

KIC 004813793

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})
004813793-01	OBS	7708.01	6.702445	133.174294	62.2	1.130	8.1	7.8	2.22	5466	2.13	827.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004813793-01	OBS	PC	0.87	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.

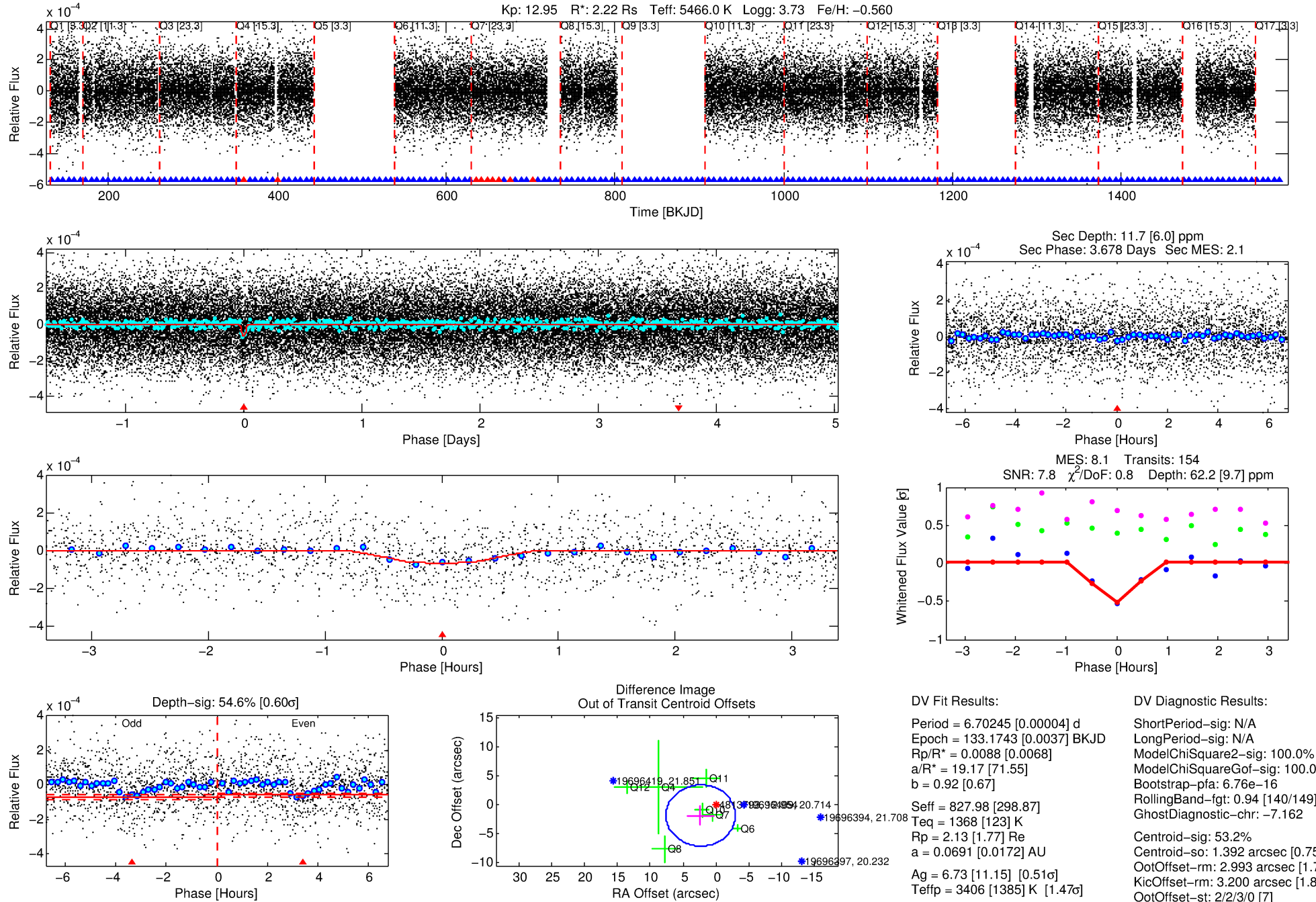
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004813793-01

No Significant Match Found

DV One-Page Summary

KIC: 4813793 Candidate: 1 of 1 Period: 6.702 d



DV Fit Results:

Period = 6.70245 [0.00004] d
Epoch = 133.1743 [0.0037] BKJD
Rp/R* = 0.0088 [0.0068]
a/R* = 19.17 [71.55]
b = 0.92 [0.67]
Seff = 827.98 [298.87]
Teq = 1368 [123] K
Rp = 2.13 [1.77] Re
a = 0.0691 [0.0172] AU
Ag = 6.73 [11.15] [0.51 σ]
Teffp = 3406 [1385] K [1.47 σ]

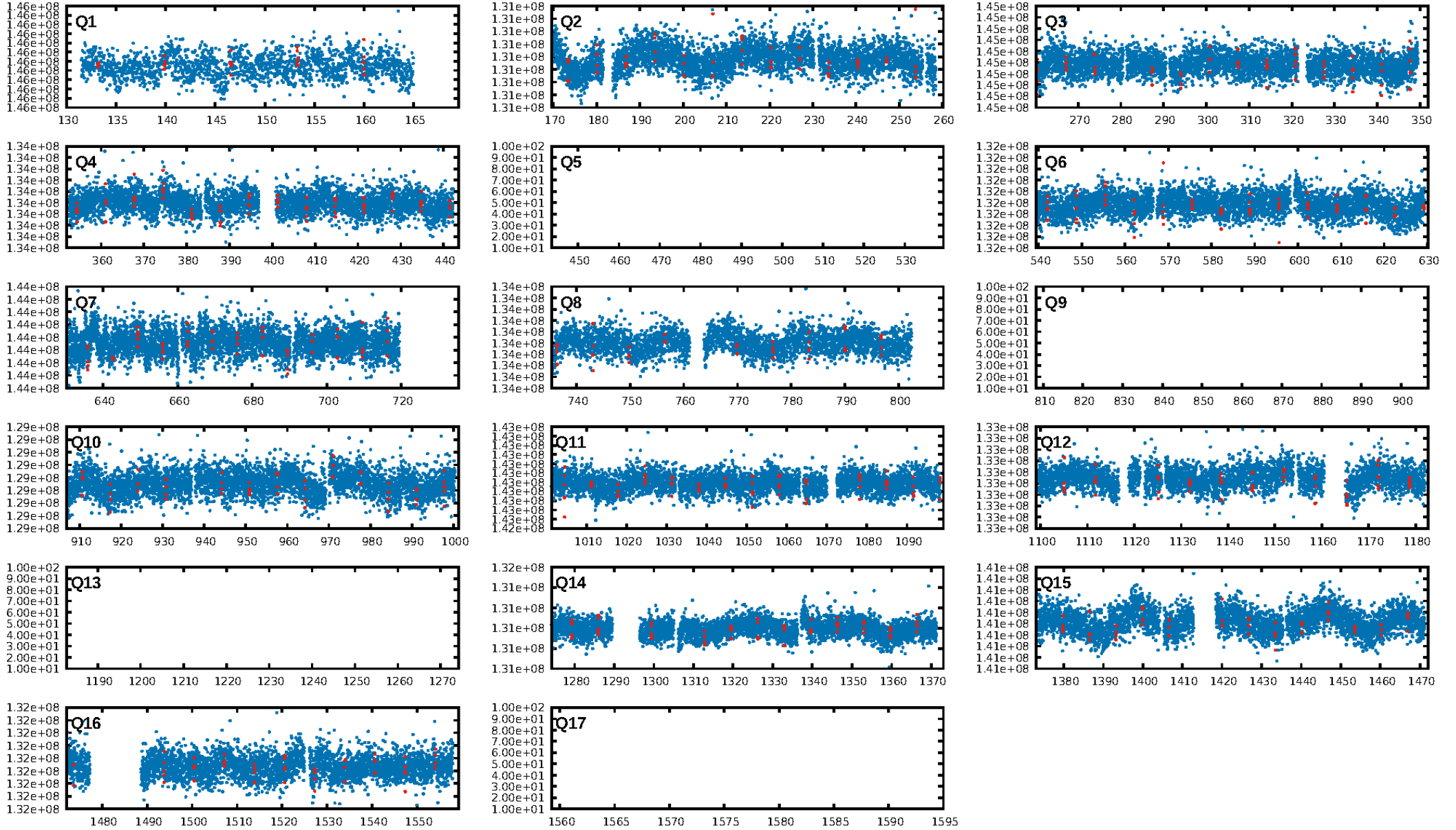
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.76e-16
RollingBand-fgt: 0.94 [140/149]
GhostDiagnostic-chr: -7.162
Centroid-sig: 53.2%
Centroid-so: 1.392 arcsec [0.75 σ]
OotOffset-rm: 2.993 arcsec [1.70 σ]
KicOffset-rm: 3.200 arcsec [1.82 σ]
OotOffset-st: 2/2/3/0 [7]
KicOffset-st: 2/2/3/0 [7]
DiffImageQuality-fgm: 0.14 [1/7]
DiffImageOverlap-fno: 1.00 [13/13]

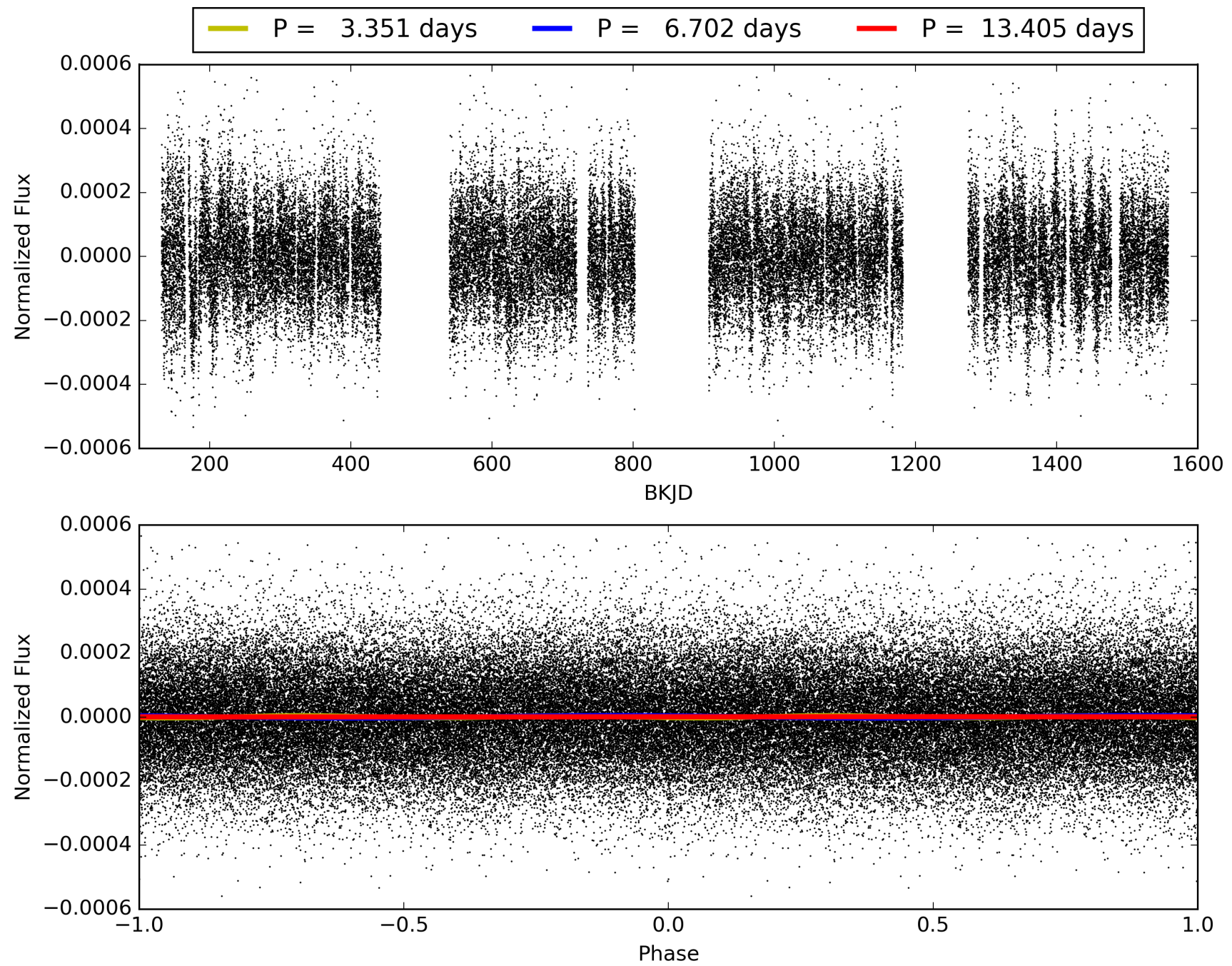
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:59:29 Z

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

TCE 004813793-01, PDC Light Curves

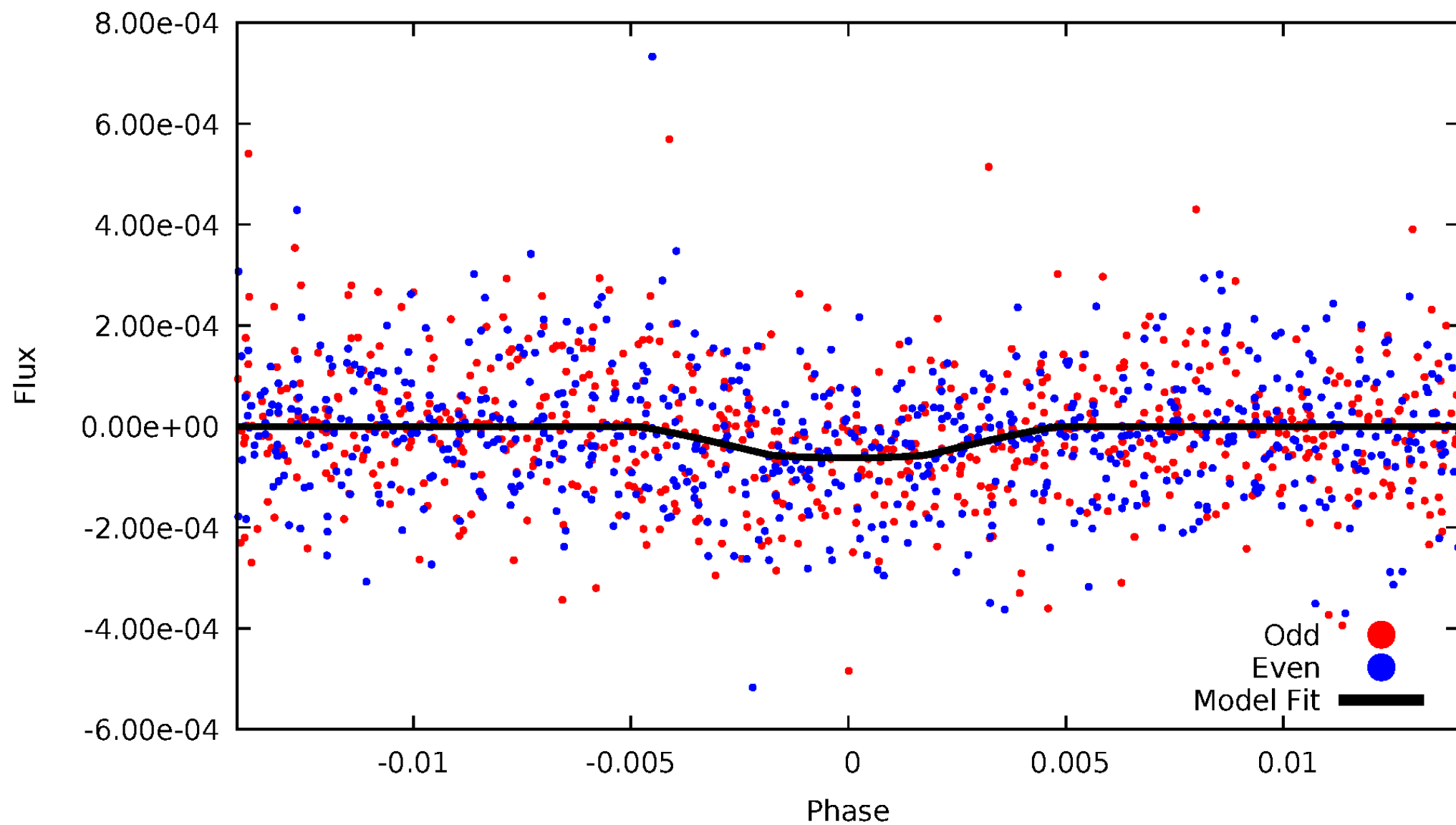


TCE 004813793-01



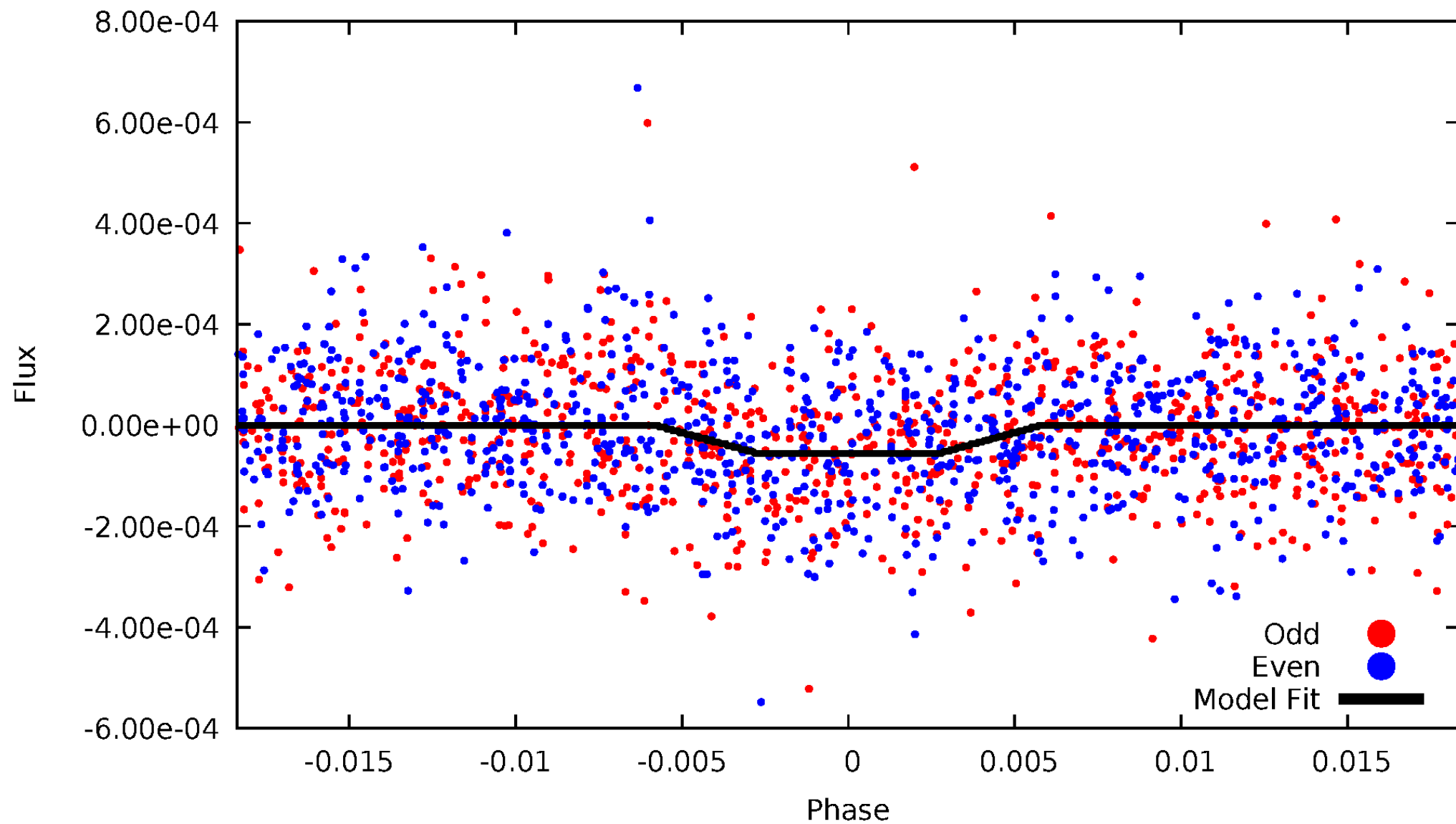
DV Odd/Even

TCE 004813793-01



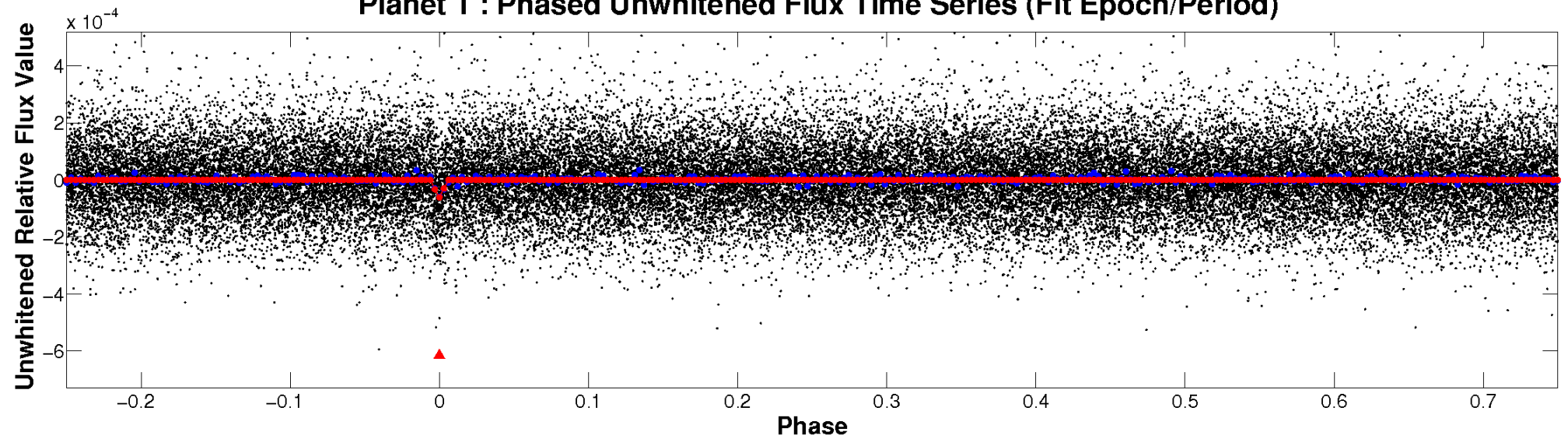
ALT Odd/Even

TCE 004813793-01

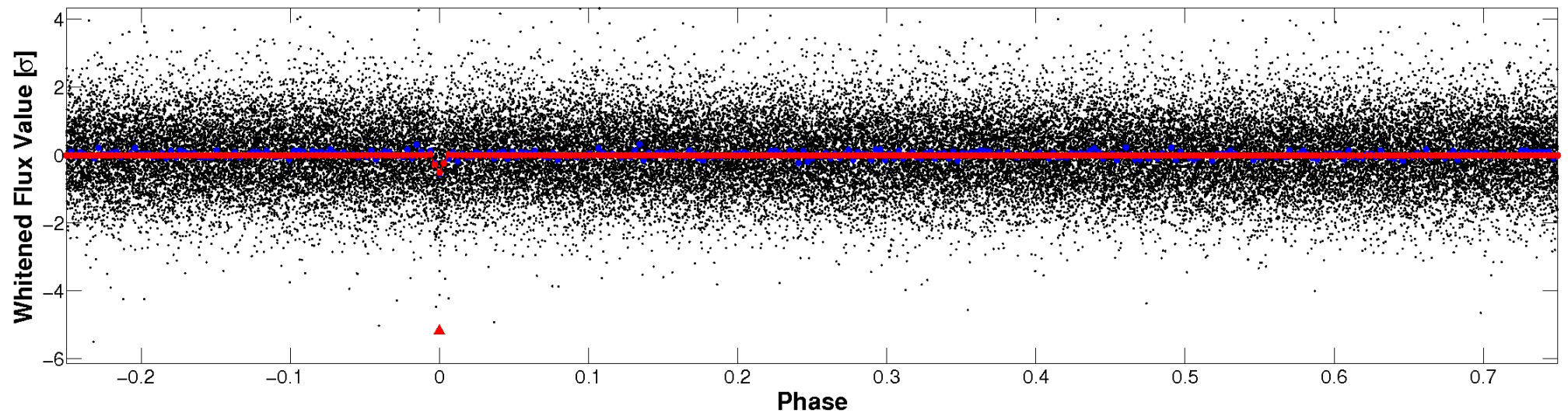


Non-Whitened Vs. Whitened Light Curve

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

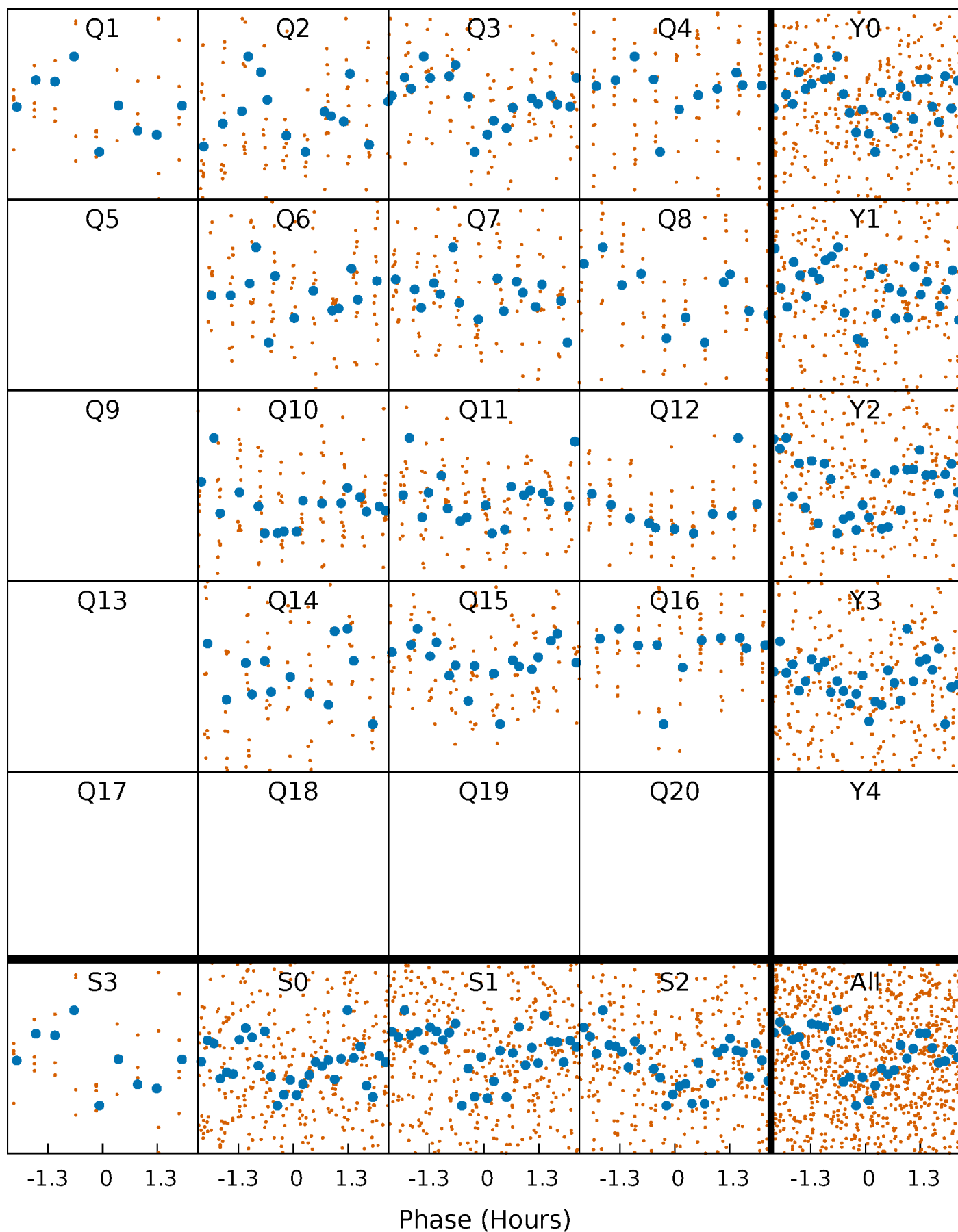


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



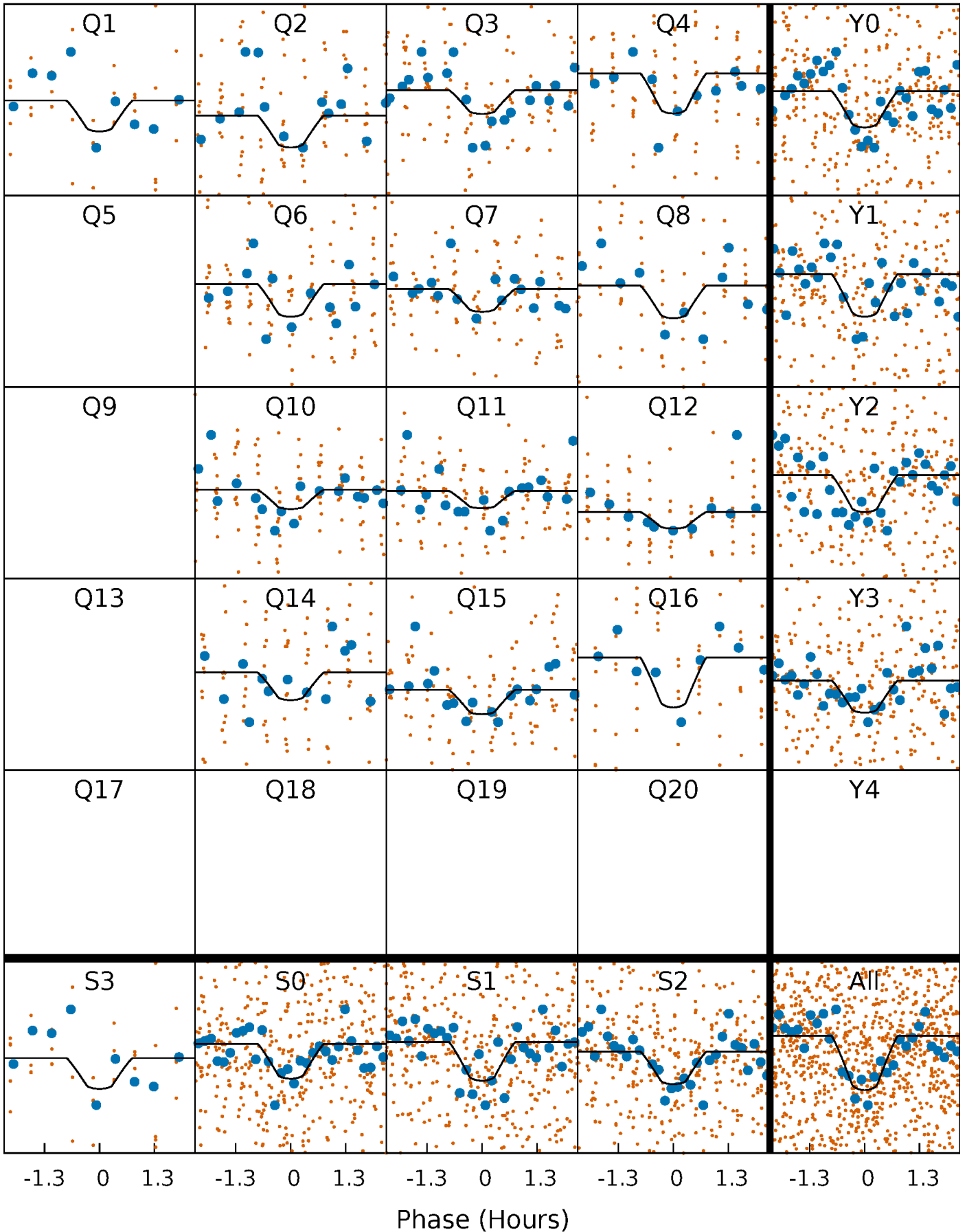
PDC Quarter-Phased Transit Curves

TCE 004813793-01 P= 6.702445 Days $T_0=133.174294$ (BKJD)



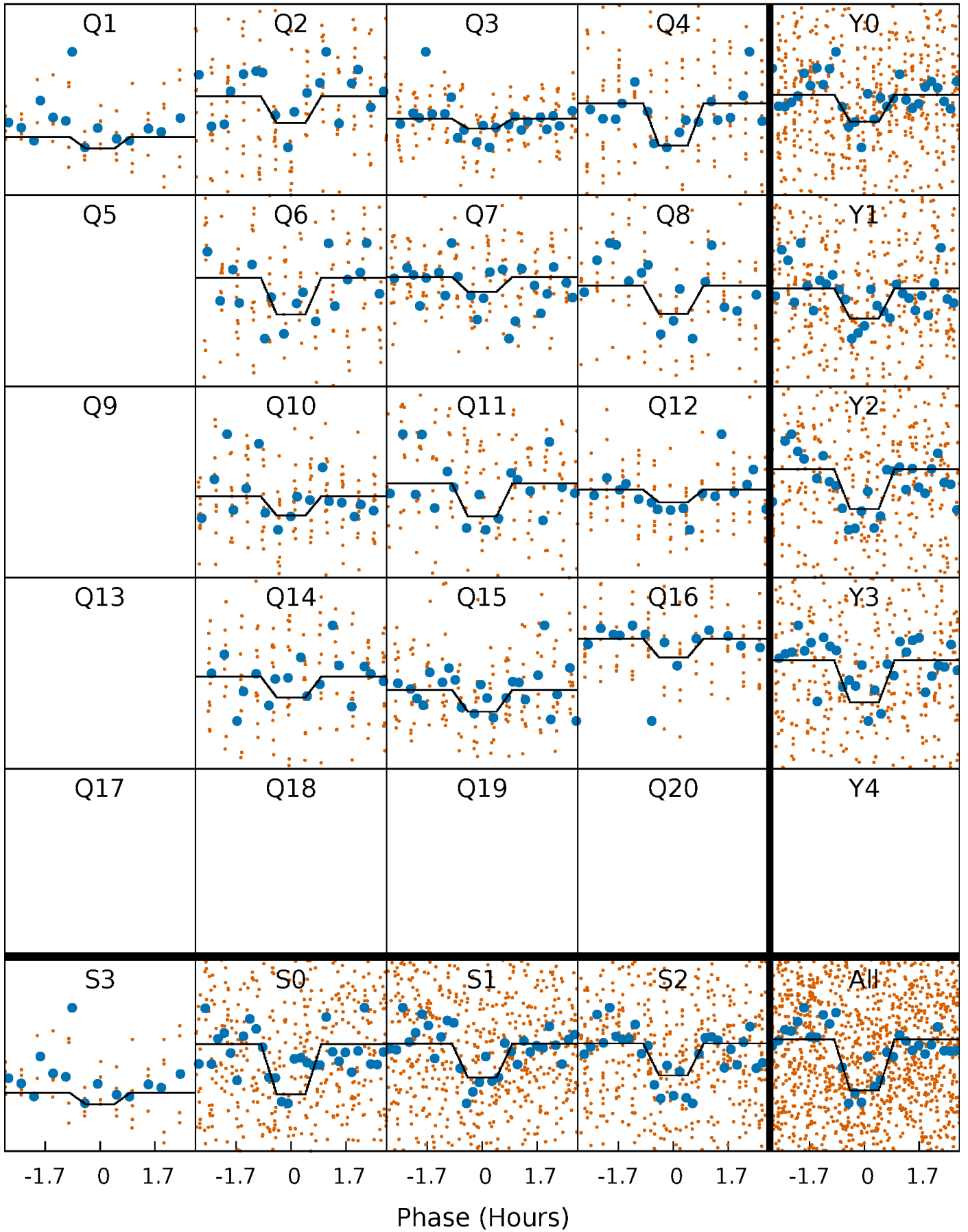
DV Quarter-Phased Transit Curves

TCE 004813793-01 P= 6.702445 Days $T_0=133.174294$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

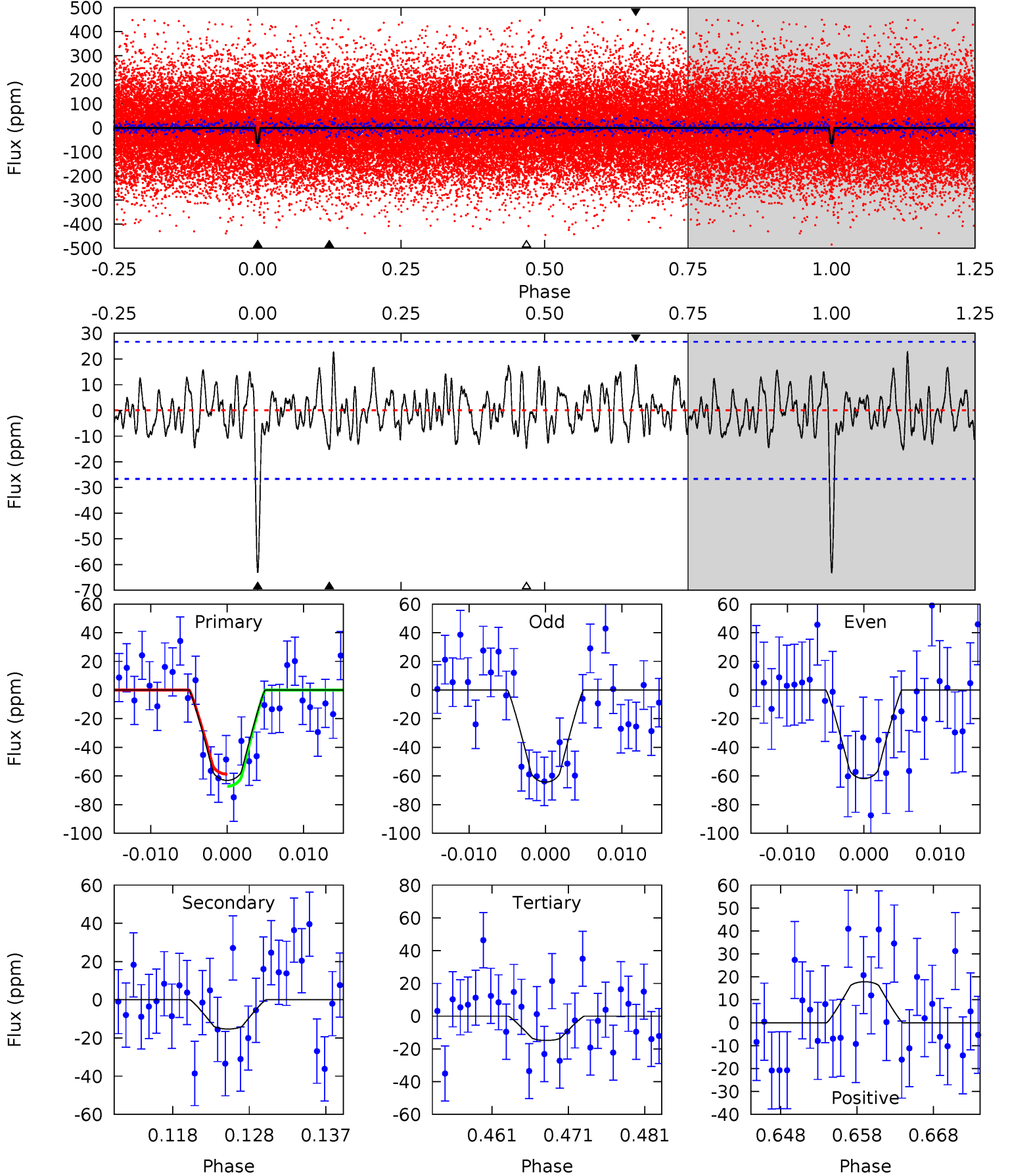
TCE 004813793-01 P= 6.702360 Days $T_0=133.188122$ (BKJD)



DV Model-Shift Uniqueness Test

004813793-01, P = 6.702445 Days, E = 126.471849 Days

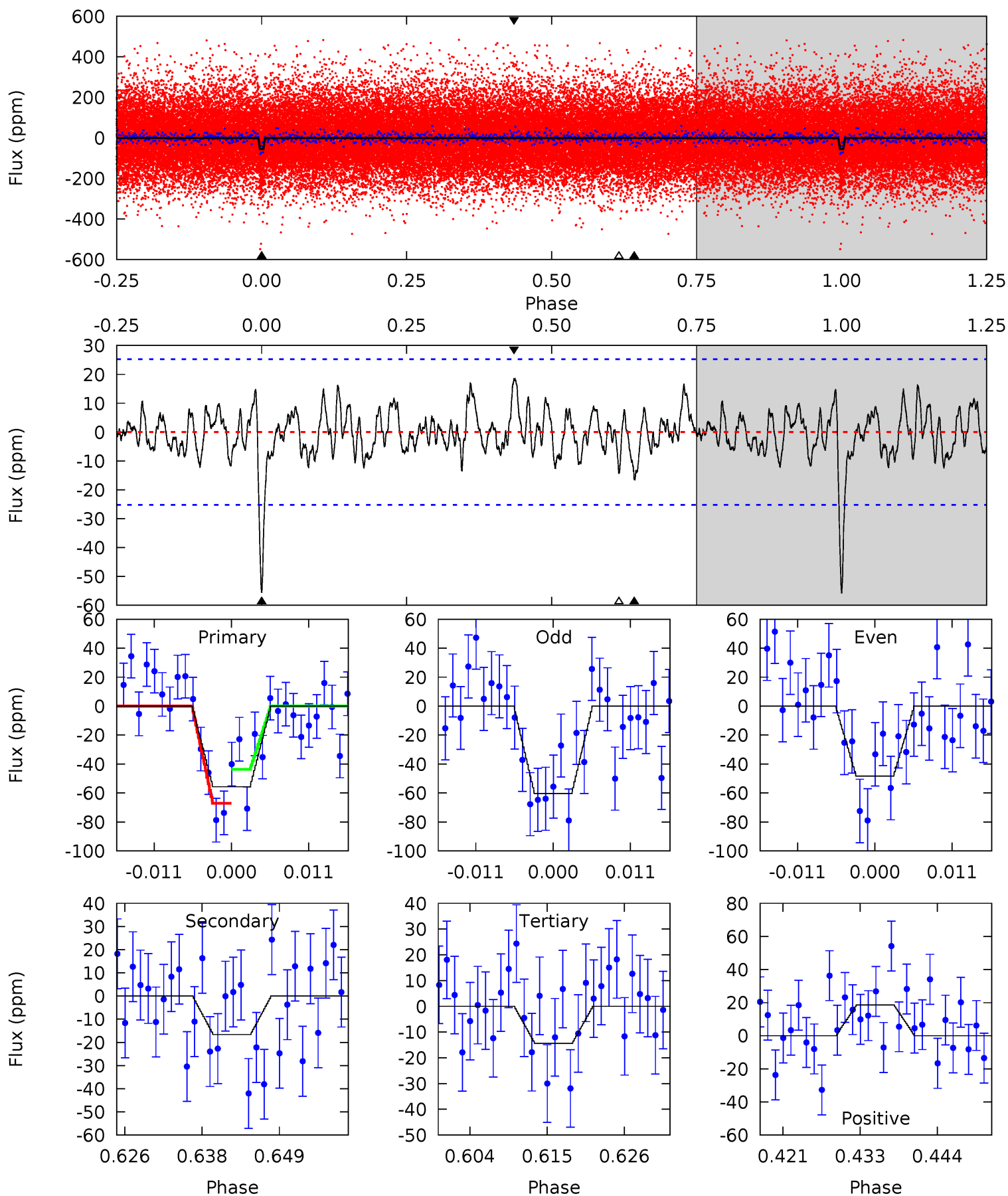
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.9	2.89	2.80	3.37	5.03	2.58	1.25	9.10	8.54	0.09	-0.48	0.23	0.99	0.27	0.81



Alt Model-Shift Uniqueness Test

004813793-01, P = 6.702360 Days, E = 126.485762 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	3.29	2.86	3.69	5.00	2.53	1.22	8.18	7.34	0.43	-0.40	1.19	1.02	0.25	2.31



Stellar Parameters For KIC 004813793

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5466^{+163}_{-163}	$3.735^{+0.175}_{-0.175}$	$-0.560^{+0.300}_{-0.250}$	$2.224^{+0.699}_{-0.466}$	$0.979^{+0.214}_{-0.115}$	$0.125^{+0.113}_{-0.058}$
	+3%/-3%	+5%/-5%	+54%/-45%	+31%/-21%	+22%/-12%	+90%/-47%
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 004813793-01 / KOI 7708.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-15 ± 5	$2.29^{+1.66}_{-1.35}$	1908^{+139}_{-117}	3789^{+1668}_{-676}	$6.973^{+37.035}_{-4.755}$
Alt.	-17 ± 5	$2.11^{+1.54}_{-1.22}$	1909^{+140}_{-129}	3990^{+1753}_{-699}	$9.838^{+42.713}_{-6.802}$

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

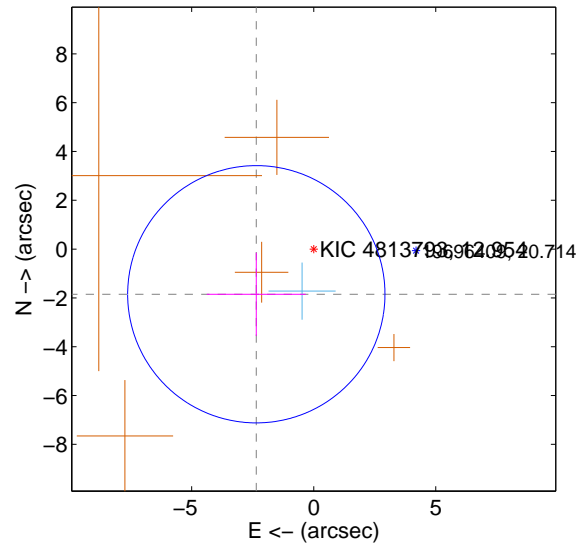
Supplemental centroid analysis for 004813793-01. Kepler magnitude: 12.95. Transit SNR 7.82

There are 1 quarters with good PRF difference image offsets

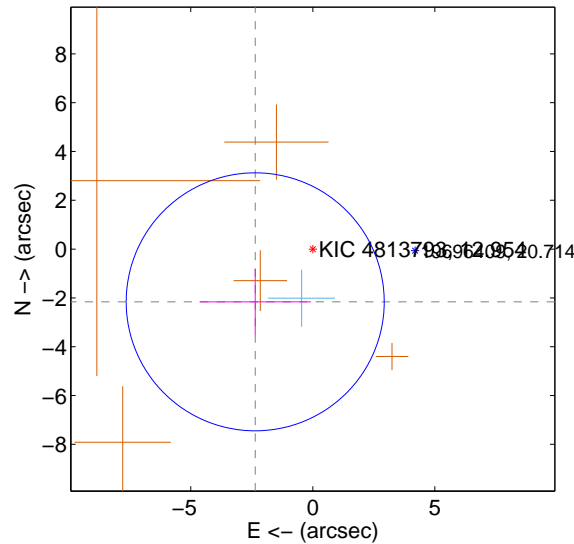
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.993 ± 1.757	1.70	2.352 ± 2.027	-1.851 ± 1.702
PRF-fit source offset from KIC position	3.200 ± 1.762	1.82	2.360 ± 2.281	-2.161 ± 1.350
photometric centroid source offset	1.39 ± 1.85	0.75	0.83 ± 1.77	-1.12 ± 1.89

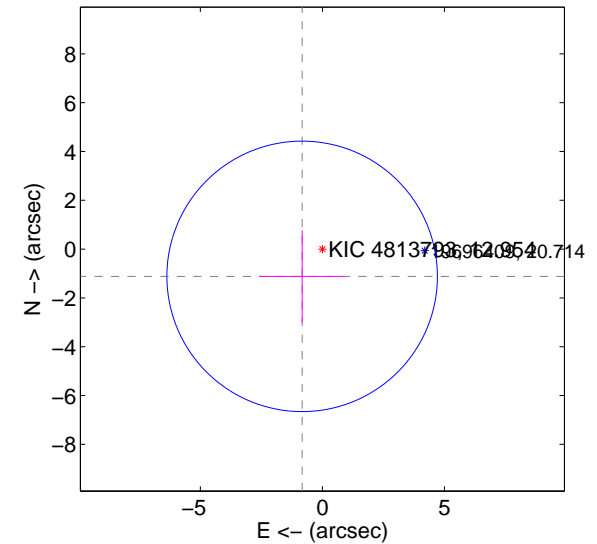
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

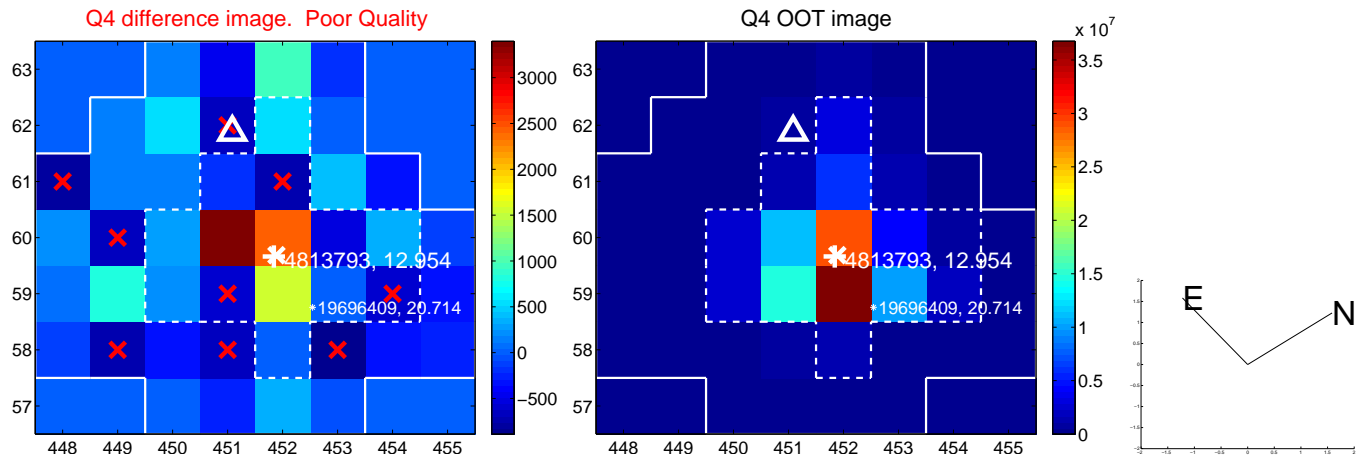
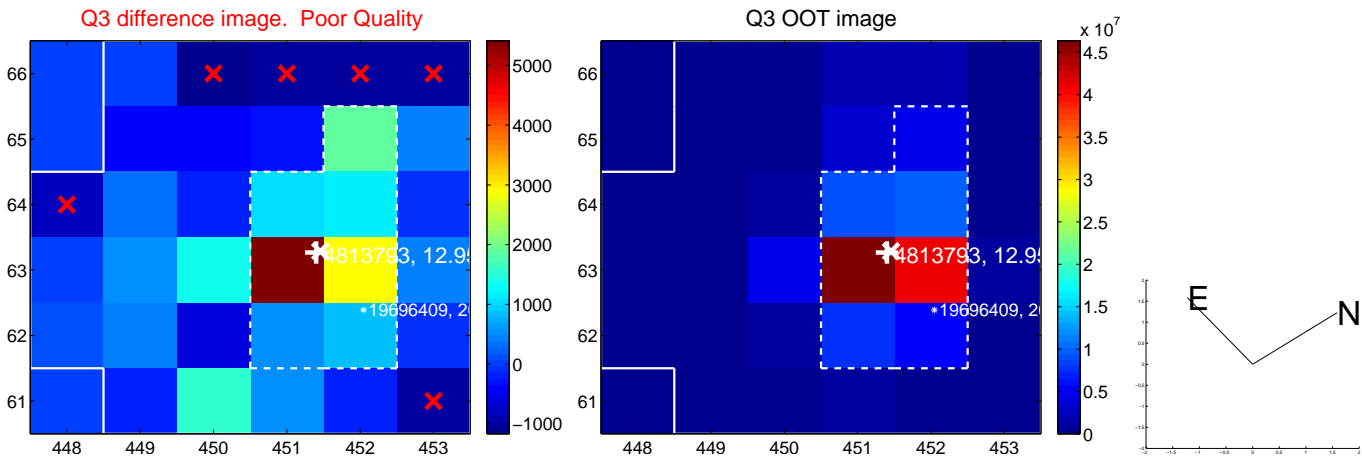
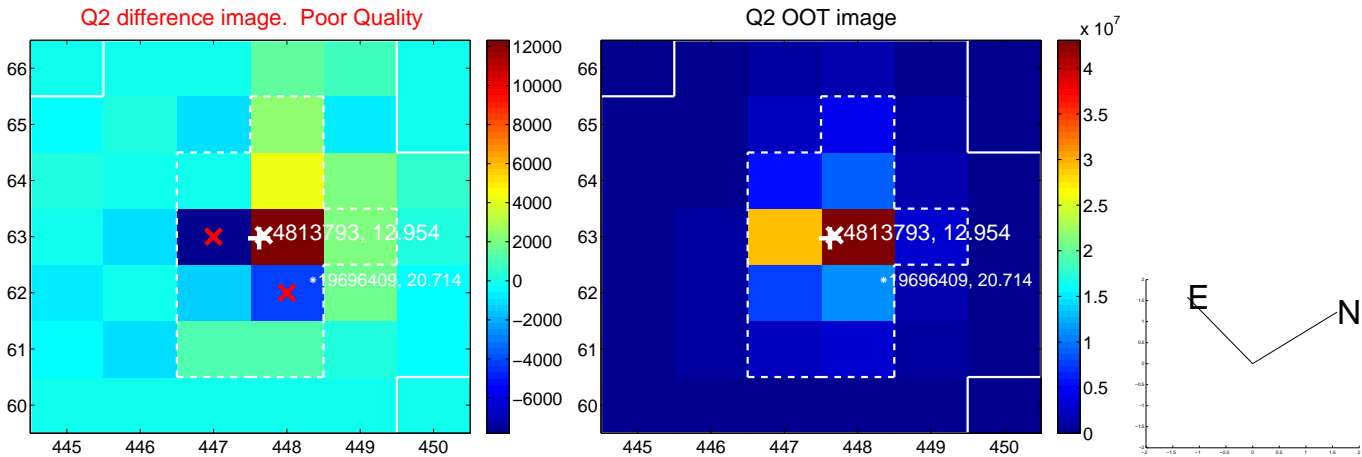
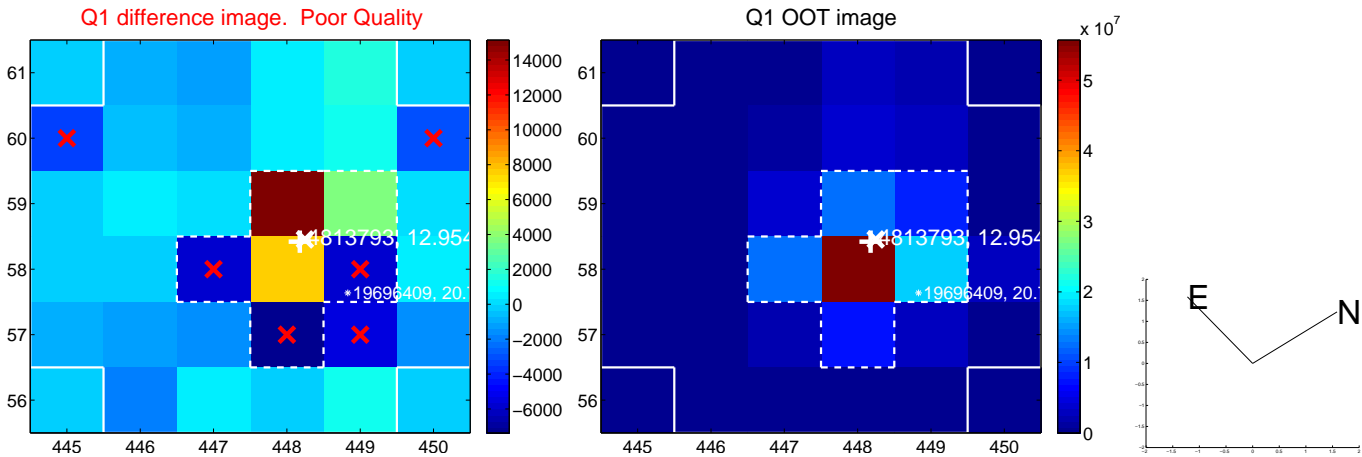


offset from photometric centroids

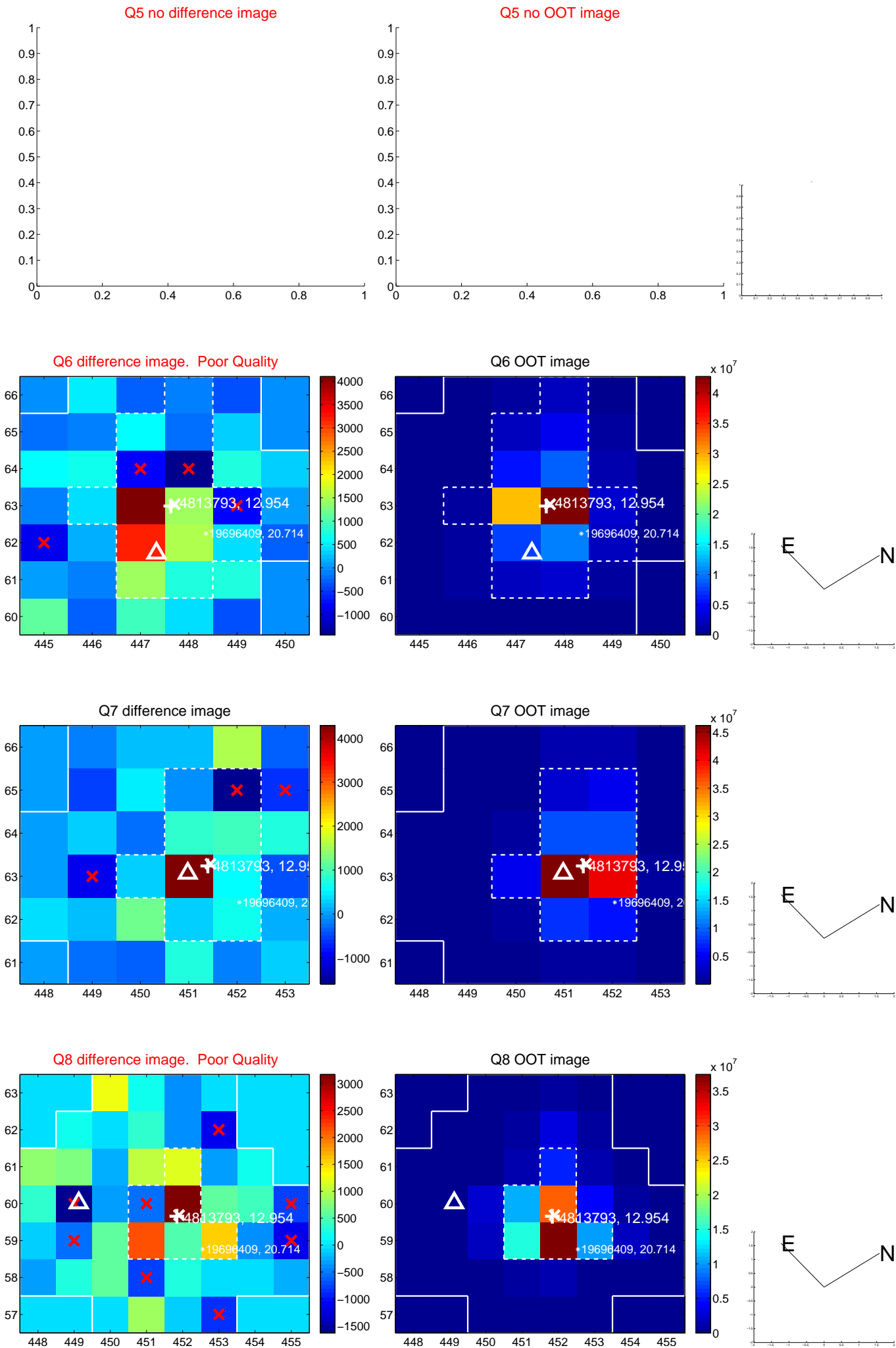


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

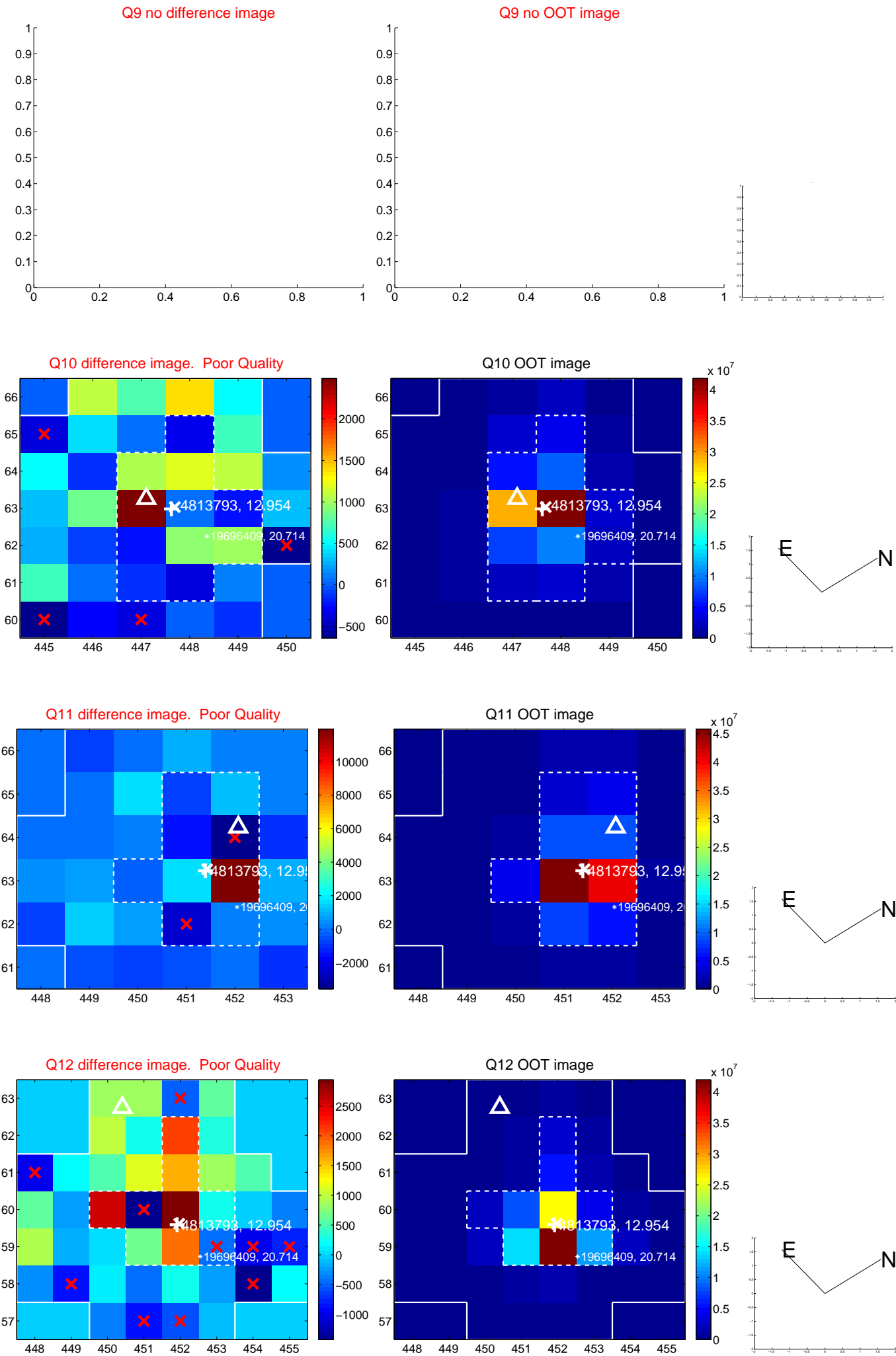
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



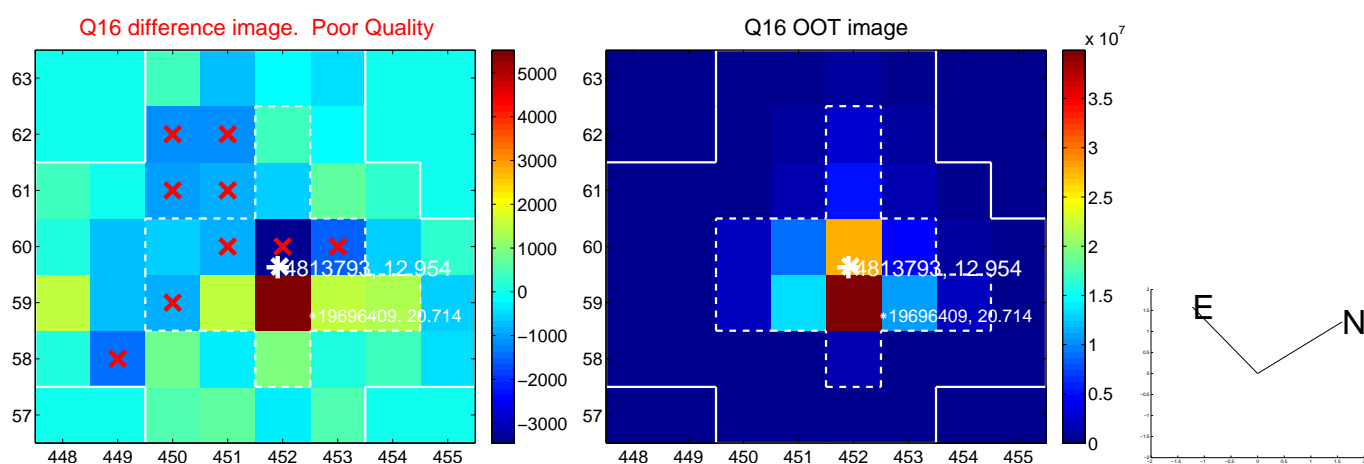
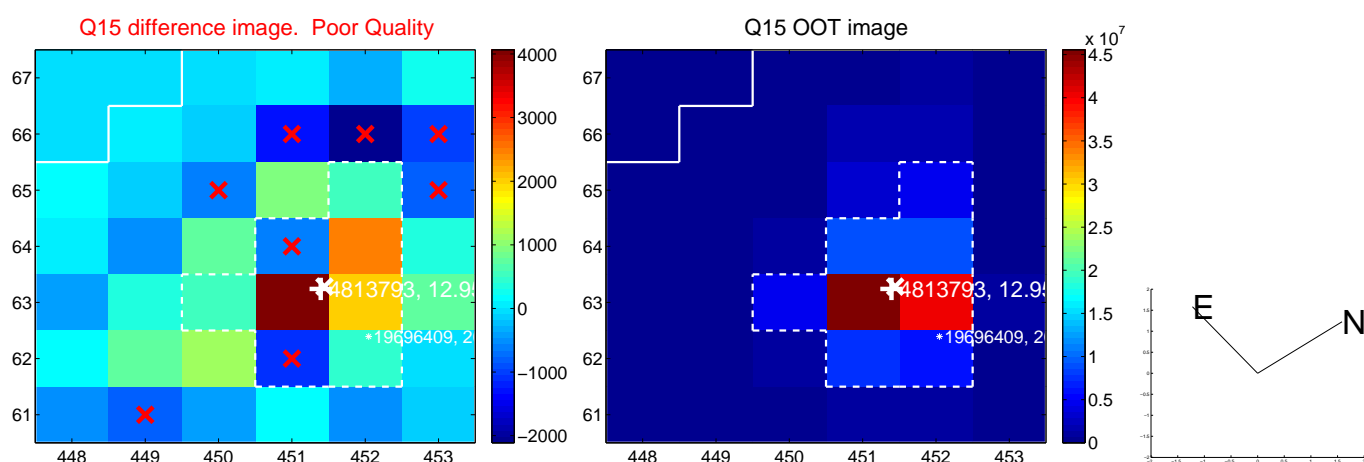
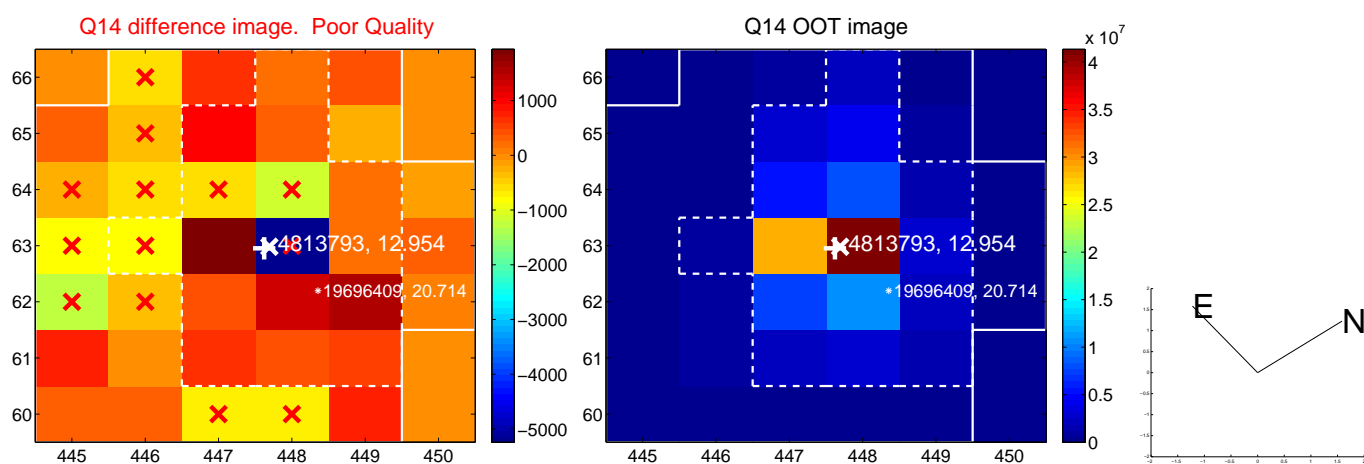
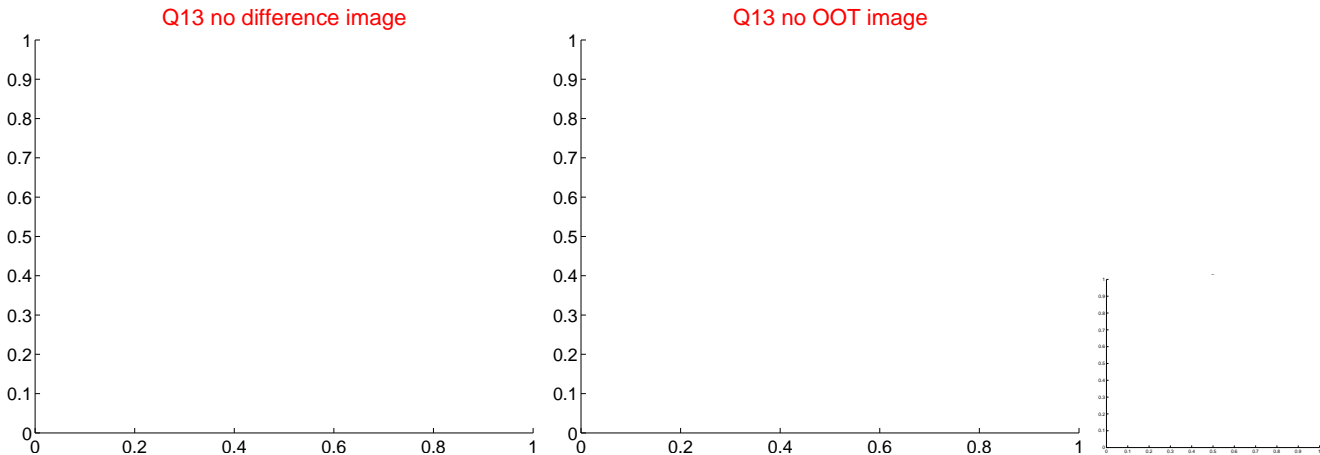
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



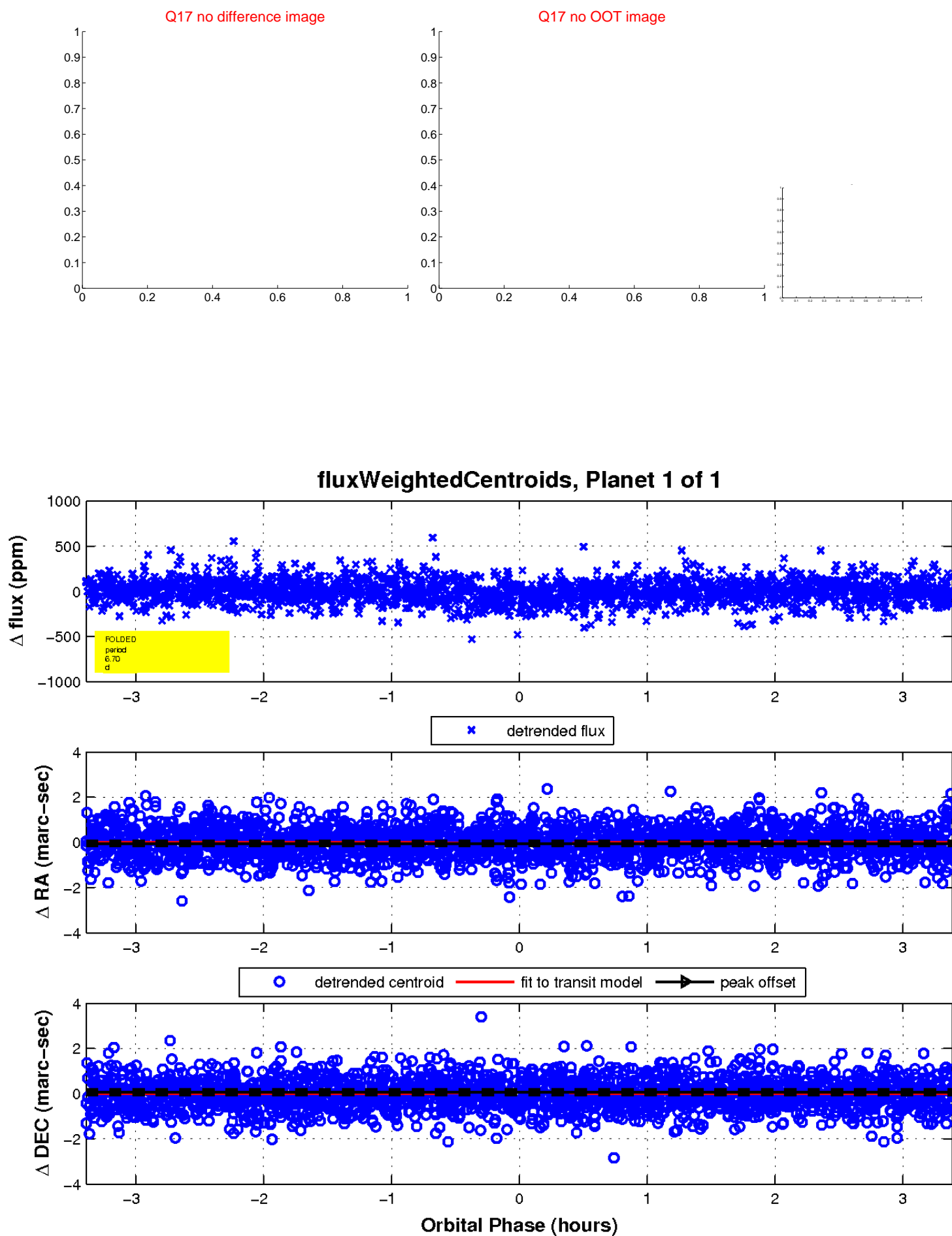
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

