

KIC 005479973

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})
005479973-01	OBS	6589.01	1.795277	131.868576	115800.8	6.291	3531.6	2300.2	1.01	6363	50.17	1722.48

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005479973-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_ALT—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.

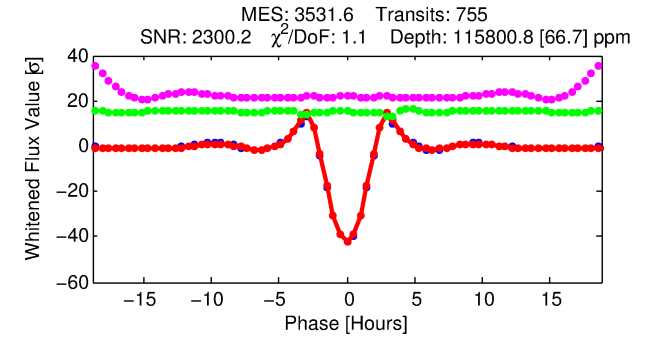
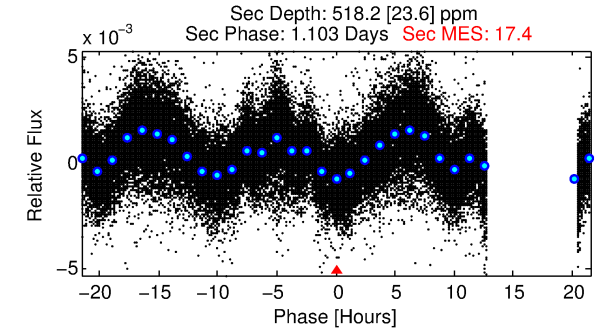
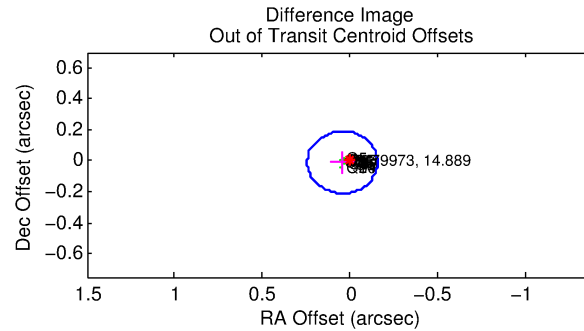
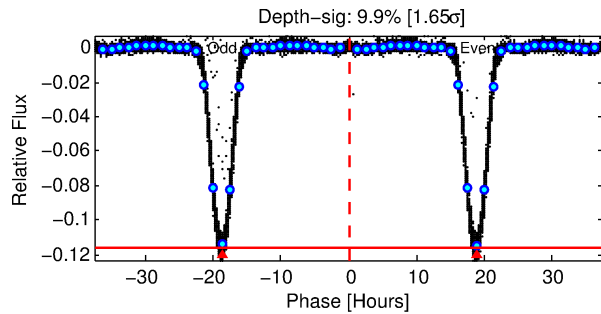
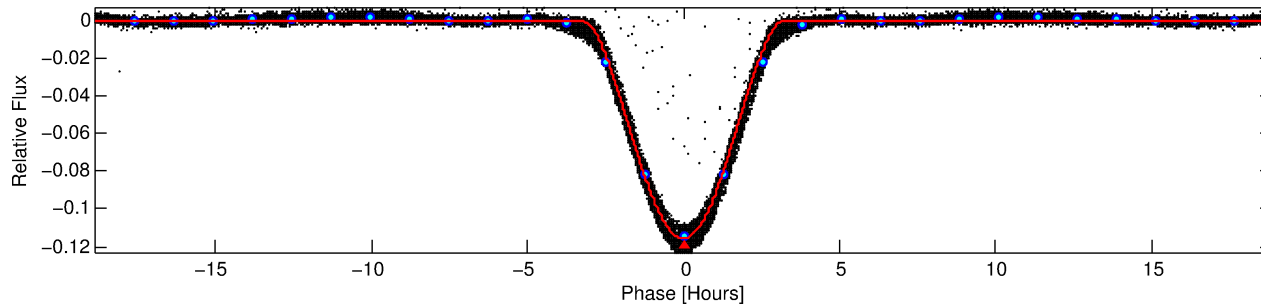
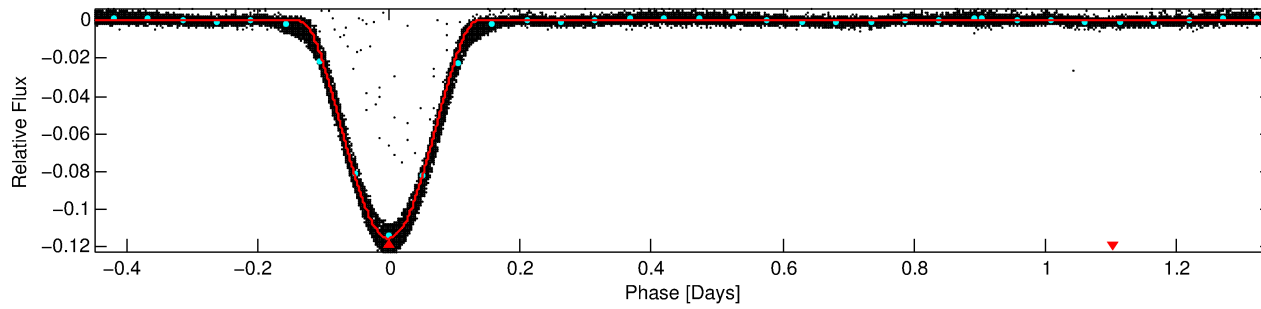
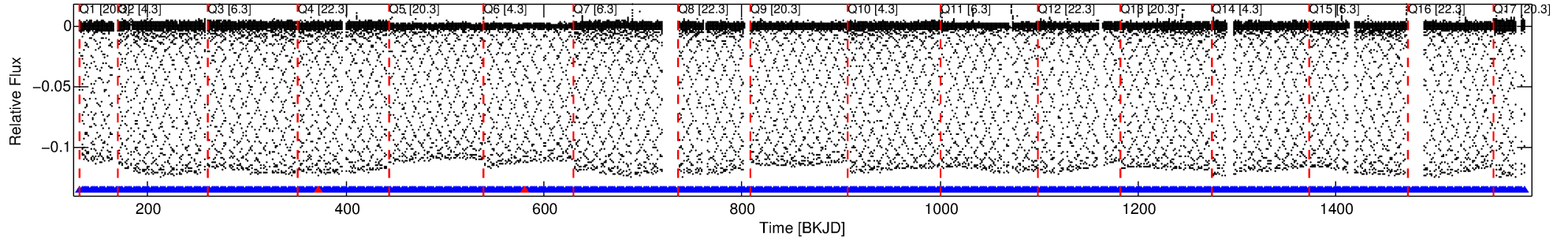
Ephemeris Match Information For 005479973-01

No Significant Match Found

DV One-Page Summary

KIC: 5479973 Candidate: 1 of 1 Period: 1.795 d
KOI: K06589.01 Corr: 0.927

Kp: 14.89 R*: 1.01 Rs Teff: 6363.0 K Logg: 4.46 Fe/H: -0.320



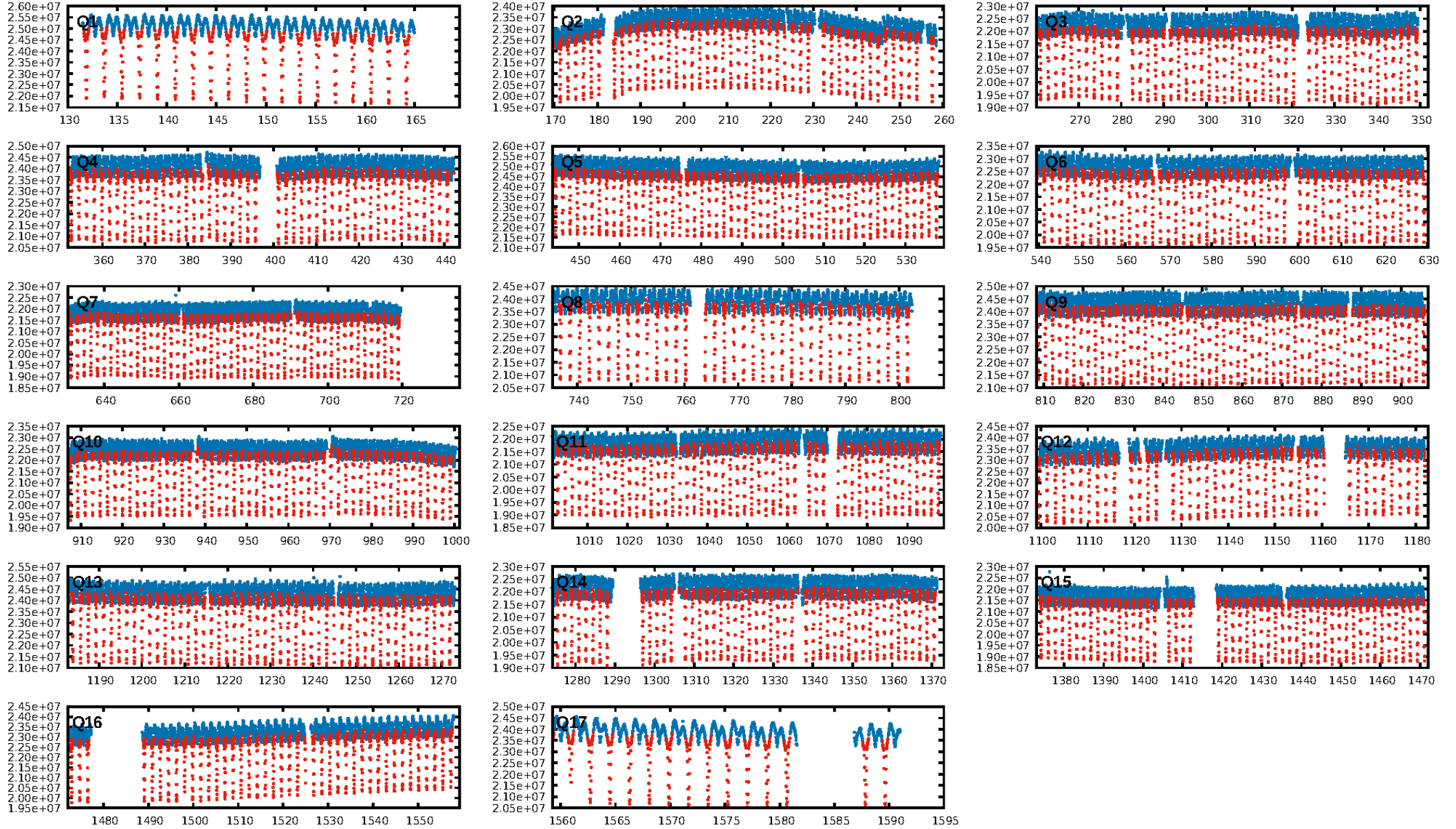
DV Fit Results:

Period = 1.79528 [0.00000] d
Epoch = 131.8686 [0.0000] BKJD
Rp/R* = 0.4543 [0.0120]
a/R* = 2.73 [0.01]
b = 0.90 [0.02]
Seff = 1722.48 [696.39]
Teff = 1643 [166] K
Rp = 50.17 [15.87] Re
a = 0.0296 [0.0077] AU
Ag = 0.10 [0.04] [-23.91σ]
Teffp = 1424 [60] K [-1.24σ]

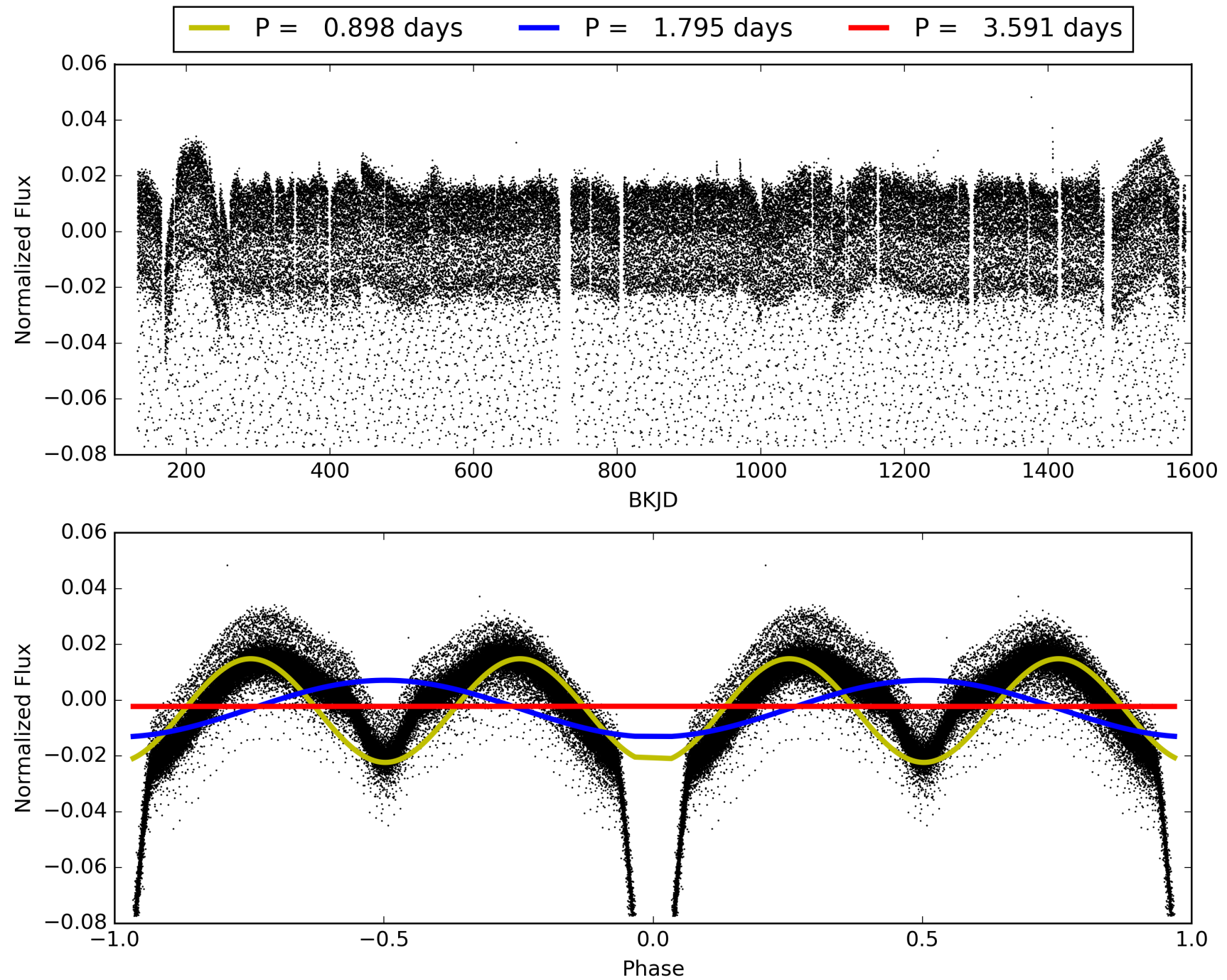
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [719/721]
GhostDiagnostic-chr: 1.443
Centroid-sig: 0.0%
Centroid-so: 0.701 arcsec [545.66σ]
OotOffset-rm: 0.046 arcsec [0.68σ]
KicOffset-rm: 0.037 arcsec [0.54σ]
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 005479973-01, PDC Light Curves

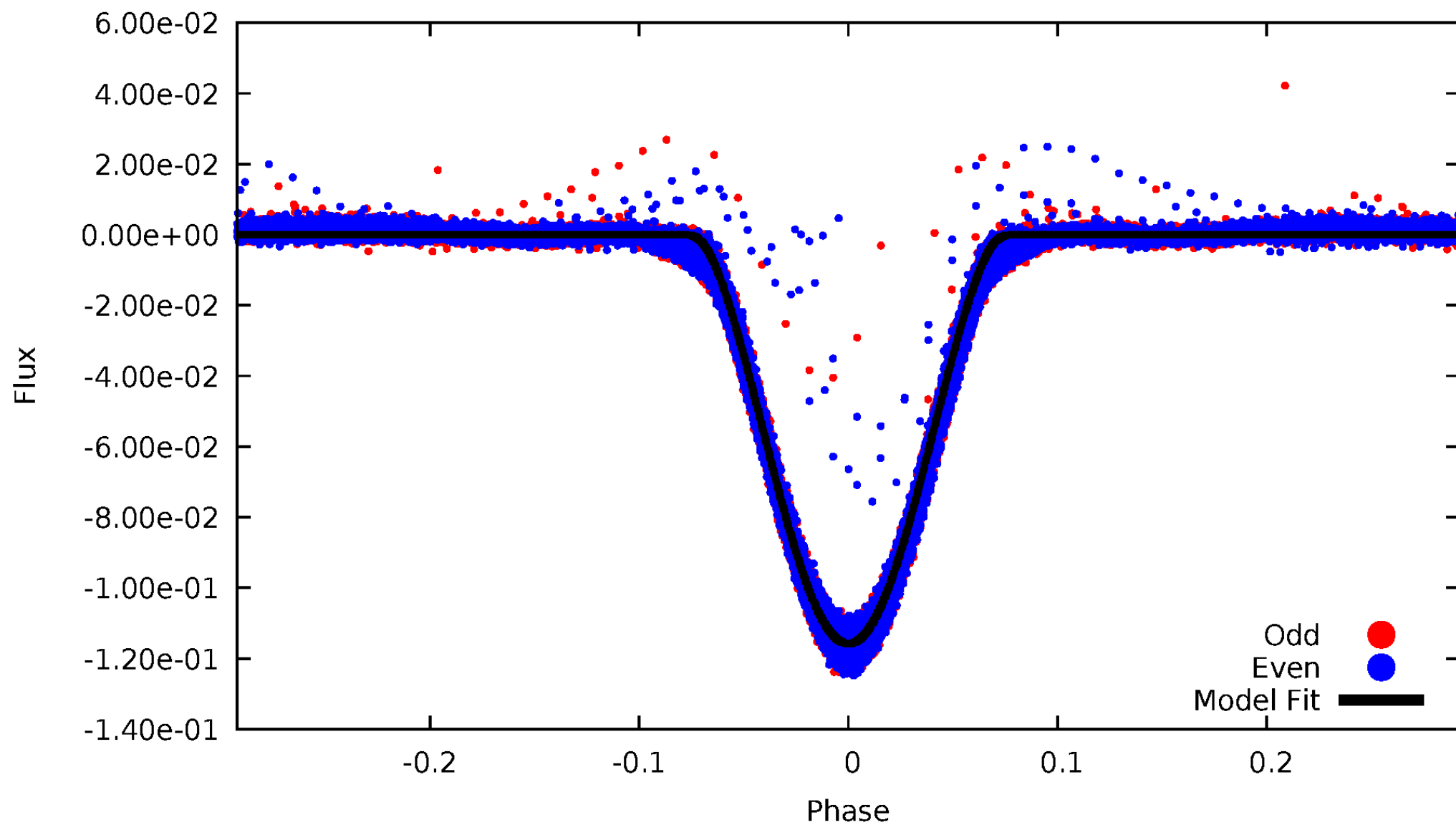


TCE 005479973-01



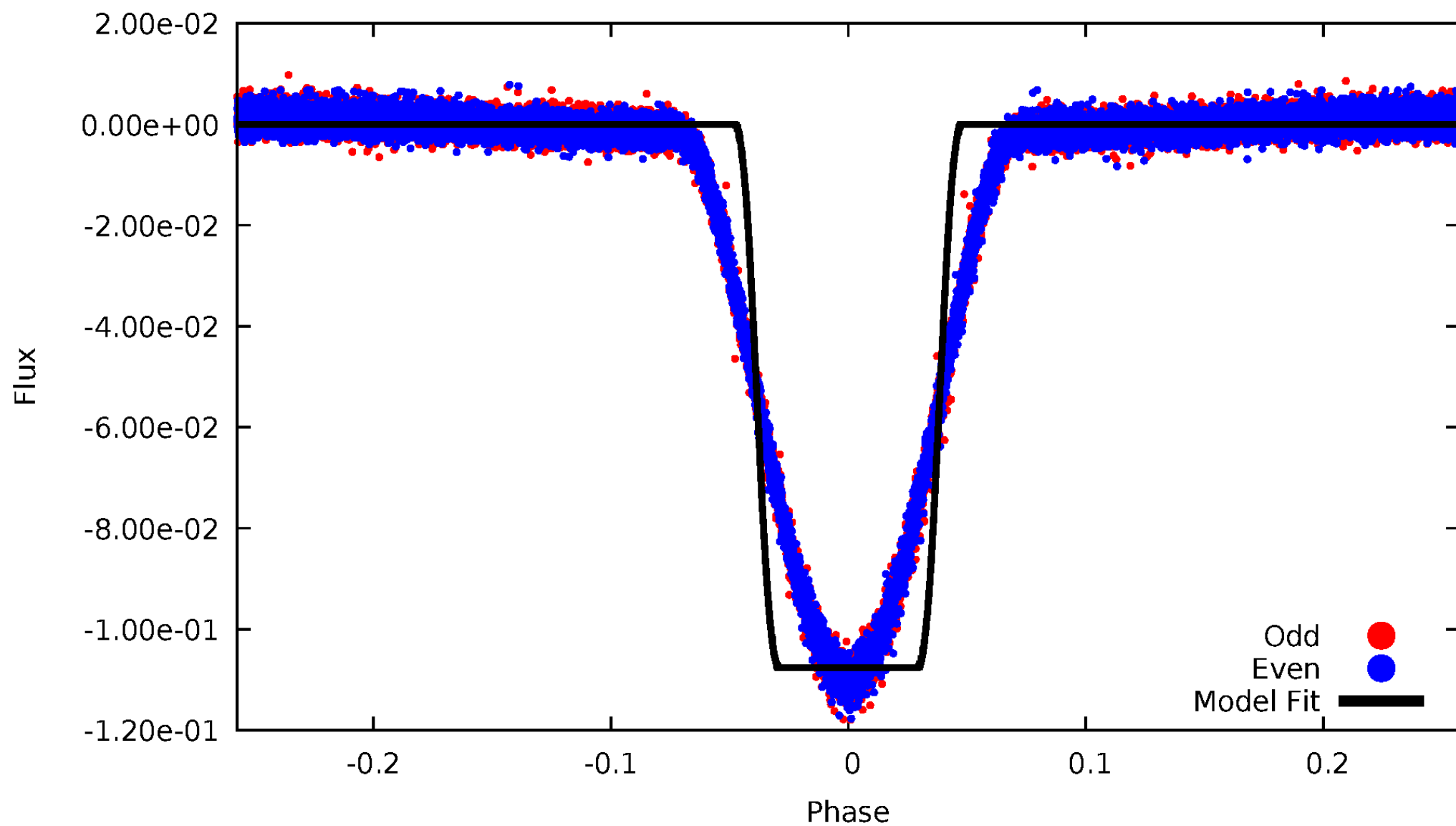
DV Odd/Even

TCE 005479973-01



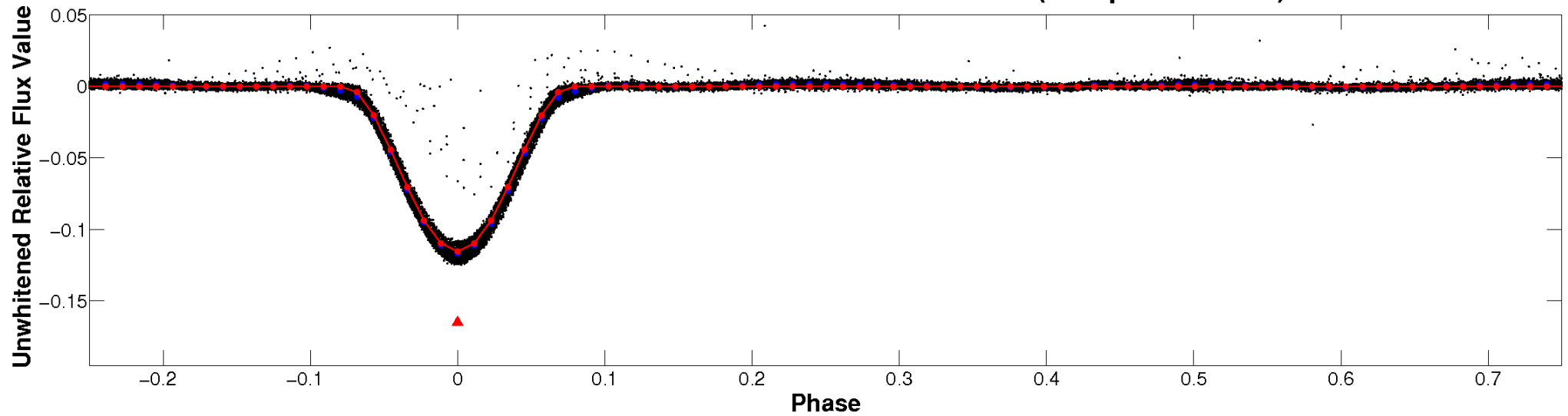
ALT Odd/Even

TCE 005479973-01

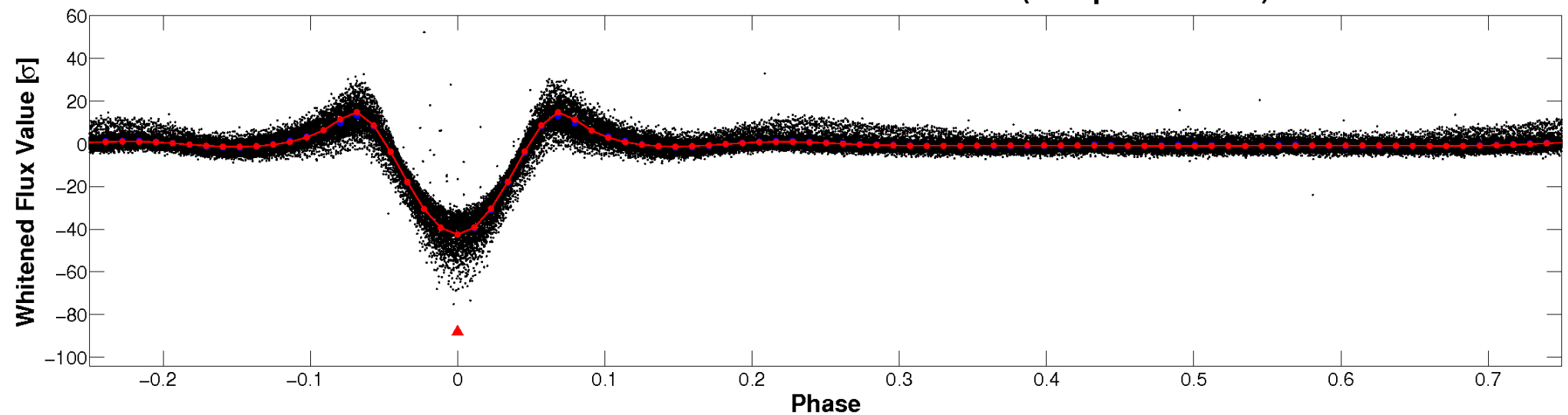


Non-Whitened Vs. Whitened Light Curve

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

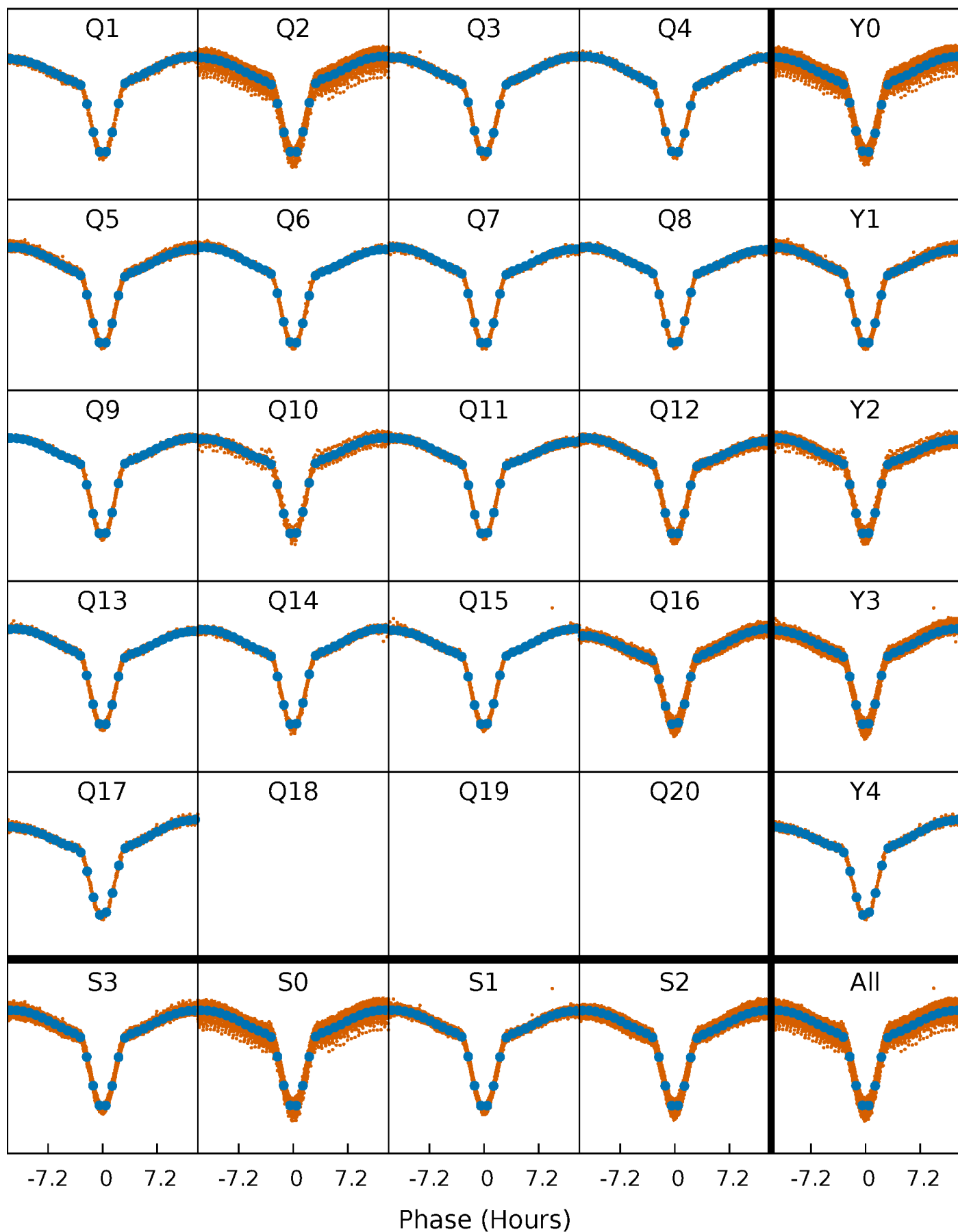


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



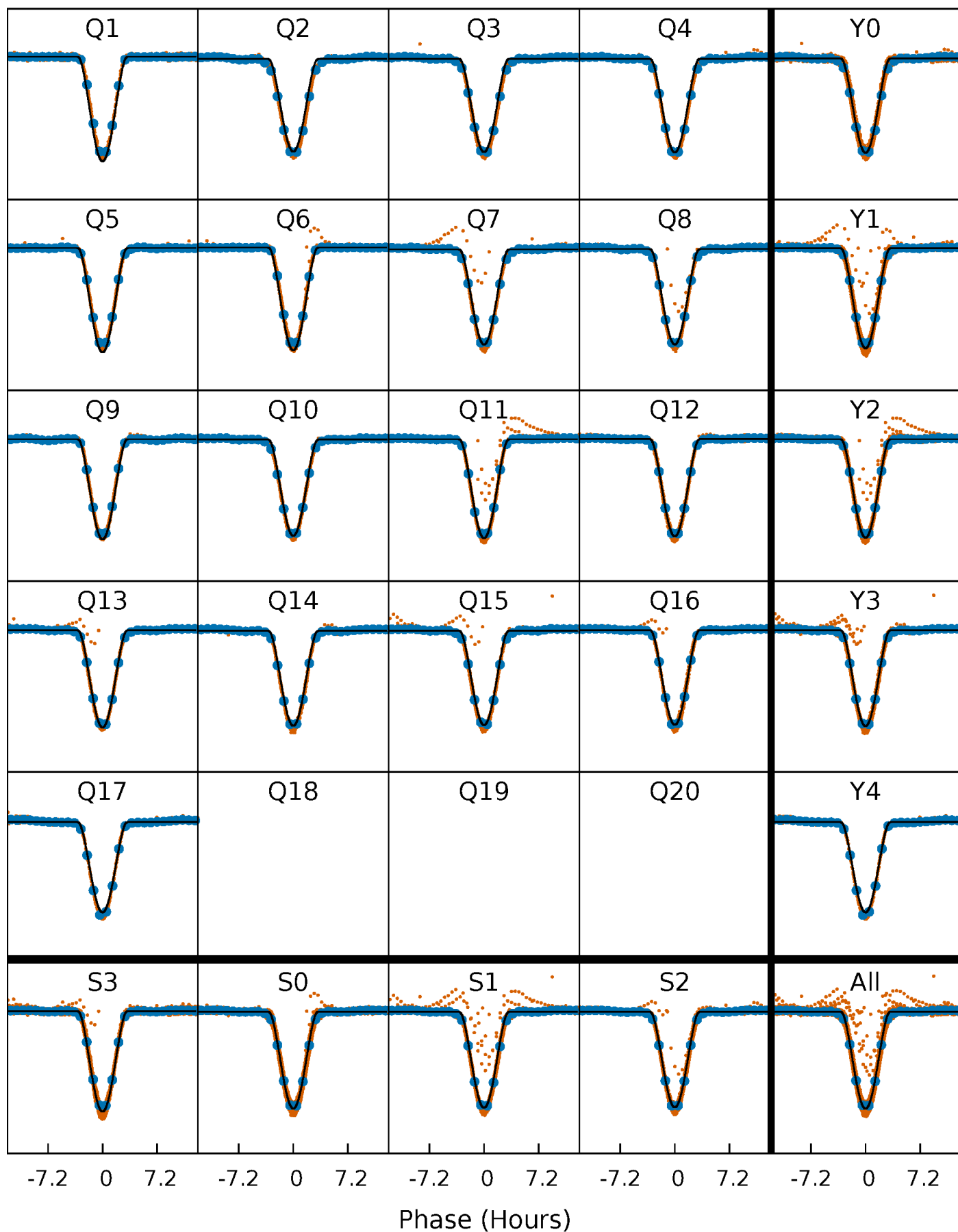
PDC Quarter-Phased Transit Curves

TCE 005479973-01 P= 1.795277 Days $T_0=131.868576$ (BKJD)



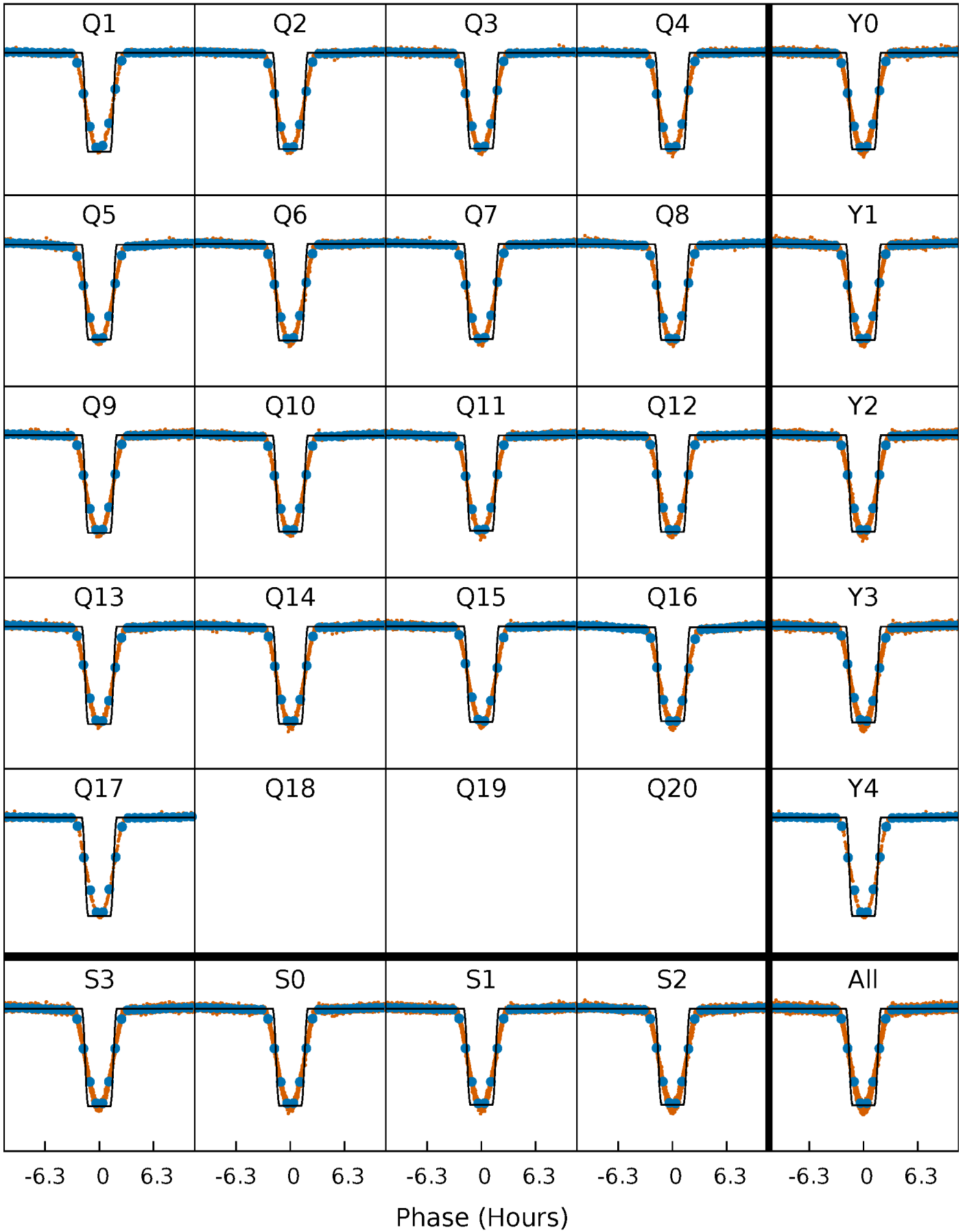
DV Quarter-Phased Transit Curves

TCE 005479973-01 P= 1.795277 Days $T_0=131.868576$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

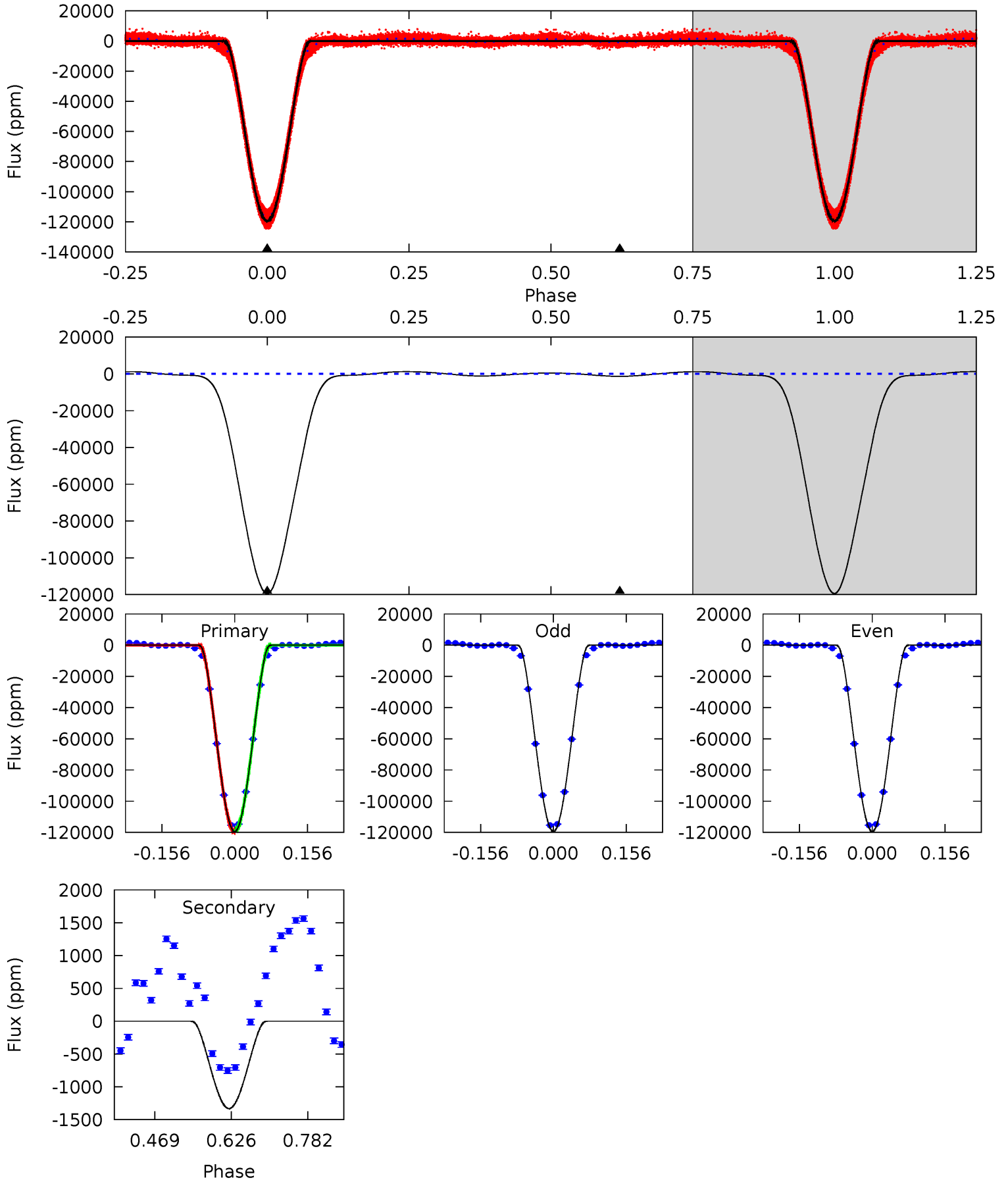
TCE 005479973-01 P= 1.795269 Days $T_0=131.871760$ (BKJD)



DV Model-Shift Uniqueness Test

005479973-01, P = 1.795277 Days, E = 130.073299 Days

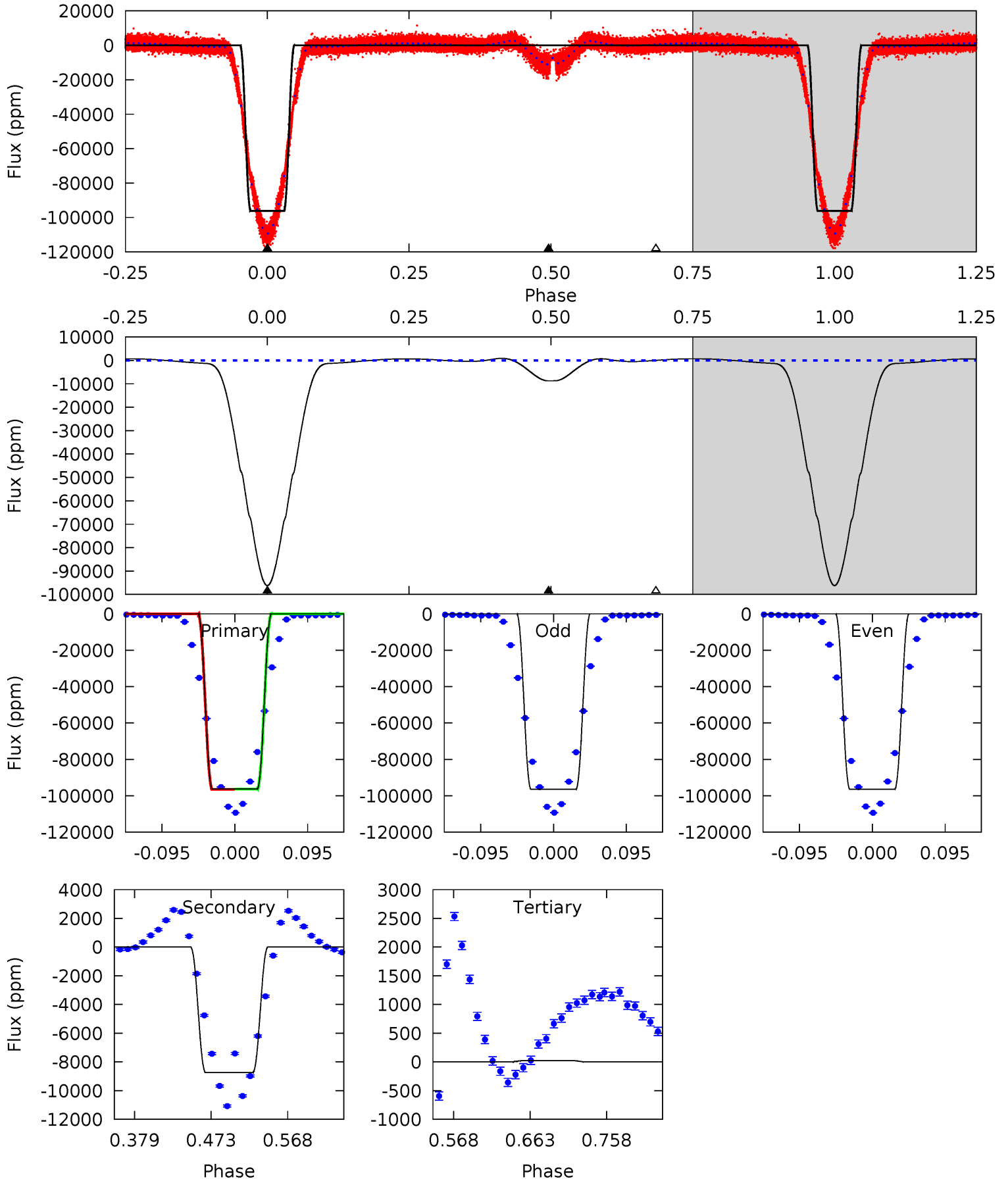
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7738	86.3	0	0	4.47	1.42	48.7	7738	7738	86.3	86.3	0.16	0.98	0.01	16.9



Alt Model-Shift Uniqueness Test

005479973-01, P = 1.795269 Days, E = 130.076491 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3791	344.3	-0.89	0	4.58	1.67	25.0	3792	3791	345.2	344.3	1.61	1.00	0.01	3.81



Stellar Parameters For KIC 005479973

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6363^{+176}_{-242}	$4.456^{+0.054}_{-0.202}$	$-0.320^{+0.250}_{-0.300}$	$1.012^{+0.319}_{-0.106}$	$1.065^{+0.143}_{-0.143}$	$1.450^{+0.404}_{-0.754}$
	+3%/-4%	+1%/-5%	+78%/-94%	+32%/-10%	+13%/-13%	+28%/-52%
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 005479973-01 / KOI 6589.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1331 ± 15	$51.78^{+8.62}_{-4.64}$	2346^{+177}_{-124}	-2244^{+252}_{-251}	$0.232^{+0.043}_{-0.055}$
Alt.	-8738 ± 25	$37.00^{+6.52}_{-3.17}$	2329^{+178}_{-120}	3705^{+95}_{-99}	$3.024^{+0.485}_{-0.735}$

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

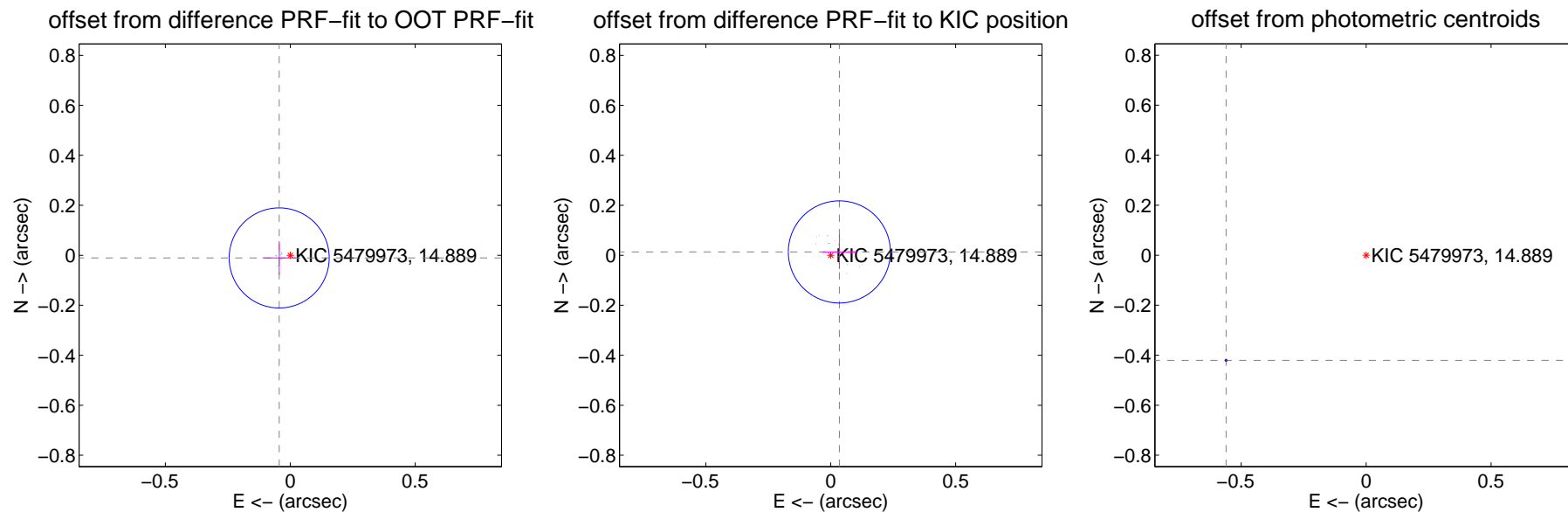
DV Centroid Data

Supplemental centroid analysis for 005479973-01. Kepler magnitude: 14.89. Transit SNR 2300.19

There are 17 quarters with good PRF difference image offsets

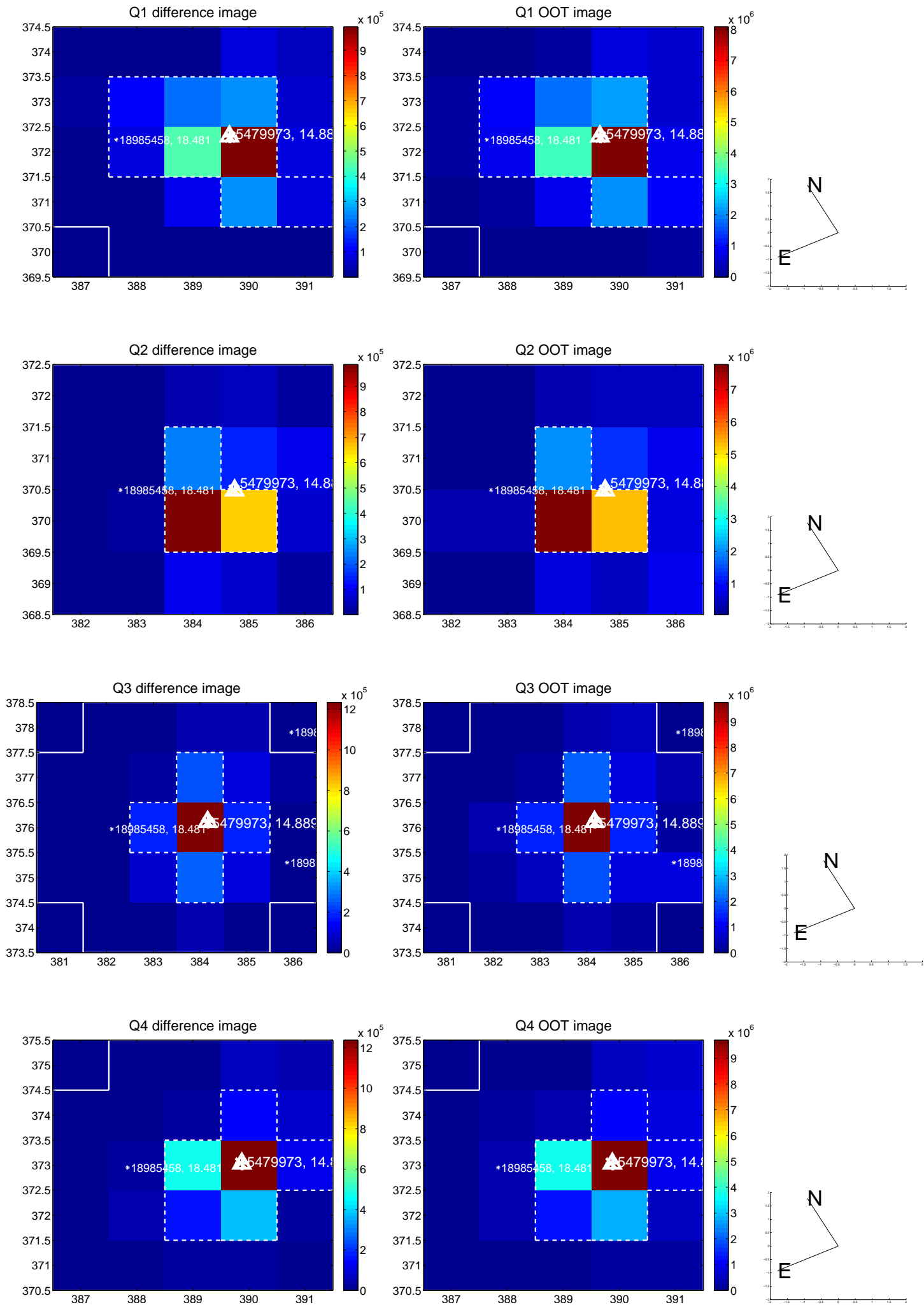
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.046 ± 0.067	0.68	0.044 ± 0.067	-0.011 ± 0.067
PRF-fit source offset from KIC position	0.037 ± 0.068	0.54	-0.035 ± 0.068	0.013 ± 0.068
photometric centroid source offset	0.70 ± 0.00	545.66	0.56 ± 0.00	-0.42 ± 0.00

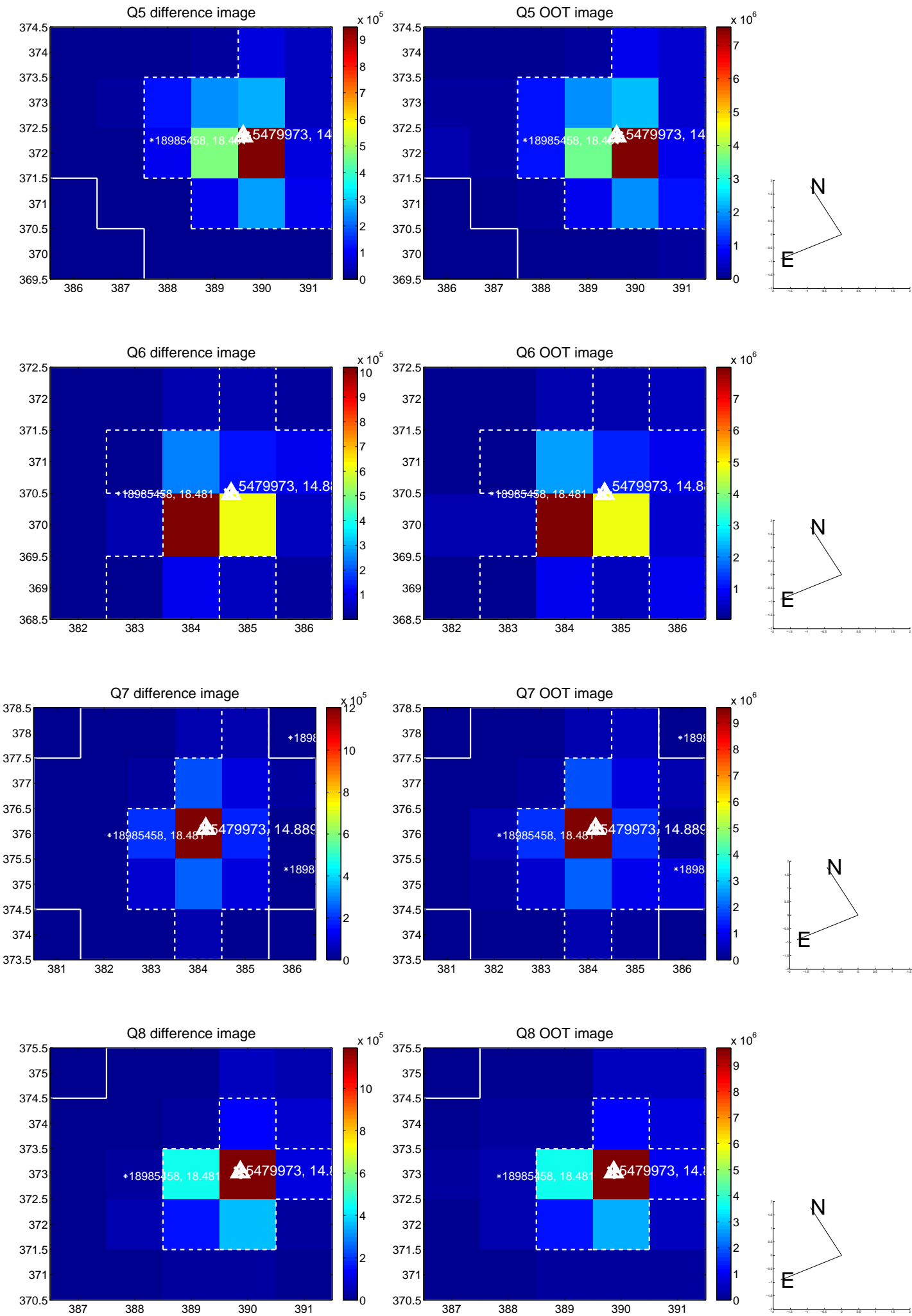


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

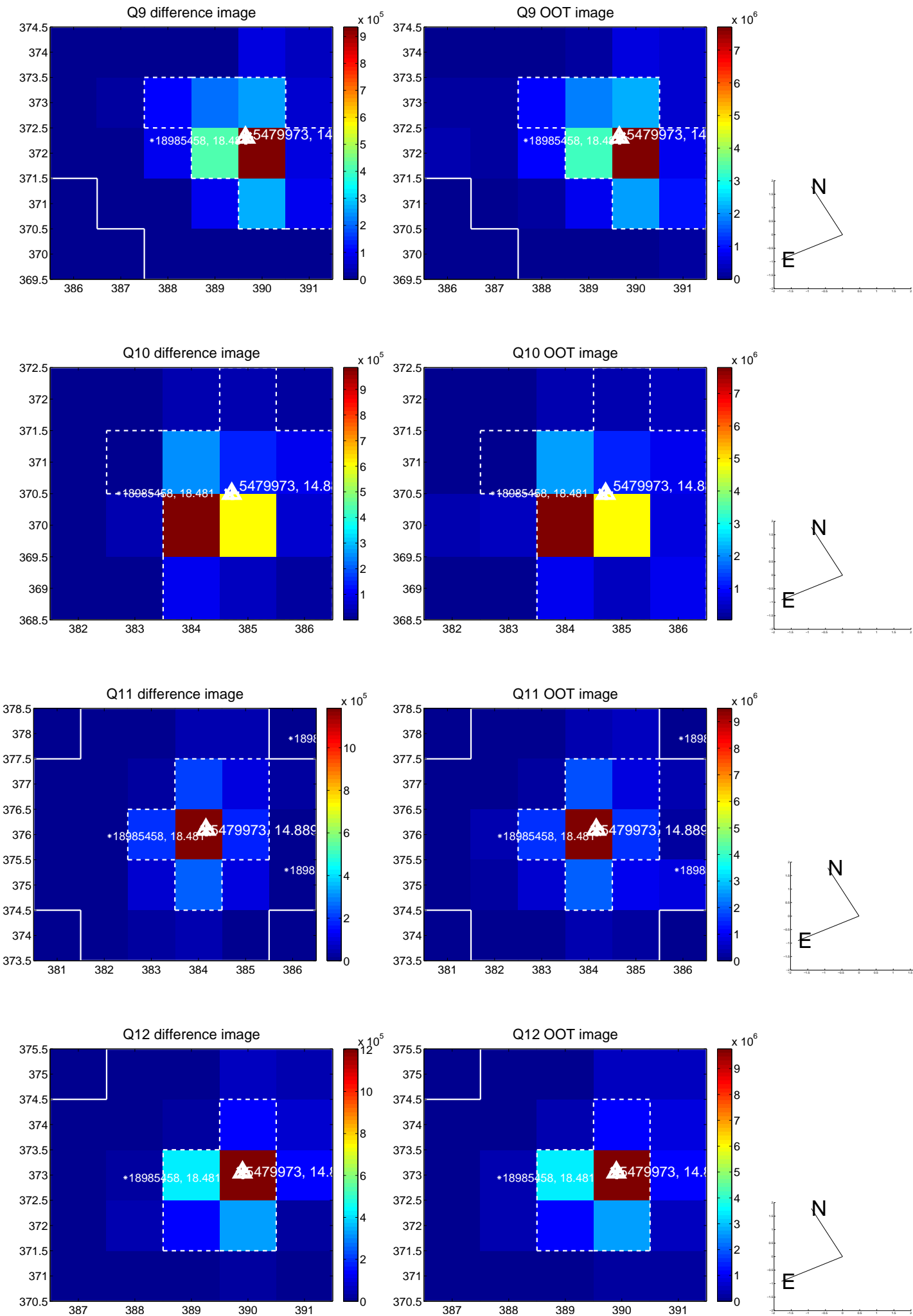
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



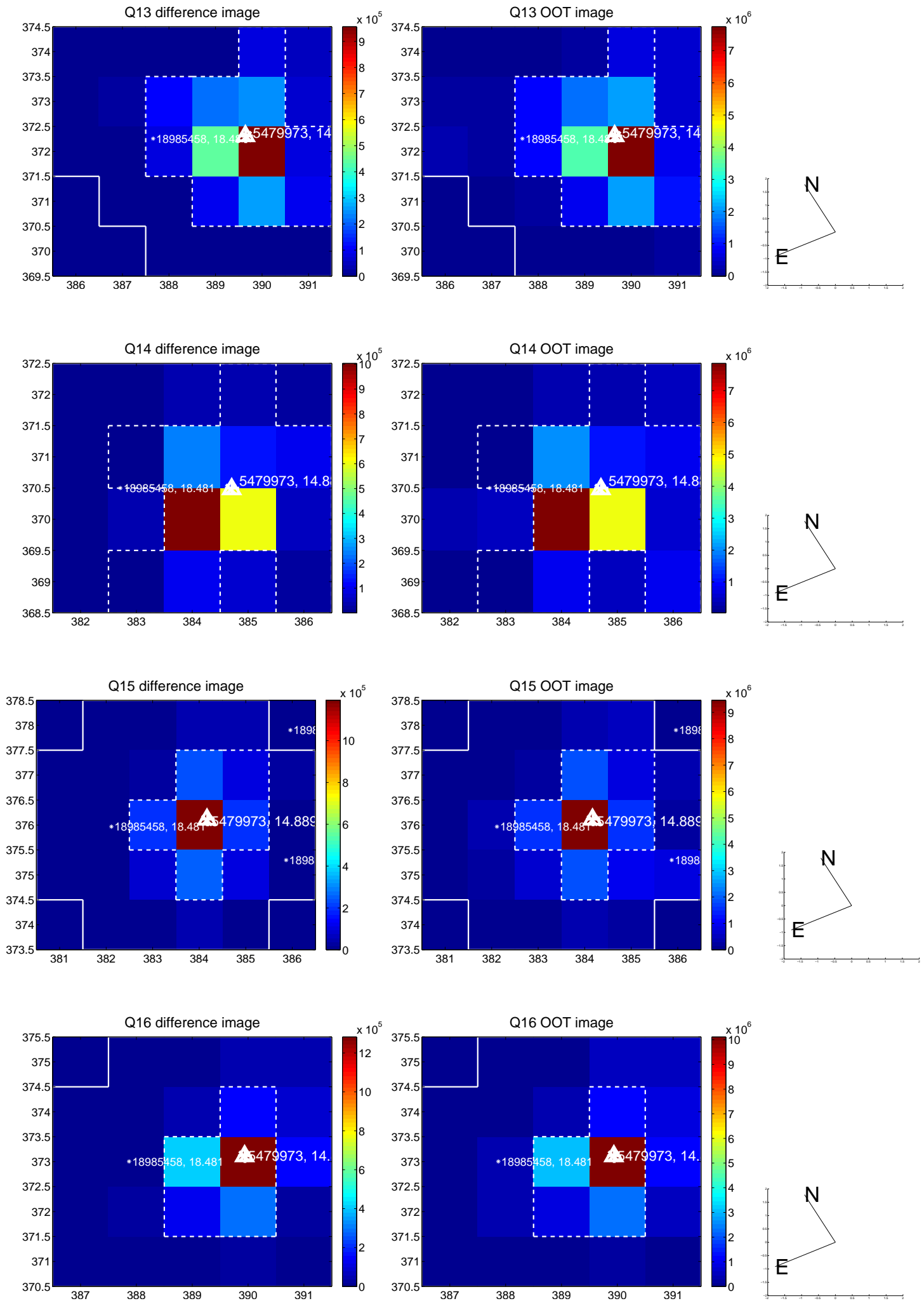
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



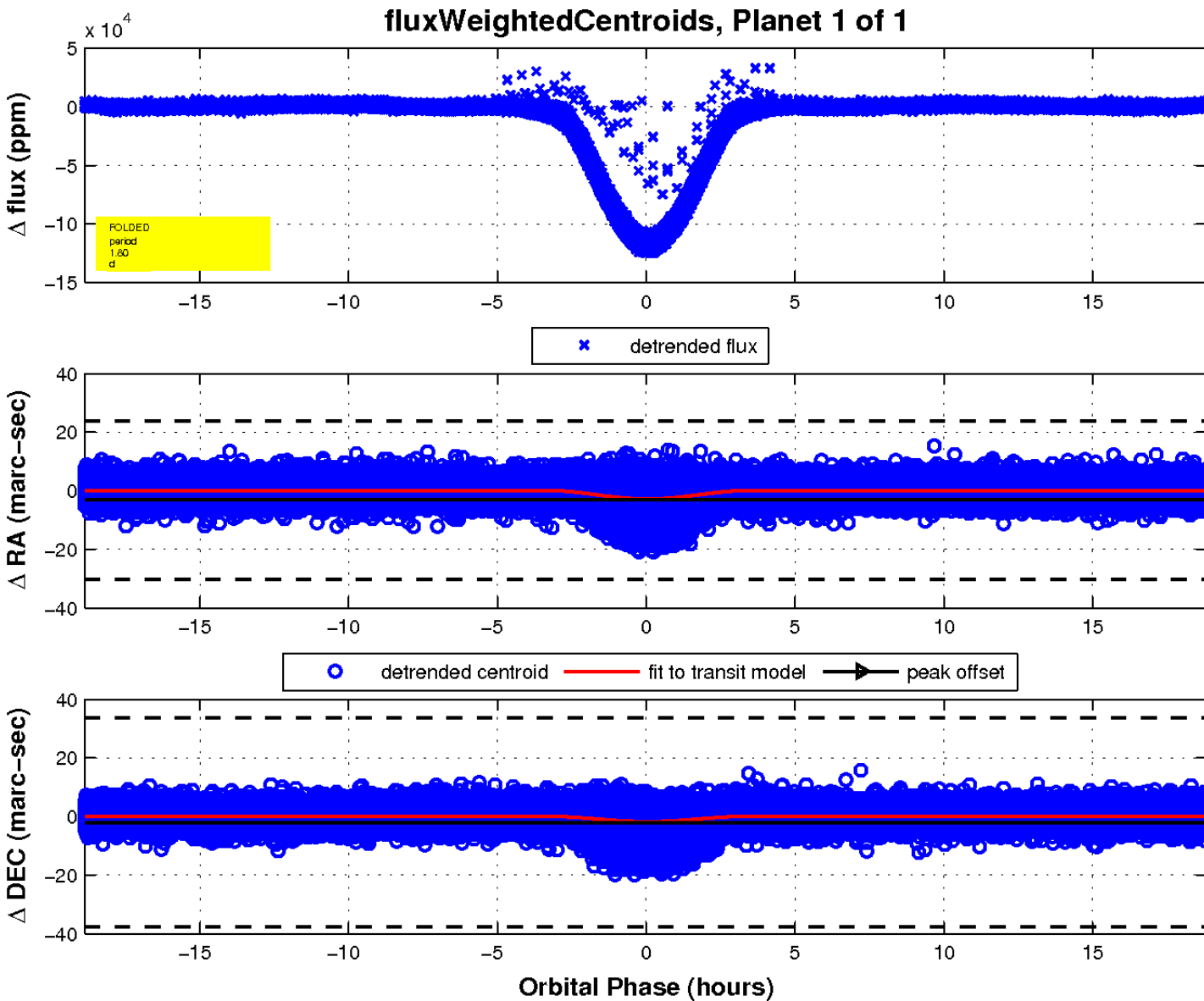
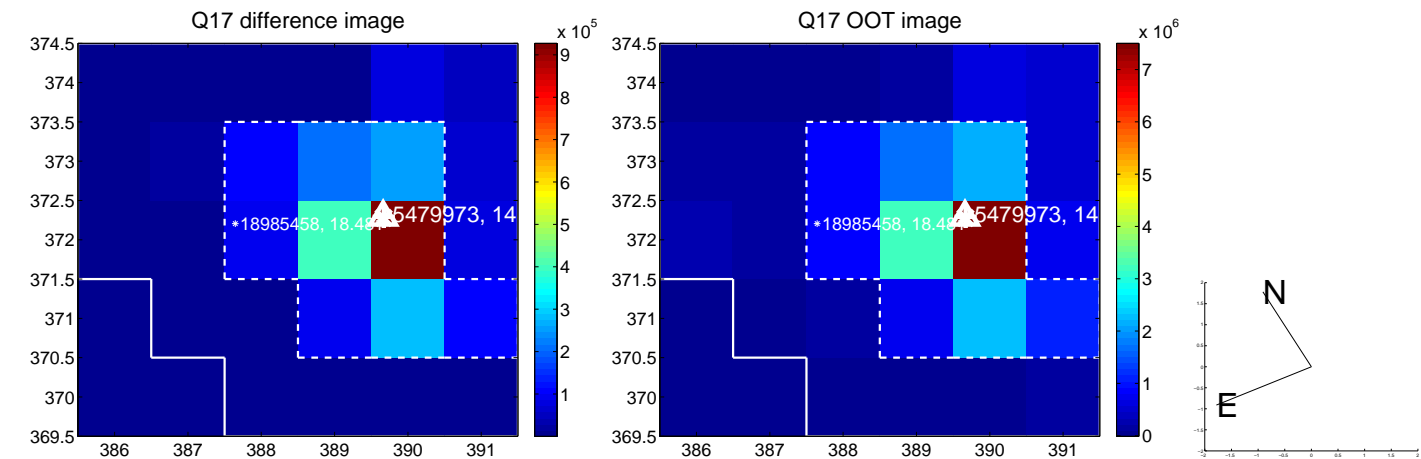
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

