

KIC 007174349

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})
007174349-01	OBS	3844.01	1.487071	132.500328	61116.5	1.727	88.4	89.1	1.00	5780	35.90	1537.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007174349-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—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 007174349-01

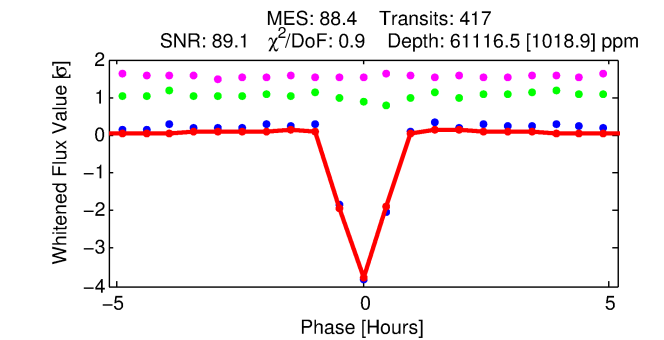
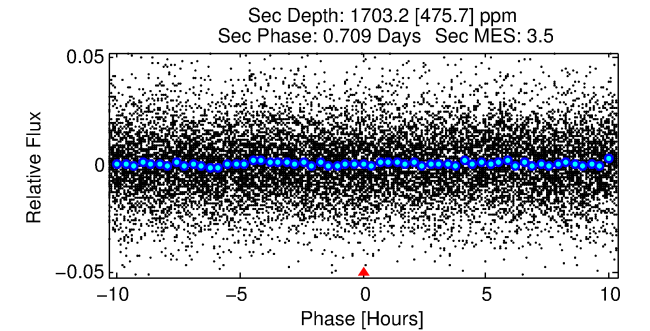
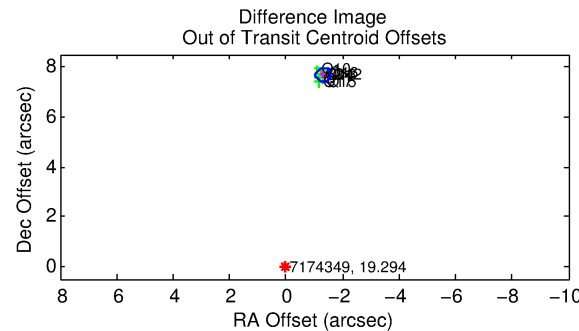
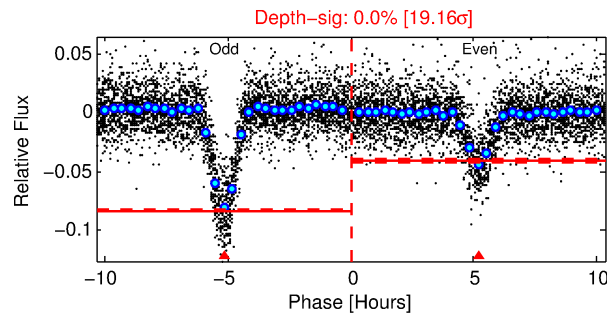
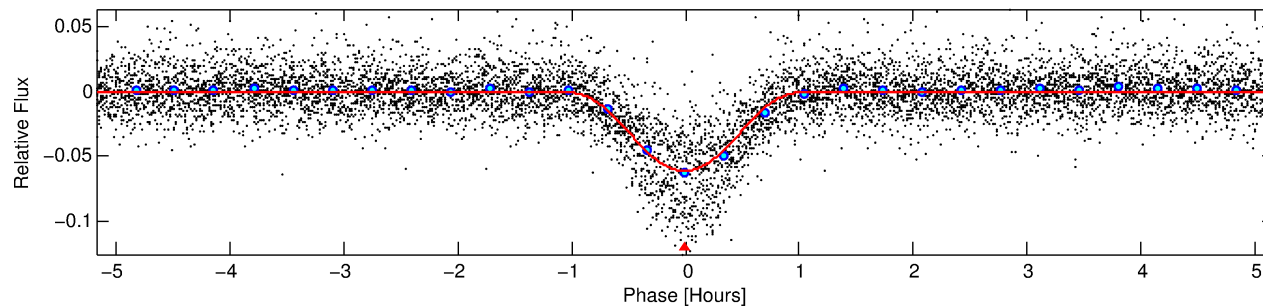
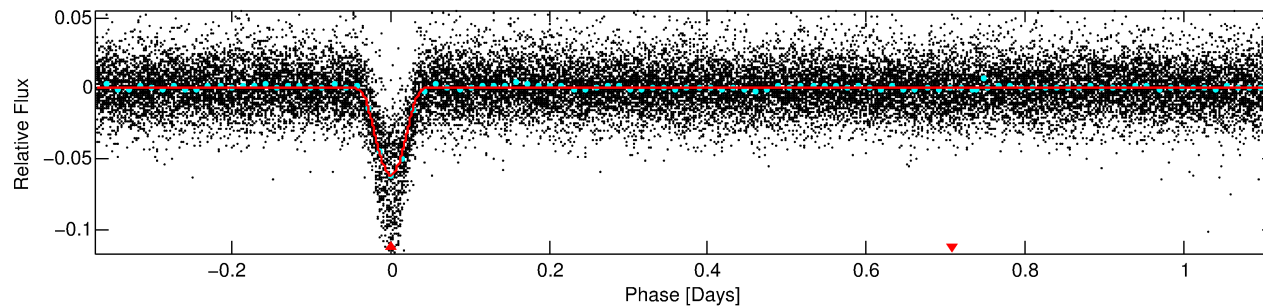
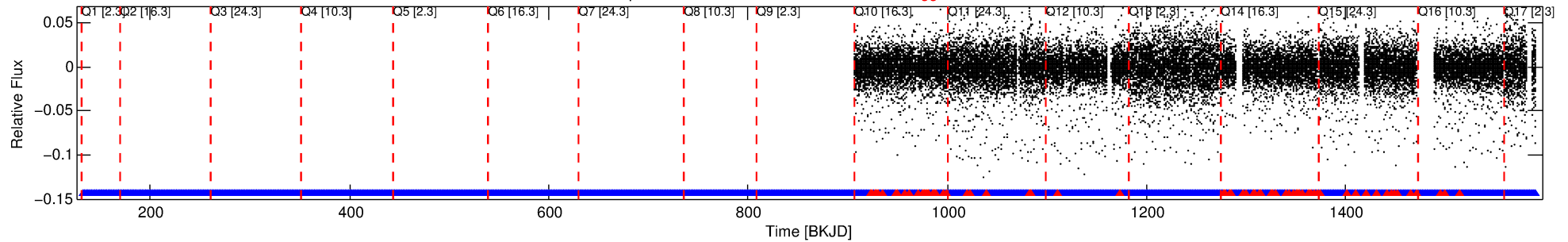
No Significant Match Found

DV One-Page Summary

KIC: 7174349 Candidate: 1 of 1 Period: 1.487 d

KOI: K03844 Corr: No Ephemeris Match

Kp: 19.29 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



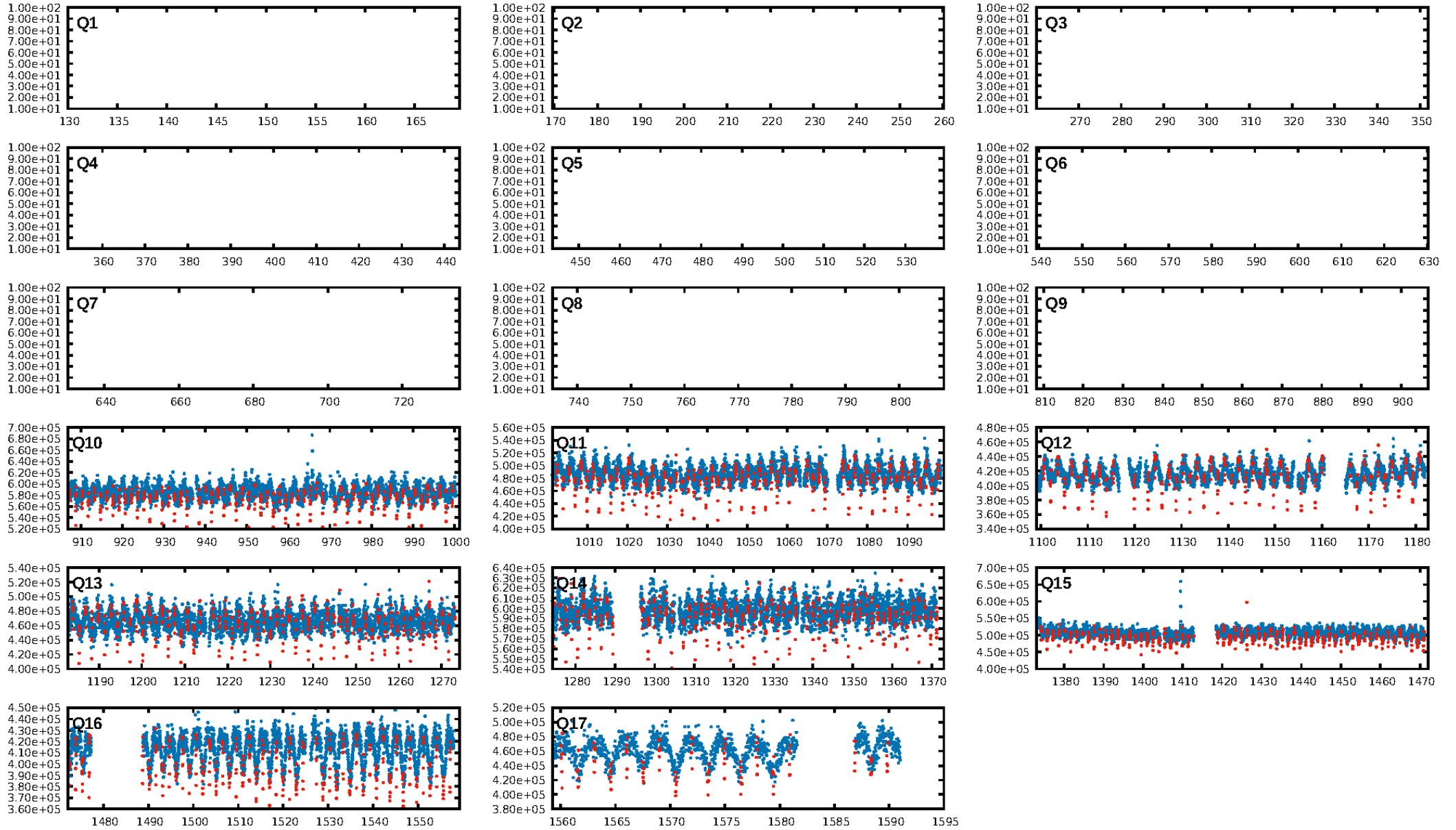
DV Fit Results:

Period = 1.48707 [0.00000] d
Epoch = 132.5003 [0.0002] BKJD
Rp/R* = 0.3290 [0.2861]
a/R* = 6.51 [0.29]
b = 0.90 [0.45]
Seff = 1537.55 [0.00]
Teff = 1597 [0] K
Rp = 35.90 [31.22] Re
a = 0.0255 [0.0000] AU
Ag = 0.47 [0.83] [-0.63σ]
Teffp = 2047 [902] K [0.50σ]

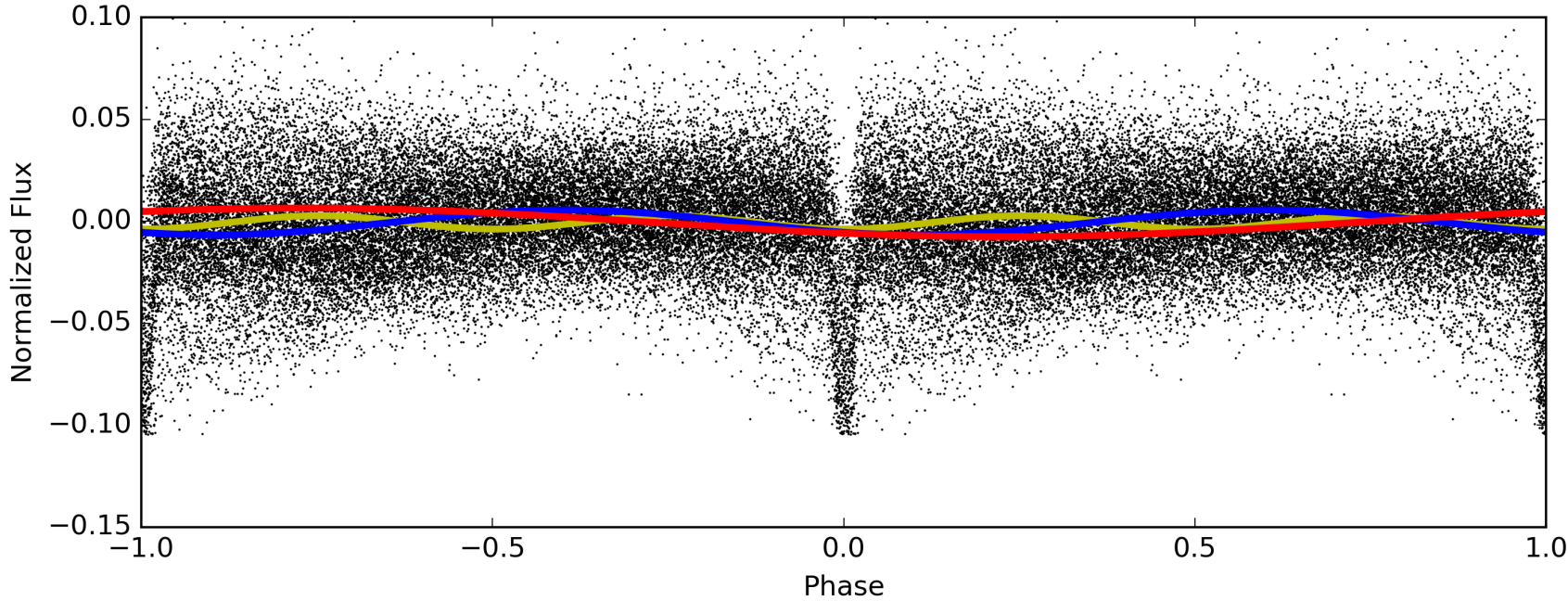
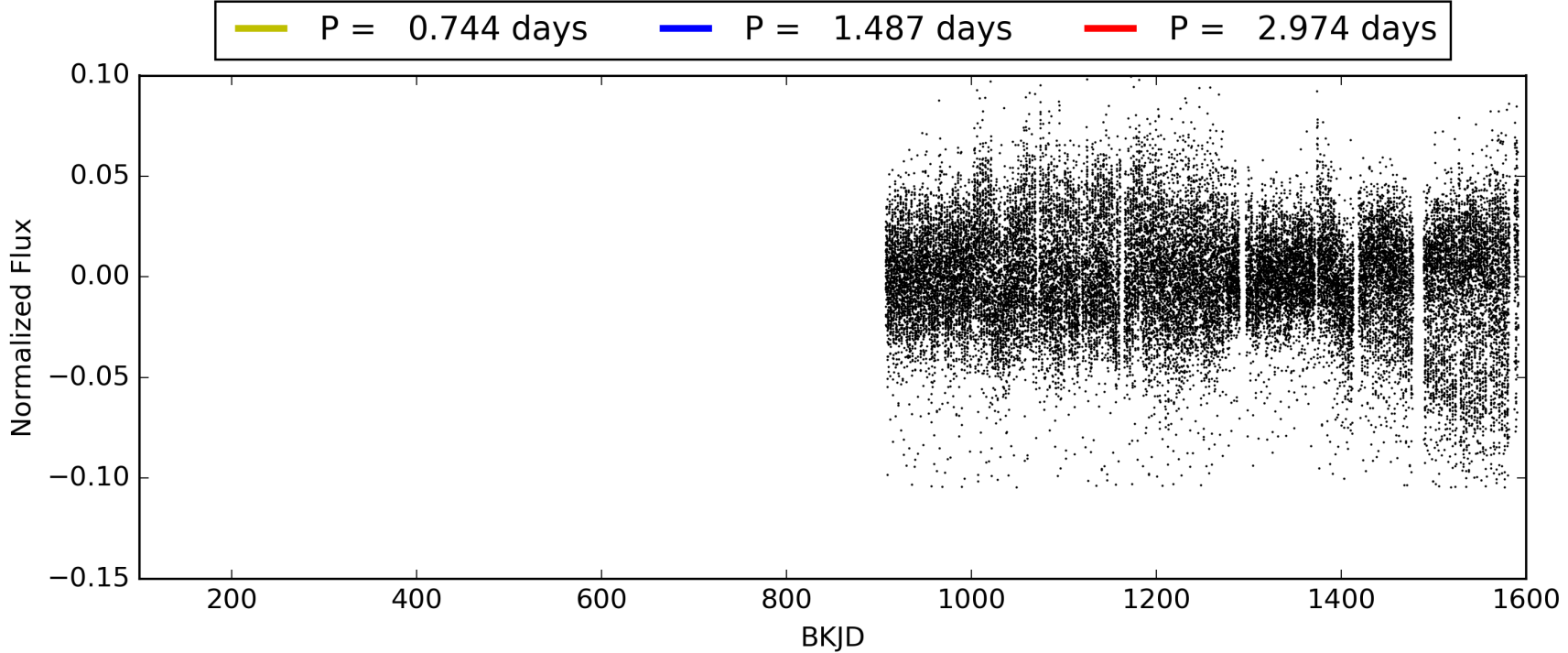
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.83 [332/399]
GhostDiagnostic-chr: 2.568
Centroid-sig: 0.0%
Centroid-so: 5.052 arcsec [299.42σ]
OotOffset-rm: 7.799 arcsec [87.05σ]
KicOffset-rm: 0.632 arcsec [7.66σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 007174349-01, PDC Light Curves

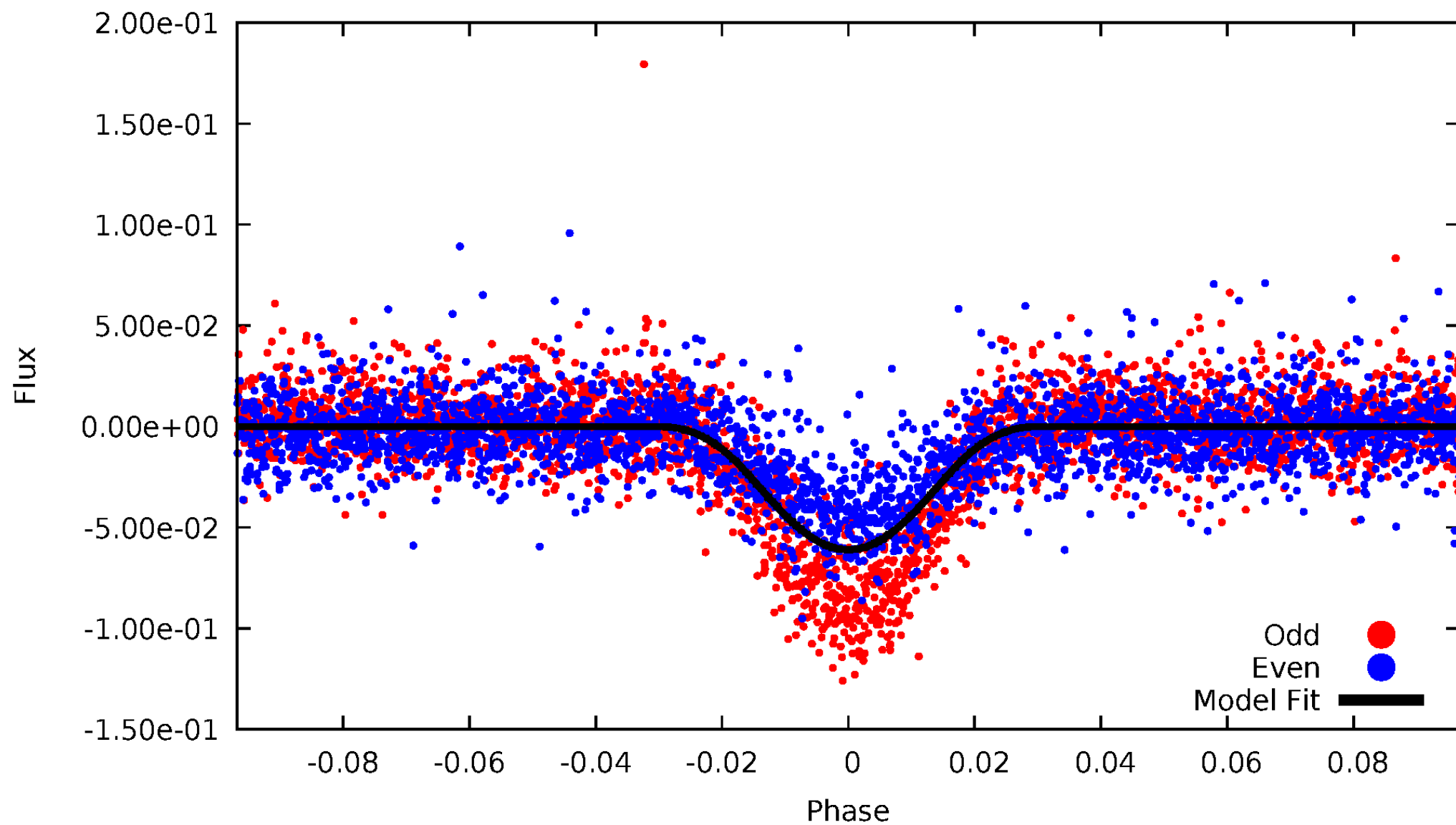


TCE 007174349-01



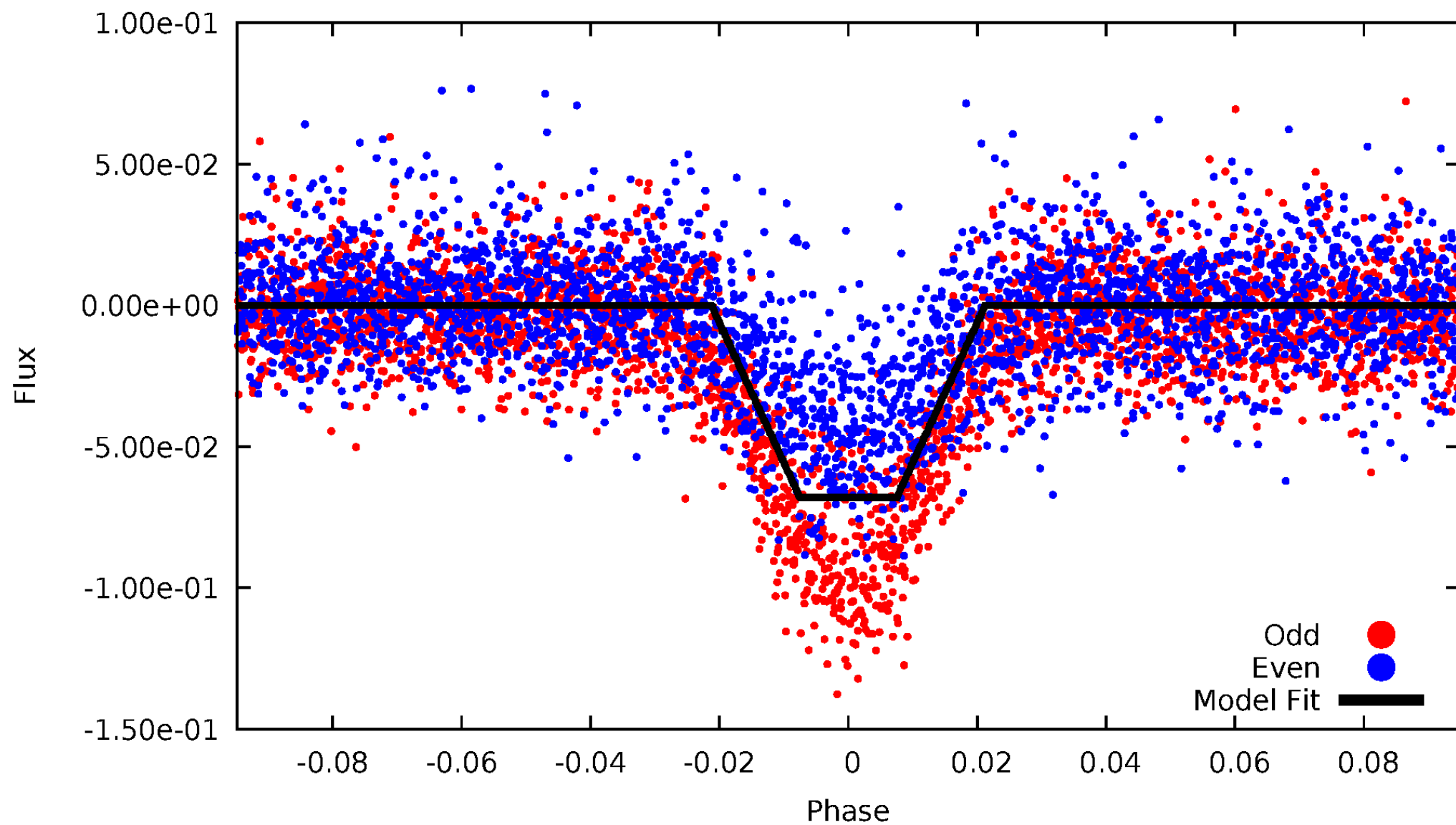
DV Odd/Even

TCE 007174349-01



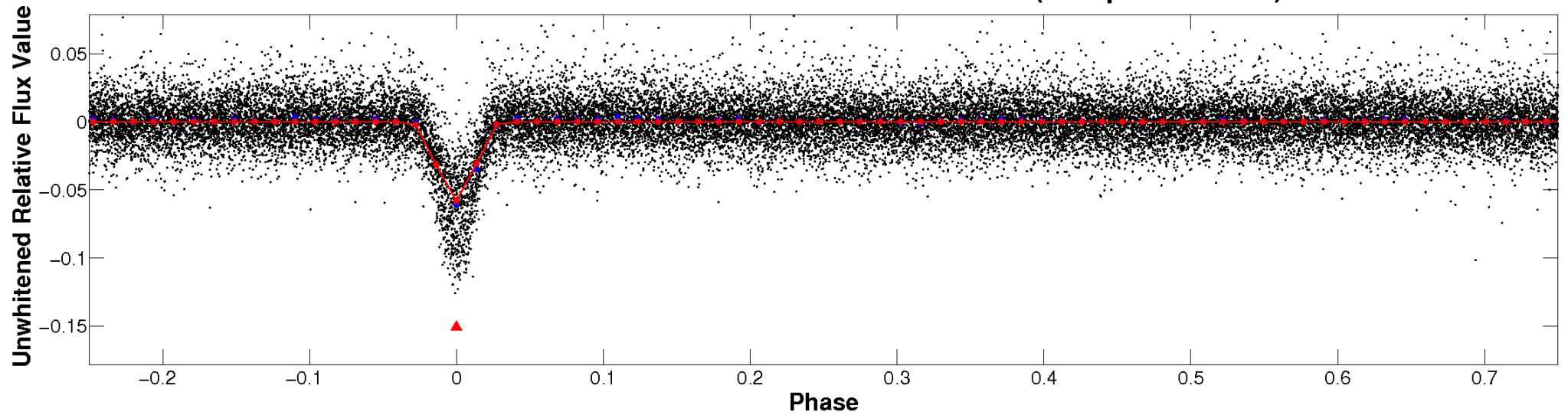
ALT Odd/Even

TCE 007174349-01

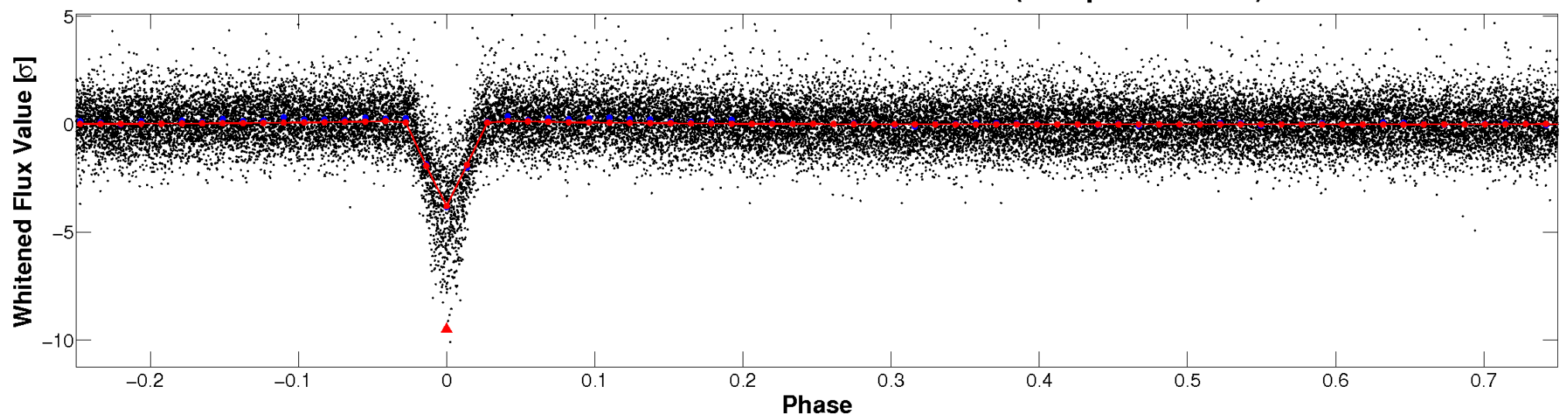


Non-Whitened Vs. Whitened Light Curve

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

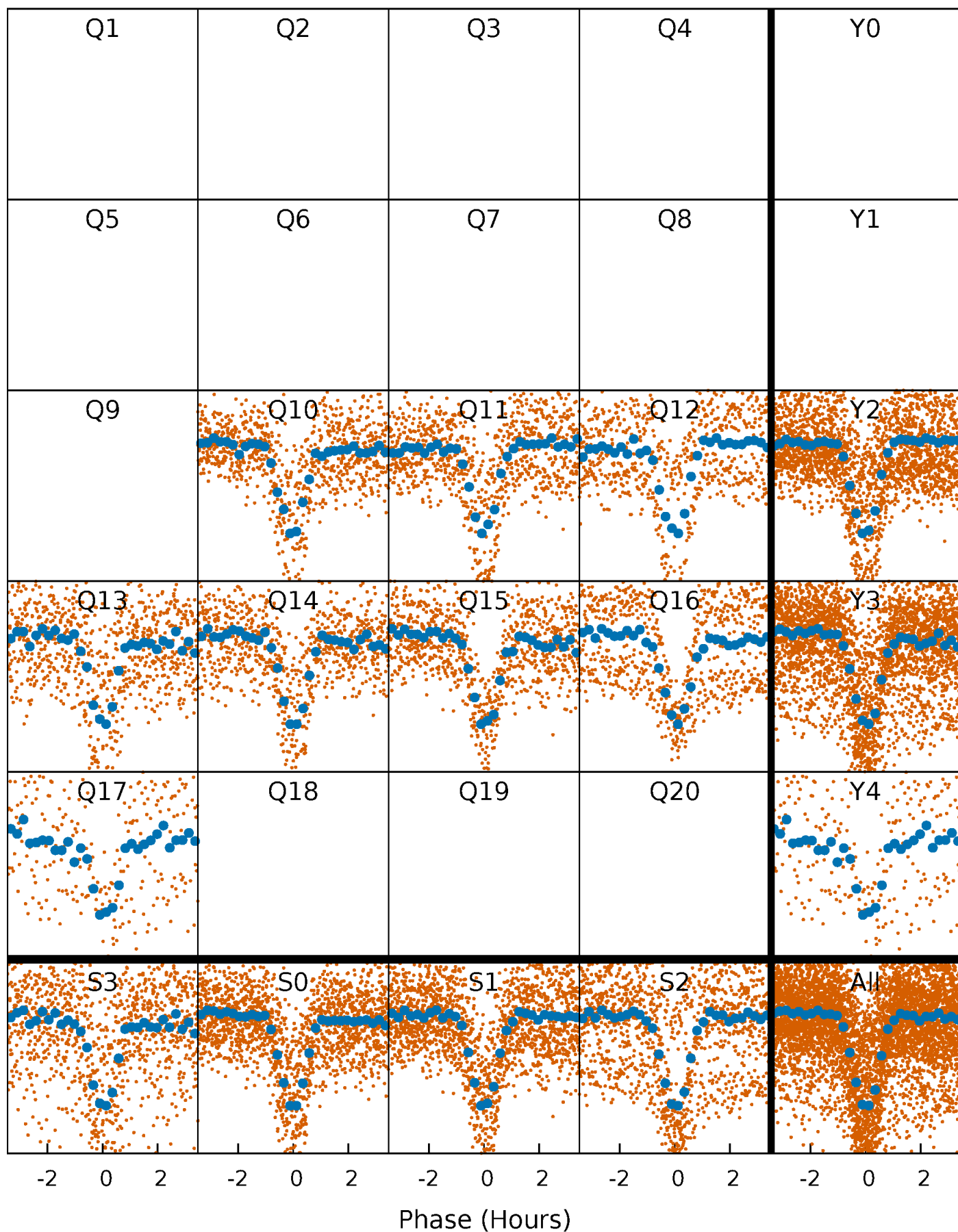


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



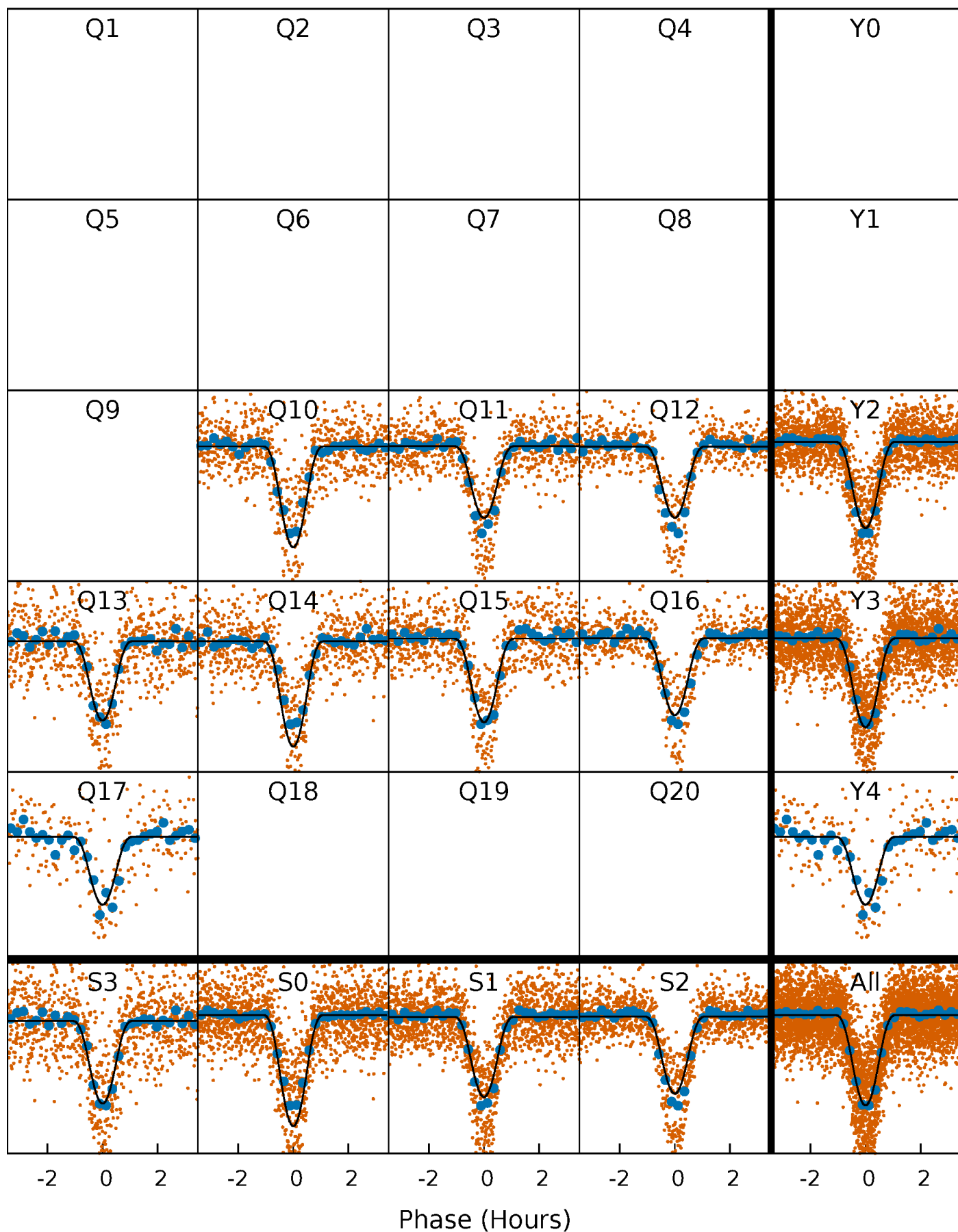
PDC Quarter-Phased Transit Curves

TCE 007174349-01 P= 1.487071 Days $T_0=132.500328$ (BKJD)



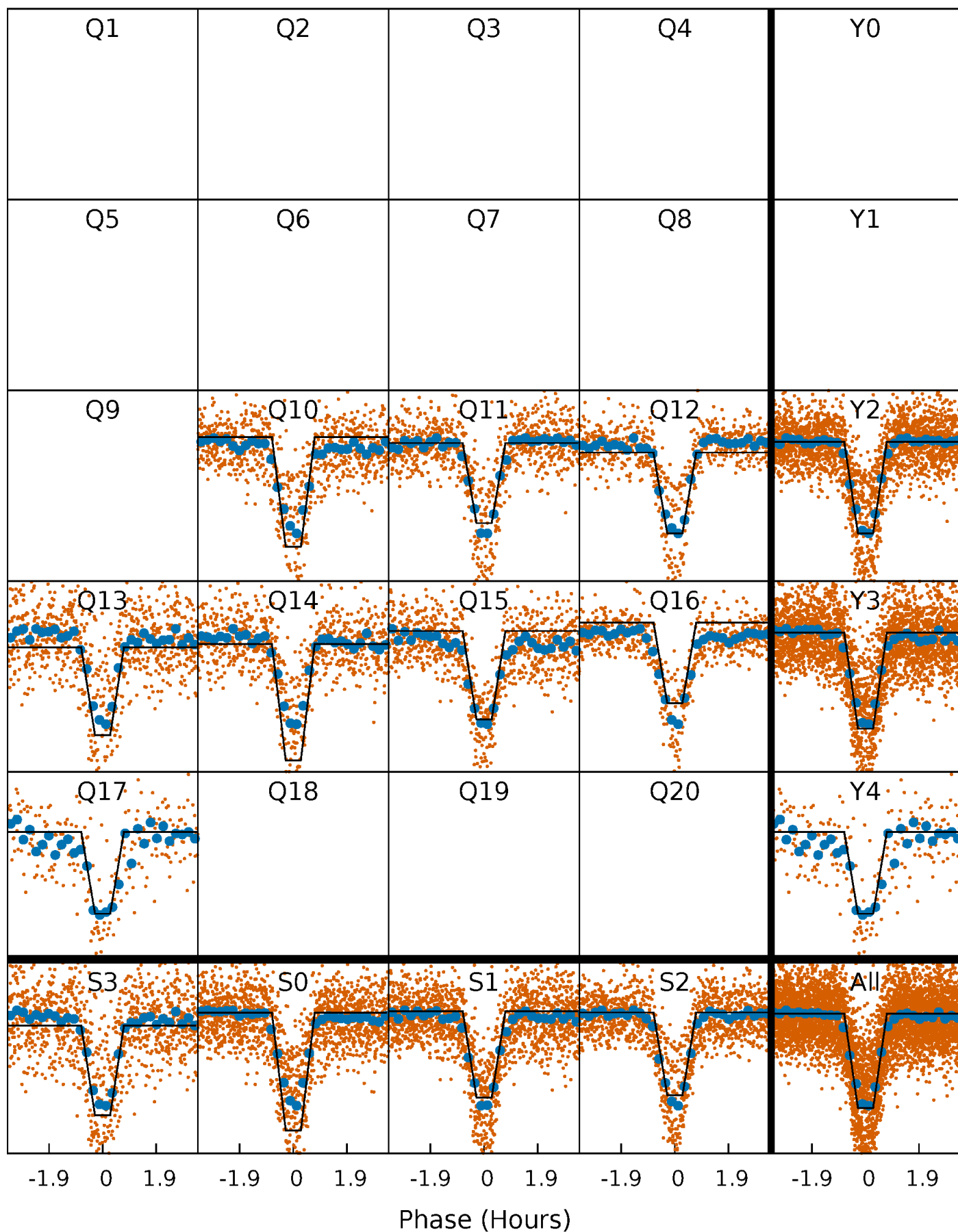
DV Quarter-Phased Transit Curves

TCE 007174349-01 P= 1.487071 Days $T_0=132.500328$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

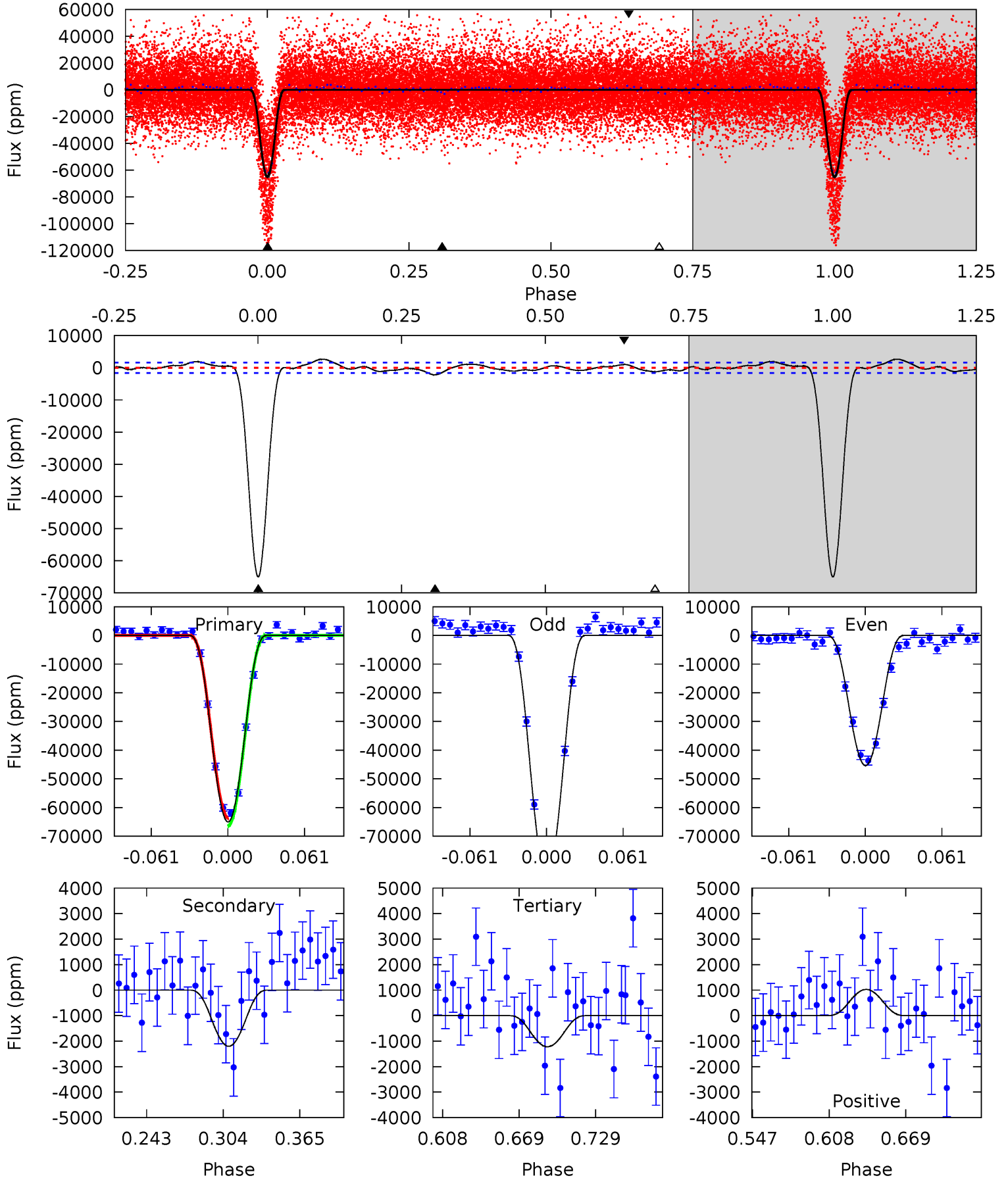
TCE 007174349-01 P= 1.487085 Days $T_0=132.490804$ (BKJD)



DV Model-Shift Uniqueness Test

007174349-01, P = 1.487071 Days, E = 132.500328 Days

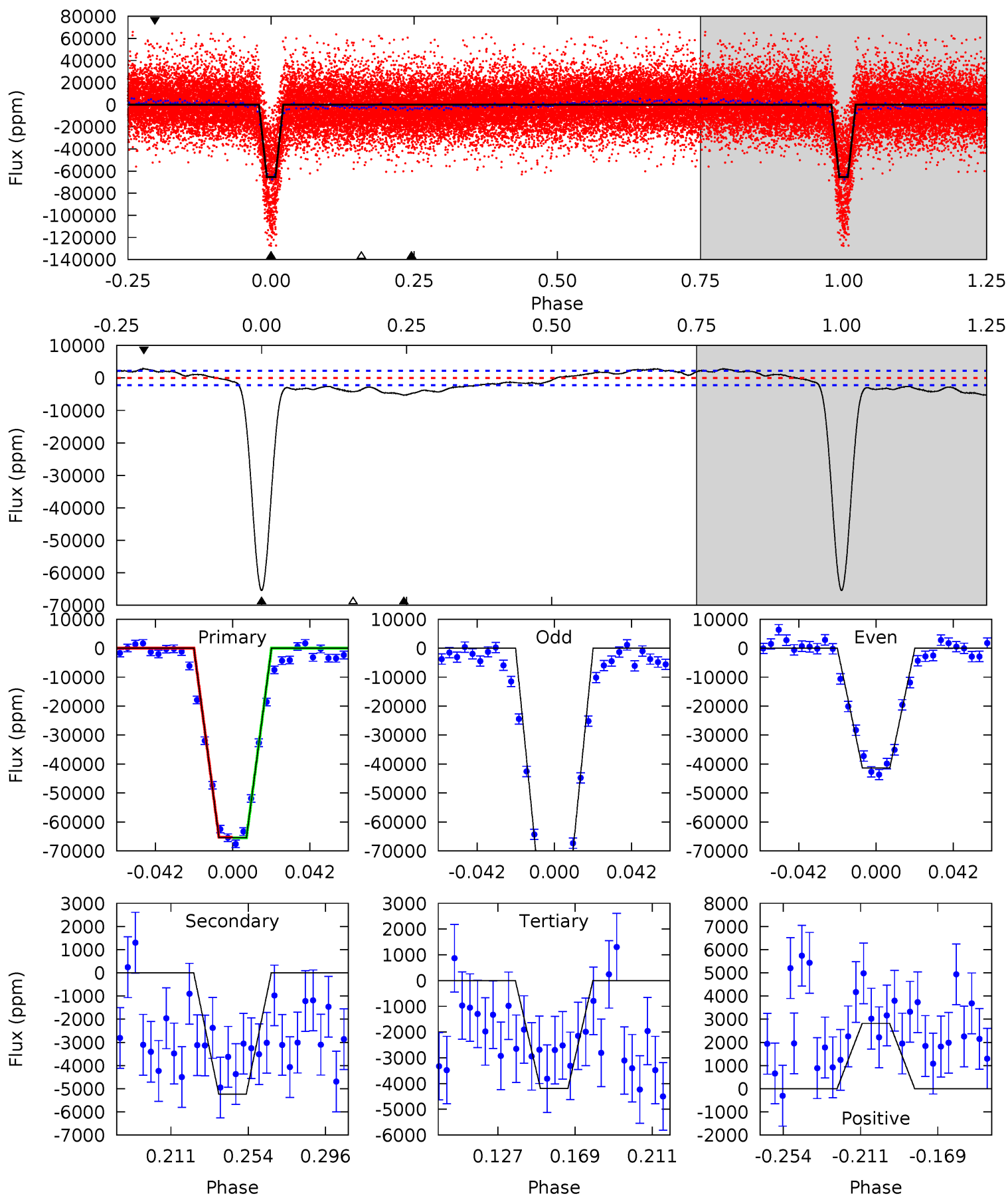
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
187.4	6.35	3.52	2.96	4.67	1.88	2.55	183.9	184.4	2.83	3.39	55.9	1.05	0.04	4.14



Alt Model-Shift Uniqueness Test

007174349-01, P = 1.487085 Days, E = 132.490804 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
140.6	11.3	9.01	6.05	4.74	2.03	4.86	131.6	134.5	2.24	5.20	49.5	0.99	0.04	0.21



Stellar Parameters For KIC 007174349

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 007174349-01 / KOI 3844.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2203 ± 347	$40.71^{+28.99}_{-24.86}$	2237^{+106}_{-115}	2494^{+1155}_{-4903}	$0.493^{+2.684}_{-0.332}$
Alt.	-5237 ± 465	$35.21^{+27.99}_{-22.05}$	2240^{+107}_{-111}	3192^{+1353}_{-746}	$1.523^{+9.449}_{-1.051}$

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 $A_{obs} \gg 1.0$

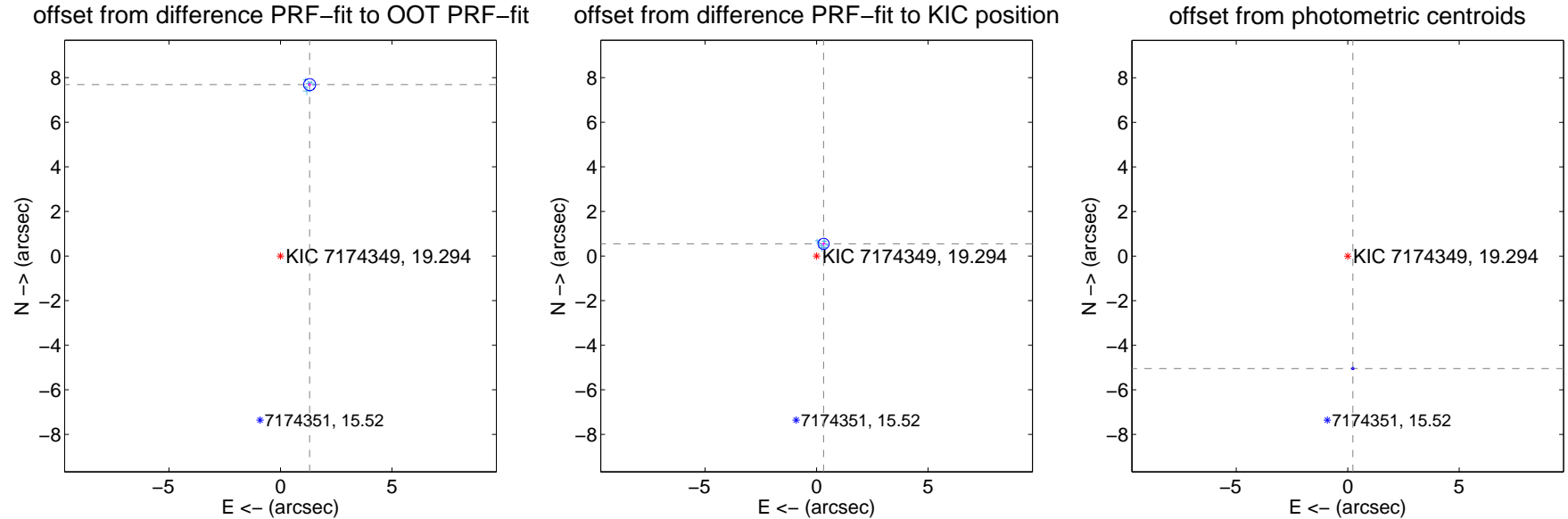
DV Centroid Data

Supplemental centroid analysis for 007174349-01. Kepler magnitude: 19.29. Transit SNR 89.12

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 7.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.799 ± 0.090	87.05	-1.308 ± 0.086	7.688 ± 0.090
PRF-fit source offset from KIC position	0.632 ± 0.083	7.66	-0.315 ± 0.090	0.548 ± 0.080
photometric centroid source offset	5.05 ± 0.02	299.42	-0.23 ± 0.01	-5.05 ± 0.02



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.

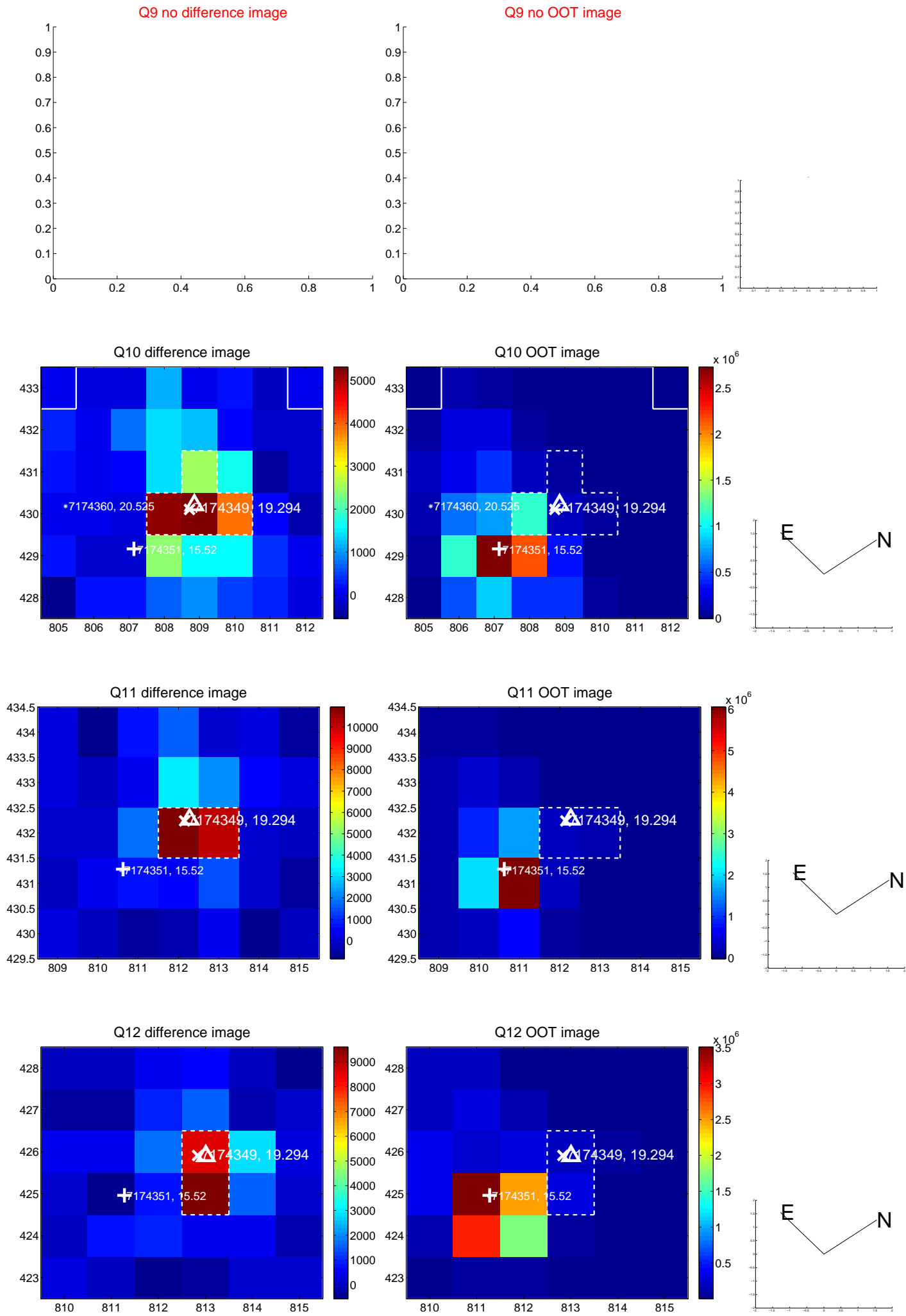
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



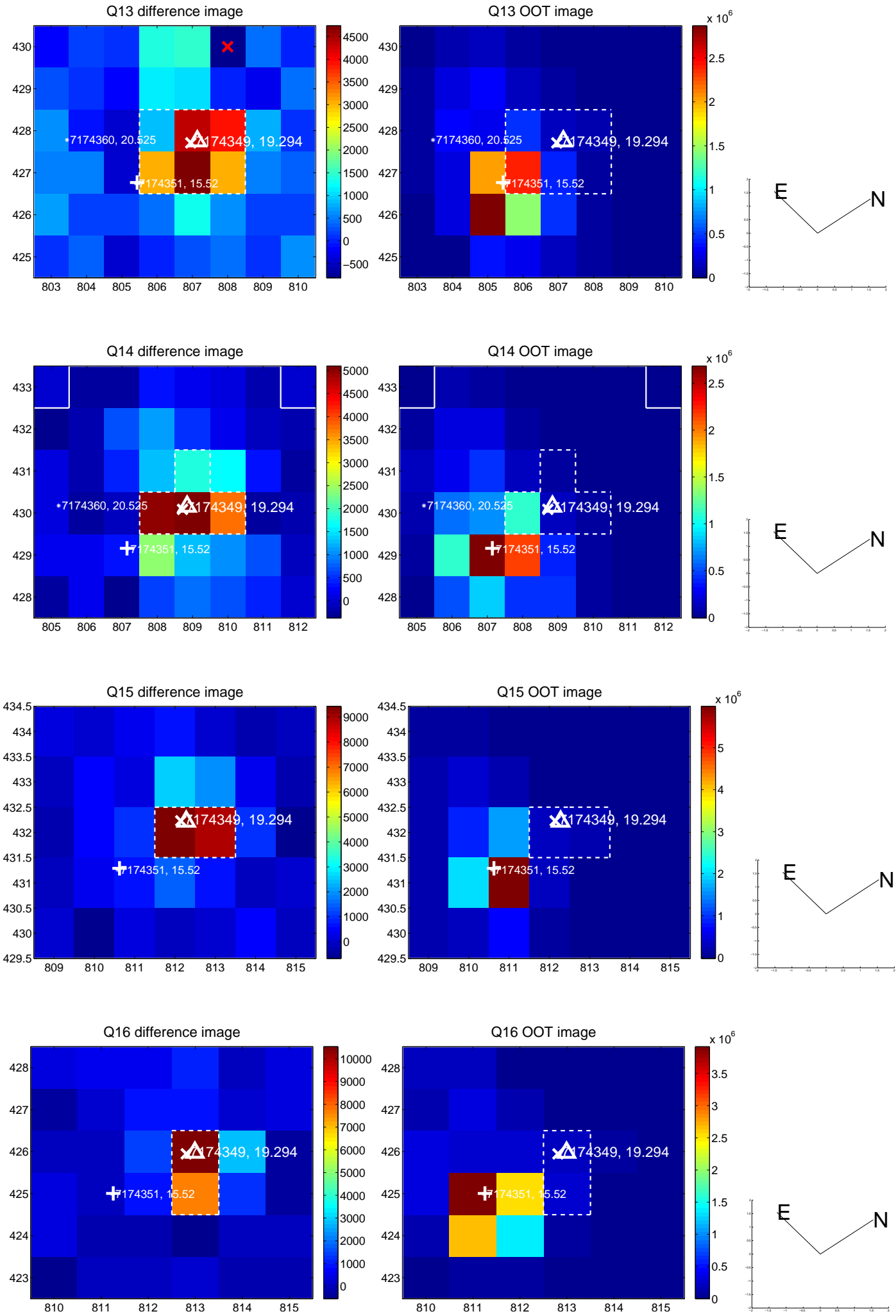
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



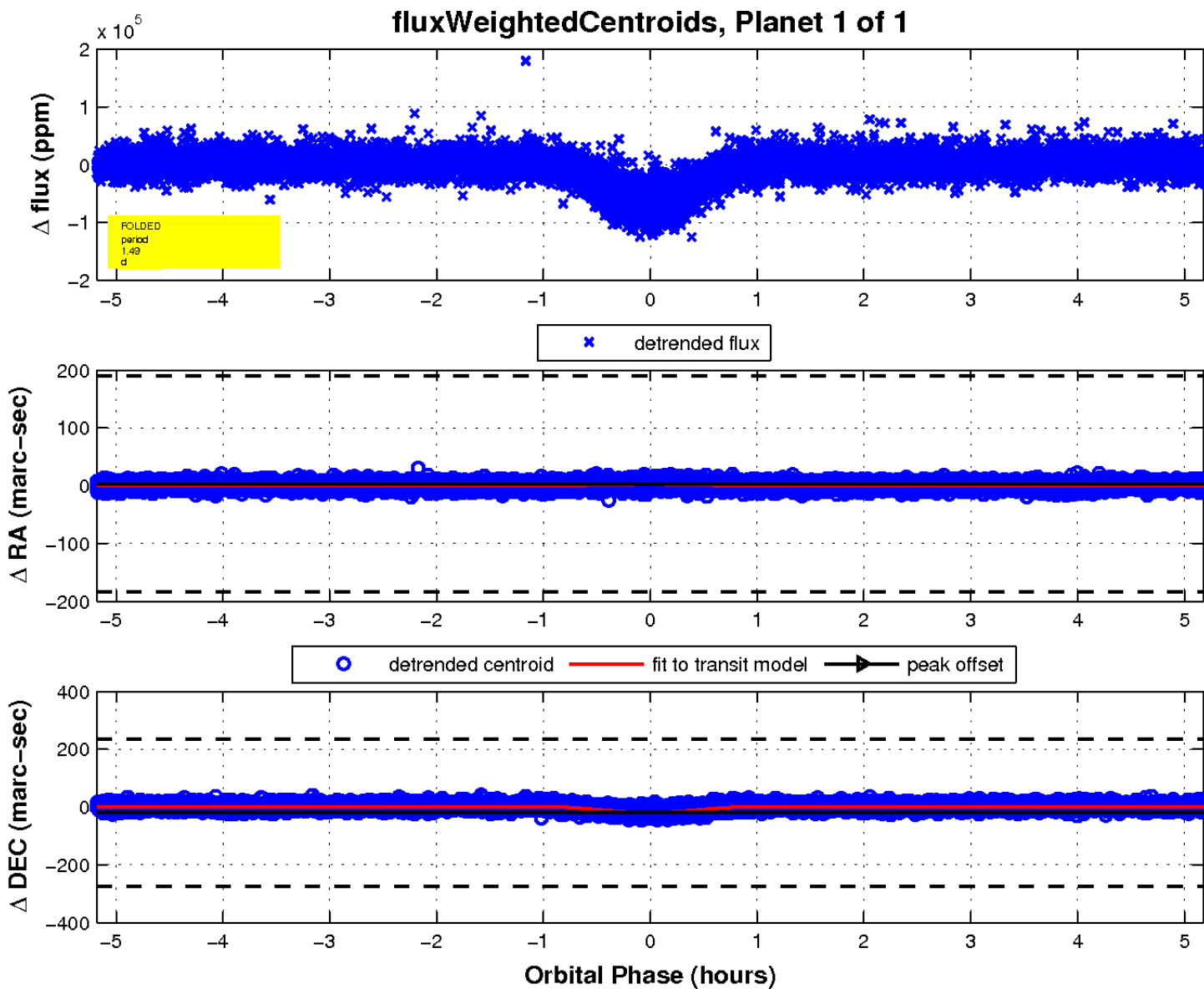
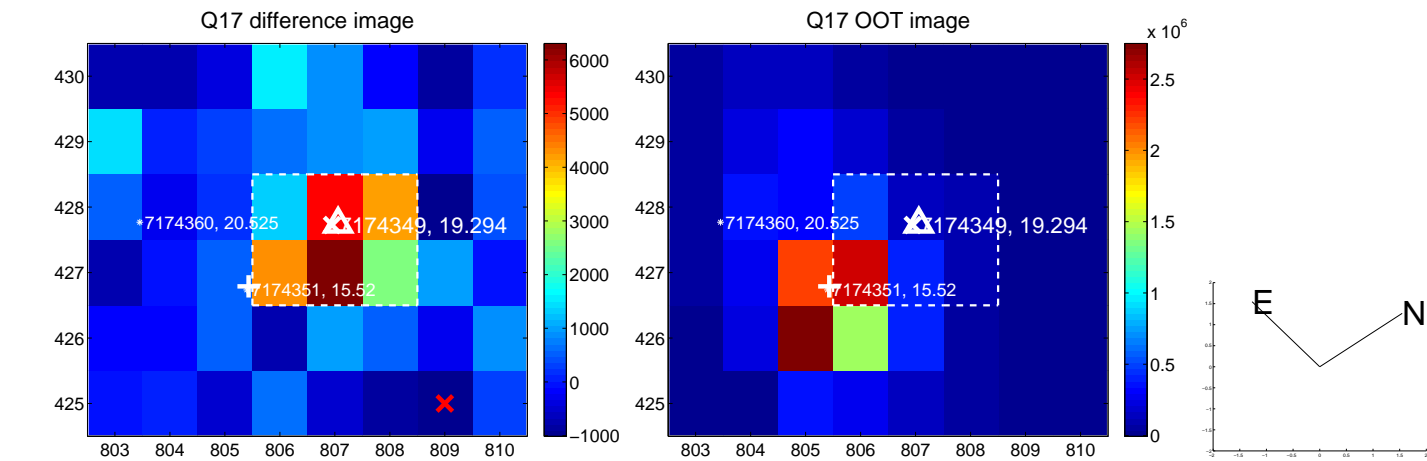
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

