

KIC 006841577

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})
006841577-01	OBS	6773.01	15.537535	140.273402	207920.0	5.832	7646.2	4664.3	0.87	5704	40.86	54.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006841577-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV

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.

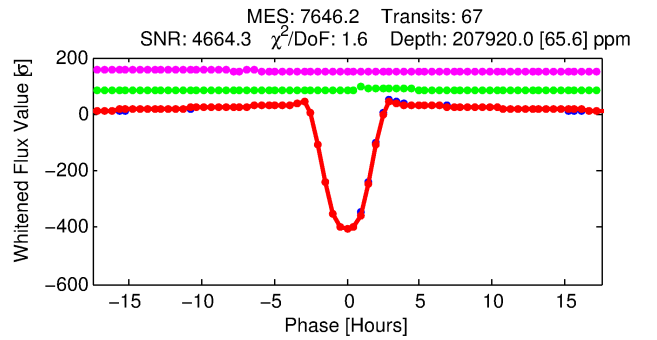
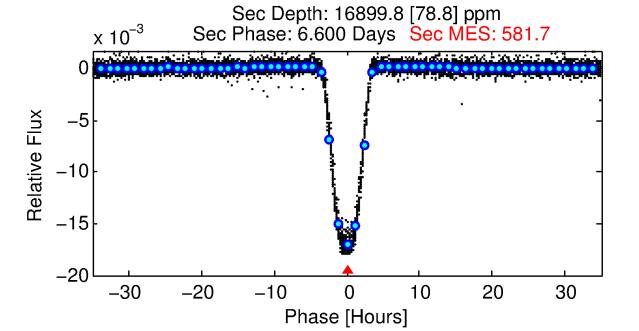
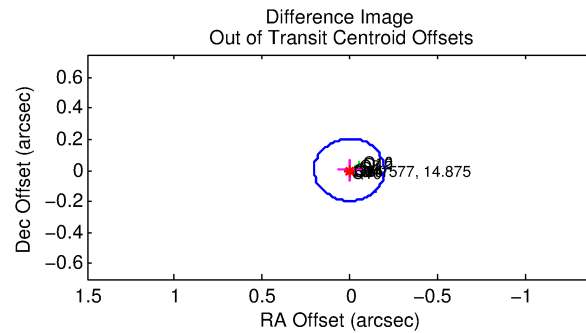
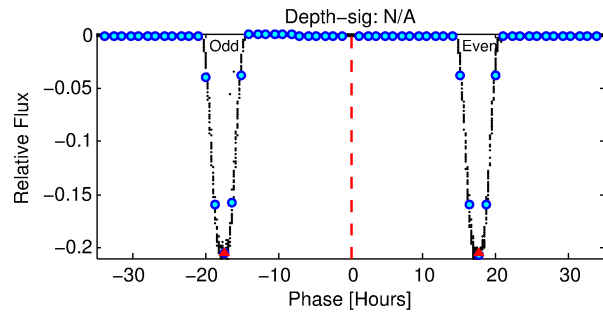
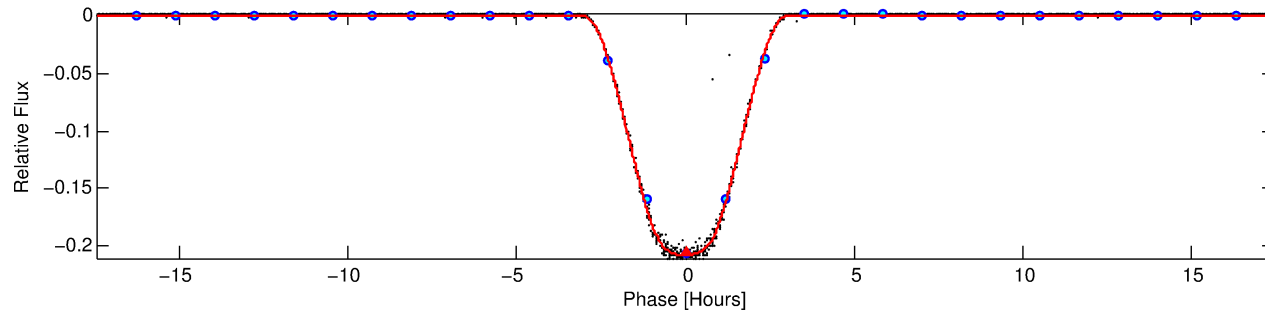
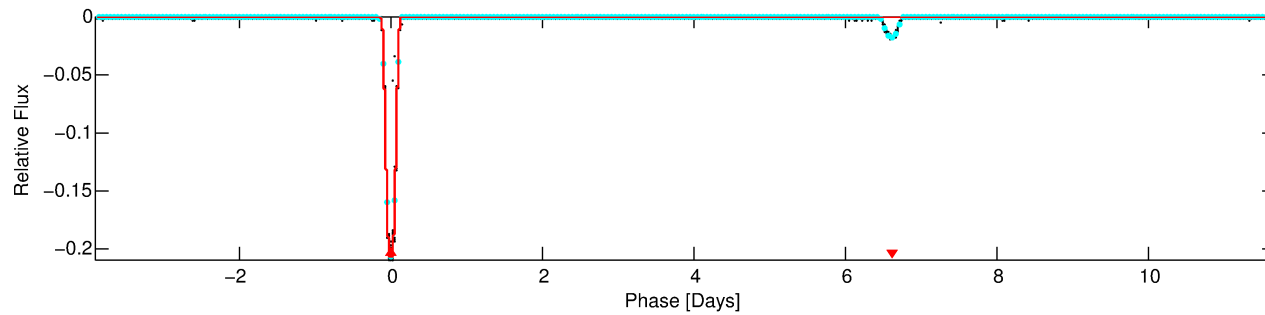
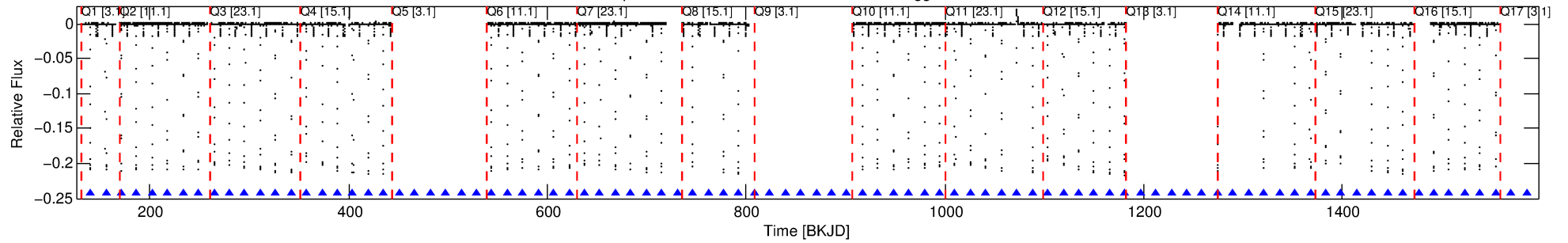
Ephemeris Match Information For 006841577-01

No Significant Match Found

DV One-Page Summary

KIC: 6841577 Candidate: 1 of 1 Period: 15.538 d
KOI: K06773.01 Corr: 1.000

Kp: 14.88 R*: 0.87 Rs Teff: 5704.0 K Logg: 4.48 Fe/H: -0.380



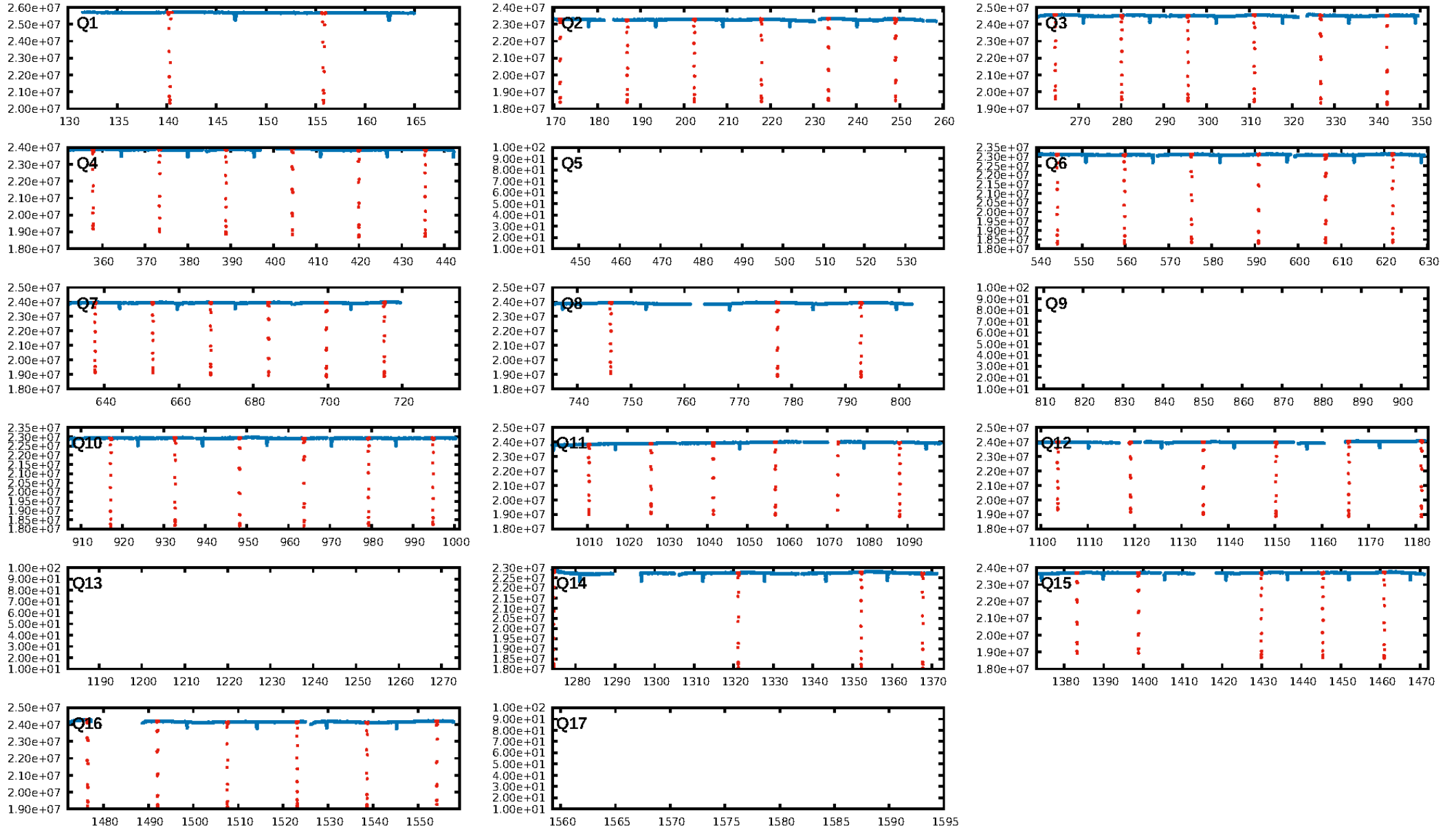
DV Fit Results:

Period = 15.53753 [0.00000] d
Epoch = 140.2734 [0.0000] BKJD
Rp/R* = 0.4314 [0.0001]
a/R* = 27.81 [0.01]
b = 0.43 [0.00]
Seff = 54.80 [17.78]
Teff = 694 [56] K
Rp = 40.86 [9.93] Re
a = 0.1142 [0.0237] AU
Ag = 72.62 [22.22] [3.22σ]
Teffp = 3131 [85] K [23.99σ]

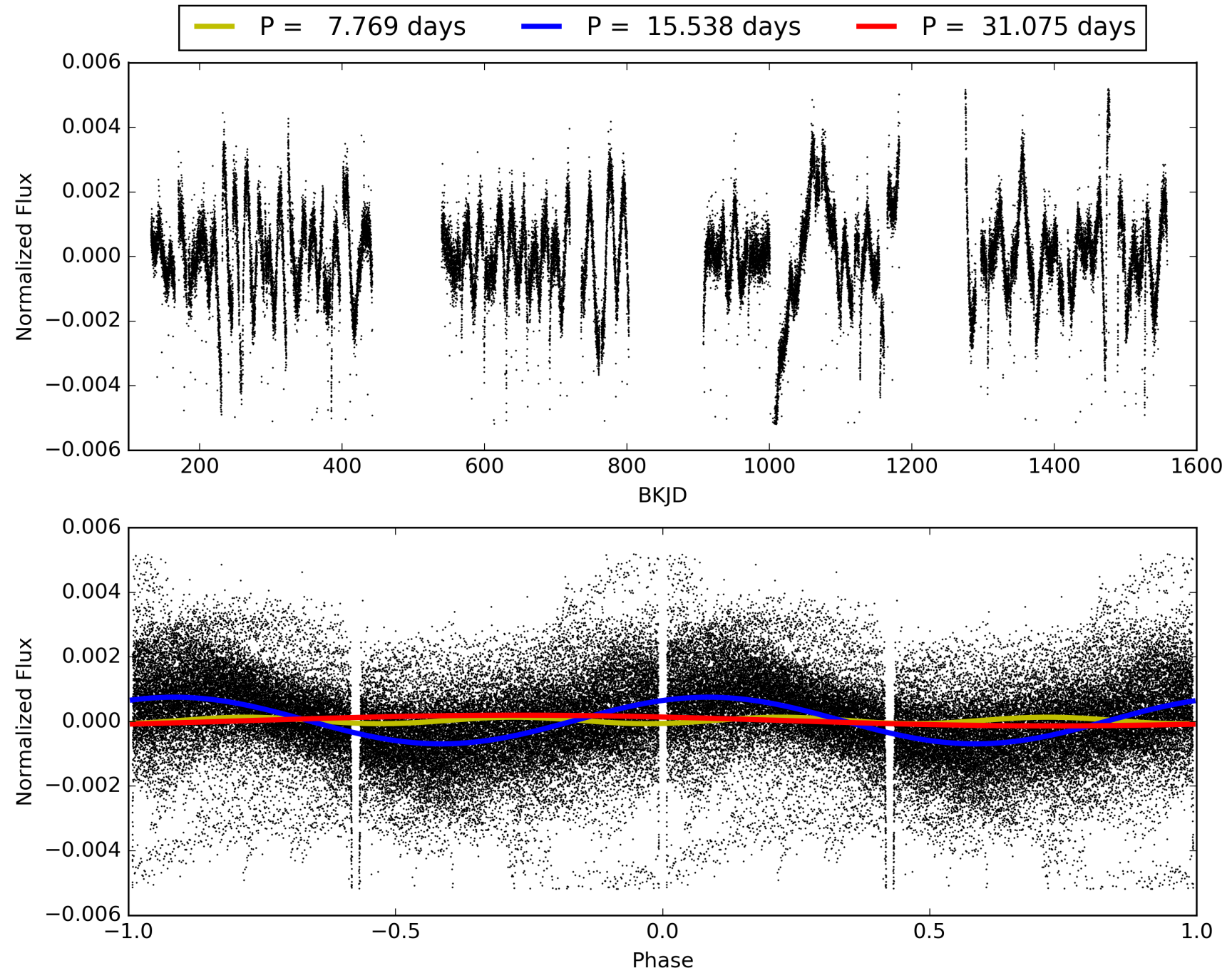
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [65/65]
GhostDiagnostic-chr: 5.245
Centroid-sig: 0.0%
Centroid-so: 0.172 arcsec [124.66σ]
OotOffset-rm: 0.007 arcsec [0.10σ]
KicOffset-rm: 0.152 arcsec [2.22σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006841577-01, PDC Light Curves

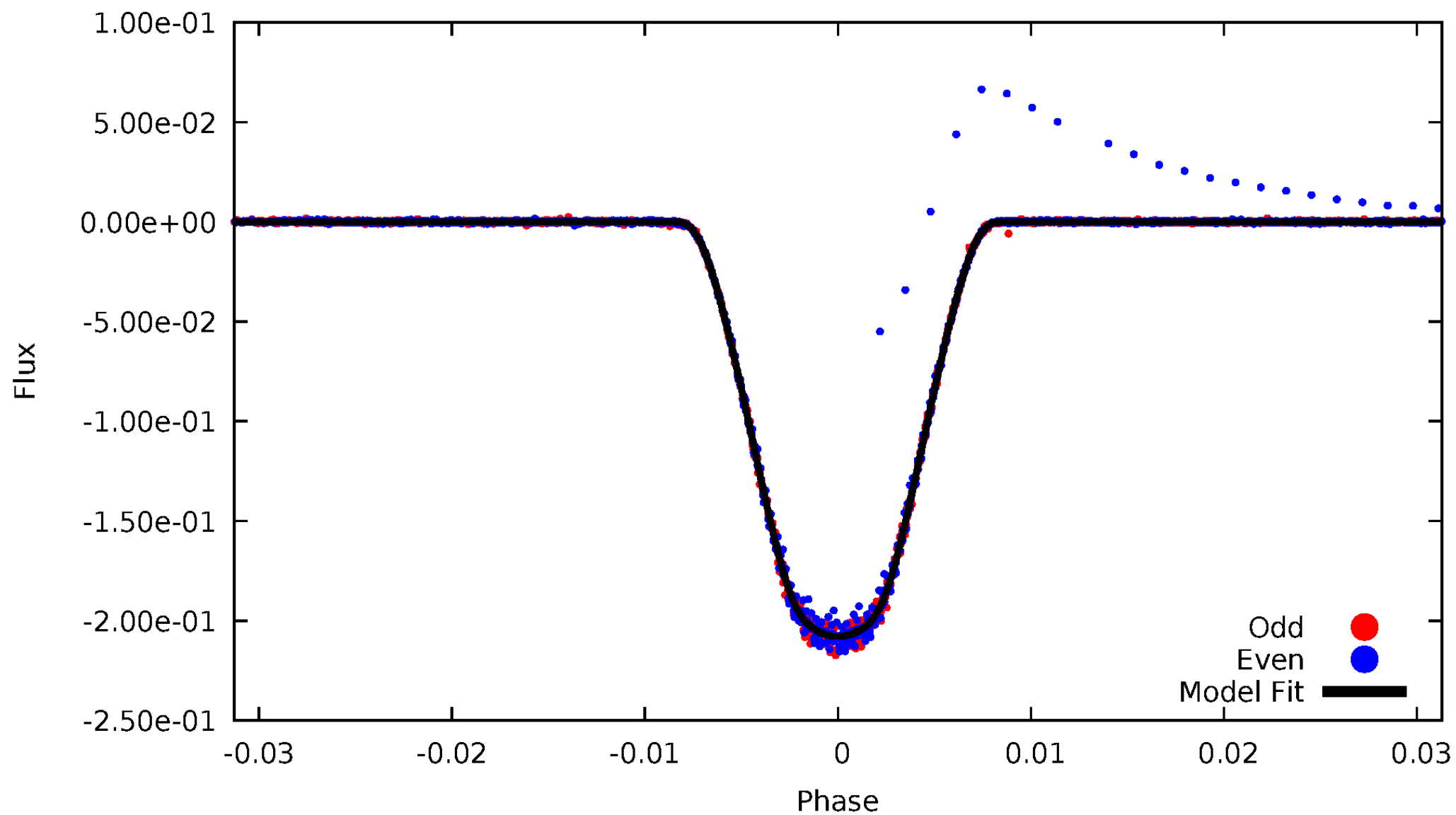


TCE 006841577-01



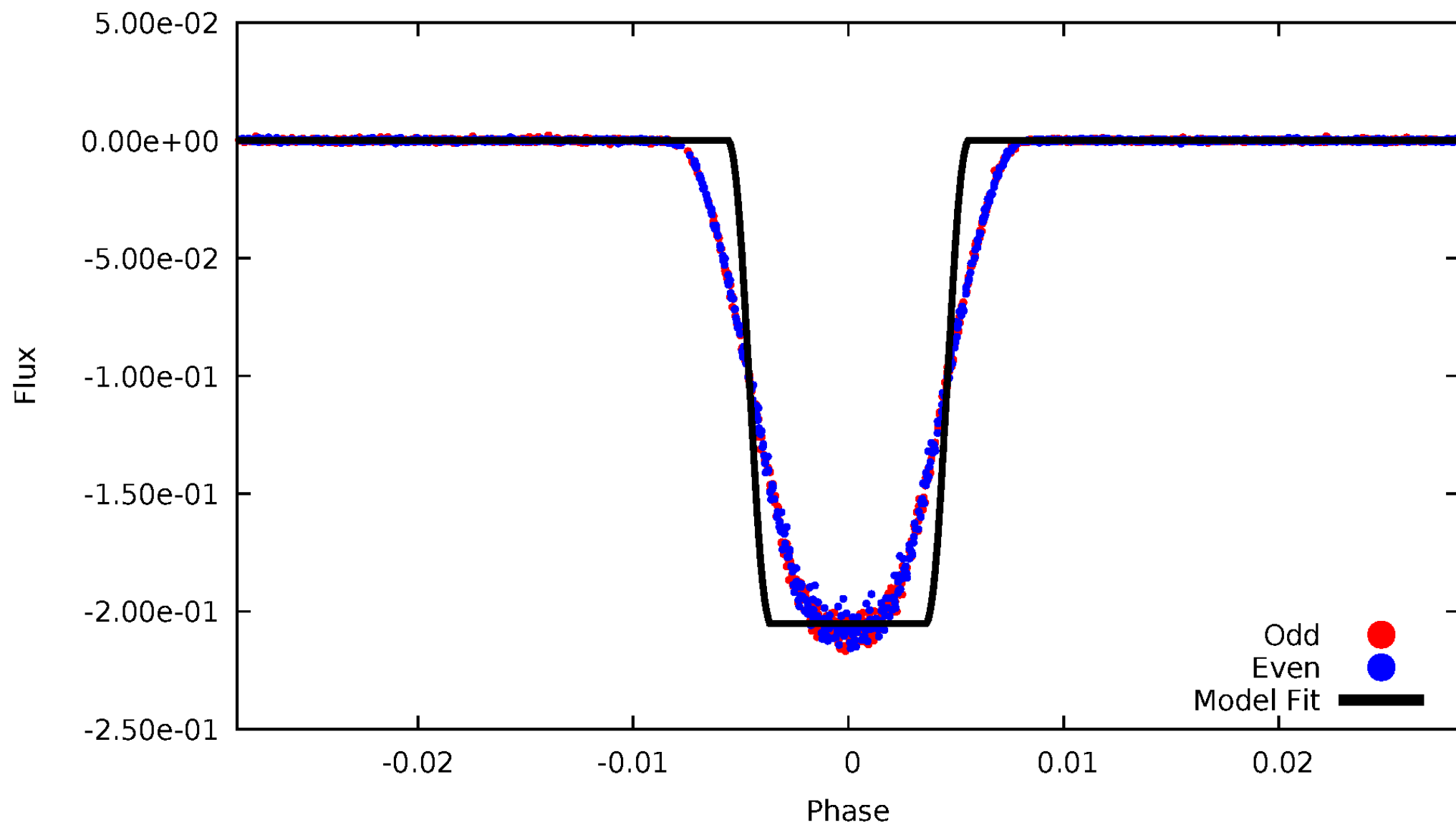
DV Odd/Even

TCE 006841577-01



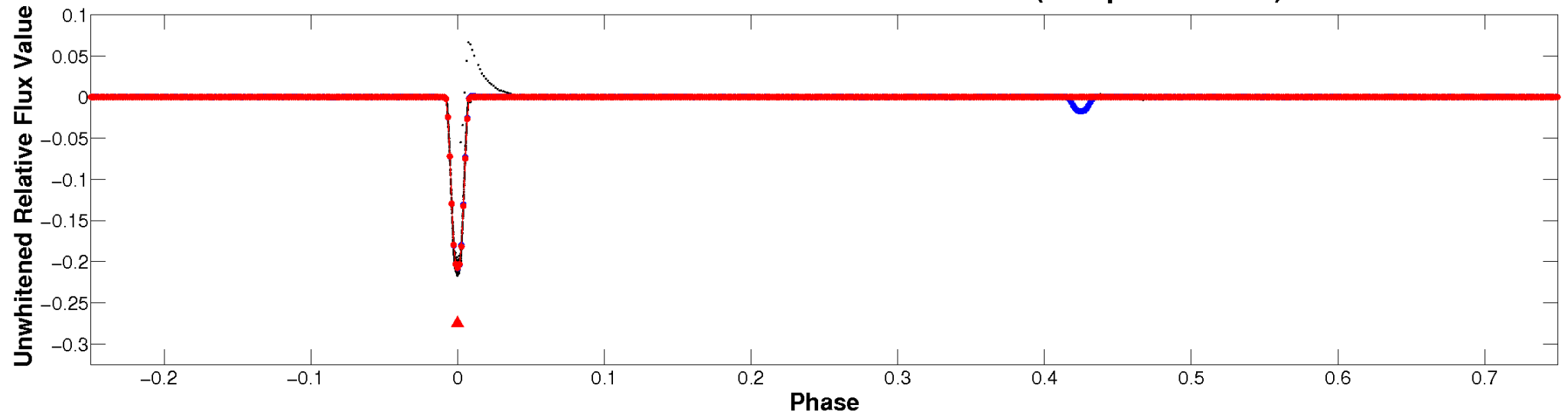
ALT Odd/Even

TCE 006841577-01

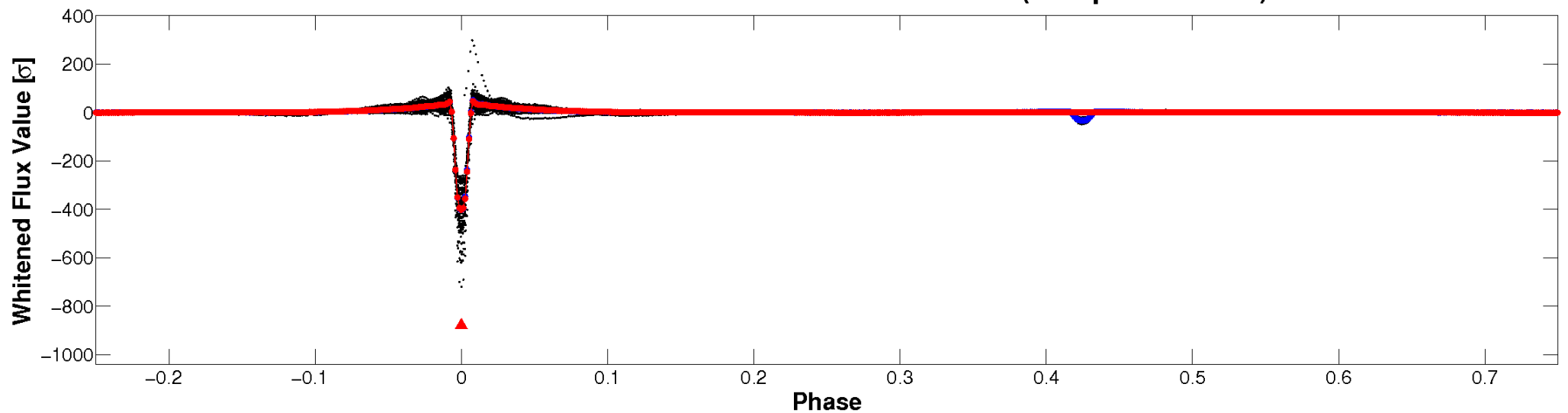


Non-Whitened Vs. Whitened Light Curve

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

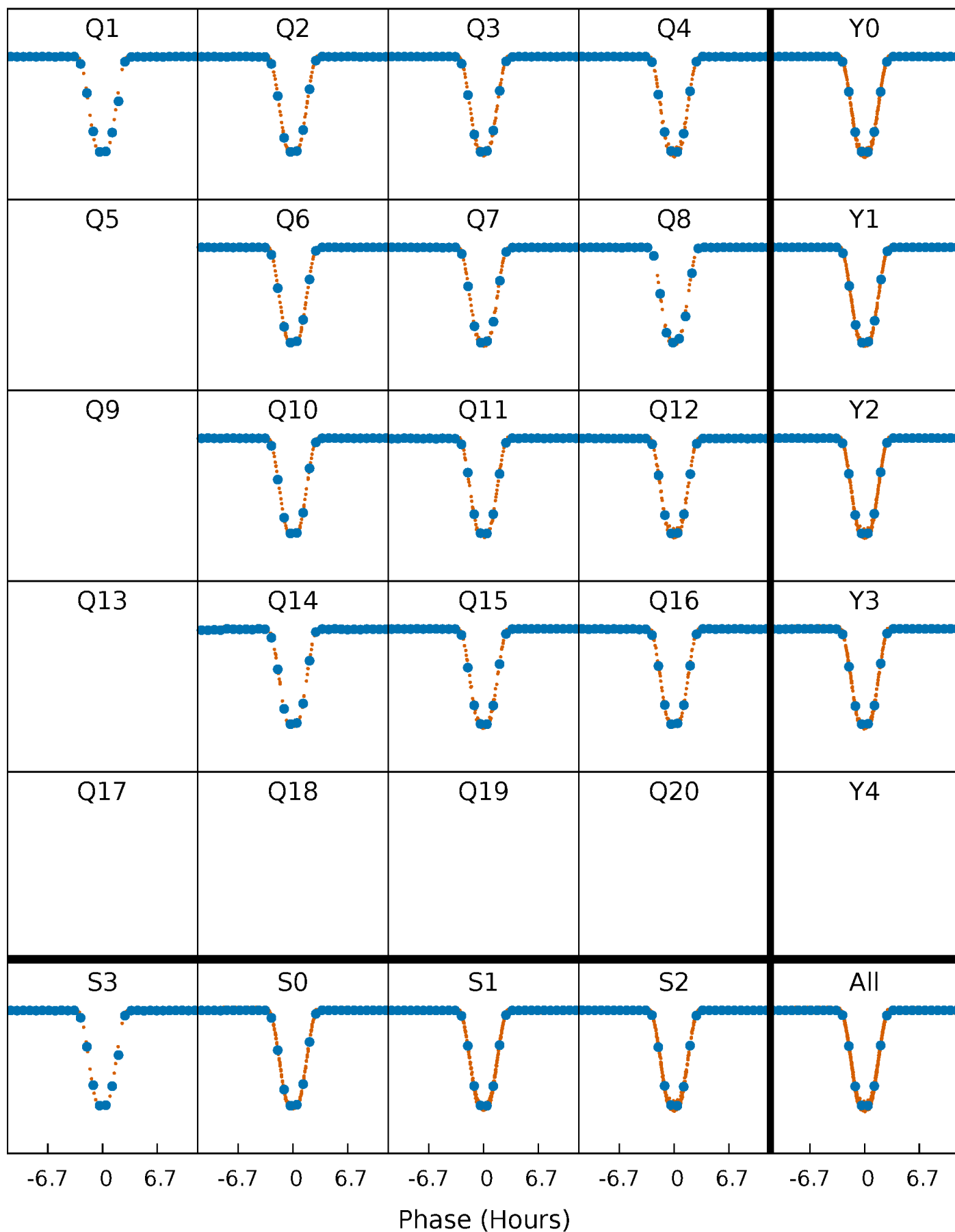


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



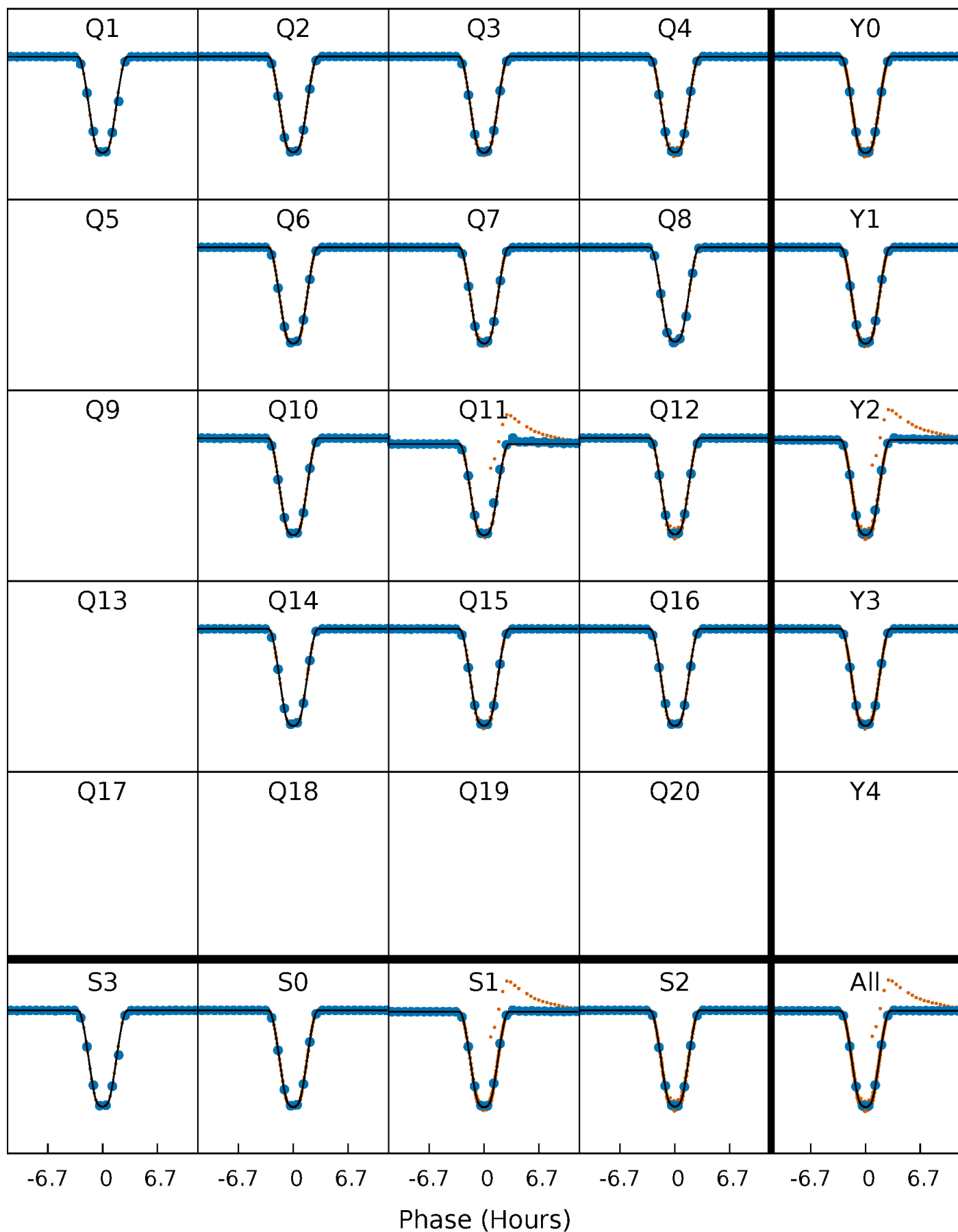
PDC Quarter-Phased Transit Curves

TCE 006841577-01 P= 15.537535 Days $T_0=140.273402$ (BKJD)



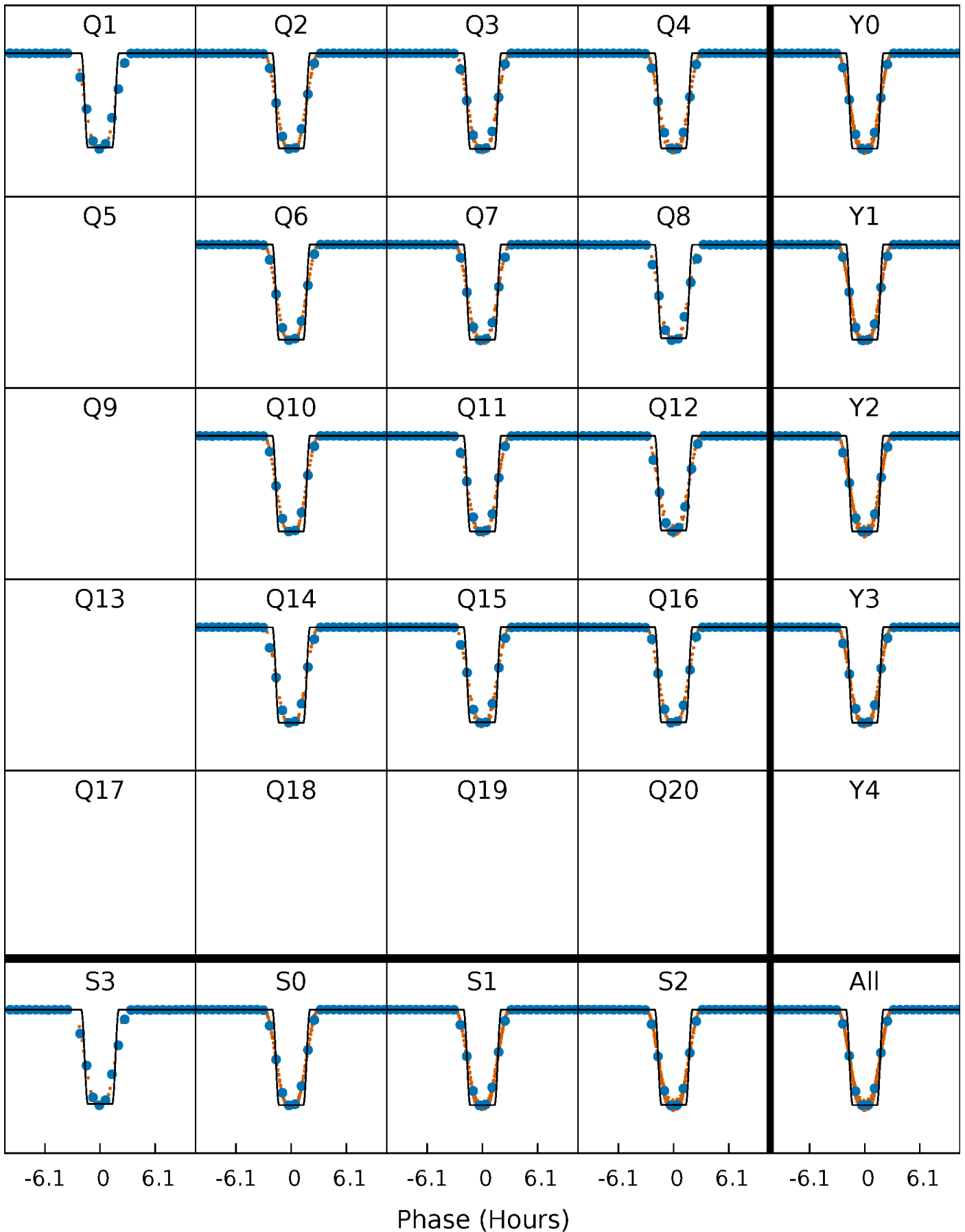
DV Quarter-Phased Transit Curves

TCE 006841577-01 P= 15.537535 Days $T_0=140.273402$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

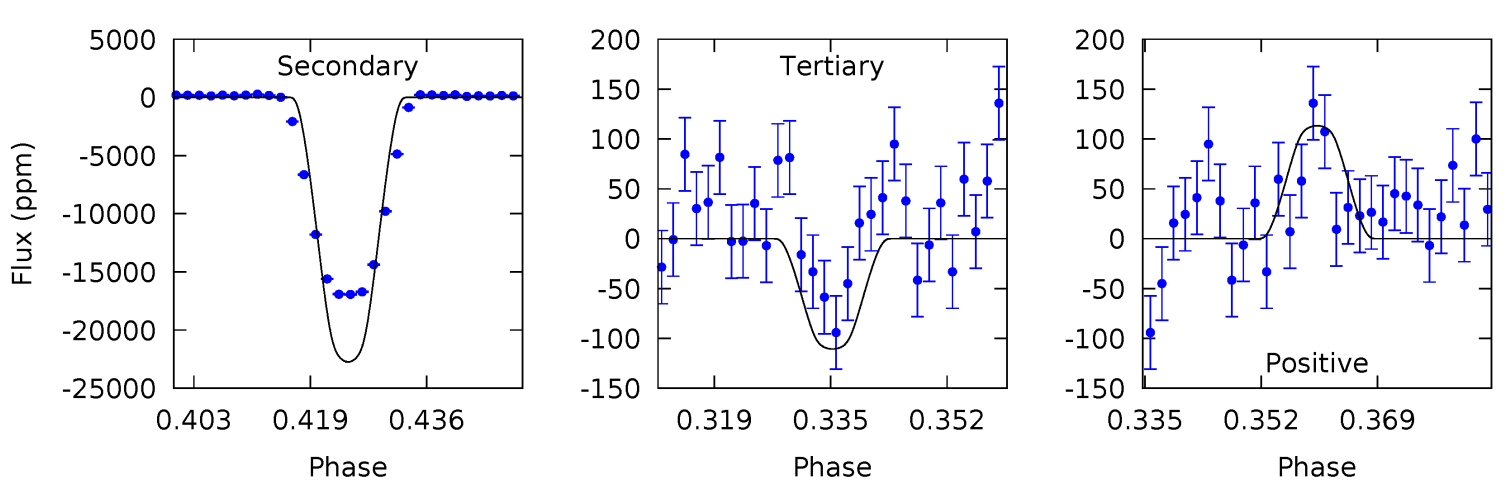
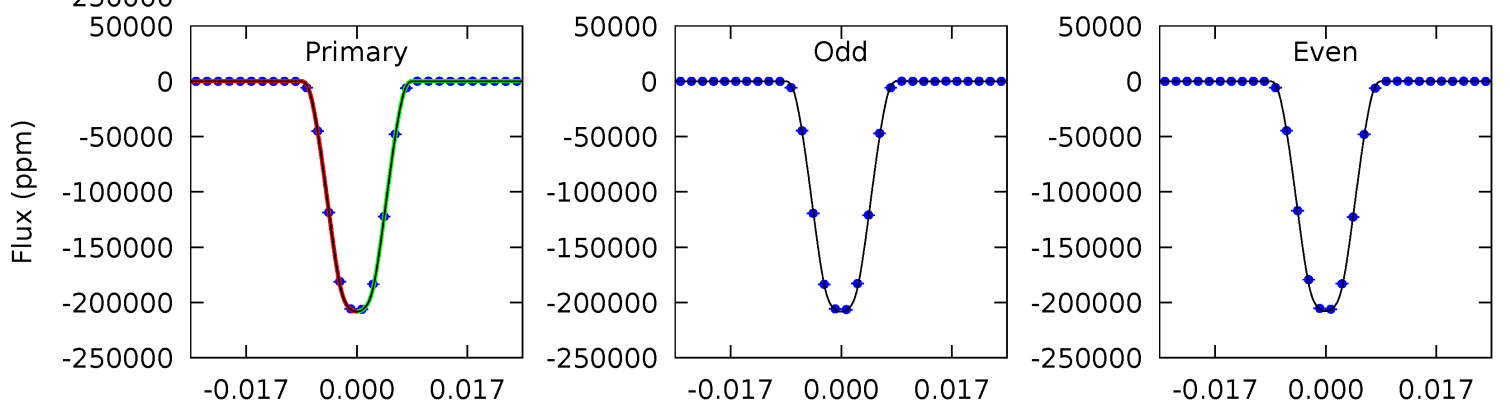
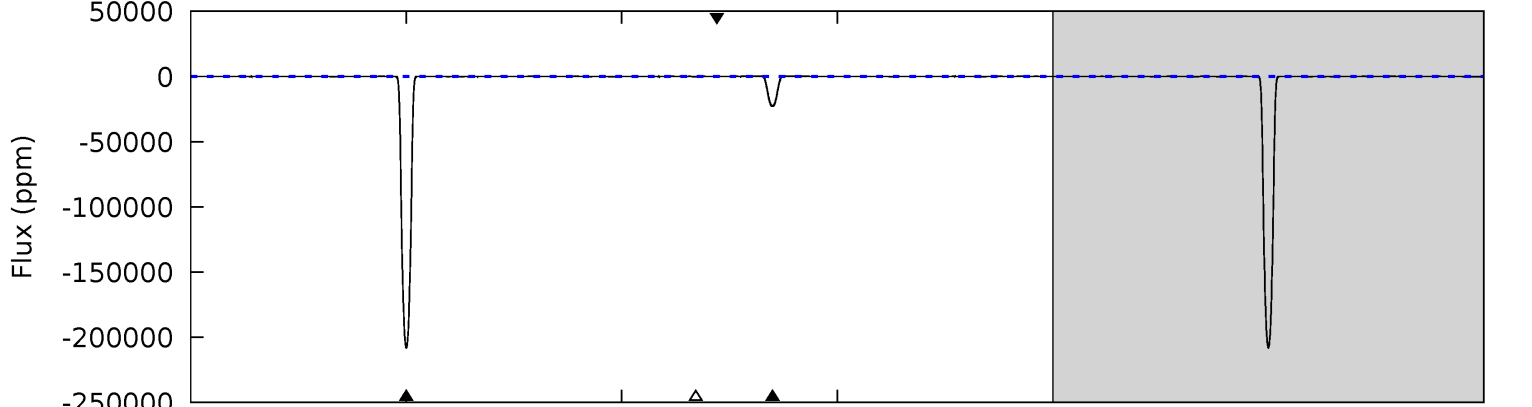
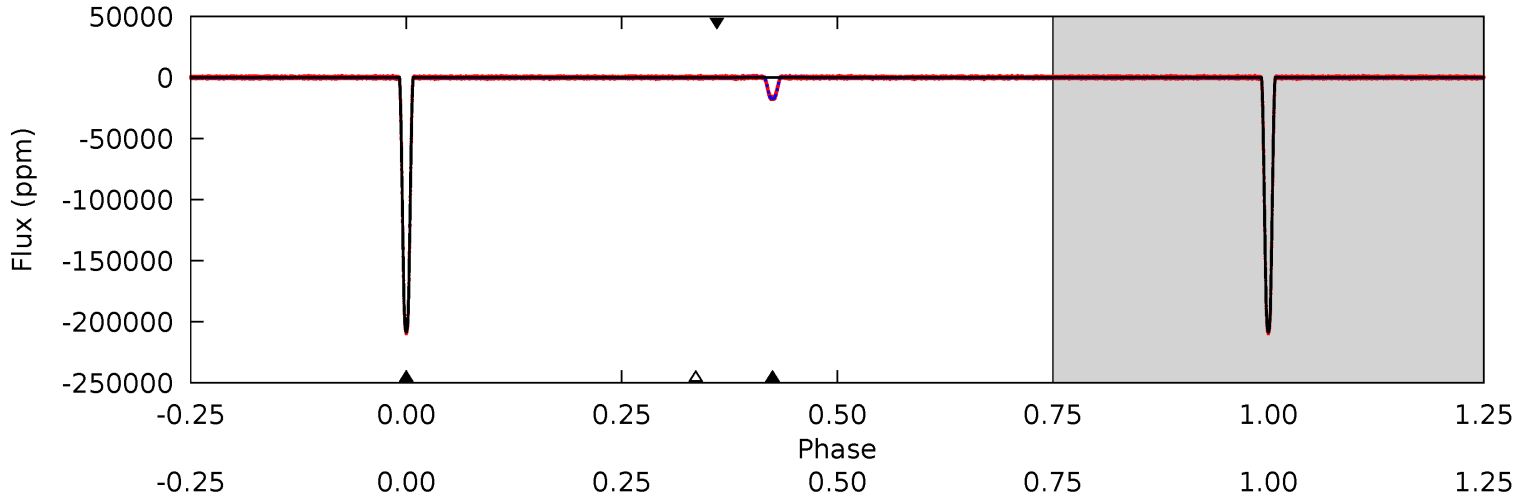
TCE 006841577-01 P= 15.537545 Days $T_0=140.272964$ (BKJD)



DV Model-Shift Uniqueness Test

006841577-01, P = 15.537535 Days, E = 124.735867 Days

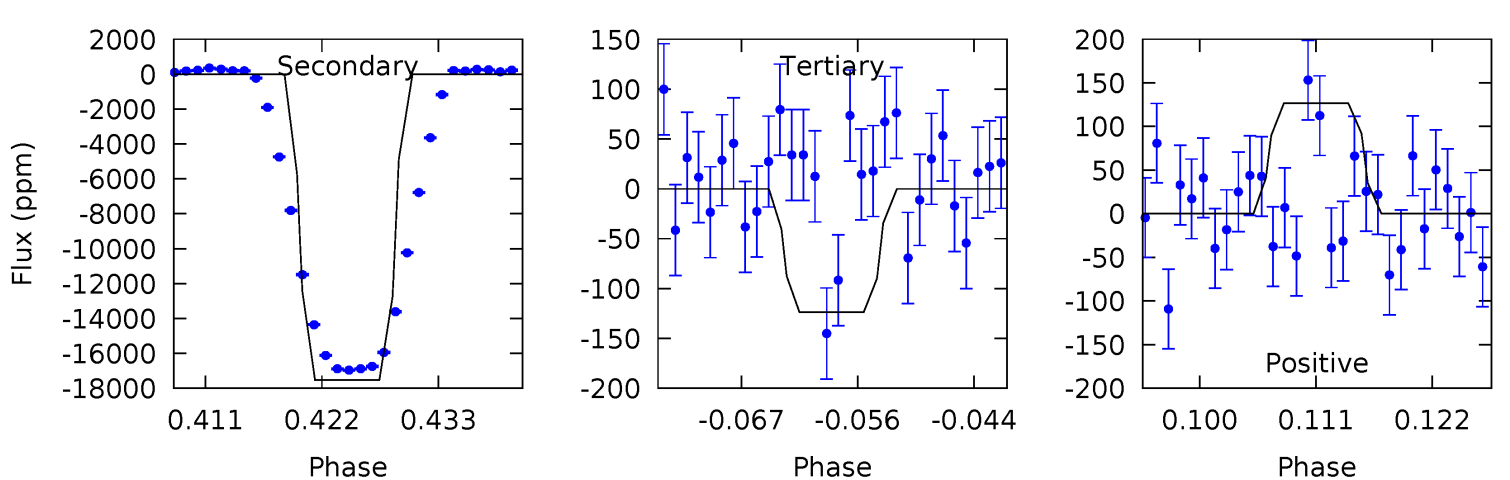
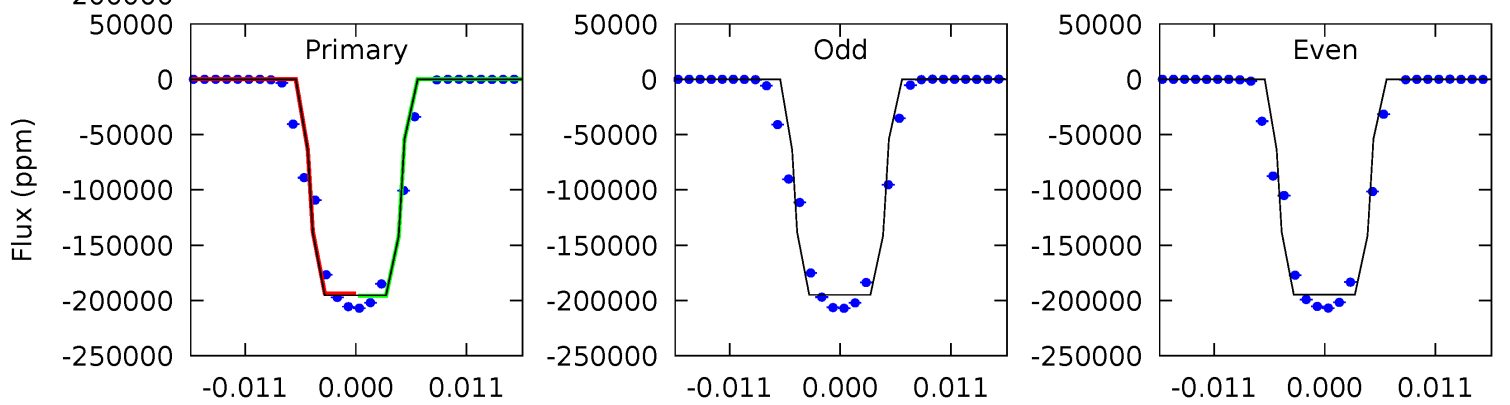
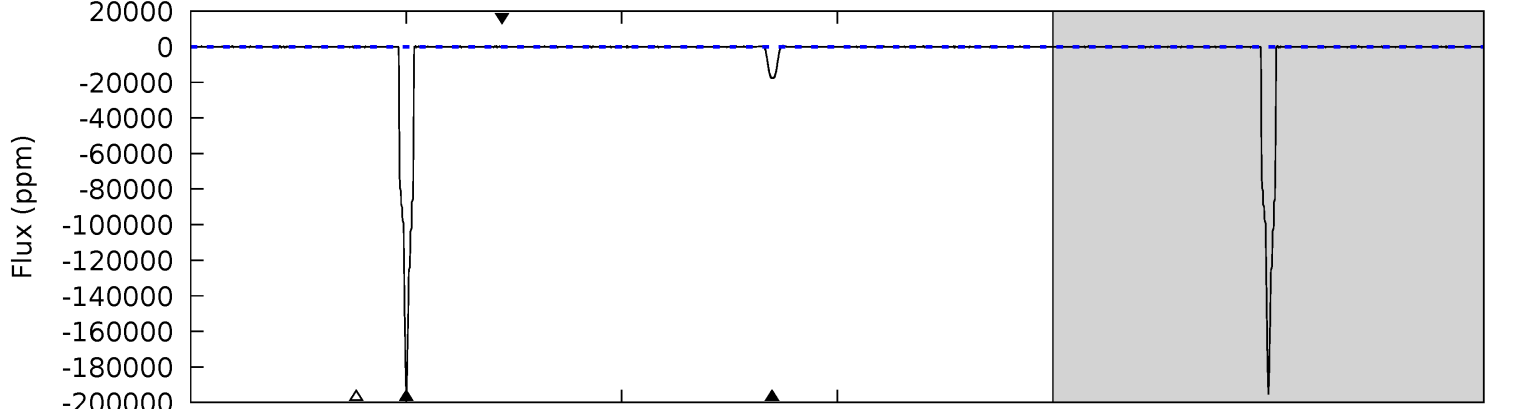
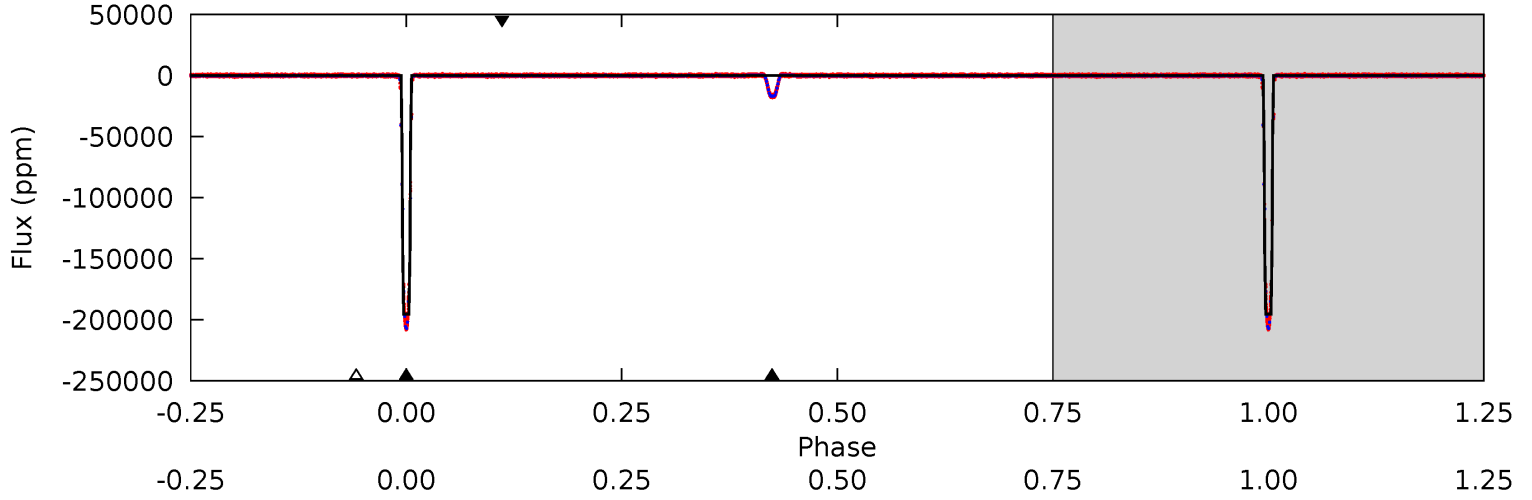
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12289	1342	6.54	6.68	4.93	2.39	3.07	12282	12282	1336	1336	18.8	0.99	0.00	0.57



Alt Model-Shift Uniqueness Test

006841577-01, P = 15.537545 Days, E = 124.735419 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5897	529.3	3.73	3.82	5.01	2.54	1.34	5894	5893	525.5	525.4	4.98	1.00	0.00	6.88



Stellar Parameters For KIC 006841577

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5704^{+154}_{-154}	$4.476^{+0.104}_{-0.169}$	$-0.380^{+0.300}_{-0.300}$	$0.868^{+0.211}_{-0.114}$	$0.822^{+0.107}_{-0.071}$	$1.770^{+0.805}_{-0.759}$
	+3%/-3%	+2%/-4%	+79%/-79%	+24%/-13%	+13%/-9%	+45%/-43%
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 006841577-01 / KOI 6773.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-22739 ± 17	$41.13^{+5.79}_{-3.41}$	973^{+72}_{-47}	3771^{+74}_{-67}	98^{+19}_{-21}
Alt.	-17530 ± 33	$43.20^{+6.27}_{-3.39}$	976^{+63}_{-47}	3556^{+71}_{-68}	68^{+12}_{-14}

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

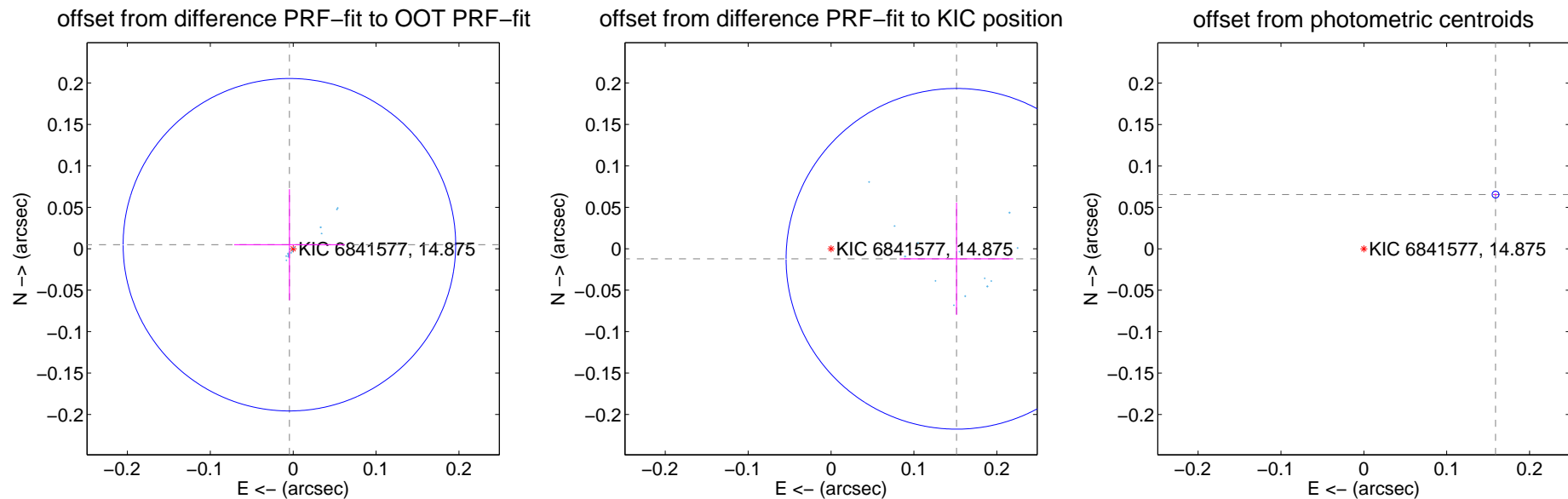
DV Centroid Data

Supplemental centroid analysis for 006841577-01. Kepler magnitude: 14.88. Transit SNR 4664.30

There are 13 quarters with good PRF difference image offsets

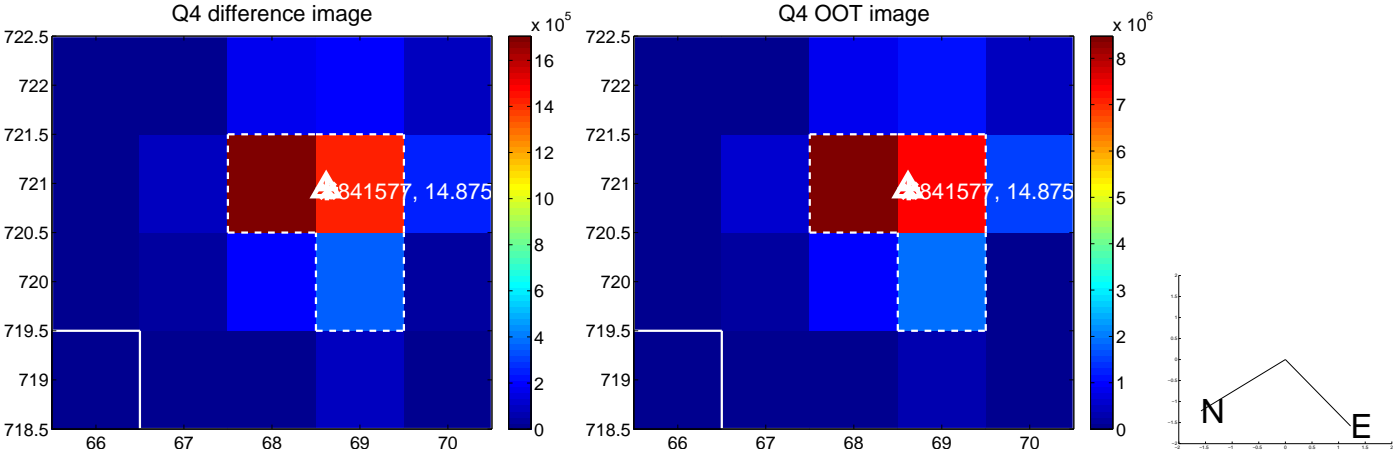
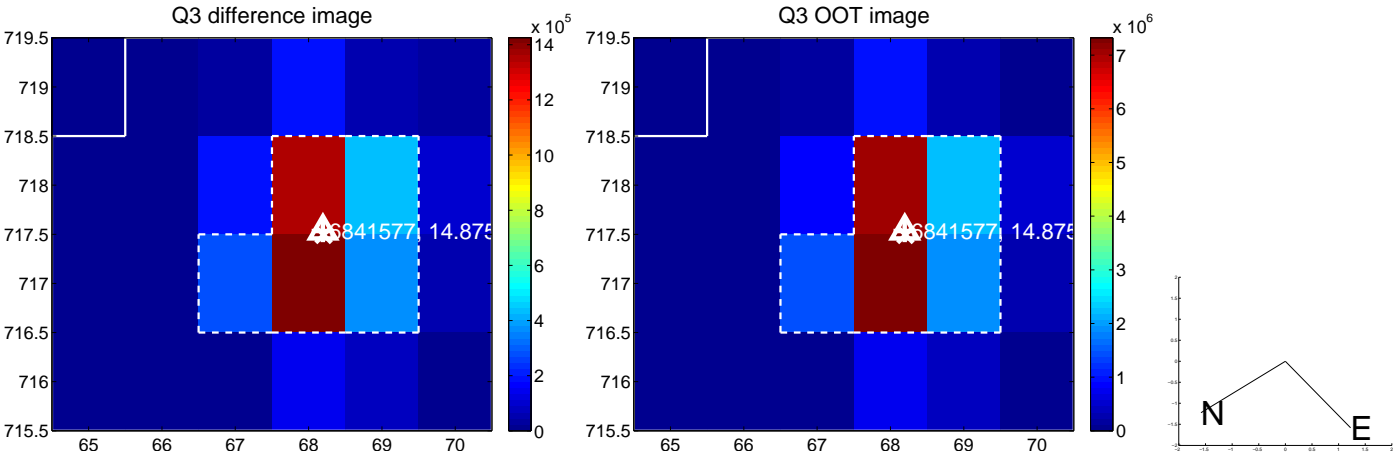
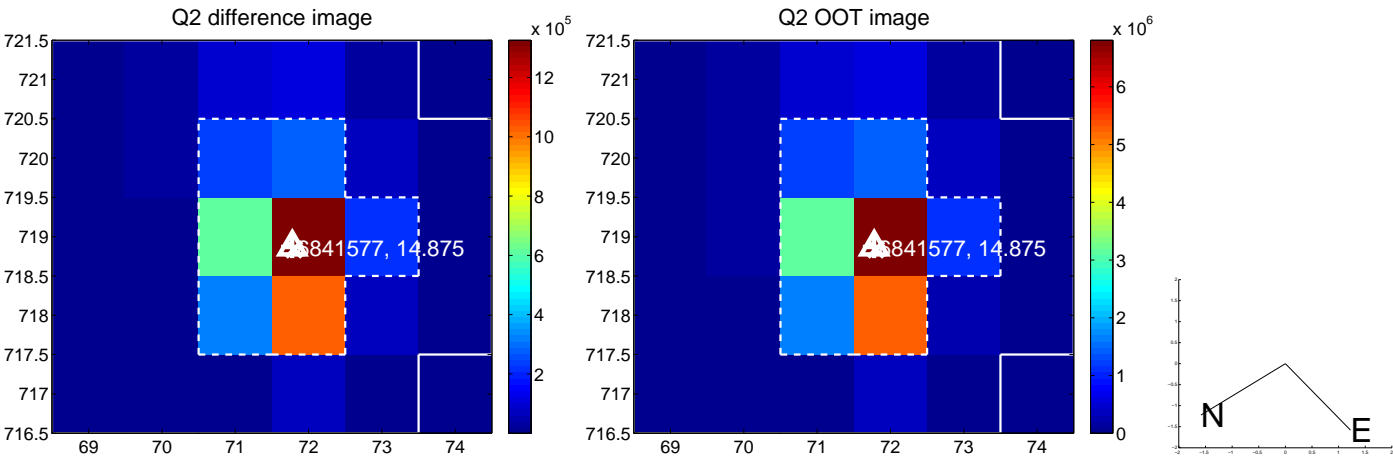
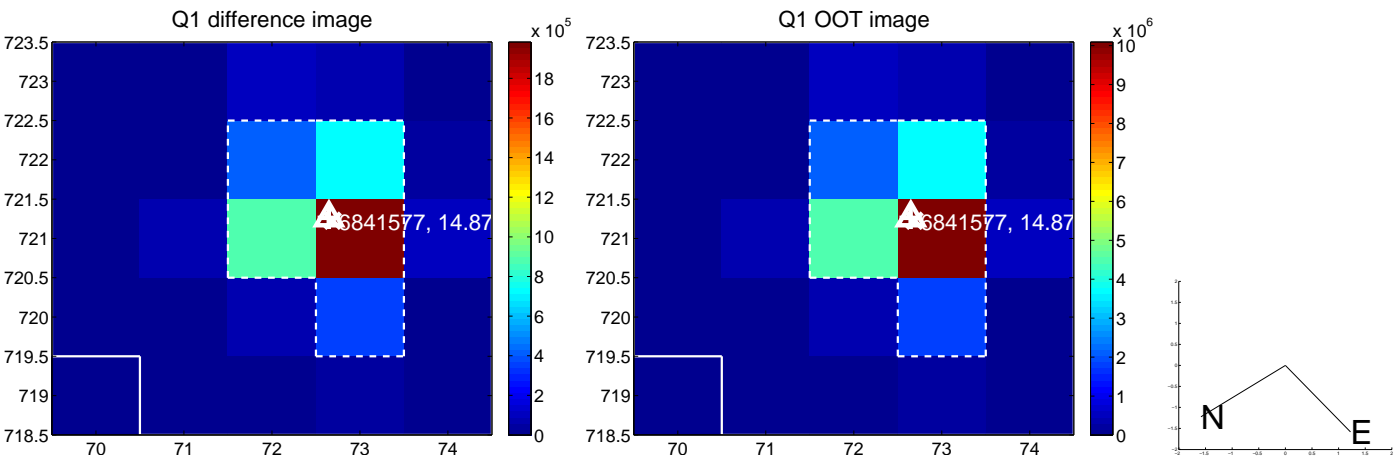
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.007 ± 0.067	0.10	0.005 ± 0.067	0.005 ± 0.067
PRF-fit source offset from KIC position	0.152 ± 0.069	2.22	-0.151 ± 0.068	-0.012 ± 0.068
photometric centroid source offset	0.17 ± 0.00	124.66	-0.16 ± 0.00	0.07 ± 0.00

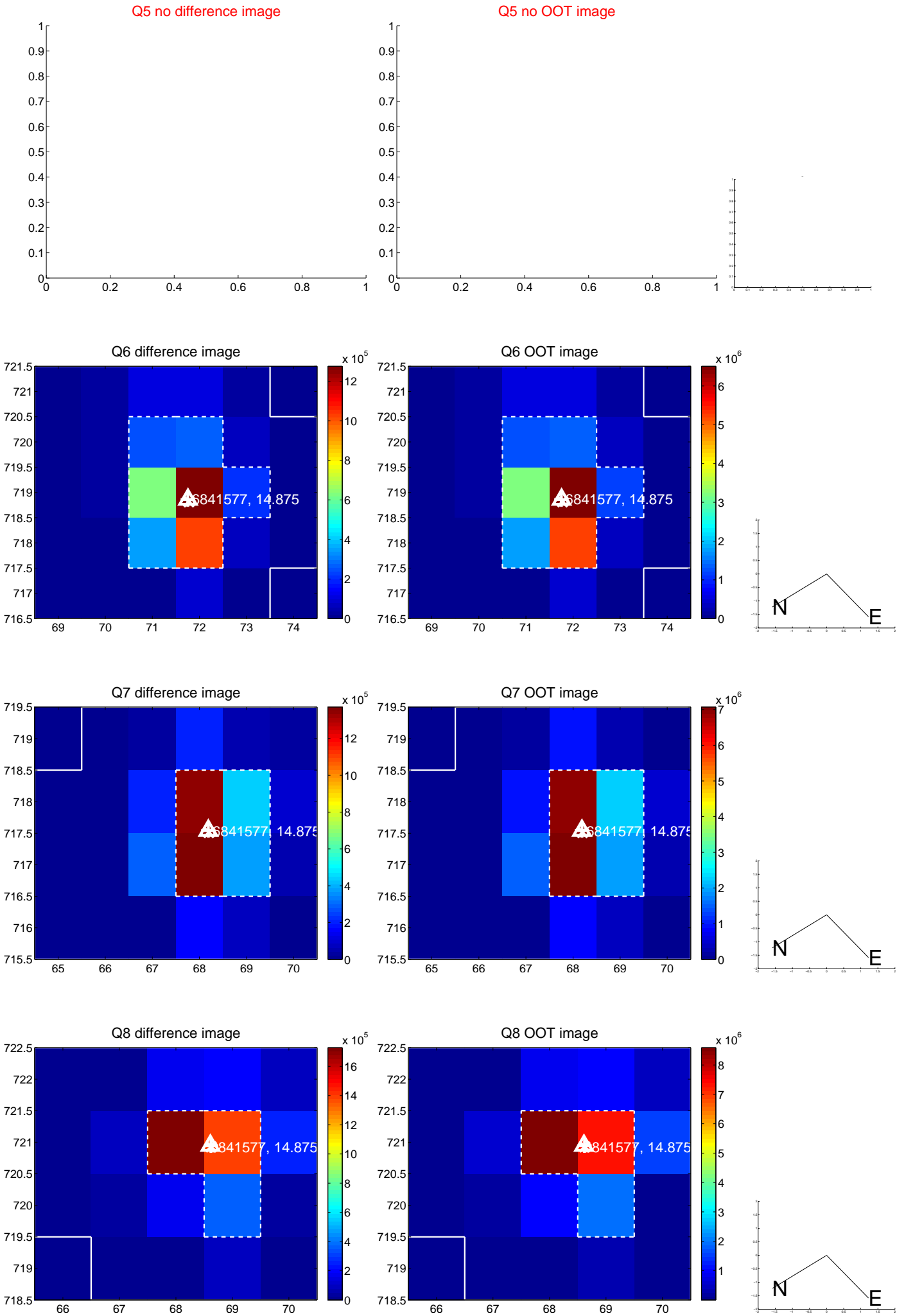


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

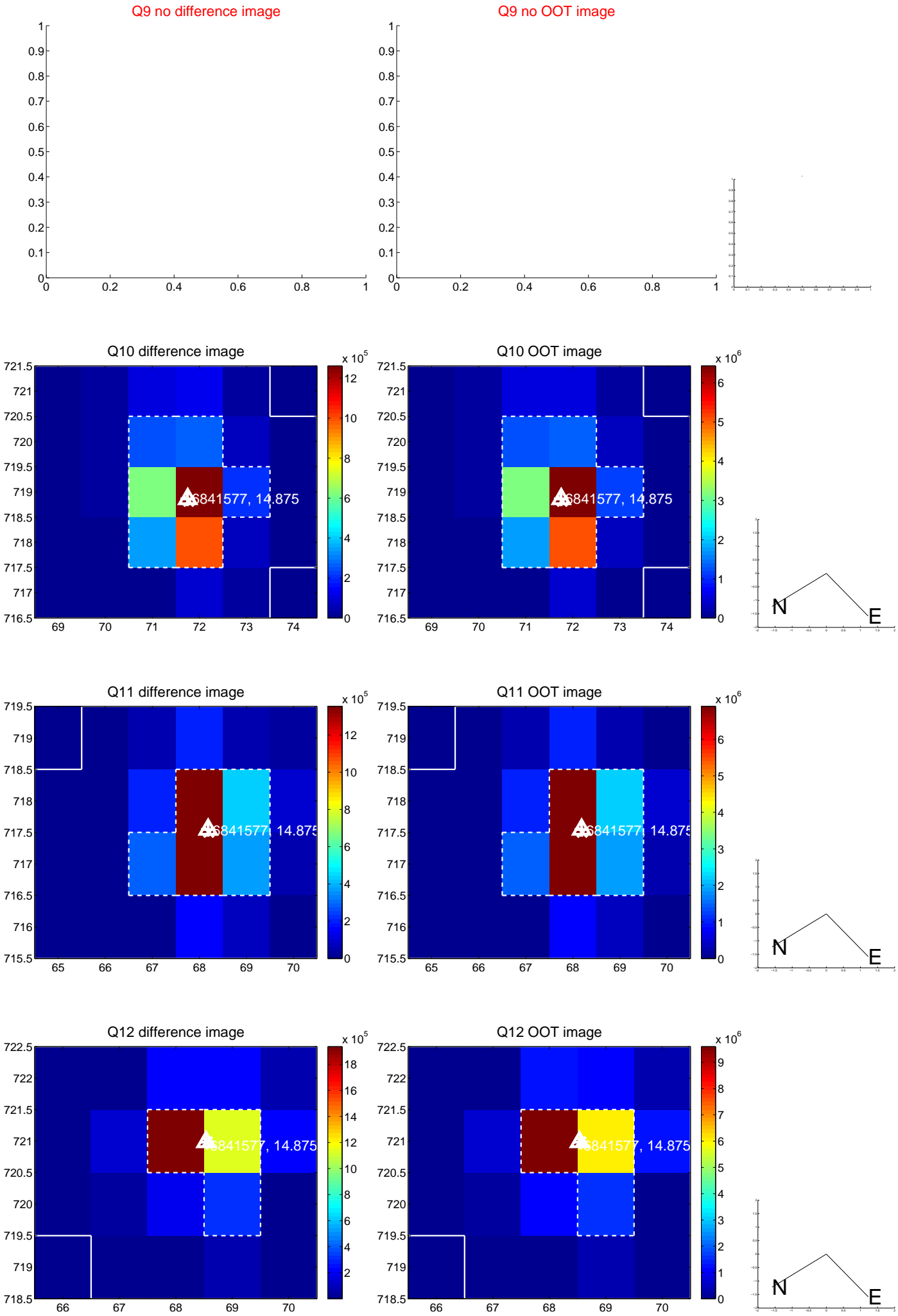
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



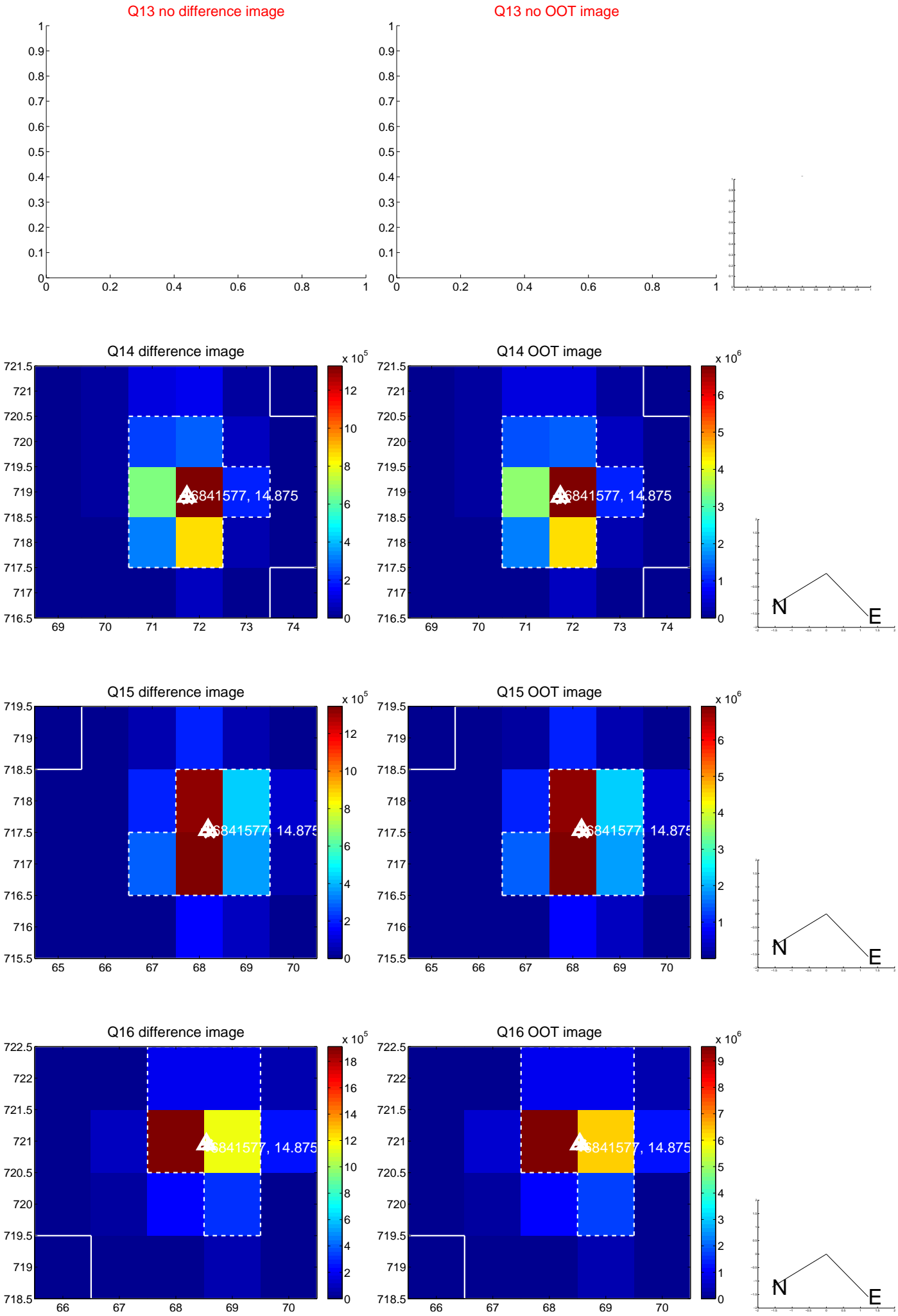
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



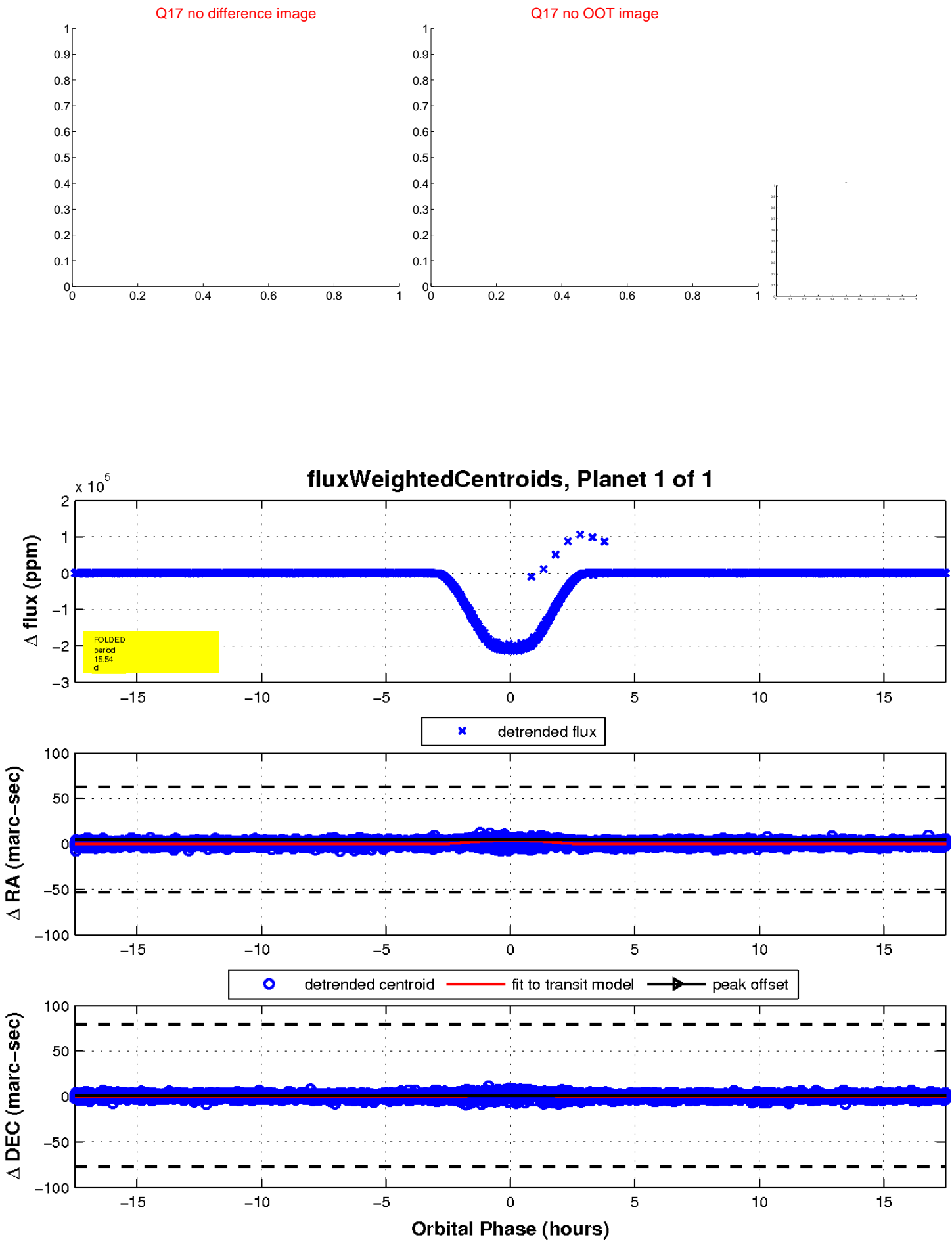
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

