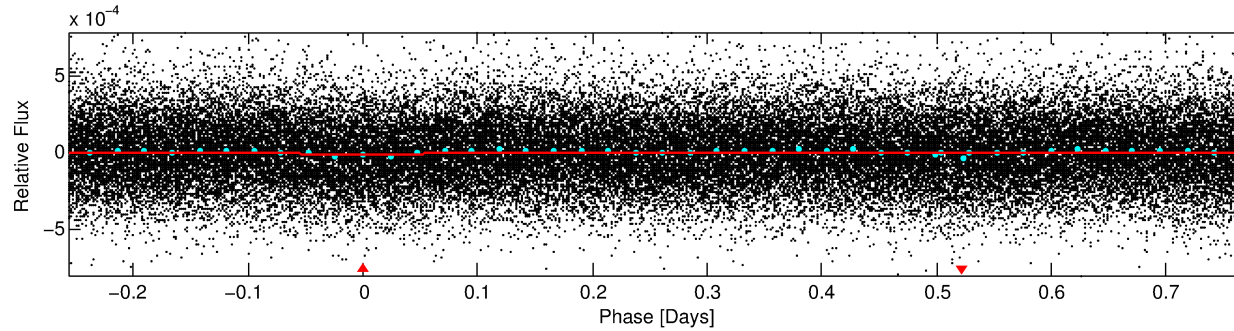
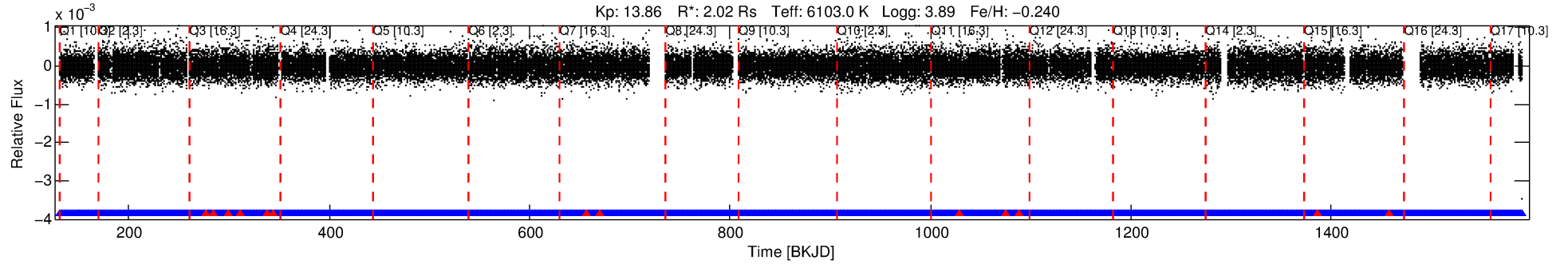
Ephemeris Match Information For 003448230-01

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
003448230-01	3448230	003448245-pri	3448245	2:1	72.5	-13	13	11.86	13.85	16535.00	Direct-PRF	0	1.67	0.23

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: 3448230 Candidate: 1 of 1 Period: 1.027 d



DV Fit Results:

Period = 1.02697 [0.00002] d
Epoch = 131.7391 [0.0052] BKJD
Rp/R* = 0.0049 [0.0026]
a/R* = 1.54 [2.55]
b = 0.90 [0.61]
Seff = 11584.84 [4114.58]
Teq = 2645 [235] K
Rp = 1.07 [0.62] Re
a = 0.0209 [0.0047] AU
Ag = 3.02 [3.41] [0.59 σ]
Teffp = 5394 [1446] K [1.88 σ]

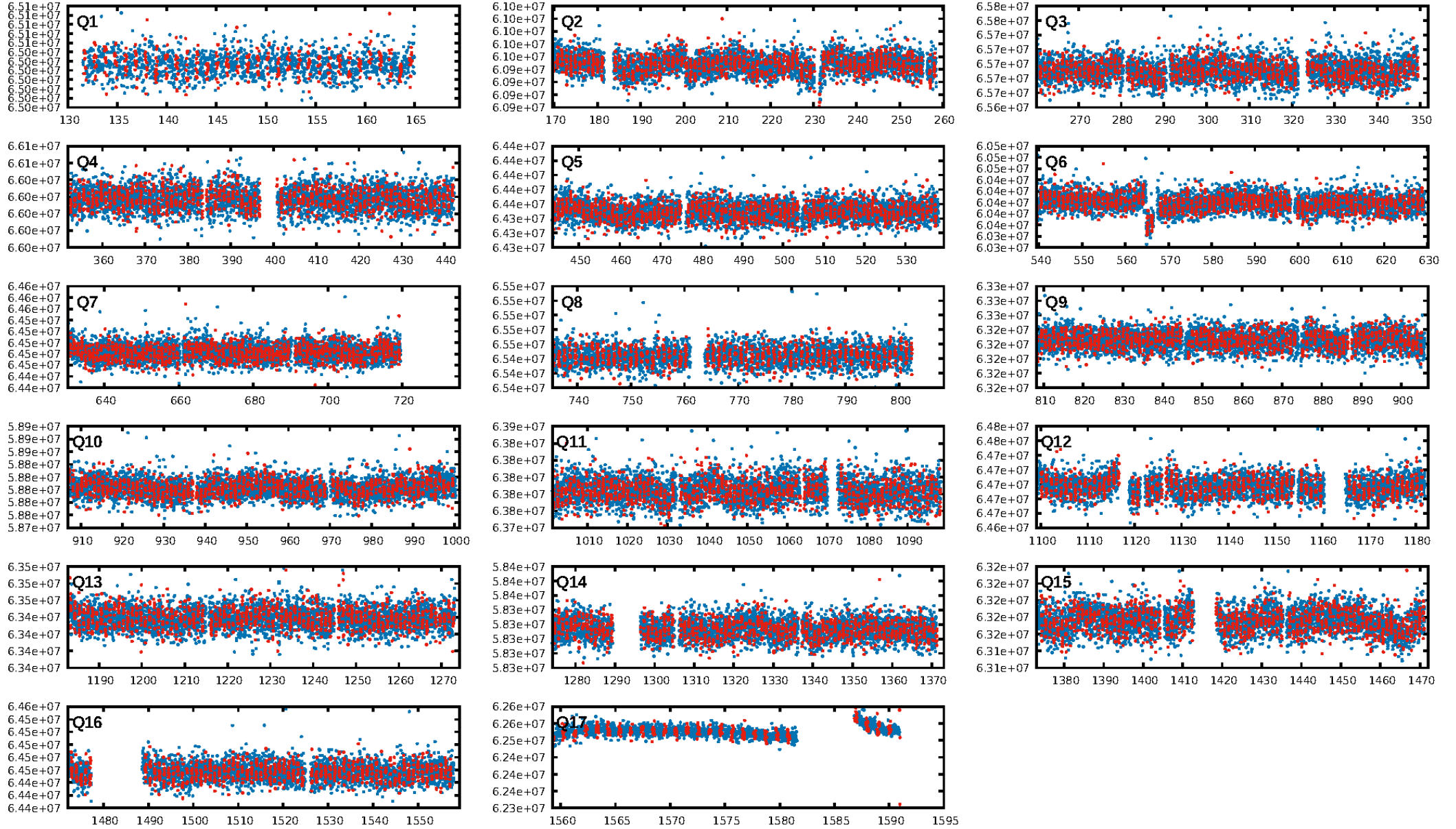
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.06e-15
RollingBand-fgt: 0.99 [1234/1247]
GhostDiagnostic-chr: 0.1814
Centroid-sig: 0.0%
Centroid-so: 4.821 arcsec [2.58 σ]
OotOffset-rm: 1.789 arcsec [2.04 σ]
KicOffset-rm: 1.701 arcsec [1.88 σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.07 [1/15]
DiffImageOverlap-fno: 1.00 [17/17]

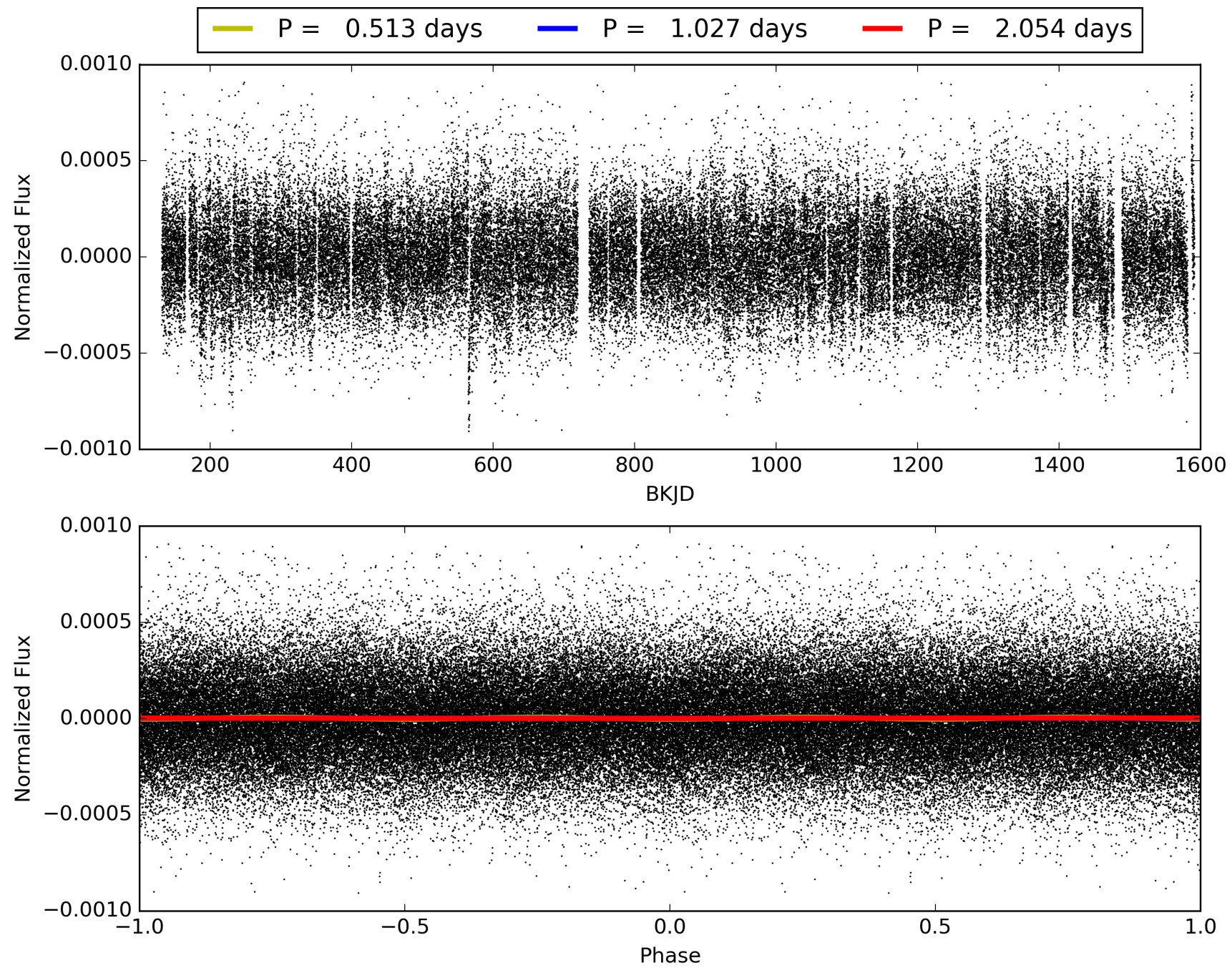
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:15:08 Z

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

TCE 003448230-01, PDC Light Curves

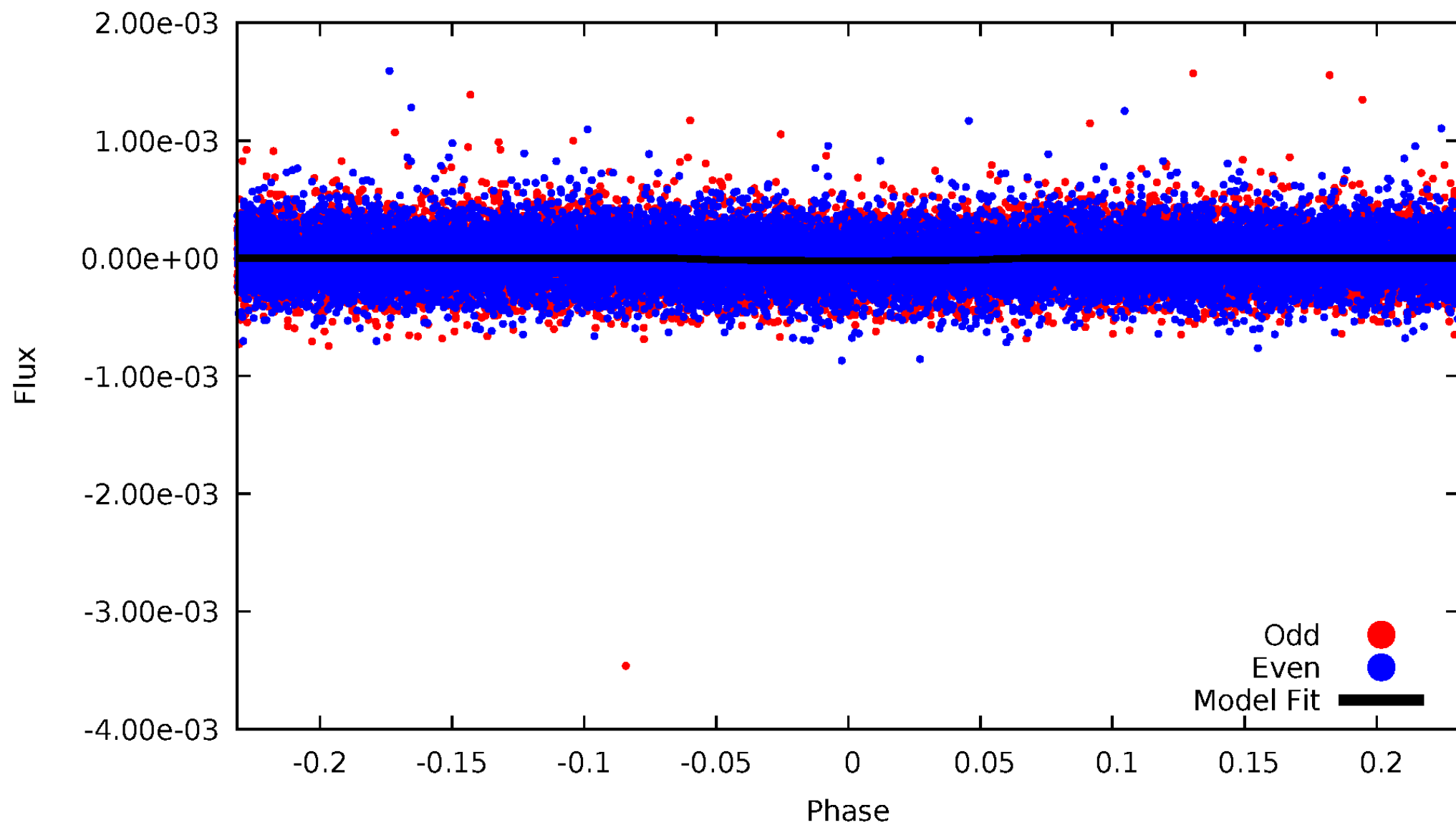


TCE 003448230-01



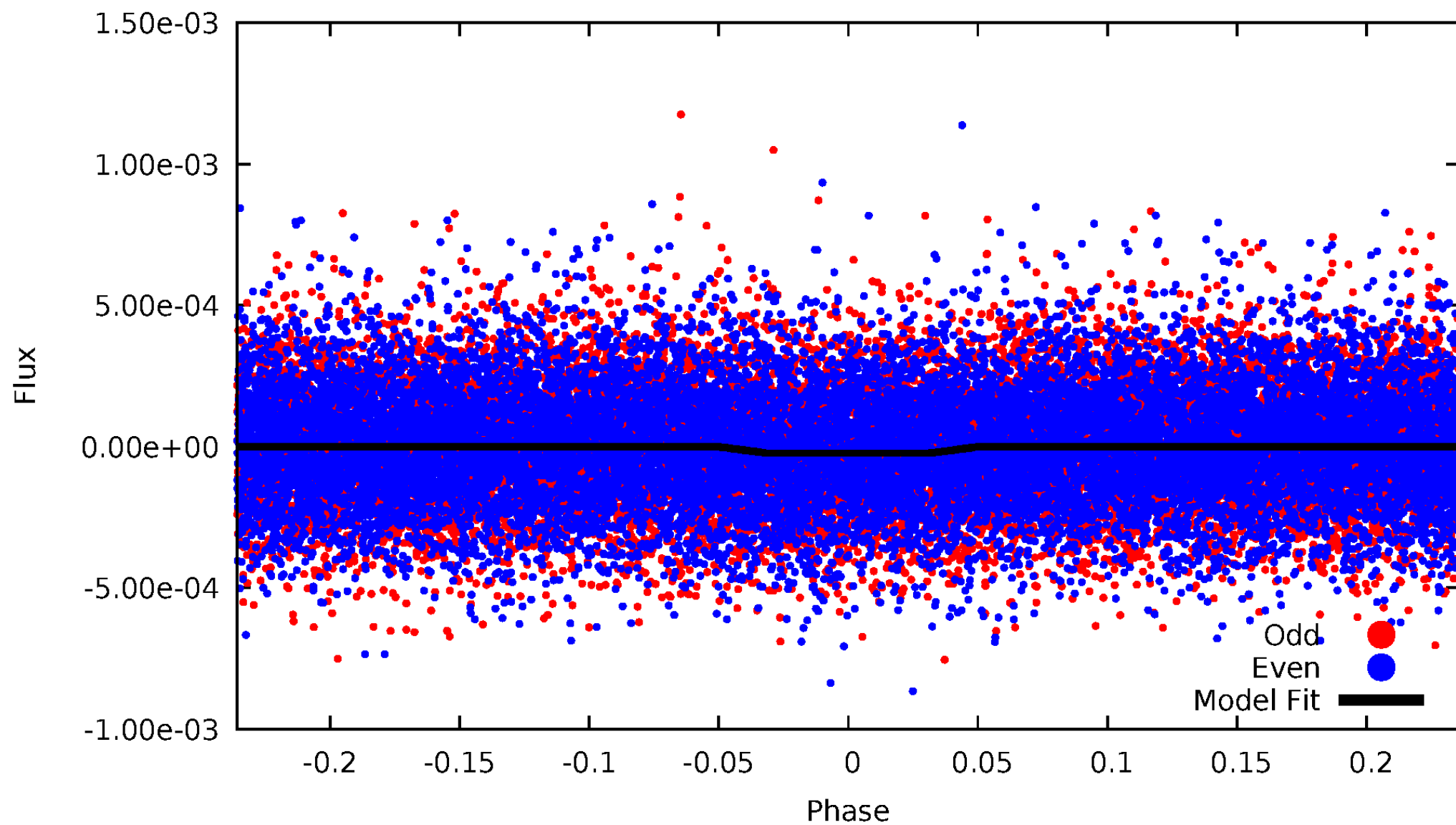
DV Odd/Even

TCE 003448230-01

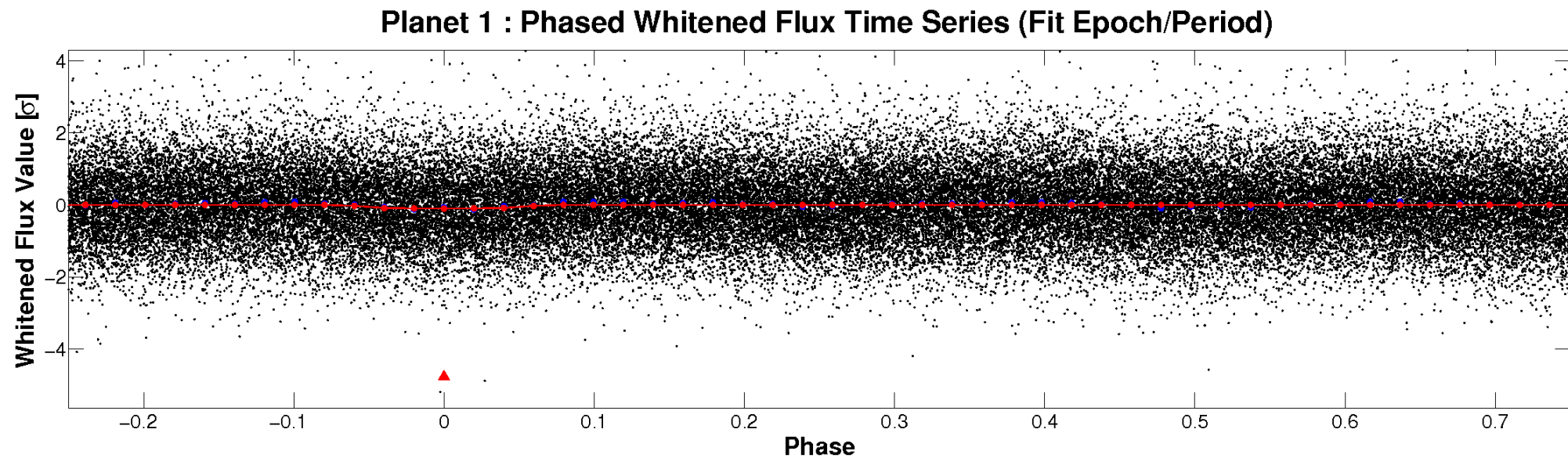
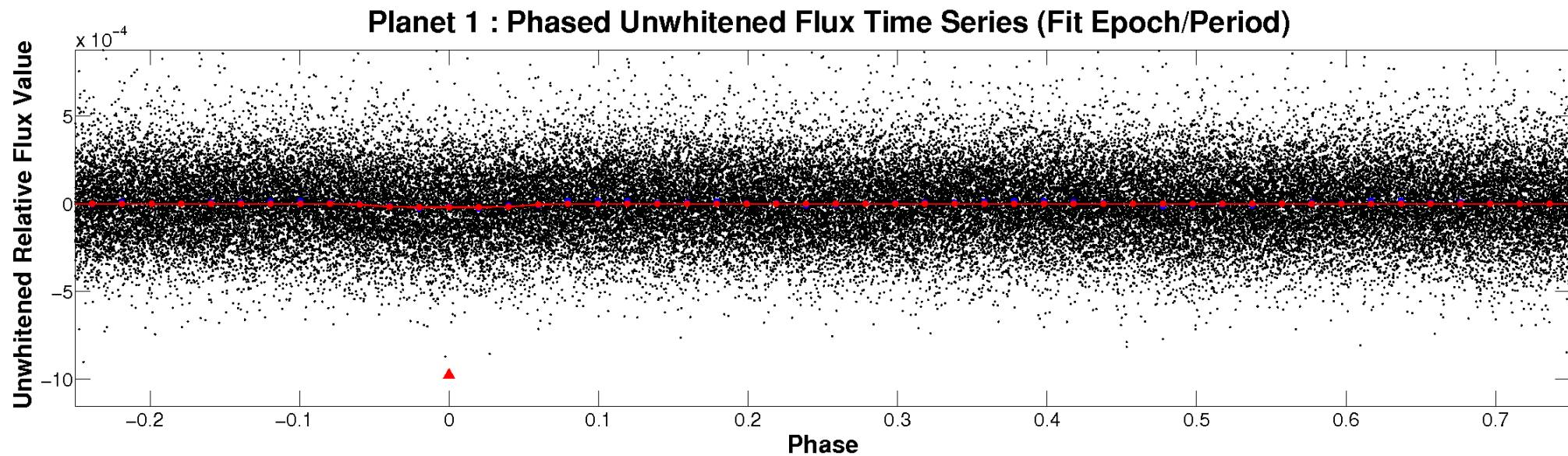


ALT Odd/Even

TCE 003448230-01

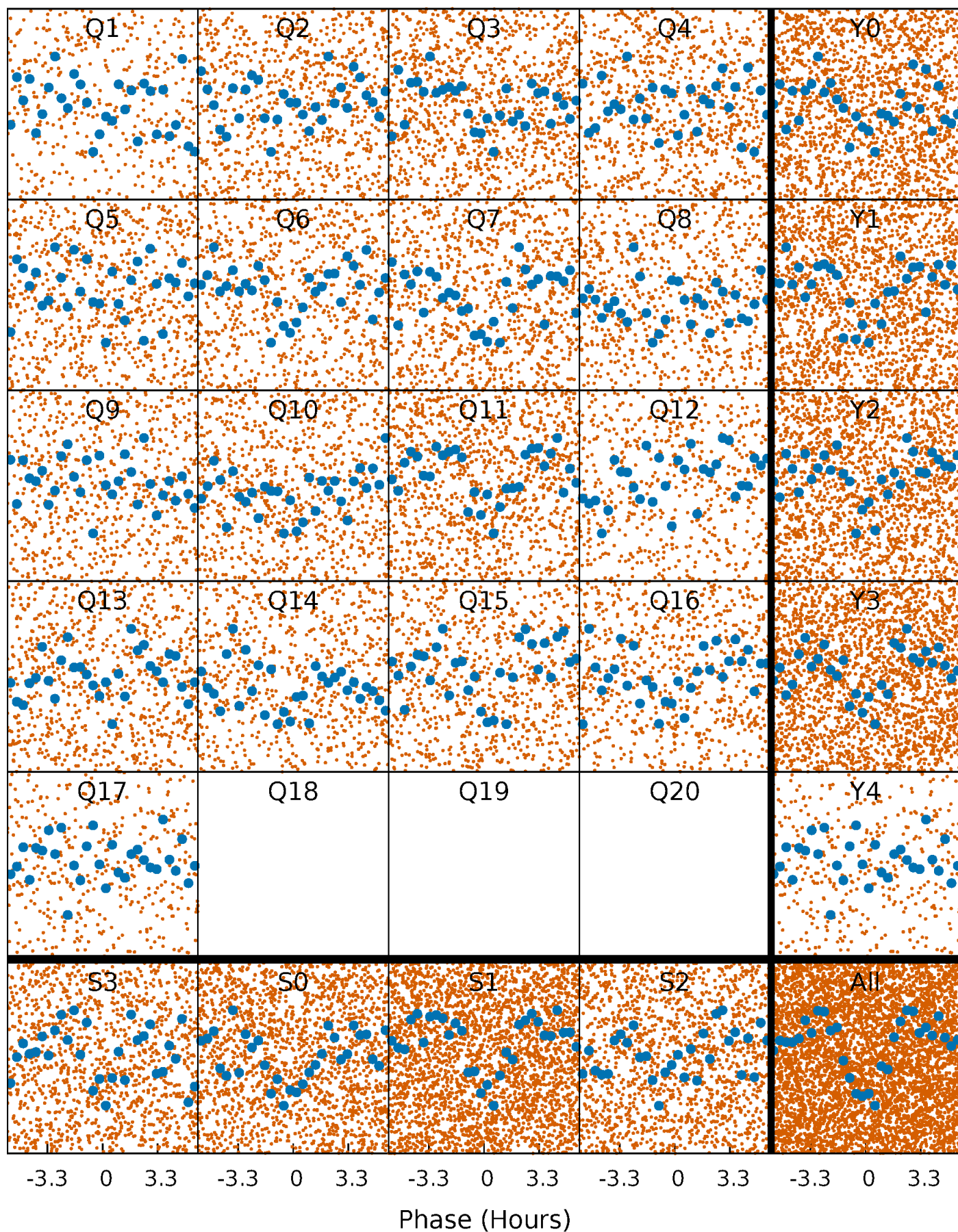


Non-Whitened Vs. Whitened Light Curve



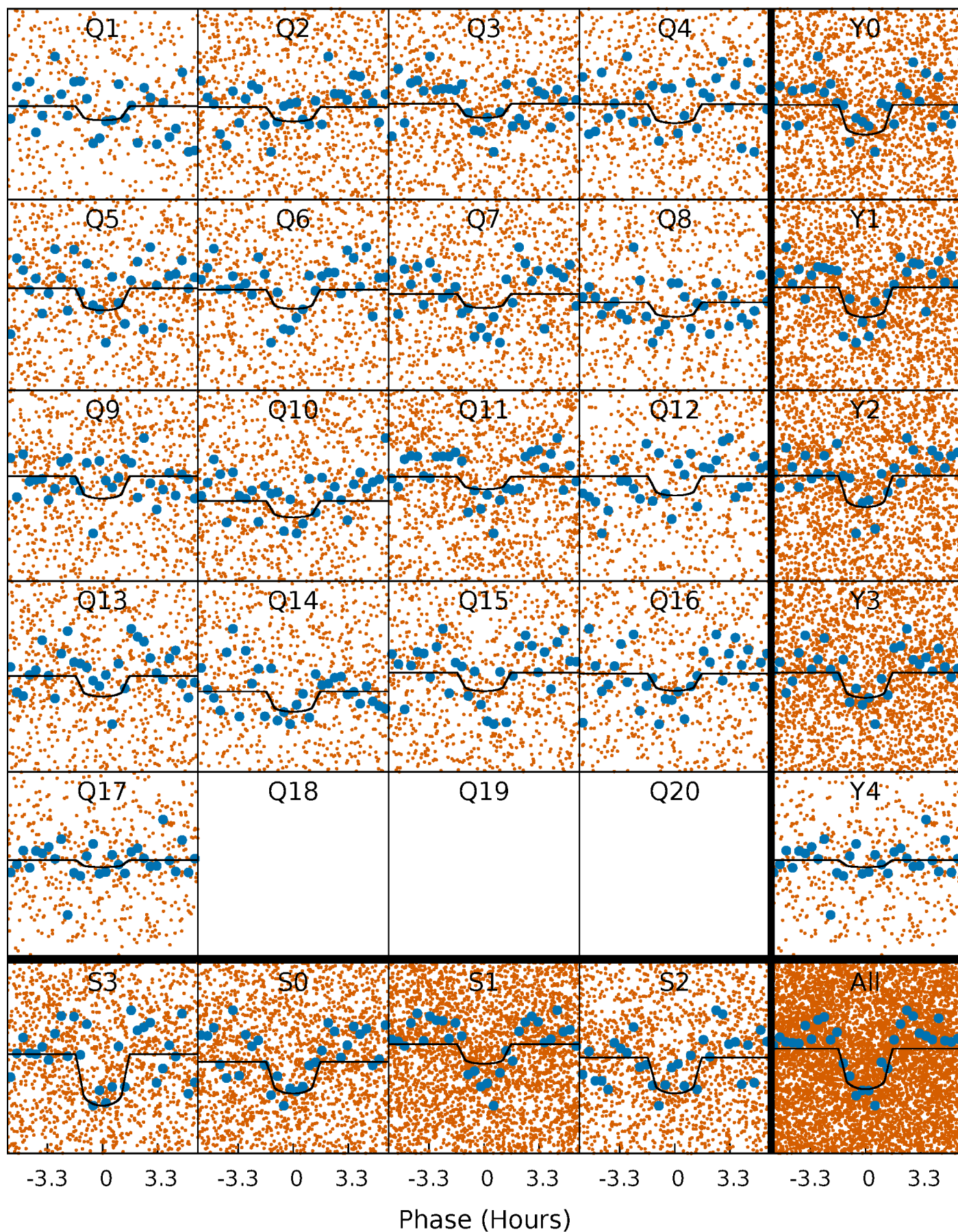
PDC Quarter-Phased Transit Curves

TCE 003448230-01 P= 1.026973 Days $T_0=131.739073$ (BKJD)



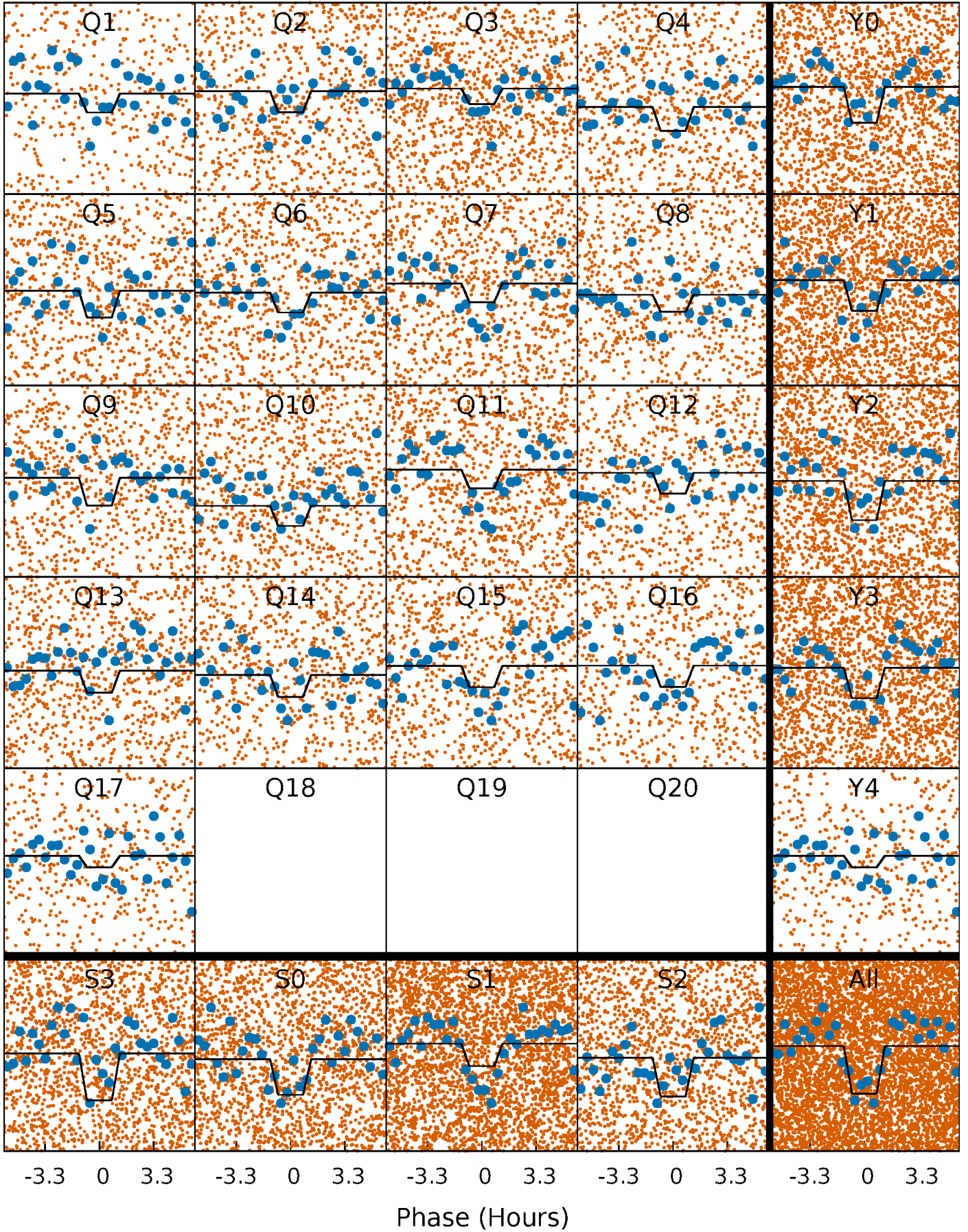
DV Quarter-Phased Transit Curves

TCE 003448230-01 P= 1.026973 Days $T_0=131.739073$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

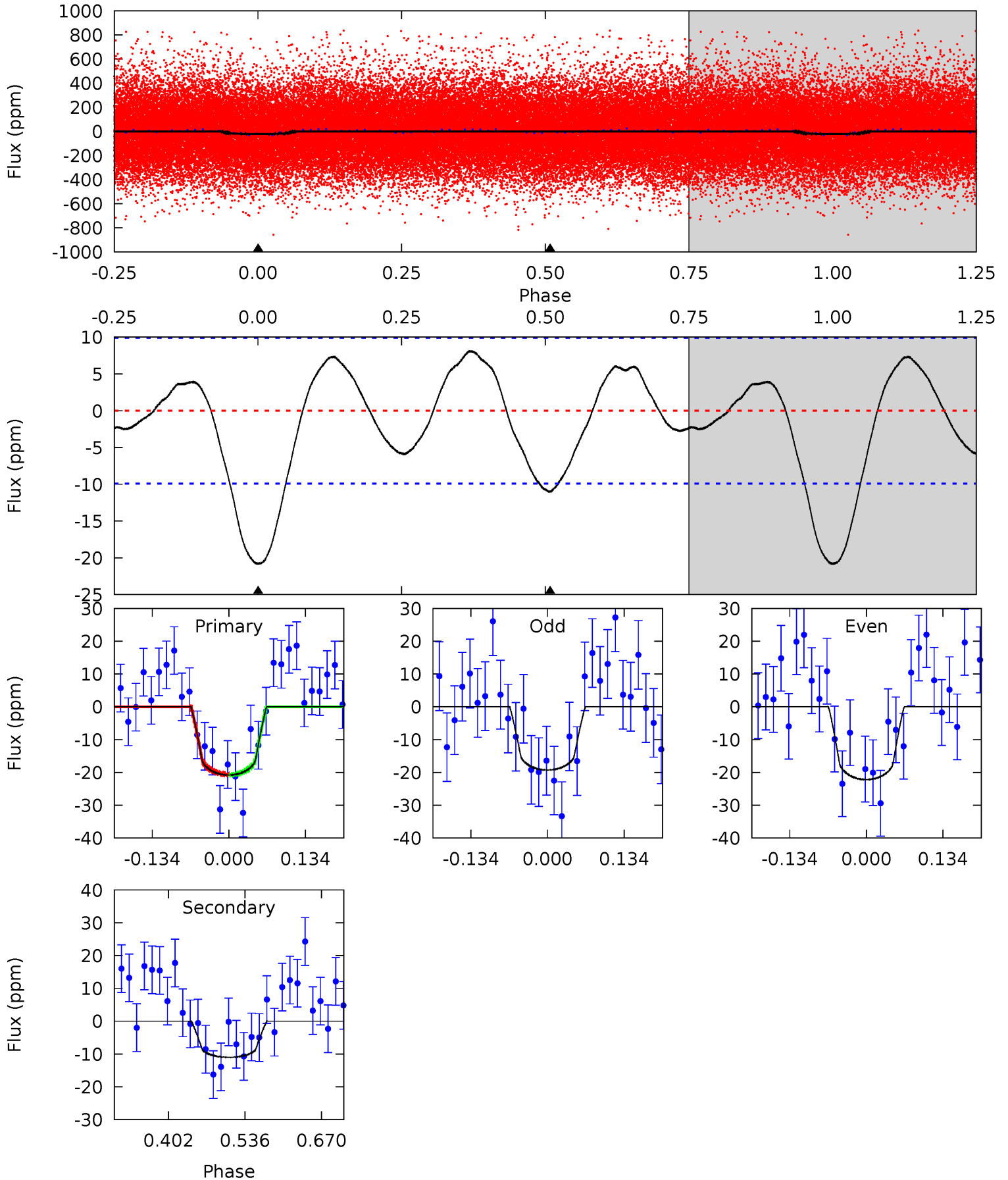
TCE 003448230-01 P= 1.026977 Days $T_0=131.739189$ (BKJD)



DV Model-Shift Uniqueness Test

003448230-01, P = 1.026973 Days, E = 130.712100 Days

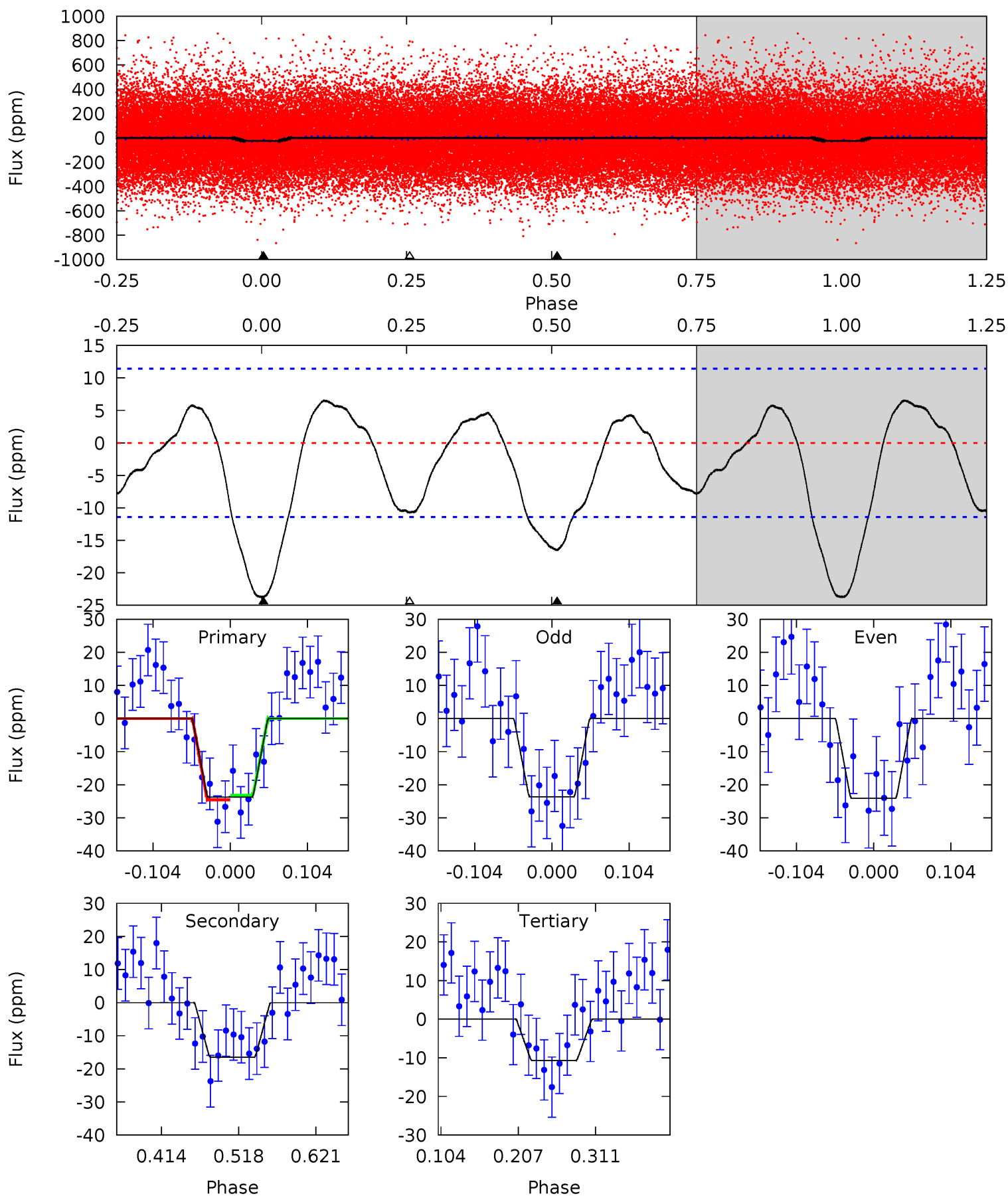
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.45	5.01	0	0	4.50	1.50	1.77	9.45	9.45	5.01	5.01	0.66	0.80	0.28	0.03



Alt Model-Shift Uniqueness Test

003448230-01, P = 1.026977 Days, E = 130.712212 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.46	6.58	4.27	0	4.56	1.63	2.02	5.19	9.46	2.31	6.58	0.09	0.88	0.22	0.27



Stellar Parameters For KIC 003448230

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6103^{+82}_{-82}	$3.891^{+0.203}_{-0.087}$	$-0.240^{+0.150}_{-0.150}$	$2.020^{+0.327}_{-0.490}$	$1.158^{+0.119}_{-0.145}$	$0.198^{+0.230}_{-0.056}$
	+1%/-1%	+5%/-2%	+62%/-62%	+16%/-24%	+10%/-13%	+116%/-28%
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 003448230-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-11 ± 2	$1.08^{+0.55}_{-0.52}$	3670^{+158}_{-233}	4873^{+2018}_{-872}	$2.319^{+6.441}_{-1.359}$
Alt.	-16 ± 3	$1.08^{+0.58}_{-0.54}$	3651^{+170}_{-211}	5352^{+2358}_{-958}	$3.384^{+10.338}_{-1.938}$

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

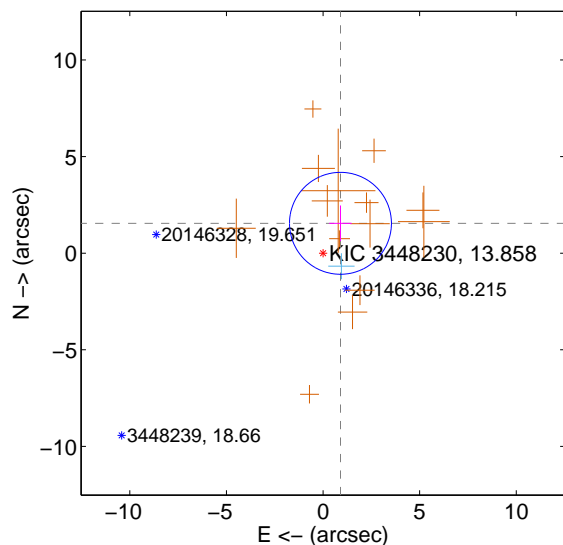
Supplemental centroid analysis for 003448230-01. Kepler magnitude: 13.86. Transit SNR 7.23

There are 1 quarters with good PRF difference image offsets

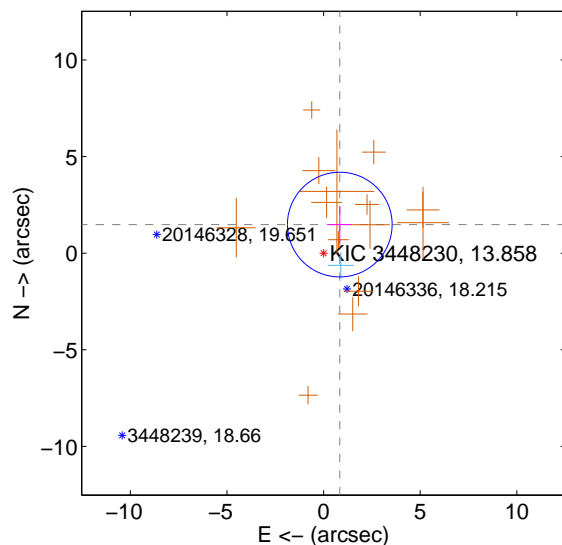
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.789 ± 0.879	2.04	-0.902 ± 0.584	1.545 ± 0.920
PRF-fit source offset from KIC position	1.701 ± 0.903	1.88	-0.839 ± 0.597	1.480 ± 0.960
photometric centroid source offset	4.82 ± 1.87	2.58	-4.63 ± 1.87	-1.34 ± 1.85

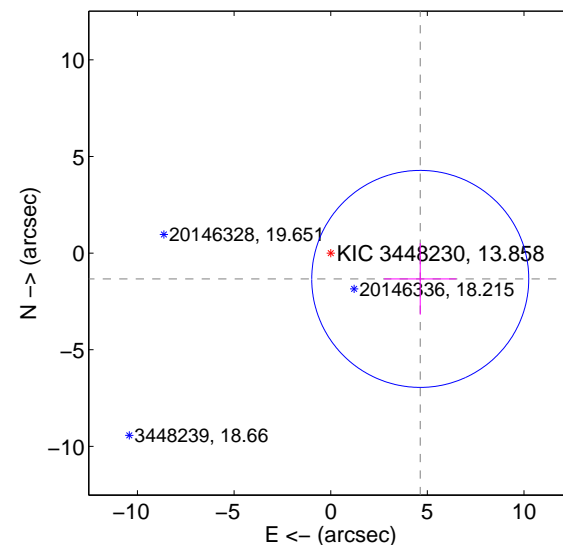
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

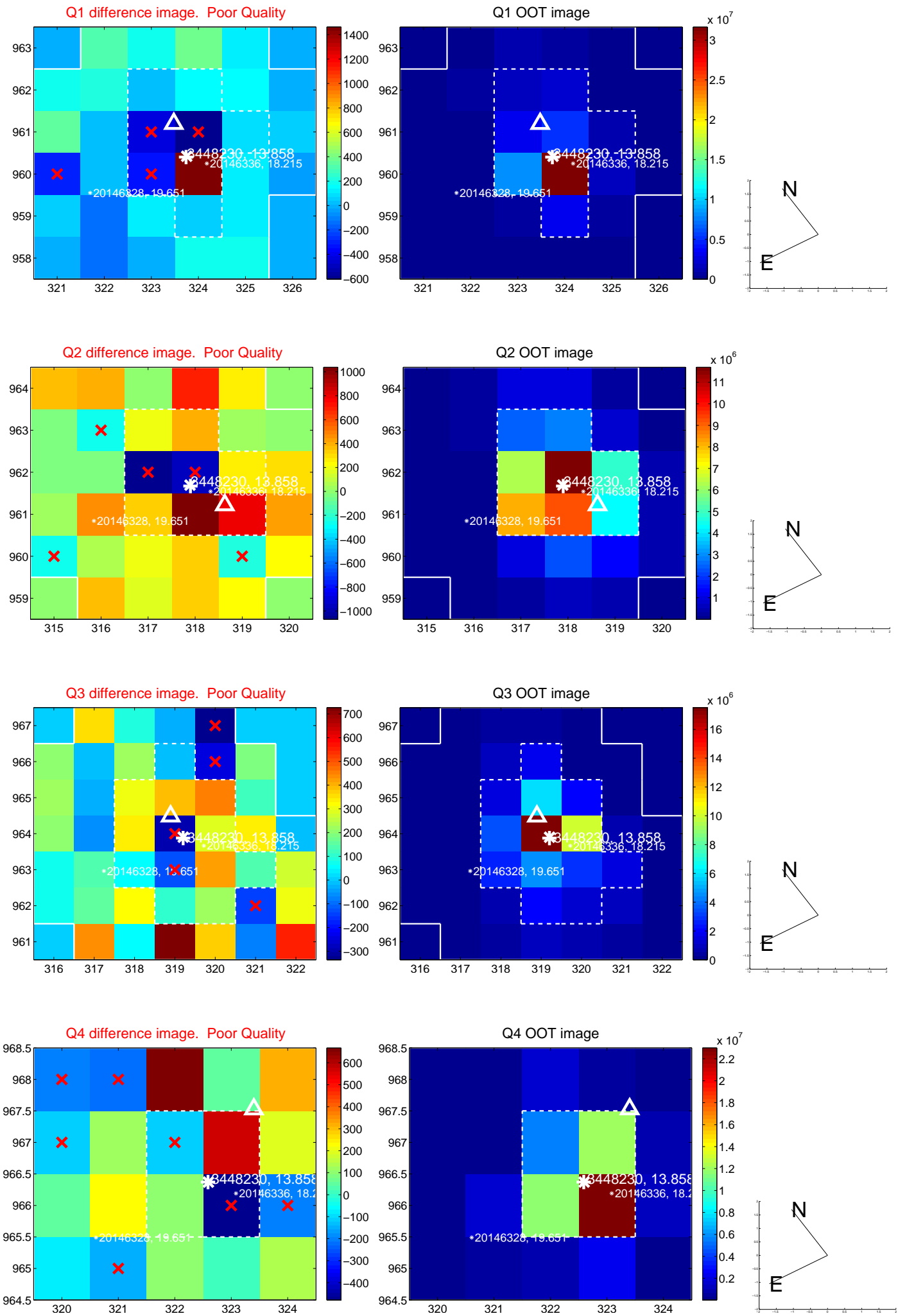


offset from photometric centroids

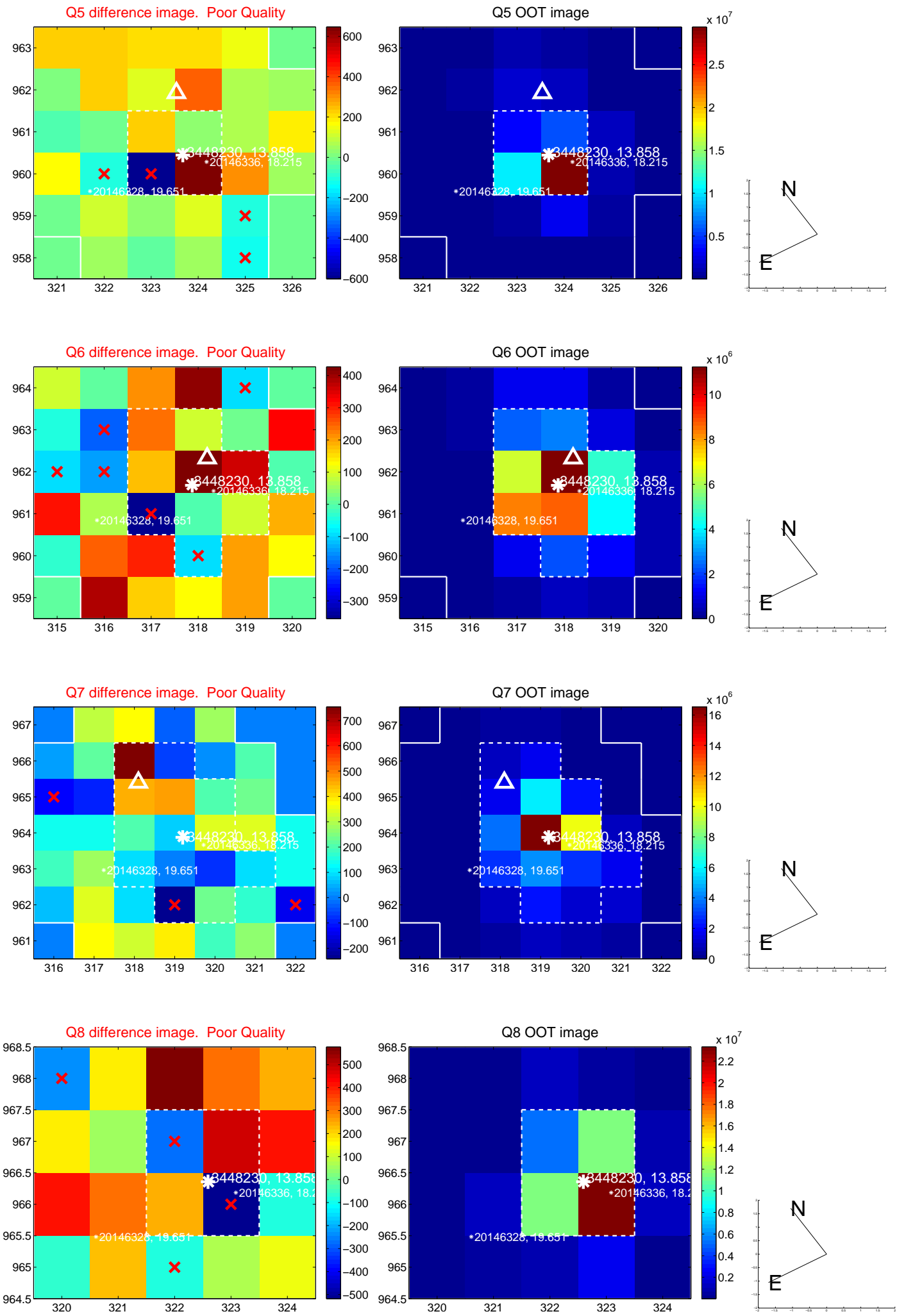


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

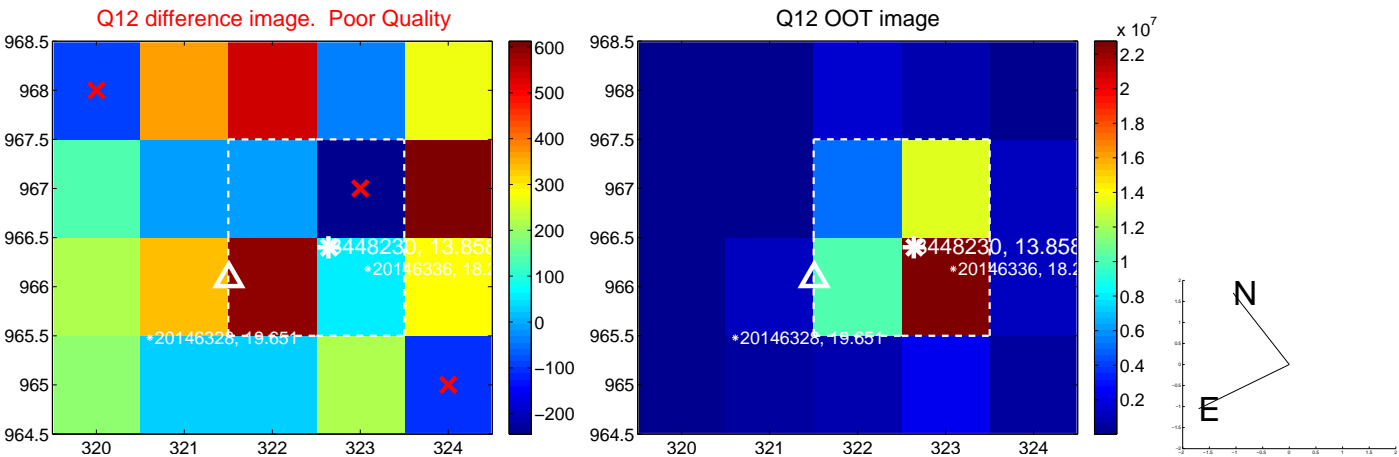
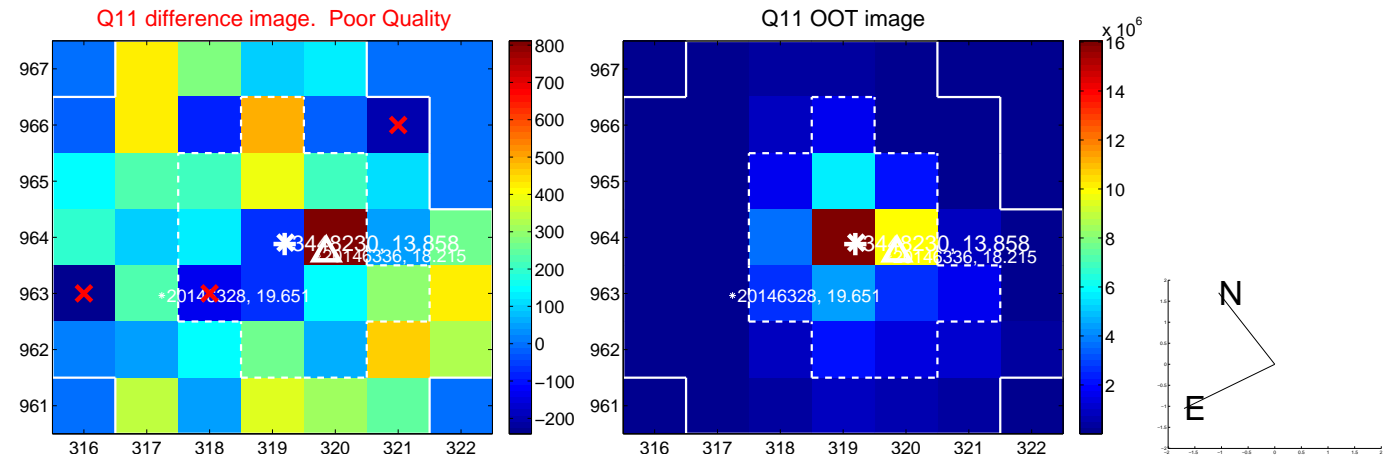
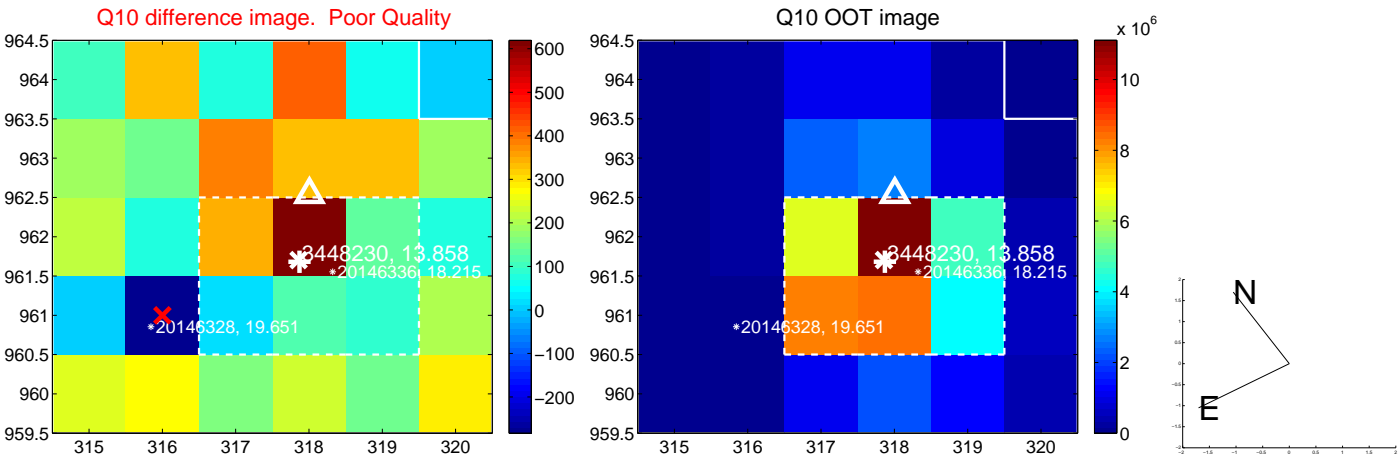
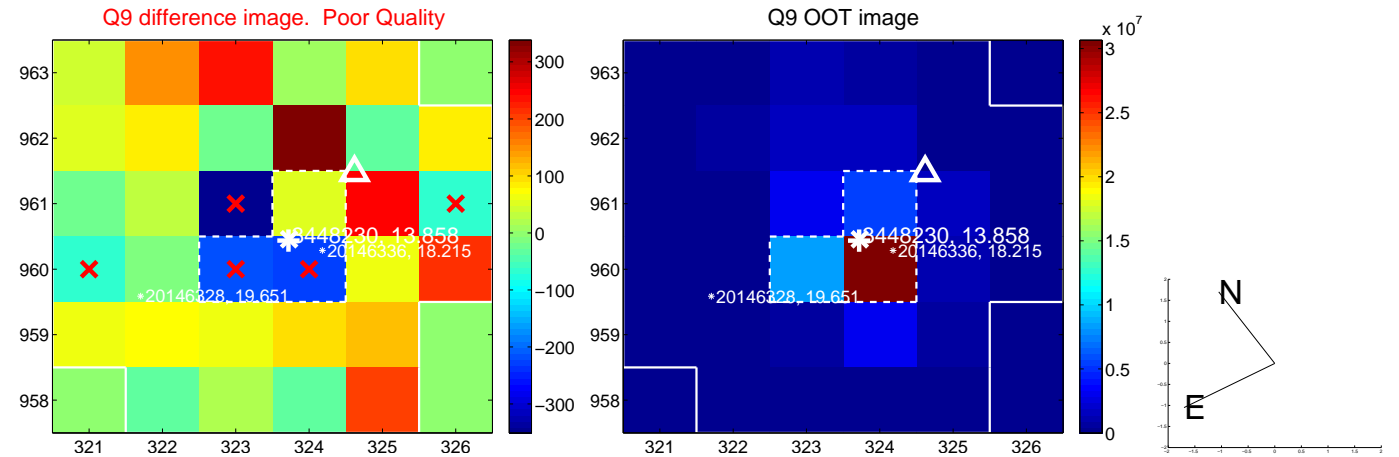
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



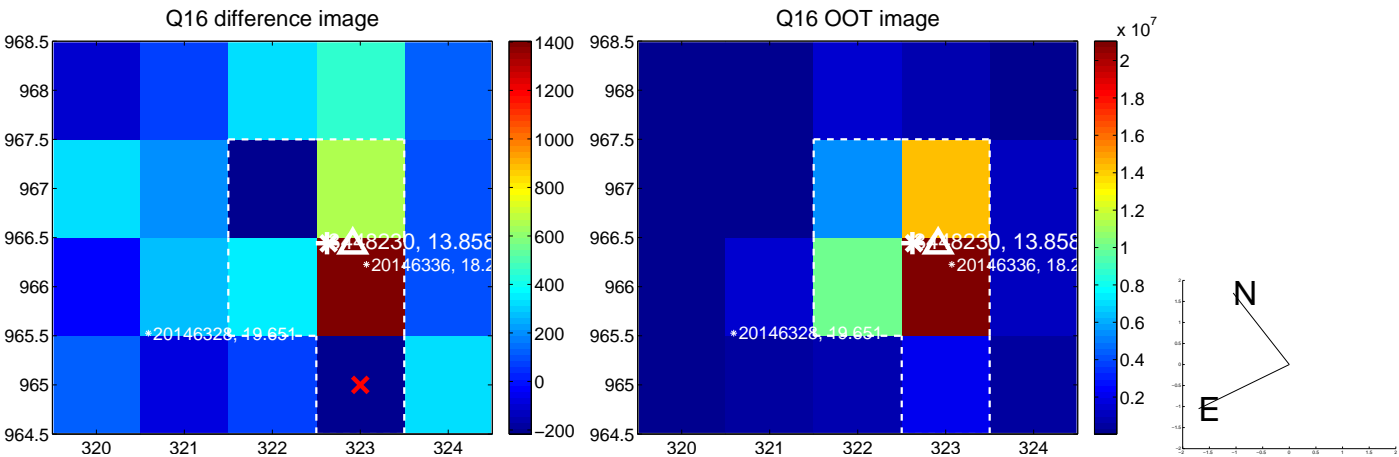
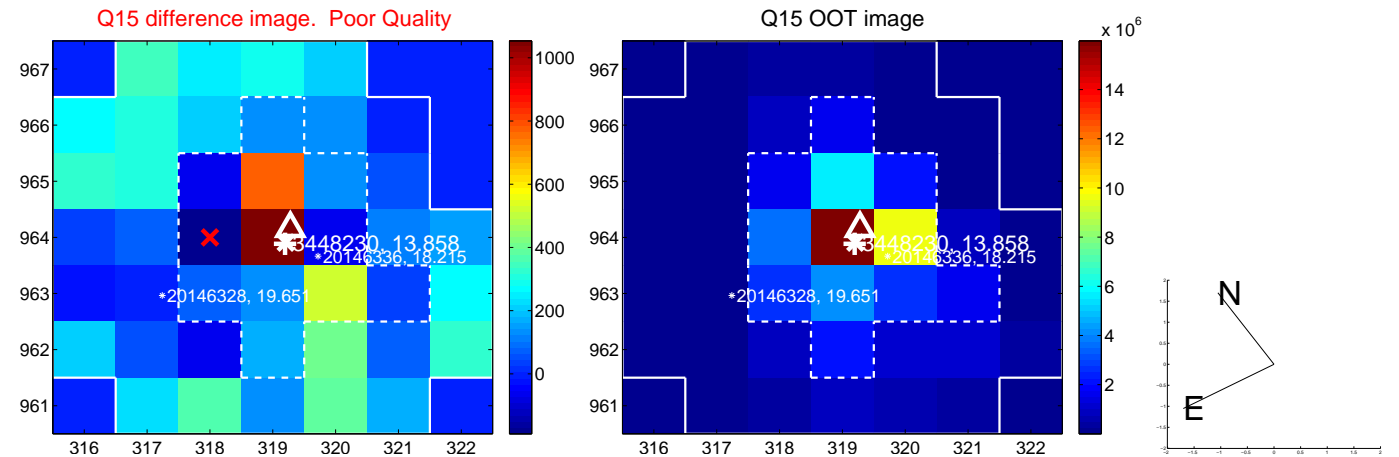
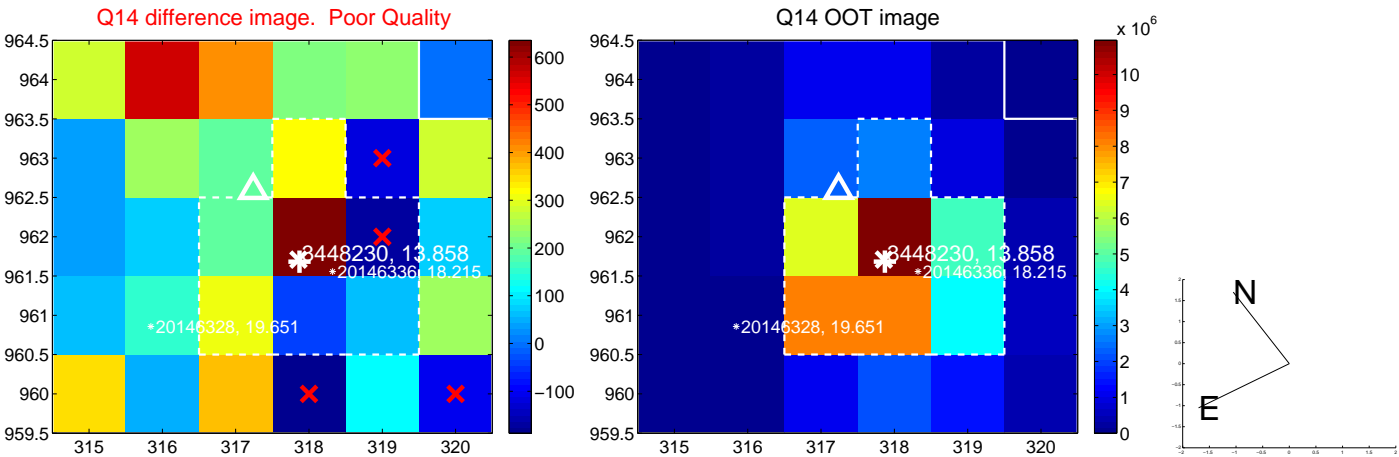
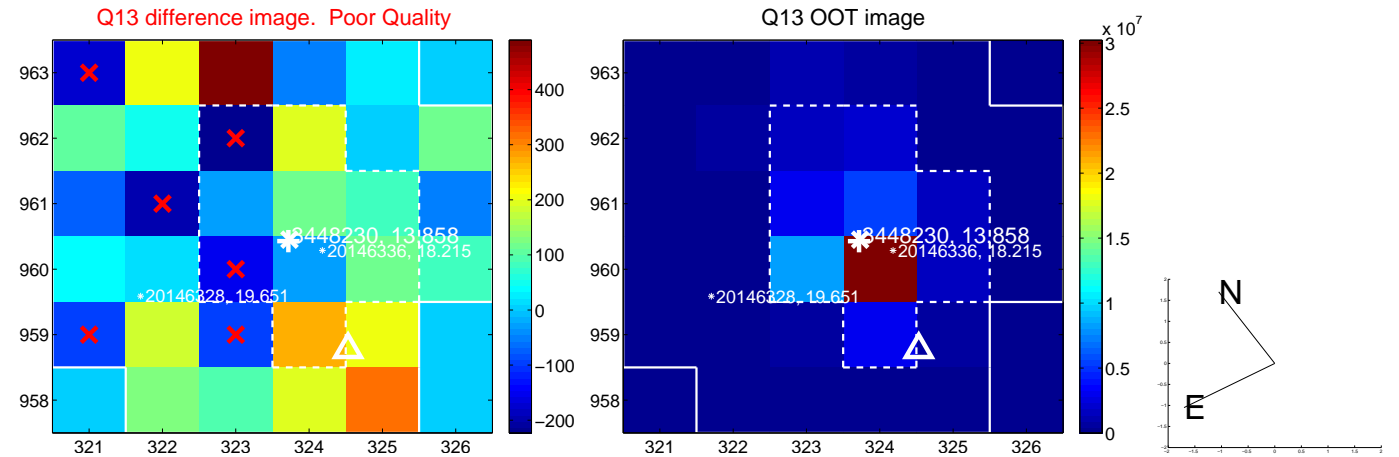
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



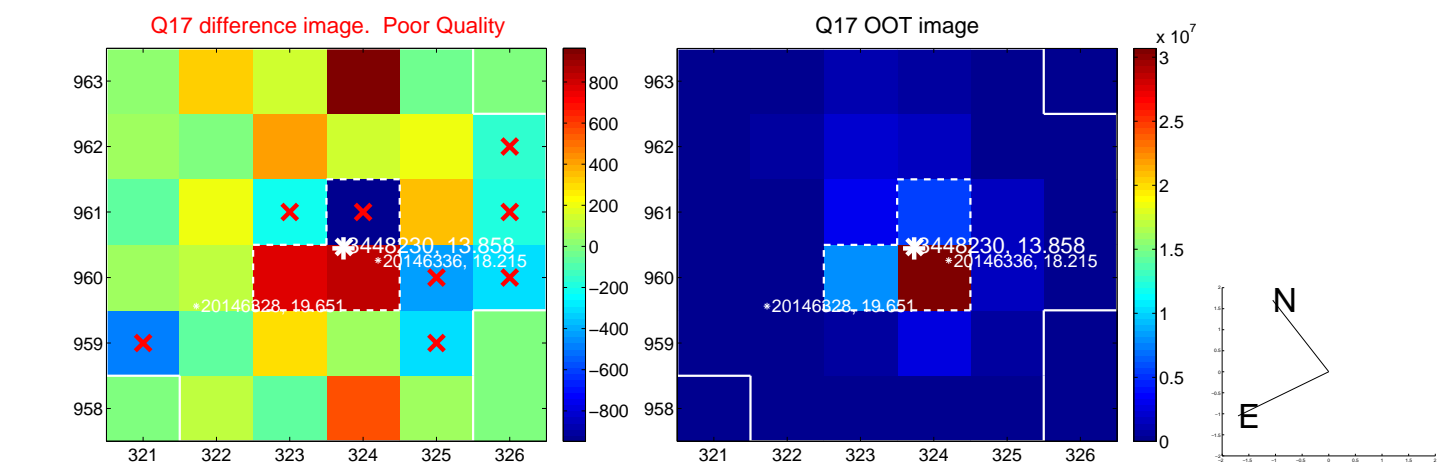
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



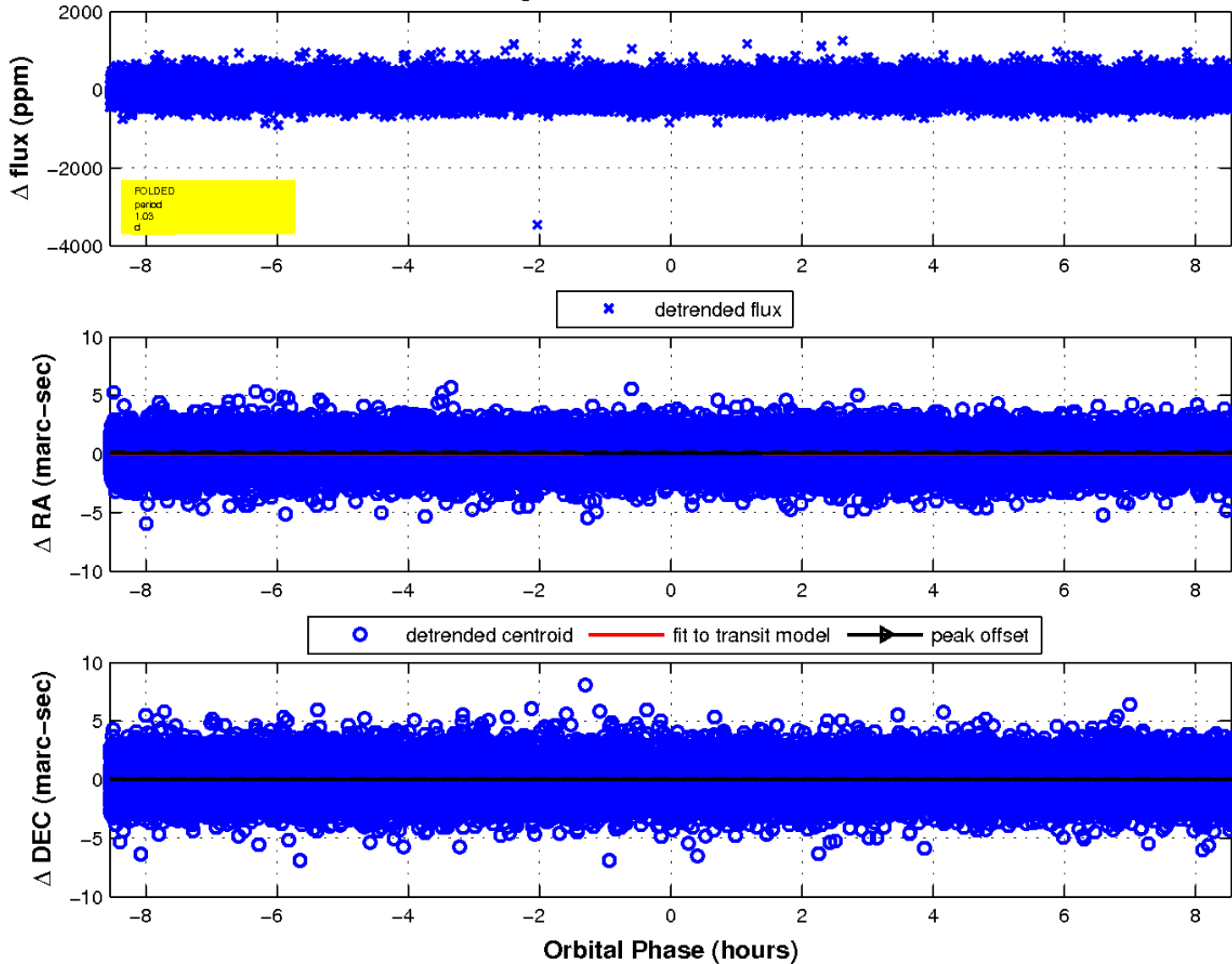
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

