

KIC 005449777

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})
005449777-01	OBS	0410.01	7.216951	132.981391	4190.5	1.892	304.4	292.5	1.06	6266	11.18	292.97

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005449777-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

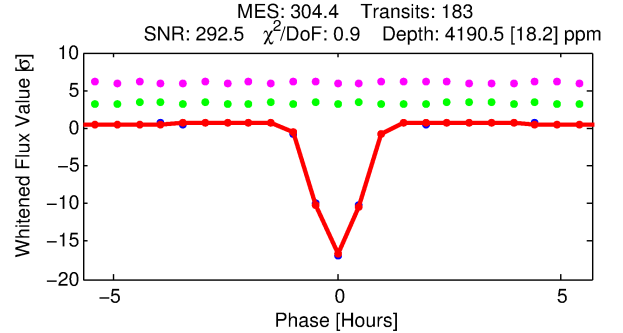
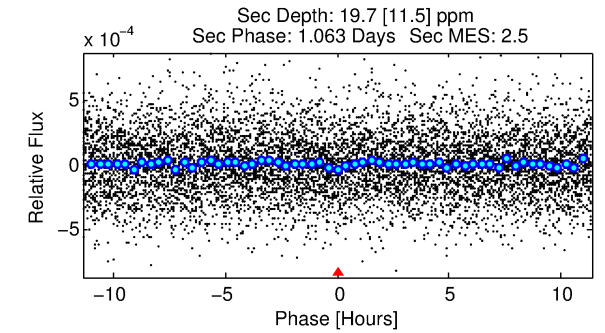
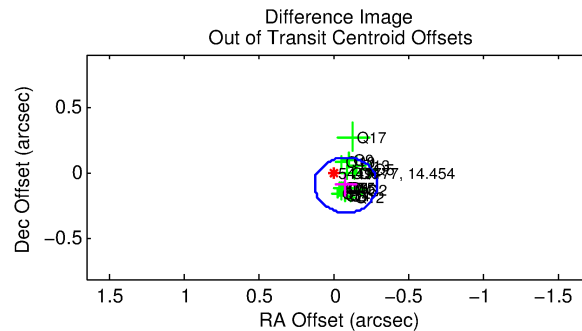
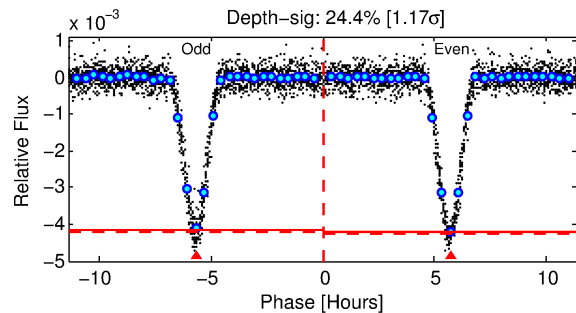
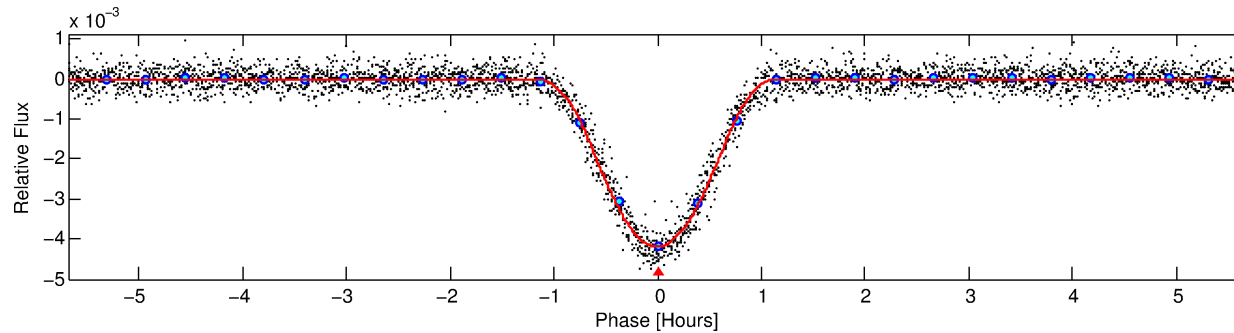
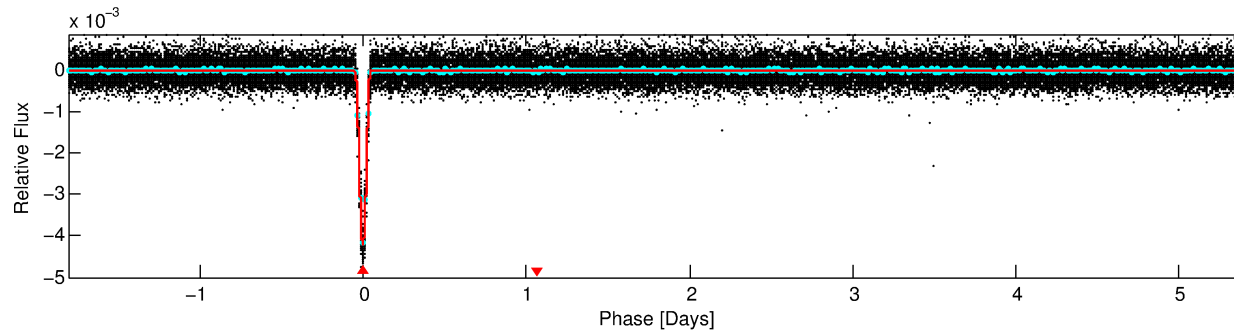
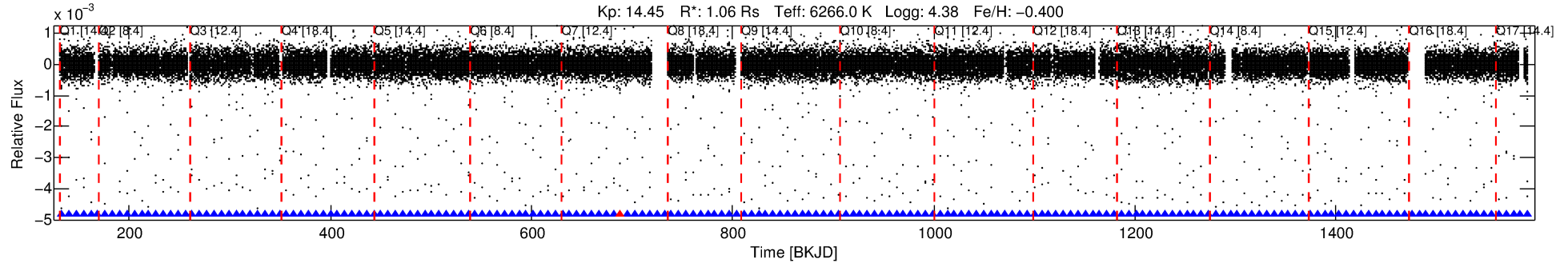
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005449777-01

No Significant Match Found

DV One-Page Summary

KIC: 5449777 Candidate: 1 of 1 Period: 7.217 d
KOI: K00410.01 Corr: 0.999



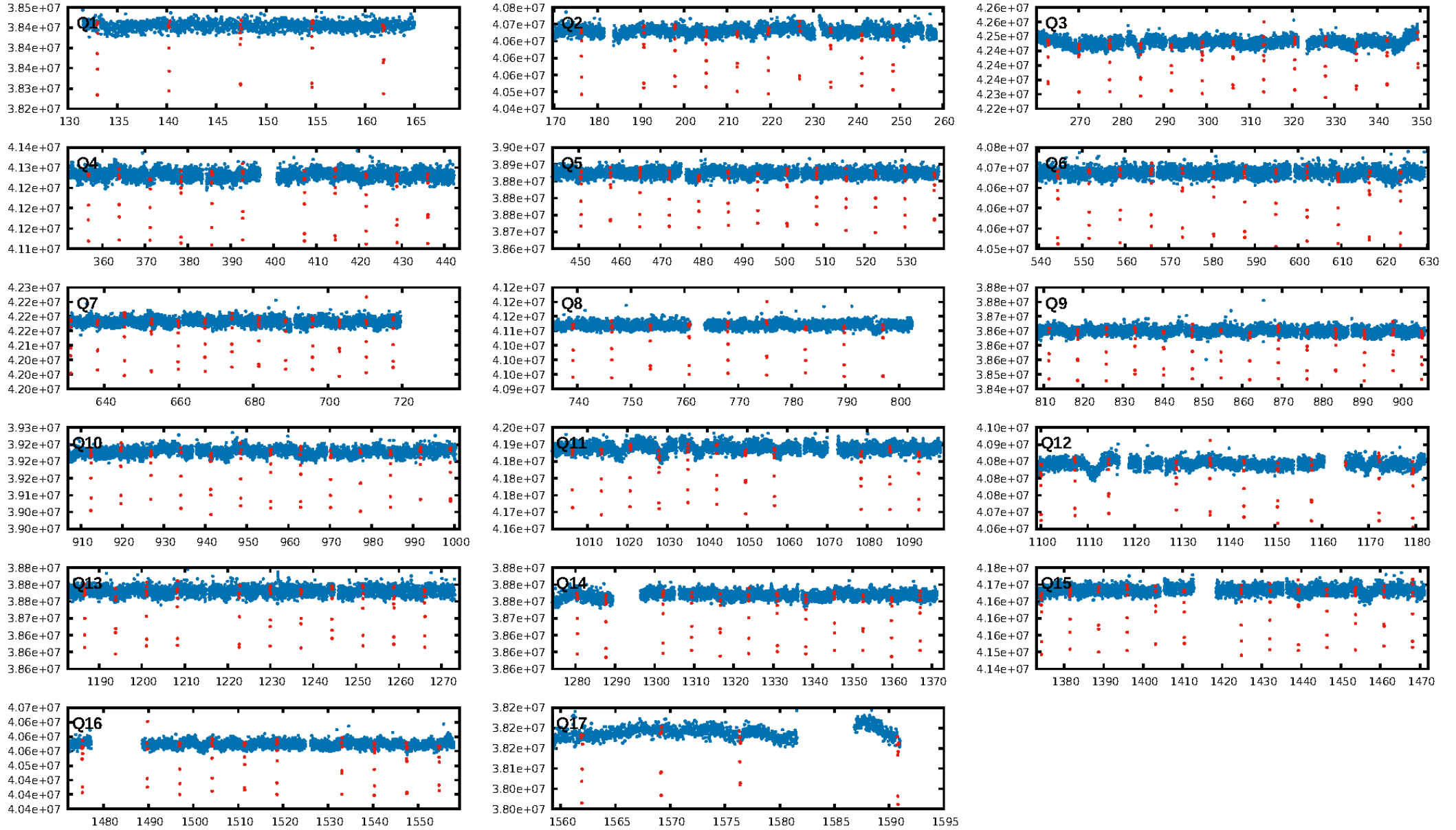
DV Fit Results:

Period = 7.21695 [0.00000] d
Epoch = 132.9814 [0.0002] BKJD
Rp/R* = 0.0971 [0.0160]
a/R* = 14.33 [0.59]
b = 0.98 [0.03]
Seff = 292.97 [110.95]
Teq = 1055 [100] K
Rp = 11.18 [3.69] Re
a = 0.0725 [0.0176] AU
Ag = 0.46 [0.34] [-1.58 σ]
Teffp = 1340 [228] K [1.14 σ]

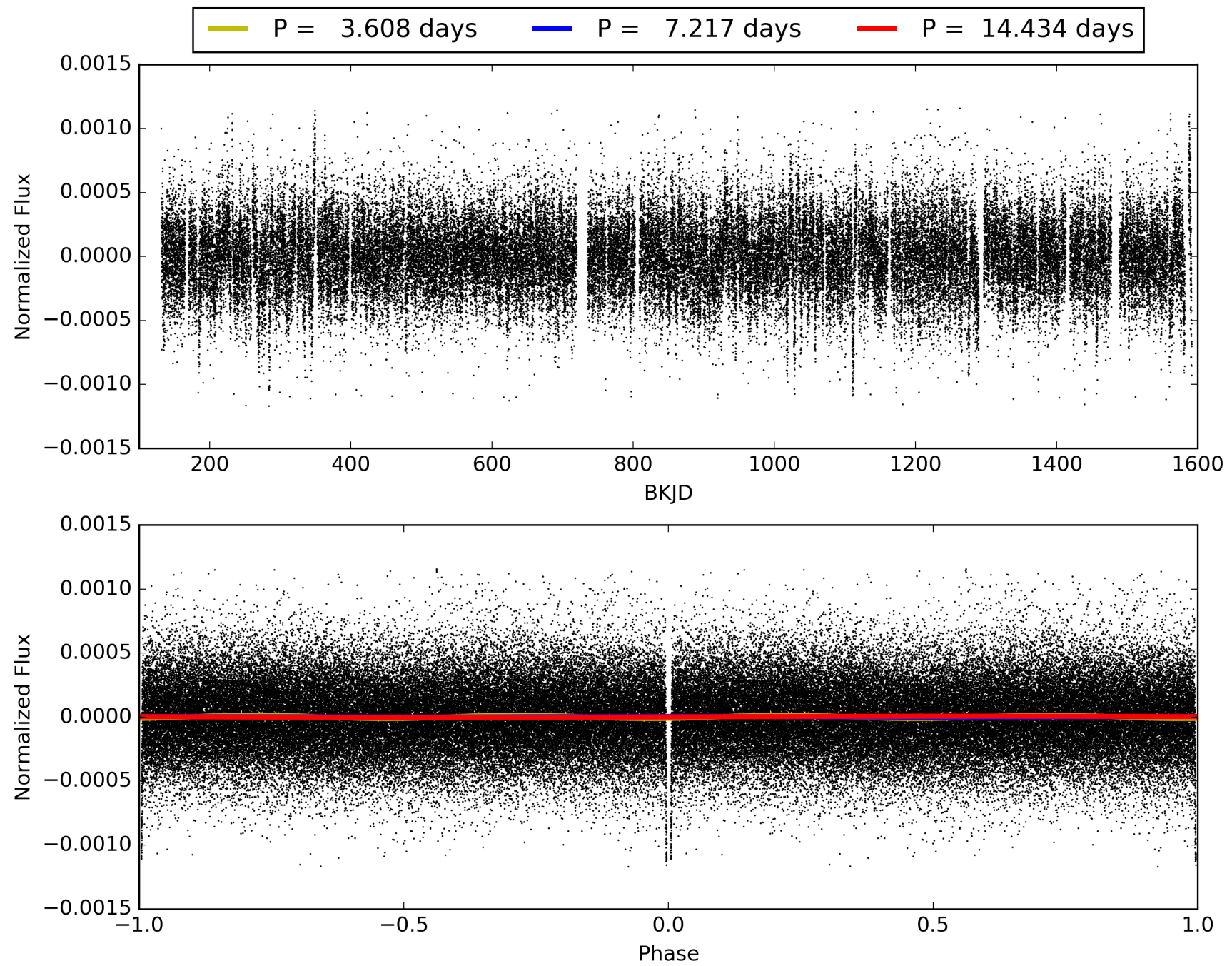
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [173/174]
GhostDiagnostic-chr: 5.172
Centroid-sig: 0.0%
Centroid-so: 0.229 arcsec [5.71 σ]
OotOffset-rm: 0.123 arcsec [1.77 σ]
KicOffset-rm: 0.212 arcsec [2.81 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 005449777-01, PDC Light Curves

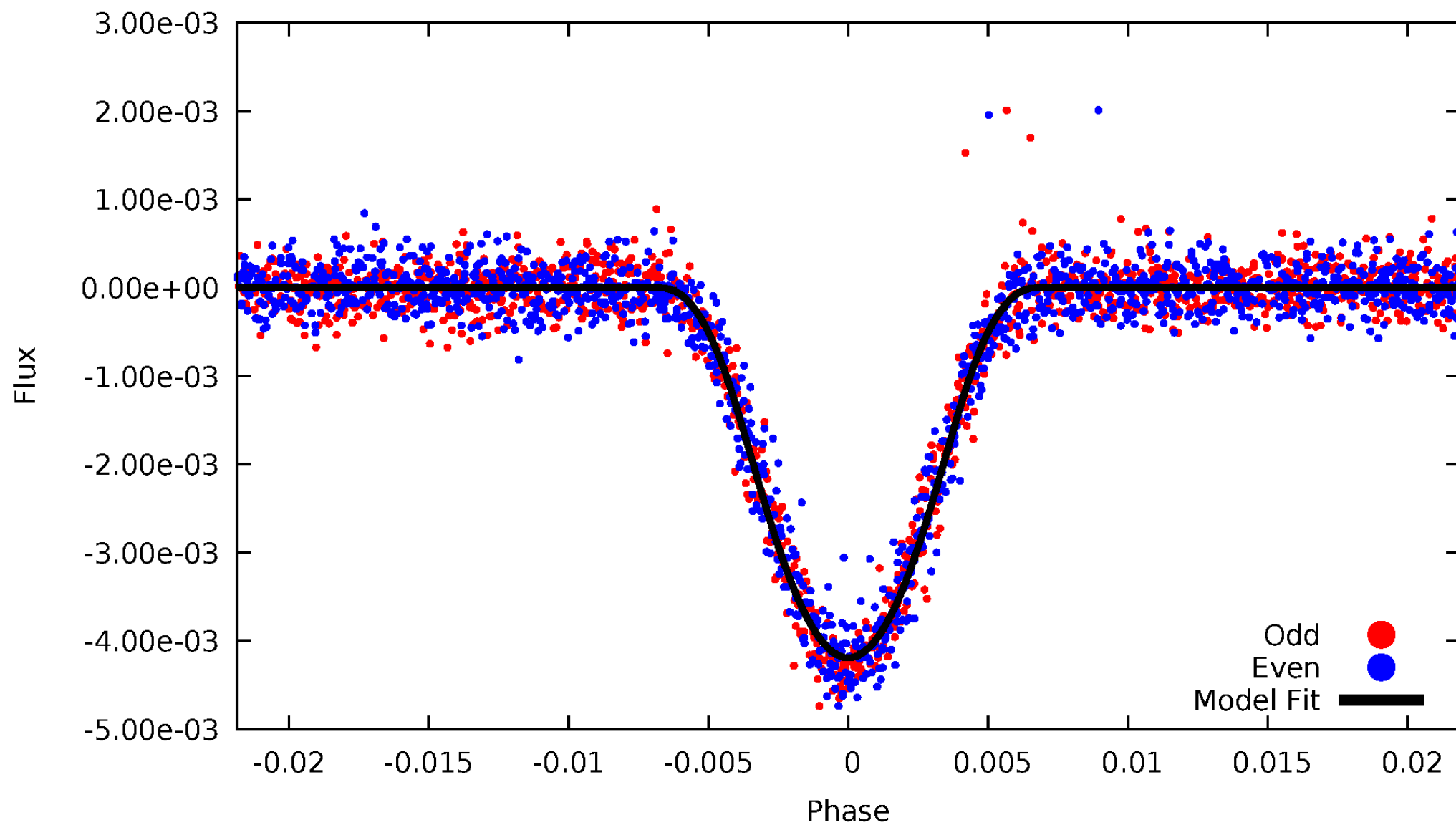


TCE 005449777-01



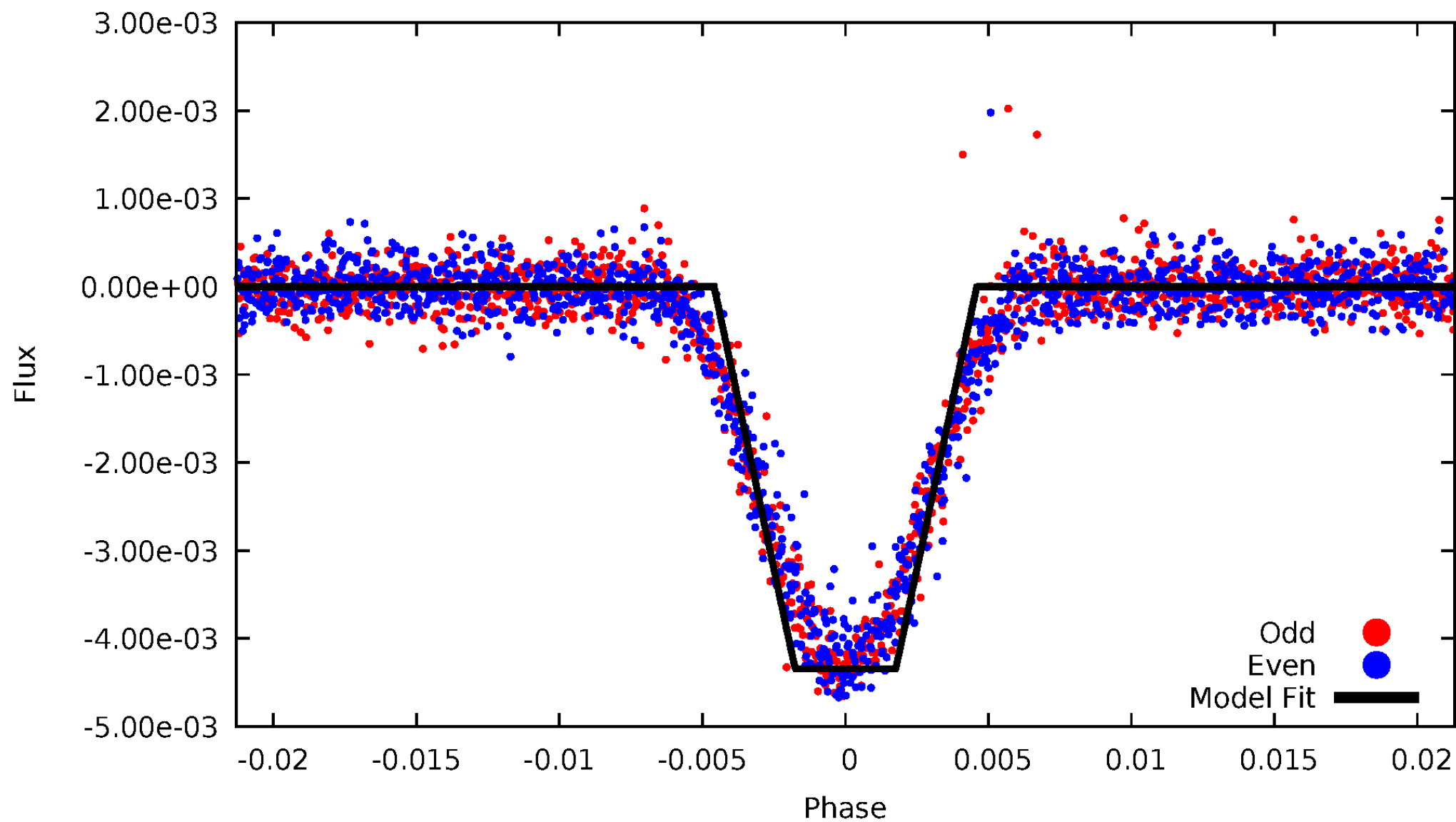
DV Odd/Even

TCE 005449777-01



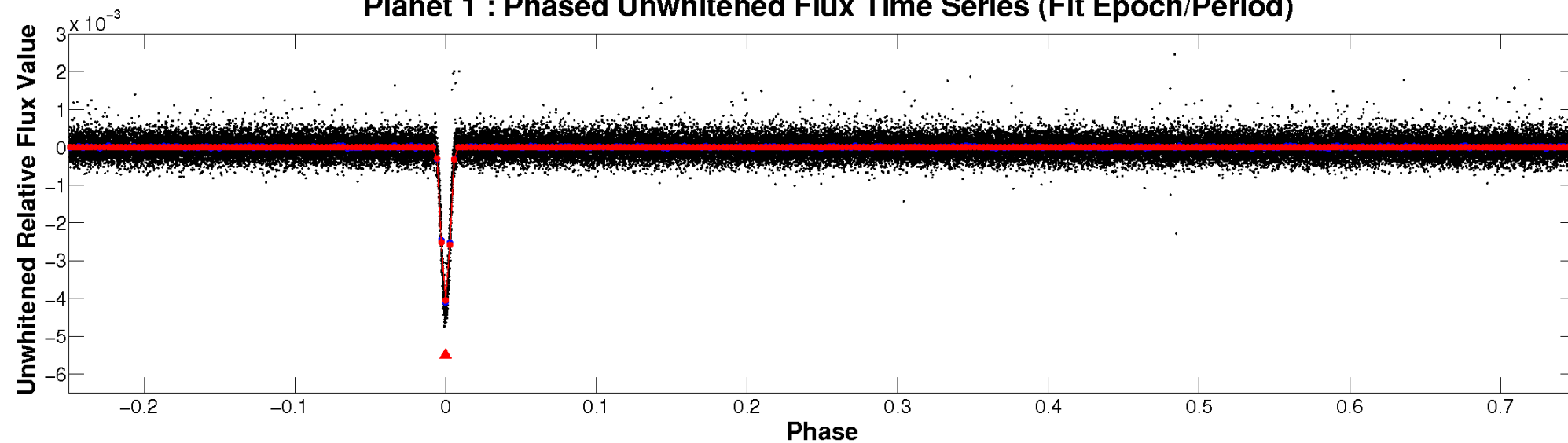
ALT Odd/Even

TCE 005449777-01

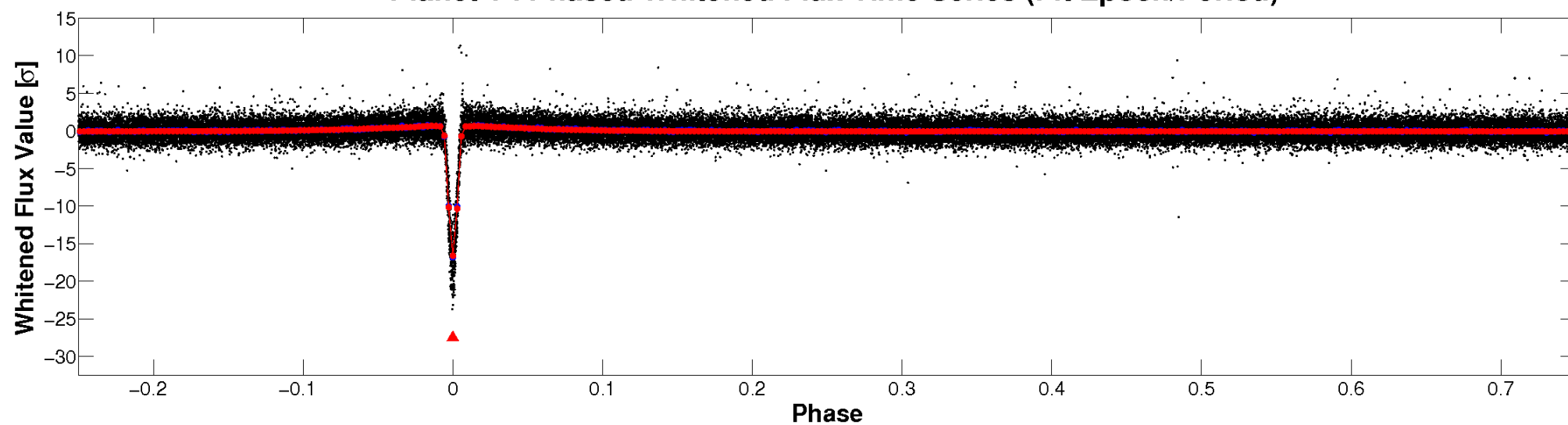


Non-Whitened Vs. Whitened Light Curve

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

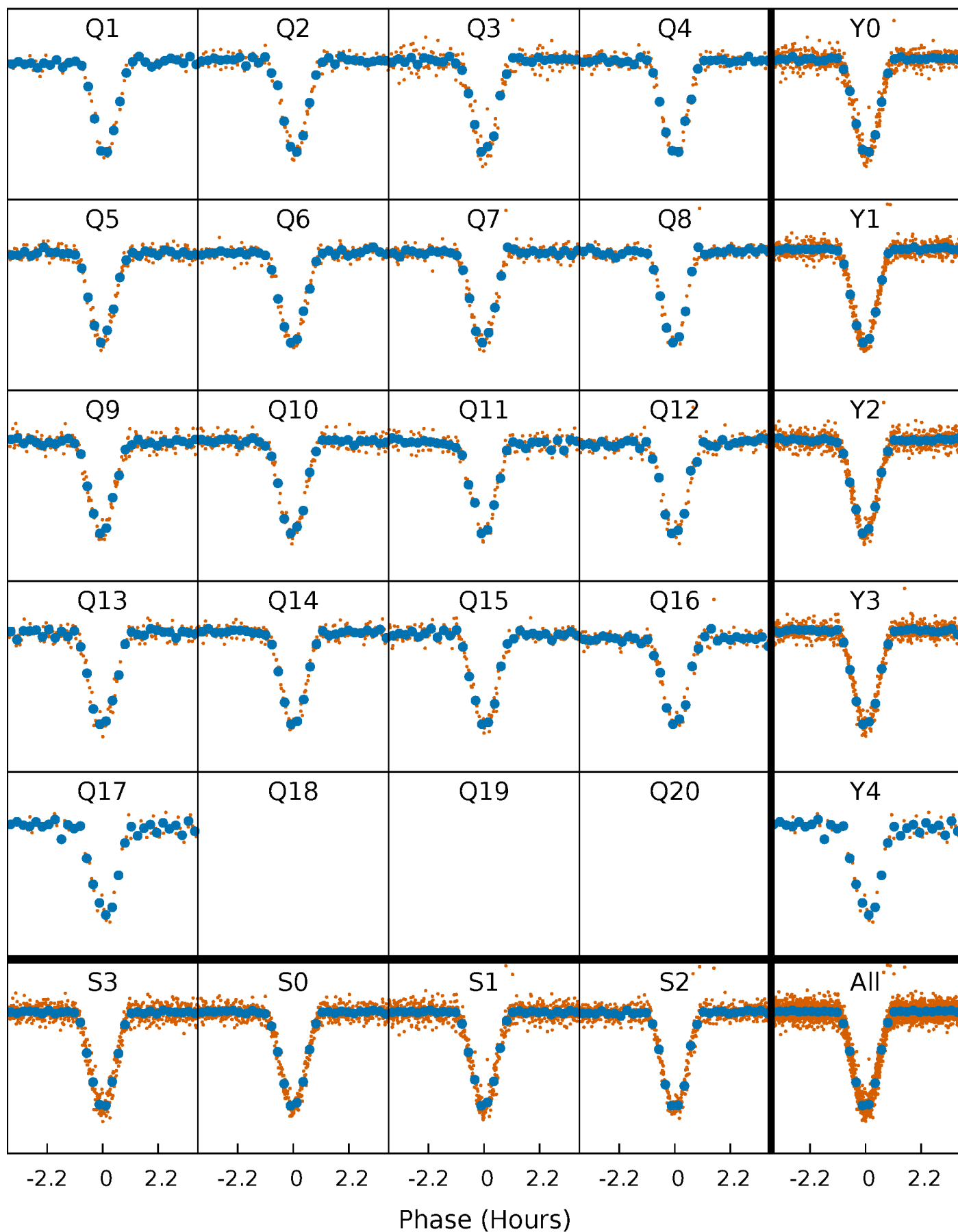


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



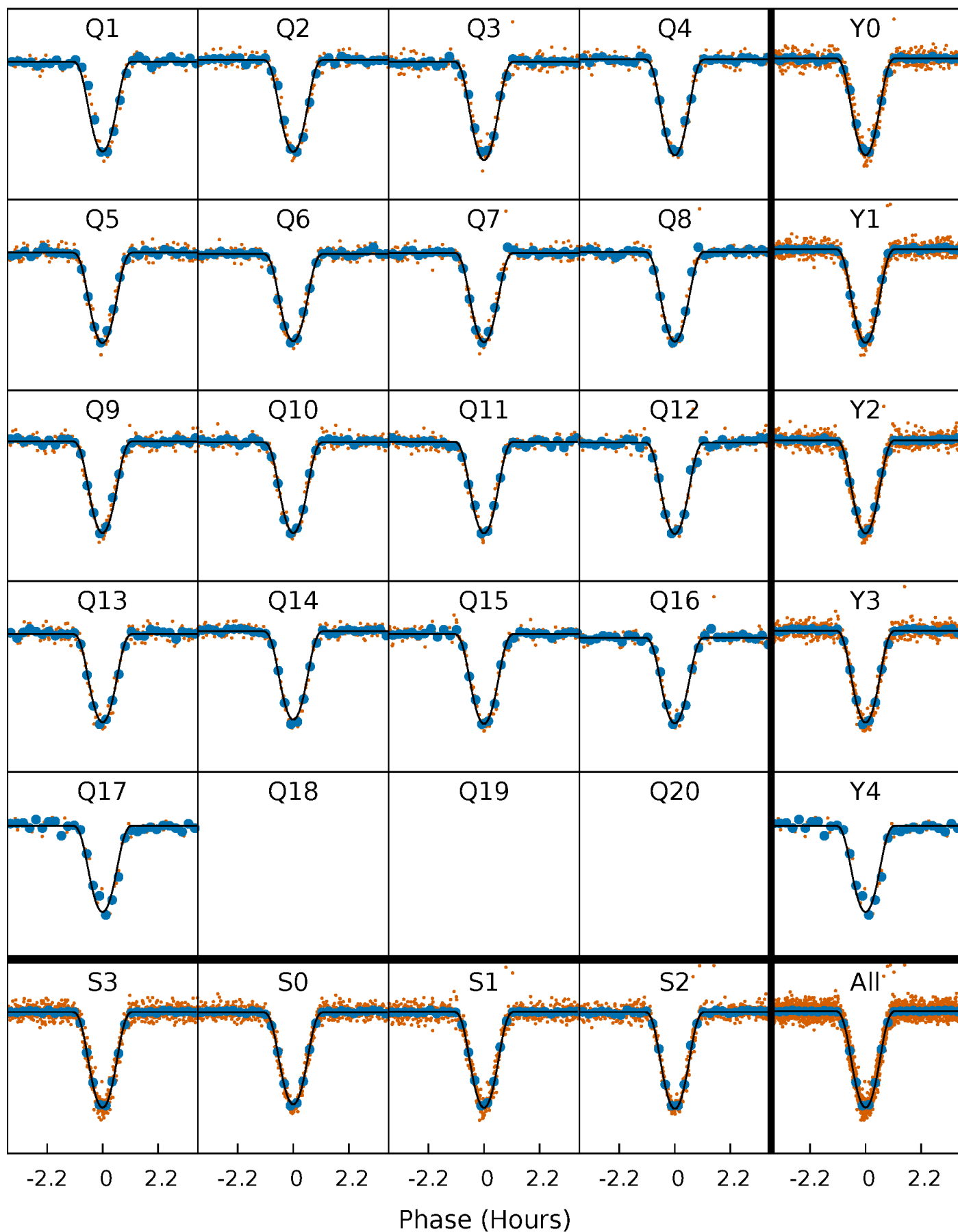
PDC Quarter-Phased Transit Curves

TCE 005449777-01 P= 7.216951 Days $T_0=132.981391$ (BKJD)



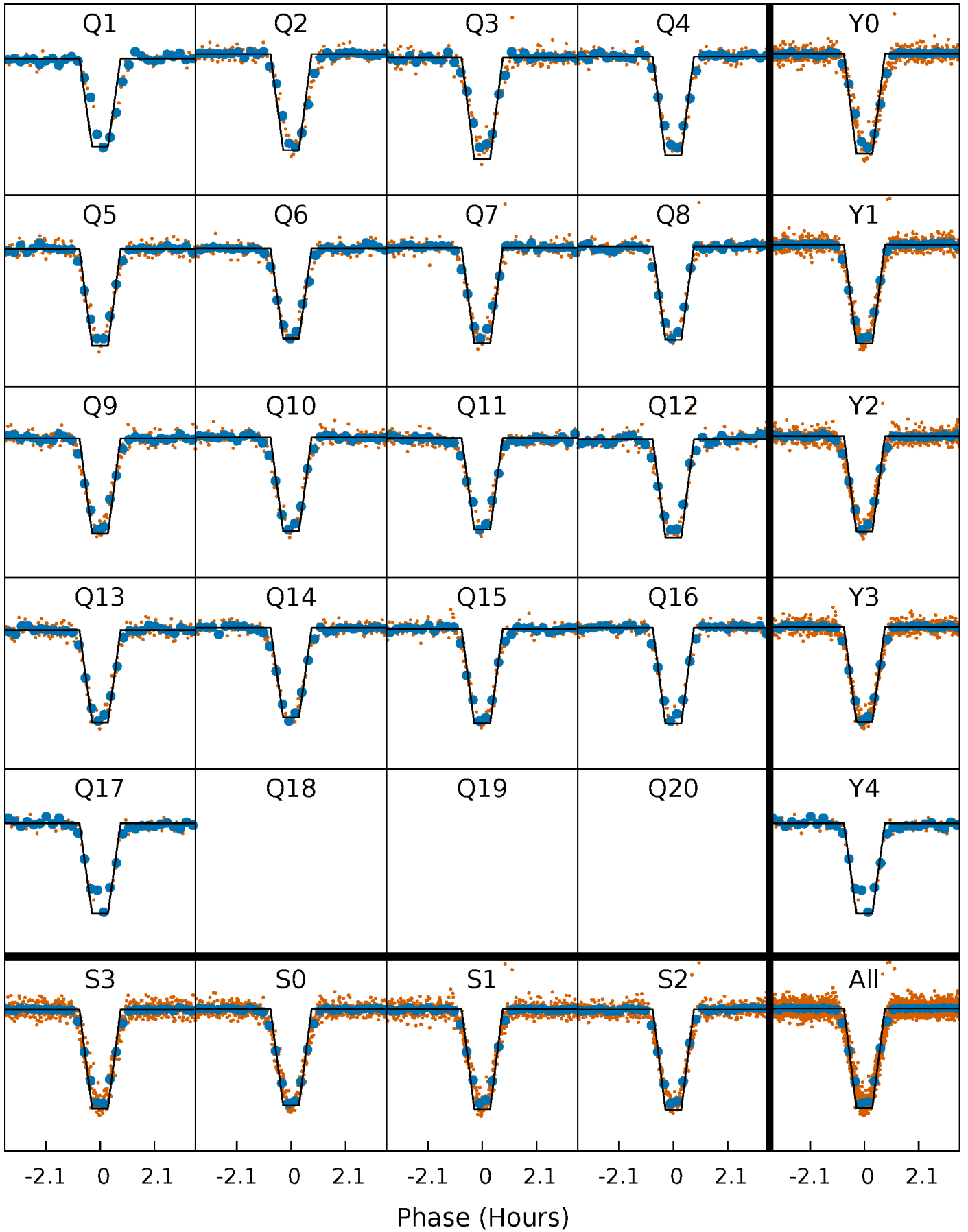
DV Quarter-Phased Transit Curves

TCE 005449777-01 P= 7.216951 Days $T_0=132.981391$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

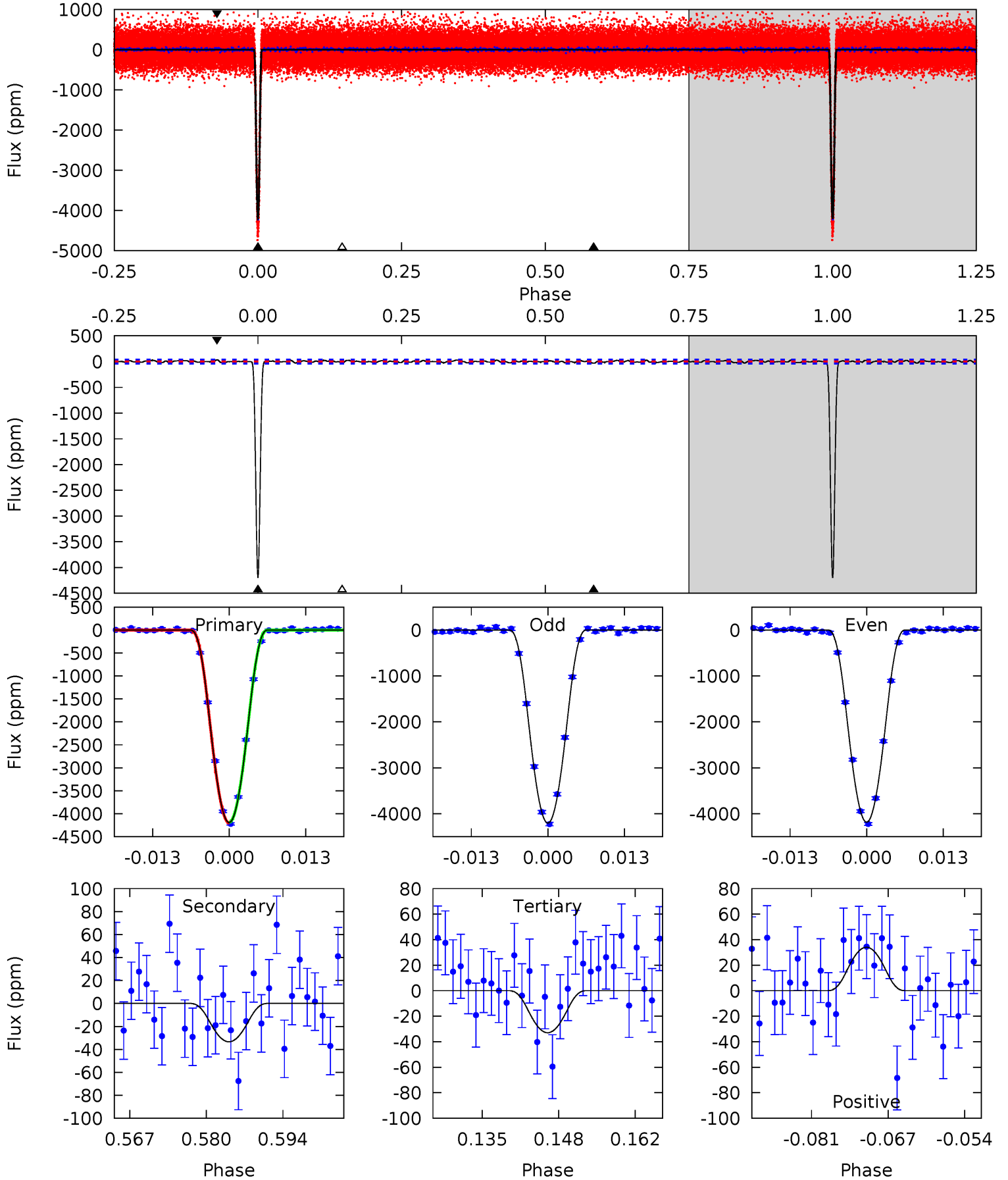
TCE 005449777-01 P= 7.216967 Days $T_0=132.979644$ (BKJD)



DV Model-Shift Uniqueness Test

005449777-01, P = 7.216951 Days, E = 125.764440 Days

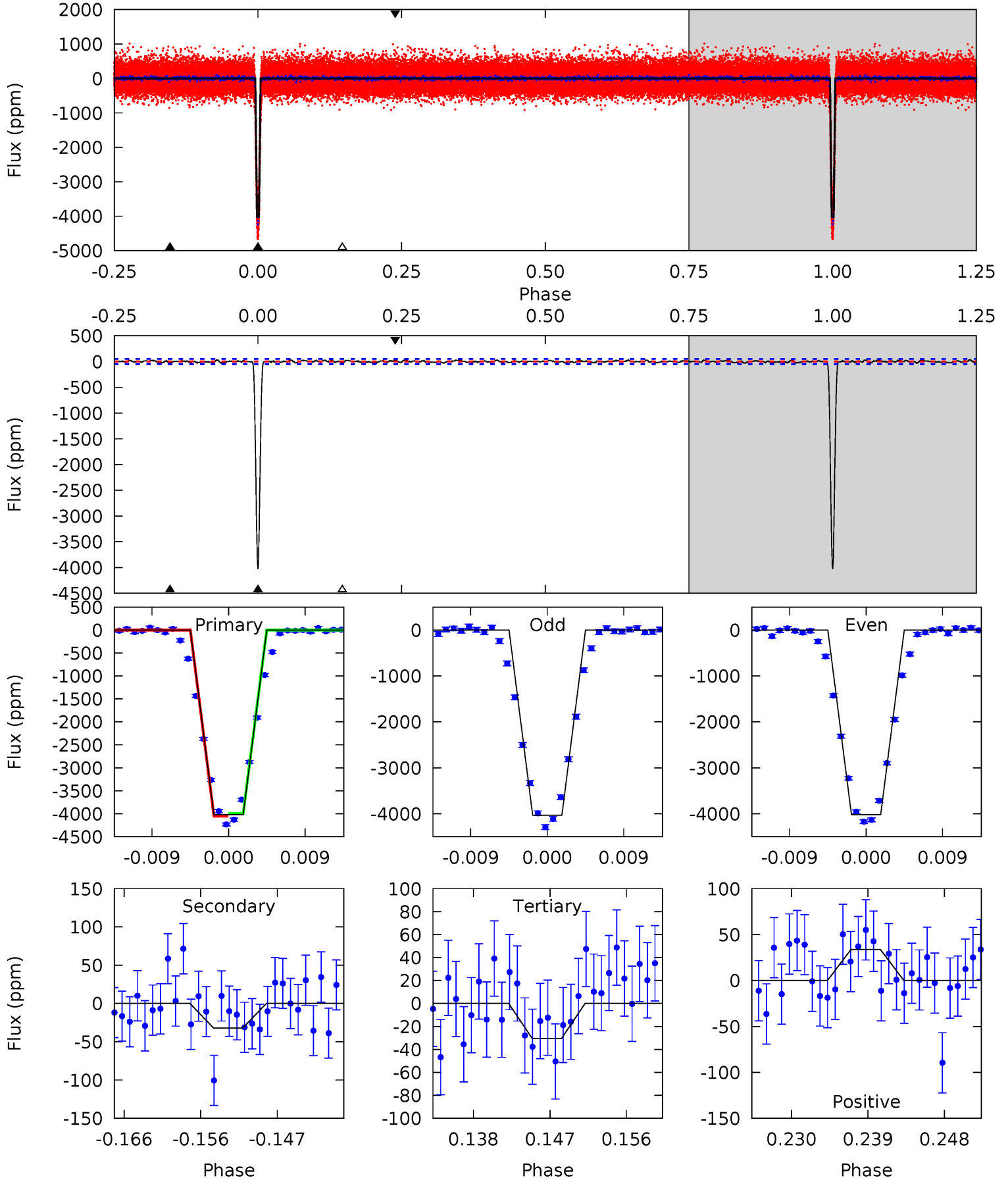
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
526.5	4.19	4.14	4.28	4.97	2.47	1.51	522.4	522.2	0.05	-0.08	1.29	1.00	0.01	0.81



Alt Model-Shift Uniqueness Test

005449777-01, P = 7.216967 Days, E = 125.762677 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
405.4	3.23	3.07	3.41	5.04	2.60	1.23	402.3	402.0	0.16	-0.18	0.64	1.00	0.01	2.95



Stellar Parameters For KIC 005449777

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6266^{+169}_{-207}	$4.380^{+0.105}_{-0.195}$	$-0.400^{+0.300}_{-0.300}$	$1.056^{+0.302}_{-0.163}$	$0.974^{+0.148}_{-0.111}$	$1.166^{+0.551}_{-0.565}$
	+3%/-3%	+2%/-4%	+75%/-75%	+29%/-15%	+15%/-11%	+47%/-48%
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 005449777-01 / KOI 0410.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-33±8	$11.58^{+2.32}_{-2.17}$	1484^{+111}_{-79}	2253^{+166}_{-194}	$0.715^{+0.410}_{-0.242}$
Alt.	-32±10	$7.83^{+2.16}_{-1.98}$	1493^{+106}_{-86}	2551^{+275}_{-238}	$1.458^{+1.377}_{-0.640}$

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

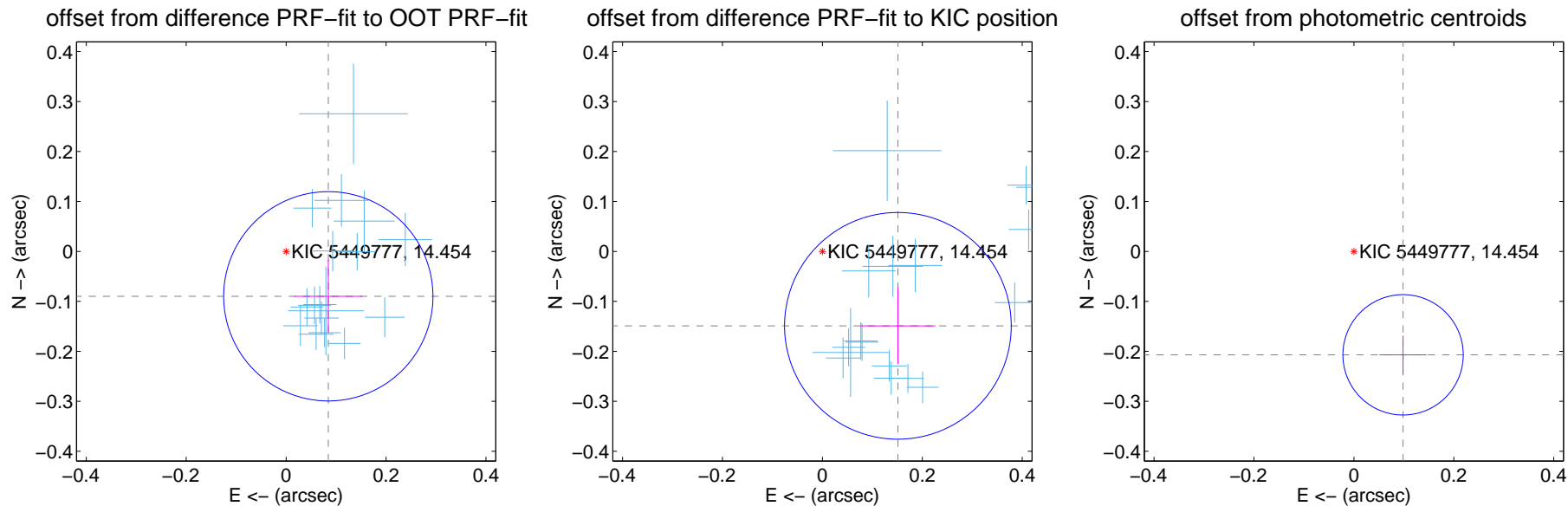
DV Centroid Data

Supplemental centroid analysis for 005449777-01. Kepler magnitude: 14.45. Transit SNR 292.47

There are 17 quarters with good PRF difference image offsets

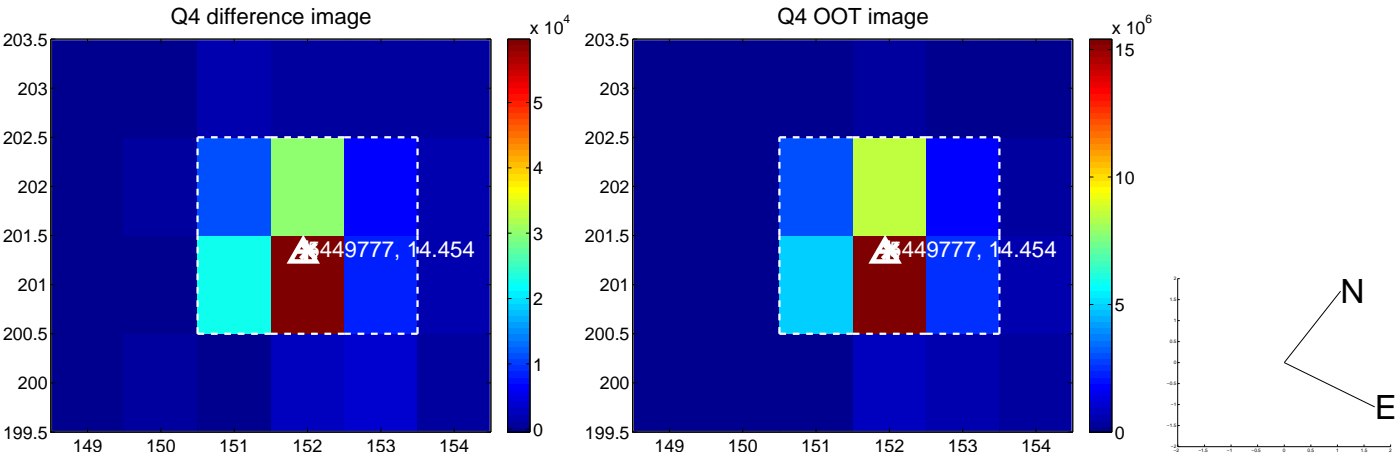
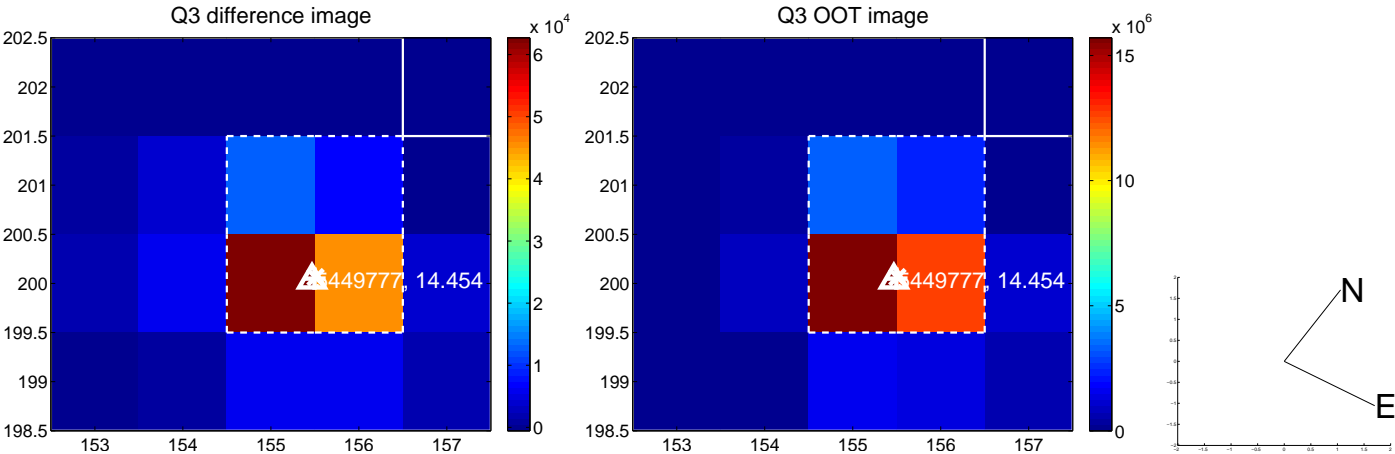
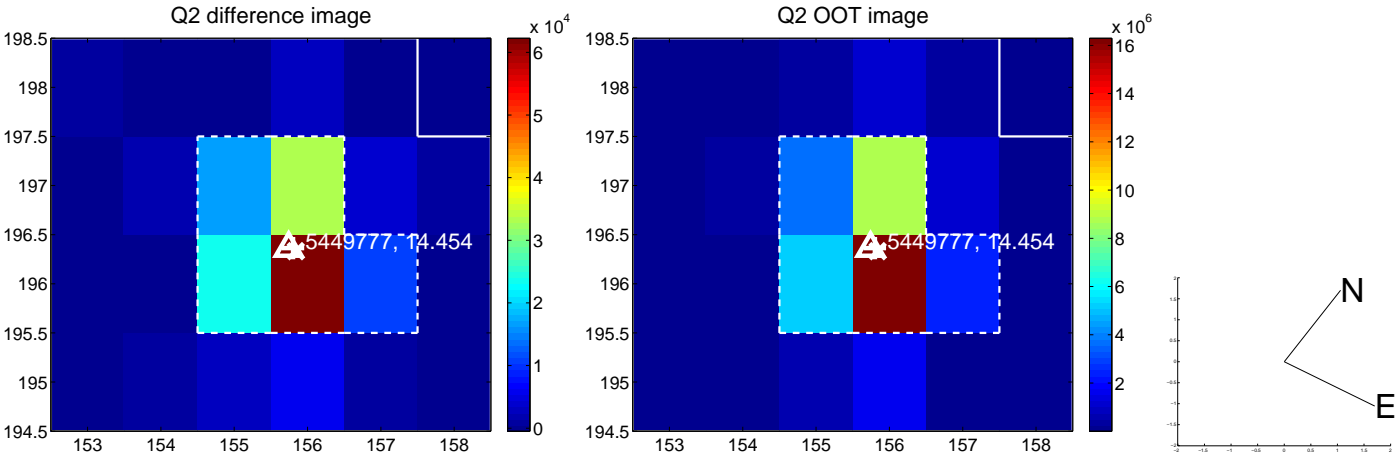
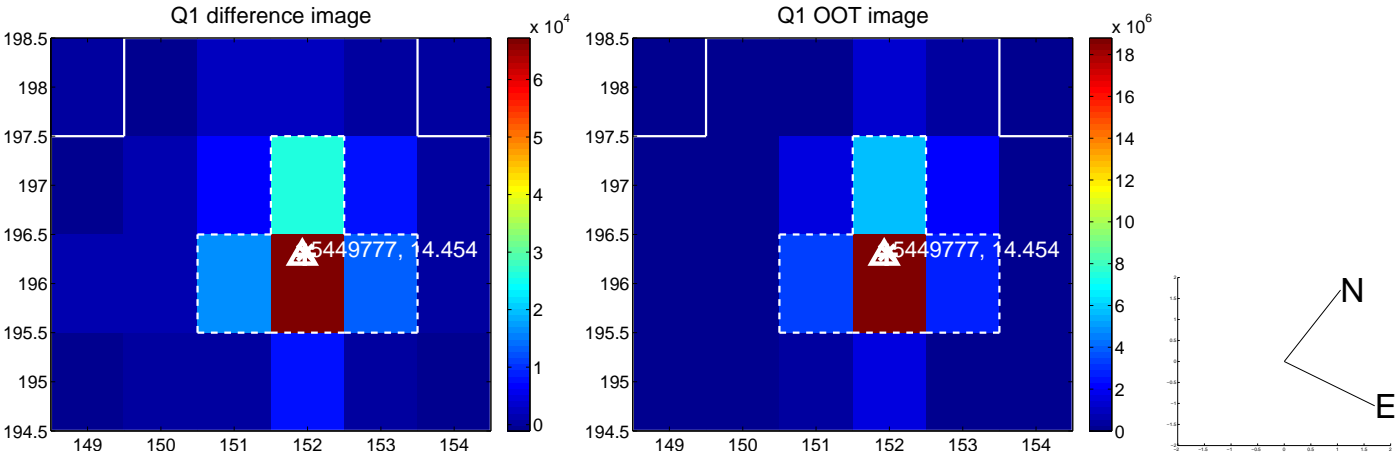
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.123 ± 0.070	1.77	-0.084 ± 0.068	-0.090 ± 0.073
PRF-fit source offset from KIC position	0.212 ± 0.076	2.81	-0.151 ± 0.075	-0.149 ± 0.076
photometric centroid source offset	0.23 ± 0.04	5.71	-0.10 ± 0.05	-0.21 ± 0.04

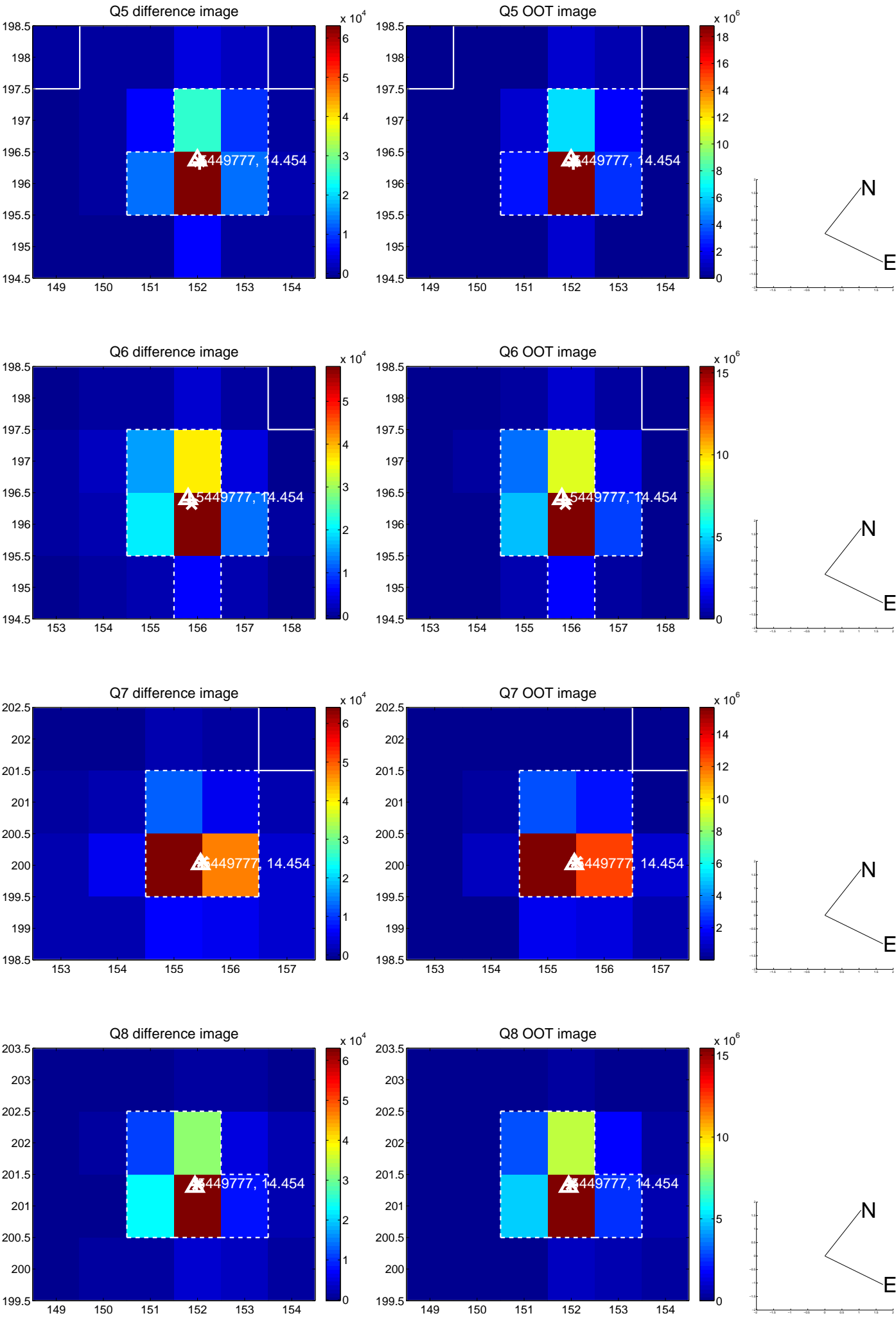


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

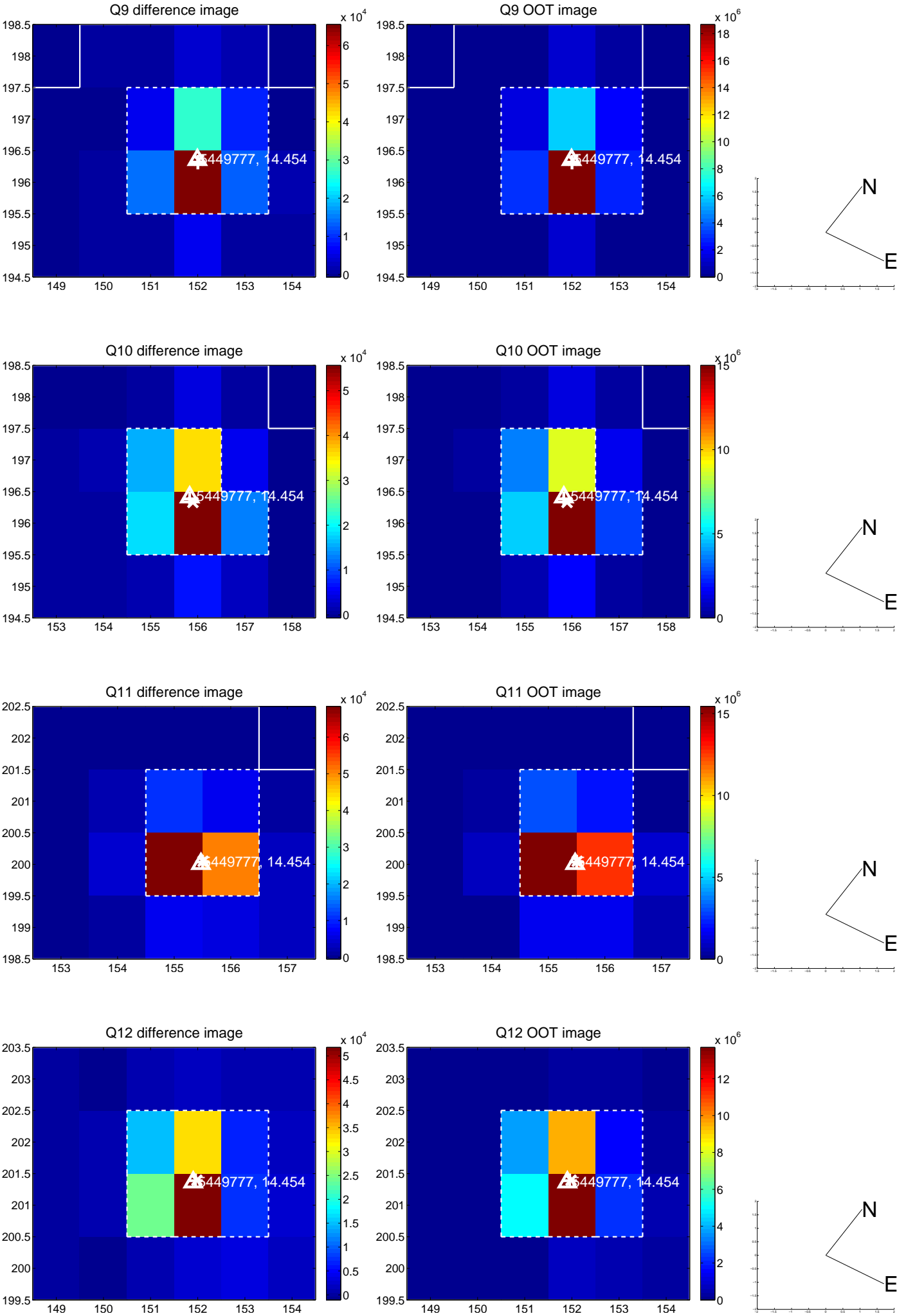
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



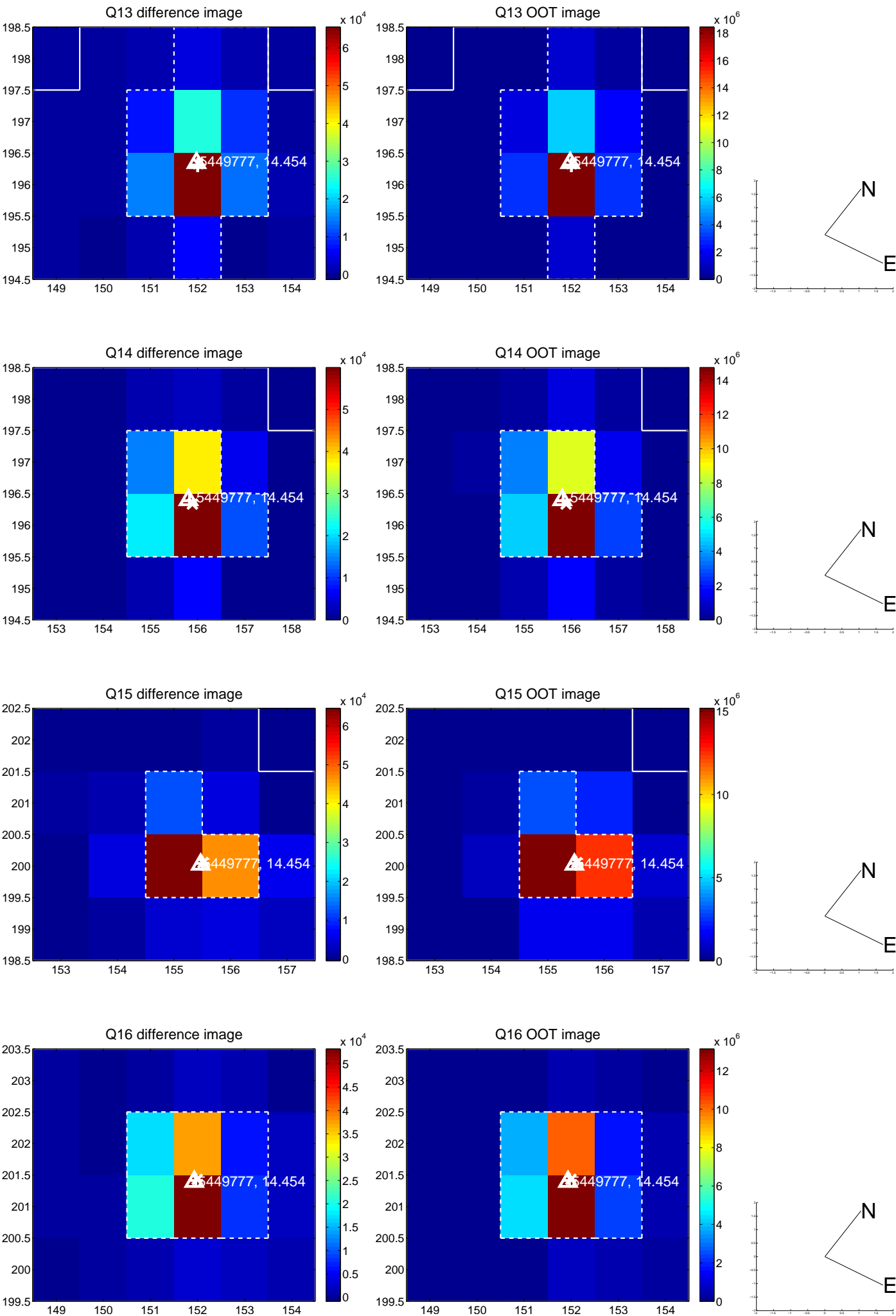
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



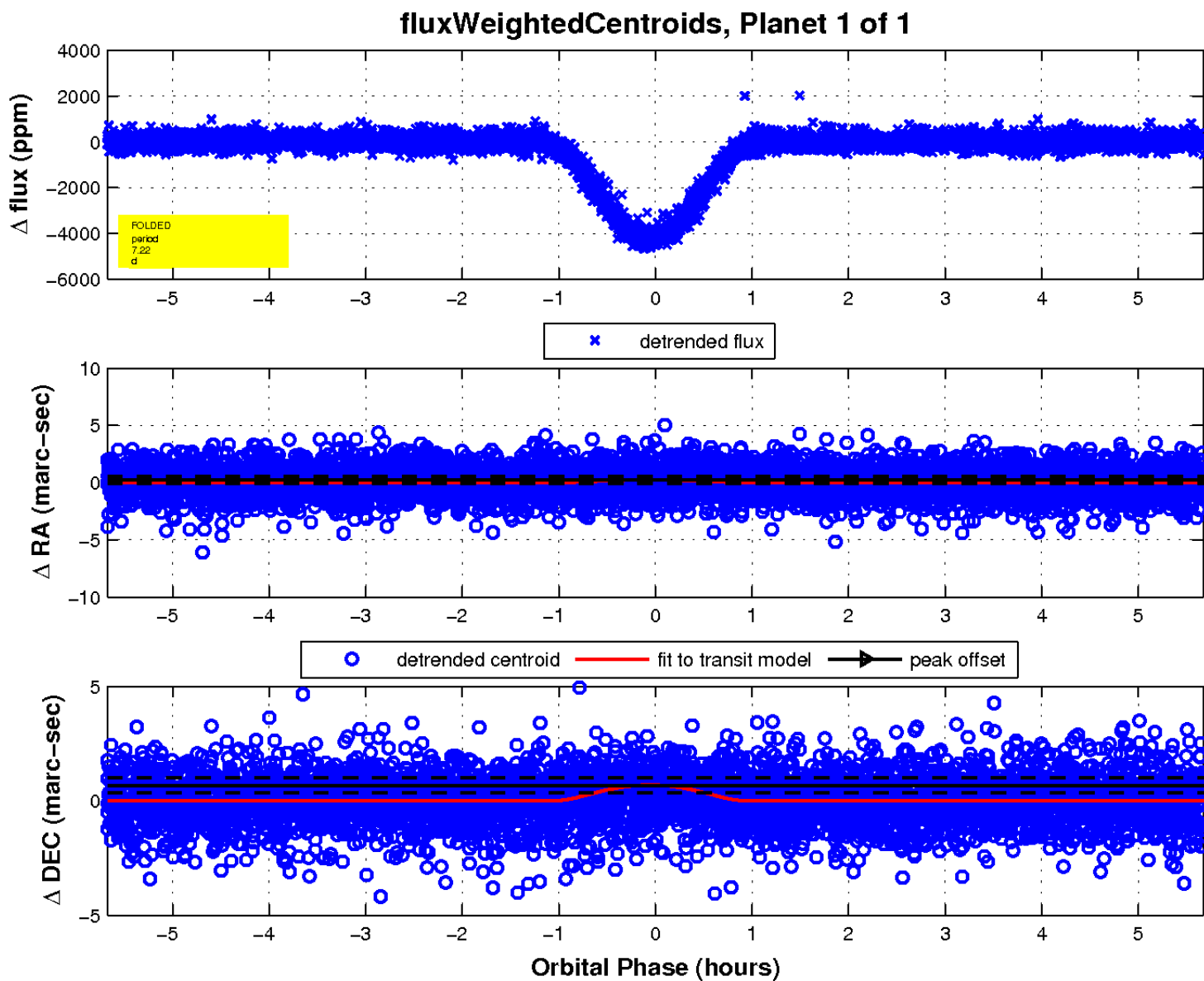
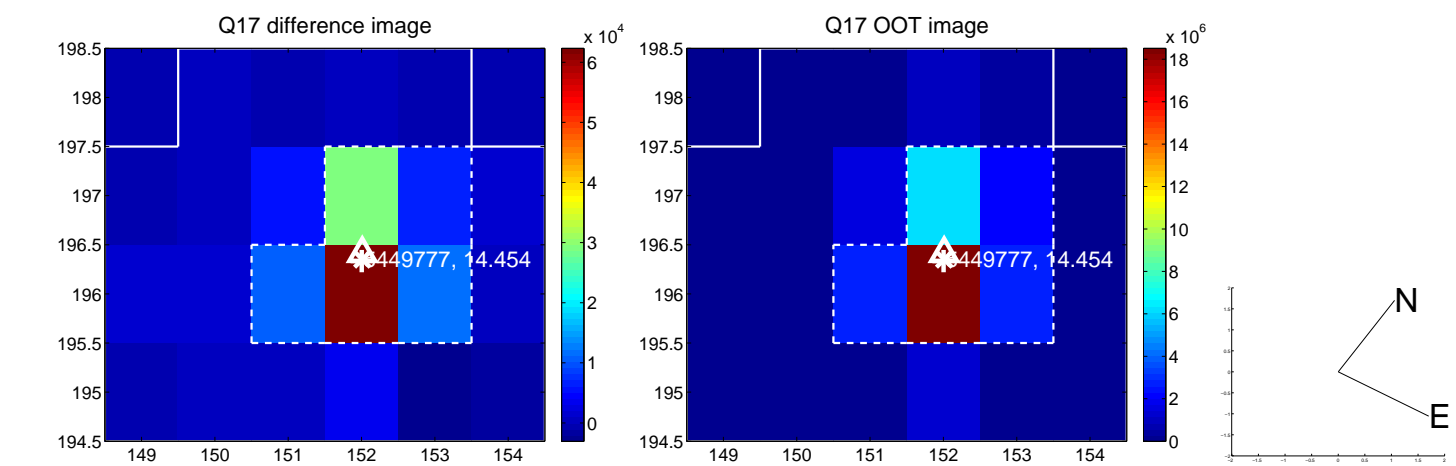
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

