

KIC 010332320

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})
010332320-01	OBS	No	1.085617	131.640970	16.6	3.149	8.6	7.3	4.24	7221	2.09	64164.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010332320-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

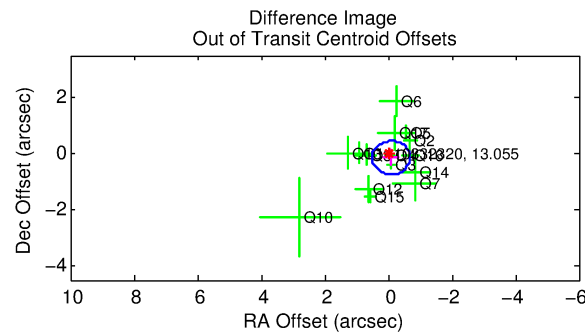
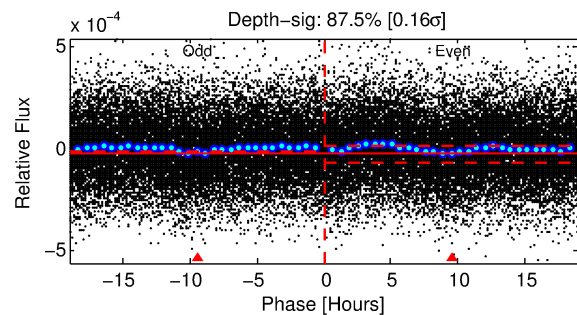
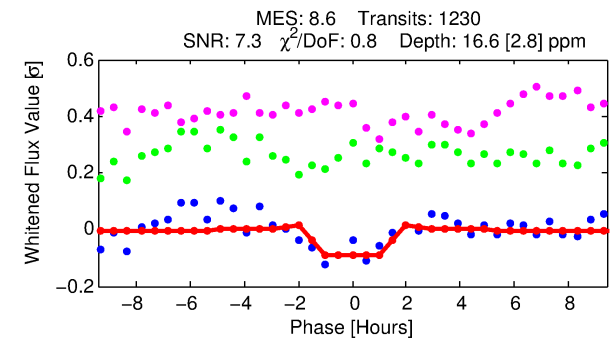
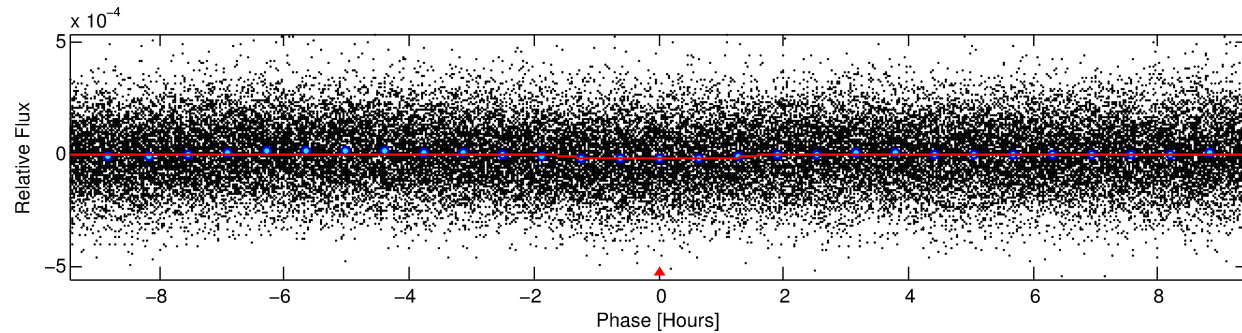
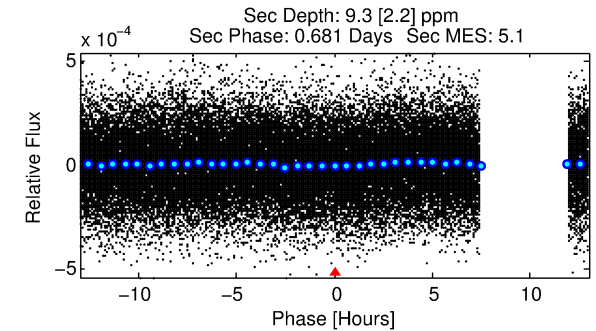
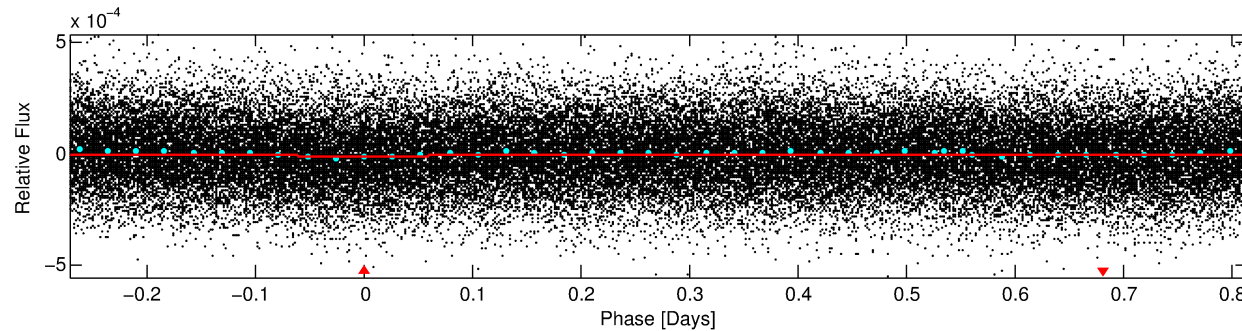
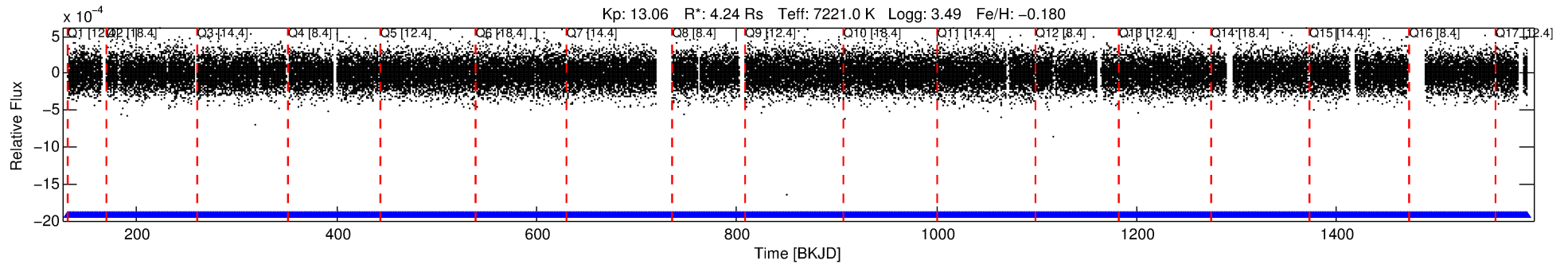
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010332320-01

No Significant Match Found

DV One-Page Summary

KIC: 10332320 Candidate: 1 of 1 Period: 1.086 d



DV Fit Results:

Period = 1.08562 [0.00002] d
Epoch = 131.6410 [0.0046] BKJD
Rp/R* = 0.0045 [0.0020]
a/R* = 1.38 [1.73]
b = 0.93 [0.39]
Seff = 64164.14 [68595.29]
Teff = 4058 [1085] K
Rp = 2.09 [1.52] Re
a = 0.0261 [0.0163] AU
Ag = 0.80 [1.12] [-0.18σ]
Teffp = 5931 [1388] K [1.06σ]

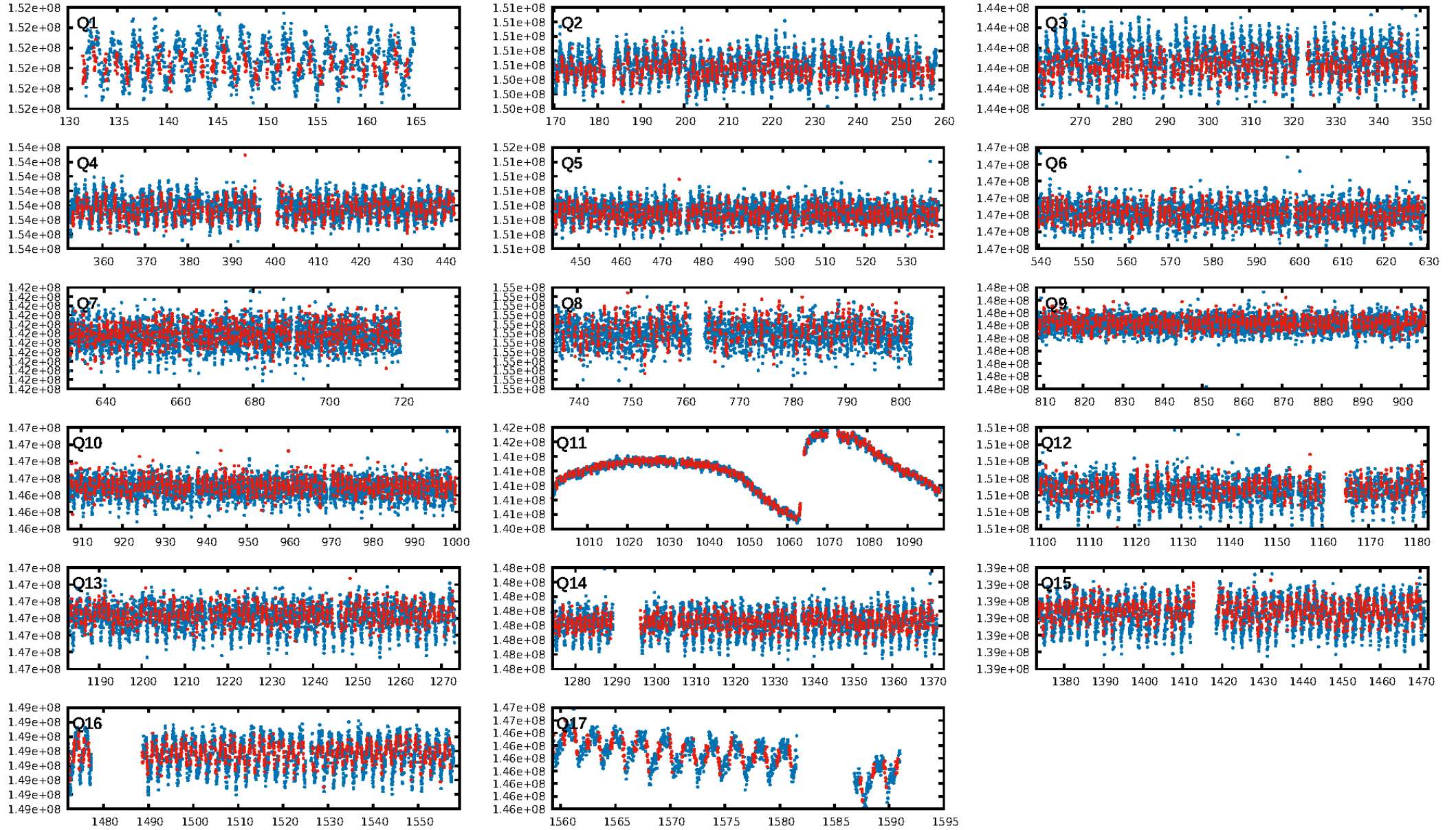
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.37e-15
RollingBand-fgt: 1.00 [1174/1174]
GhostDiagnostic-chr: -1.828
Centroid-sig: 48.4%
Centroid-so: 0.724 arcsec [0.68σ]
OotOffset-rm: 0.174 arcsec [0.87σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-rm: 0.303 arcsec [1.50σ]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.40 [6/15]
DiffImageOverlap-fno: 1.00 [17/17]

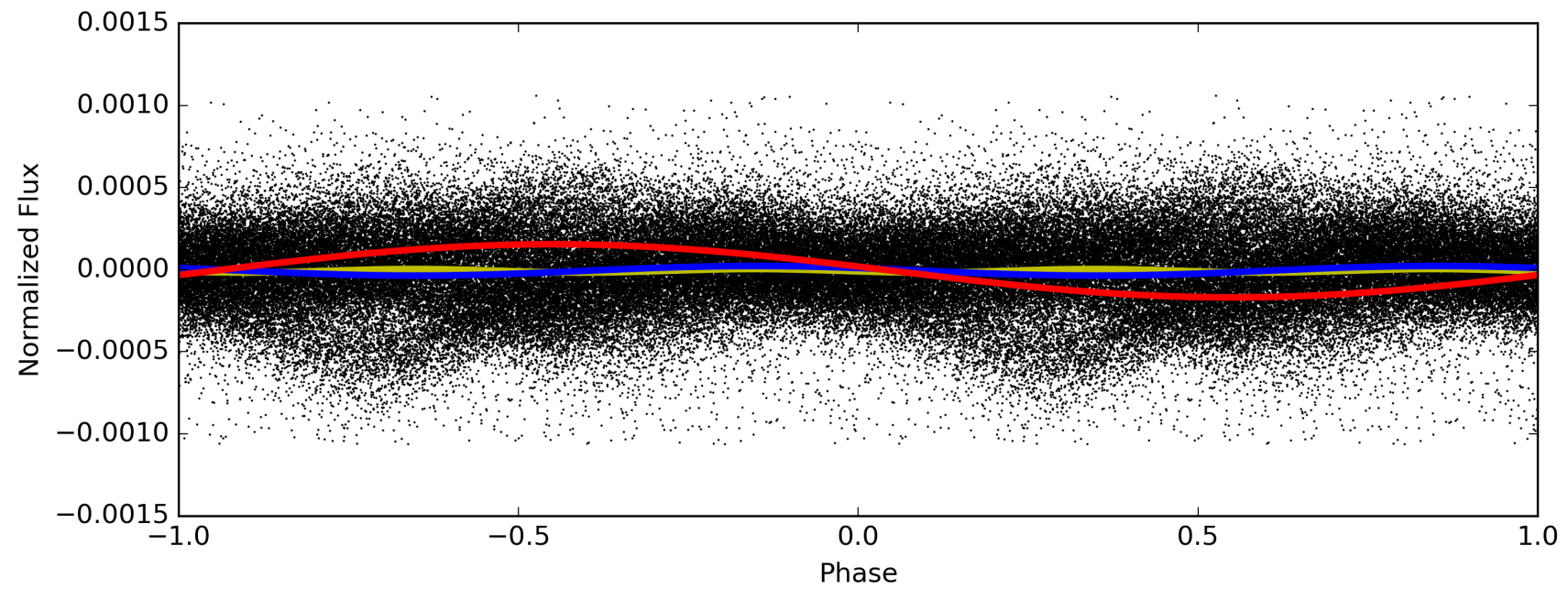
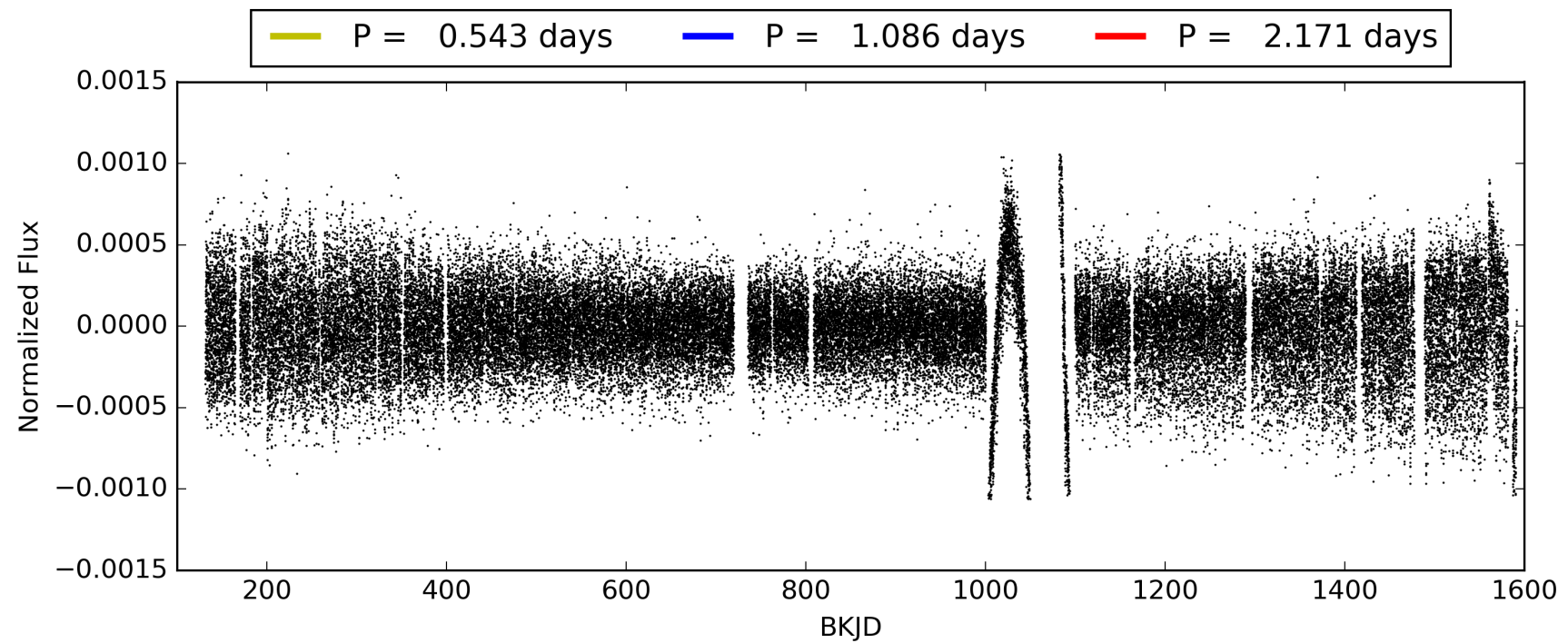
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:54:29 Z

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

TCE 010332320-01, PDC Light Curves

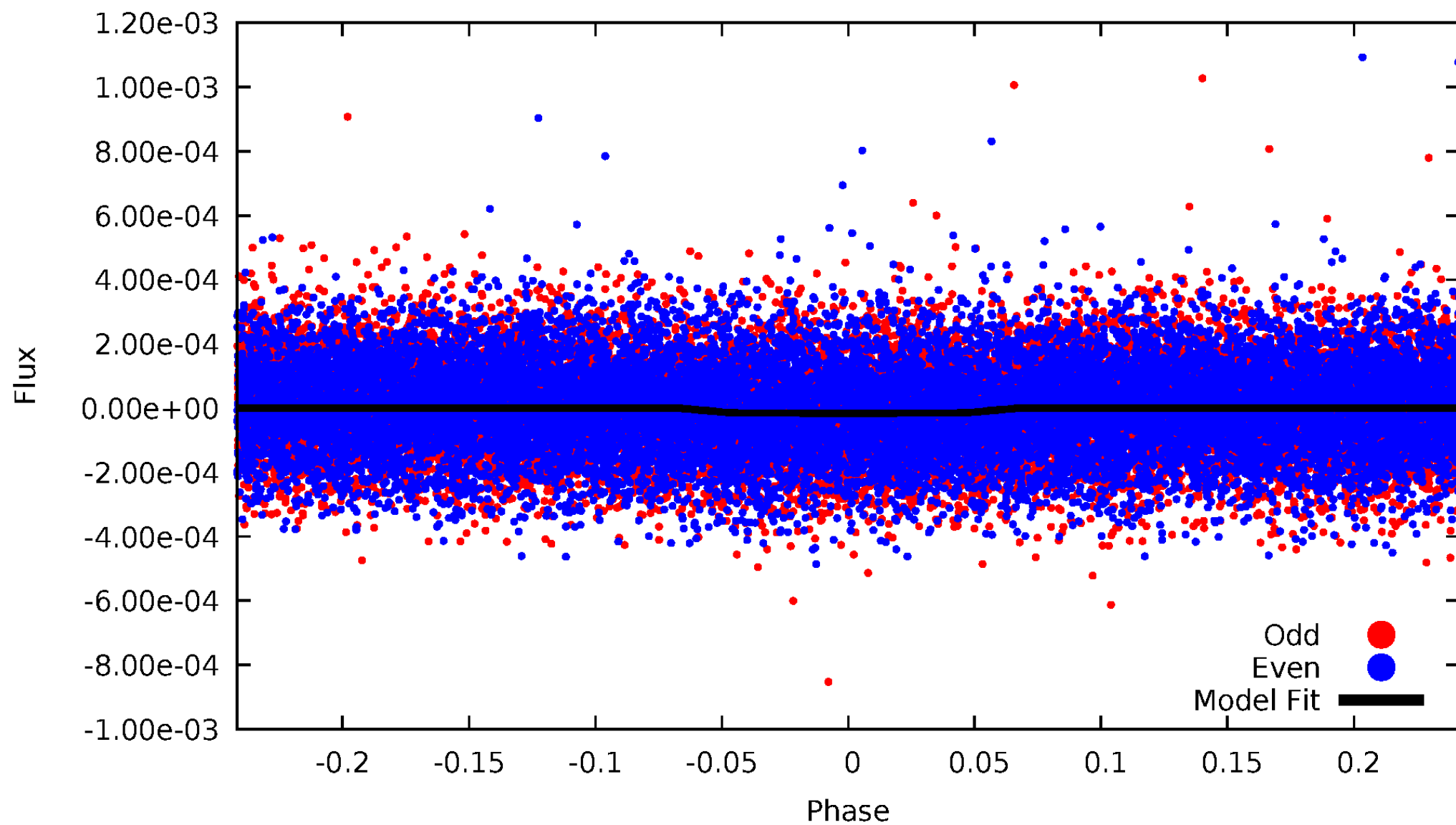


TCE 010332320-01



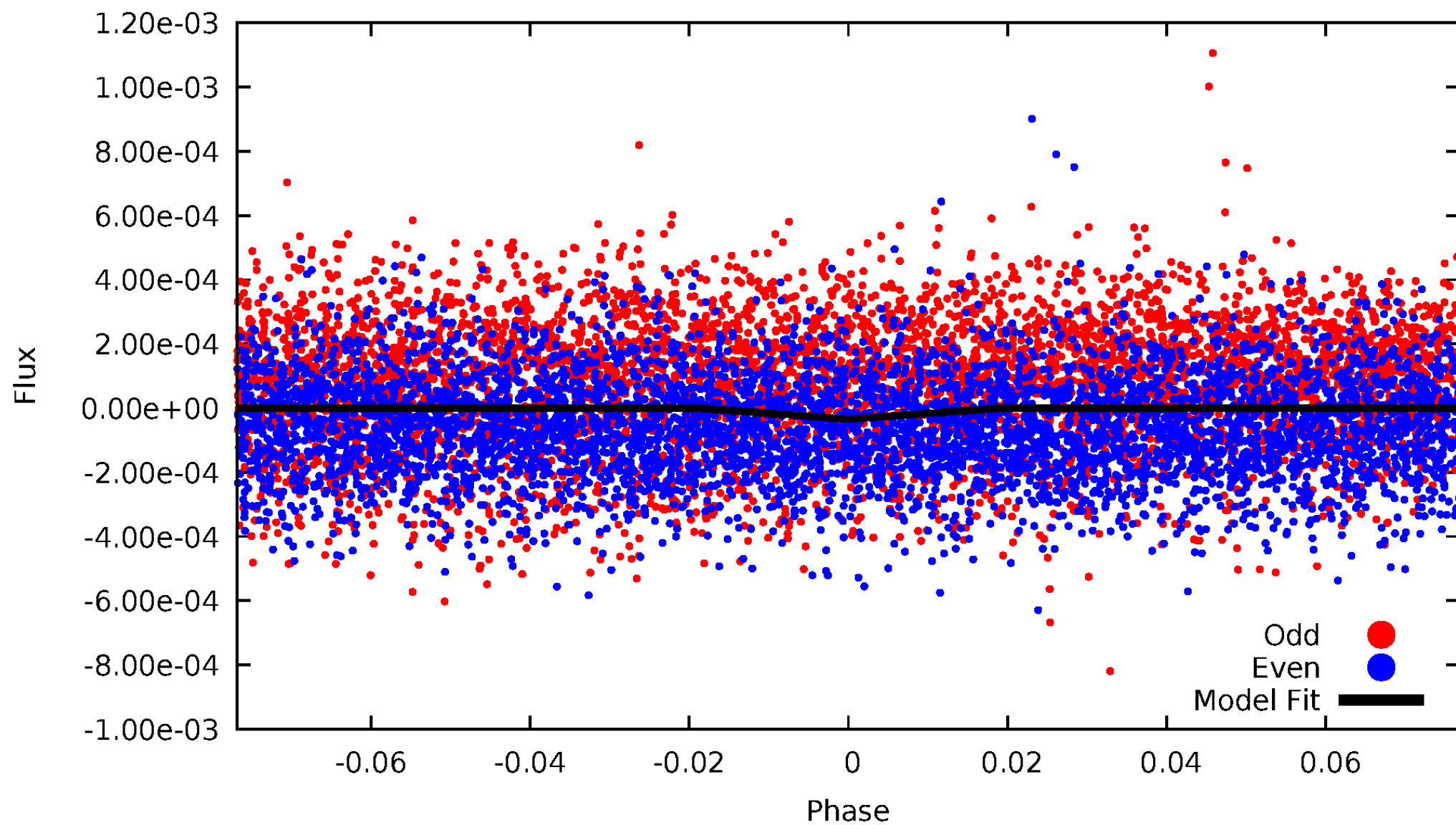
DV Odd/Even

TCE 010332320-01



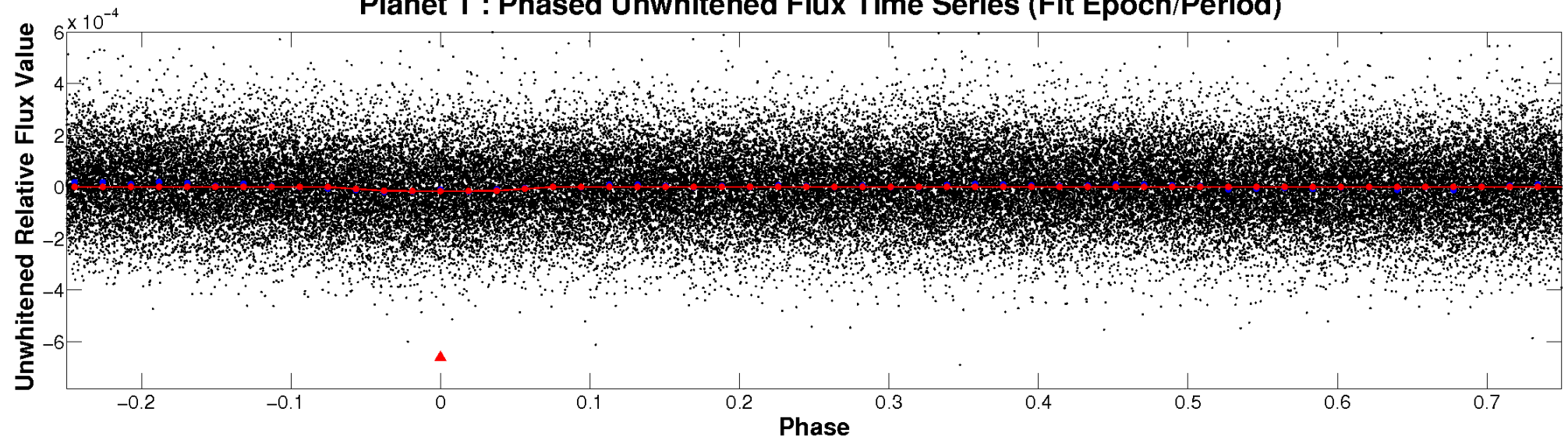
ALT Odd/Even

TCE 010332320-01

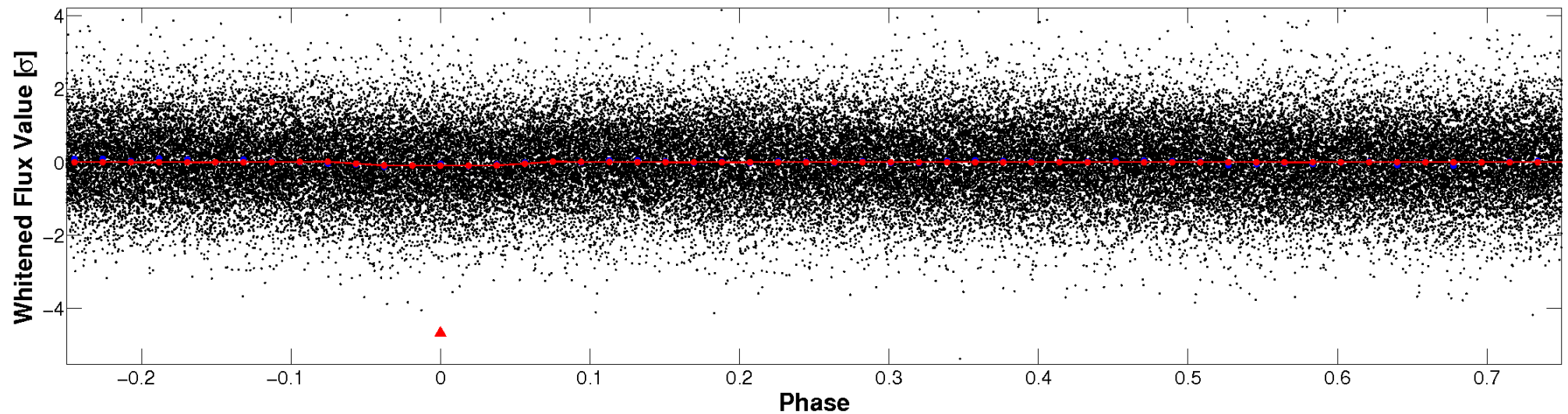


Non-Whitened Vs. Whitened Light Curve

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

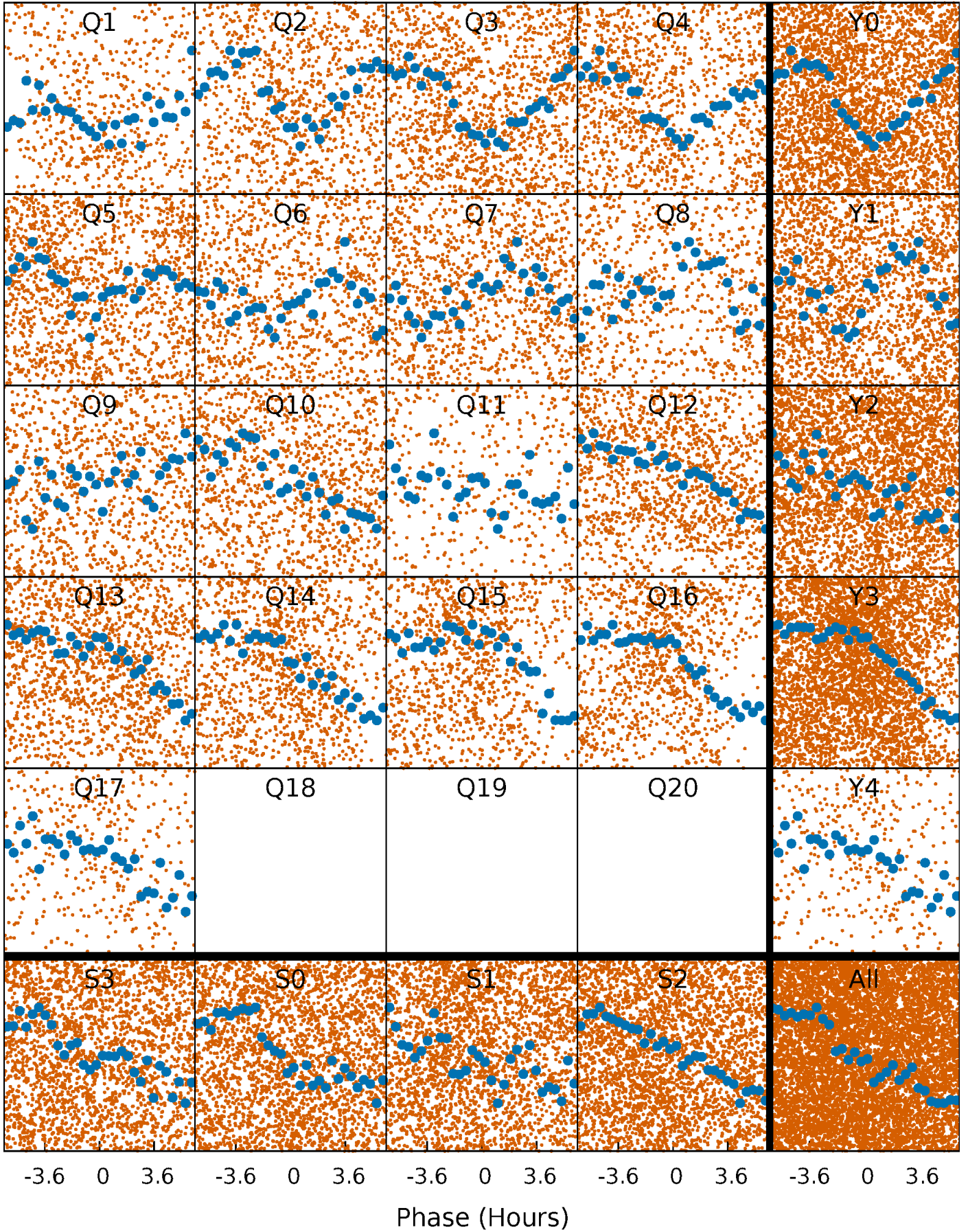


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



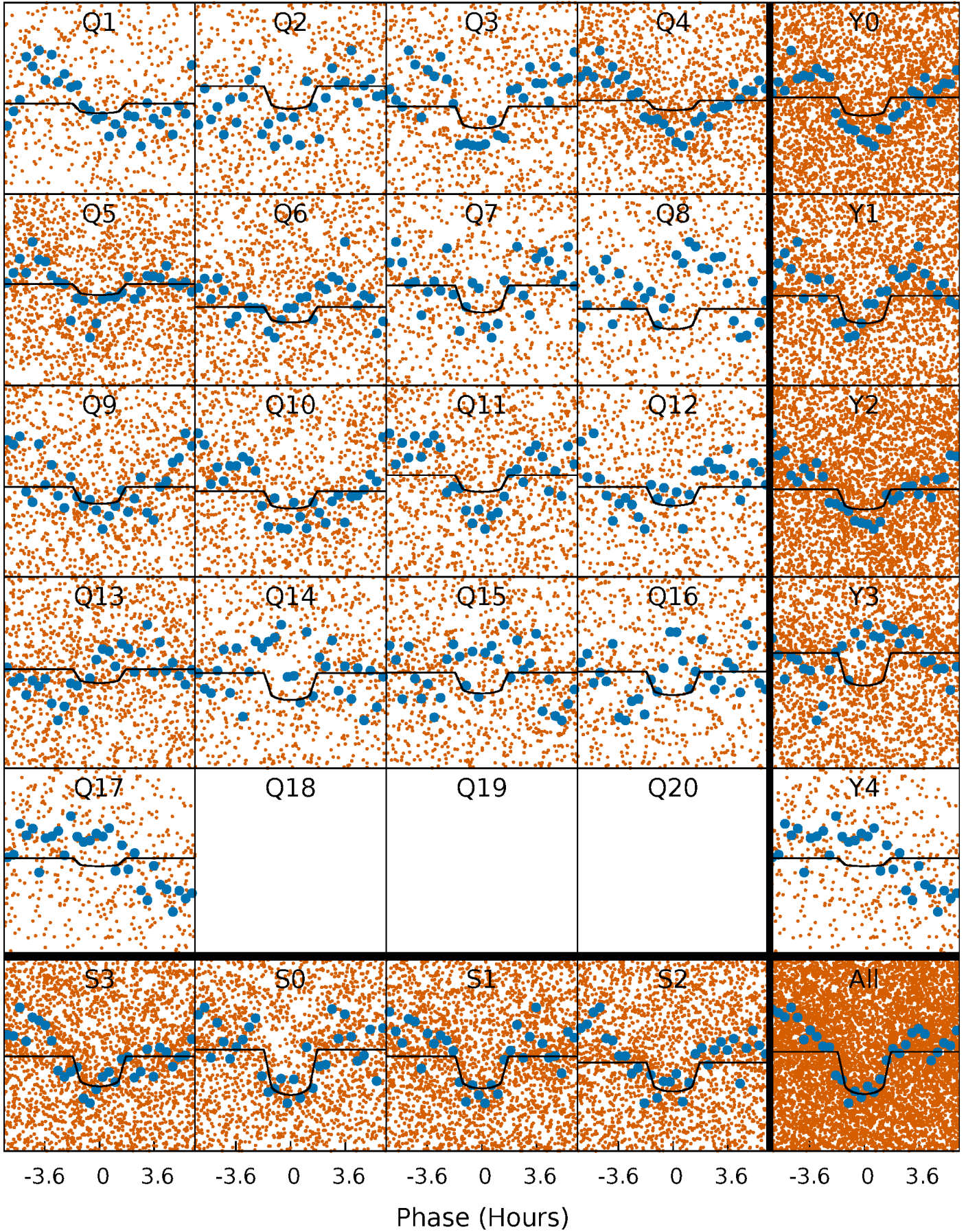
PDC Quarter-Phased Transit Curves

TCE 010332320-01 P= 1.085617 Days $T_0=131.640970$ (BKJD)



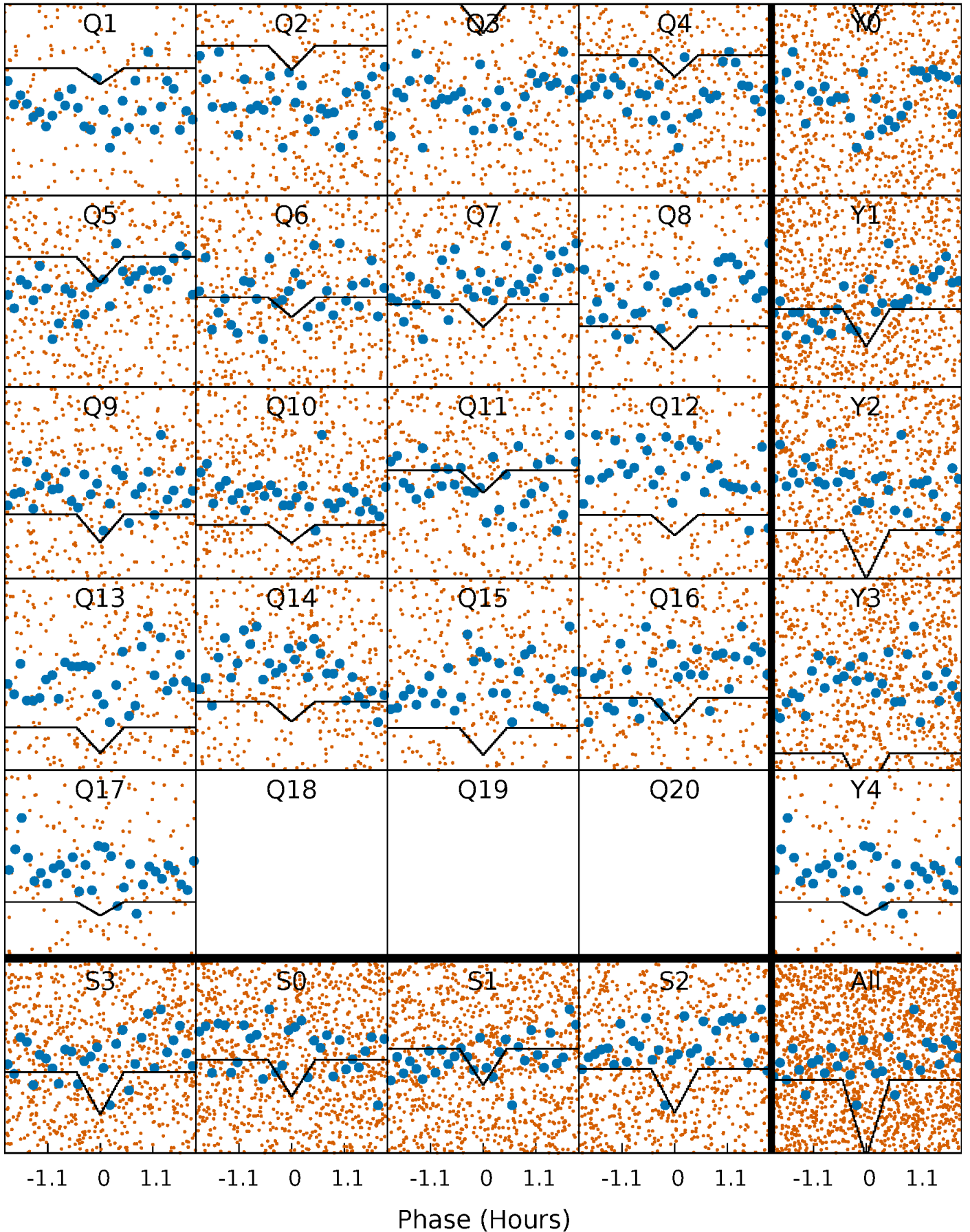
DV Quarter-Phased Transit Curves

TCE 010332320-01 P= 1.085617 Days $T_0=131.640970$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

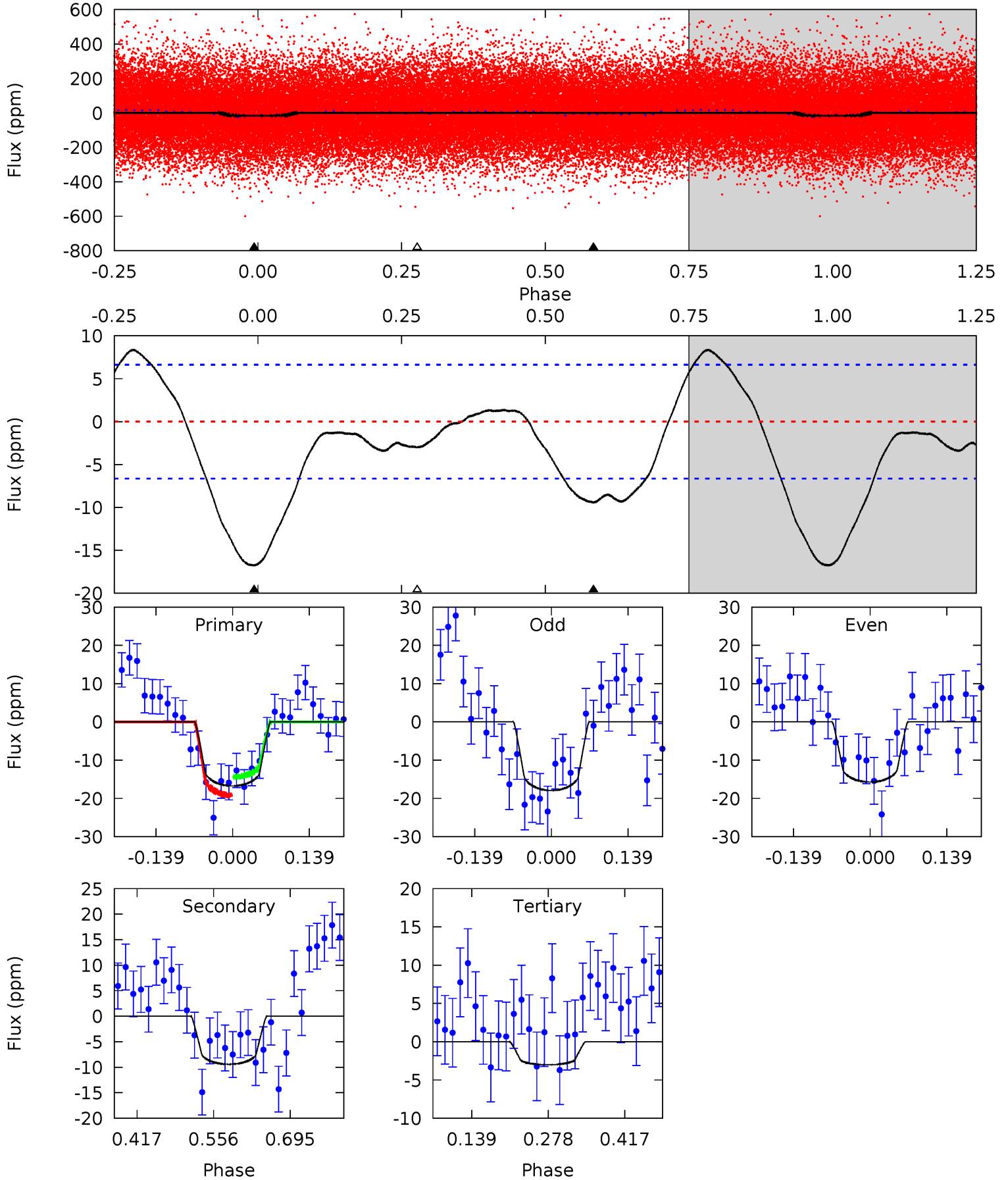
TCE 010332320-01 P= 1.085530 Days $T_0=131.683287$ (BKJD)



DV Model-Shift Uniqueness Test

010332320-01, P = 1.085617 Days, E = 130.555353 Days

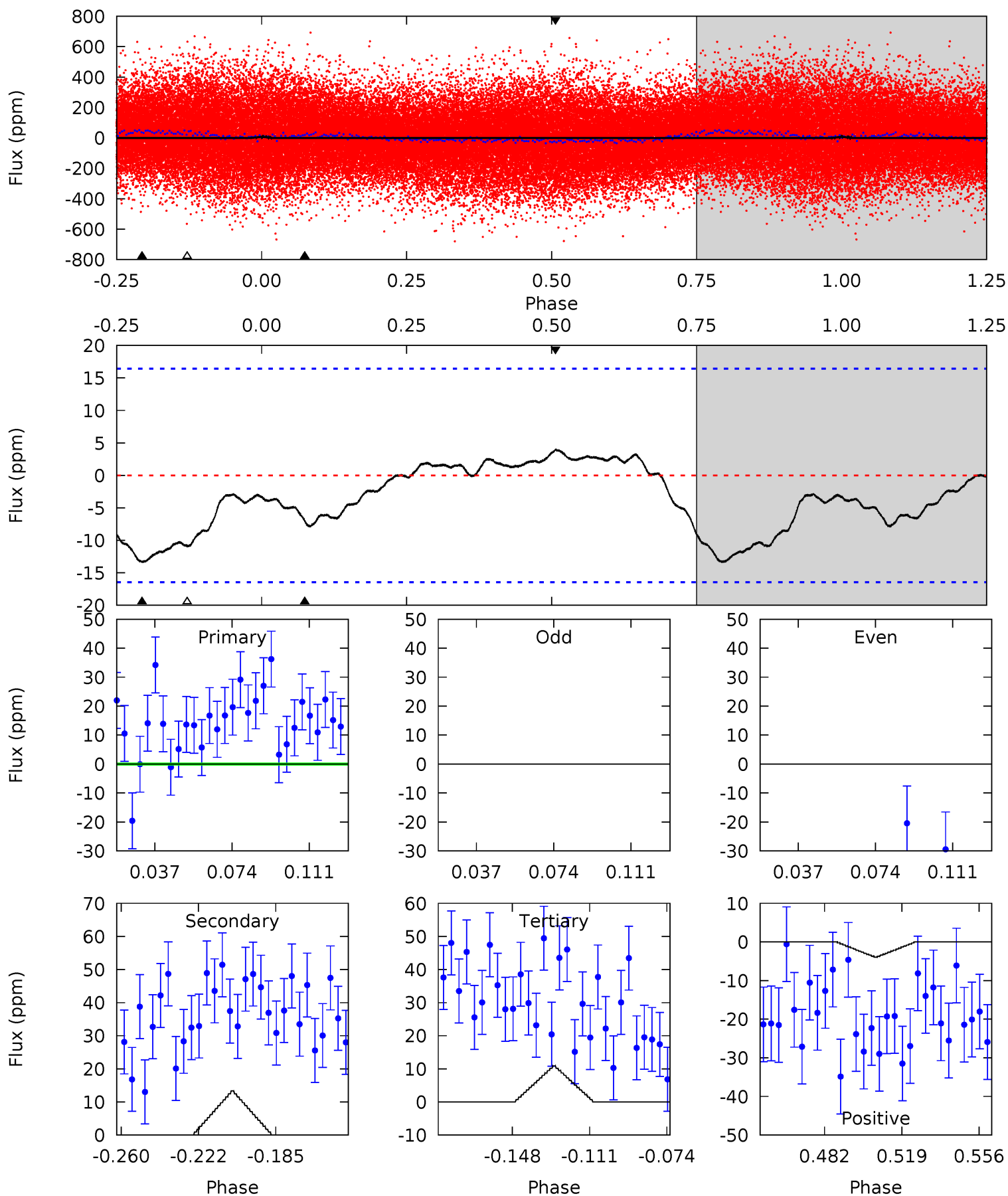
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	6.38	2.04	0	4.50	1.48	2.46	9.31	11.3	4.35	6.38	0.75	0.92	0.33	1.64



Alt Model-Shift Uniqueness Test

010332320-01, P = 1.085530 Days, E = 130.597757 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.03	3.87	3.17	1.15	4.77	2.08	1.21	-1.14	0.87	0.70	2.71	1.91	1.92	0.23	0.13



Stellar Parameters For KIC 010332320

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7221^{+226}_{-327}	$3.488^{+0.639}_{-0.071}$	$-0.180^{+0.250}_{-0.300}$	$4.240^{+0.432}_{-2.446}$	$2.018^{+0.069}_{-0.651}$	$0.037^{+0.363}_{-0.009}$
	+3%/-5%	+18%/-2%	+139%/-167%	+10%/-58%	+3%/-32%	+973%/-24%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010332320-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 1	$1.80^{+1.07}_{-0.89}$	5428^{+421}_{-739}	5260^{+2440}_{-1456}	$1.014^{+2.904}_{-0.598}$
Alt.	-13 ± 3	$2.25^{+1.03}_{-0.94}$	5418^{+425}_{-810}	5190^{+1668}_{-1369}	$0.936^{+1.811}_{-0.524}$

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 $A_{\text{obs}} \gg 1.0$

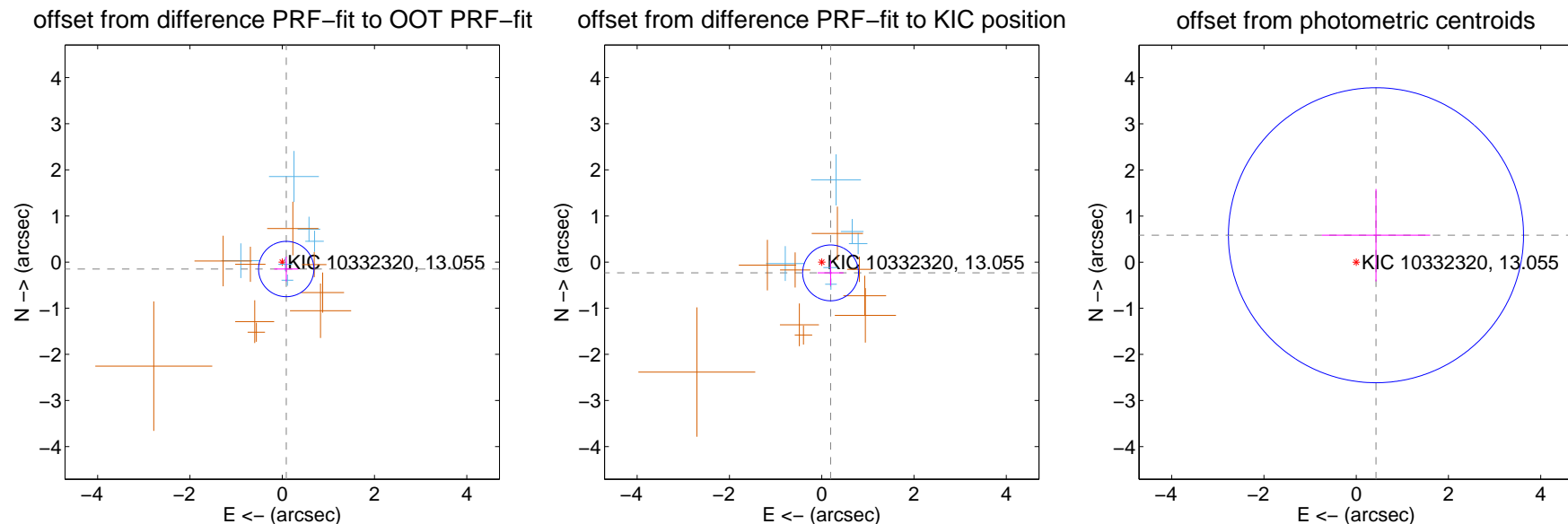
DV Centroid Data

Supplemental centroid analysis for 010332320-01. Kepler magnitude: 13.05. Transit SNR 7.29

There are 6 quarters with good PRF difference image offsets

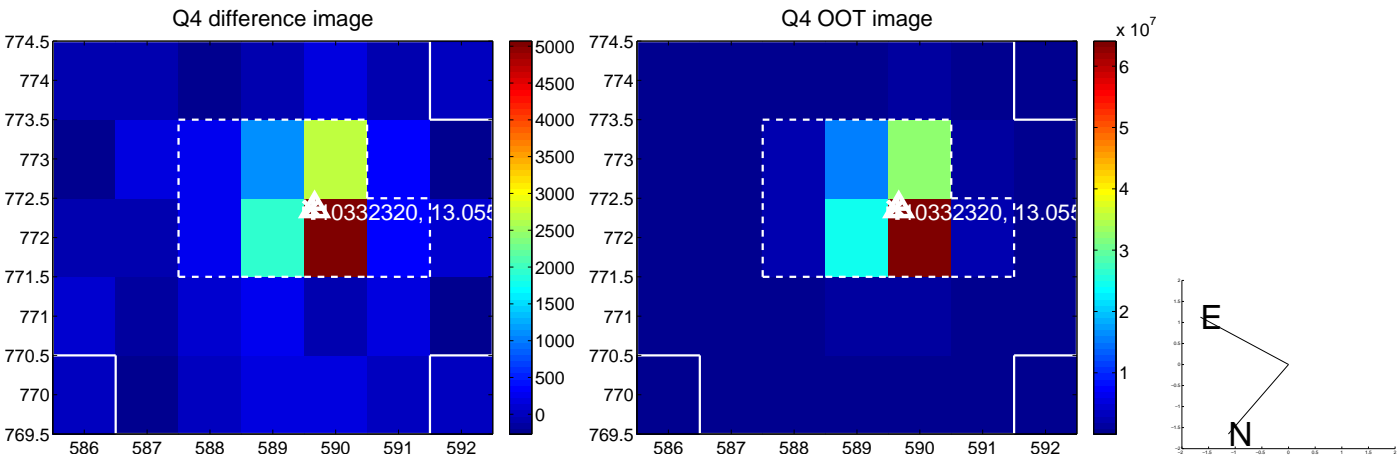
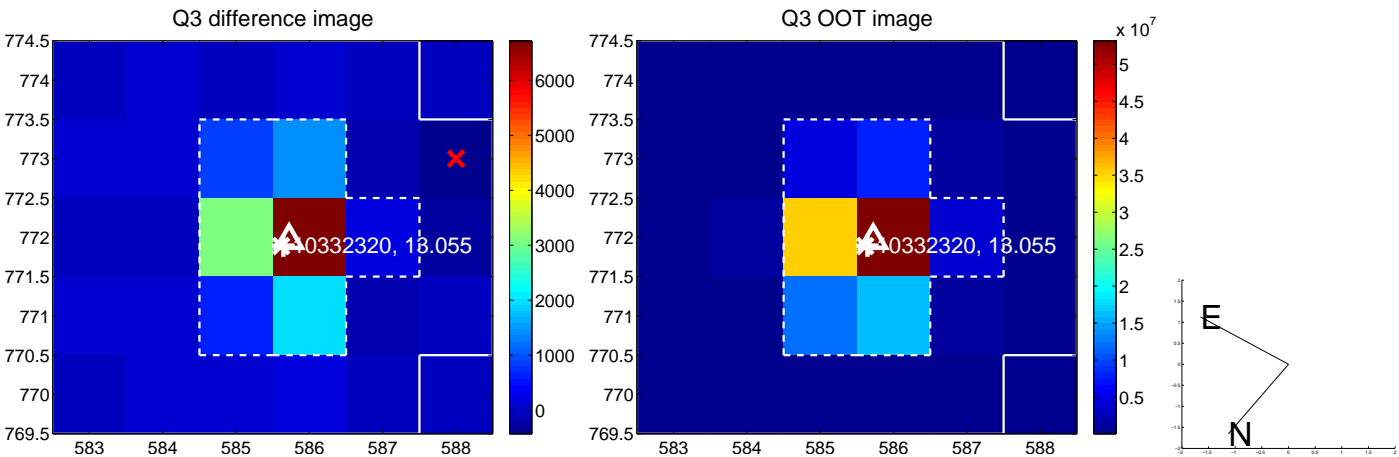
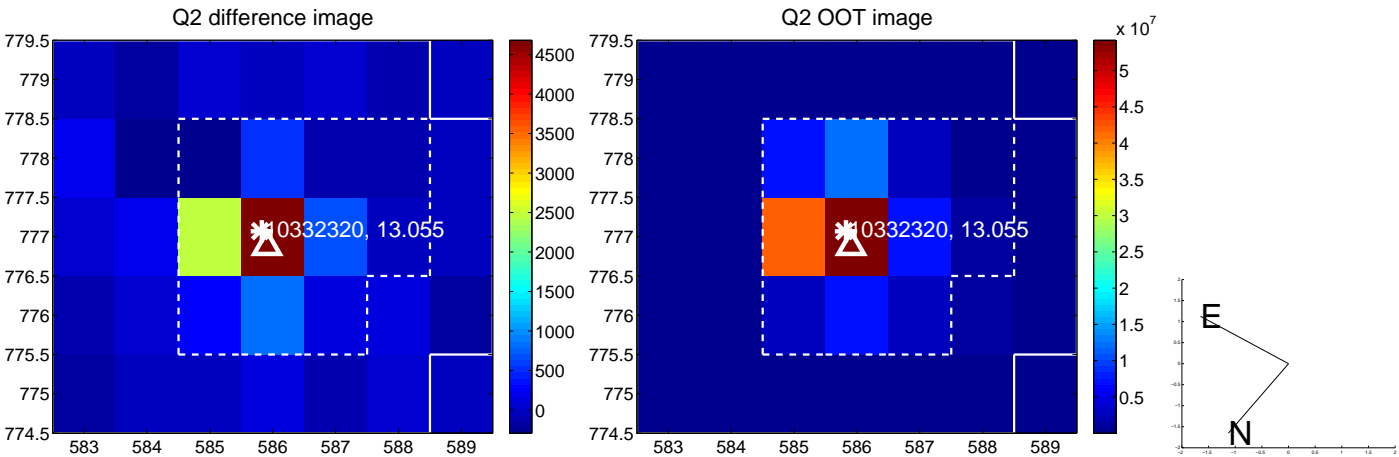
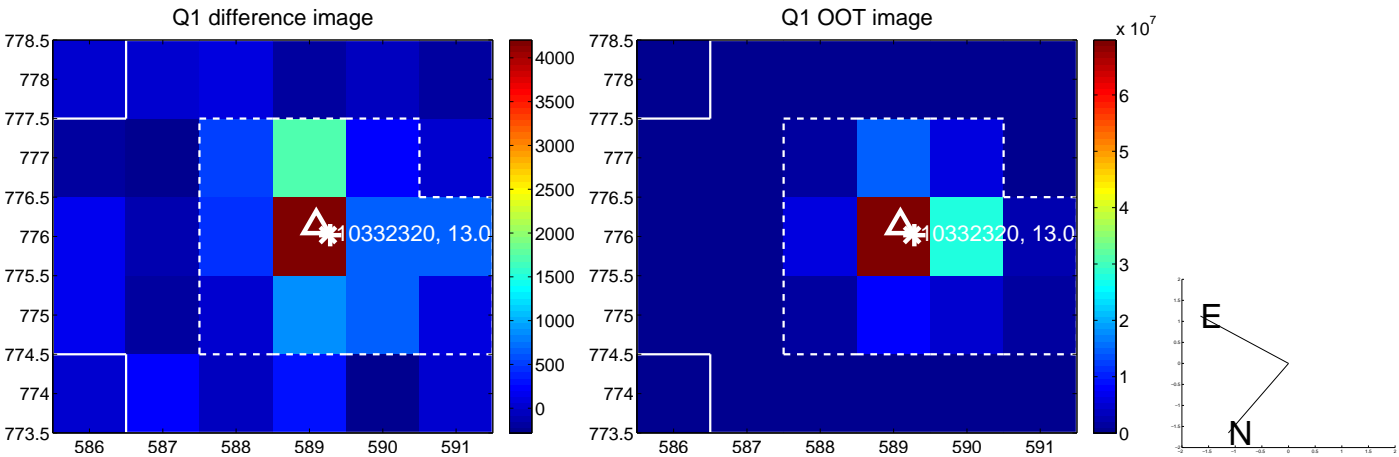
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.174 ± 0.200	0.87	-0.087 ± 0.260	-0.150 ± 0.267
PRF-fit source offset from KIC position	0.303 ± 0.202	1.50	-0.192 ± 0.280	-0.234 ± 0.274
photometric centroid source offset	0.72 ± 1.07	0.68	-0.43 ± 1.17	0.58 ± 1.00

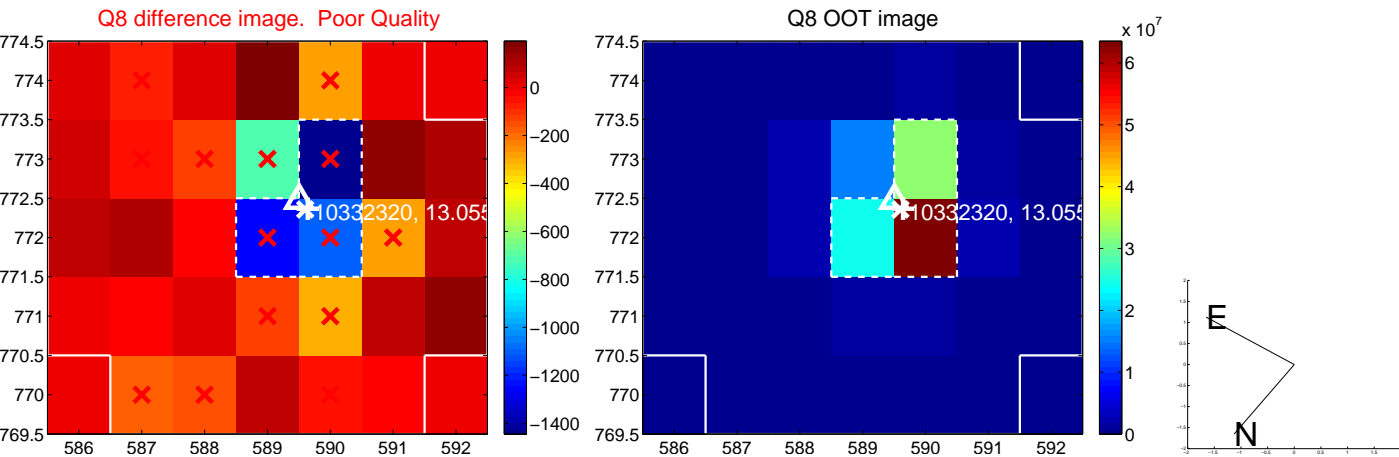
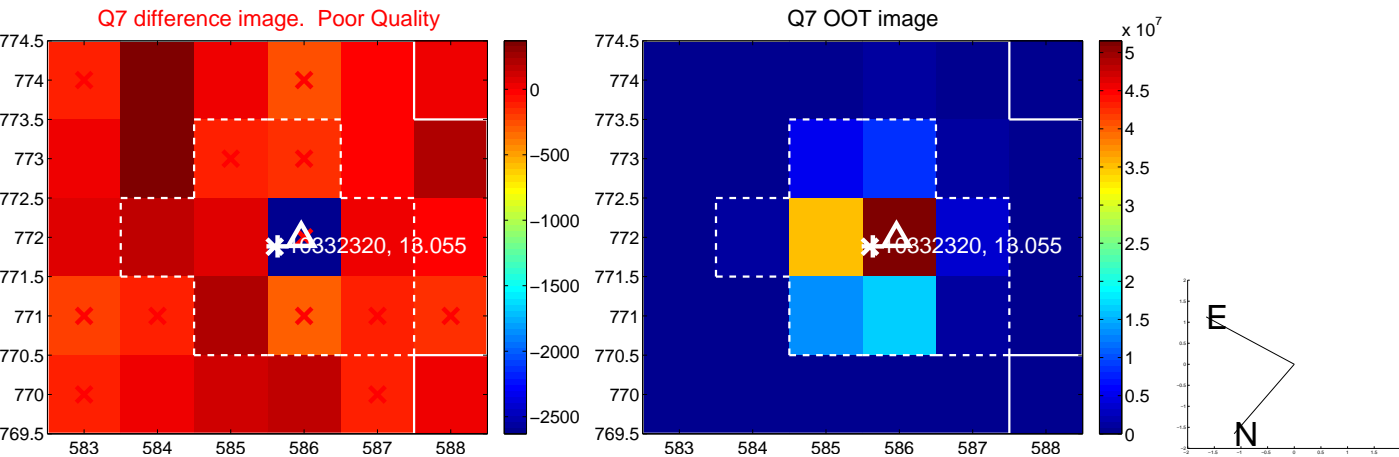
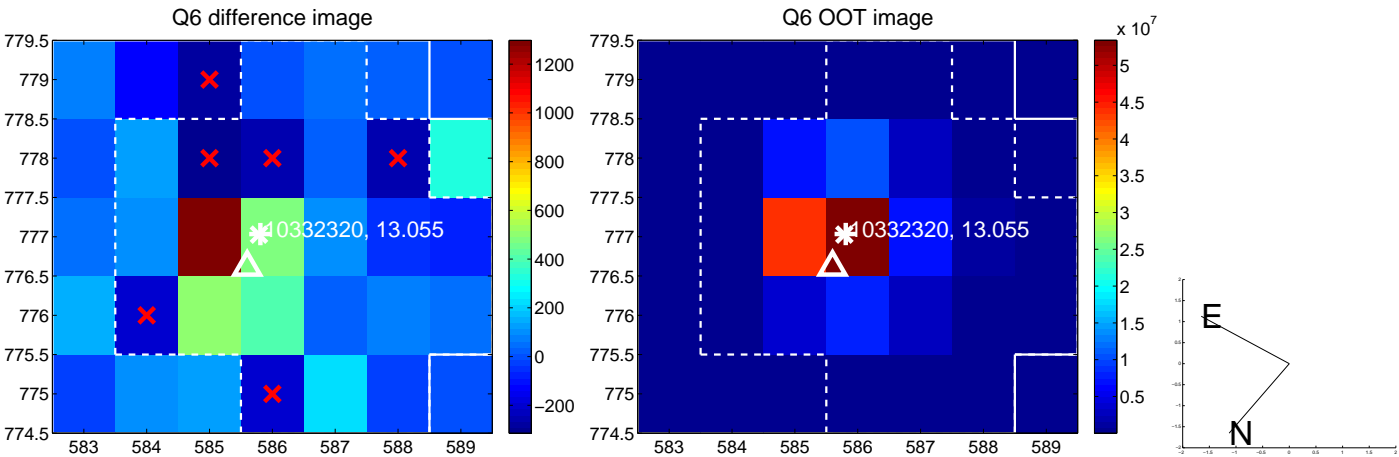
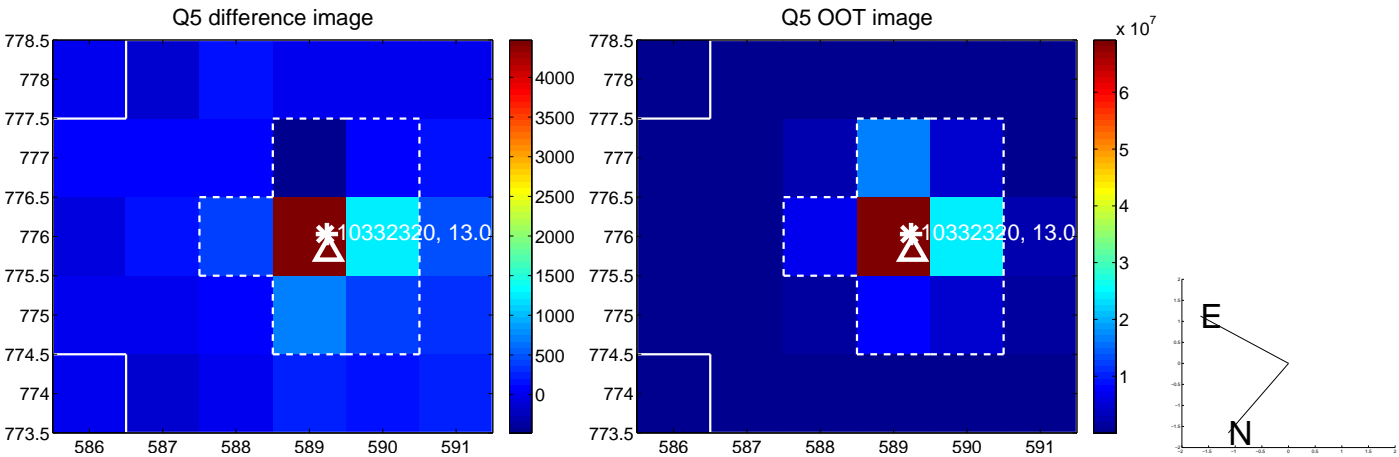


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

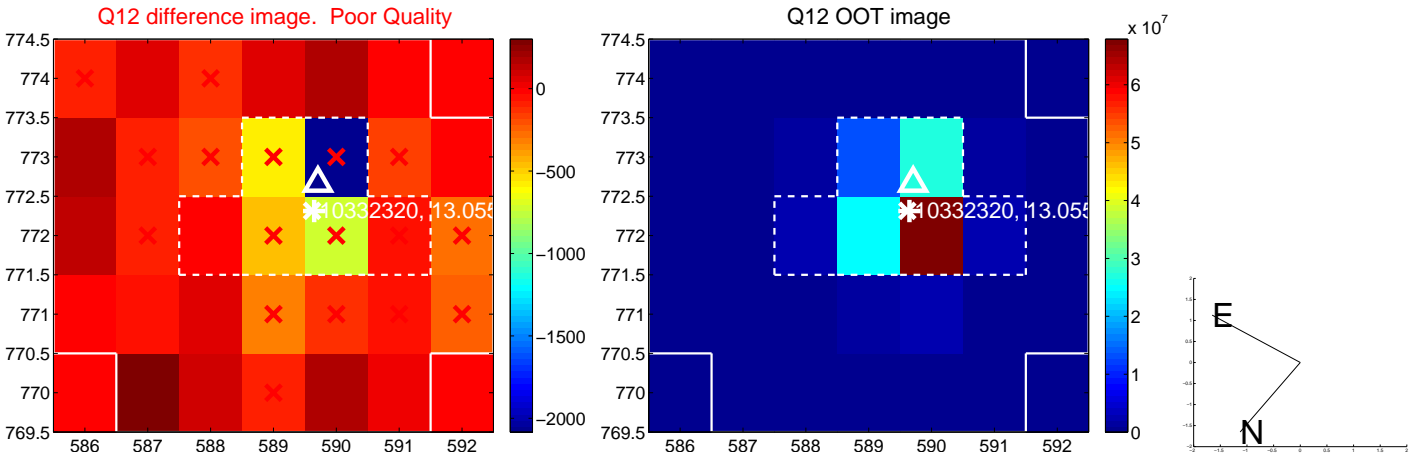
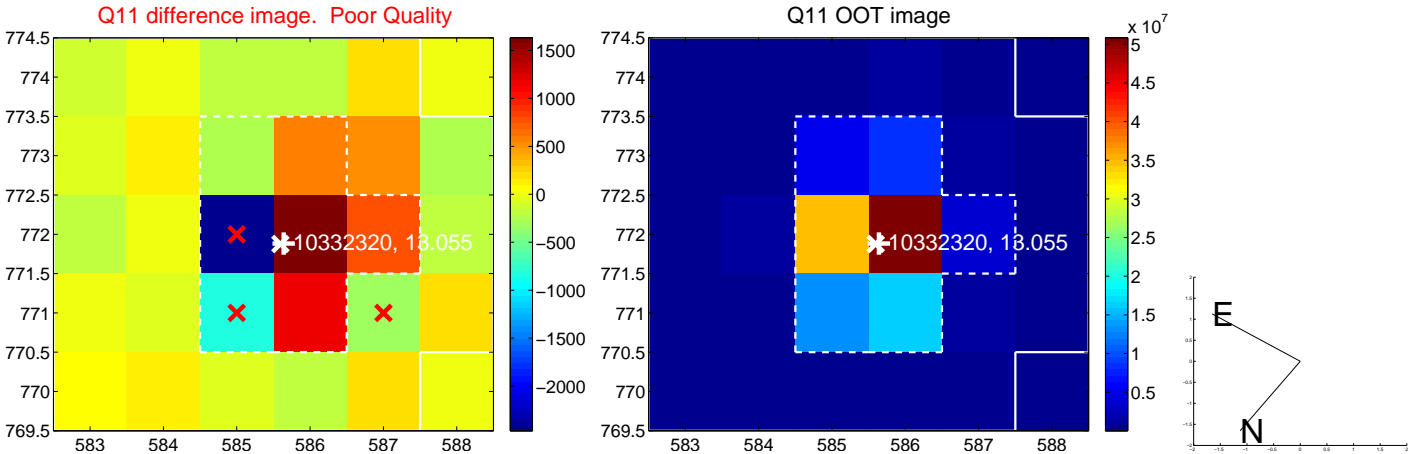
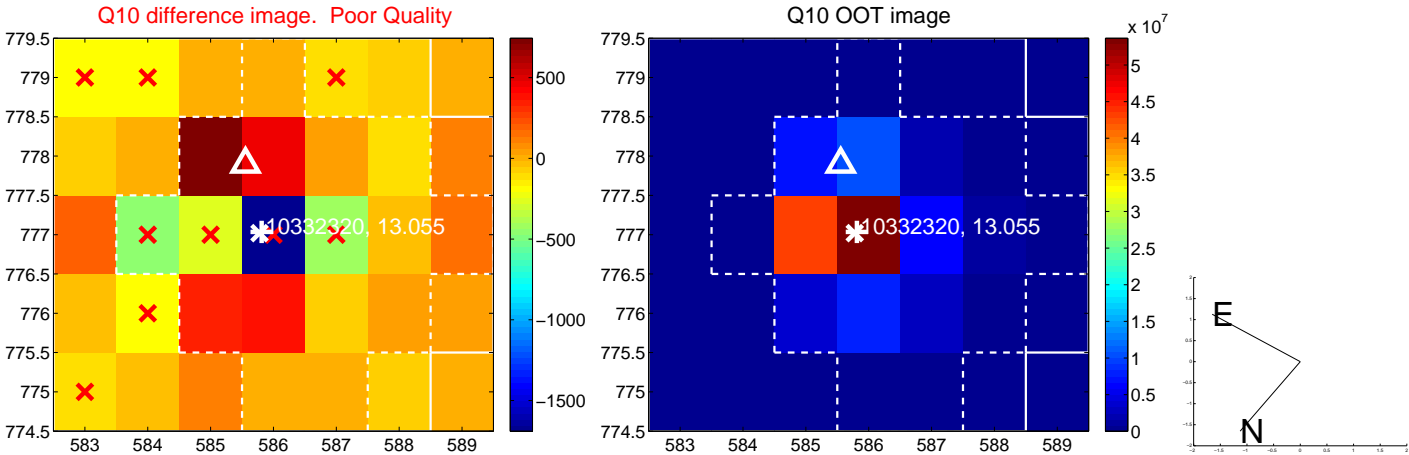
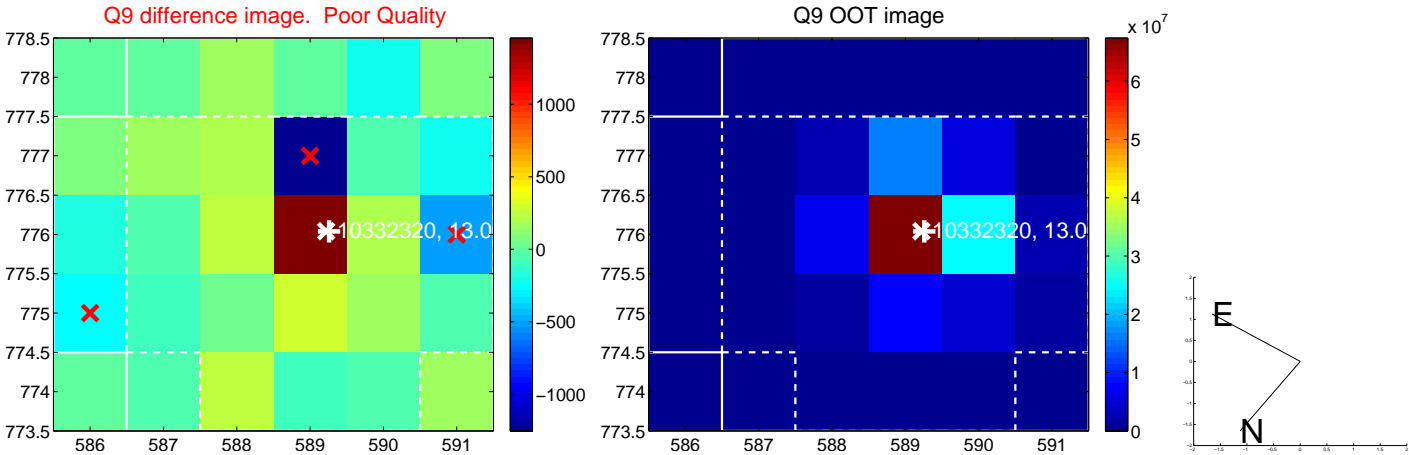
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



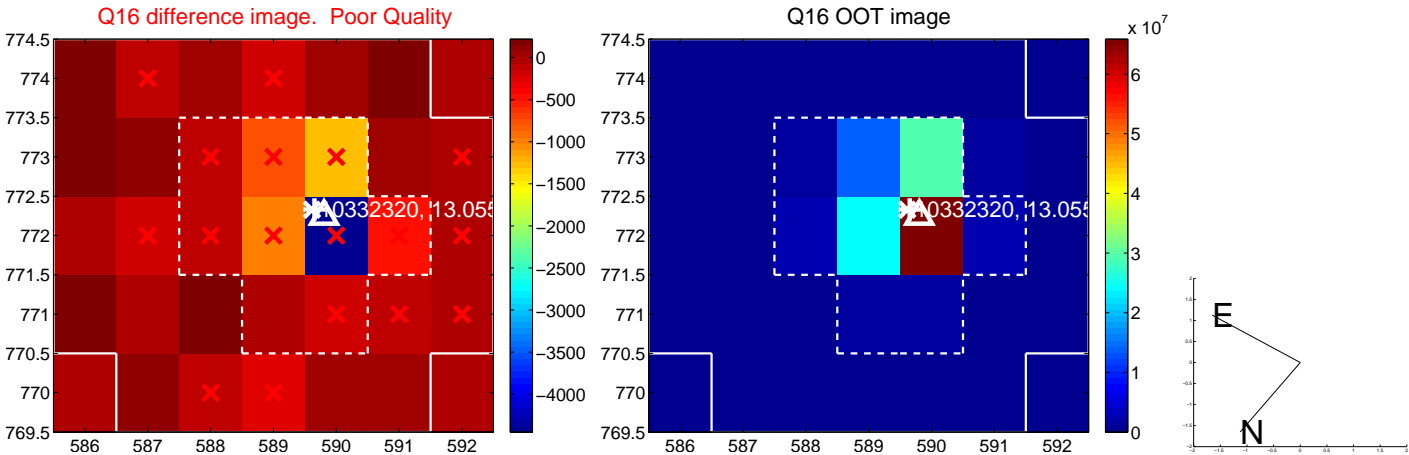
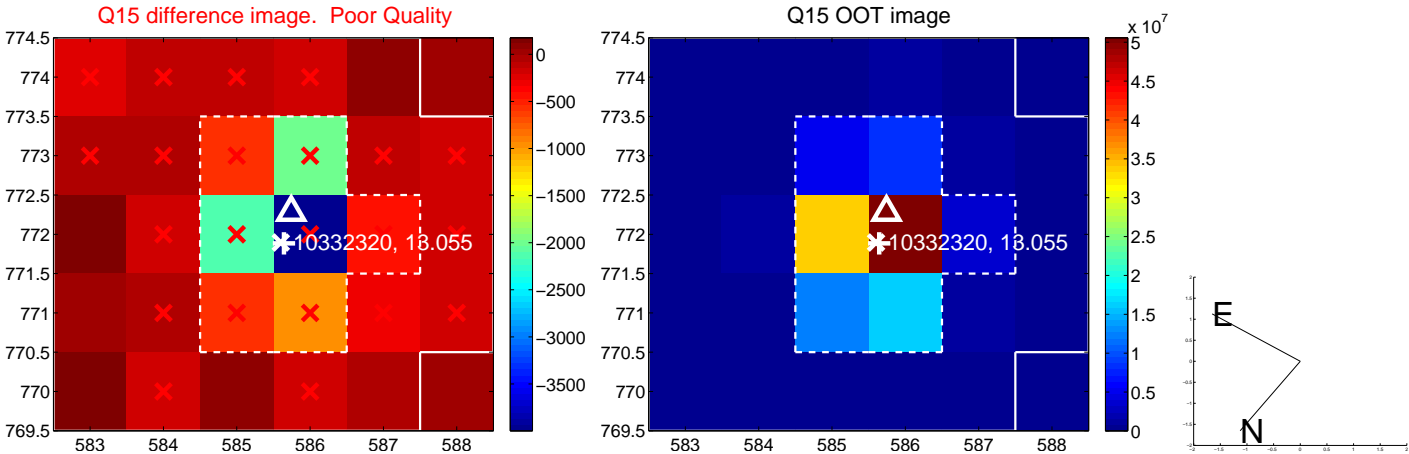
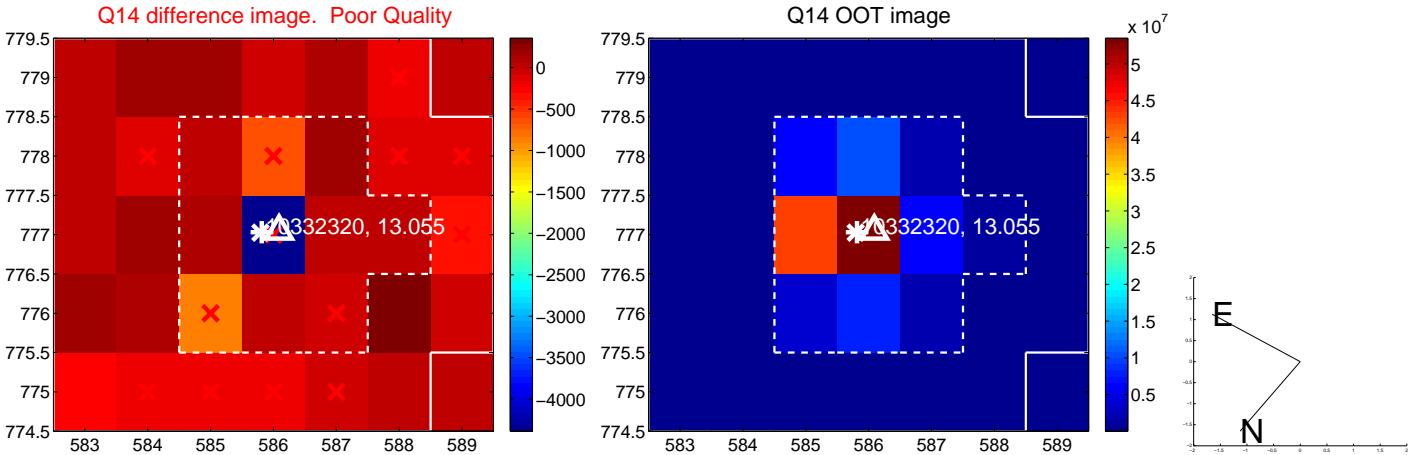
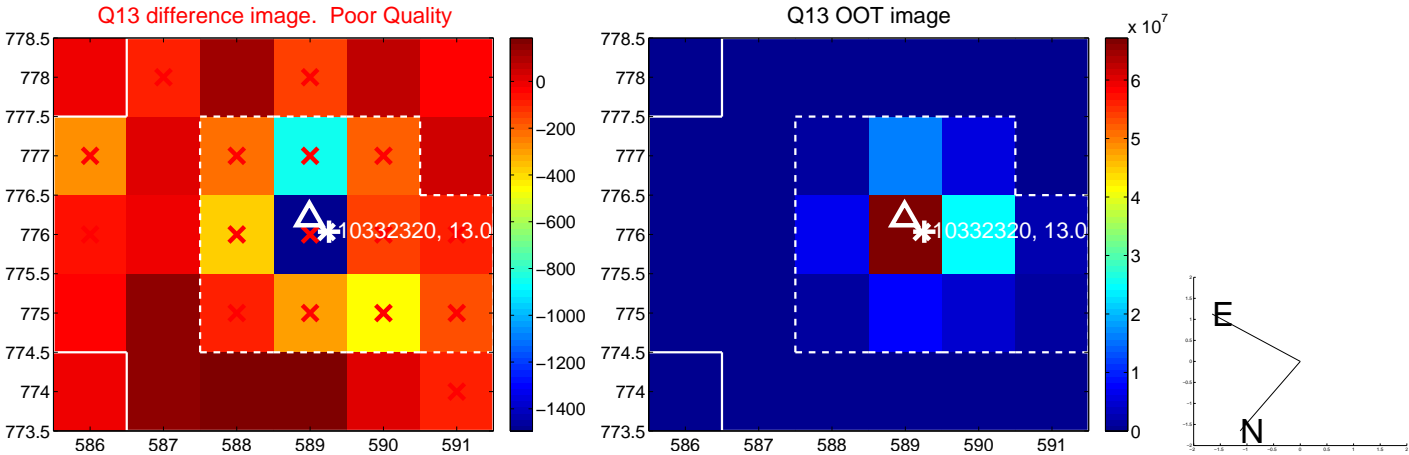
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



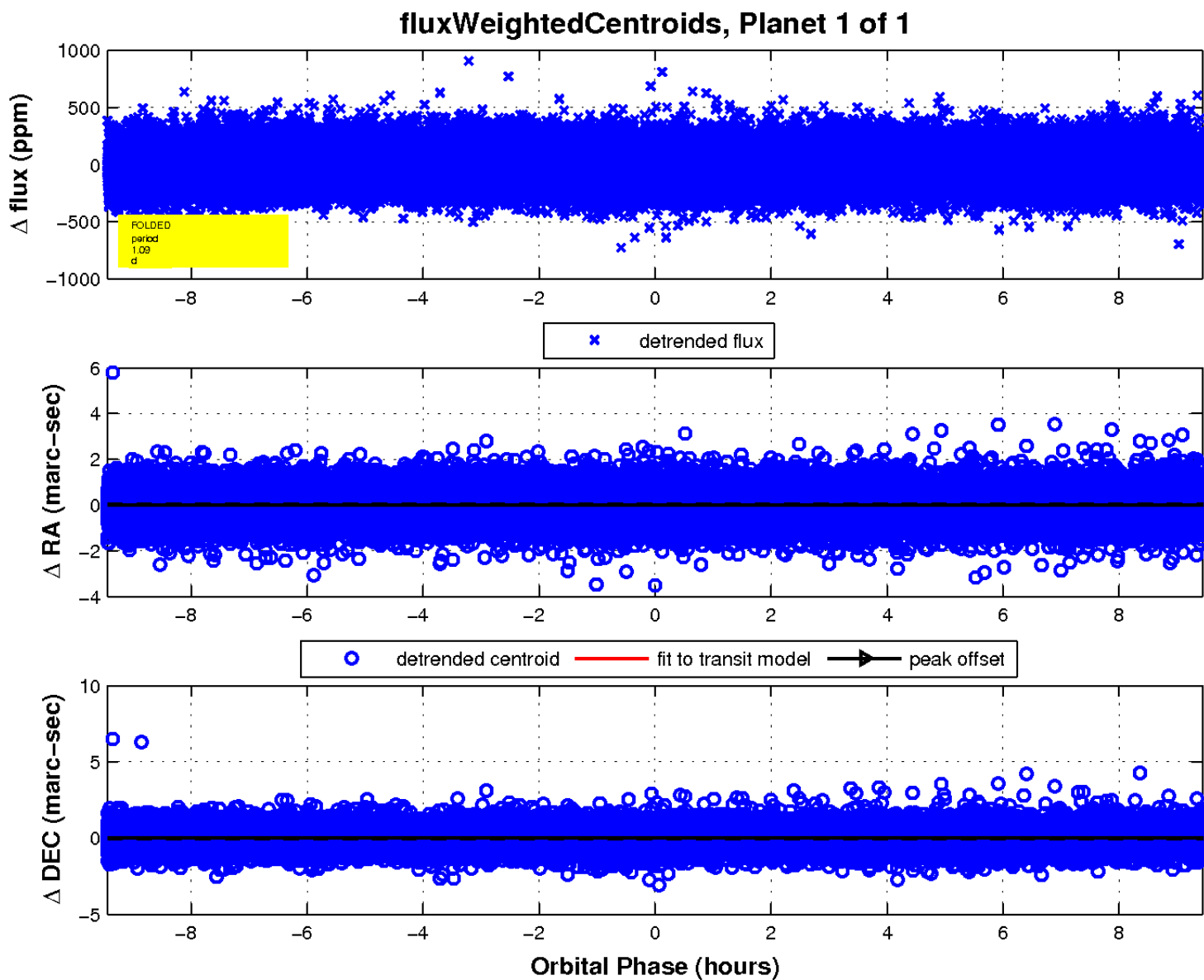
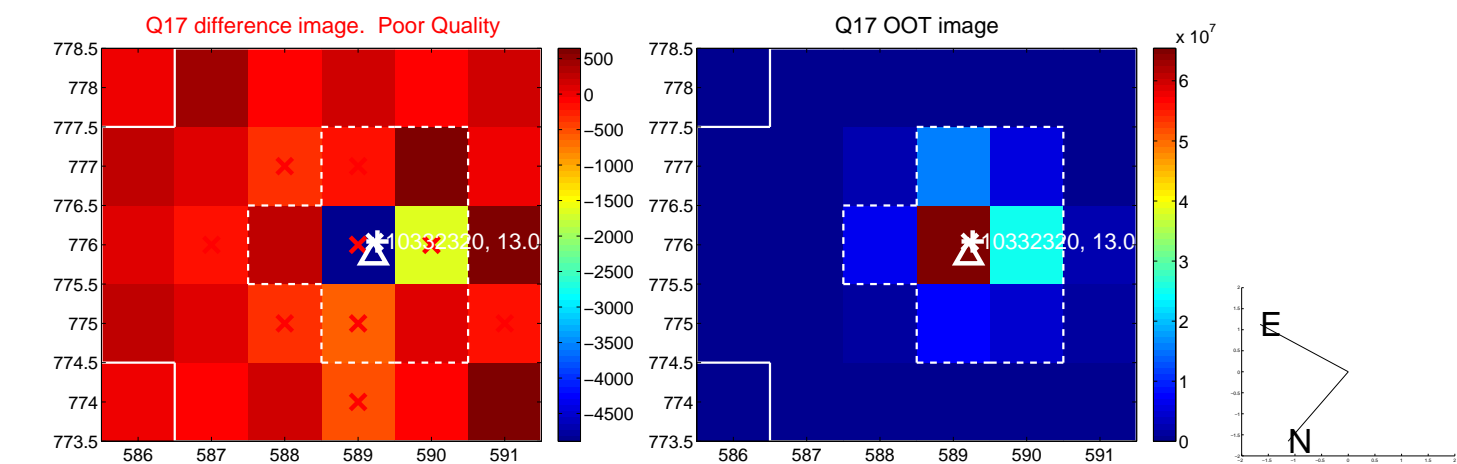
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UKIRT Image

