

KIC 008440062

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})
008440062-01	OBS	7886.01	366.712391	185.640522	264.8	11.060	8.2	6.8	2.05	6295	4.02	5.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008440062-01	OBS	FP	0.32	1	0	0	0	MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

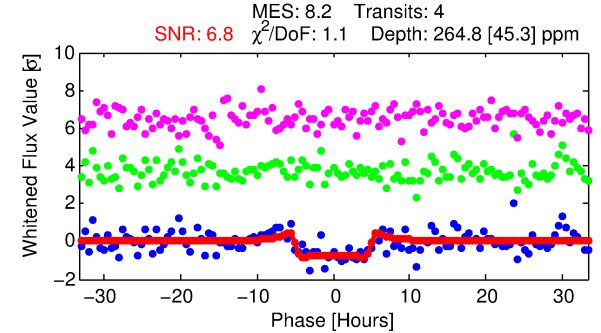
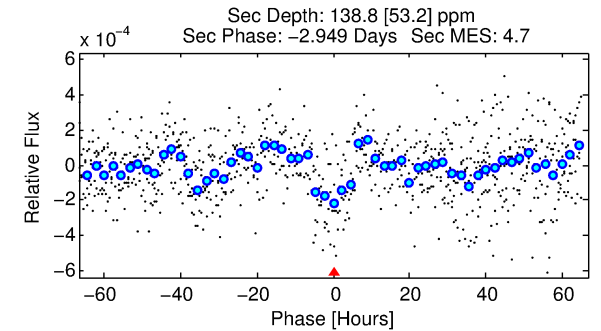
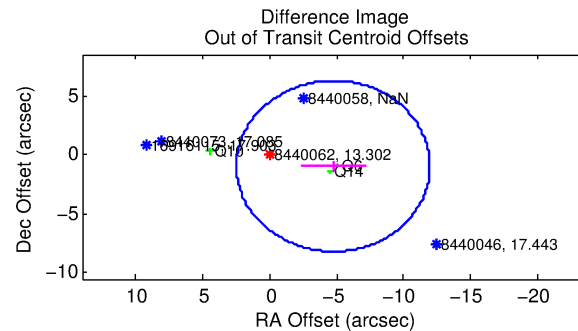
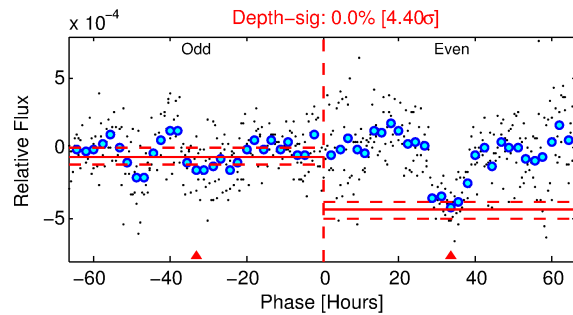
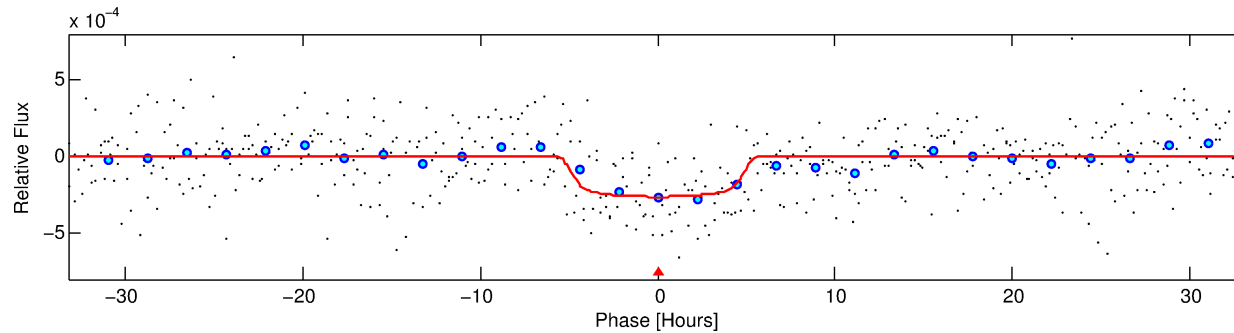
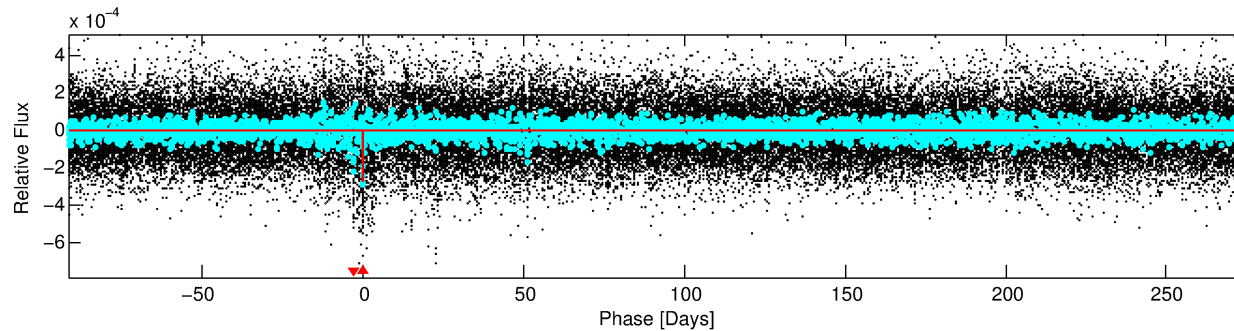
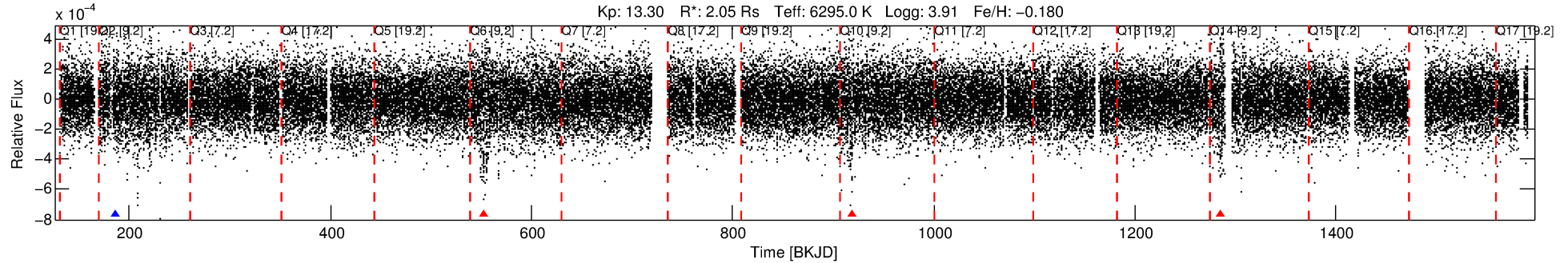
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008440062-01

No Significant Match Found

DV One-Page Summary

KIC: 8440062 Candidate: 1 of 1 Period: 366.712 d



DV Fit Results:

Period = 366.71239 [0.00902] d
Epoch = 185.6405 [0.0178] BKJD
Rp/R* = 0.0180 [0.0021]
a/R* = 104.97 [41.18]
b = 0.93 [0.06]
Seff = 5.10 [2.56]
Teq = 383 [48] K
Rp = 4.02 [1.41] Re
a = 1.0763 [0.3331] AU
Ag = 5464.90 [3636.61] [1.50 σ]
Teffp = 5094 [591] K [7.94 σ]

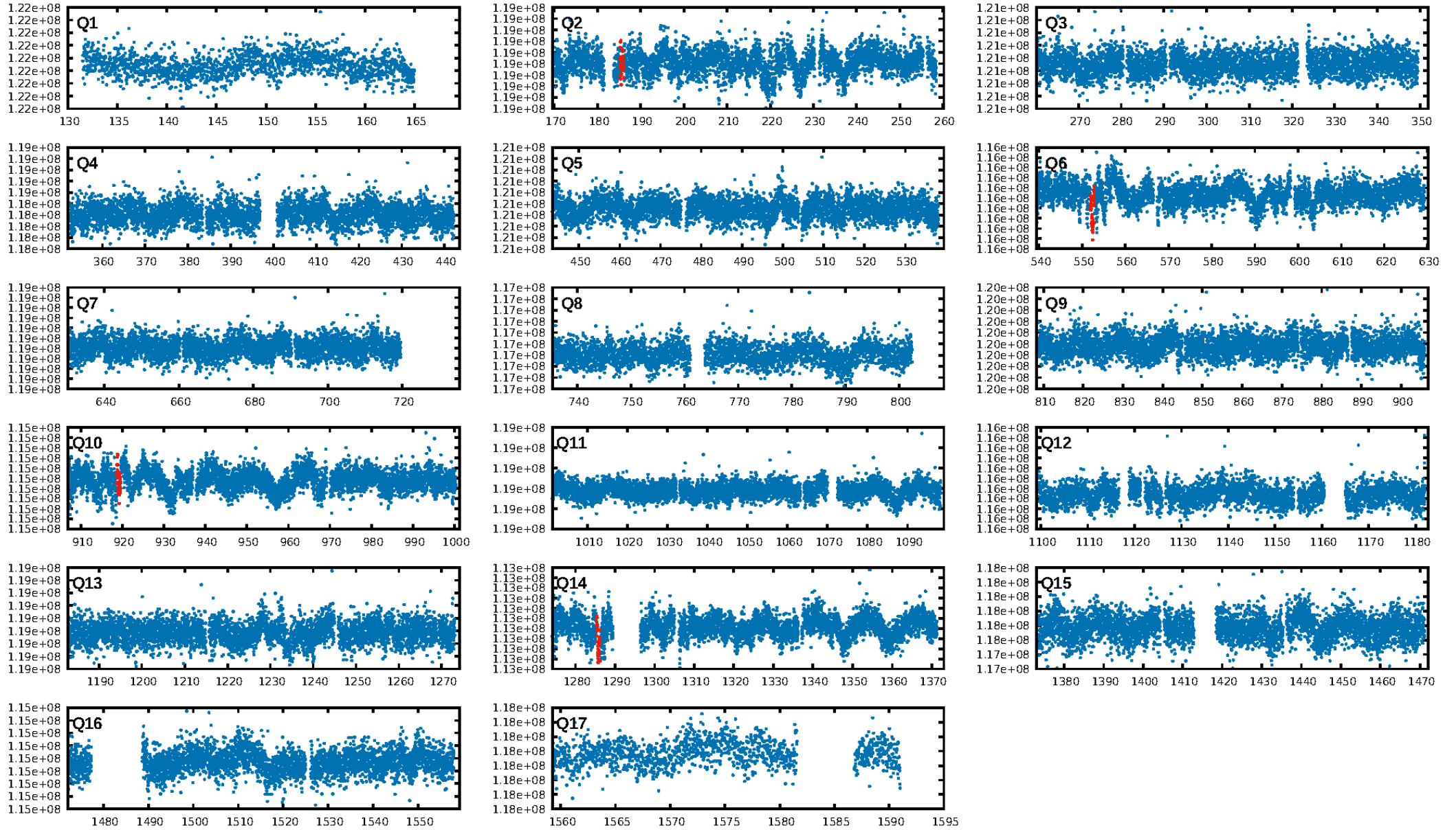
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: 7.83e-13
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: -70.43
Centroid-sig: 0.0%
Centroid-so: 8.621 arcsec [4.32 σ]
OotOffset-rm: 4.841 arcsec [2.01 σ]
KicOffset-rm: 4.857 arcsec [1.35 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [4/4]

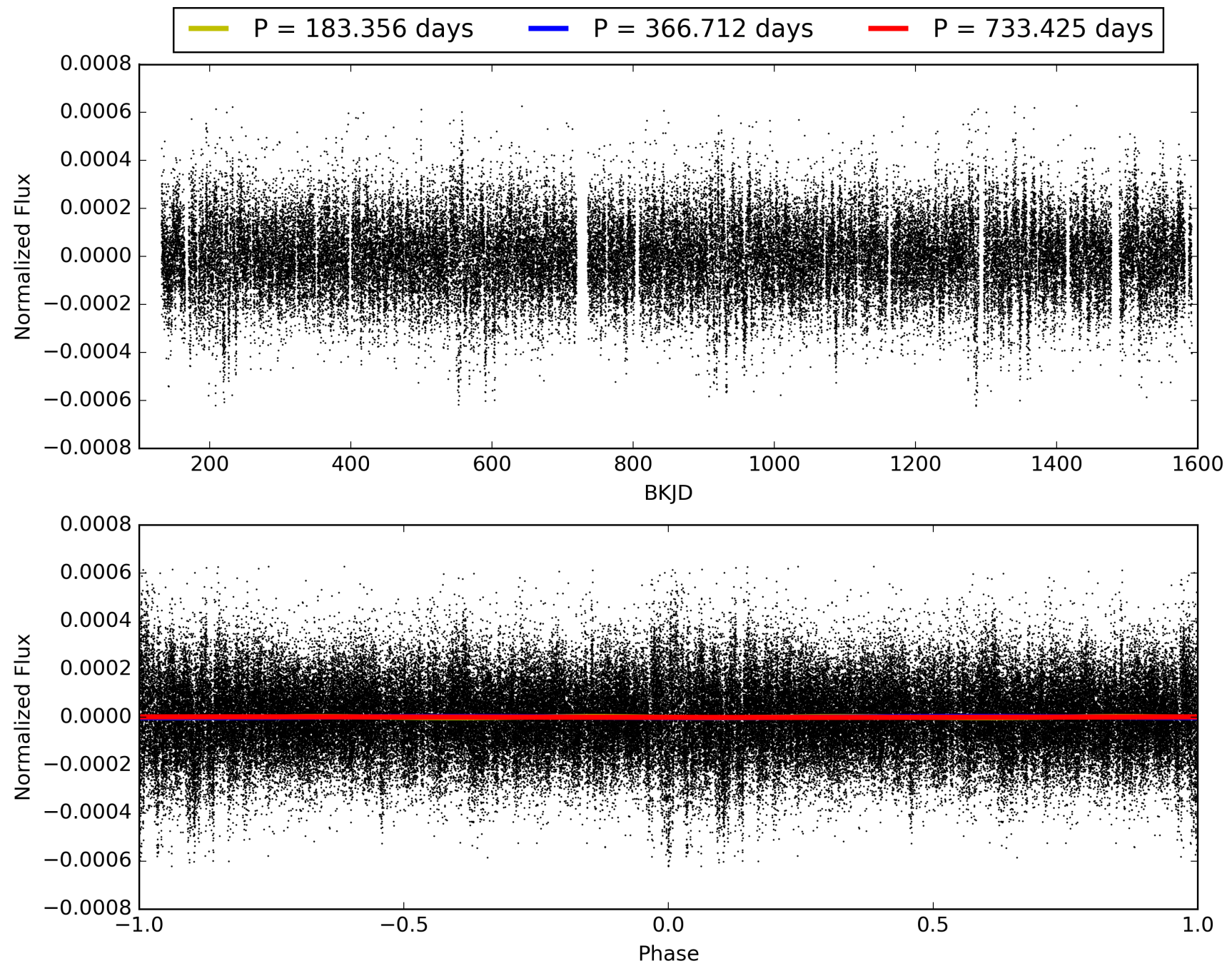
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 23:38:04 Z

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

TCE 008440062-01, PDC Light Curves

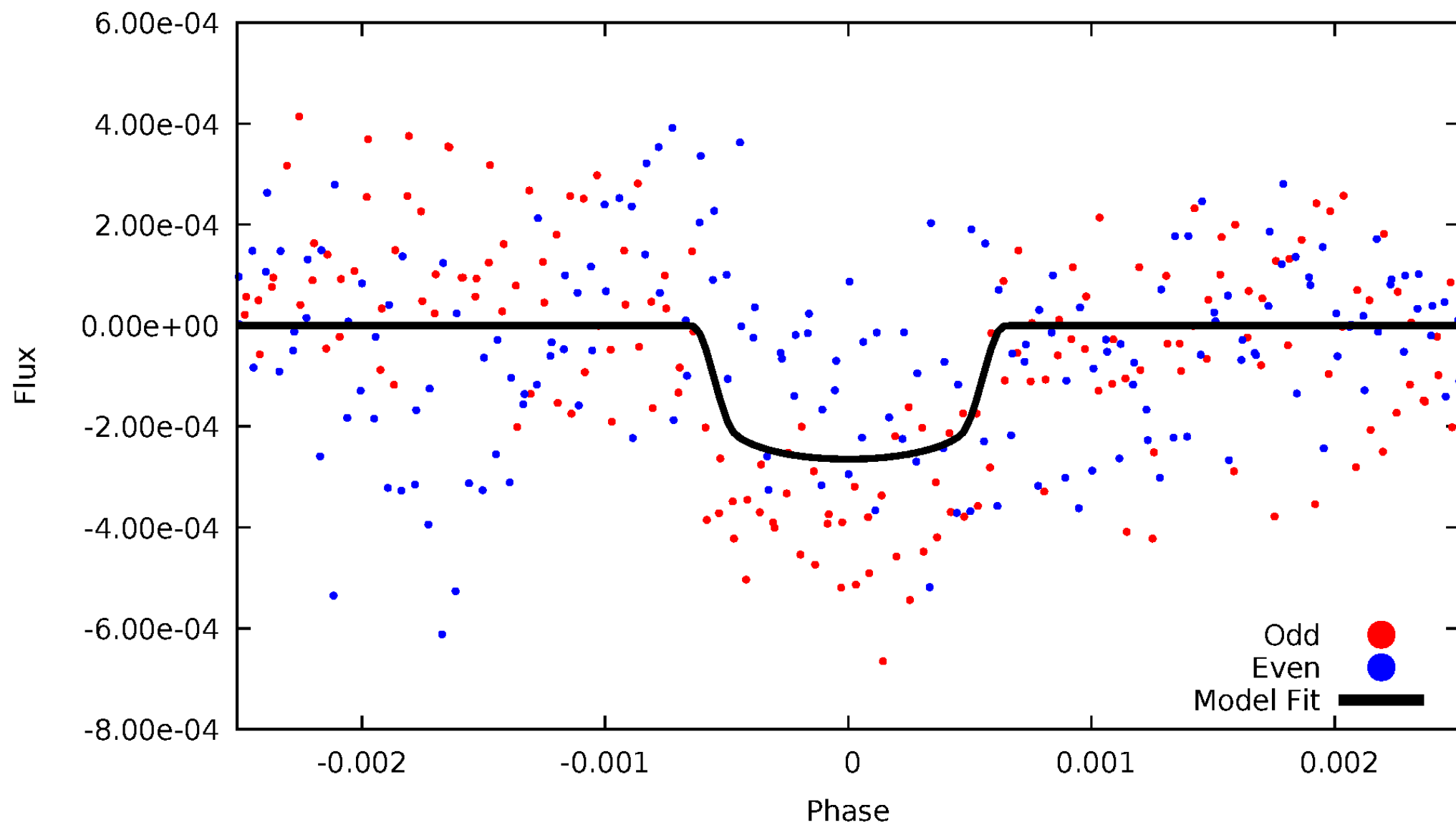


TCE 008440062-01



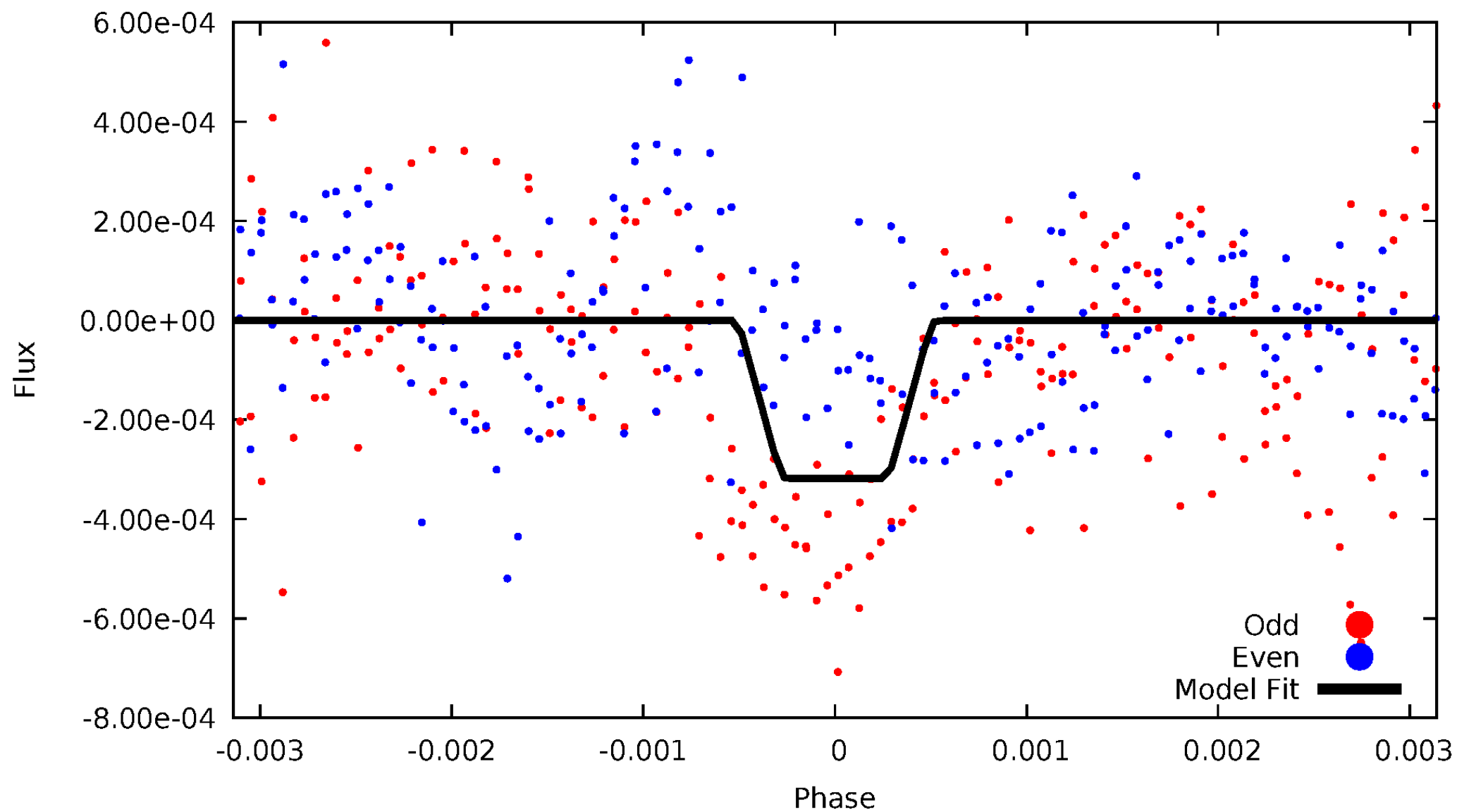
DV Odd/Even

TCE 008440062-01



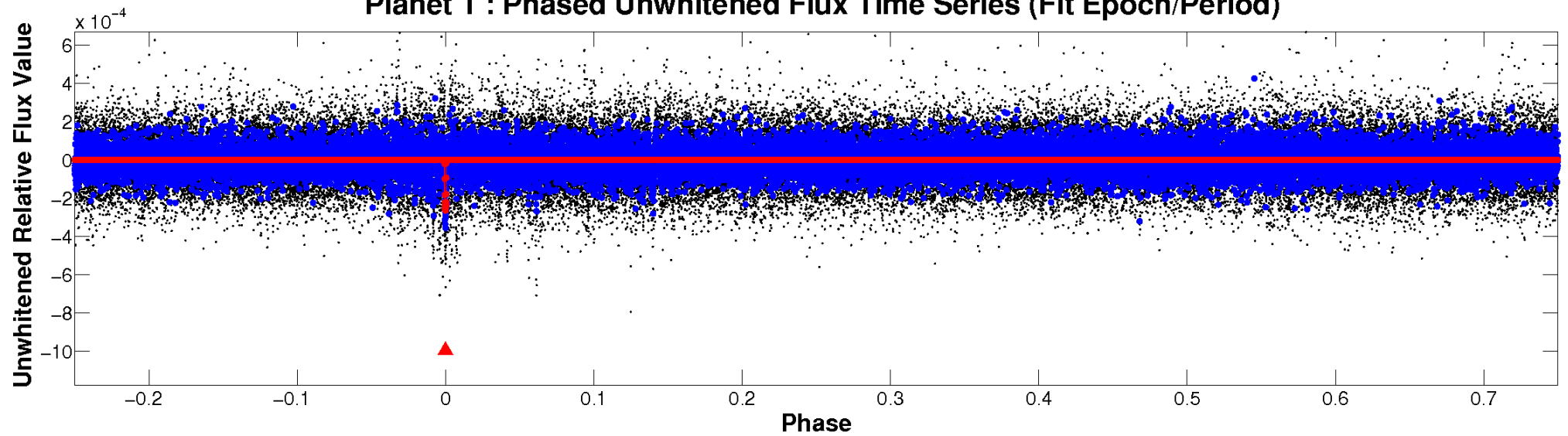
ALT Odd/Even

TCE 008440062-01

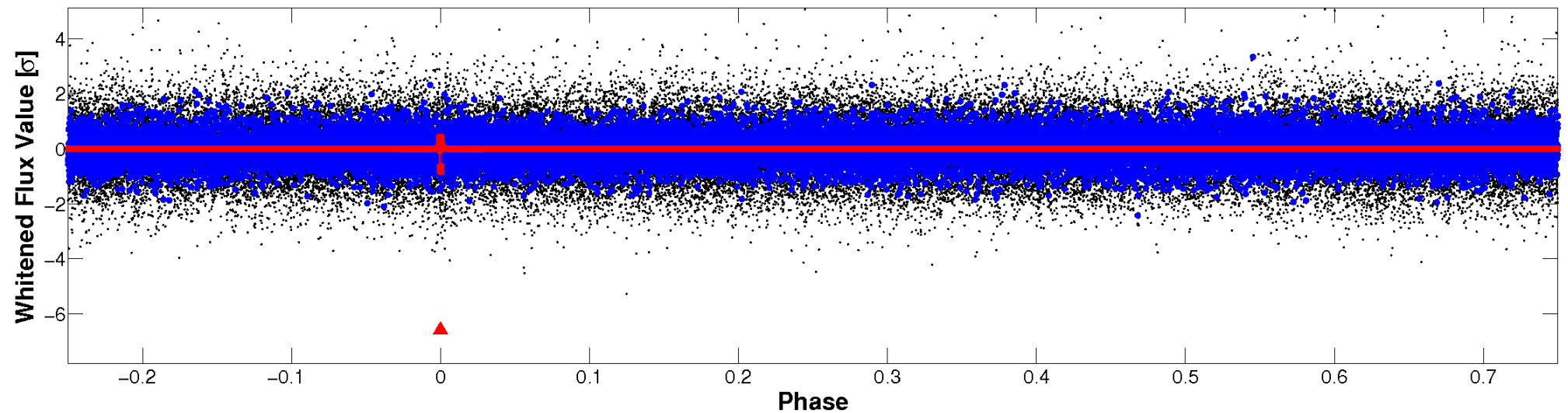


Non-Whitened Vs. Whitened Light Curve

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

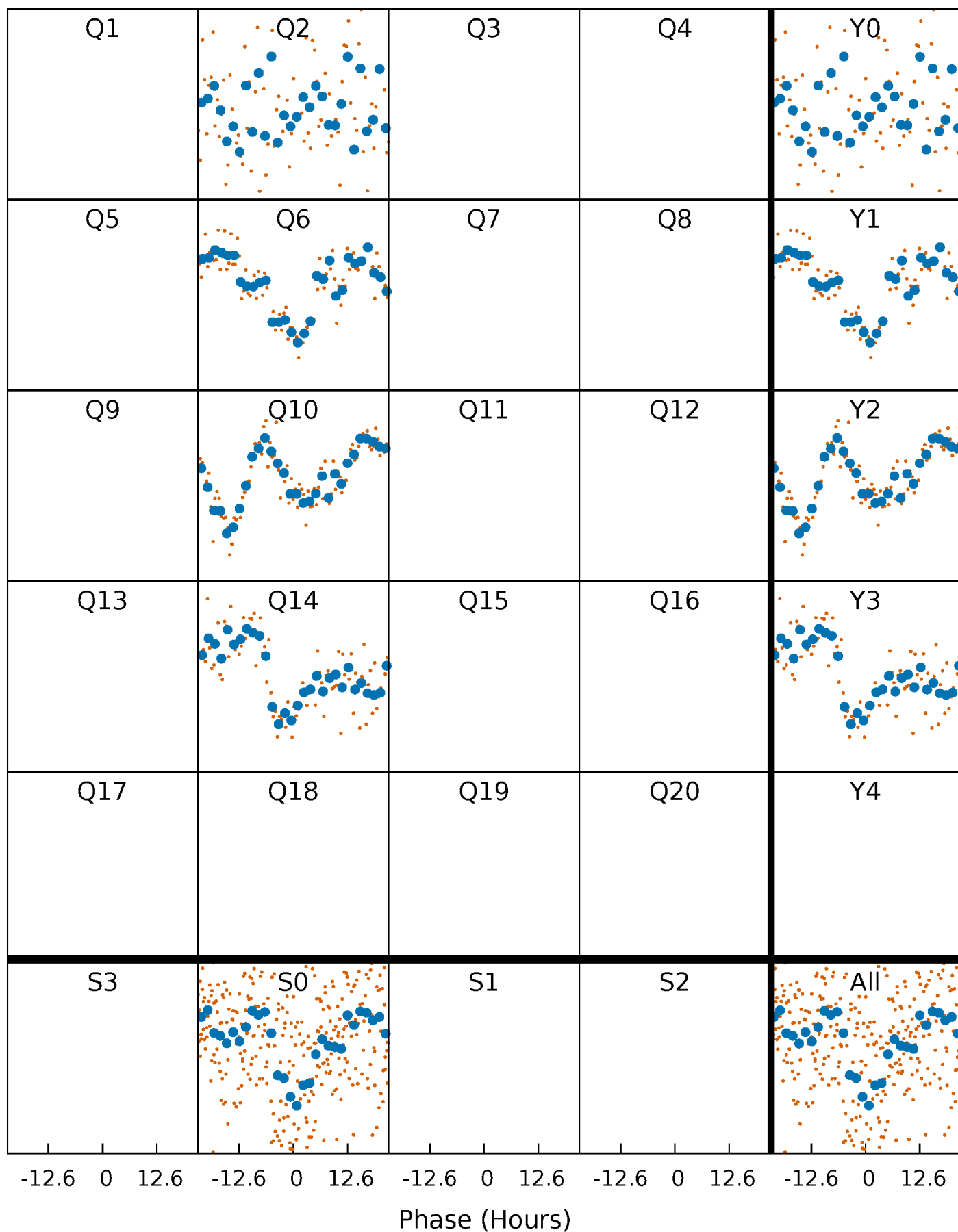


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



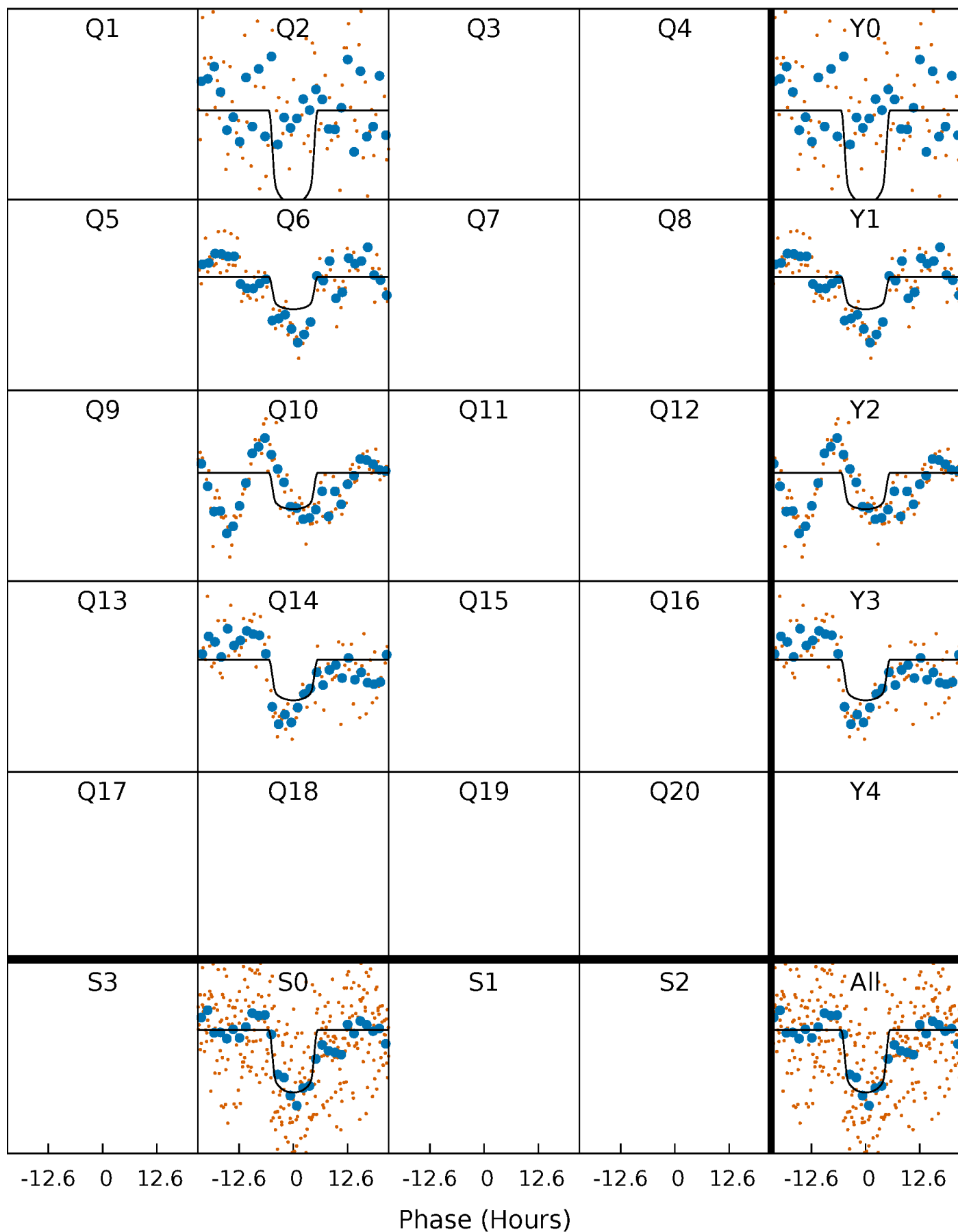
PDC Quarter-Phased Transit Curves

TCE 008440062-01 P=366.712391 Days $T_0=185.640522$ (BKJD)



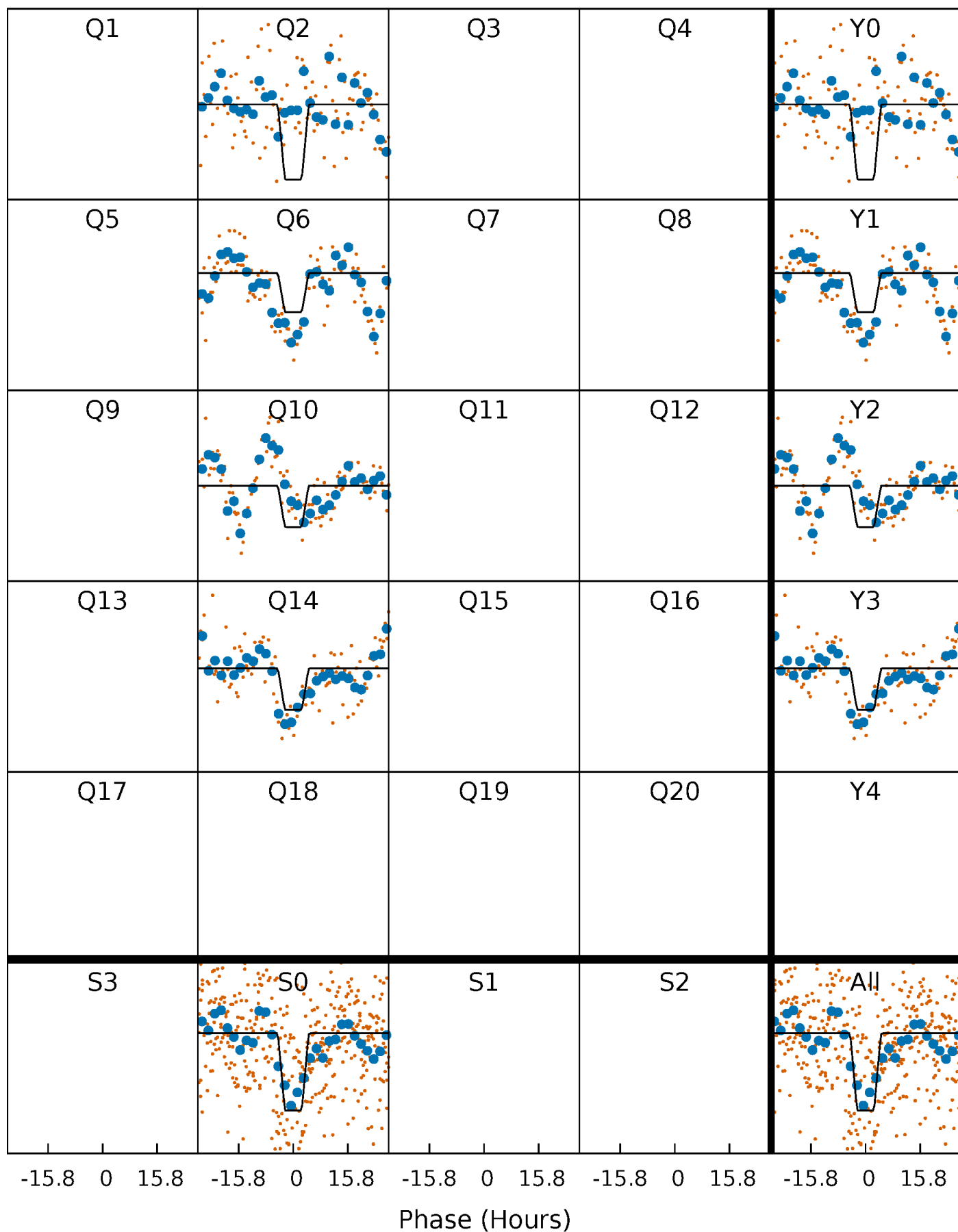
DV Quarter-Phased Transit Curves

TCE 008440062-01 P=366.712391 Days $T_0=185.640522$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

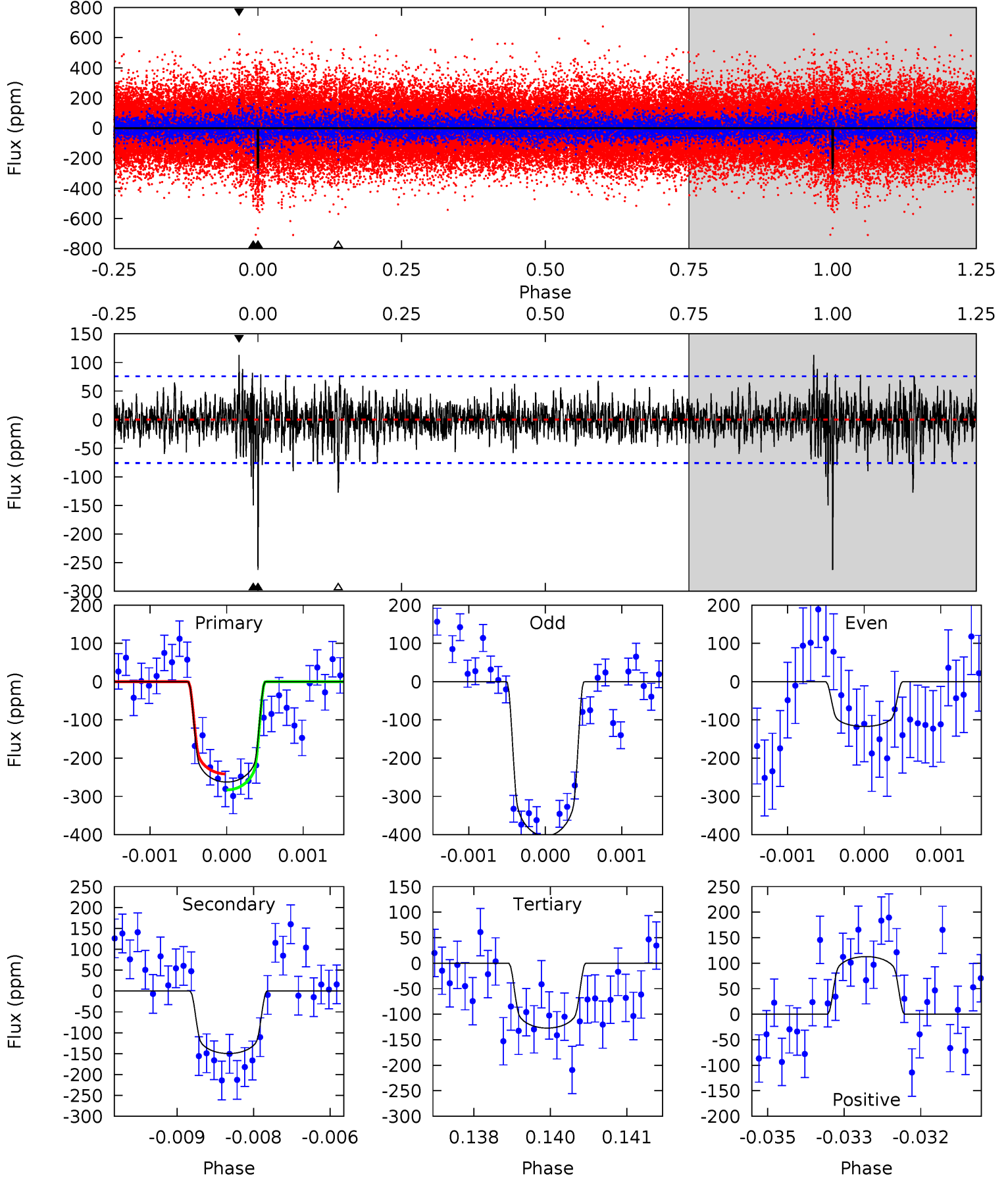
TCE 008440062-01 P=366.680234 Days $T_0=185.719186$ (BKJD)



DV Model-Shift Uniqueness Test

008440062-01, P = 366.712391 Days, E = 185.640522 Days

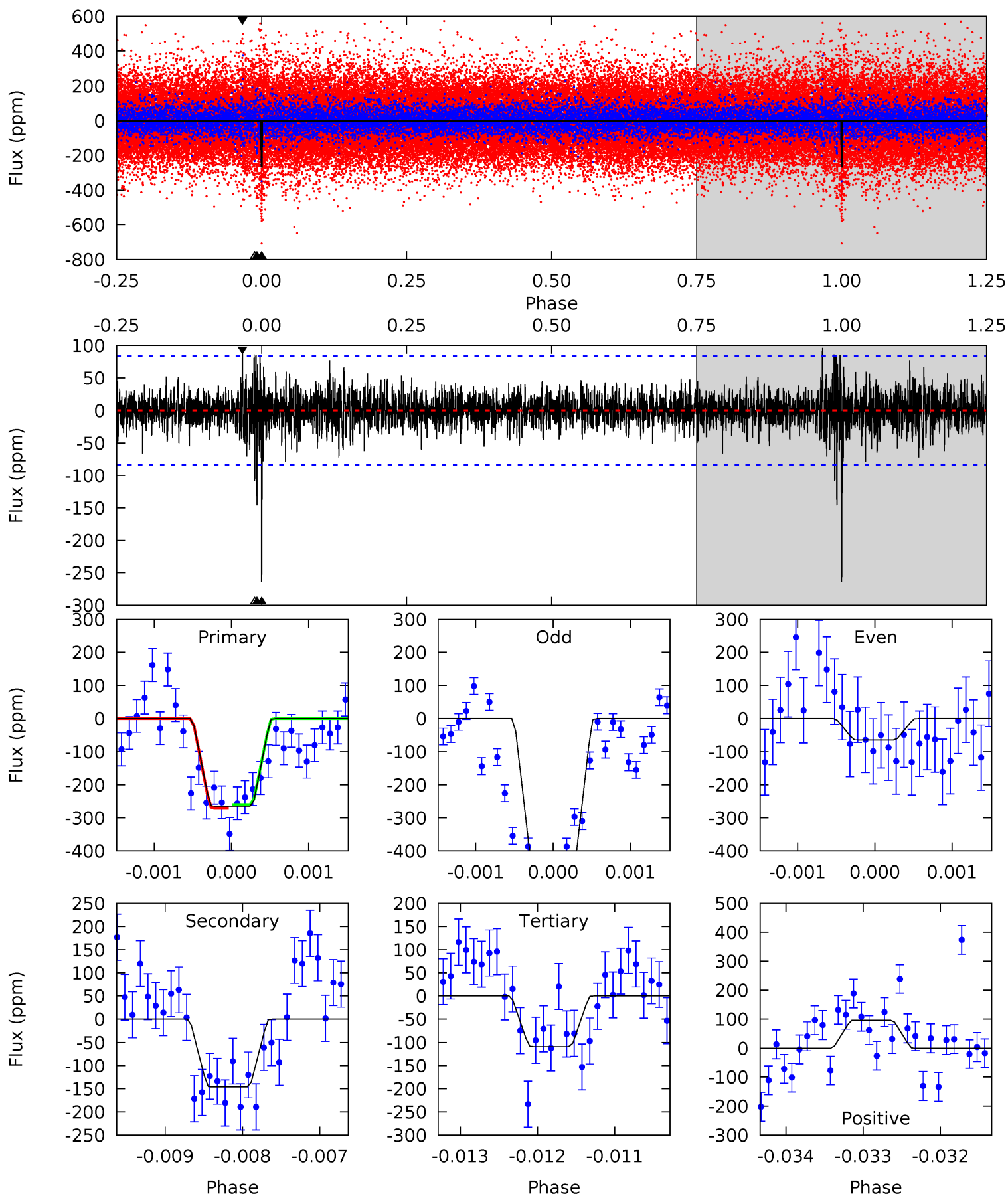
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	10.7	9.07	8.05	5.41	3.22	1.62	9.64	10.7	1.61	2.63	10.2	0.92	0.30	1.48



Alt Model-Shift Uniqueness Test

008440062-01, P = 366.680234 Days, E = 185.719186 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	9.53	7.11	6.28	5.45	3.29	1.27	10.1	11.0	2.42	3.25	12.8	1.02	0.27	0.30



Stellar Parameters For KIC 008440062

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6295^{+173}_{-173}	$3.907^{+0.285}_{-0.114}$	$-0.180^{+0.300}_{-0.250}$	$2.049^{+0.449}_{-0.673}$	$1.237^{+0.220}_{-0.198}$	$0.203^{+0.356}_{-0.071}$
	+3%/-3%	+7%/-3%	+167%/-139%	+22%/-33%	+18%/-16%	+176%/-35%
Source	PHO1	FLK73	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 008440062-01 / KOI 7886.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-150 ± 14	$3.85^{+0.87}_{-0.75}$	528^{+35}_{-46}	5248^{+377}_{-285}	6481^{+3597}_{-2073}
Alt.	-146 ± 15	$3.84^{+0.76}_{-0.71}$	525^{+34}_{-43}	5210^{+367}_{-277}	6408^{+3059}_{-1910}

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

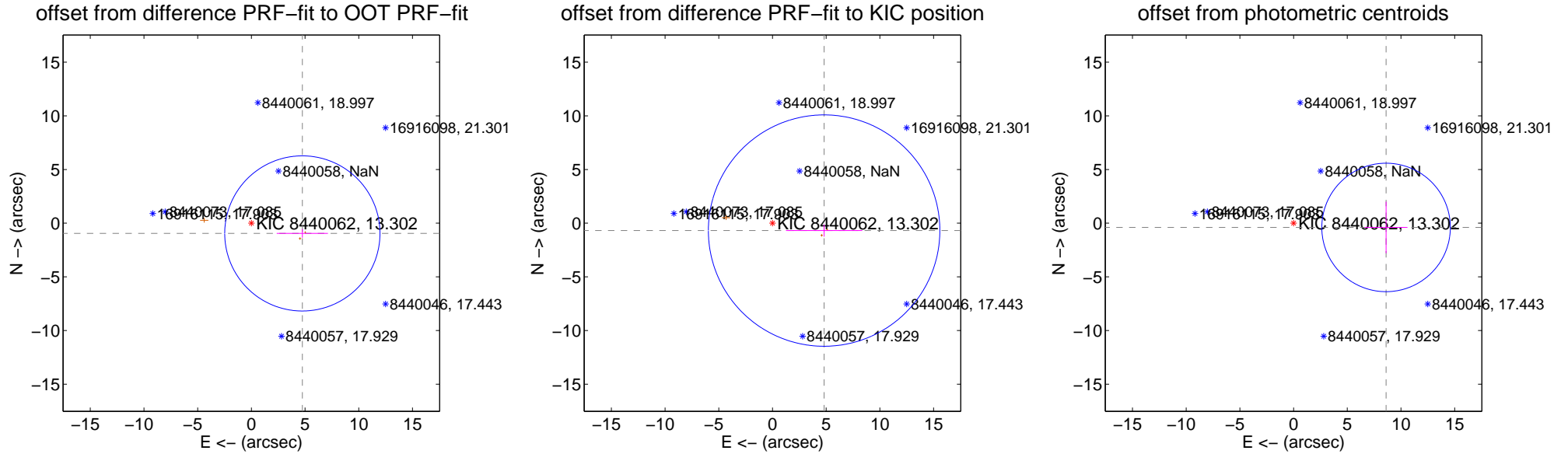
DV Centroid Data

Supplemental centroid analysis for 008440062-01. Kepler magnitude: 13.30. Transit SNR 6.80

There are 0 quarters with good PRF difference image offsets

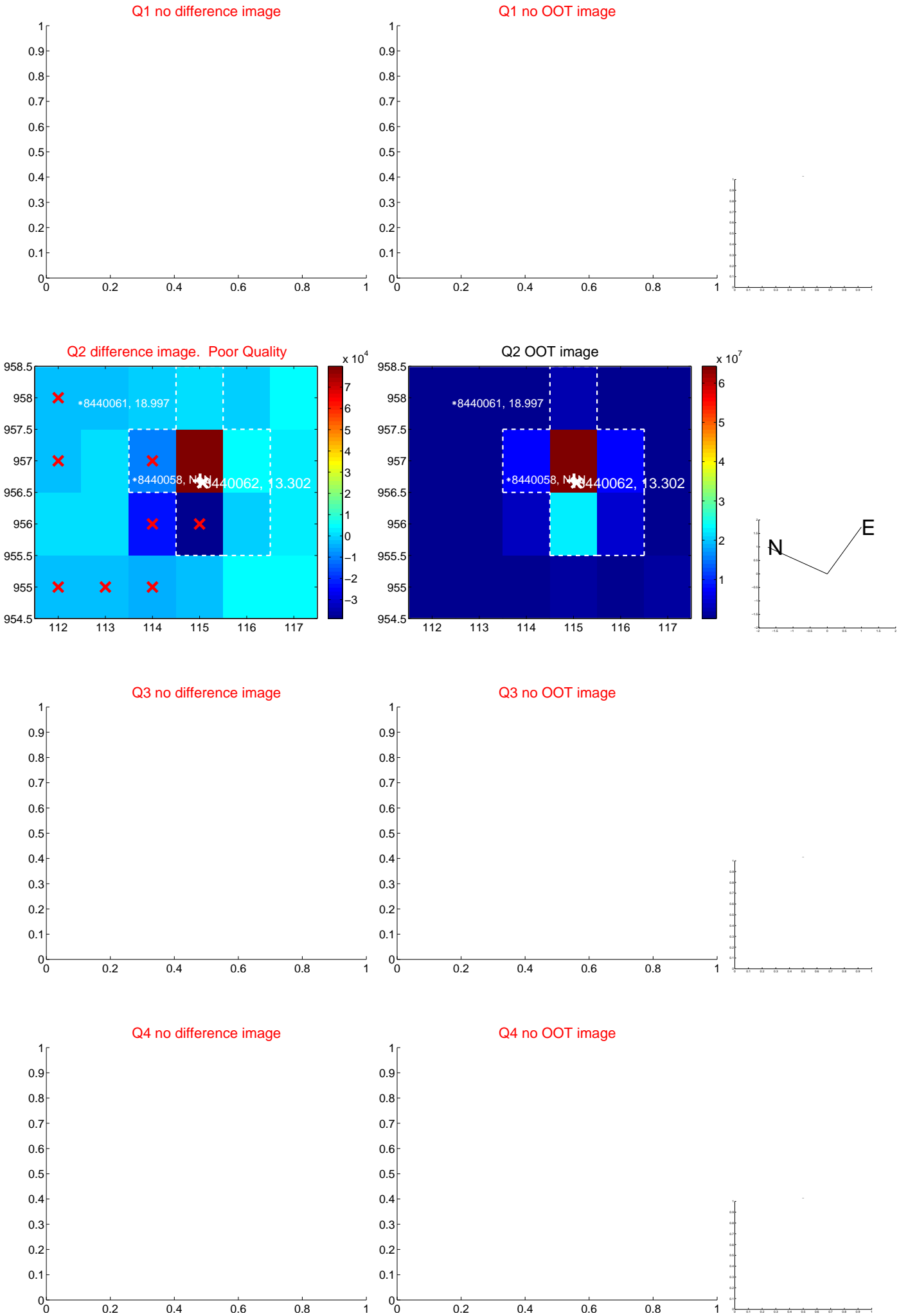
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.841 ± 2.409	2.01	-4.746 ± 2.383	-0.953 ± 0.407
PRF-fit source offset from KIC position	4.857 ± 3.592	1.35	-4.808 ± 3.551	-0.688 ± 0.565
photometric centroid source offset	8.62 ± 1.99	4.32	-8.61 ± 1.99	-0.40 ± 2.40

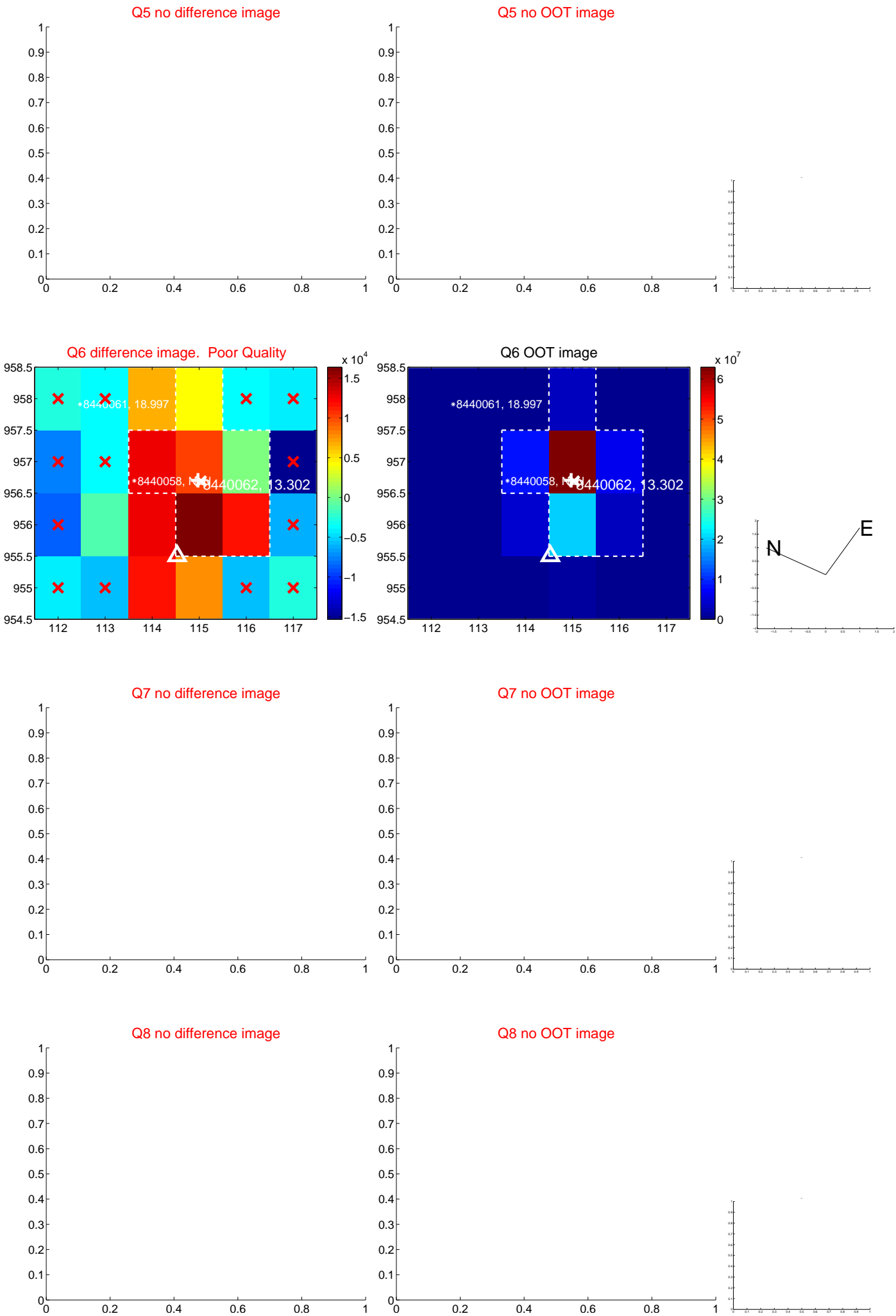


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

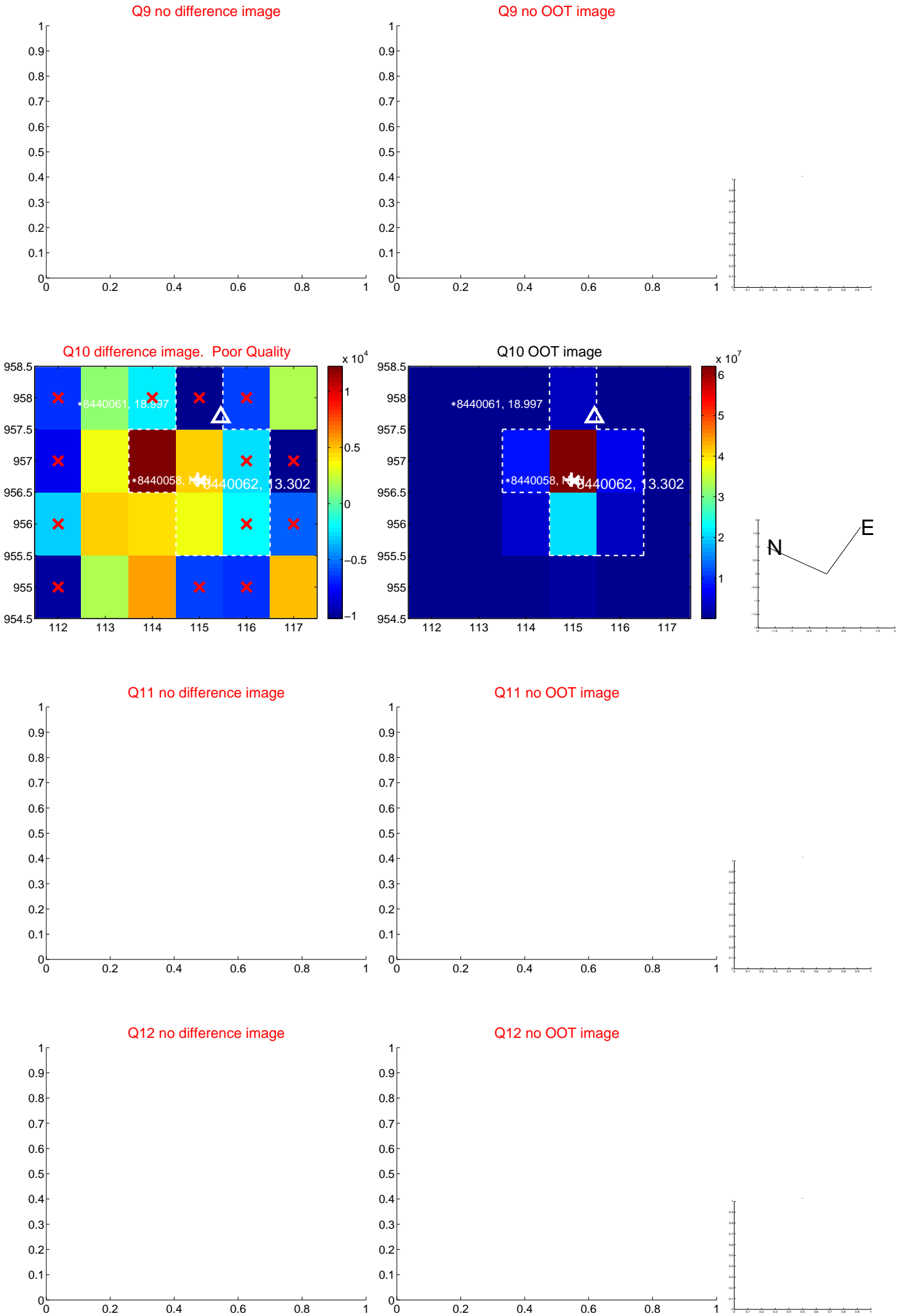
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



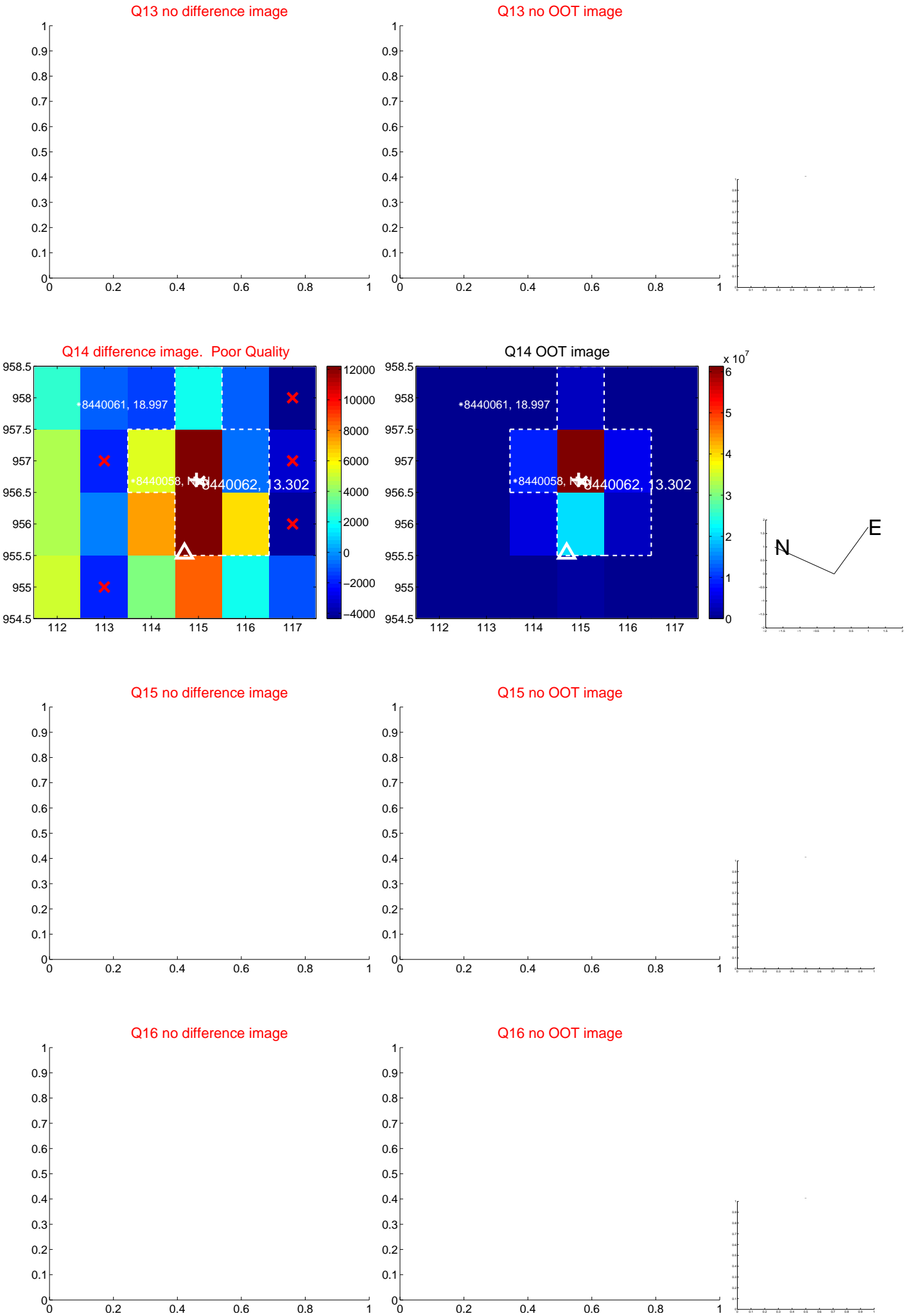
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



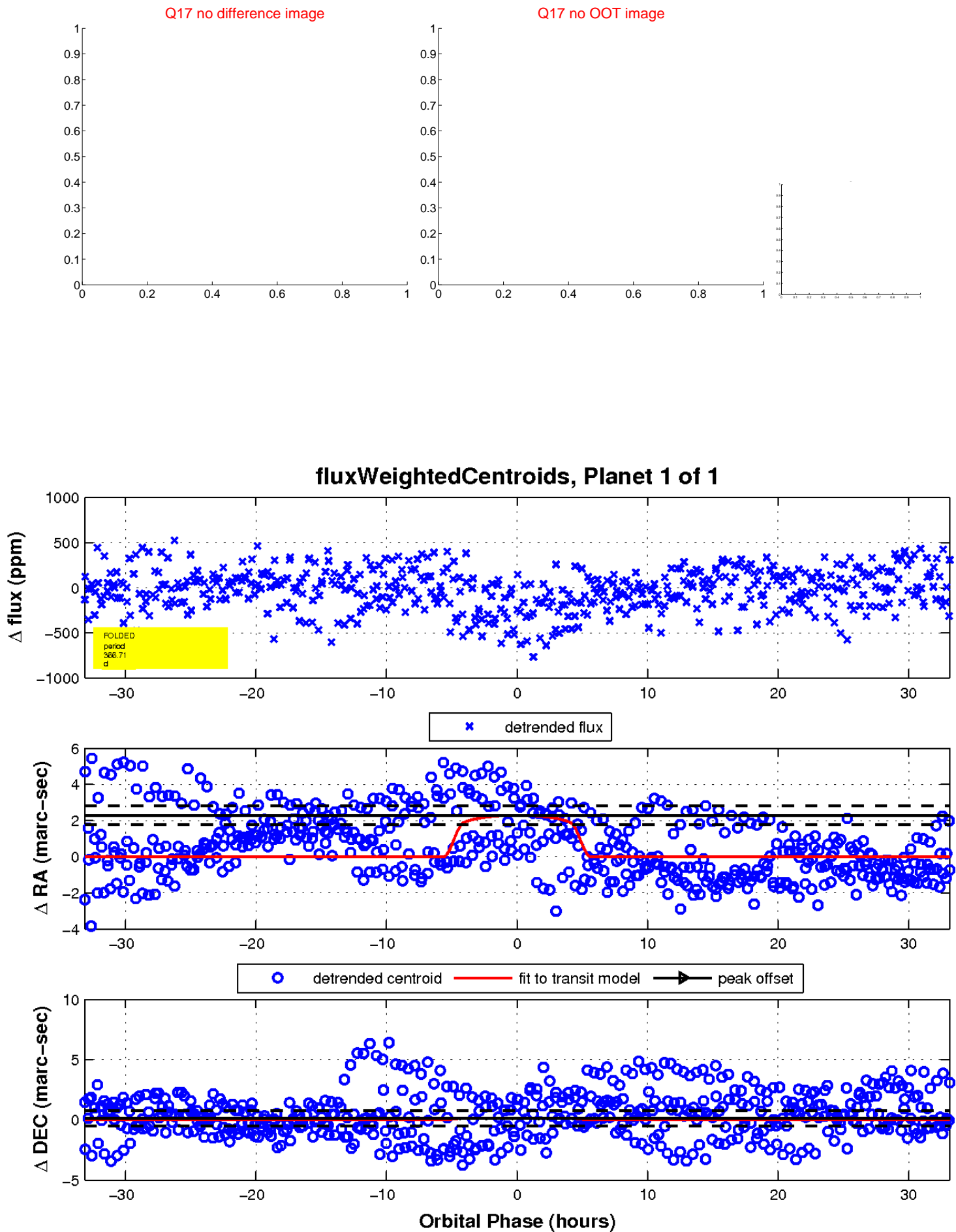
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

