

KIC 004284980

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})
004284980-01	OBS	7690.01	2.243084	133.433016	95.8	3.842	7.4	7.5	0.89	5897	1.04	773.05

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004284980-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—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.

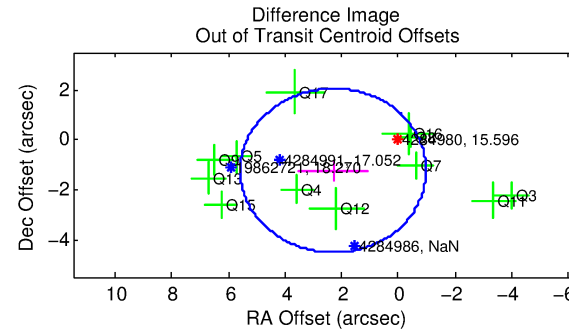
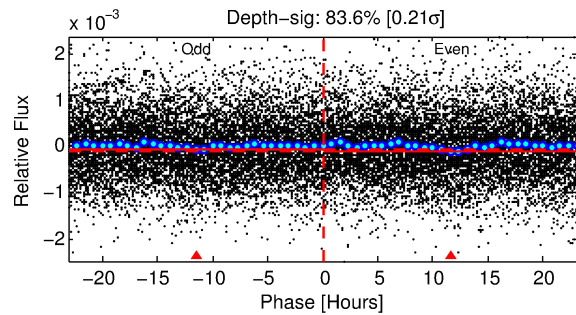
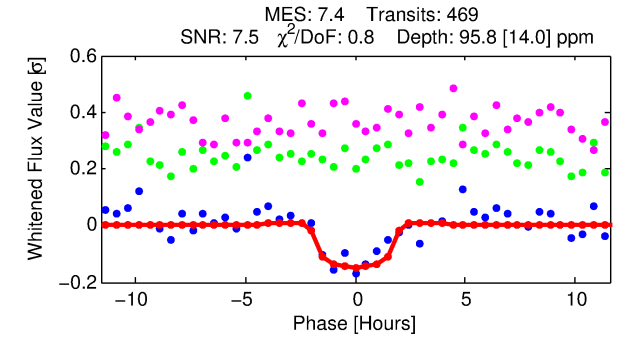
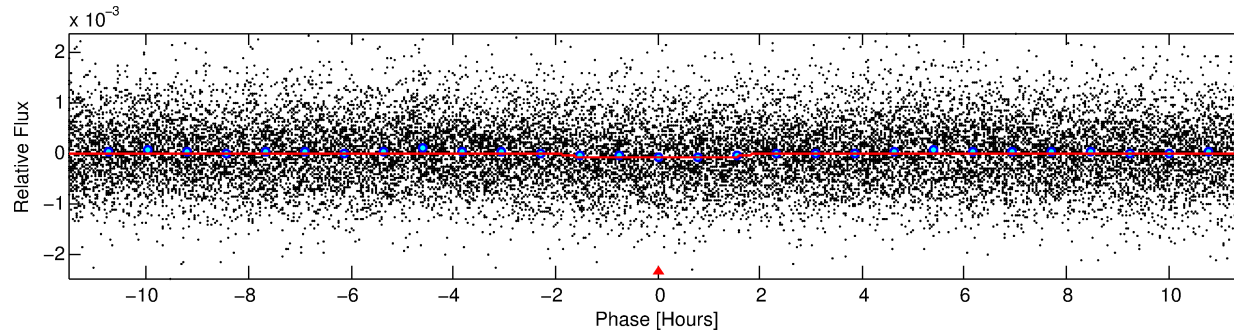
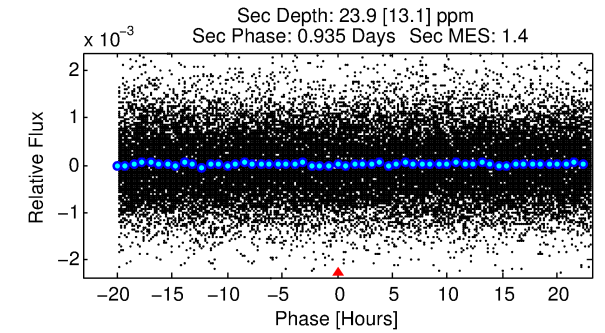
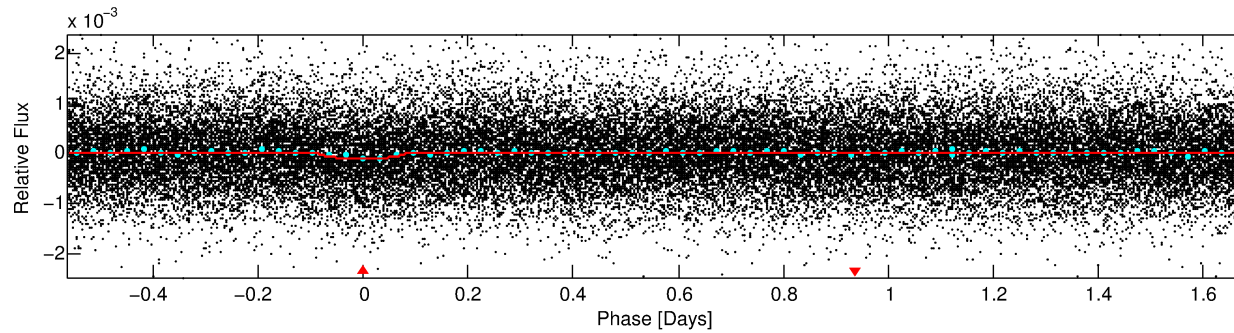
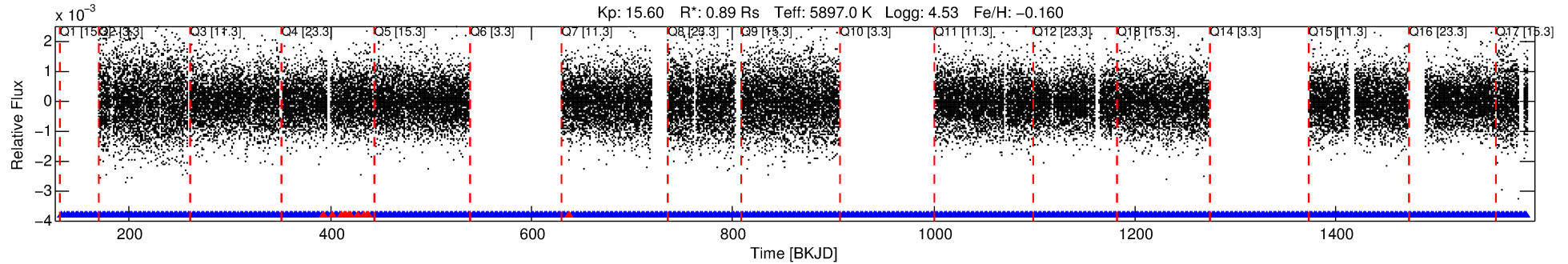
Ephemeris Match Information For 004284980-01

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
004284980-01	4284980	6112.01	4285087	1:1	53.4	13	6	12.79	15.60	2949.20	Direct-PRF	0	2.08	0.97

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: 4284980 Candidate: 1 of 1 Period: 2.243 d



DV Fit Results:

Period = 2.24308 [0.00003] d
Epoch = 133.4330 [0.0069] BKJD
Rp/R* = 0.0107 [0.0072]
a/R* = 2.20 [6.01]
b = 0.91 [0.68]
Seff = 773.05 [317.29]
Teq = 1345 [138] K
Rp = 1.04 [0.77] Re
a = 0.0334 [0.0087] AU
Ag = 13.60 [20.43] [0.62σ]
Teffp = 3992 [1456] K [1.81σ]

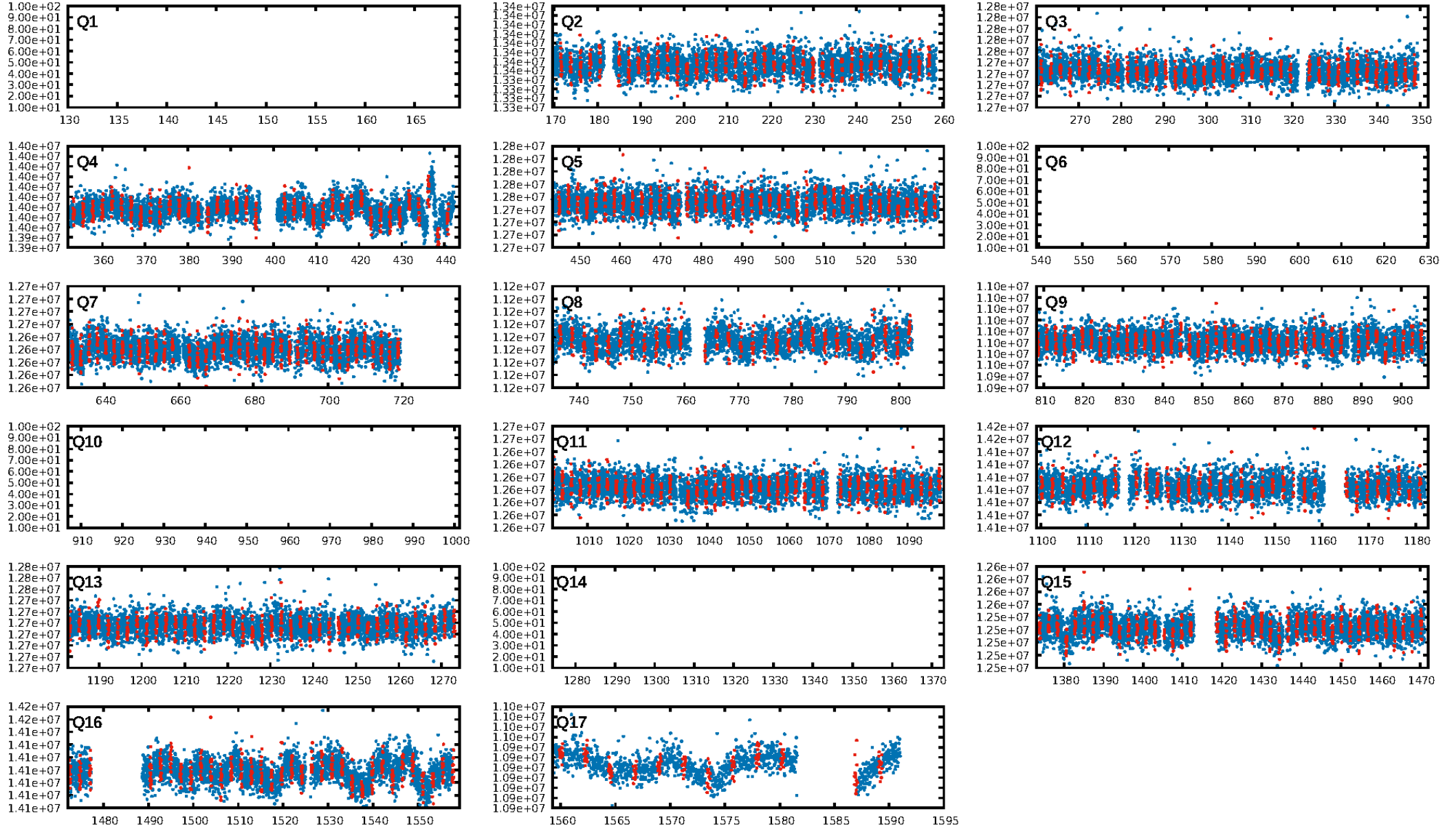
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.32e-13
RollingBand-fgt: 0.97 [445/457]
GhostDiagnostic-chr: 0.2632
Centroid-sig: 2.1%
Centroid-so: 1.763 arcsec [1.09σ]
OotOffset-rm: 2.613 arcsec [2.39σ]
KicOffset-rm: 2.993 arcsec [2.88σ]
OotOffset-st: 0/4/4/4 [12]
KicOffset-st: 0/4/4/4 [12]
DiffImageQuality-fgm: 0.00 [0/12]
DiffImageOverlap-fno: 1.00 [13/13]

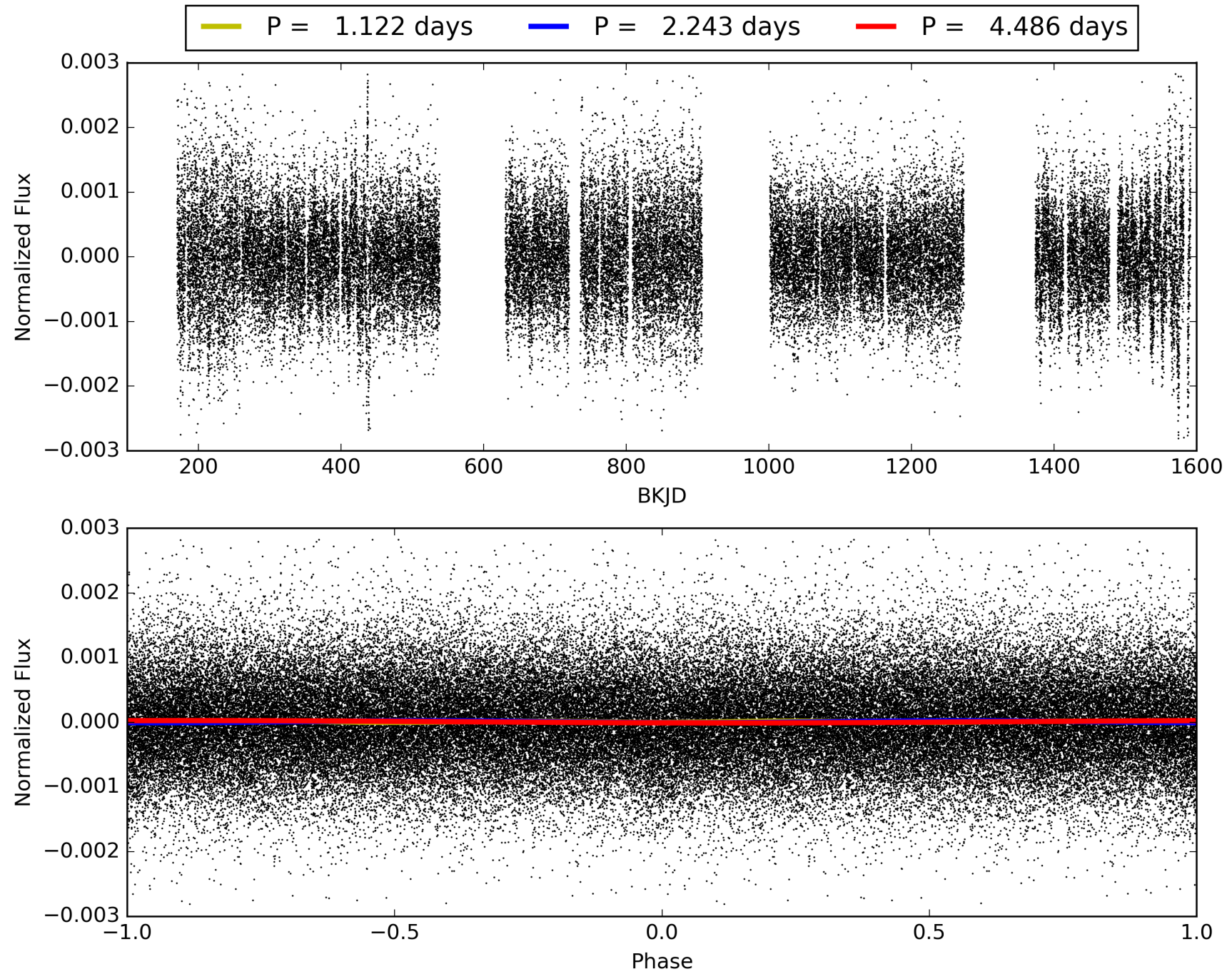
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:20:39 Z

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

TCE 004284980-01, PDC Light Curves

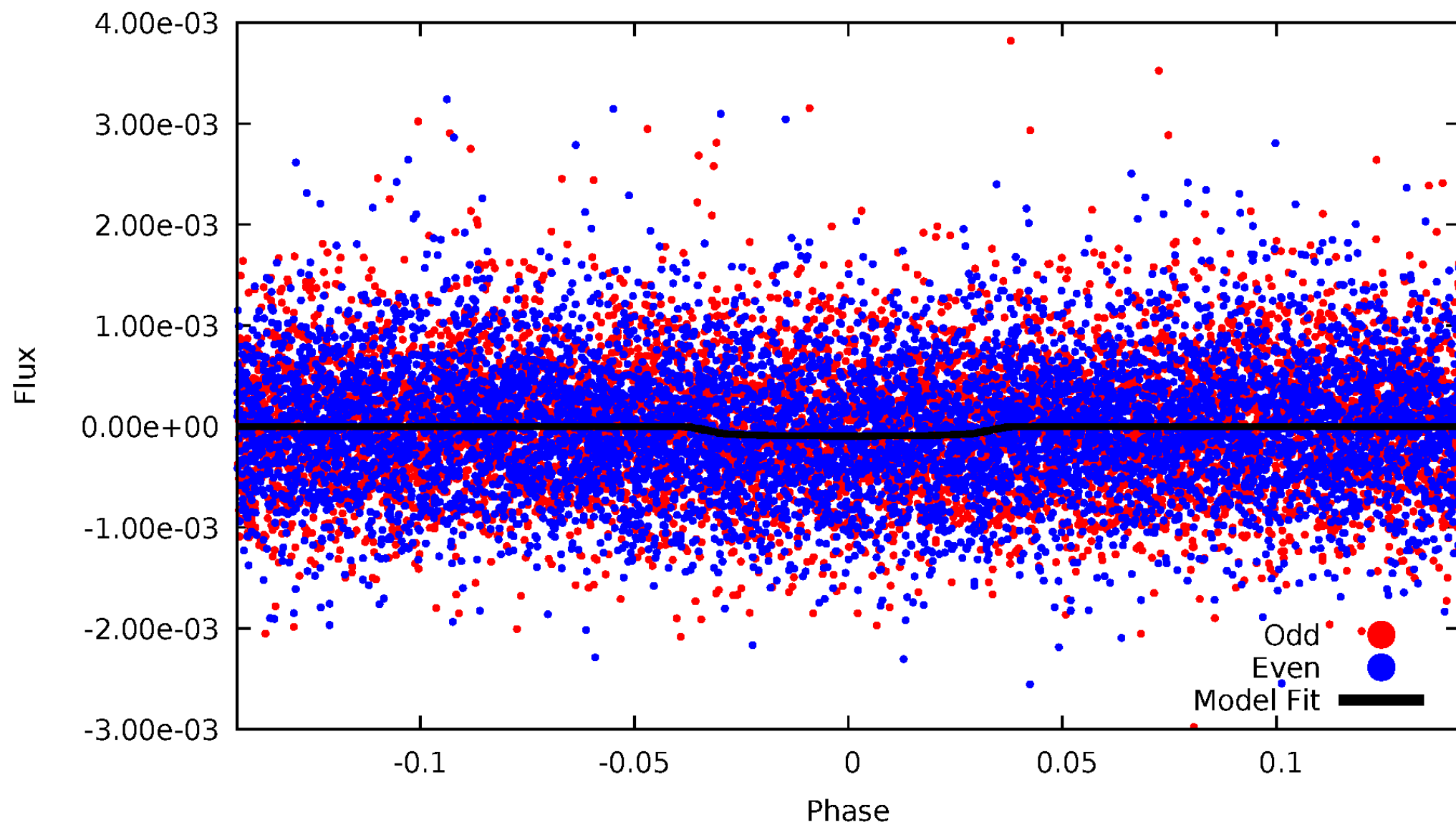


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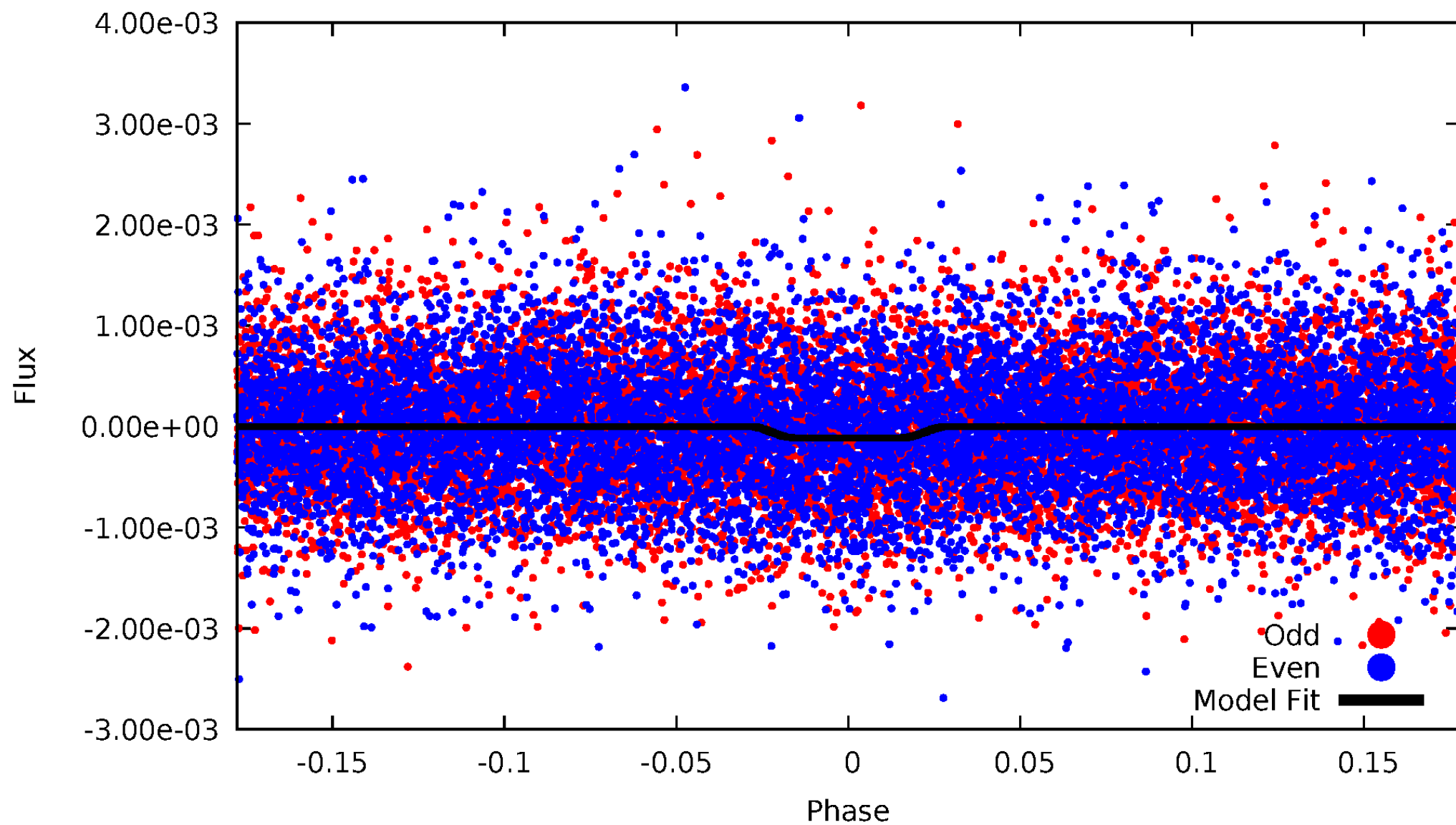
DV Odd/Even

TCE 004284980-01

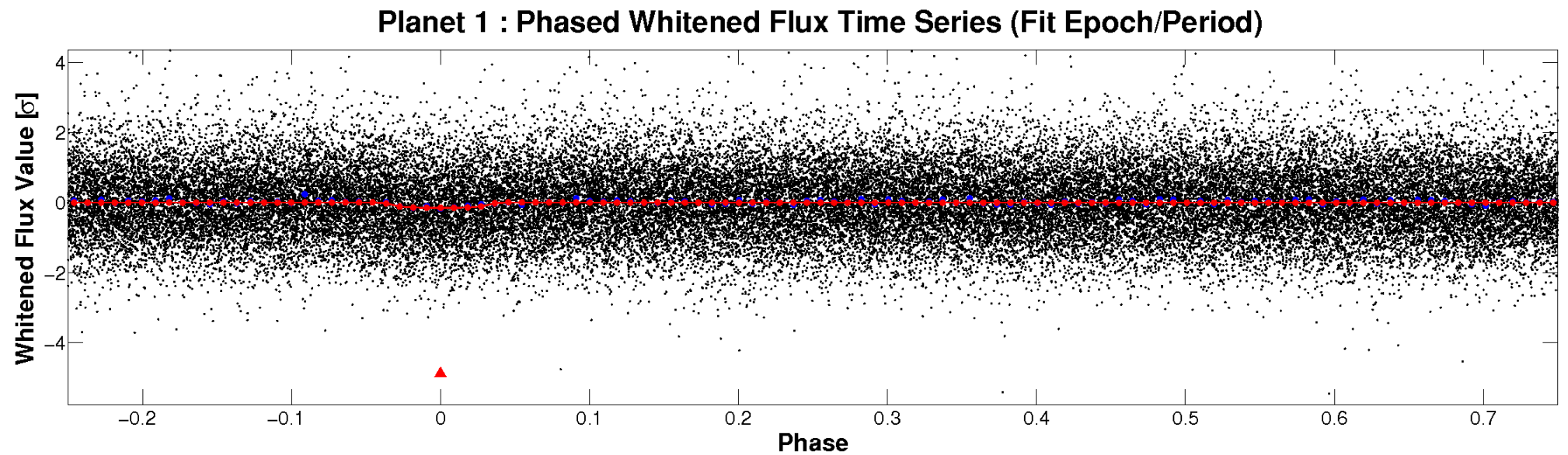
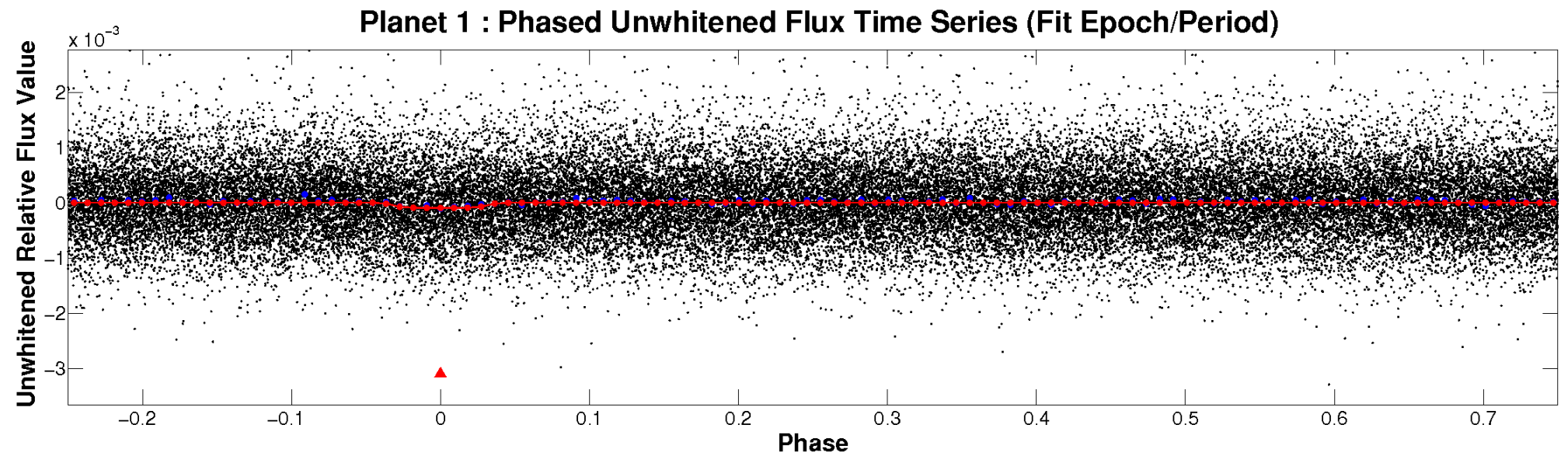


ALT Odd/Even

TCE 004284980-01

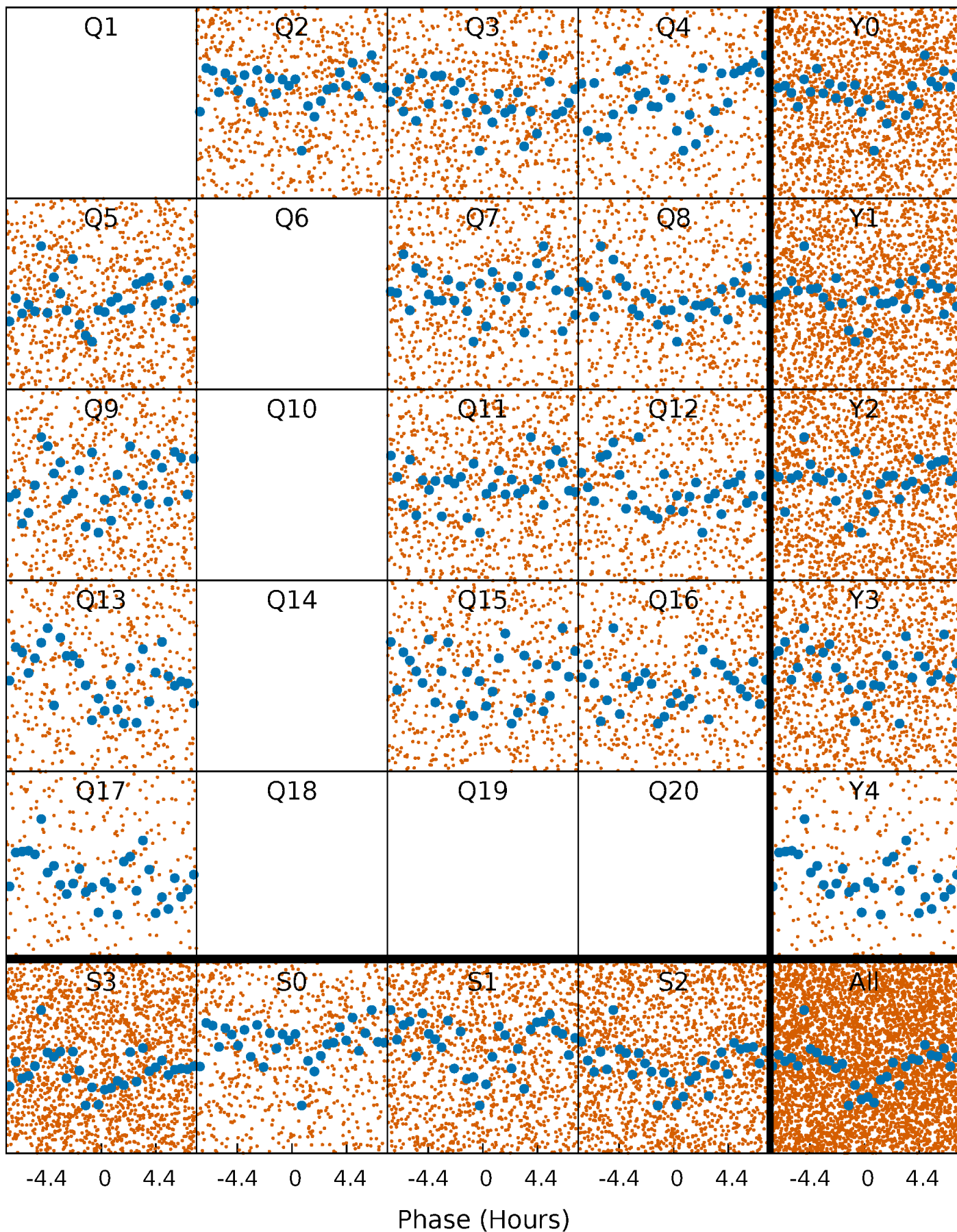


Non-Whitened Vs. Whitened Light Curve



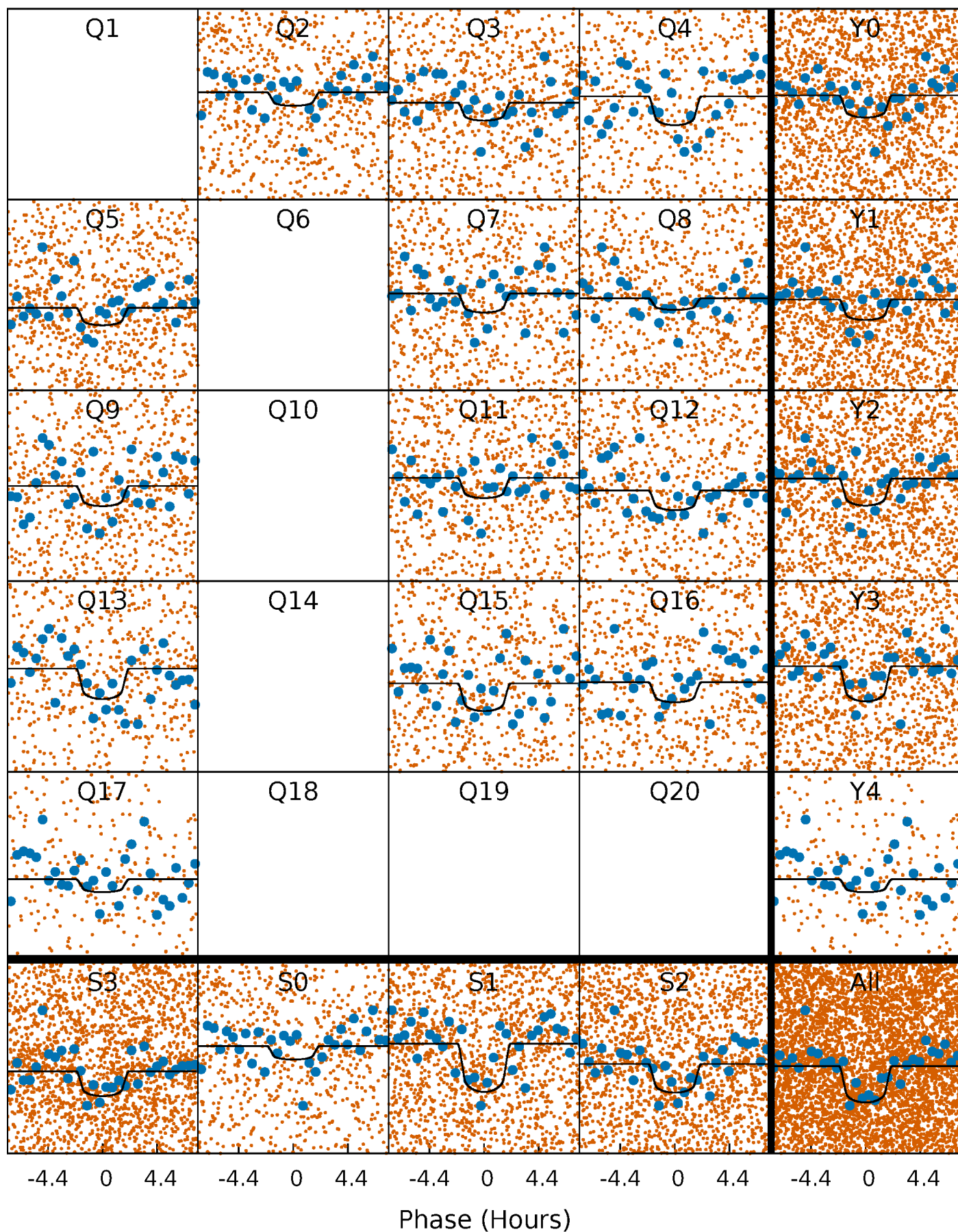
PDC Quarter-Phased Transit Curves

TCE 004284980-01 P= 2.243084 Days $T_0=133.433016$ (BKJD)



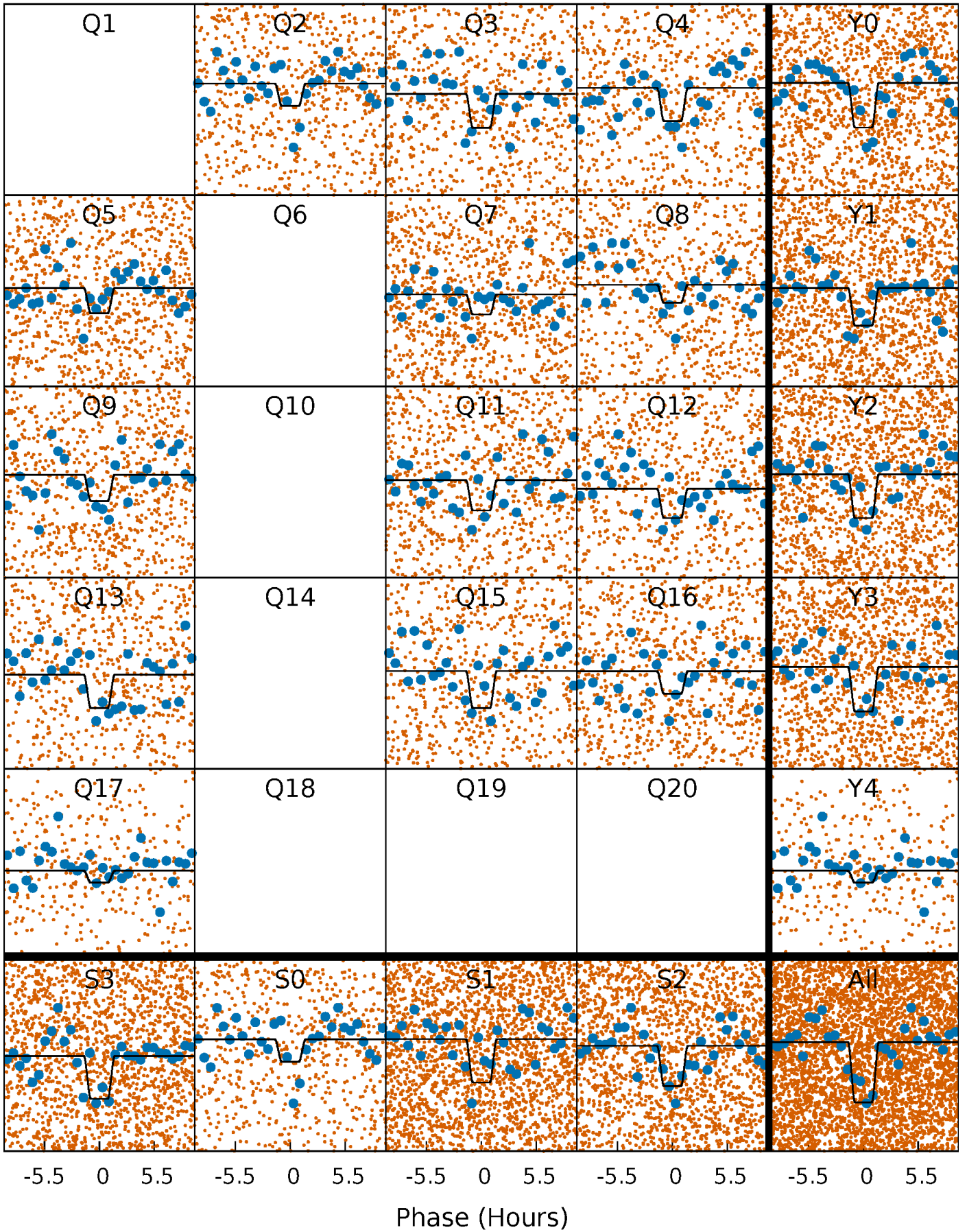
DV Quarter-Phased Transit Curves

TCE 004284980-01 P= 2.243084 Days $T_0=133.433016$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

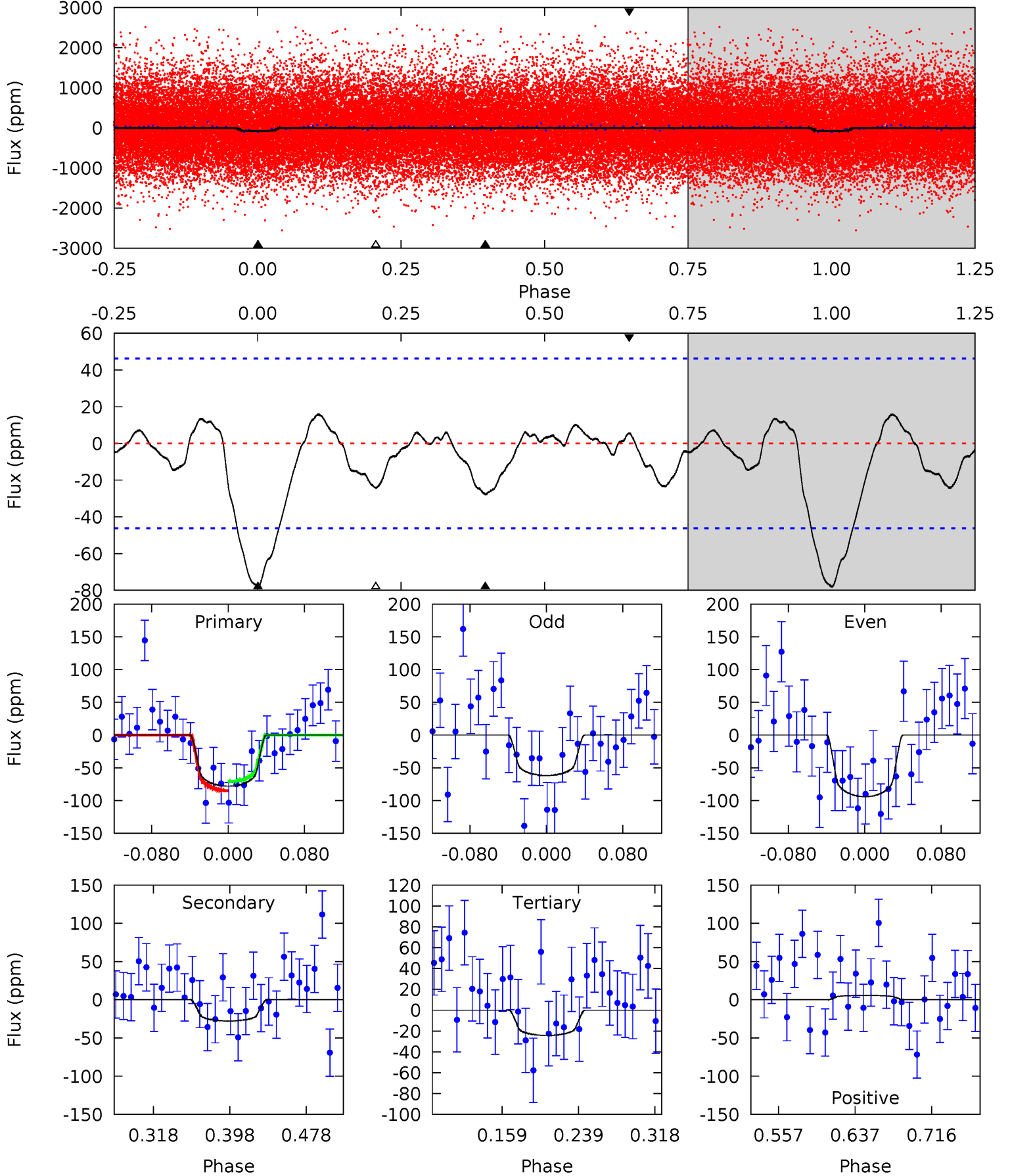
TCE 004284980-01 P= 2.242968 Days $T_0=133.469633$ (BKJD)



DV Model-Shift Uniqueness Test

004284980-01, P = 2.243084 Days, E = 133.433016 Days

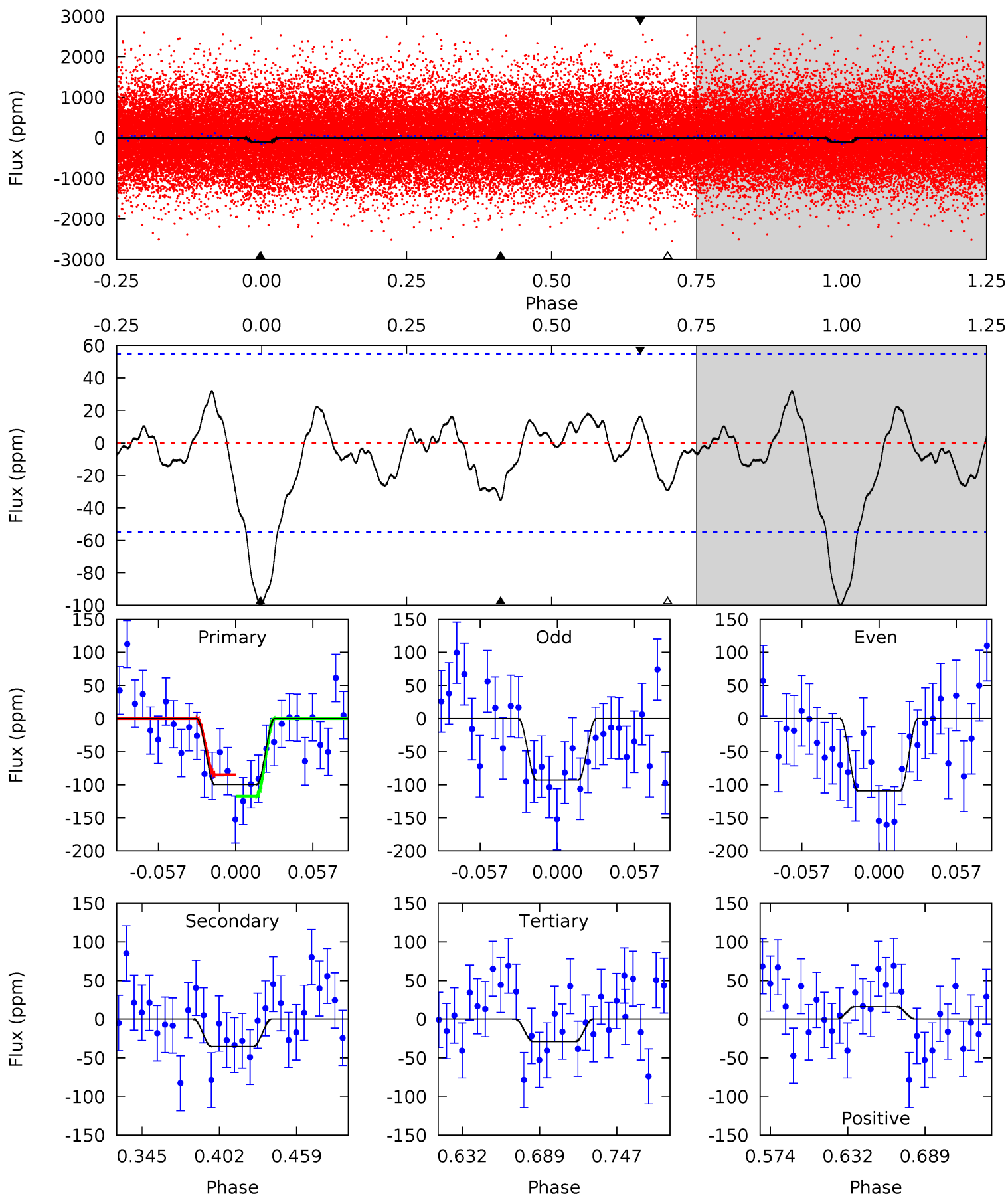
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.79	2.78	2.42	0.56	4.61	1.75	0.98	5.38	7.23	0.36	2.22	1.61	0.98	0.17	0.71



Alt Model-Shift Uniqueness Test

004284980-01, P = 2.242968 Days, E = 133.469633 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.49	3.00	2.48	1.38	4.68	1.90	1.05	6.01	7.11	0.52	1.62	0.70	0.87	0.24	1.38



Stellar Parameters For KIC 004284980

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5897^{+186}_{-206}	$4.531^{+0.037}_{-0.213}$	$-0.160^{+0.300}_{-0.300}$	$0.891^{+0.274}_{-0.091}$	$0.983^{+0.120}_{-0.132}$	$1.958^{+0.409}_{-0.999}$
	+3%/-3%	+1%/-5%	+188%/-188%	+31%/-10%	+12%/-13%	+21%/-51%
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 004284980-01 / KOI 7690.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28 ± 10	$1.16^{+0.75}_{-0.69}$	1932^{+141}_{-92}	4218^{+1969}_{-703}	12^{+65}_{-8}
Alt.	-35 ± 12	$1.13^{+0.76}_{-0.67}$	1930^{+132}_{-99}	4419^{+2255}_{-787}	15^{+83}_{-10}

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 $A_{obs} \gg 1.0$

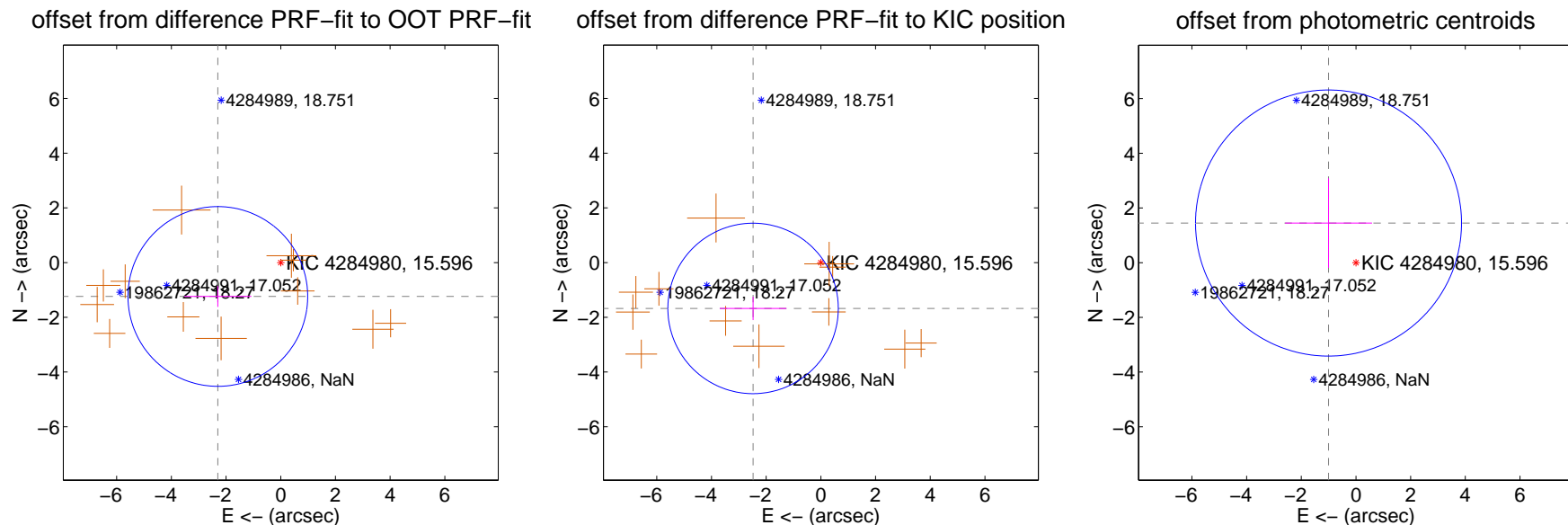
DV Centroid Data

Supplemental centroid analysis for 004284980-01. Kepler magnitude: 15.60. Transit SNR 7.54

There are 0 quarters with good PRF difference image offsets

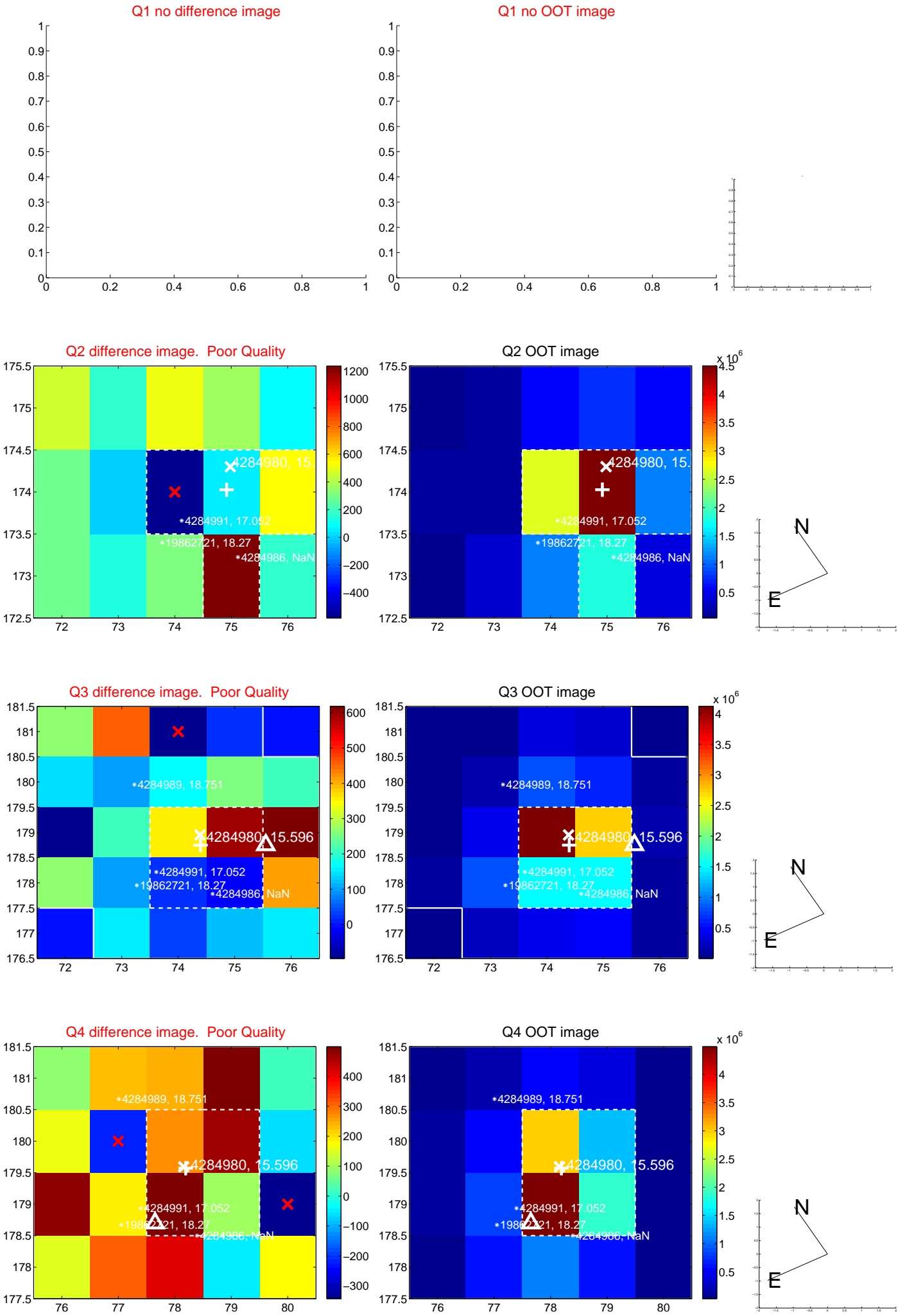
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.613 ± 1.095	2.39	2.301 ± 1.227	-1.238 ± 0.382
PRF-fit source offset from KIC position	2.993 ± 1.039	2.88	2.479 ± 1.220	-1.676 ± 0.427
photometric centroid source offset	1.76 ± 1.62	1.09	1.00 ± 1.59	1.45 ± 1.64

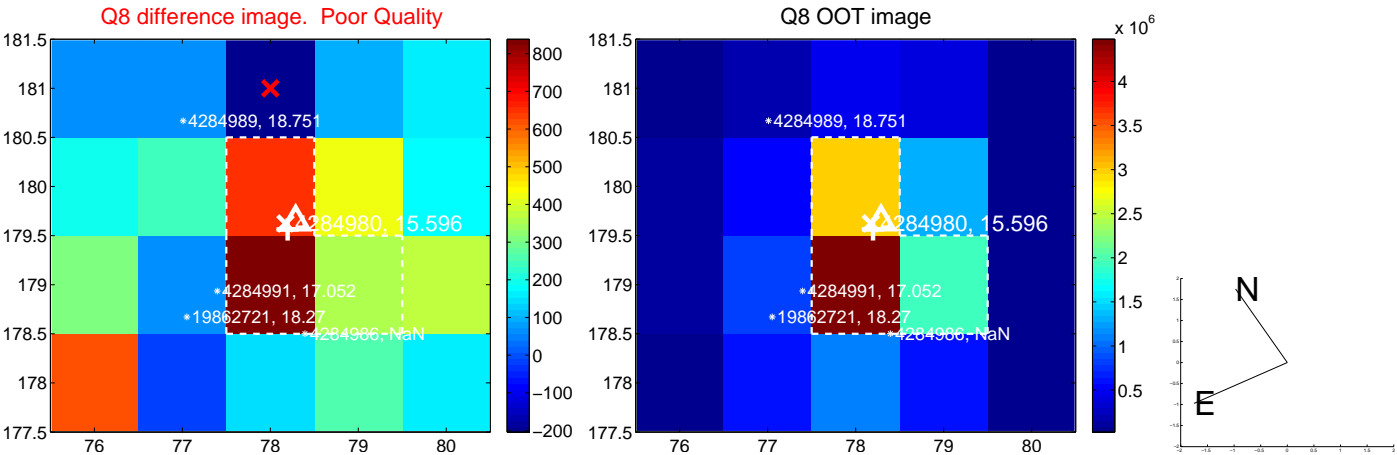
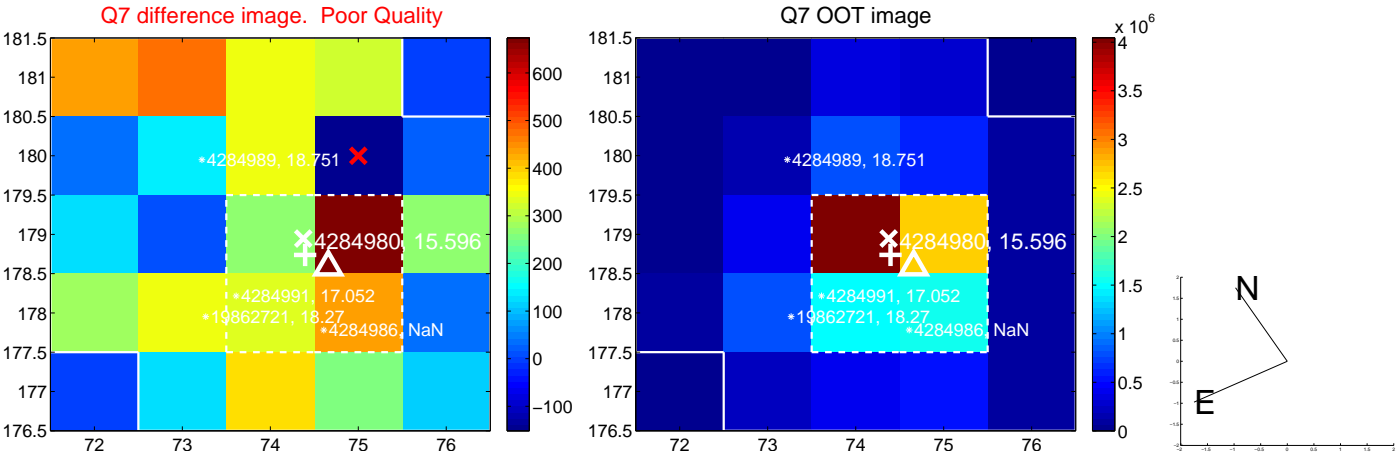
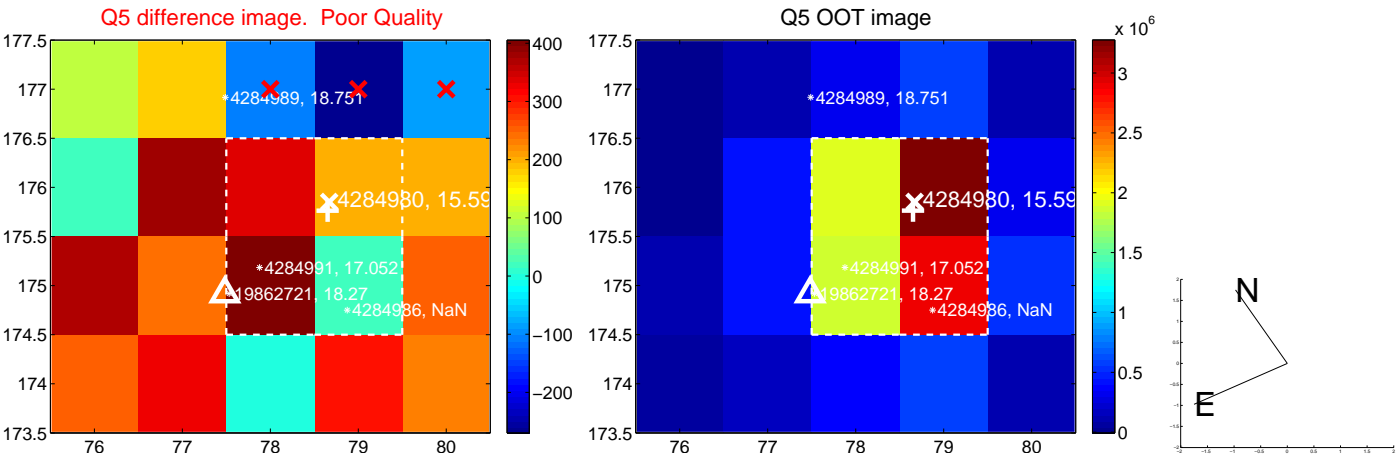


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

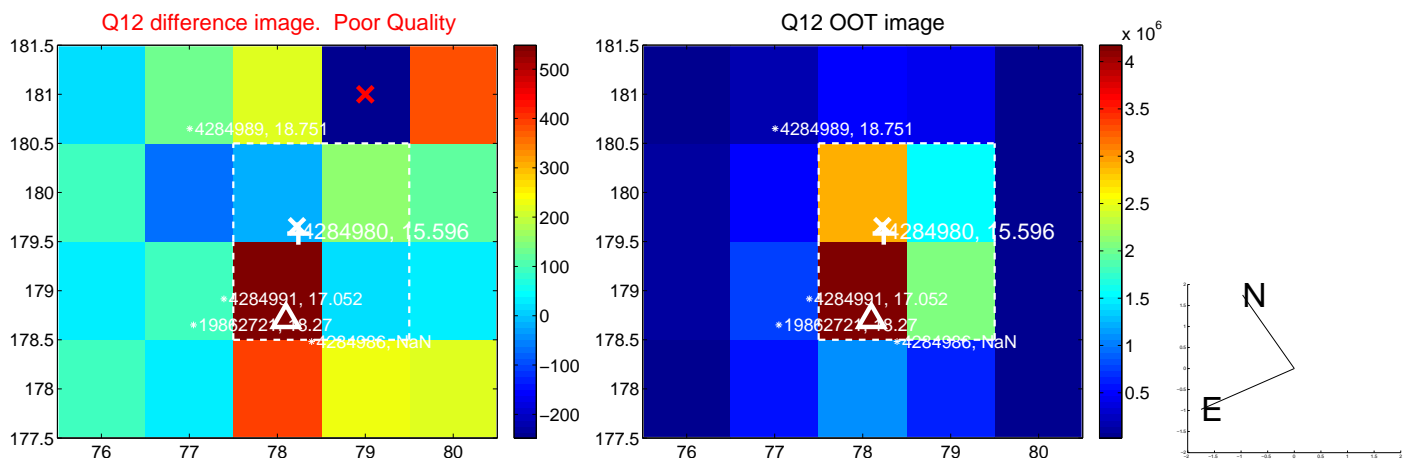
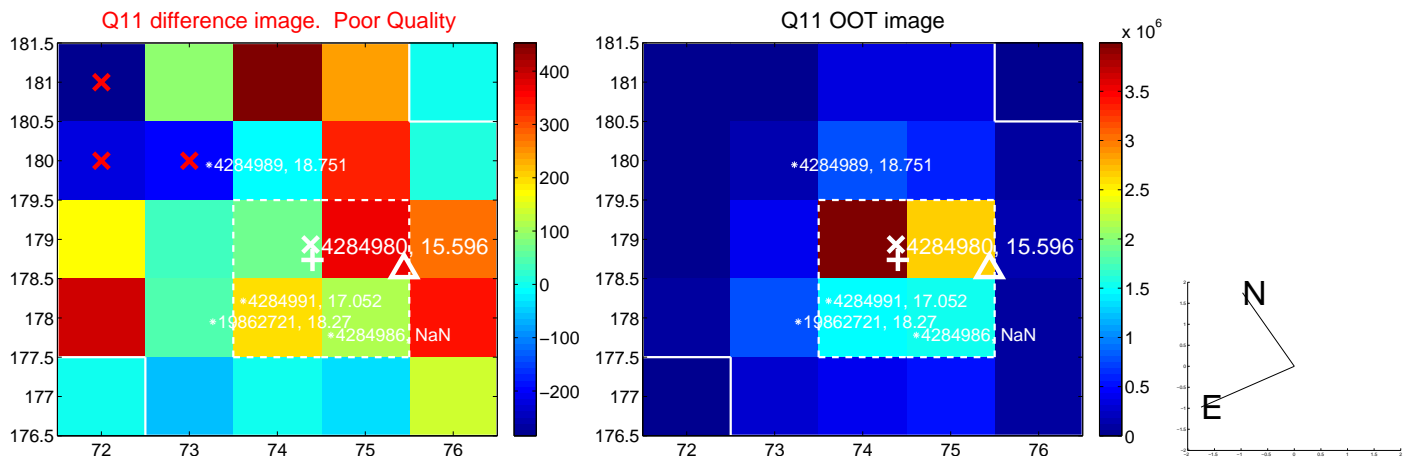
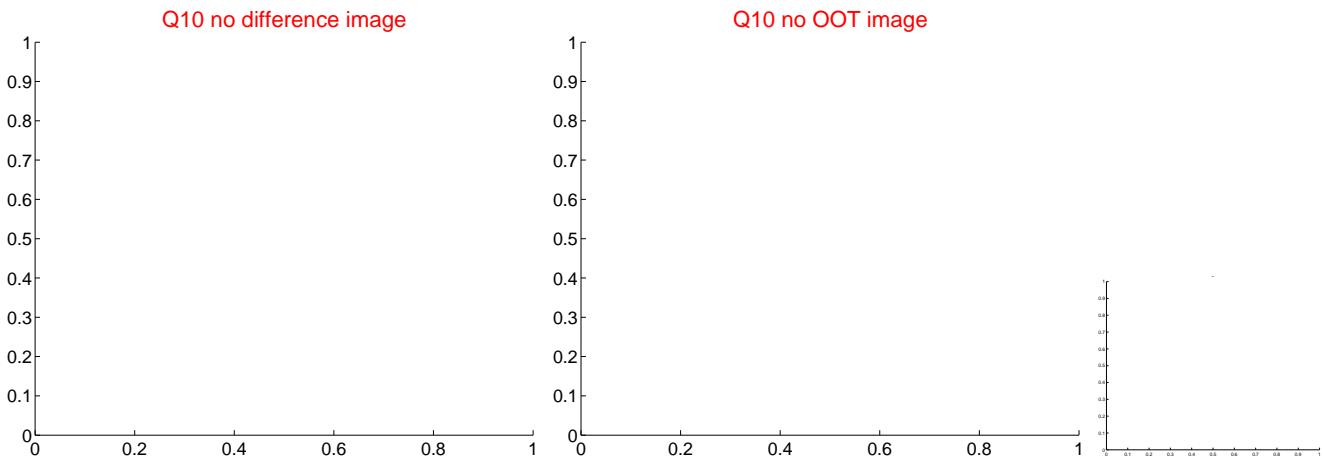
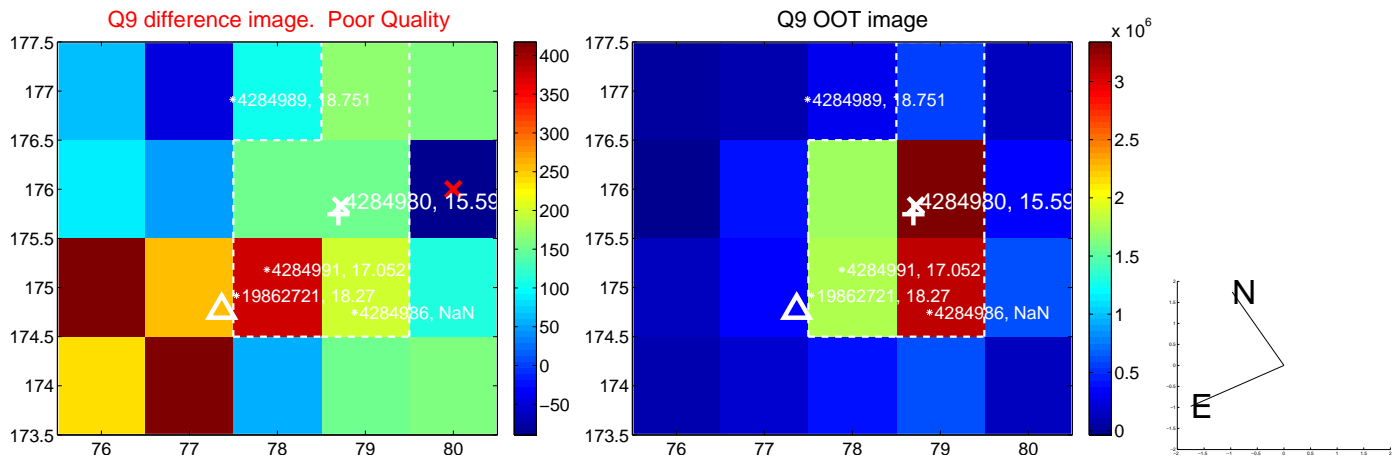
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



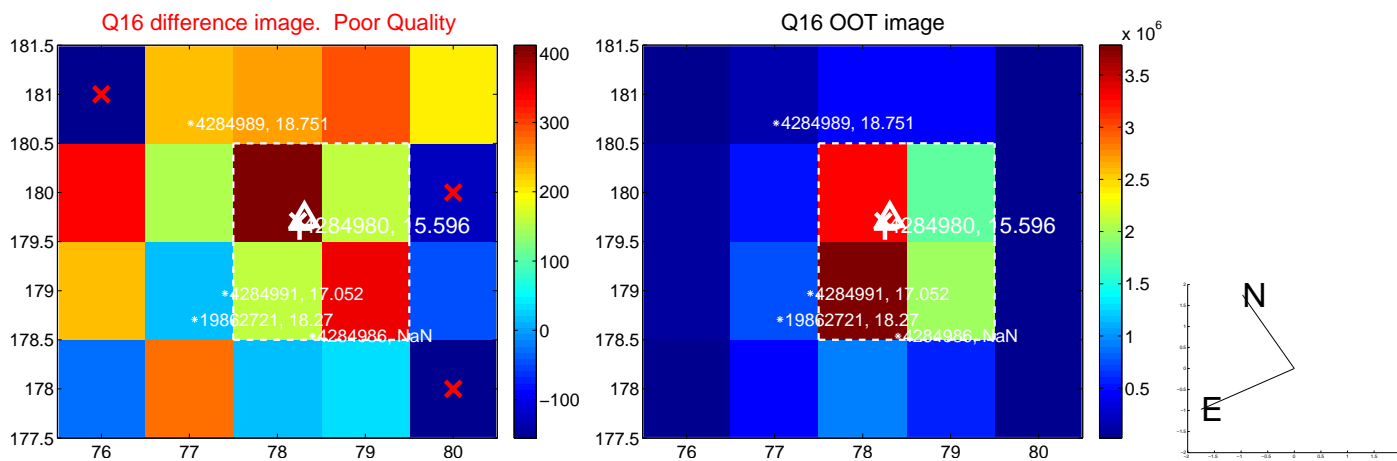
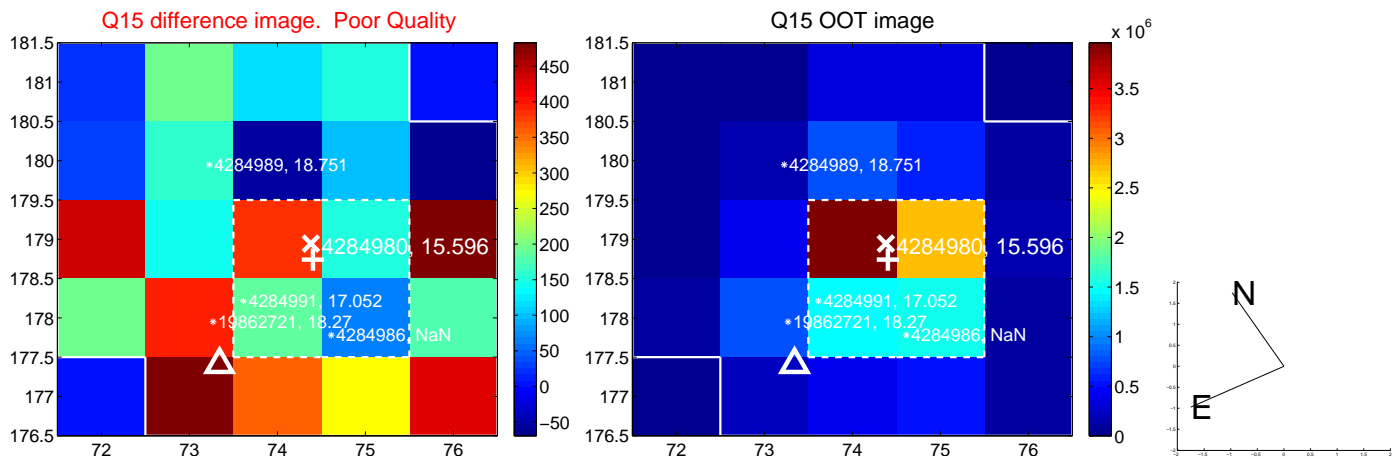
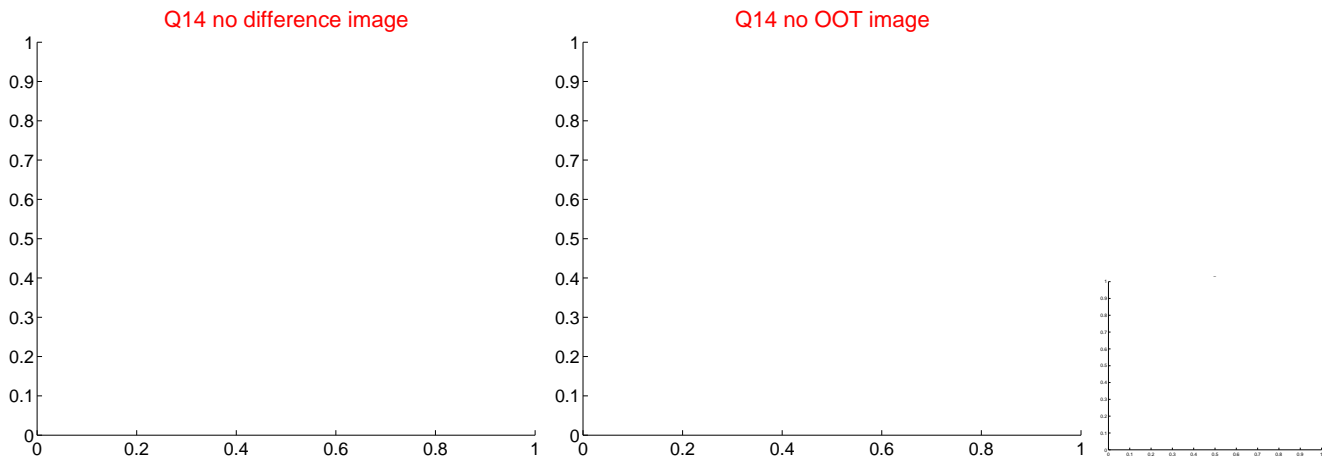
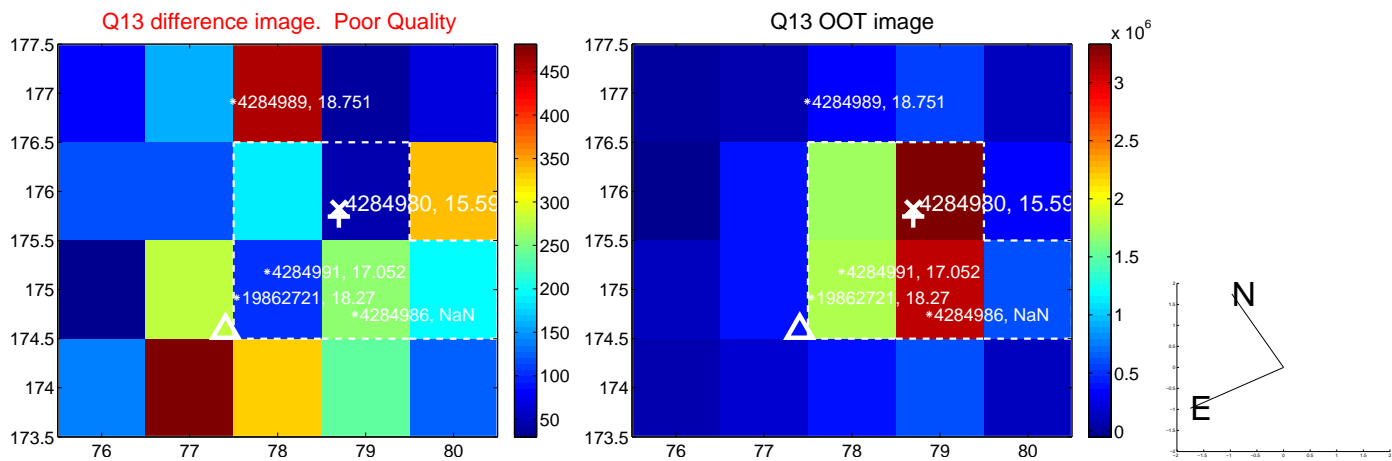
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



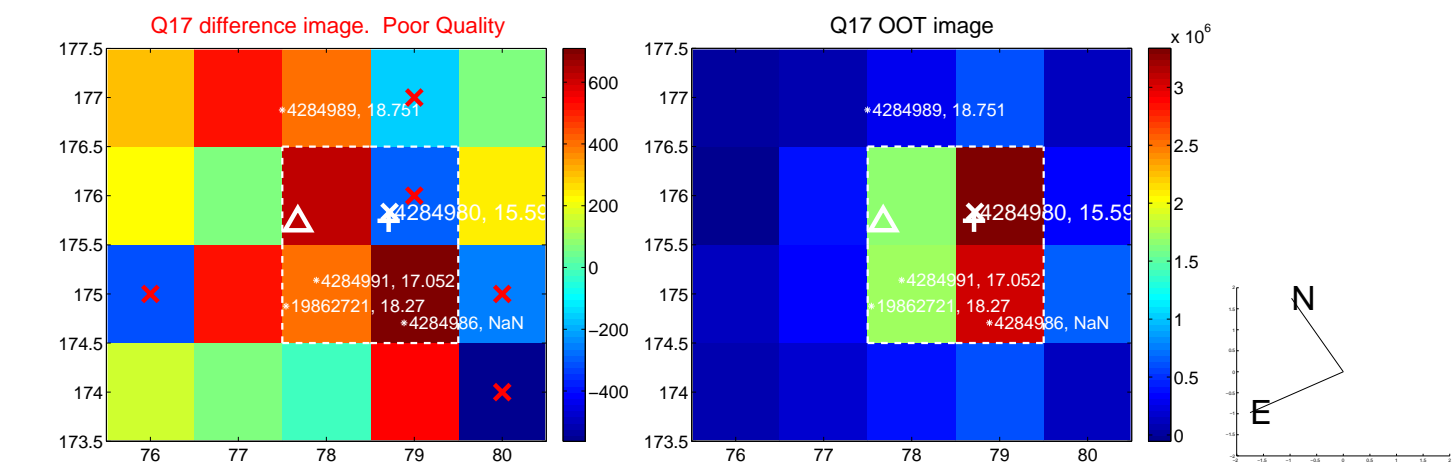
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



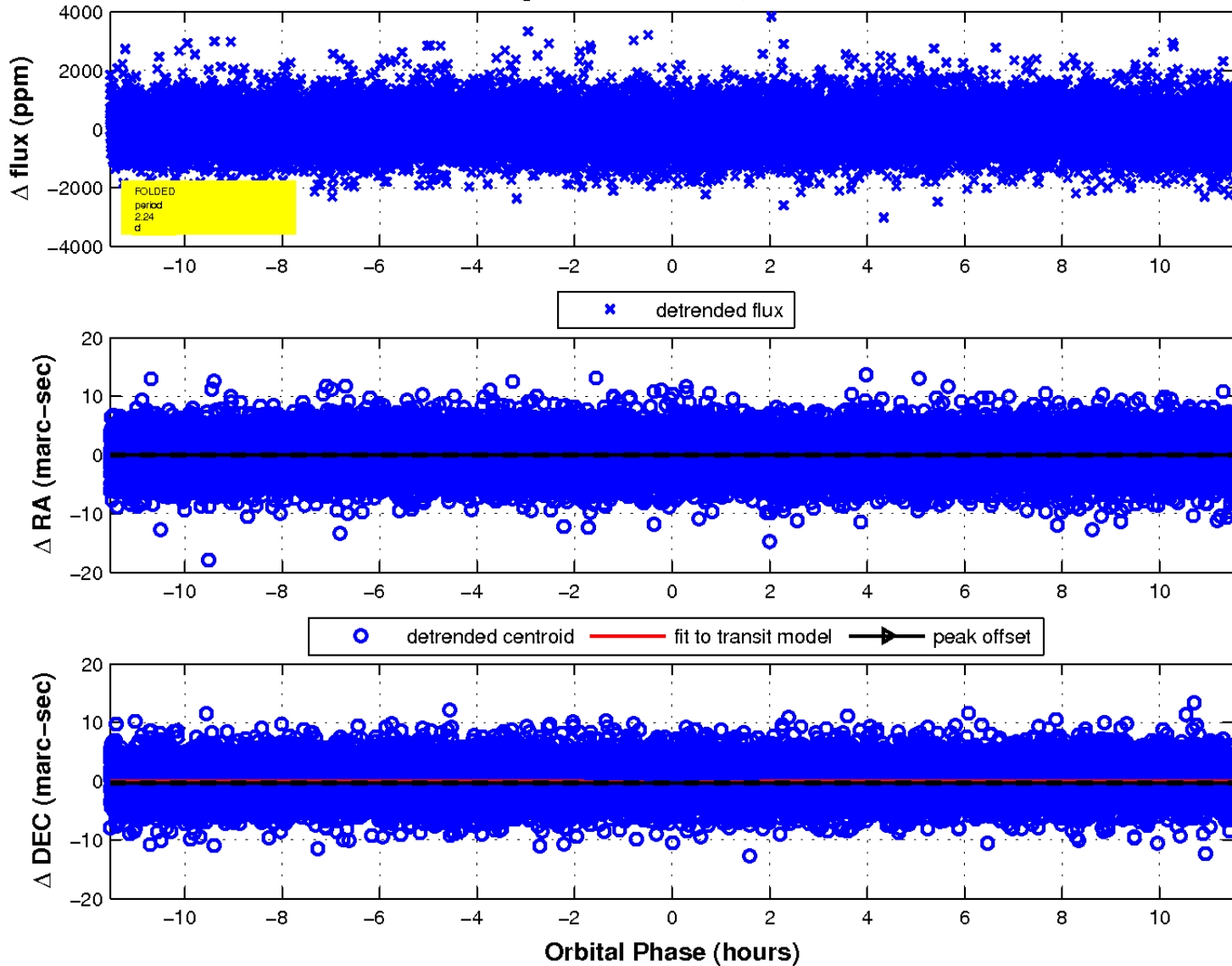
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

