

KIC 007289577

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})
007289577-01	OBS	1974.01	109.445037	197.983305	1256.5	4.029	23.8	25.1	0.87	5403	3.54	3.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007289577-01	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.

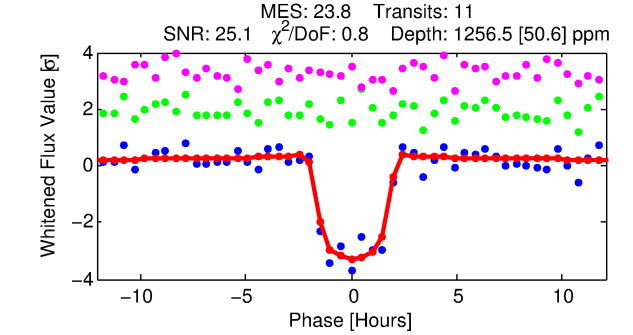
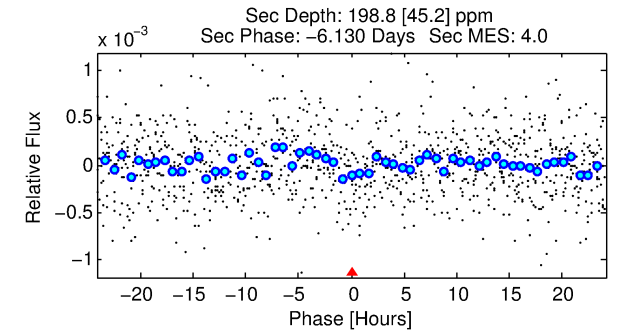
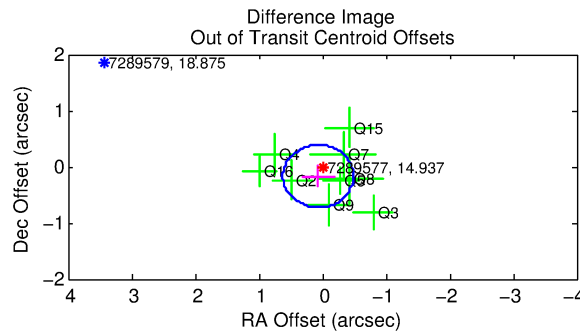
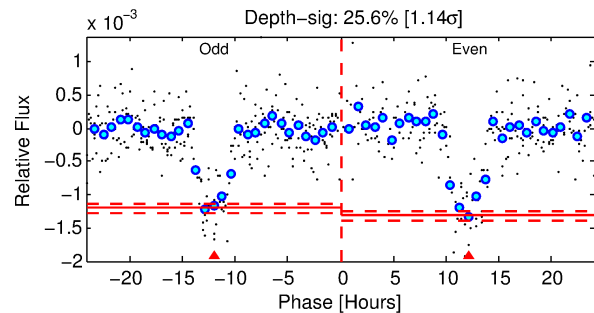
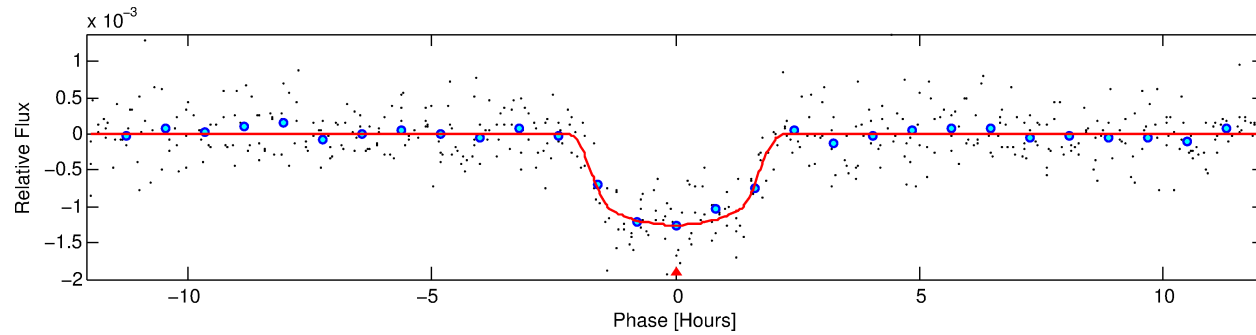
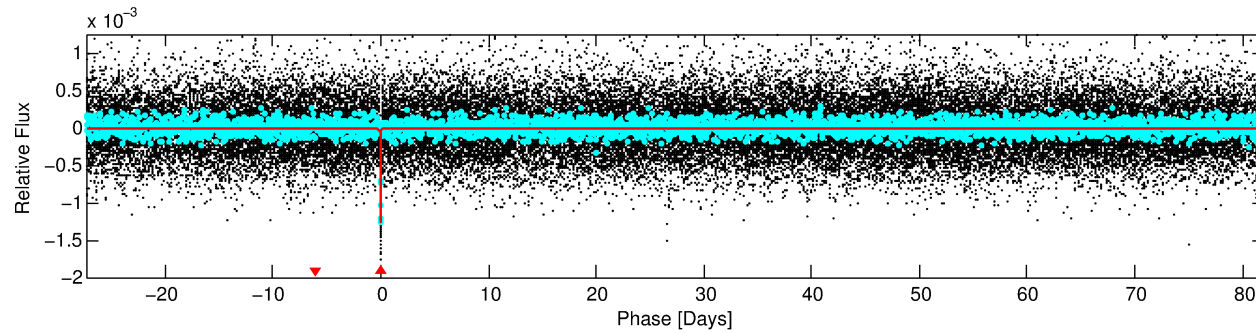
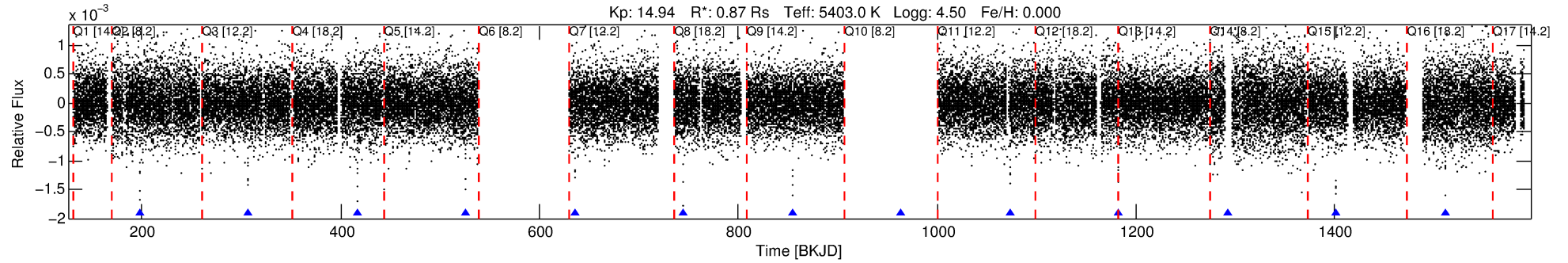
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007289577-01

No Significant Match Found

DV One-Page Summary

KIC: 7289577 Candidate: 1 of 1 Period: 109.445 d
KOI: K01974.01 Corr: 0.985



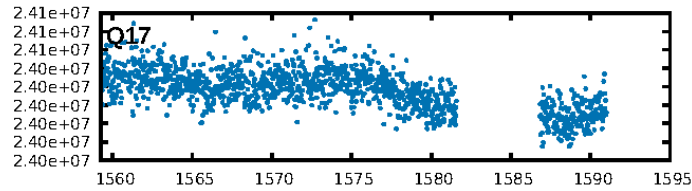
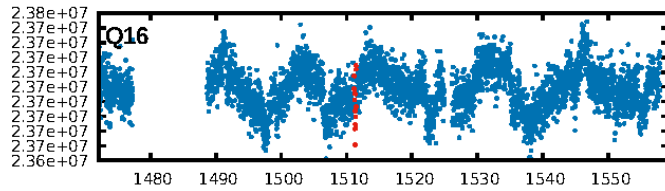
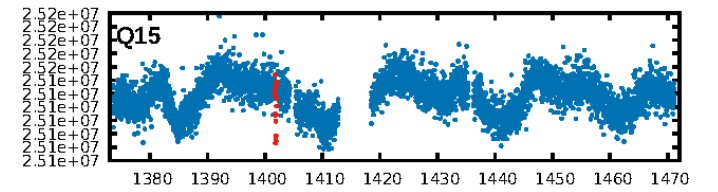
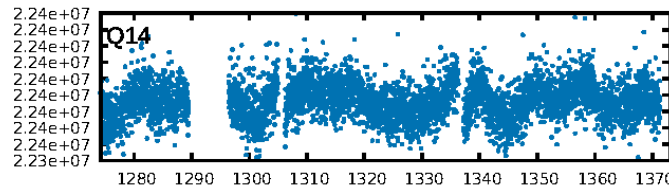
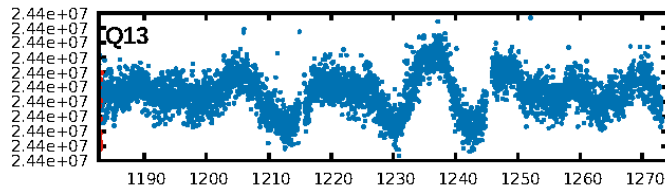
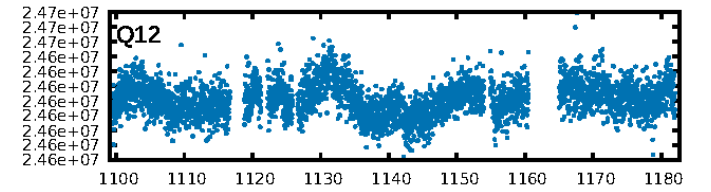
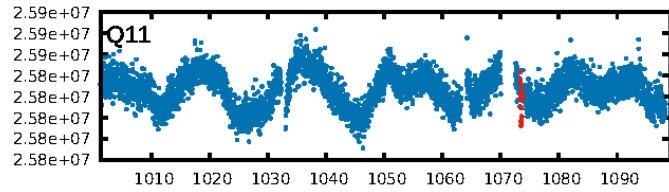
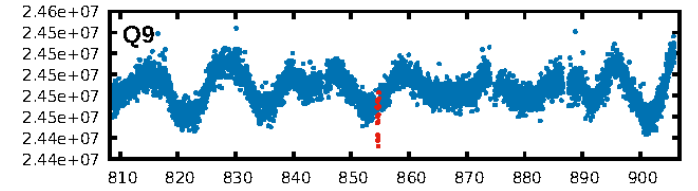
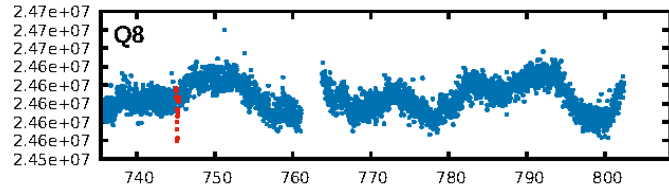
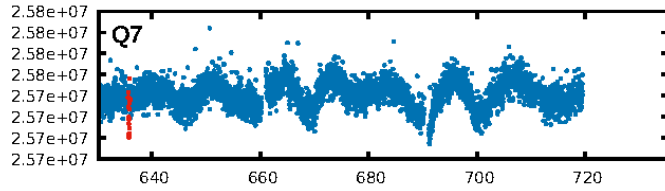
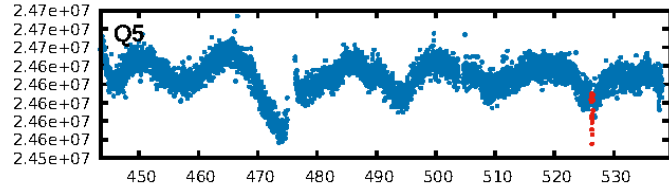
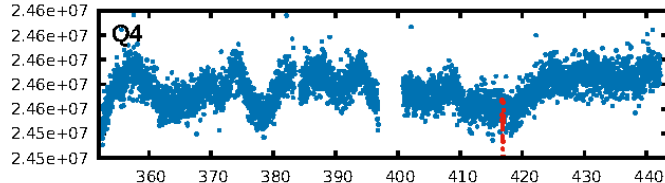
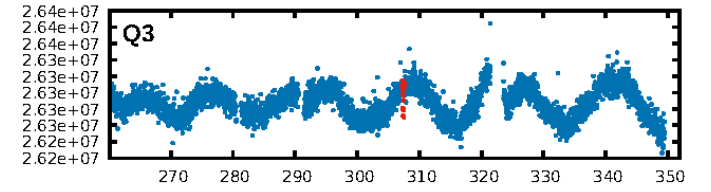
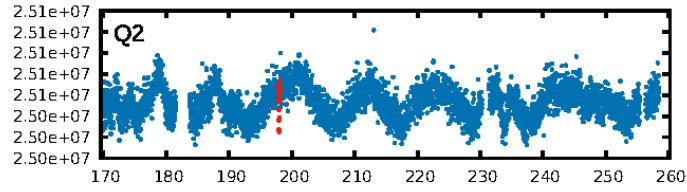
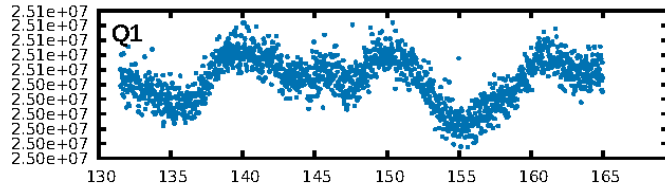
DV Fit Results:

Period = 109.44504 [0.00046] d
Epoch = 197.9833 [0.0031] BKJD
Rp/R* = 0.0374 [0.0039]
a/R* = 123.36 [49.70]
b = 0.85 [0.13]
Seff = 3.15 [0.47]
Teff = 340 [13] K
Rp = 3.54 [0.49] Re
a = 0.4274 [0.0351] AU
Ag = 1591.13 [529.29] [3.00 σ]
Teffp = 3317 [264] K [11.27 σ]

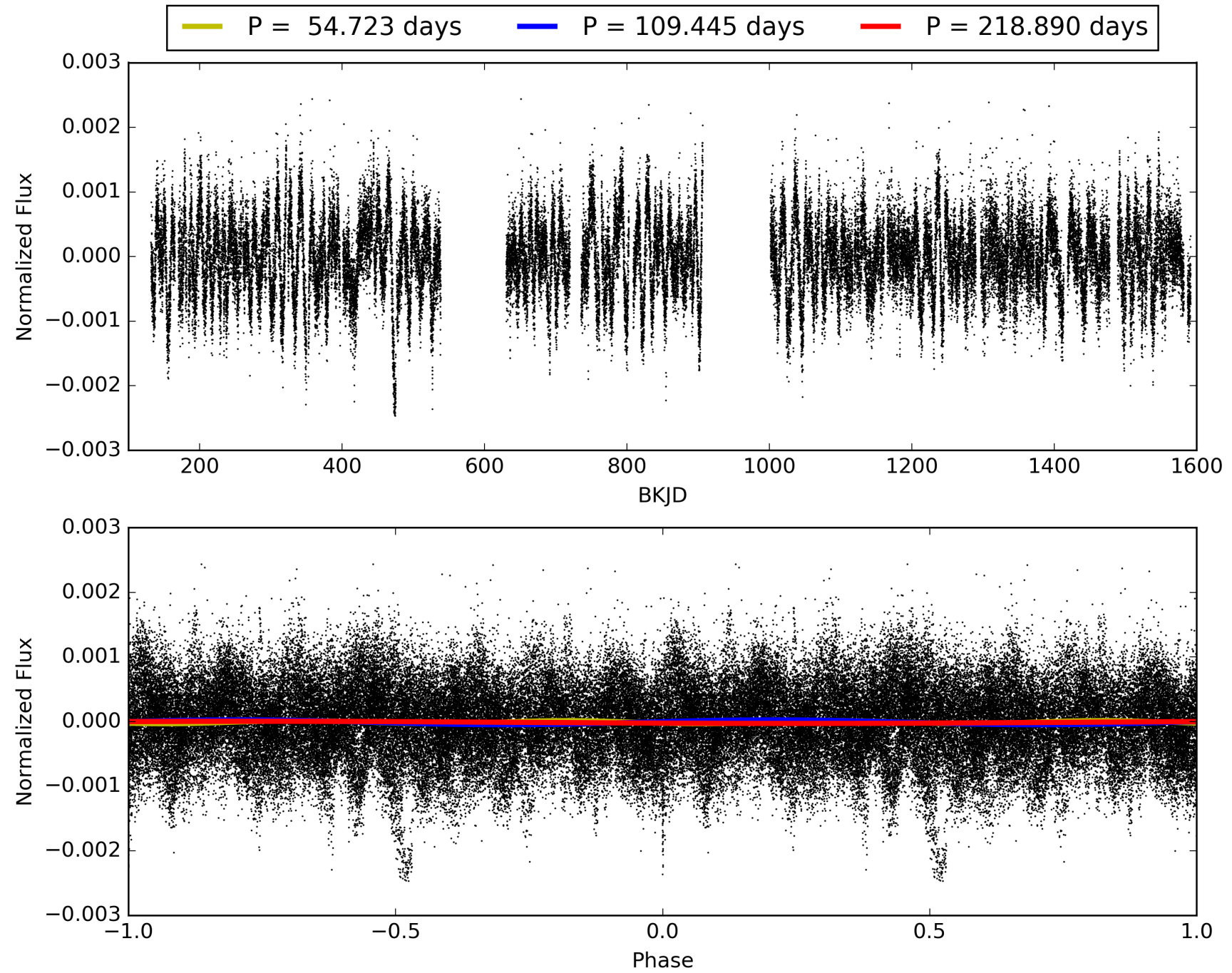
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.31e-122
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 5.446
Centroid-sig: 16.3%
Centroid-so: 0.753 arcsec [1.59 σ]
OotOffset-rm: 0.184 arcsec [1.00 σ]
KicOffset-rm: 0.453 arcsec [2.43 σ]
OotOffset-st: 1/3/3/2 [9]
KicOffset-st: 1/3/3/2 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 007289577-01, PDC Light Curves

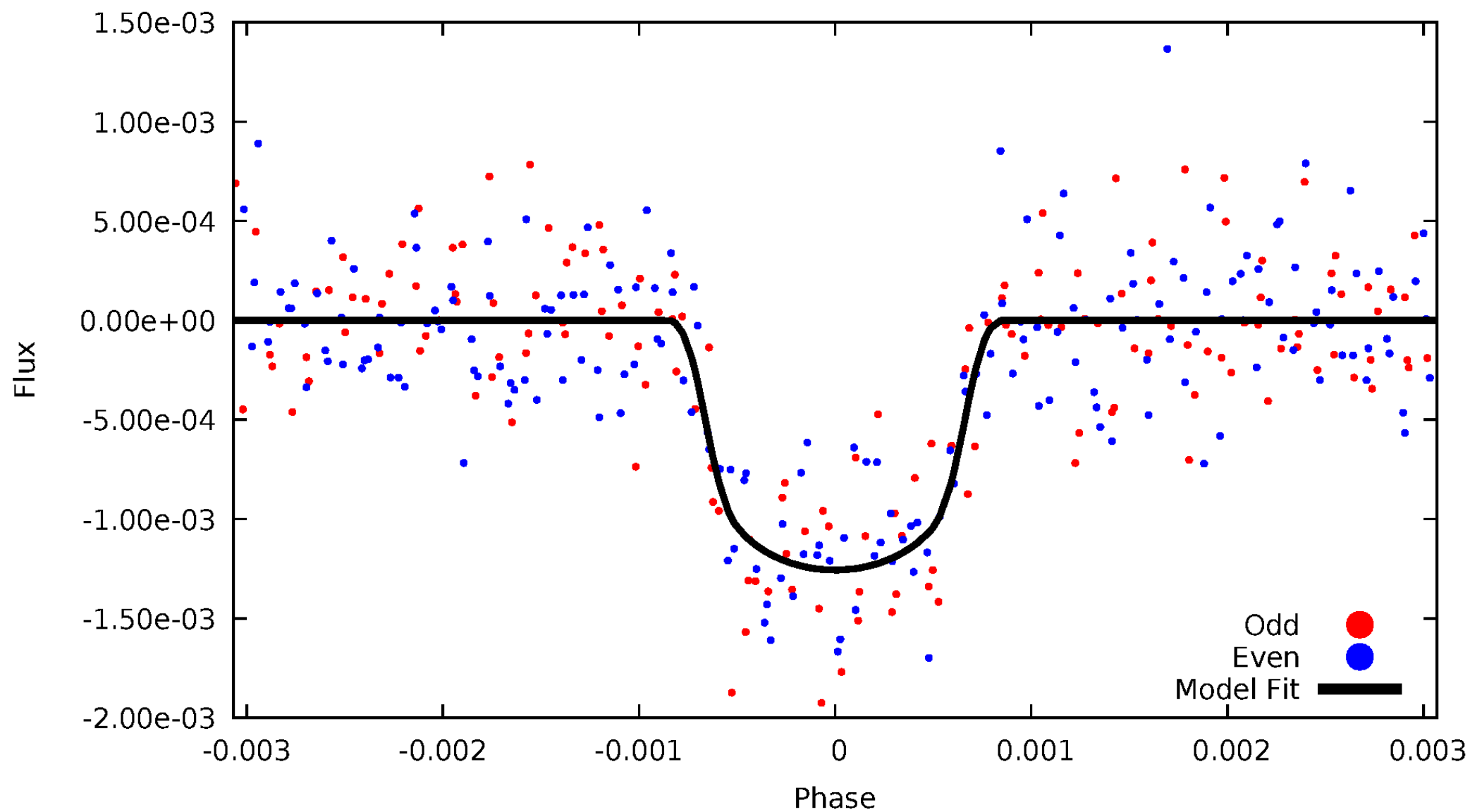


TCE 007289577-01



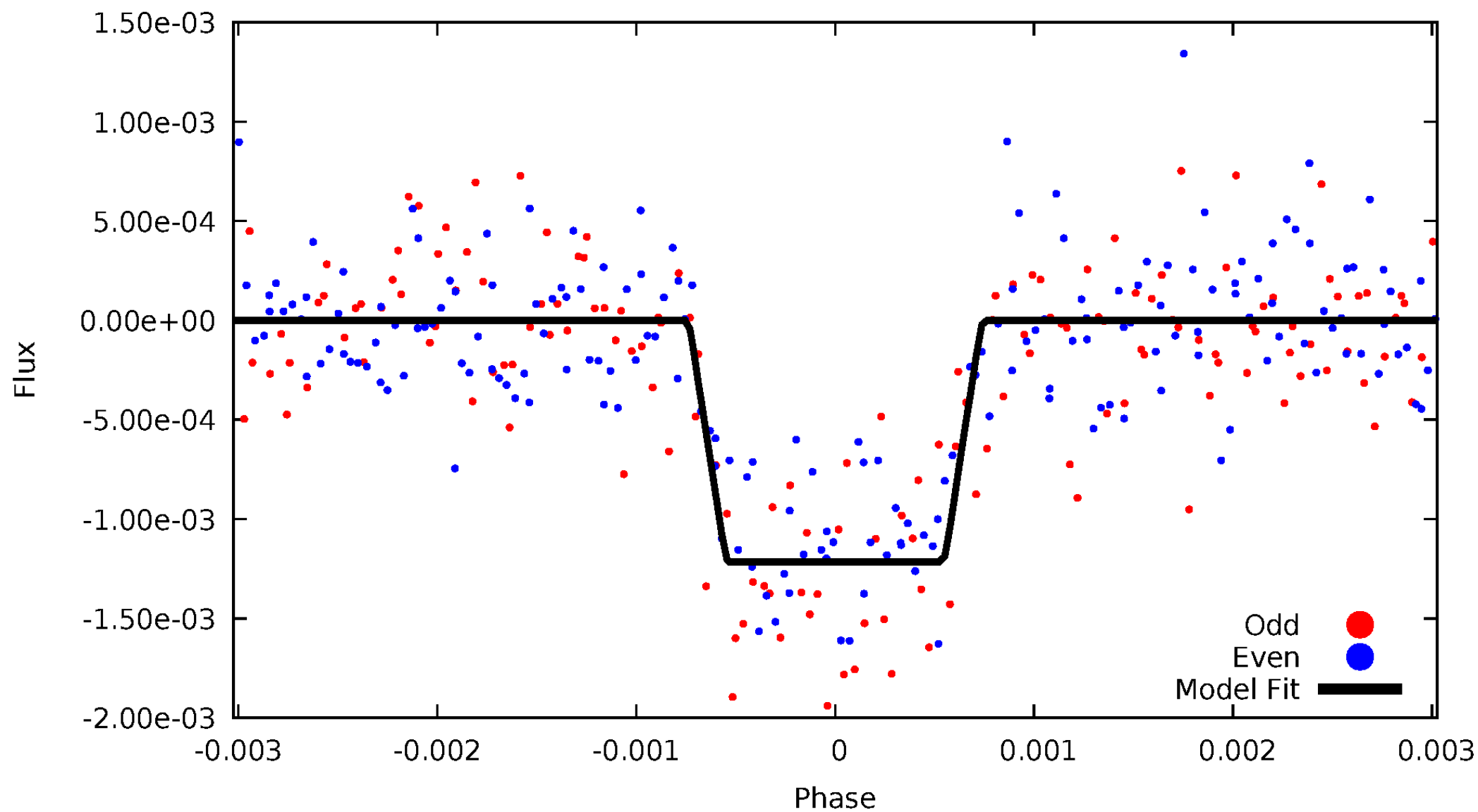
DV Odd/Even

TCE 007289577-01

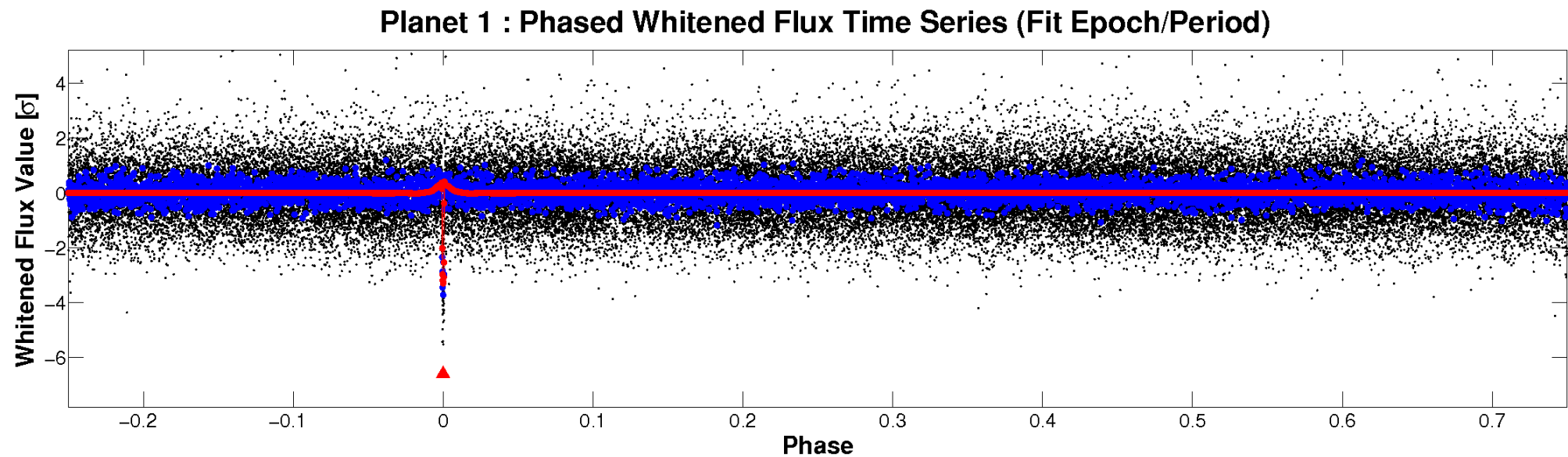
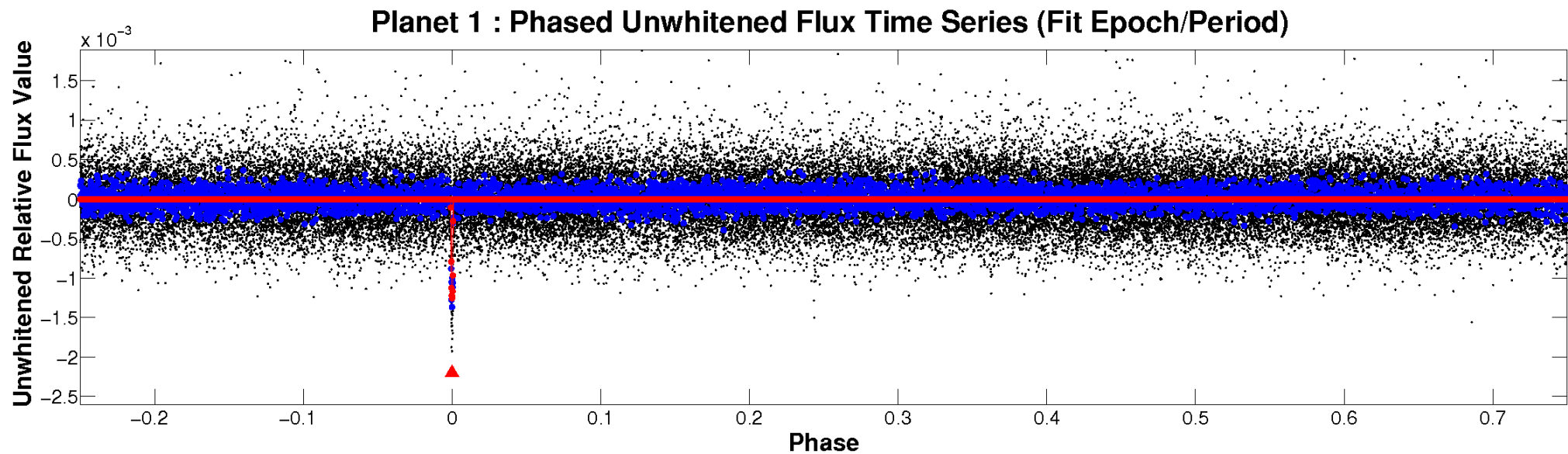


ALT Odd/Even

TCE 007289577-01

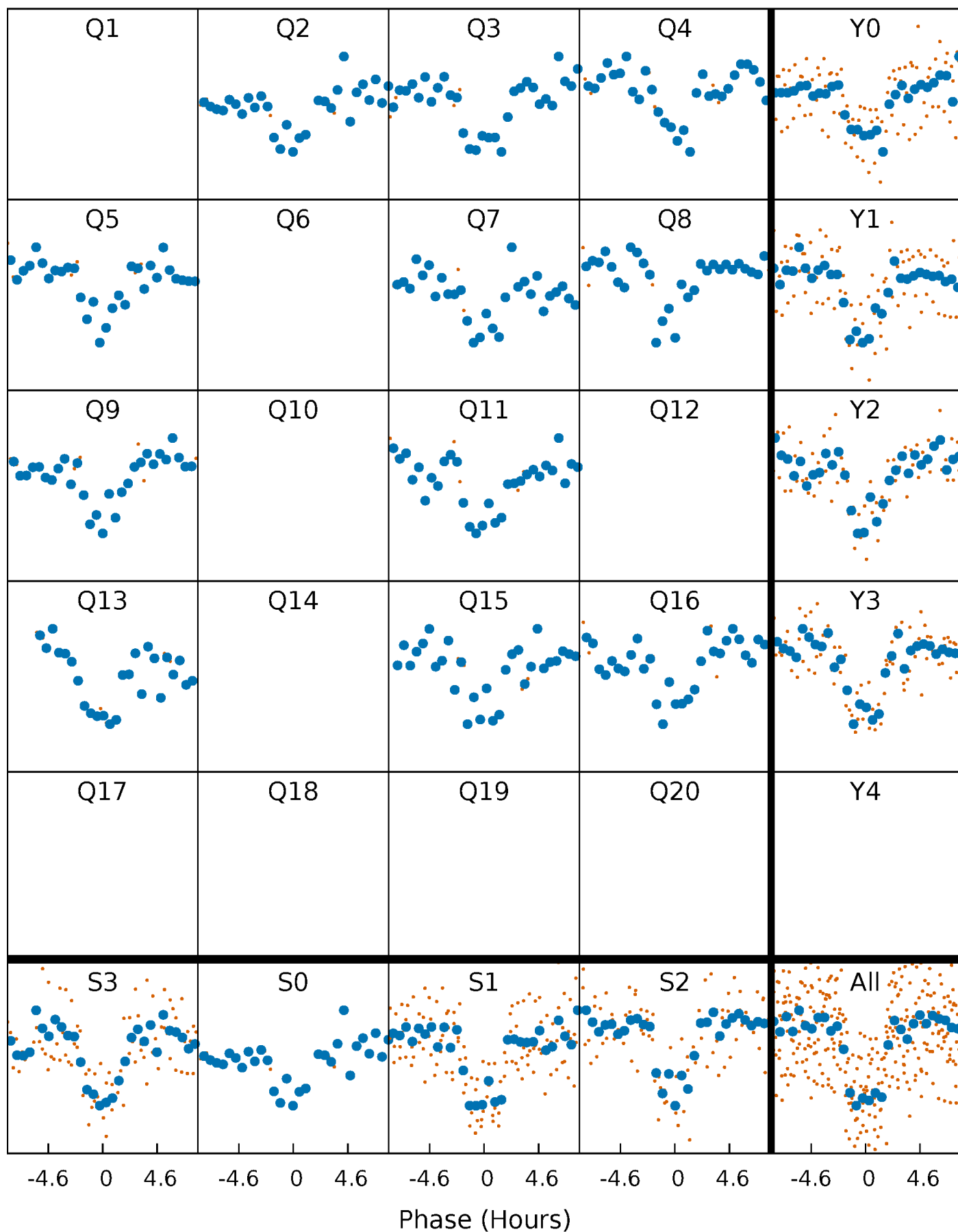


Non-Whitened Vs. Whitened Light Curve



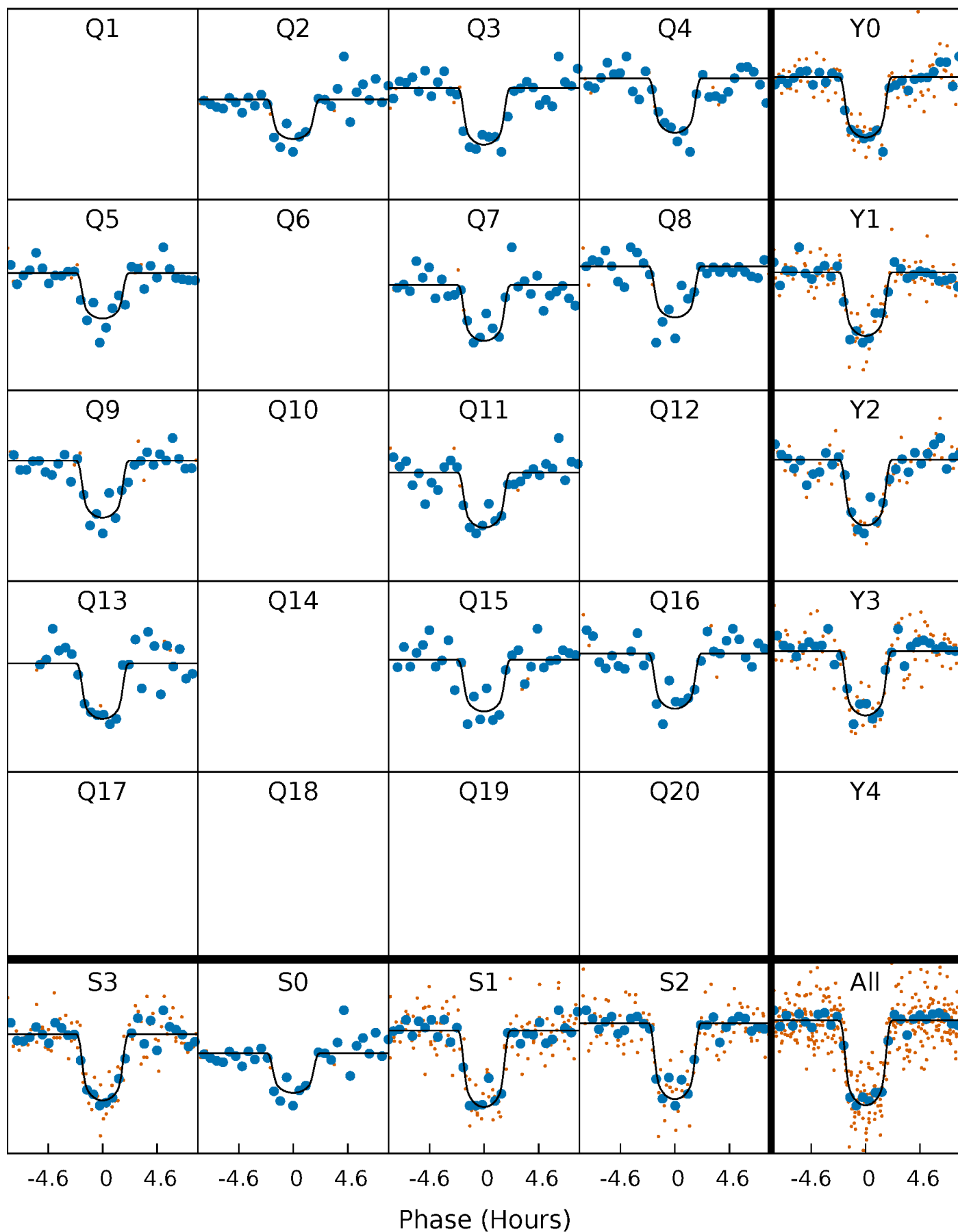
PDC Quarter-Phased Transit Curves

TCE 007289577-01 P=109.445037 Days $T_0=197.983305$ (BKJD)



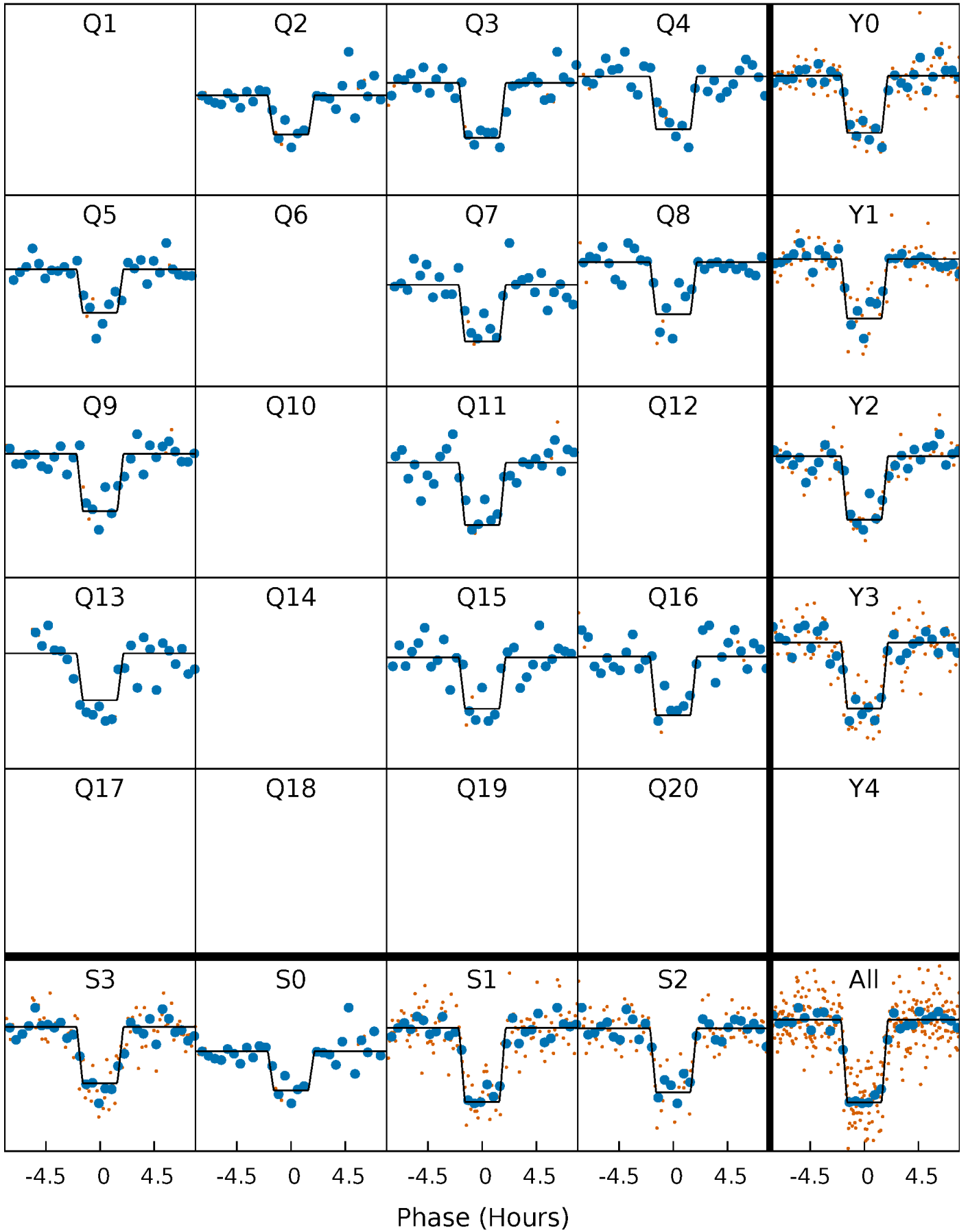
DV Quarter-Phased Transit Curves

TCE 007289577-01 P=109.445037 Days $T_0=197.983305$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

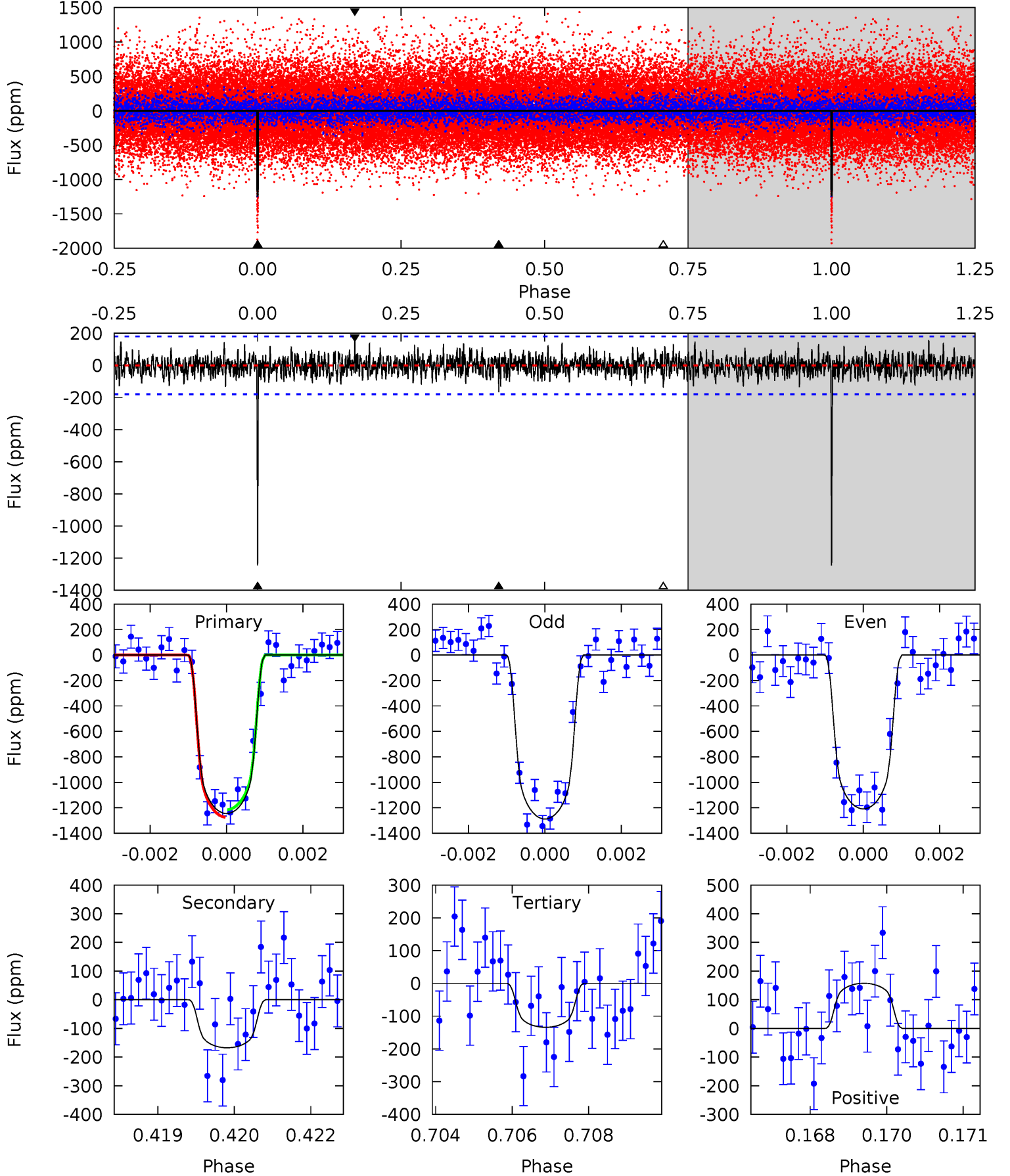
TCE 007289577-01 P=109.446075 Days $T_0=197.976893$ (BKJD)



DV Model-Shift Uniqueness Test

007289577-01, $P = 109.445037$ Days, $E = 88.538268$ Days

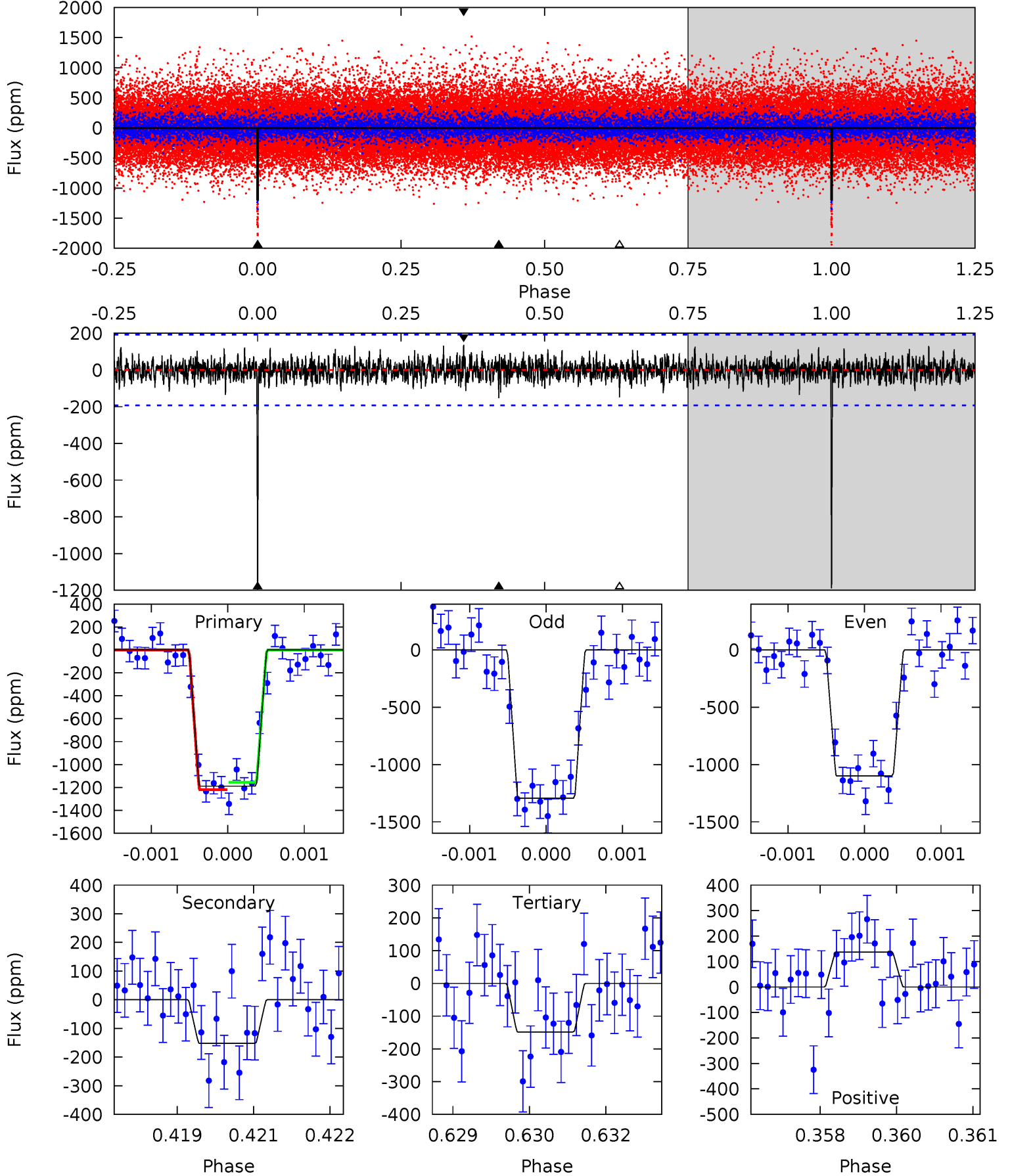
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.1	4.99	3.99	4.69	5.36	3.14	1.32	33.1	32.4	1.00	0.30	1.19	0.98	0.11	0.89



Alt Model-Shift Uniqueness Test

007289577-01, $P = 109.446075$ Days, $E = 88.530818$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.2	4.26	4.14	3.81	5.38	3.18	1.07	29.1	29.4	0.12	0.44	2.74	0.99	0.10	0.91



Stellar Parameters For KIC 007289577

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5403^{+107}_{-107}	$4.500^{+0.058}_{-0.071}$	$0.000^{+0.150}_{-0.150}$	$0.868^{+0.080}_{-0.058}$	$0.868^{+0.054}_{-0.048}$	$1.869^{+0.429}_{-0.416}$
	+2%/-2%	+1%/-2%	+inf%/-inf%	+9%/-7%	+6%/-6%	+23%/-22%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 007289577-01 / KOI 1974.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-168 ± 34	$3.55^{+0.39}_{-0.39}$	475^{+15}_{-13}	3617^{+175}_{-177}	1344^{+487}_{-356}
Alt.	-152 ± 36	$3.30^{+0.41}_{-0.40}$	475^{+15}_{-14}	3632^{+215}_{-180}	1420^{+555}_{-430}

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

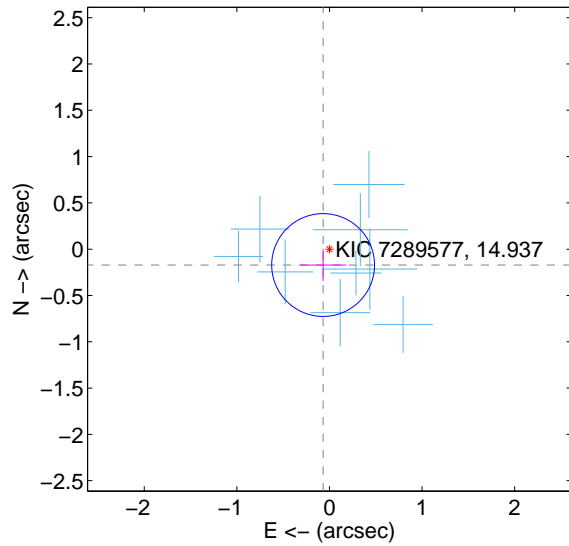
Supplemental centroid analysis for 007289577-01. Kepler magnitude: 14.94. Transit SNR 25.10

There are 9 quarters with good PRF difference image offsets

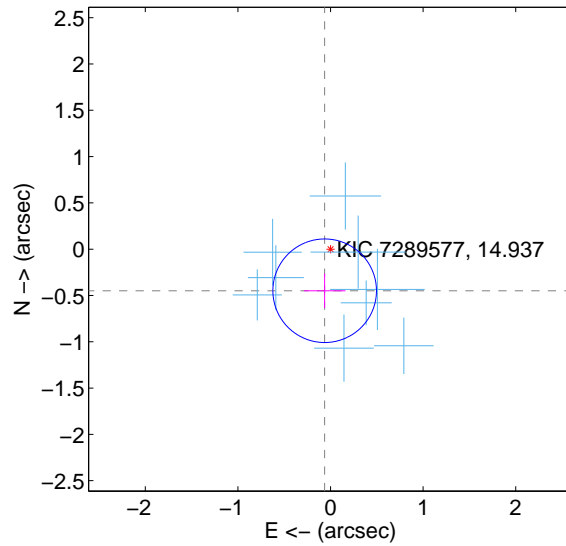
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.184 ± 0.185	1.00	0.069 ± 0.252	-0.171 ± 0.172
PRF-fit source offset from KIC position	0.453 ± 0.186	2.43	0.063 ± 0.224	-0.449 ± 0.186
photometric centroid source offset	0.75 ± 0.47	1.59	0.61 ± 0.49	-0.45 ± 0.44

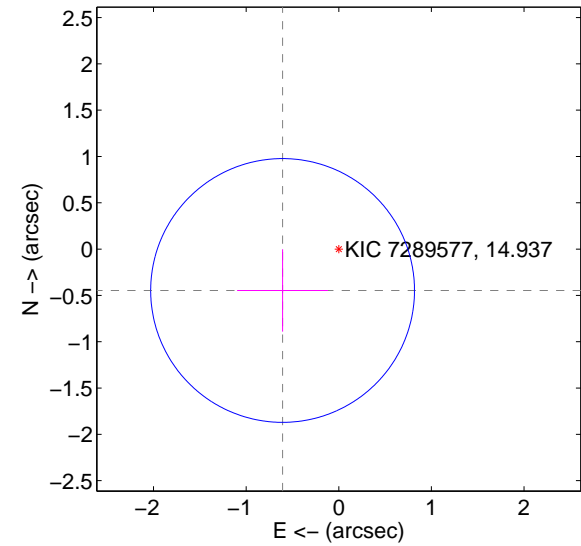
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

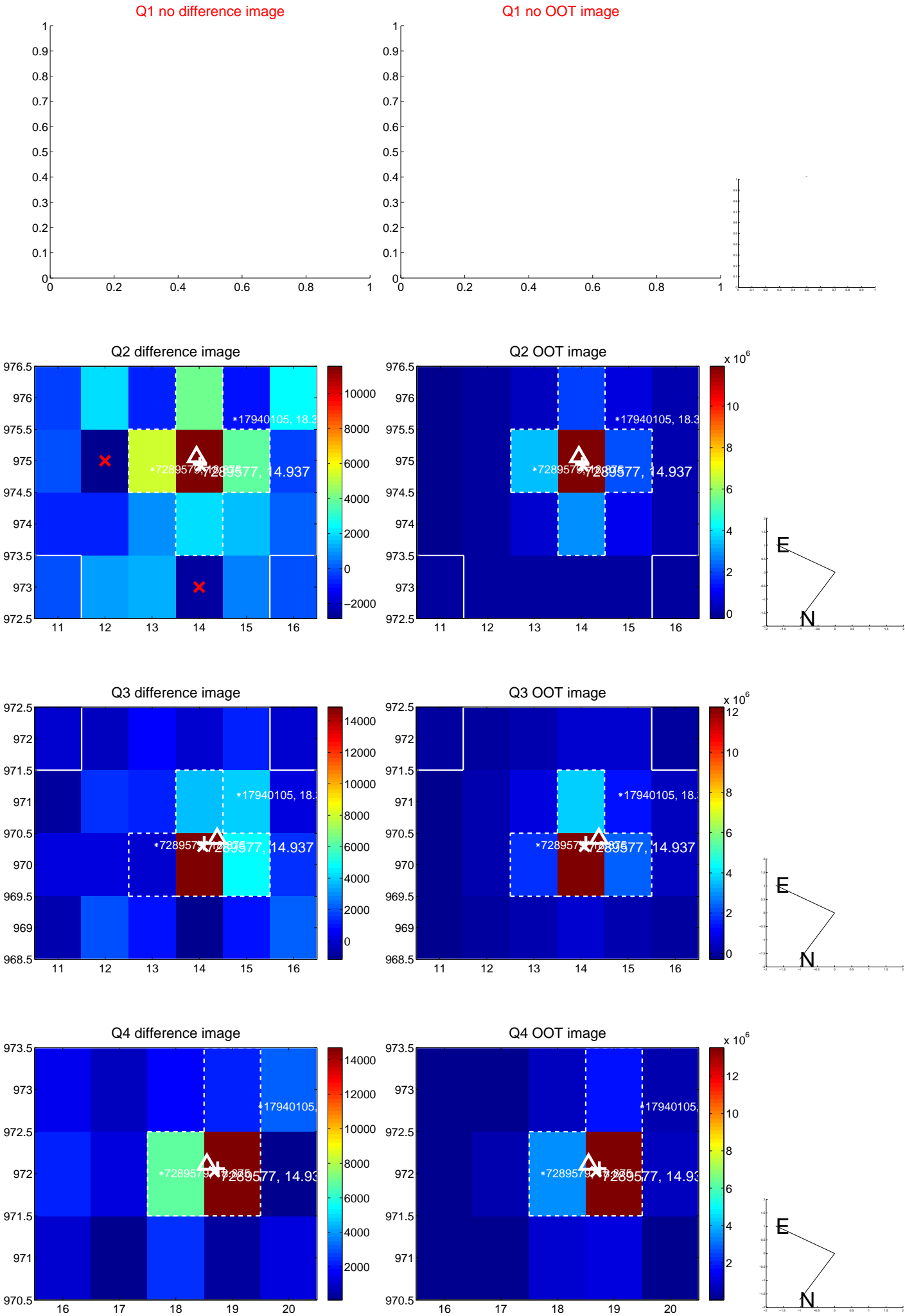


offset from photometric centroids

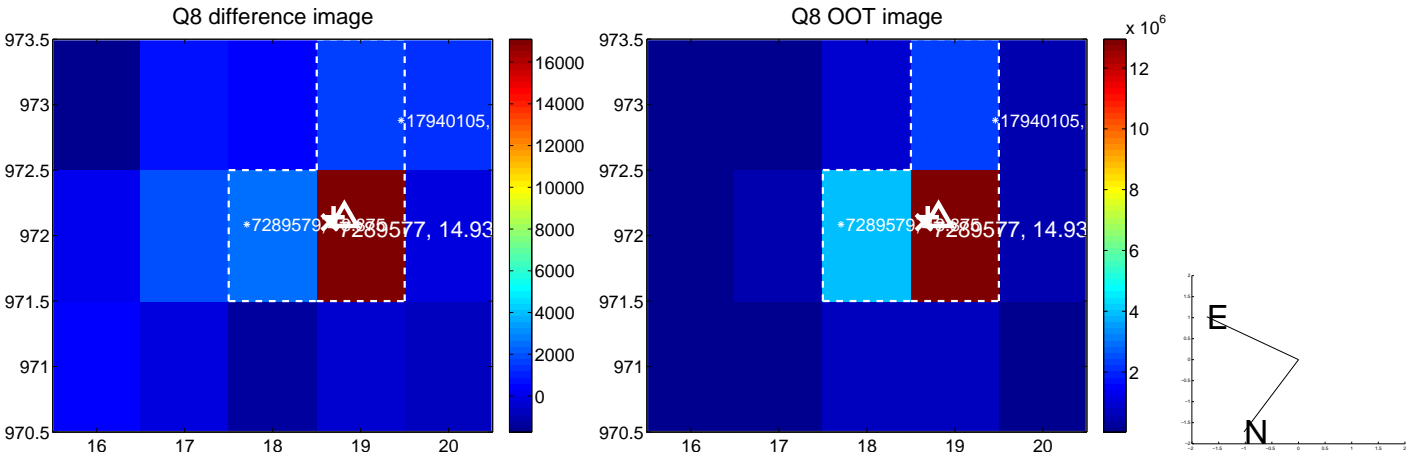
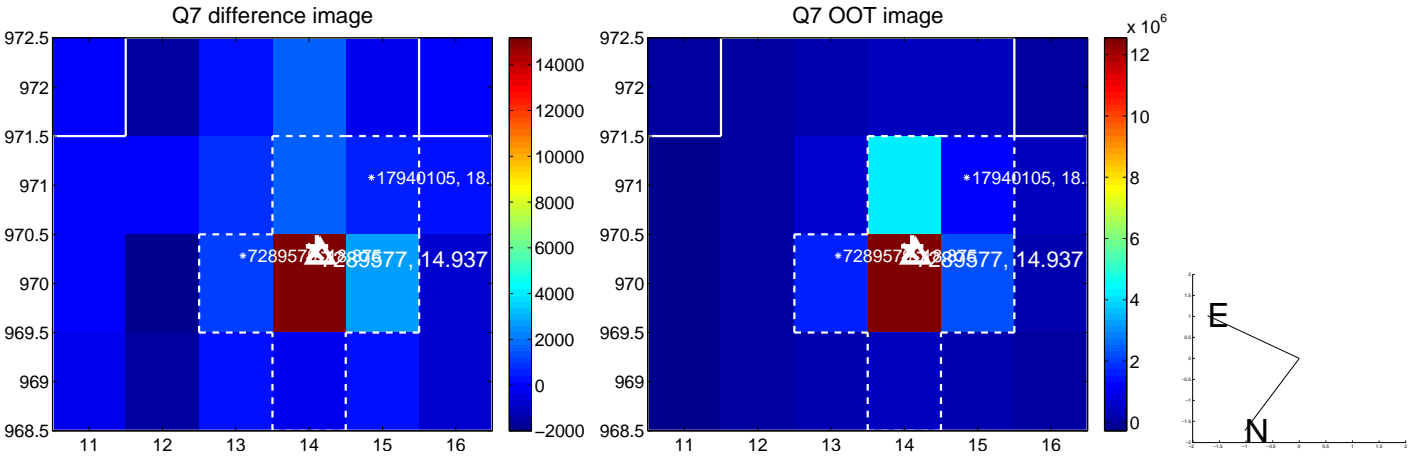
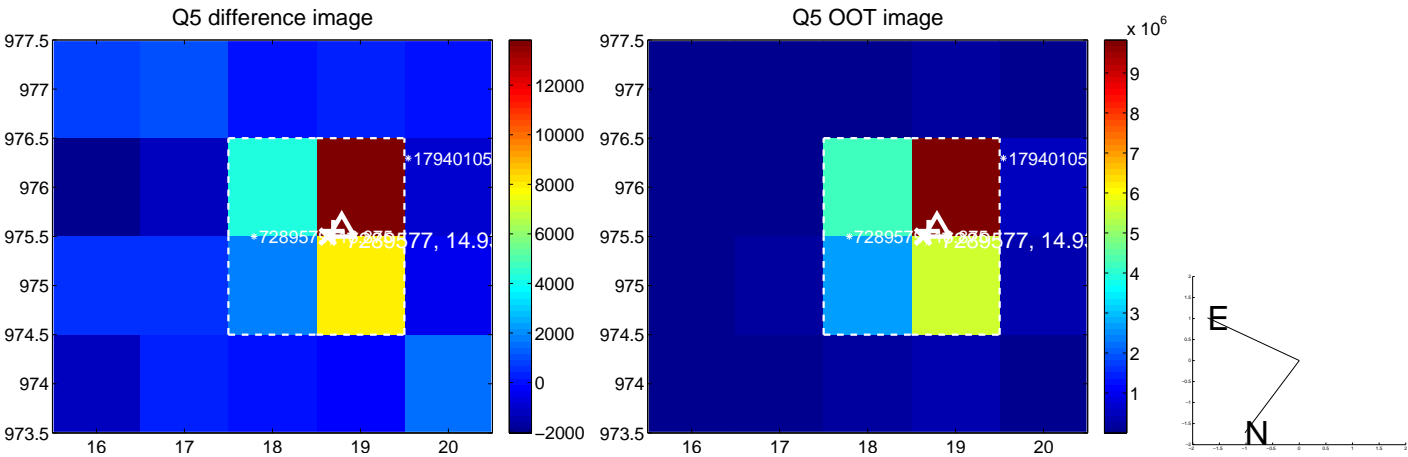


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

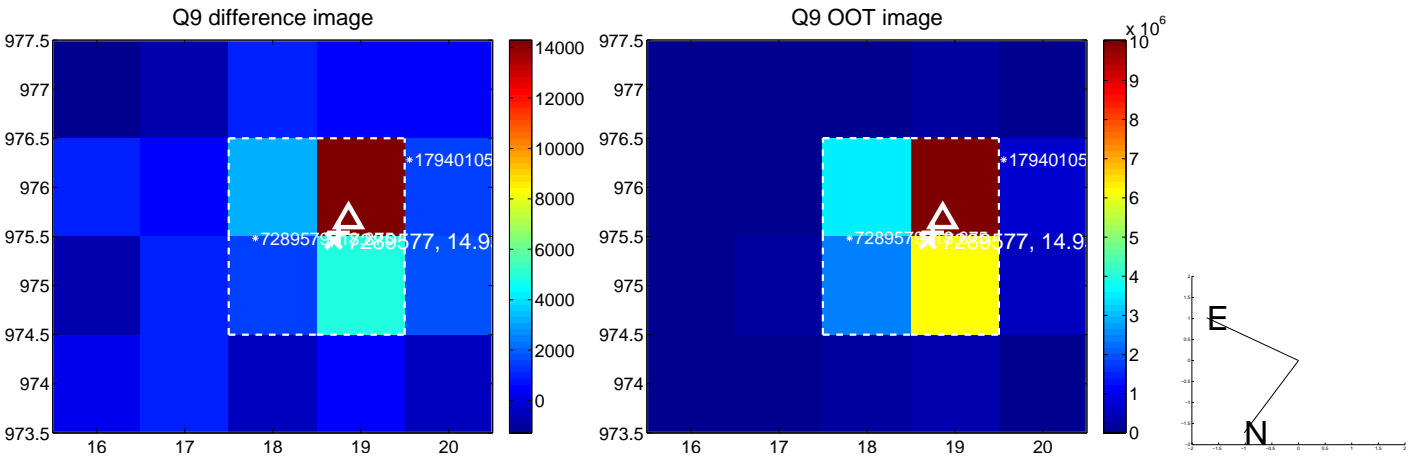
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



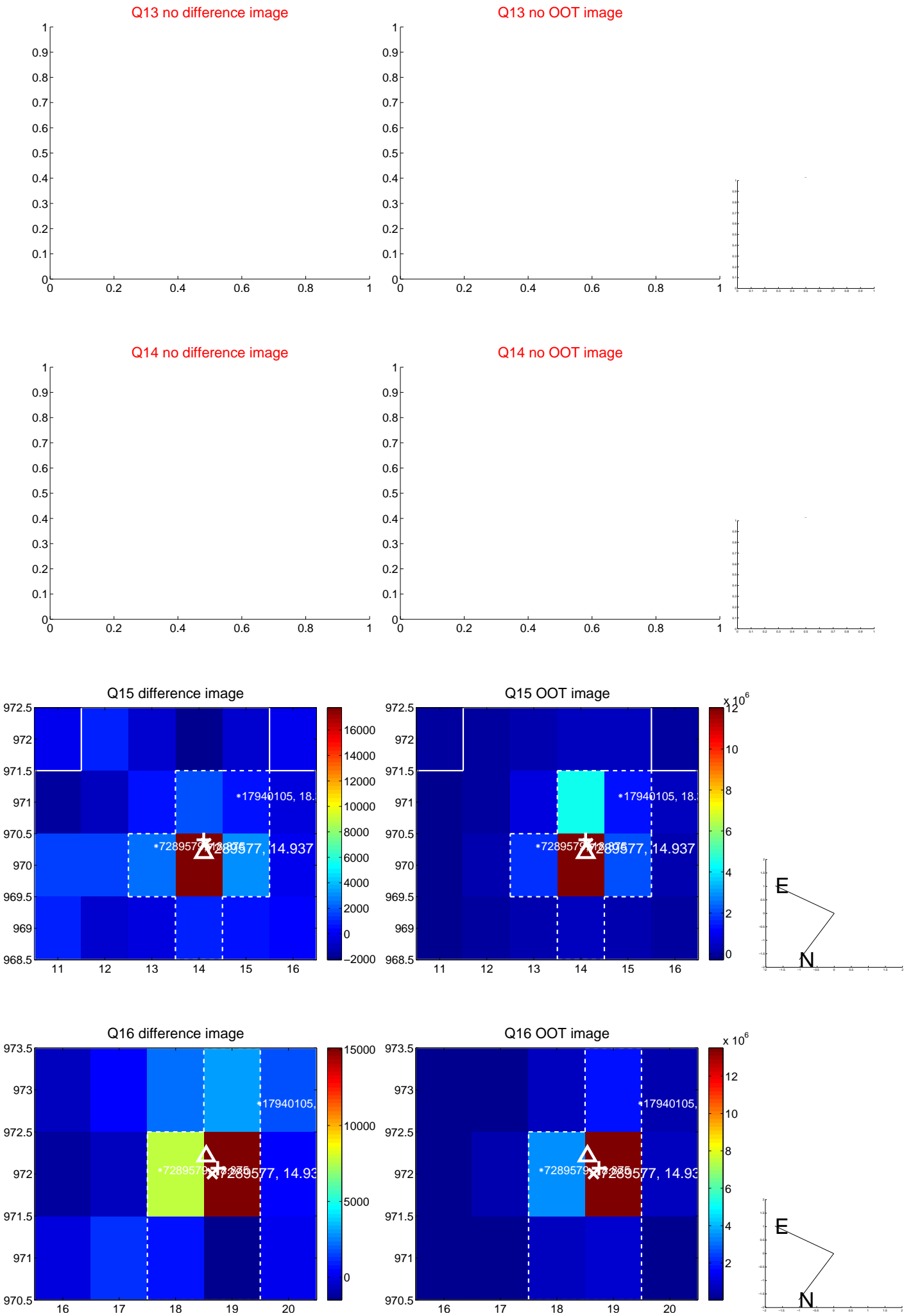
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



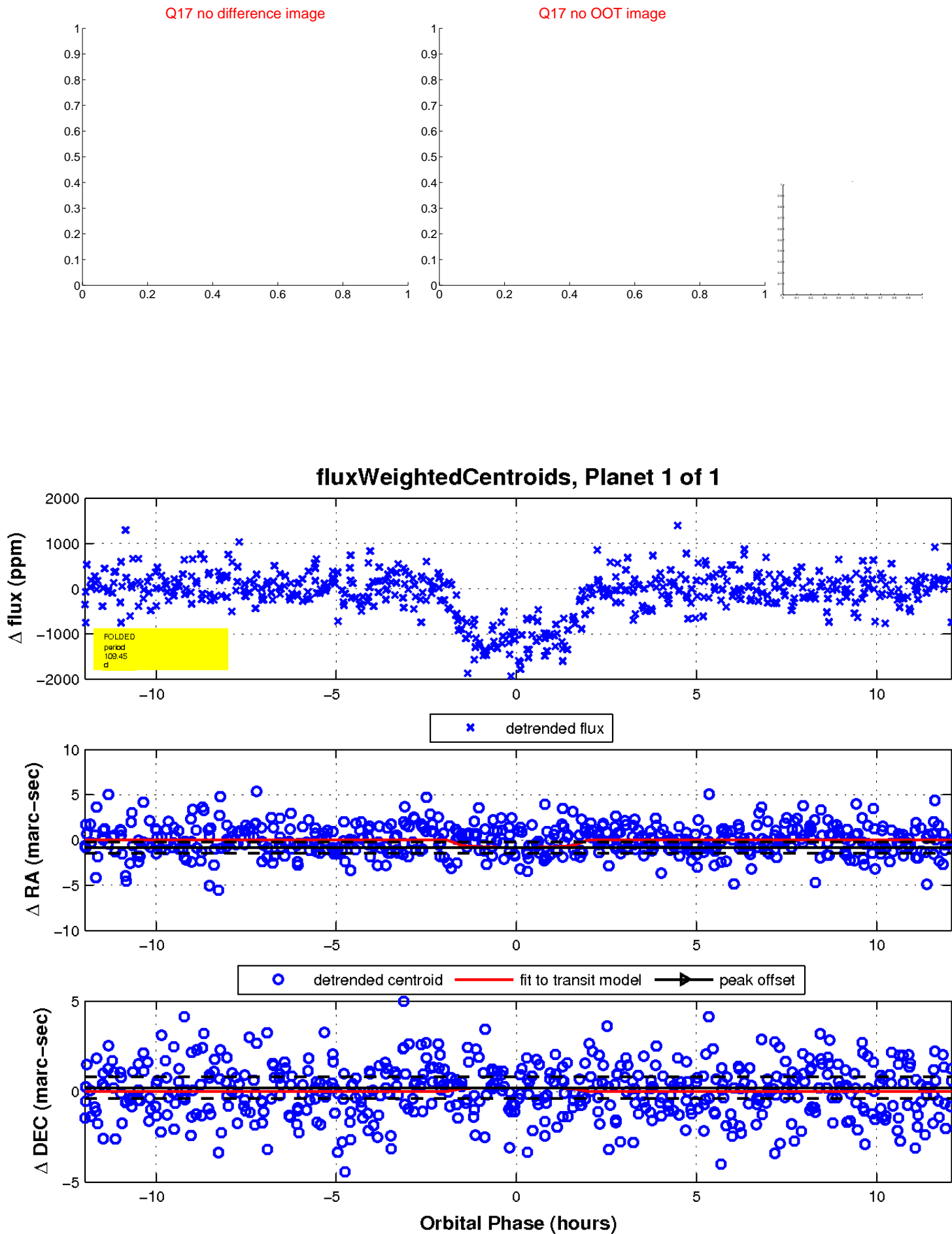
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

