

KIC 007749773

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})
007749773-01	OBS	2848.01	13.787259	144.772958	73.7	5.637	16.2	17.3	1.46	5691	1.49	150.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007749773-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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

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

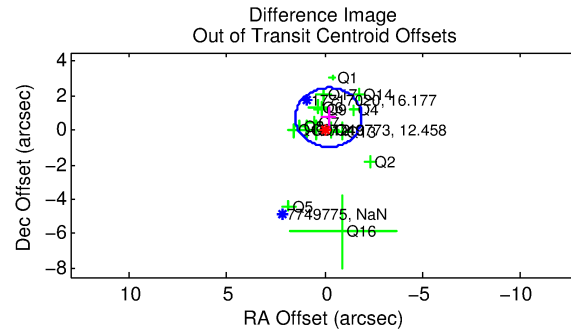
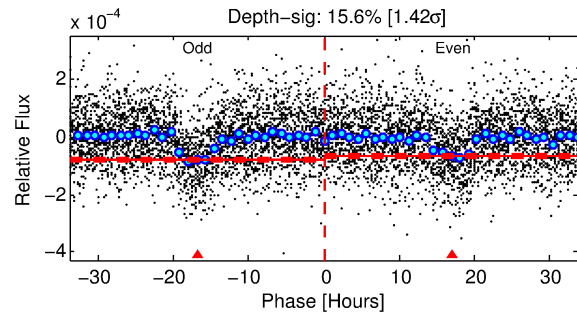
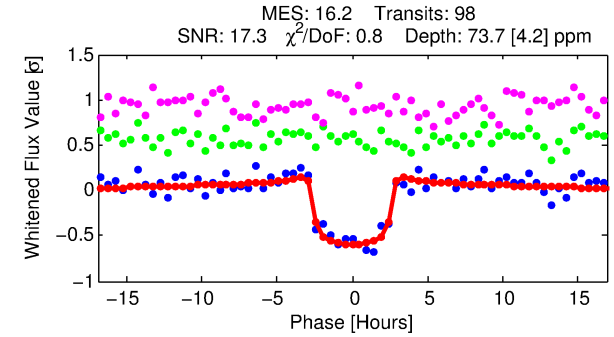
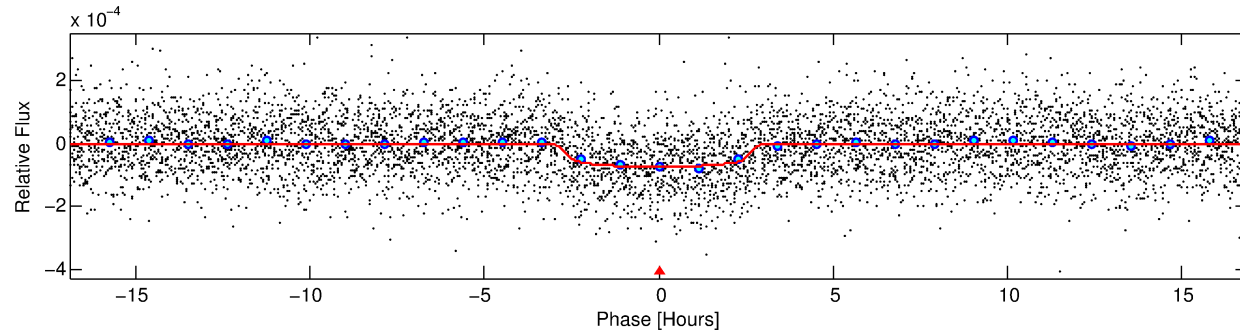
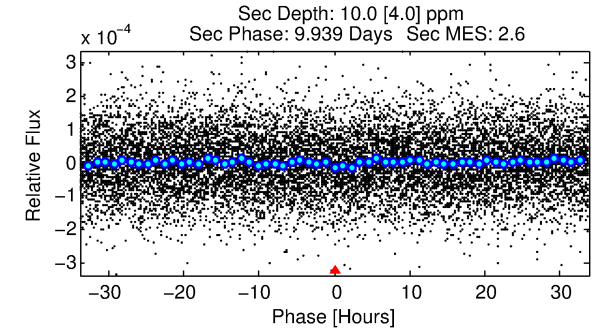
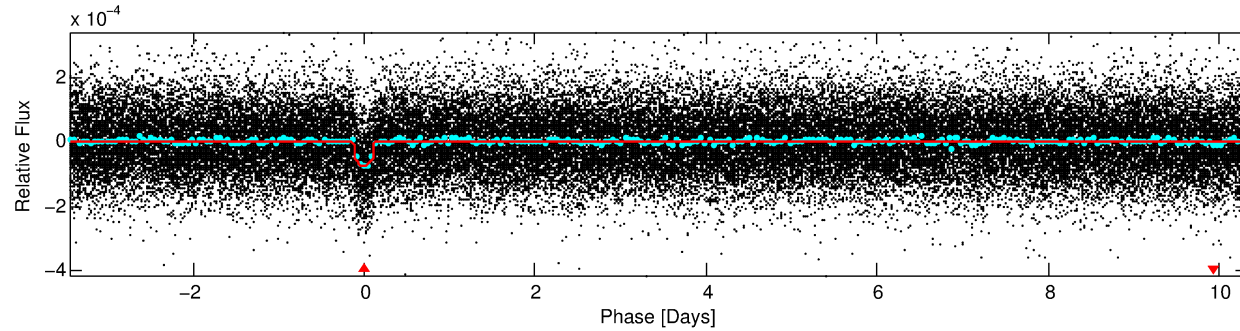
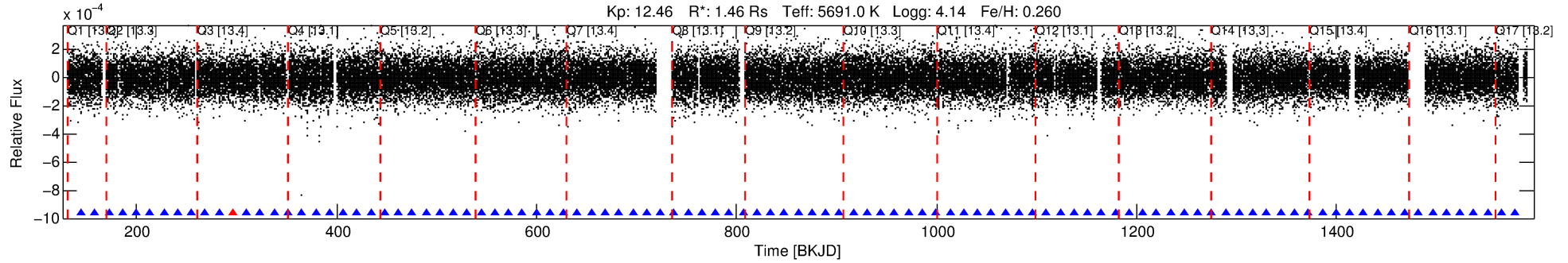
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007749773-01

No Significant Match Found

DV One-Page Summary

KIC: 7749773 Candidate: 1 of 1 Period: 13.787 d
KOI: K02848.01 Corr: 0.987



DV Fit Results:

Period = 13.78726 [0.00008] d
Epoch = 144.7730 [0.0050] BKJD
Rp/R* = 0.0094 [0.0020]
a/R* = 8.74 [8.25]
b = 0.90 [0.21]
Seff = 150.96 [60.26]
Teq = 894 [89] K
Rp = 1.49 [0.50] Re
a = 0.1150 [0.0287] AU
Ag = 32.90 [23.00] [1.39σ]
Teffp = 3310 [479] K [4.96σ]

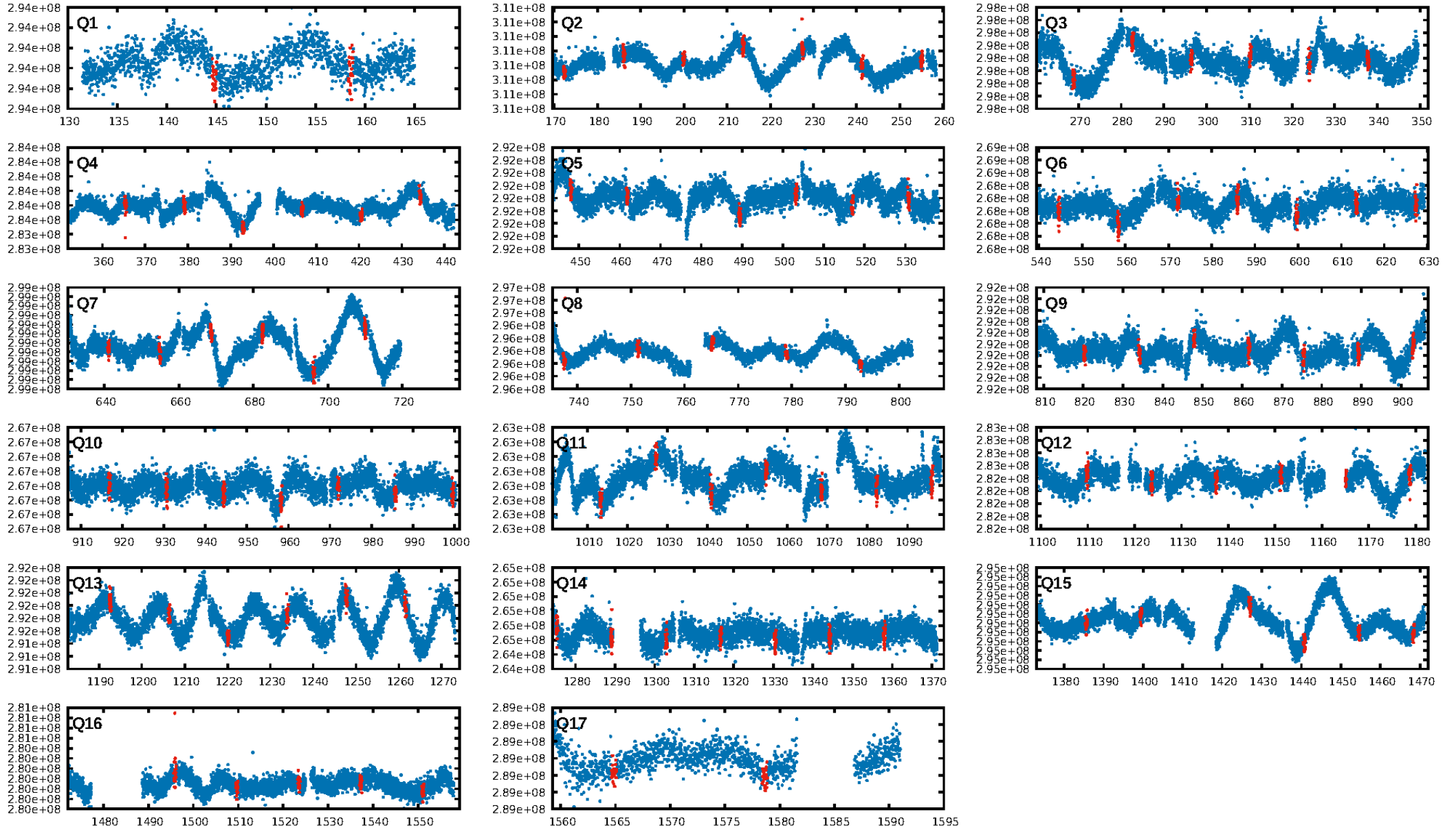
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.70e-53
RollingBand-fgt: 0.99 [93/94]
GhostDiagnostic-chr: 4.552
Centroid-sig: 0.3%
Centroid-so: 1.264 arcsec [2.23σ]
OotOffset-rm: 0.767 arcsec [1.35σ]
KicOffset-rm: 0.202 arcsec [0.47σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

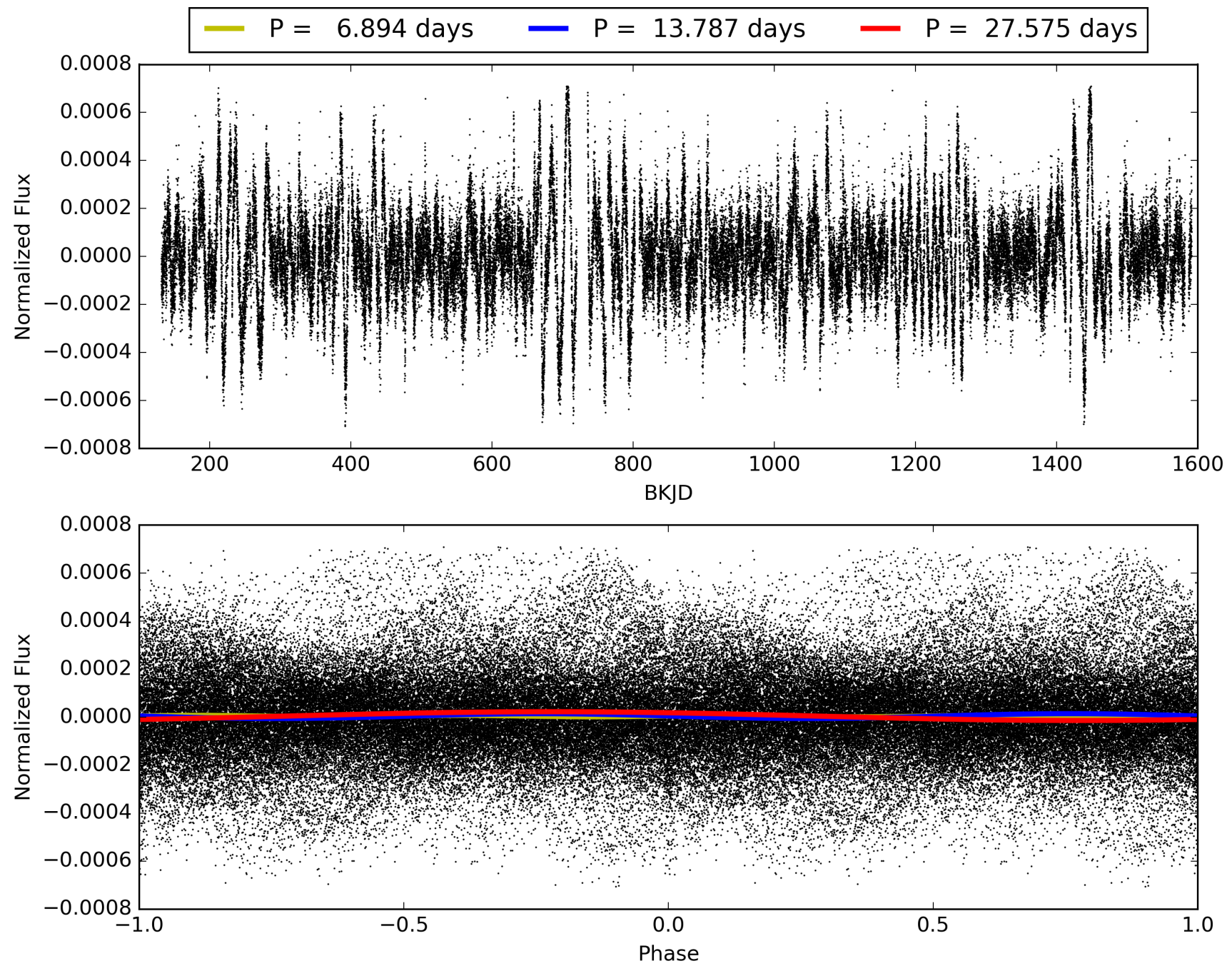
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:10:38 Z

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

TCE 007749773-01, PDC Light Curves

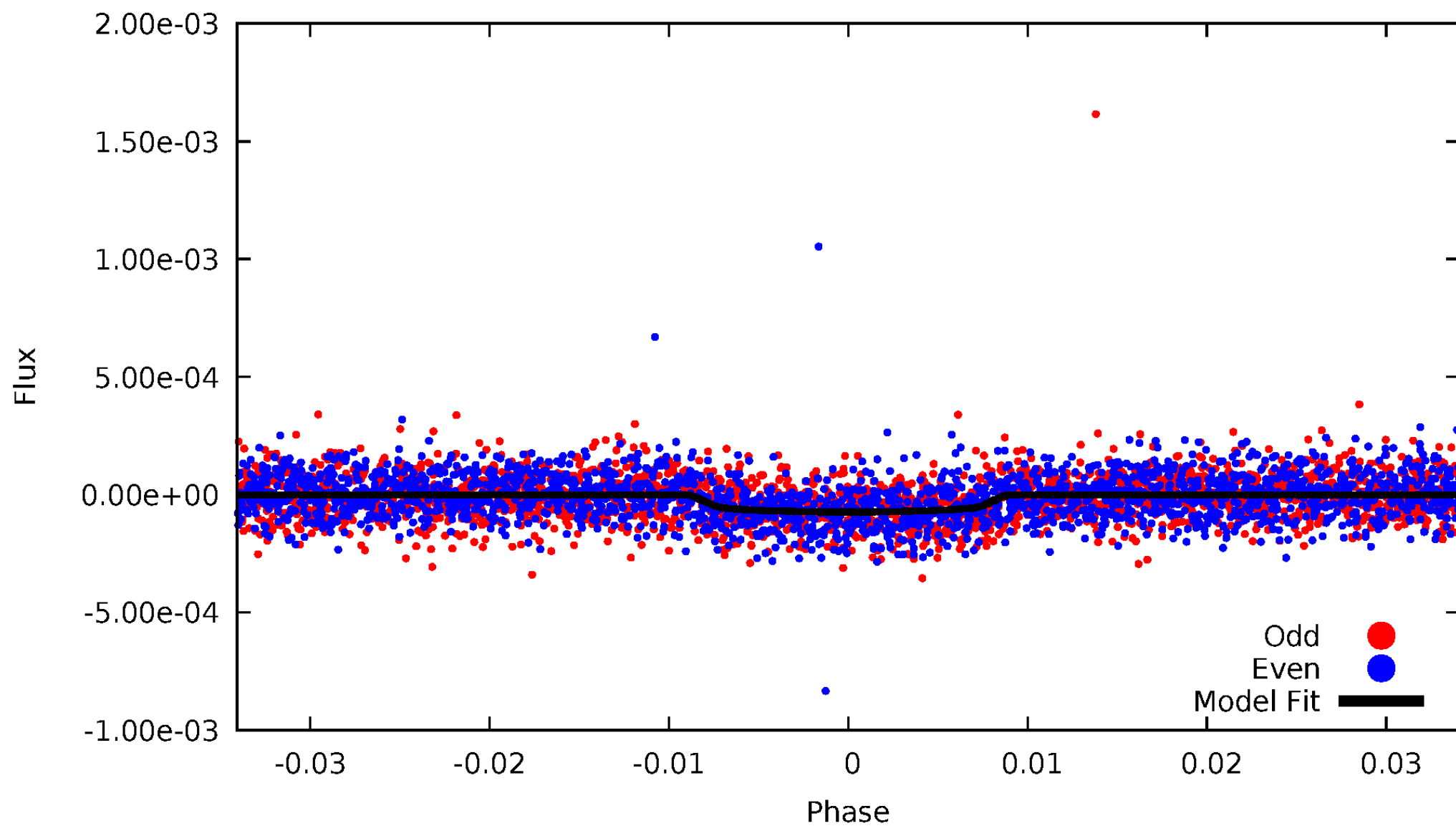


TCE 007749773-01



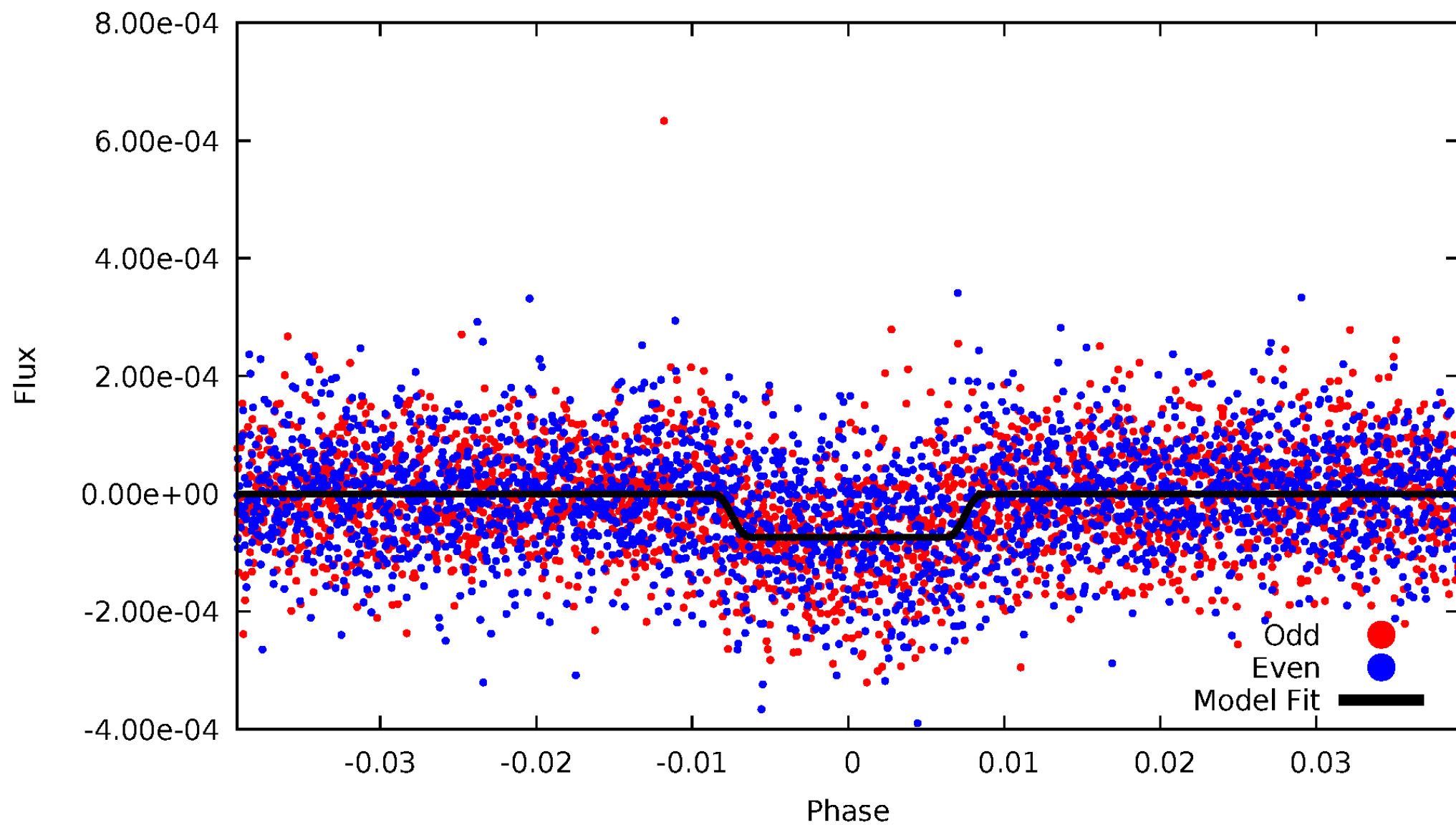
DV Odd/Even

TCE 007749773-01



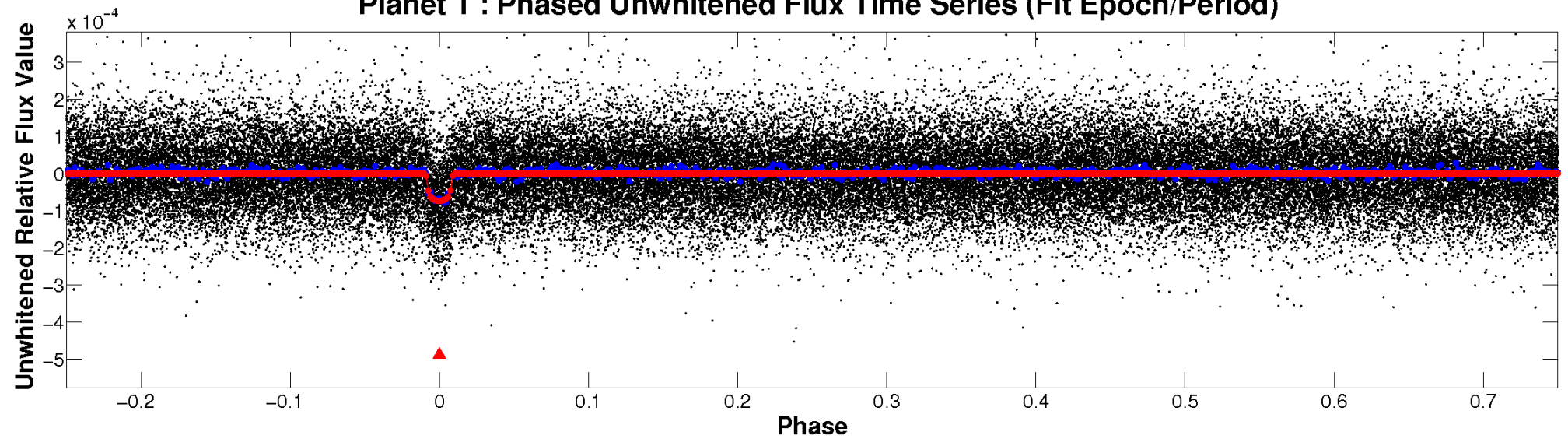
ALT Odd/Even

TCE 007749773-01

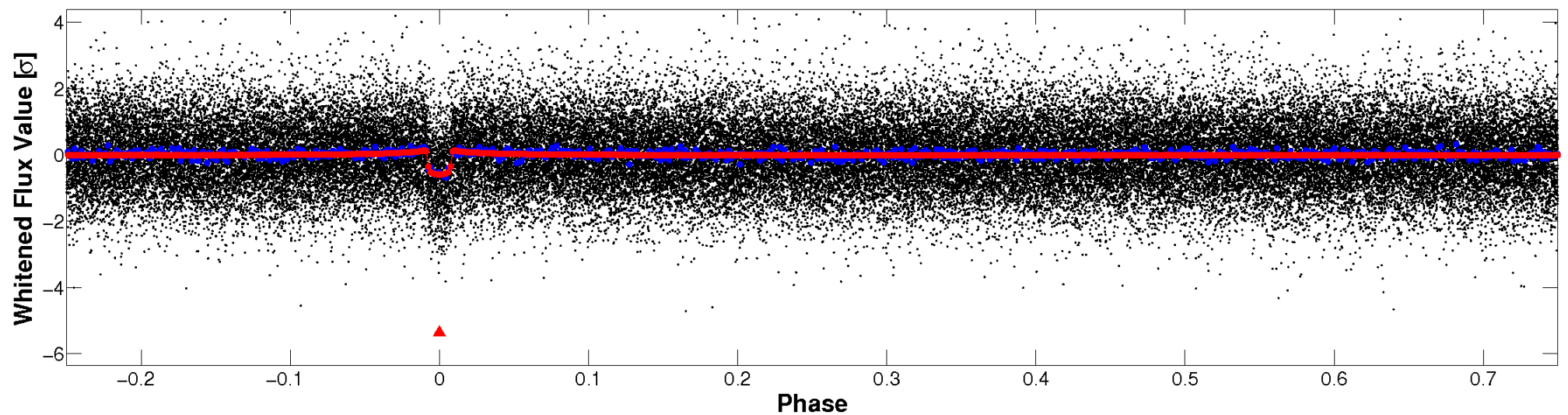


Non-Whitened Vs. Whitened Light Curve

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

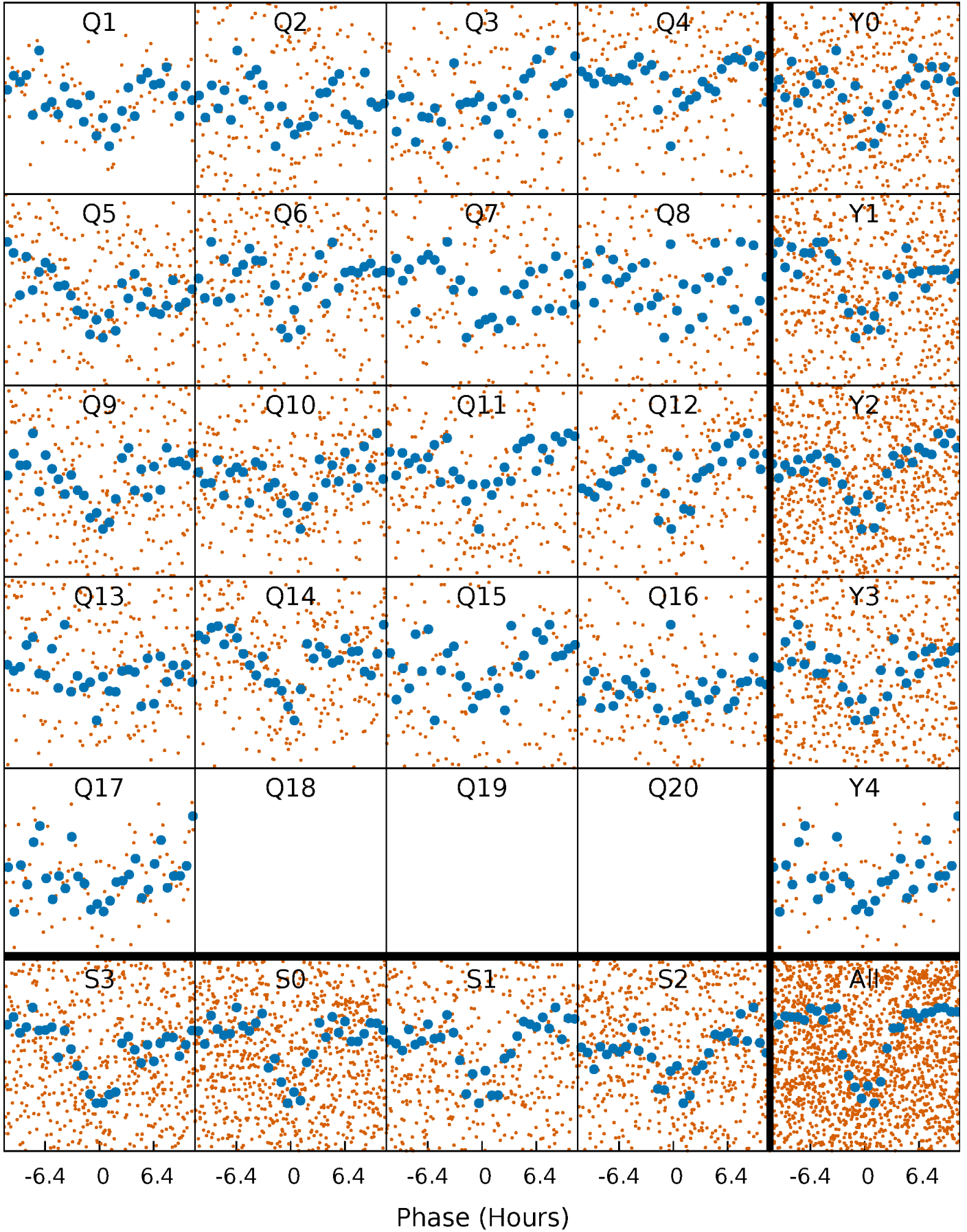


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



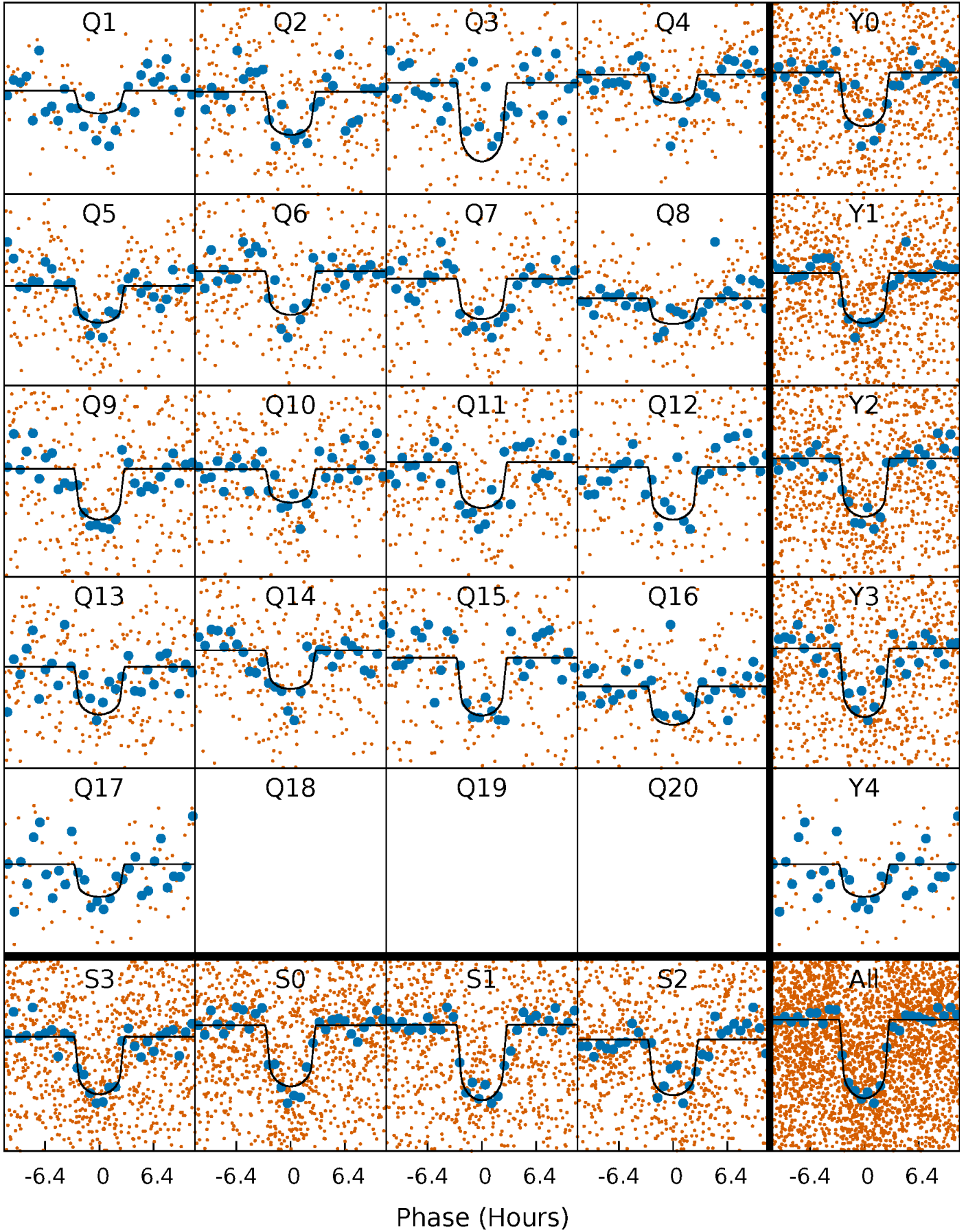
PDC Quarter-Phased Transit Curves

TCE 007749773-01 P= 13.787259 Days $T_0=144.772958$ (BKJD)



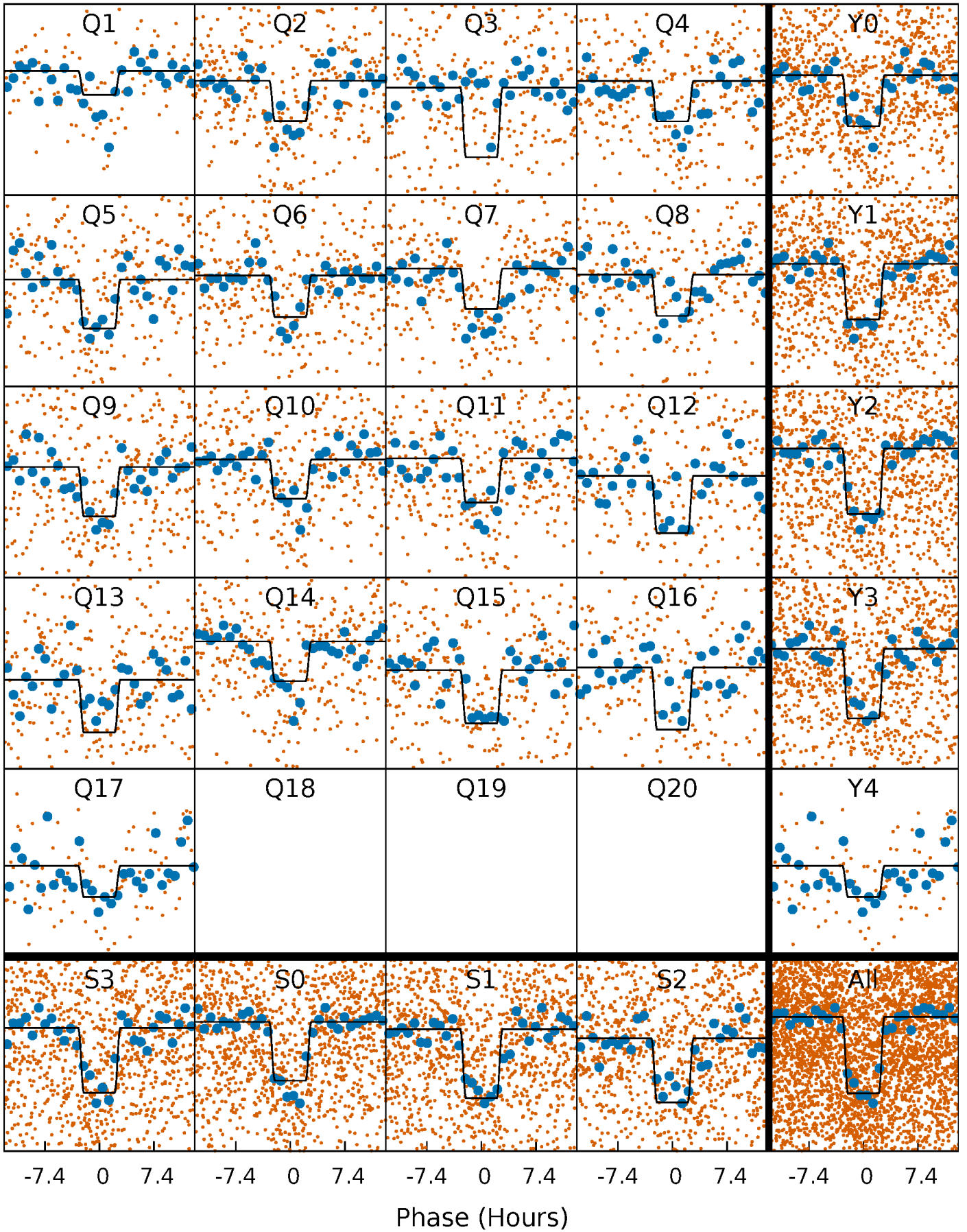
DV Quarter-Phased Transit Curves

TCE 007749773-01 P= 13.787259 Days $T_0=144.772958$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

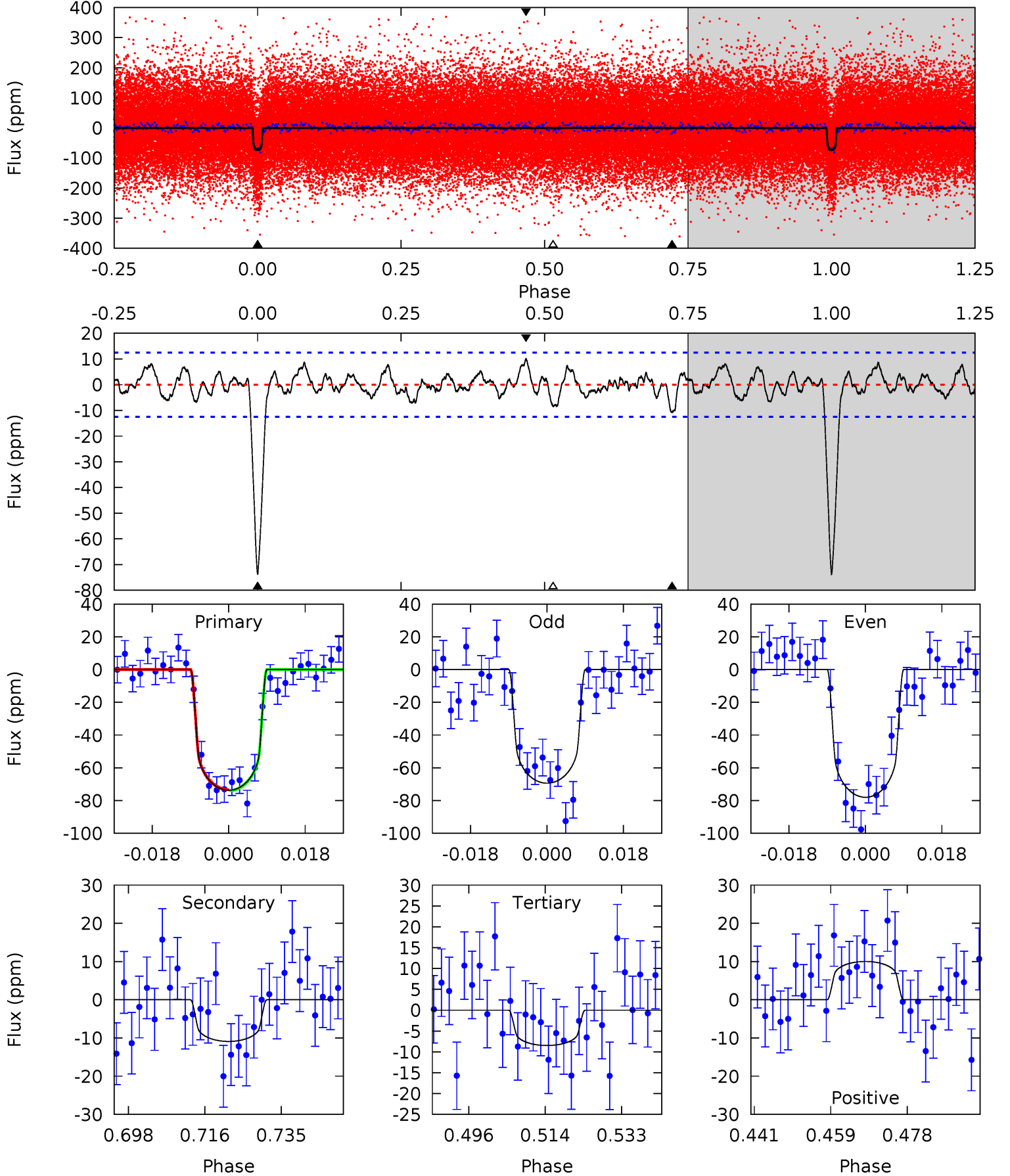
TCE 007749773-01 P= 13.786913 Days $T_0=144.789213$ (BKJD)



DV Model-Shift Uniqueness Test

007749773-01, $P = 13.787259$ Days, $E = 130.985699$ Days

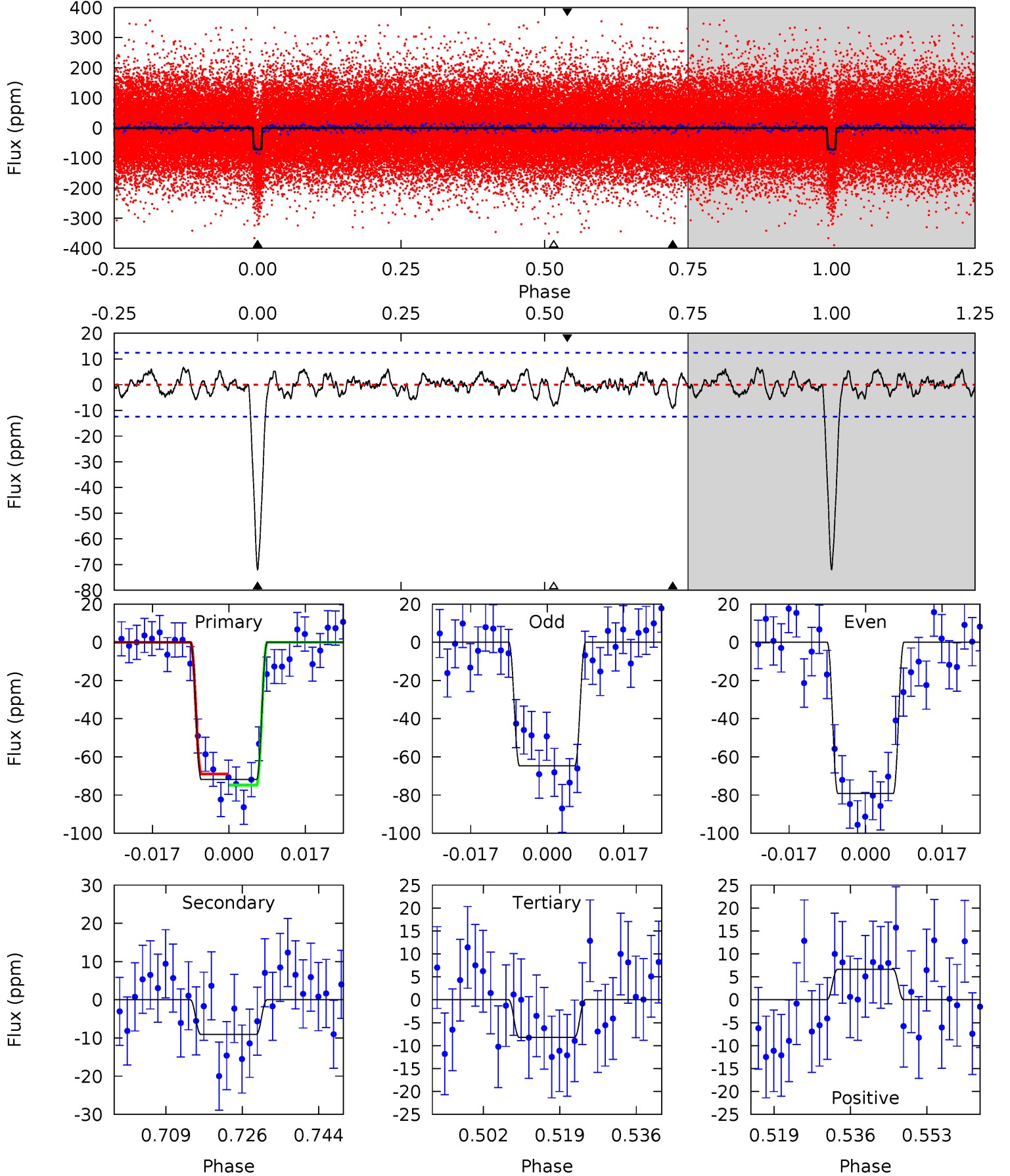
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.9	4.28	3.33	3.93	4.91	2.36	1.35	25.6	25.0	0.96	0.35	1.69	1.07	0.12	0.12



Alt Model-Shift Uniqueness Test

007749773-01, P = 13.786913 Days, E = 131.002300 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.4	3.60	3.24	2.63	4.92	2.38	1.10	25.2	25.8	0.36	0.97	2.87	1.00	0.08	1.14



Stellar Parameters For KIC 007749773

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5691^{+77}_{-77}	$4.139^{+0.231}_{-0.116}$	$0.260^{+0.150}_{-0.150}$	$1.458^{+0.265}_{-0.383}$	$1.068^{+0.093}_{-0.076}$	$0.485^{+0.597}_{-0.171}$
	+1%/-1%	+6%/-3%	+58%/-58%	+18%/-26%	+9%/-7%	+123%/-35%
Source	SPE90	FLK73	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007749773-01 / KOI 2848.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 3	$1.46^{+0.39}_{-0.35}$	1240^{+65}_{-91}	3746^{+357}_{-285}	37^{+31}_{-15}
Alt.	-9 ± 3	$1.34^{+0.36}_{-0.34}$	1237^{+70}_{-84}	3735^{+361}_{-288}	37^{+31}_{-15}

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 $A_{obs} \gg 1.0$

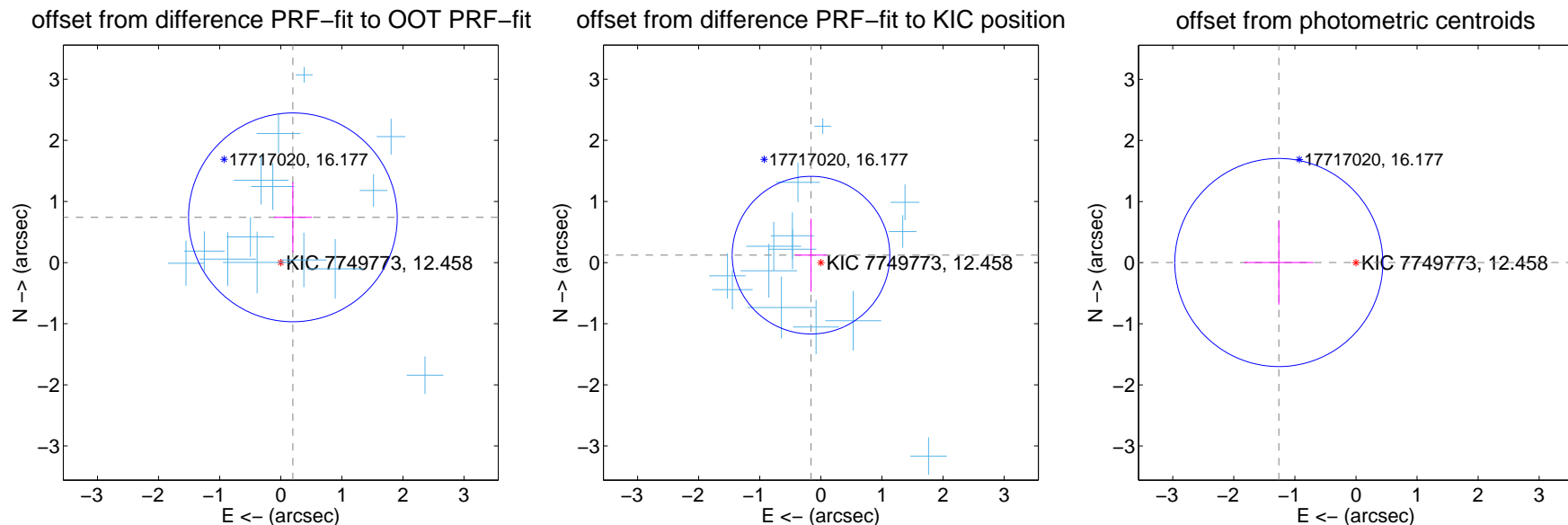
DV Centroid Data

Supplemental centroid analysis for 007749773-01. Kepler magnitude: 12.46. Transit SNR 17.34

There are 14 quarters with good PRF difference image offsets

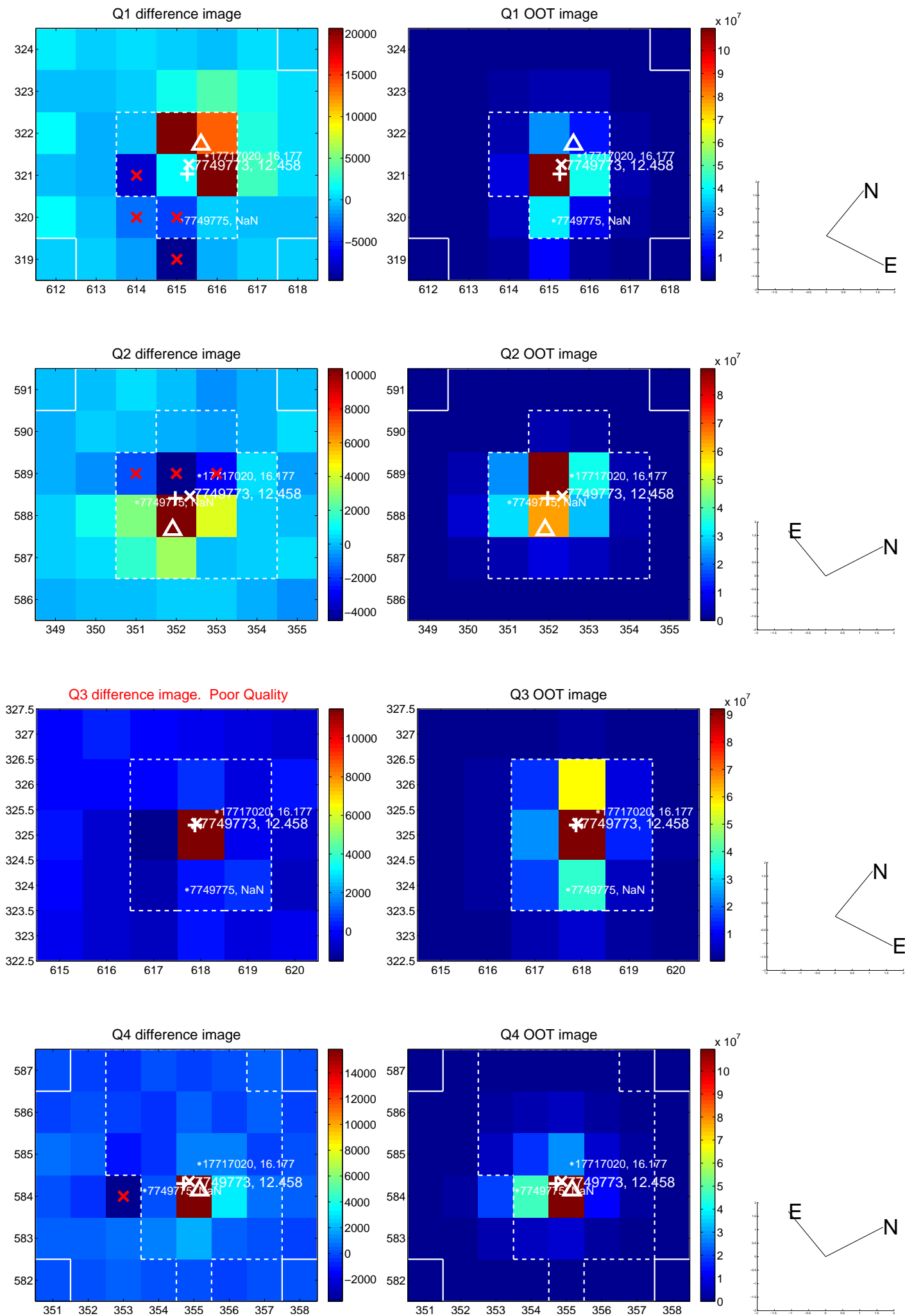
The direct PRF centroid is offset from the target star catalog position by about 0.87 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.767 ± 0.569	1.35	-0.199 ± 0.310	0.740 ± 0.575
PRF-fit source offset from KIC position	0.202 ± 0.430	0.47	0.161 ± 0.261	0.122 ± 0.597
photometric centroid source offset	1.26 ± 0.57	2.23	1.26 ± 0.57	0.00 ± 0.69

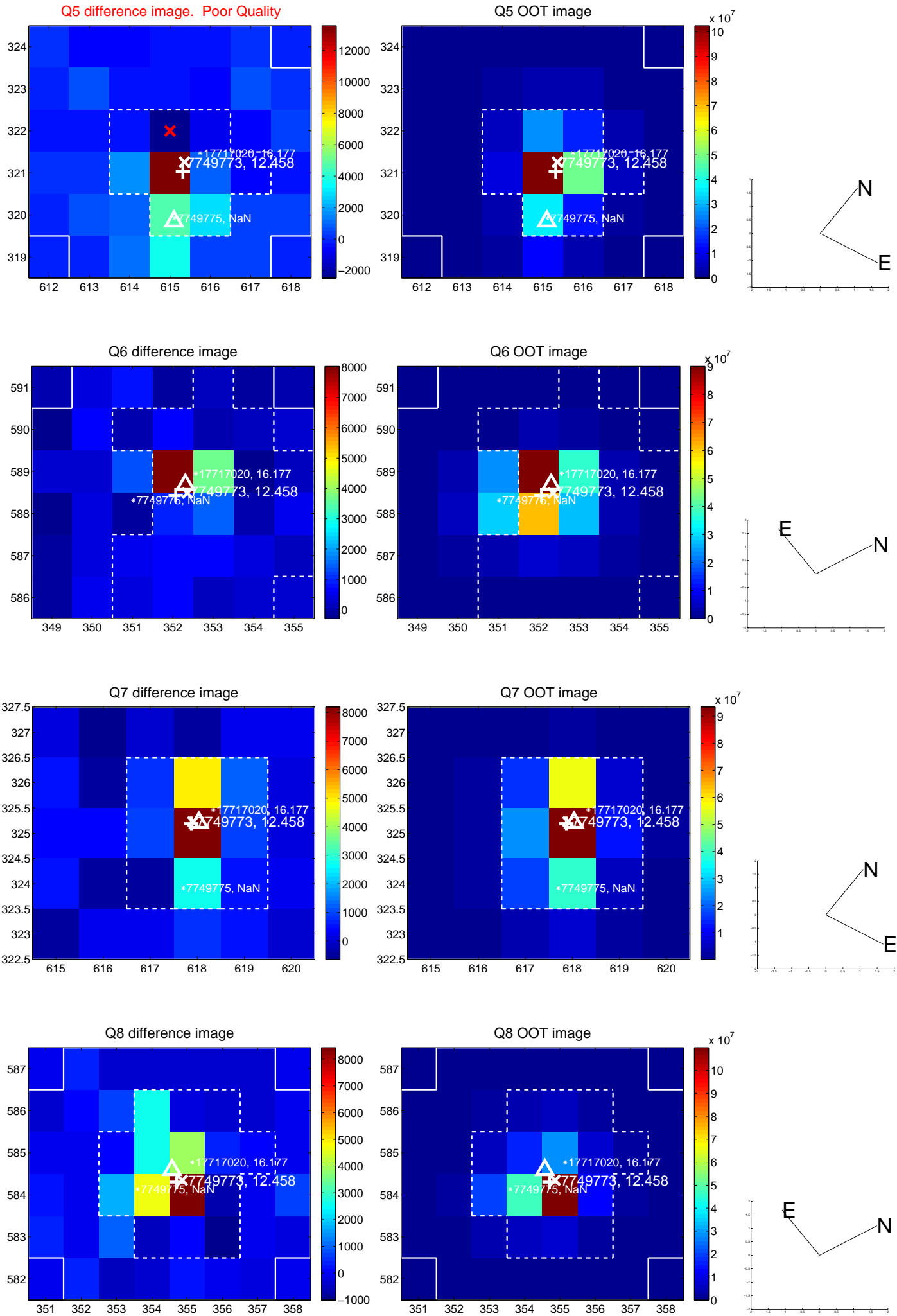


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

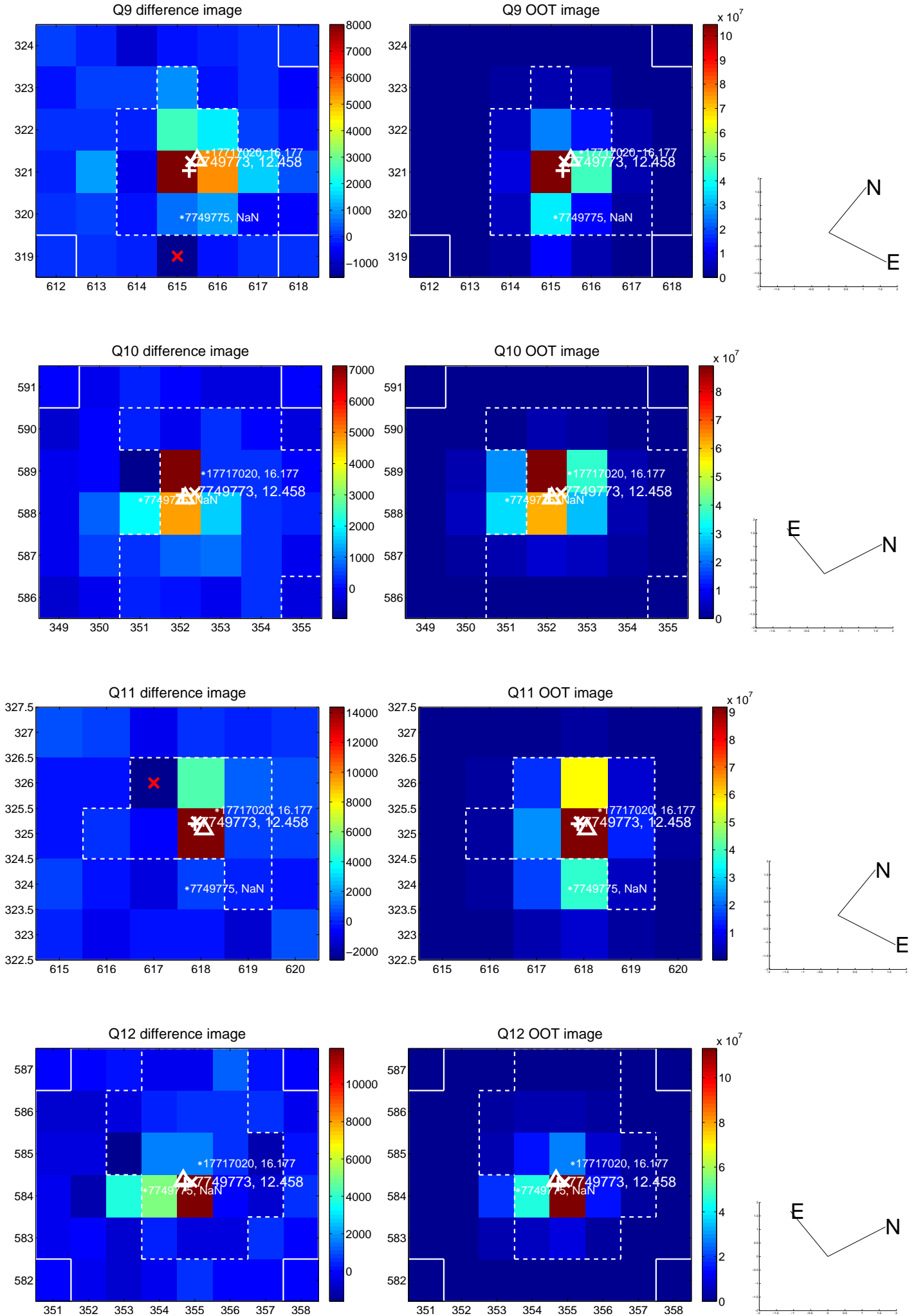
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



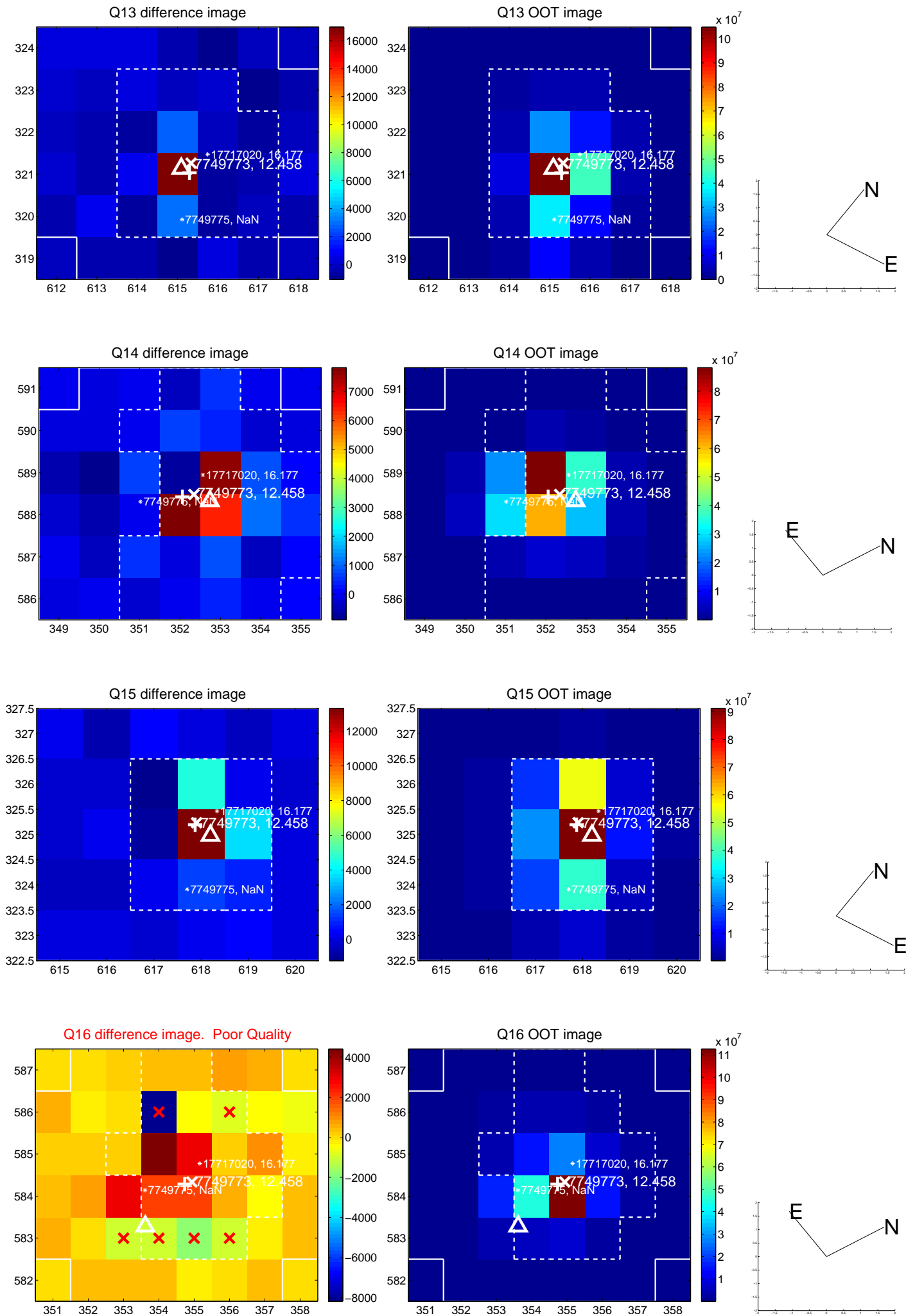
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



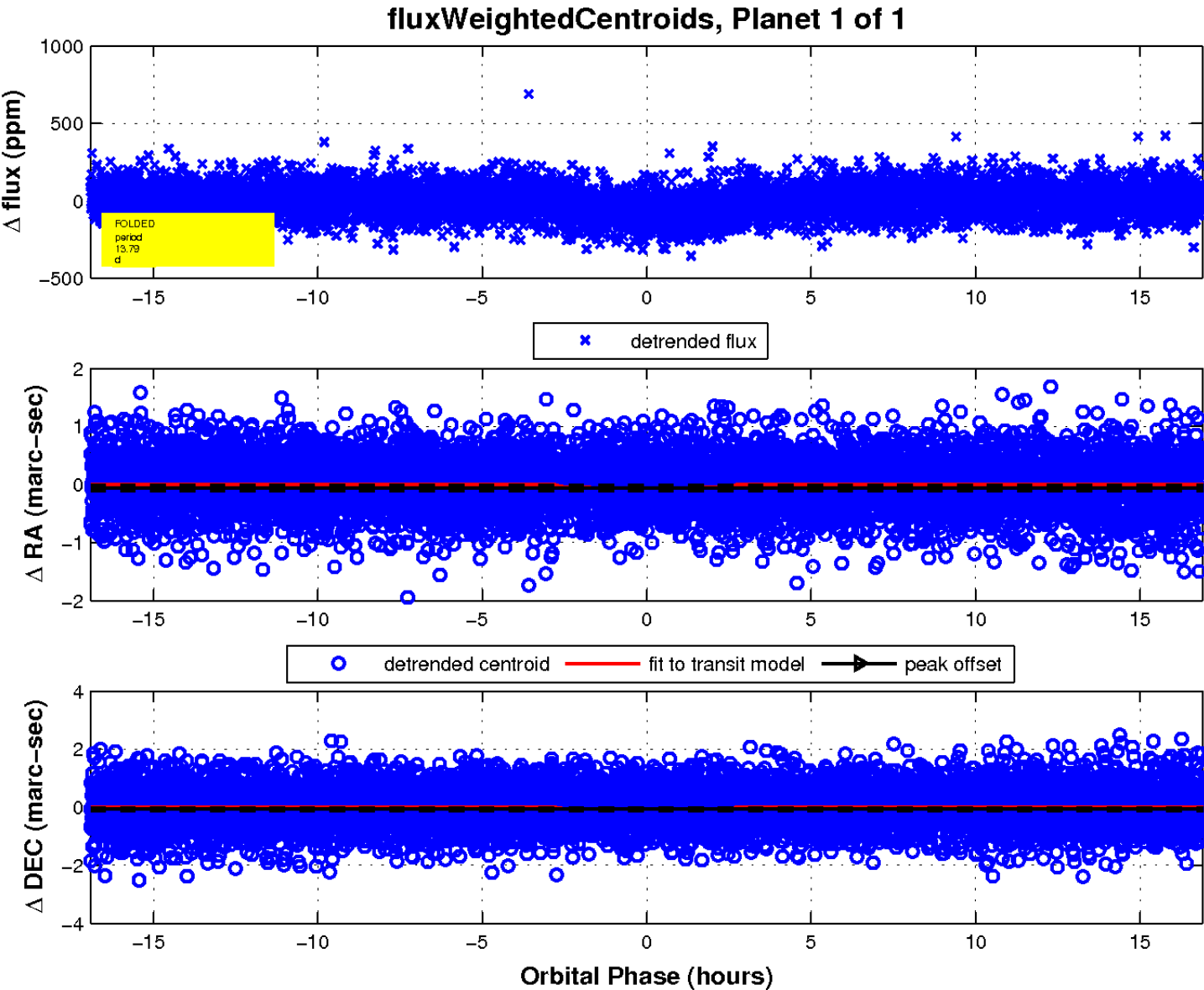
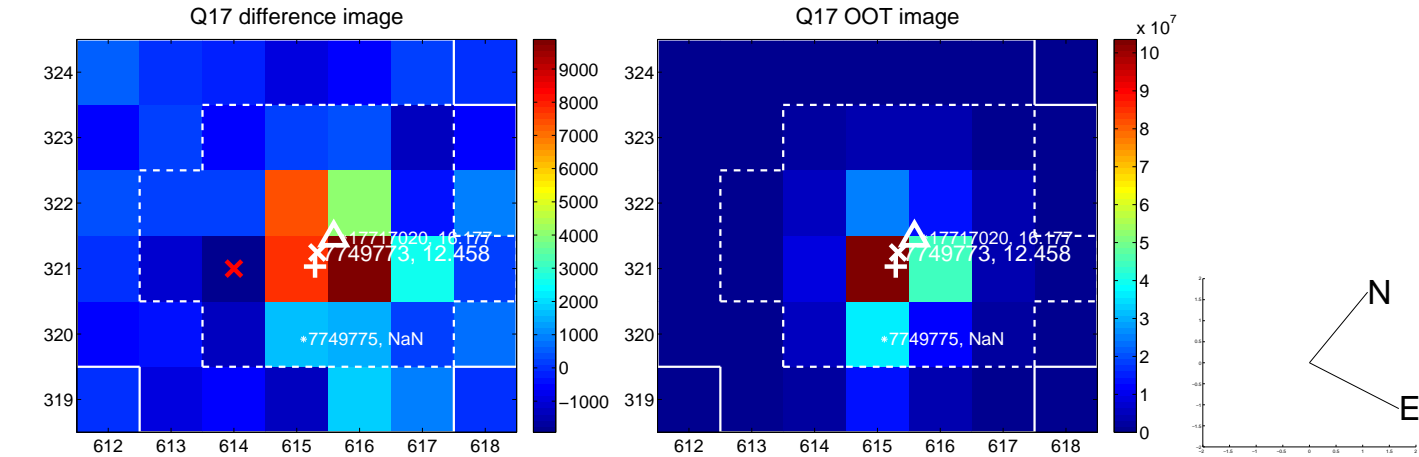
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UKIRT Image

