

KIC 007971389

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})
007971389-01	OBS	6944.01	13.174810	136.463085	70452.3	3.388	4451.0	3203.8	1.00	6067	42.19	102.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007971389-01	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.

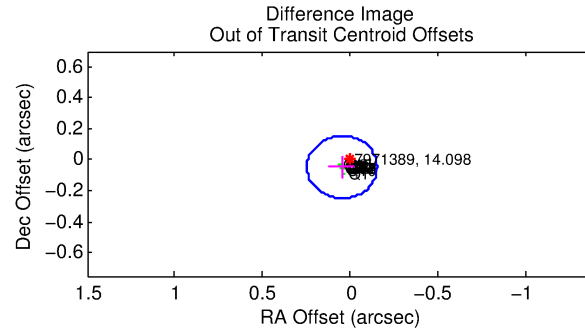
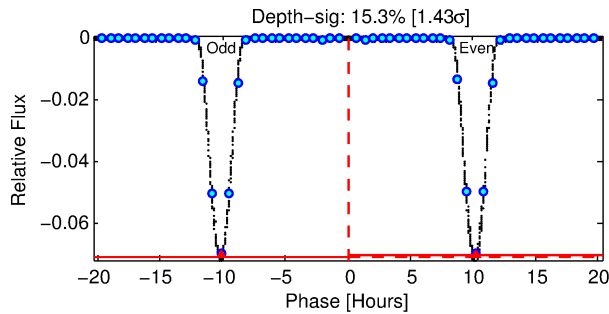
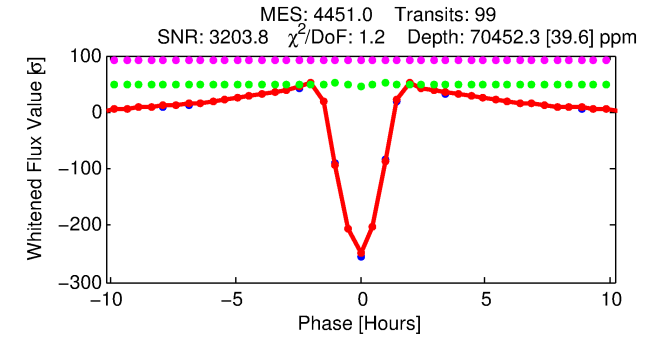
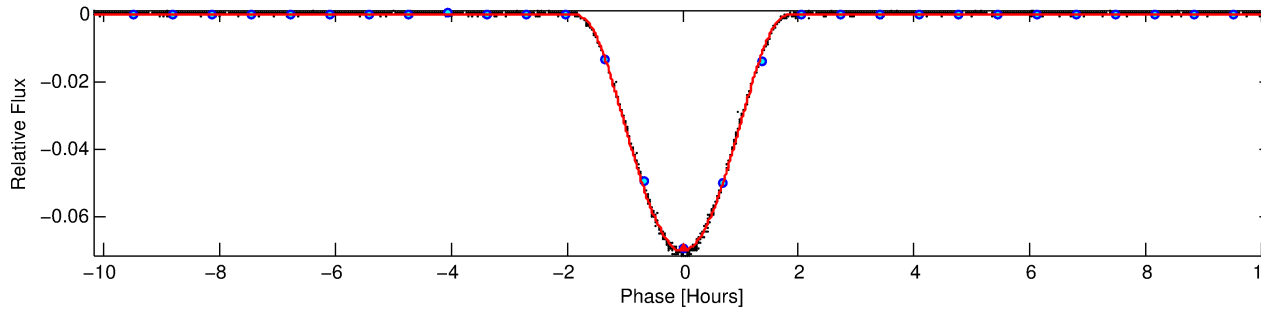
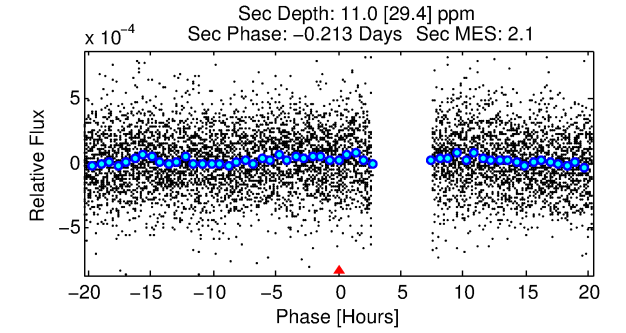
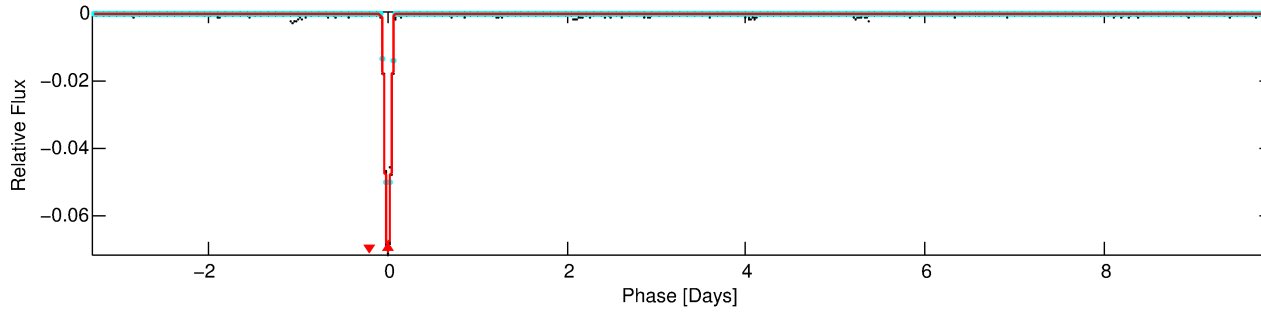
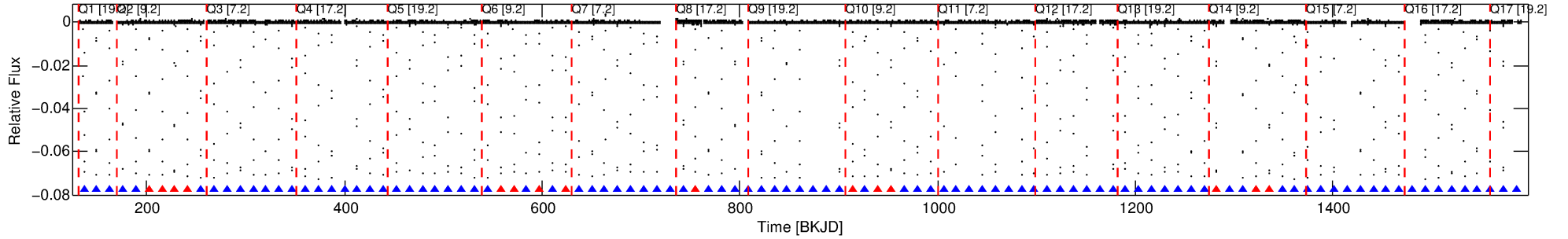
Ephemeris Match Information For 007971389-01

No Significant Match Found

DV One-Page Summary

KIC: 7971389 Candidate: 1 of 1 Period: 13.175 d
KOI: K06944.01 Corr: 0.998

Kp: 14.10 R*: 1.00 Rs Teff: 6067.0 K Logg: 4.43 Fe/H: -0.240



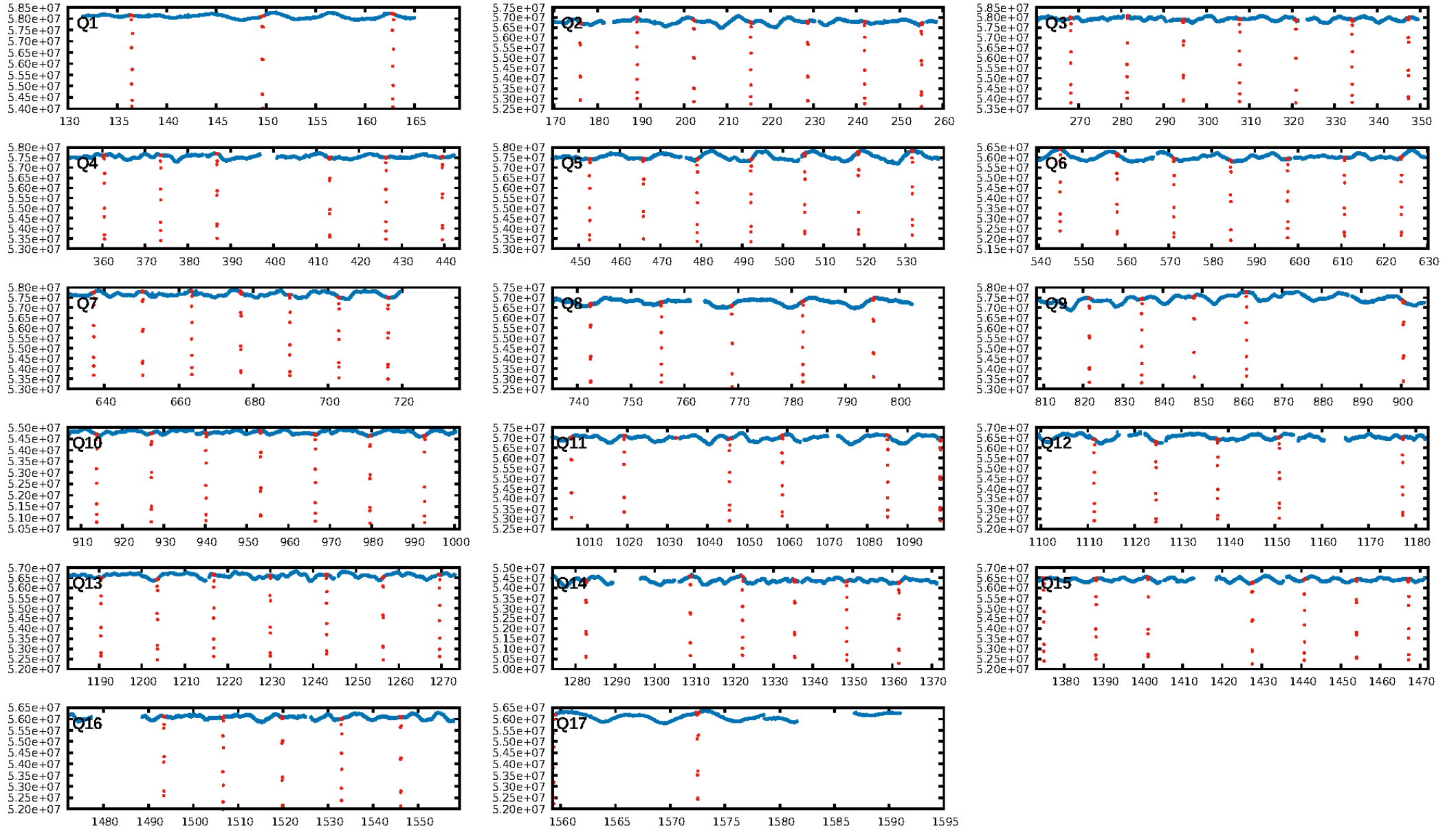
DV Fit Results:

Period = 13.17481 [0.00000] d
Epoch = 136.4631 [0.0000] BKJD
Rp/R* = 0.3878 [0.0133]
a/R* = 29.76 [0.01]
b = 0.96 [0.02]
Seff = 102.39 [39.27]
Teq = 811 [78] K
Rp = 42.19 [12.61] Re
a = 0.1086 [0.0270] AU
Ag = 0.04 [0.11] [-8.88σ]
Teffp = 561 [375] K [-0.65σ]

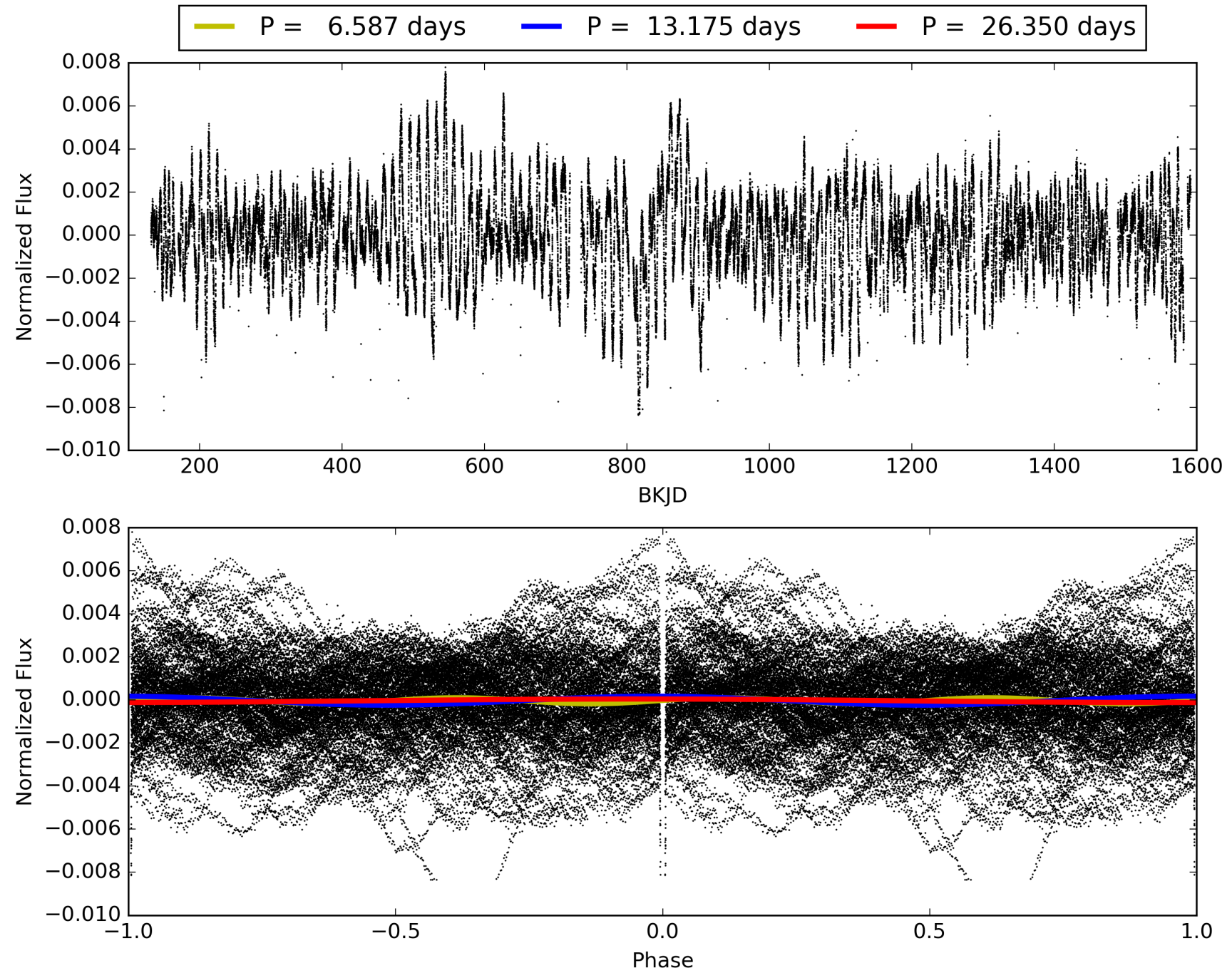
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.84 [79/94]
GhostDiagnostic-chr: 4.079
Centroid-sig: 0.0%
Centroid-so: 0.067 arcsec [28.02σ]
OotOffset-rm: 0.067 arcsec [1.00σ]
KicOffset-rm: 0.064 arcsec [0.94σ]
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 007971389-01, PDC Light Curves

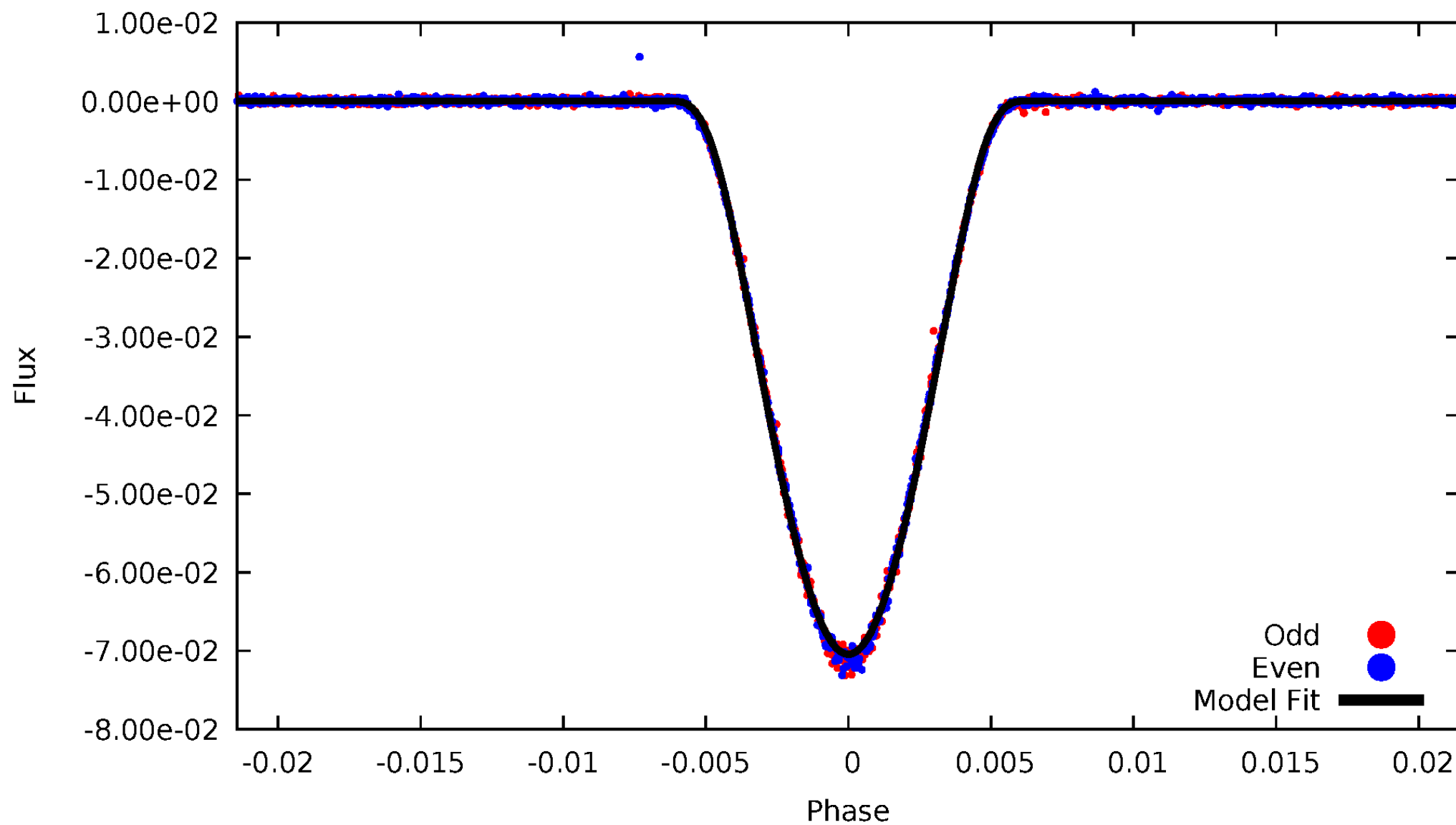


TCE 007971389-01



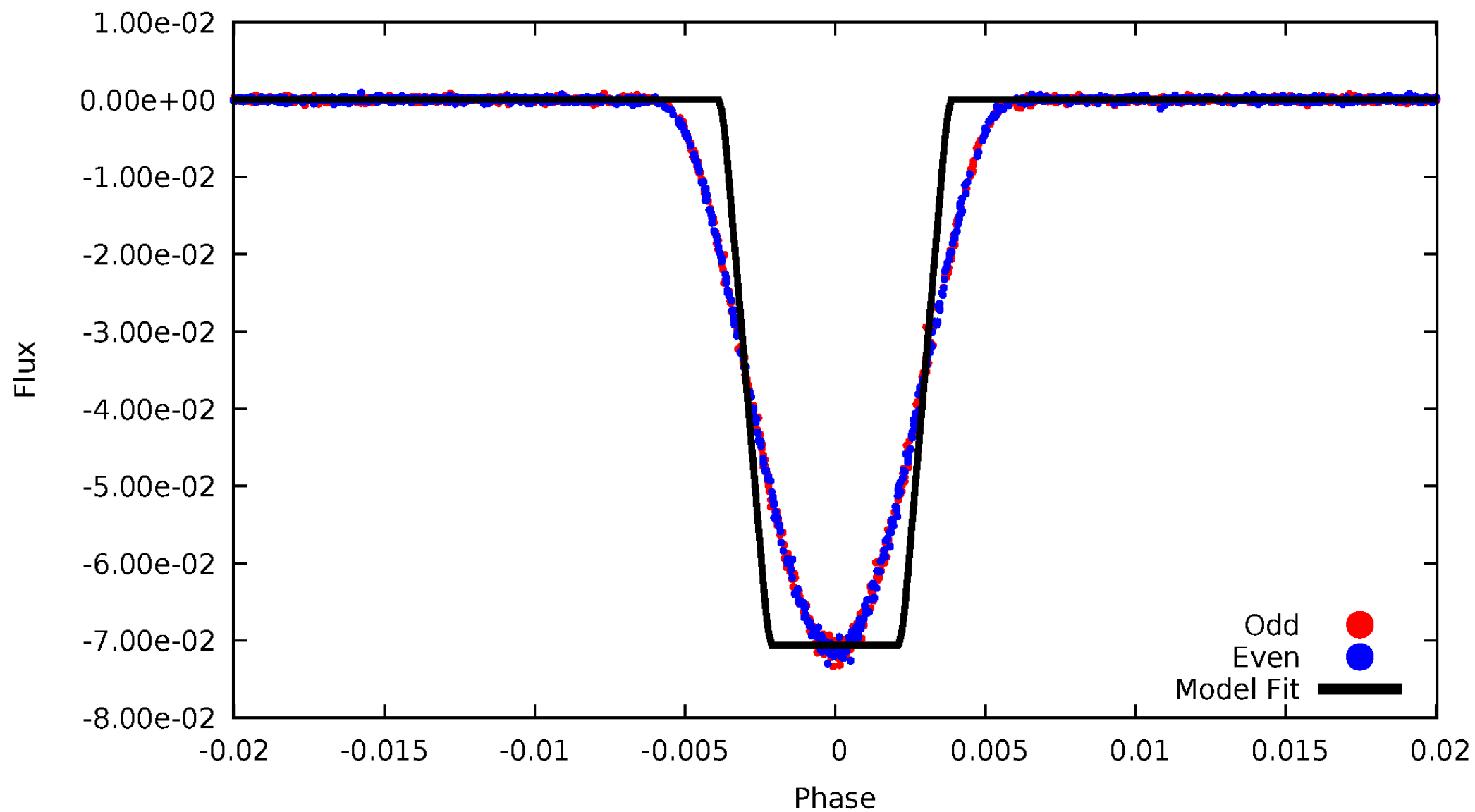
DV Odd/Even

TCE 007971389-01



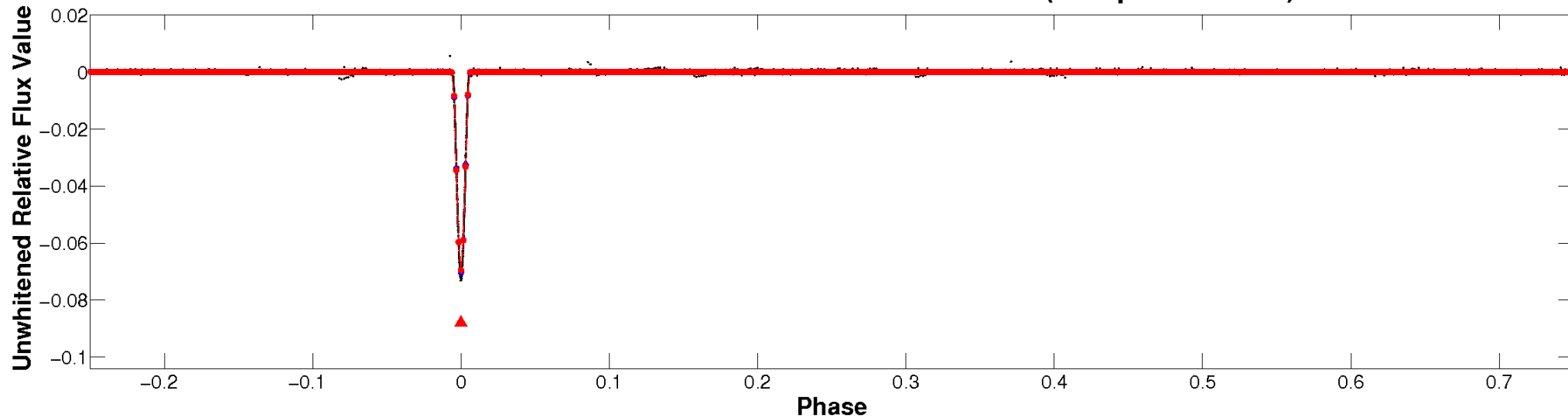
ALT Odd/Even

TCE 007971389-01

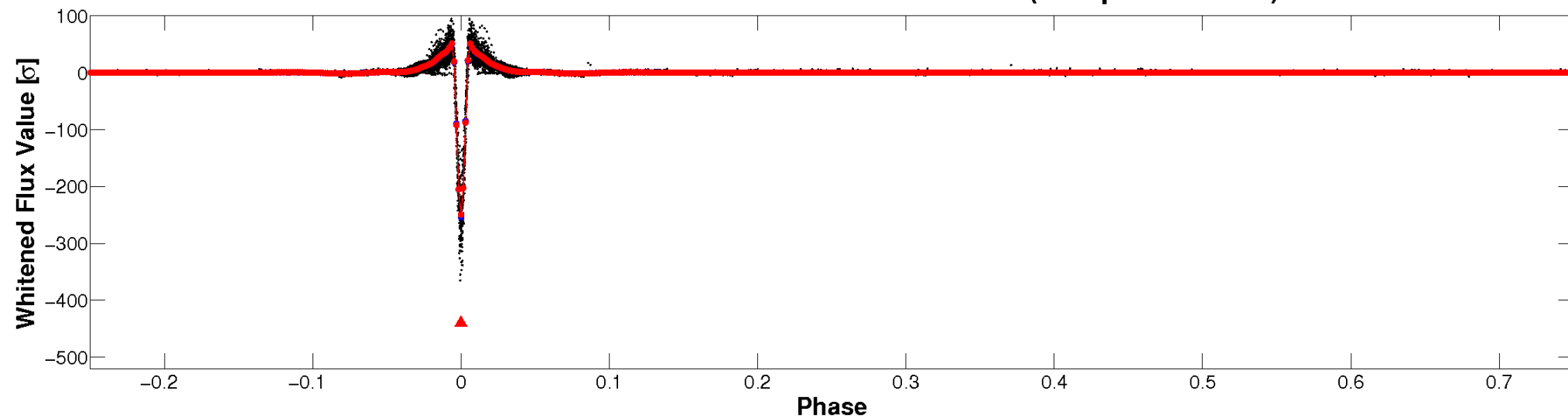


Non-Whitened Vs. Whitened Light Curve

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

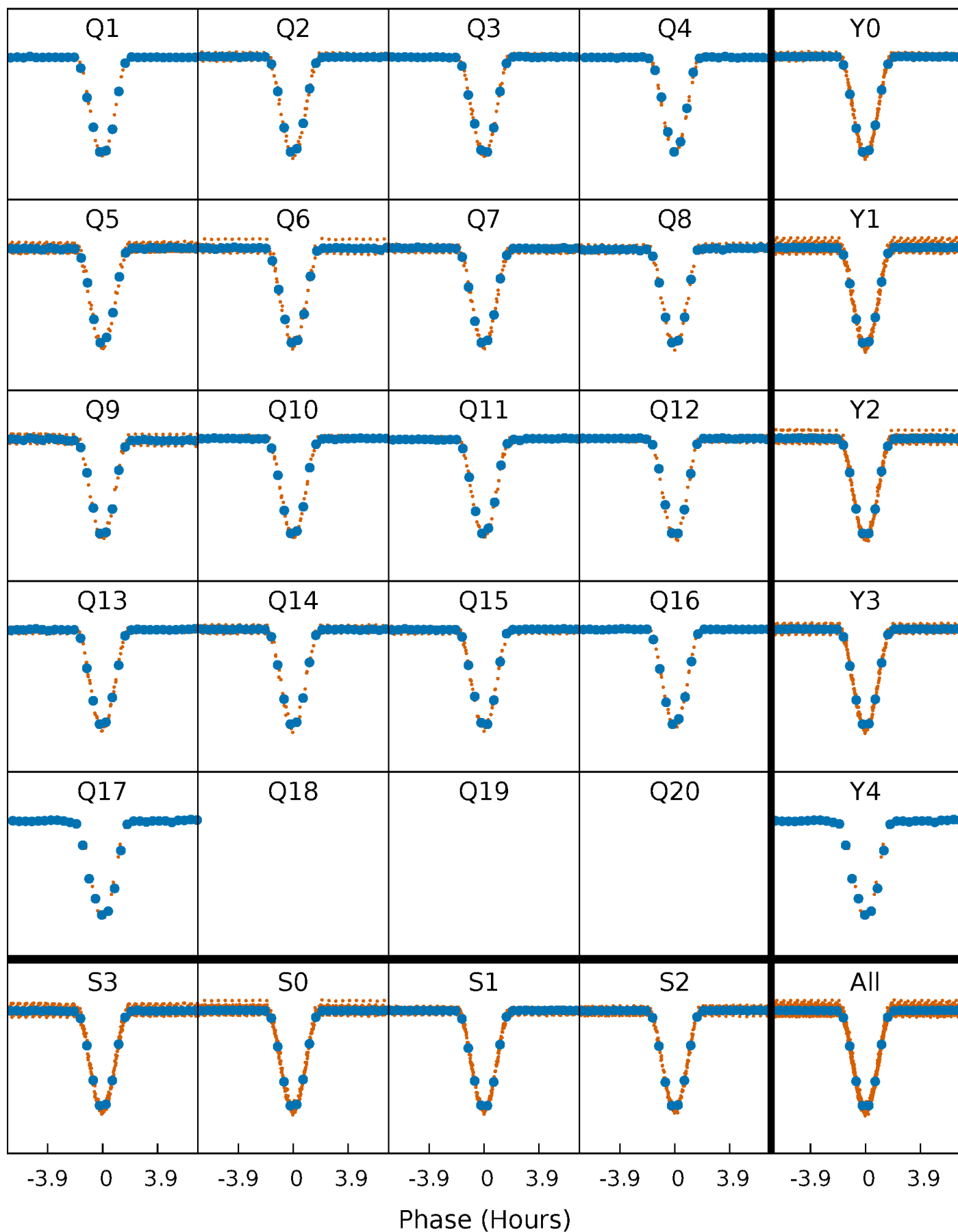


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



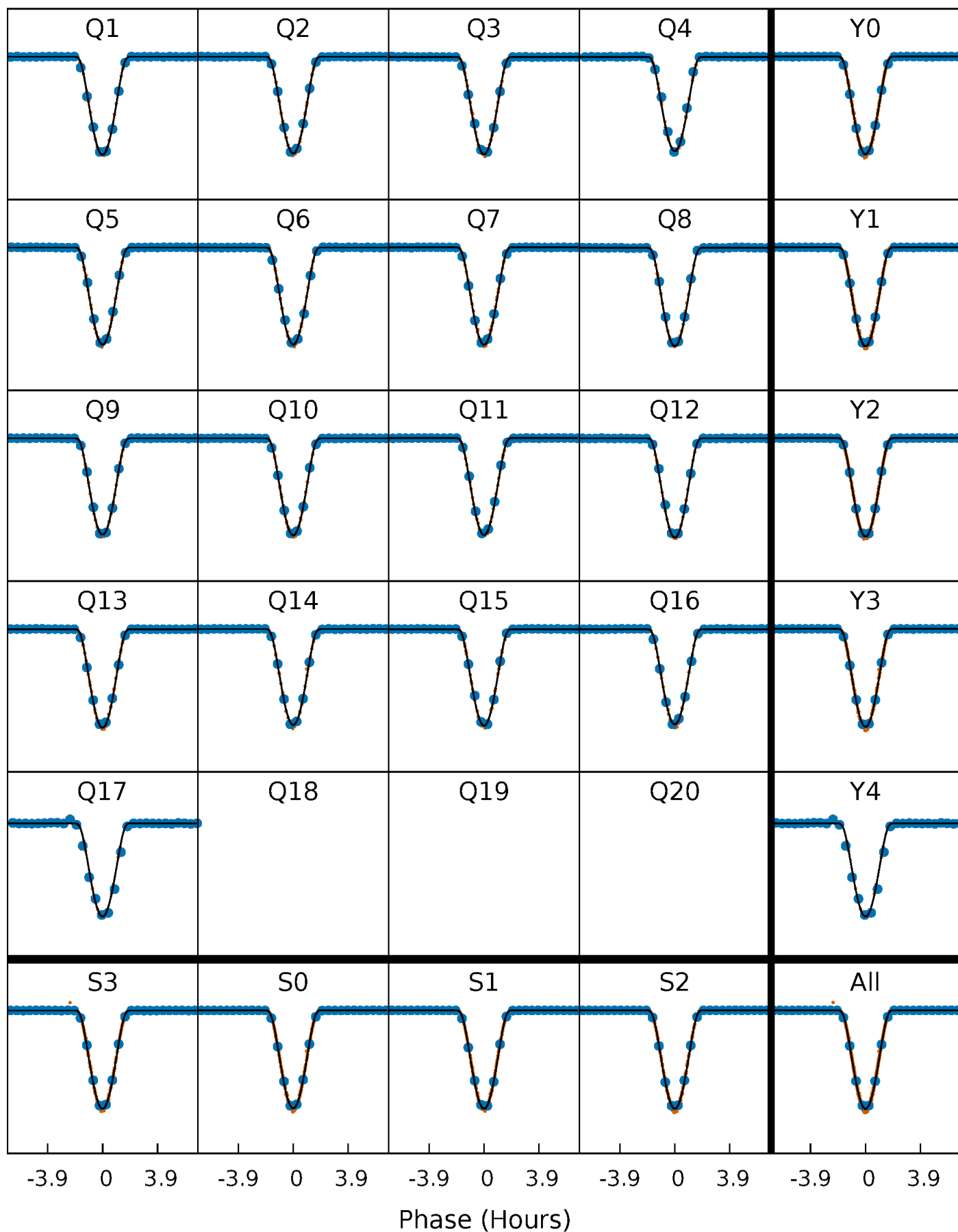
PDC Quarter-Phased Transit Curves

TCE 007971389-01 P= 13.174810 Days $T_0=136.463085$ (BKJD)



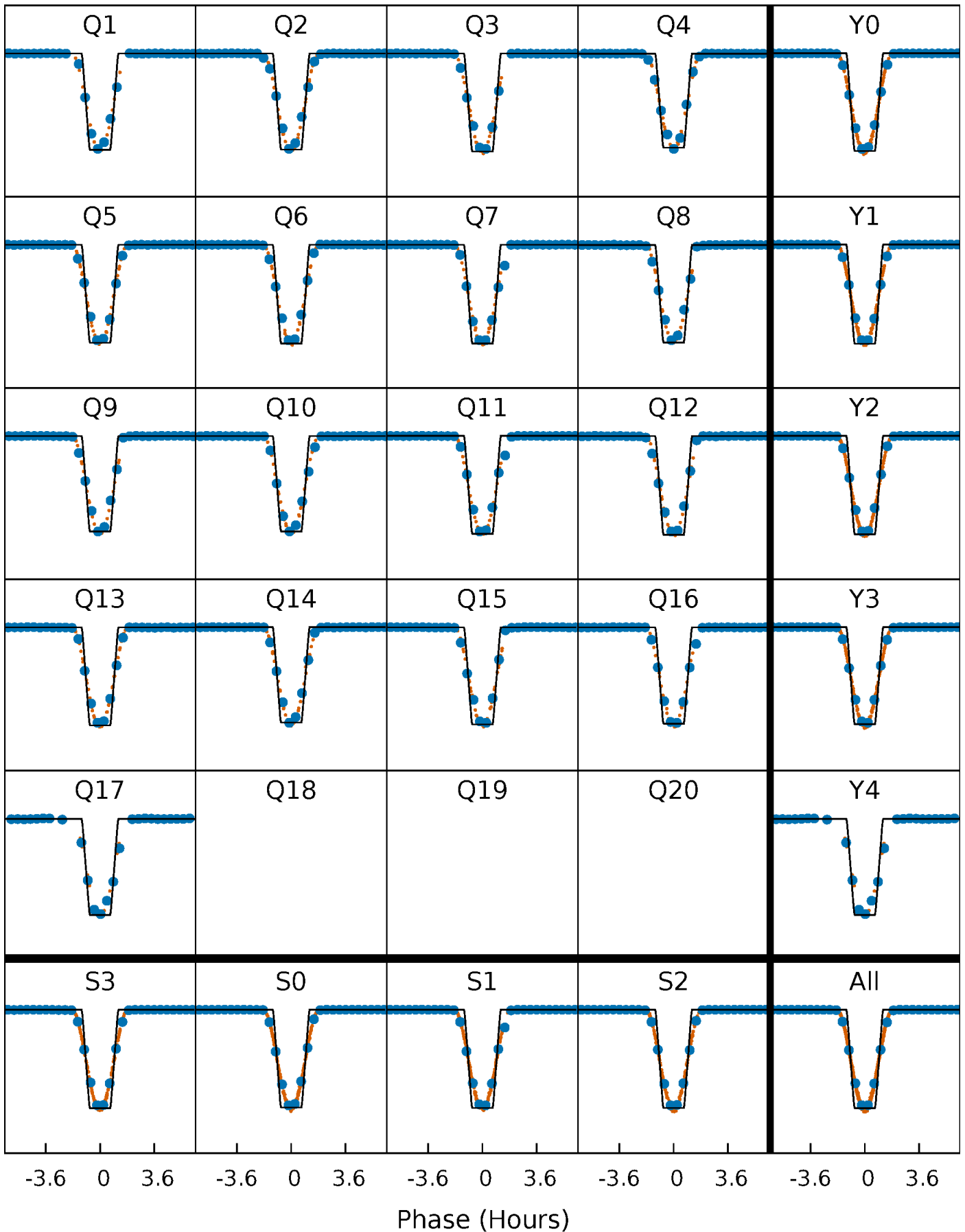
DV Quarter-Phased Transit Curves

TCE 007971389-01 P= 13.174810 Days $T_0=136.463085$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

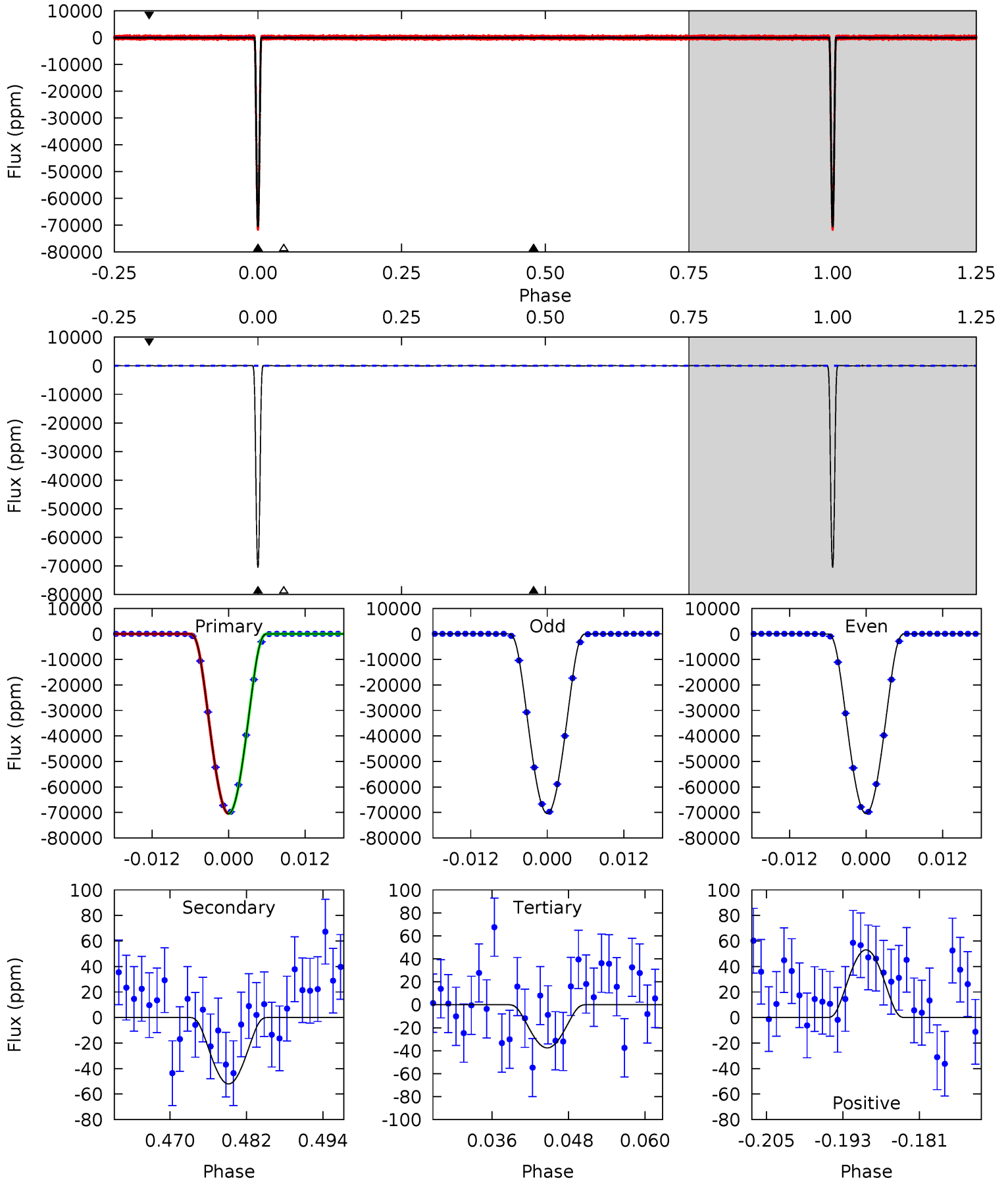
TCE 007971389-01 P= 13.174798 Days $T_0=136.463669$ (BKJD)



DV Model-Shift Uniqueness Test

007971389-01, P = 13.174810 Days, E = 123.288275 Days

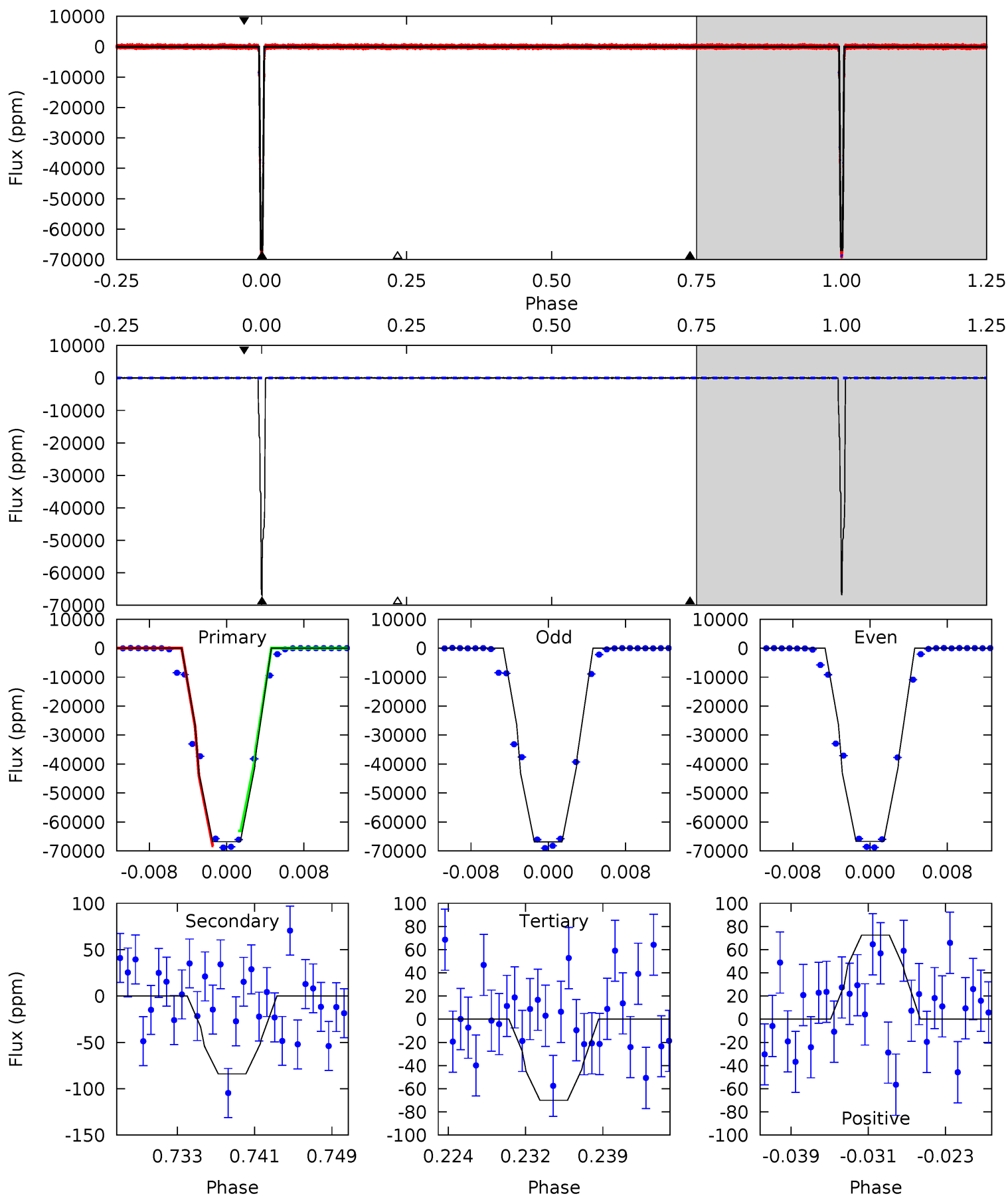
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8006	5.92	4.27	6.03	4.99	2.51	2.03	8001	8000	1.65	-0.11	2.87	1.00	0.00	0



Alt Model-Shift Uniqueness Test

007971389-01, P = 13.174798 Days, E = 123.288871 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3139	3.95	3.29	3.41	5.08	2.66	1.08	3136	3136	0.66	0.54	3.82	1.00	0.00	0



Stellar Parameters For KIC 007971389

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6067^{+163}_{-200}	$4.433^{+0.084}_{-0.196}$	$-0.240^{+0.300}_{-0.300}$	$0.997^{+0.296}_{-0.127}$	$0.981^{+0.142}_{-0.116}$	$1.396^{+0.514}_{-0.727}$
	+3%/-3%	+2%/-4%	+125%/-125%	+30%/-13%	+14%/-12%	+37%/-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 007971389-01 / KOI 6944.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-52 ± 9	$43.09^{+7.00}_{-4.15}$	1146^{+87}_{-57}	-1795^{+103}_{-105}	$0.172^{+0.053}_{-0.045}$
Alt.	-84 ± 21	$29.66^{+4.53}_{-3.10}$	1147^{+82}_{-59}	1948^{+103}_{-156}	$0.593^{+0.220}_{-0.185}$

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

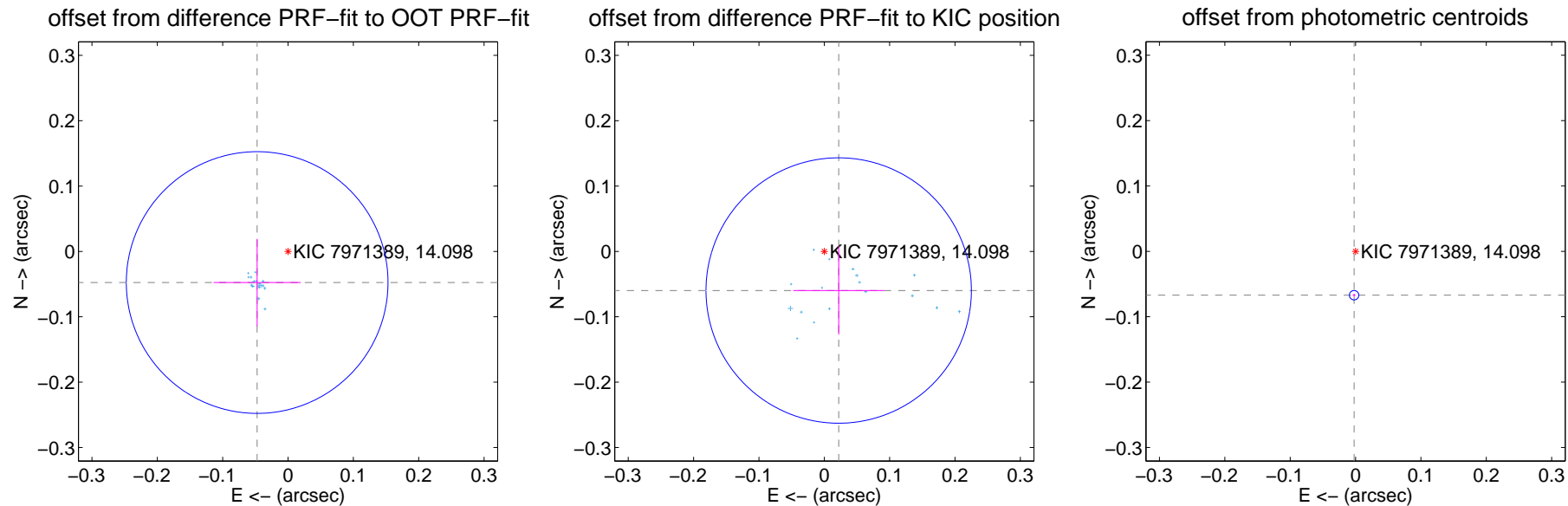
DV Centroid Data

Supplemental centroid analysis for 007971389-01. Kepler magnitude: 14.10. Transit SNR 3203.78

There are 17 quarters with good PRF difference image offsets

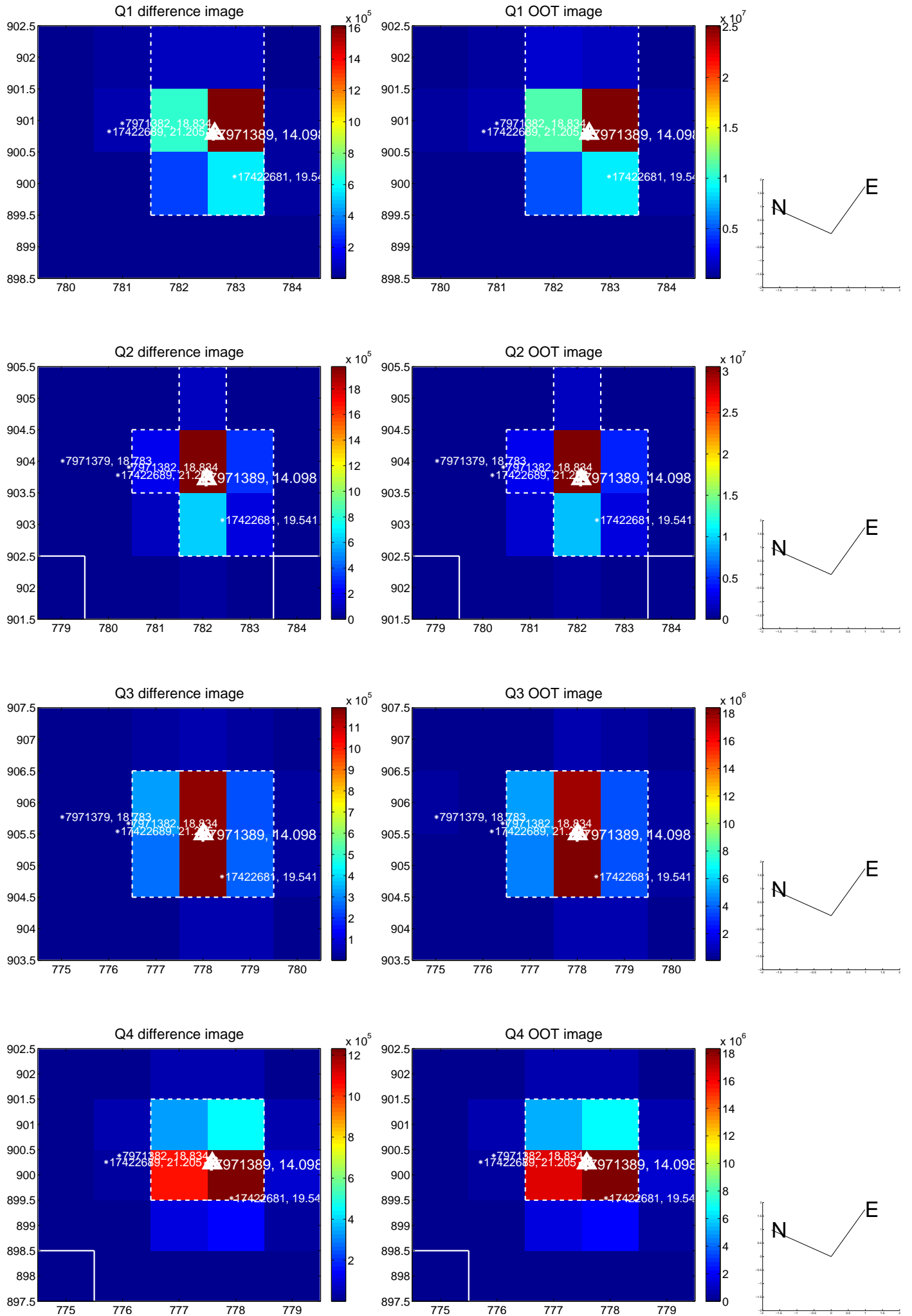
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.067 ± 0.067	1.00	0.047 ± 0.067	-0.048 ± 0.067
PRF-fit source offset from KIC position	0.064 ± 0.068	0.94	-0.022 ± 0.070	-0.060 ± 0.067
photometric centroid source offset	0.07 ± 0.00	28.02	0.00 ± 0.00	-0.07 ± 0.00

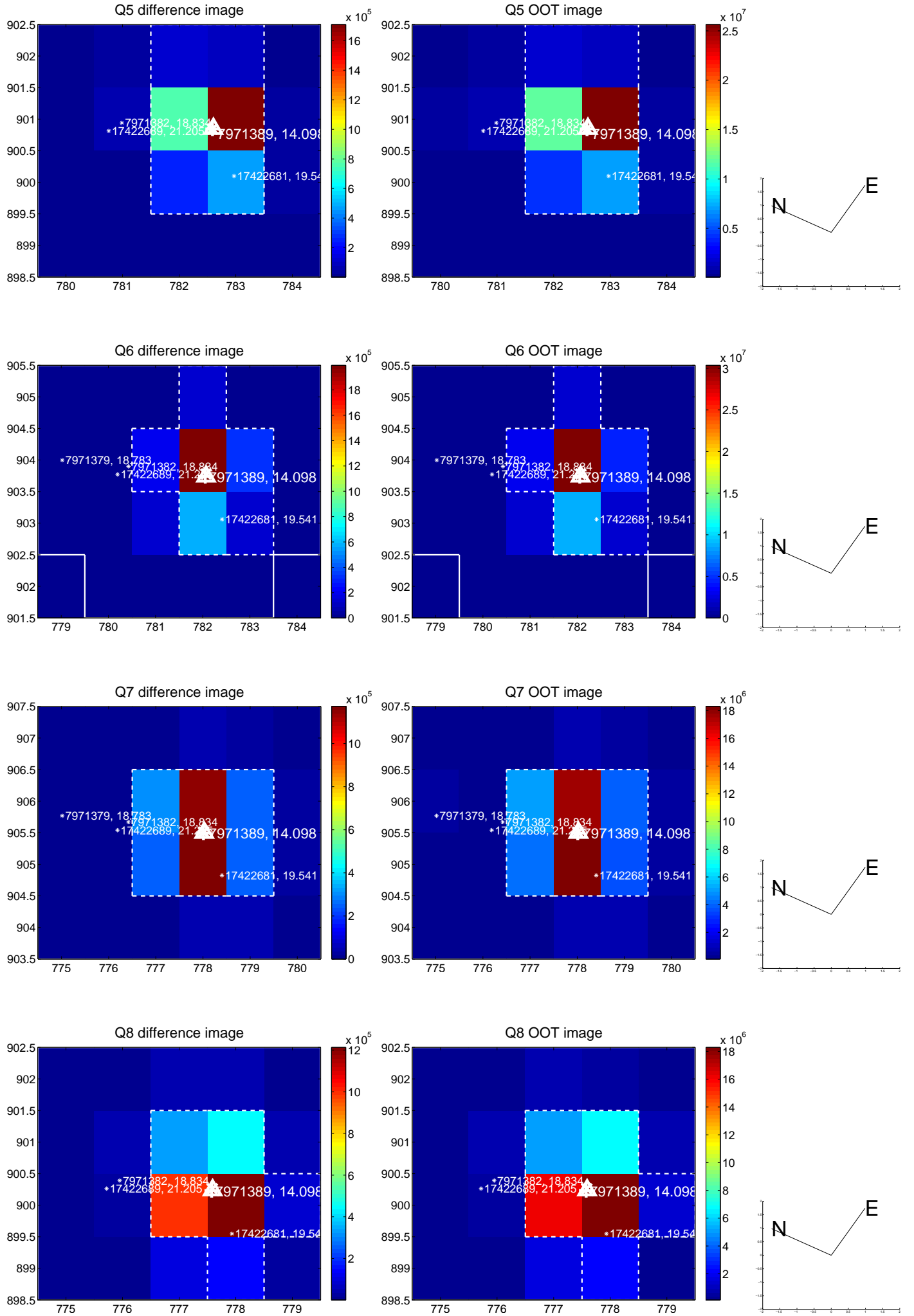


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

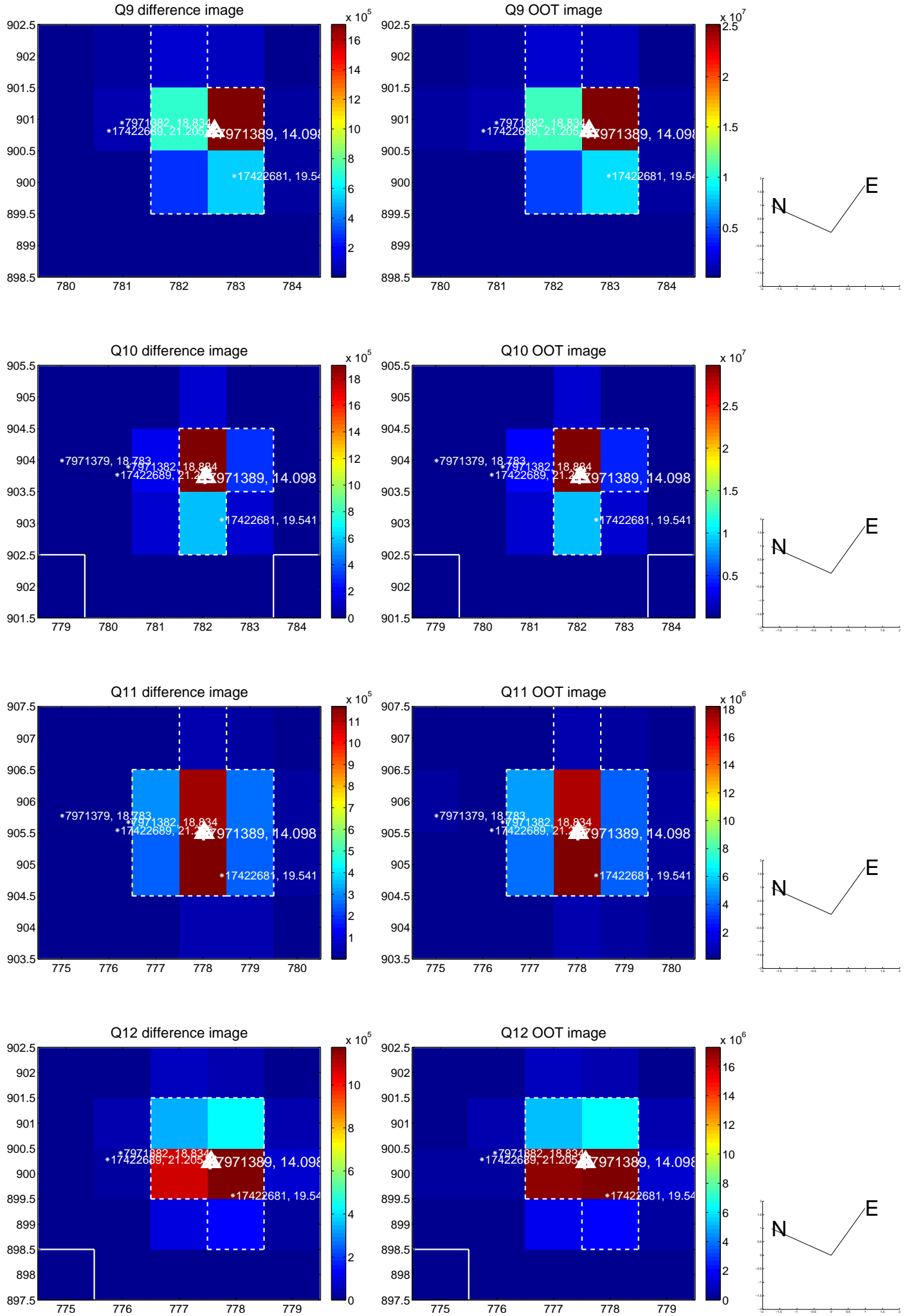
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



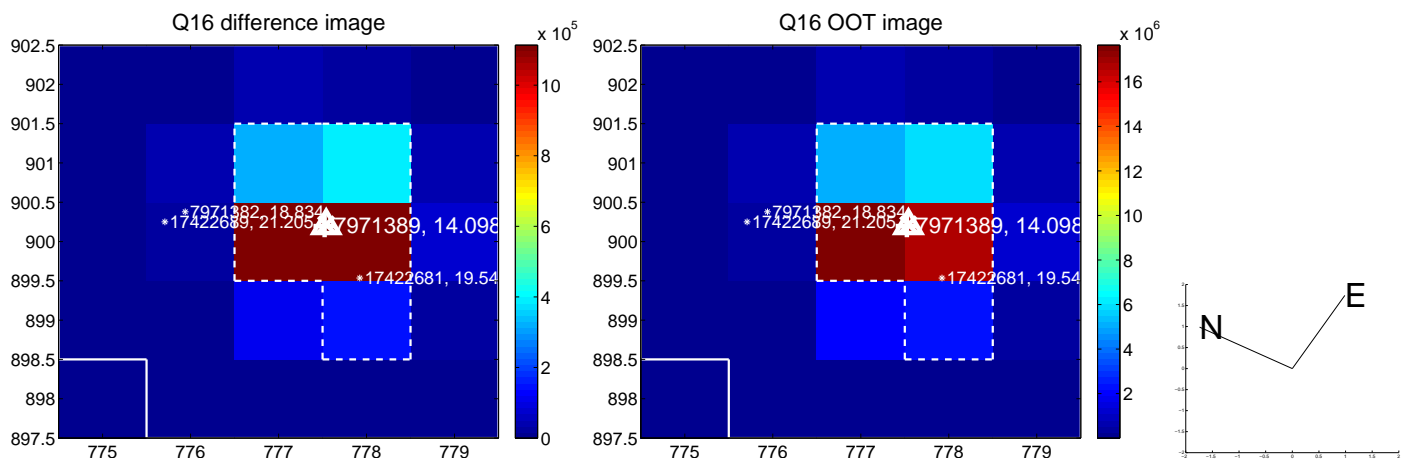
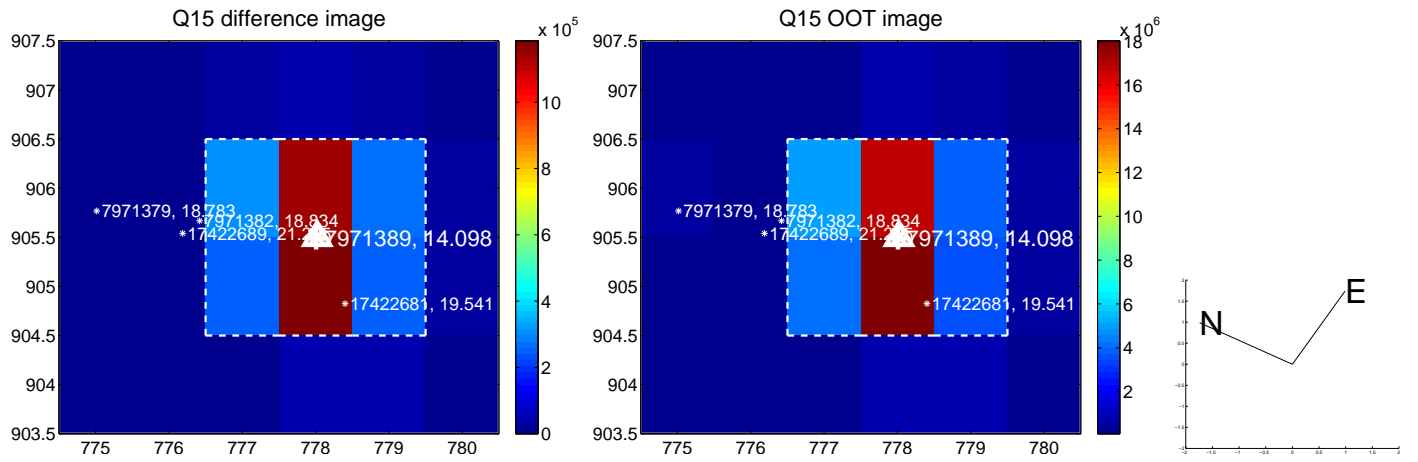
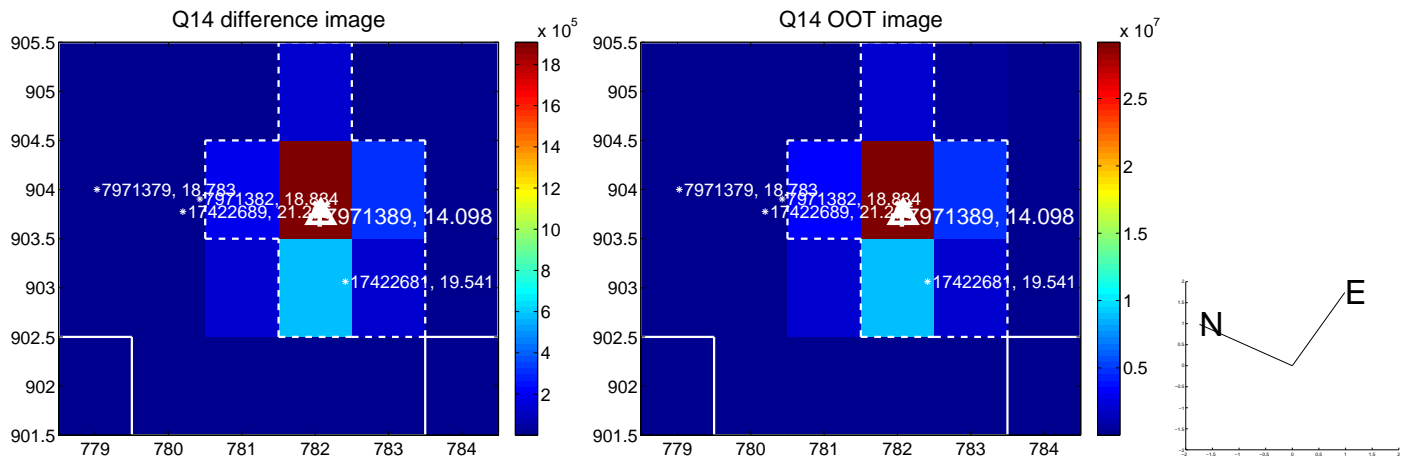
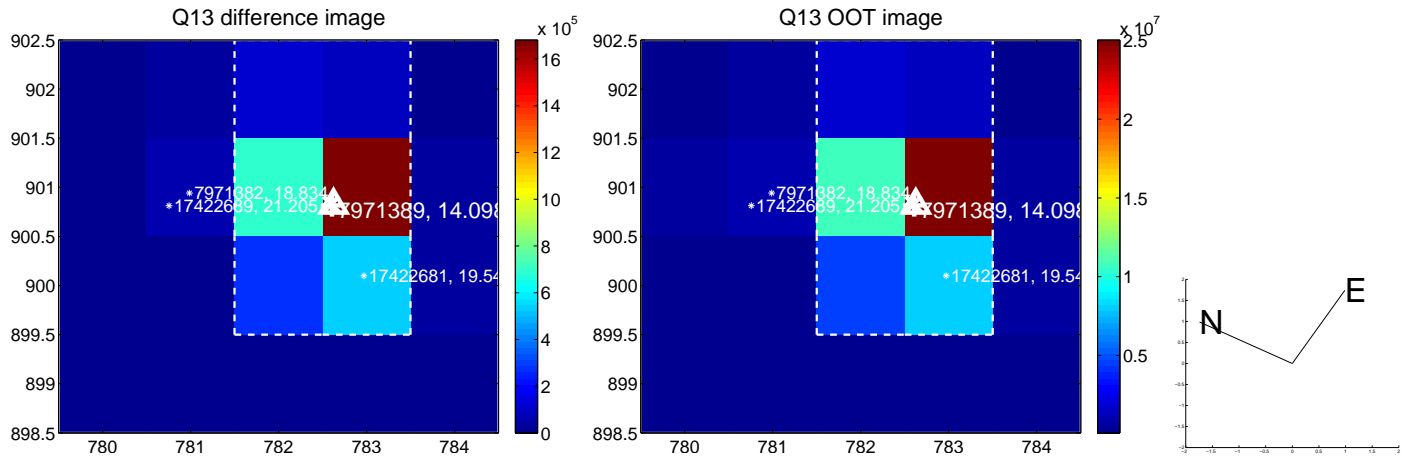
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



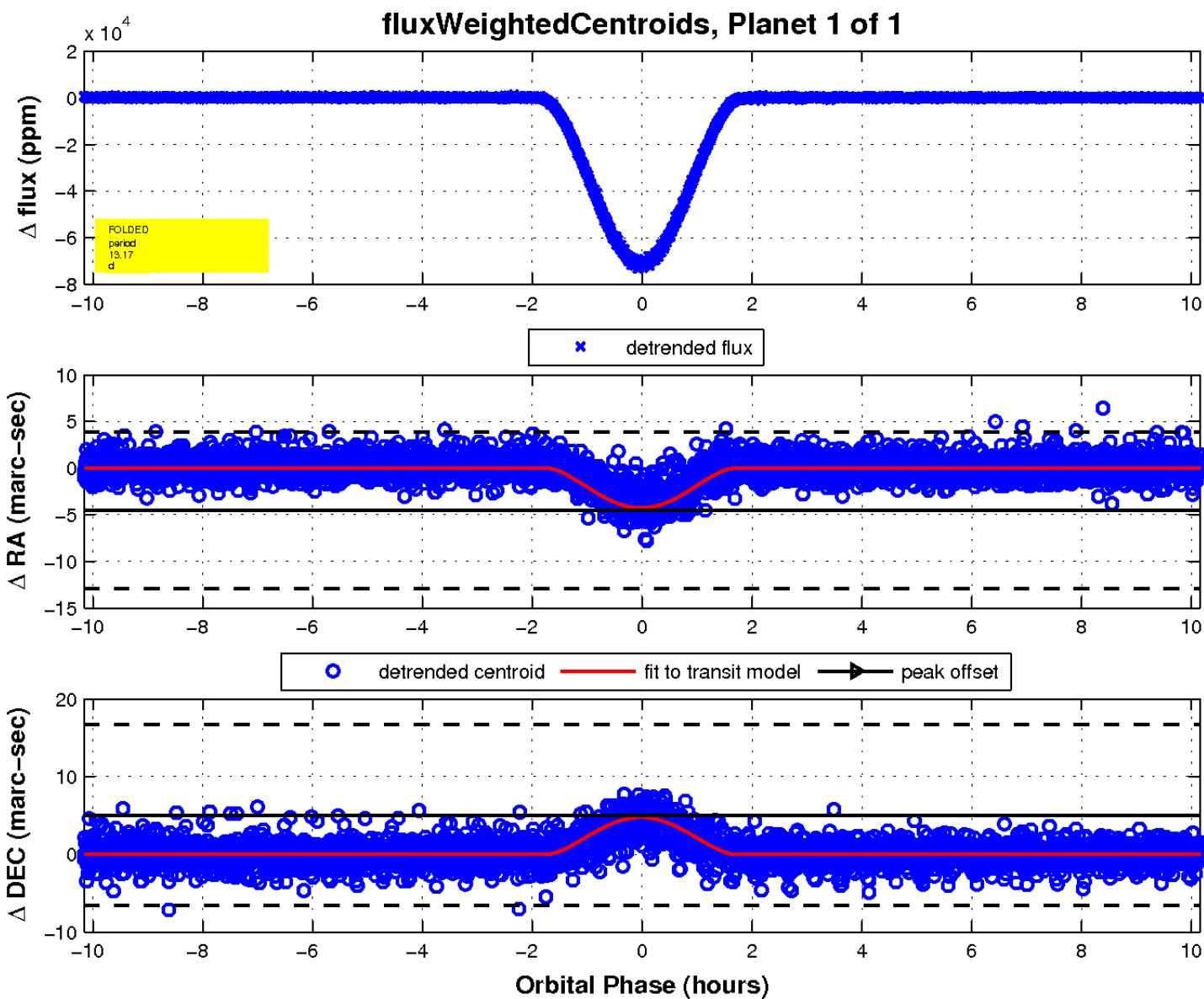
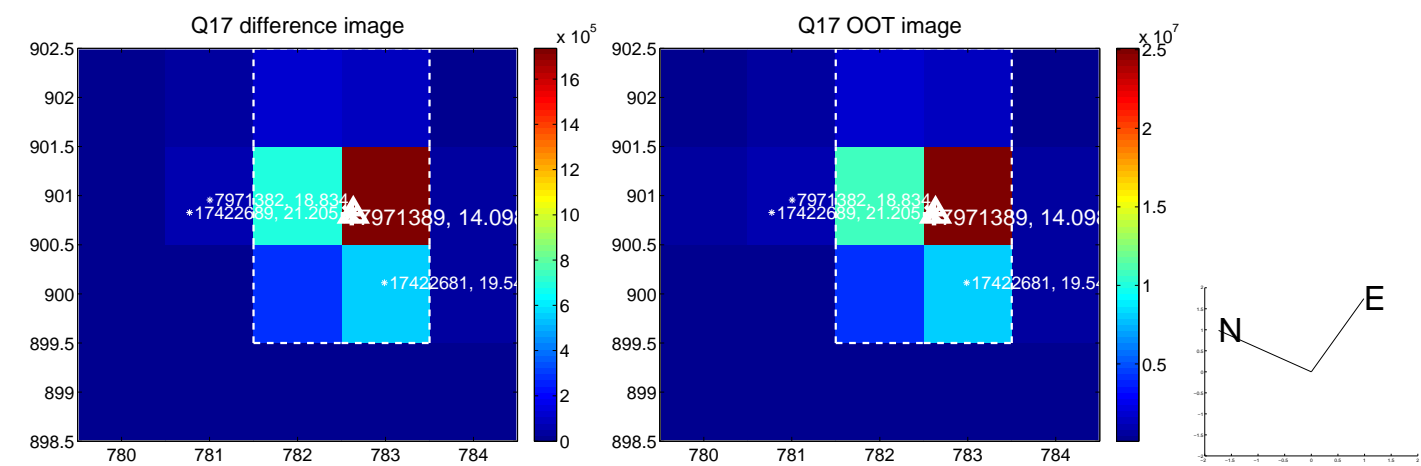
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UKIRT Image

