

KIC 003122913

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})
003122913-01	OBS	2490.01	11.606502	134.418255	798.7	2.345	17.0	18.2	0.70	4703	2.45	27.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122913-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

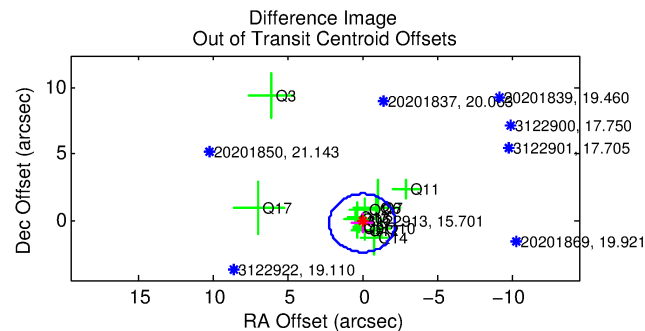
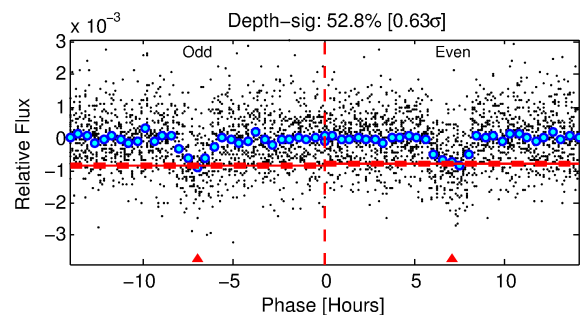
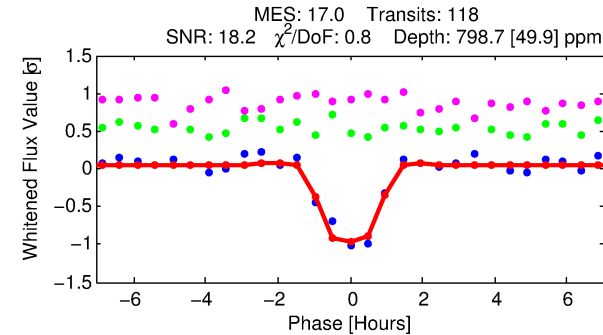
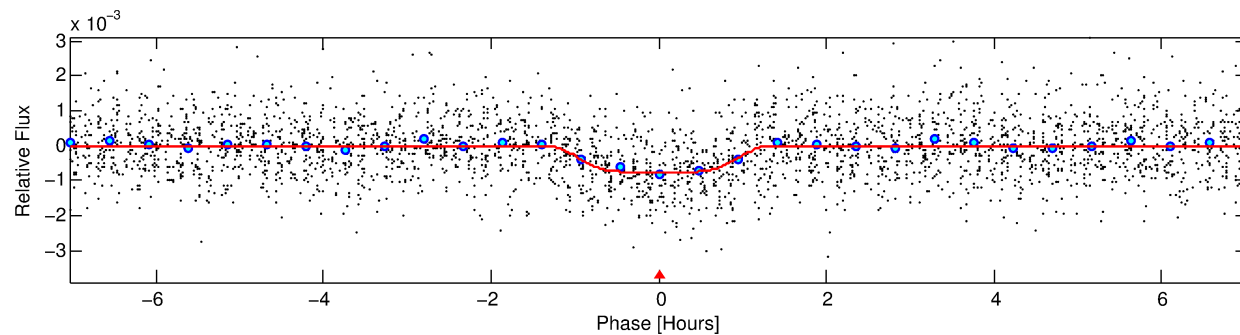
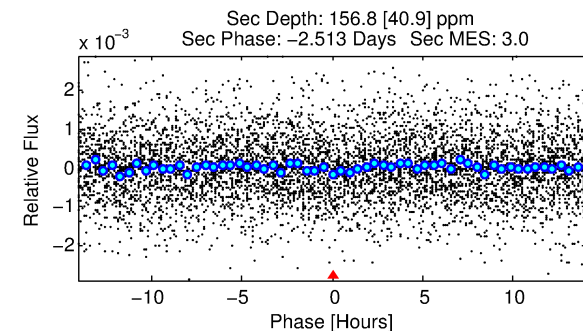
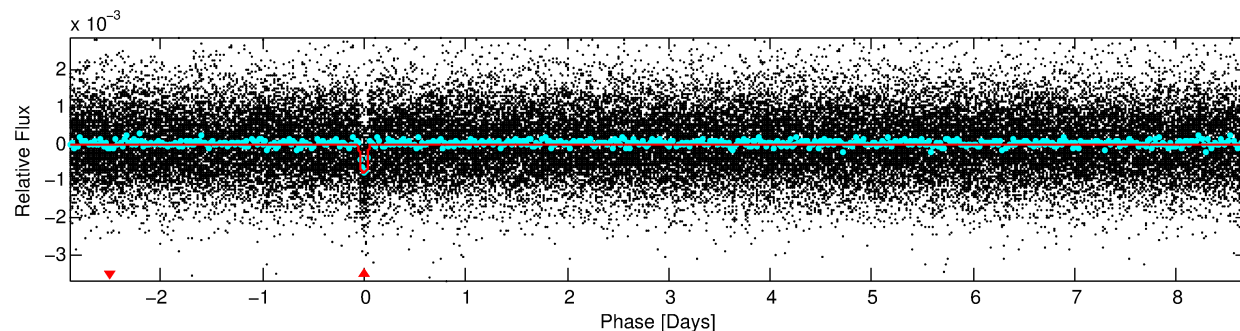
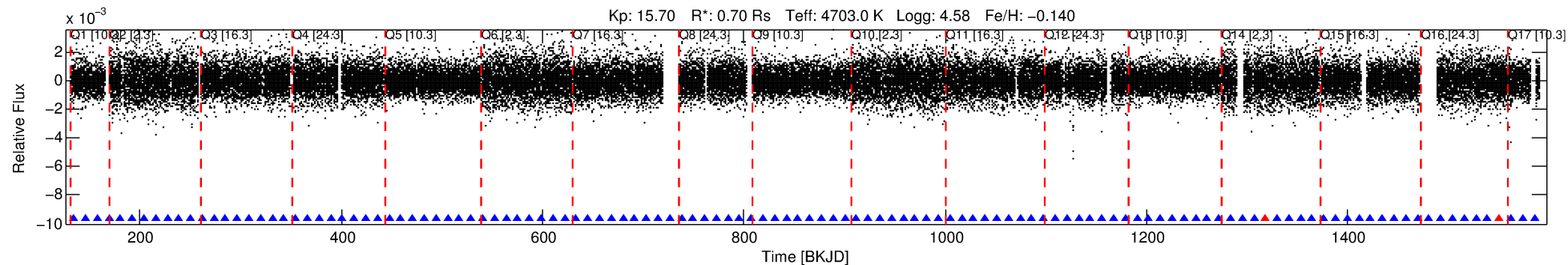
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003122913-01

No Significant Match Found

DV One-Page Summary

KIC: 3122913 Candidate: 1 of 1 Period: 11.607 d
KOI: K02490.01 Corr: 0.973



DV Fit Results:

Period = 11.60650 [0.00005] d
Epoch = 134.4183 [0.0032] BKJD
Rp/R* = 0.0320 [0.0064]
a/R* = 18.83 [13.36]
b = 0.90 [0.15]
Seff = 27.54 [3.05]
Teq = 584 [16] K
Rp = 2.45 [0.51] Re
a = 0.0884 [0.0048] AU
Ag = 112.30 [54.56] [2.04σ]
Teffp = 2940 [356] K [6.62σ]

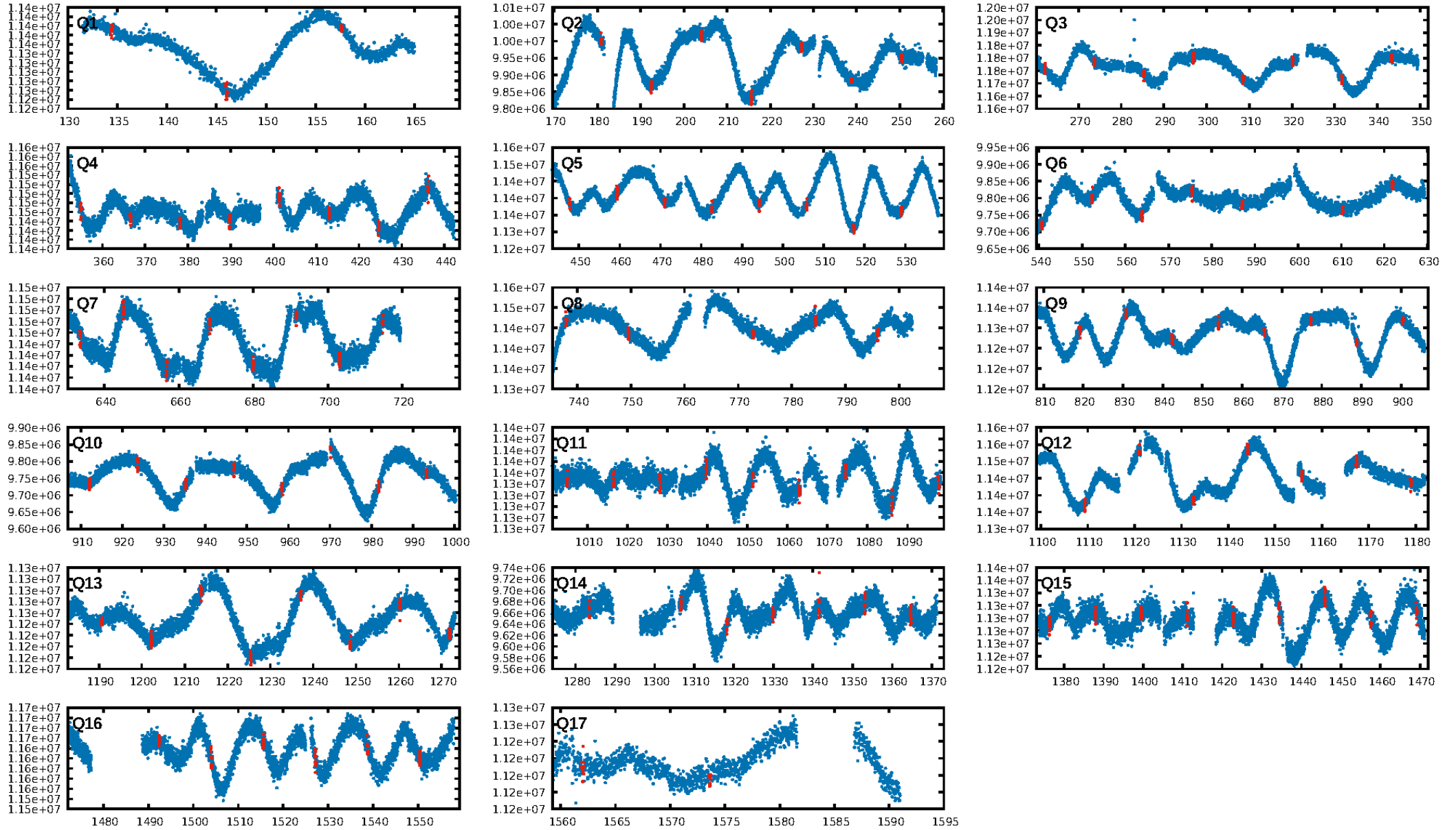
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.08e-65
RollingBand-fgt: 0.98 [111/113]
GhostDiagnostic-chr: 5.806
Centroid-sig: 66.4%
Centroid-so: 0.589 arcsec [0.82σ]
OotOffset-rm: 0.189 arcsec [0.26σ]
KicOffset-rm: 0.166 arcsec [0.19σ]
OotOffset-st: 4/3/2/4 [13]
KicOffset-st: 4/3/2/4 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [17/17]

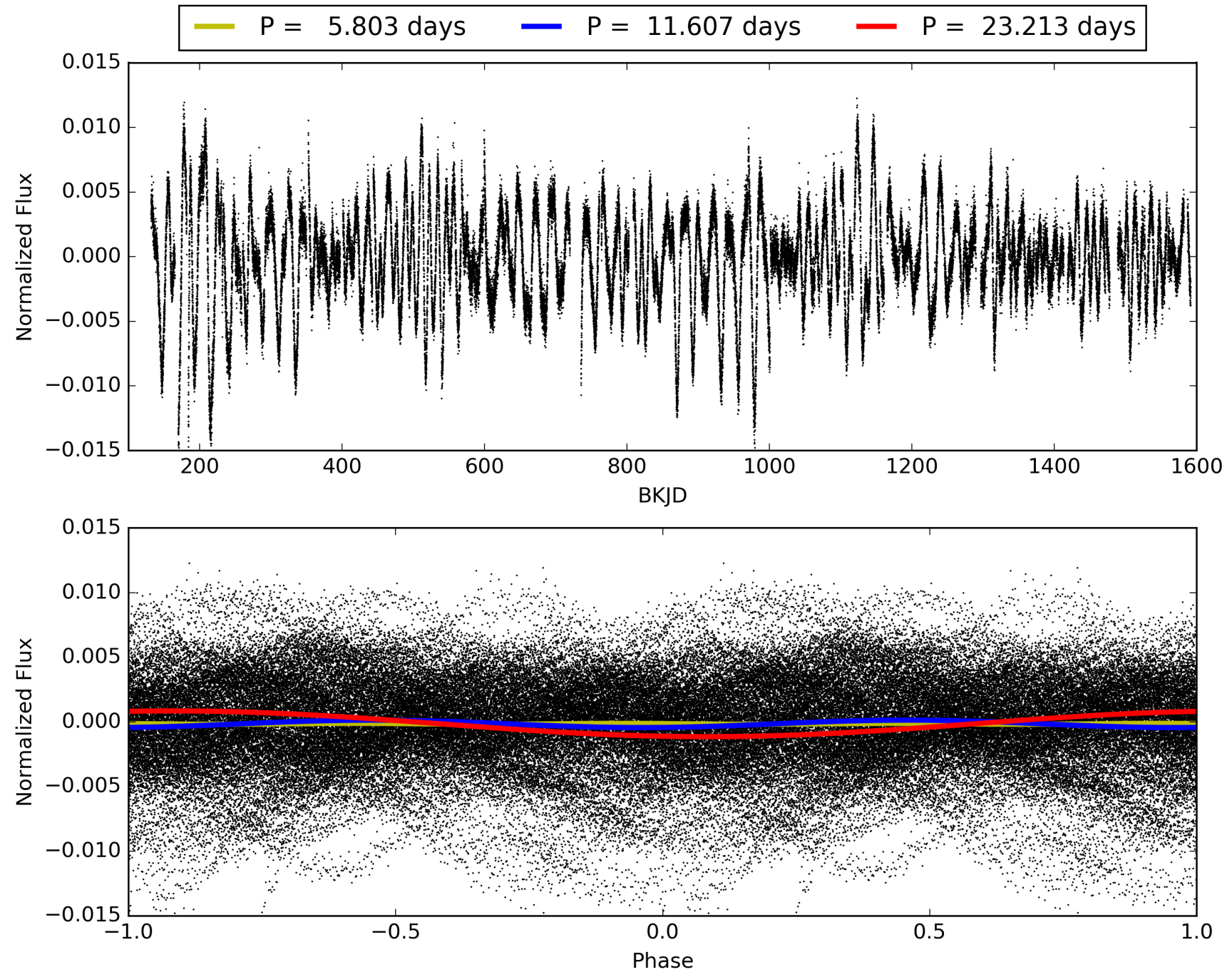
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:11:52 Z

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

TCE 003122913-01, PDC Light Curves

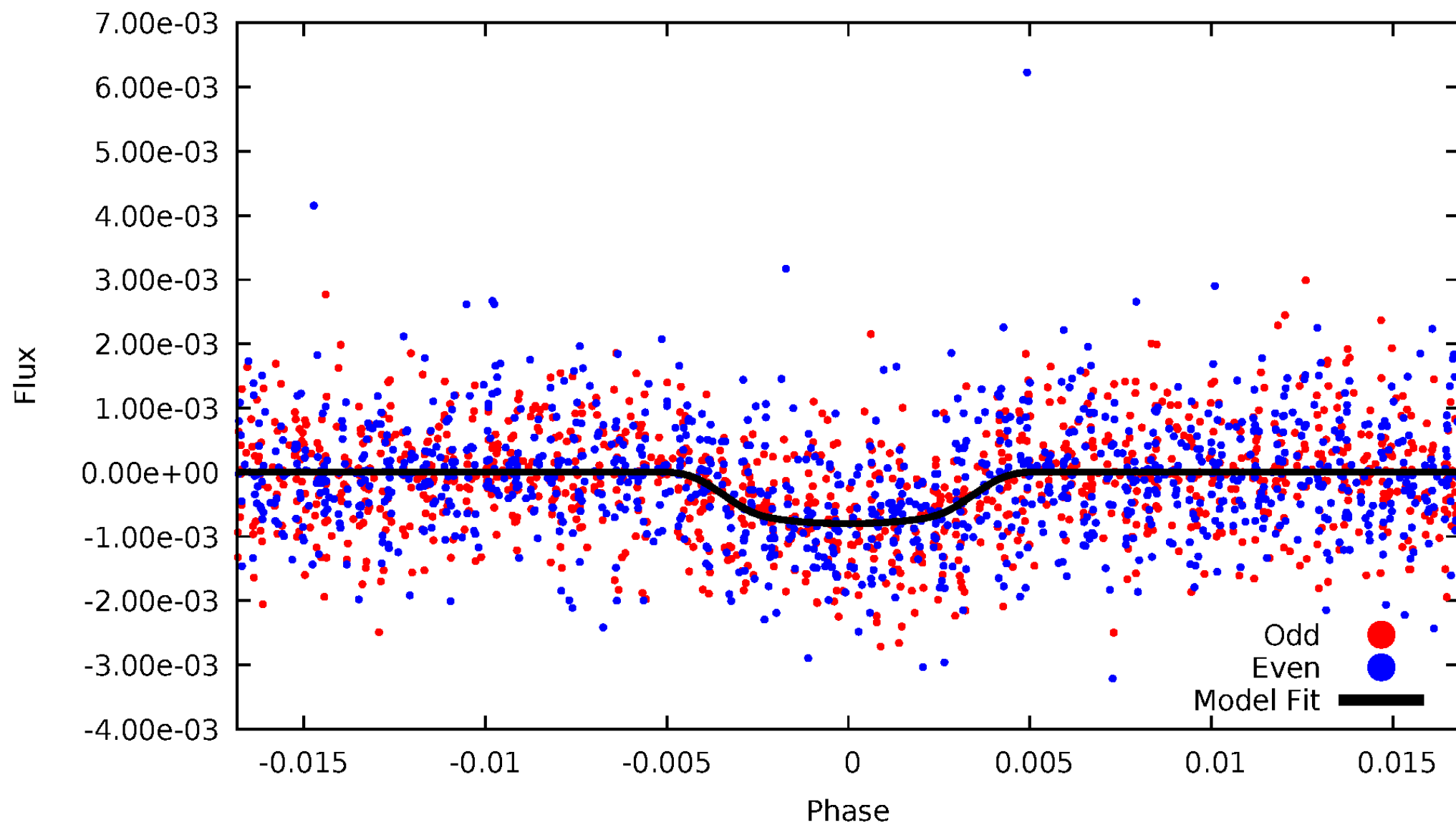


TCE 003122913-01



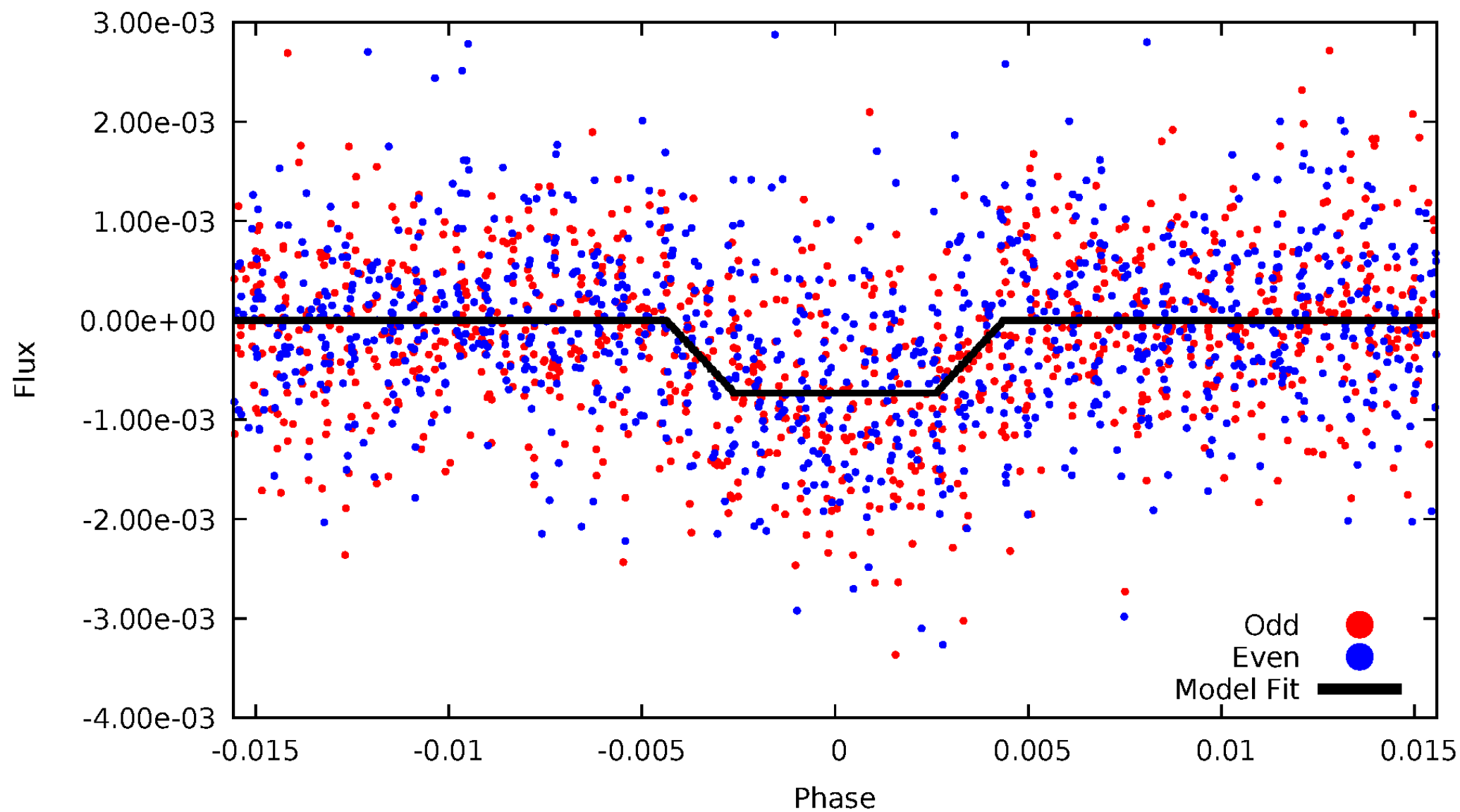
DV Odd/Even

TCE 003122913-01



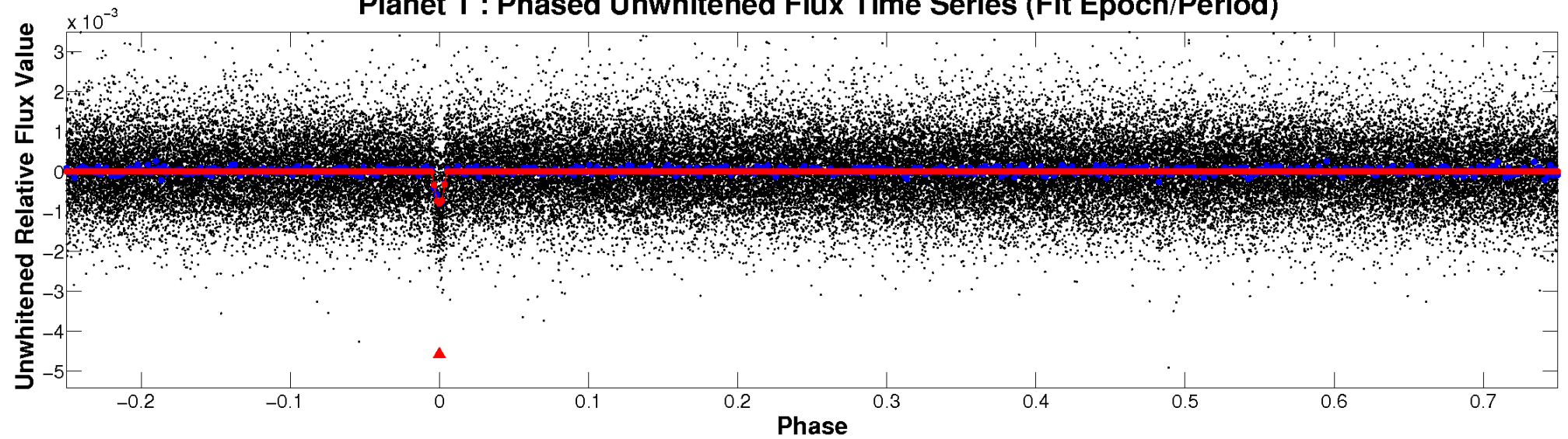
ALT Odd/Even

TCE 003122913-01

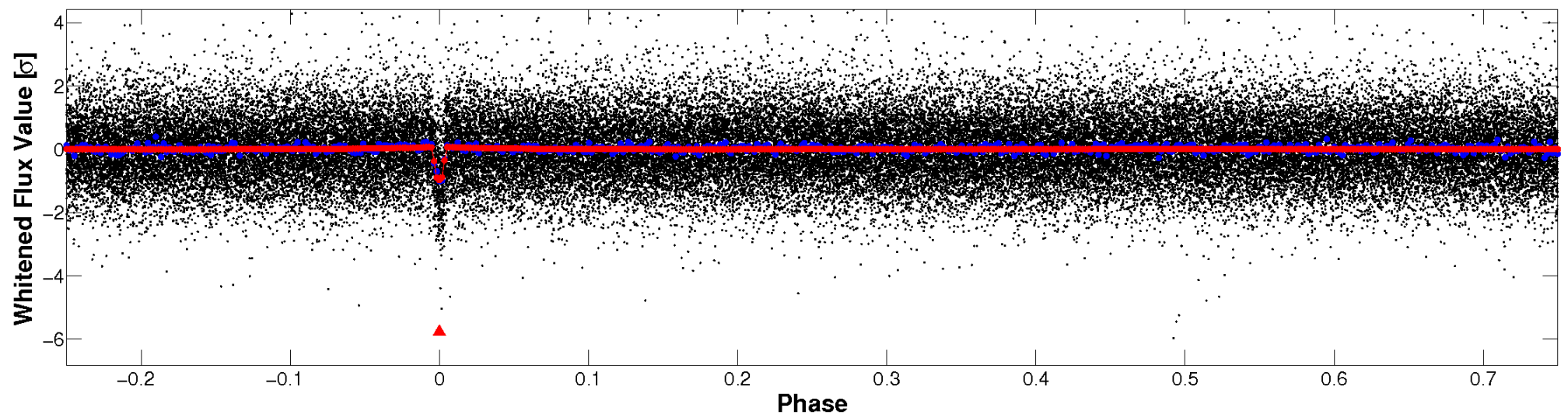


Non-Whitened Vs. Whitened Light Curve

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

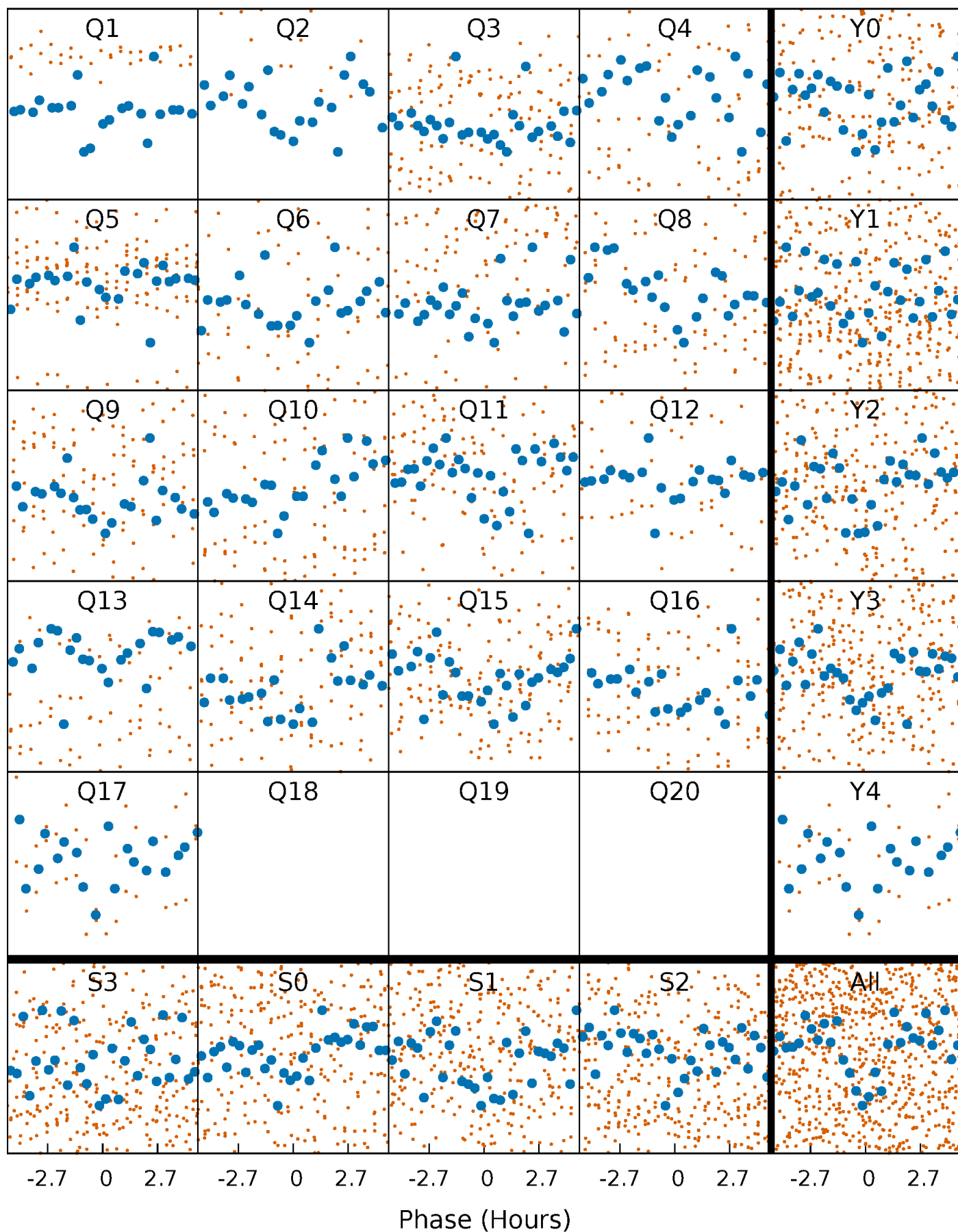


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



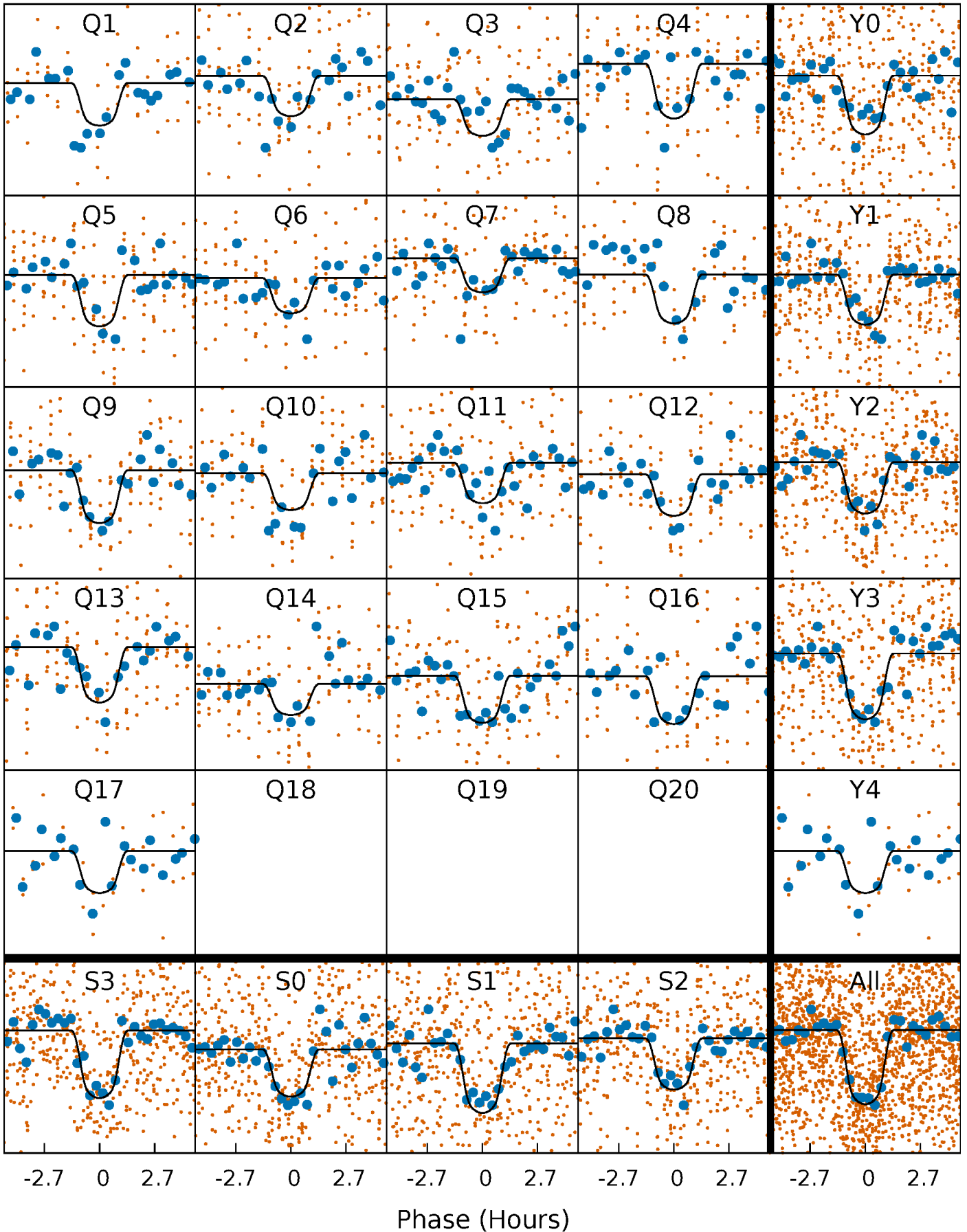
PDC Quarter-Phased Transit Curves

TCE 003122913-01 P= 11.606502 Days $T_0=134.418255$ (BKJD)



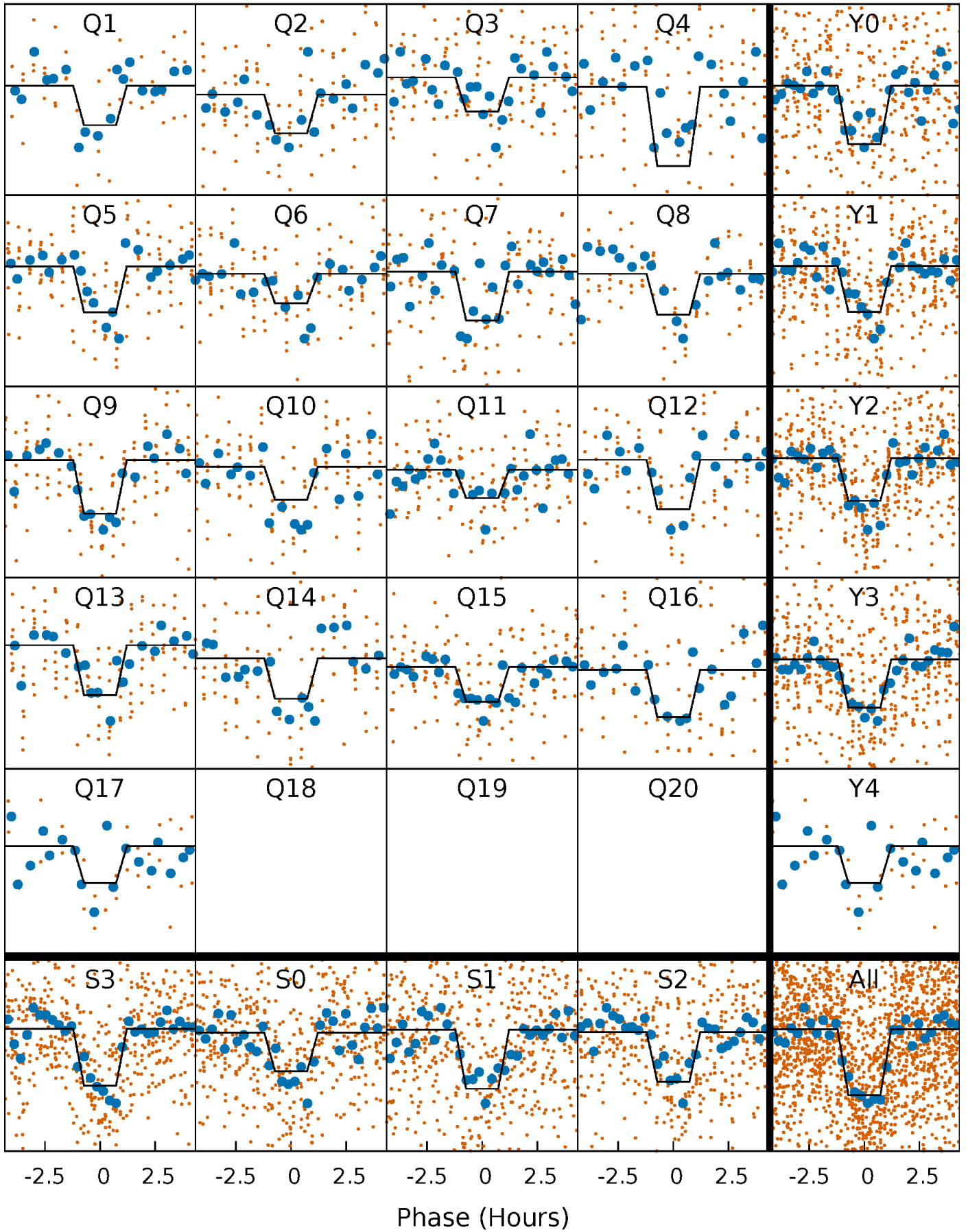
DV Quarter-Phased Transit Curves

TCE 003122913-01 P= 11.606502 Days $T_0=134.418255$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

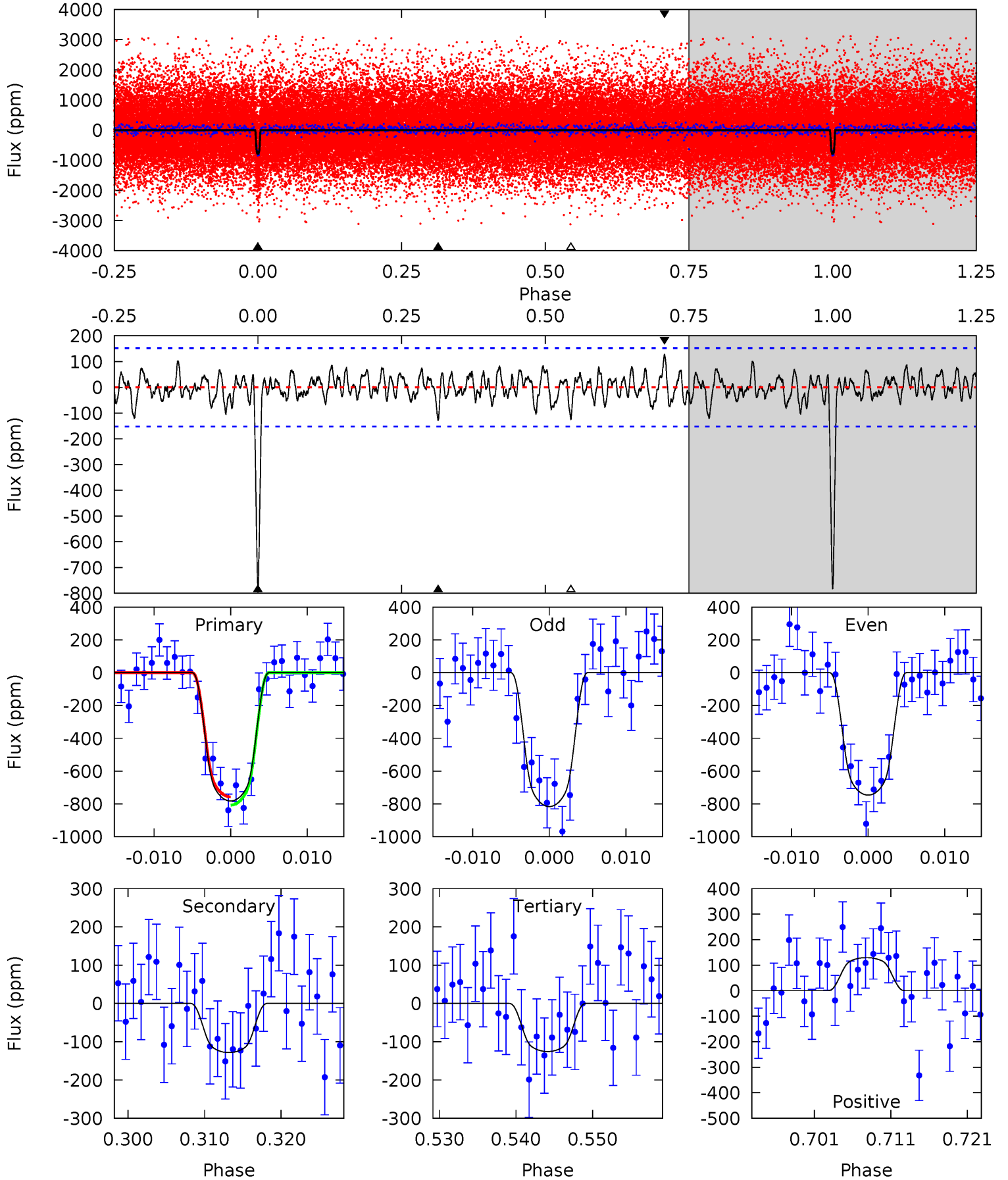
TCE 003122913-01 P= 11.606484 Days $T_0=134.417298$ (BKJD)



DV Model-Shift Uniqueness Test

003122913-01, P = 11.606502 Days, E = 122.811753 Days

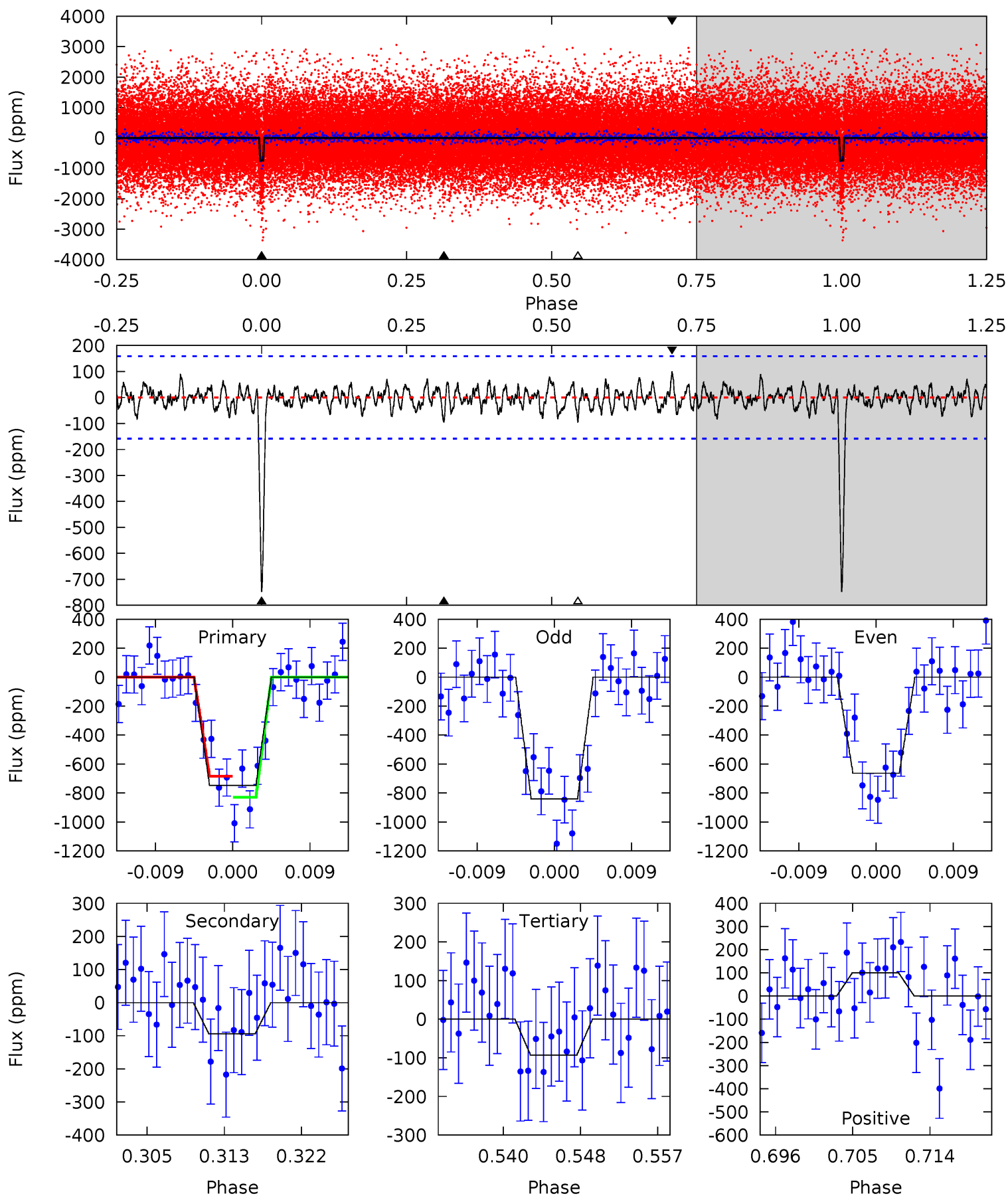
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.9	4.25	4.15	4.28	5.03	2.58	1.34	21.7	21.6	0.09	-0.04	1.16	0.93	0.14	0.83



Alt Model-Shift Uniqueness Test

003122913-01, $P = 11.606484$ Days, $E = 122.810814$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	3.00	2.96	3.18	5.05	2.62	1.02	20.9	20.6	0.04	-0.18	2.83	0.96	0.12	2.32



Stellar Parameters For KIC 003122913

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4703^{+74}_{-84}	$4.582^{+0.049}_{-0.017}$	$-0.140^{+0.150}_{-0.150}$	$0.701^{+0.027}_{-0.041}$	$0.686^{+0.050}_{-0.025}$	$2.798^{+0.540}_{-0.171}$
	+2%/-2%	+1%/-0%	+107%/-107%	+4%/-6%	+7%/-4%	+19%/-6%
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 003122913-01 / KOI 2490.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-128 ± 30	$2.44^{+0.52}_{-0.48}$	812^{+16}_{-18}	3260^{+259}_{-188}	92^{+59}_{-31}
Alt.	-94 ± 31	$2.06^{+0.47}_{-0.50}$	811^{+15}_{-18}	3267^{+346}_{-252}	93^{+80}_{-39}

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 $A_{obs} \gg 1.0$

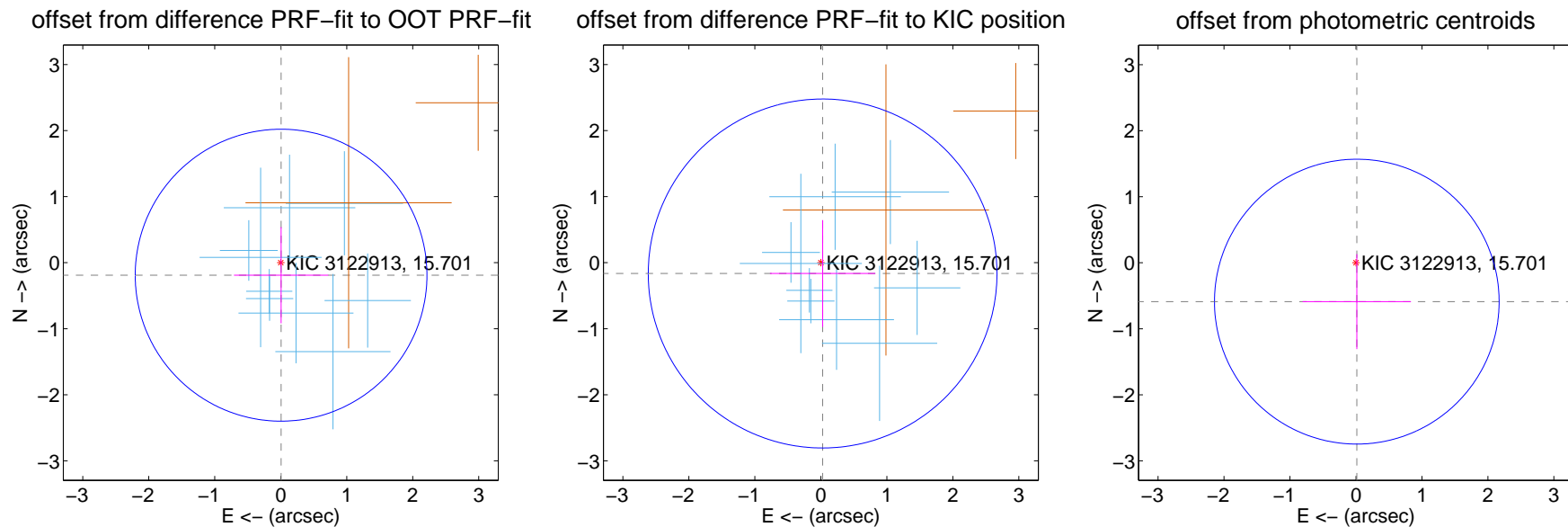
DV Centroid Data

Supplemental centroid analysis for 003122913-01. Kepler magnitude: 15.70. Transit SNR 18.23

There are 9 quarters with good PRF difference image offsets

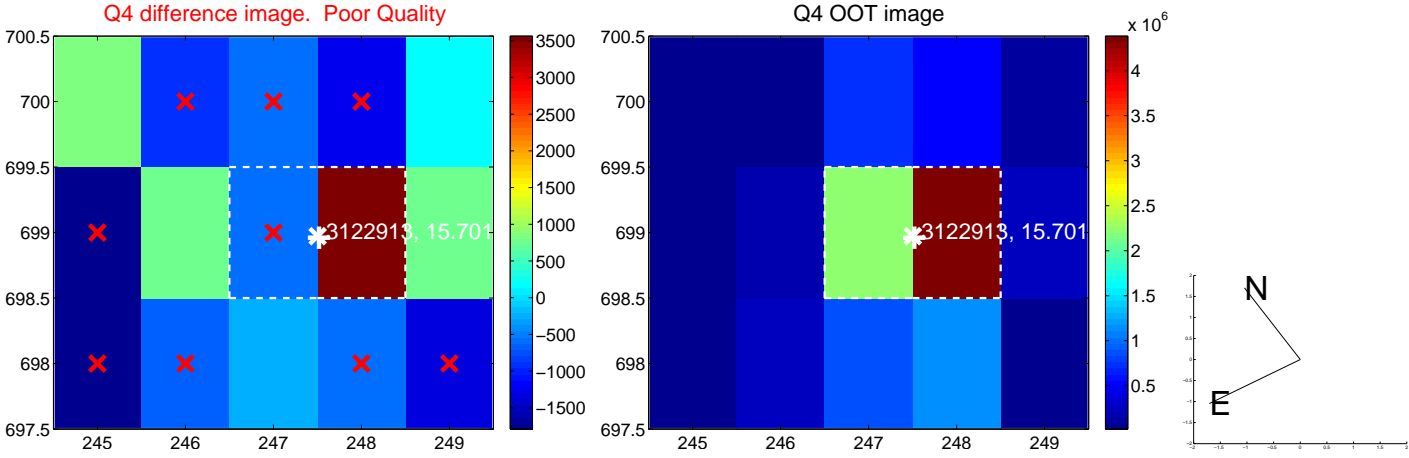
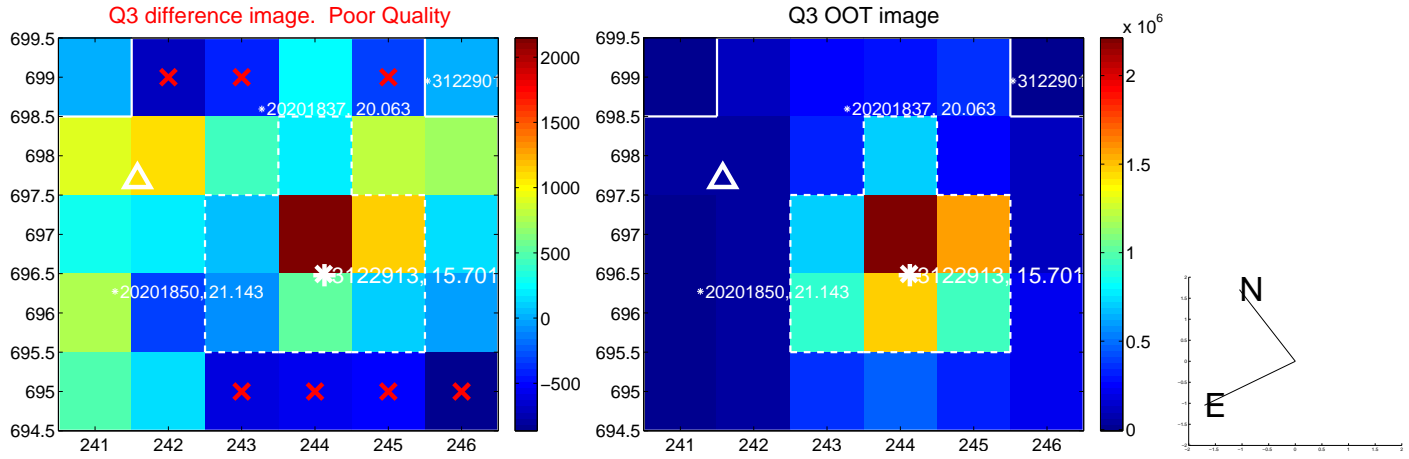
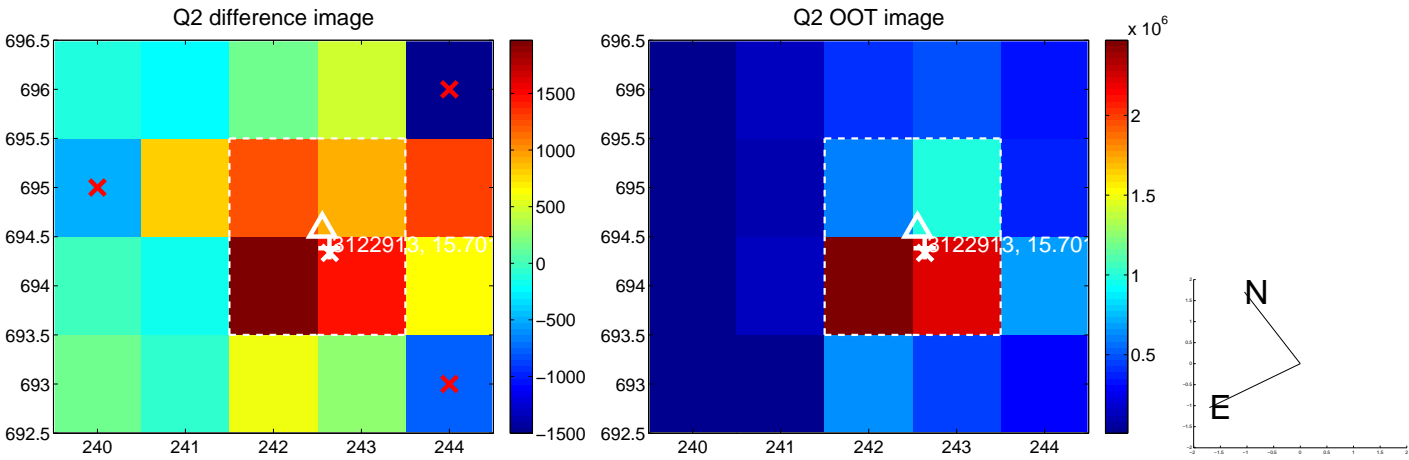
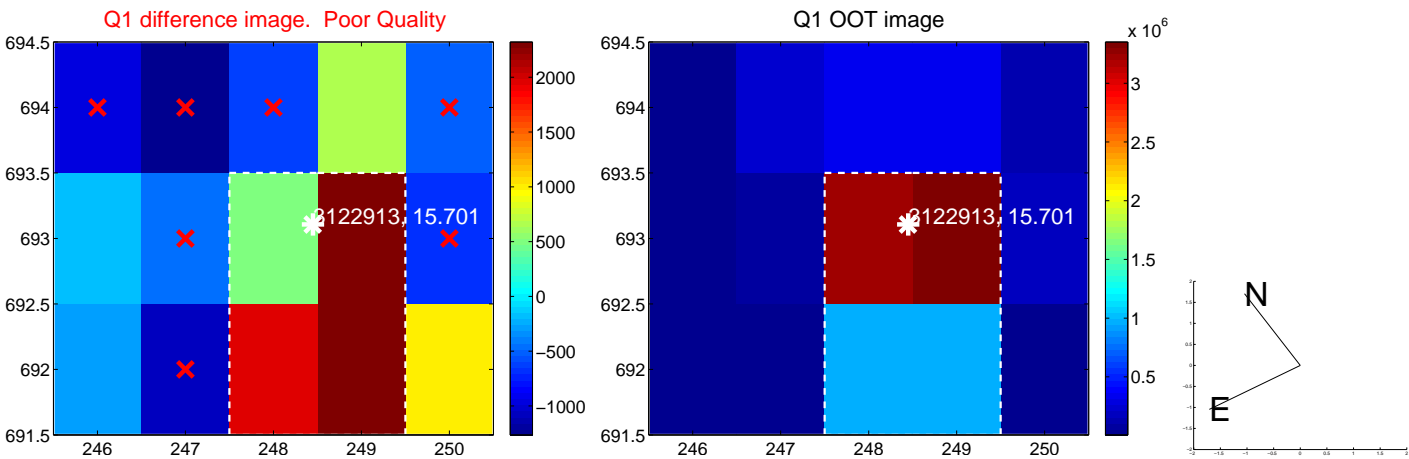
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.189 ± 0.737	0.26	-0.005 ± 0.714	-0.189 ± 0.728
PRF-fit source offset from KIC position	0.166 ± 0.881	0.19	-0.027 ± 0.798	-0.164 ± 0.808
photometric centroid source offset	0.59 ± 0.72	0.82	-0.01 ± 0.82	-0.59 ± 0.72

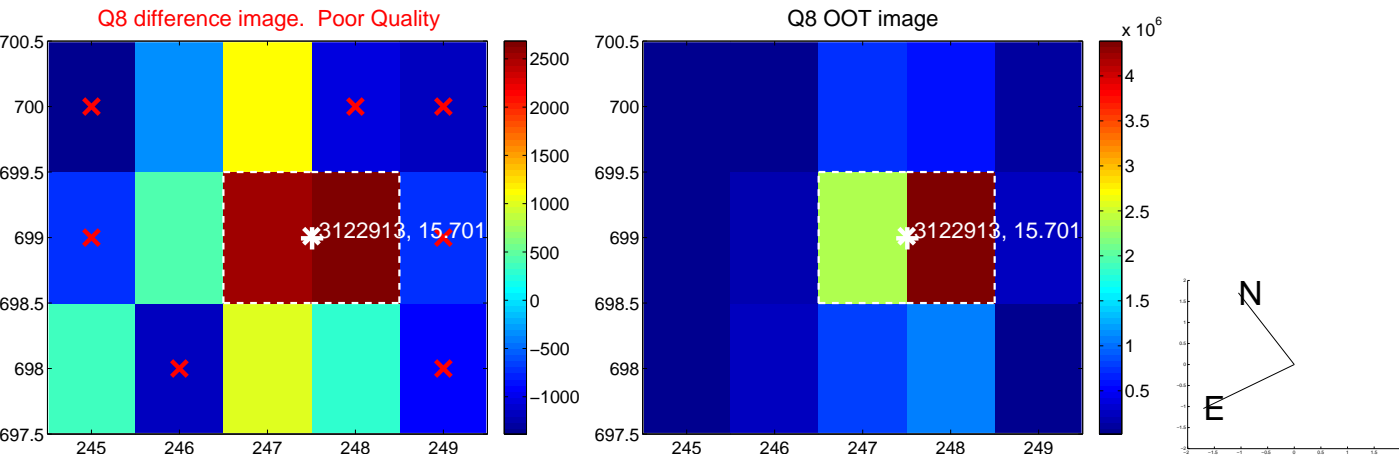
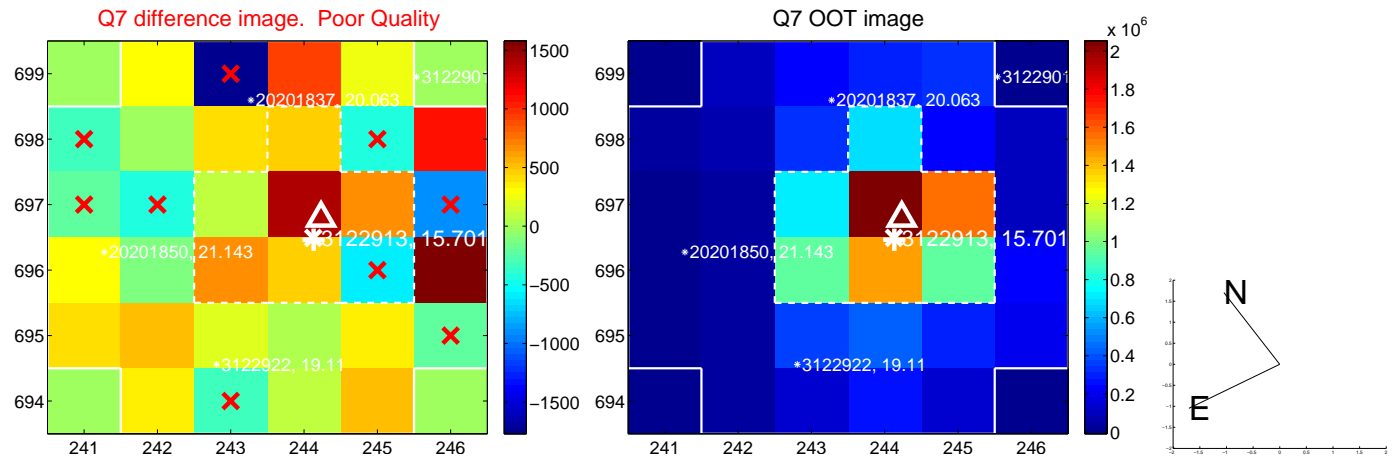
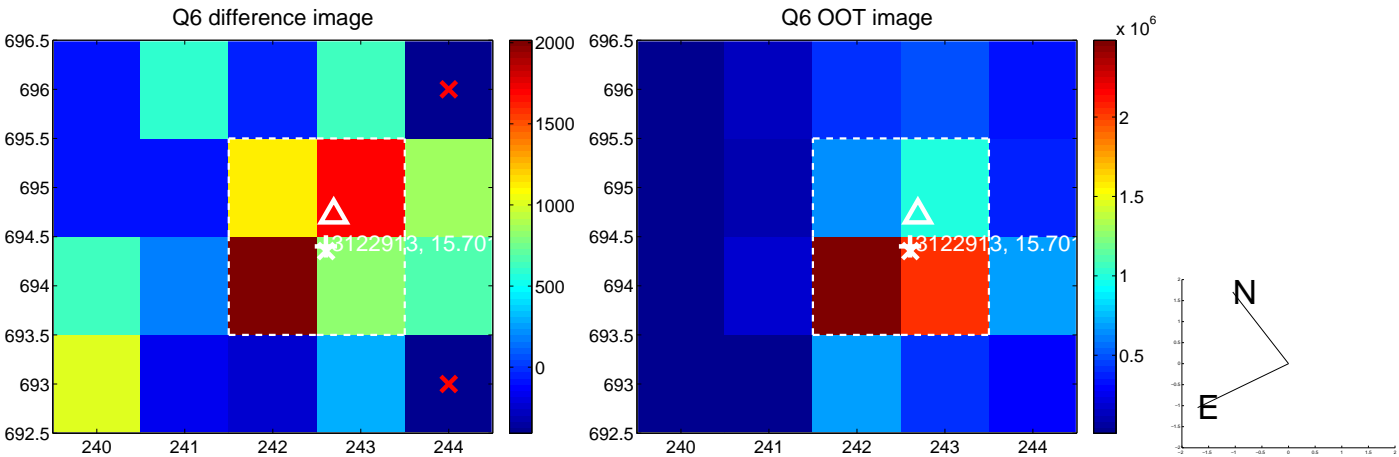
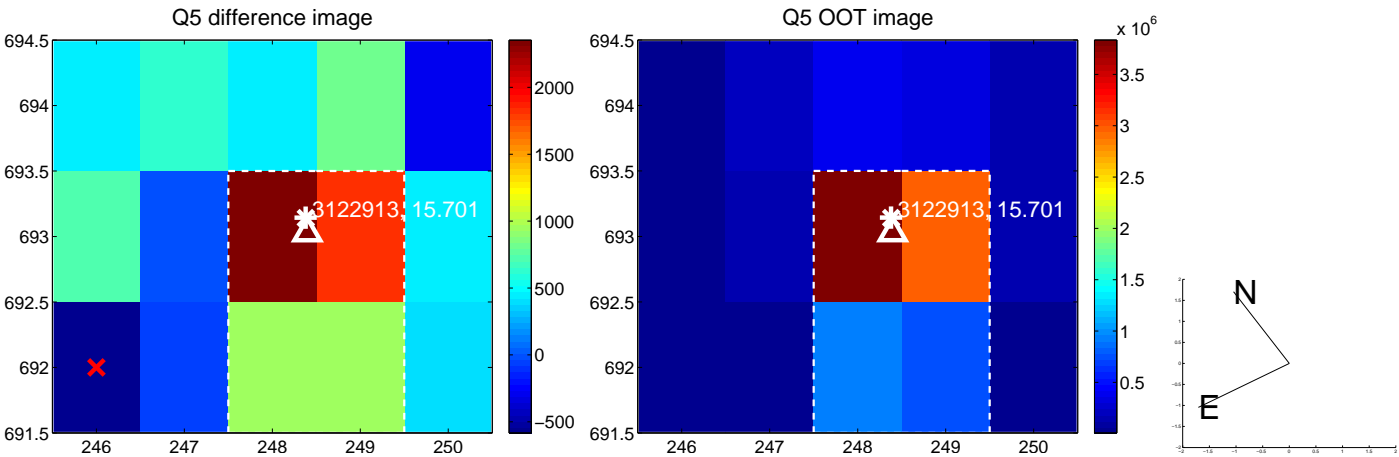


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

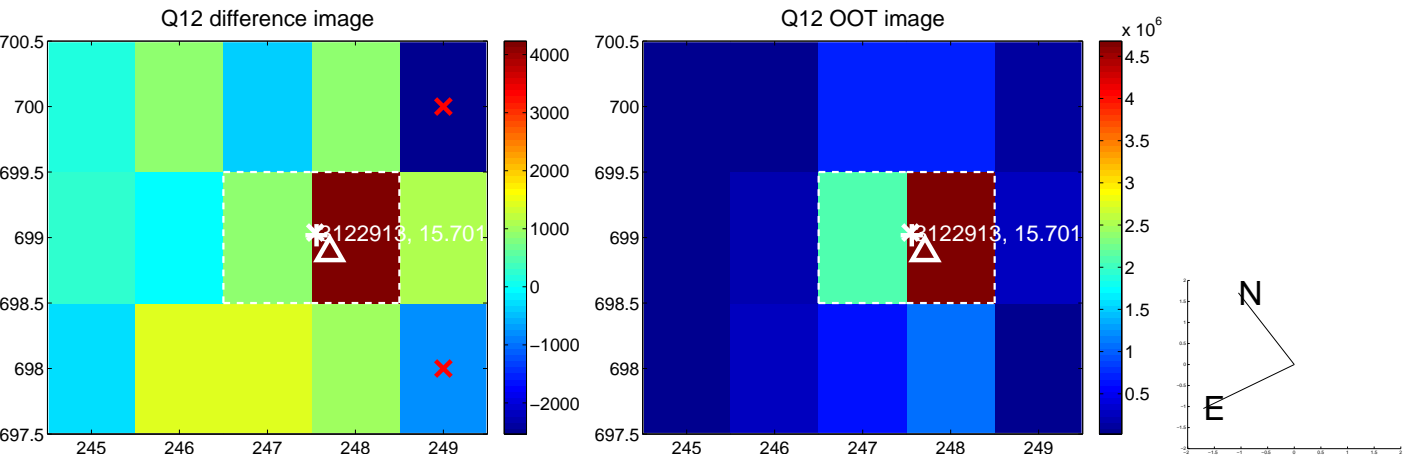
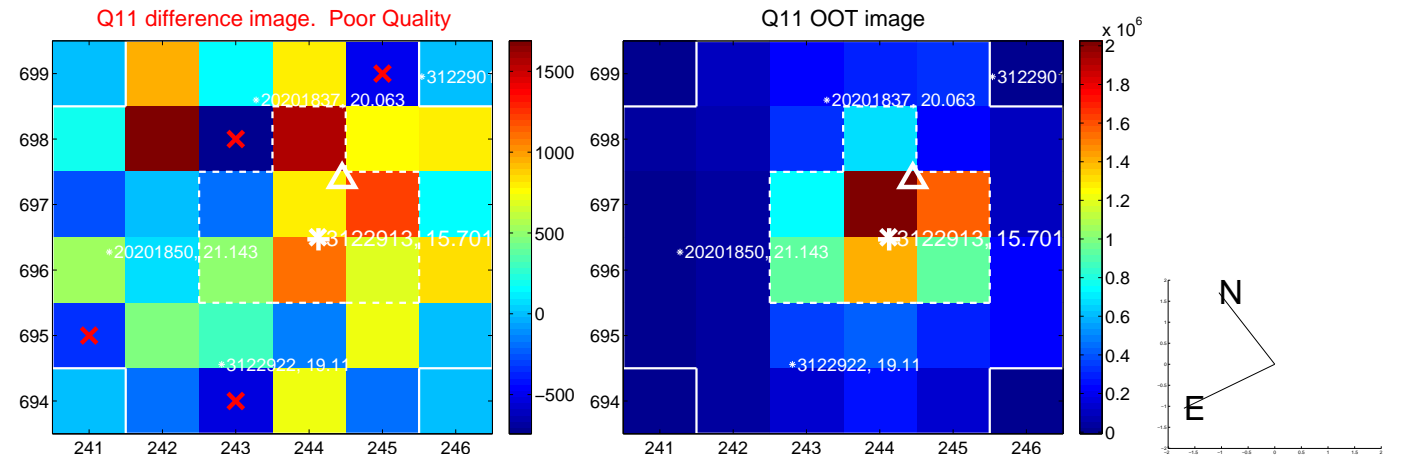
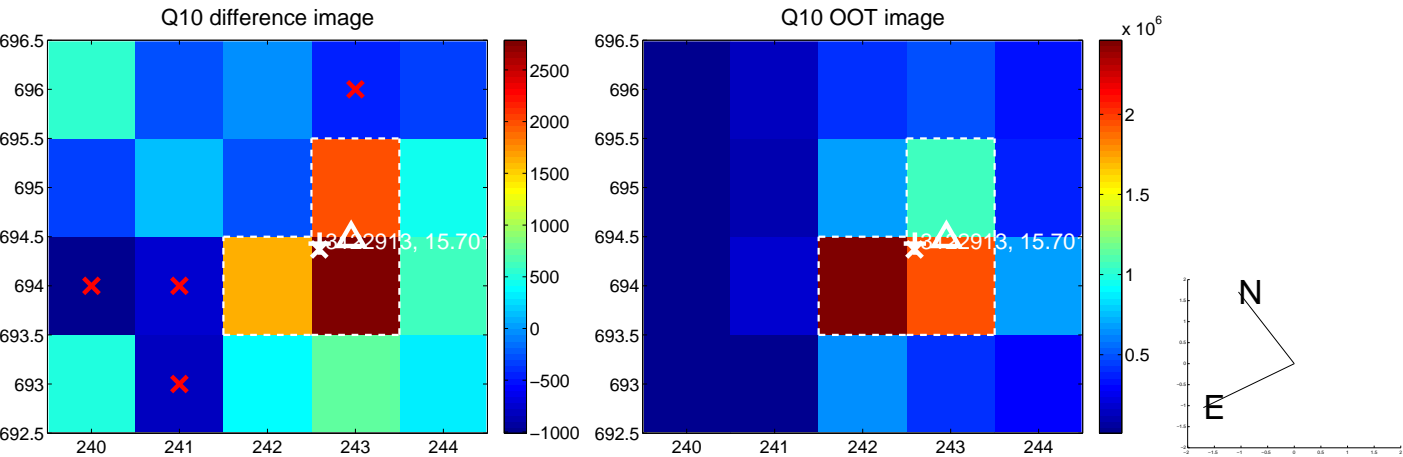
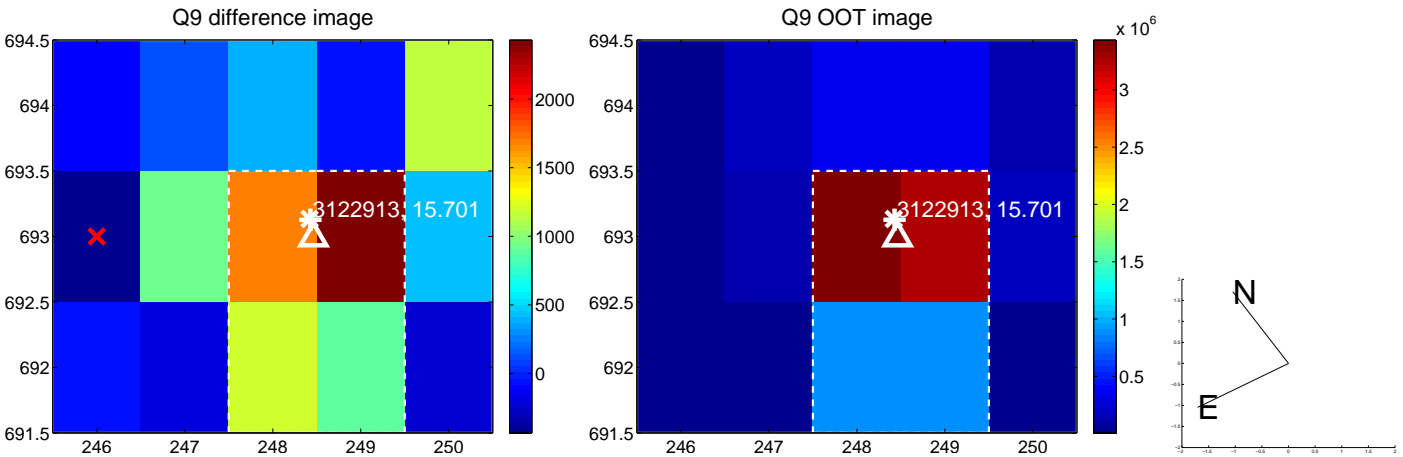
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



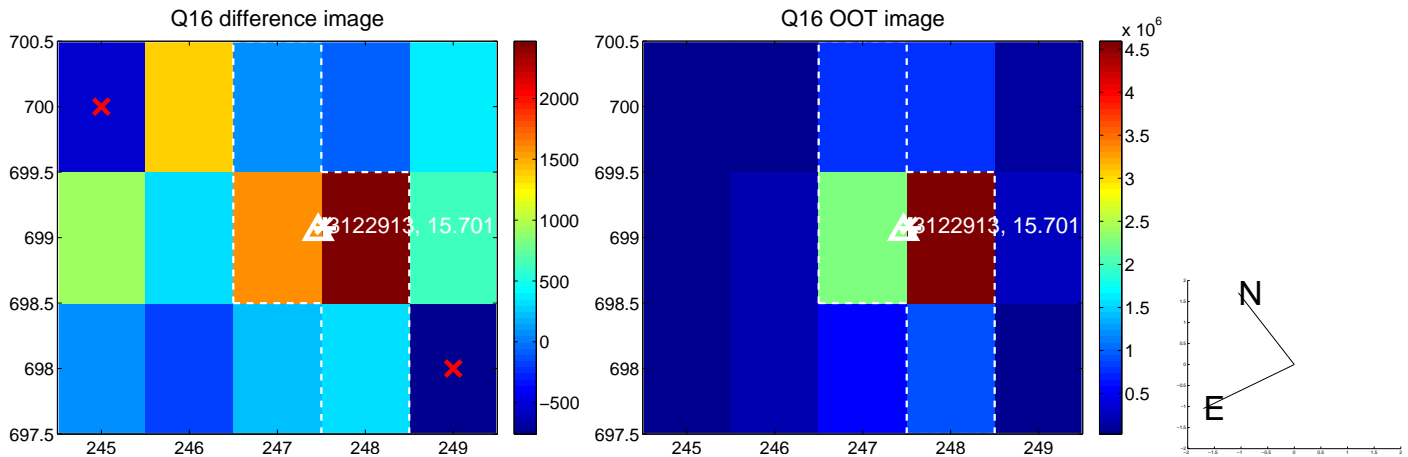
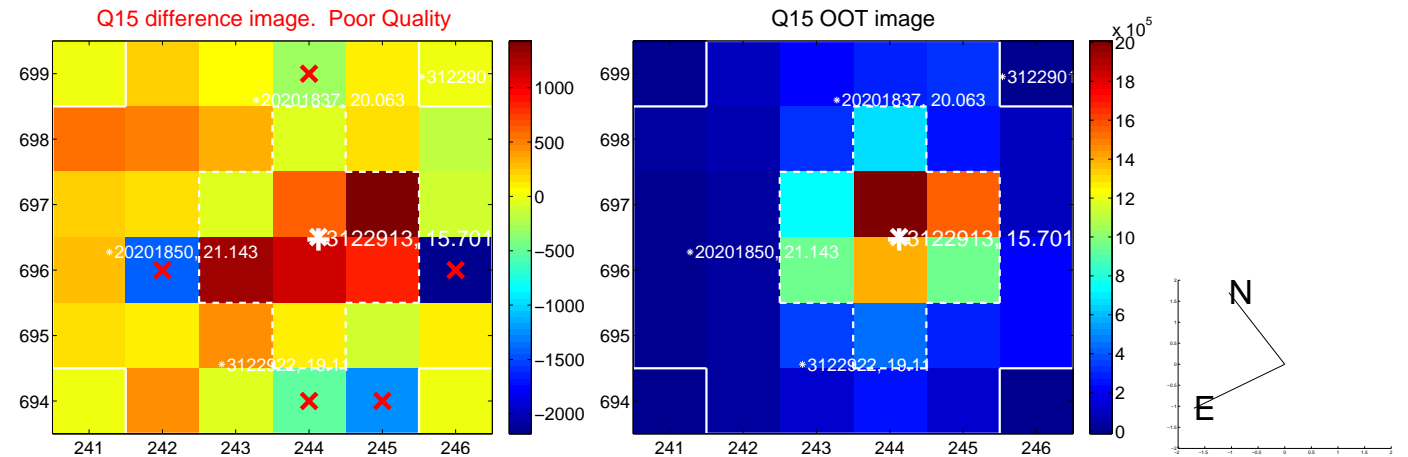
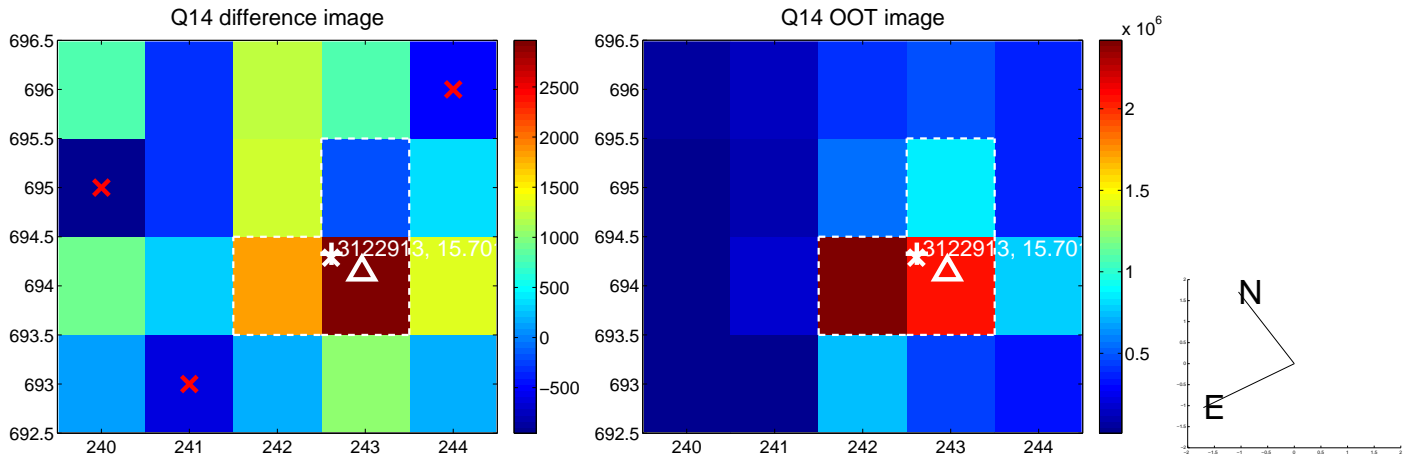
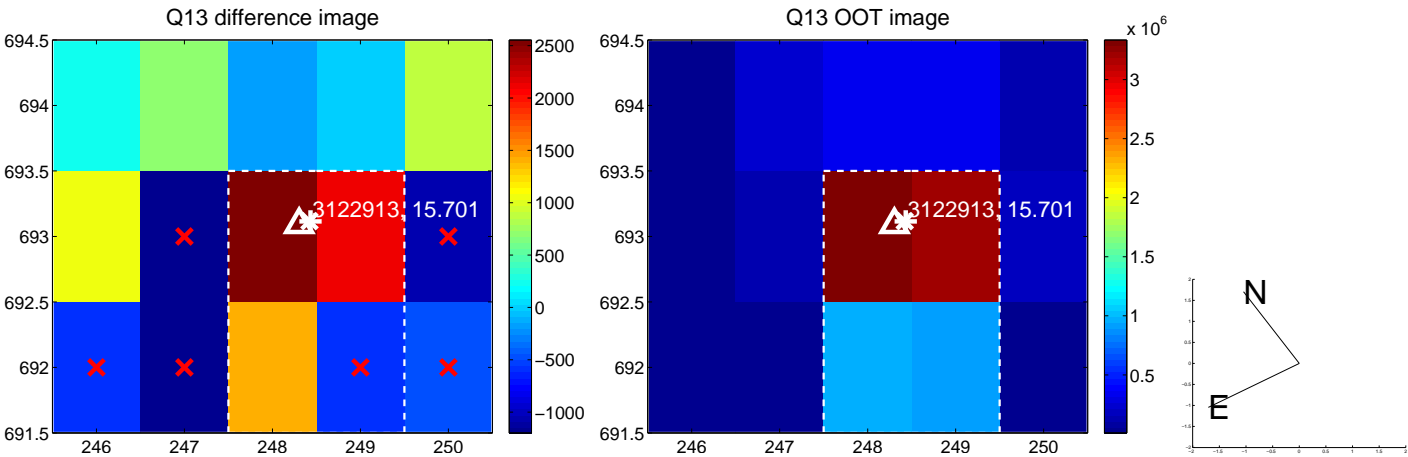
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



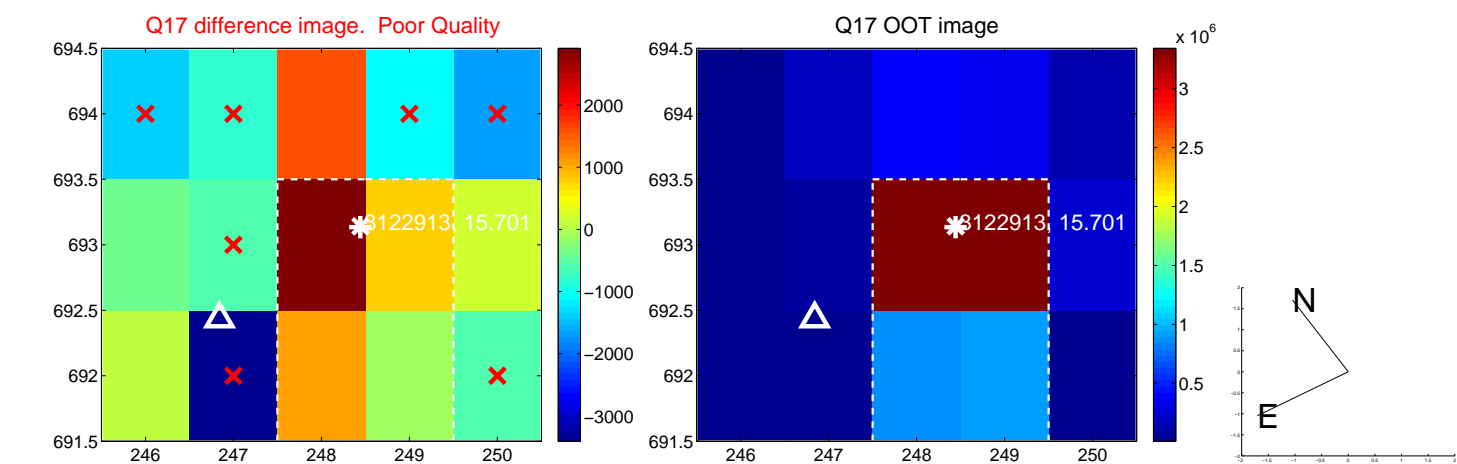
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



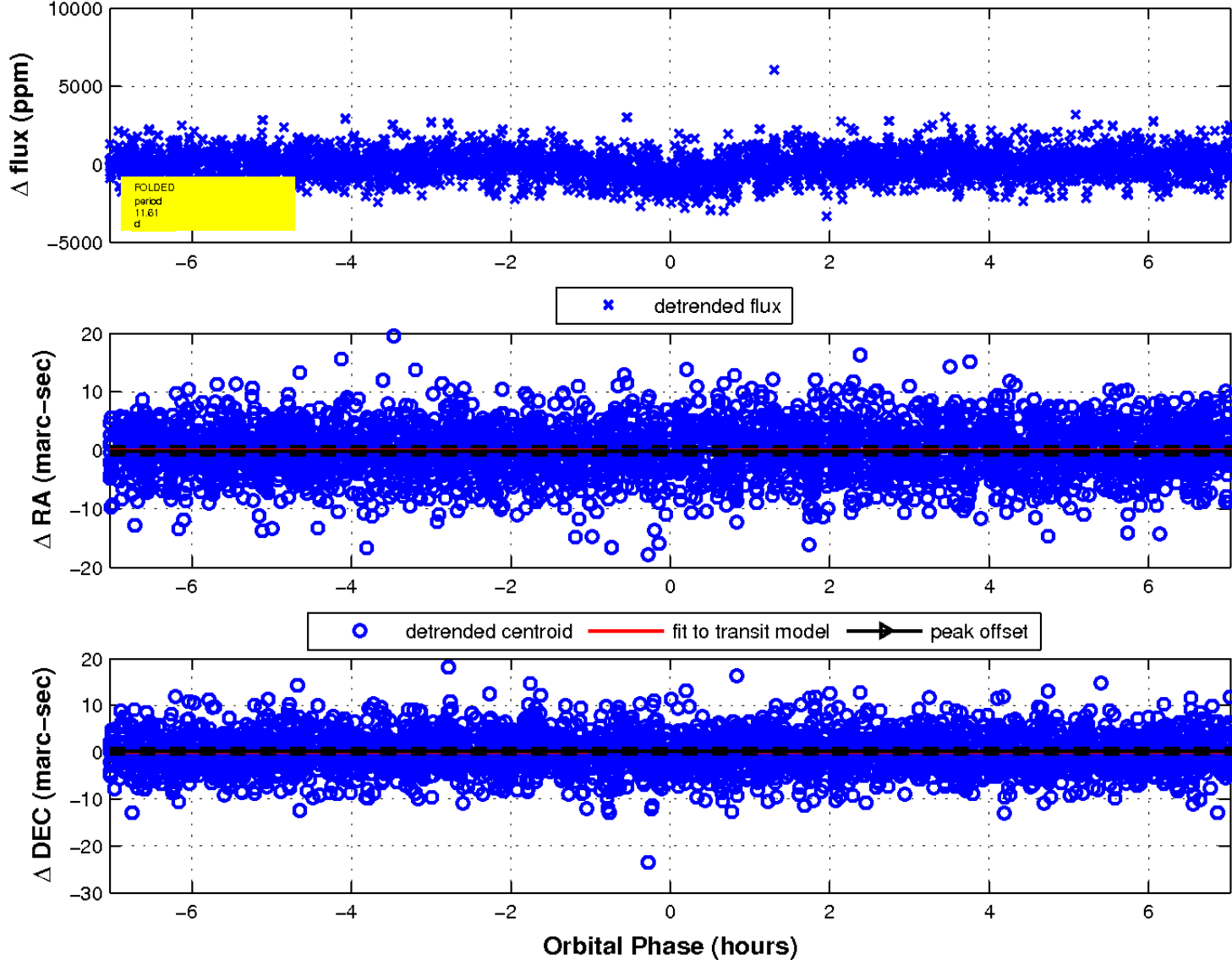
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

