

KIC 007960980

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})
007960980-01	OBS	2274.01	9.989689	133.759689	966.7	3.882	19.3	20.5	0.81	5265	2.88	58.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007960980-01	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 007960980-01

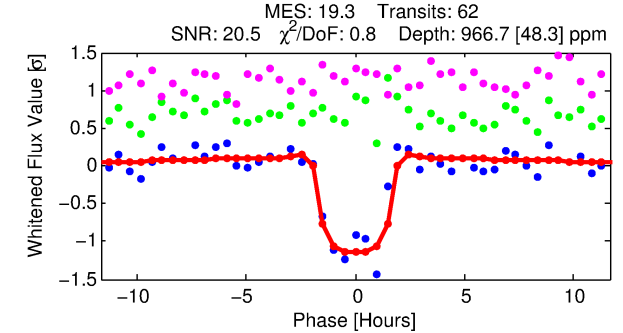
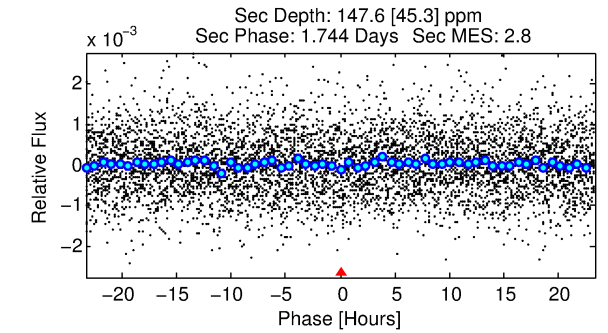
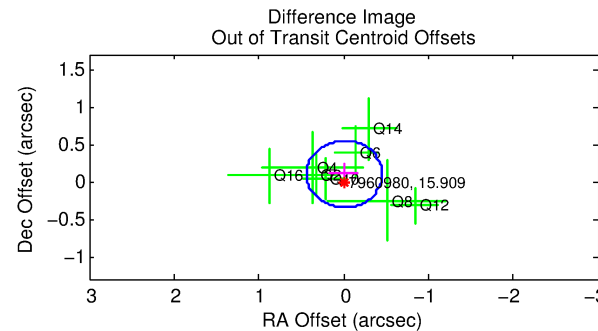
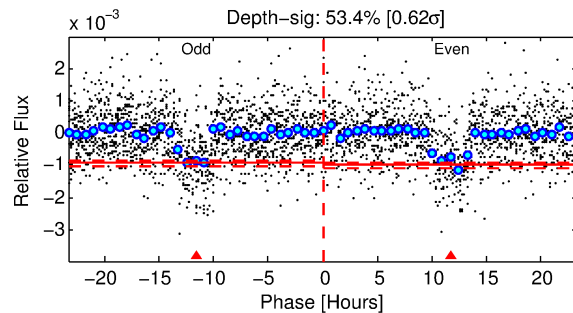
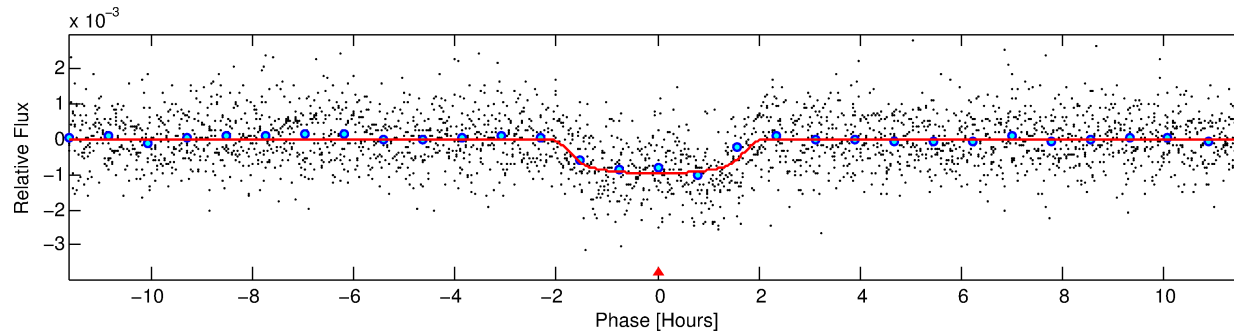
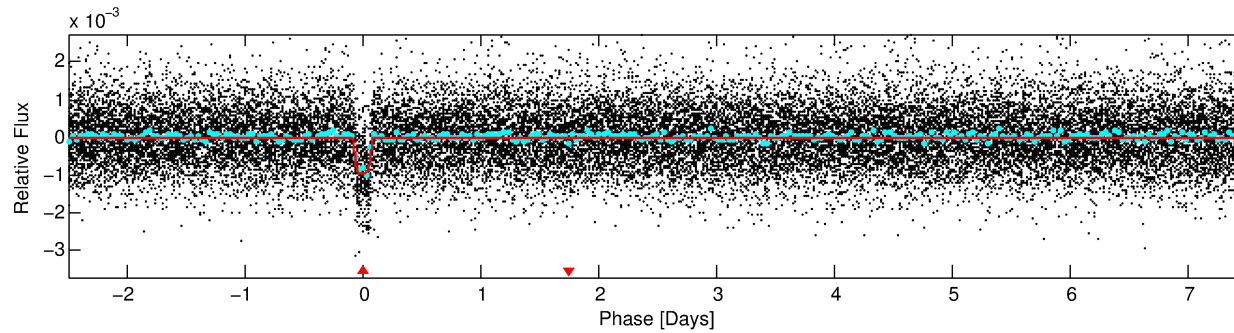
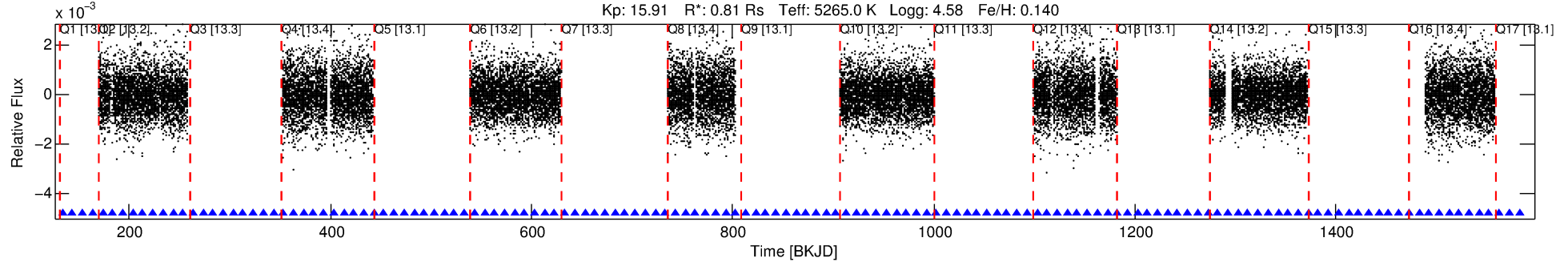
No Significant Match Found

DV One-Page Summary

KIC: 7960980 Candidate: 1 of 1 Period: 9.990 d

KOI: K02274.01 Corr: 0.977

Kp: 15.91 R*: 0.81 Rs Teff: 5265.0 K Logg: 4.58 Fe/H: 0.140



DV Fit Results:

Period = 9.98969 [0.00005] d
Epoch = 133.7597 [0.0037] BKJD
Rp/R* = 0.0326 [0.0069]
a/R* = 11.97 [9.47]
b = 0.84 [0.30]
Seff = 58.35 [14.51]
Teq = 705 [44] K
Rp = 2.88 [0.78] Re
a = 0.0880 [0.0125] AU
Ag = 75.82 [42.47] [1.76σ]
Teffp = 3215 [434] K [5.76σ]

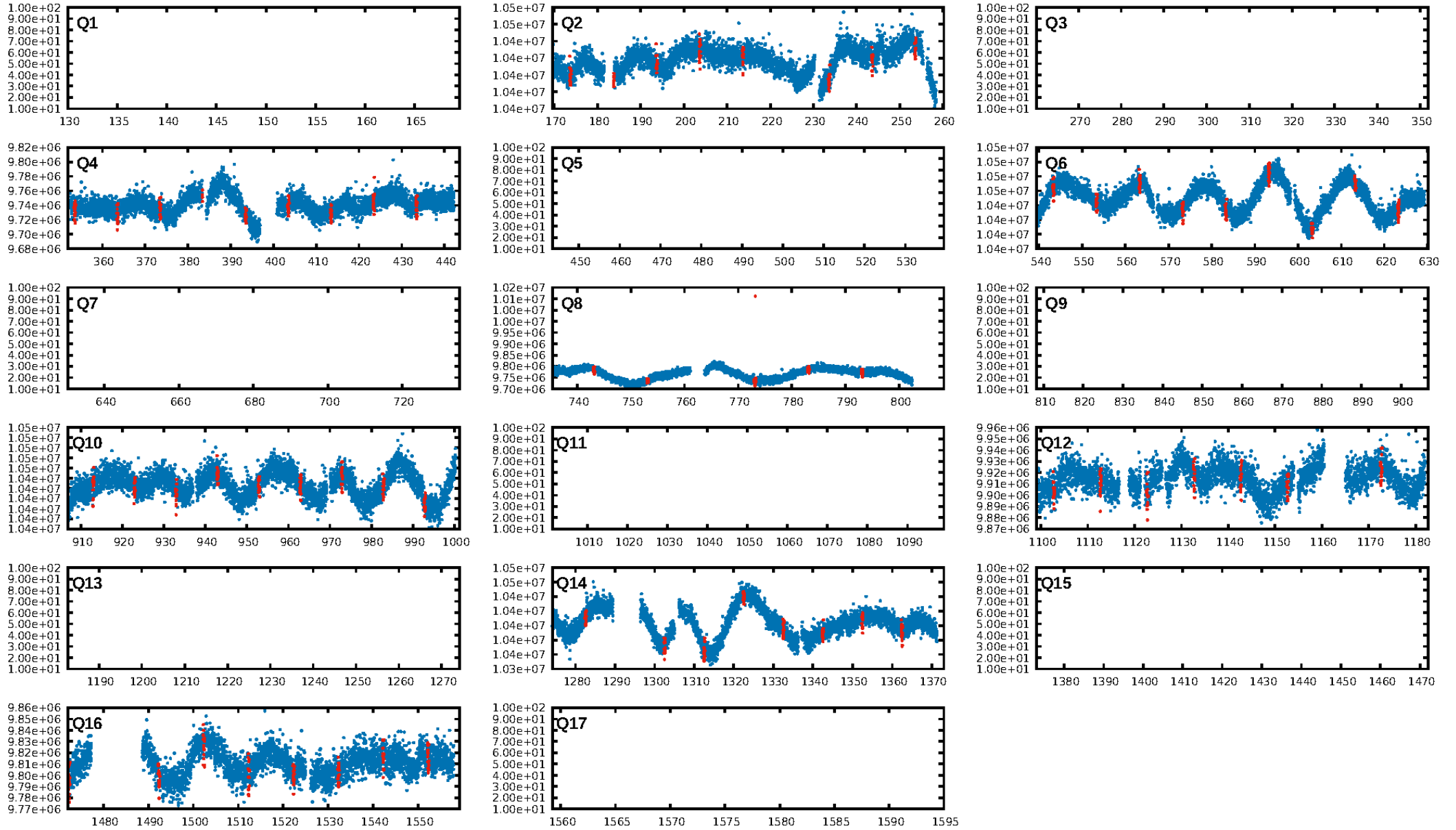
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.41e-77
RollingBand-fgt: 1.00 [62/62]
GhostDiagnostic-chr: 17.37
Centroid-sig: 19.8%
Centroid-so: 0.812 arcsec [1.26σ]
OotOffset-rm: 0.101 arcsec [0.68σ]
OotOffset-st: 4/0/4/0 [8]
KicOffset-rm: 0.043 arcsec [0.23σ]
KicOffset-st: 4/0/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

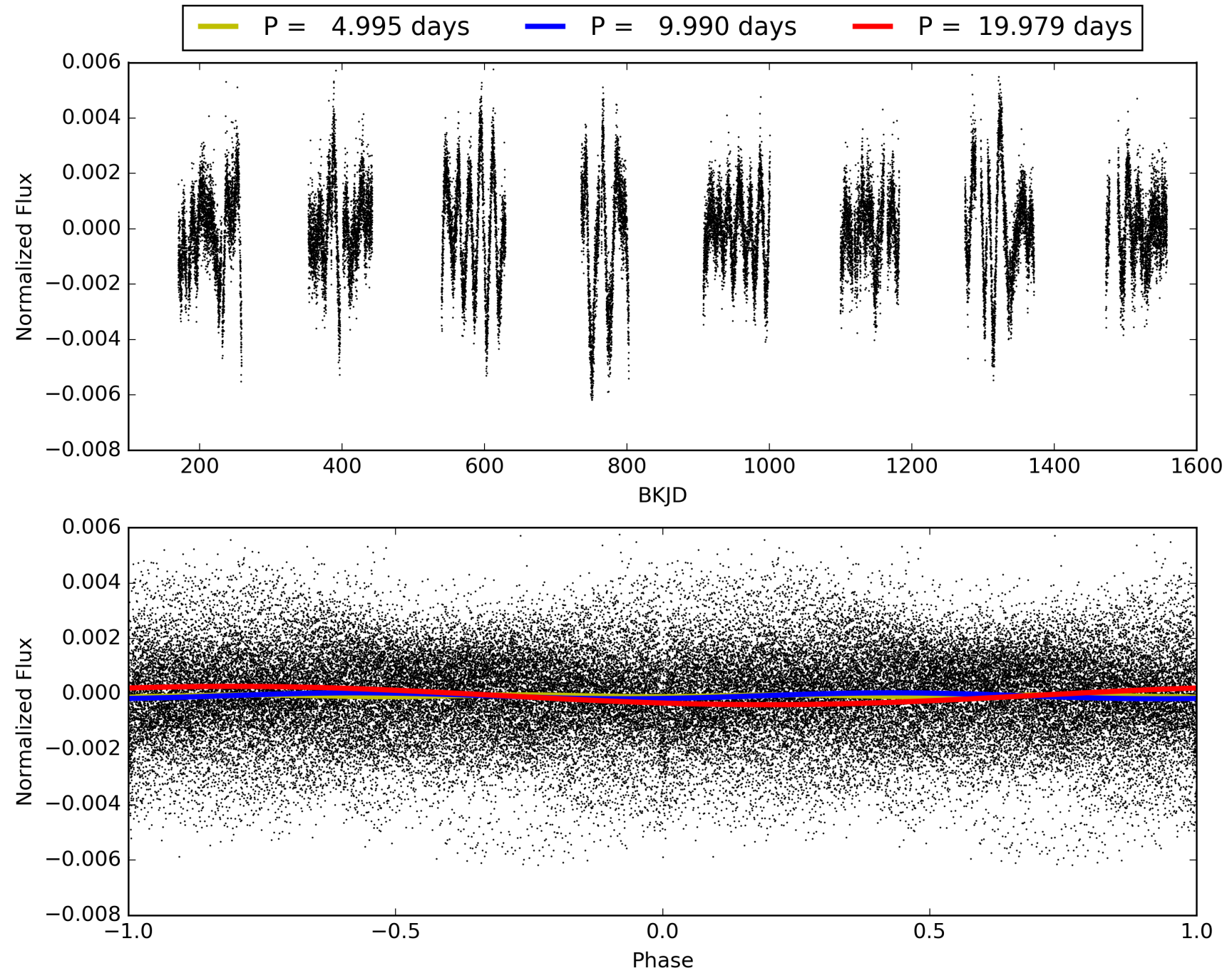
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:38:34 Z

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

TCE 007960980-01, PDC Light Curves

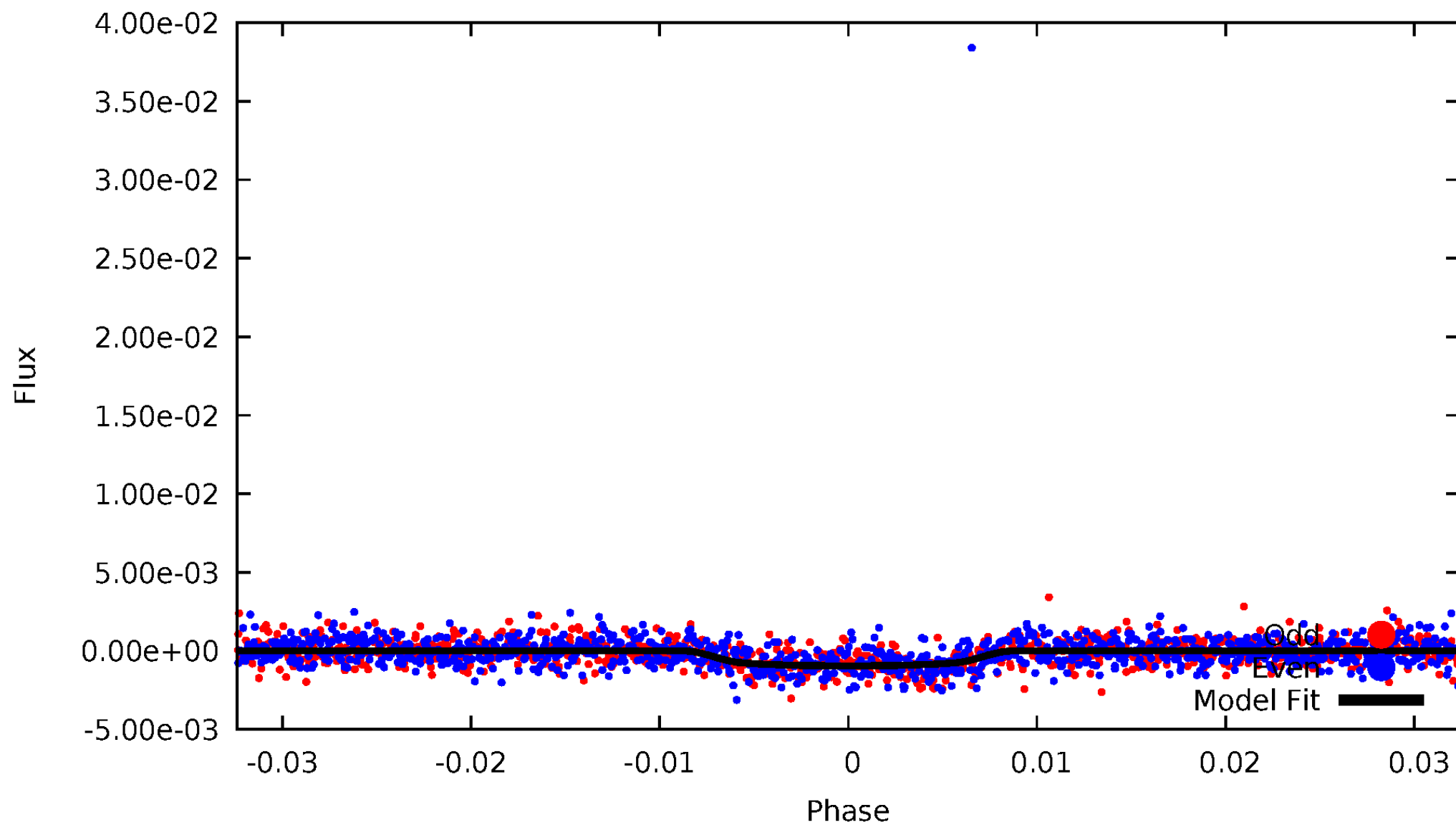


TCE 007960980-01



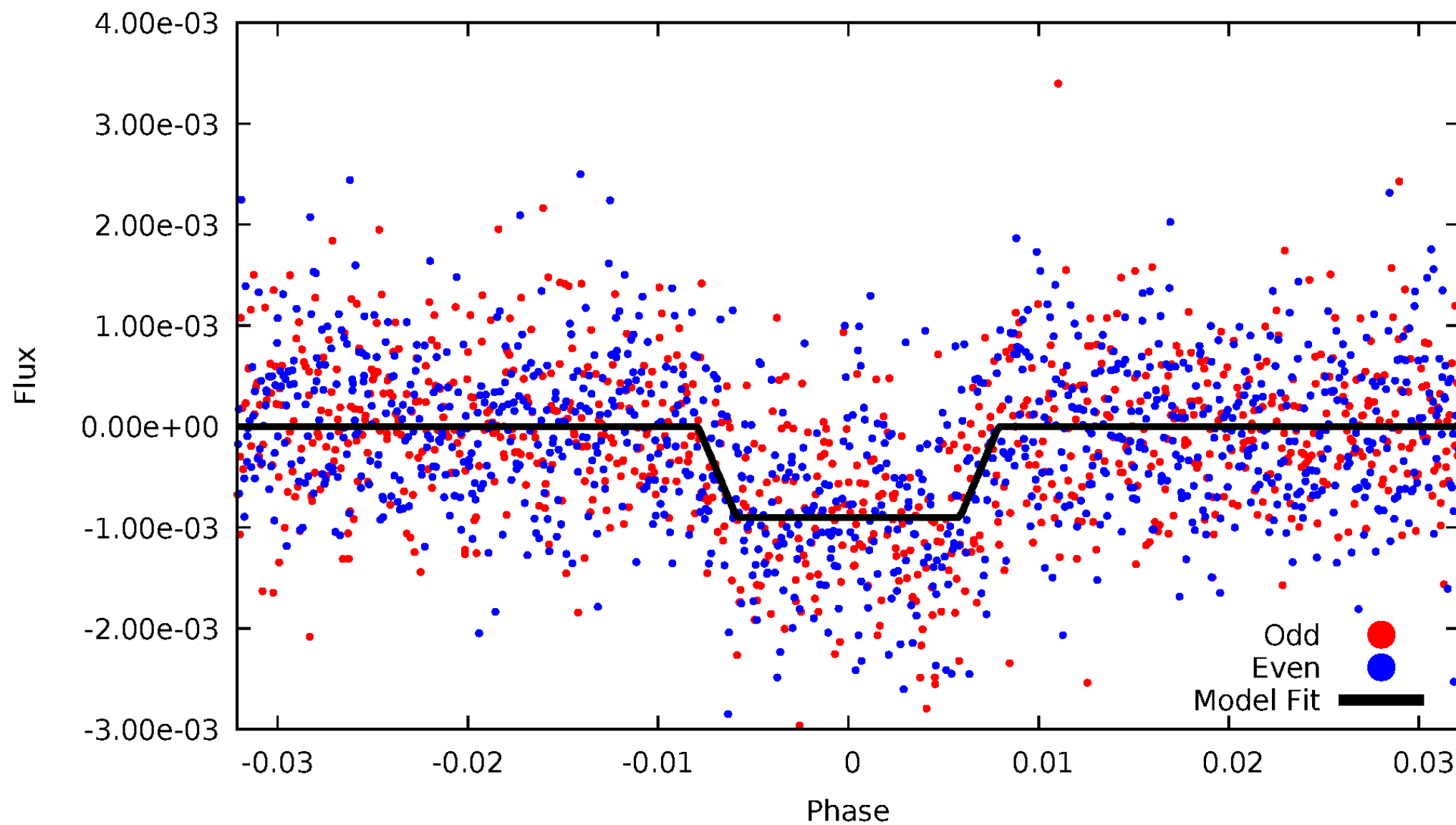
DV Odd/Even

TCE 007960980-01



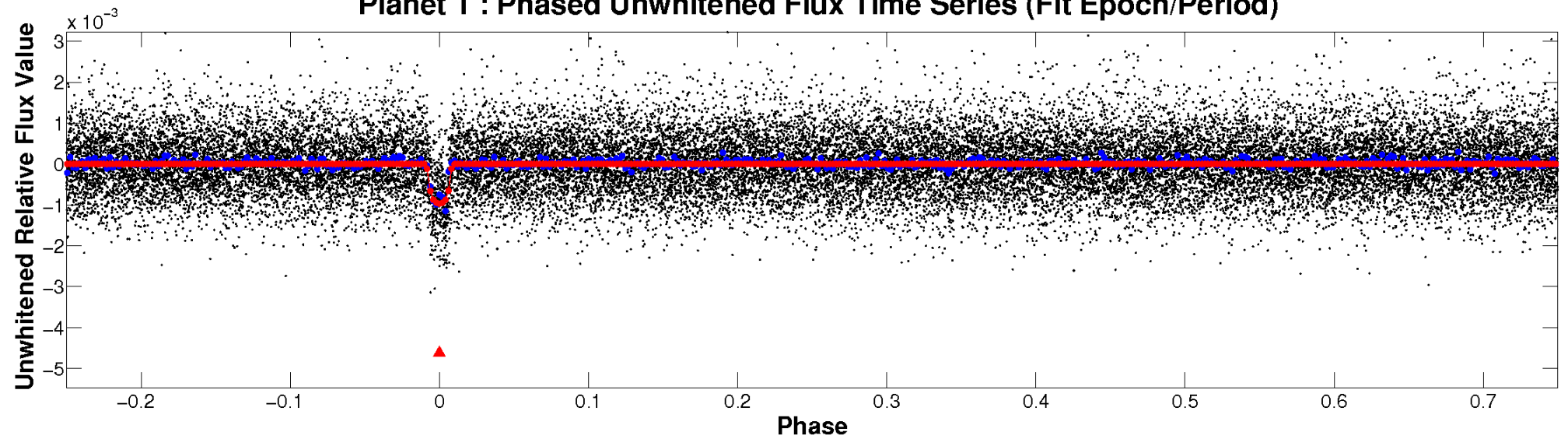
ALT Odd/Even

TCE 007960980-01

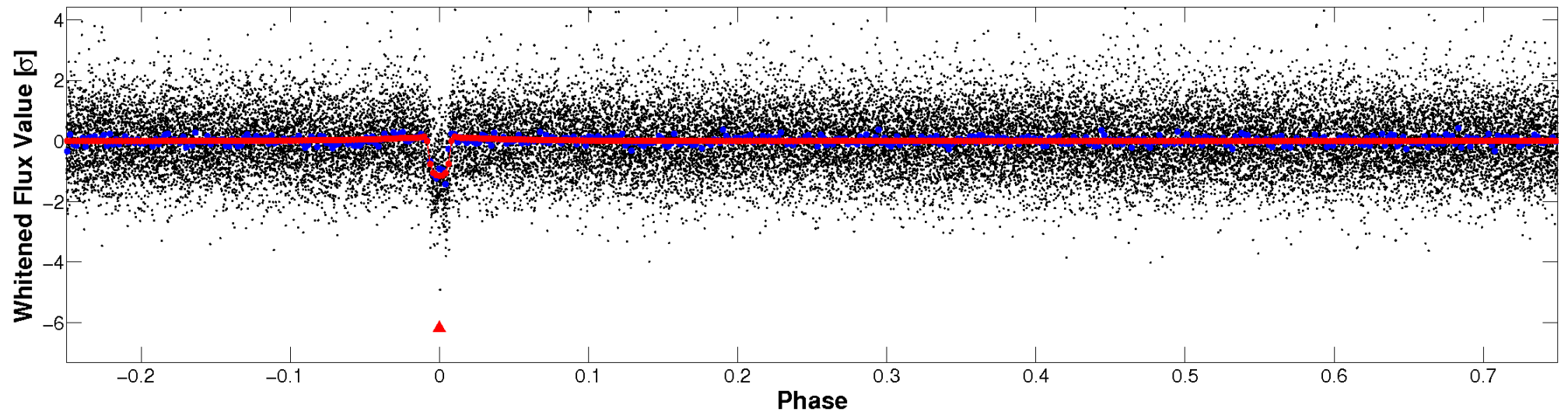


Non-Whitened Vs. Whitened Light Curve

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

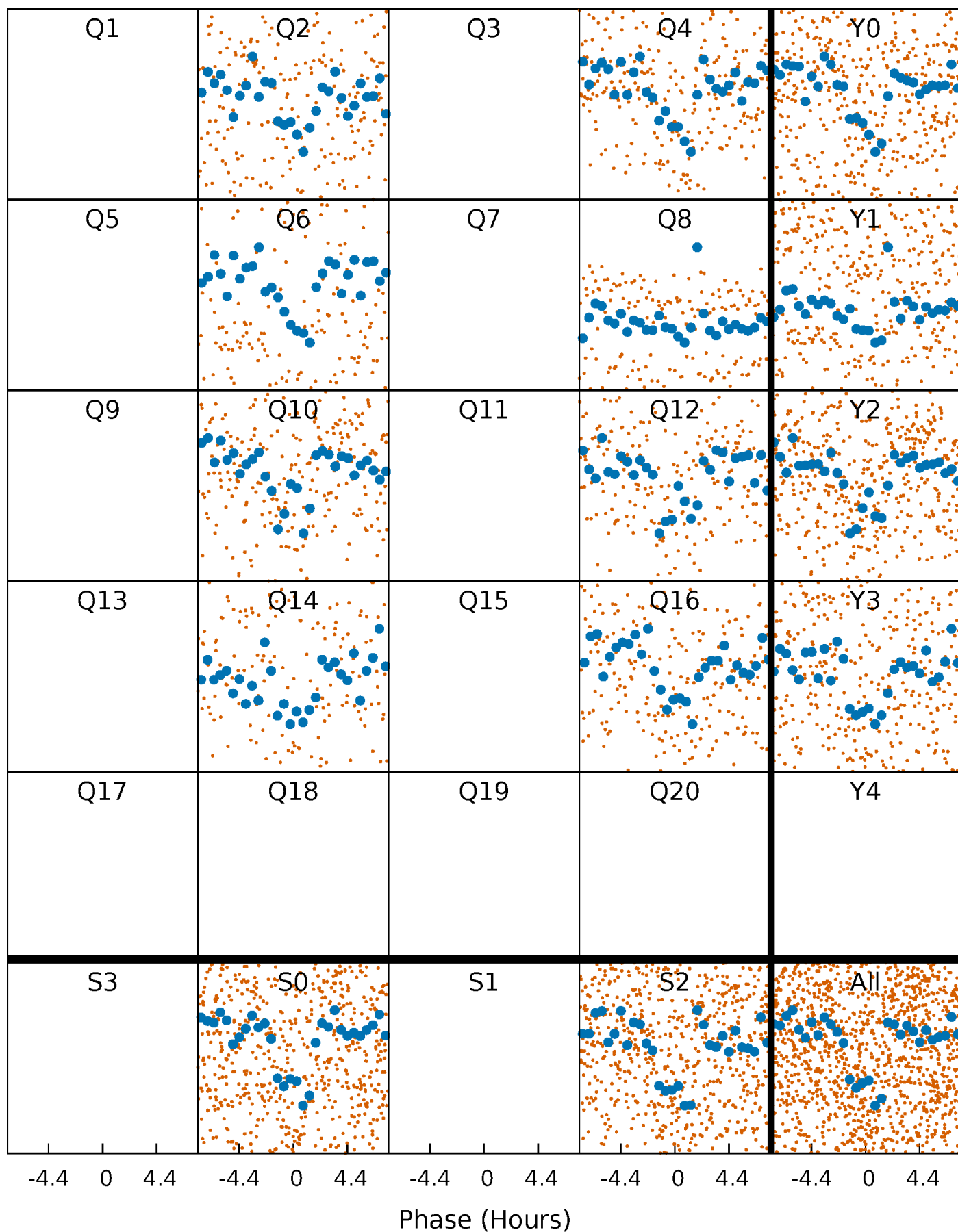


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



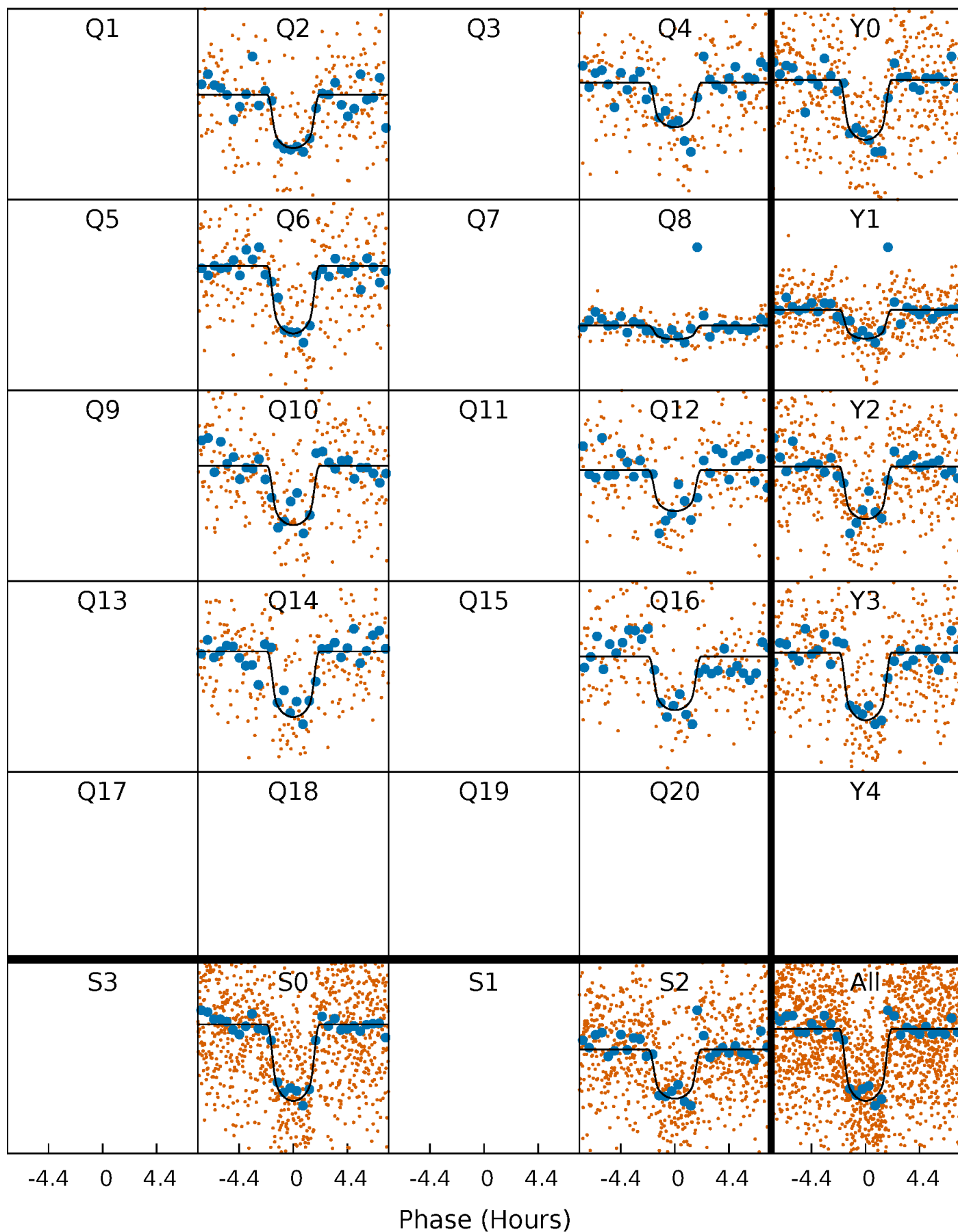
PDC Quarter-Phased Transit Curves

TCE 007960980-01 P= 9.989689 Days $T_0=133.759689$ (BKJD)



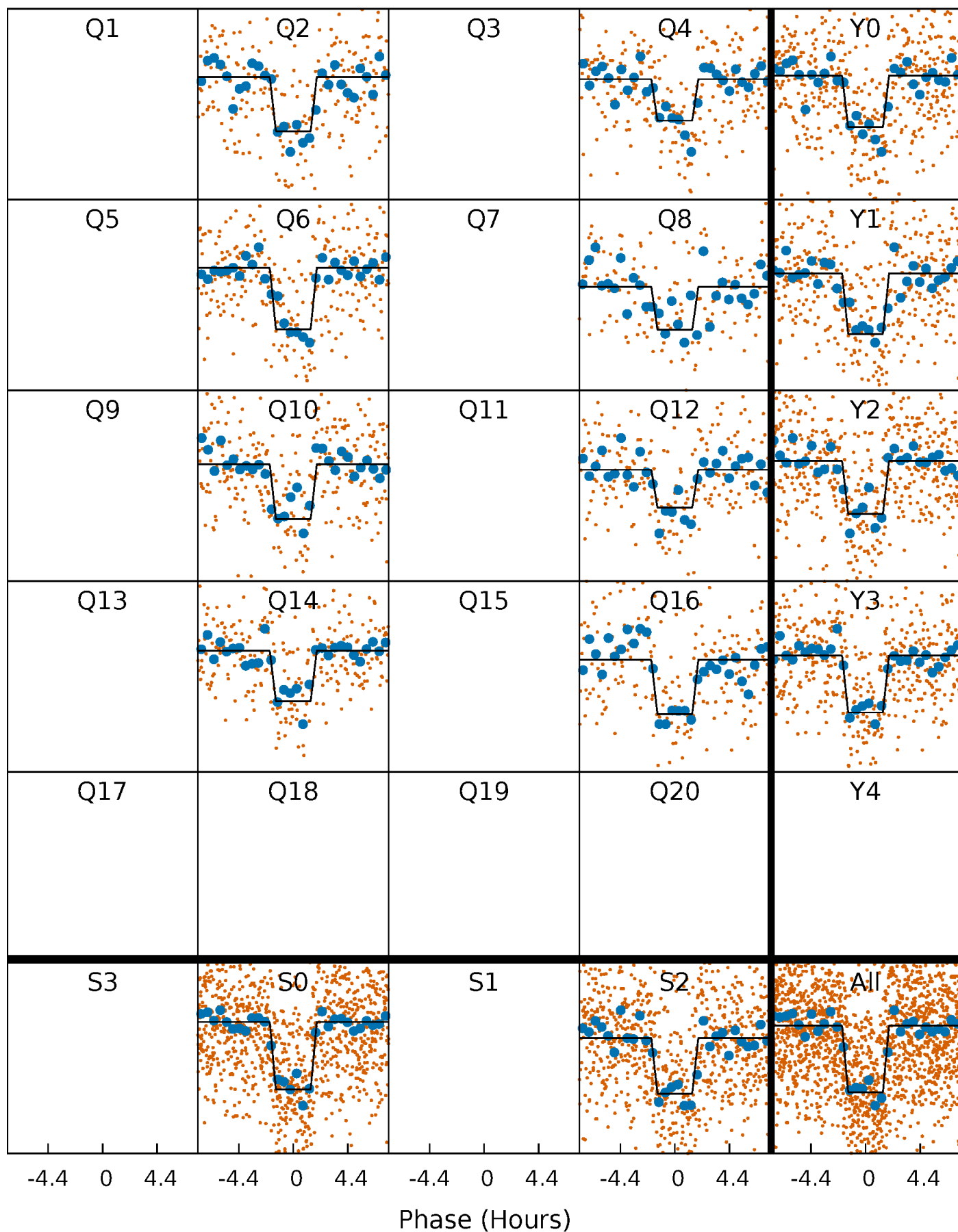
DV Quarter-Phased Transit Curves

TCE 007960980-01 P= 9.989689 Days $T_0=133.759689$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

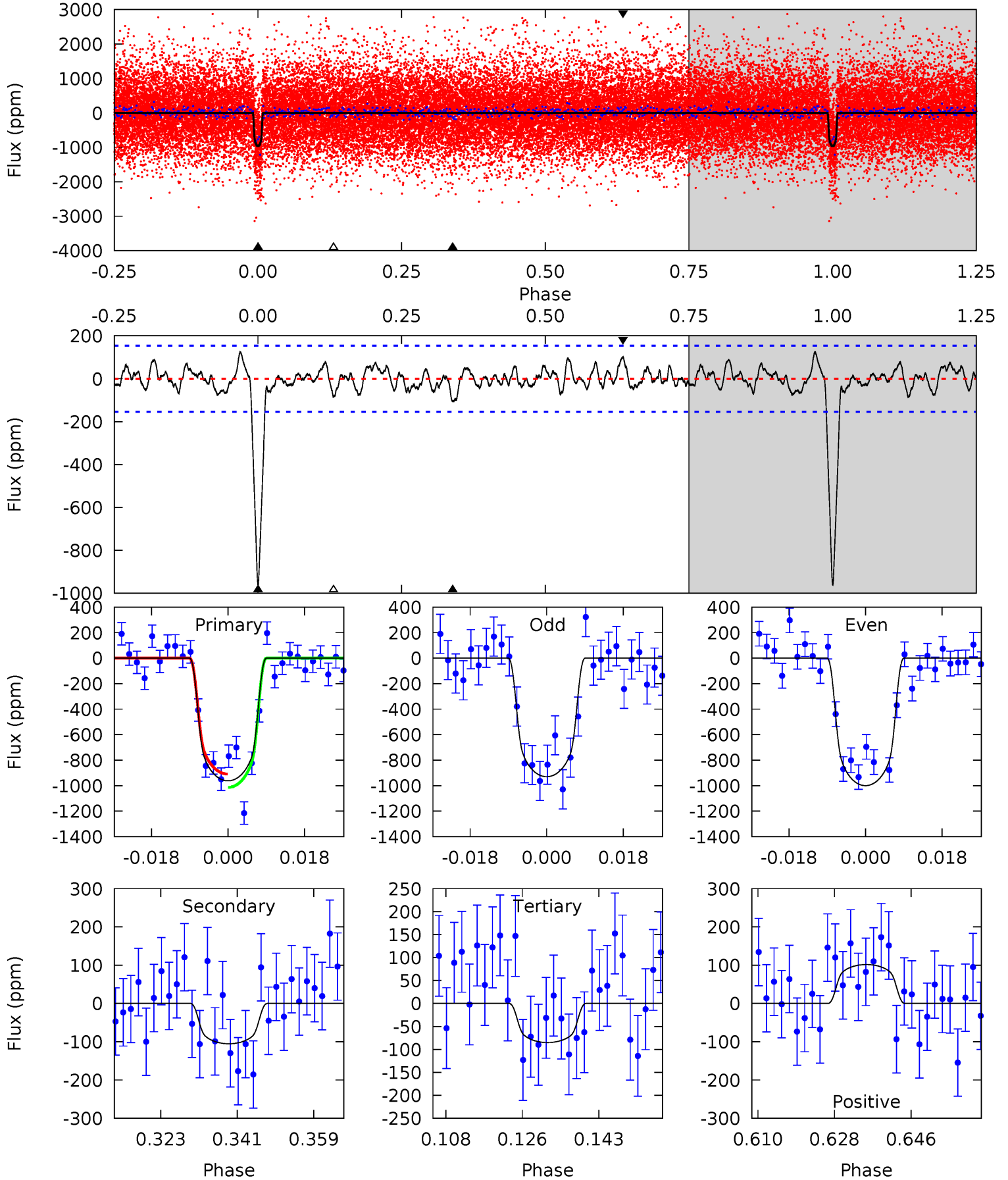
TCE 007960980-01 P= 9.989804 Days $T_0=133.752432$ (BKJD)



DV Model-Shift Uniqueness Test

007960980-01, P = 9.989689 Days, E = 133.759689 Days

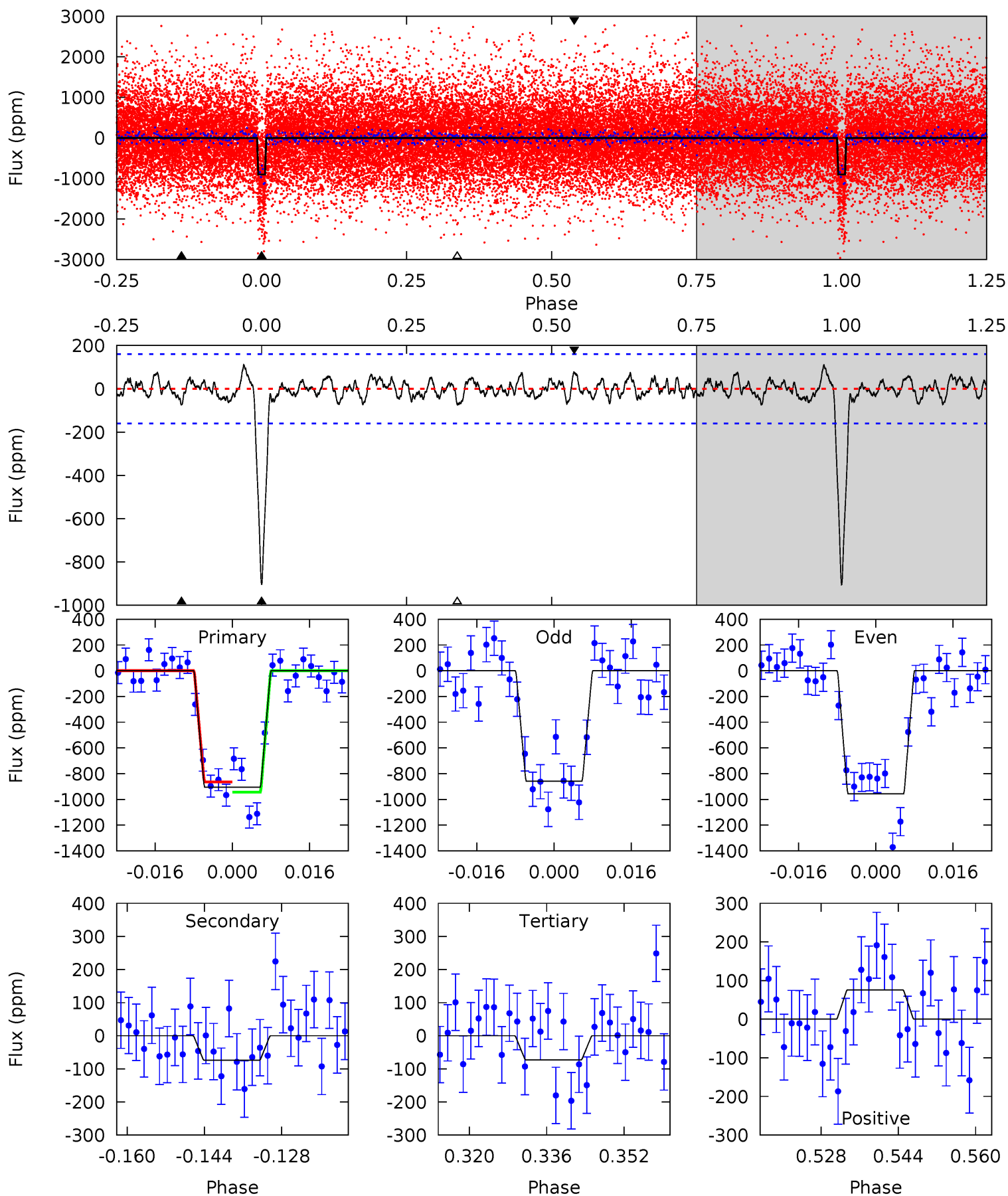
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.7	3.36	2.72	3.25	4.91	2.37	1.21	28.0	27.5	0.65	0.11	1.12	0.93	0.12	1.67



Alt Model-Shift Uniqueness Test

007960980-01, P = 9.989804 Days, E = 133.752432 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.8	2.28	2.24	2.34	4.94	2.41	1.01	25.6	25.5	0.04	-0.05	1.50	1.06	0.11	1.22



Stellar Parameters For KIC 007960980

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5265^{+184}_{-184}	$4.580^{+0.030}_{-0.112}$	$0.140^{+0.250}_{-0.300}$	$0.810^{+0.137}_{-0.059}$	$0.910^{+0.057}_{-0.098}$	$2.407^{+0.354}_{-0.811}$
	+3%/-3%	+1%/-2%	+179%/-214%	+17%/-7%	+6%/-11%	+15%/-34%
Source	KIC0	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 007960980-01 / KOI 2274.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-105 ± 31	$2.91^{+0.63}_{-0.62}$	1003^{+43}_{-44}	3429^{+310}_{-263}	49^{+37}_{-19}
Alt.	-74 ± 32	$2.73^{+0.66}_{-0.63}$	1002^{+46}_{-44}	3329^{+354}_{-346}	42^{+36}_{-22}

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

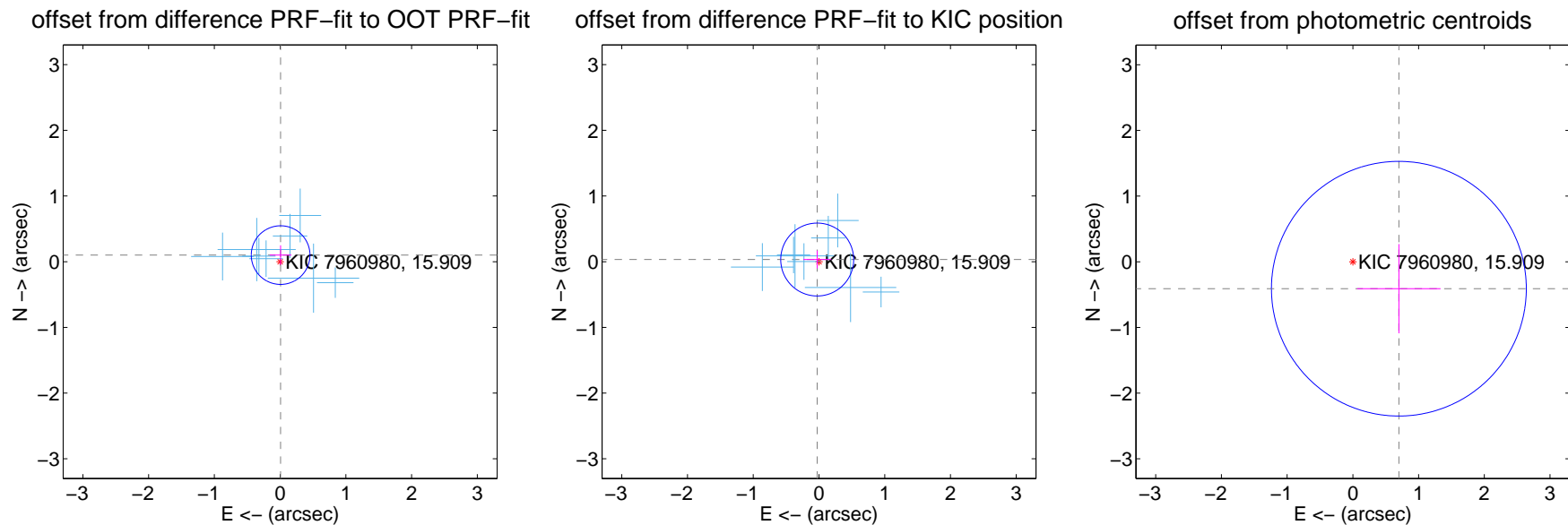
DV Centroid Data

Supplemental centroid analysis for 007960980-01. Kepler magnitude: 15.91. Transit SNR 20.46

There are 8 quarters with good PRF difference image offsets

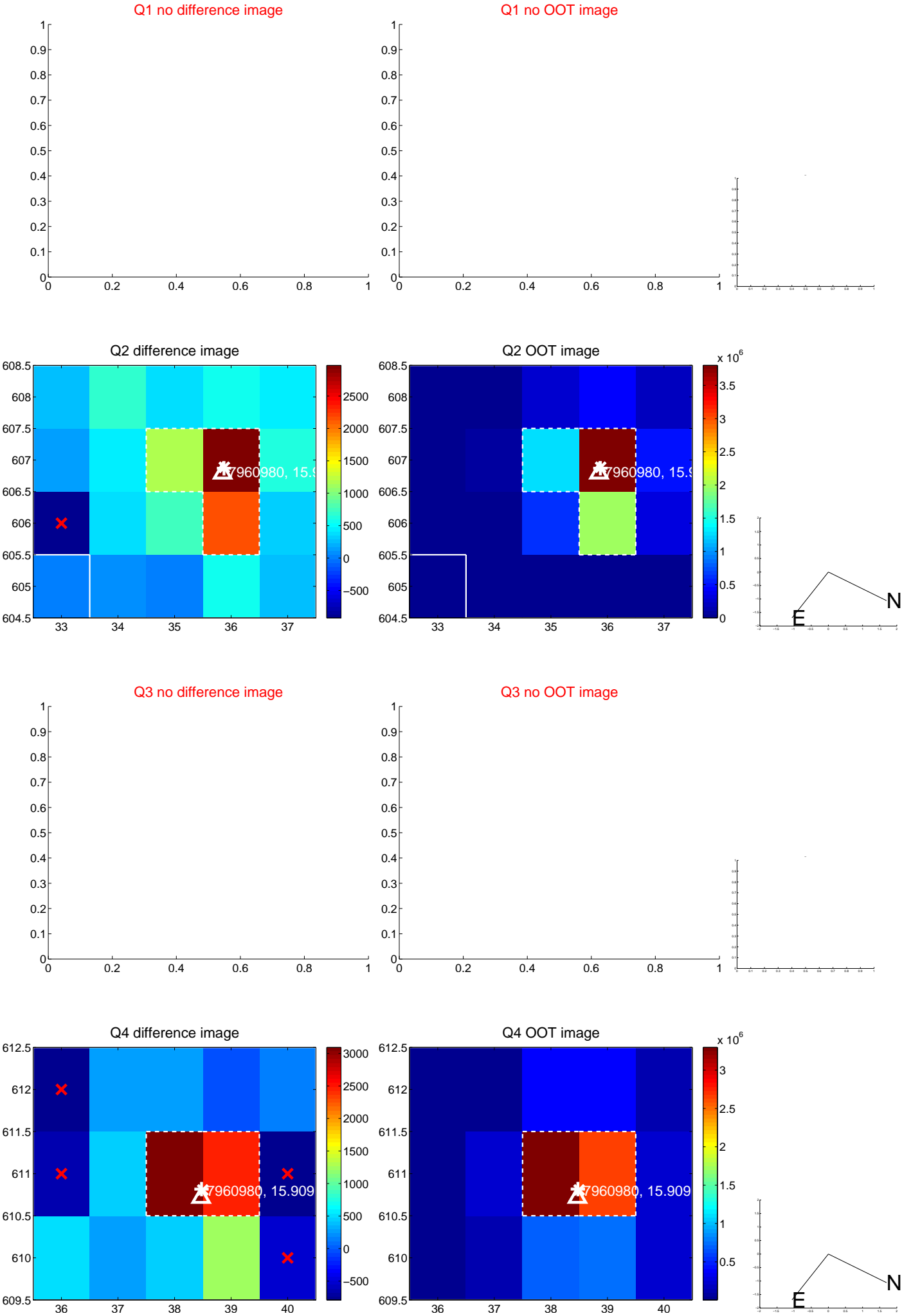
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.101 ± 0.149	0.68	-0.008 ± 0.164	0.100 ± 0.149
PRF-fit source offset from KIC position	0.043 ± 0.185	0.23	0.027 ± 0.213	0.033 ± 0.135
photometric centroid source offset	0.81 ± 0.65	1.26	-0.70 ± 0.63	-0.41 ± 0.68

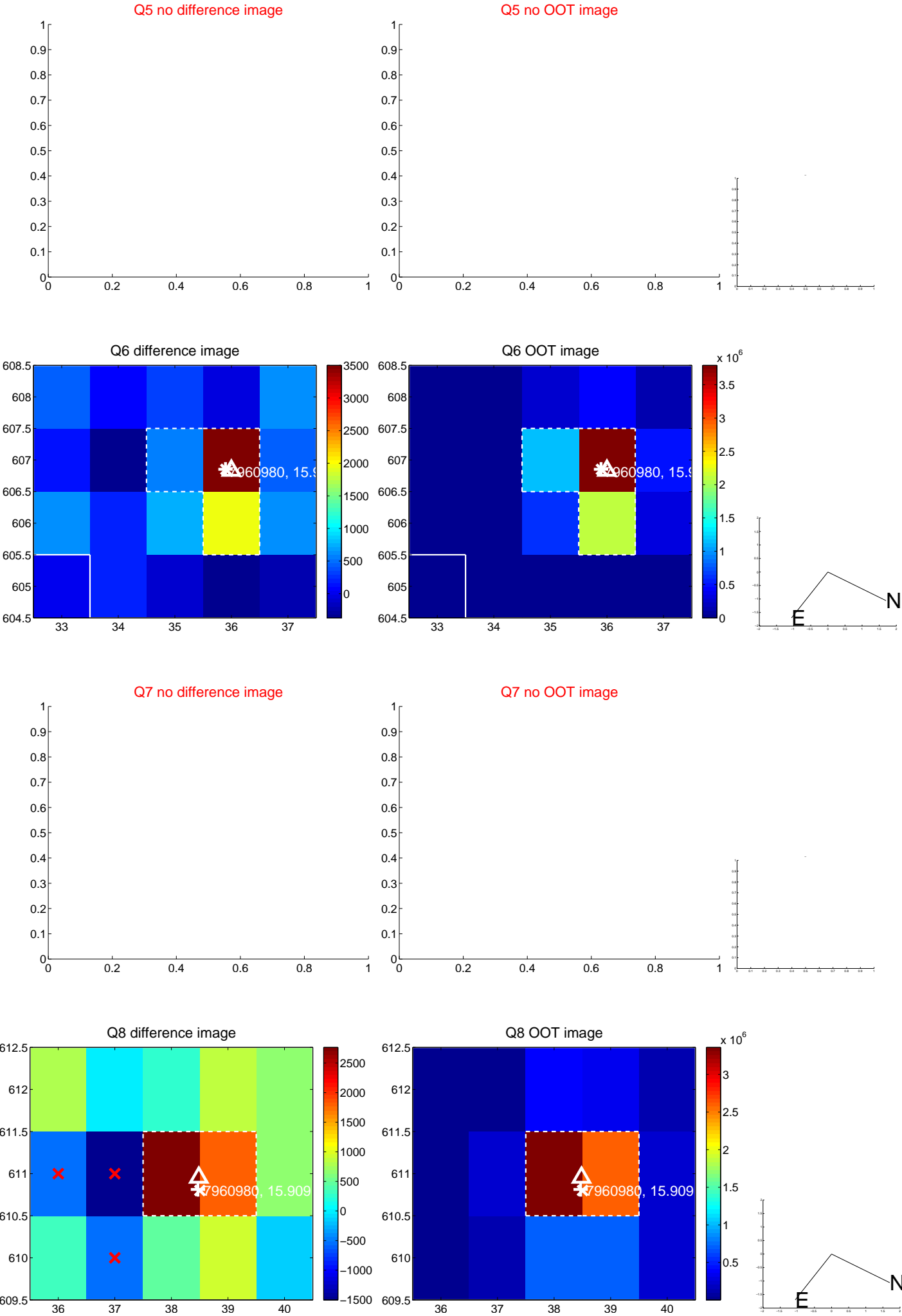


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

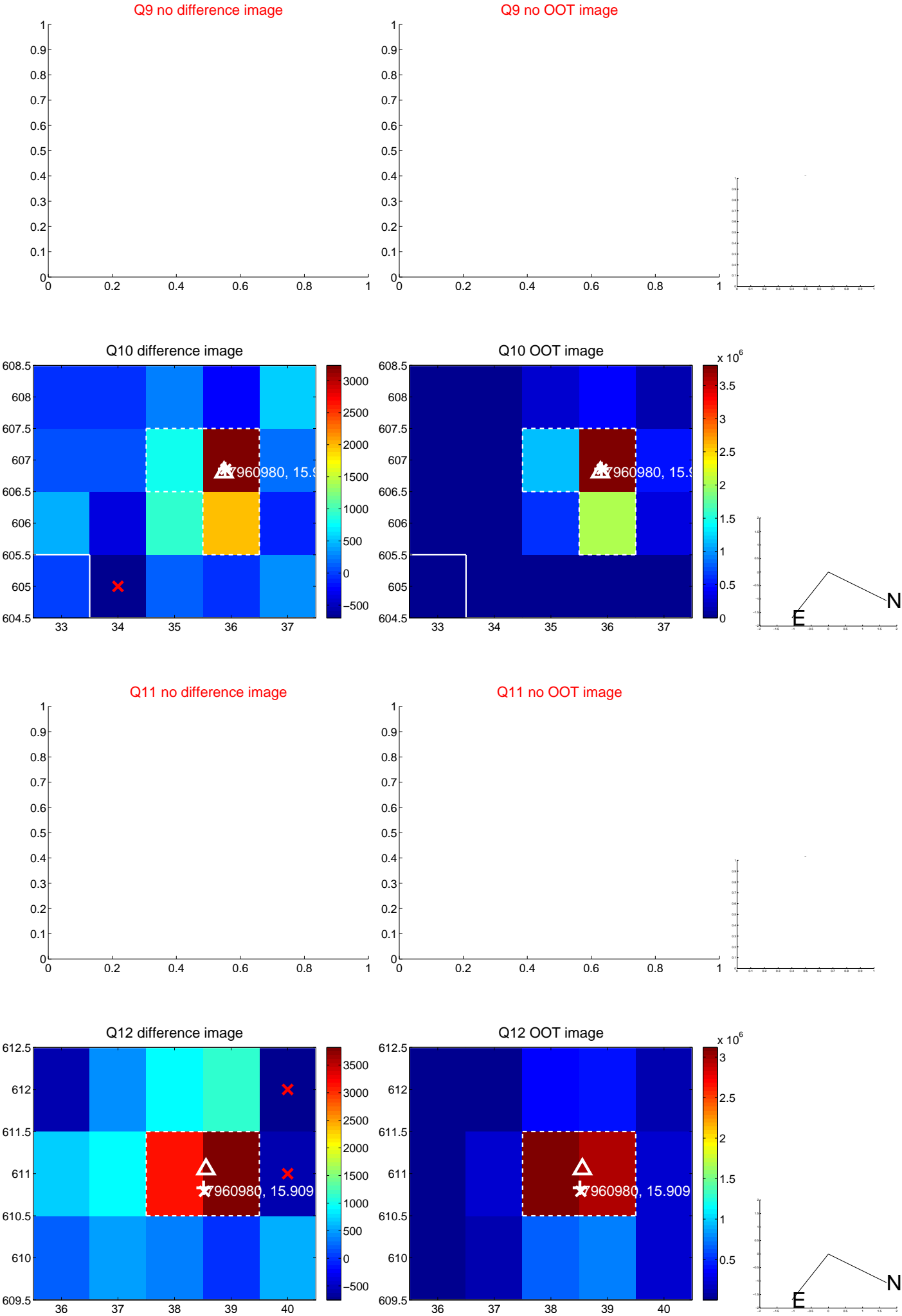
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



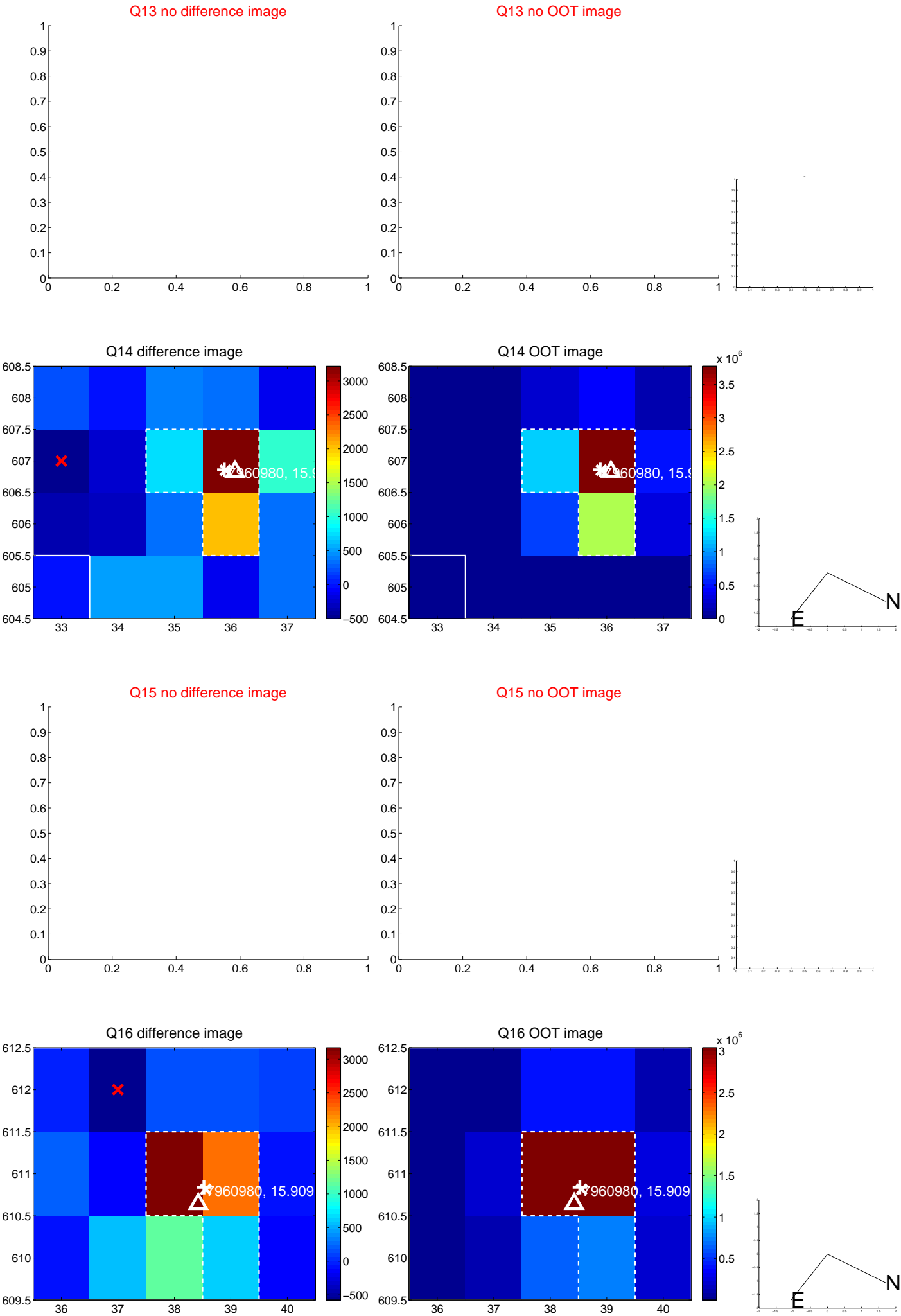
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



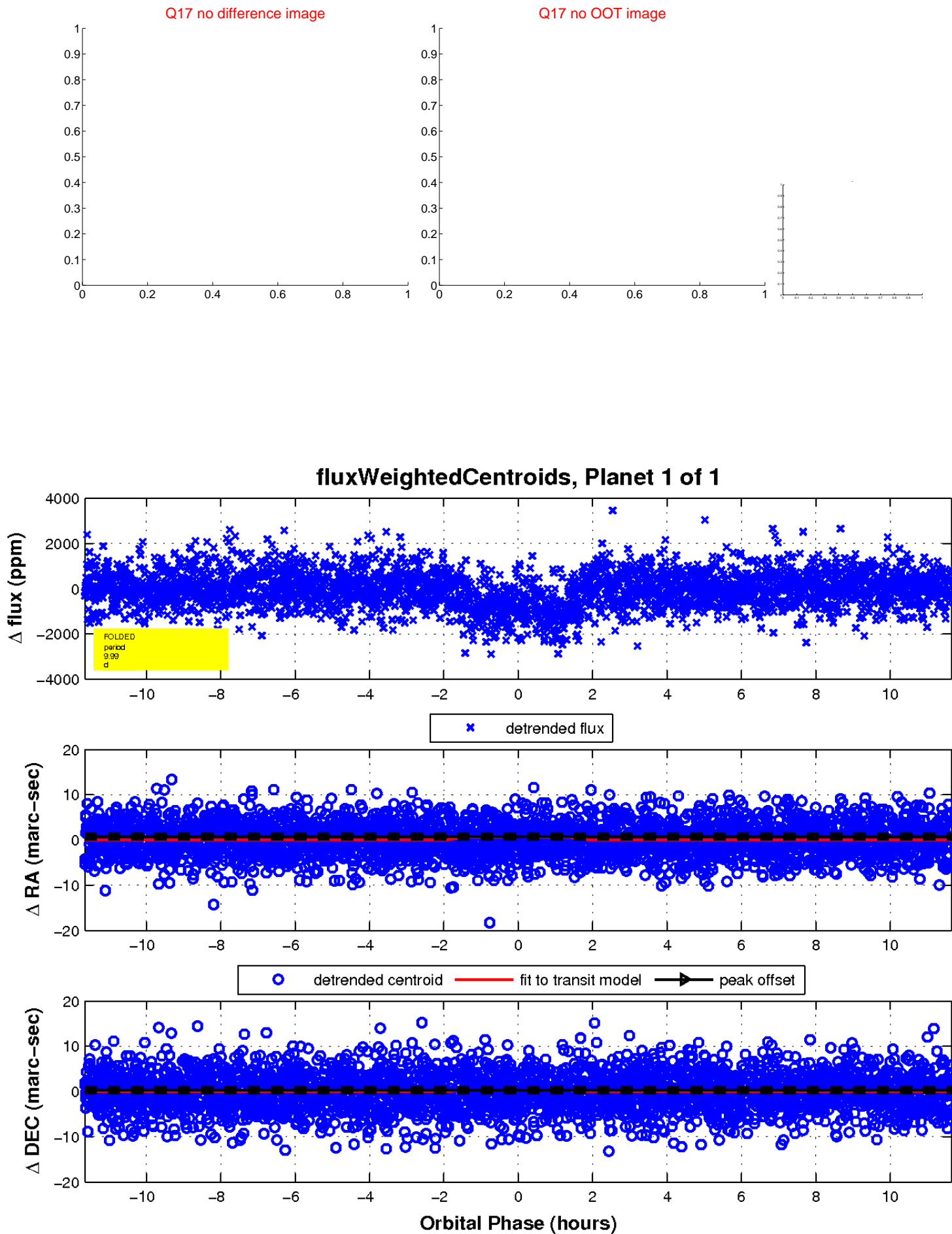
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

