

KIC 007730747

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})
007730747-01	OBS	0684.01	4.034904	131.910426	798.8	1.850	77.8	89.5	1.79	5548	7.26	1053.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007730747-01	OBS	PC	1.00	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.

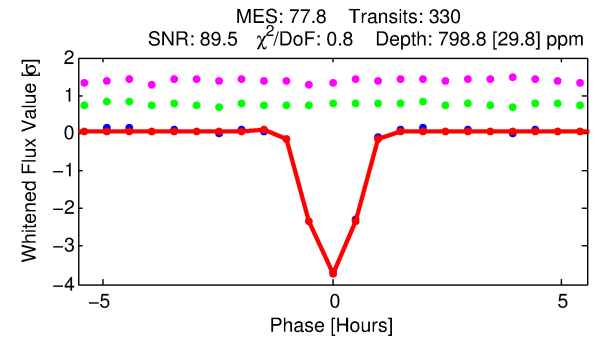
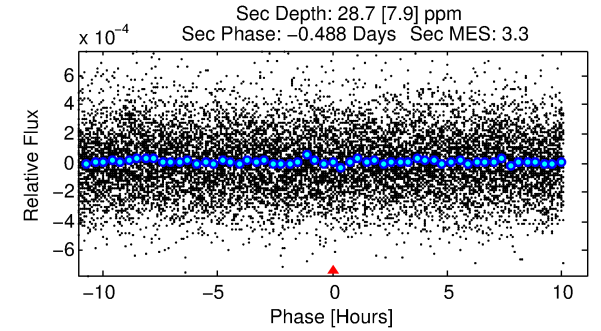
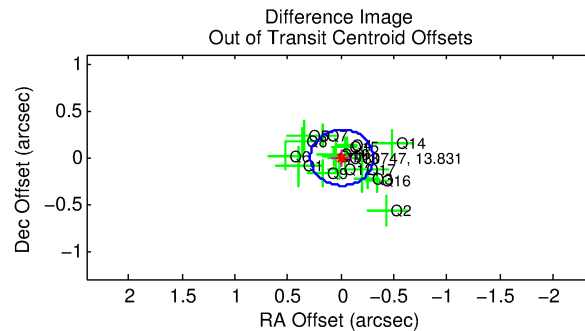
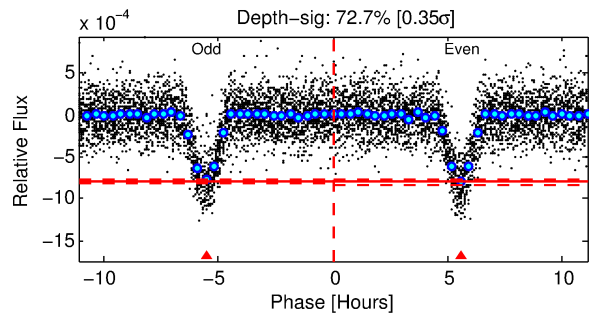
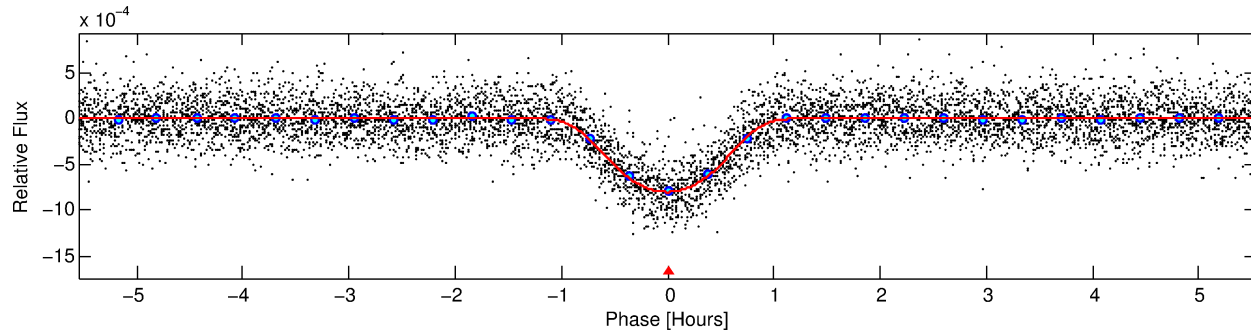
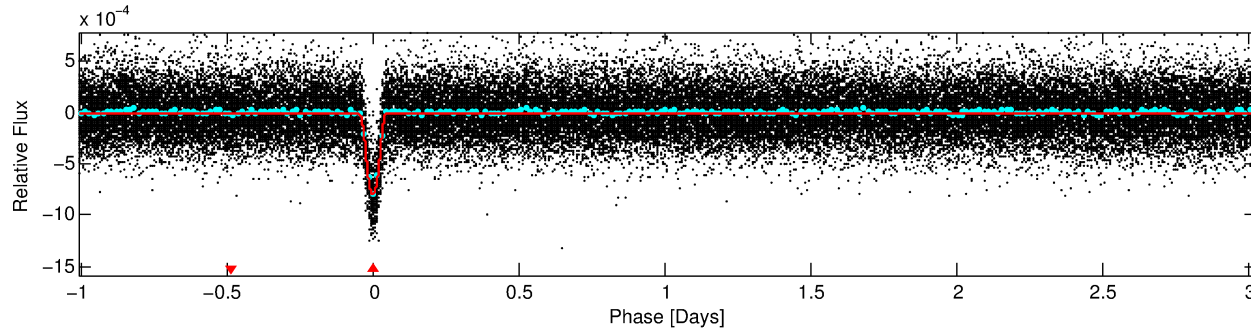
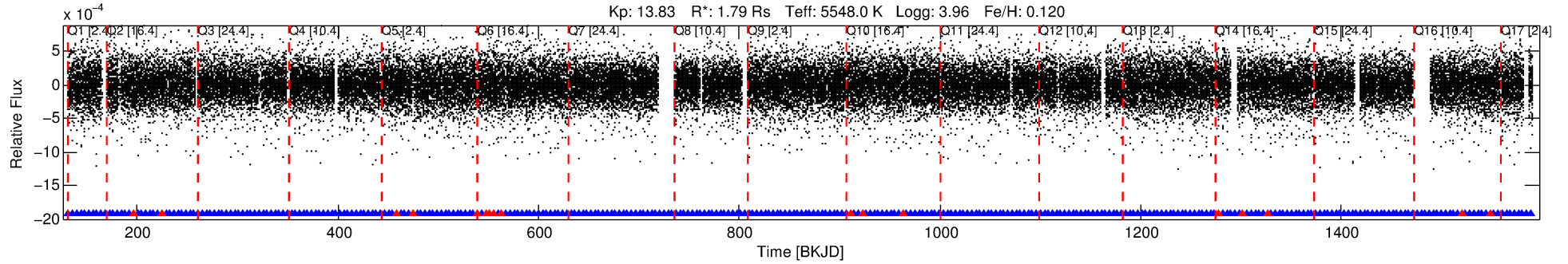
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007730747-01

No Significant Match Found

DV One-Page Summary

KIC: 7730747 Candidate: 1 of 1 Period: 4.035 d
KOI: K00684.01 Corr: 0.984



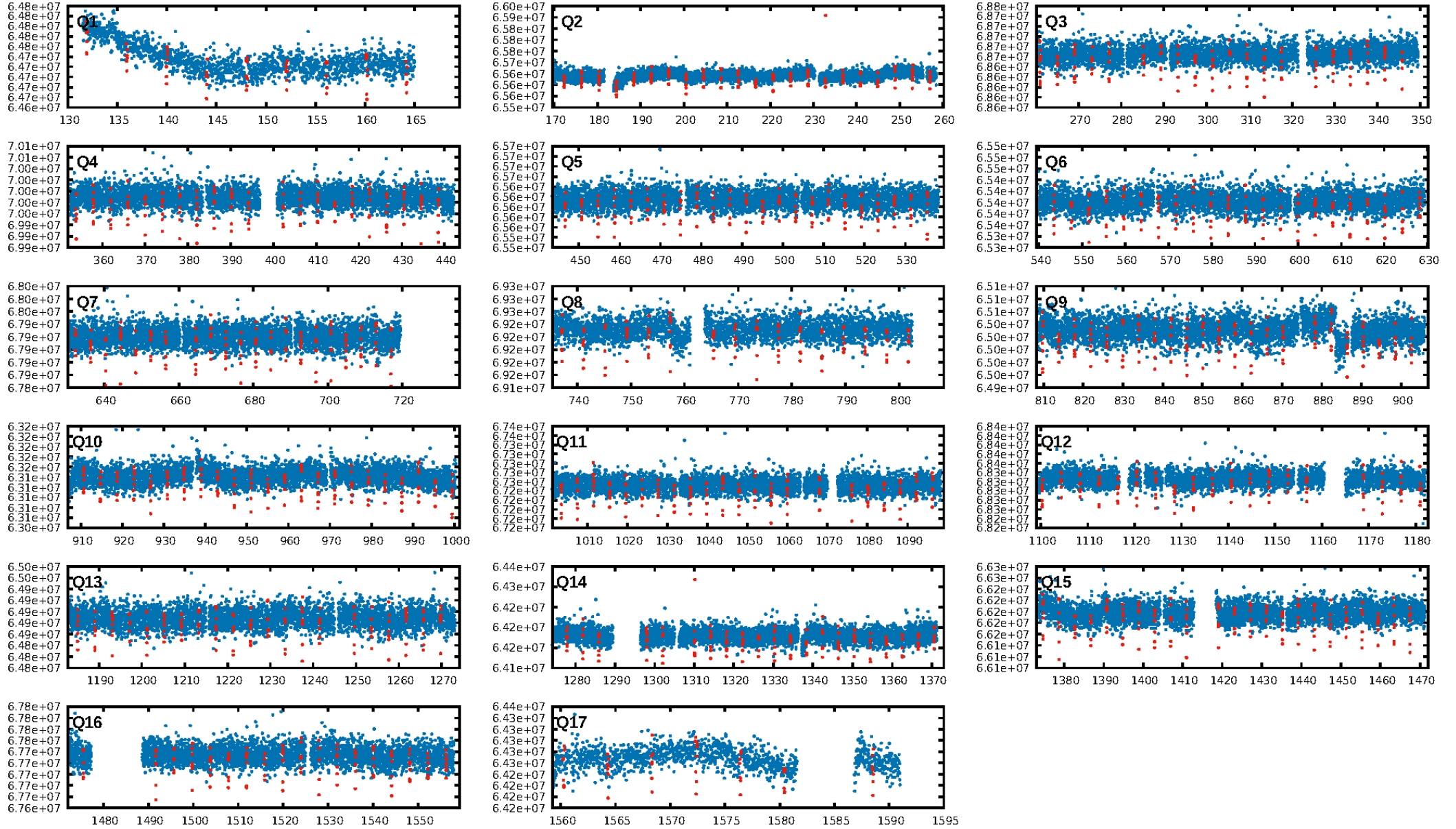
DV Fit Results:

Period = 4.03490 [0.00000] d
Epoch = 131.9104 [0.0004] BKJD
Rp/R* = 0.0371 [0.0040]
a/R* = 6.10 [0.42]
b = 0.97 [0.01]
Seff = 1053.70 [836.28]
Teq = 1453 [288] K
Rp = 7.26 [3.36] Re
a = 0.0509 [0.0240] AU
Ag = 0.77 [0.67] [-0.34 σ]
Teffp = 2107 [195] K [1.88 σ]

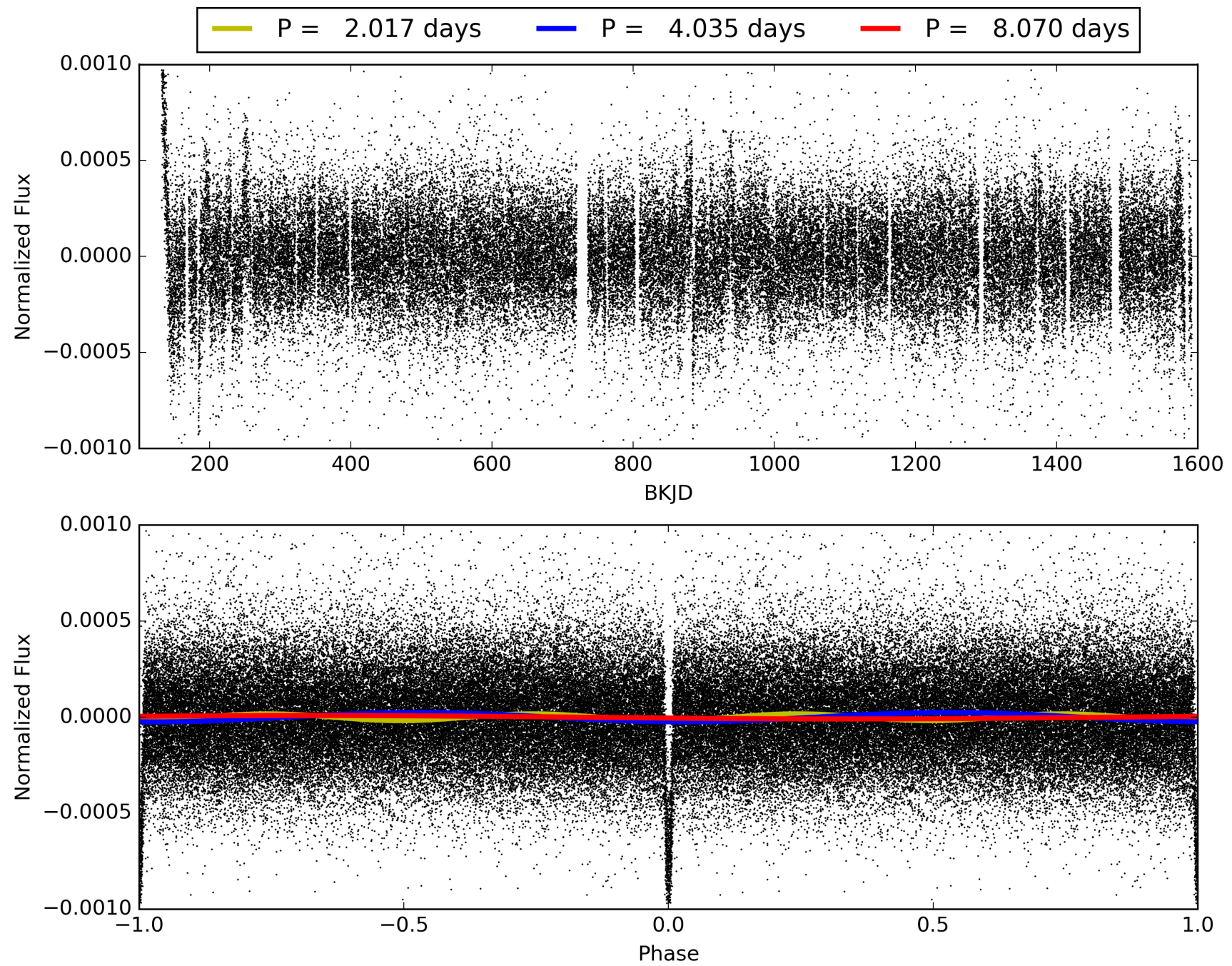
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.95 [297/314]
GhostDiagnostic-chr: 4.138
Centroid-sig: 60.5%
Centroid-so: 0.599 arcsec [3.72 σ]
OotOffset-rm: 0.011 arcsec [0.11 σ]
KicOffset-rm: 0.245 arcsec [2.99 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007730747-01, PDC Light Curves

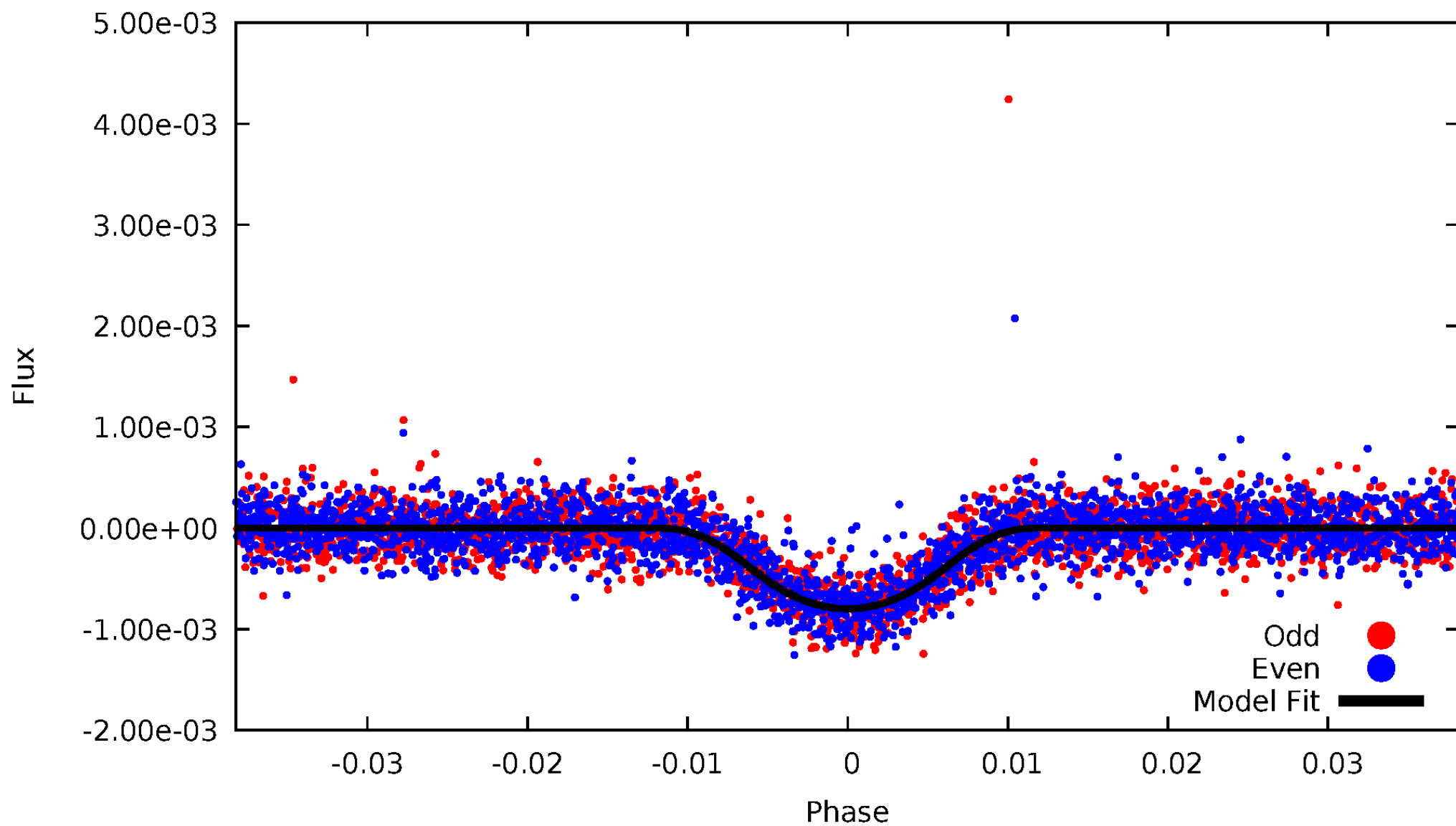


TCE 007730747-01



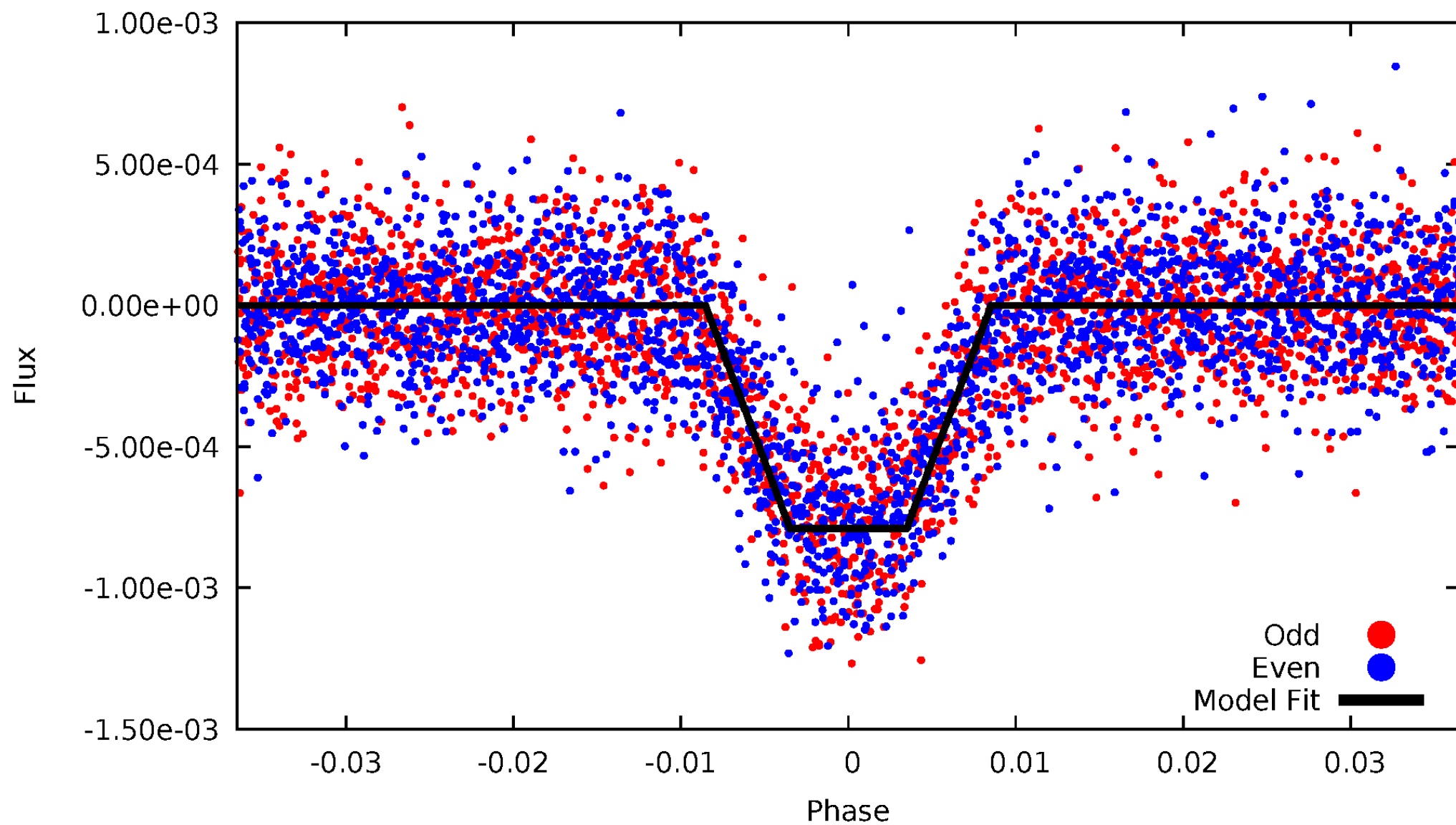
DV Odd/Even

TCE 007730747-01



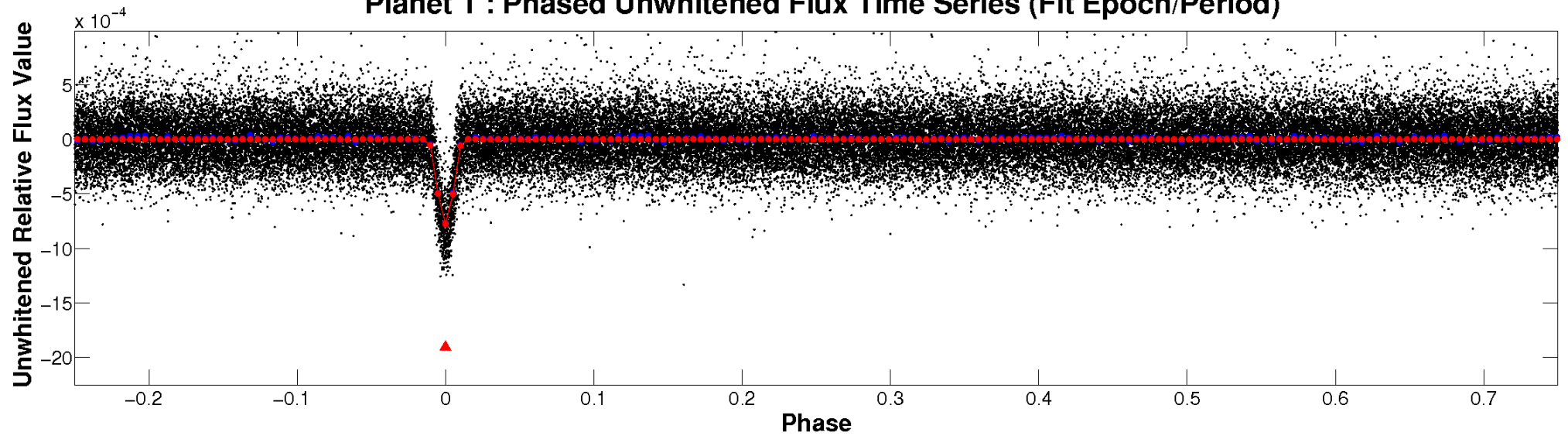
ALT Odd/Even

TCE 007730747-01

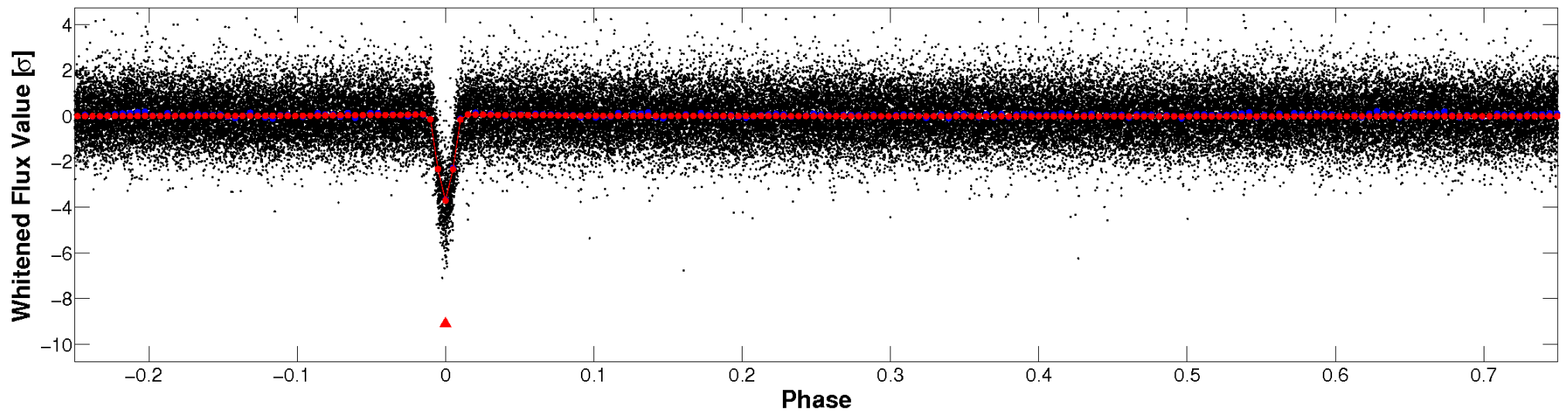


Non-Whitened Vs. Whitened Light Curve

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

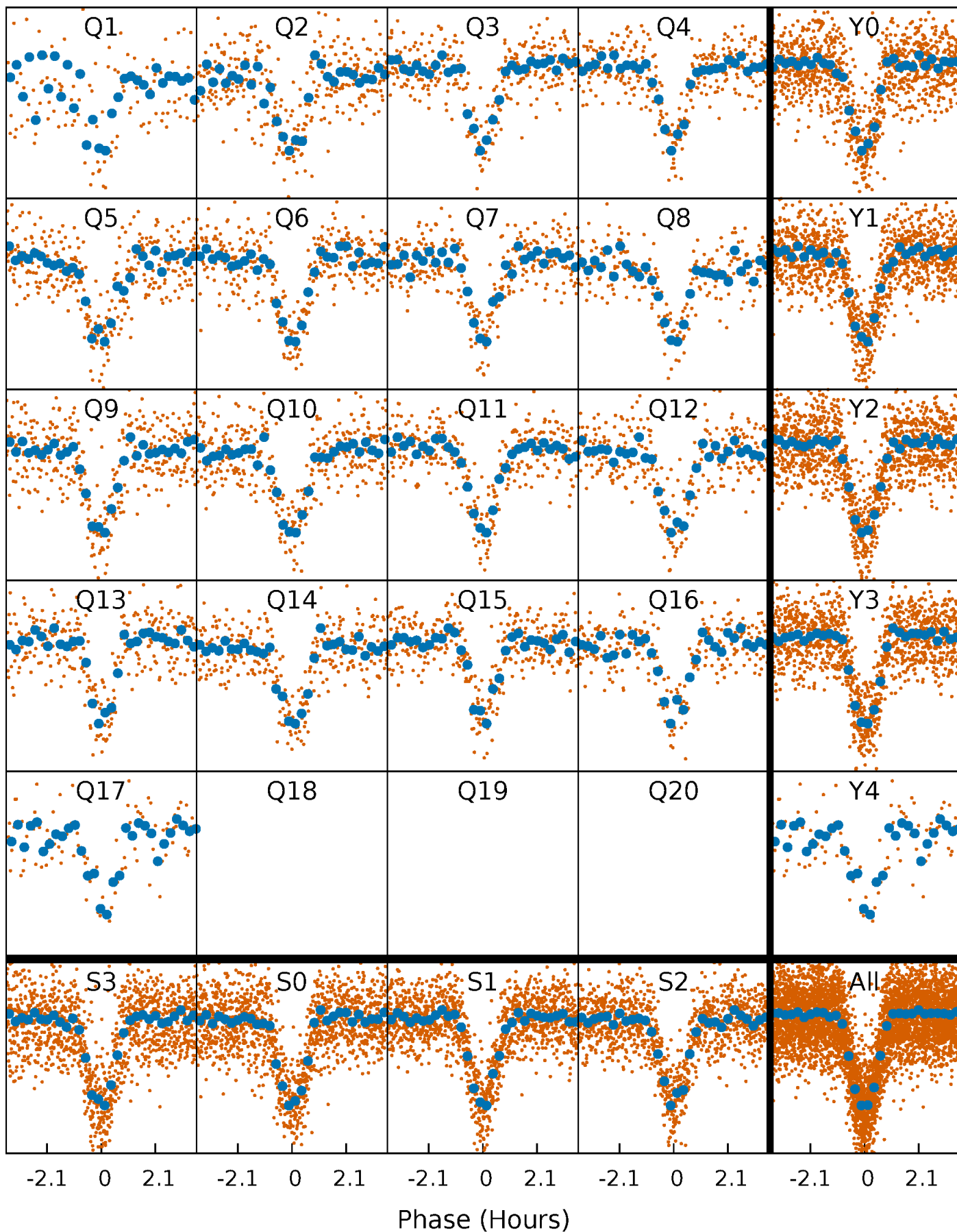


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



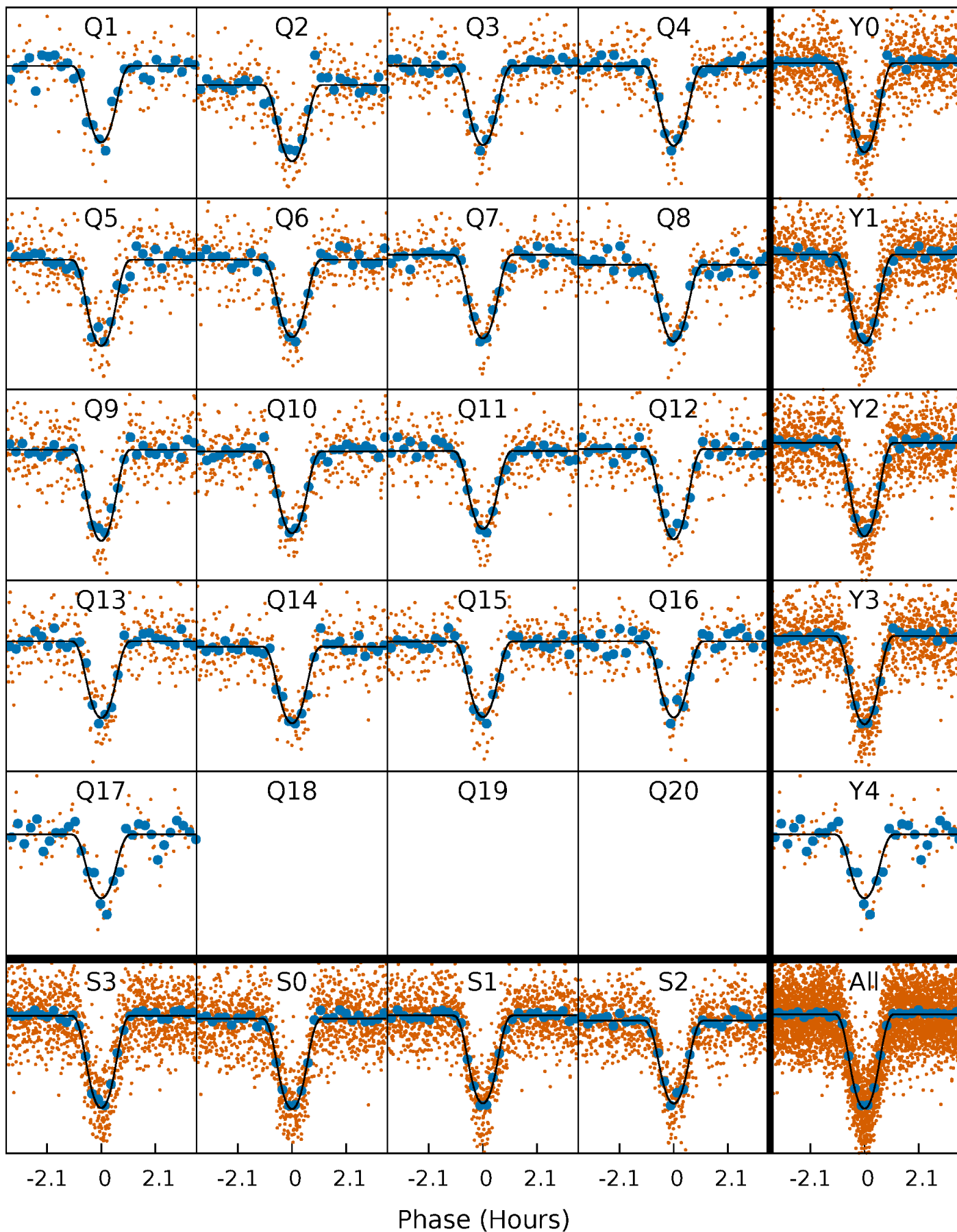
PDC Quarter-Phased Transit Curves

TCE 007730747-01 P= 4.034904 Days $T_0=131.910426$ (BKJD)



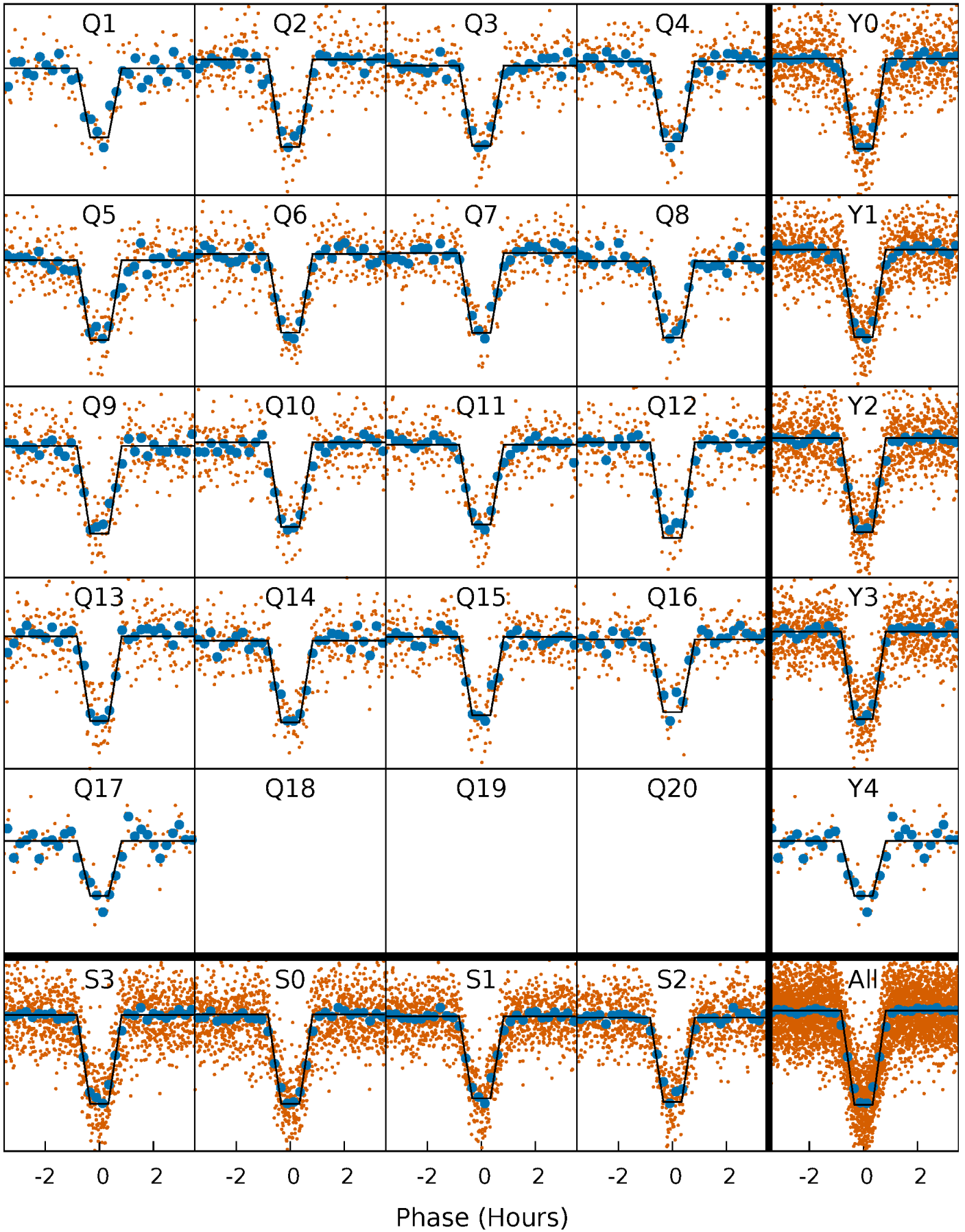
DV Quarter-Phased Transit Curves

TCE 007730747-01 P= 4.034904 Days $T_0=131.910426$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

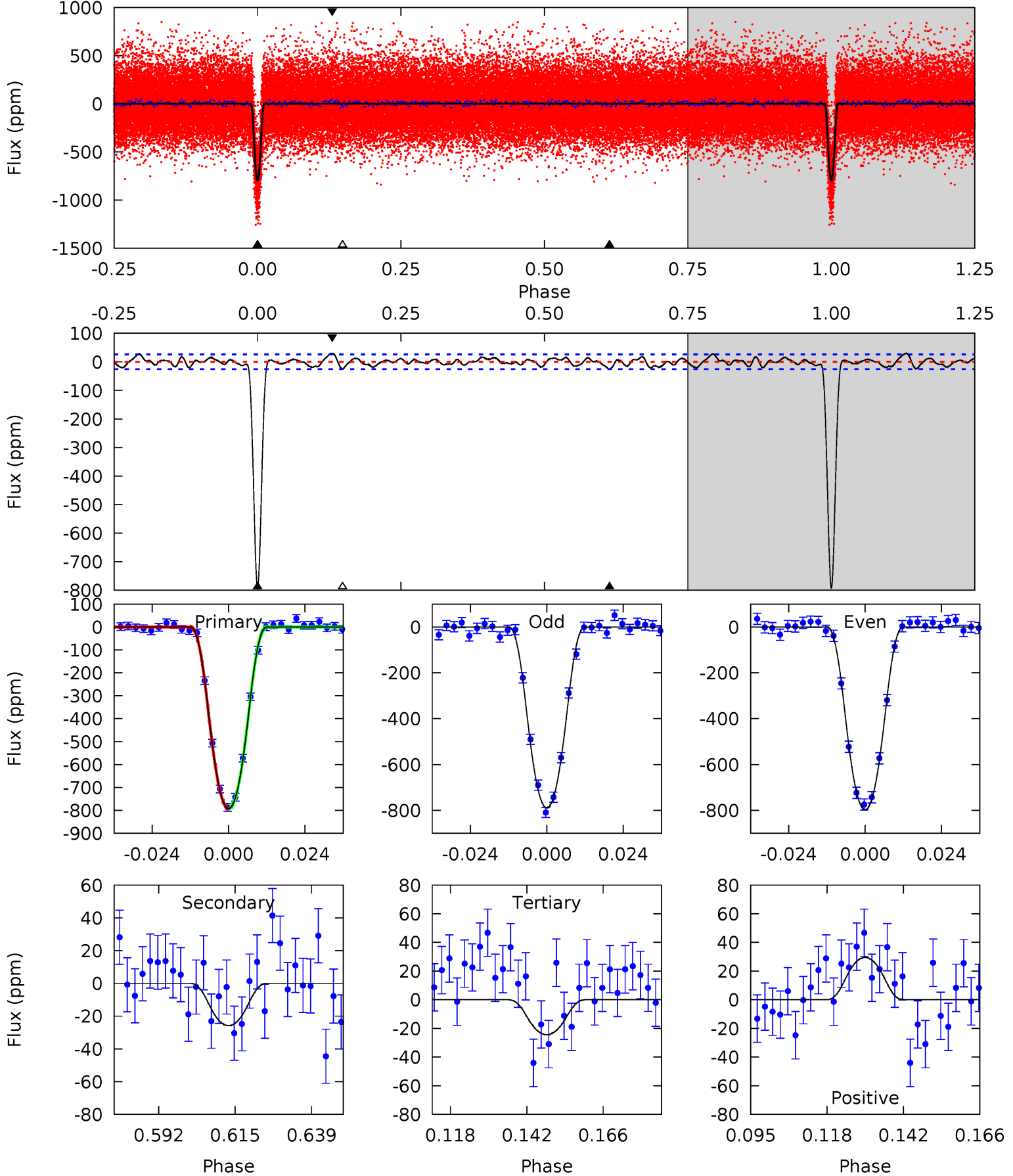
TCE 007730747-01 P= 4.034914 Days $T_0=131.908750$ (BKJD)



DV Model-Shift Uniqueness Test

007730747-01, P = 4.034904 Days, E = 127.875522 Days

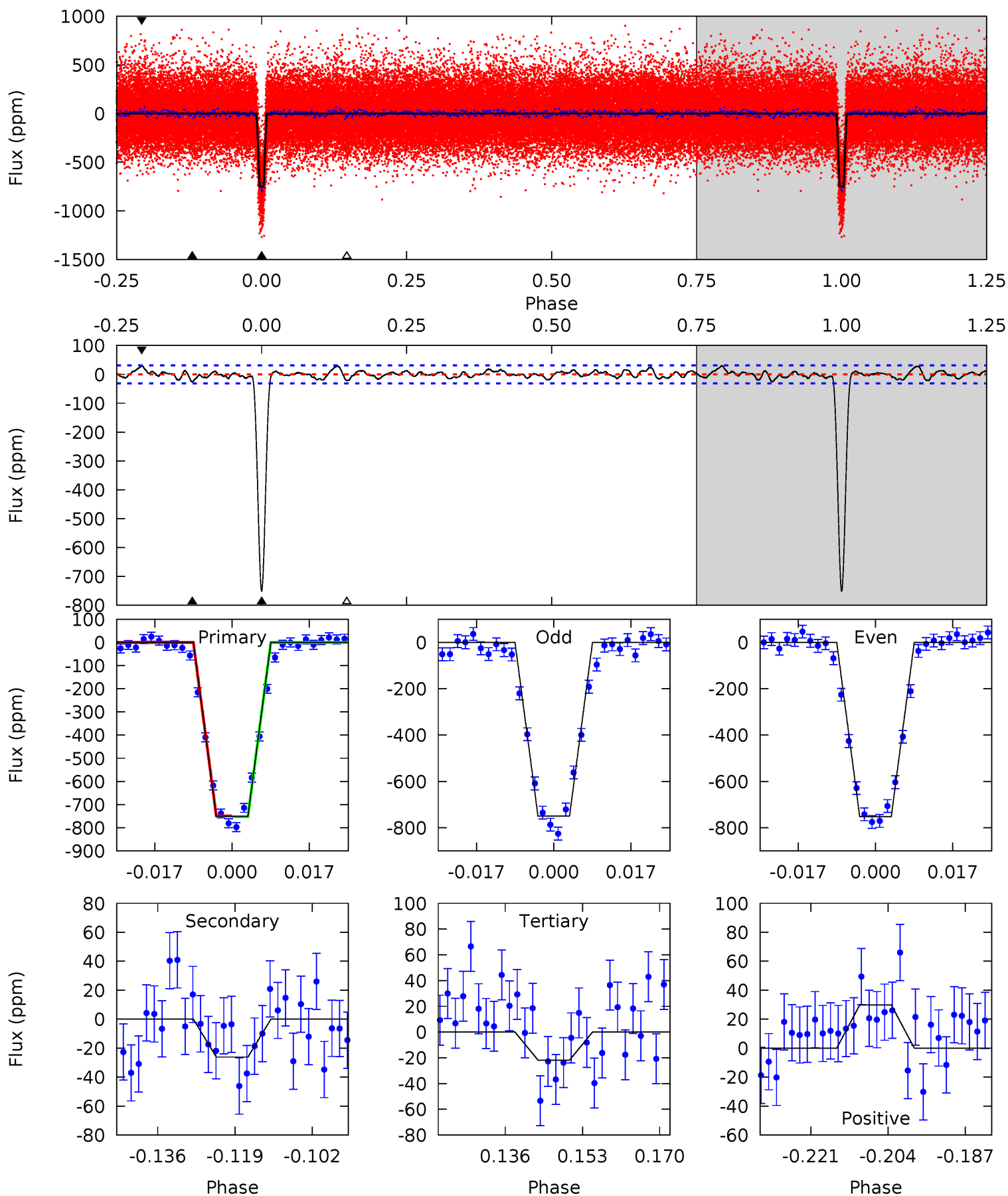
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
149.1	4.85	4.59	5.55	4.86	2.26	1.95	144.5	143.5	0.26	-0.70	0.78	1.00	0.04	0.05



Alt Model-Shift Uniqueness Test

007730747-01, P = 4.034914 Days, E = 127.873836 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
118.6	4.13	3.44	4.71	4.92	2.39	1.54	115.1	113.9	0.69	-0.58	0.14	1.01	0.04	0.29



Stellar Parameters For KIC 007730747

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5548^{+168}_{-151}	$3.964^{+0.472}_{-0.157}$	$0.120^{+0.250}_{-0.250}$	$1.793^{+0.435}_{-0.808}$	$1.079^{+0.129}_{-0.172}$	$0.264^{+1.219}_{-0.117}$
	+3%/-3%	+12%/-4%	+208%/-208%	+24%/-45%	+12%/-16%	+462%/-44%
Source	PHO1	KIC0	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 007730747-01 / KOI 0684.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-26 ± 5	$7.03^{+1.47}_{-1.67}$	2006^{+169}_{-222}	2620^{+177}_{-237}	$0.755^{+0.560}_{-0.277}$
Alt.	-26 ± 6	$5.30^{+1.19}_{-1.34}$	2000^{+166}_{-261}	2903^{+214}_{-199}	$1.321^{+1.229}_{-0.511}$

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 $A_{\text{obs}} \gg 1.0$

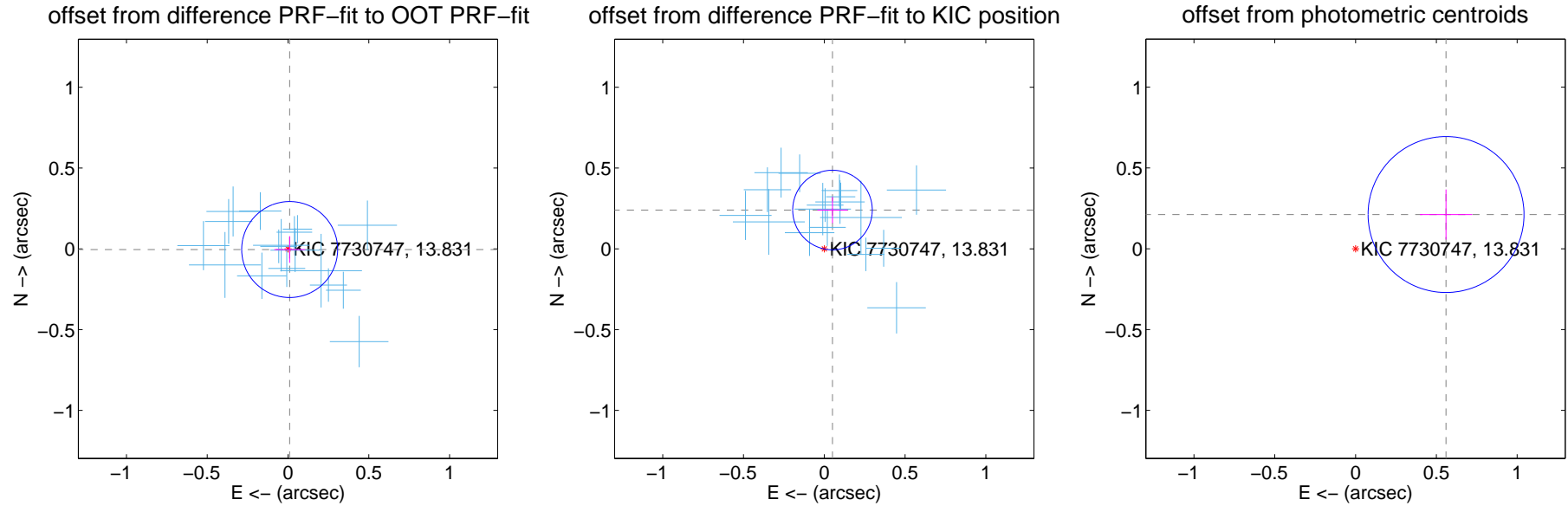
DV Centroid Data

Supplemental centroid analysis for 007730747-01. Kepler magnitude: 13.83. Transit SNR 89.48

There are 17 quarters with good PRF difference image offsets

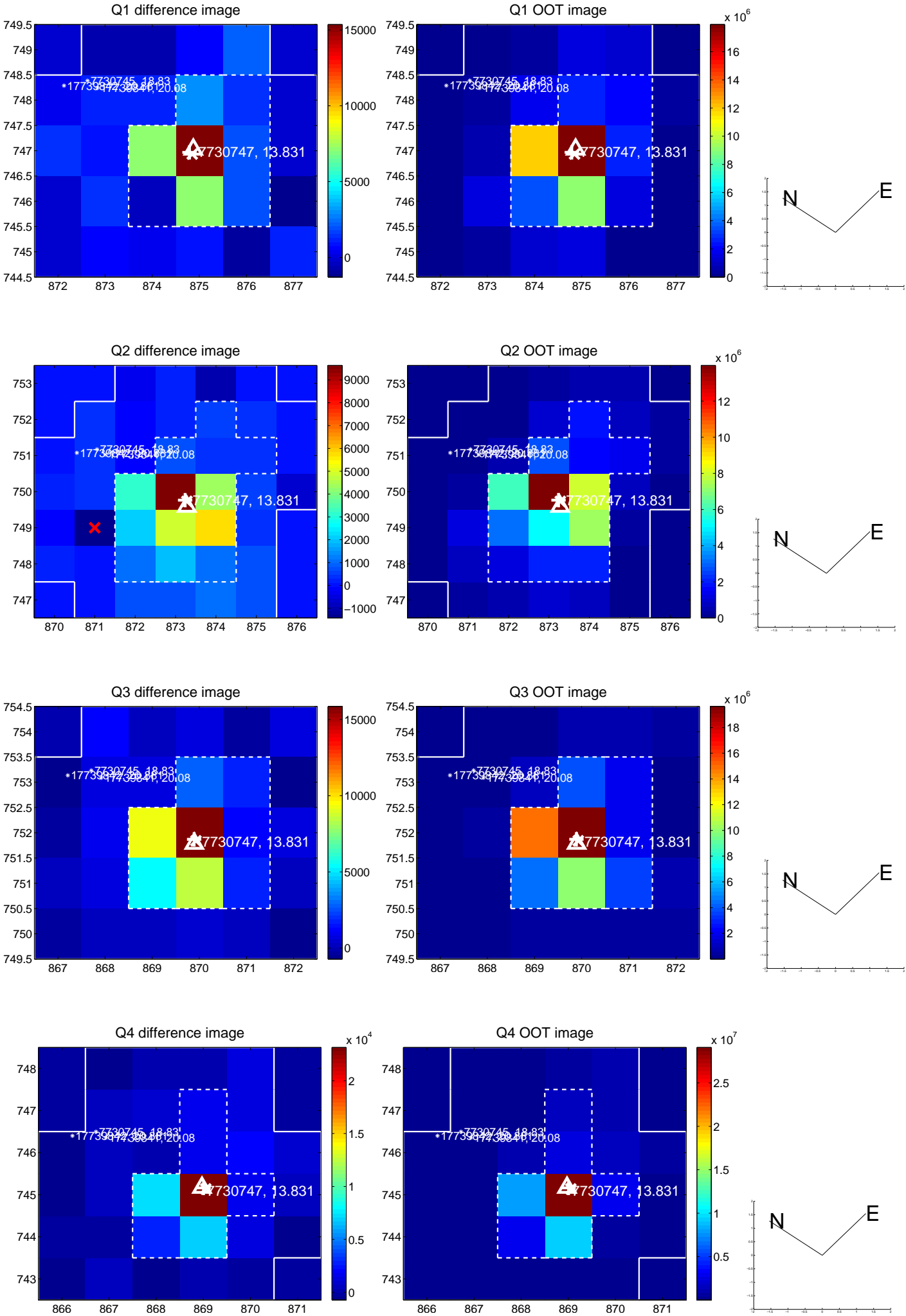
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.011 ± 0.099	0.11	-0.010 ± 0.095	-0.004 ± 0.083
PRF-fit source offset from KIC position	0.245 ± 0.082	2.99	-0.051 ± 0.093	0.240 ± 0.082
photometric centroid source offset	0.60 ± 0.16	3.72	-0.56 ± 0.16	0.21 ± 0.16

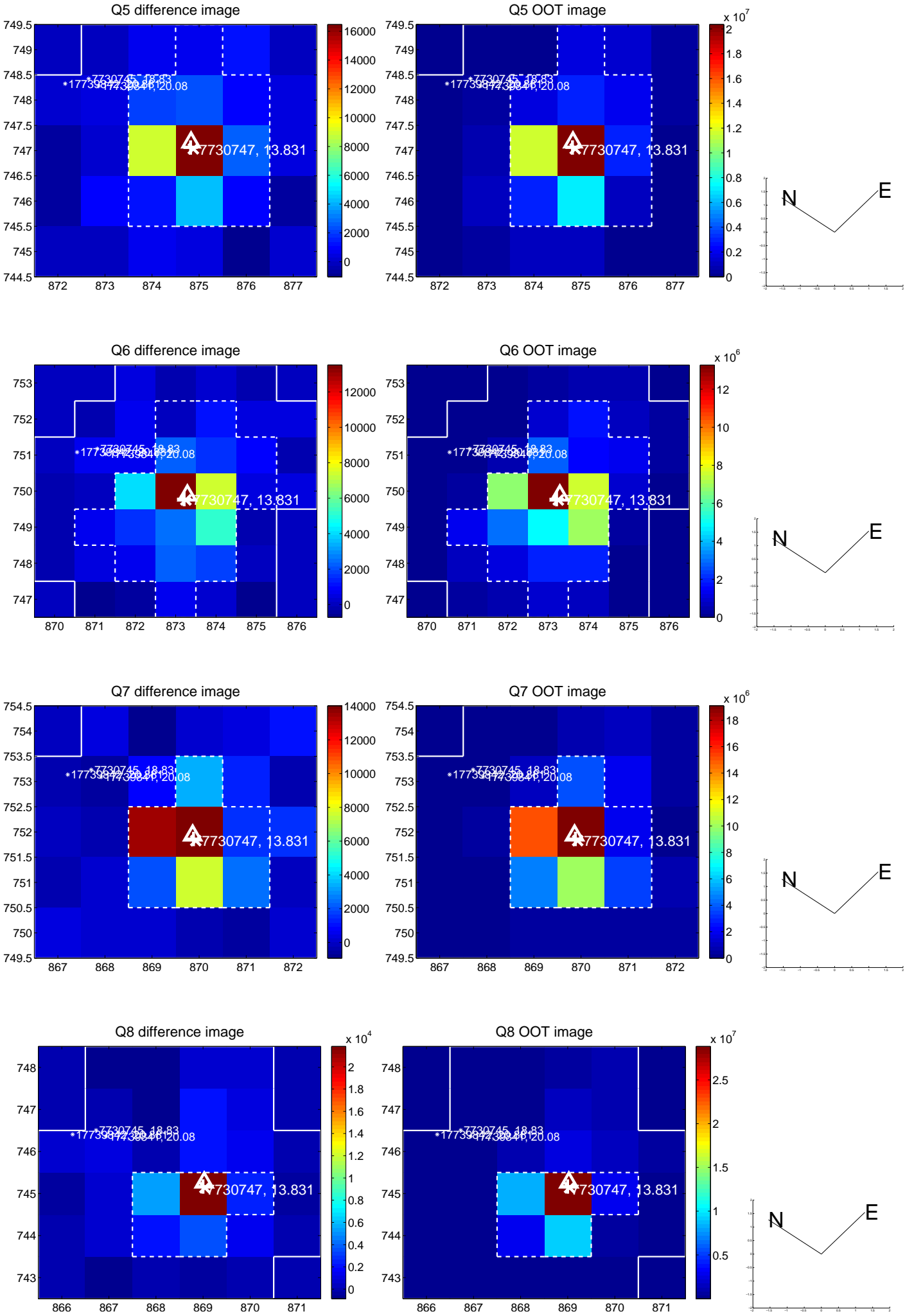


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

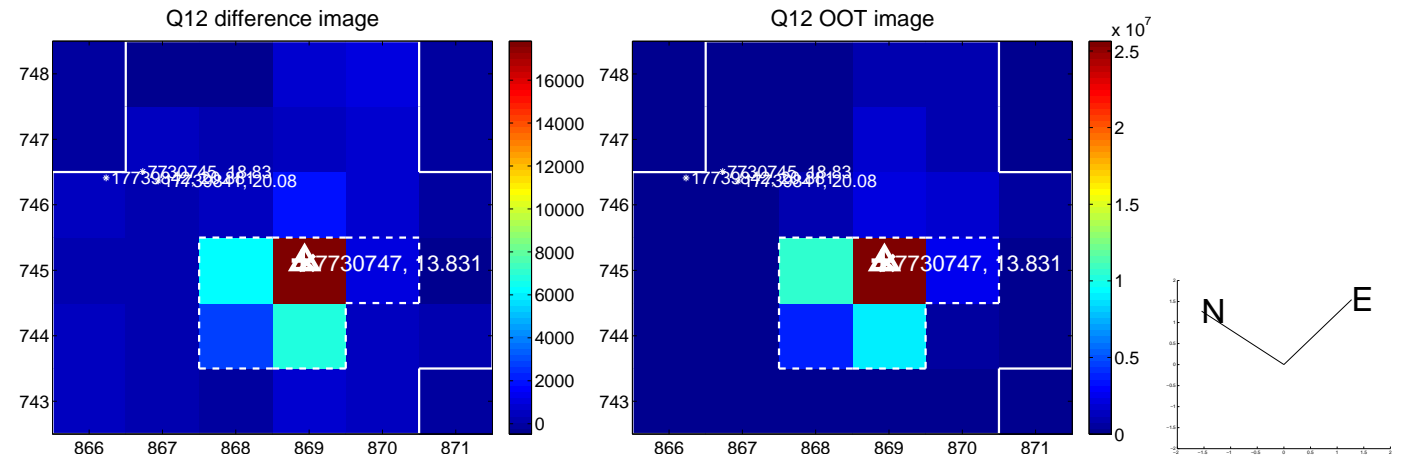
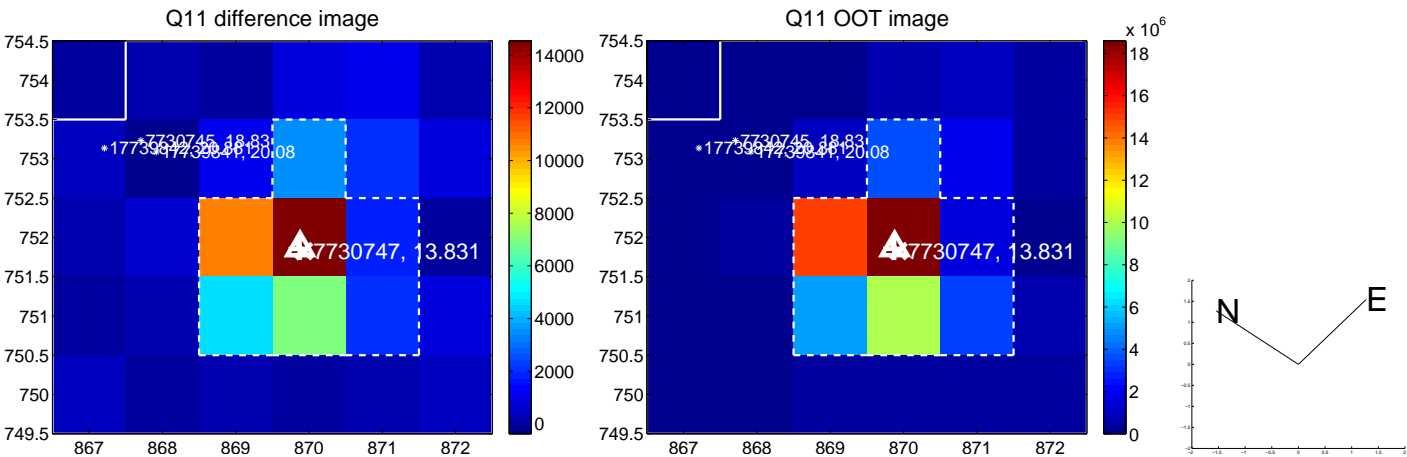
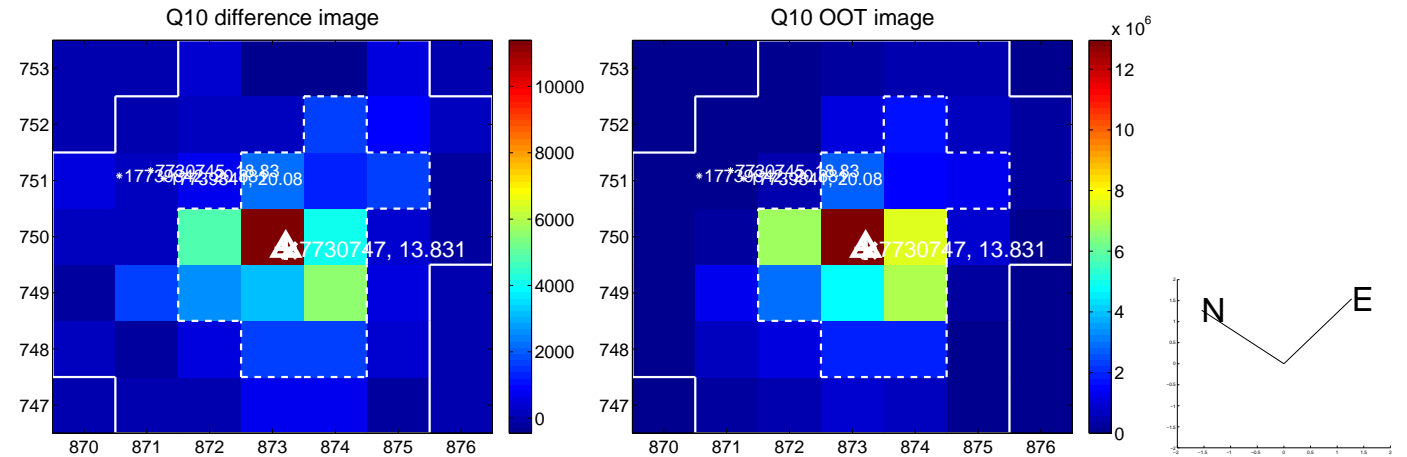
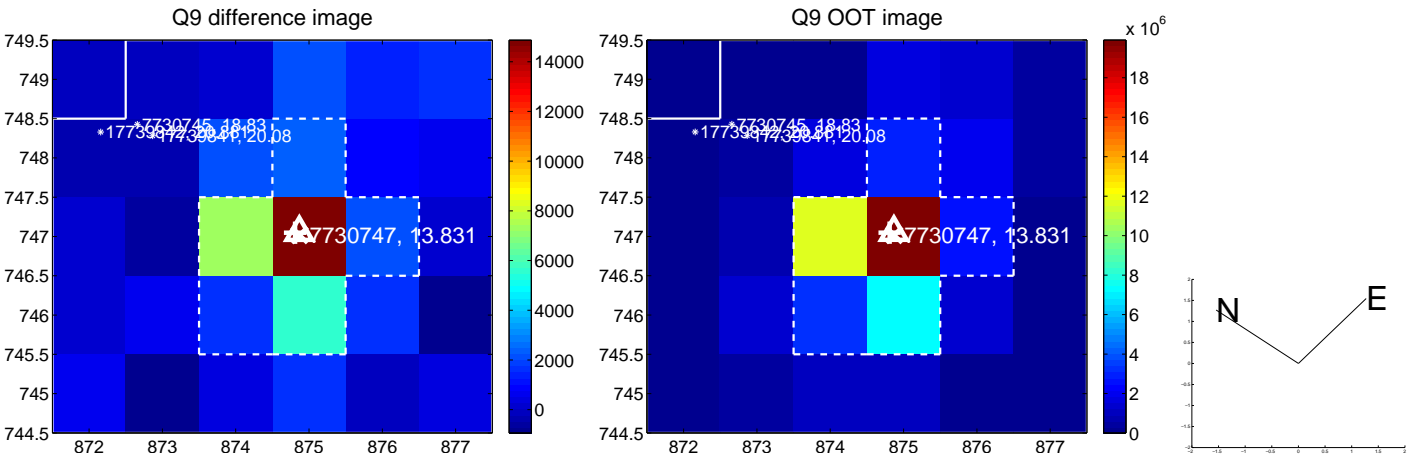
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



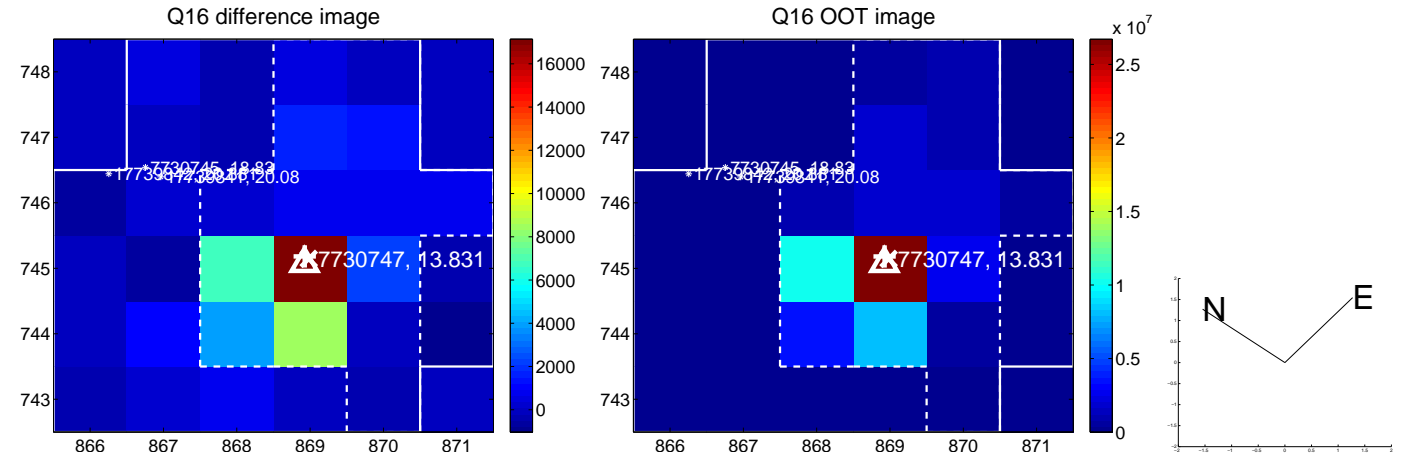
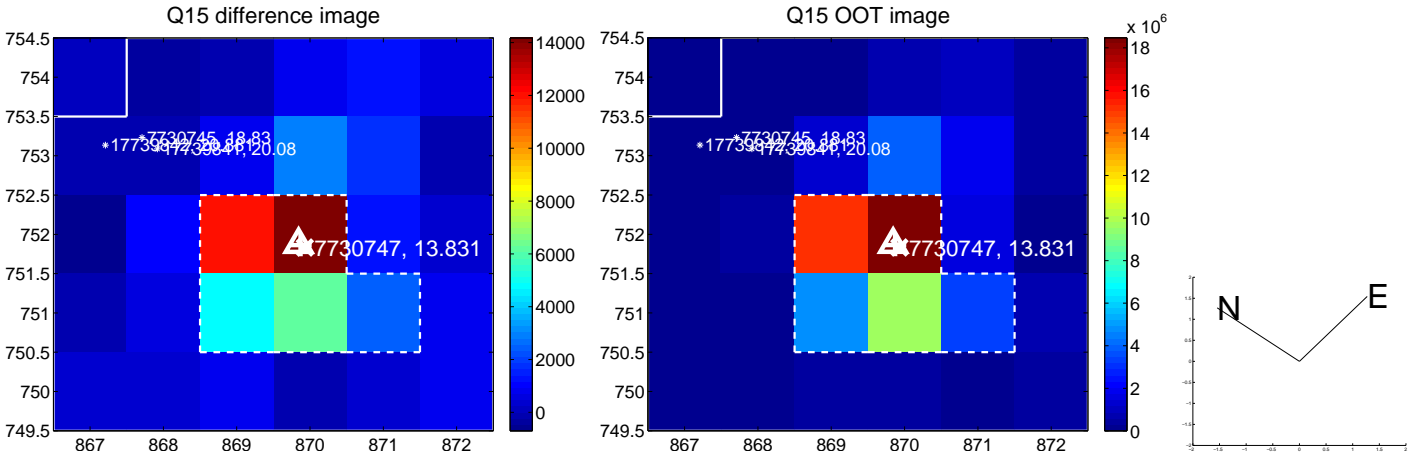
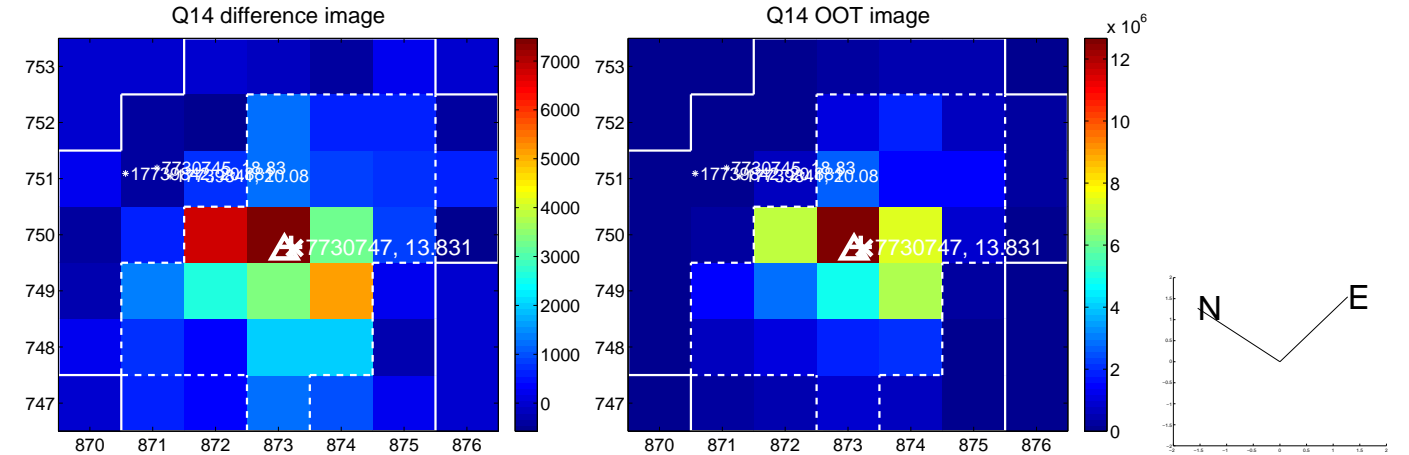
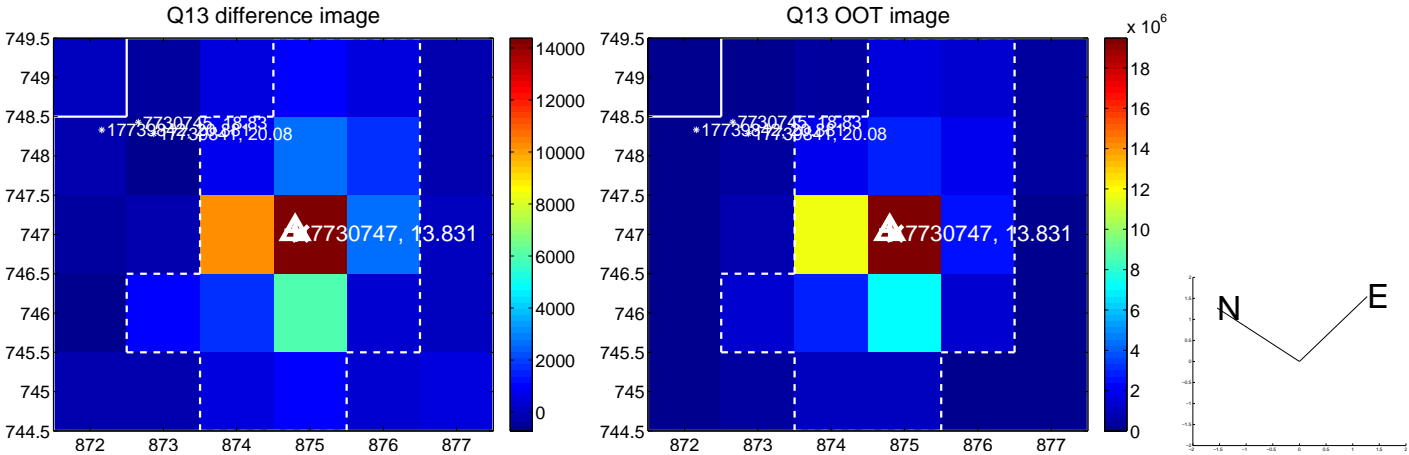
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



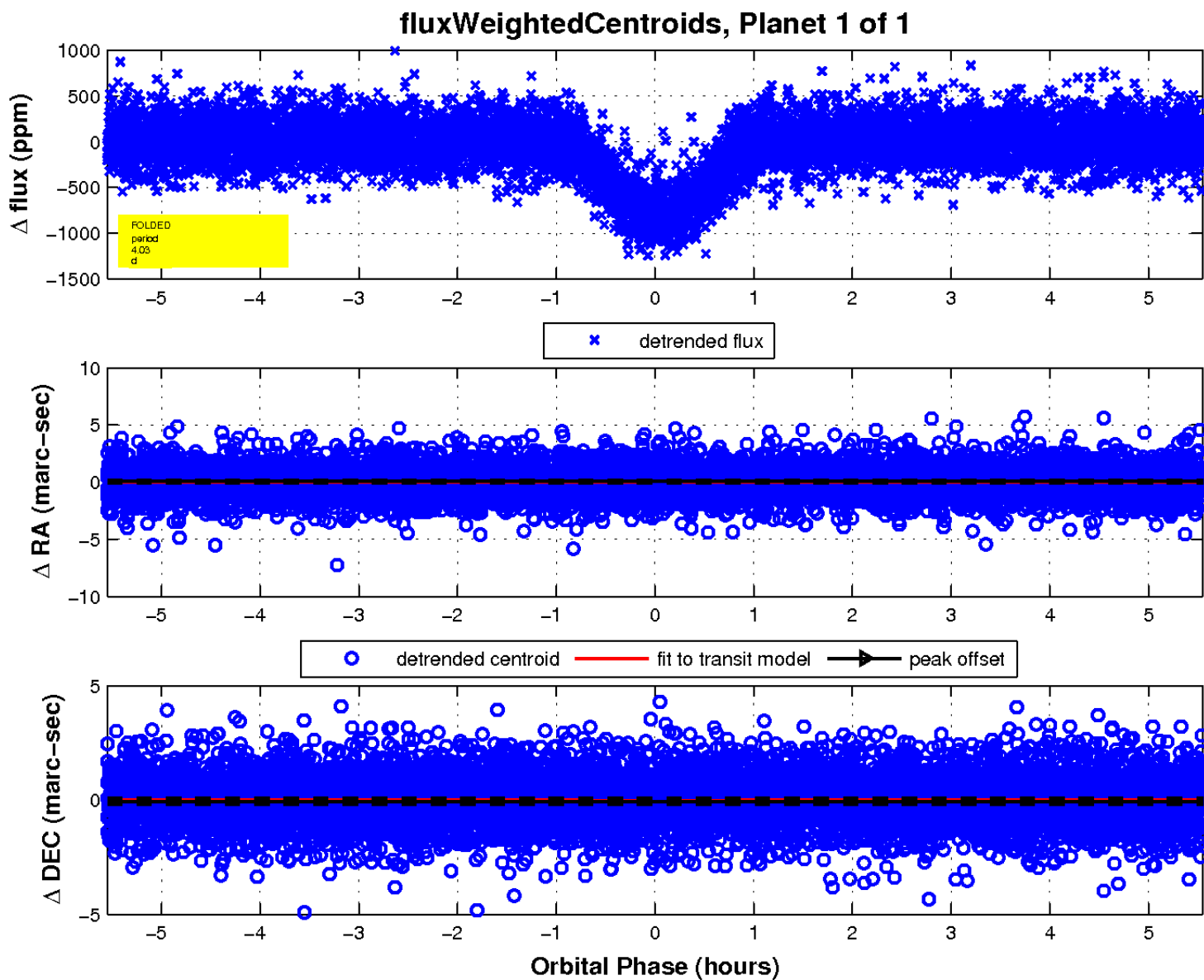
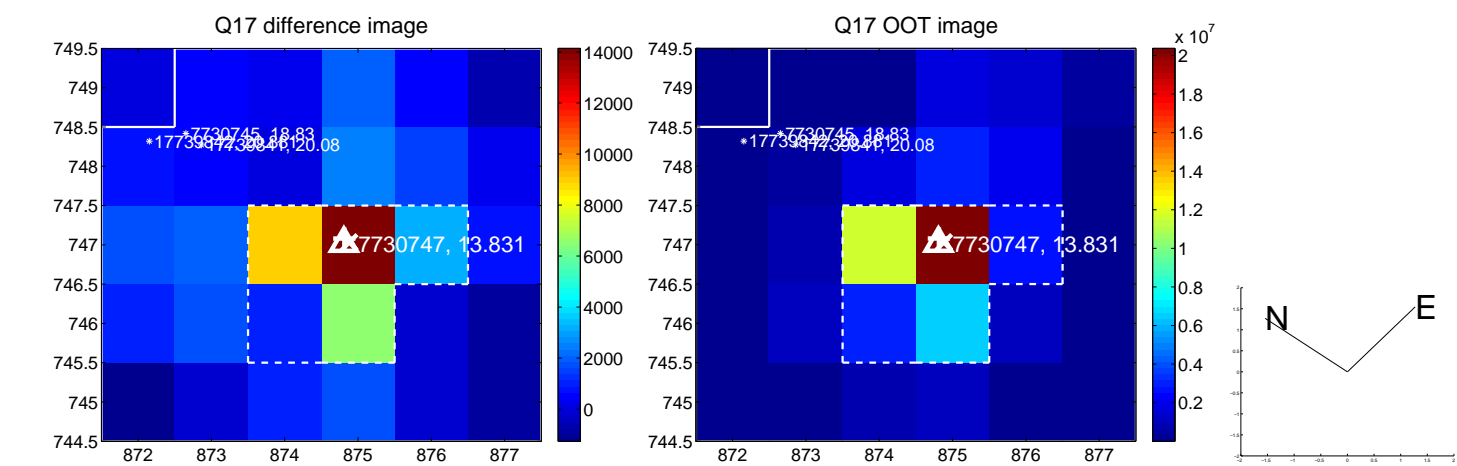
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UKIRT Image

Declination

