

KIC 008263545

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})
008263545-01	OBS	2822.01	4.445881	131.744991	417.1	2.490	18.9	19.5	0.86	5918	2.08	302.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008263545-01	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 008263545-01

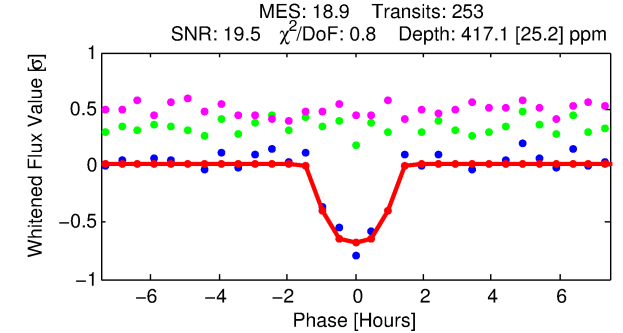
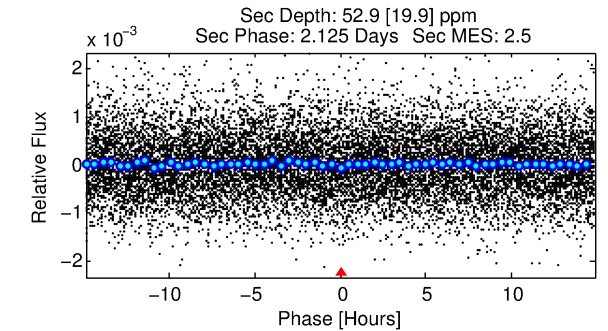
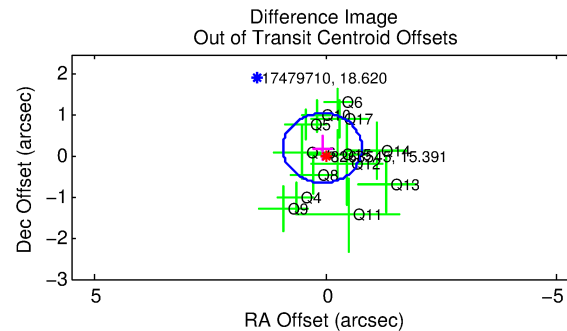
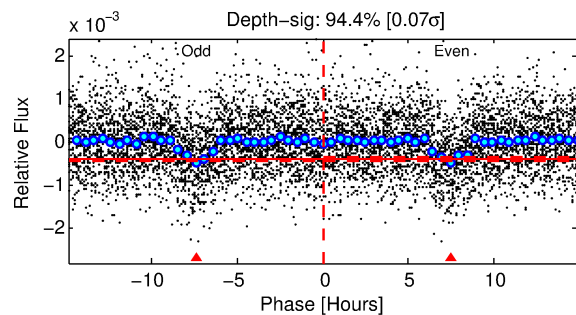
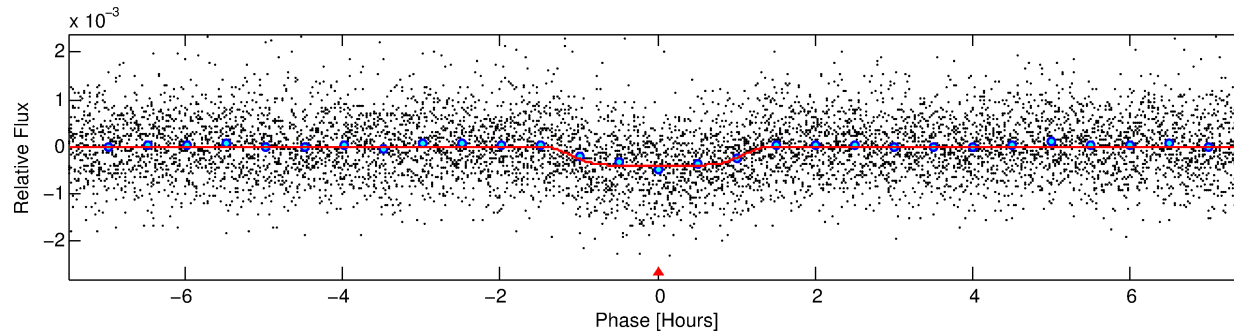
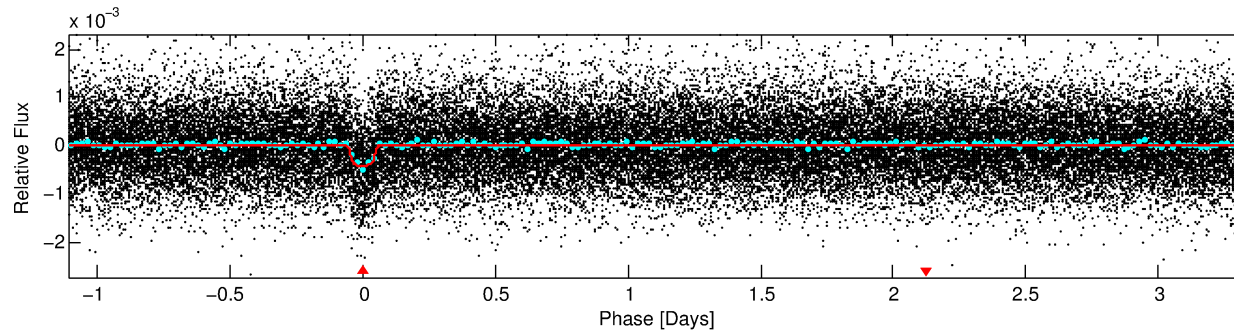
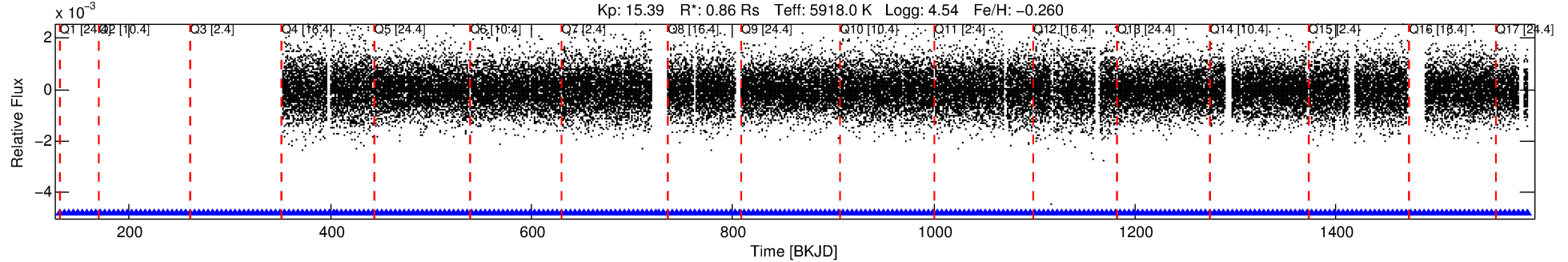
No Significant Match Found

DV One-Page Summary

KIC: 8263545 Candidate: 1 of 1 Period: 4.446 d

KOI: K02822.01 Corr: 0.983

Kp: 15.39 R*: 0.86 Rs Teff: 5918.0 K Logg: 4.54 Fe/H: -0.260



DV Fit Results:

Period = 4.44588 [0.00002] d
Epoch = 131.7450 [0.0026] BKJD
Rp/R* = 0.0221 [0.0051]
a/R* = 6.71 [7.51]
b = 0.90 [0.25]
Seff = 302.69 [120.07]
Teq = 1064 [105] K
Rp = 2.08 [0.78] Re
a = 0.0521 [0.0132] AU
Ag = 18.19 [12.74] [1.35σ]
Teffp = 3396 [518] K [4.41σ]

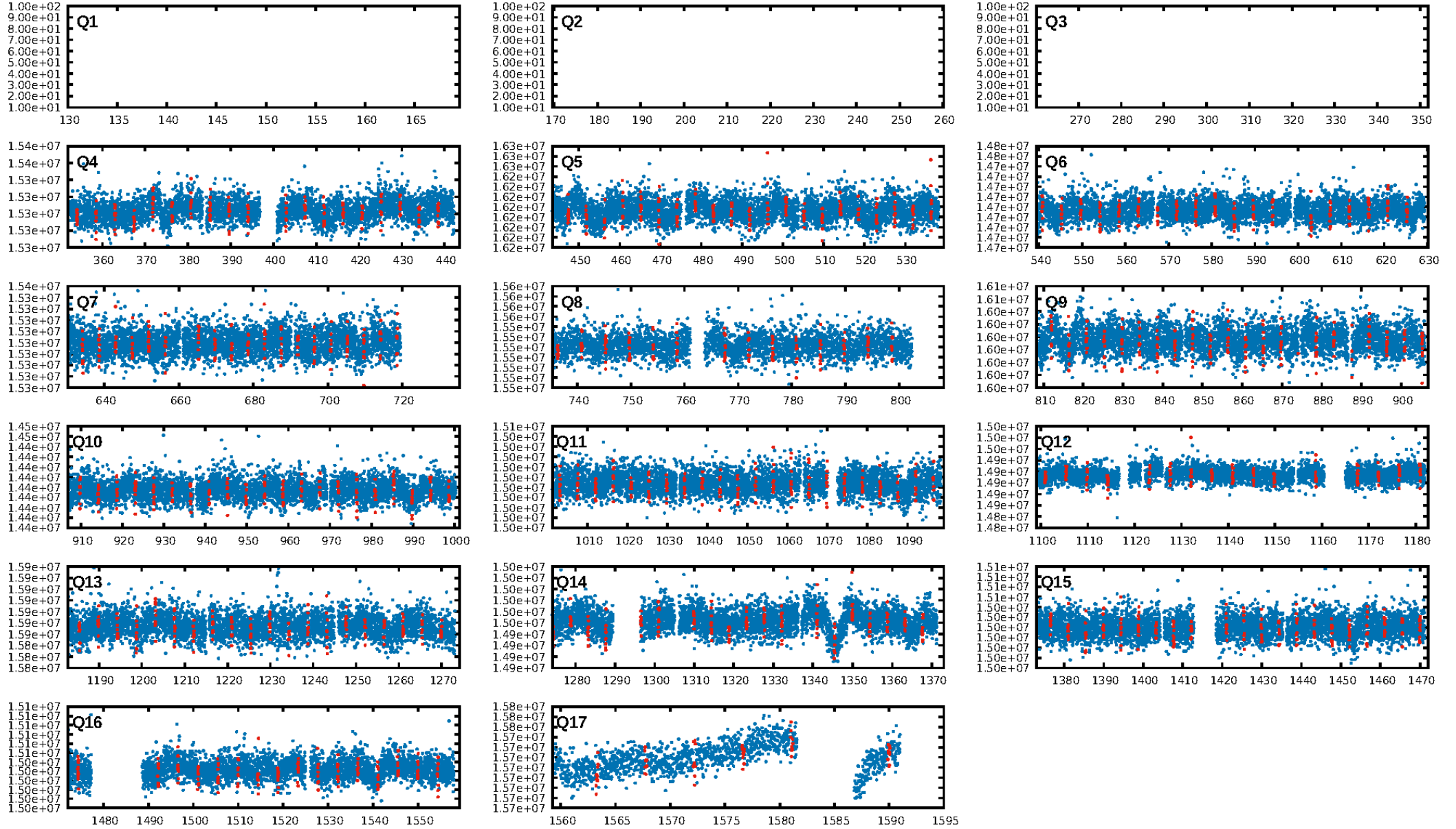
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.66e-78
RollingBand-fgt: 1.00 [247/247]
GhostDiagnostic-chr: 7.631
Centroid-sig: N/A
Centroid-so: 2.157 arcsec [2.91σ]
OotOffset-rm: 0.217 arcsec [0.76σ]
KicOffset-rm: 0.334 arcsec [1.52σ]
OotOffset-st: 3/2/4/4 [13]
KicOffset-st: 3/2/4/4 [13]
DiffImageQuality-fgm: 0.85 [11/13]
DiffImageOverlap-fno: 1.00 [14/14]

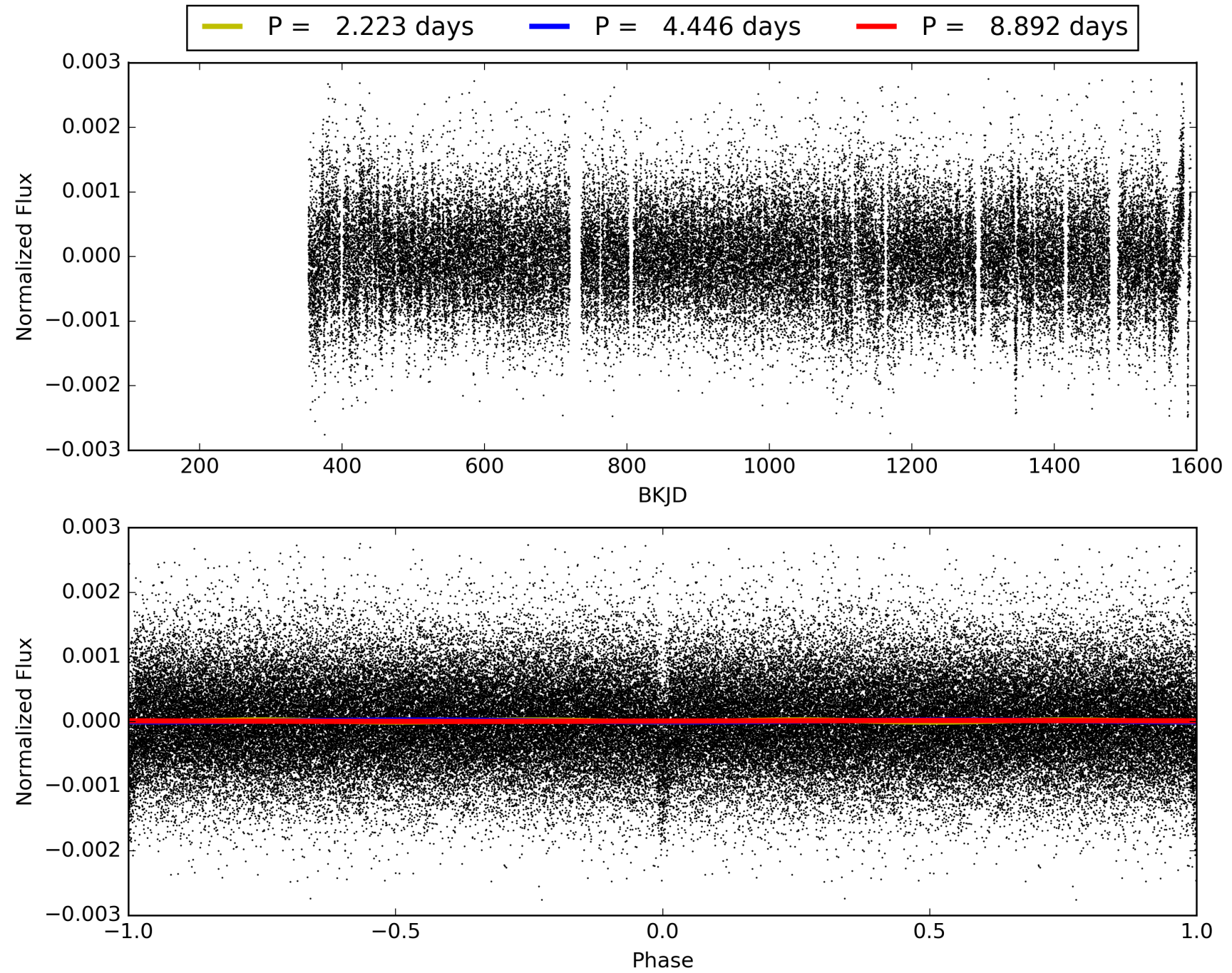
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:55:53 Z

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

TCE 008263545-01, PDC Light Curves

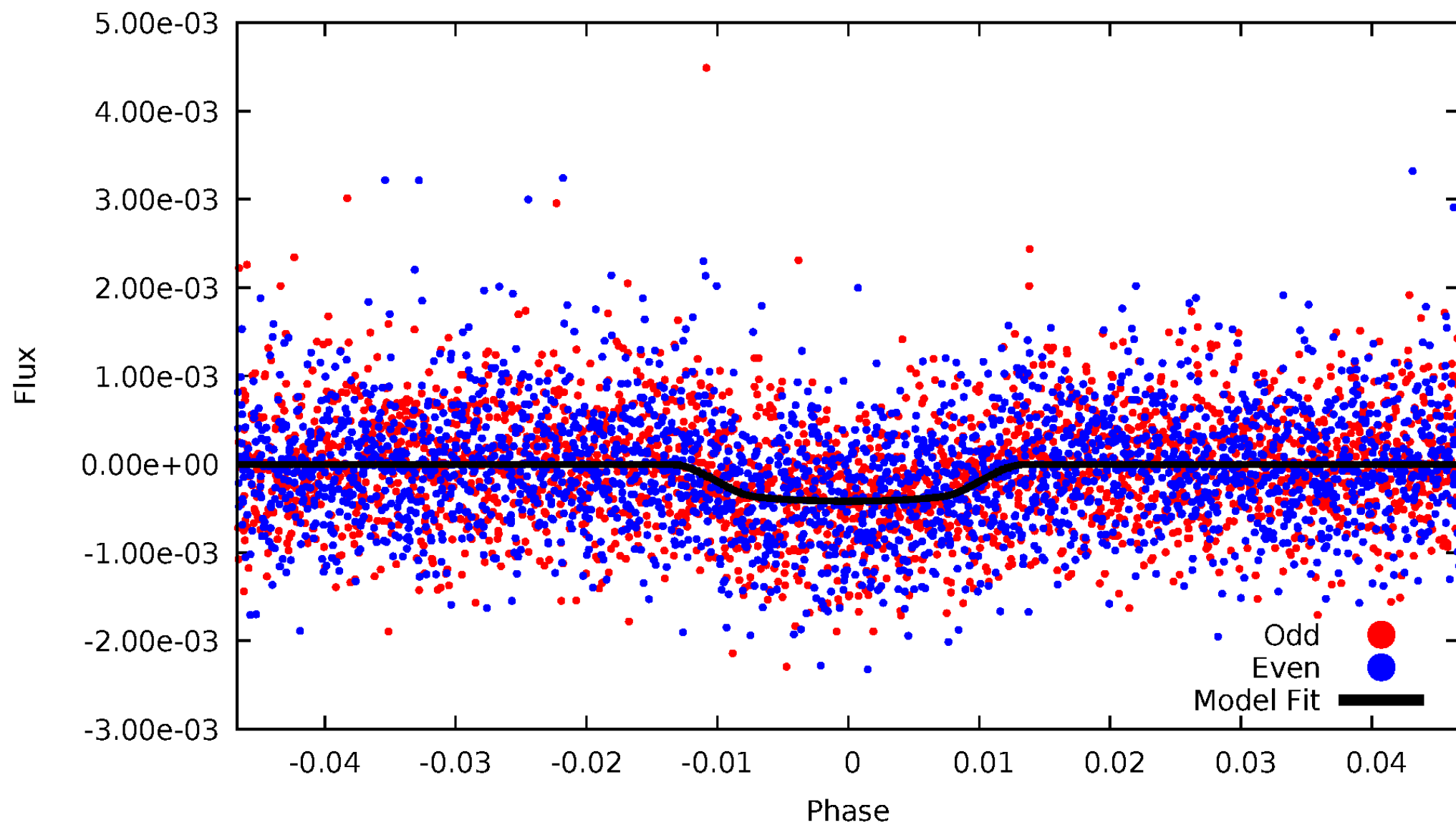


TCE 008263545-01



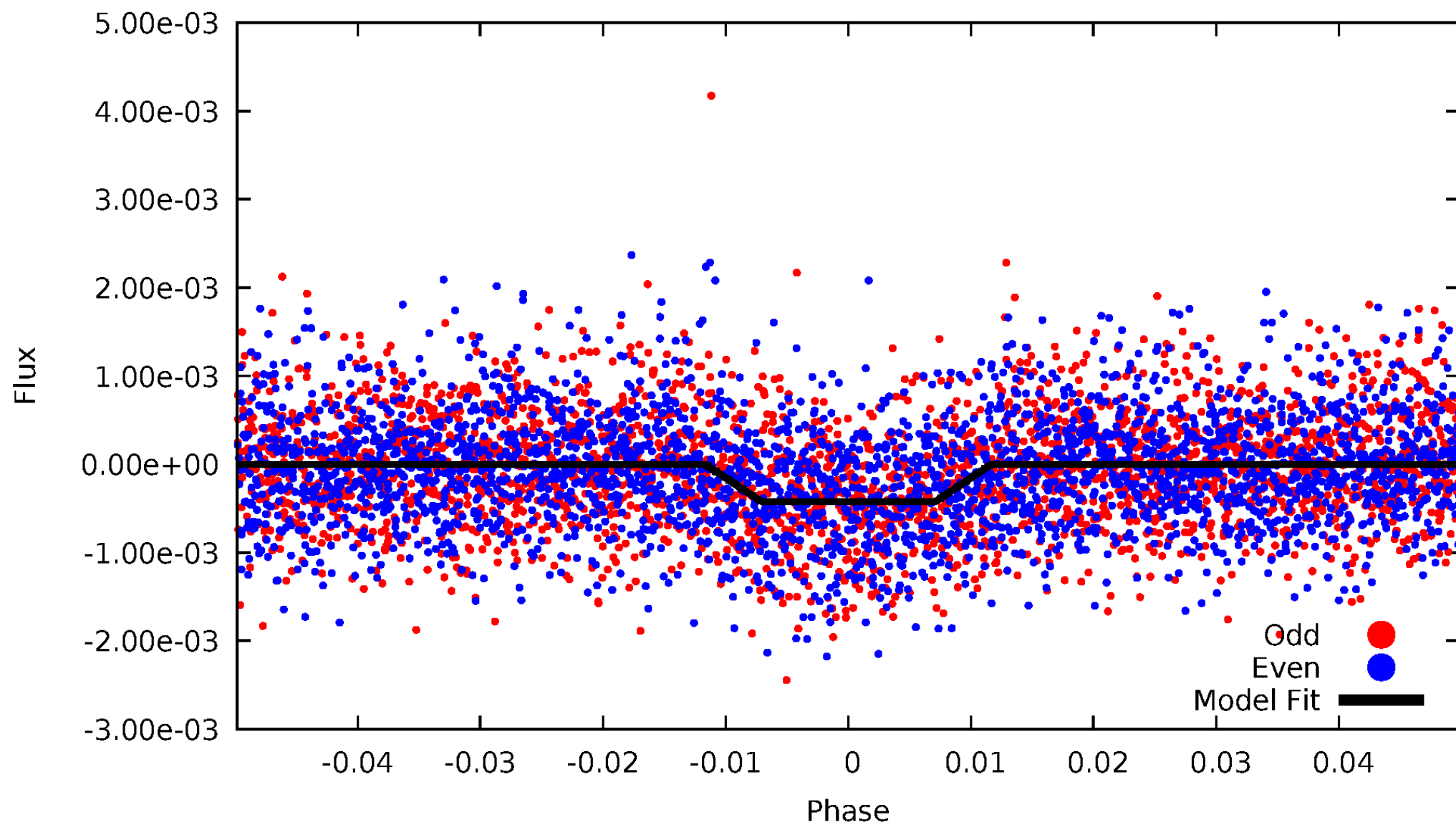
DV Odd/Even

TCE 008263545-01

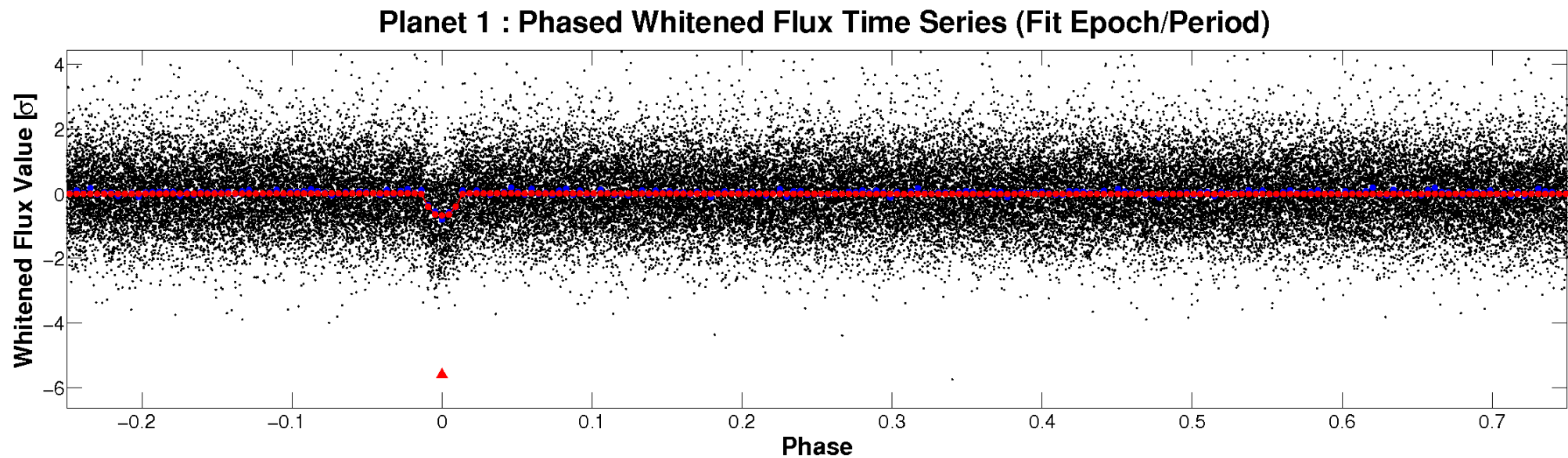
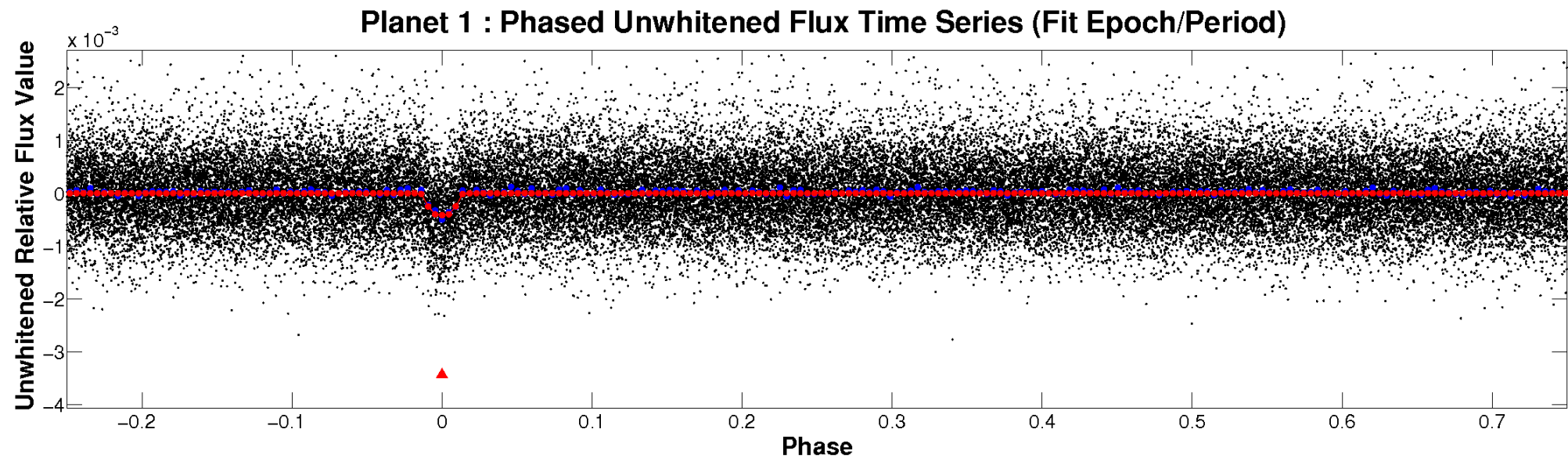


ALT Odd/Even

TCE 008263545-01

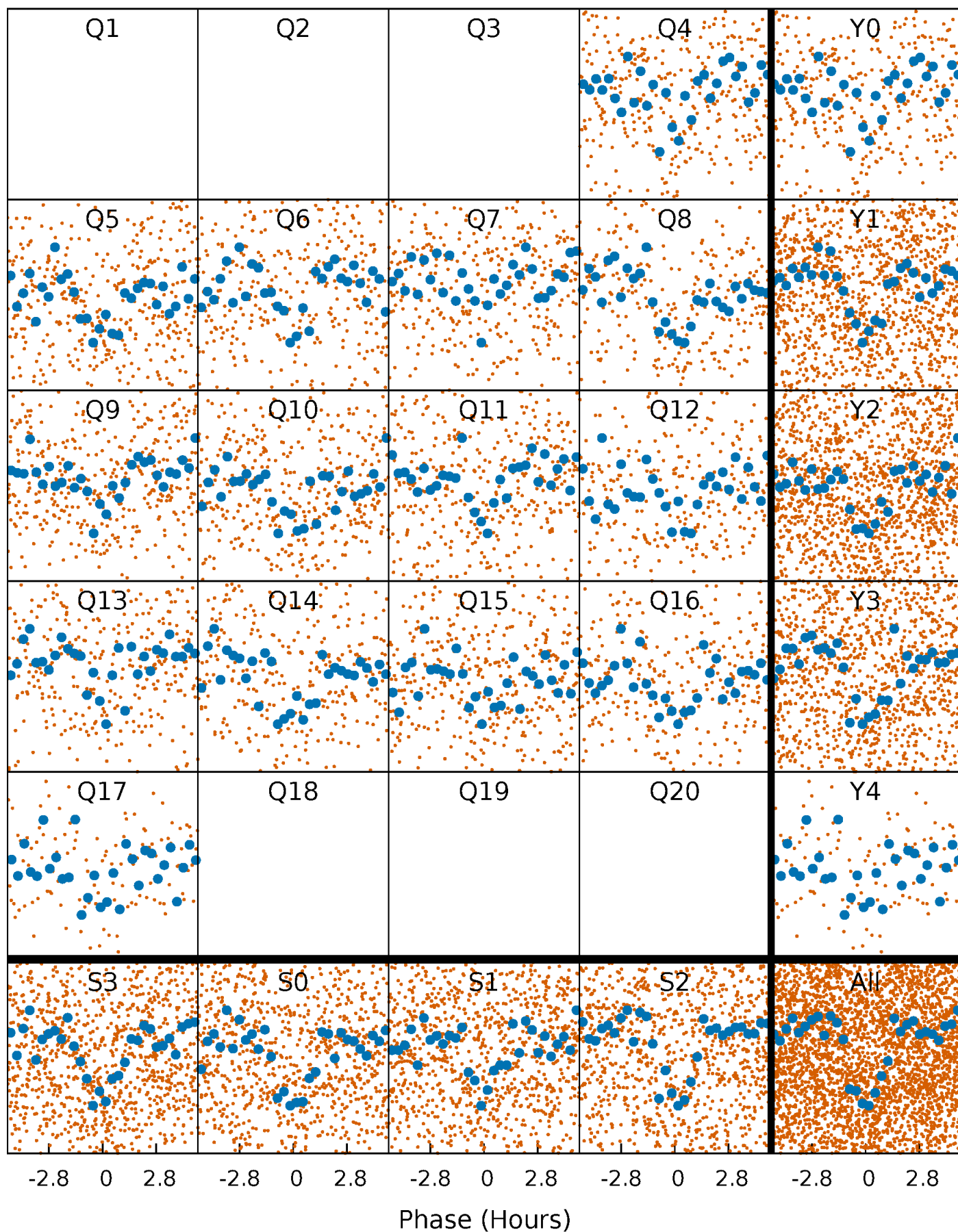


Non-Whitened Vs. Whitened Light Curve



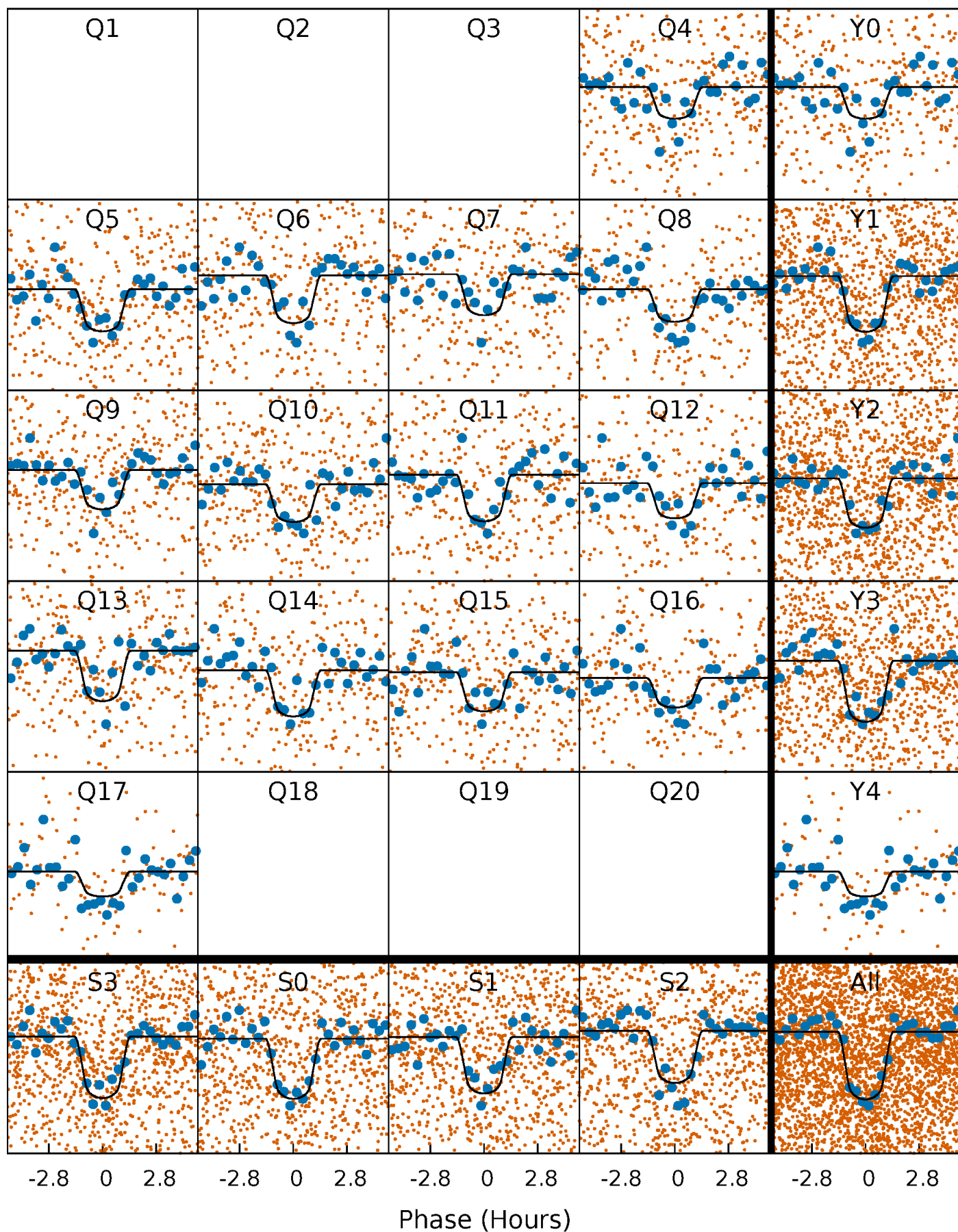
PDC Quarter-Phased Transit Curves

TCE 008263545-01 P= 4.445881 Days $T_0=131.744991$ (BKJD)



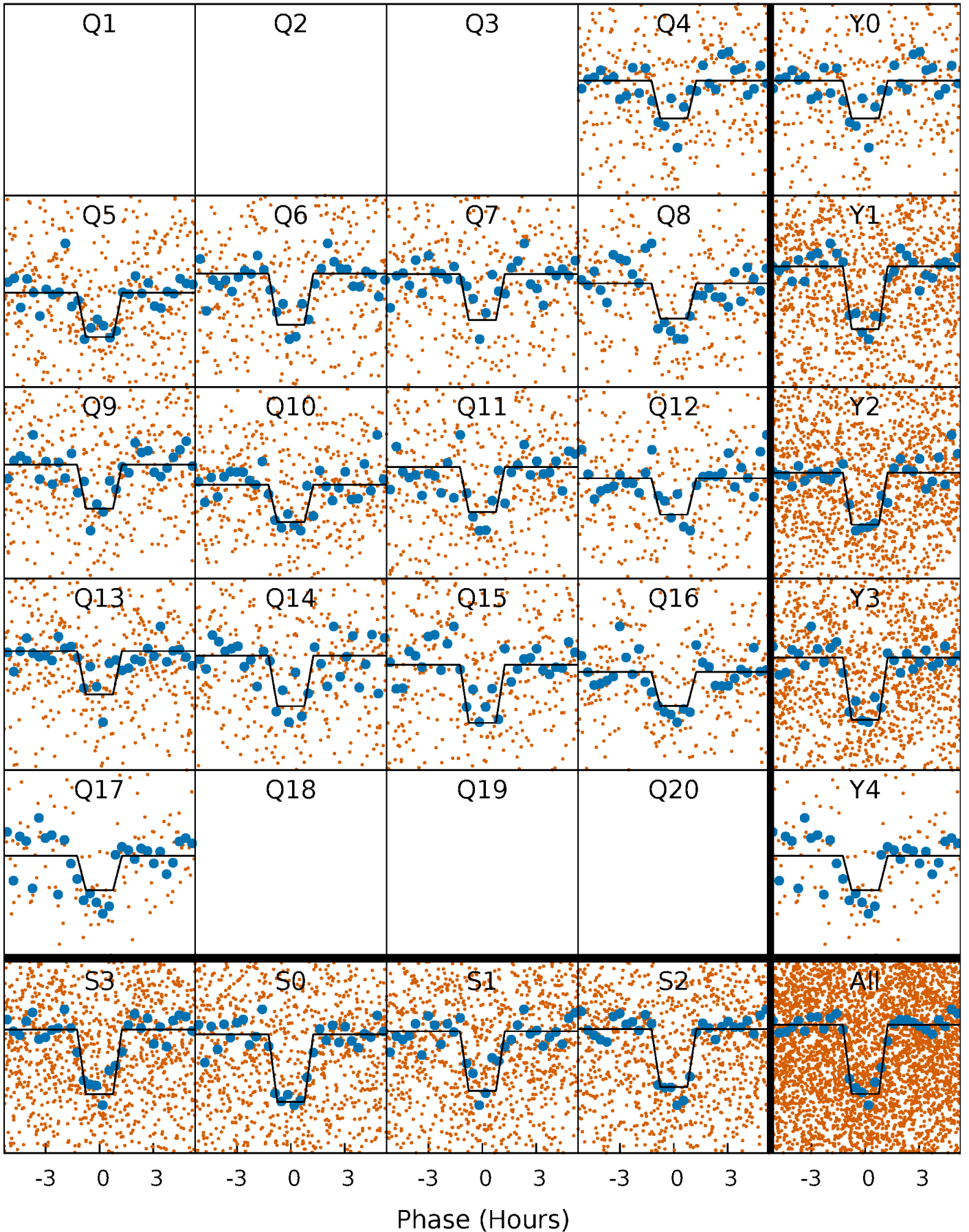
DV Quarter-Phased Transit Curves

TCE 008263545-01 P= 4.445881 Days $T_0=131.744991$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

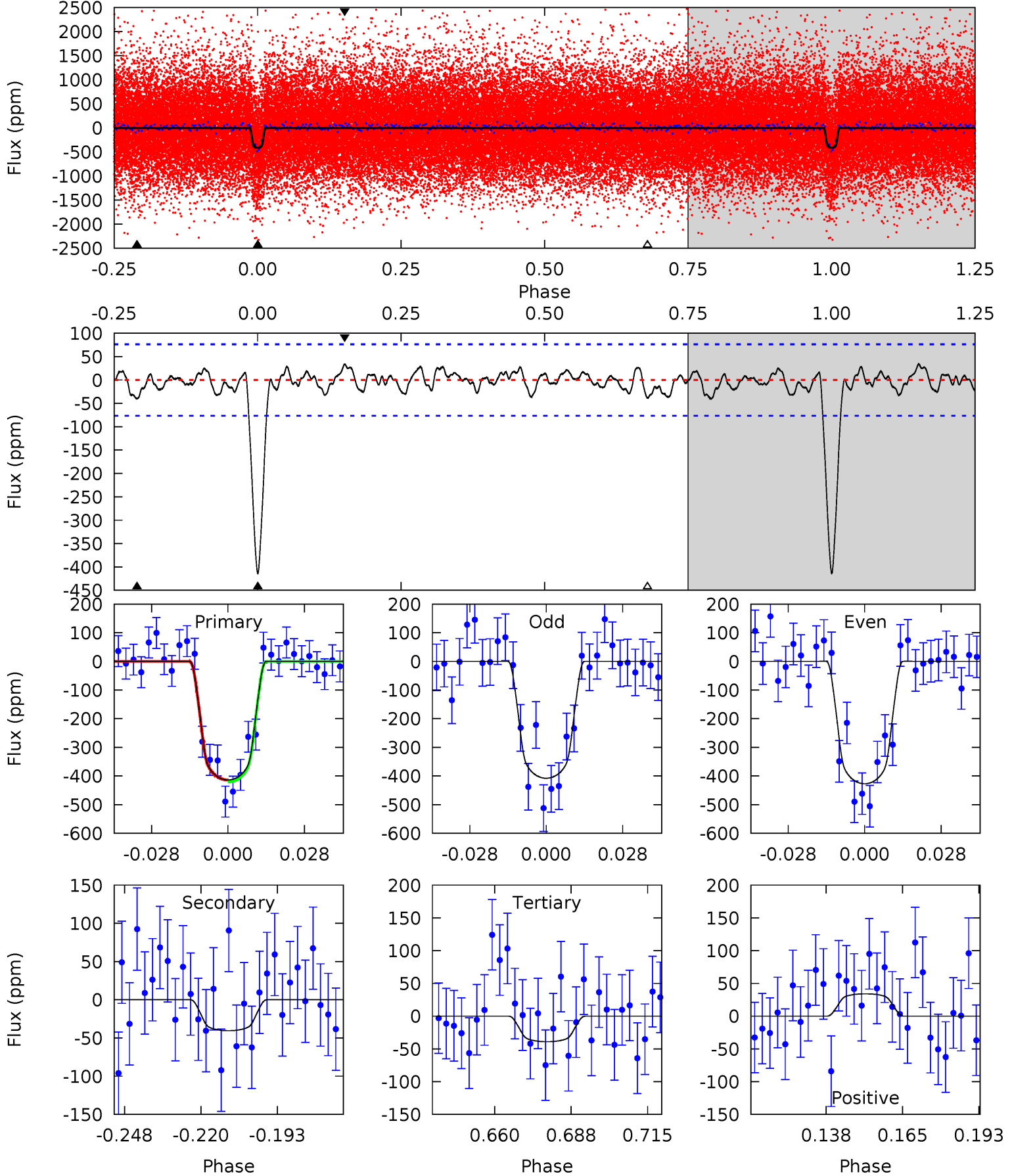
TCE 008263545-01 P= 4.445914 Days $T_0=131.738948$ (BKJD)



DV Model-Shift Uniqueness Test

008263545-01, P = 4.445881 Days, E = 131.744991 Days

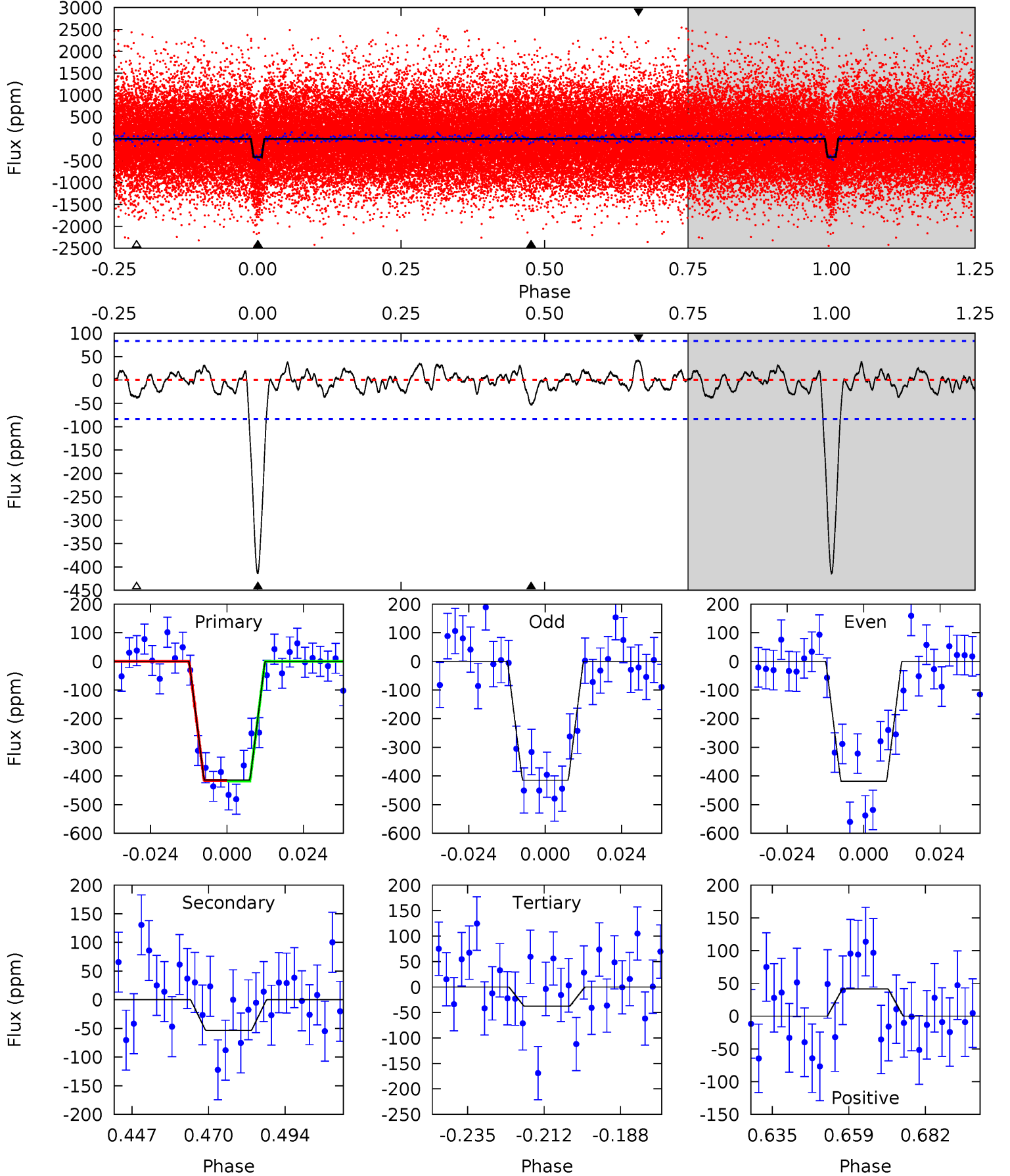
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.2	2.56	2.47	2.15	4.83	2.20	1.00	23.7	24.0	0.09	0.40	0.61	0.99	0.08	0.21



Alt Model-Shift Uniqueness Test

008263545-01, P = 4.445914 Days, E = 131.738948 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	3.12	2.19	2.42	4.86	2.26	0.92	21.9	21.7	0.92	0.70	0.12	1.03	0.09	0.04



Stellar Parameters For KIC 008263545

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5918^{+187}_{-208}	$4.544^{+0.036}_{-0.204}$	$-0.260^{+0.300}_{-0.300}$	$0.865^{+0.258}_{-0.086}$	$0.956^{+0.119}_{-0.119}$	$2.079^{+0.416}_{-1.084}$
	+3%/-4%	+1%/-4%	+115%/-115%	+30%/-10%	+12%/-12%	+20%/-52%
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 008263545-01 / KOI 2822.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-40 ± 16	$2.18^{+0.58}_{-0.51}$	1524^{+108}_{-74}	3575^{+457}_{-352}	12^{+11}_{-6}
Alt.	-53 ± 17	$2.06^{+0.59}_{-0.51}$	1531^{+105}_{-74}	3857^{+488}_{-344}	18^{+16}_{-8}

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

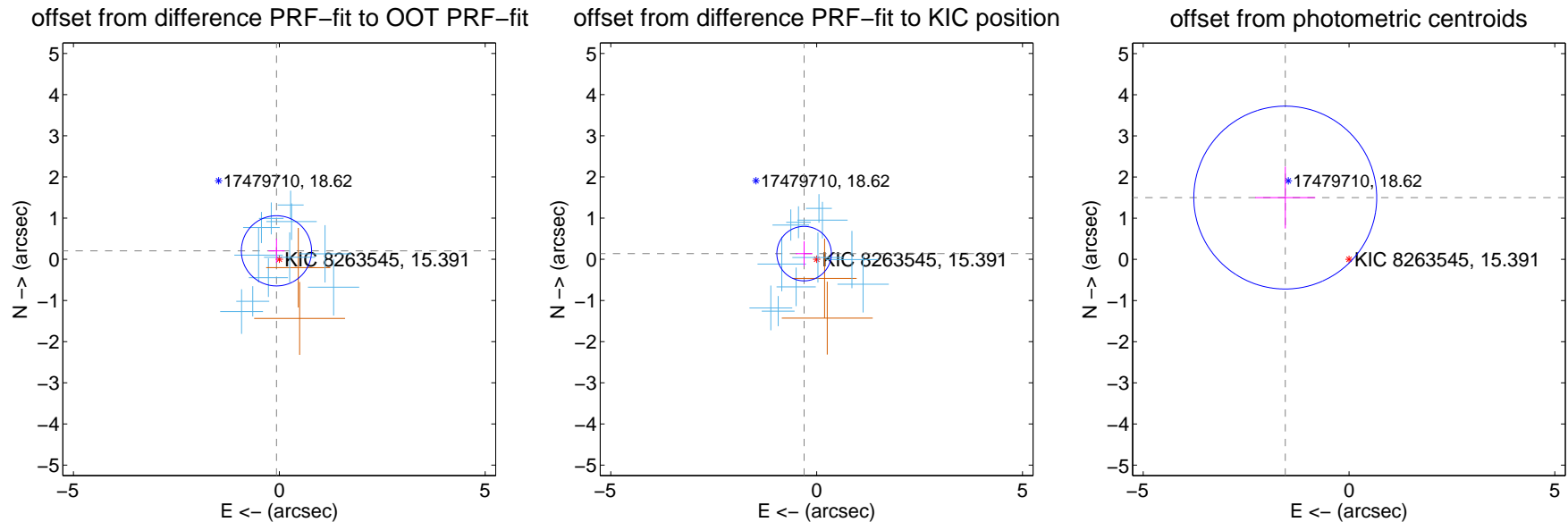
DV Centroid Data

Supplemental centroid analysis for 008263545-01. Kepler magnitude: 15.39. Transit SNR 19.45

There are 11 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	0.217 ± 0.284	0.76	0.069 ± 0.194	0.206 ± 0.293
PRF-fit source offset from KIC position	0.334 ± 0.220	1.52	0.305 ± 0.200	0.138 ± 0.300
photometric centroid source offset	2.16 ± 0.74	2.91	1.55 ± 0.73	1.50 ± 0.75



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



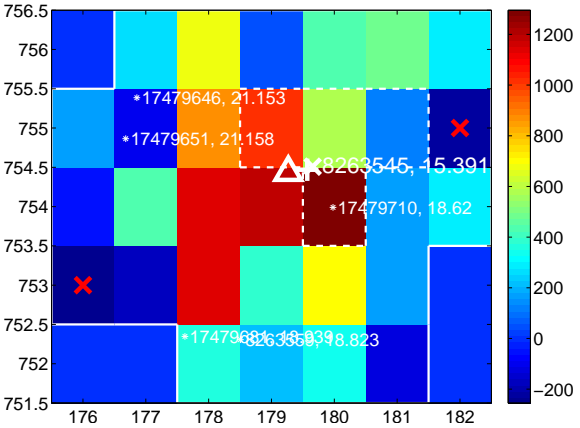
Q3 no difference image



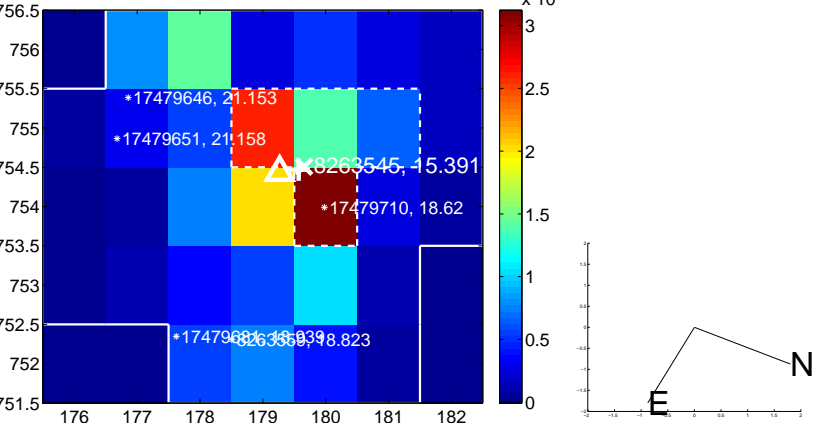
Q3 no OOT image



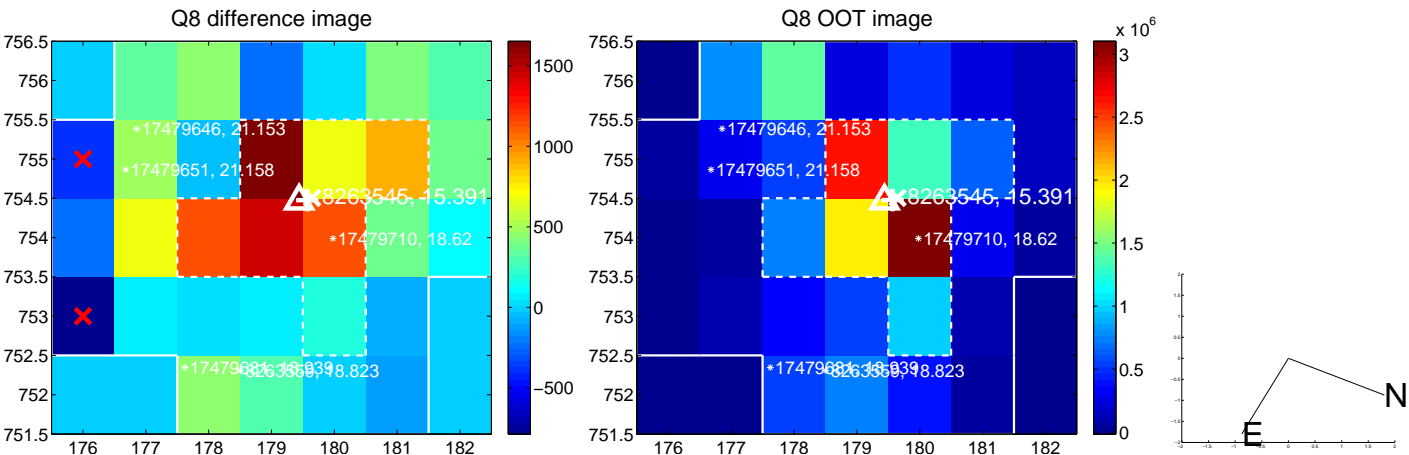
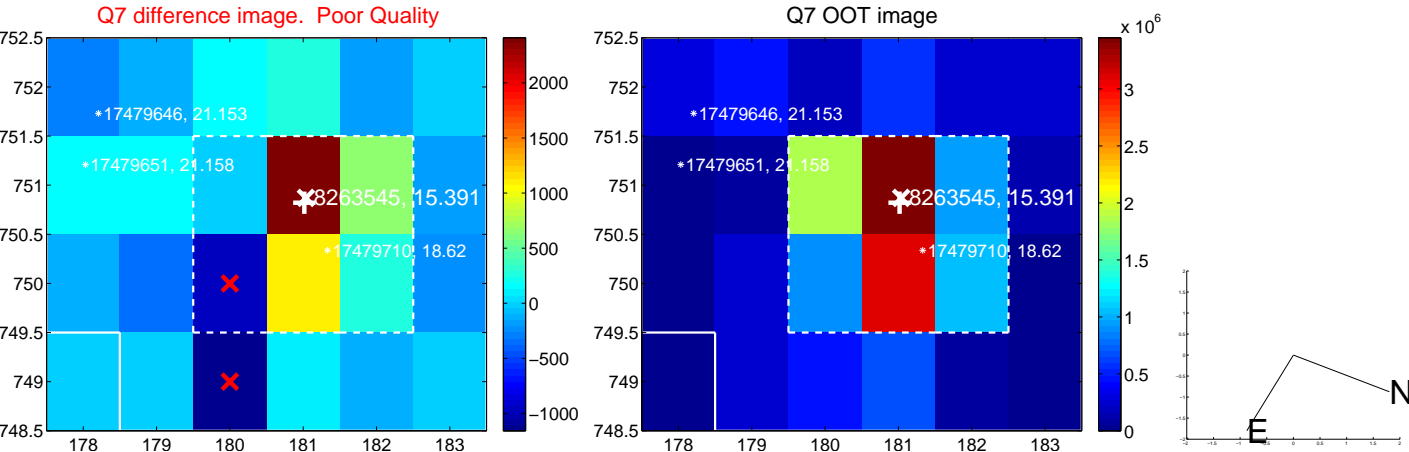
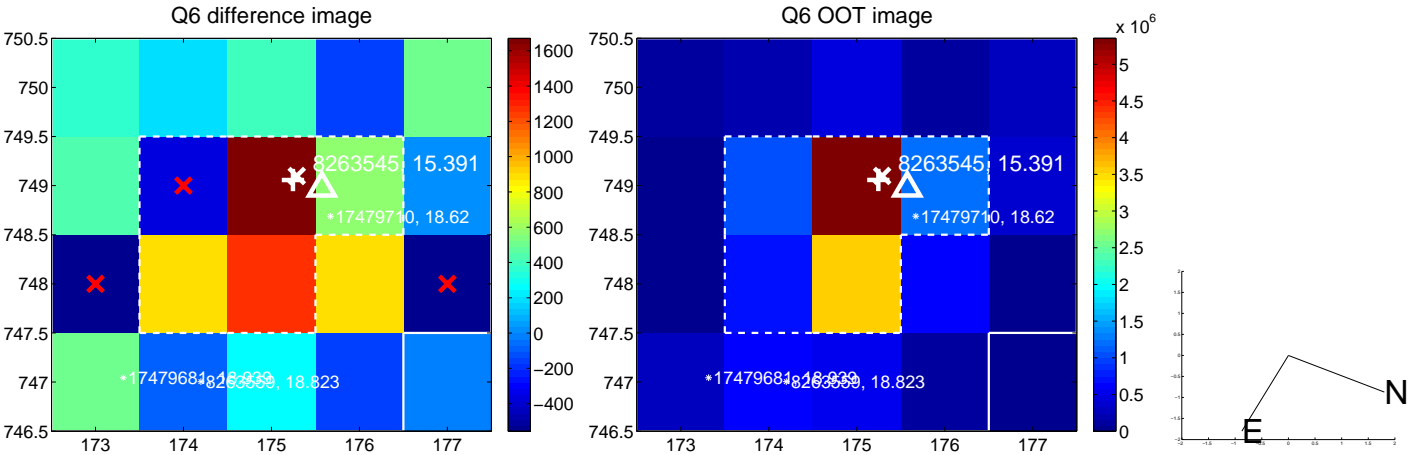
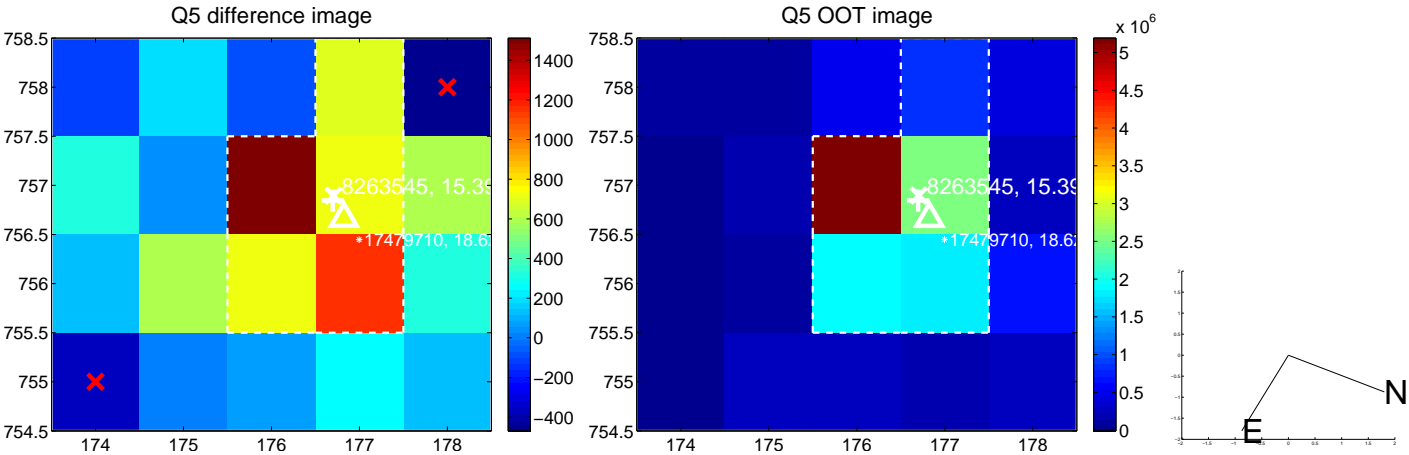
Q4 difference image



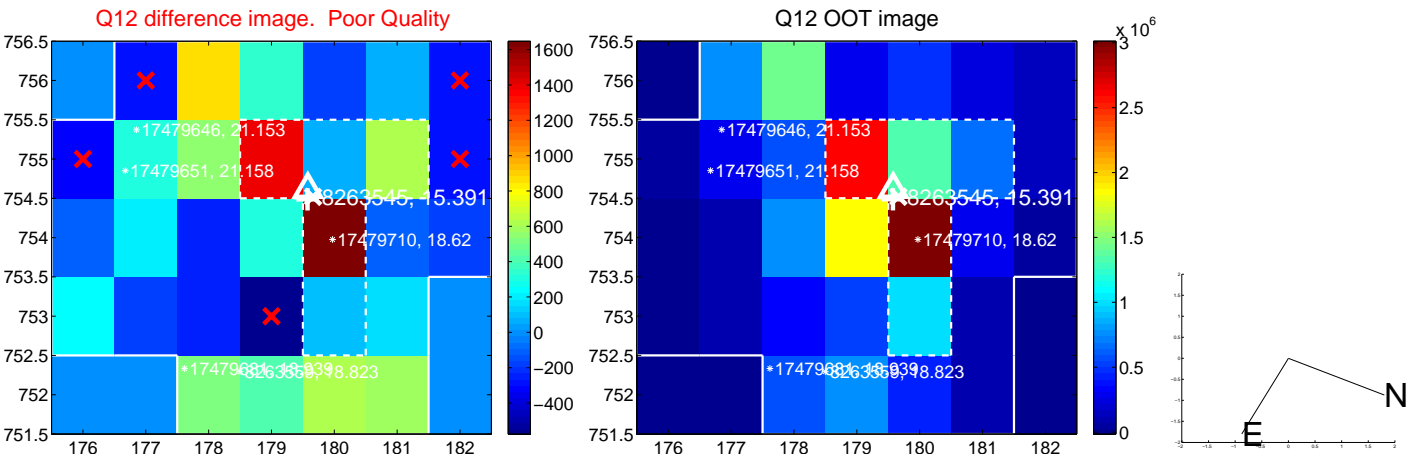
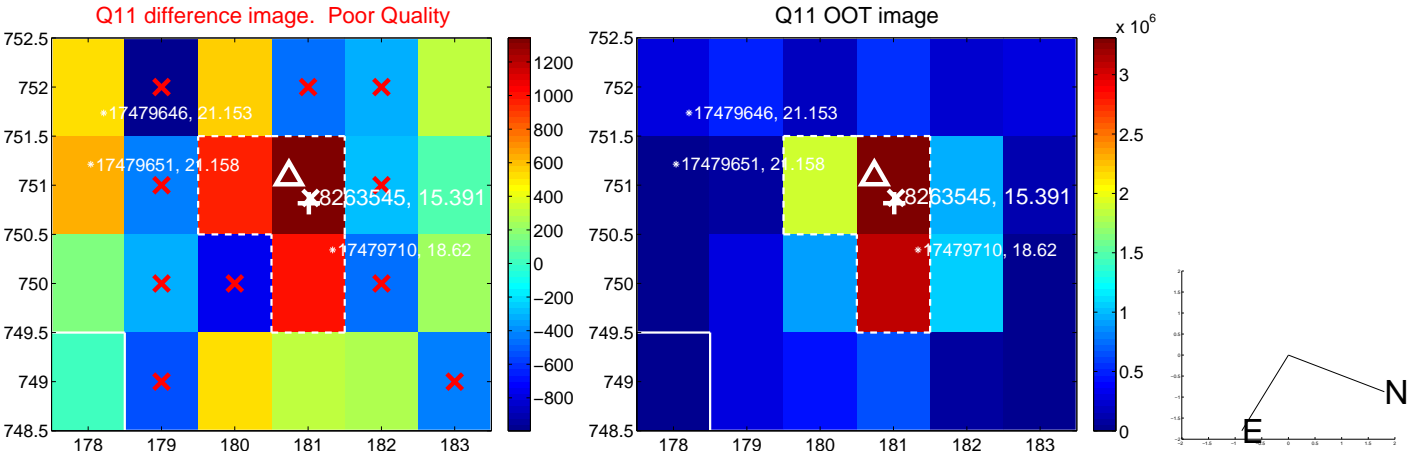
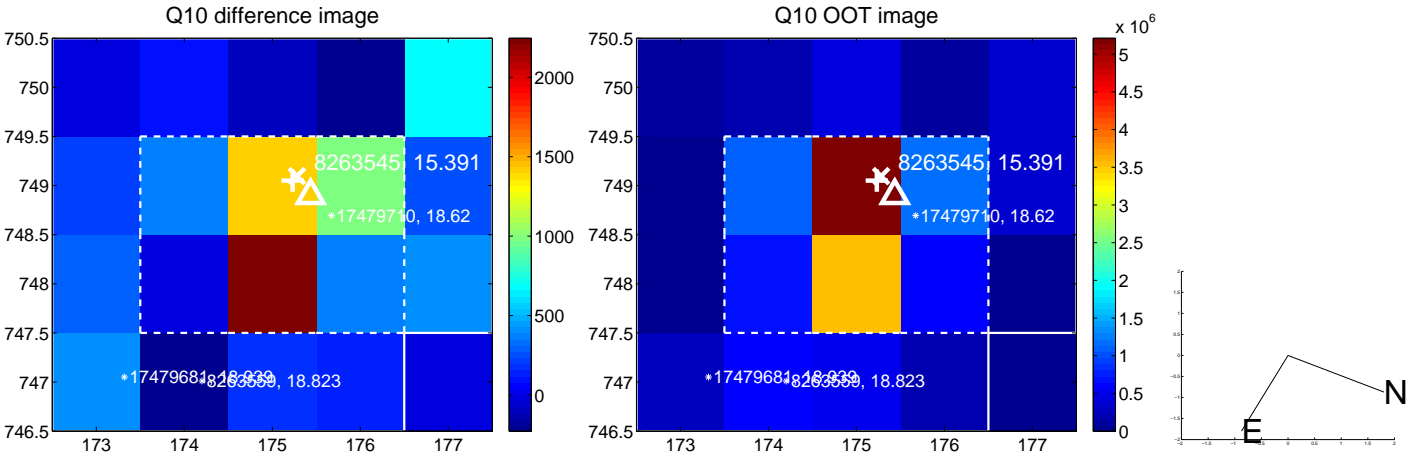
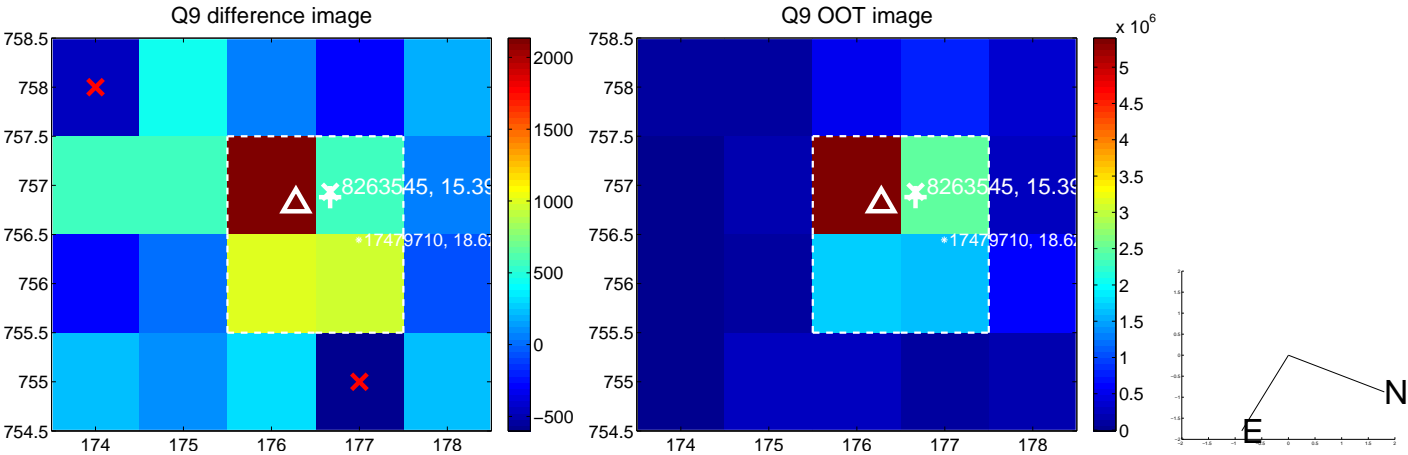
Q4 OOT image



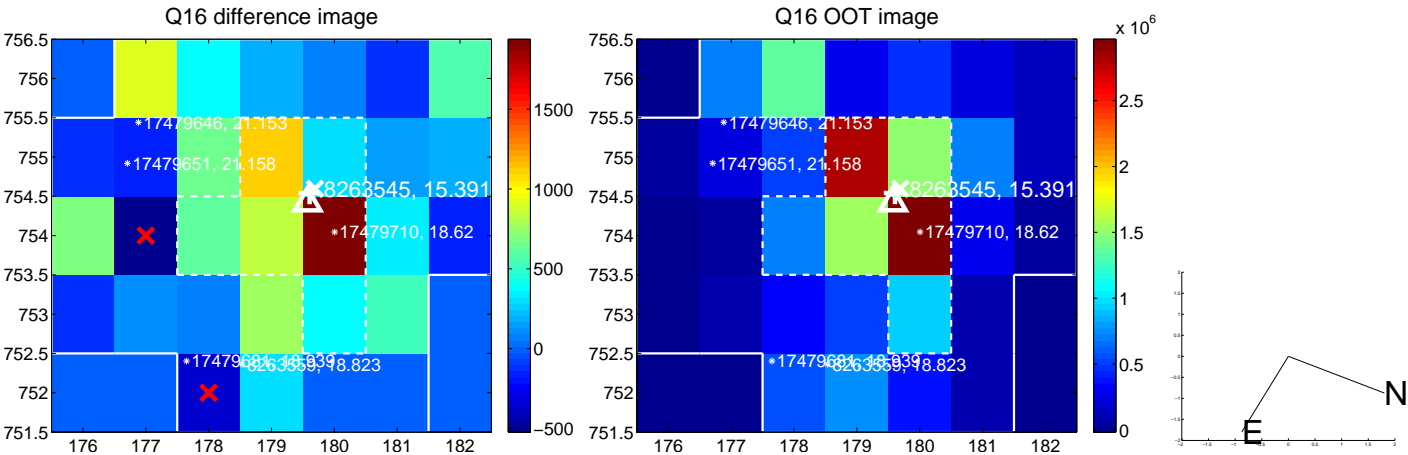
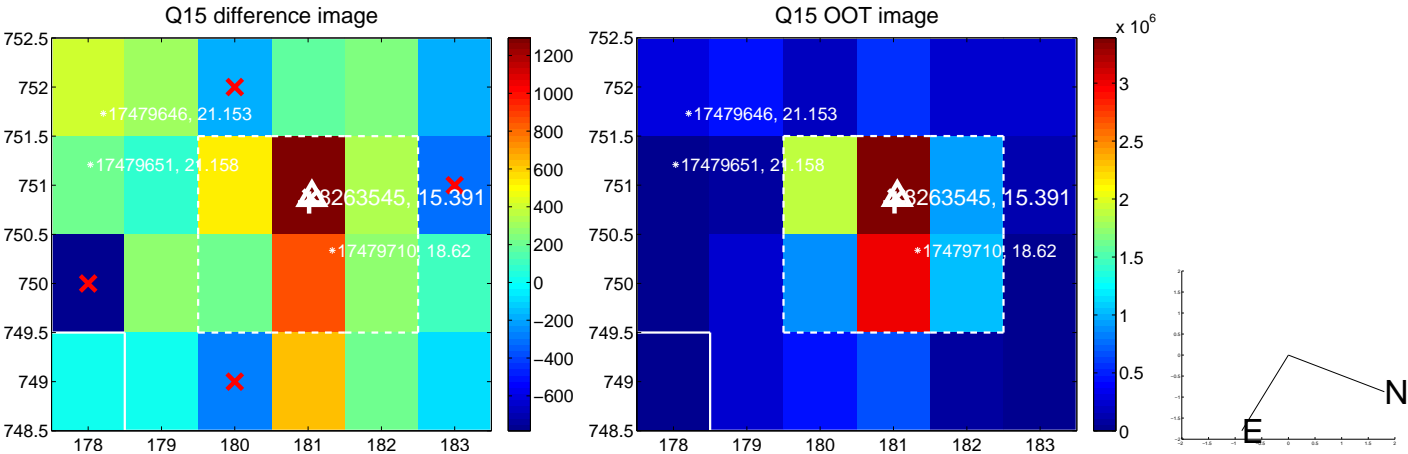
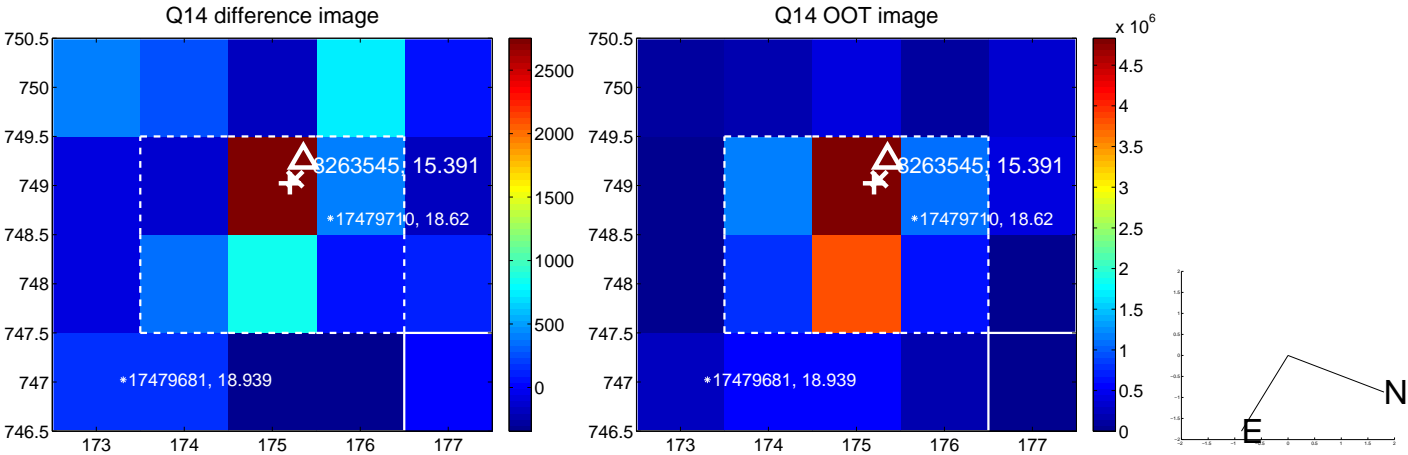
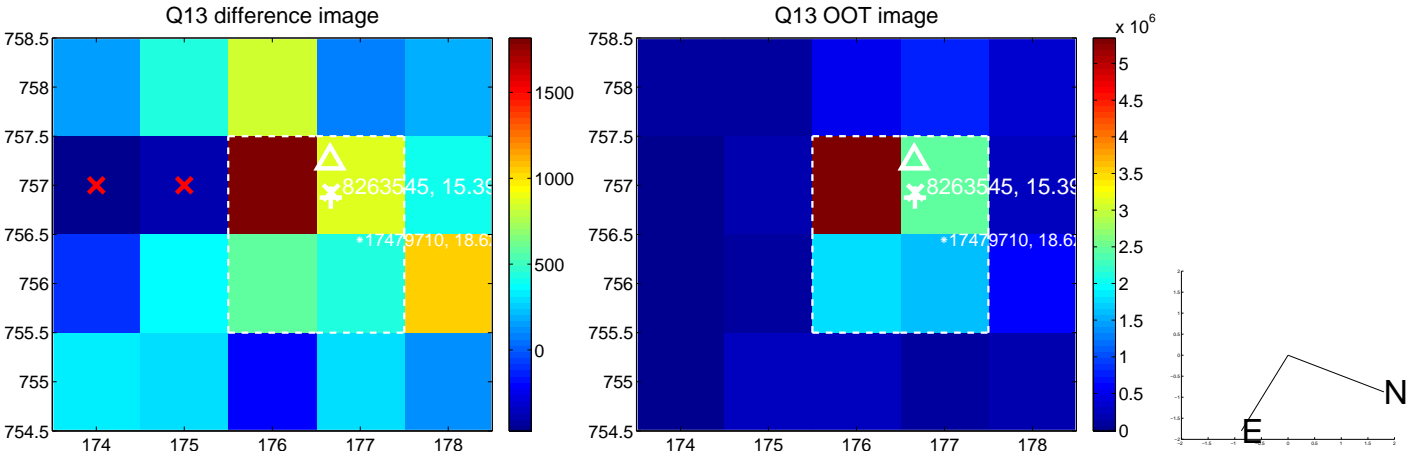
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



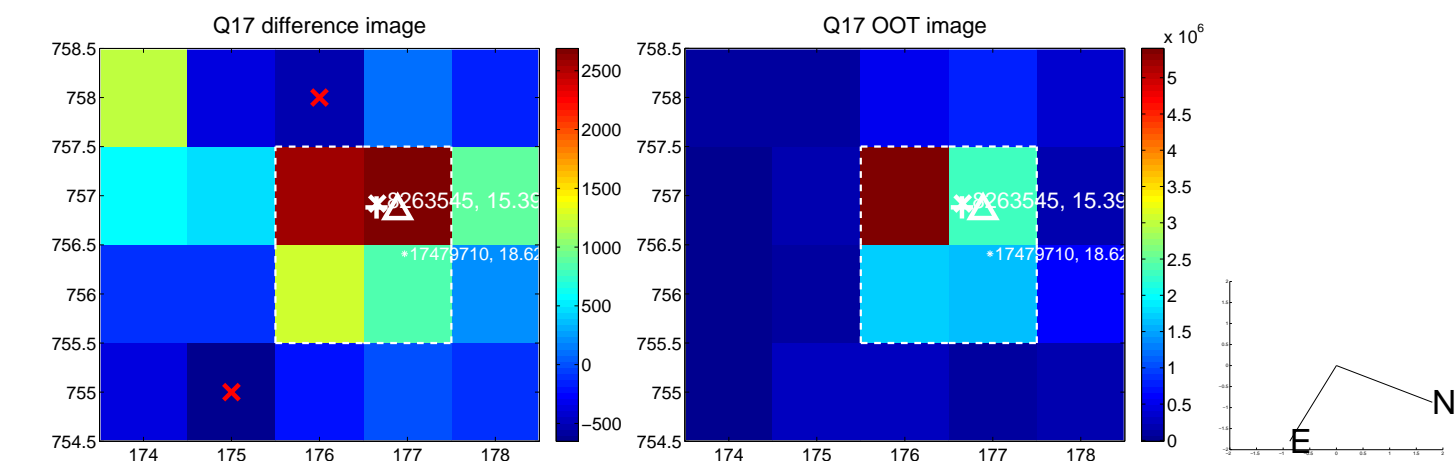
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



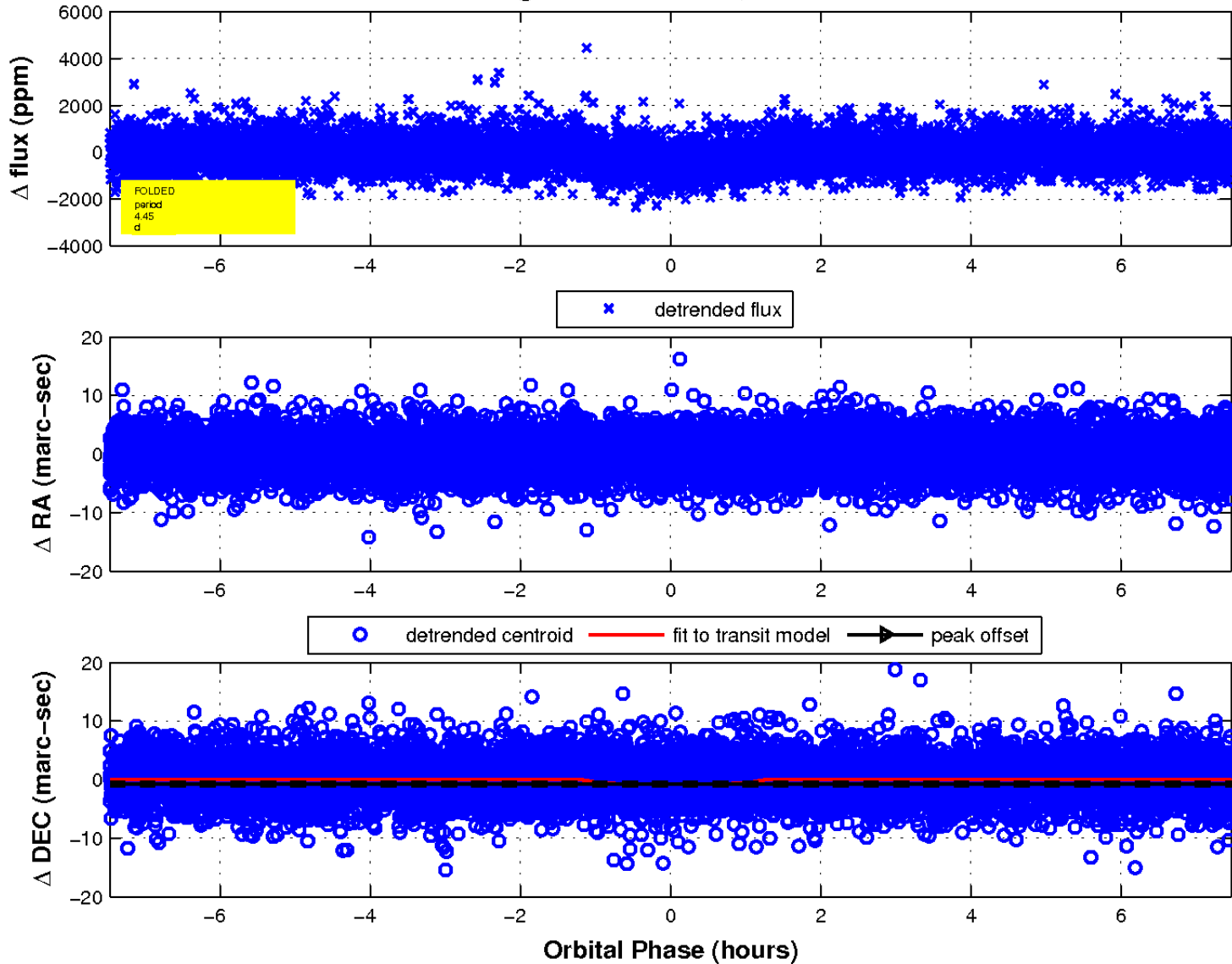
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

