

KIC 010751733

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})
010751733-01	OBS	No	1.696309	132.884575	16.4	10.324	7.3	8.5	1.83	7568	0.88	9018.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010751733-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT

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

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

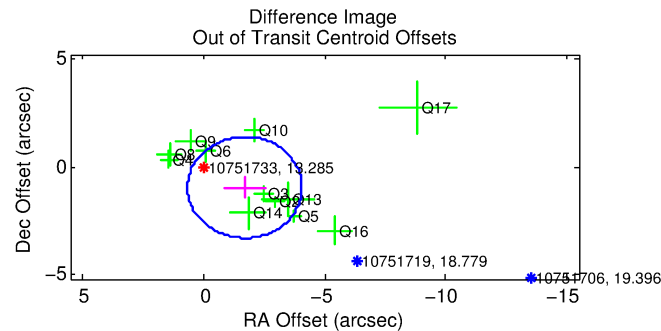
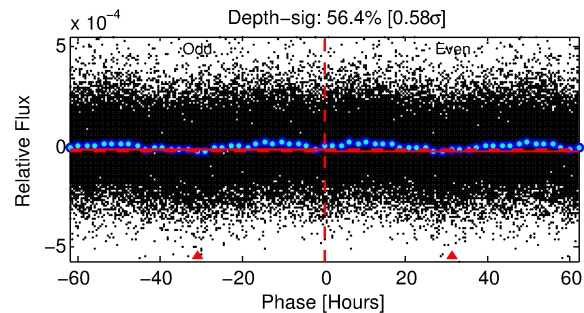
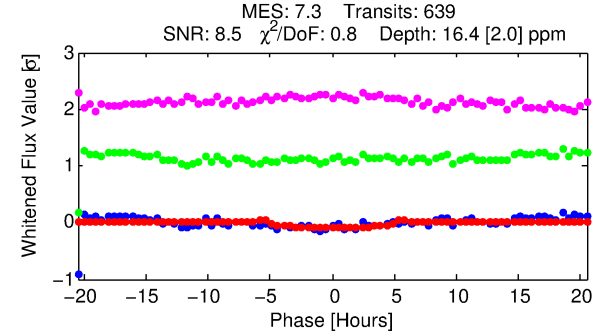
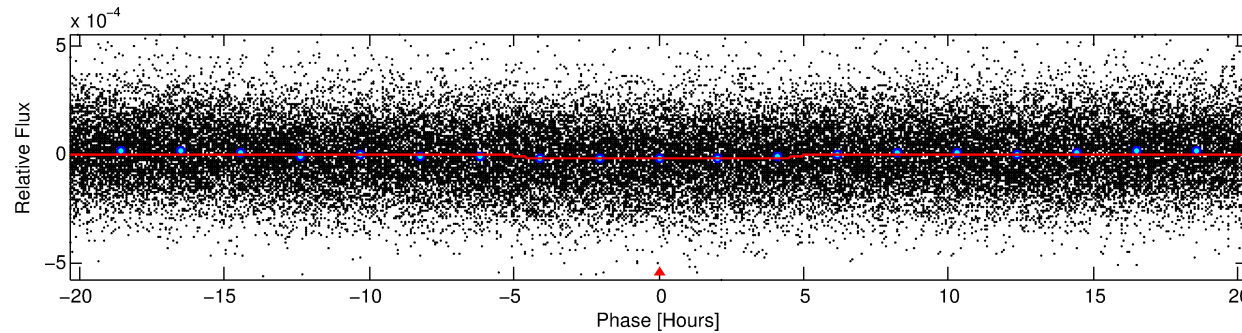
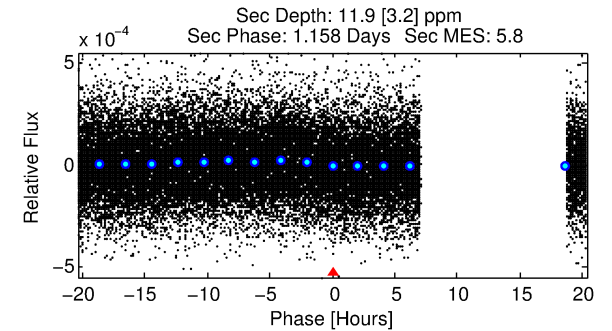
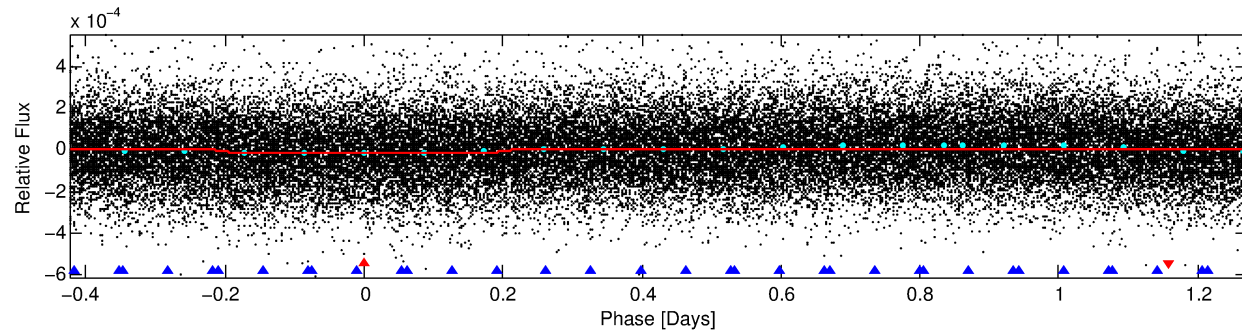
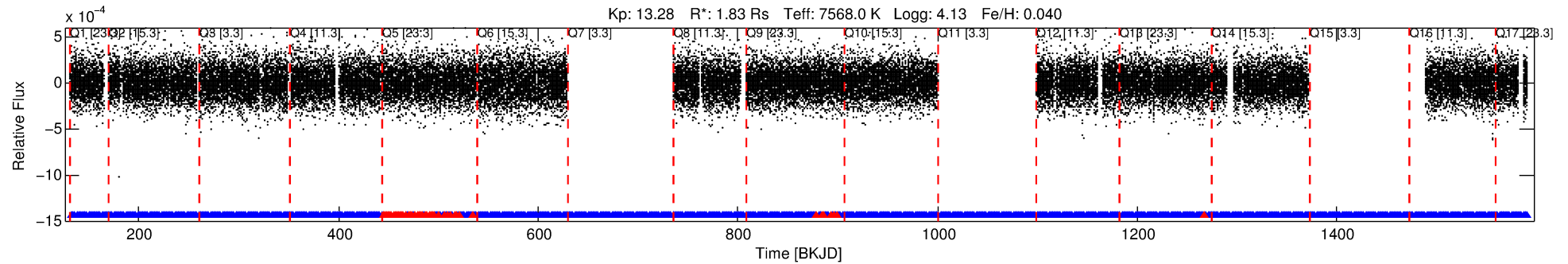
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010751733-01

No Significant Match Found

DV One-Page Summary

KIC: 10751733 Candidate: 1 of 2 Period: 1.696 d



DV Fit Results:

Period = 1.69631 [0.00003] d
Epoch = 132.8846 [0.0089] BKJD
Rp/R* = 0.0044 [0.0010]
a/R* = 1.07 [0.20]
b = 0.93 [0.21]
Seff = 9018.75 [3473.57]
Teq = 2485 [239] K
Rp = 0.88 [0.32] Re
a = 0.0330 [0.0079] AU
Ag = 9.25 [5.83] [1.42σ]
Teffp = 6700 [924] K [4.41σ]

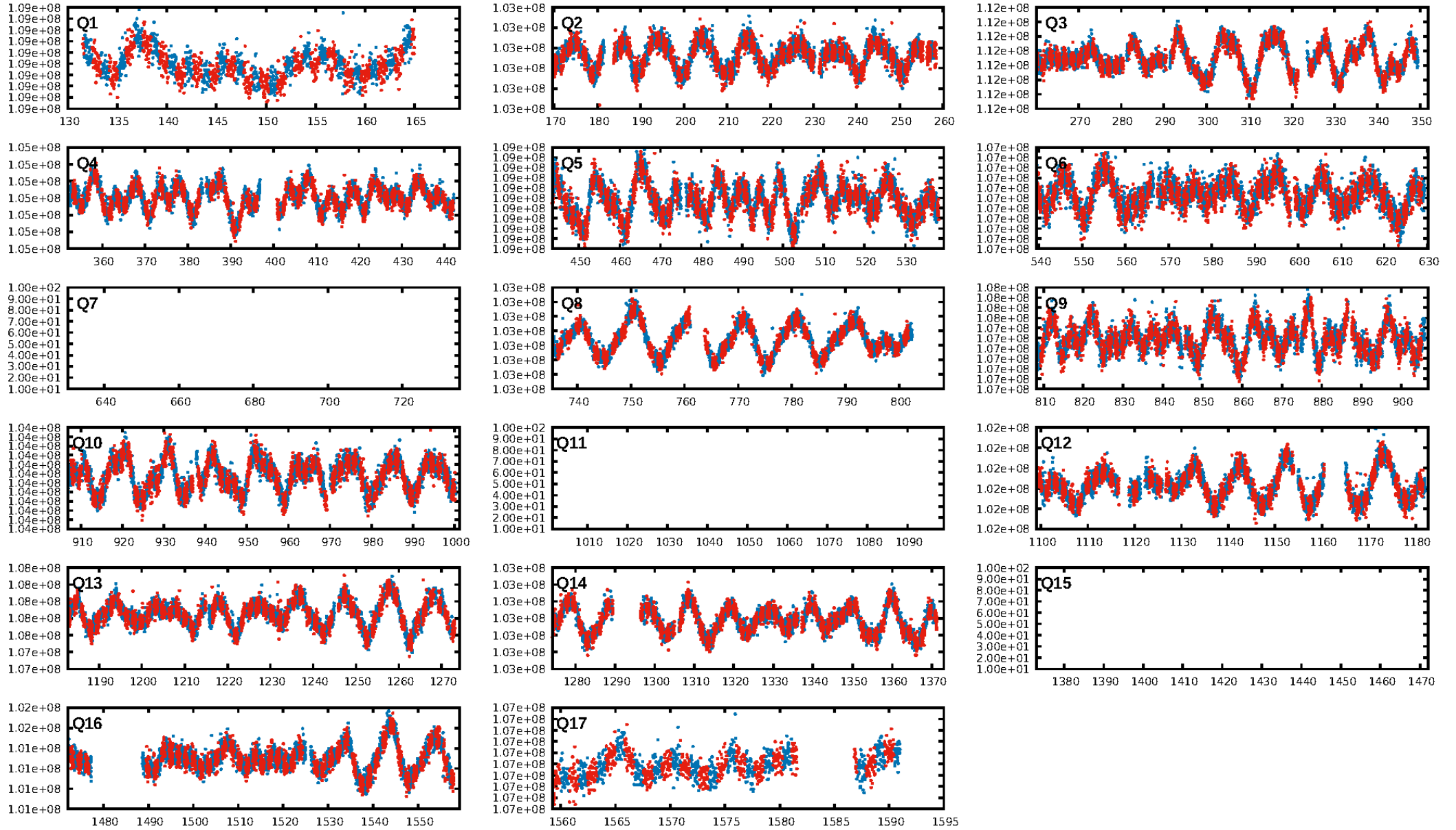
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [61.52σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.92e-08
RollingBand-fgt: 0.93 [559/602]
GhostDiagnostic-chr: 1.121
Centroid-sig: 0.1%
Centroid-so: 2.576 arcsec [2.07σ]
OotOffset-rm: 1.959 arcsec [2.49σ]
KicOffset-rm: 2.039 arcsec [2.41σ]
OotOffset-st: 4/1/3/4 [12]
KicOffset-st: 4/1/3/4 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [14/14]

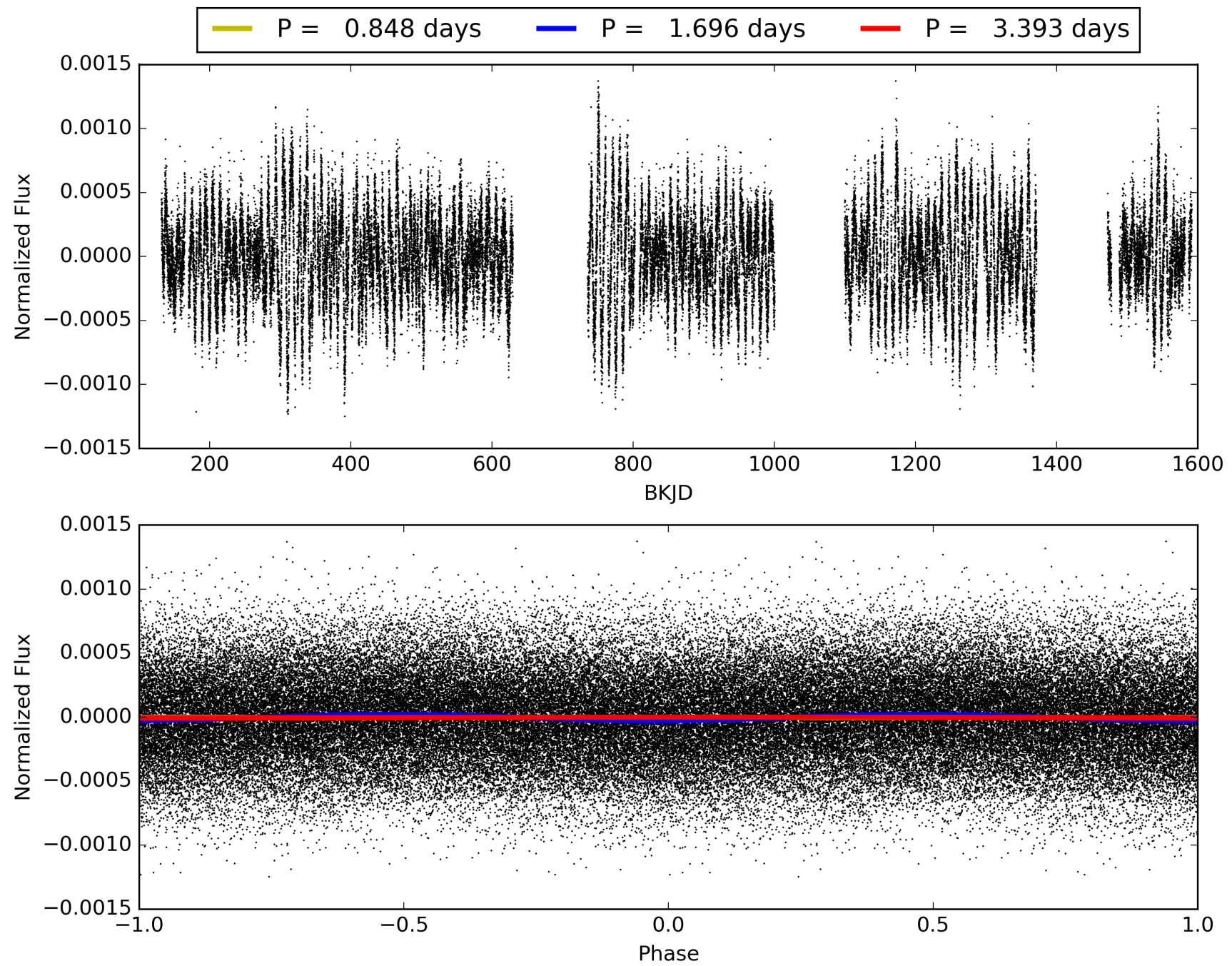
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:11:53 Z

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

TCE 010751733-01, PDC Light Curves

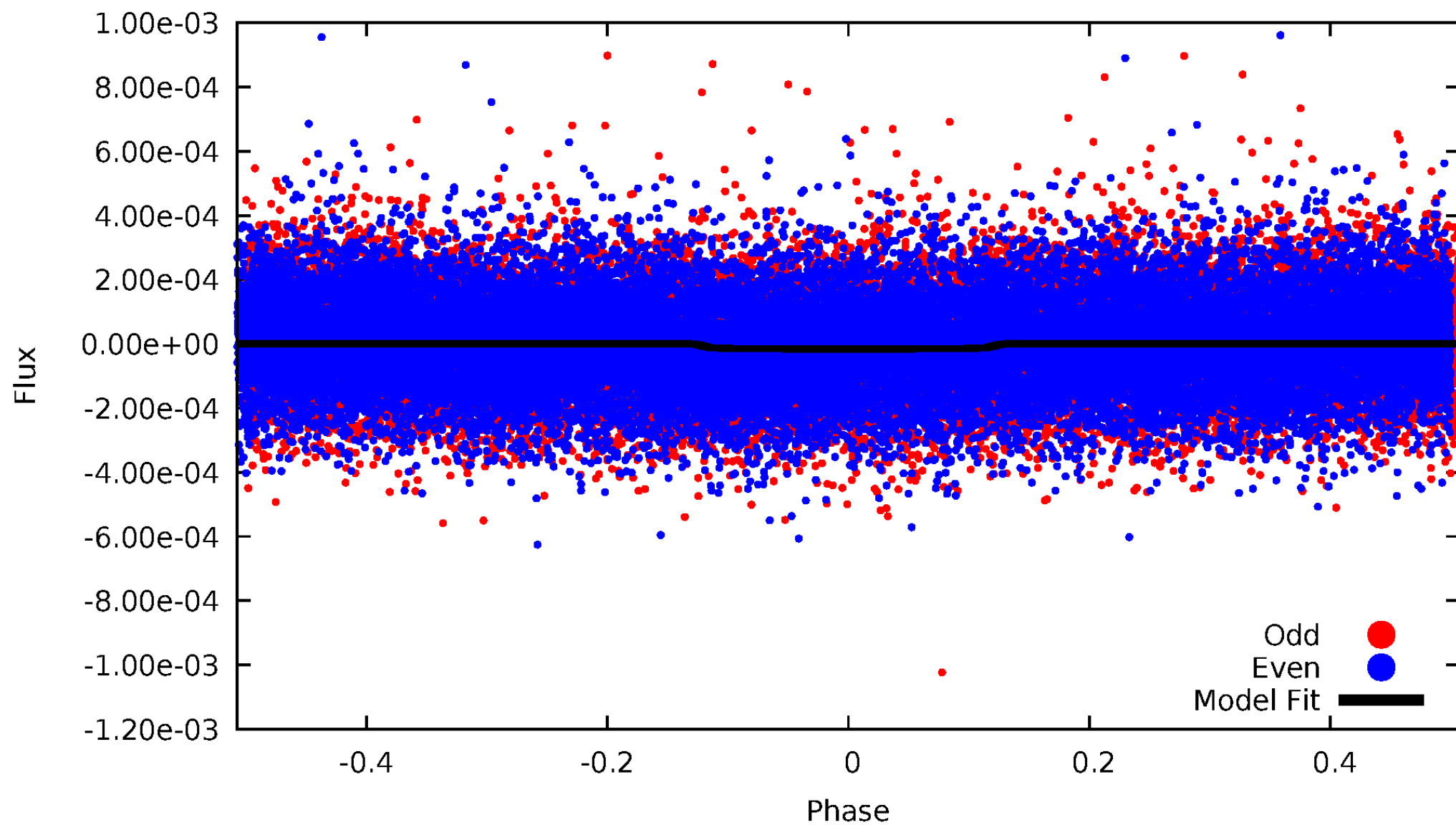


TCE 010751733-01



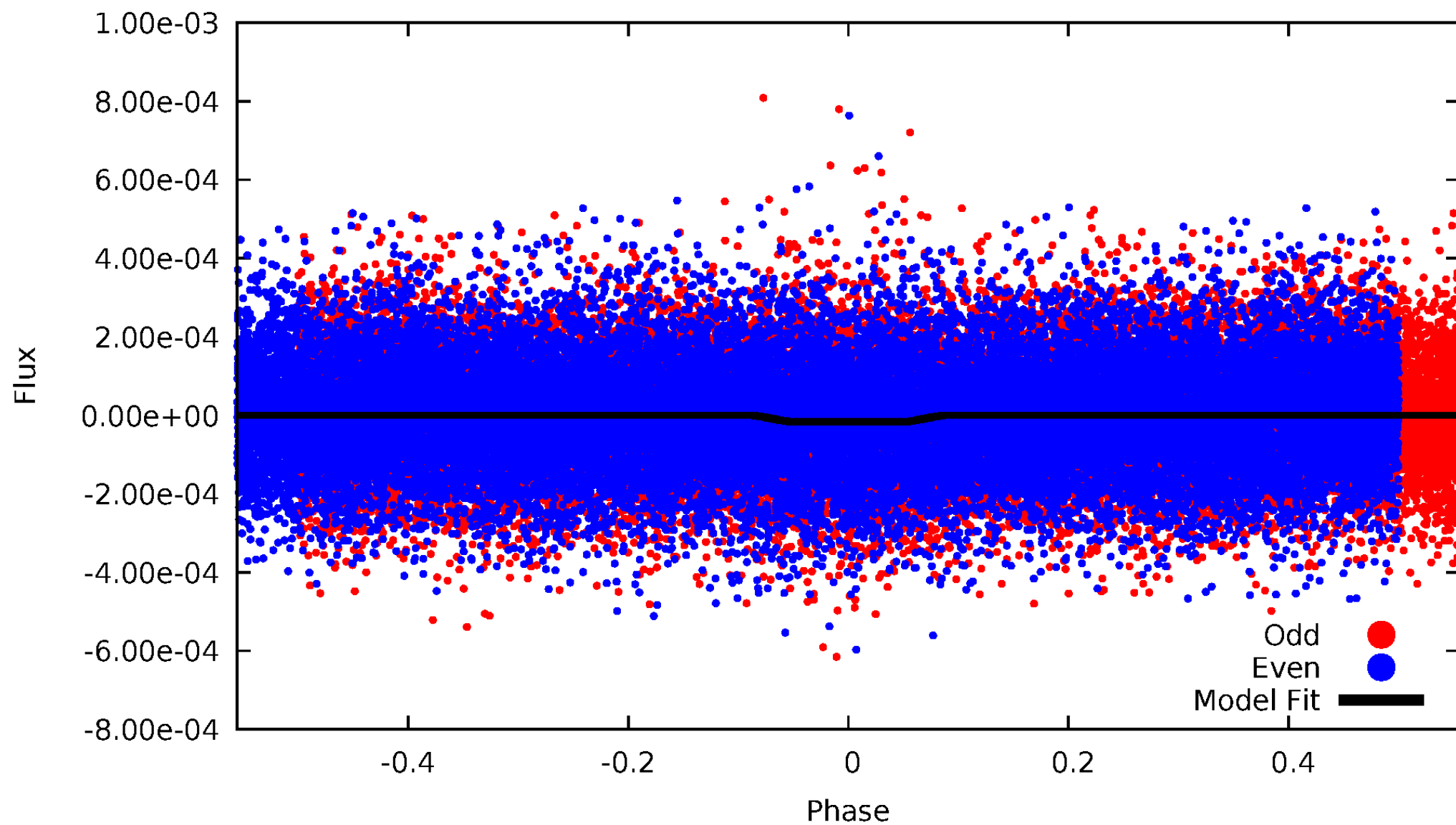
DV Odd/Even

TCE 010751733-01



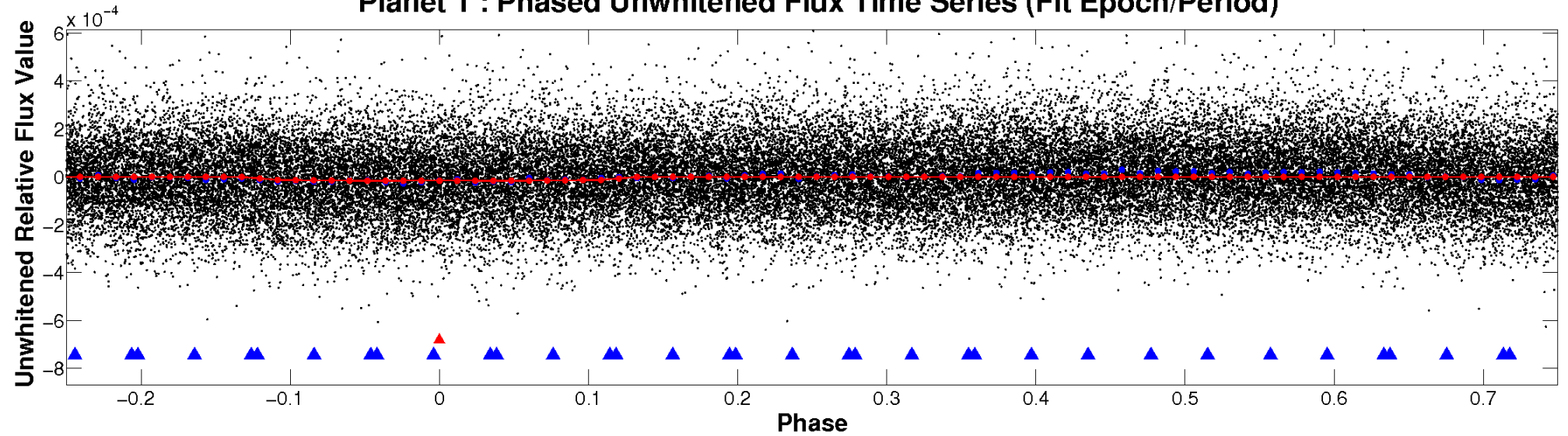
ALT Odd/Even

TCE 010751733-01

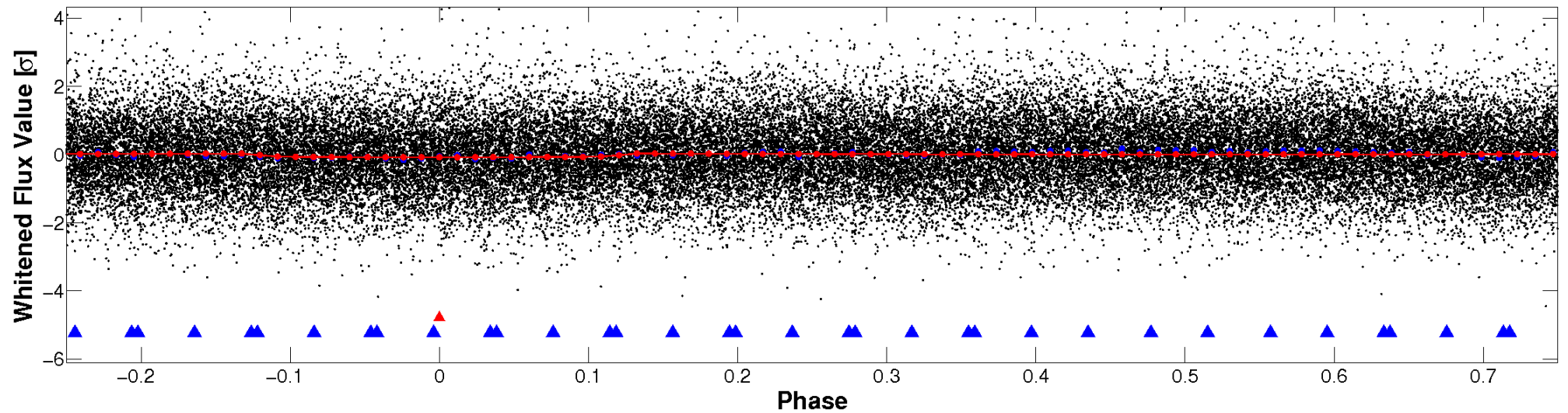


Non-Whitened Vs. Whitened Light Curve

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

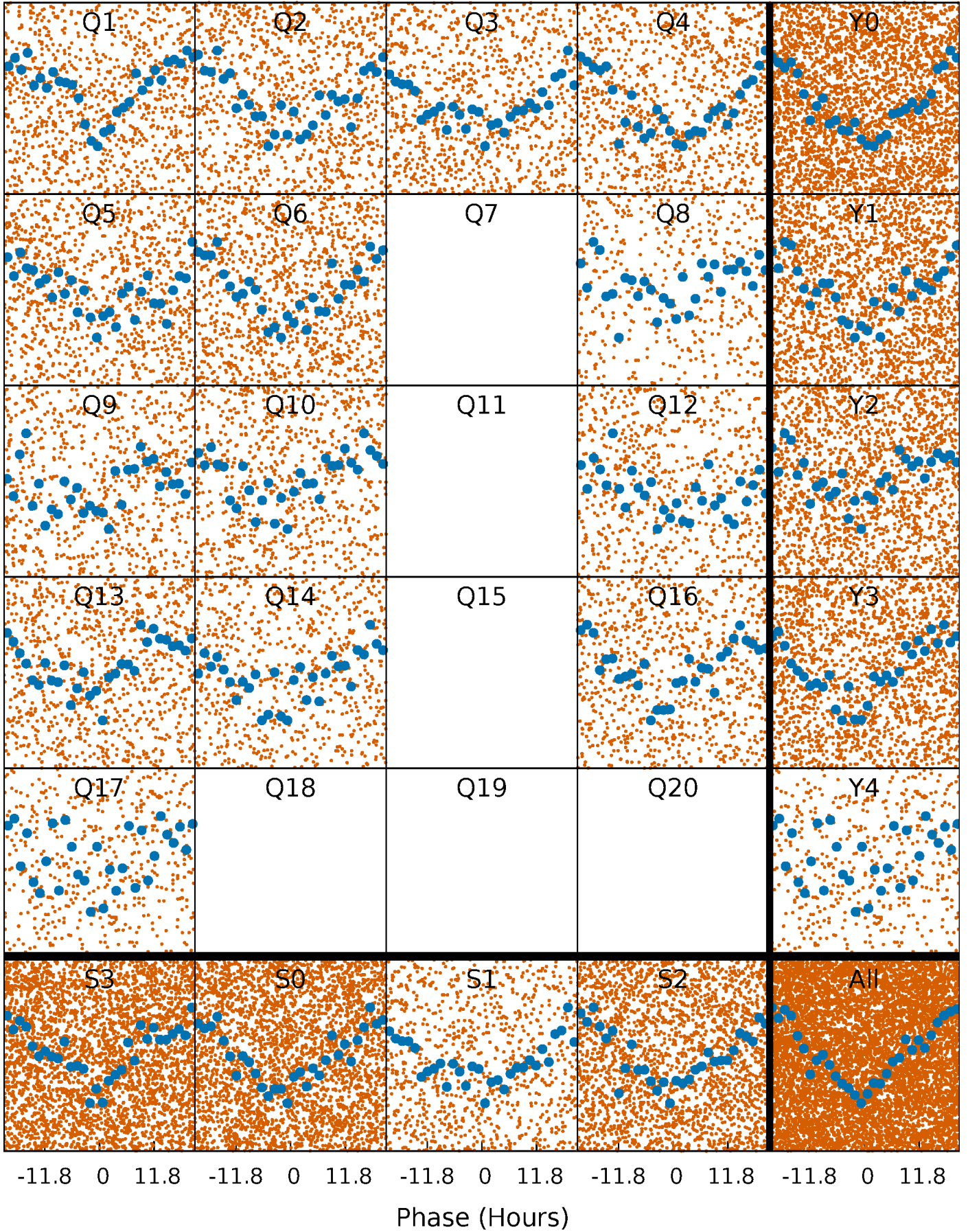


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



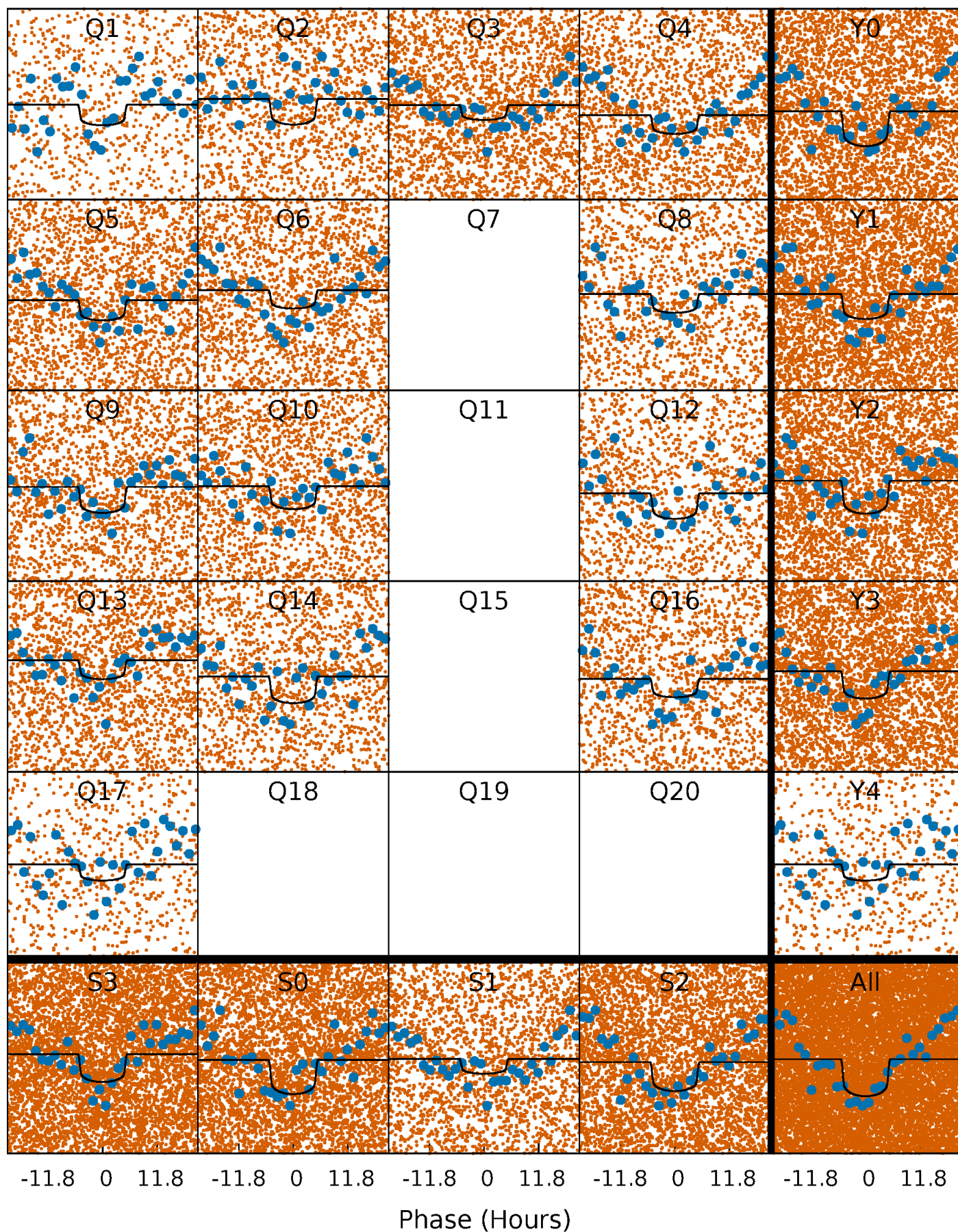
PDC Quarter-Phased Transit Curves

TCE 010751733-01 P= 1.696309 Days $T_0=132.884575$ (BKJD)



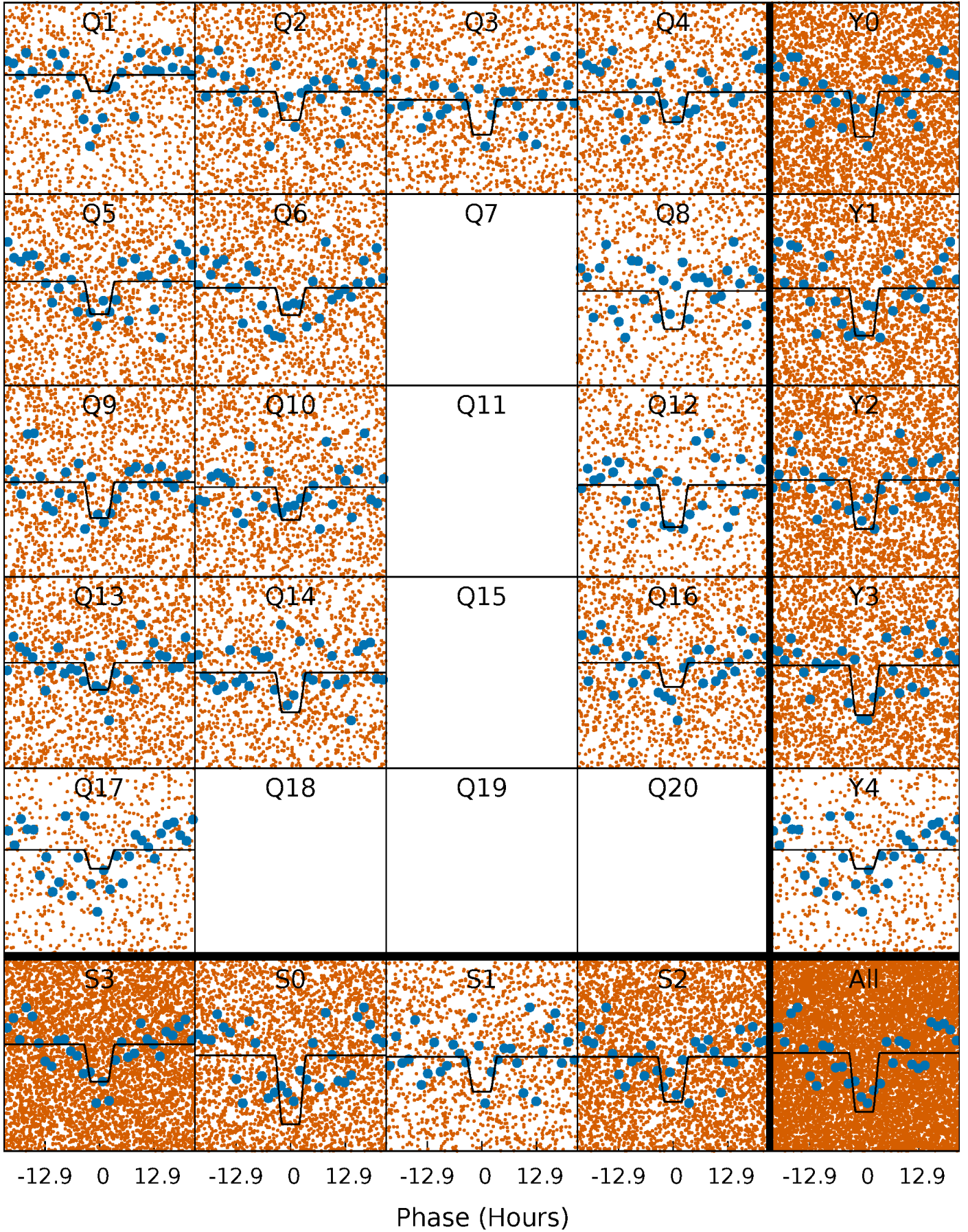
DV Quarter-Phased Transit Curves

TCE 010751733-01 P= 1.696309 Days $T_0=132.884575$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

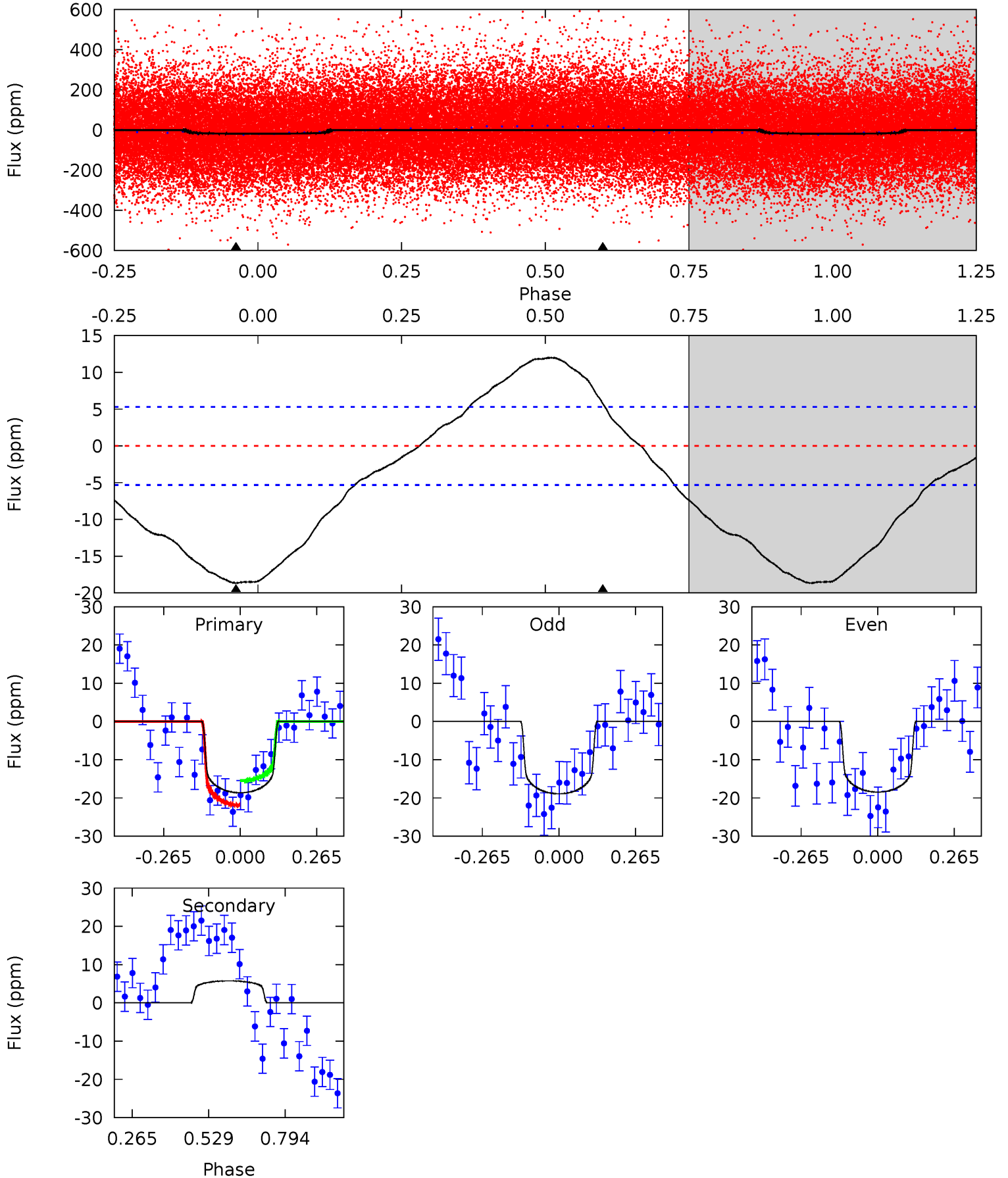
TCE 010751733-01 P= 1.696143 Days $T_0=132.942030$ (BKJD)



DV Model-Shift Uniqueness Test

010751733-01, P = 1.696309 Days, E = 131.188266 Days

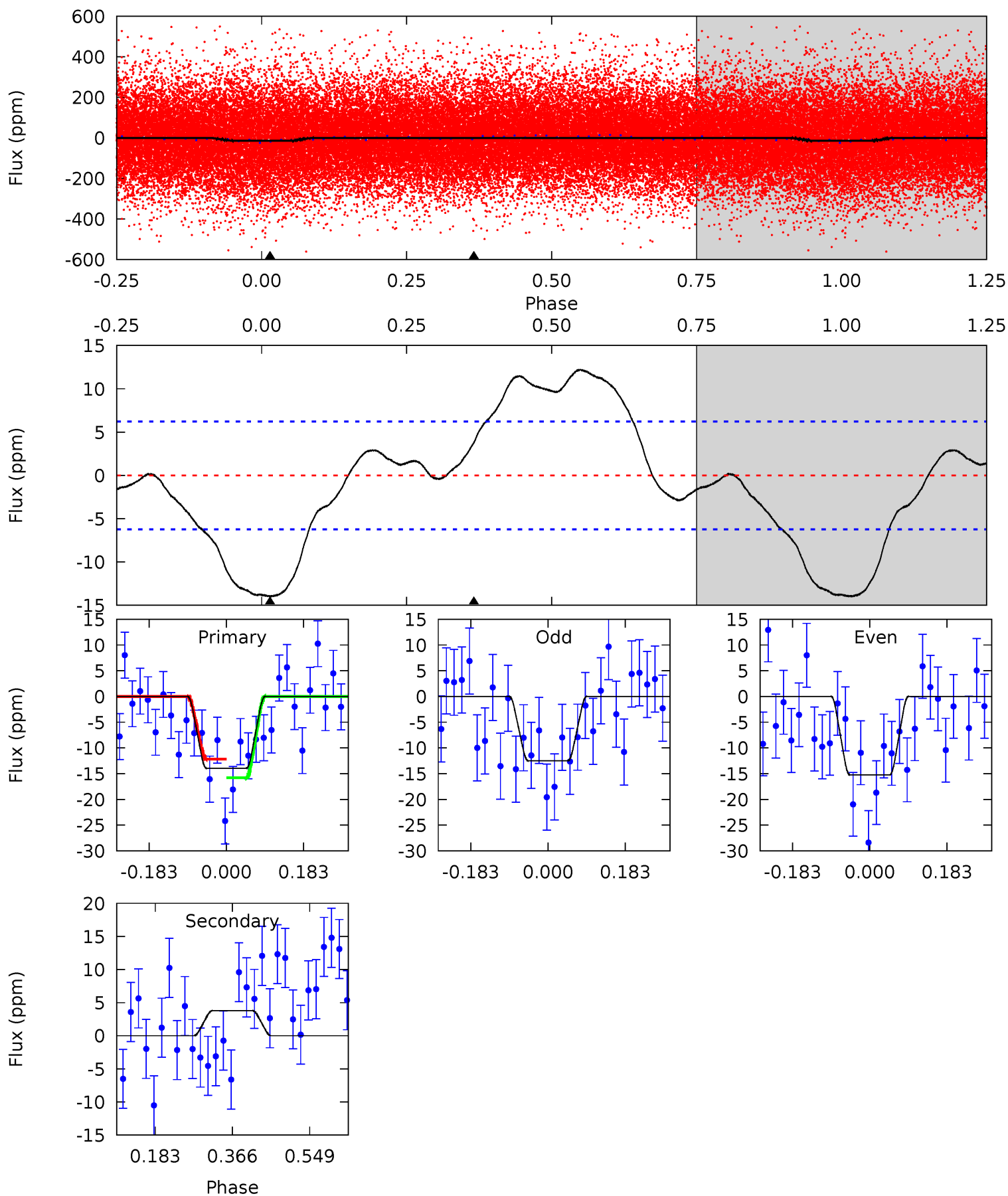
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	-4.72	0	0	4.36	1.12	1.49	15.3	15.3	-4.72	-4.72	0.18	1.05	0.39	2.66



Alt Model-Shift Uniqueness Test

010751733-01, P = 1.696143 Days, E = 131.245887 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.95	-2.70	0	0	4.44	1.33	3.87	9.95	9.95	-2.70	-2.70	0.98	0.96	0.47	1.30



Stellar Parameters For KIC 010751733

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7568^{+211}_{-316}	$4.135^{+0.116}_{-0.188}$	$0.040^{+0.200}_{-0.350}$	$1.826^{+0.528}_{-0.352}$	$1.658^{+0.204}_{-0.250}$	$0.383^{+0.218}_{-0.188}$
	+3%/-4%	+3%/-5%	+500%/-875%	+29%/-19%	+12%/-15%	+57%/-49%
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 010751733-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	6 ± 1	$0.90^{+0.24}_{-0.22}$	3492^{+261}_{-224}	-5576^{+550}_{-828}	$-4.232^{+1.864}_{-3.501}$
Alt.	4 ± 1	$0.84^{+0.25}_{-0.22}$	3506^{+258}_{-226}	-5203^{+573}_{-790}	$-2.955^{+1.438}_{-3.128}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

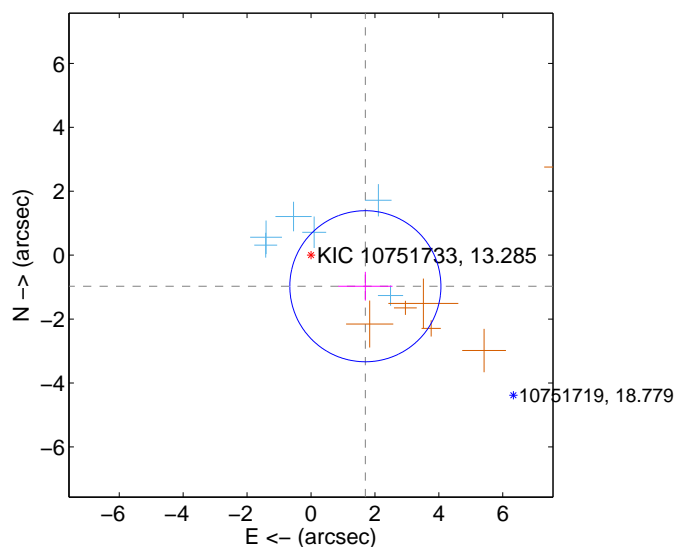
Supplemental centroid analysis for 010751733-01. Kepler magnitude: 13.29. Transit SNR 8.50

There are 6 quarters with good PRF difference image offsets

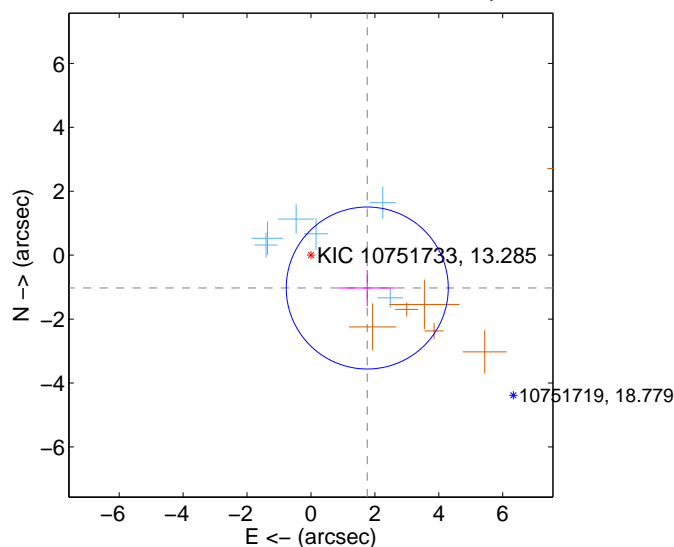
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.959 ± 0.788	2.49	-1.701 ± 0.846	-0.972 ± 0.450
PRF-fit source offset from KIC position	2.039 ± 0.845	2.41	-1.762 ± 0.888	-1.027 ± 0.564
photometric centroid source offset	2.58 ± 1.24	2.07	-0.64 ± 1.37	-2.49 ± 1.24

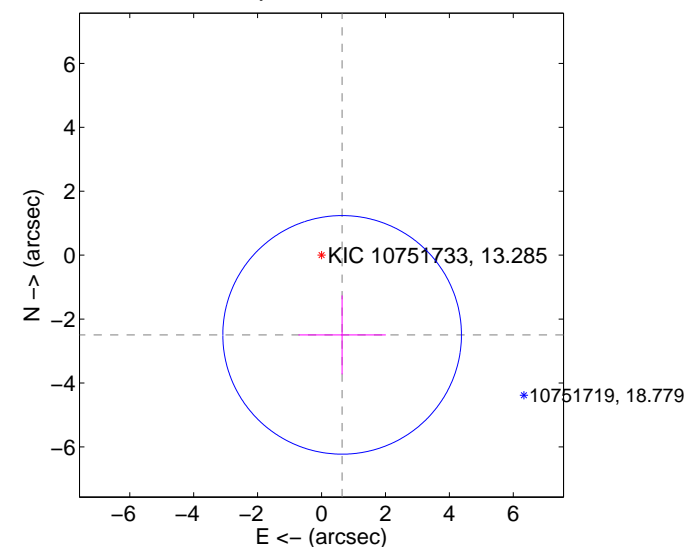
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

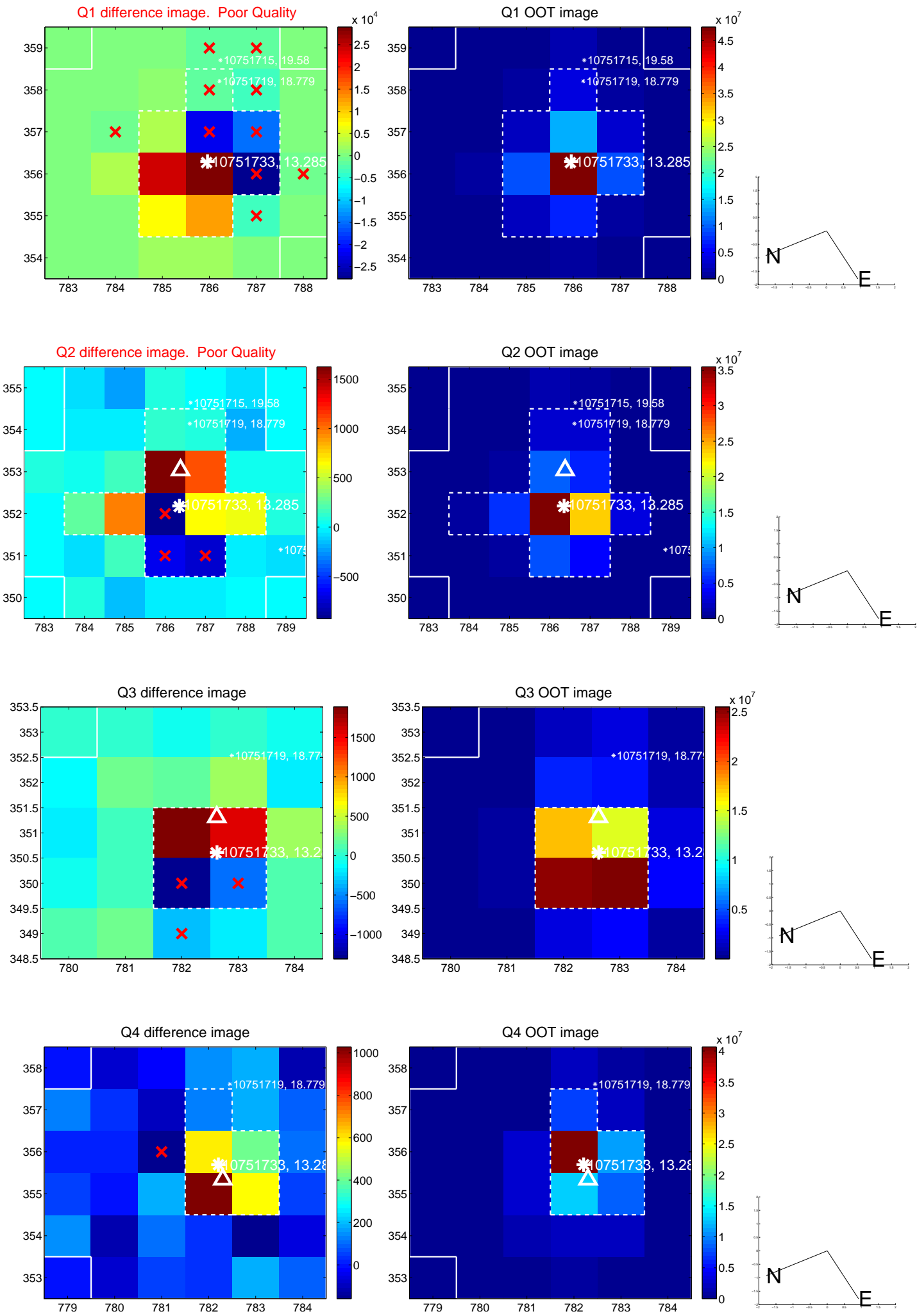


offset from photometric centroids

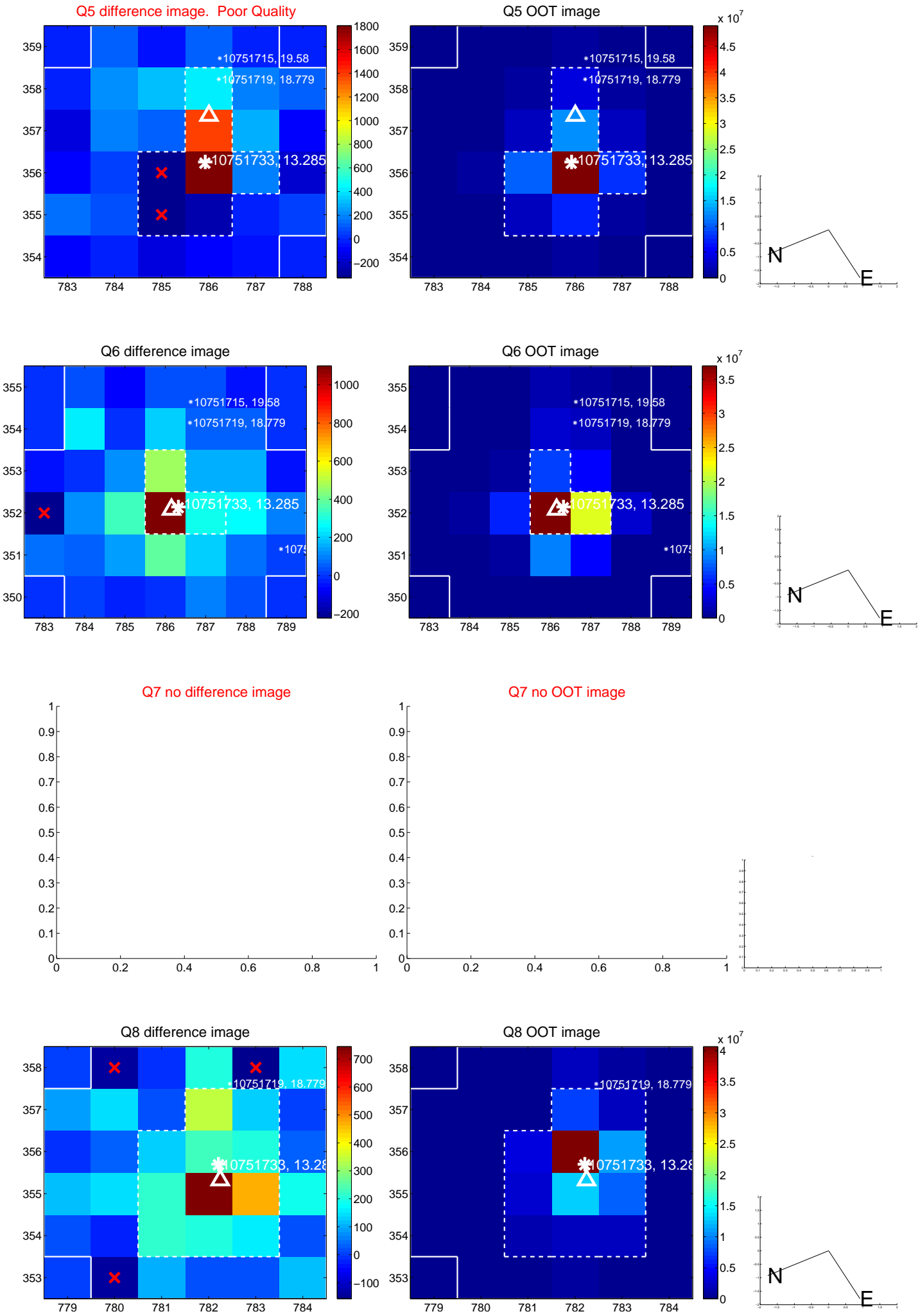


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

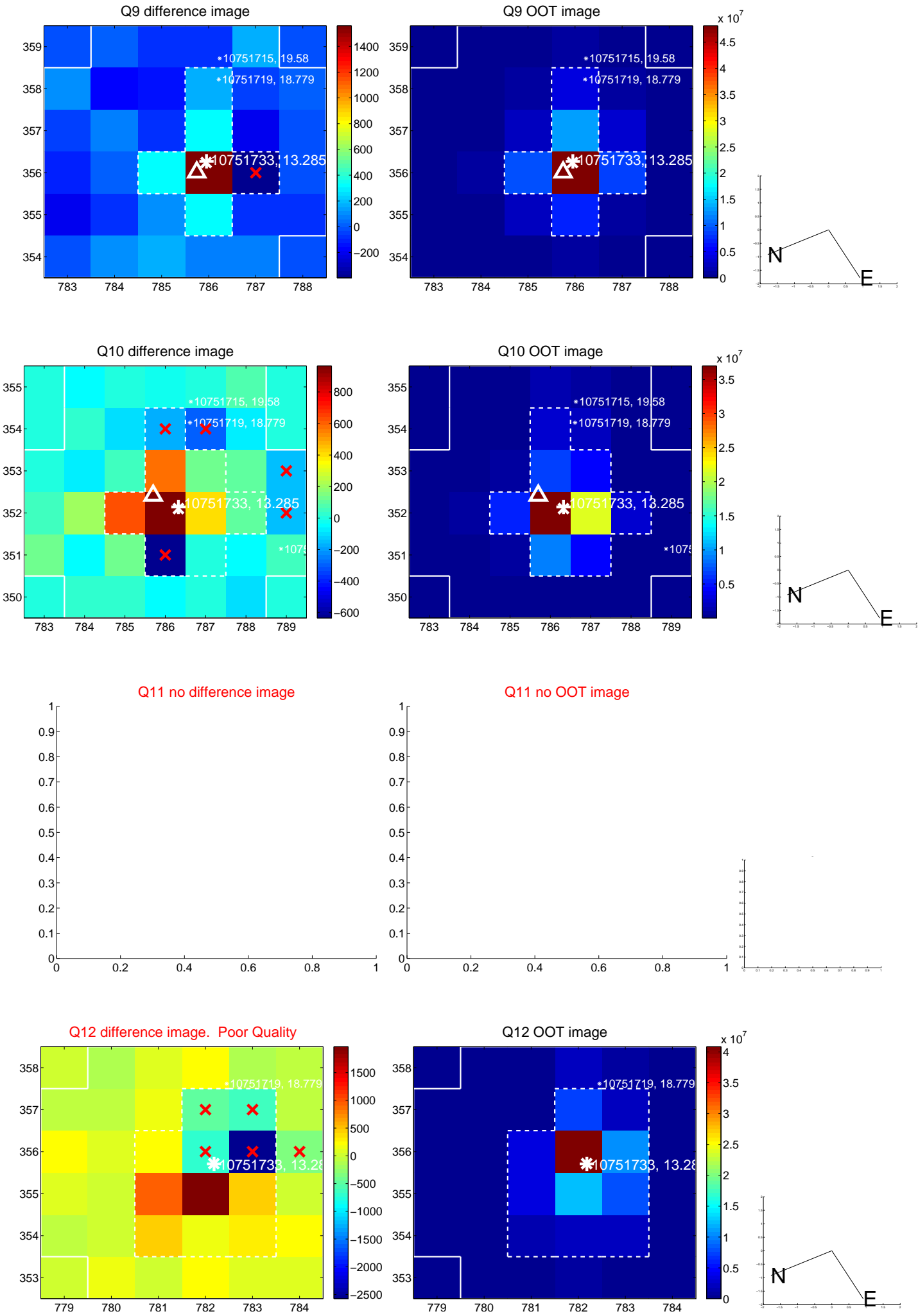
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



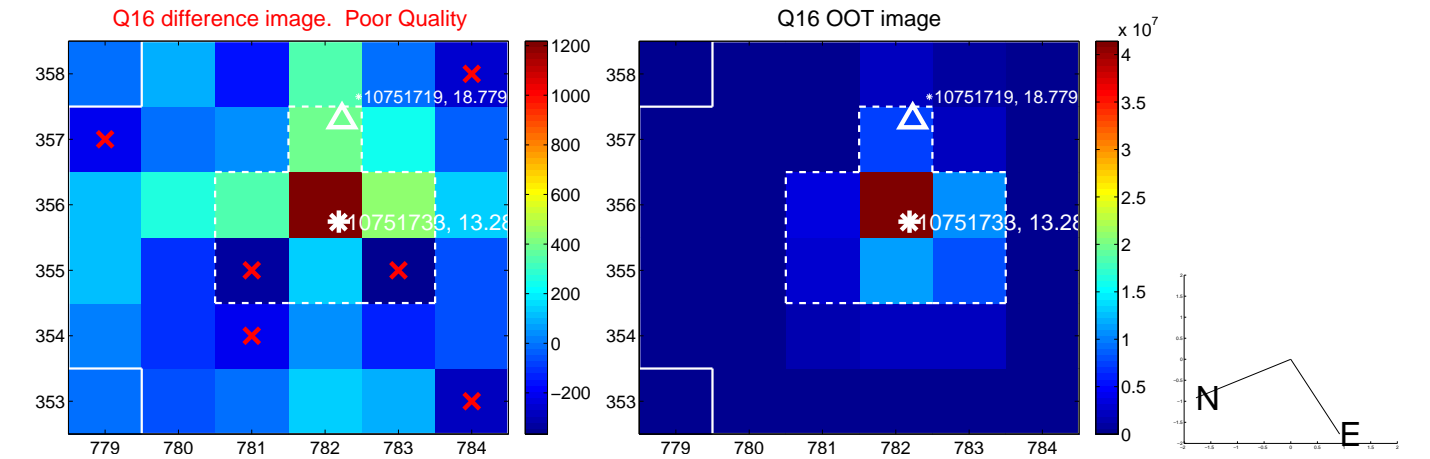
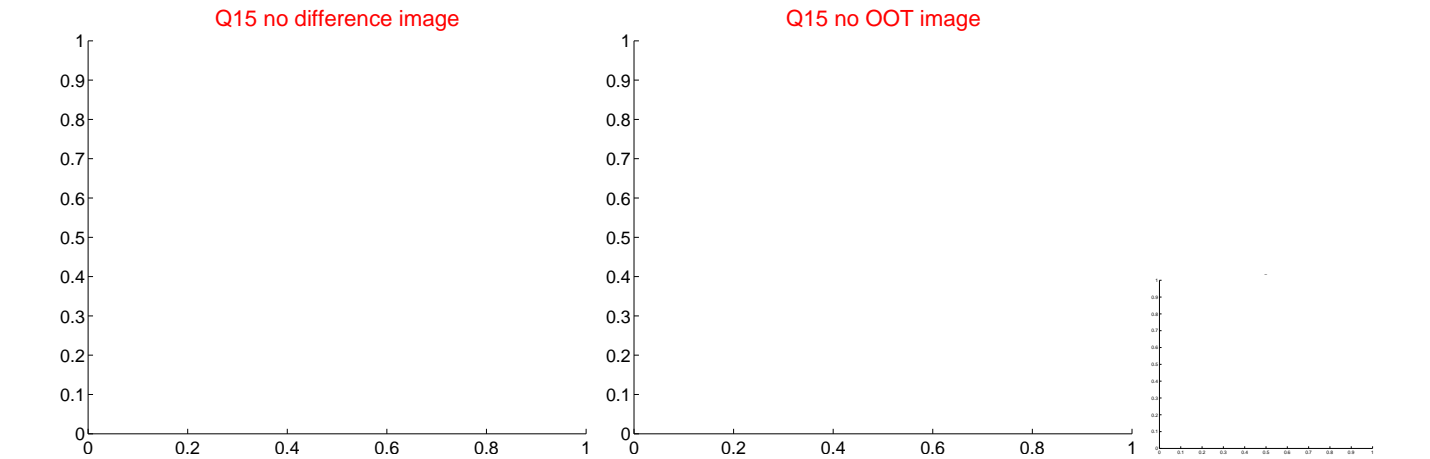
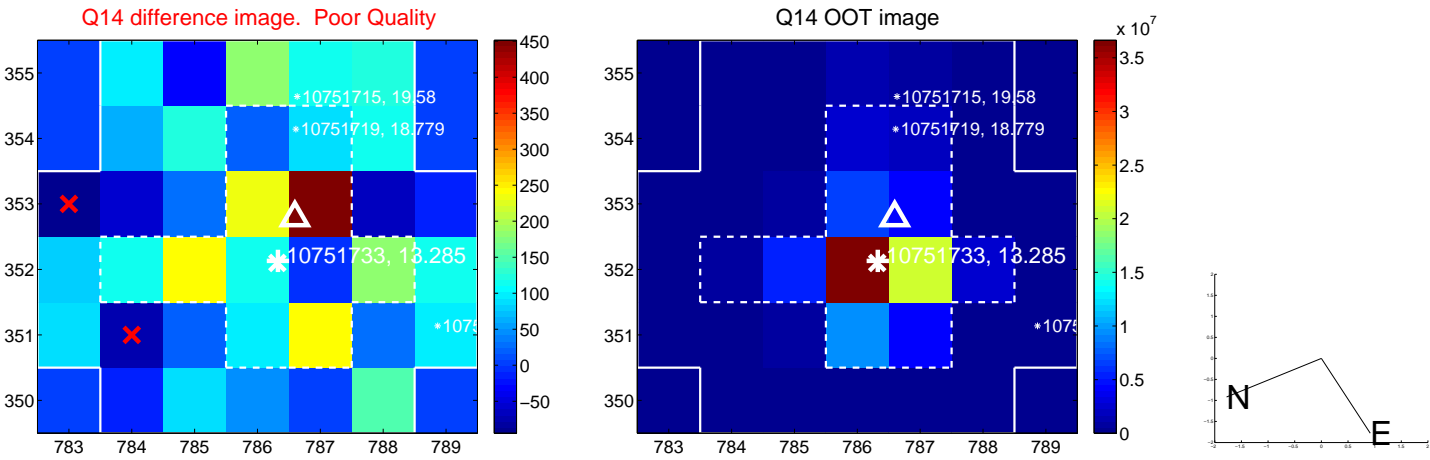
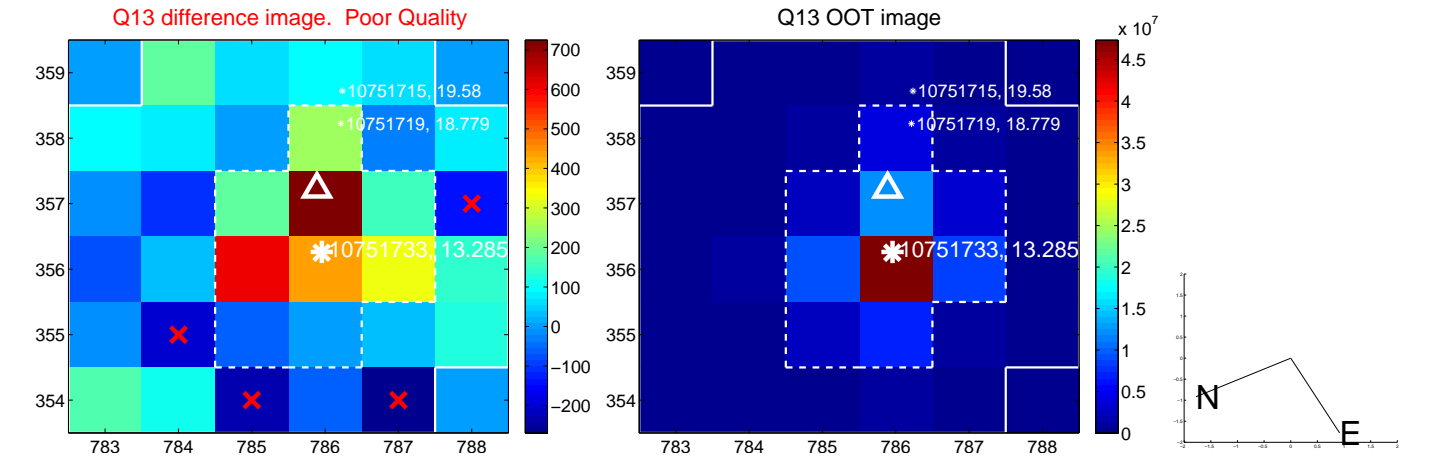
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



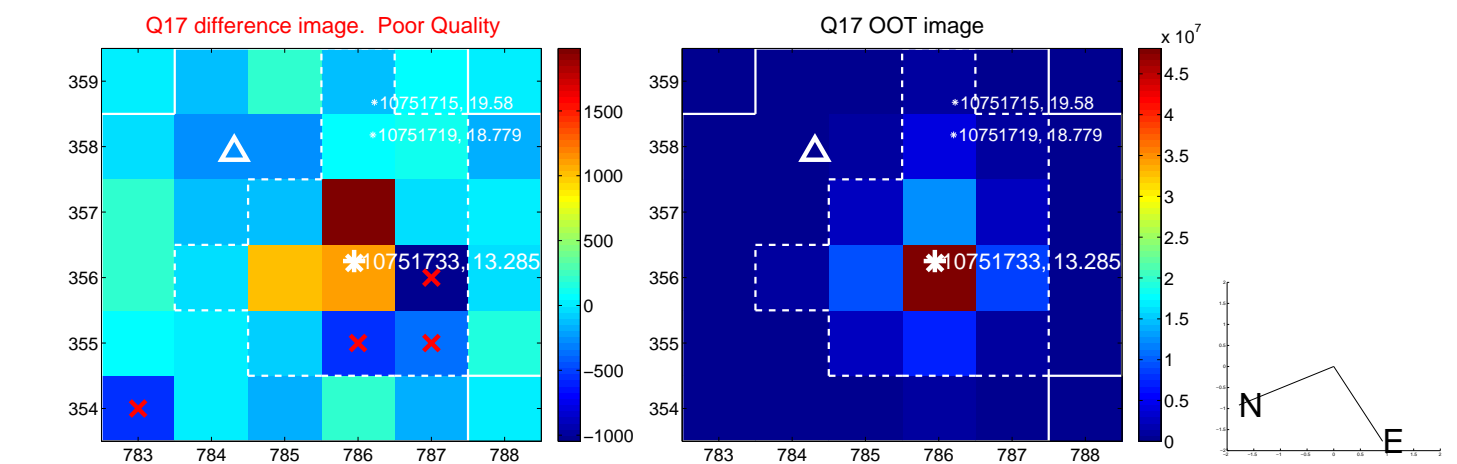
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



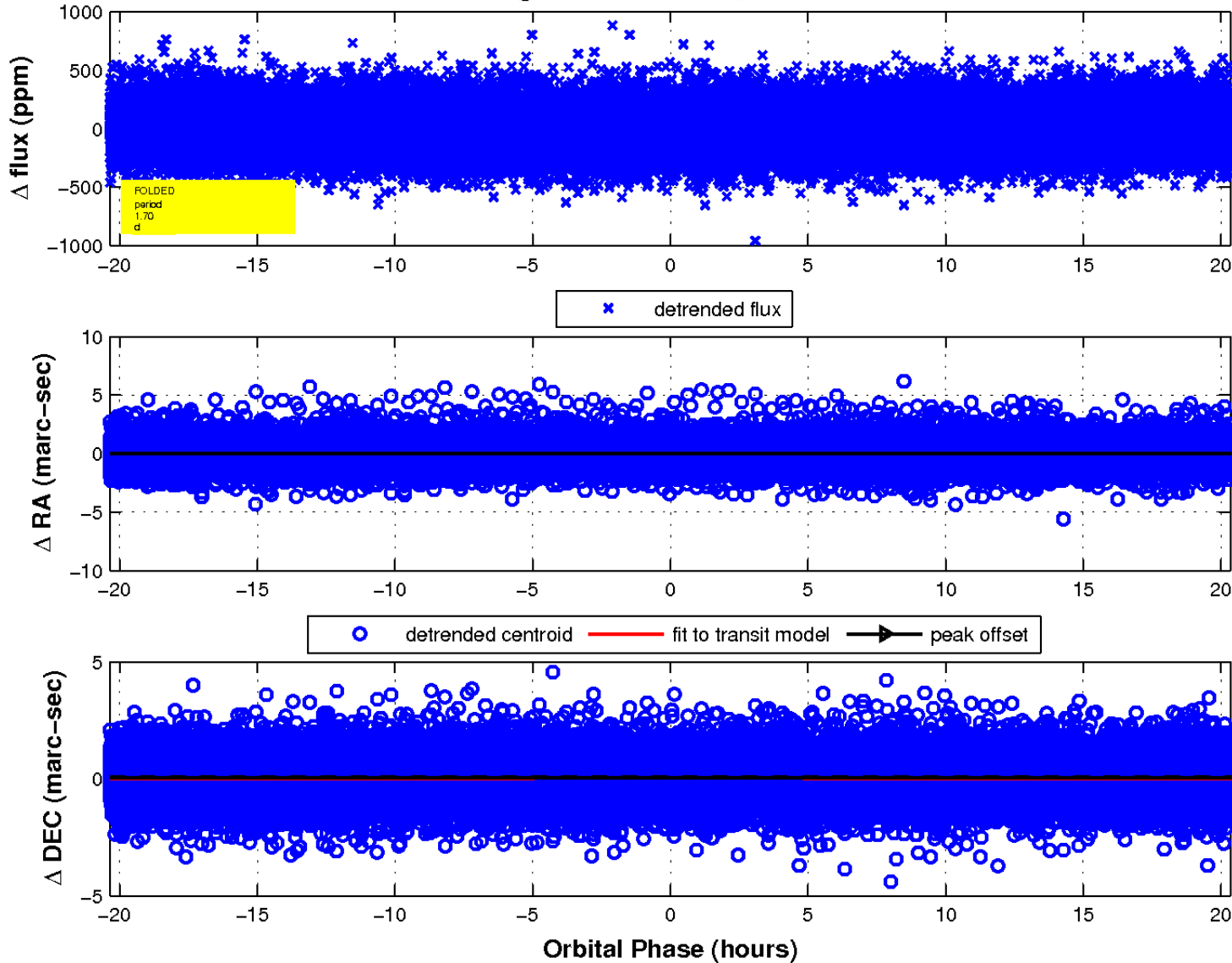
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination

