

KIC 011757157

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})
011757157-01	OBS	No	398.475606	361.218555	1297.5	4.209	8.5	7.8	16.82	5030	79.67	64.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011757157-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

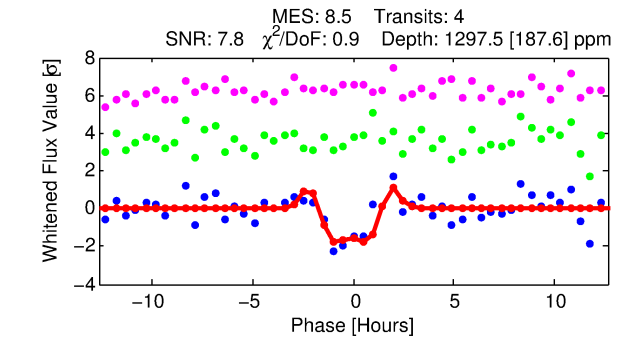
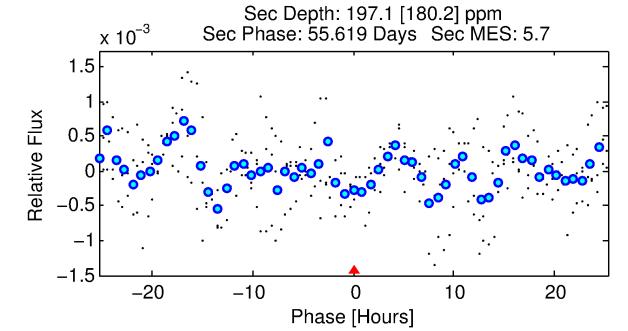
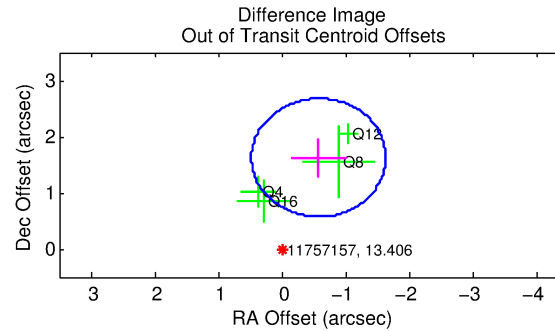
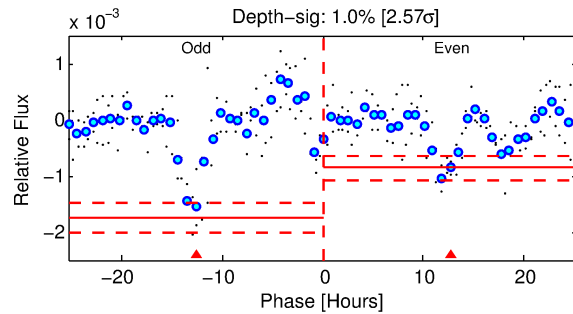
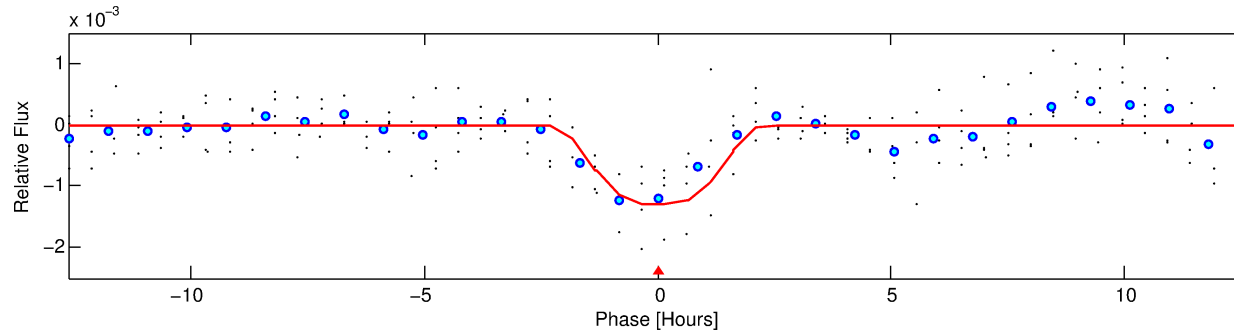
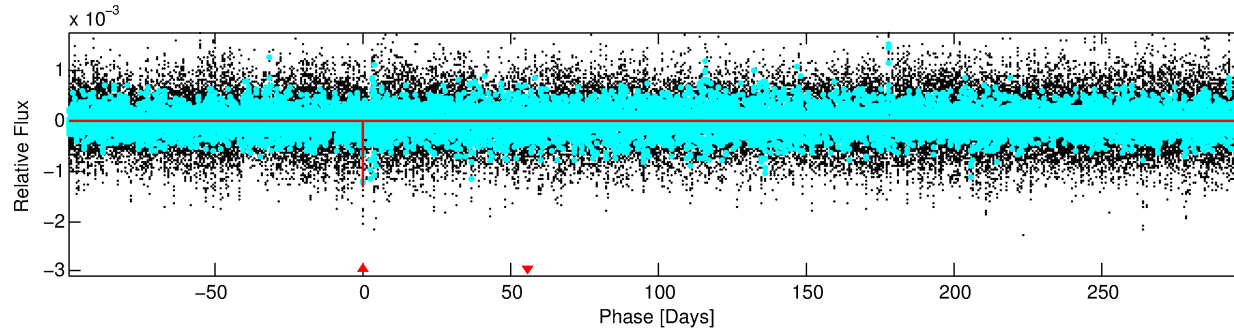
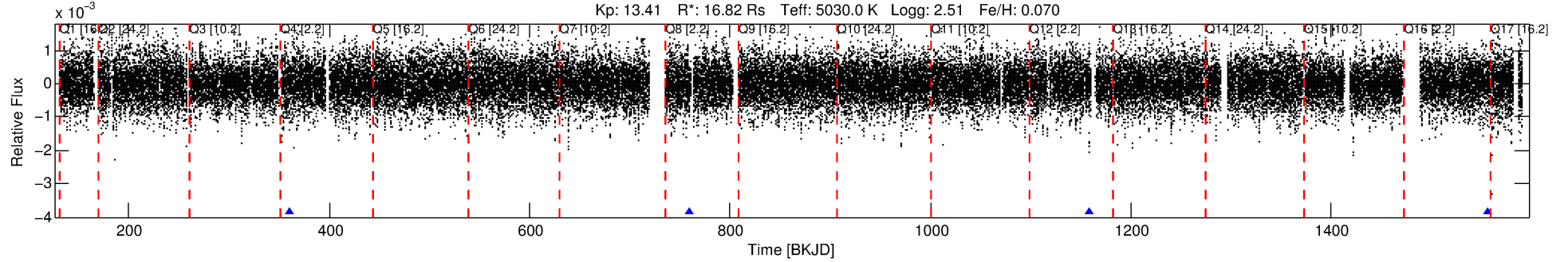
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011757157-01

No Significant Match Found

DV One-Page Summary

KIC: 11757157 Candidate: 1 of 1 Period: 398.476 d



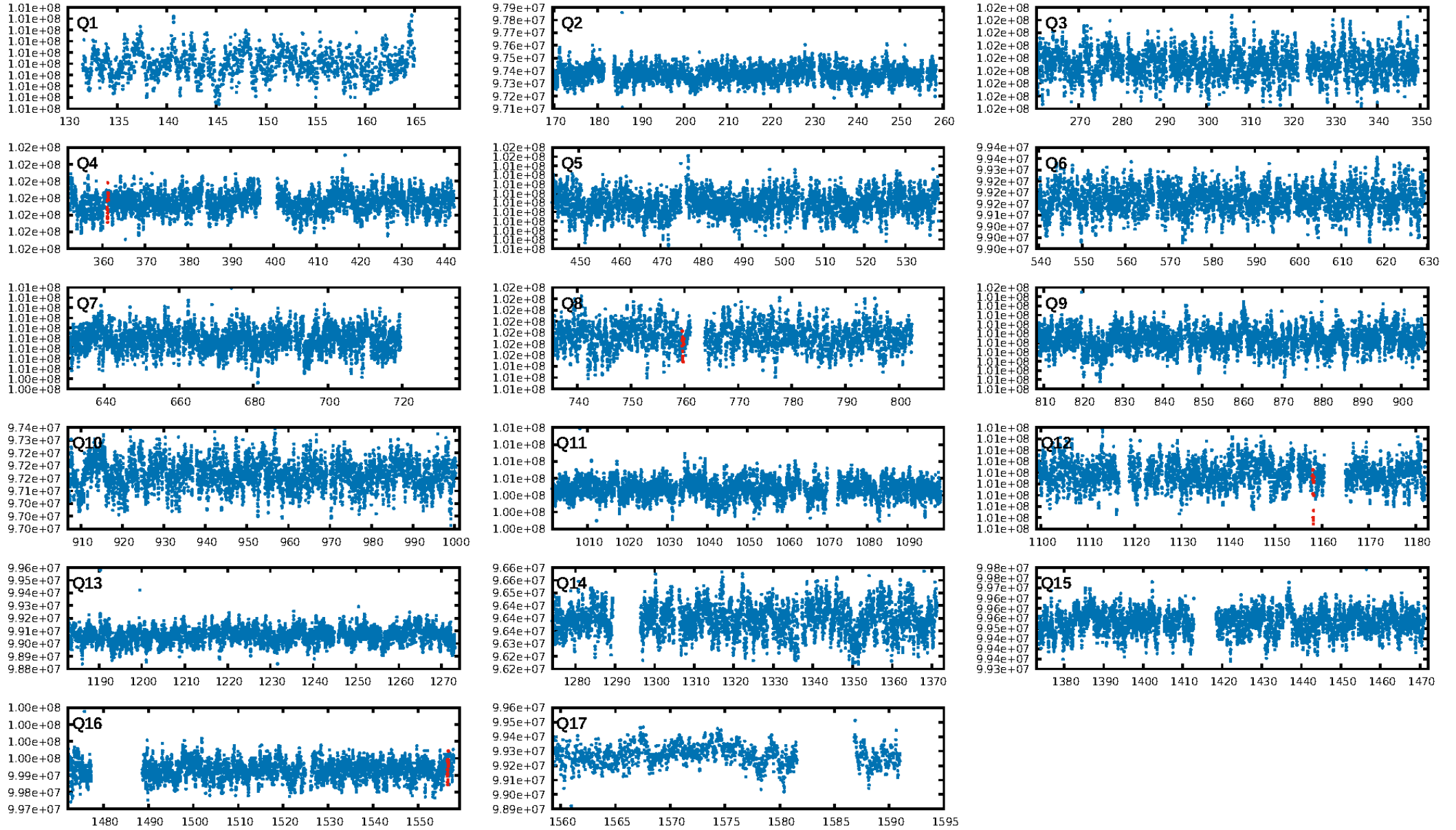
DV Fit Results:

Period = 398.47561 [0.00352] d
Epoch = 361.2186 [0.0065] BKJD
Rp/R* = 0.0434 [0.0037]
a/R* = 315.72 [31.46]
b = 0.95 [0.01]
Seff = 64.95 [20.14]
Teq = 724 [56] K
Rp = 79.67 [32.07] Re
a = 1.5810 [0.4166] AU
Ag = 42.70 [41.31] [1.01 σ]
Teffp = 2861 [674] K [3.16 σ]

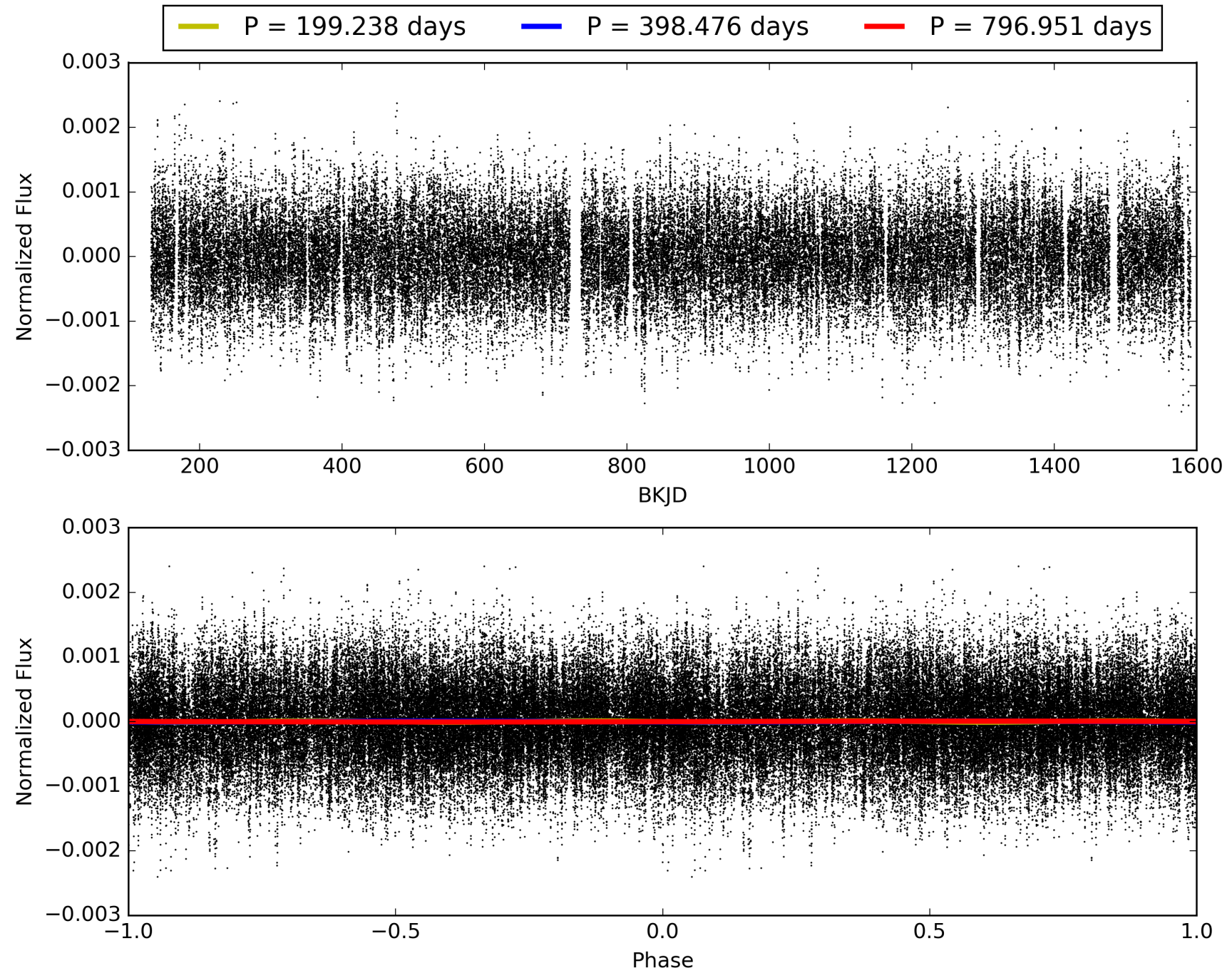
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.1%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 3.49e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.825
Centroid-sig: 39.9%
Centroid-so: 1.132 arcsec [2.62 σ]
OotOffset-rm: 1.724 arcsec [4.91 σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-rm: 0.789 arcsec [1.76 σ]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 011757157-01, PDC Light Curves

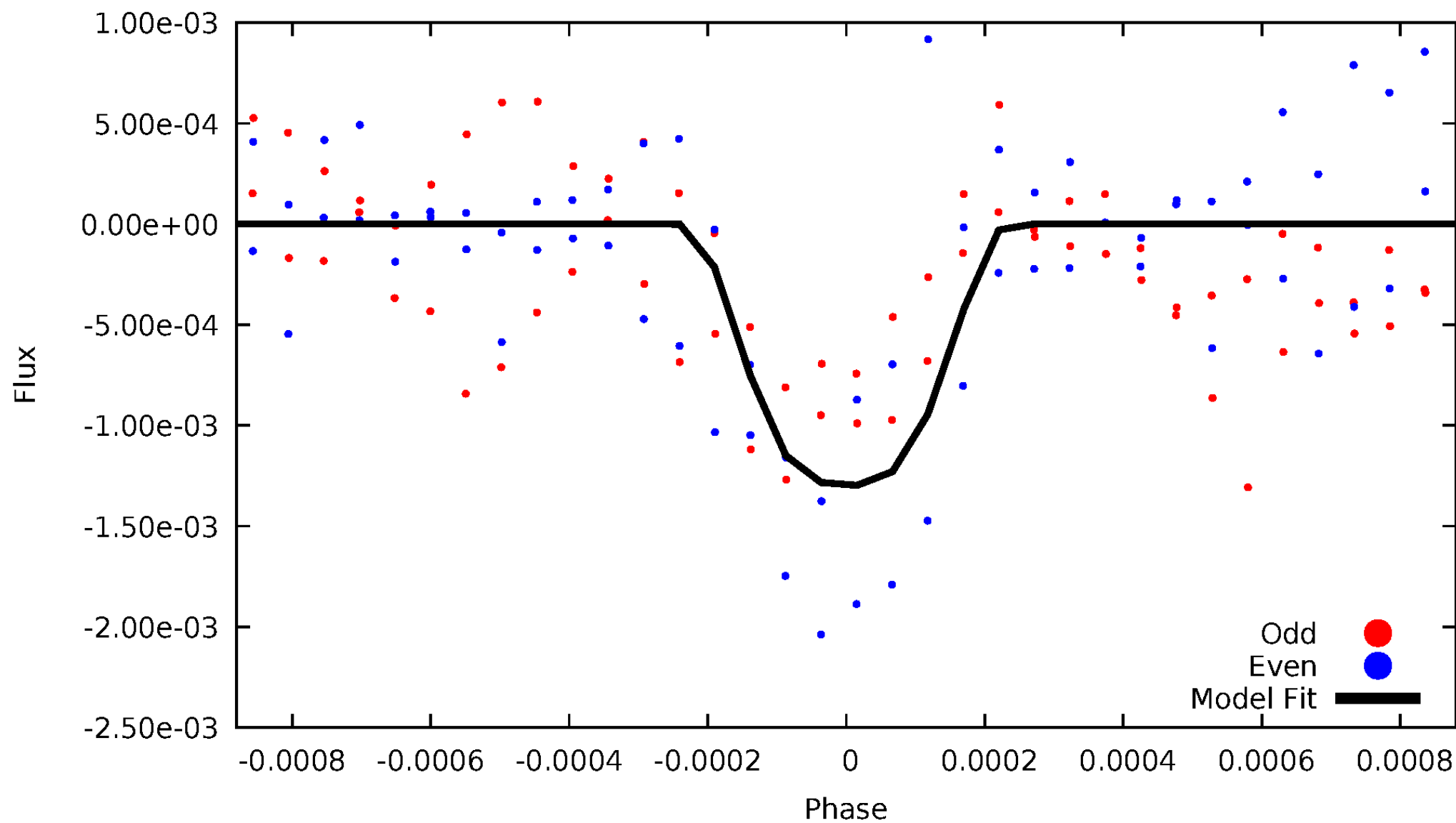


TCE 011757157-01



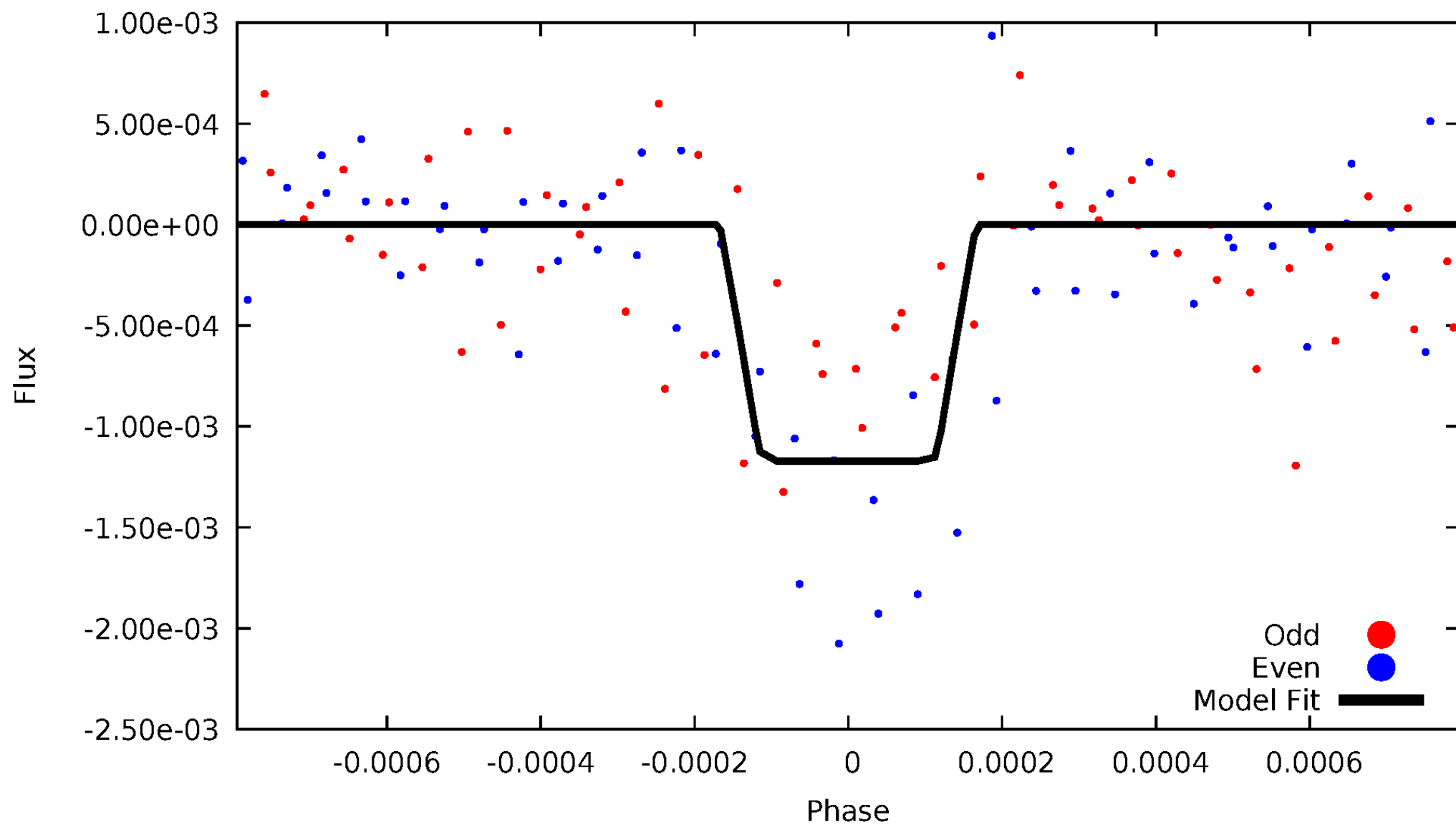
DV Odd/Even

TCE 011757157-01



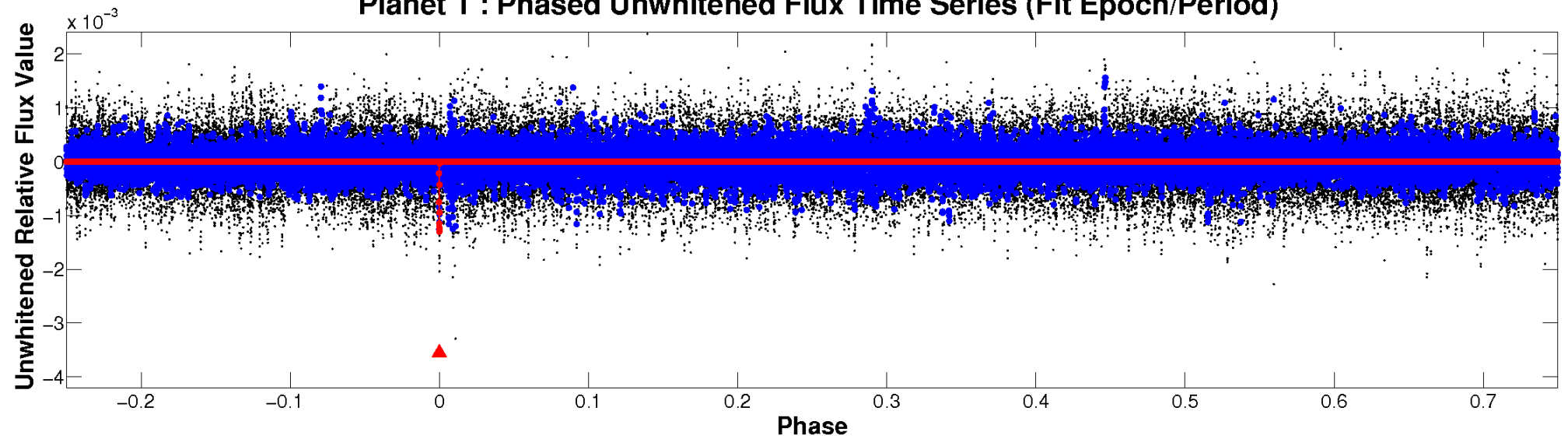
ALT Odd/Even

TCE 011757157-01

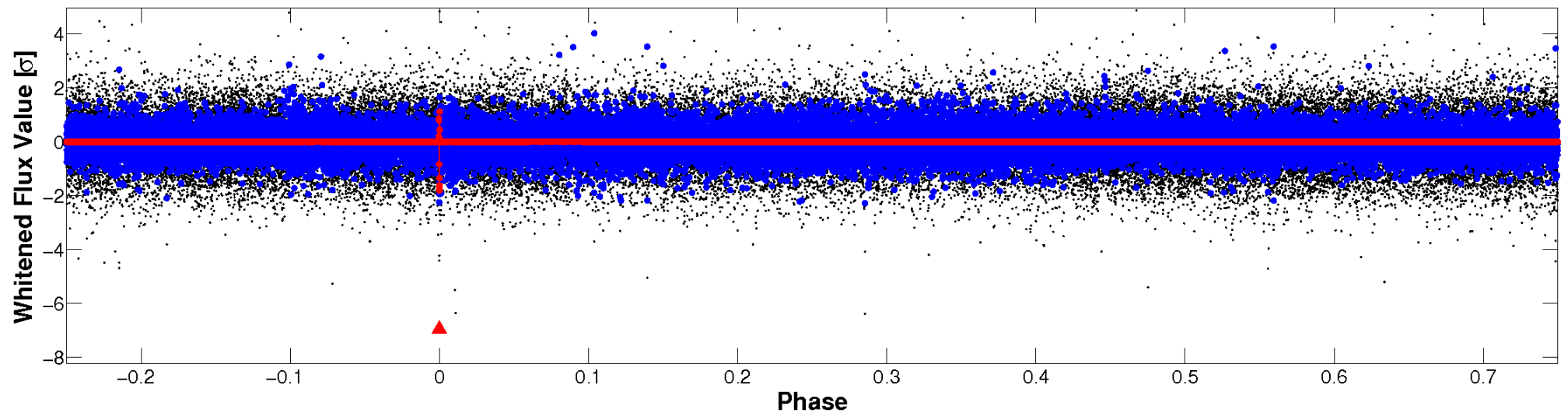


Non-Whitened Vs. Whitened Light Curve

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

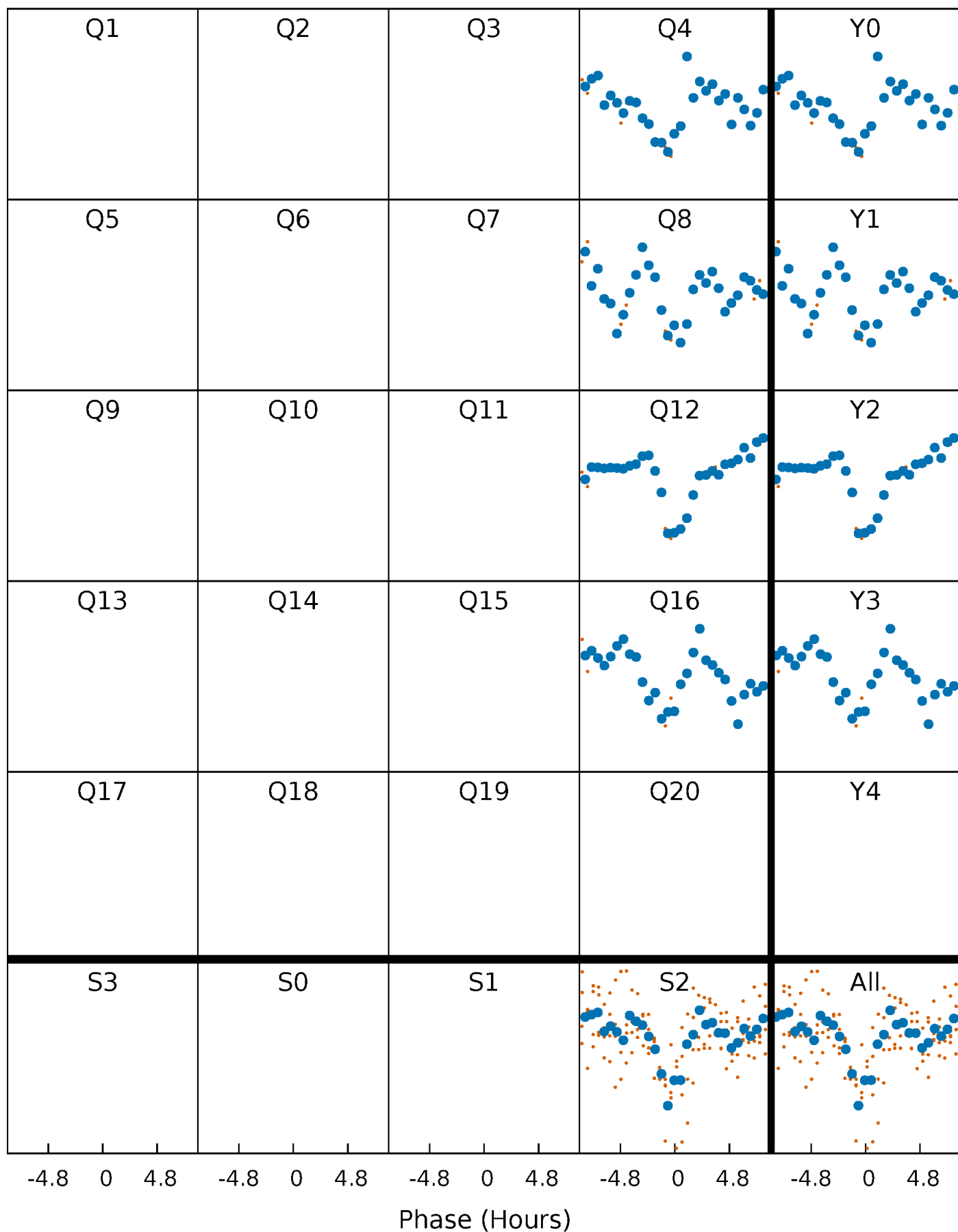


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



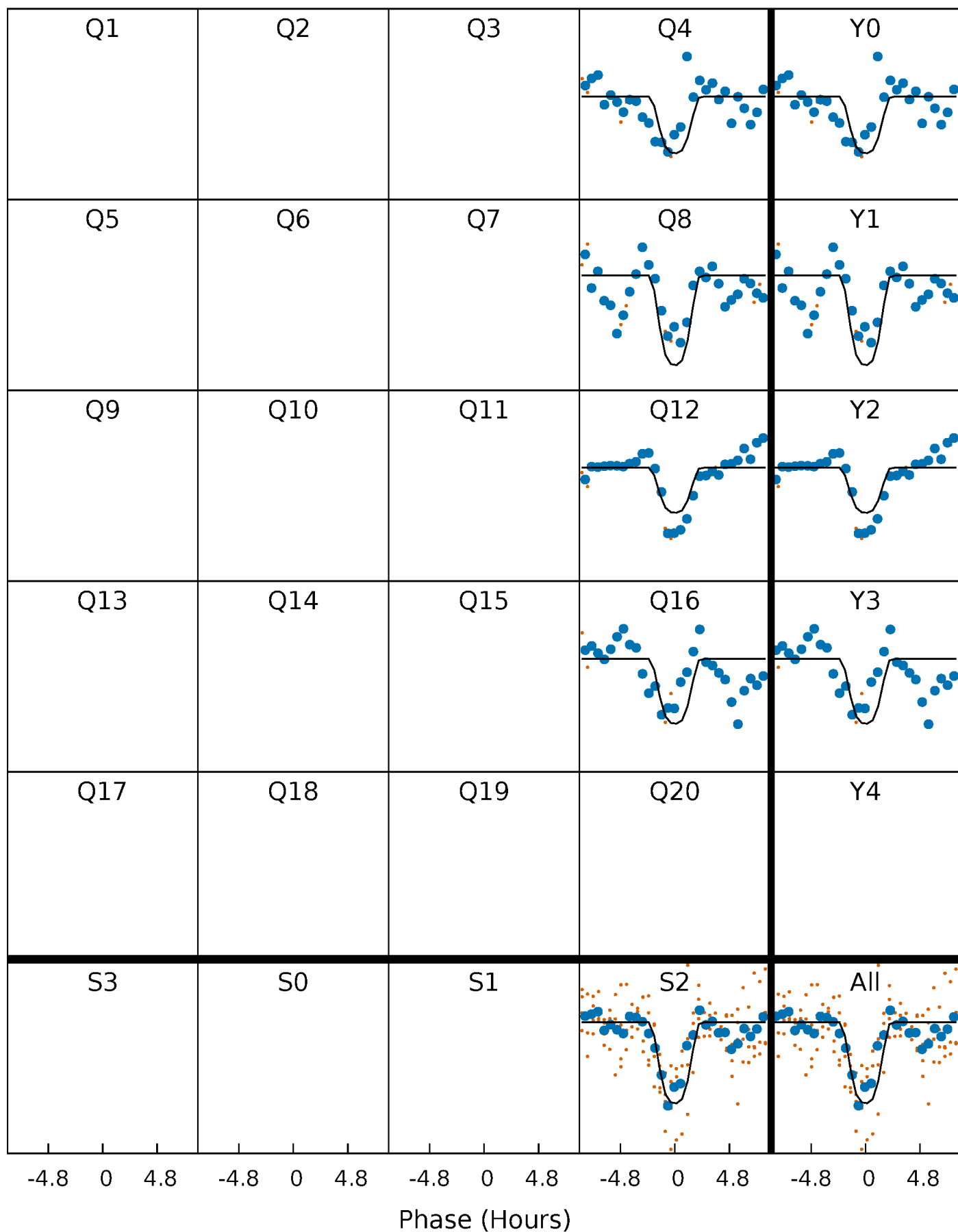
PDC Quarter-Phased Transit Curves

TCE 011757157-01 P=398.475607 Days $T_0=361.218555$ (BKJD)



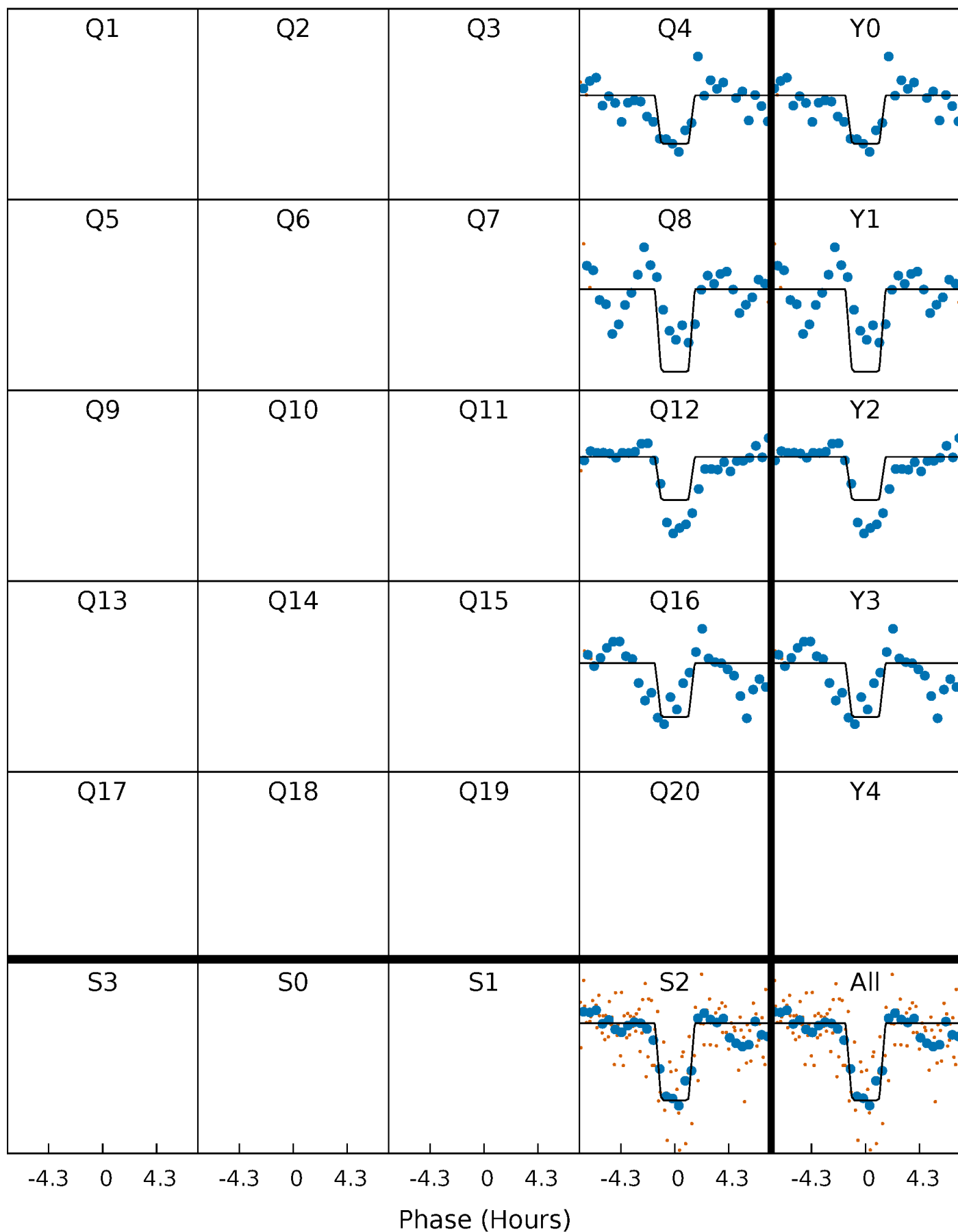
DV Quarter-Phased Transit Curves

TCE 011757157-01 P=398.475607 Days $T_0=361.218555$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

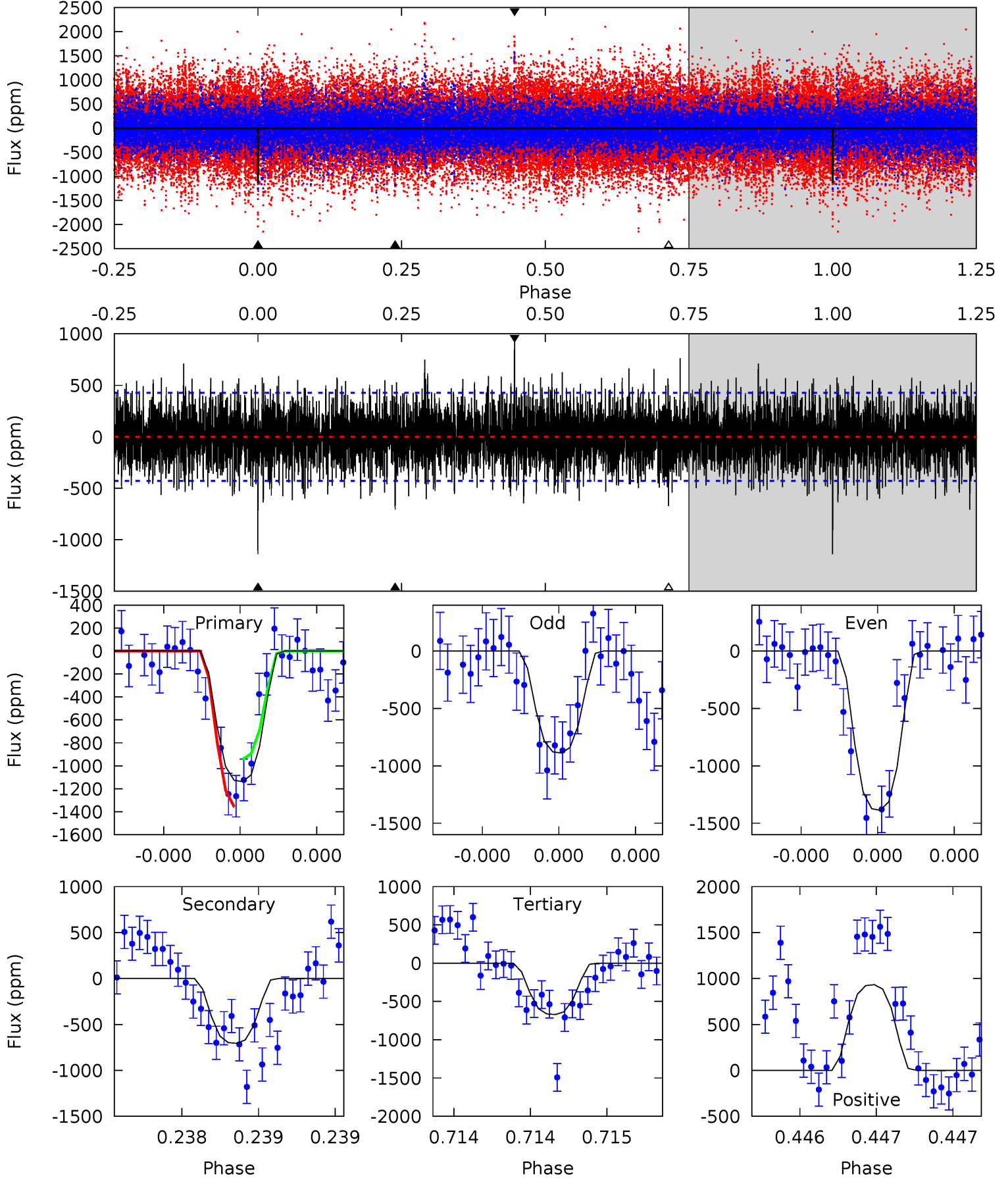
TCE 011757157-01 P=398.484445 Days $T_0=361.191210$ (BKJD)



DV Model-Shift Uniqueness Test

011757157-01, P = 398.475607 Days, E = 361.218555 Days

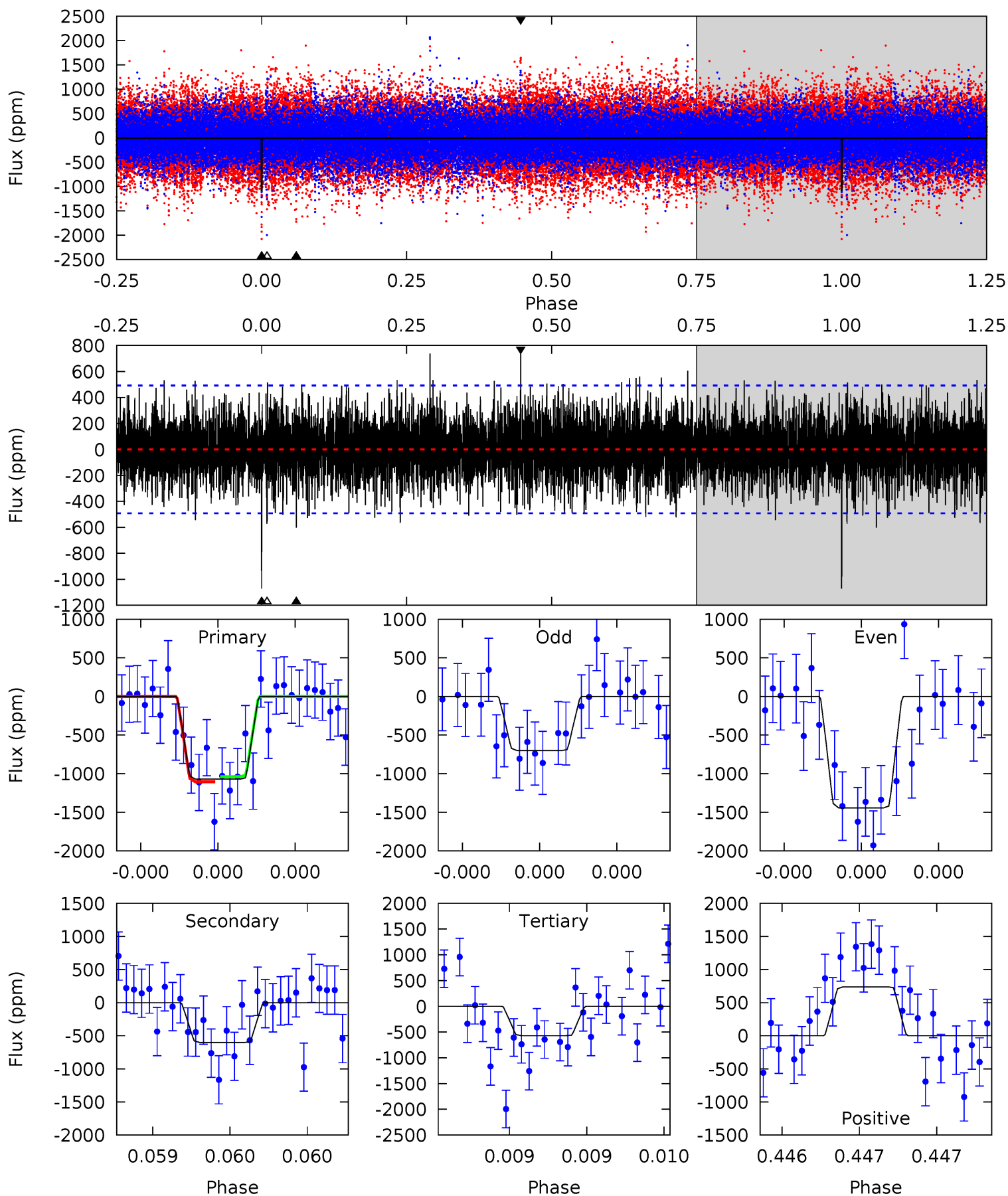
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	9.23	8.77	12.2	5.59	3.50	2.62	6.12	2.69	0.46	-2.97	3.26	1.28	0.45	2.71



Alt Model-Shift Uniqueness Test

011757157-01, P = 398.484445 Days, E = 361.191210 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	6.91	6.56	8.49	5.65	3.60	1.95	5.75	3.82	0.35	-1.58	4.27	1.08	0.41	0.38



Stellar Parameters For KIC 011757157

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5030^{+122}_{-198}	$2.507^{+0.033}_{-0.027}$	$0.070^{+0.050}_{-0.700}$	$16.825^{+0.697}_{-6.620}$	$3.315^{+0.105}_{-1.994}$	$0.001^{+0.001}_{-0.000}$
	+2%/-4%	+1%/-1%	+71%/-1000%	+4%/-39%	+3%/-60%	+66%/-9%
Source	PHO1	AST9	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 011757157-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-706 ± 76	$80.41^{+6.79}_{-8.66}$	1011^{+29}_{-42}	4127^{+183}_{-173}	153^{+34}_{-29}
Alt.	-602 ± 87	$63.24^{+7.42}_{-7.73}$	1013^{+31}_{-43}	4378^{+276}_{-250}	208^{+64}_{-49}

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 $A_{obs} \gg 1.0$

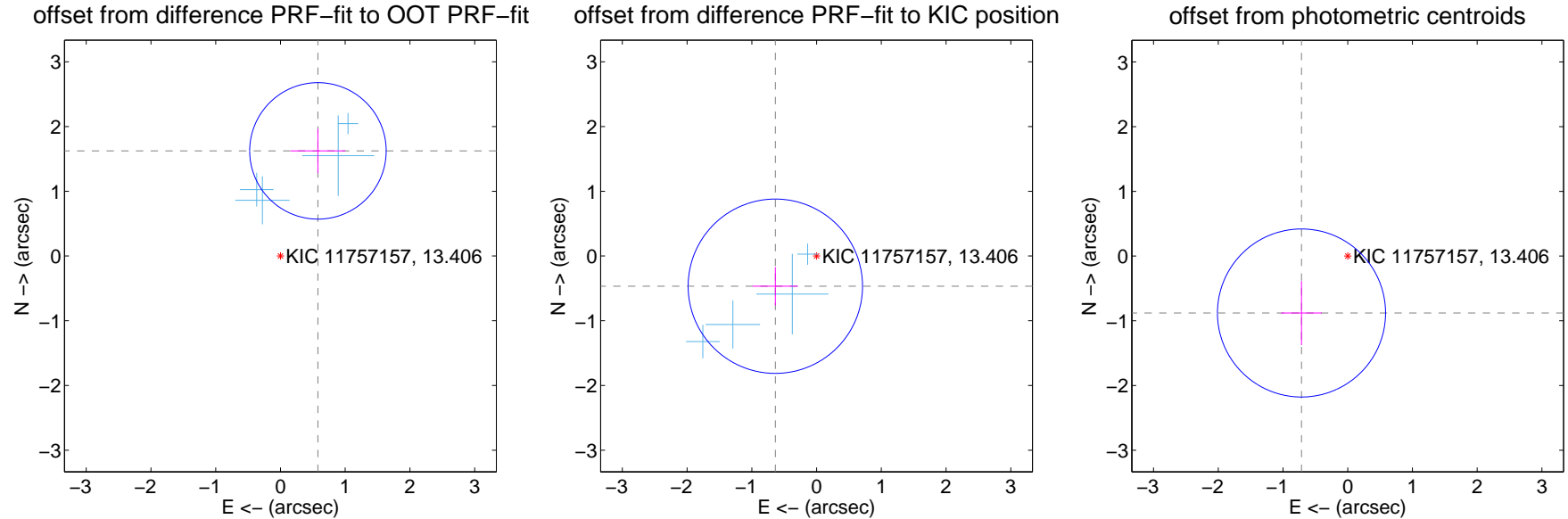
DV Centroid Data

Supplemental centroid analysis for 011757157-01. Kepler magnitude: 13.41. Transit SNR 7.85

There are 4 quarters with good PRF difference image offsets

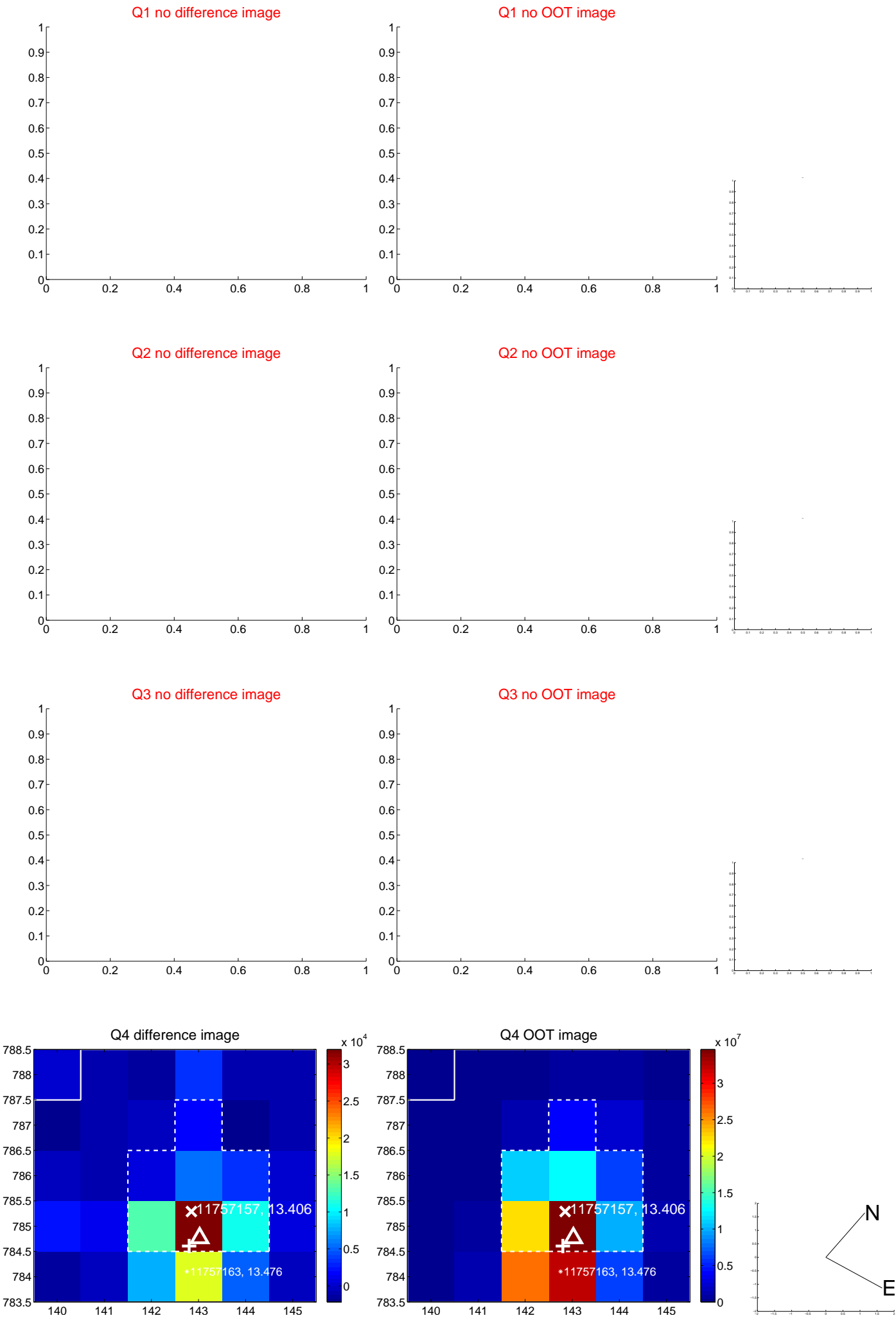
The OOT PRF centroid is offset from the target star catalog position by about 2.17 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.724 ± 0.351	4.91	-0.579 ± 0.422	1.624 ± 0.341
PRF-fit source offset from KIC position	0.789 ± 0.449	1.76	0.637 ± 0.350	-0.466 ± 0.295
photometric centroid source offset	1.13 ± 0.43	2.62	0.71 ± 0.31	-0.88 ± 0.50

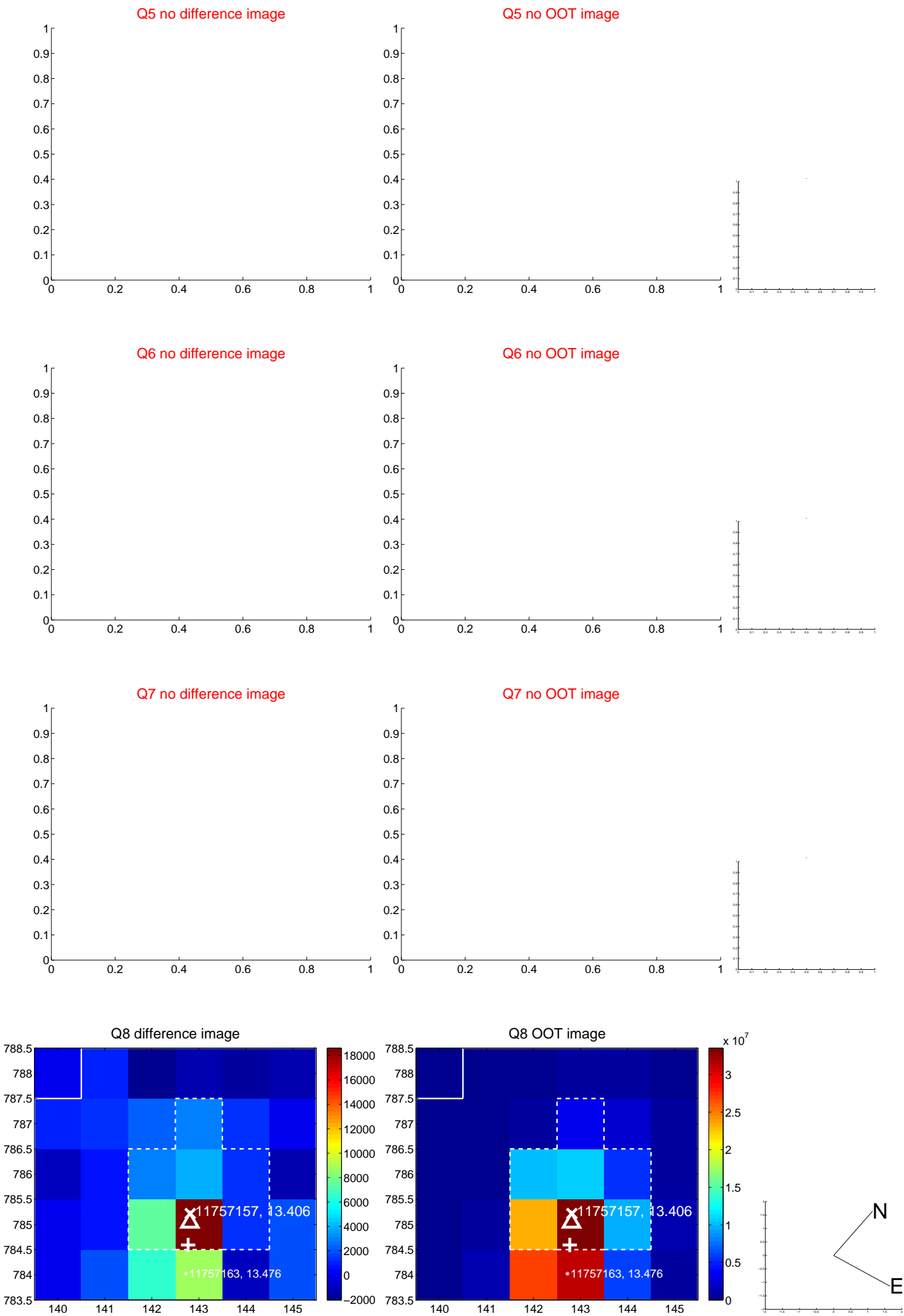


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

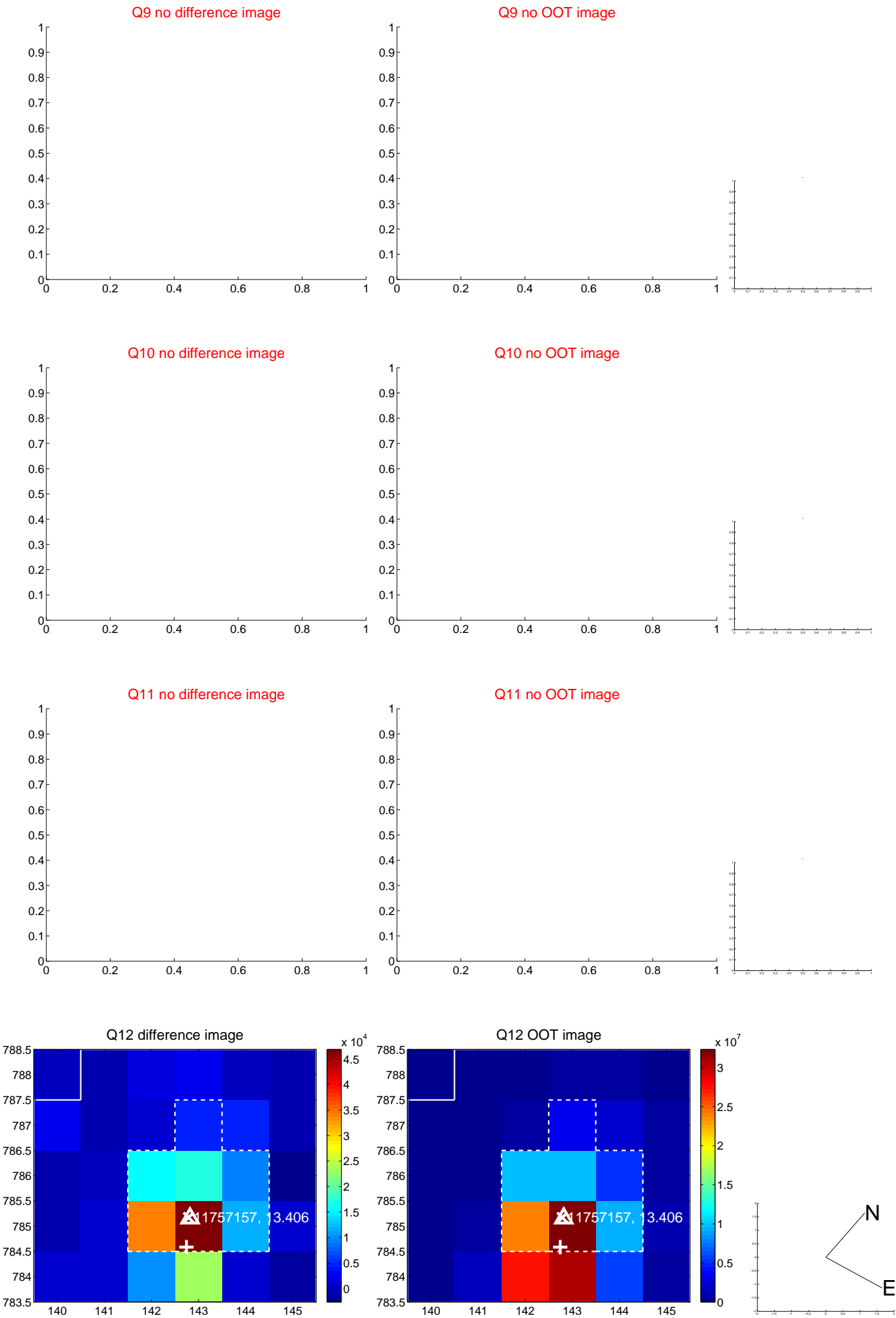
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



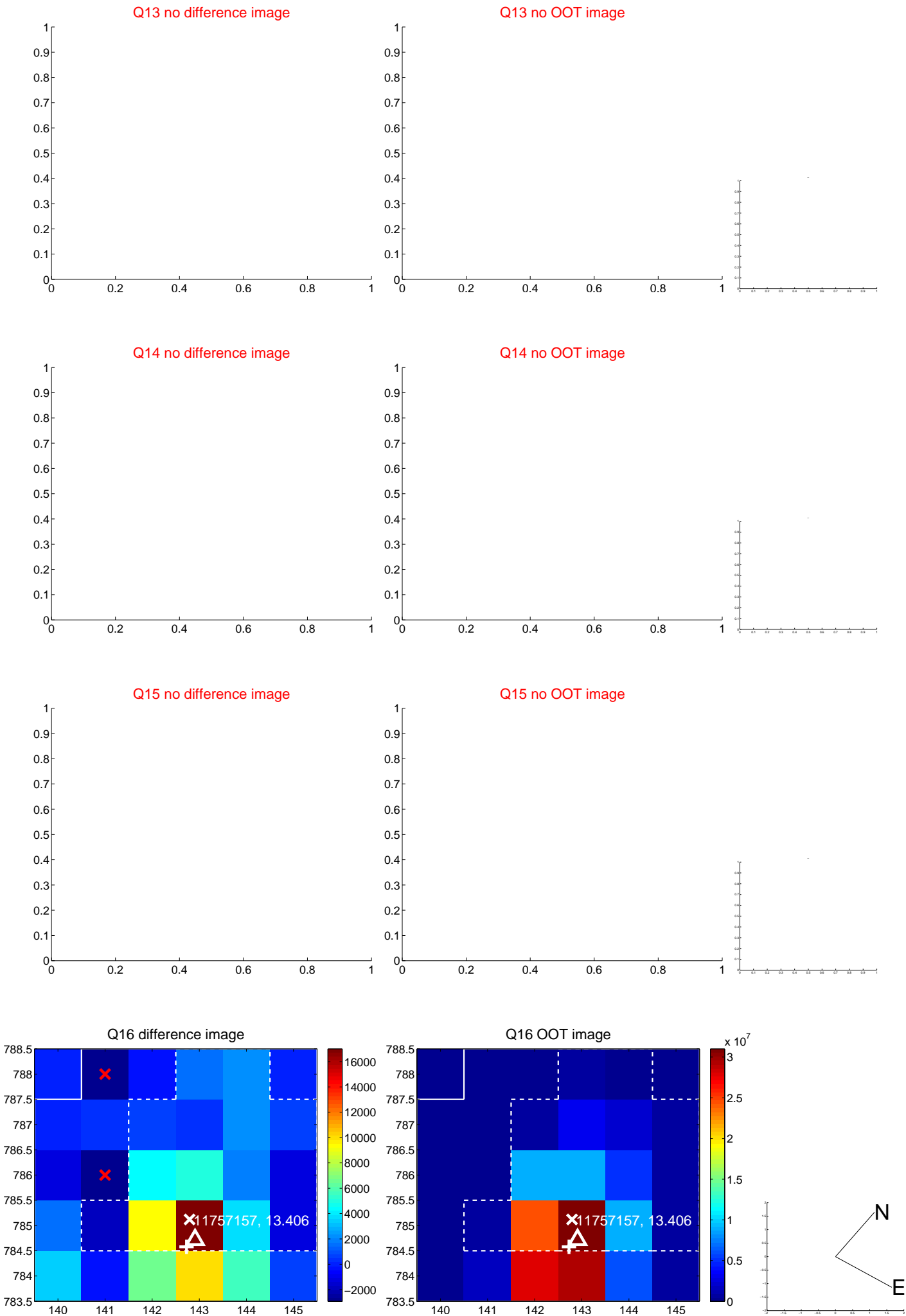
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



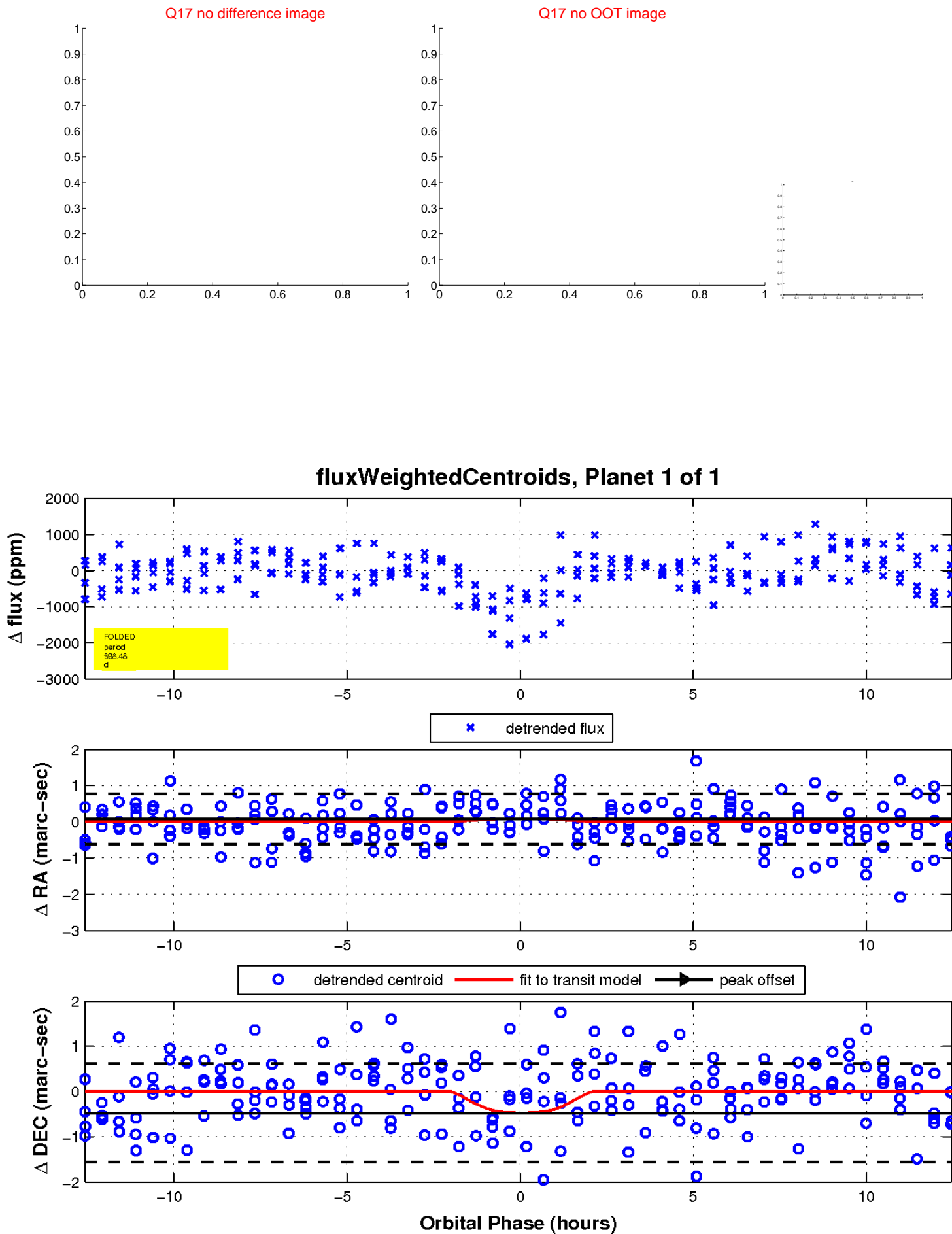
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

