

KIC 008128965

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})
008128965-01	OBS	6974.01	3.570185	134.437668	98967.2	6.217	14268.9	4655.1	1.33	5945	41.97	981.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008128965-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT

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.

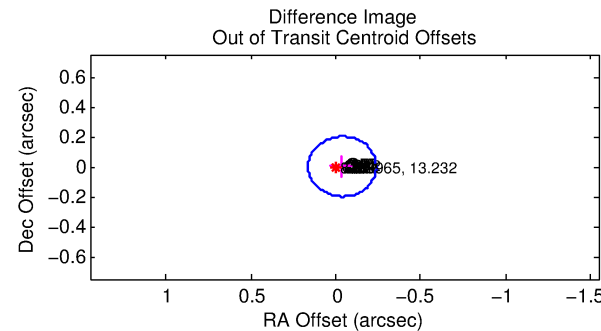
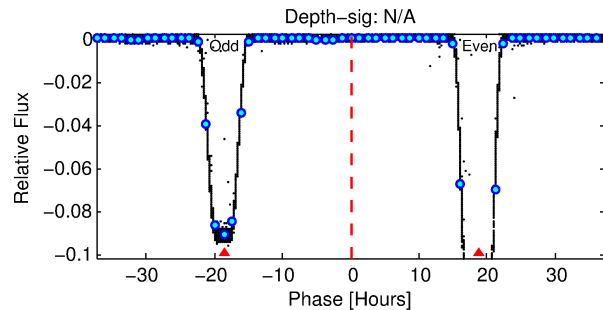
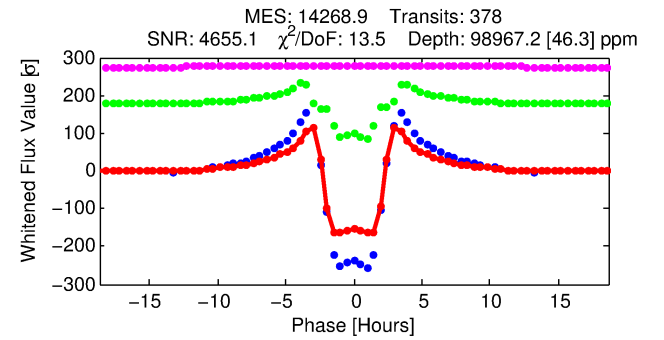
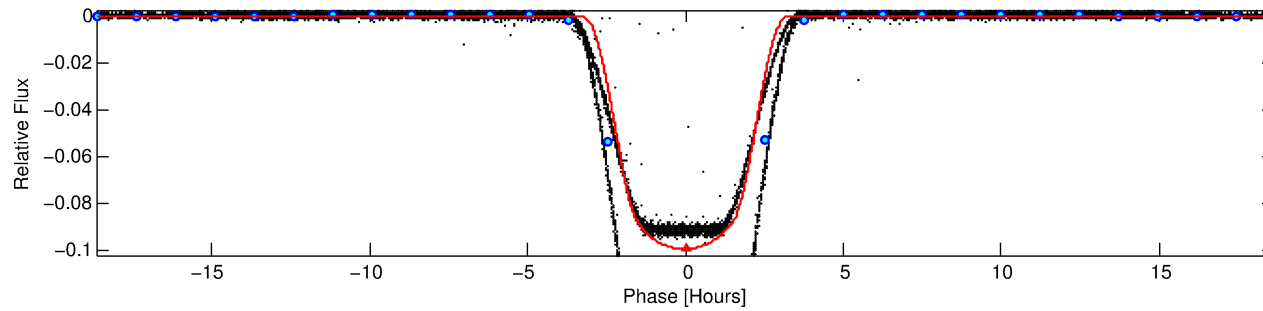
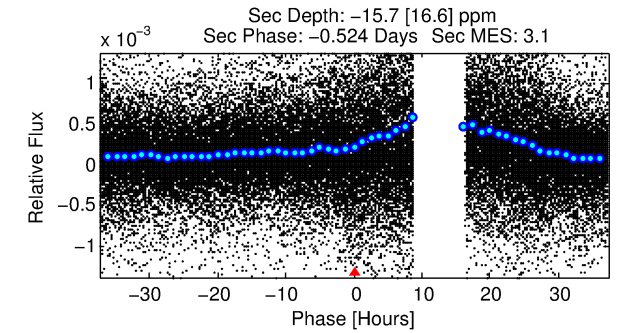
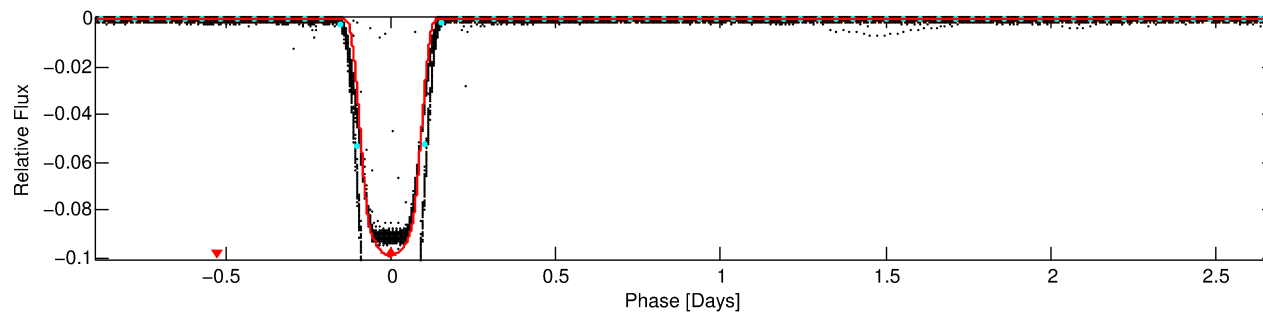
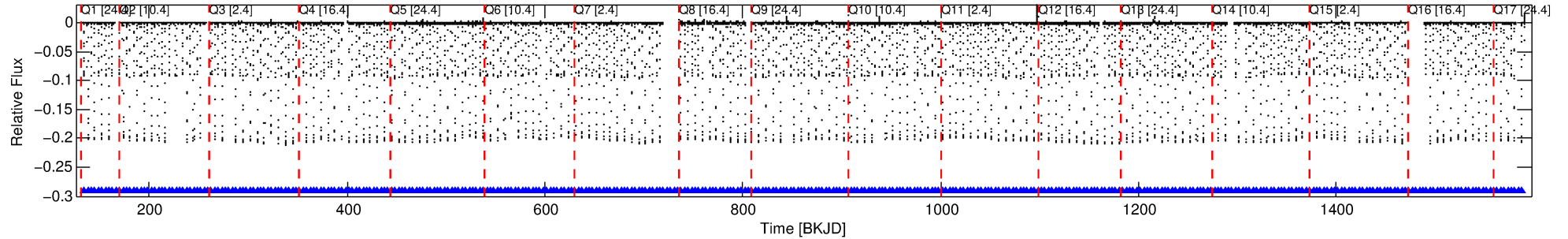
Ephemeris Match Information For 008128965-01

No Significant Match Found

DV One-Page Summary

KIC: 8128965 Candidate: 1 of 1 Period: 3.570 d
KOI: K06974 Corr: No Ephemeris Match

Kp: 13.23 R*: 1.33 Rs Teff: 5945.0 K Logg: 4.17 Fe/H: -0.240



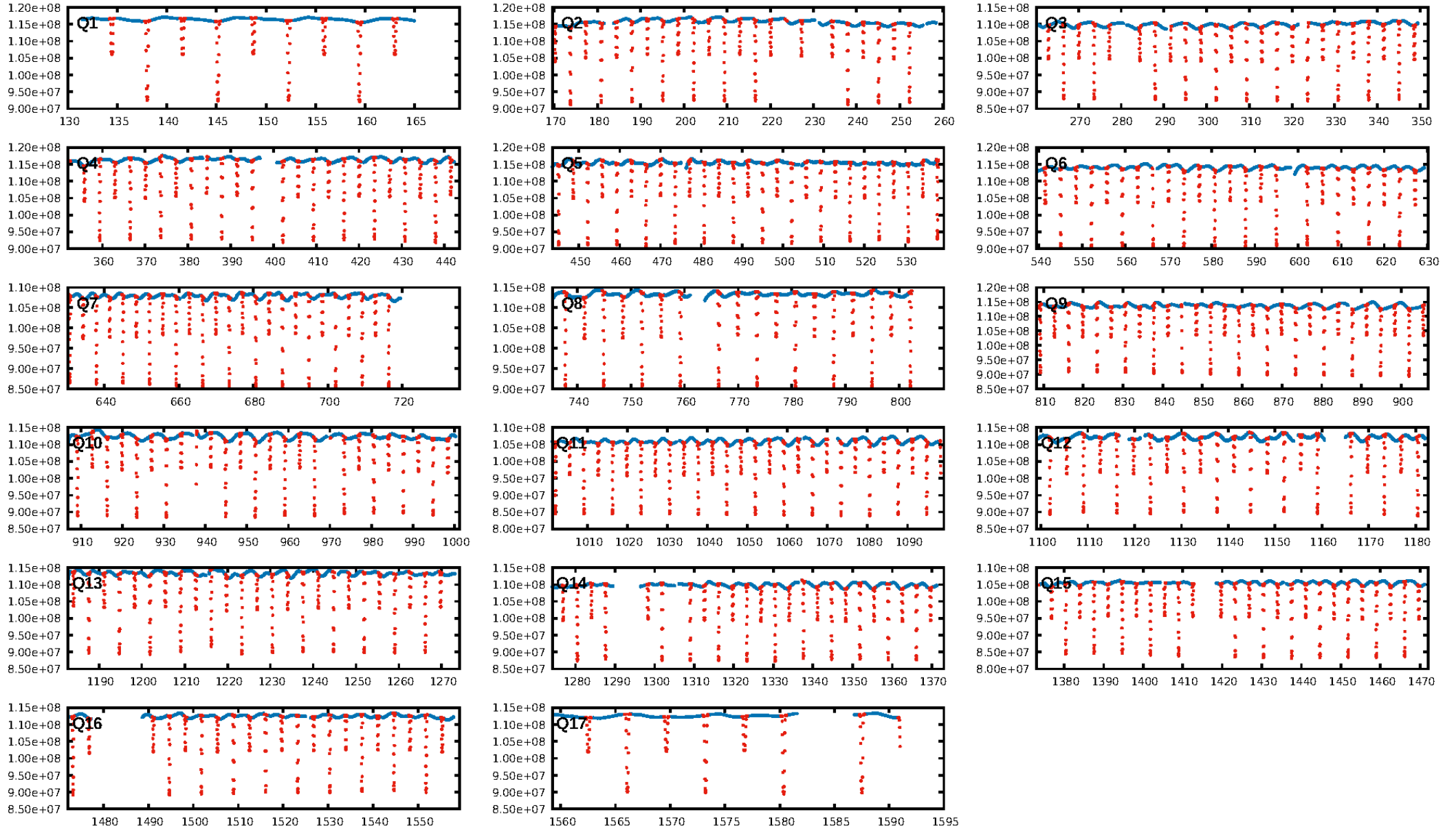
DV Fit Results:

Period = 3.57018 [0.00000] d
Epoch = 134.4377 [0.0000] BKJD
Rp/R* = 0.2885 [0.0001]
a/R* = 5.70 [0.00]
b = 0.00 [19.48]
Seff = 981.30 [493.88]
Teq = 1427 [180] K
Rp = 41.97 [12.03] Re
a = 0.0450 [0.0133] AU
Ag = N/A
Teffp = N/A

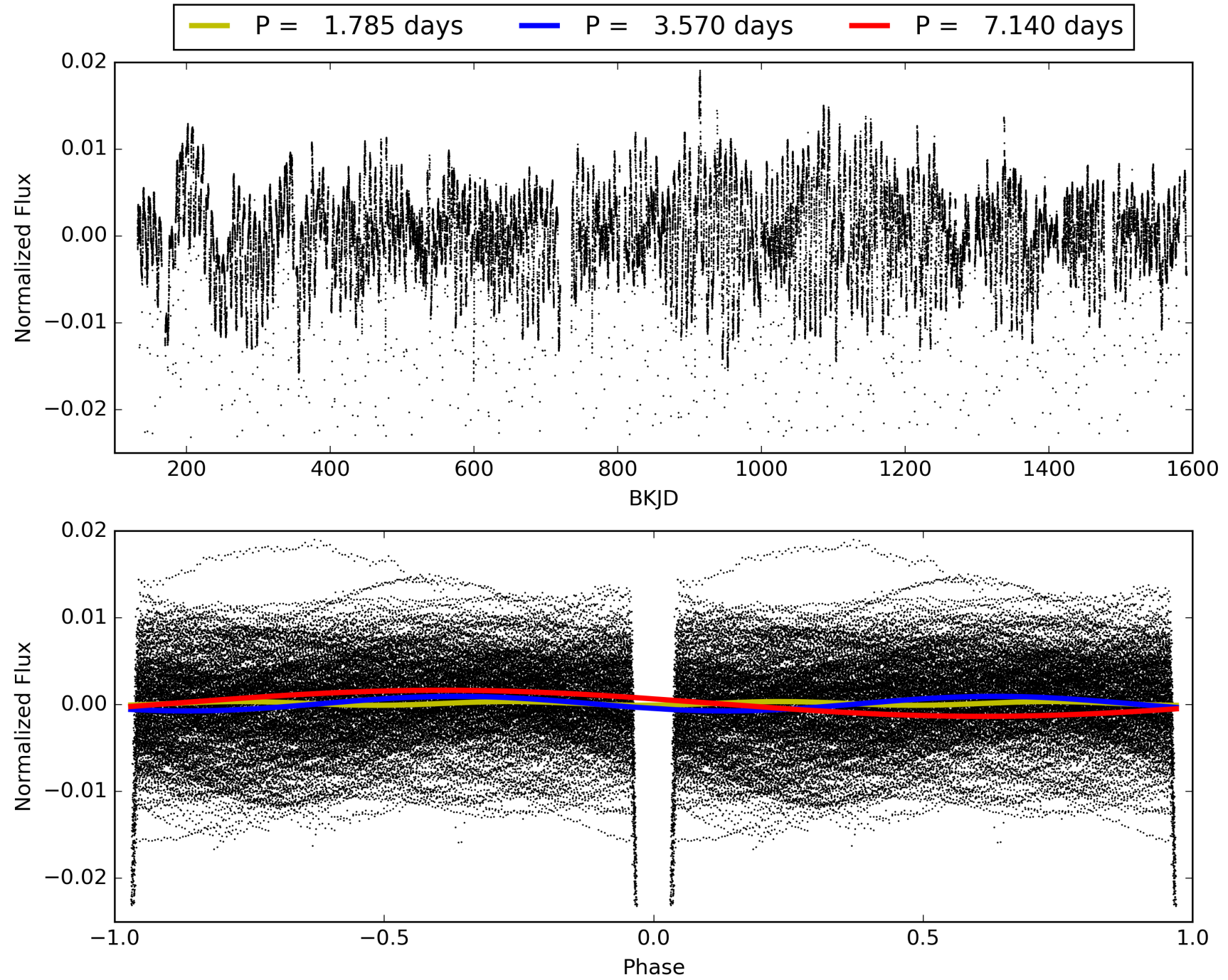
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [361/361]
GhostDiagnostic-chr: 0.8987
Centroid-sig: 0.0%
Centroid-so: 0.470 arcsec [640.61σ]
OotOffset-rm: 0.038 arcsec [0.56σ]
KicOffset-rm: 0.104 arcsec [1.53σ]
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 008128965-01, PDC Light Curves

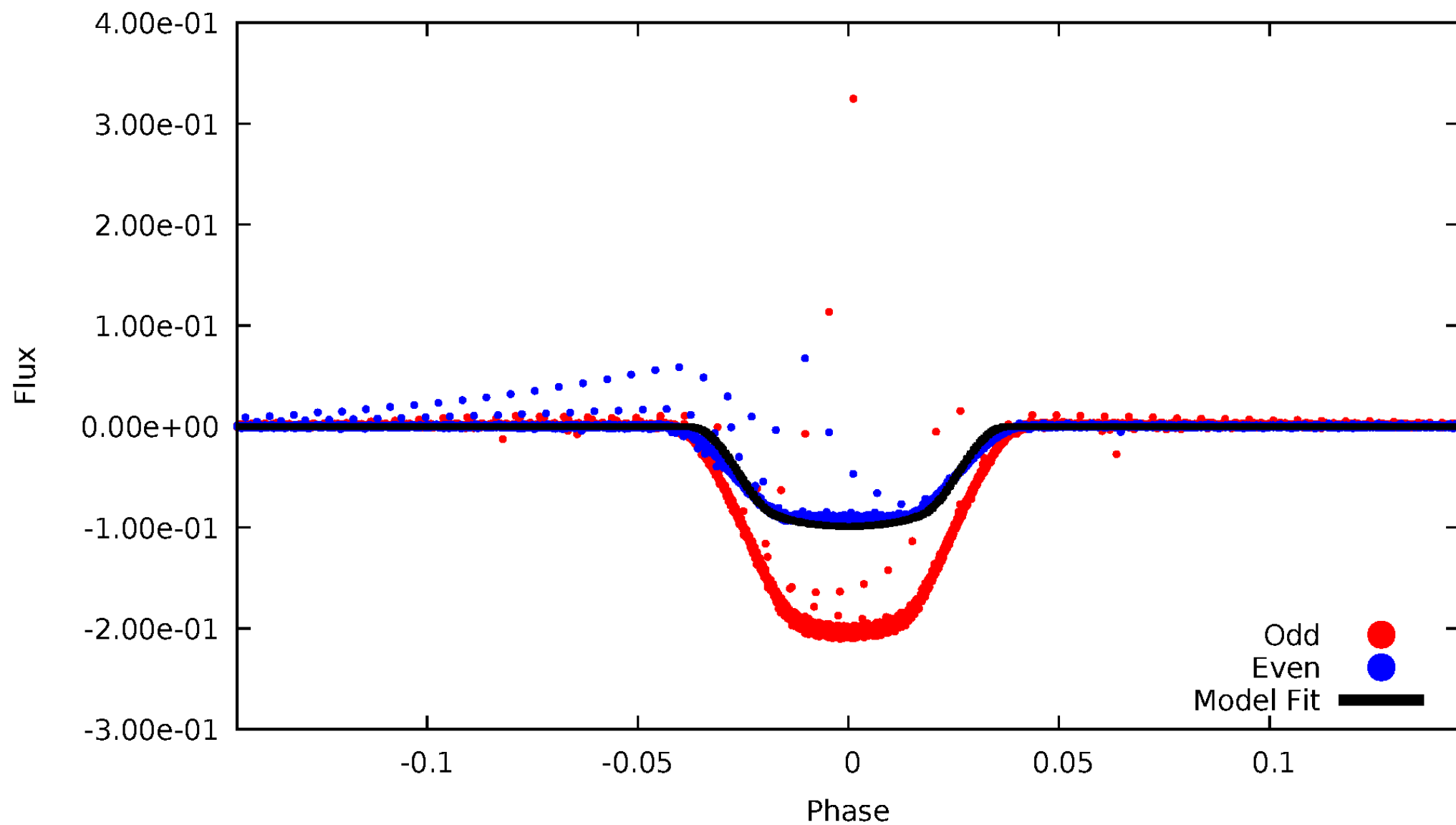


TCE 008128965-01



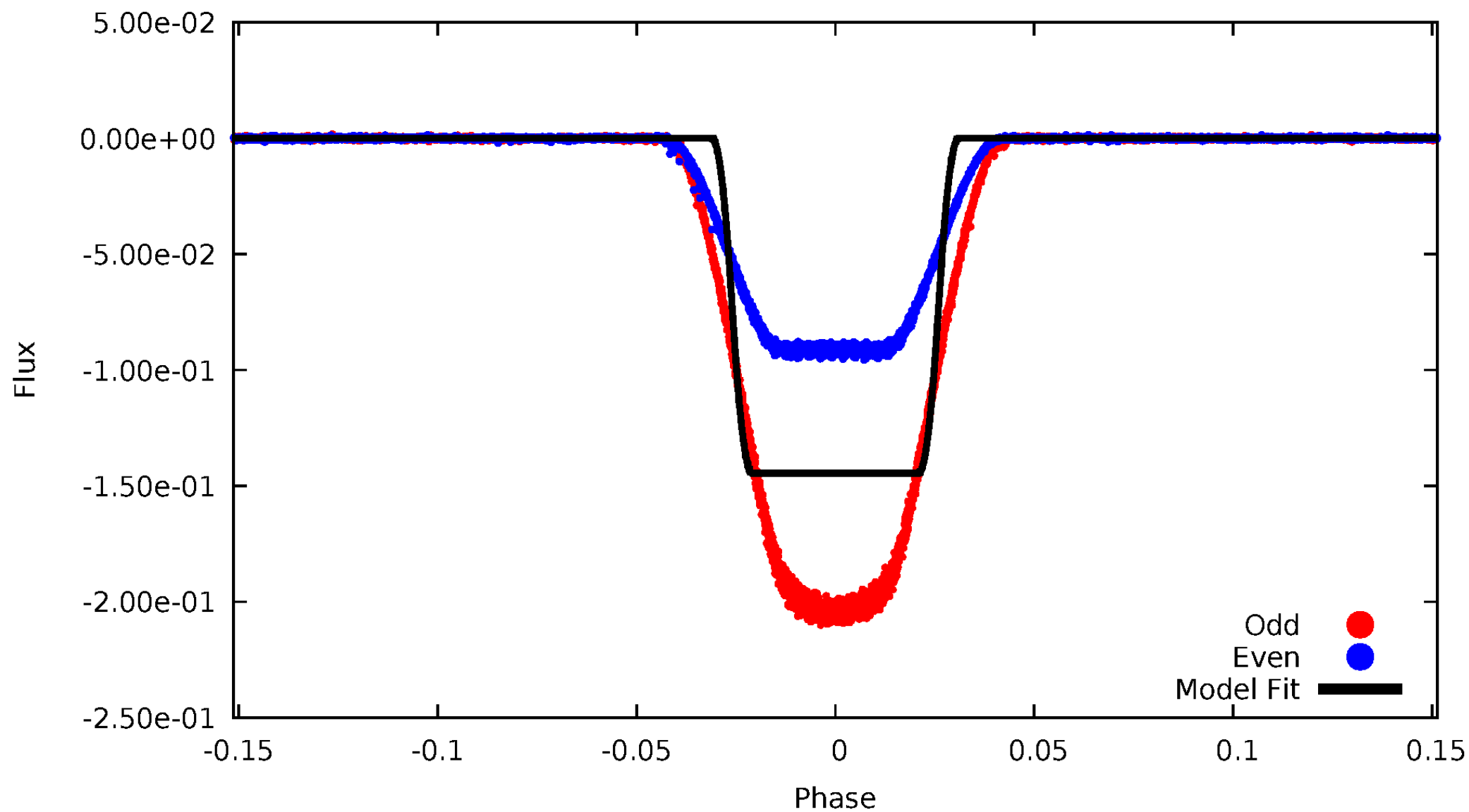
DV Odd/Even

TCE 008128965-01



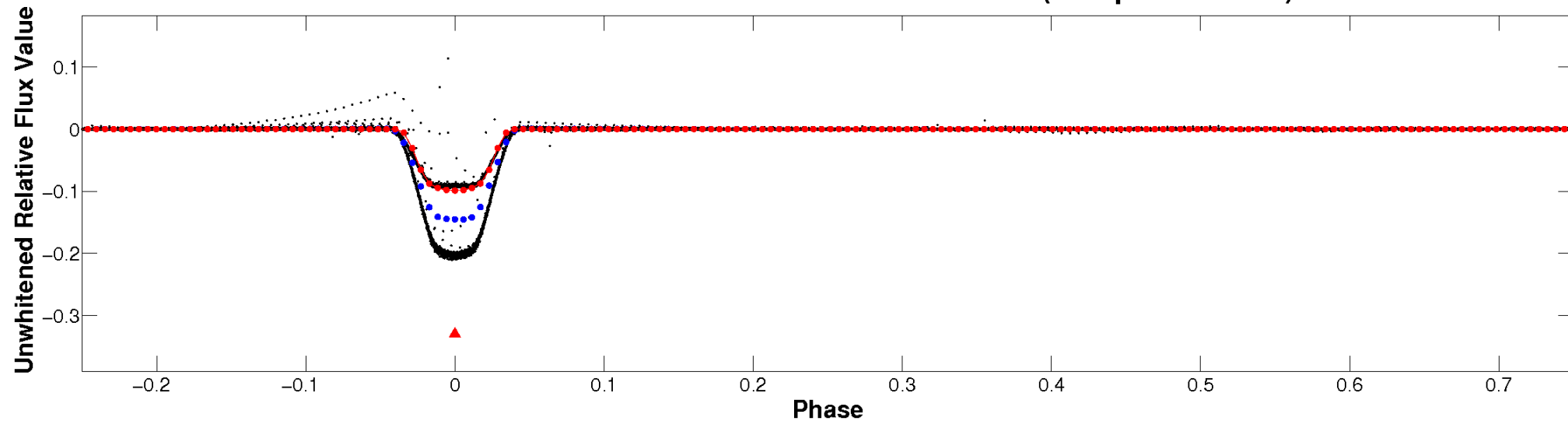
ALT Odd/Even

TCE 008128965-01

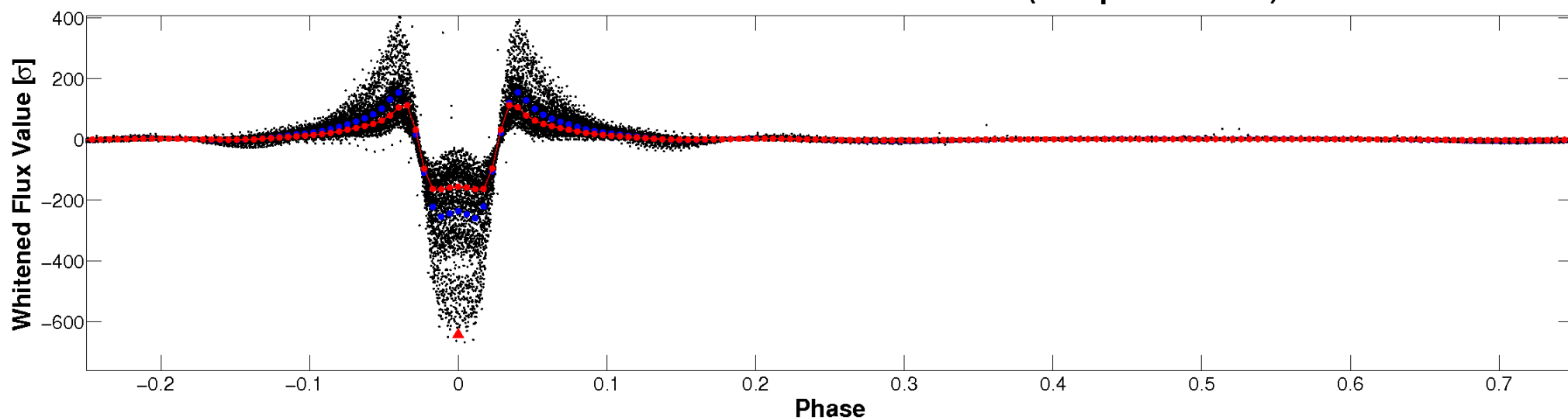


Non-Whitened Vs. Whitened Light Curve

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

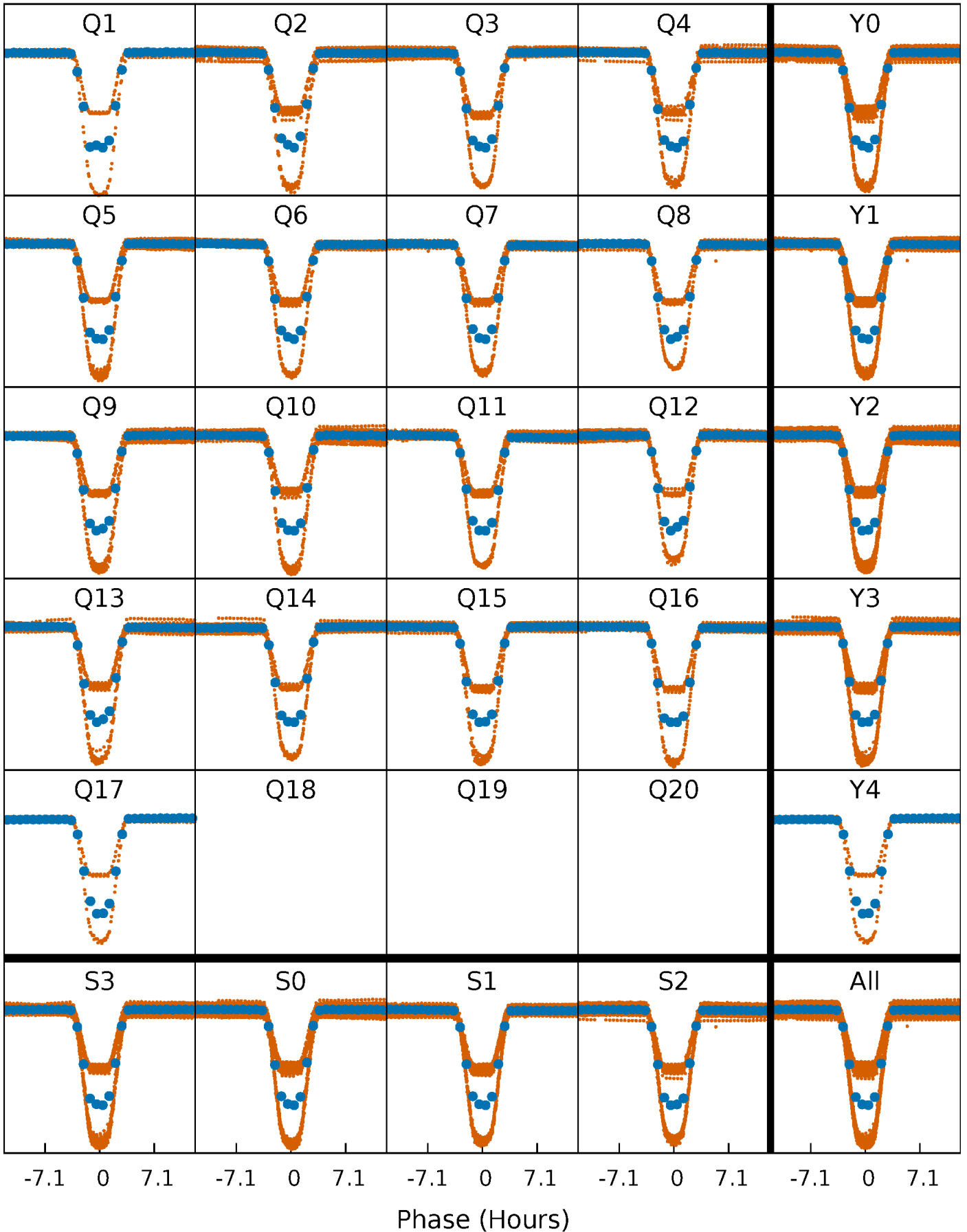


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



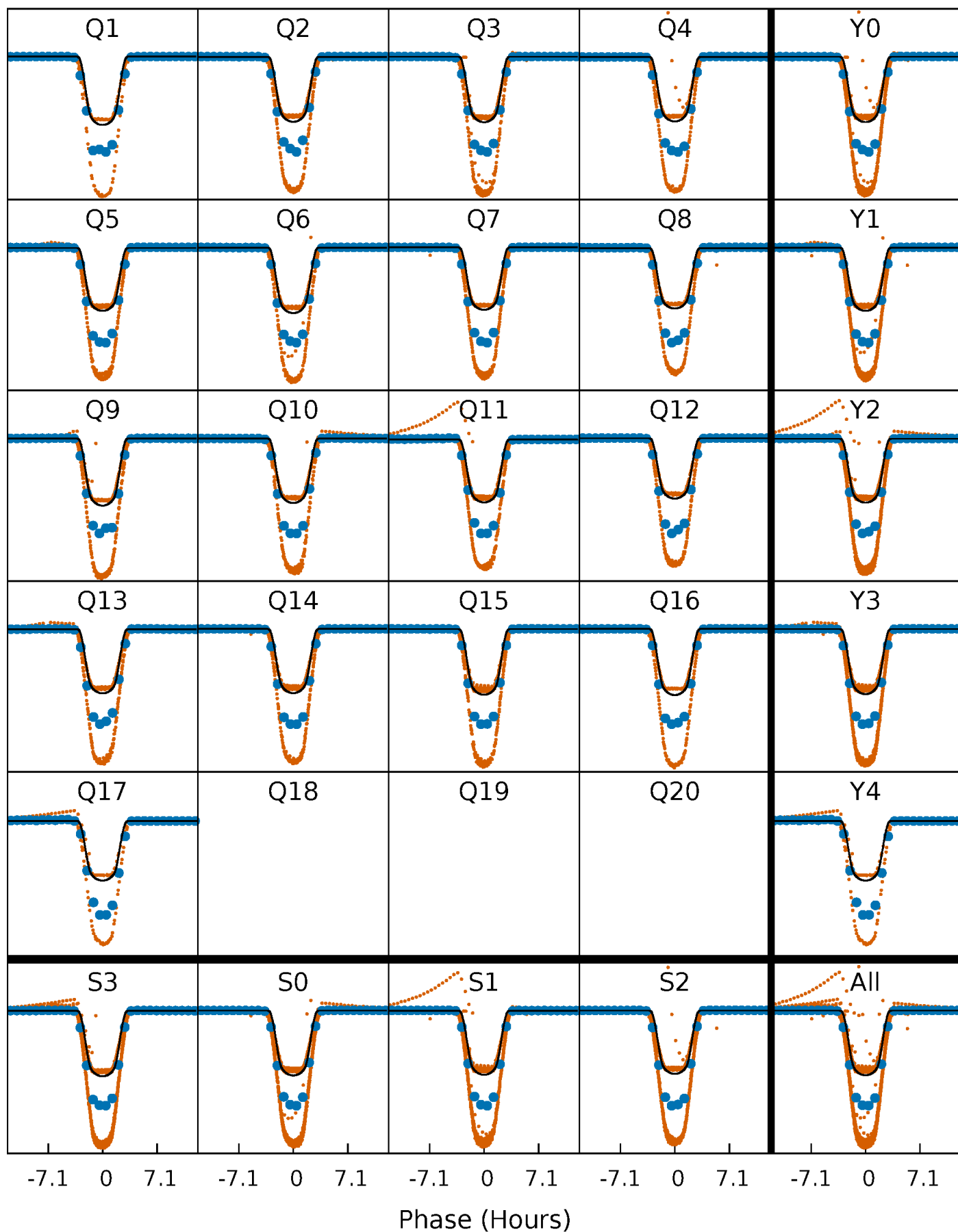
PDC Quarter-Phased Transit Curves

TCE 008128965-01 P= 3.570185 Days $T_0=134.437668$ (BKJD)



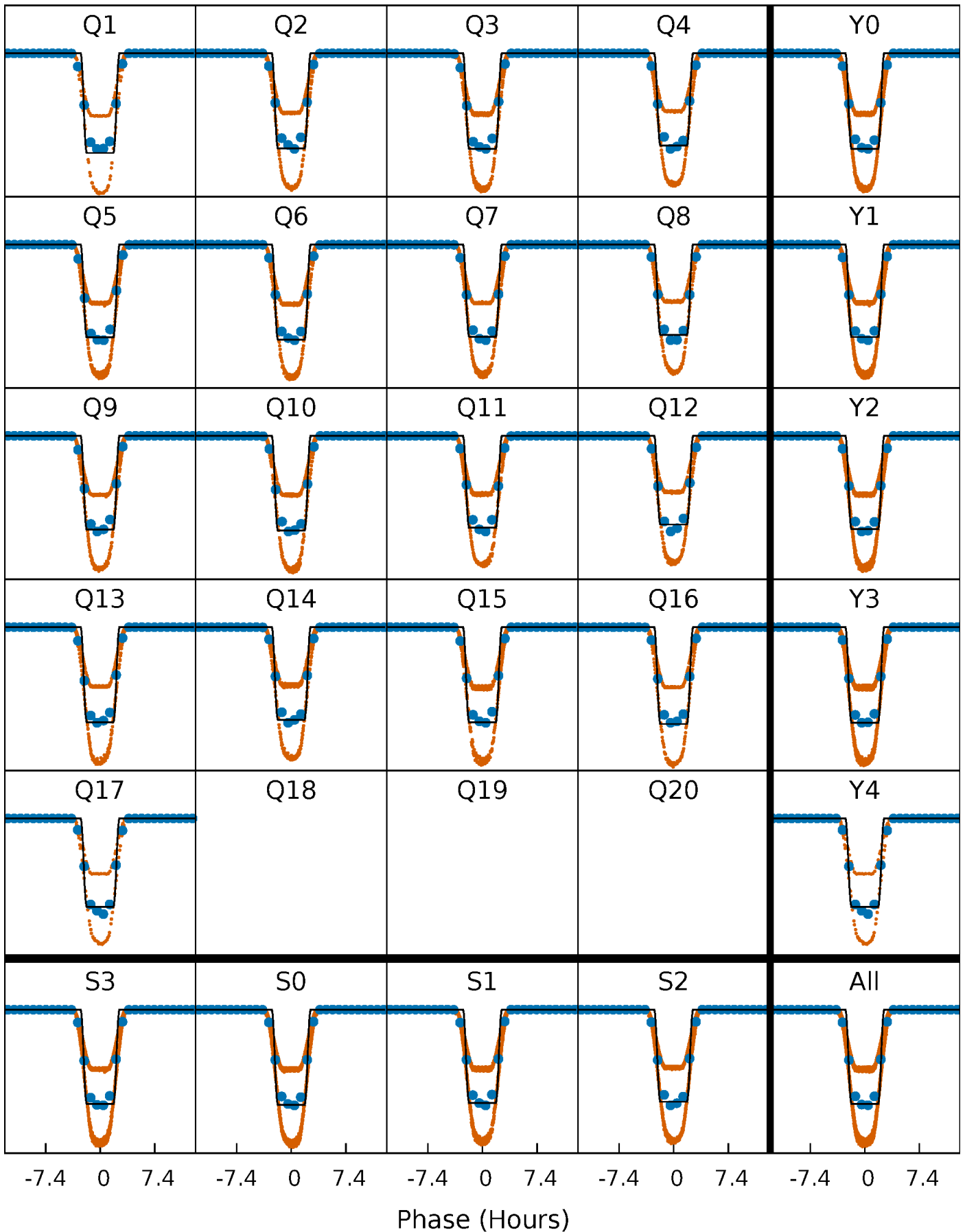
DV Quarter-Phased Transit Curves

TCE 008128965-01 P= 3.570185 Days $T_0=134.437668$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

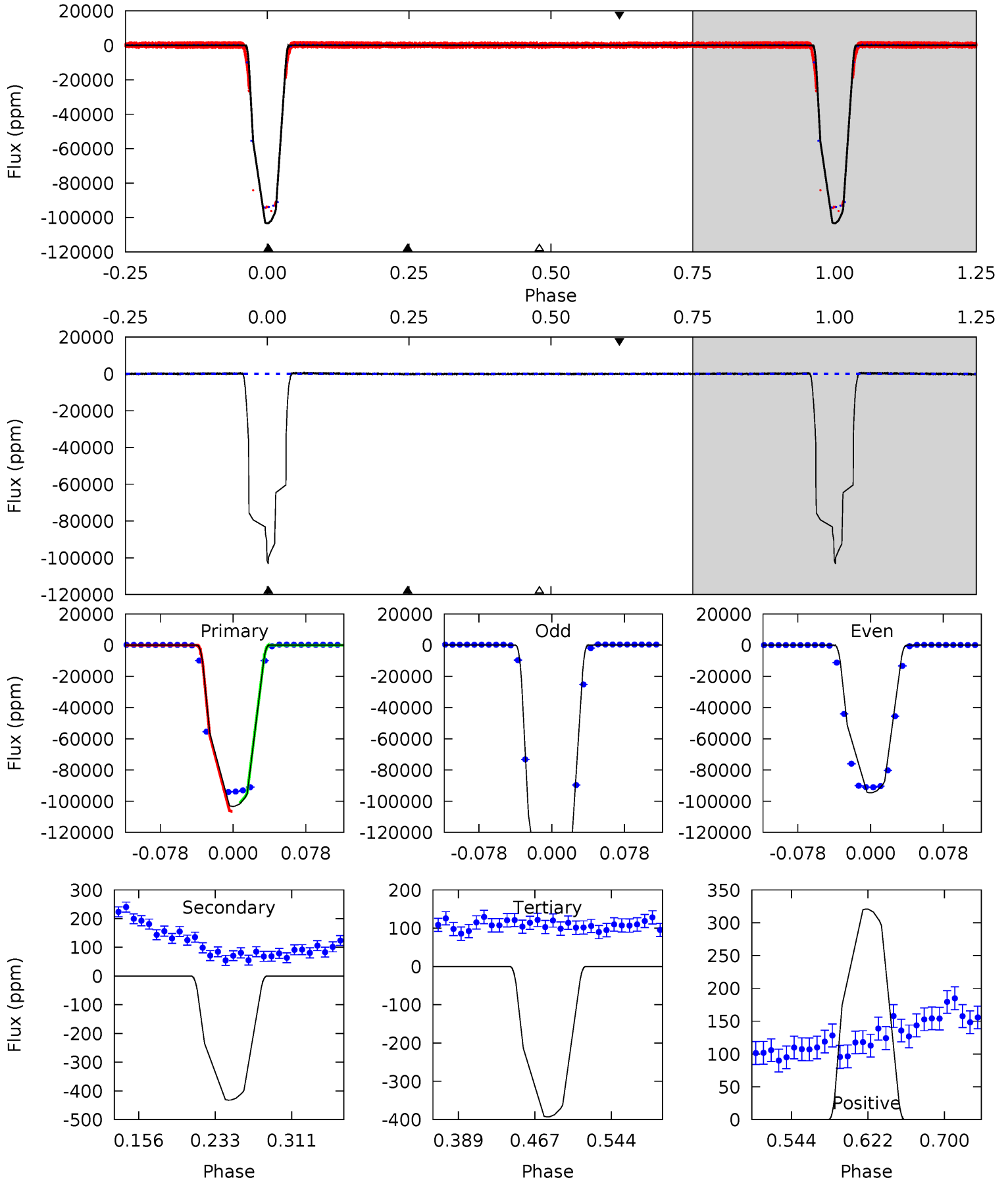
TCE 008128965-01 P= 3.570188 Days $T_0=134.436542$ (BKJD)



DV Model-Shift Uniqueness Test

008128965-01, P = 3.570185 Days, E = 130.867483 Days

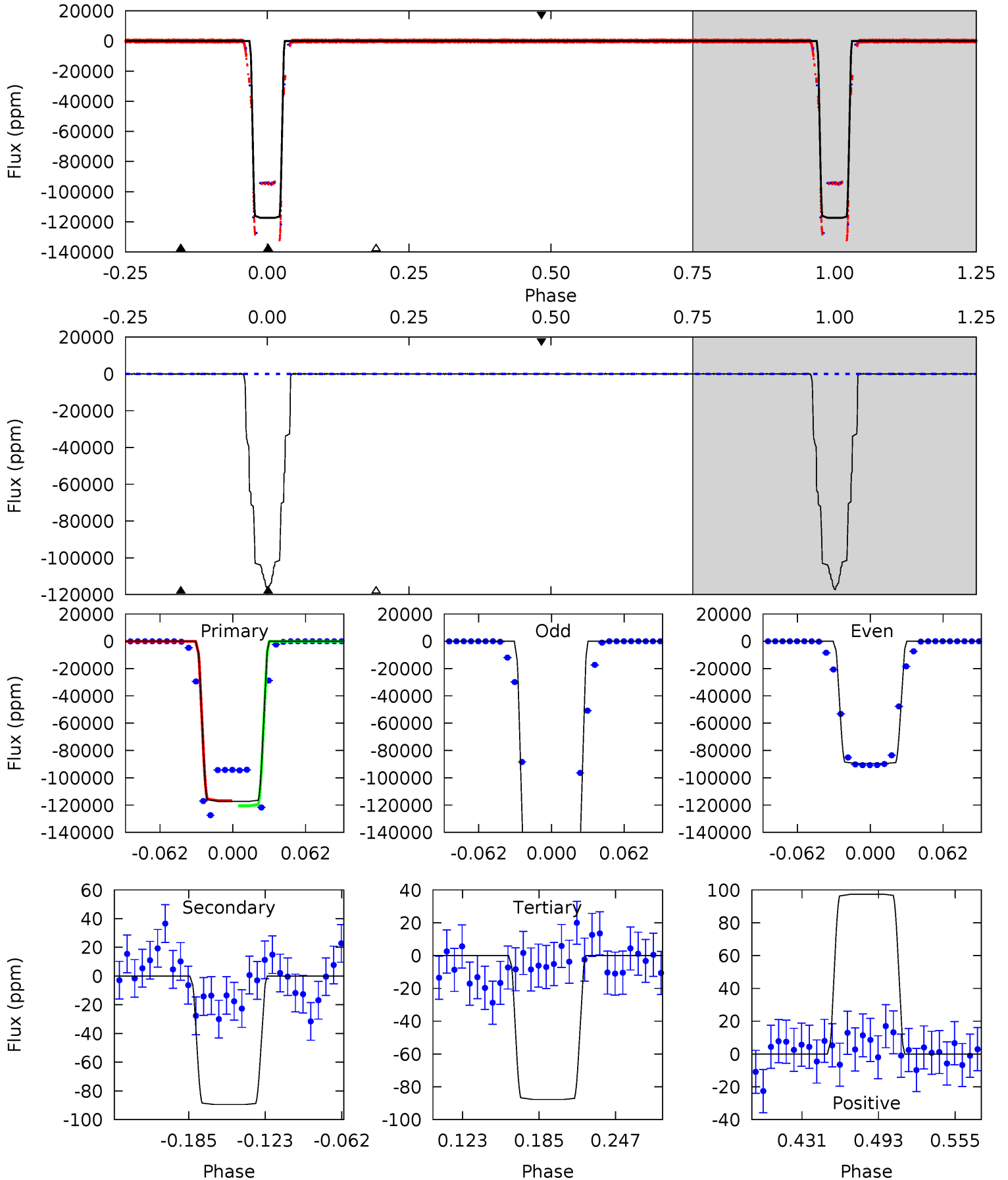
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4436	18.6	16.9	13.8	4.62	1.76	5.56	4419	4422	1.69	4.77	5595	1.48	0.01	0



Alt Model-Shift Uniqueness Test

008128965-01, P = 3.570188 Days, E = 130.866354 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5161	3.94	3.86	4.29	4.67	1.87	1.21	5157	5157	0.08	-0.35	6718	1.48	0.00	0



Stellar Parameters For KIC 008128965

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5945^{+161}_{-179}	$4.168^{+0.293}_{-0.158}$	$-0.240^{+0.300}_{-0.300}$	$1.333^{+0.343}_{-0.382}$	$0.953^{+0.145}_{-0.105}$	$0.567^{+1.049}_{-0.266}$
	+3%/-3%	+7%/-4%	+125%/-125%	+26%/-29%	+15%/-11%	+185%/-47%
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 008128965-01 / KOI 6974.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-432 ± 23	$41.15^{+6.12}_{-6.54}$	1970^{+141}_{-166}	-1796^{+3905}_{-400}	$0.285^{+0.116}_{-0.067}$
Alt.	-89 ± 23	$54.56^{+8.24}_{-9.16}$	1967^{+153}_{-178}	-2440^{+119}_{-100}	$0.035^{+0.017}_{-0.012}$

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

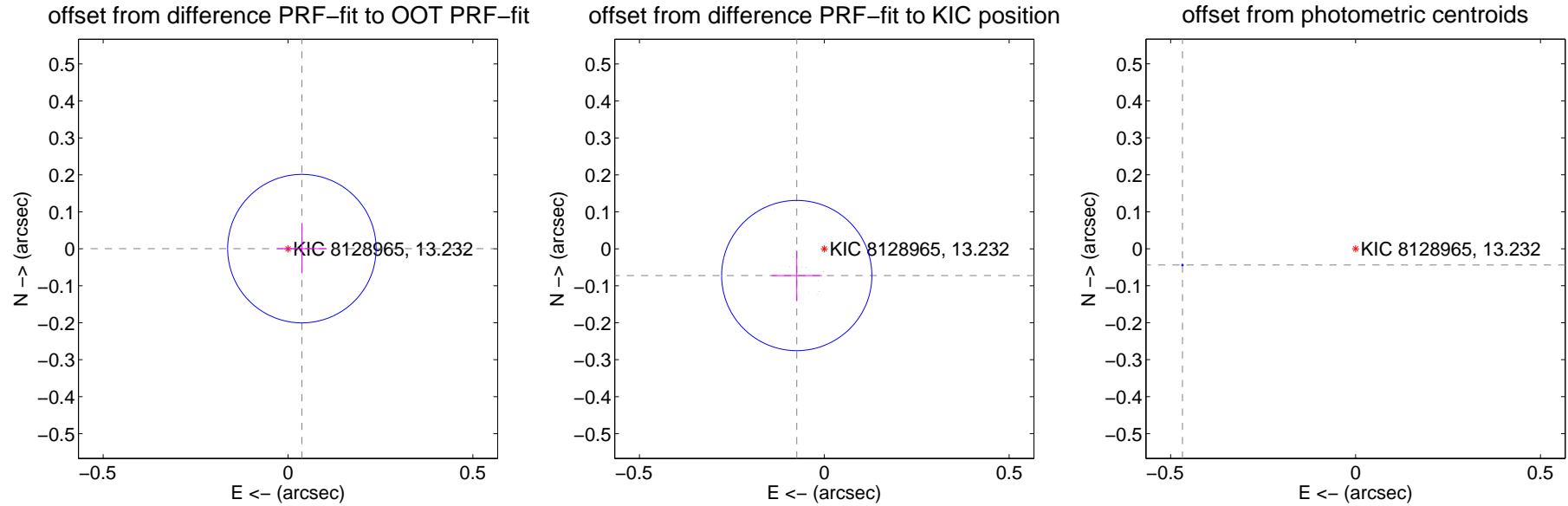
DV Centroid Data

Supplemental centroid analysis for 008128965-01. Kepler magnitude: 13.23. Transit SNR 4655.07

There are 17 quarters with good PRF difference image offsets

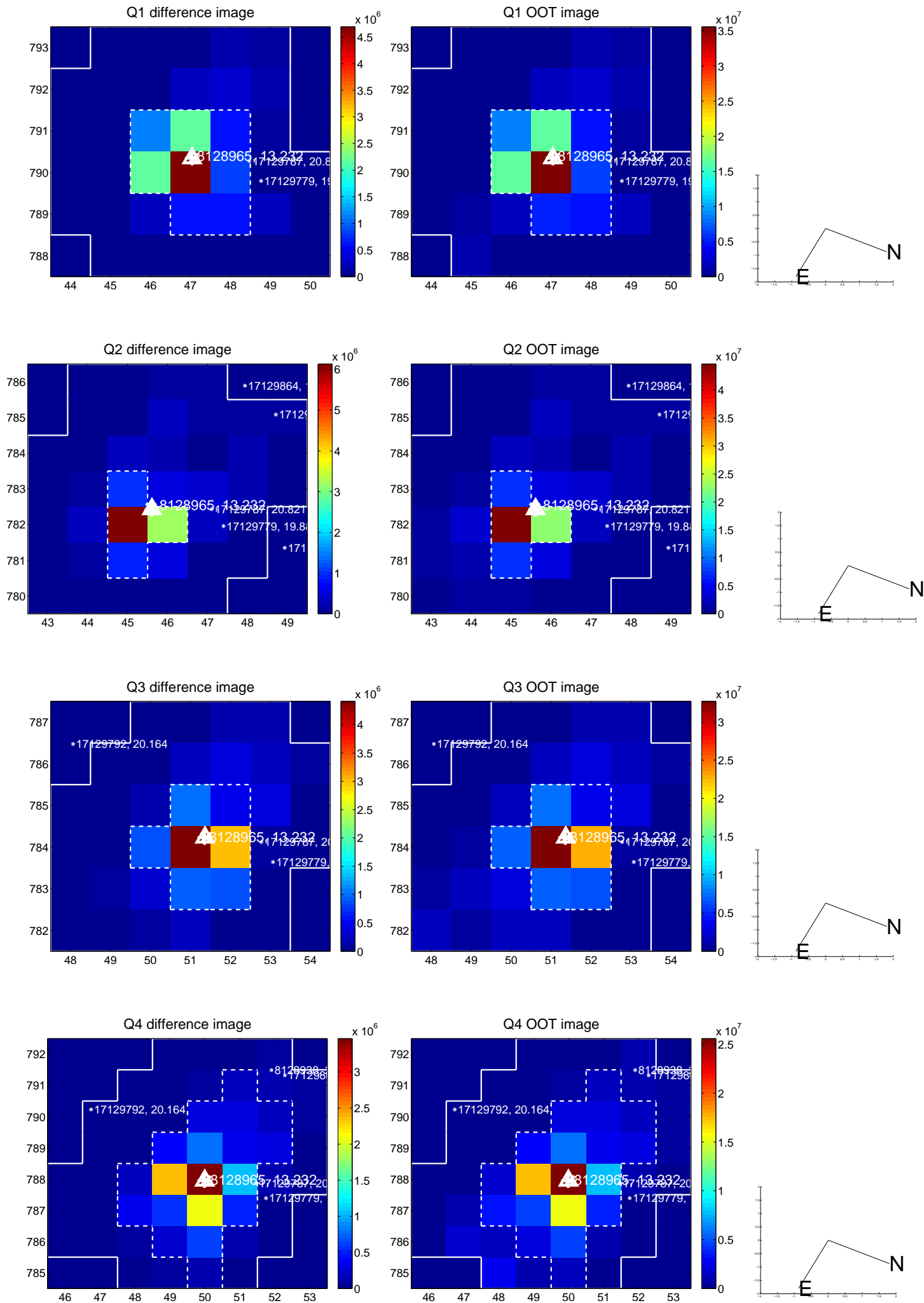
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.038 ± 0.067	0.56	-0.038 ± 0.067	0.001 ± 0.067
PRF-fit source offset from KIC position	0.104 ± 0.068	1.53	0.075 ± 0.068	-0.072 ± 0.068
photometric centroid source offset	0.47 ± 0.00	640.61	0.47 ± 0.00	-0.04 ± 0.00

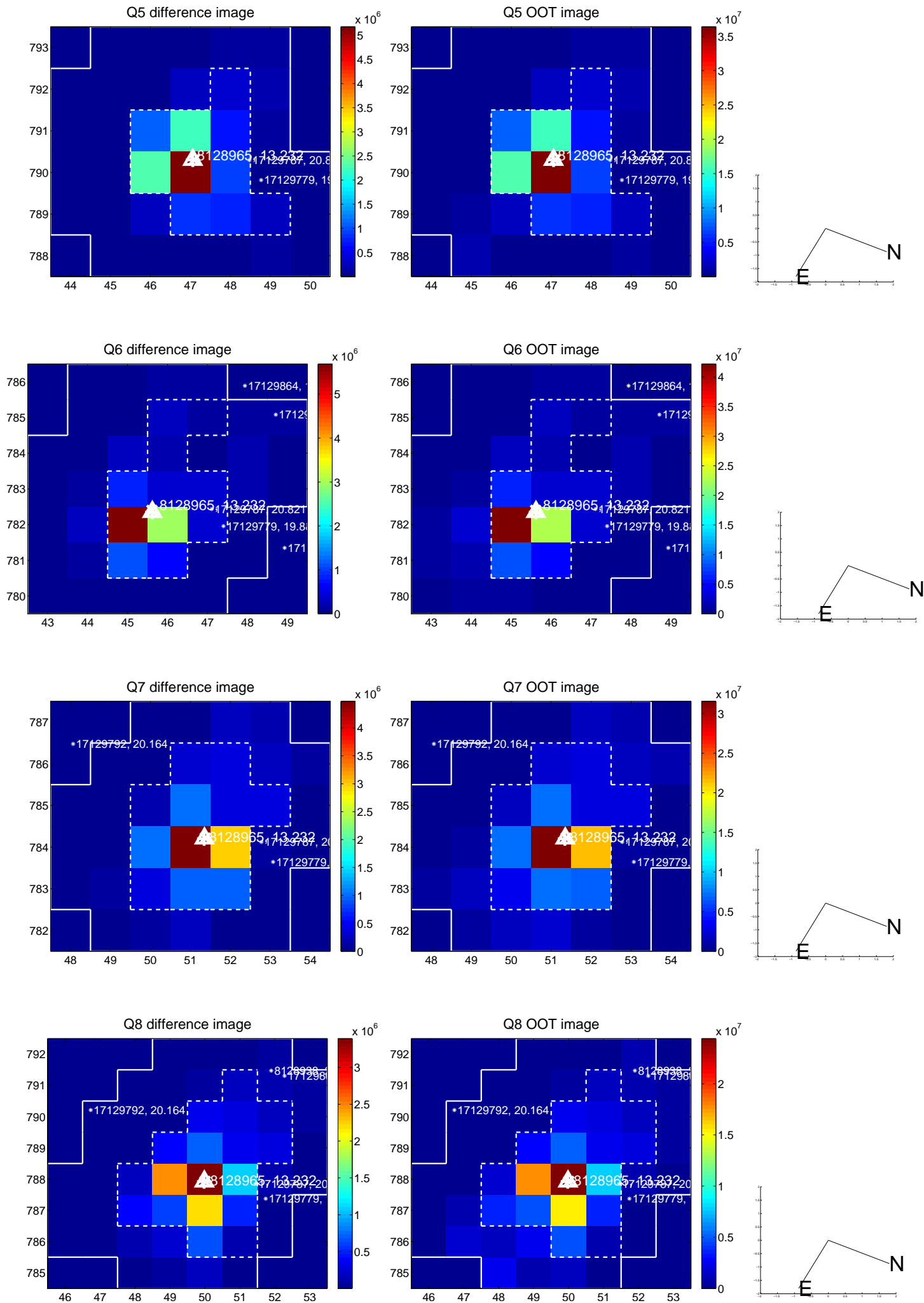


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

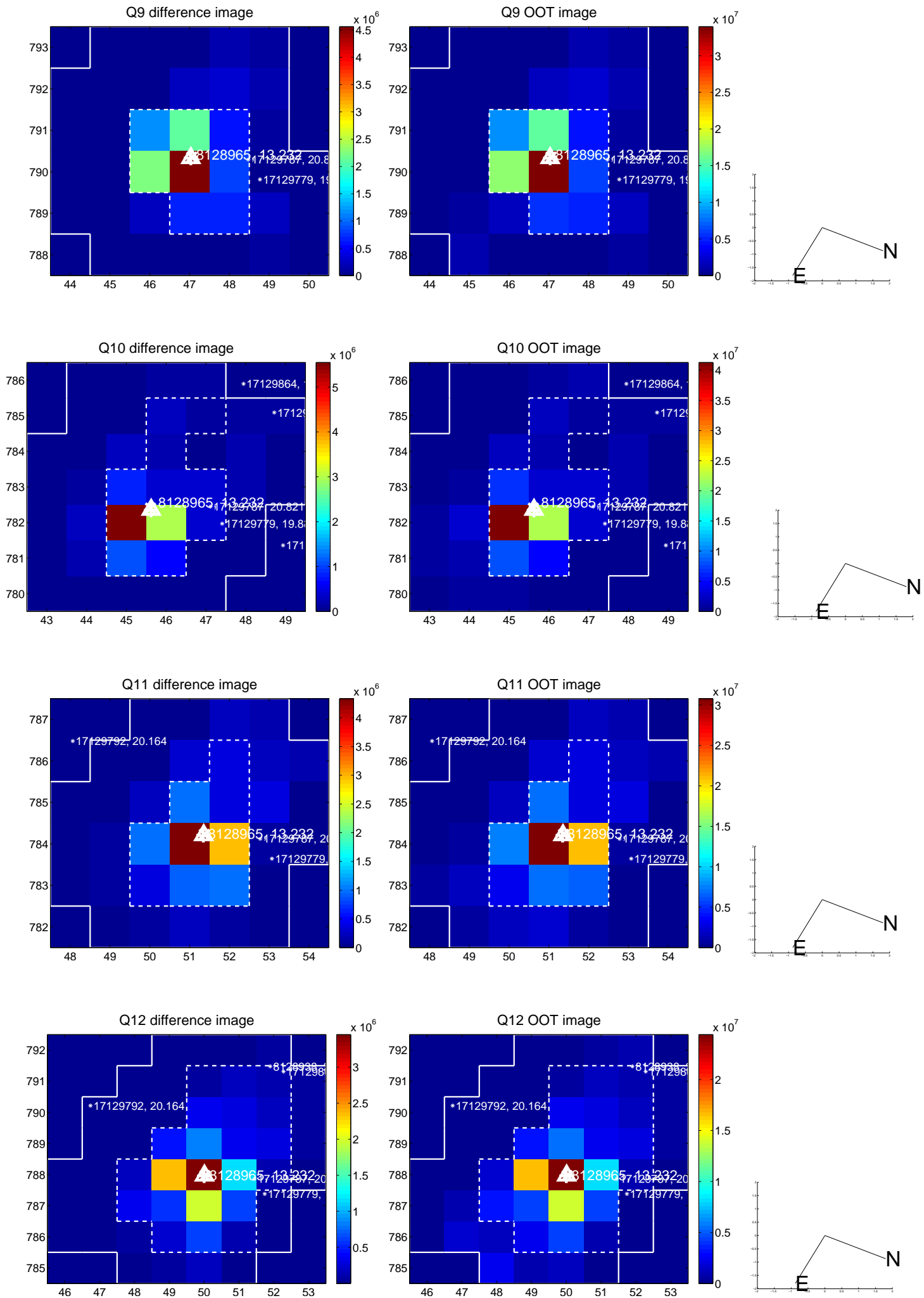
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



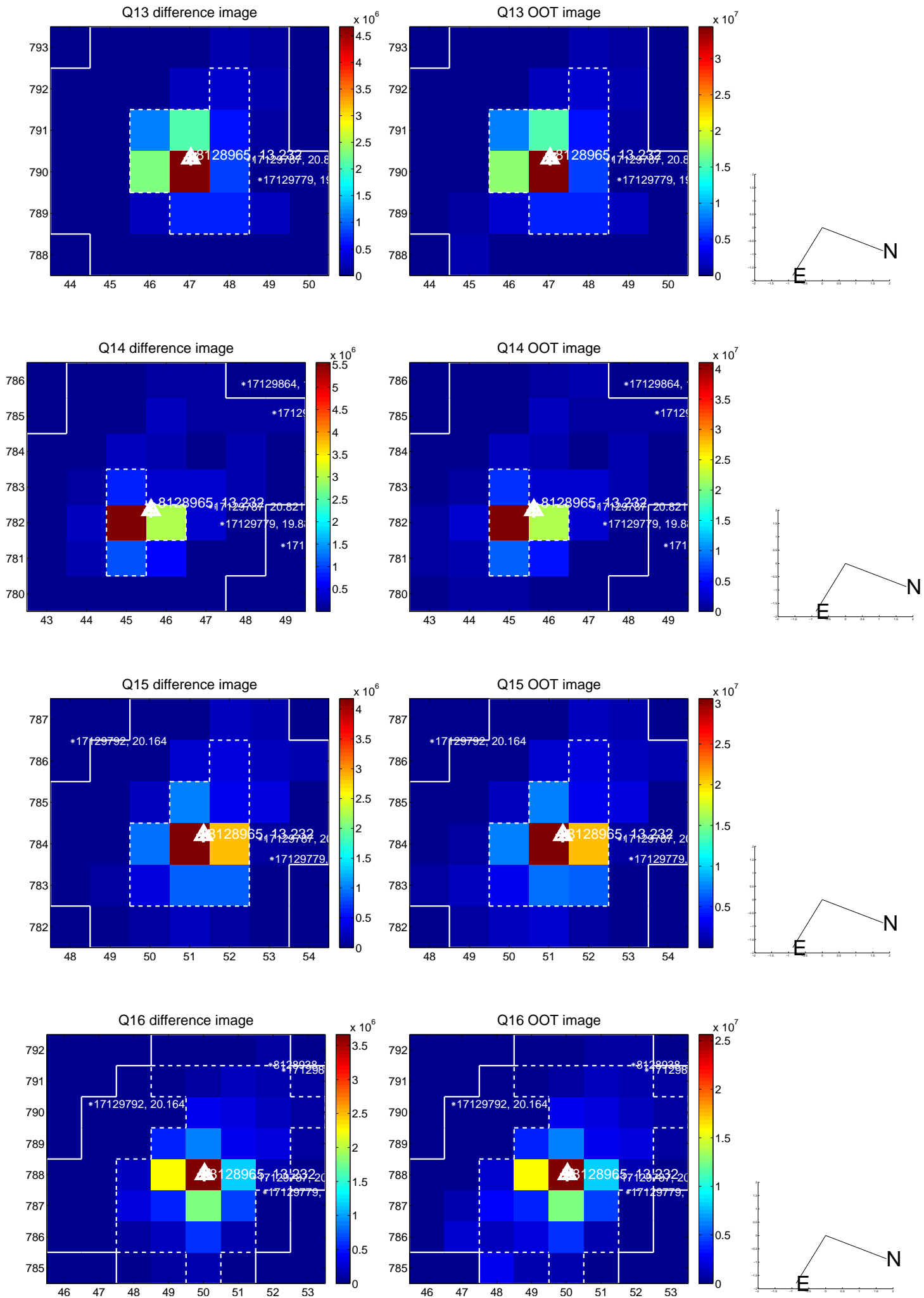
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



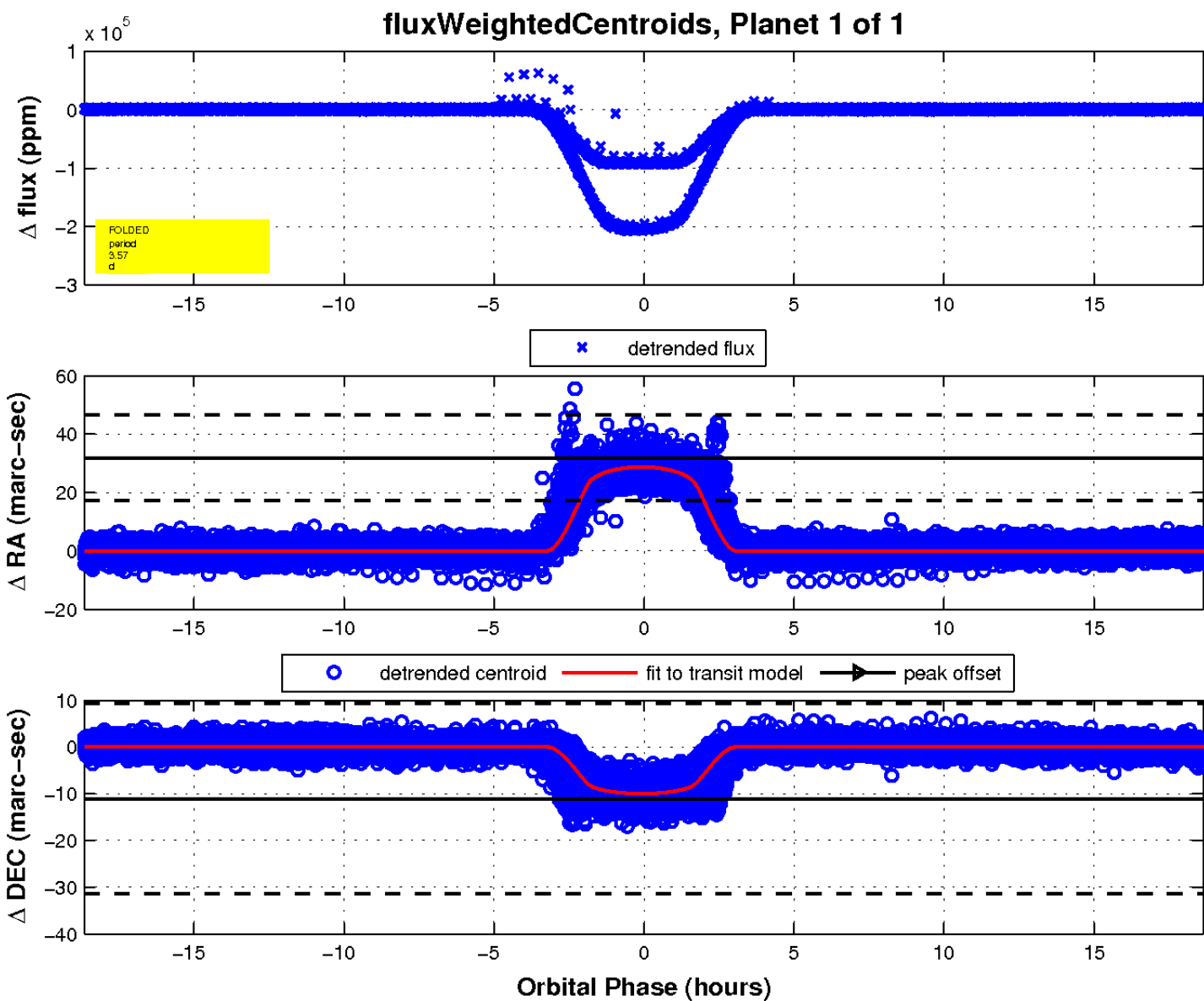
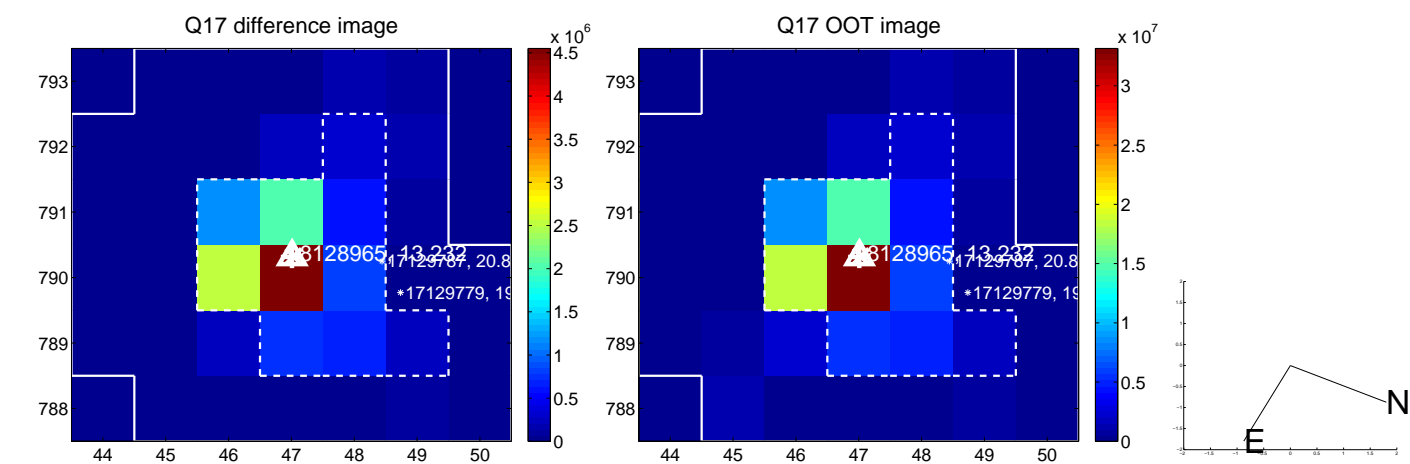
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

