

KIC 007277317

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})
007277317-01	OBS	0674.01	16.338882	145.239324	1708.1	9.442	151.5	151.5	2.60	4877	10.81	203.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007277317-01	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.

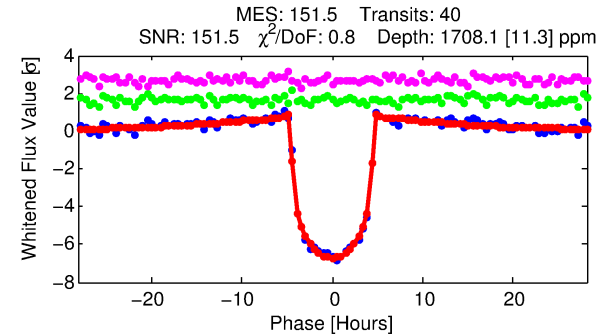
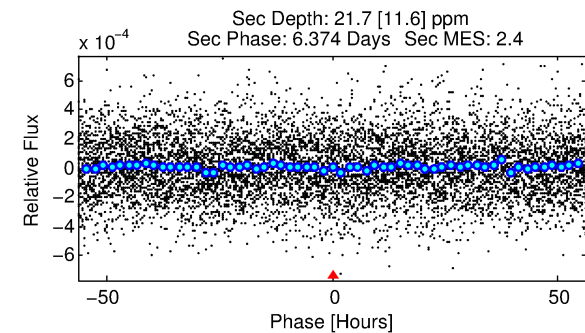
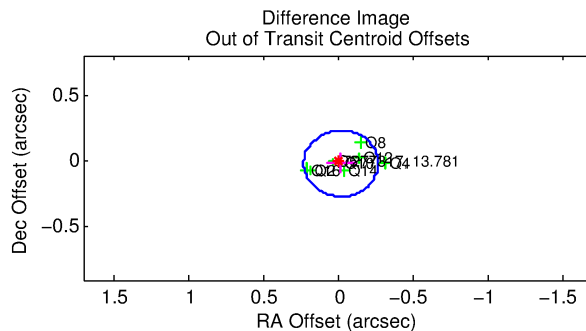
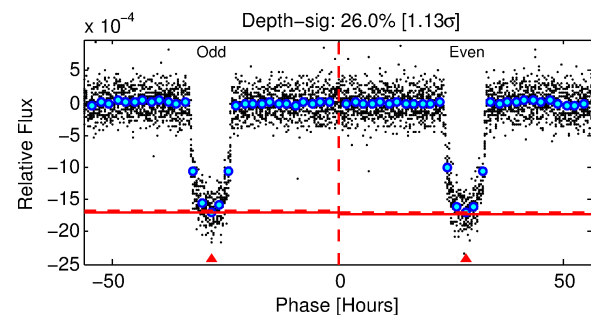
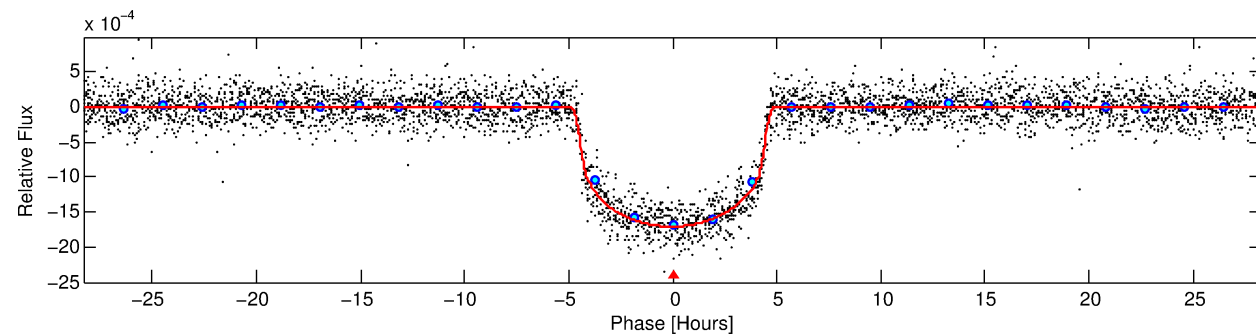
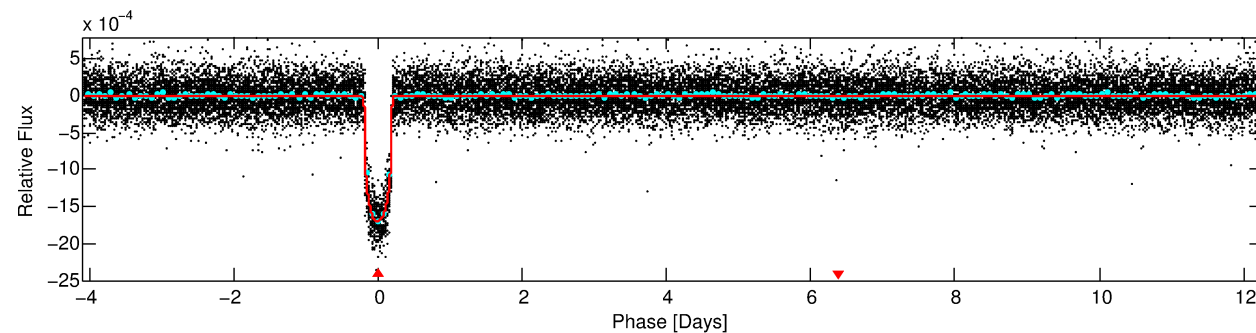
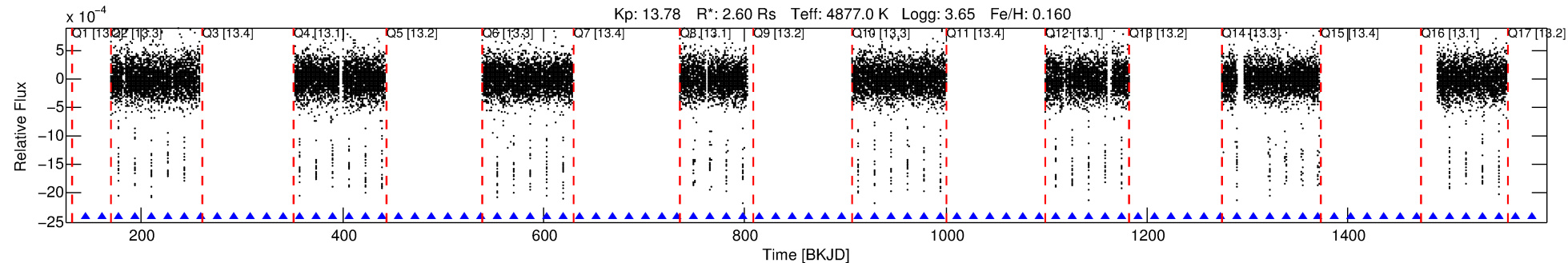
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007277317-01

No Significant Match Found

DV One-Page Summary

KIC: 7277317 Candidate: 1 of 1 Period: 16.339 d
KOI: K00674.01 Corr: 0.996



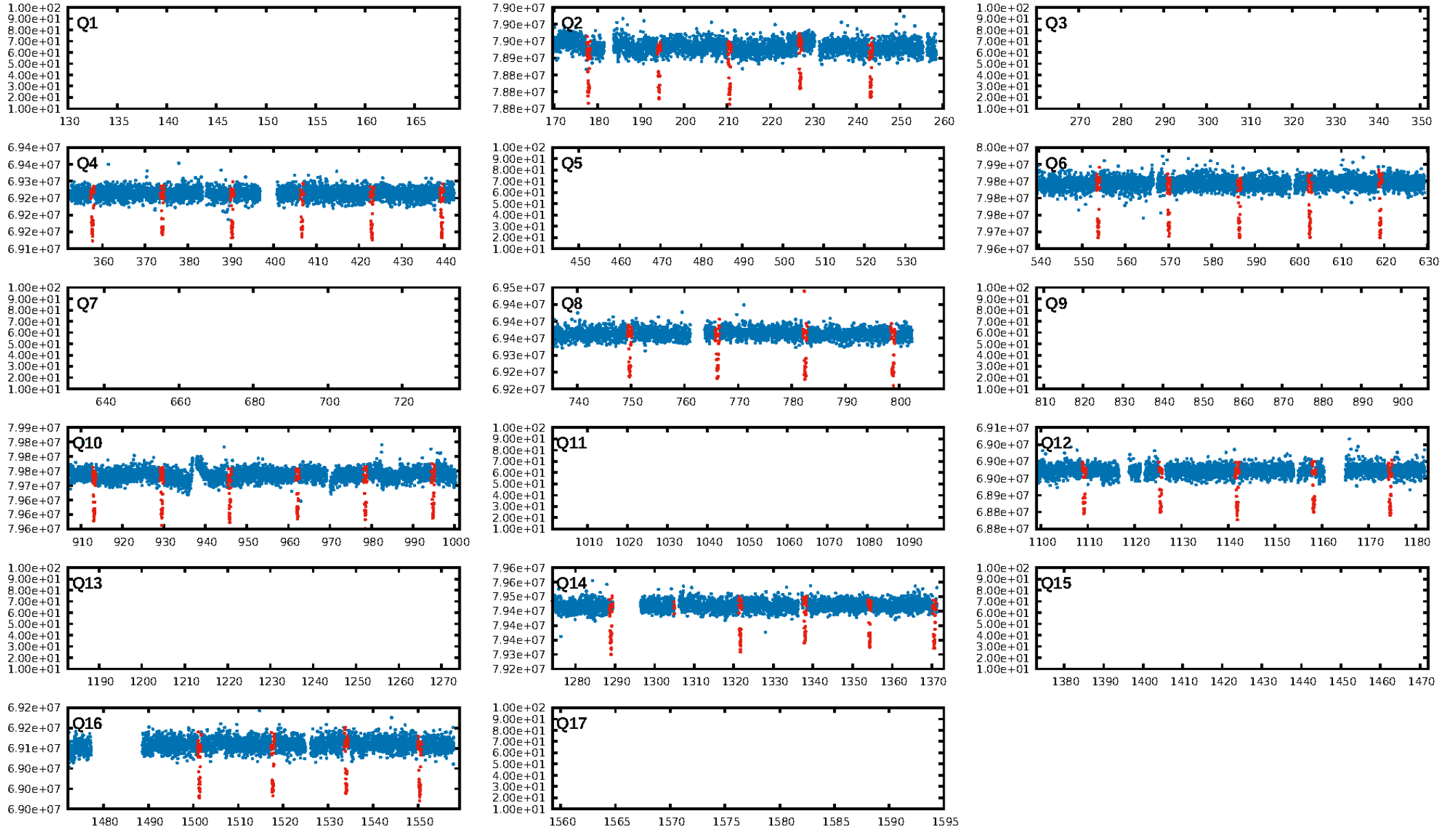
DV Fit Results:

Period = 16.33888 [0.00002] d
Epoch = 145.2393 [0.0010] BKJD
Rp/R* = 0.0382 [0.0016]
a/R* = 11.98 [1.63]
b = 0.51 [0.20]
Seff = 203.53 [27.20]
Teff = 963 [32] K
Rp = 10.81 [1.23] Re
a = 0.1295 [0.0112] AU
Ag = 1.72 [0.95] [0.75 σ]
Teffp = 1705 [231] K [3.18 σ]

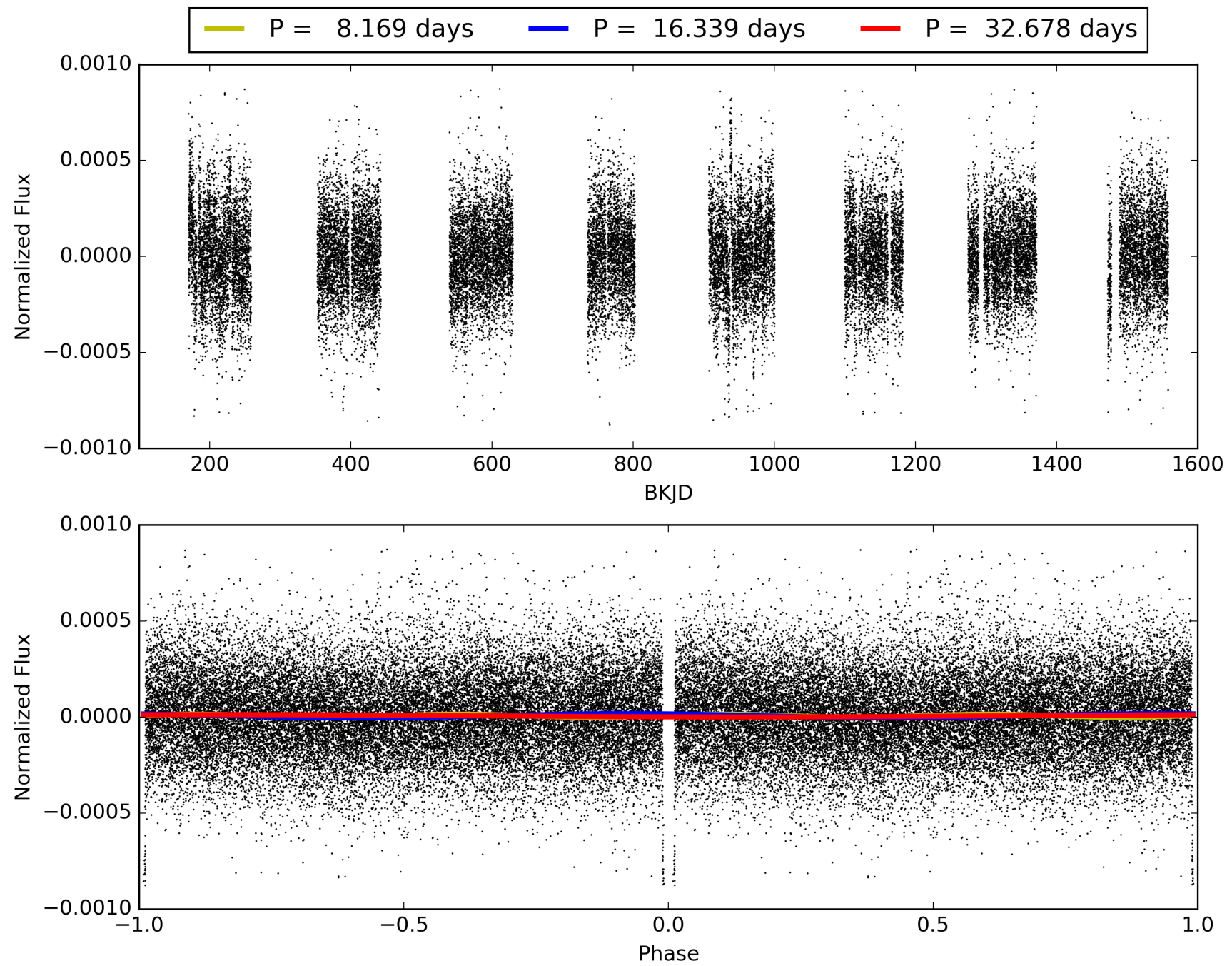
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: 5.131
Centroid-sig: 53.4%
Centroid-so: 0.314 arcsec [4.65 σ]
OotOffset-rm: 0.029 arcsec [0.35 σ]
KicOffset-rm: 0.354 arcsec [4.64 σ]
OotOffset-st: 4/0/4/0 [8]
KicOffset-st: 4/0/4/0 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 007277317-01, PDC Light Curves

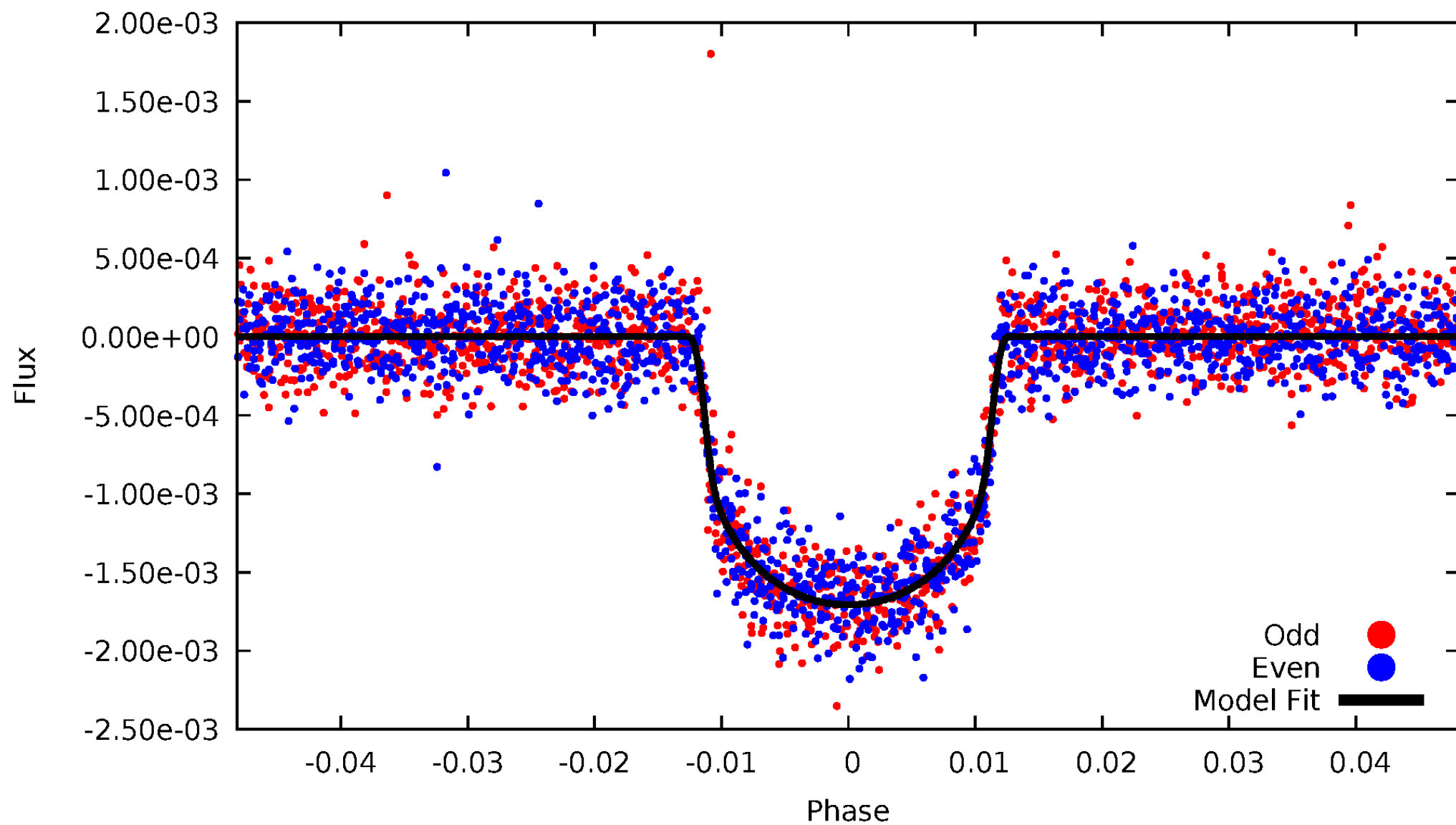


TCE 007277317-01



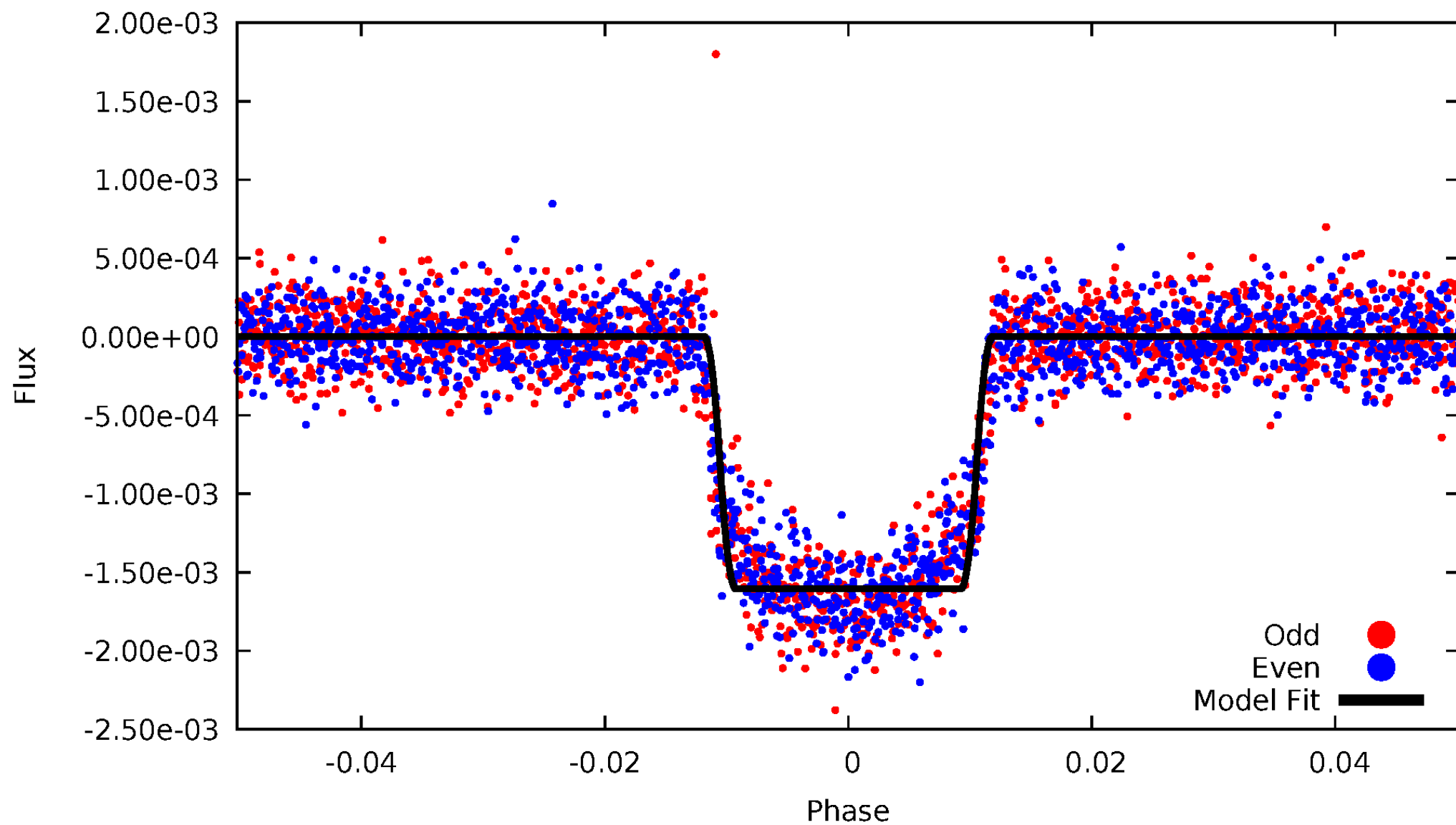
DV Odd/Even

TCE 007277317-01



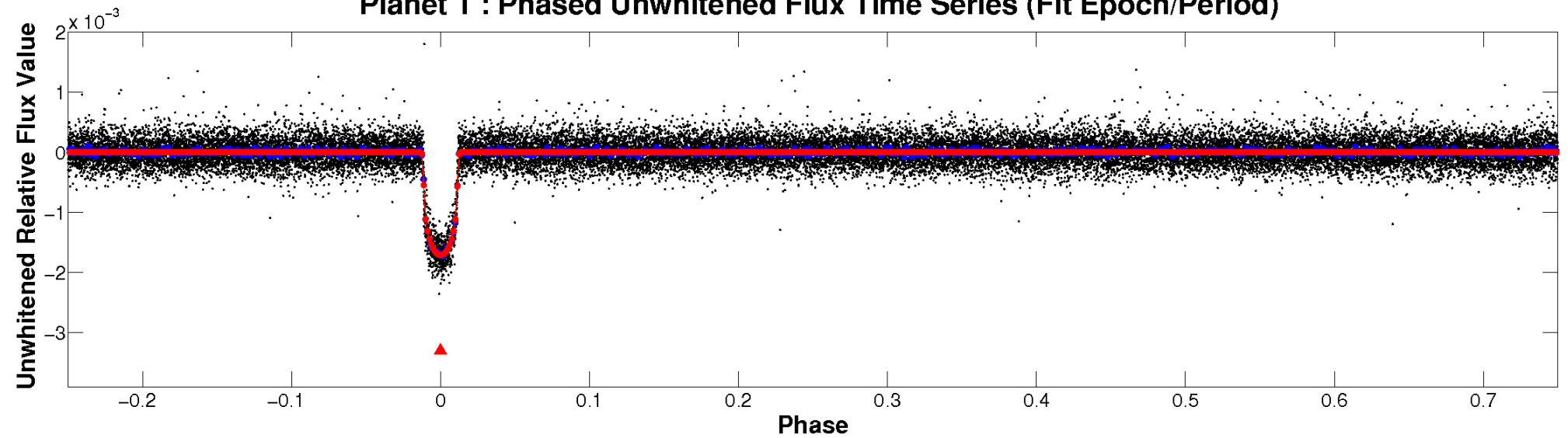
ALT Odd/Even

TCE 007277317-01

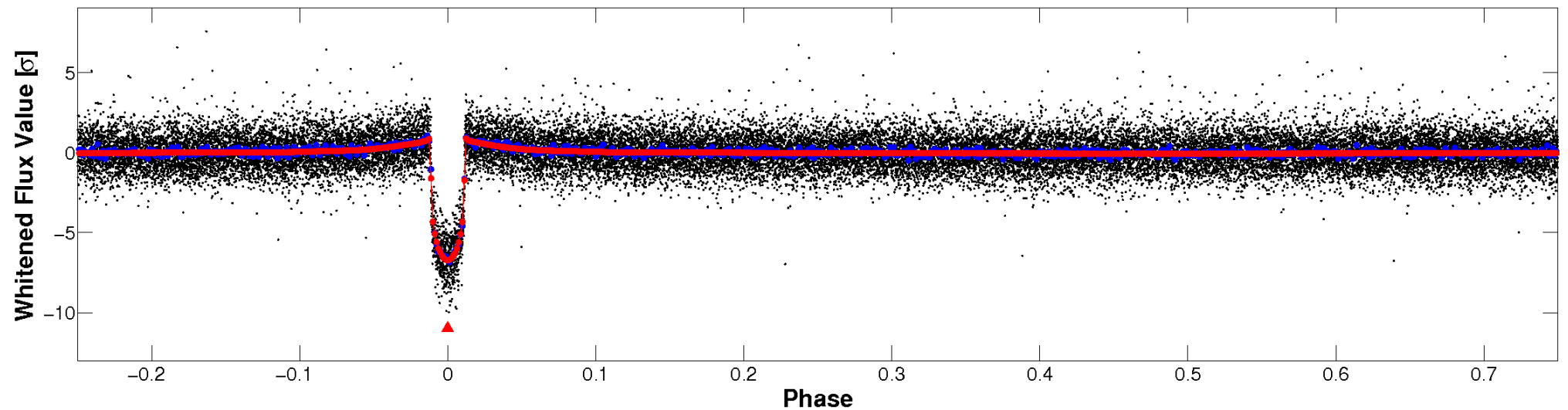


Non-Whitened Vs. Whitened Light Curve

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

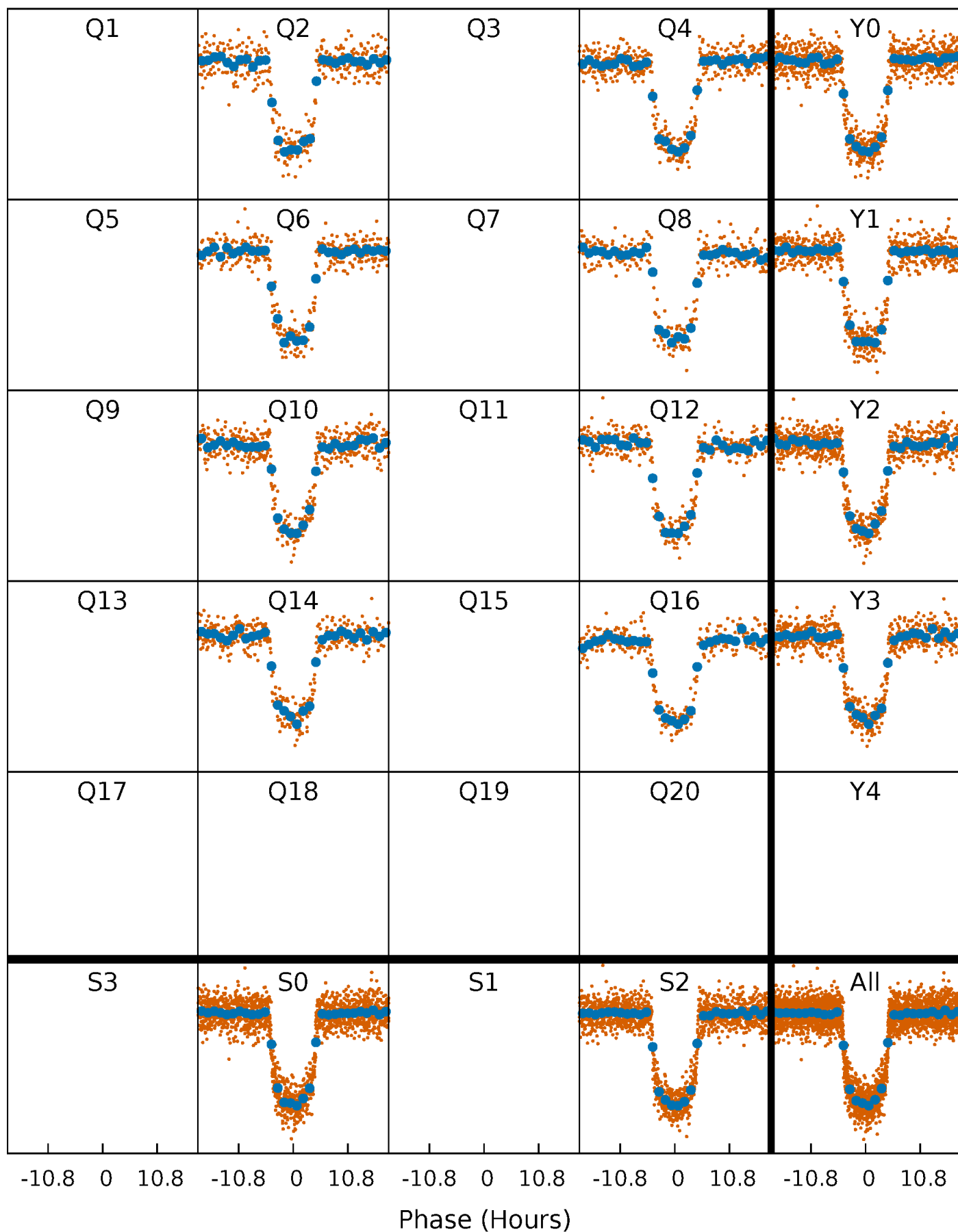


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



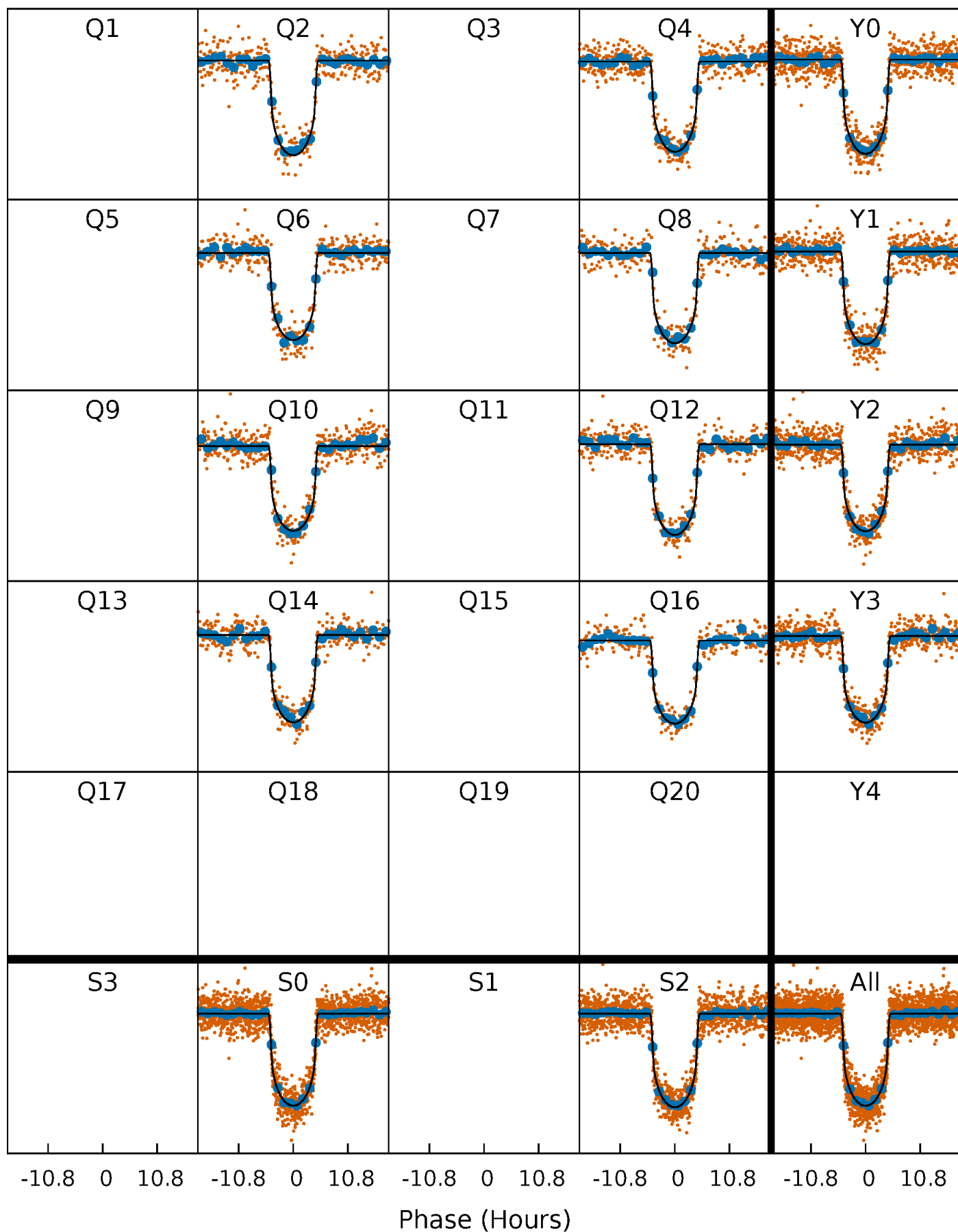
PDC Quarter-Phased Transit Curves

TCE 007277317-01 P= 16.338882 Days $T_0=145.239324$ (BKJD)



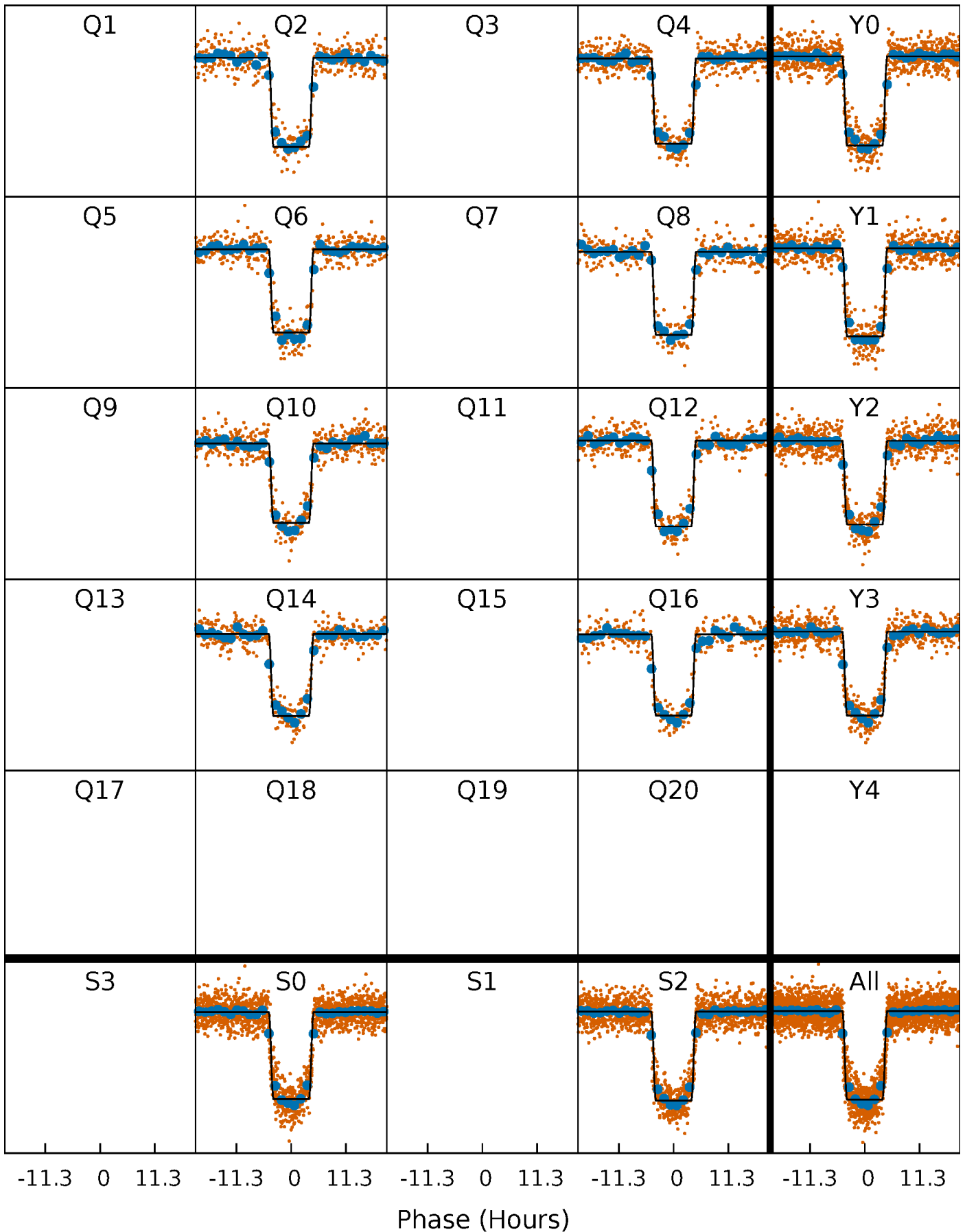
DV Quarter-Phased Transit Curves

TCE 007277317-01 P= 16.338882 Days $T_0=145.239324$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

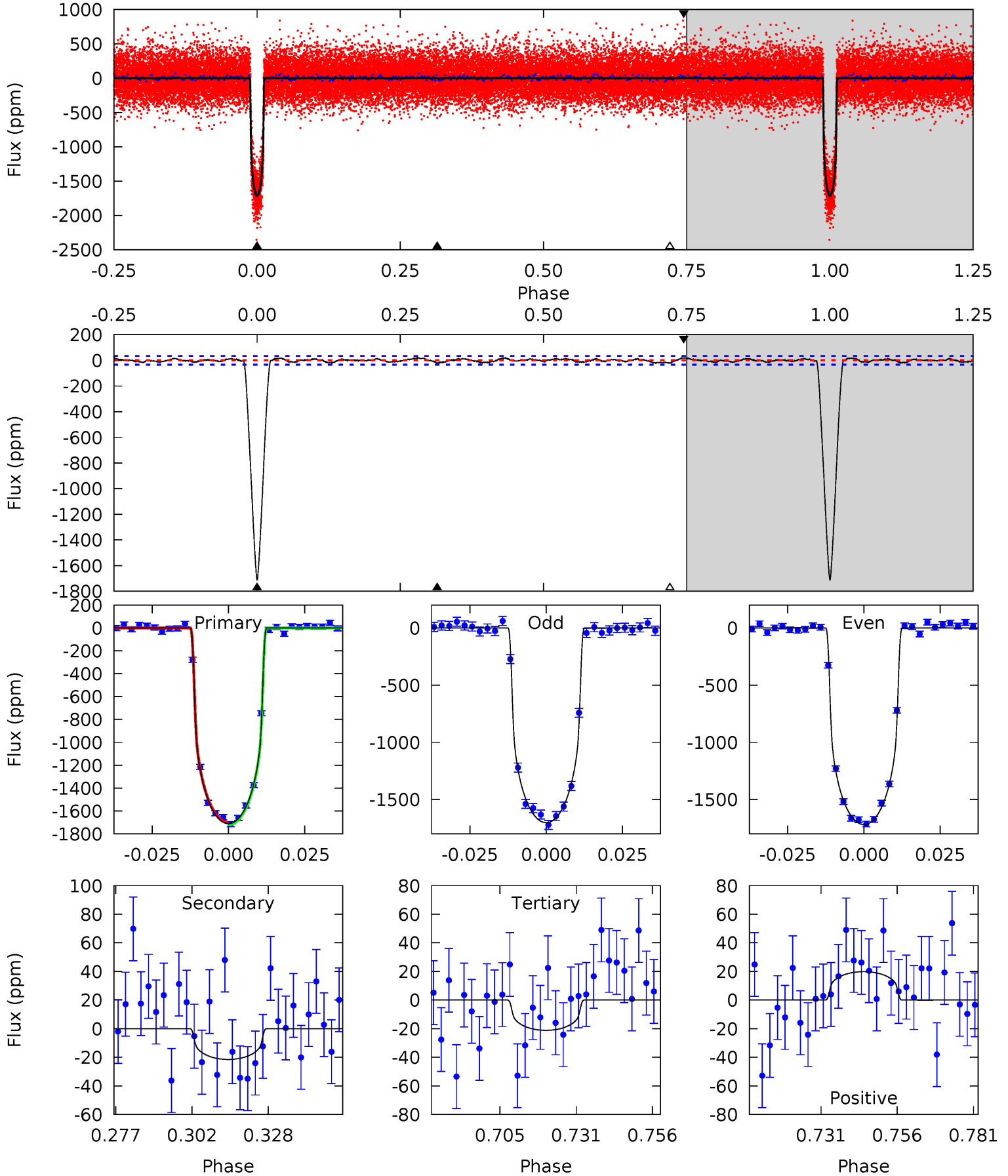
TCE 007277317-01 P= 16.339035 Days $T_0=145.233903$ (BKJD)



DV Model-Shift Uniqueness Test

007277317-01, P = 16.338882 Days, E = 145.239324 Days

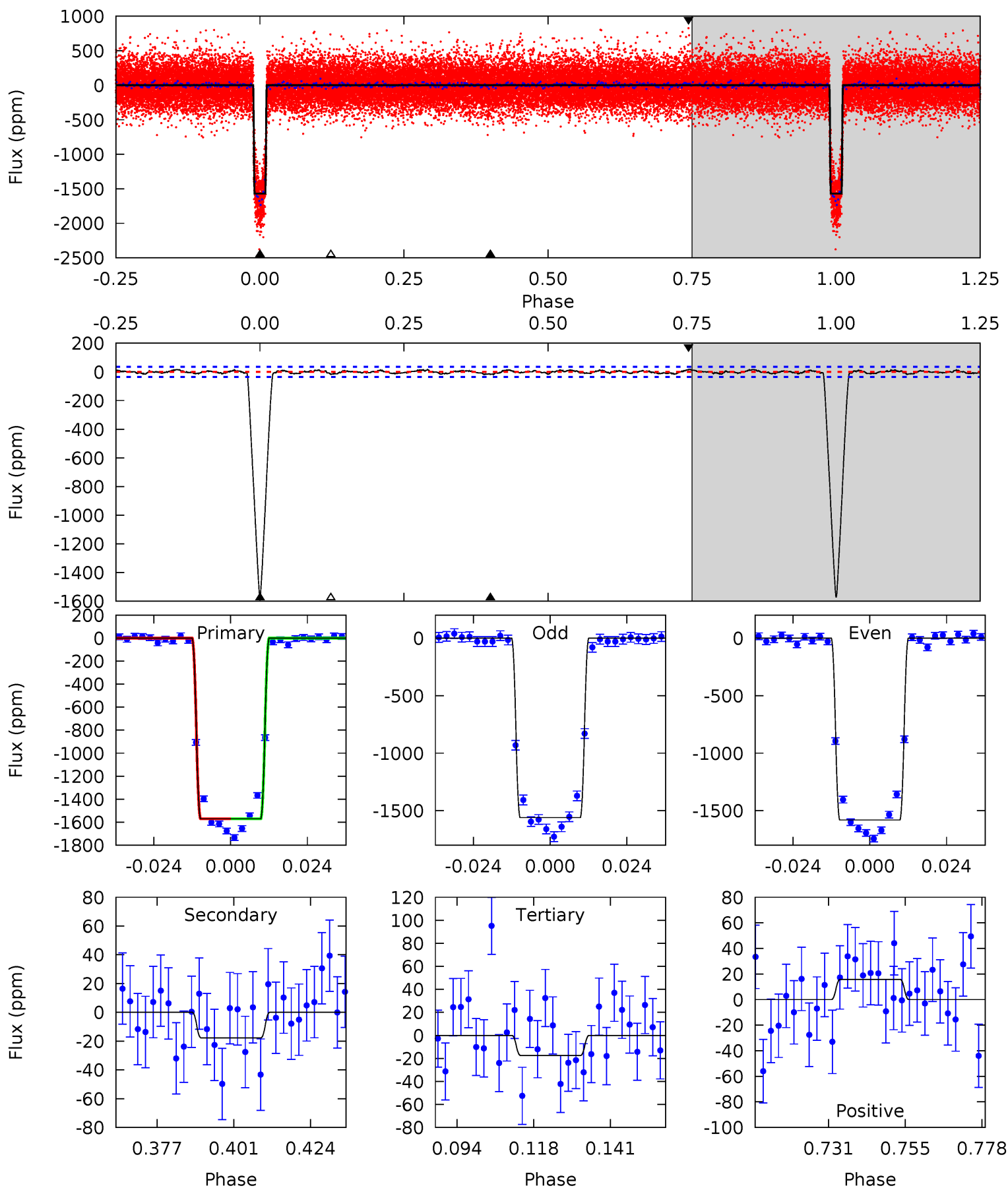
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
240.2	3.02	2.98	2.79	4.85	2.24	1.29	237.3	237.4	0.05	0.23	1.14	1.00	0.01	1.32



Alt Model-Shift Uniqueness Test

007277317-01, P = 16.339035 Days, E = 145.233903 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
217.0	2.44	2.41	2.18	4.86	2.26	1.02	214.6	214.8	0.03	0.26	1.40	1.00	0.01	0.08



Stellar Parameters For KIC 007277317

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4877^{+63}_{-53}	$3.645^{+0.060}_{-0.066}$	$0.160^{+0.100}_{-0.100}$	$2.595^{+0.273}_{-0.198}$	$1.085^{+0.130}_{-0.095}$	$0.087^{+0.020}_{-0.020}$
	+1%/-1%	+2%/-2%	+62%/-62%	+11%/-8%	+12%/-9%	+23%/-23%
Source	SPE8	AST8	SPE8	DSEP		

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

Secondary Eclipse Parameters for KIC 007277317-01 / KOI 0674.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-22 ± 7	$10.80^{+0.78}_{-0.71}$	1348^{+33}_{-35}	2448^{+118}_{-153}	$1.653^{+0.663}_{-0.575}$
Alt.	-18 ± 7	$11.32^{+0.86}_{-0.71}$	1347^{+35}_{-35}	2345^{+124}_{-192}	$1.242^{+0.533}_{-0.503}$

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 $A_{obs} \gg 1.0$

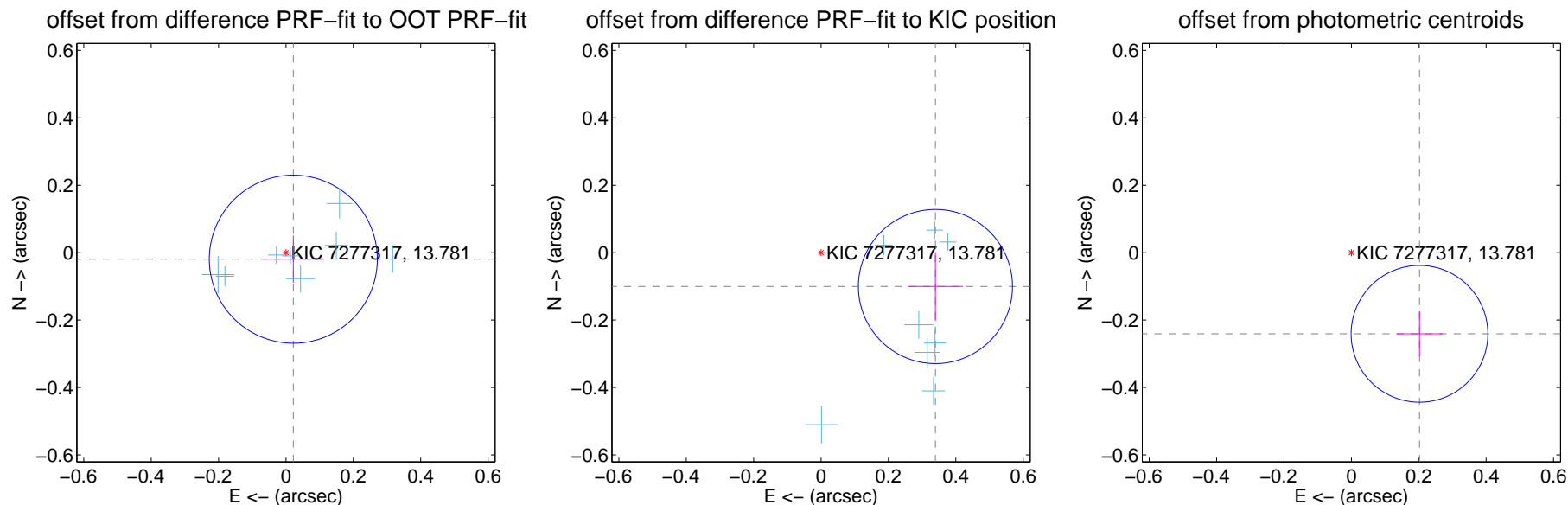
DV Centroid Data

Supplemental centroid analysis for 007277317-01. Kepler magnitude: 13.78. Transit SNR 151.51

There are 8 quarters with good PRF difference image offsets

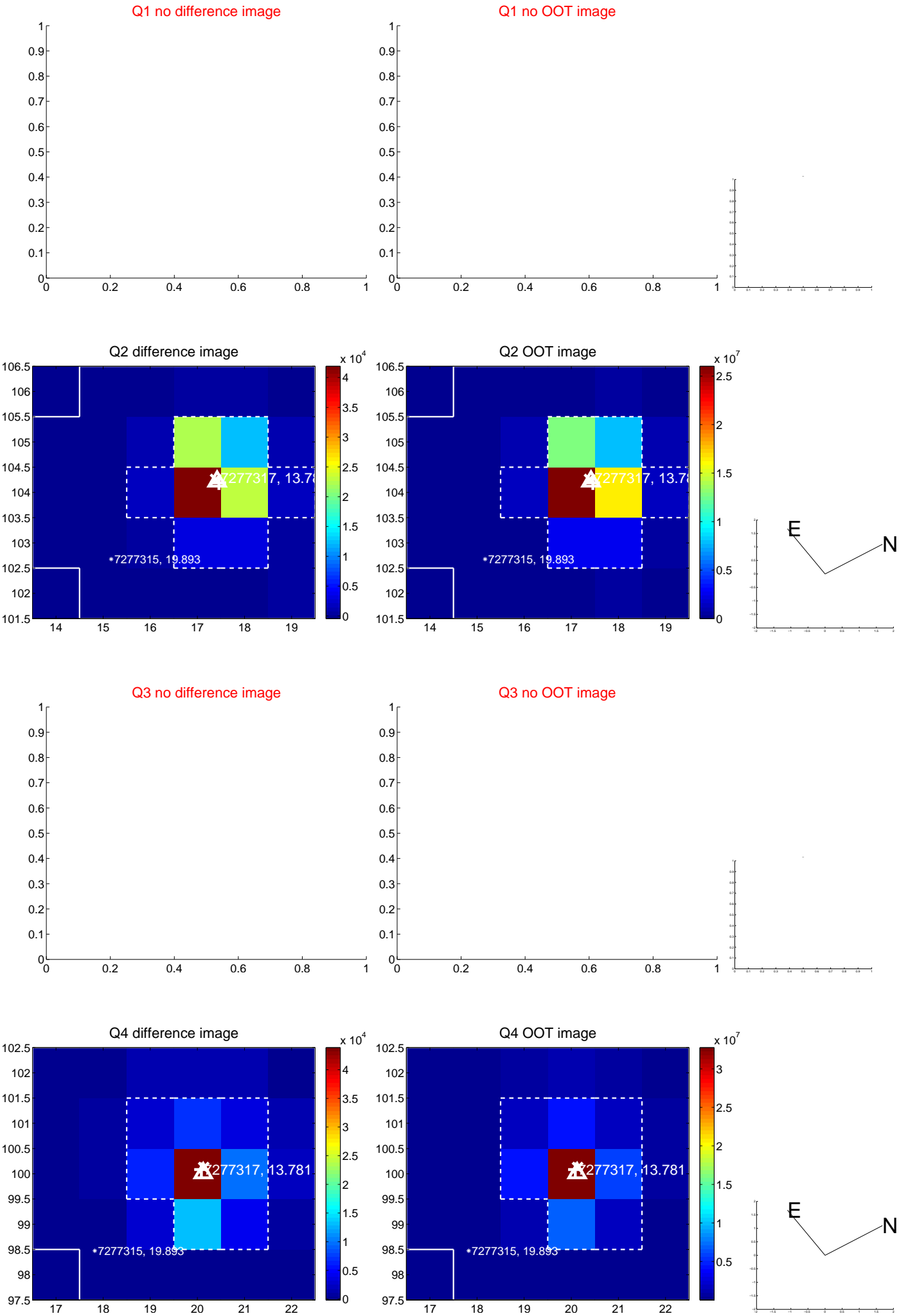
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.029 ± 0.083	0.35	-0.022 ± 0.092	-0.019 ± 0.070
PRF-fit source offset from KIC position	0.354 ± 0.076	4.64	-0.340 ± 0.082	-0.100 ± 0.102
photometric centroid source offset	0.31 ± 0.07	4.65	-0.20 ± 0.07	-0.24 ± 0.07

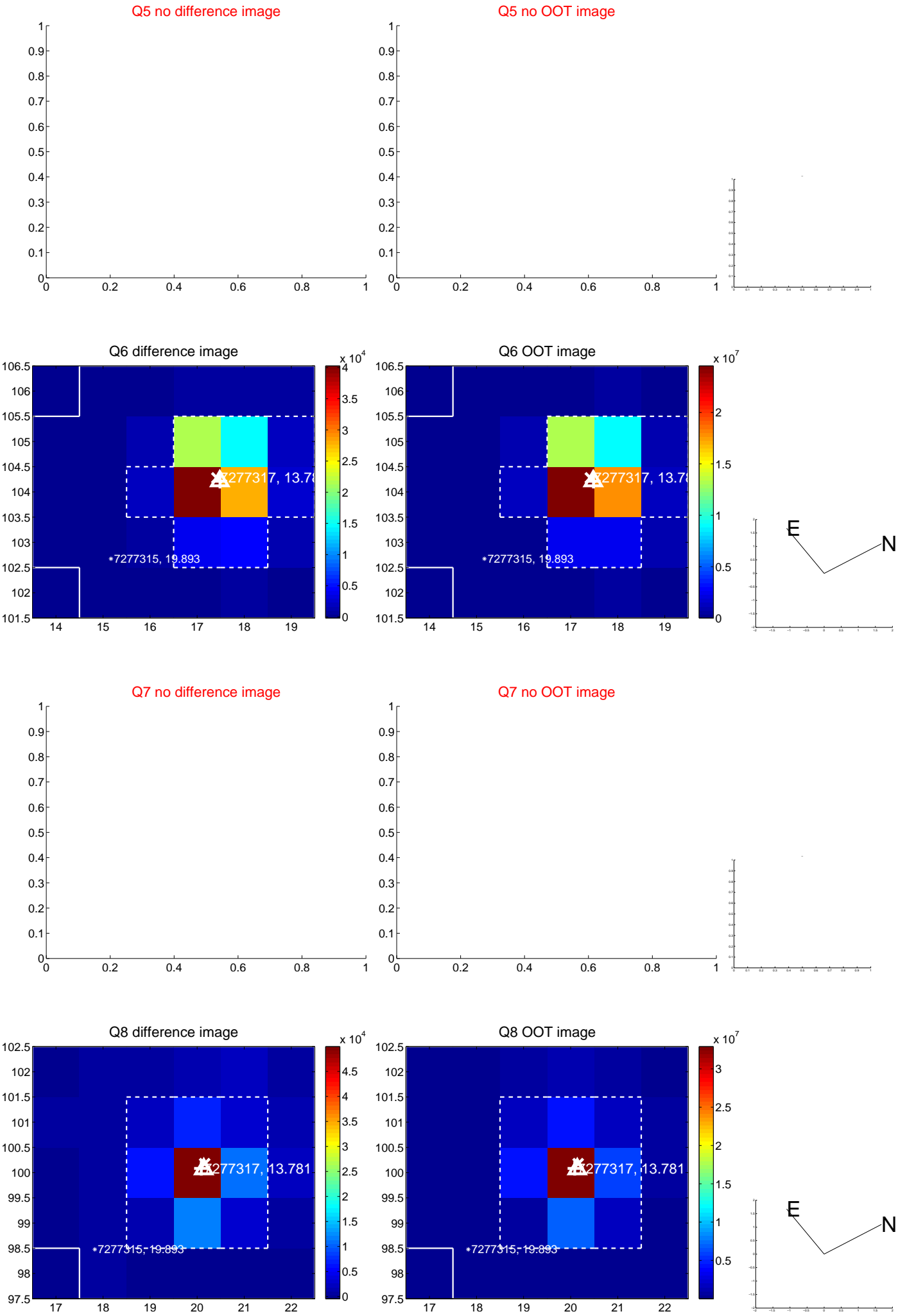


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

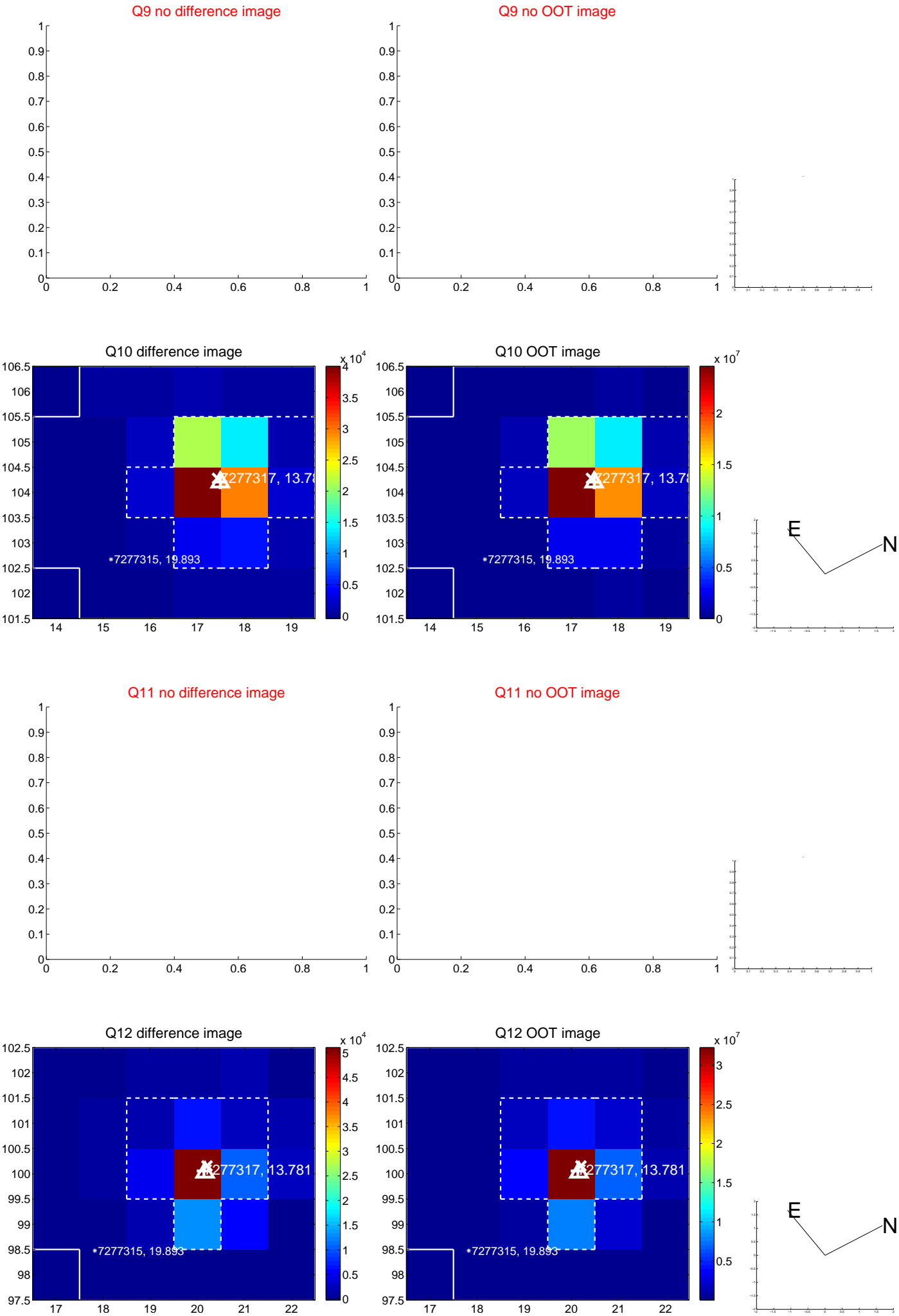
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



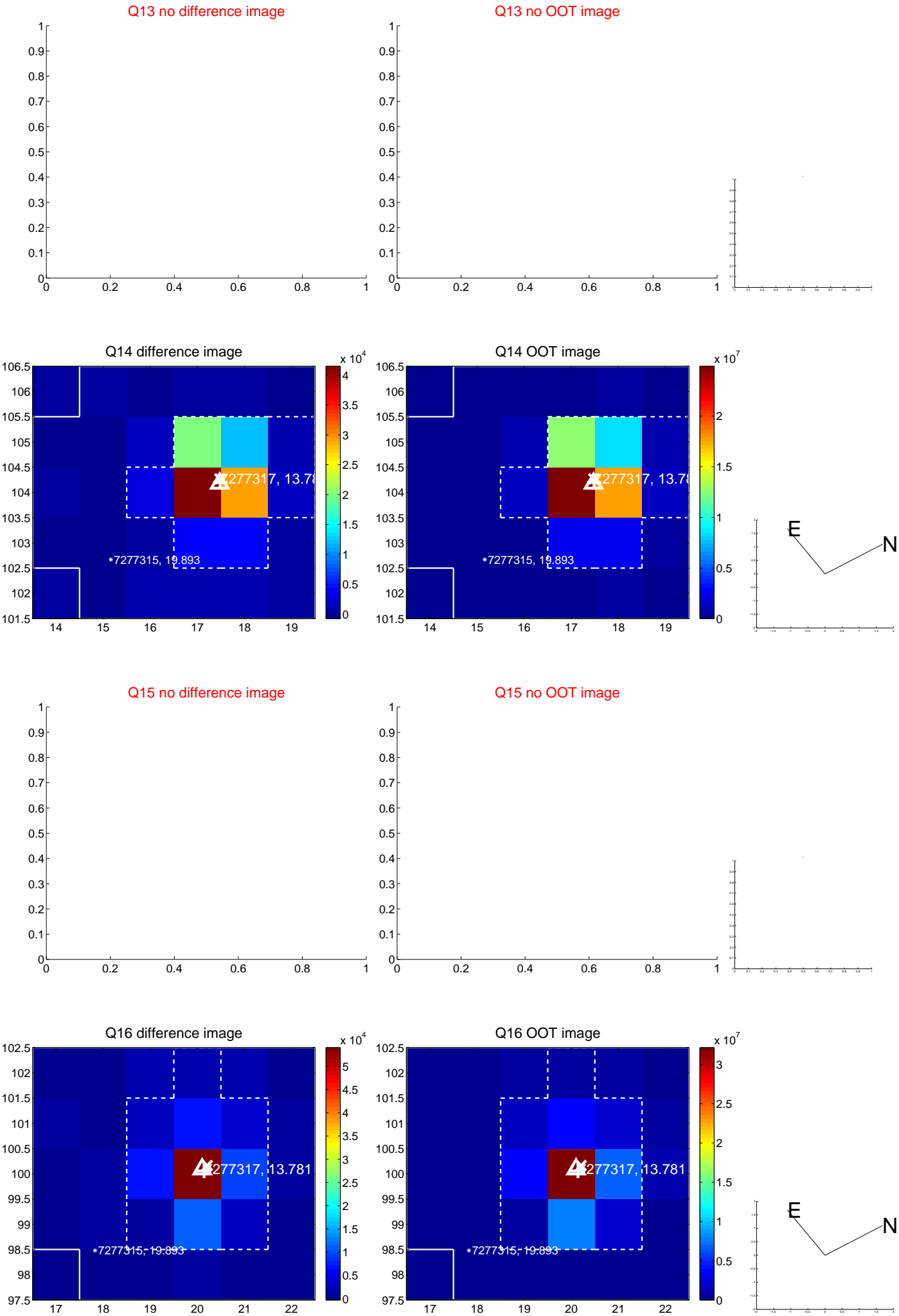
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



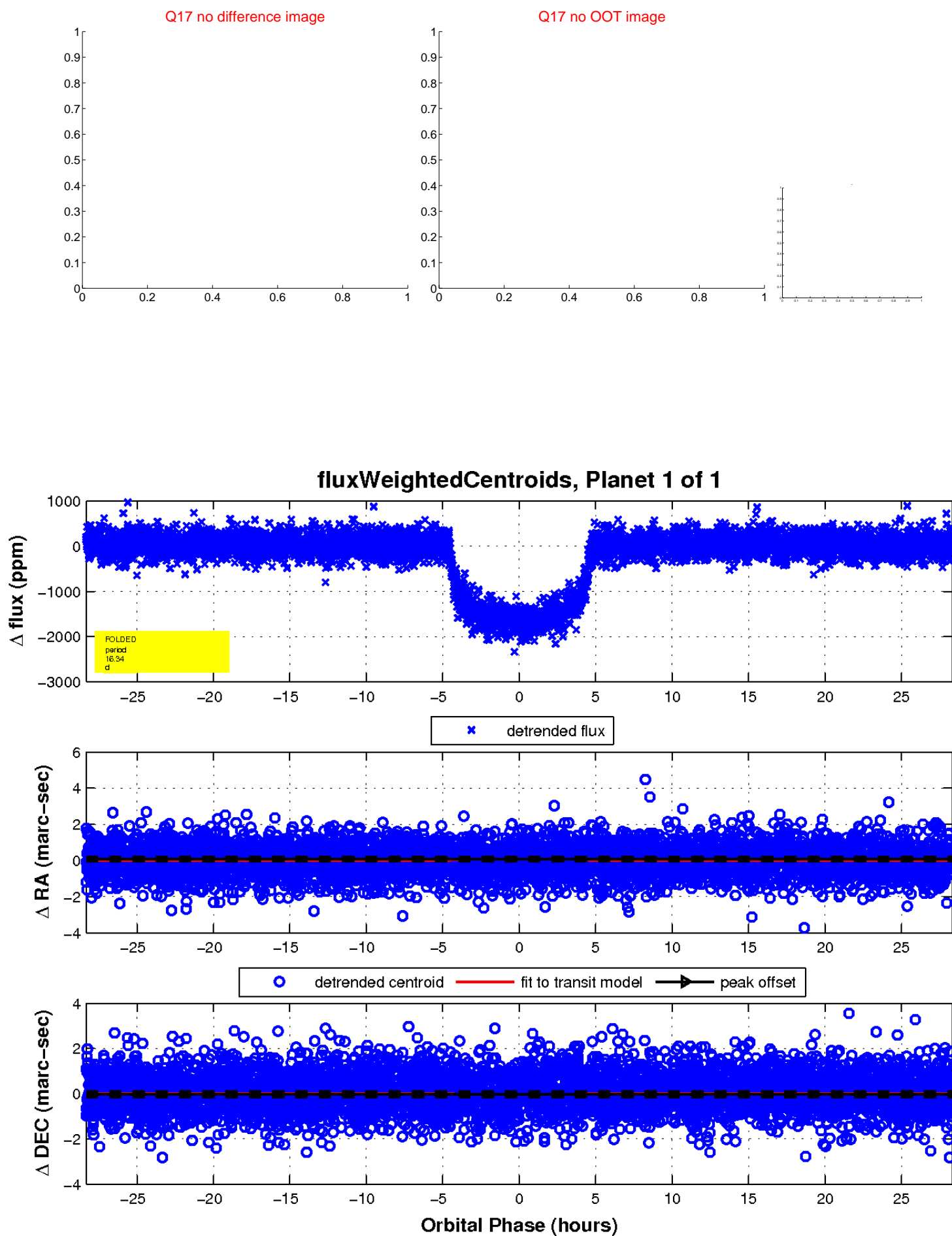
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

