

KIC 001725016

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})
001725016-01	OBS	1007.01	7.407358	133.280470	421.1	3.906	19.4	21.3	0.96	5922	2.31	183.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001725016-01	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 001725016-01

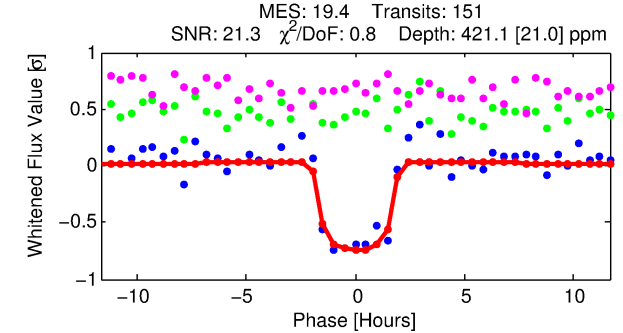
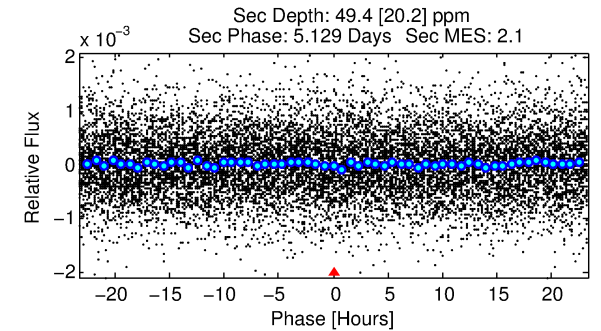
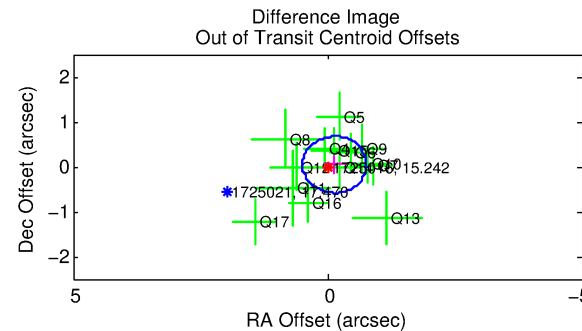
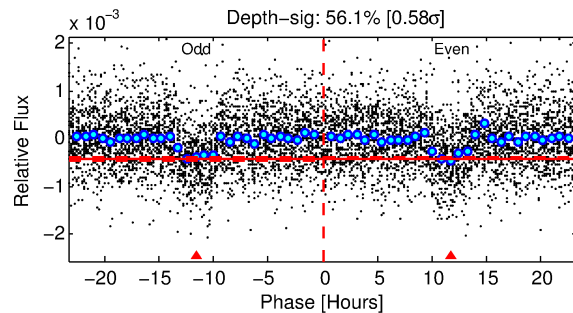
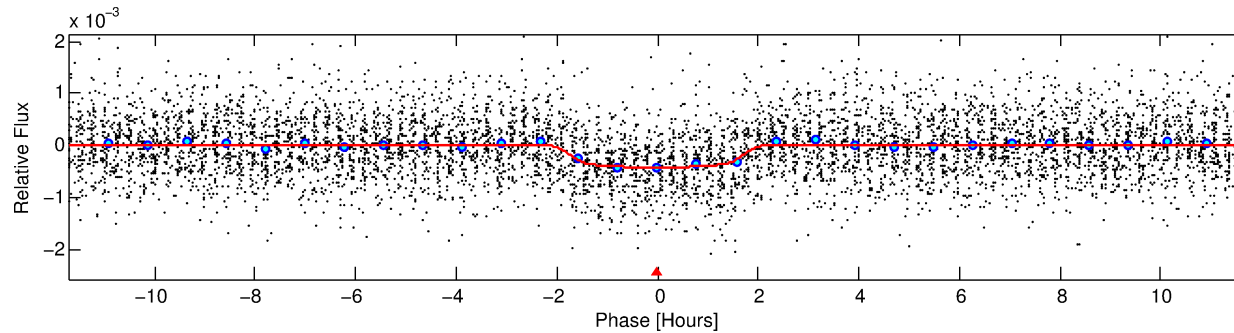
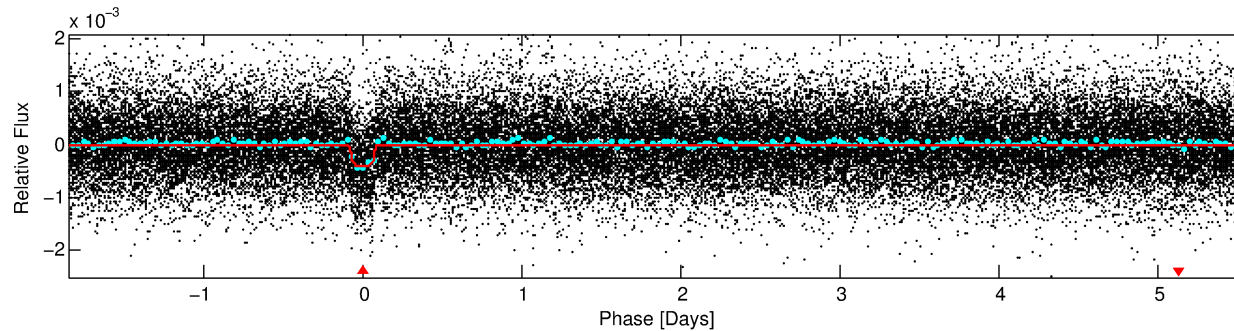
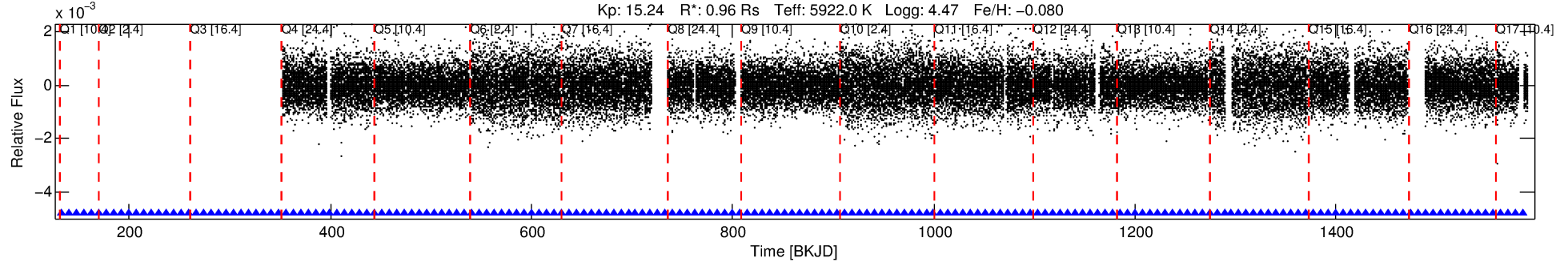
No Significant Match Found

DV One-Page Summary

KIC: 1725016 Candidate: 1 of 1 Period: 7.407 d

KOI: K01007.01 Corr: 0.957

Kp: 15.24 R*: 0.96 Rs Teff: 5922.0 K Logg: 4.47 Fe/H: -0.080



DV Fit Results:

Period = 7.40736 [0.00004] d
Epoch = 133.2805 [0.0043] BKJD
Rp/R* = 0.0220 [0.0035]
a/R* = 7.37 [5.56]
b = 0.89 [0.19]
Seff = 183.53 [76.02]
Teq = 939 [97] K
Rp = 2.31 [0.80] Re
a = 0.0745 [0.0197] AU
Ag = 28.25 [18.34] [1.49σ]
Teffp = 3345 [449] K [5.24σ]

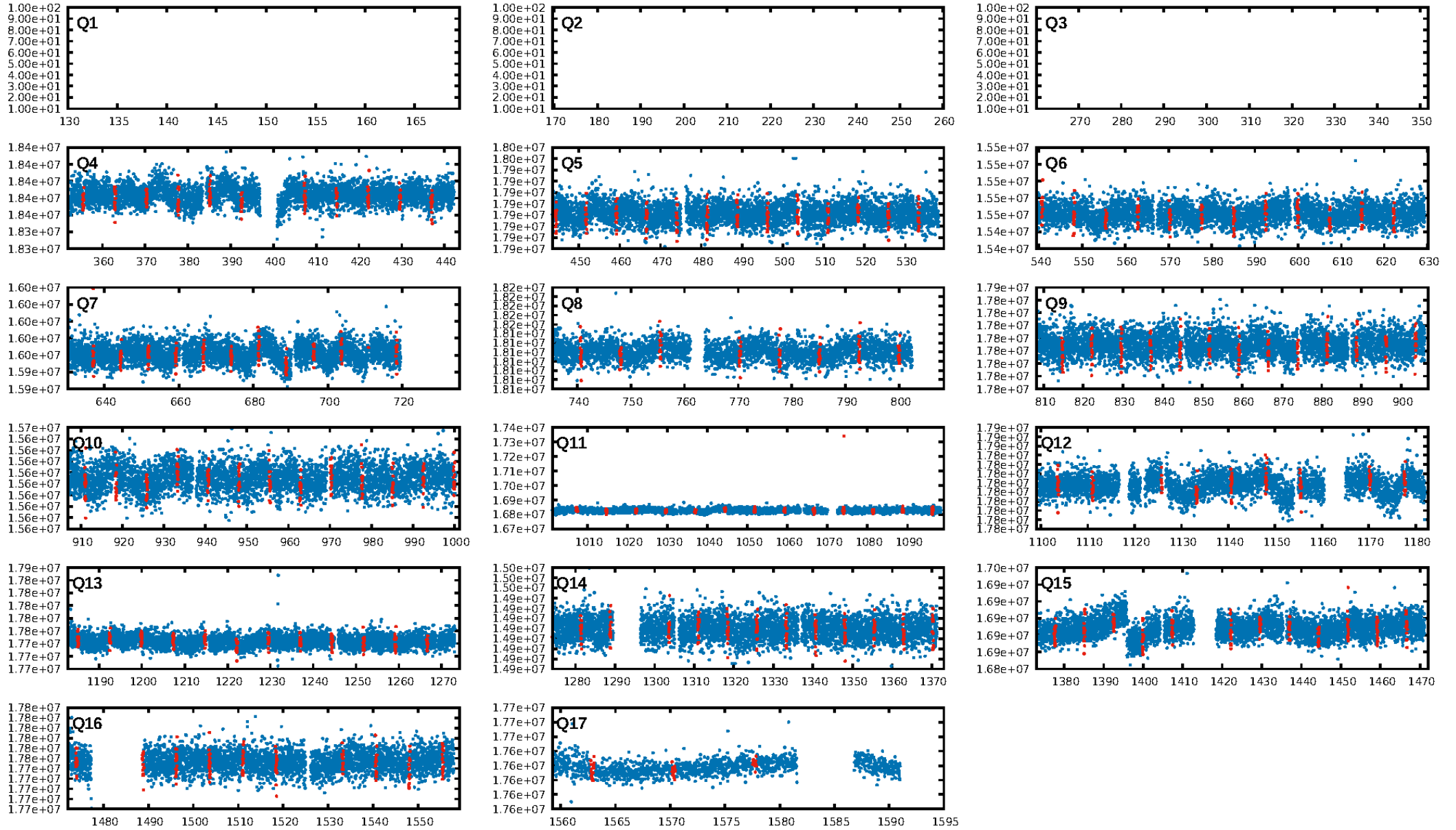
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.64e-86
RollingBand-fgt: 1.00 [148/148]
GhostDiagnostic-chr: 2.056
Centroid-sig: 94.3%
Centroid-so: 1.211 arcsec [2.12σ]
OotOffset-rm: 0.143 arcsec [0.68σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-rm: 0.047 arcsec [0.23σ]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [14/14]

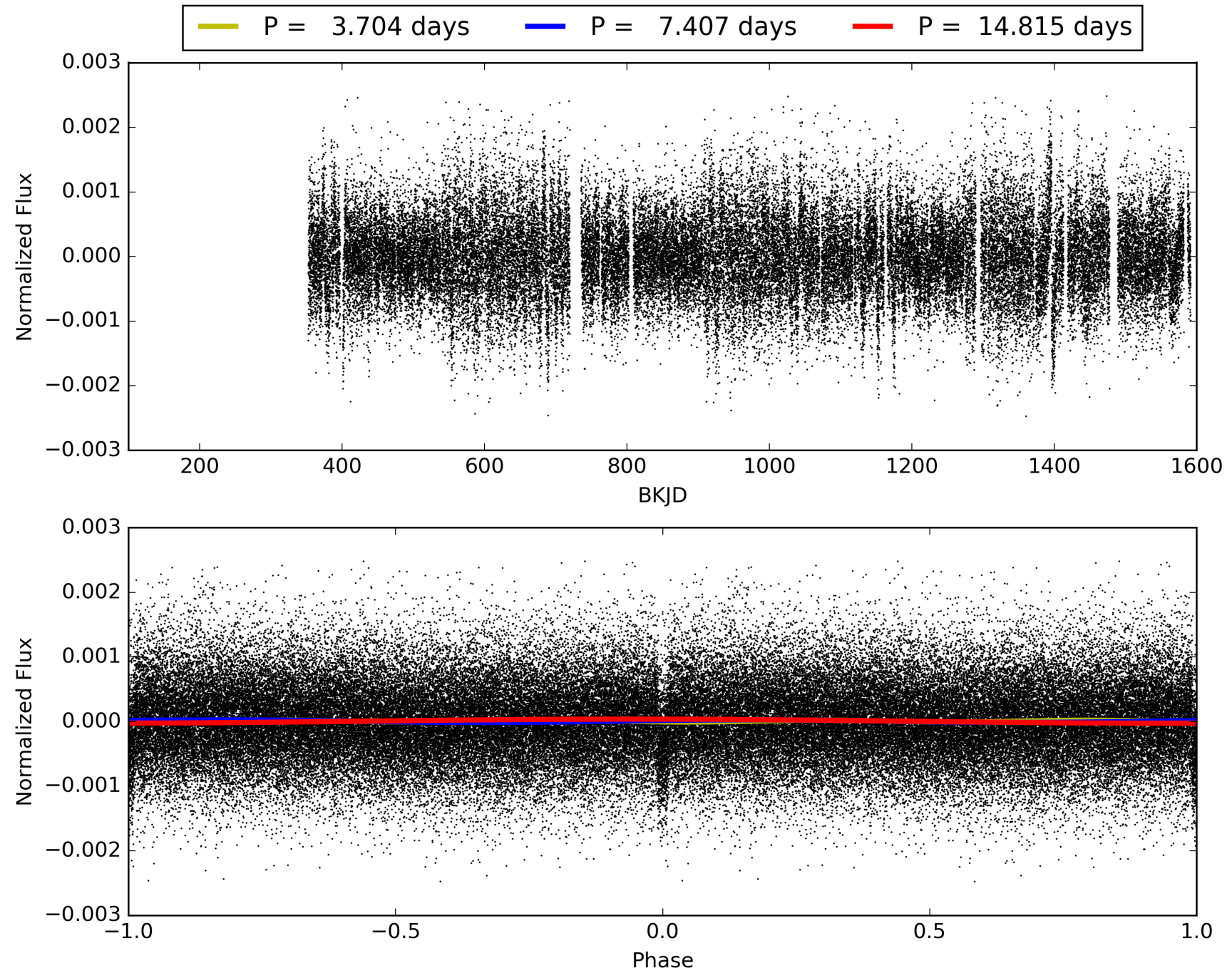
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:52:30 Z

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

TCE 001725016-01, PDC Light Curves

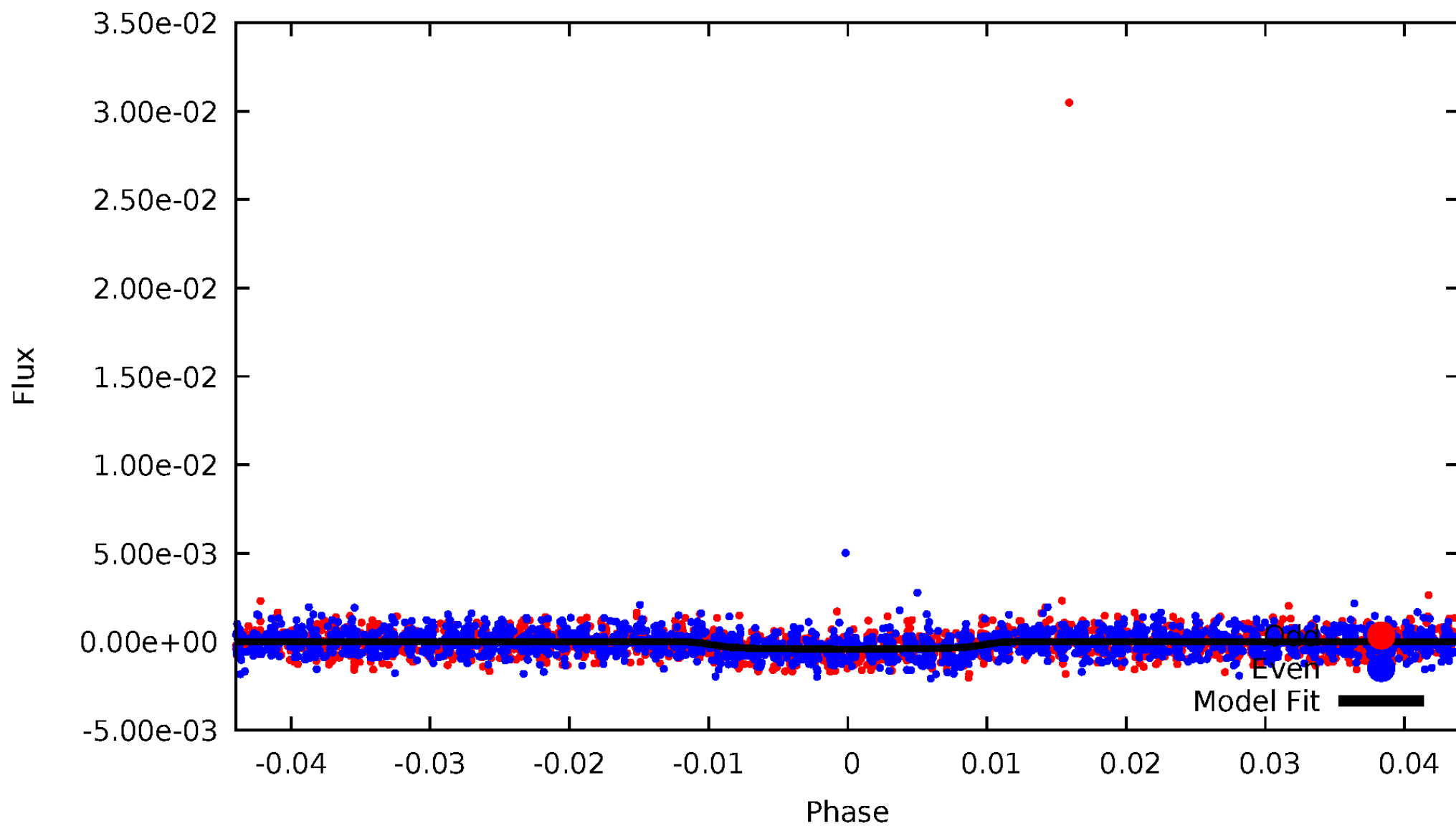


TCE 001725016-01



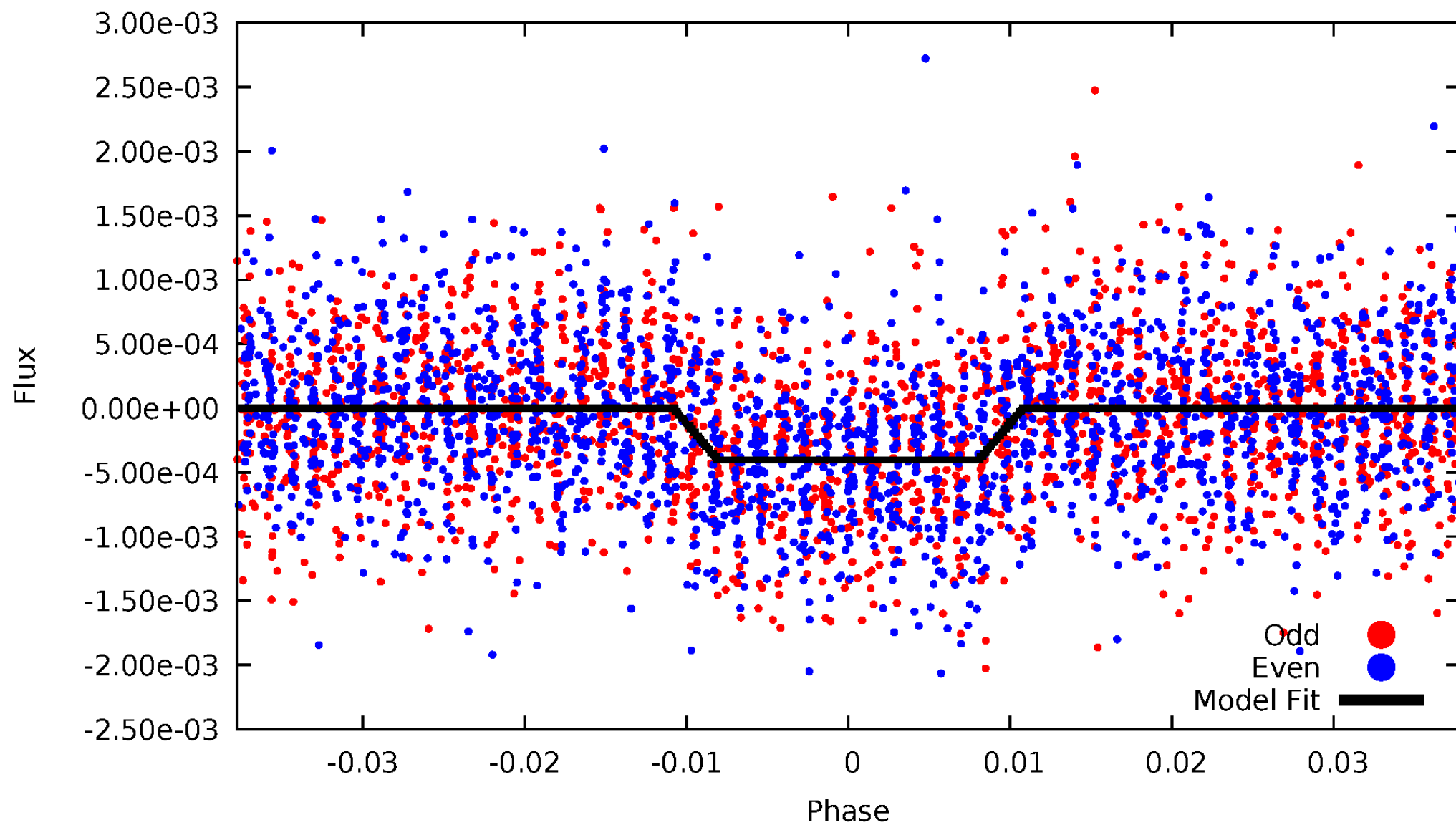
DV Odd/Even

TCE 001725016-01

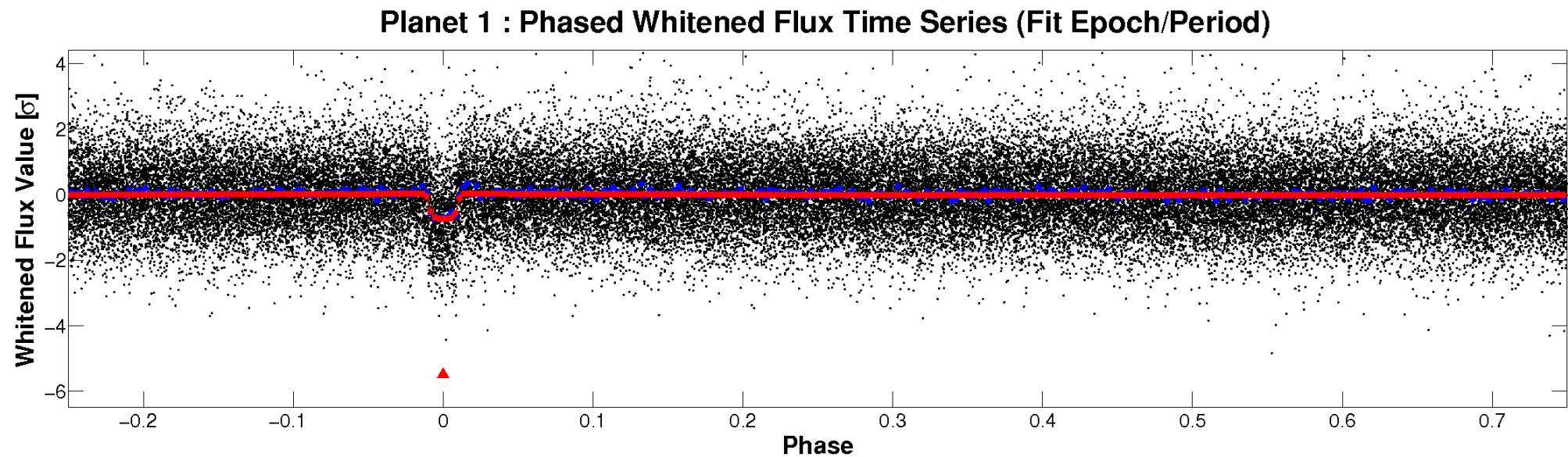
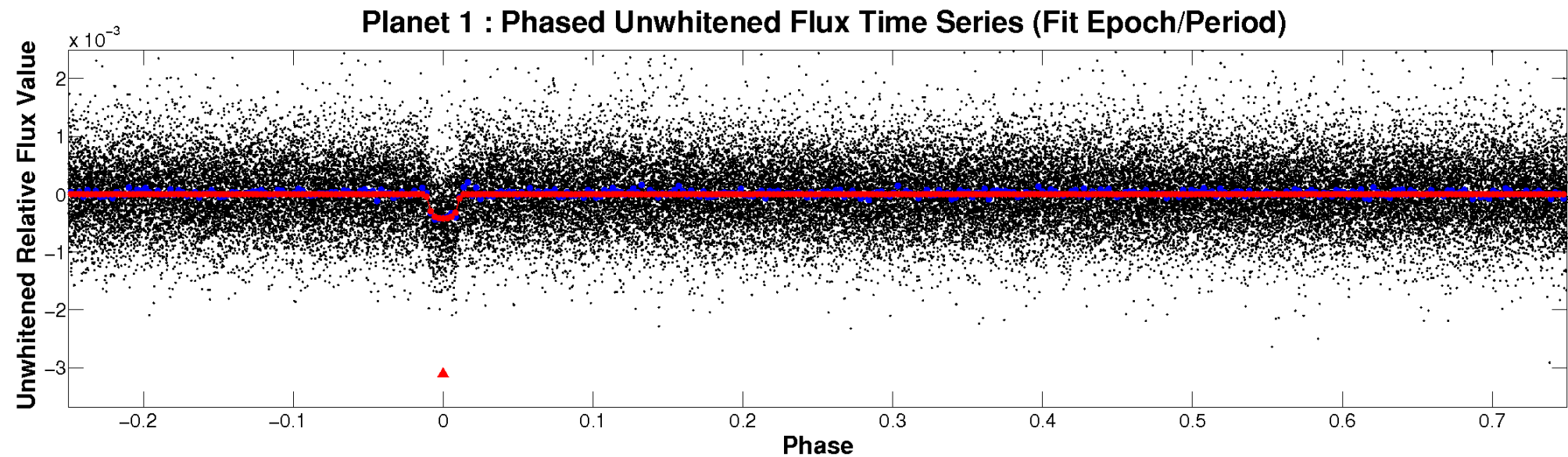


ALT Odd/Even

TCE 001725016-01

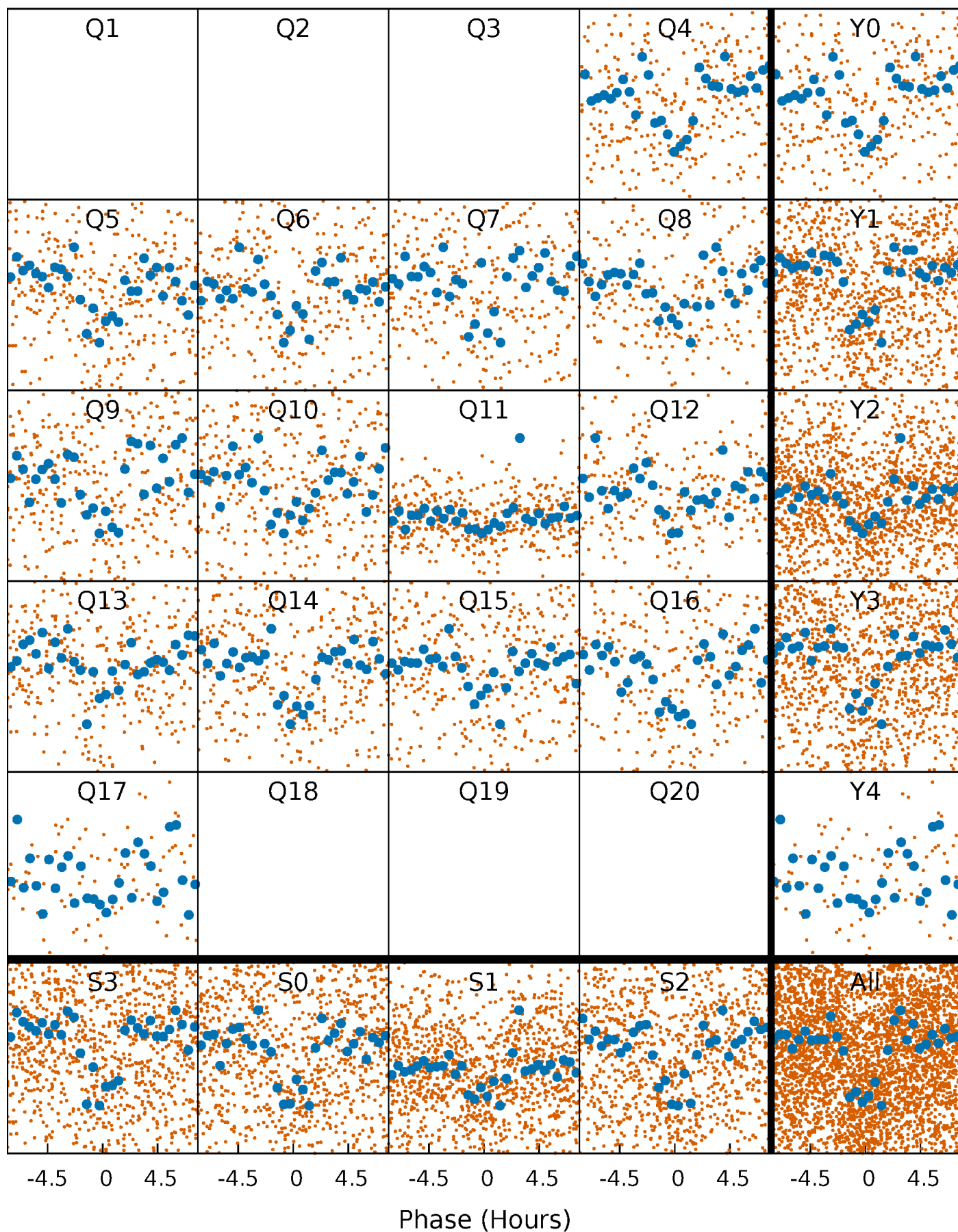


Non-Whitened Vs. Whitened Light Curve



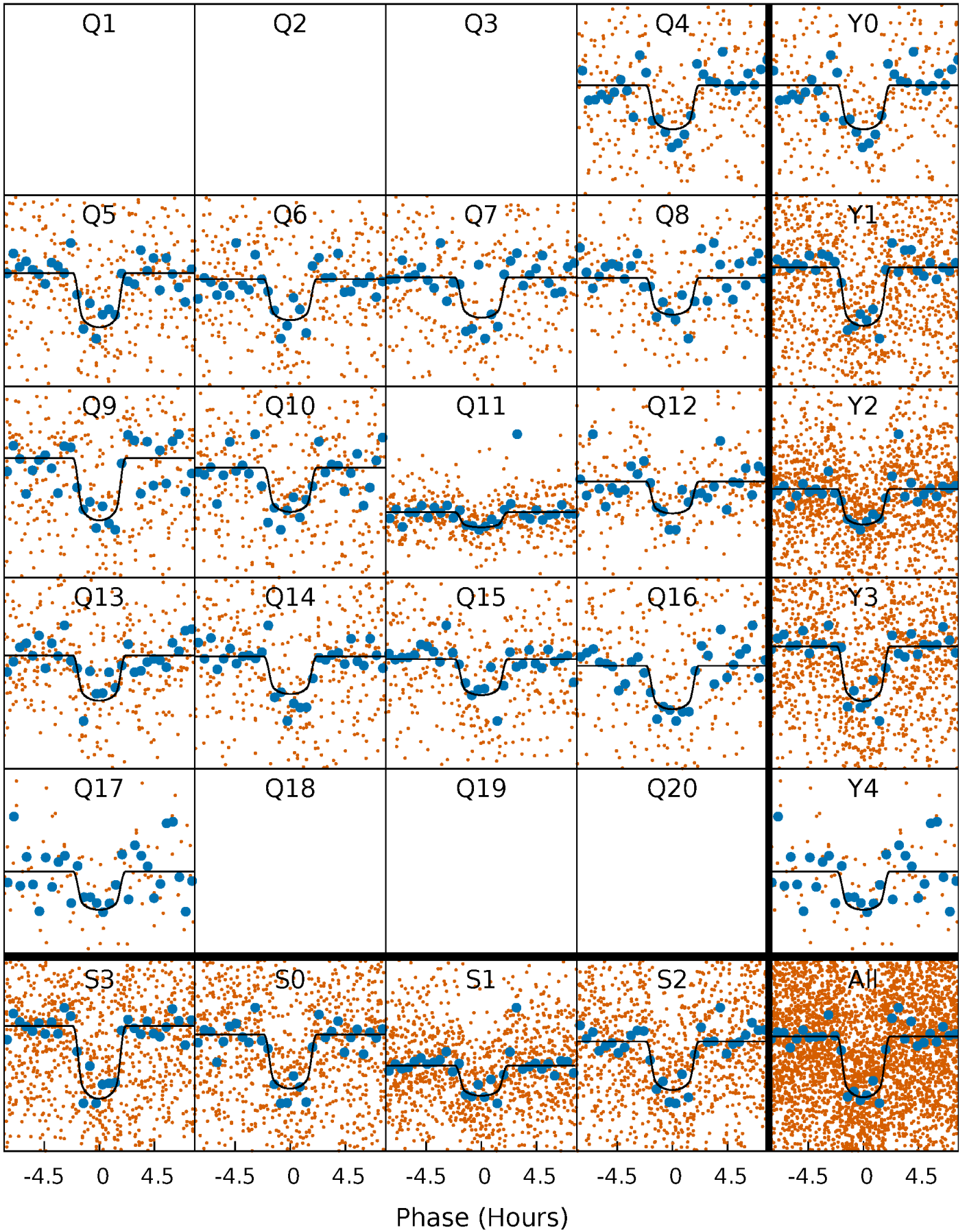
PDC Quarter-Phased Transit Curves

TCE 001725016-01 P= 7.407358 Days $T_0=133.280470$ (BKJD)



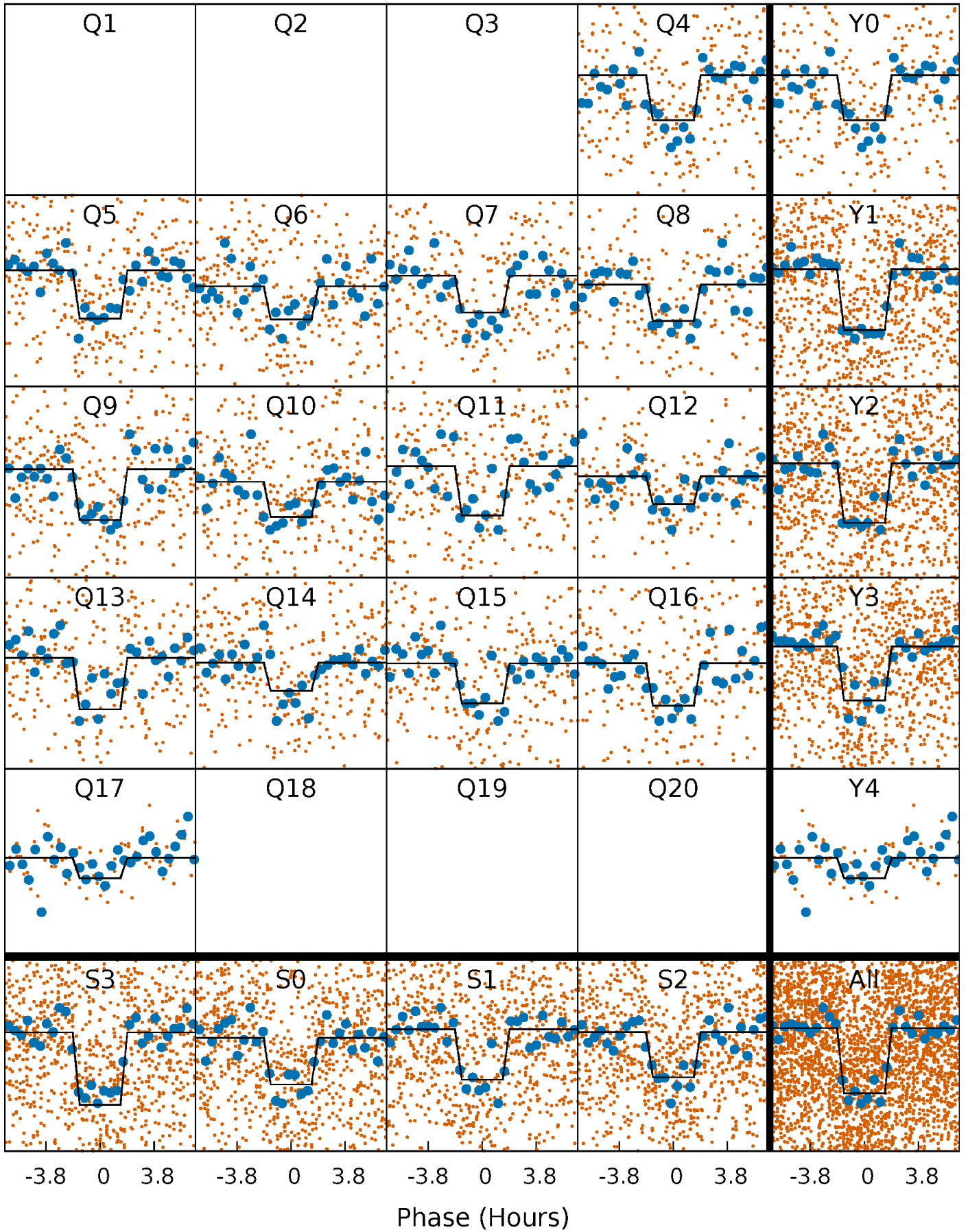
DV Quarter-Phased Transit Curves

TCE 001725016-01 P= 7.407358 Days $T_0=133.280470$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

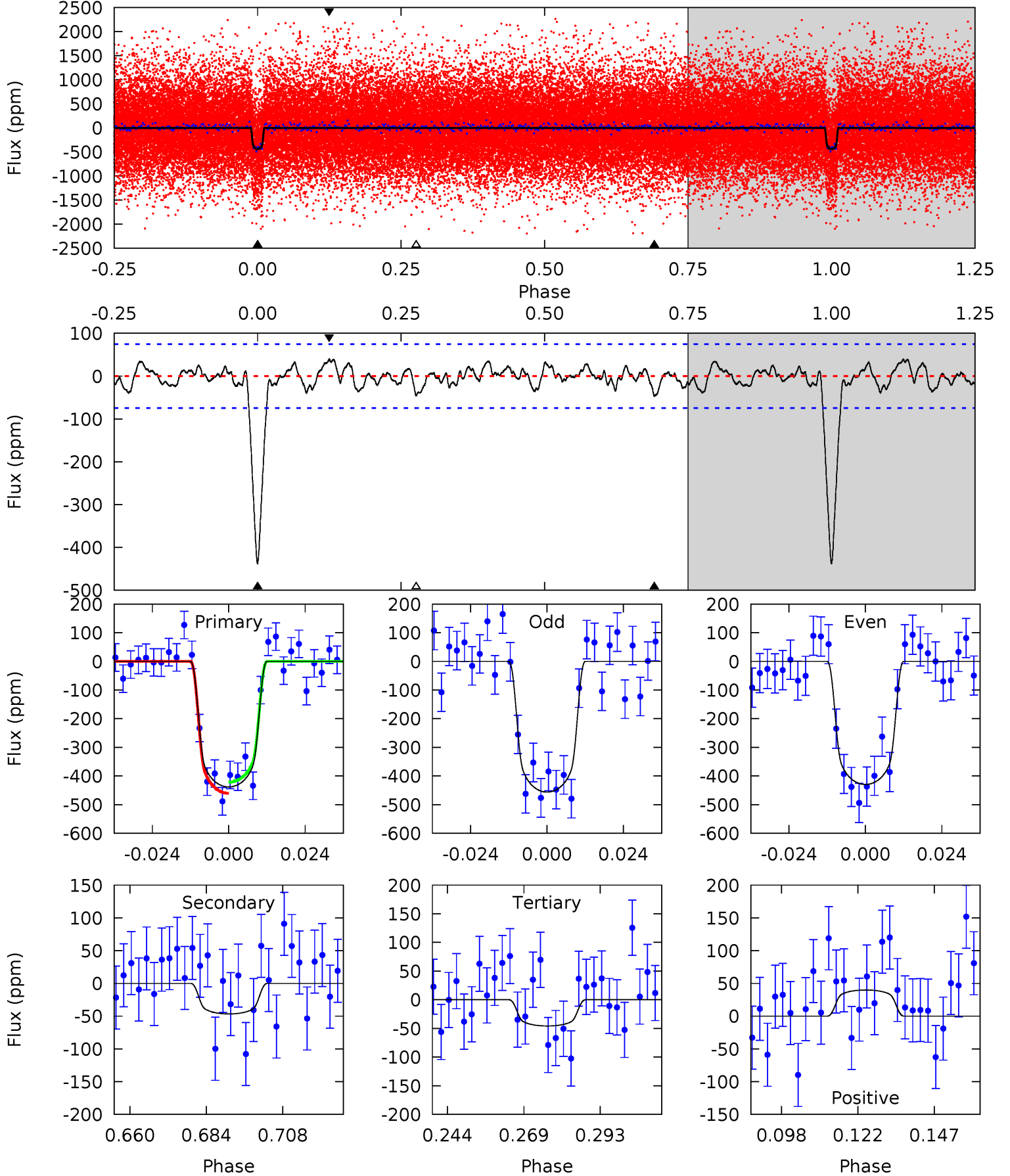
TCE 001725016-01 P= 7.407362 Days $T_0=133.281423$ (BKJD)



DV Model-Shift Uniqueness Test

001725016-01, P = 7.407358 Days, E = 133.280470 Days

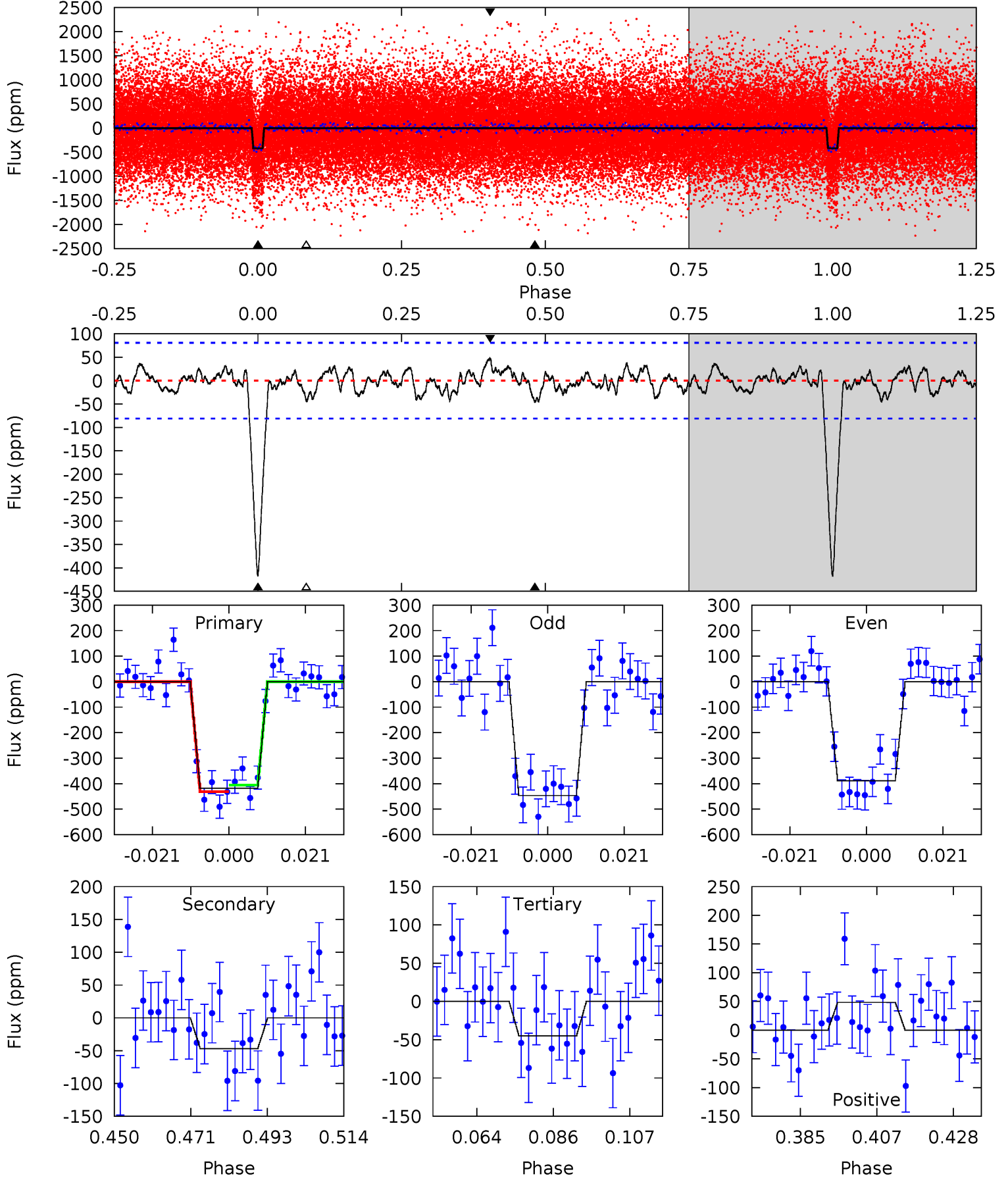
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.5	3.04	2.98	2.60	4.85	2.25	1.13	25.5	25.9	0.06	0.44	0.87	1.01	0.08	1.26



Alt Model-Shift Uniqueness Test

001725016-01, P = 7.407362 Days, E = 133.281423 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.2	2.82	2.70	2.92	4.88	2.30	1.07	22.5	22.3	0.12	-0.10	1.73	0.96	0.10	0.76



Stellar Parameters For KIC 001725016

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5922^{+184}_{-205}	$4.474^{+0.054}_{-0.216}$	$-0.080^{+0.250}_{-0.300}$	$0.961^{+0.297}_{-0.099}$	$1.002^{+0.140}_{-0.127}$	$1.591^{+0.454}_{-0.837}$
	+3%/-3%	+1%/-5%	+312%/-375%	+31%/-10%	+14%/-13%	+29%/-53%
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 001725016-01 / KOI 1007.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-47 ± 15	$2.39^{+0.51}_{-0.44}$	1336^{+98}_{-70}	3693^{+341}_{-306}	24^{+16}_{-10}
Alt.	-47 ± 17	$2.21^{+0.50}_{-0.43}$	1340^{+102}_{-69}	3799^{+378}_{-308}	28^{+21}_{-13}

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

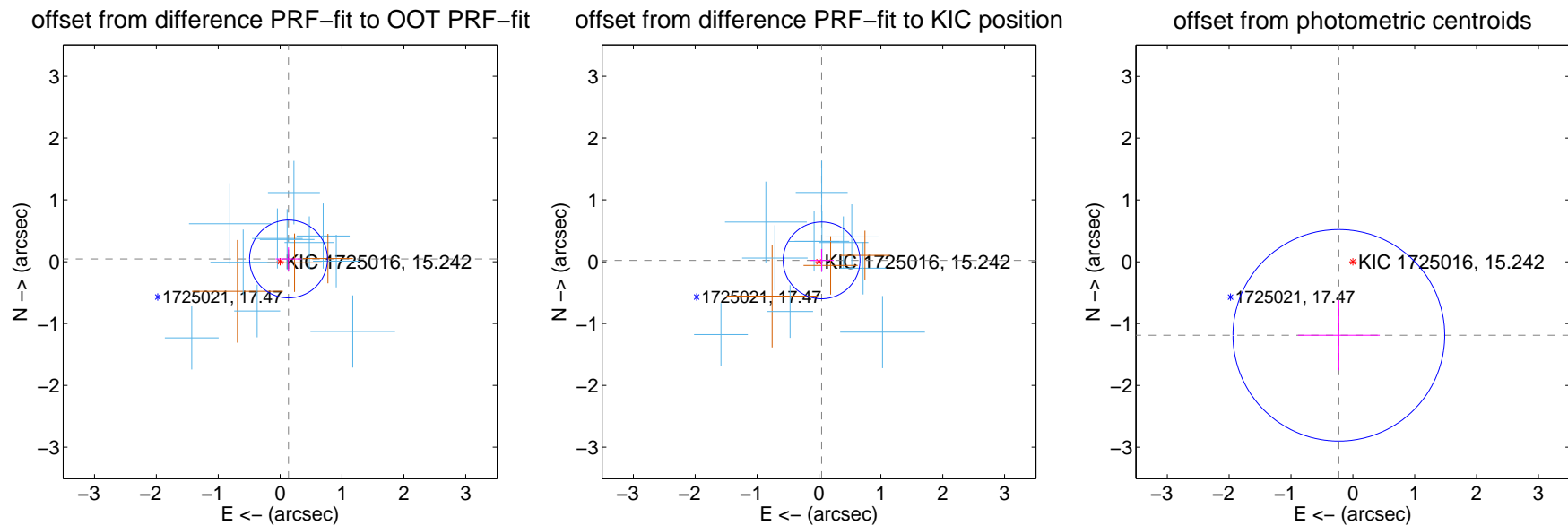
DV Centroid Data

Supplemental centroid analysis for 001725016-01. Kepler magnitude: 15.24. Transit SNR 21.28

There are 11 quarters with good PRF difference image offsets

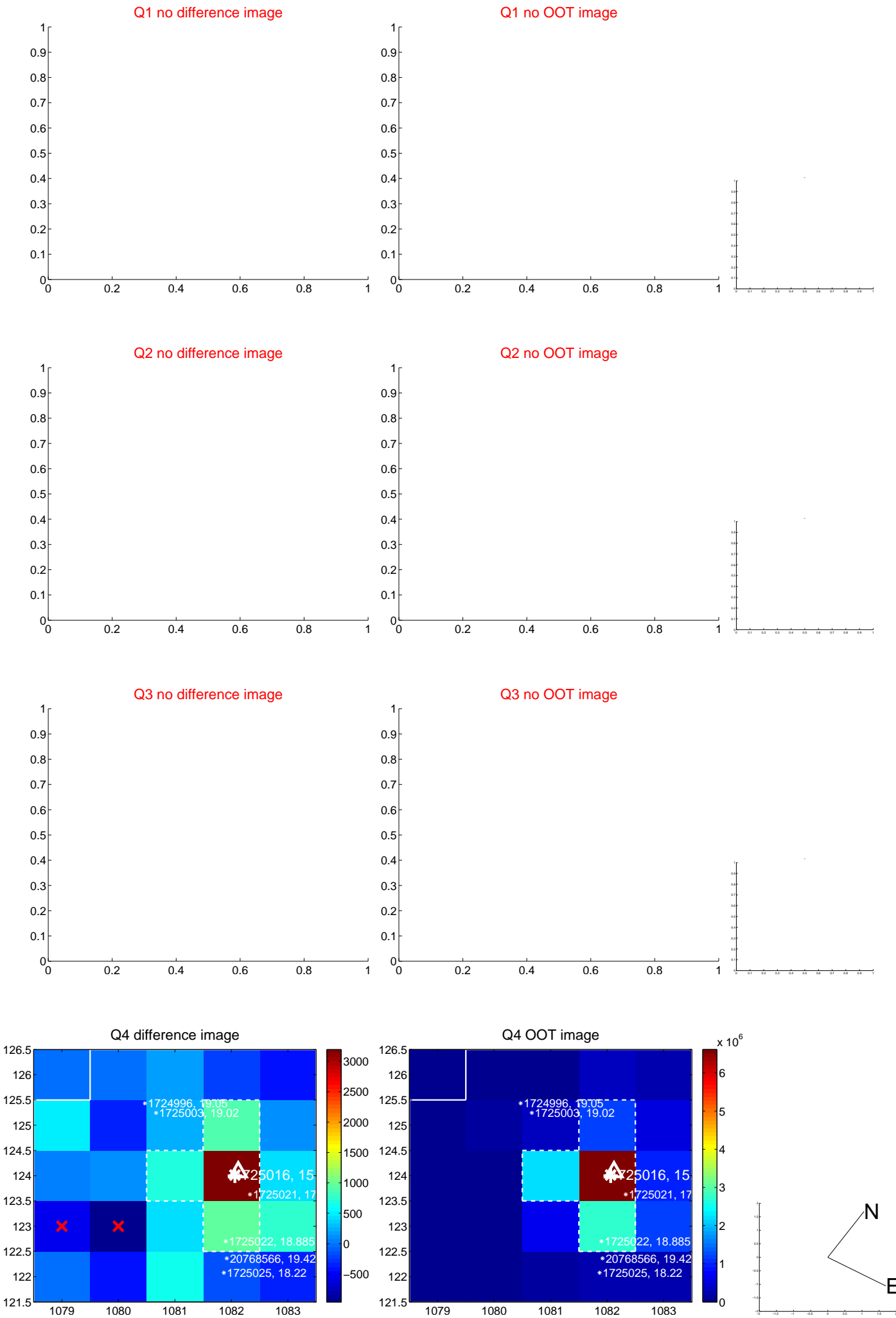
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.143 ± 0.210	0.68	-0.136 ± 0.207	0.044 ± 0.187
PRF-fit source offset from KIC position	0.047 ± 0.207	0.23	-0.042 ± 0.196	0.021 ± 0.184
photometric centroid source offset	1.21 ± 0.57	2.12	0.23 ± 0.66	-1.19 ± 0.57

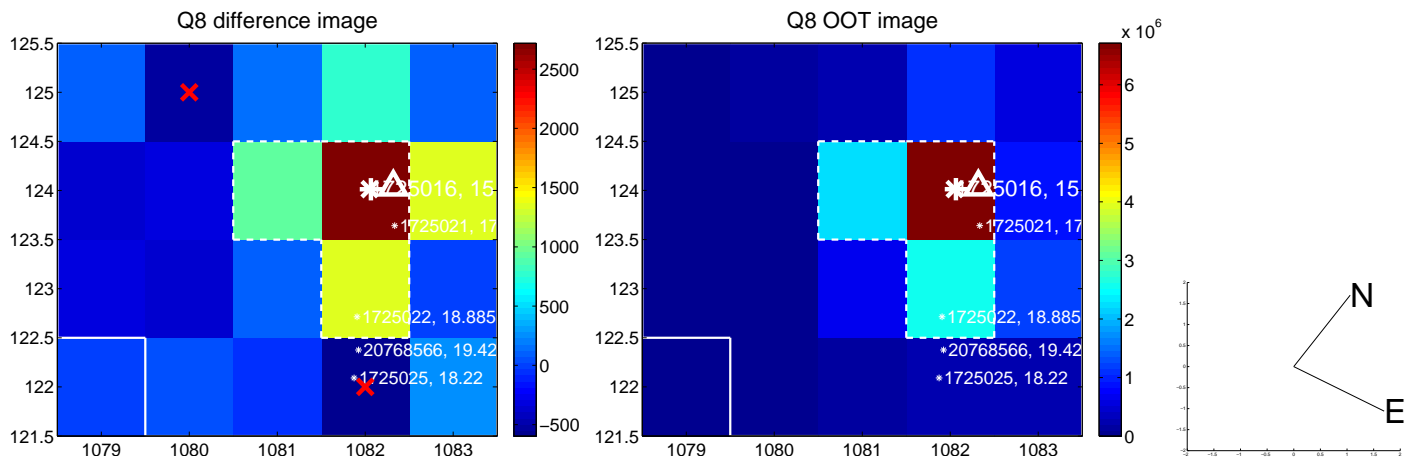
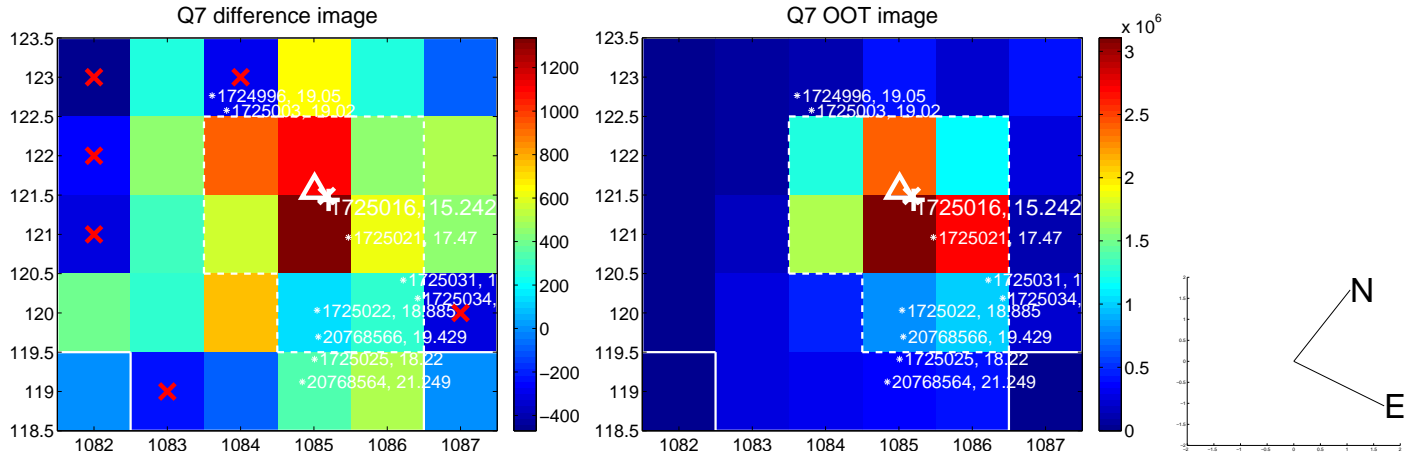
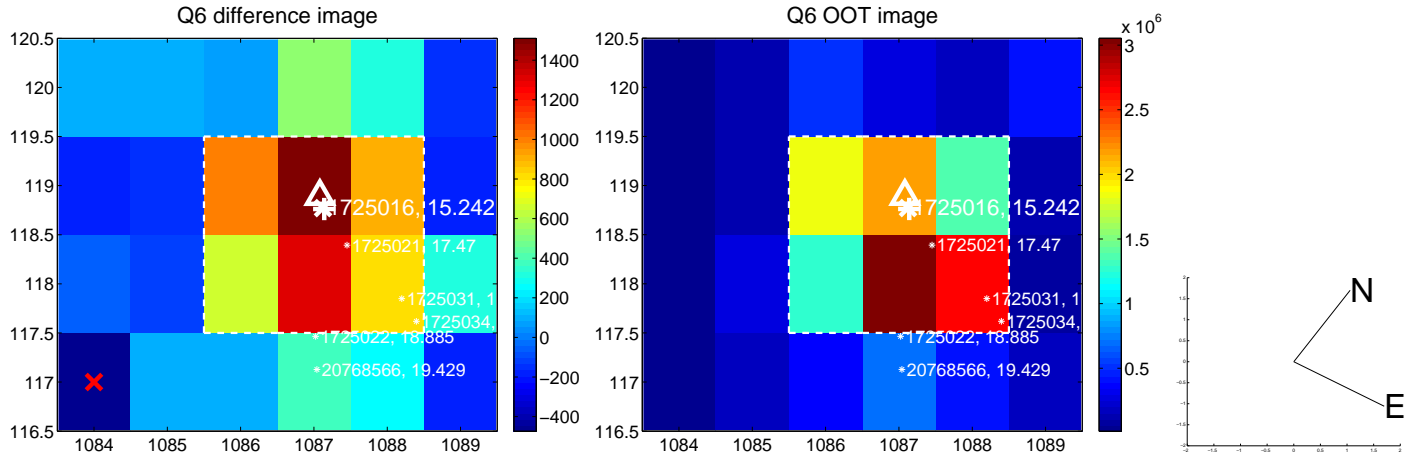
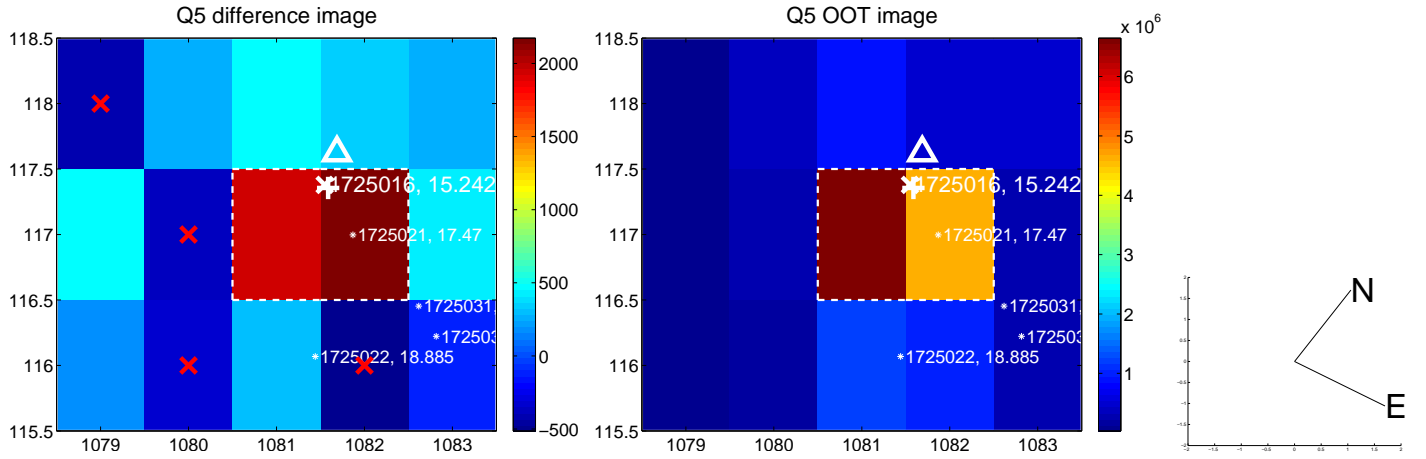


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

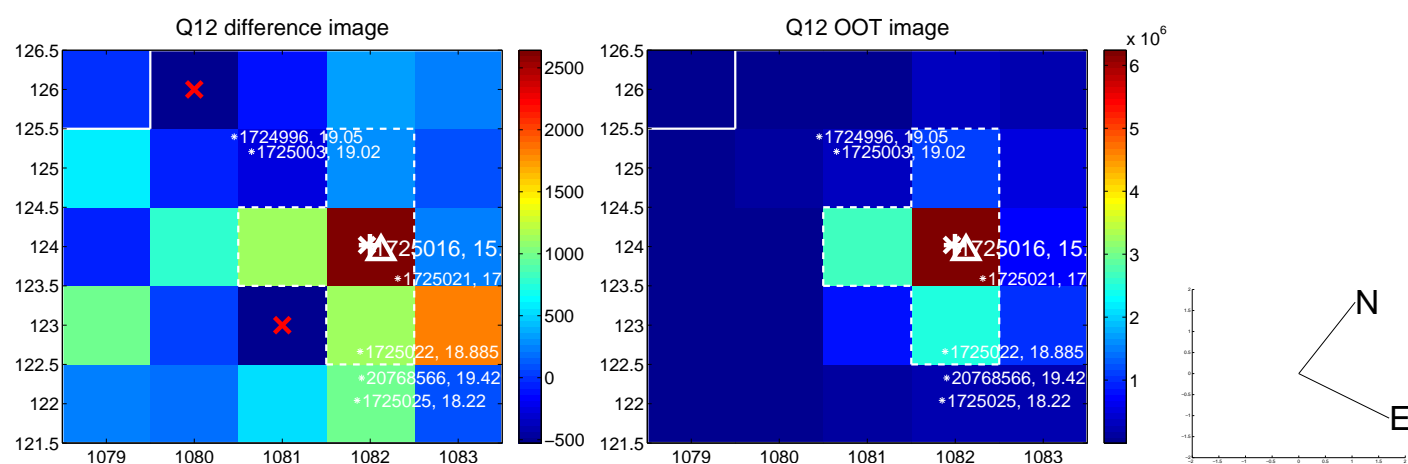
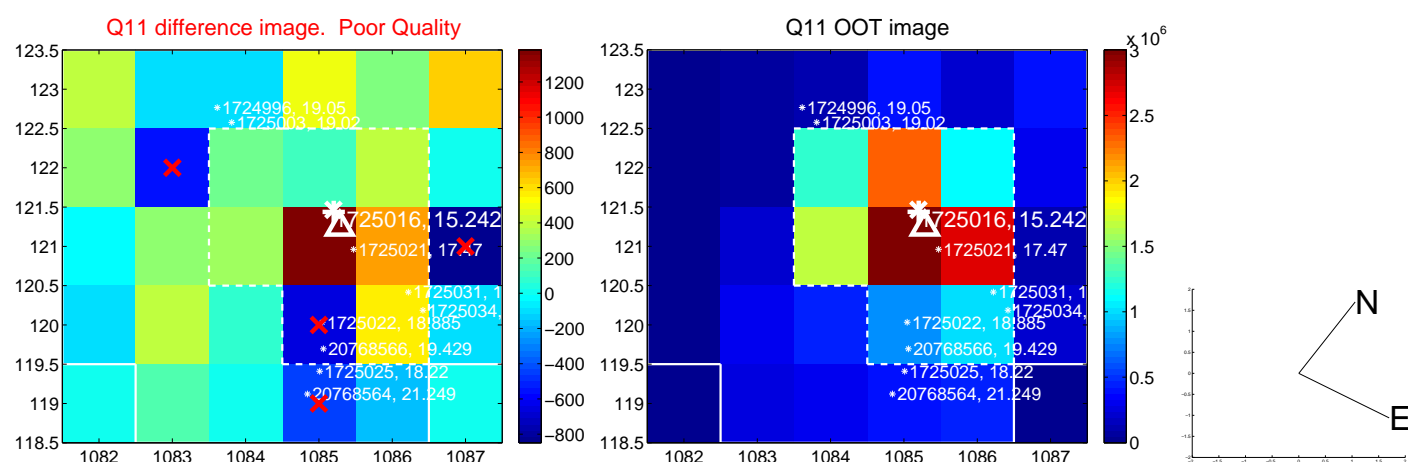
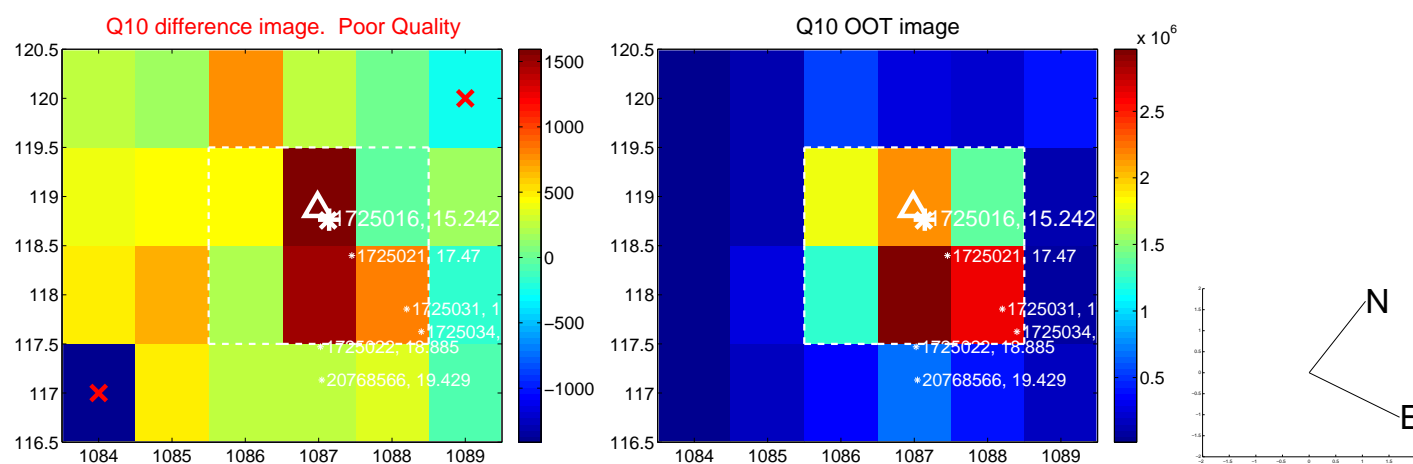
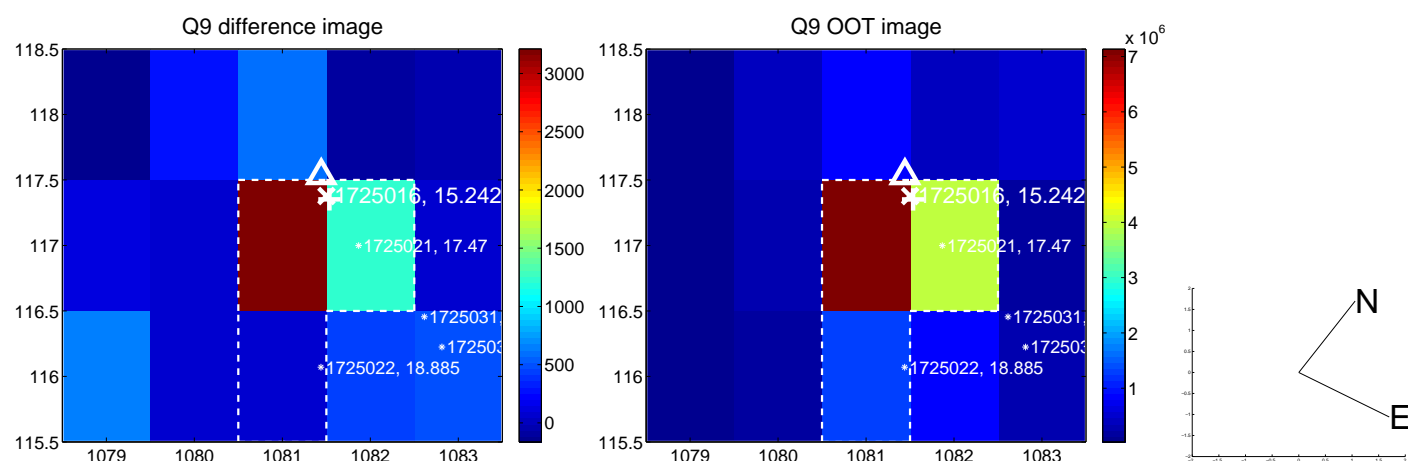
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



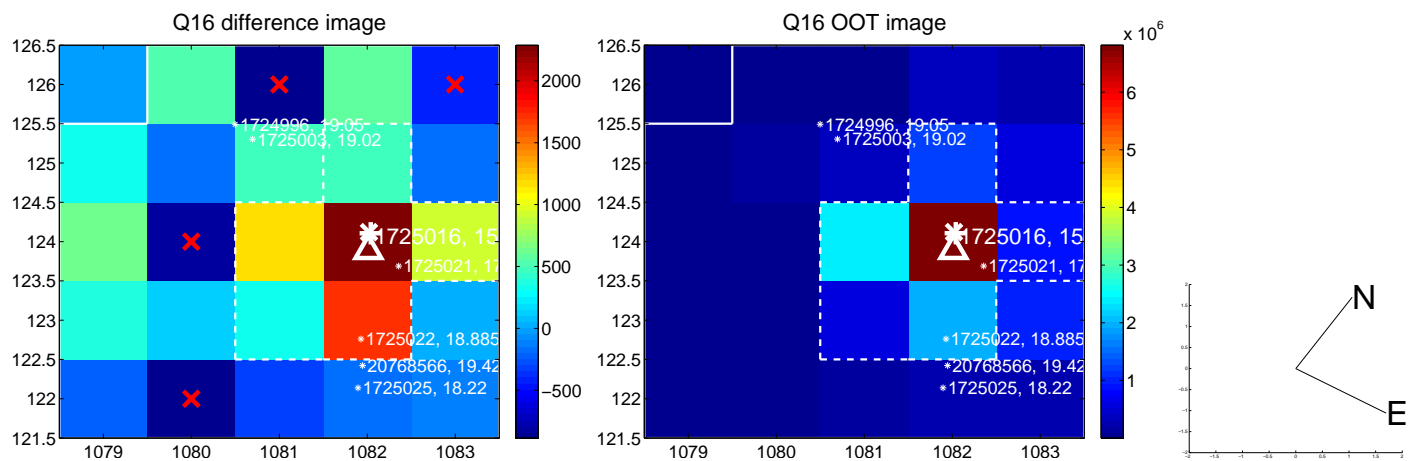
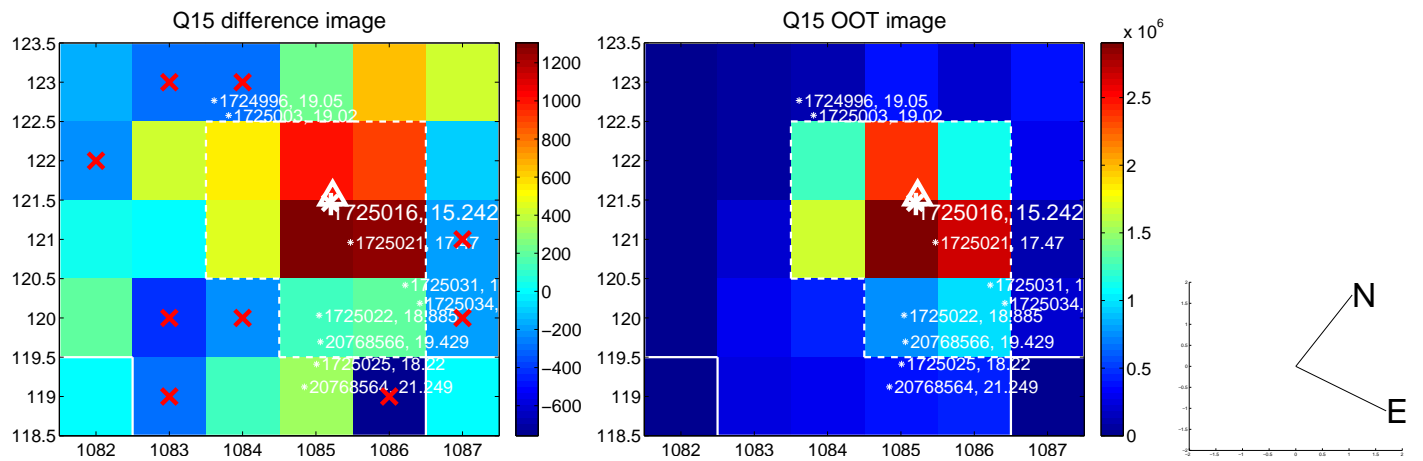
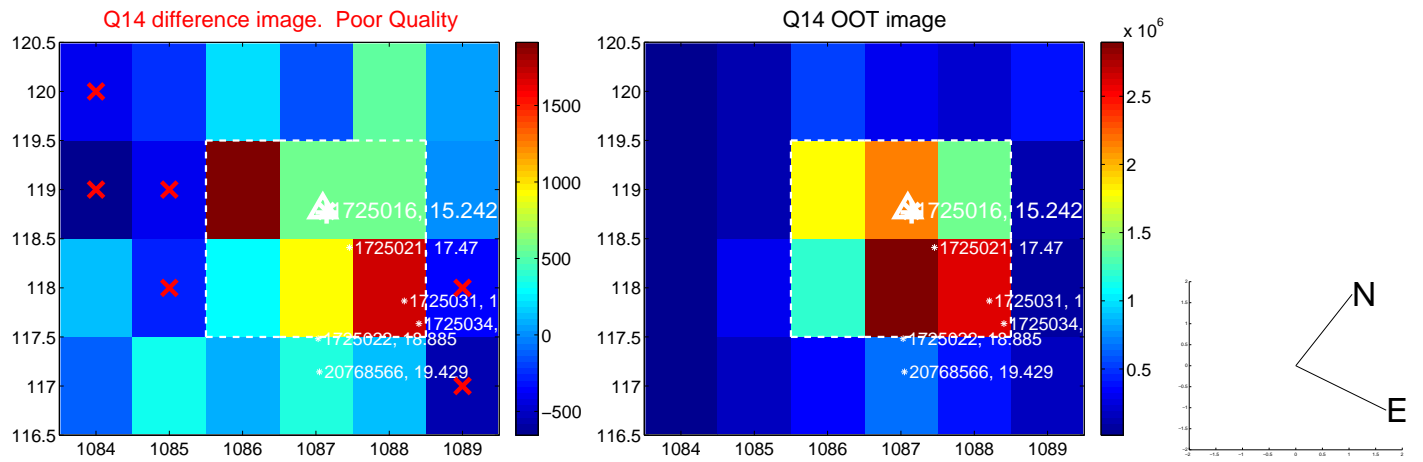
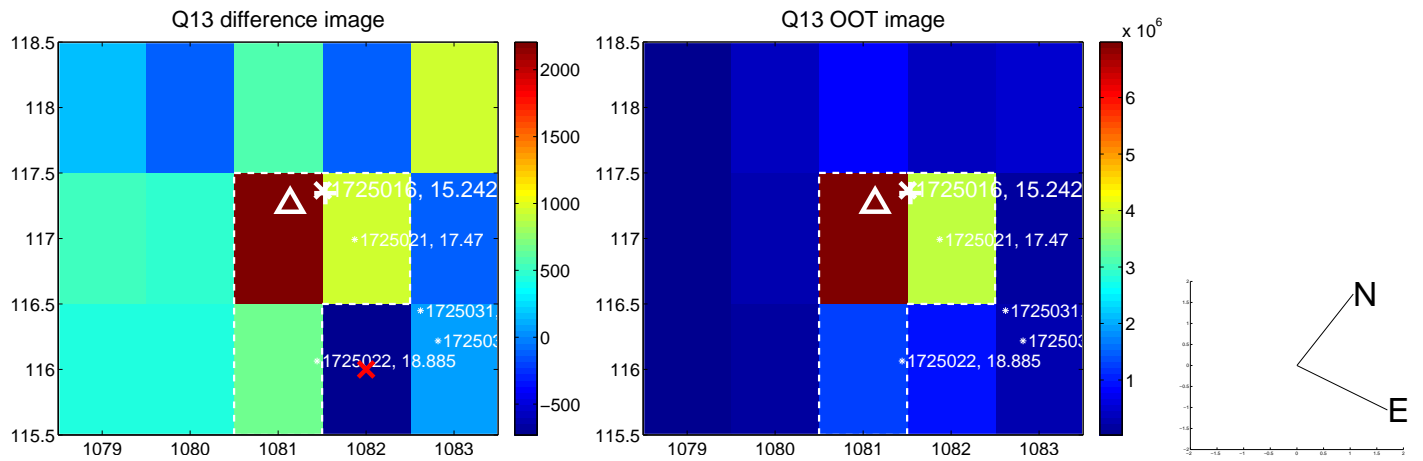
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



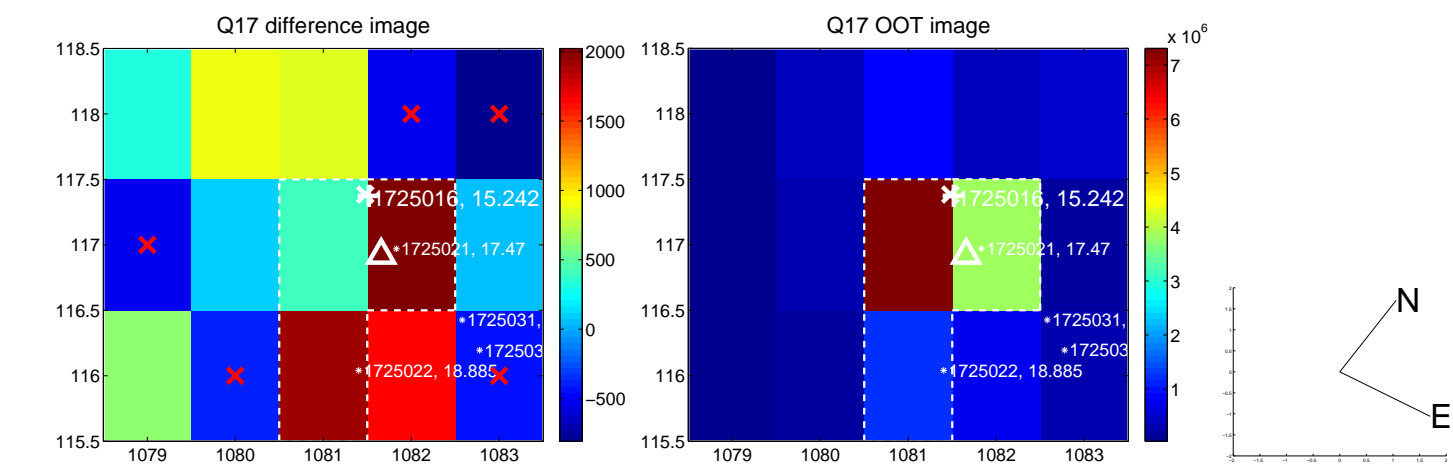
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



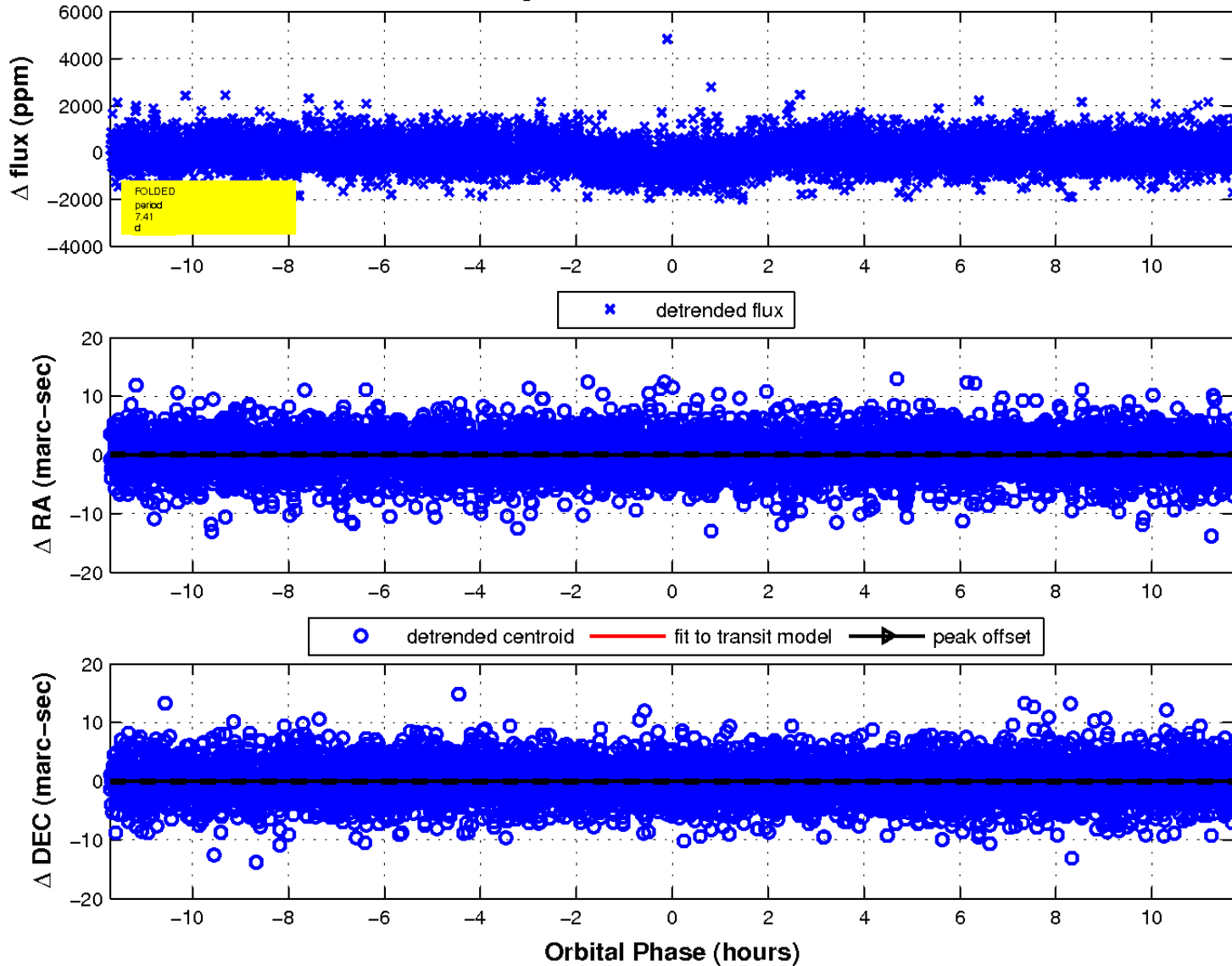
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

