

KIC 003122872

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})
003122872-01	OBS	3203.01	96.818652	136.542930	190.6	10.641	15.0	15.1	2.47	6404	3.75	43.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003122872-01	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 003122872-01

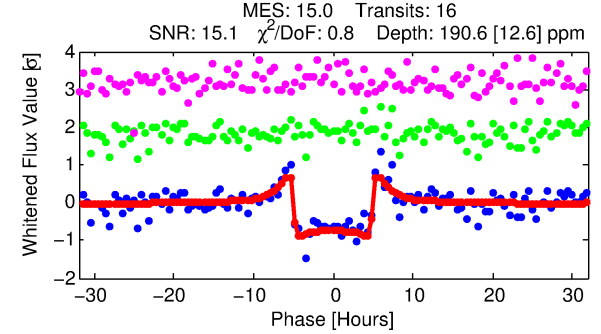
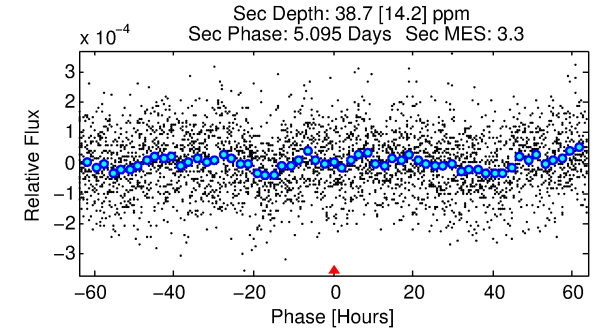
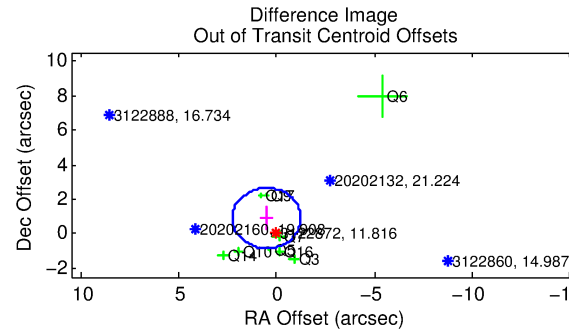
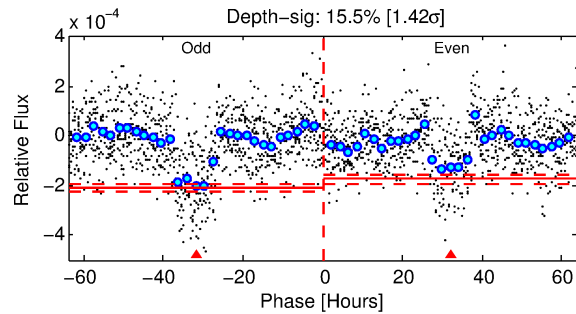
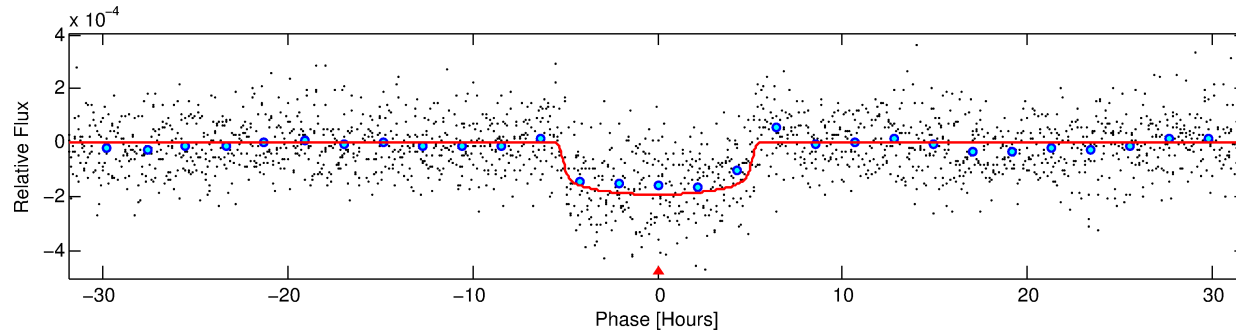
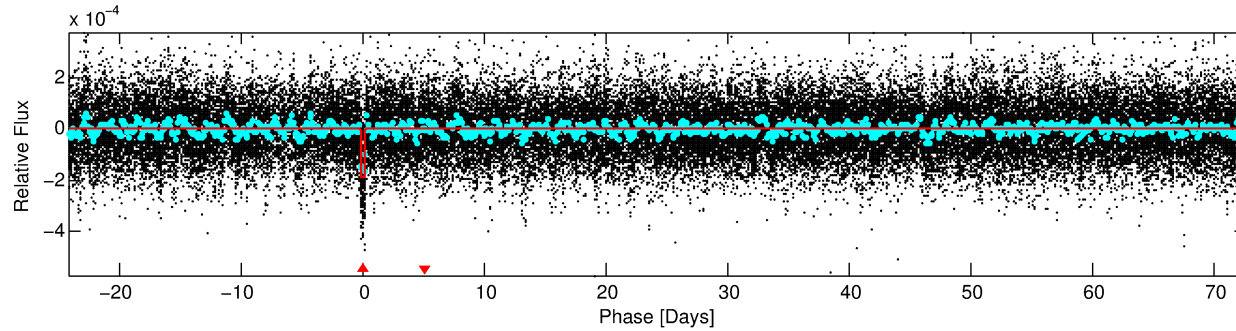
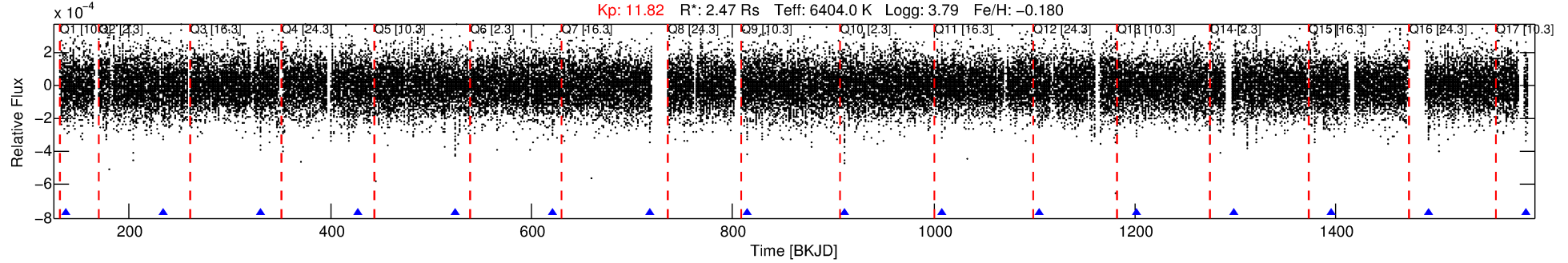
No Significant Match Found

DV One-Page Summary

KIC: 3122872 Candidate: 1 of 1 Period: 96.819 d

KOI: K03203.01 Corr: 0.980

Kp: 11.82 R*: 2.47 Rs Teff: 6404.0 K Logg: 3.79 Fe/H: -0.180



DV Fit Results:

Period = 96.81865 [0.00054] d
Epoch = 136.5429 [0.0050] BKJD
Rp/R* = 0.0139 [0.0015]
a/R* = 43.75 [22.58]
b = 0.80 [0.24]
Seff = 43.47 [17.09]
Teff = 655 [64] K
Rp = 3.75 [1.14] Re
a = 0.4593 [0.1163] AU
Ag = 318.91 [182.10] [1.75σ]
Teffp = 4278 [459] K [7.81σ]

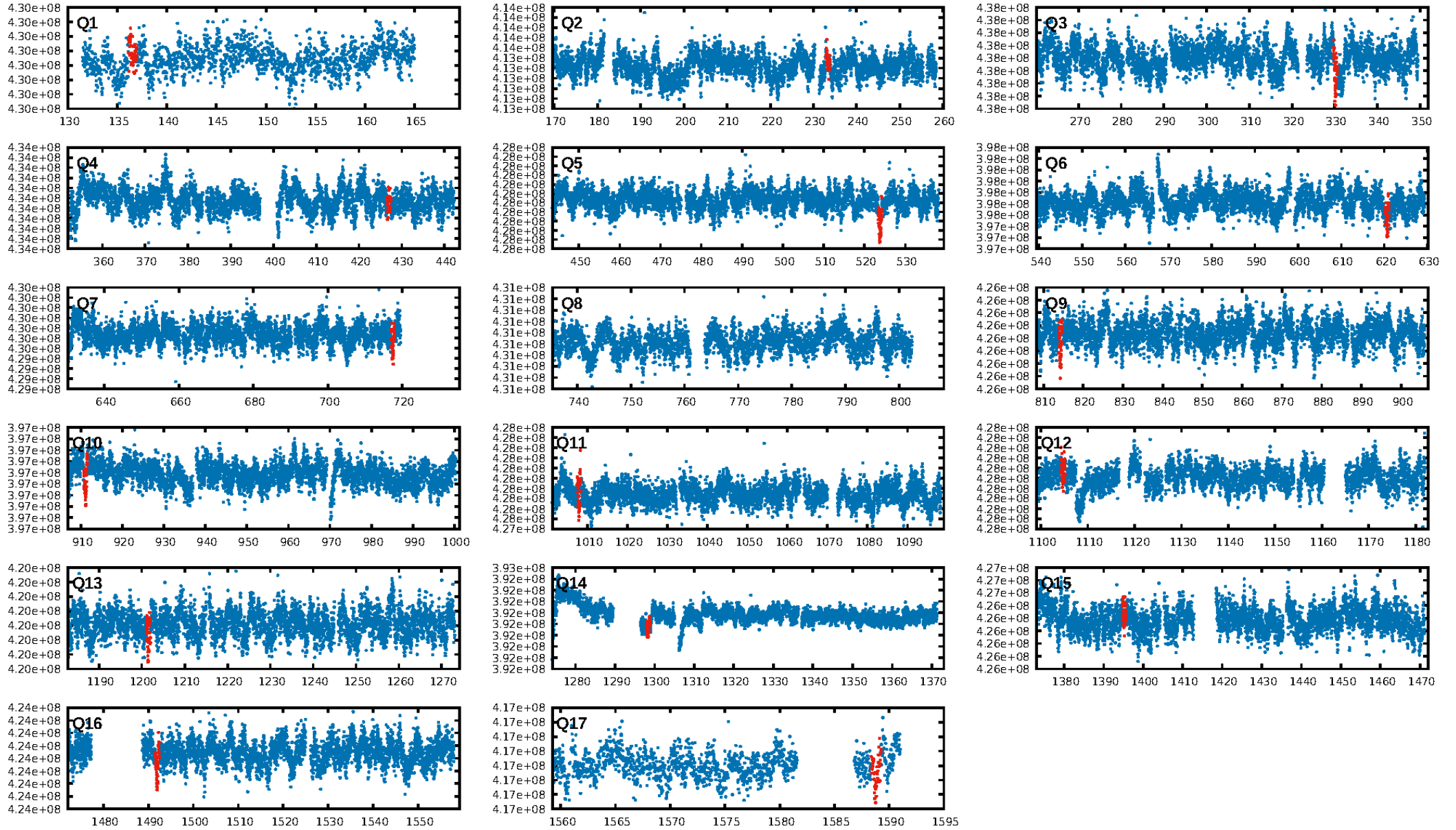
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.12e-45
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: -2.256
Centroid-sig: 0.2%
Centroid-so: 0.877 arcsec [1.75σ]
OotOffset-rm: 1.038 arcsec [1.78σ]
KicOffset-rm: 1.177 arcsec [1.82σ]
OotOffset-st: 3/2/1/3 [9]
KicOffset-st: 3/2/1/3 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 1.00 [13/13]

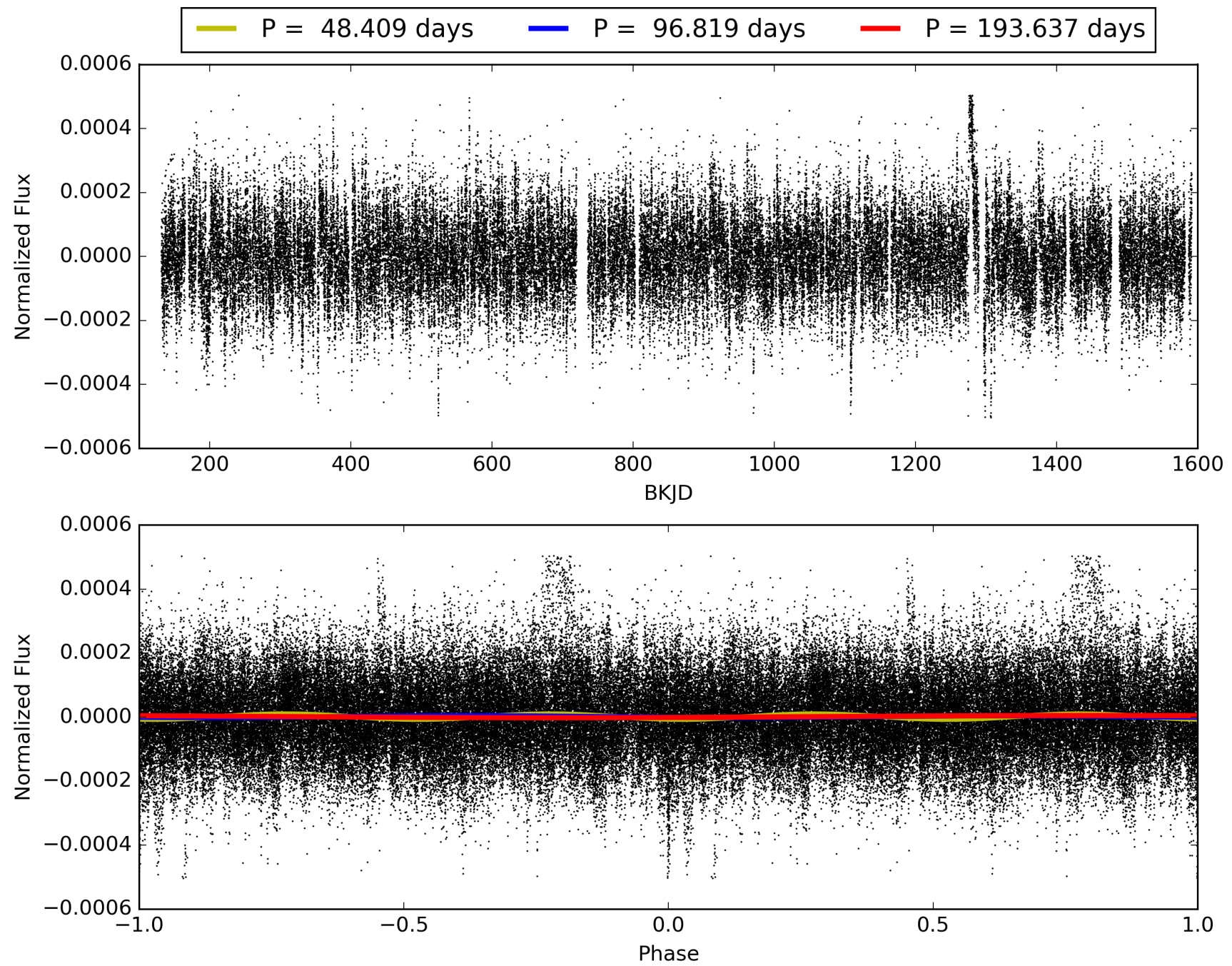
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:06:49 Z

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

TCE 003122872-01, PDC Light Curves

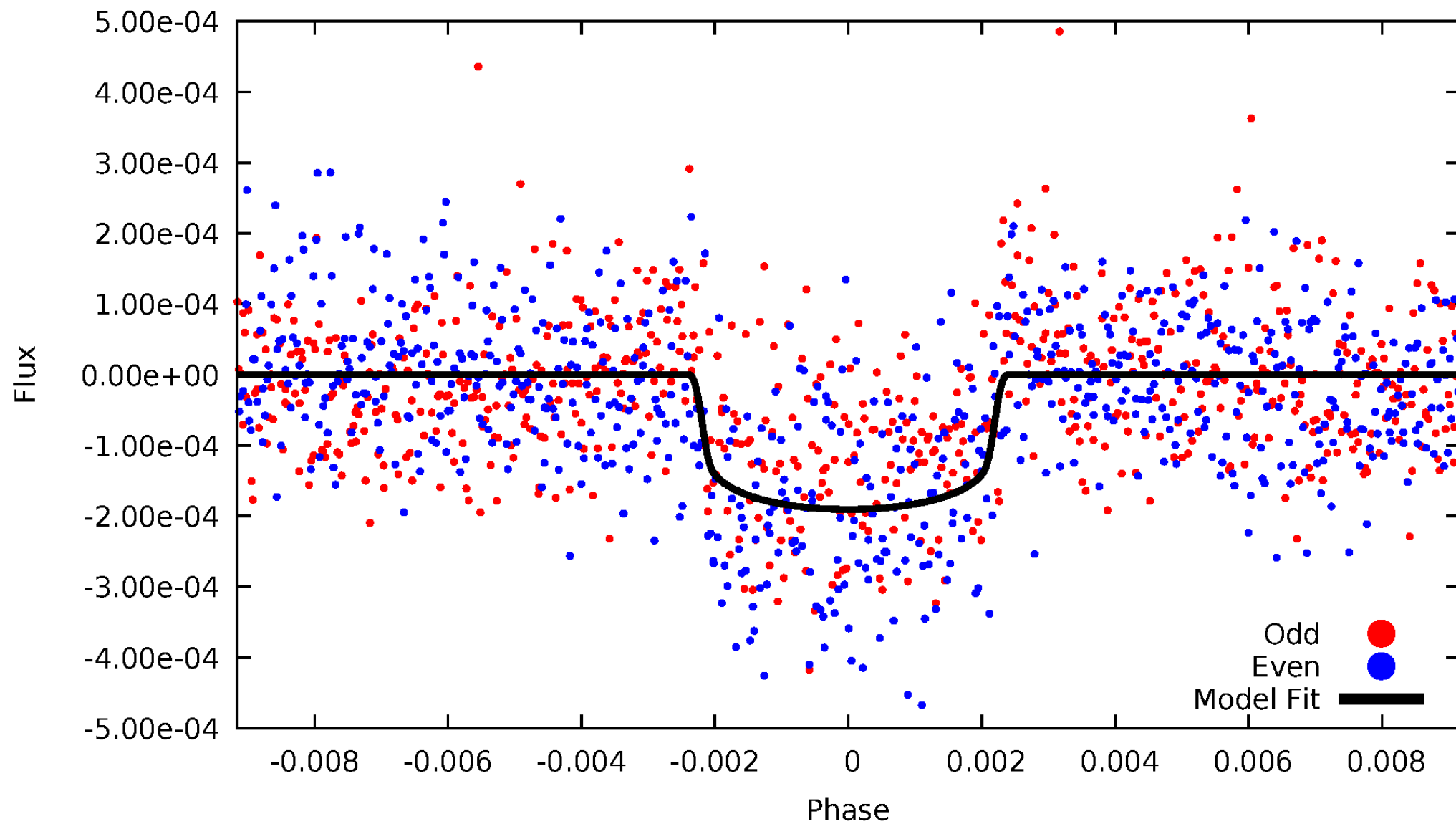


TCE 003122872-01



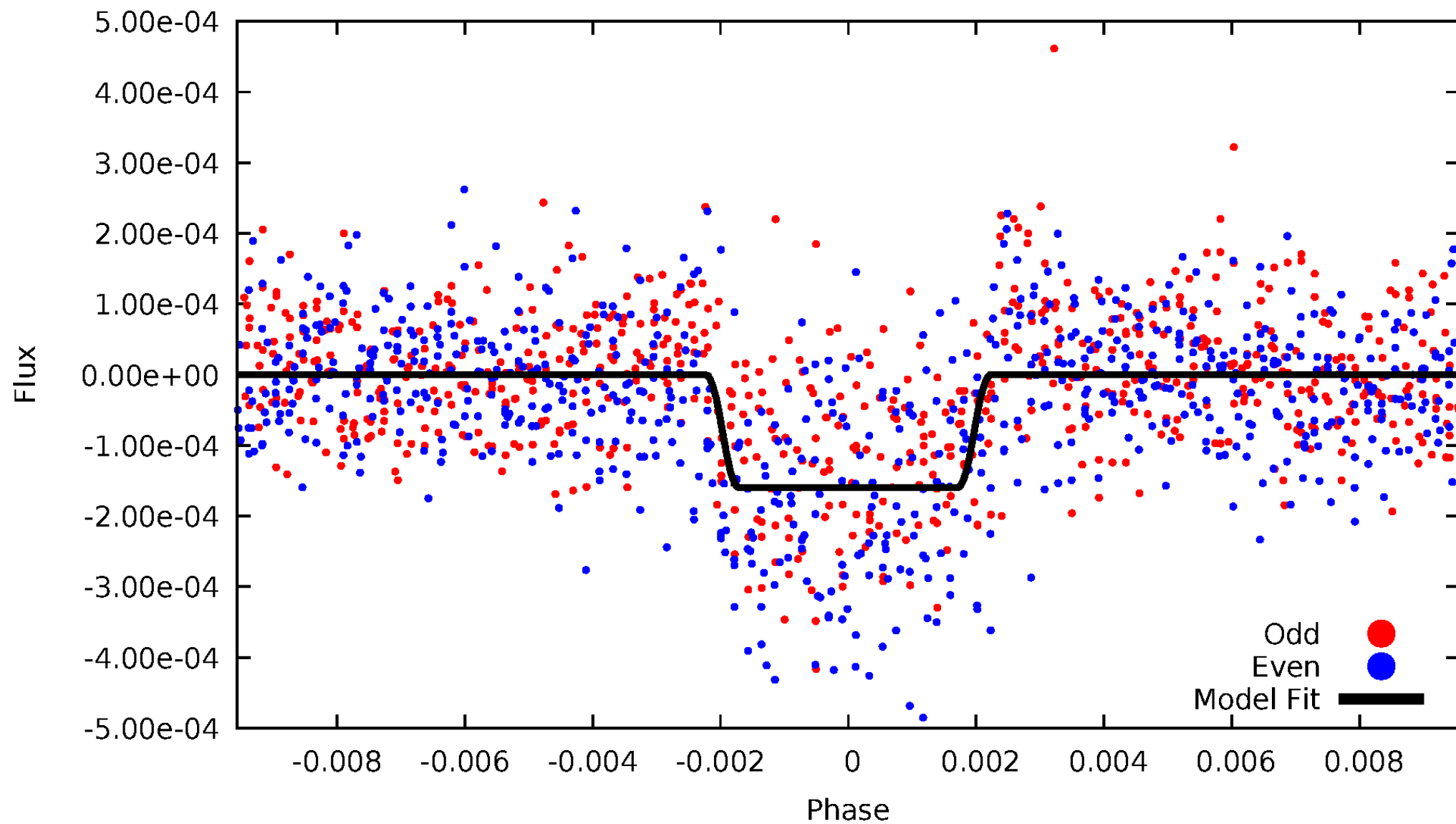
DV Odd/Even

TCE 003122872-01



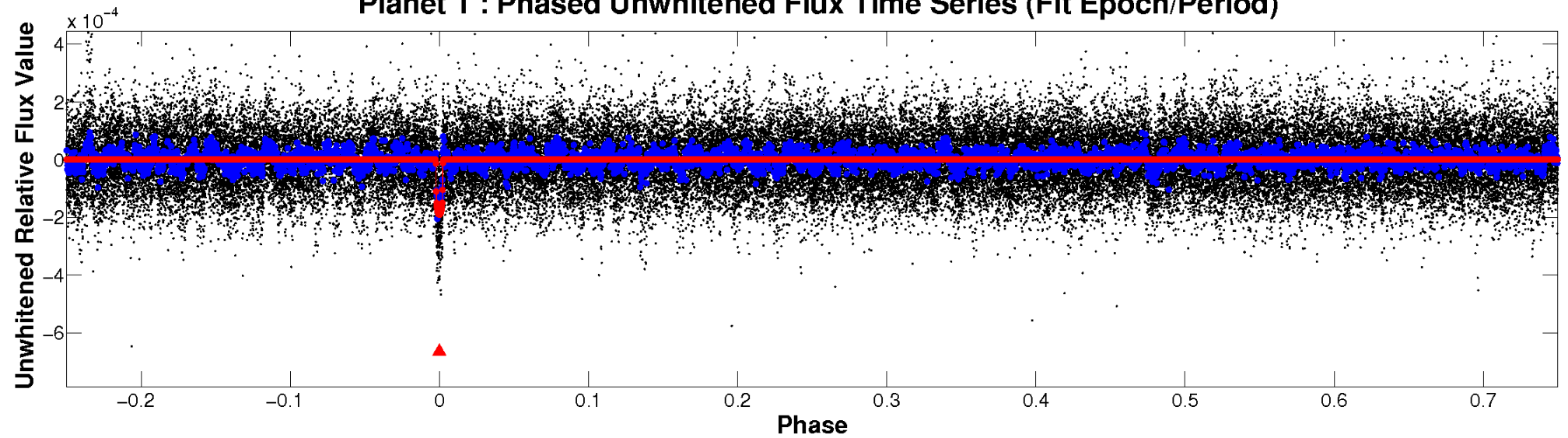
ALT Odd/Even

TCE 003122872-01

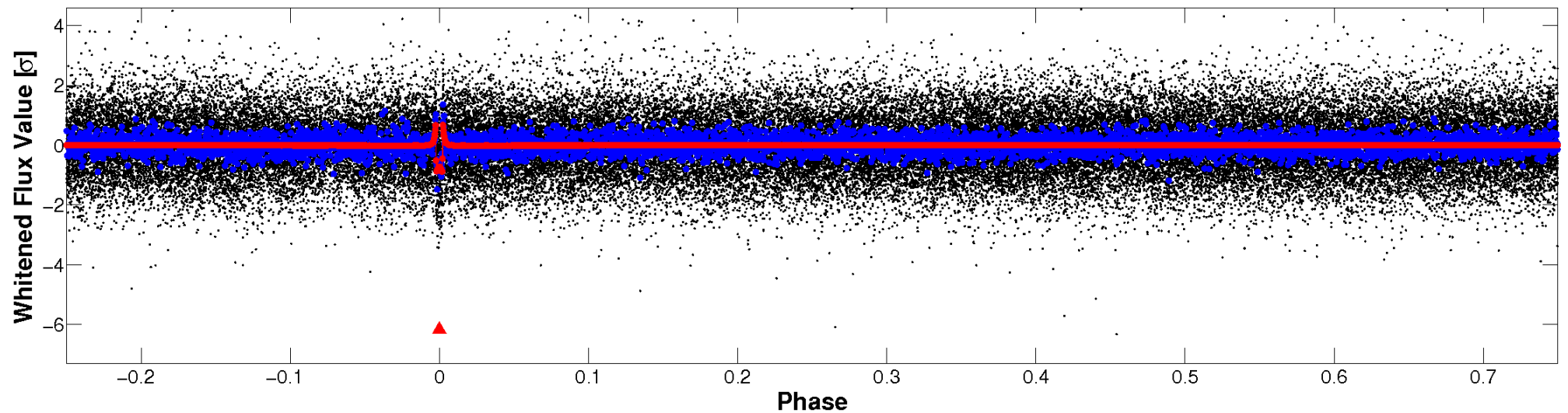


Non-Whitened Vs. Whitened Light Curve

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

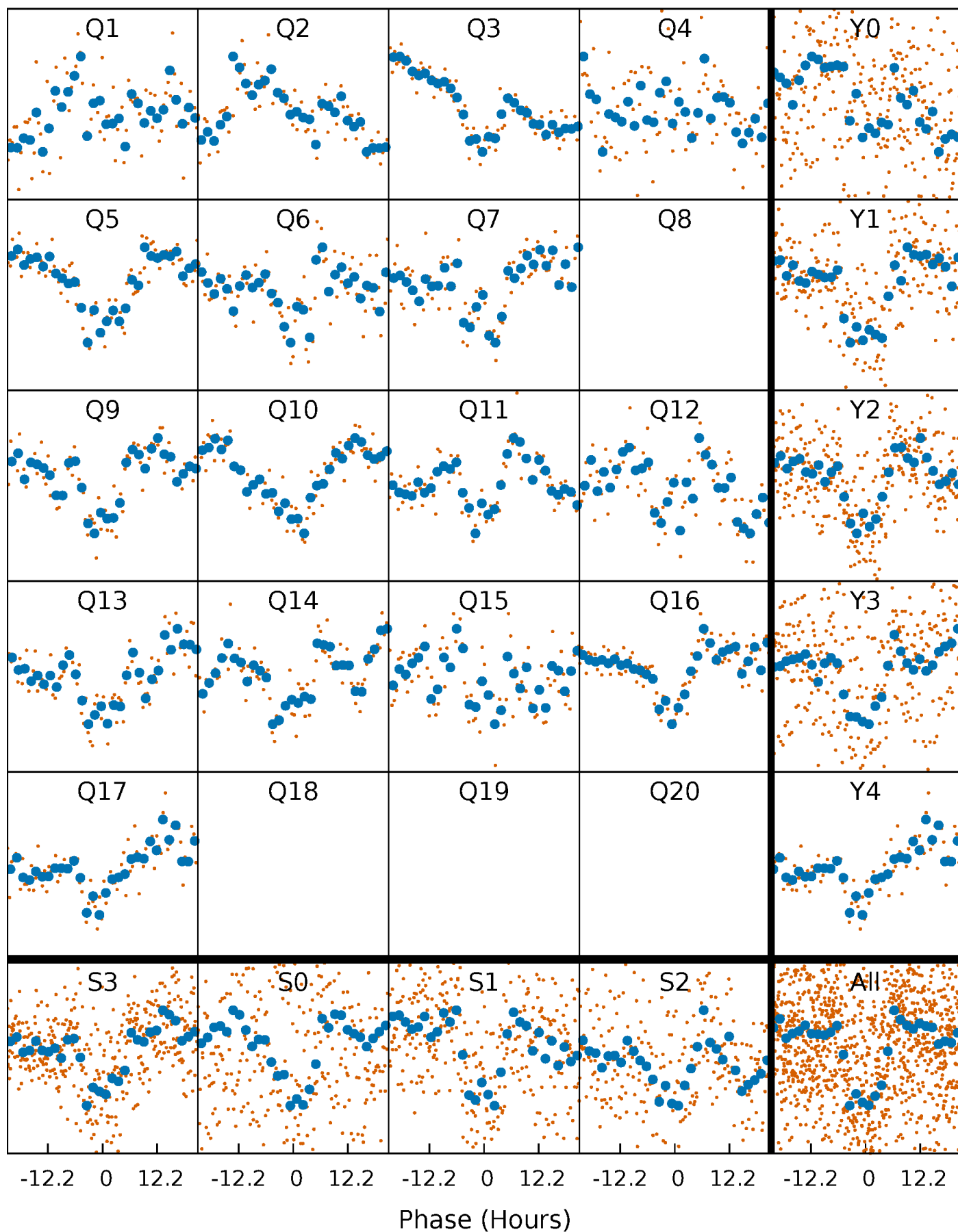


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



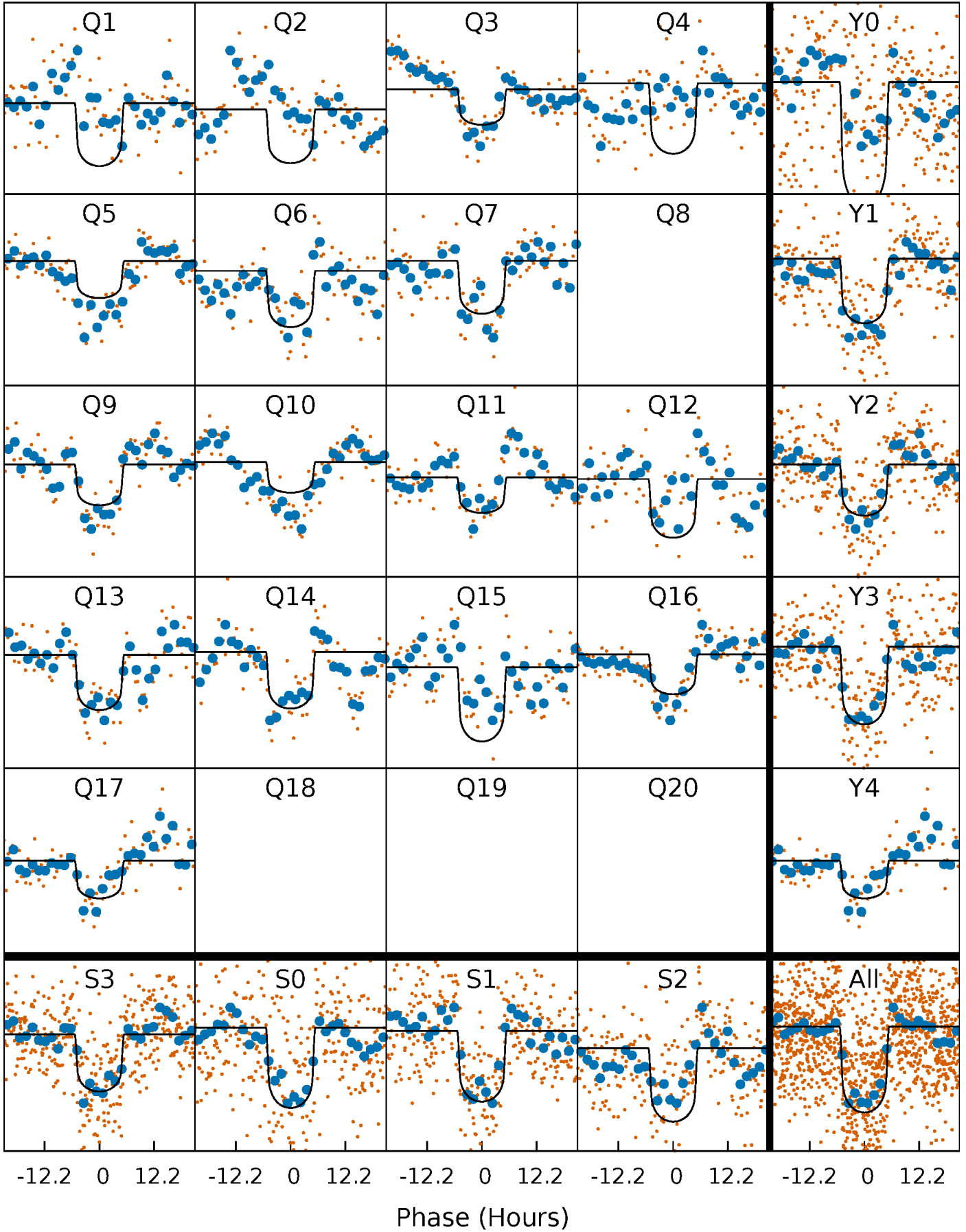
PDC Quarter-Phased Transit Curves

TCE 003122872-01 P= 96.818652 Days $T_0=136.542930$ (BKJD)



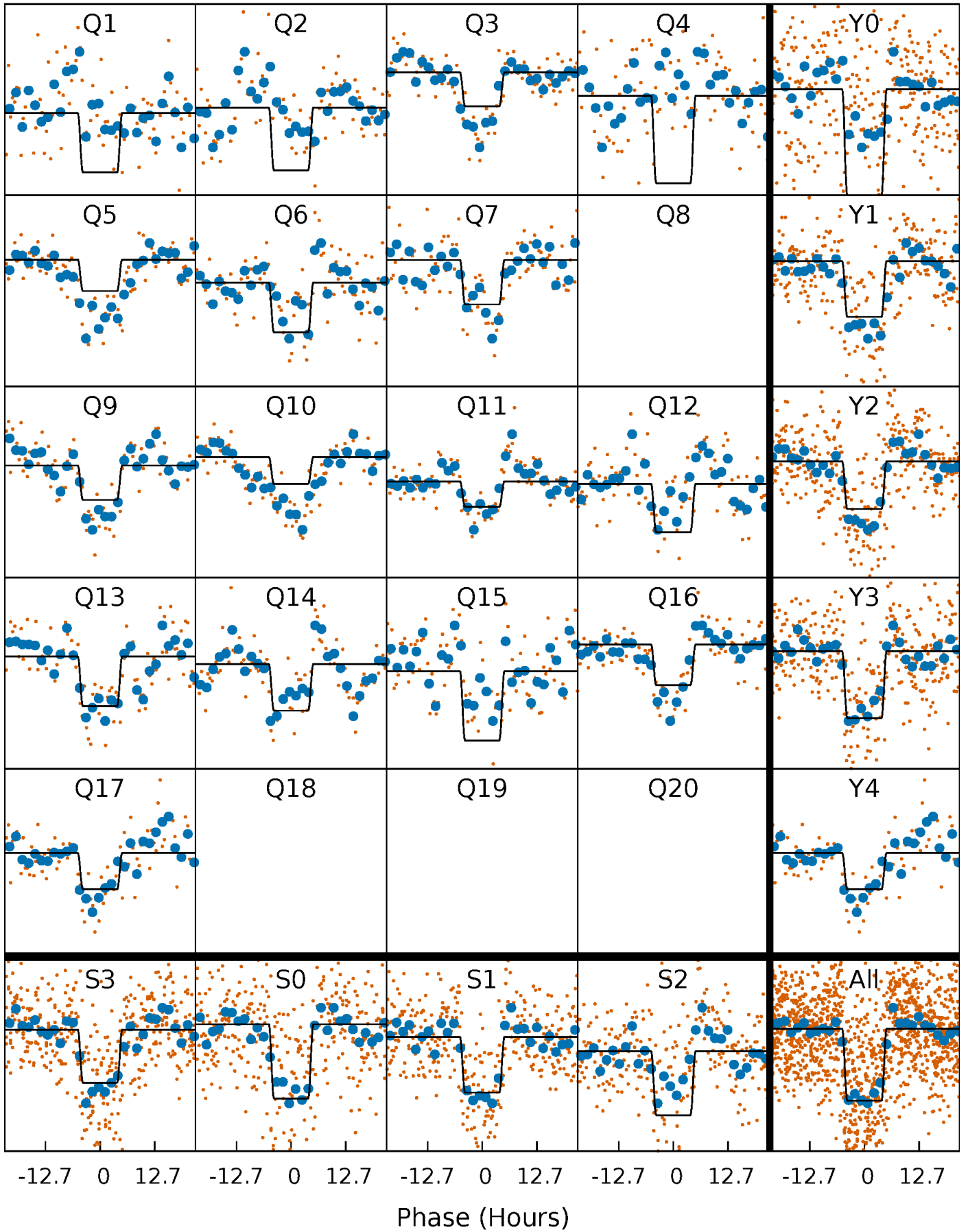
DV Quarter-Phased Transit Curves

TCE 003122872-01 P= 96.818652 Days $T_0=136.542930$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

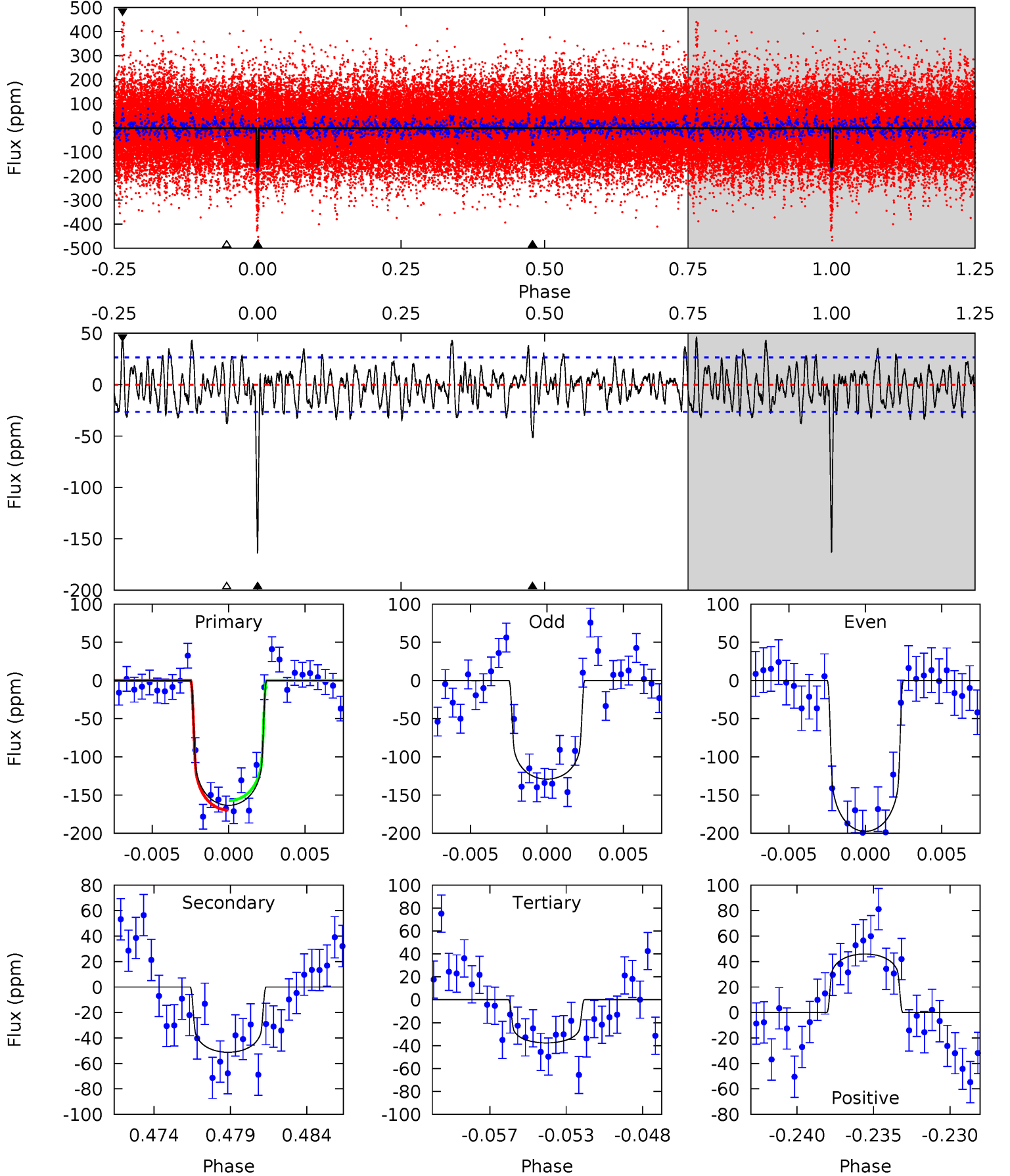
TCE 003122872-01 P= 96.819695 Days $T_0=136.528022$ (BKJD)



DV Model-Shift Uniqueness Test

003122872-01, P = 96.818652 Days, E = 39.724278 Days

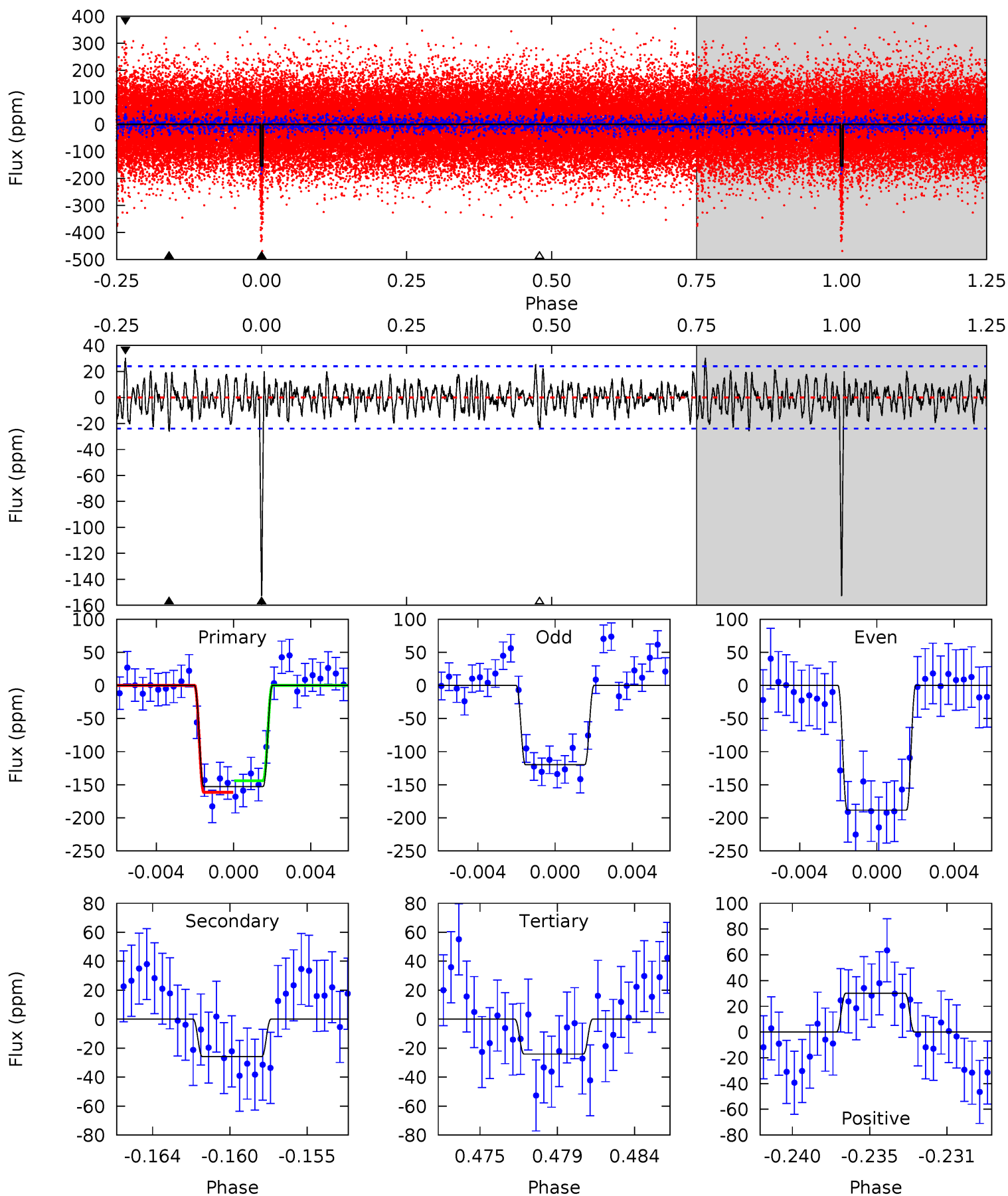
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.9	9.98	7.34	8.95	5.17	2.82	2.80	24.5	22.9	2.64	1.03	6.66	0.92	0.22	1.20



Alt Model-Shift Uniqueness Test

003122872-01, P = 96.819695 Days, E = 39.708327 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	5.59	5.21	6.52	5.18	2.85	1.77	27.8	26.5	0.38	-0.94	7.44	0.87	0.16	1.89



Stellar Parameters For KIC 003122872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6404^{+129}_{-116}	$3.793^{+0.218}_{-0.058}$	$-0.180^{+0.150}_{-0.100}$	$2.467^{+0.301}_{-0.703}$	$1.380^{+0.175}_{-0.195}$	$0.130^{+0.171}_{-0.032}$
	+2%/-2%	+6%/-2%	+83%/-56%	+12%/-28%	+13%/-14%	+132%/-25%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 003122872-01 / KOI 3203.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-51 ± 5	$3.62^{+0.56}_{-0.58}$	903^{+34}_{-64}	4733^{+229}_{-223}	458^{+183}_{-110}
Alt.	-26 ± 5	$3.27^{+0.53}_{-0.54}$	897^{+40}_{-54}	4289^{+256}_{-240}	285^{+129}_{-84}

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 $A_{obs} \gg 1.0$

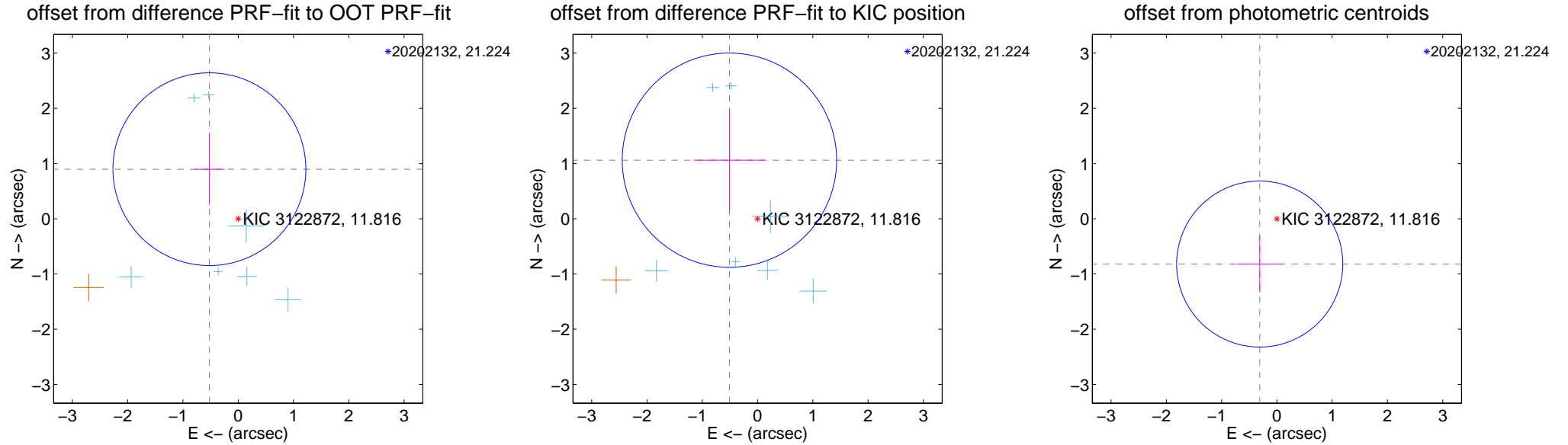
DV Centroid Data

Supplemental centroid analysis for 003122872-01. **Kepler magnitude: 11.82.** Transit SNR 15.09

There are 7 quarters with good PRF difference image offsets

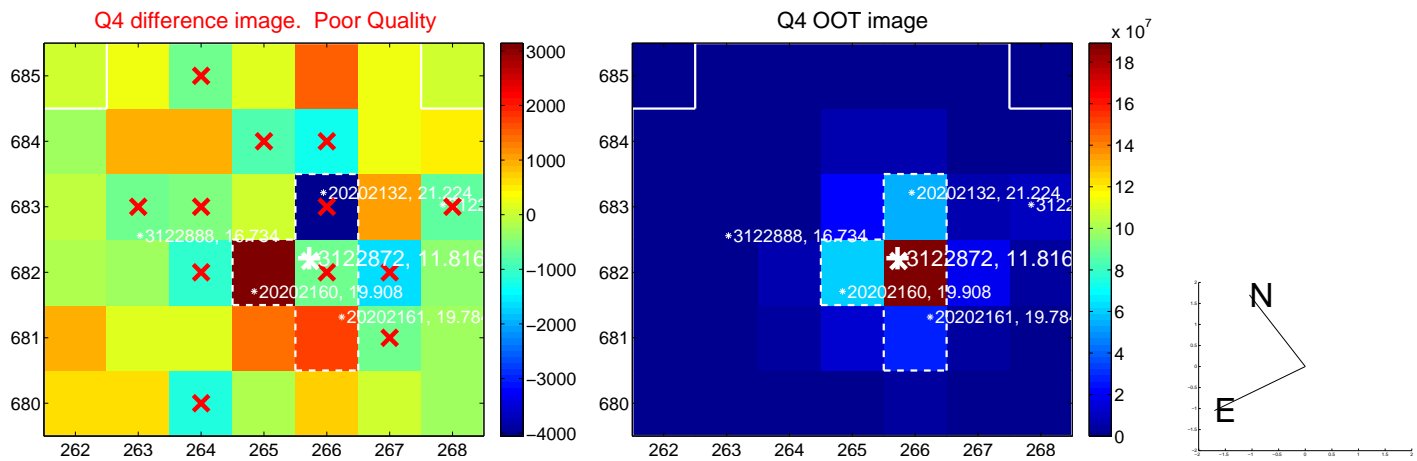
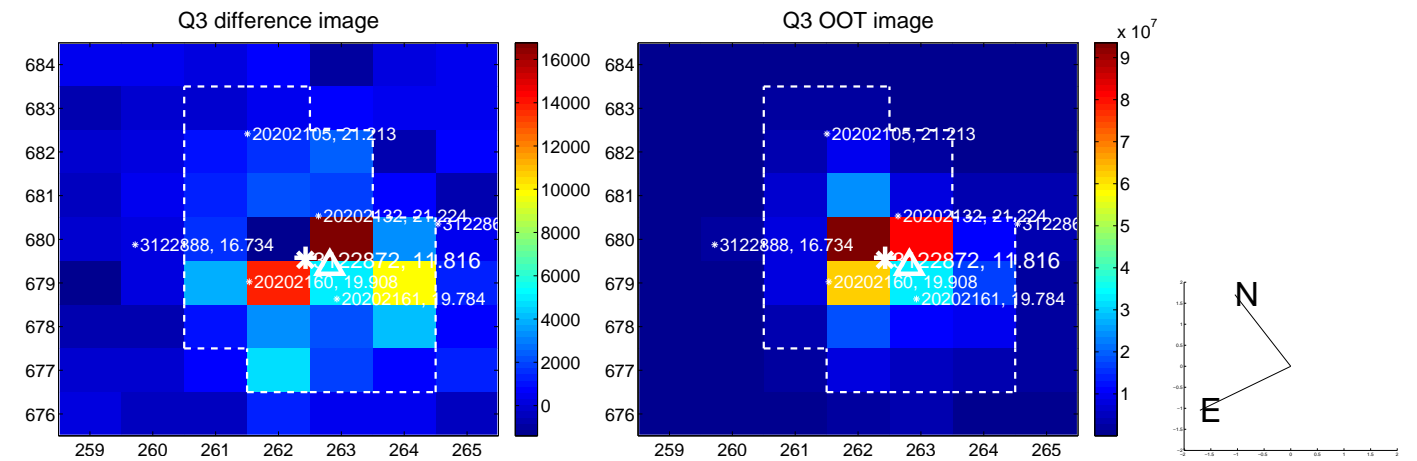
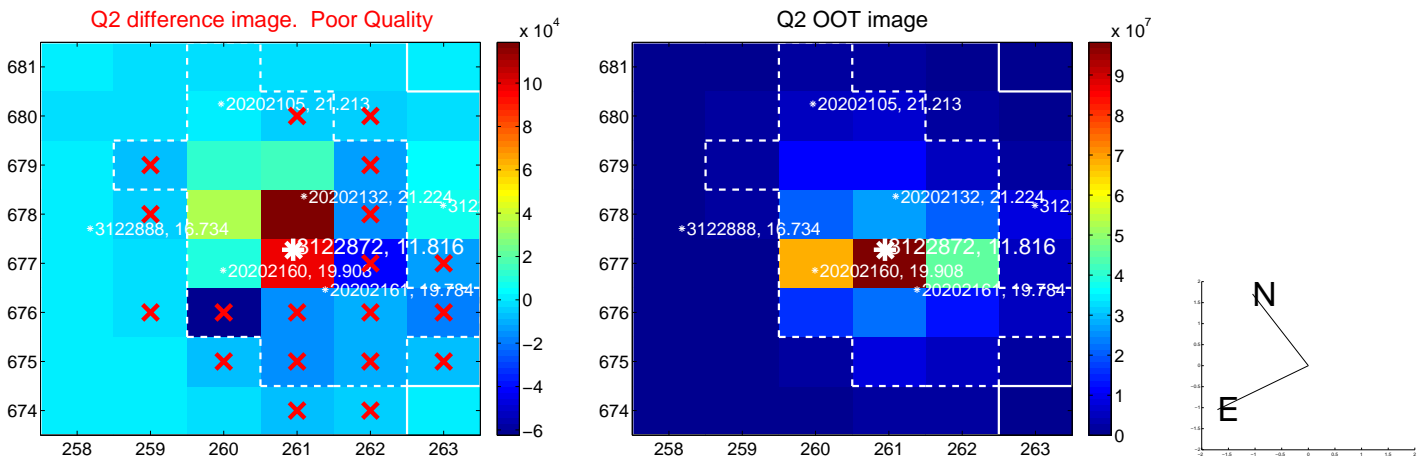
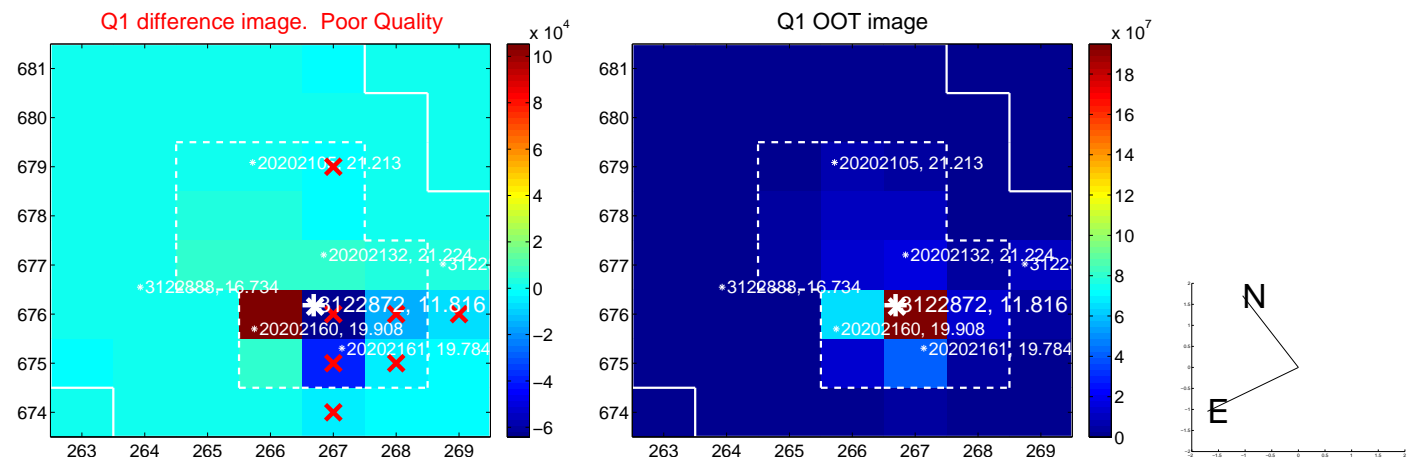
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.038 ± 0.582	1.78	0.521 ± 0.274	0.898 ± 0.654
PRF-fit source offset from KIC position	1.177 ± 0.647	1.82	0.509 ± 0.649	1.061 ± 0.925
photometric centroid source offset	0.88 ± 0.50	1.75	0.31 ± 0.42	-0.82 ± 0.51

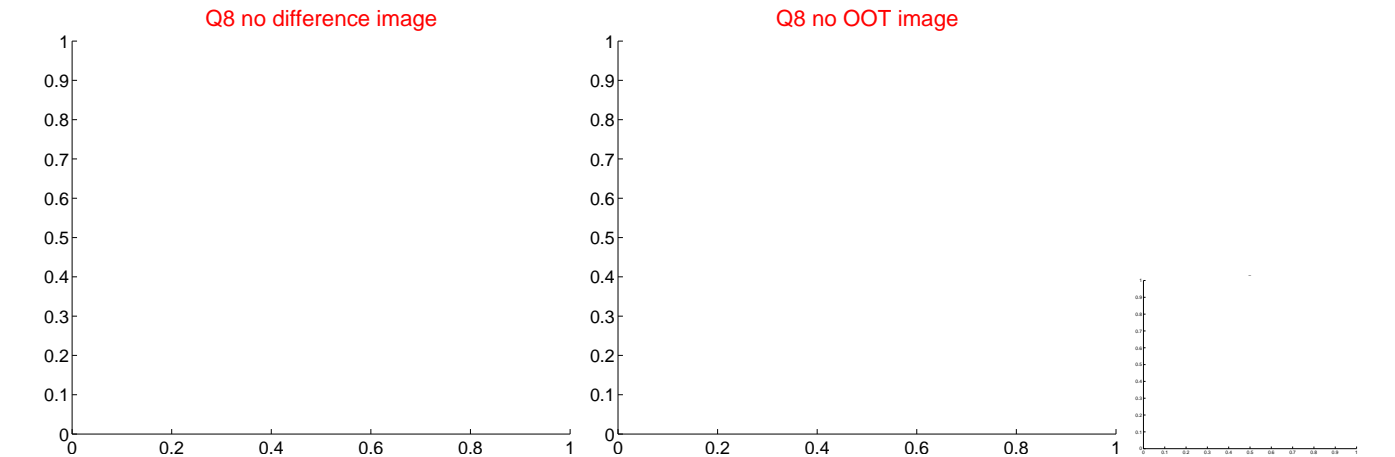
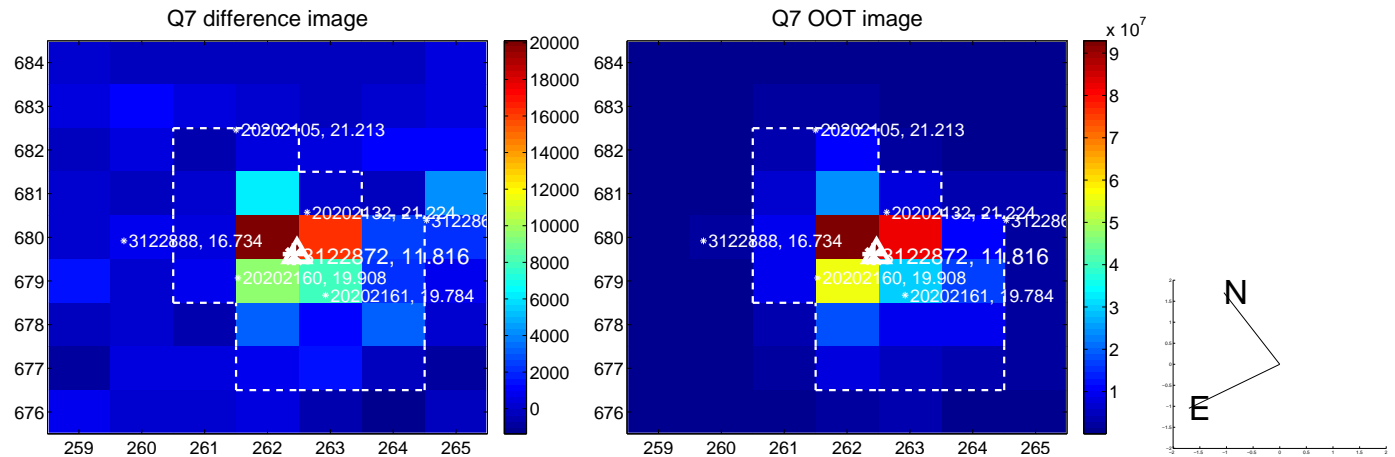
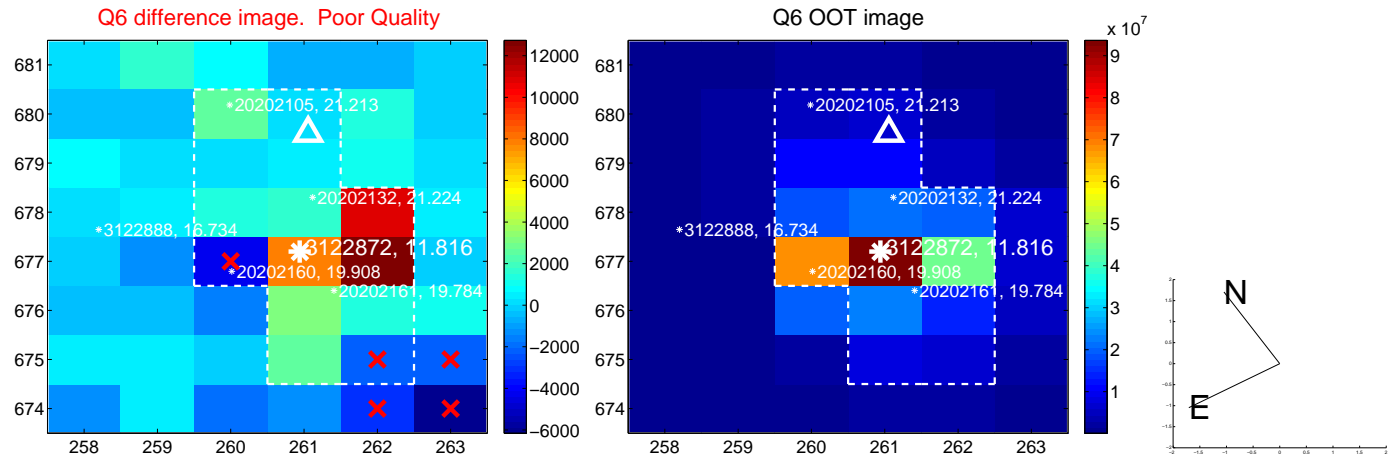
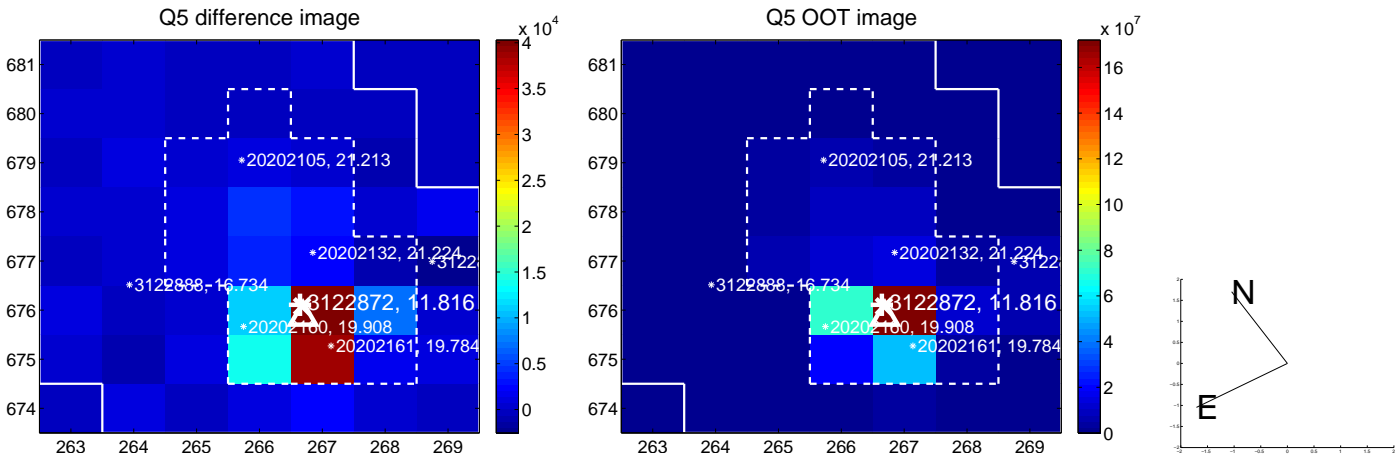


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

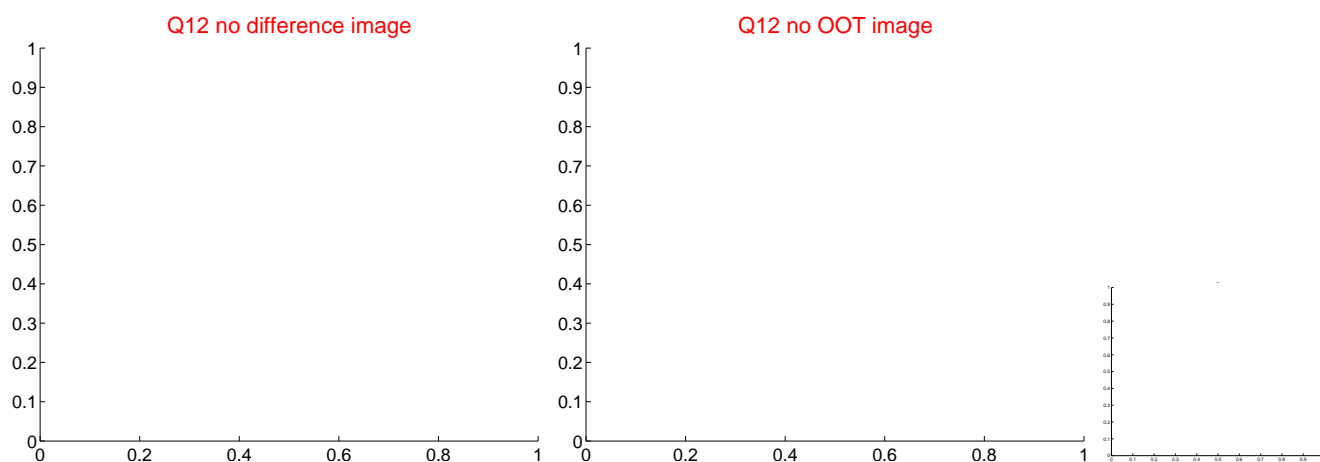
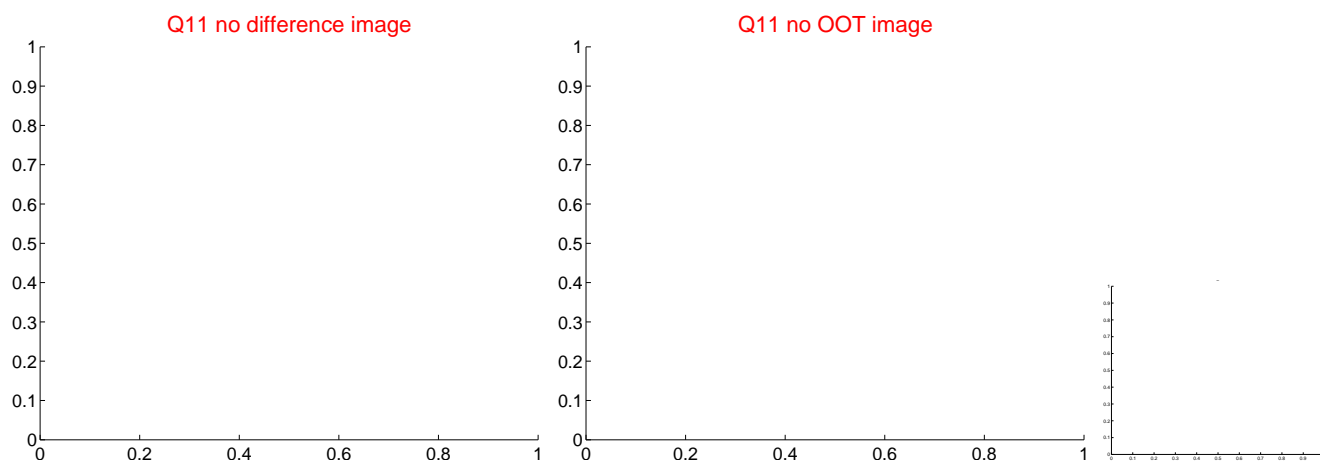
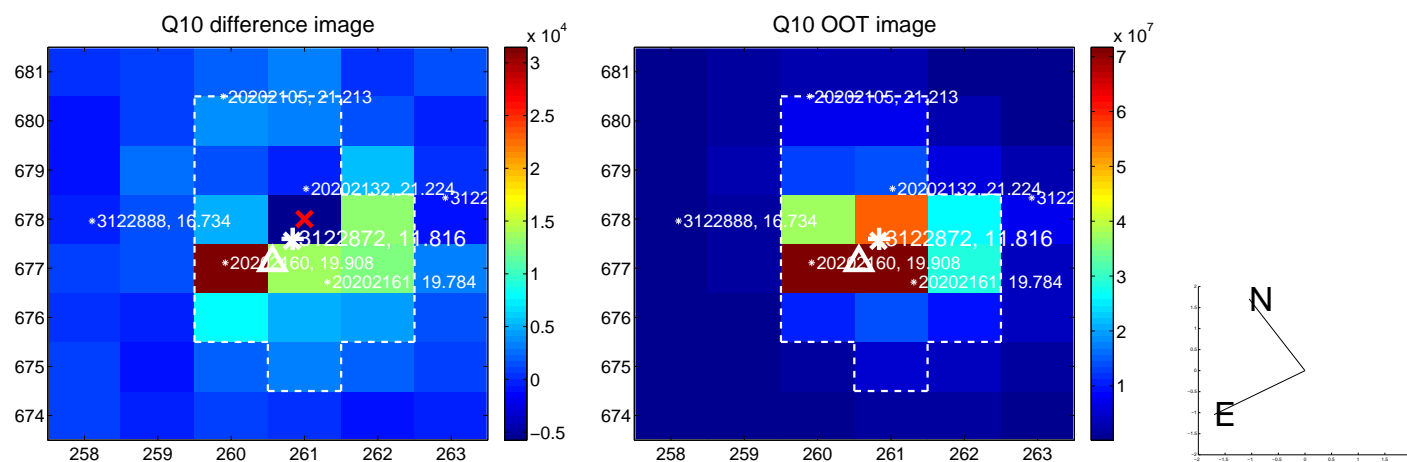
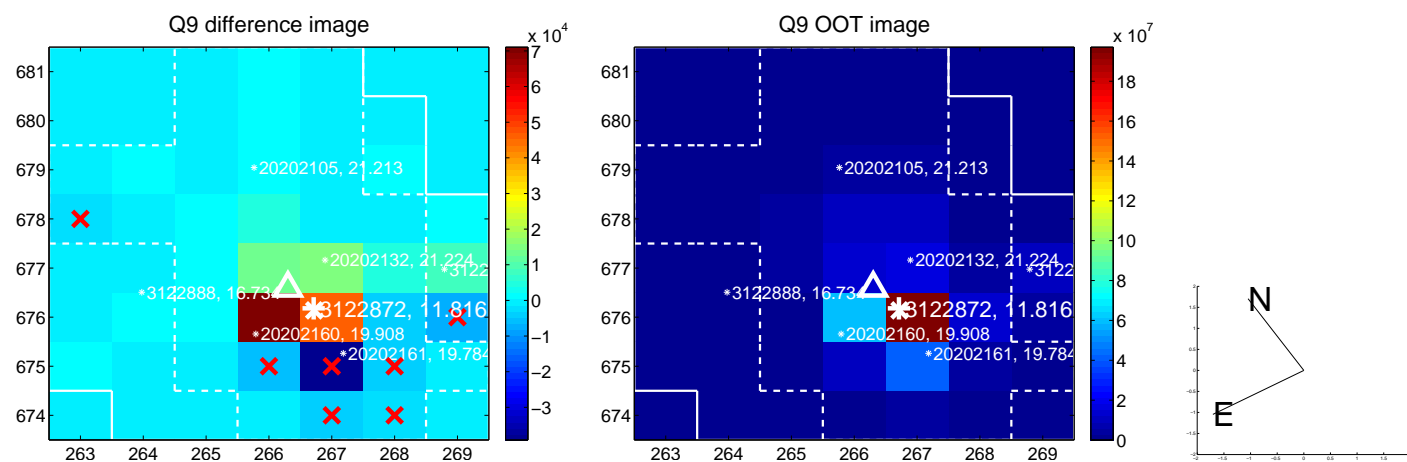
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



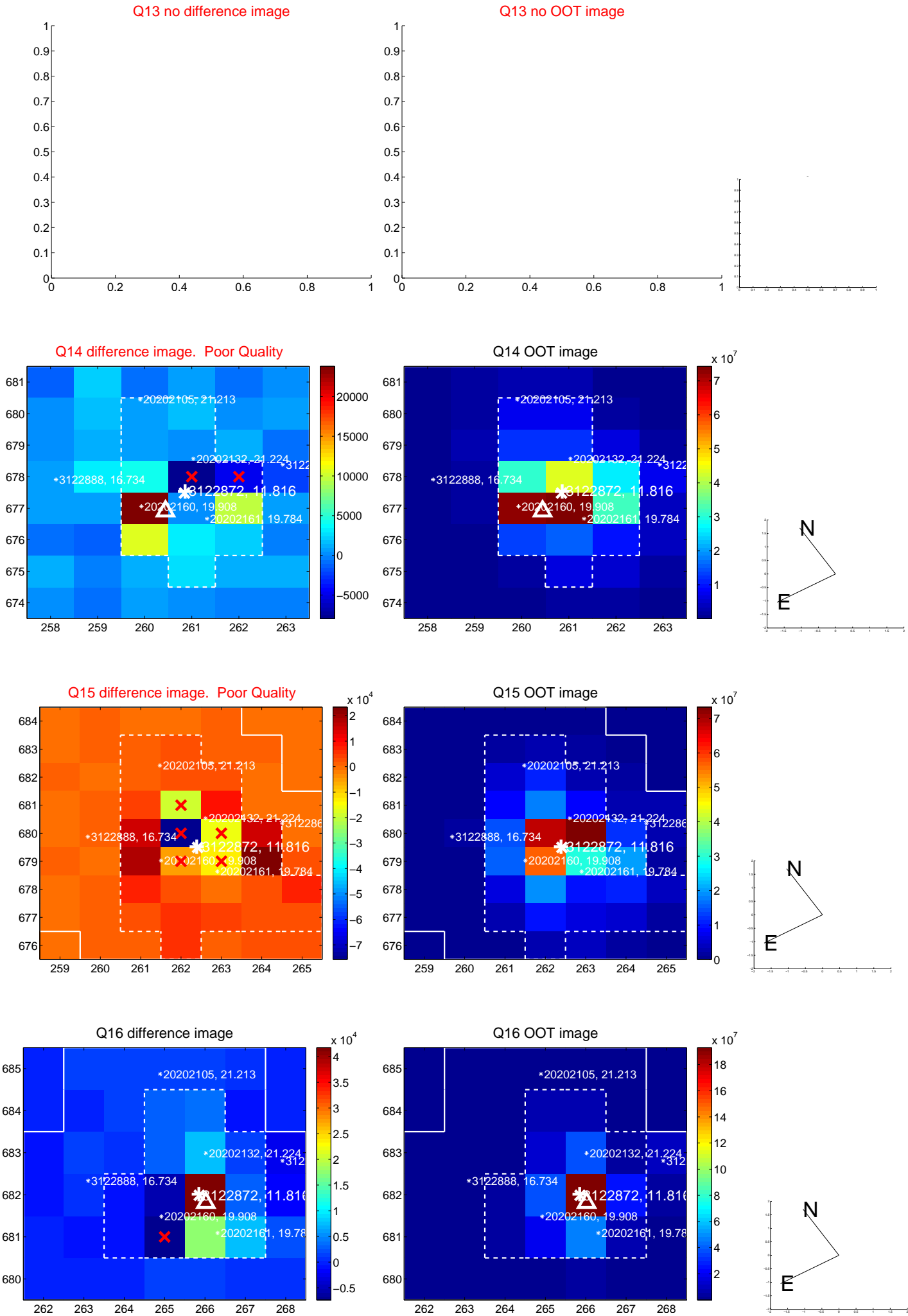
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



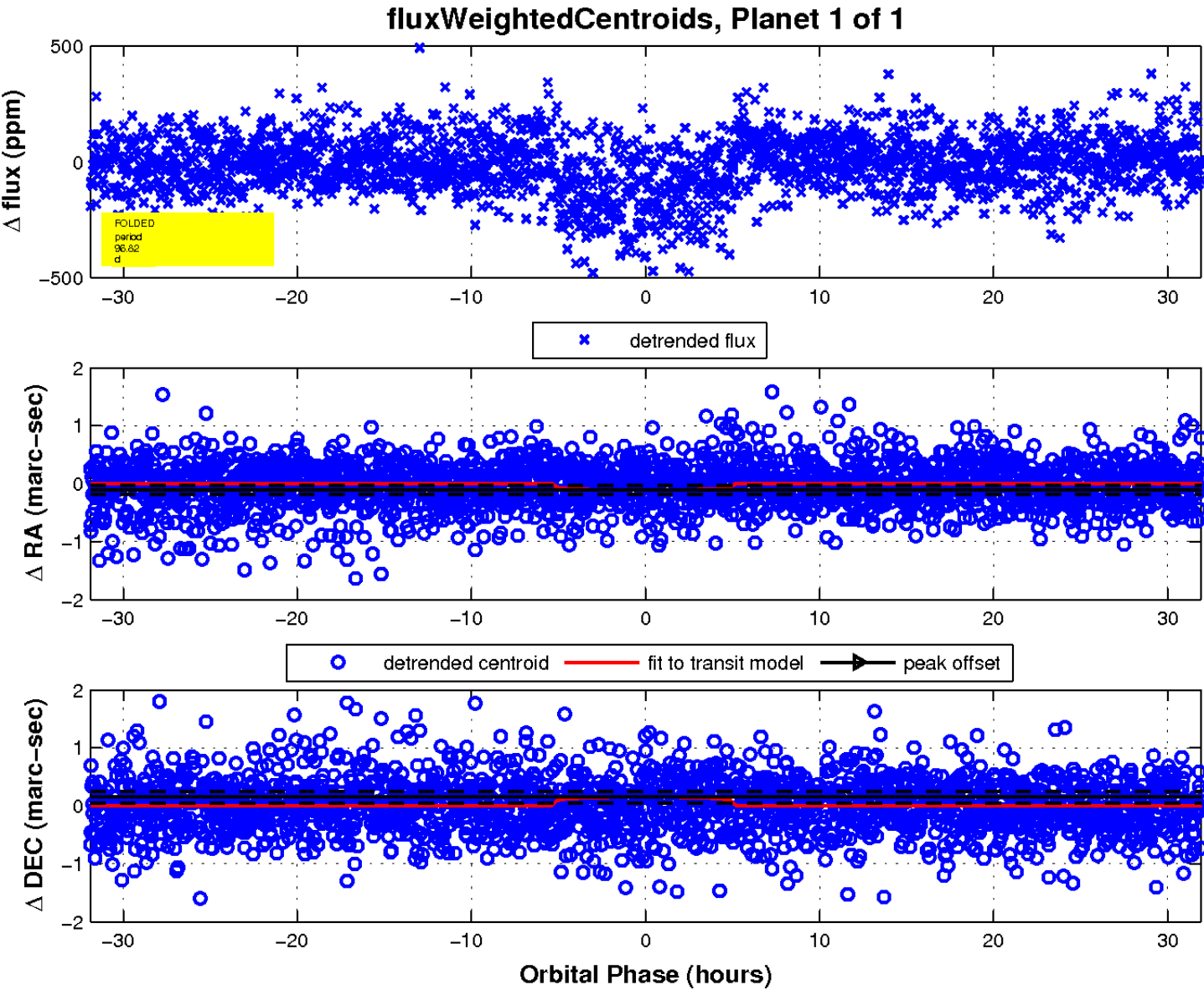
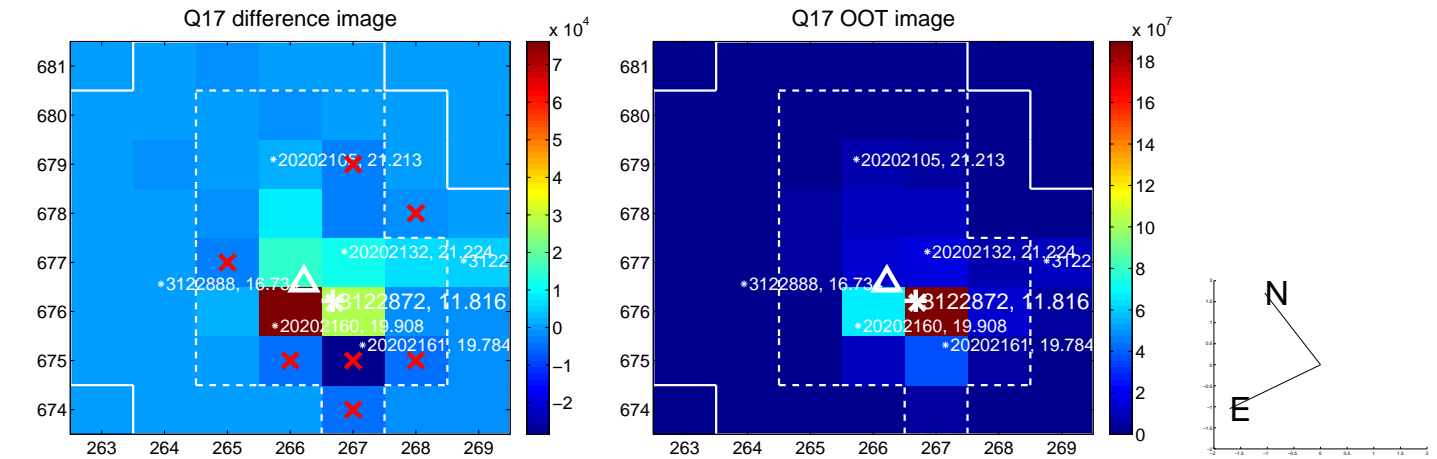
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

