

KIC 007801070

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})
007801070-01	OBS	4361.01	75.878032	194.681719	1213.7	1.638	11.2	13.3	0.97	5579	5.31	7.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007801070-01	OBS	PC	0.97	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 007801070-01

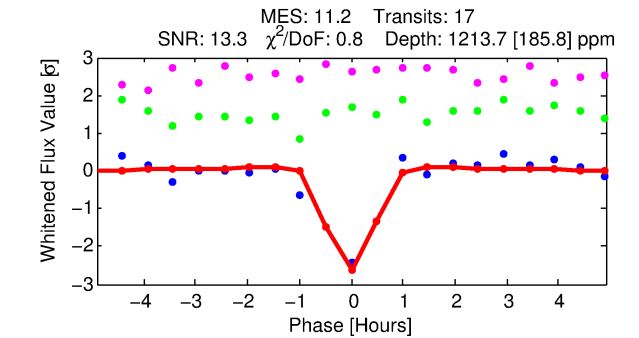
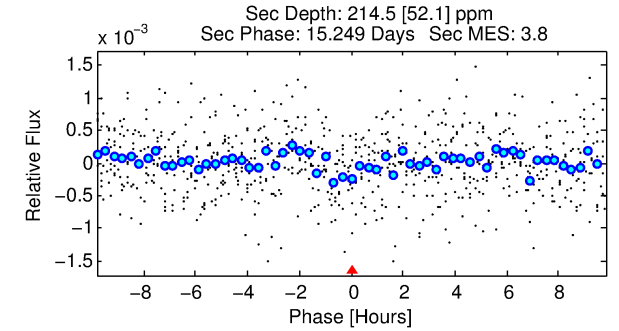
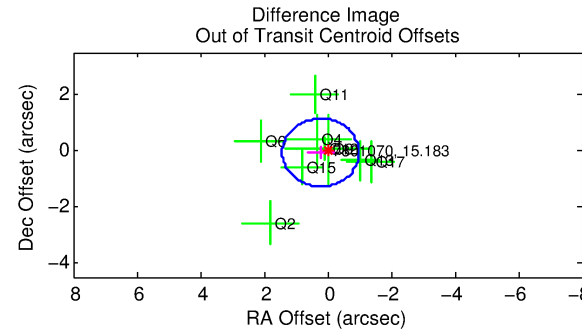
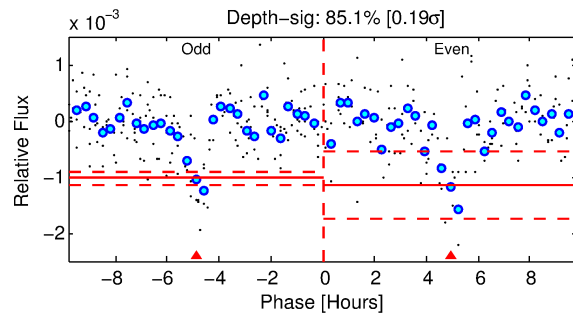
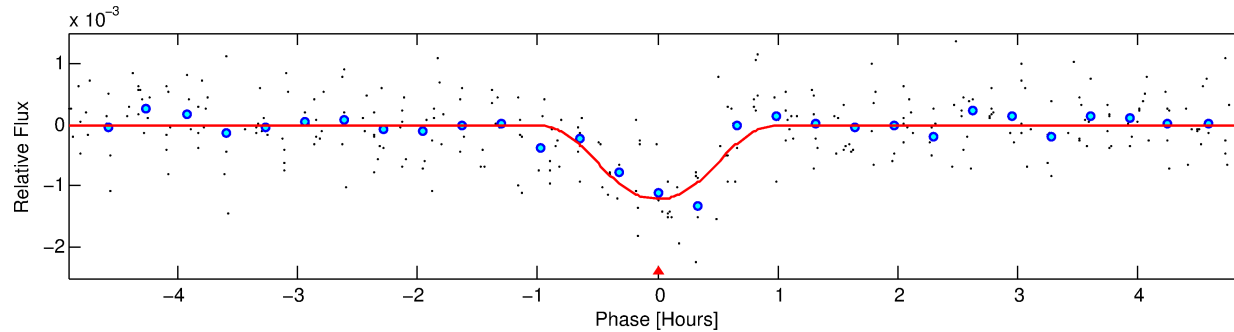
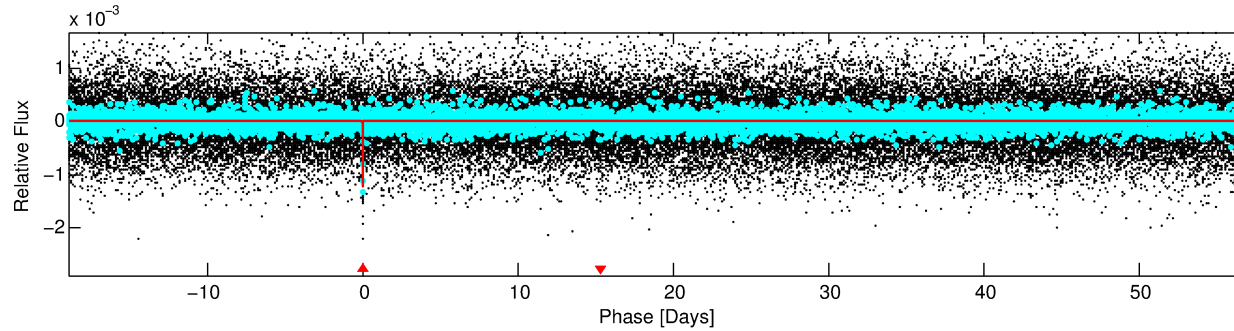
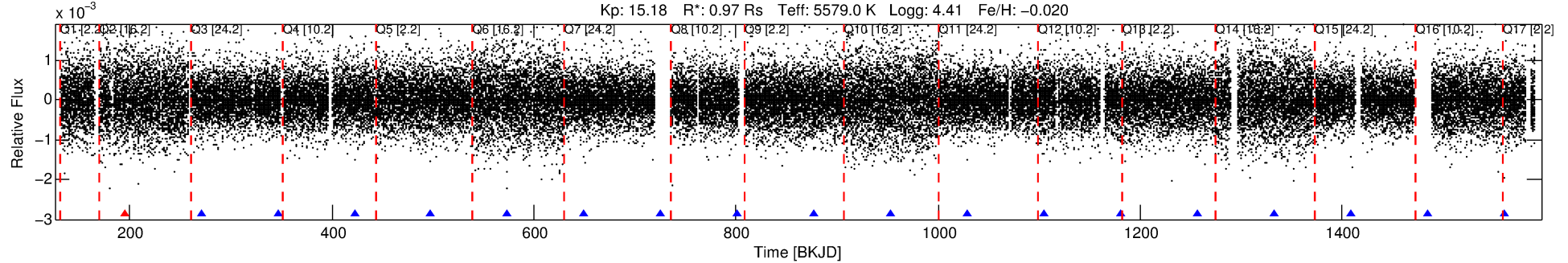
No Significant Match Found

DV One-Page Summary

KIC: 7801070 Candidate: 1 of 1 Period: 75.878 d

KOI: K04361.01 Corr: 0.907

Kp: 15.18 R*: 0.97 Rs Teff: 5579.0 K Logg: 4.41 Fe/H: -0.020



DV Fit Results:

Period = 75.87803 [0.00030] d
Epoch = 194.6817 [0.0032] BKJD
Rp/R* = 0.0500 [0.1179]
a/R* = 135.80 [125.36]
b = 0.98 [0.23]
Seff = 7.19 [2.52]
Teq = 418 [37] K
Rp = 5.31 [12.58] Re
a = 0.3377 [0.0764] AU
Ag = 477.78 [2259.23] [0.21σ]
Teffp = 3018 [3561] K [0.73σ]

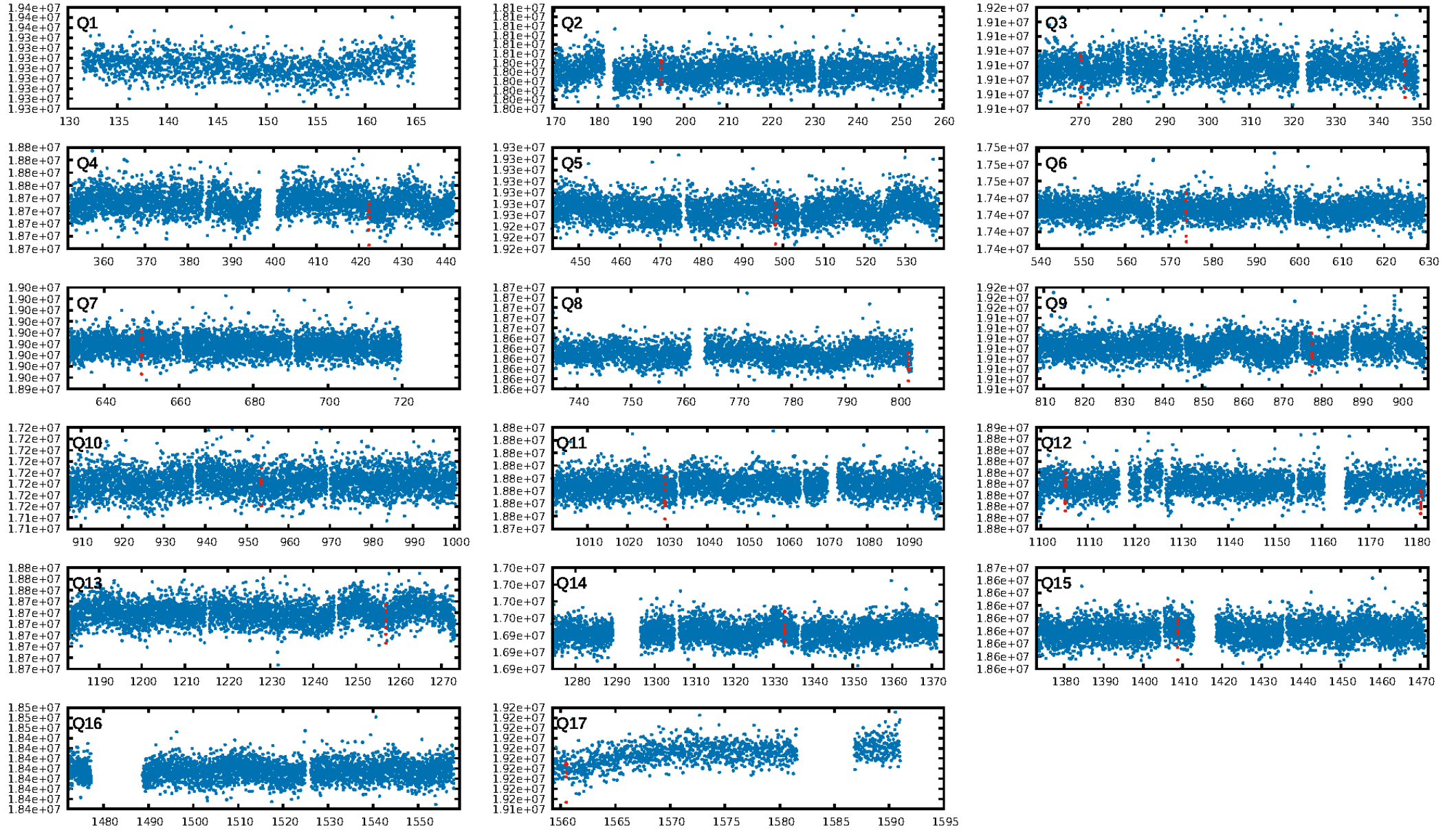
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 64.5%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: 1.47e-28
RollingBand-fgt: 0.94 [15/16]
GhostDiagnostic-chr: 3.325
Centroid-sig: 11.8%
Centroid-so: 1.760 arcsec [1.52σ]
OotOffset-rm: 0.232 arcsec [0.58σ]
KicOffset-rm: 0.386 arcsec [0.99σ]
OotOffset-st: 2/2/2/3 [9]
KicOffset-st: 2/2/2/3 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [14/14]

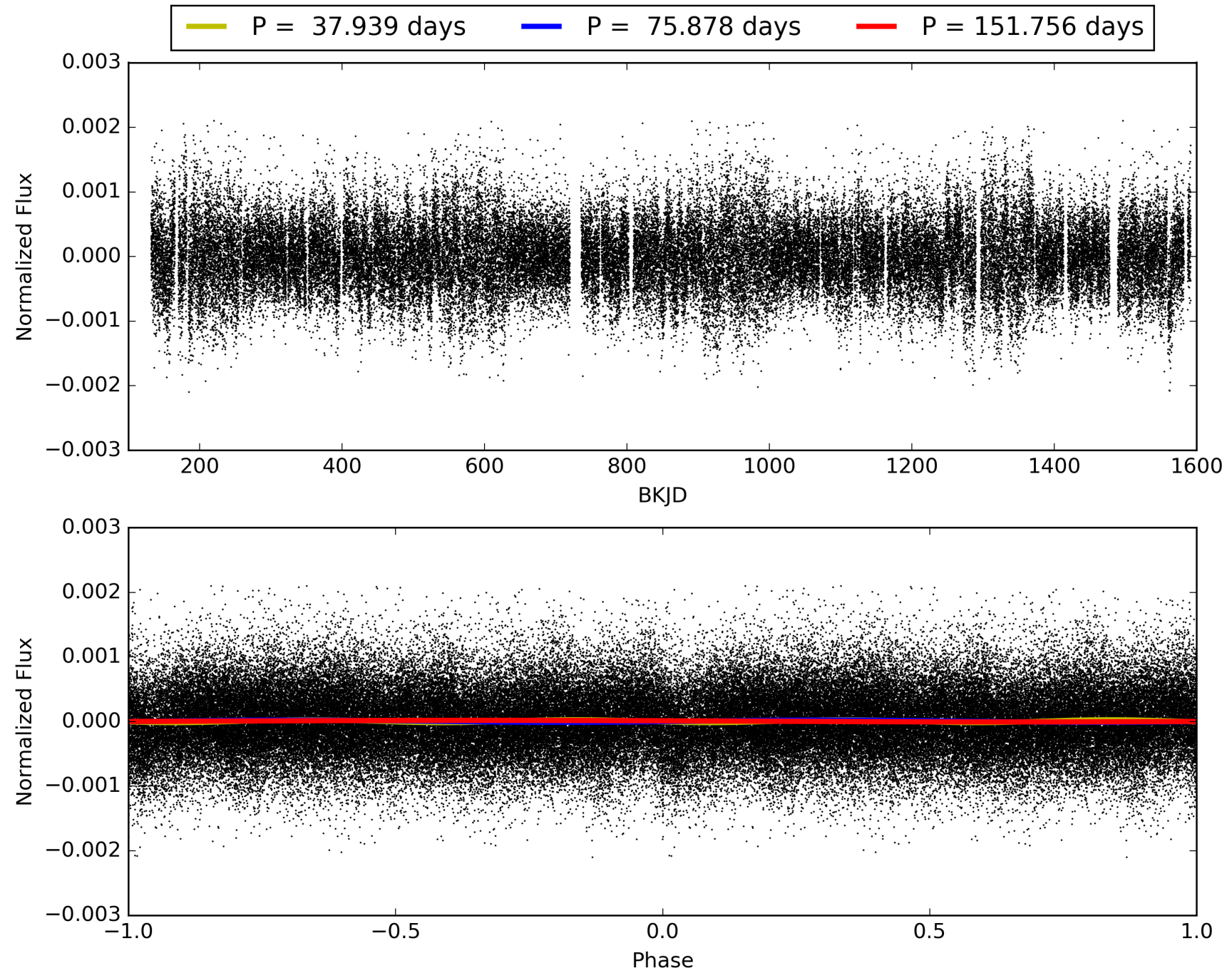
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:00:09 Z

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

TCE 007801070-01, PDC Light Curves

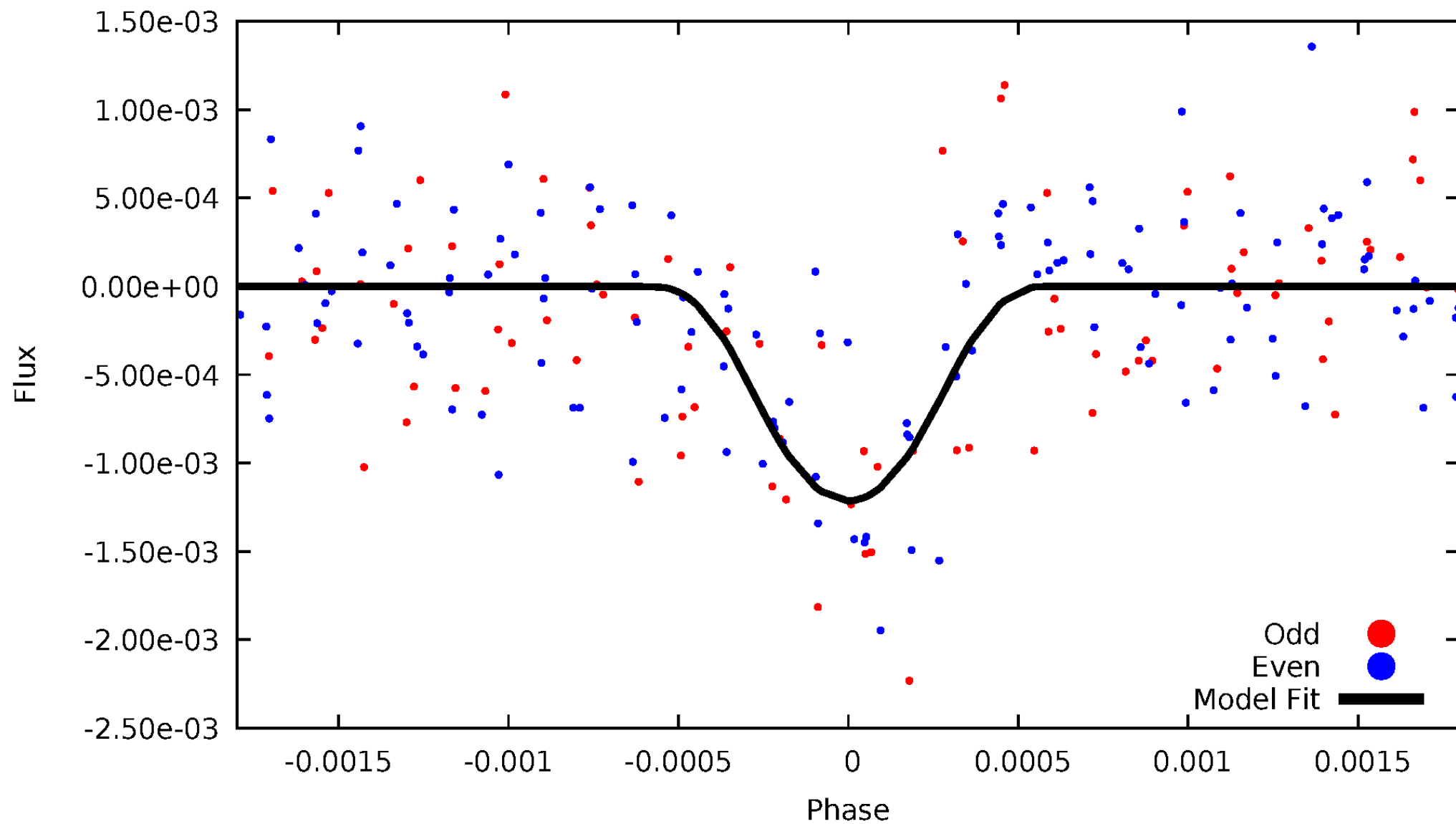


TCE 007801070-01



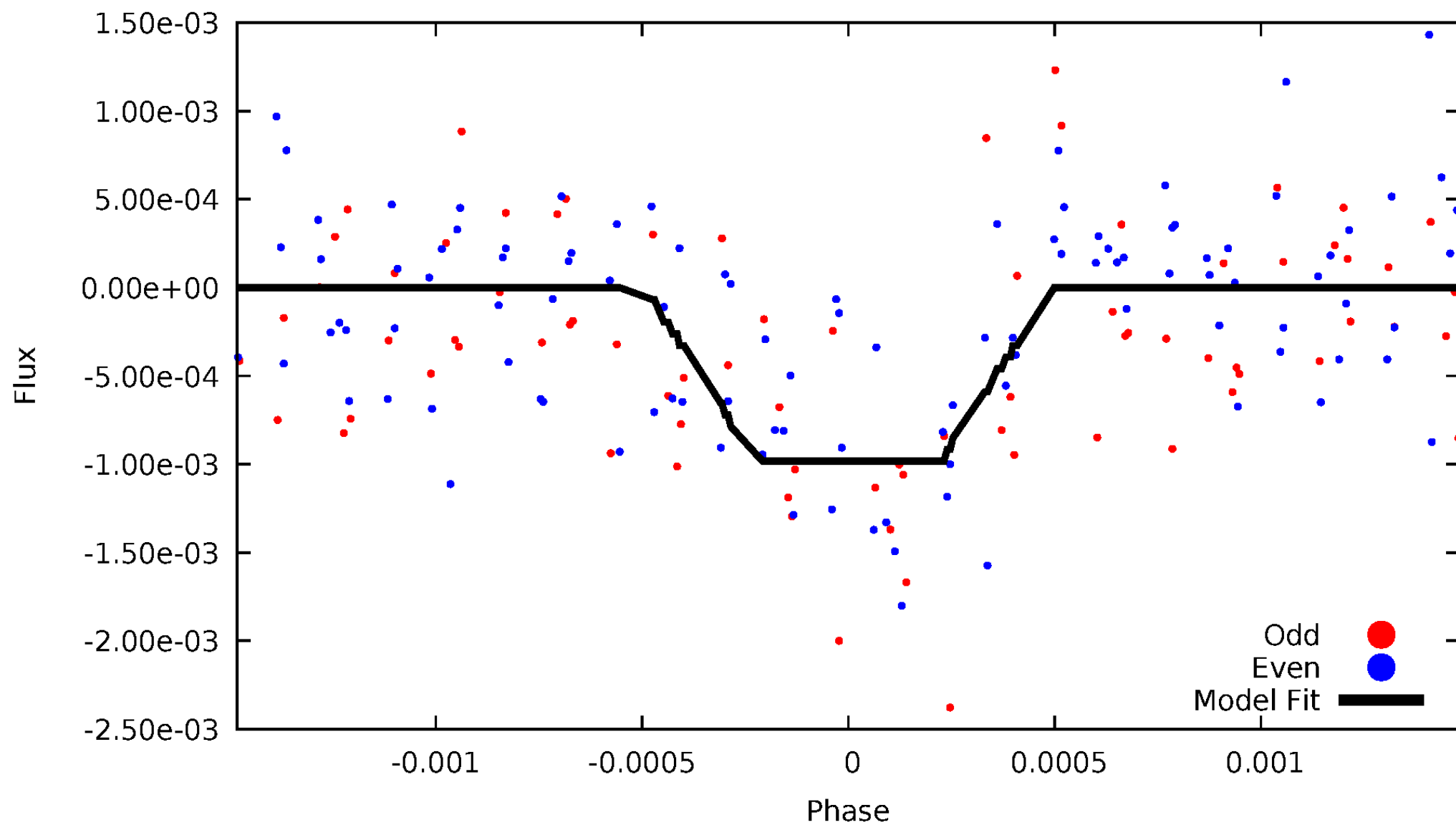
DV Odd/Even

TCE 007801070-01



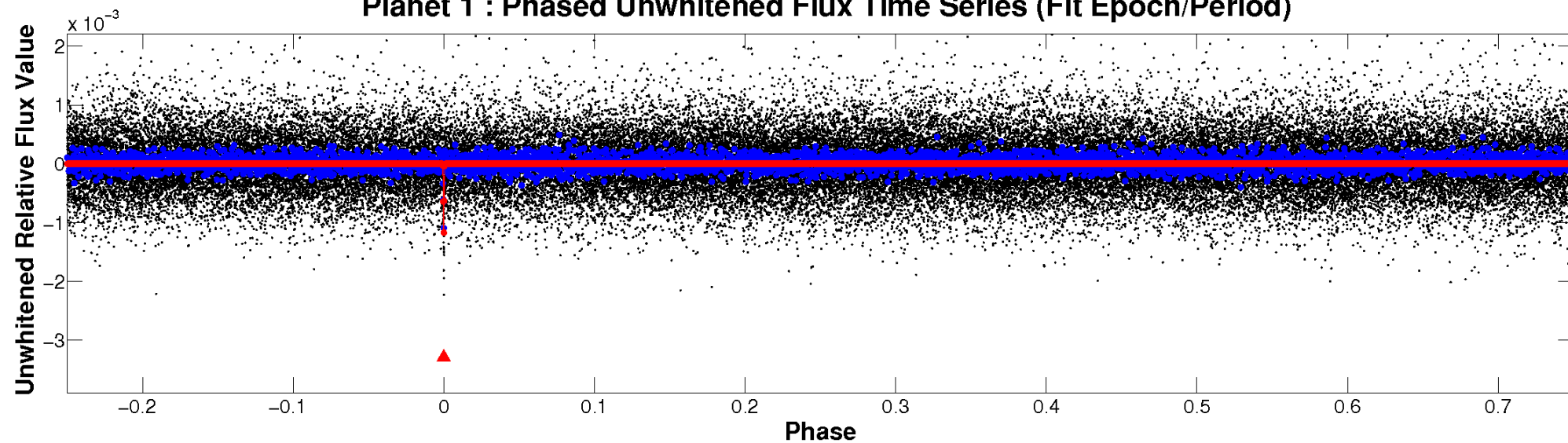
ALT Odd/Even

TCE 007801070-01

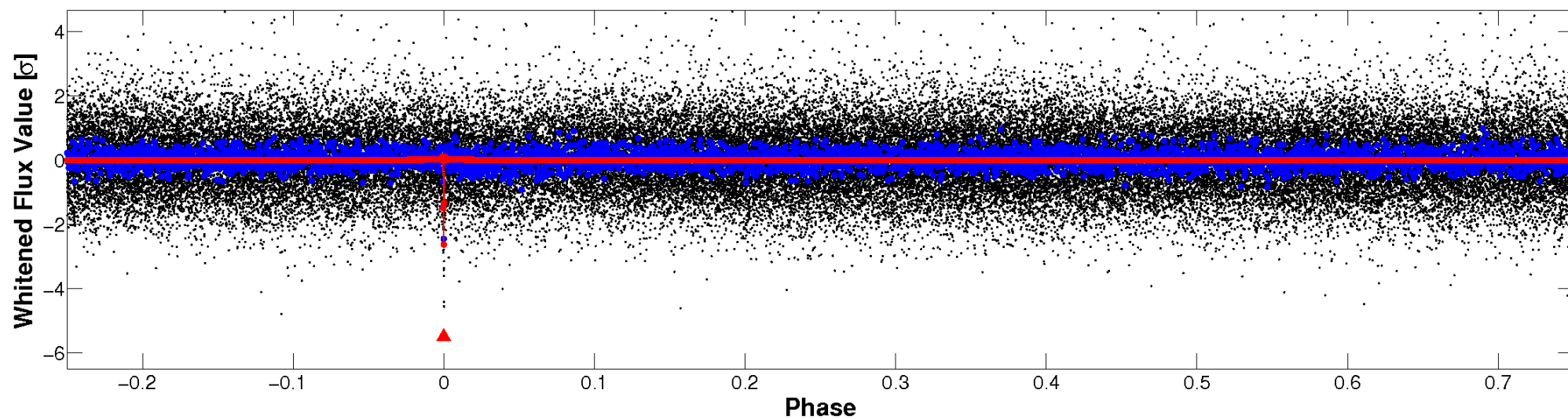


Non-Whitened Vs. Whitened Light Curve

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

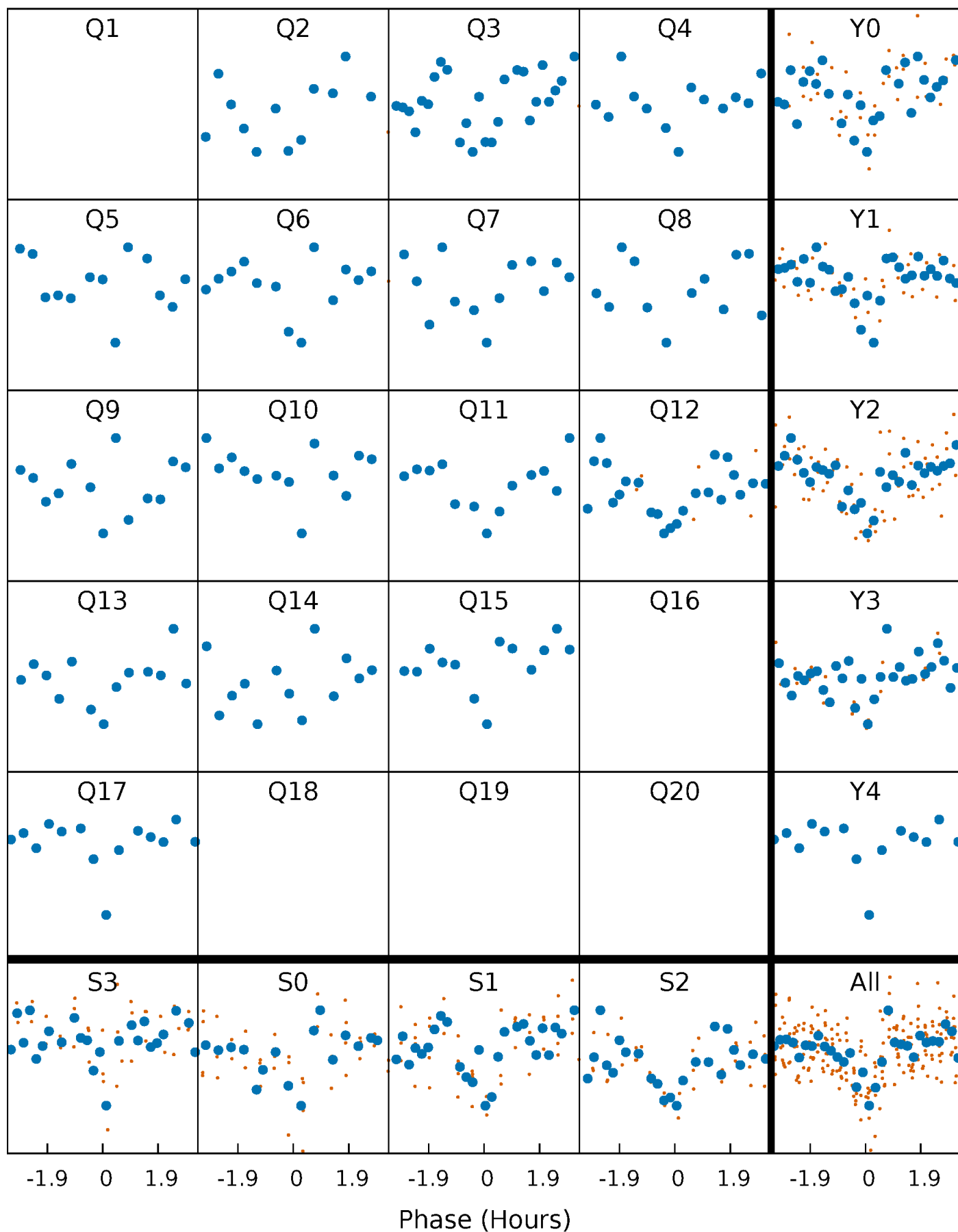


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



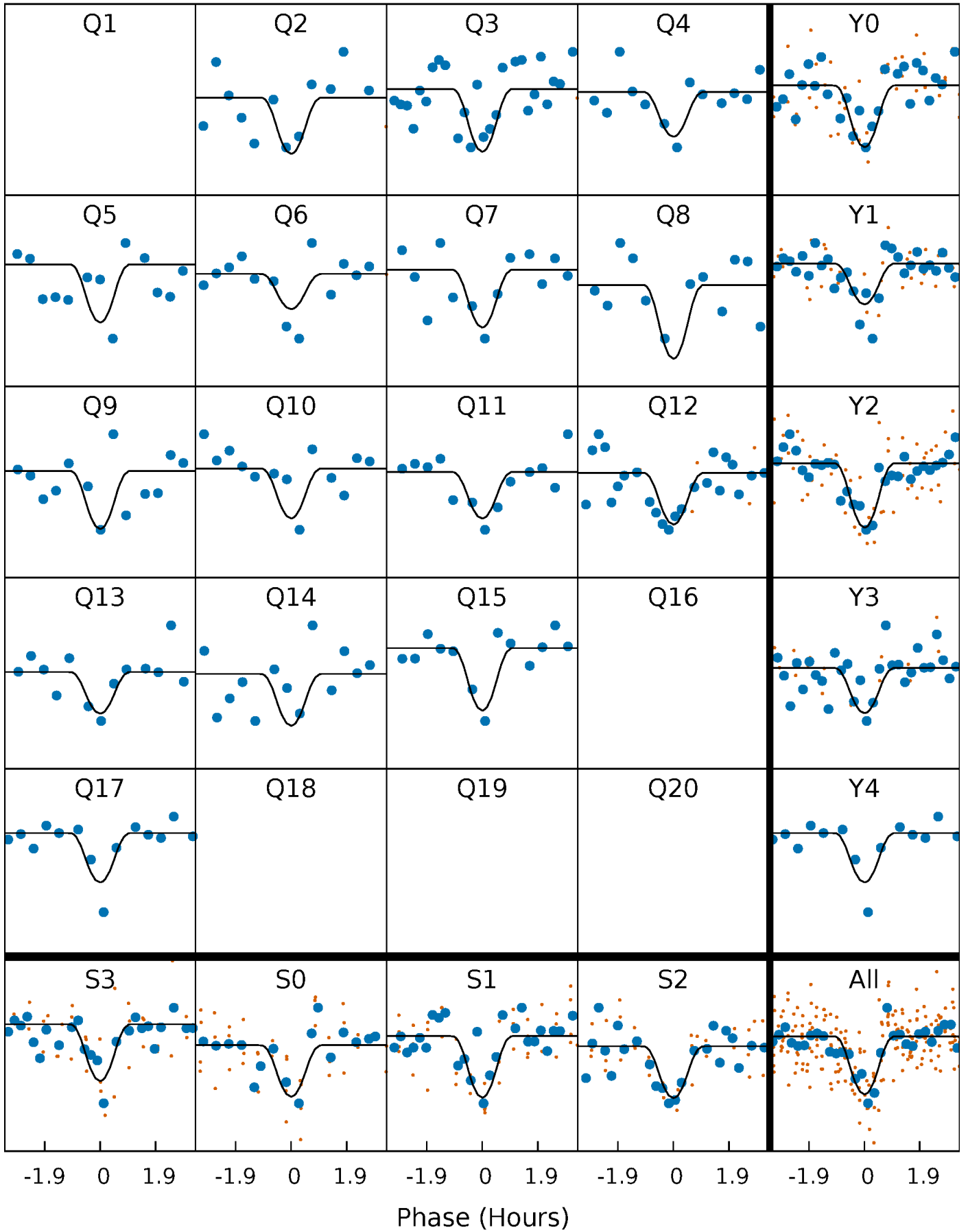
PDC Quarter-Phased Transit Curves

TCE 007801070-01 P= 75.878032 Days $T_0=194.681719$ (BKJD)



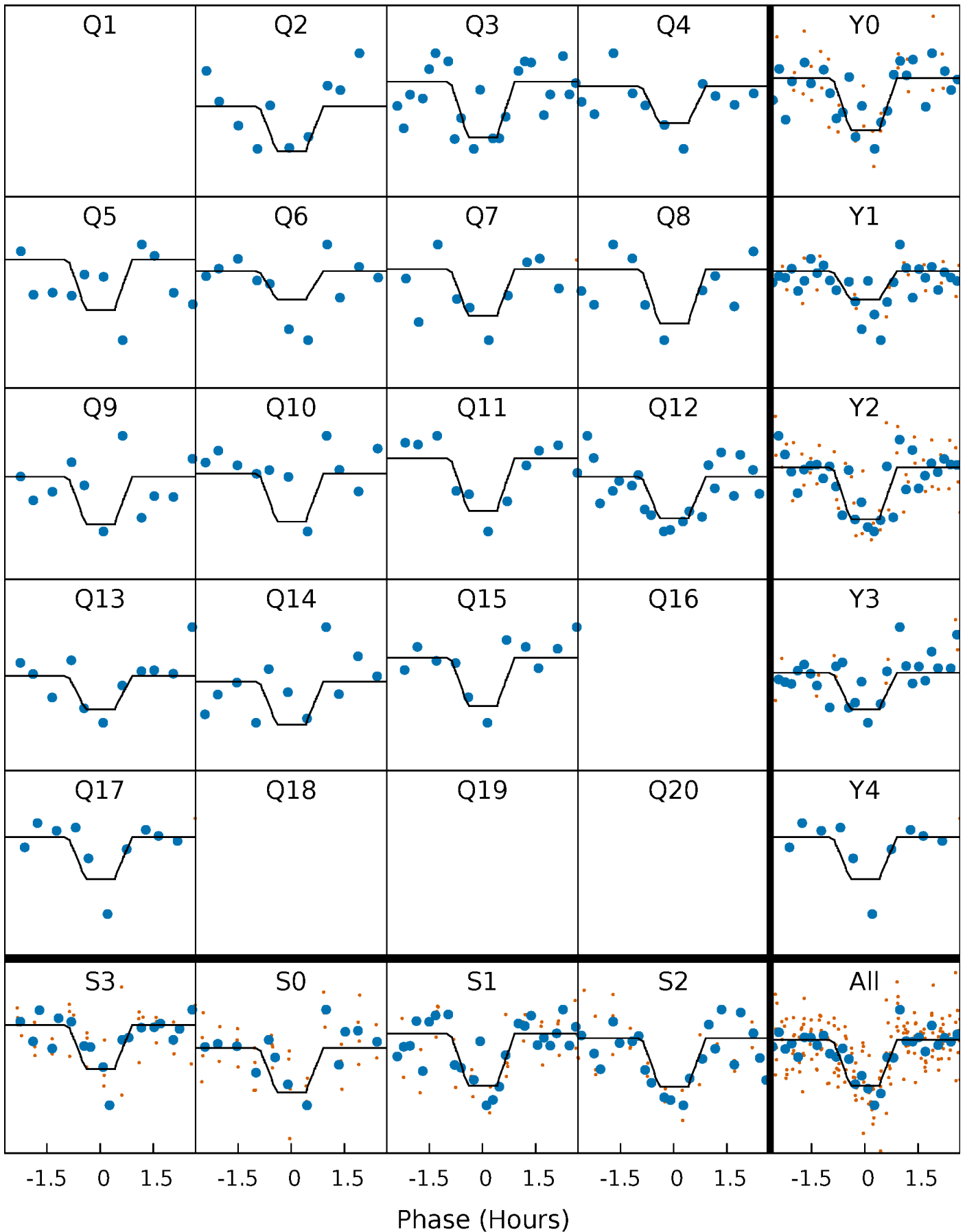
DV Quarter-Phased Transit Curves

TCE 007801070-01 P= 75.878032 Days $T_0=194.681719$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

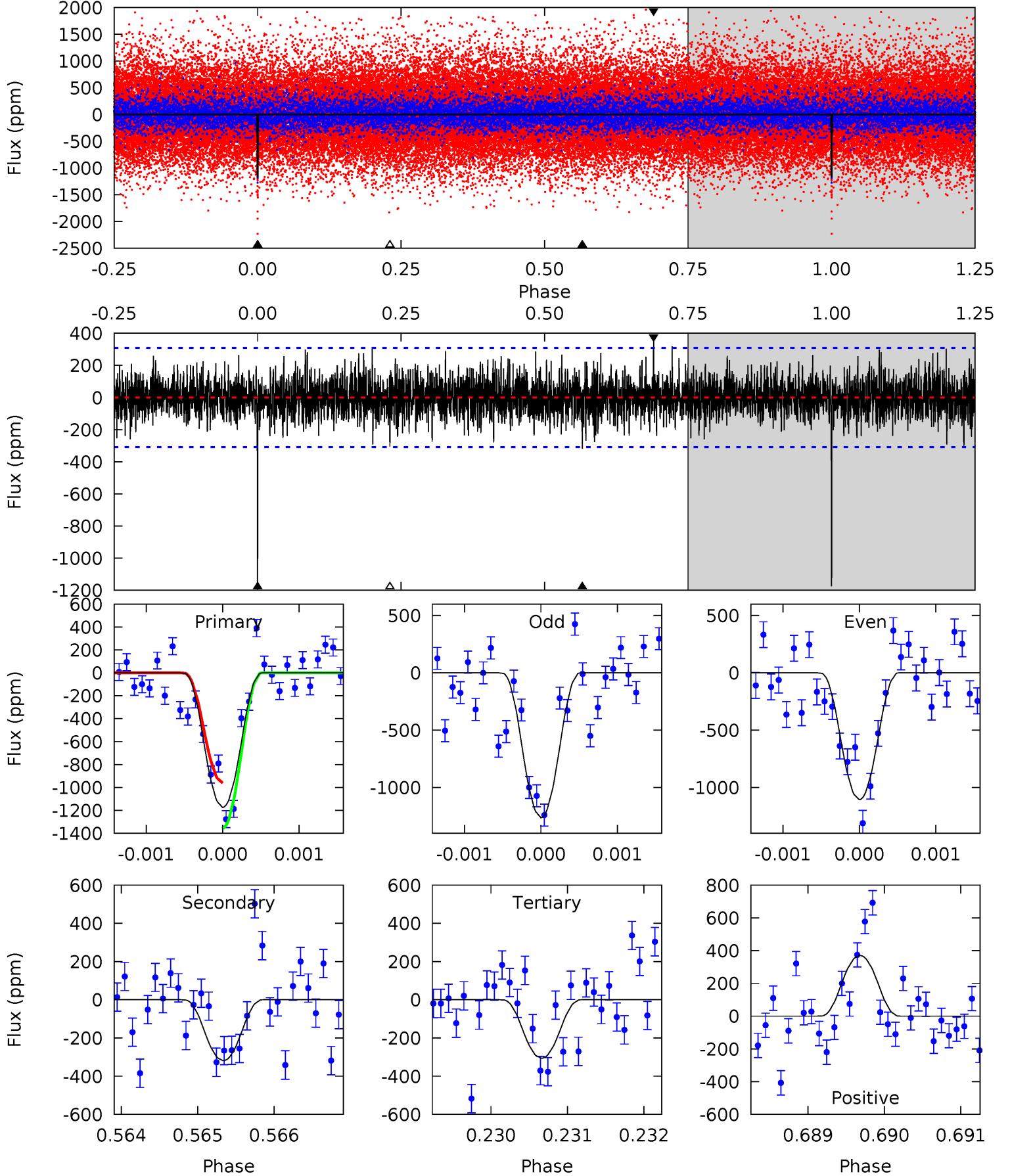
TCE 007801070-01 P= 75.878227 Days $T_0=194.675647$ (BKJD)



DV Model-Shift Uniqueness Test

007801070-01, $P = 75.878032$ Days, $E = 118.803687$ Days

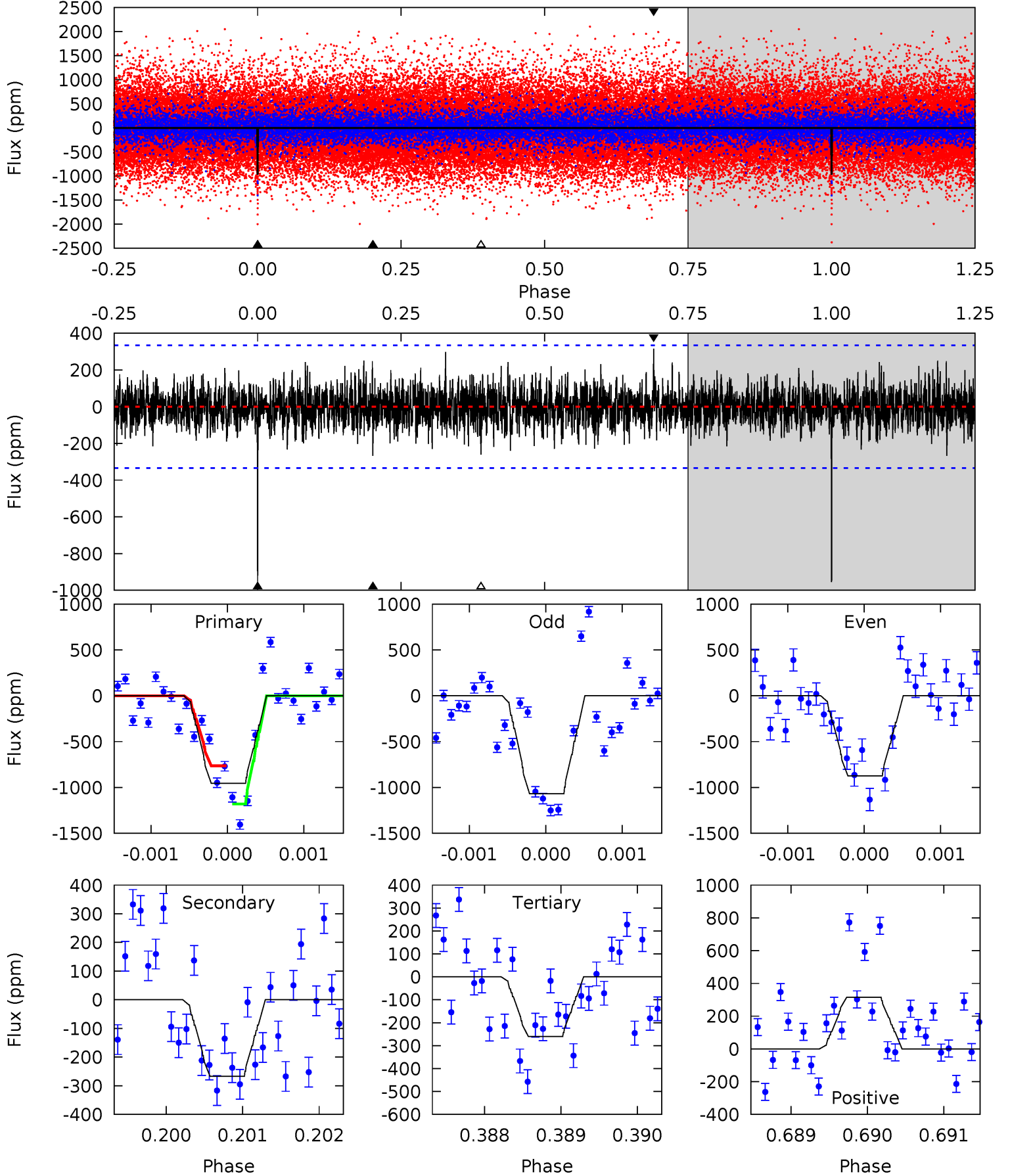
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	5.60	5.38	6.50	5.43	3.26	1.54	15.2	14.1	0.22	-0.90	1.36	0.96	0.24	3.48



Alt Model-Shift Uniqueness Test

007801070-01, $P = 75.878227$ Days, $E = 118.797420$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	4.35	4.25	5.14	5.46	3.30	1.21	11.3	10.4	0.11	-0.79	1.57	0.93	0.25	3.40



Stellar Parameters For KIC 007801070

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5579^{+166}_{-166}	$4.413^{+0.120}_{-0.180}$	$-0.020^{+0.250}_{-0.300}$	$0.972^{+0.261}_{-0.141}$	$0.893^{+0.111}_{-0.074}$	$1.369^{+0.743}_{-0.655}$
	+3%/-3%	+3%/-4%	+1250%/-1500%	+27%/-15%	+12%/-8%	+54%/-48%
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 007801070-01 / KOI 4361.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-319 ± 57	$11.16^{+11.15}_{-7.65}$	587^{+44}_{-31}	2997^{+1371}_{-513}	161^{+1561}_{-122}
Alt.	-267 ± 61	$10.40^{+10.46}_{-7.39}$	586^{+40}_{-31}	2964^{+1426}_{-487}	155^{+1615}_{-118}

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

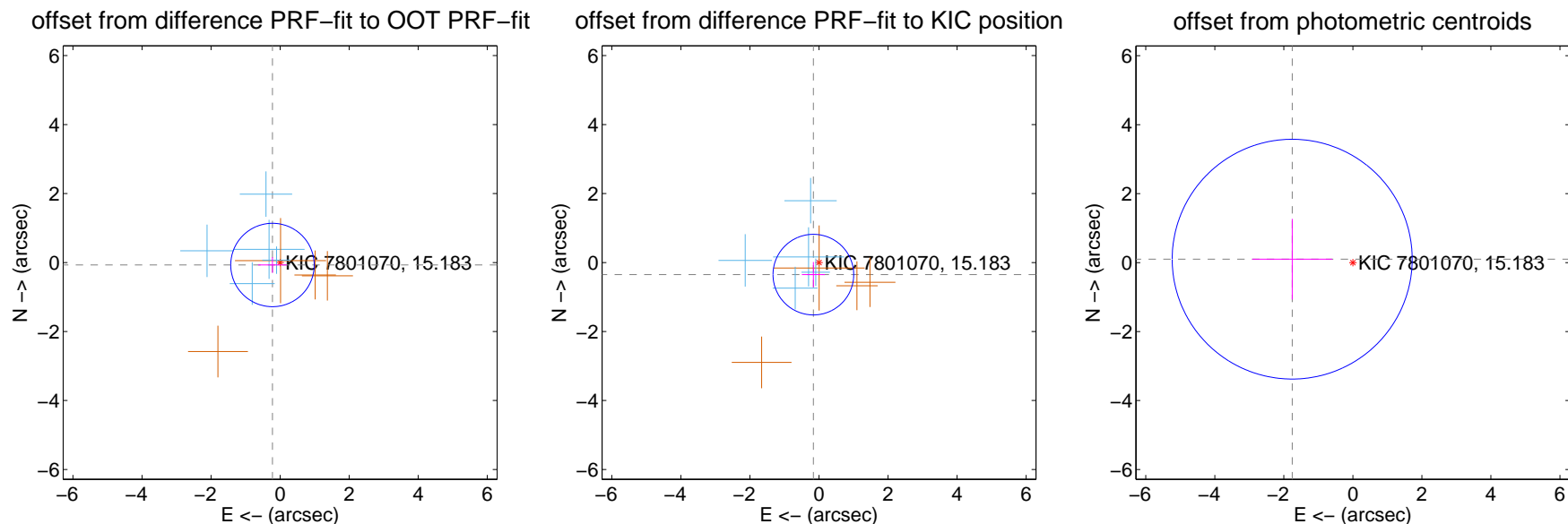
DV Centroid Data

Supplemental centroid analysis for 007801070-01. Kepler magnitude: 15.18. Transit SNR 13.25

There are 5 quarters with good PRF difference image offsets

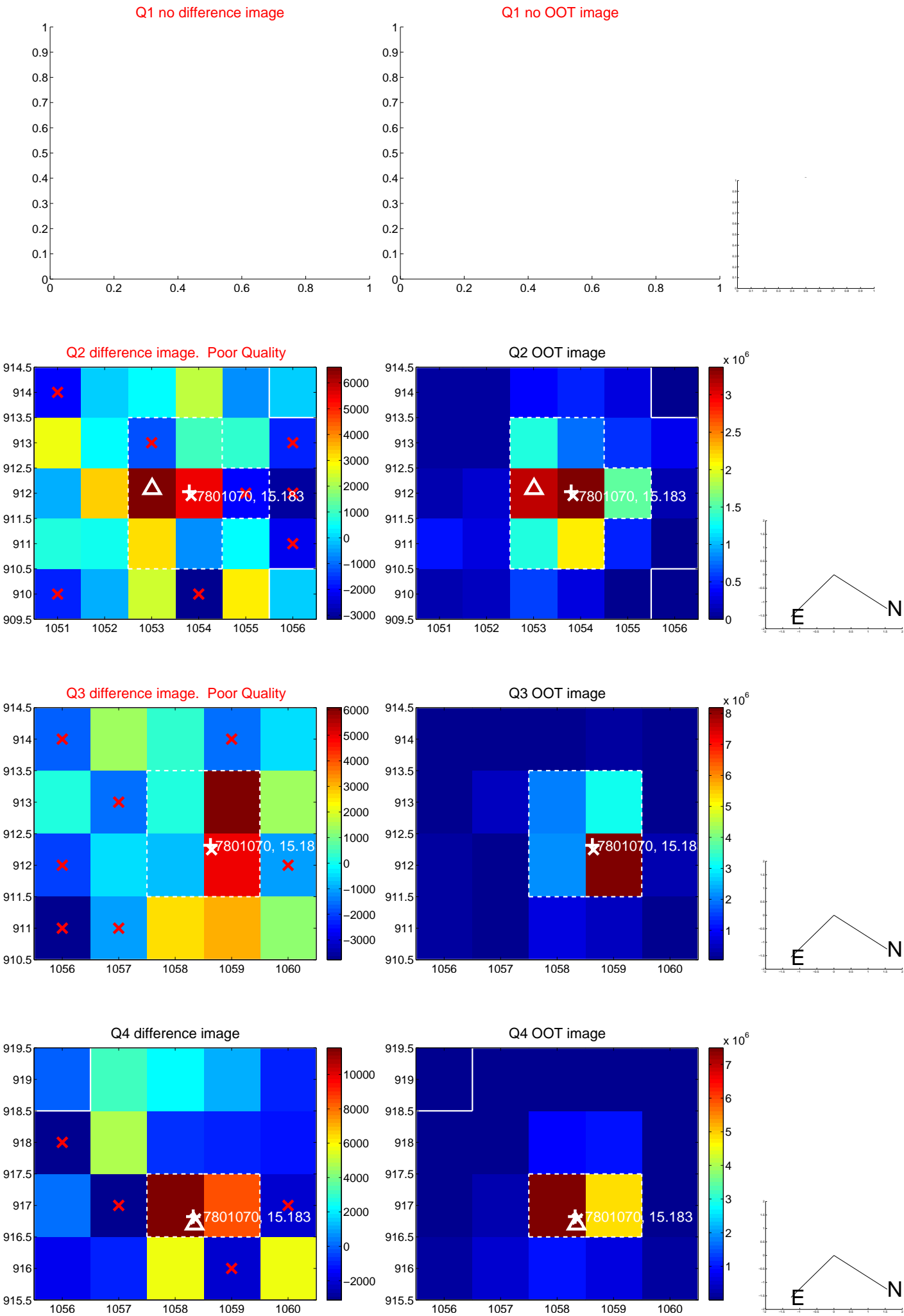
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.232 ± 0.403	0.58	0.221 ± 0.417	-0.071 ± 0.228
PRF-fit source offset from KIC position	0.386 ± 0.389	0.99	0.163 ± 0.333	-0.350 ± 0.366
photometric centroid source offset	1.76 ± 1.16	1.52	1.76 ± 1.16	0.10 ± 1.17

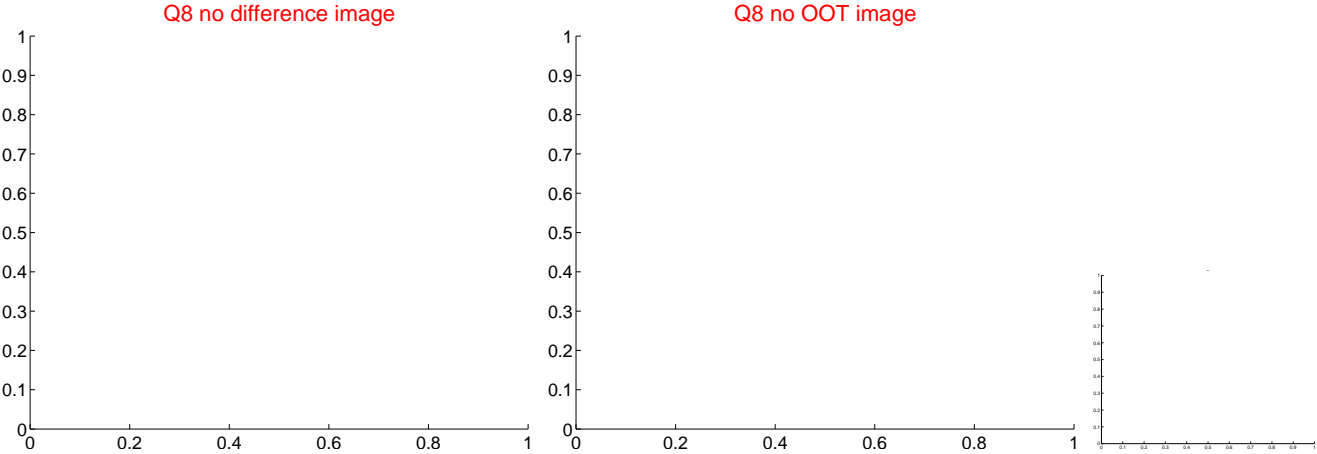
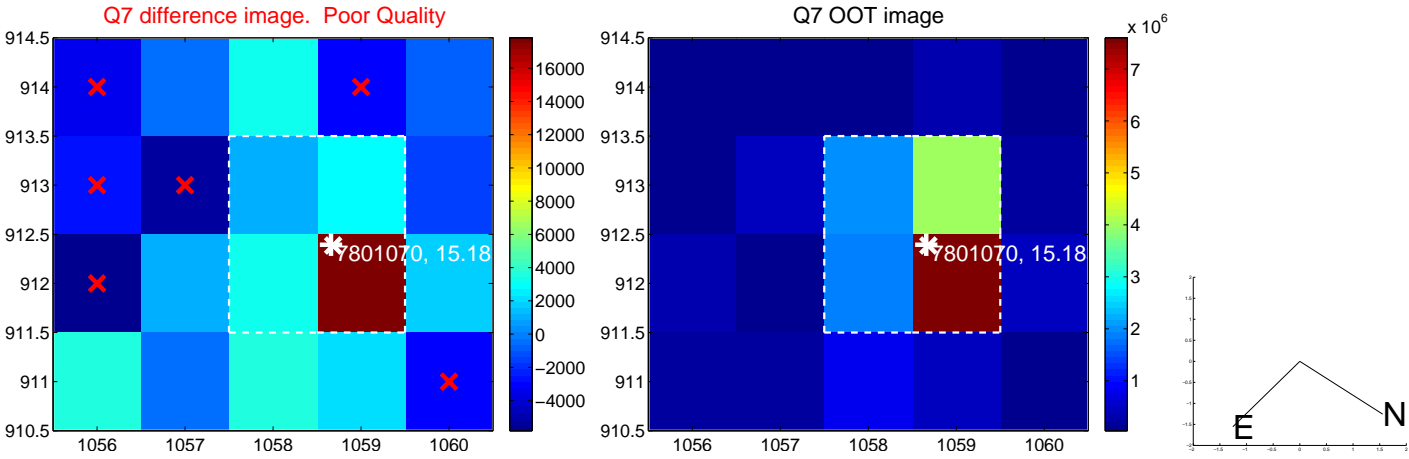
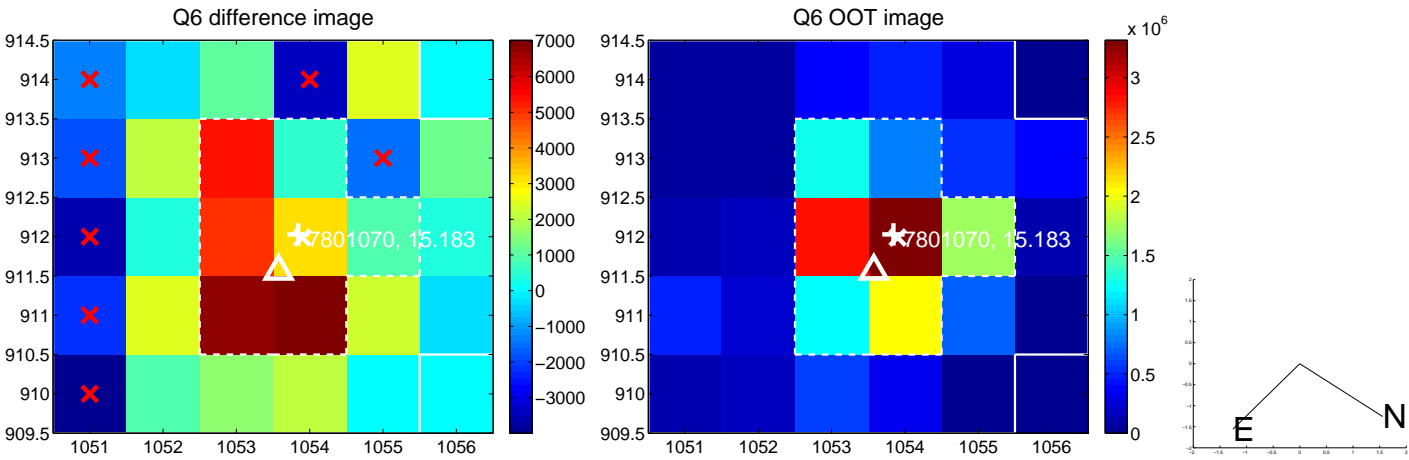
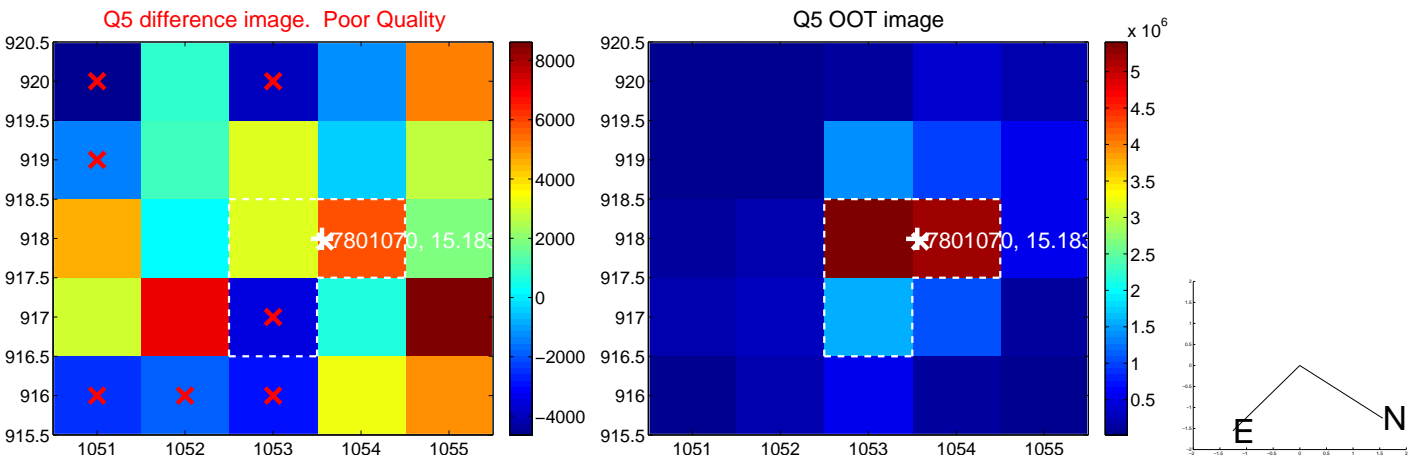


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

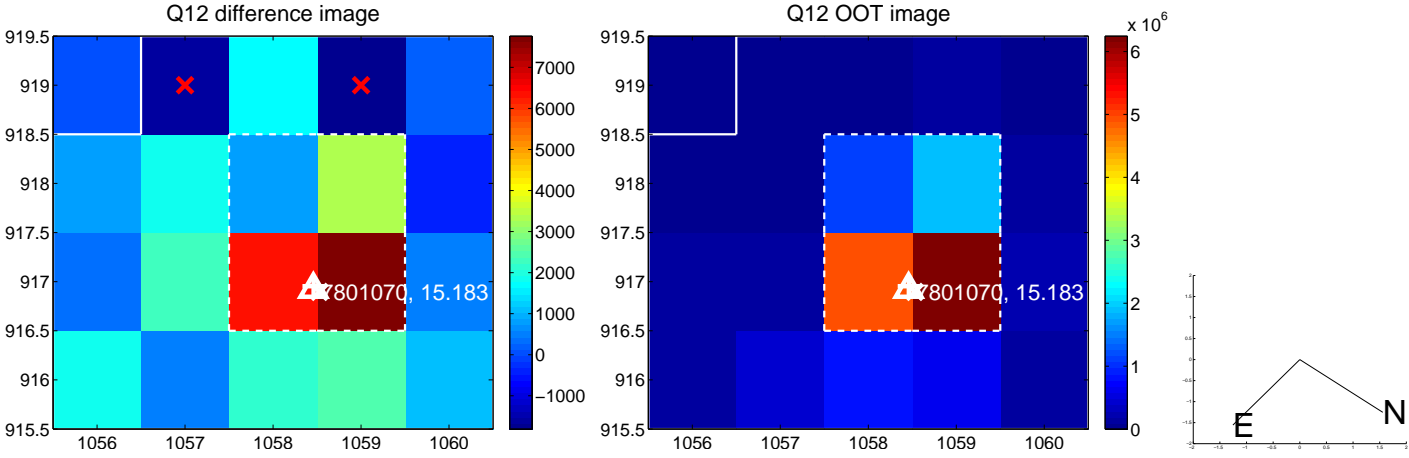
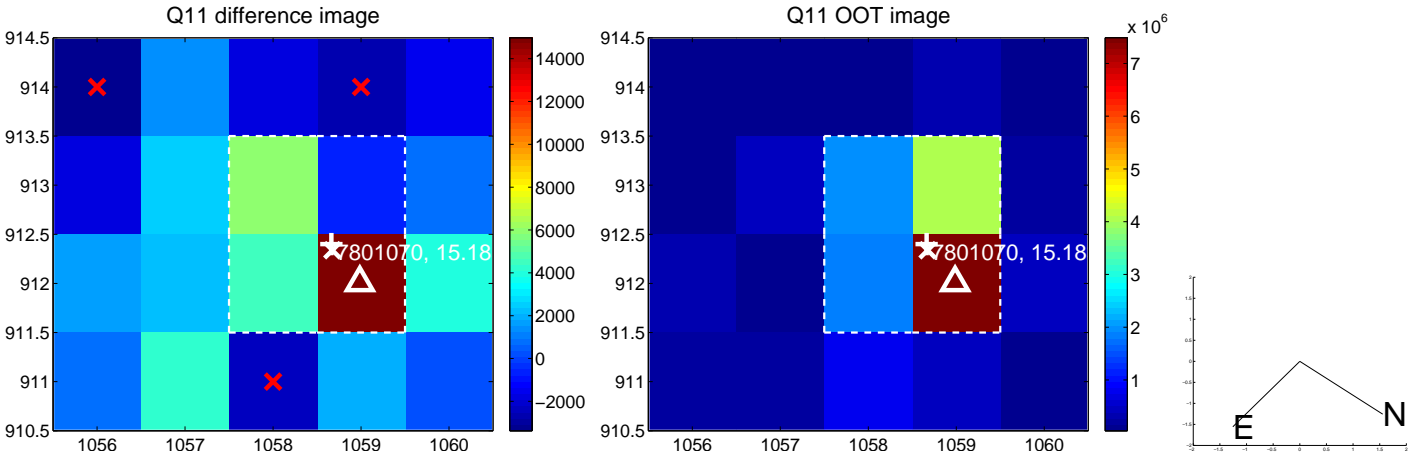
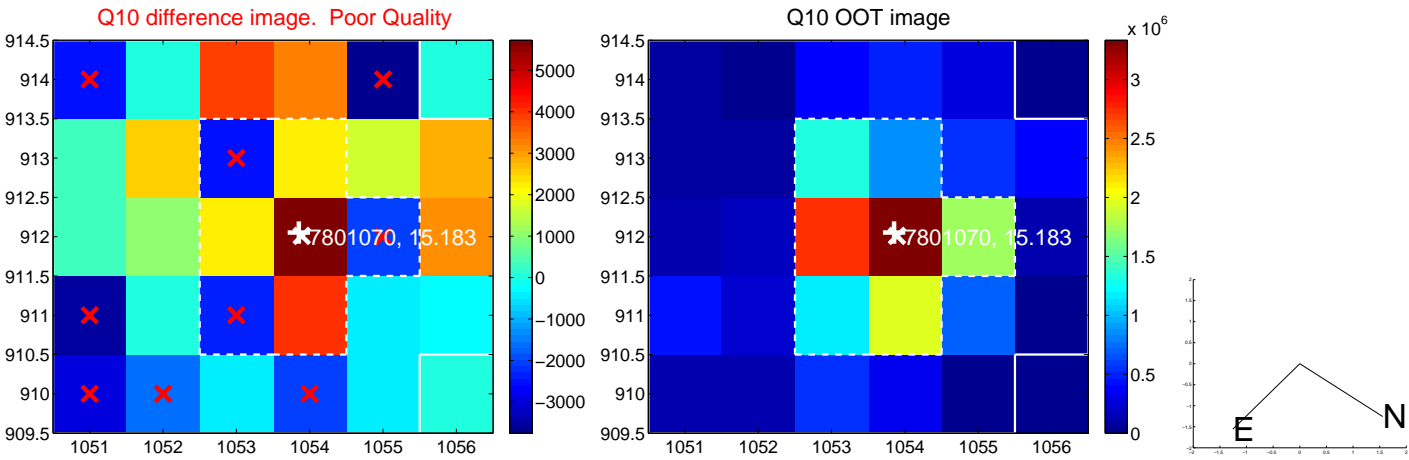
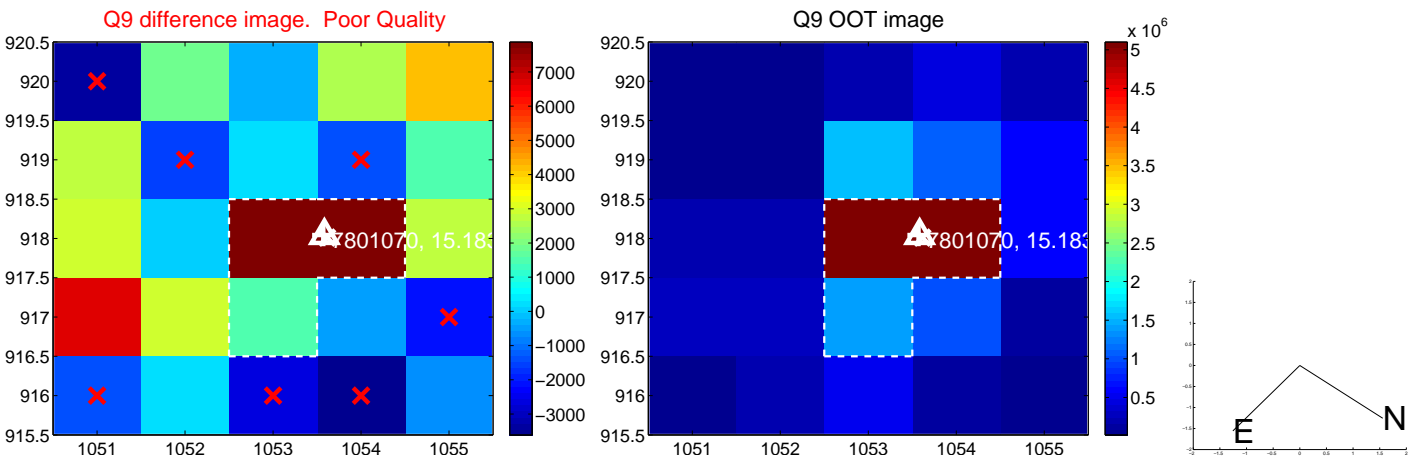
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



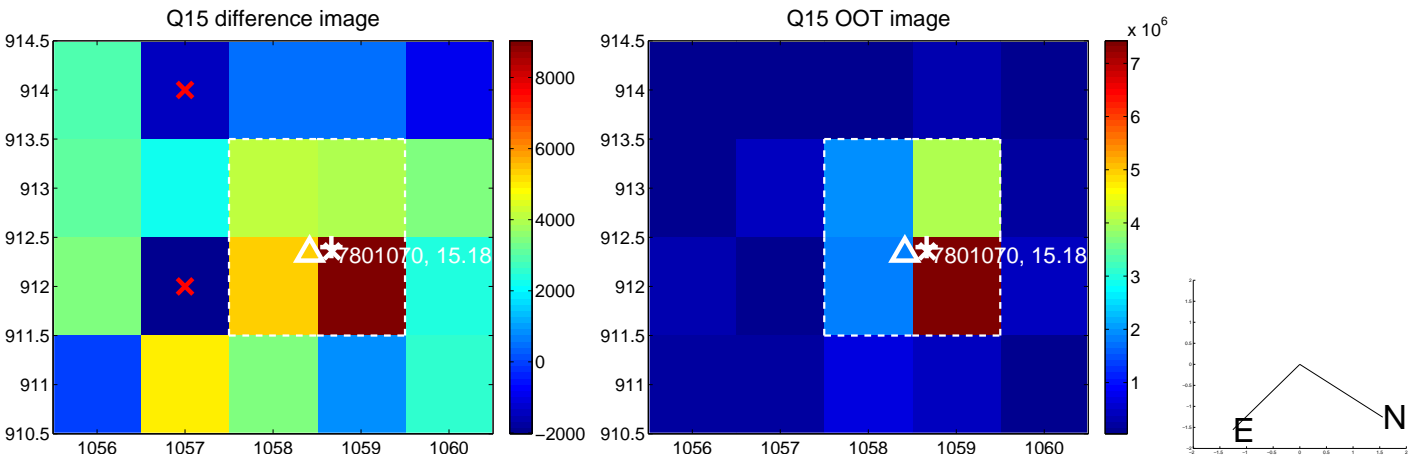
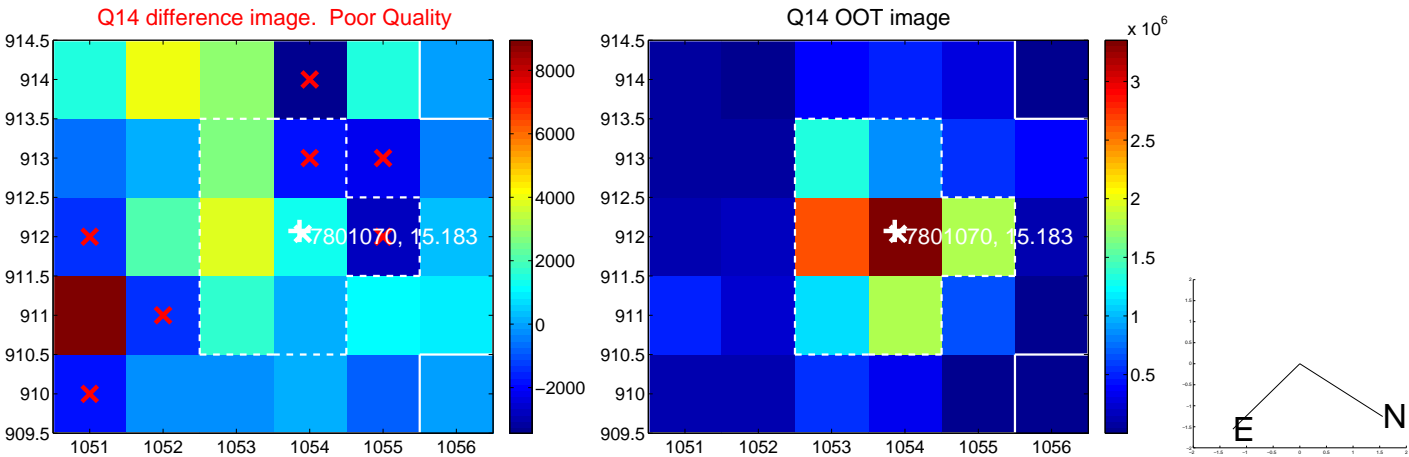
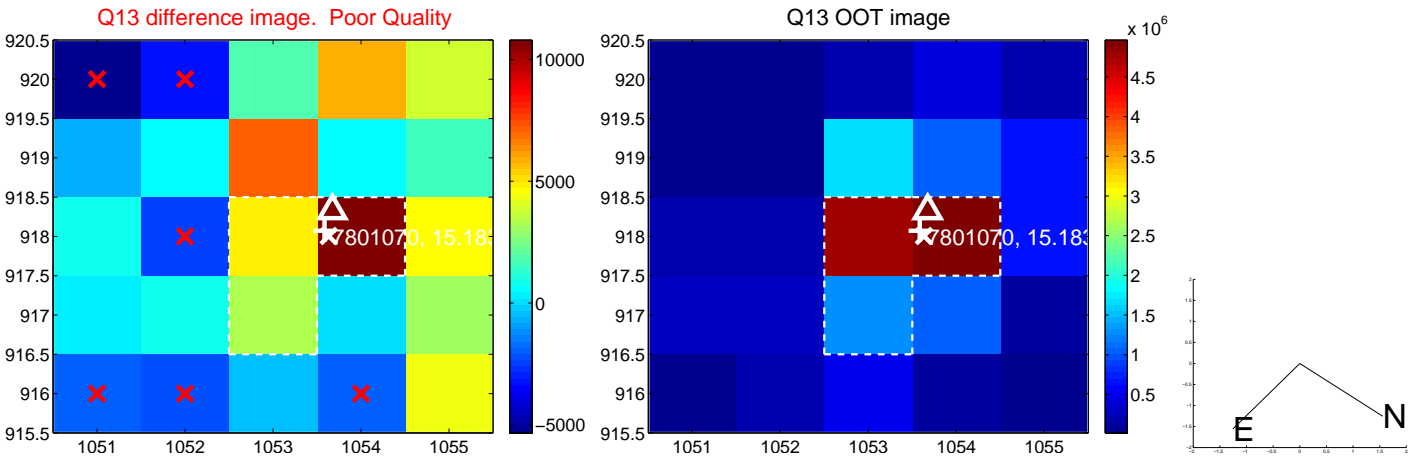
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



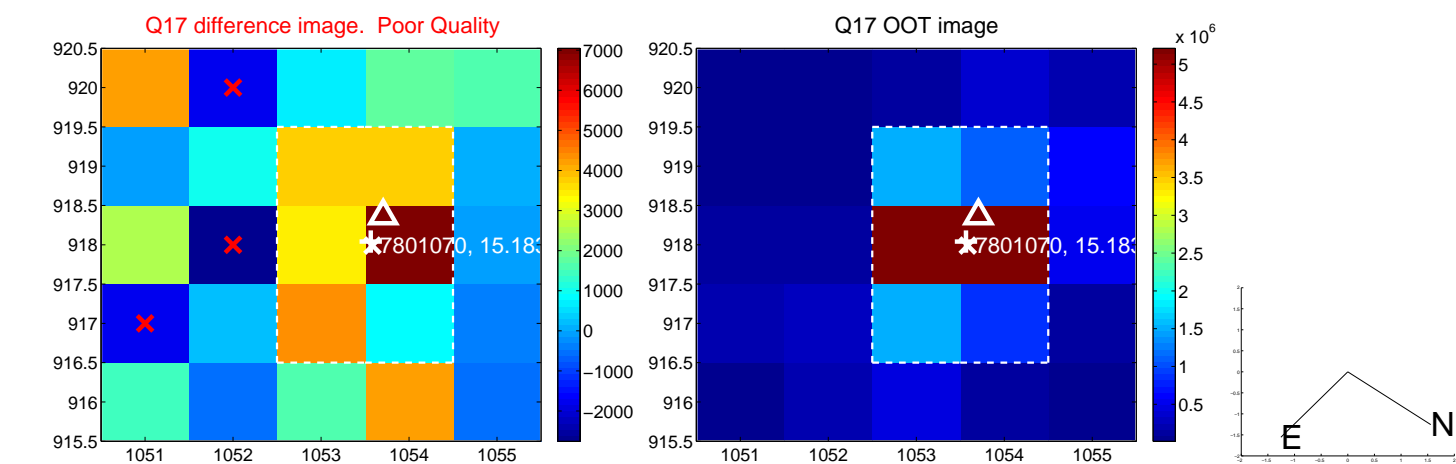
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



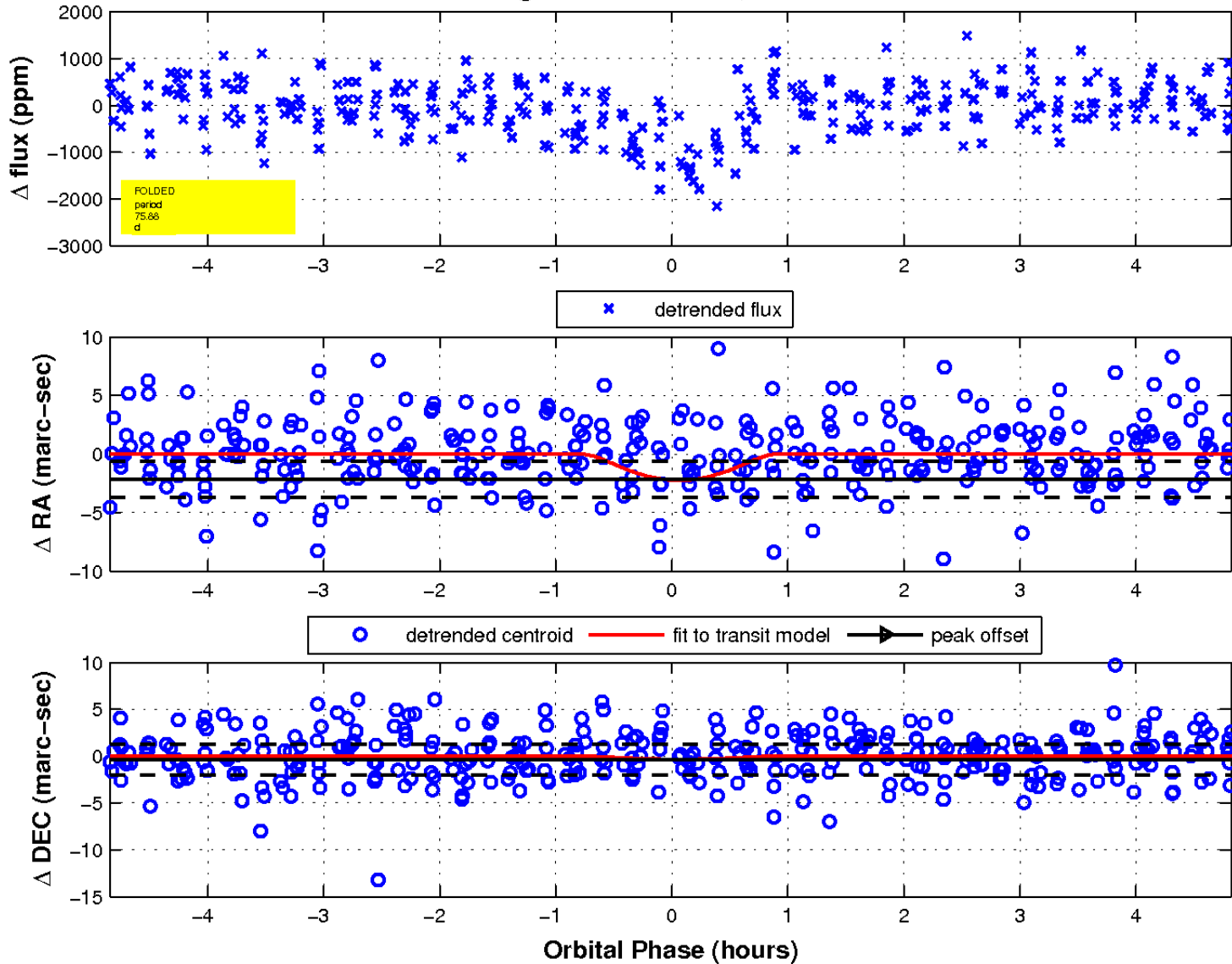
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

