

KIC 010724369

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})
010724369-01	OBS	1302.01	55.639289	131.910488	836.8	7.191	38.5	41.7	0.96	5949	2.96	12.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010724369-01	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.

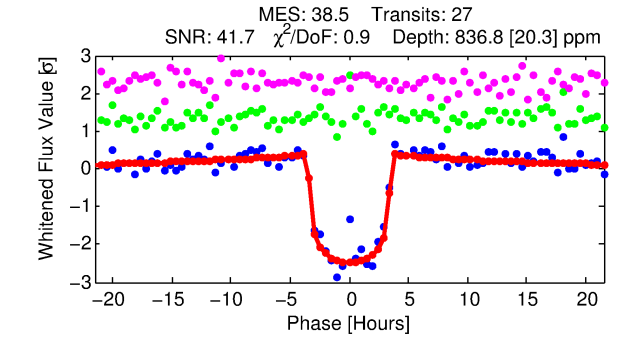
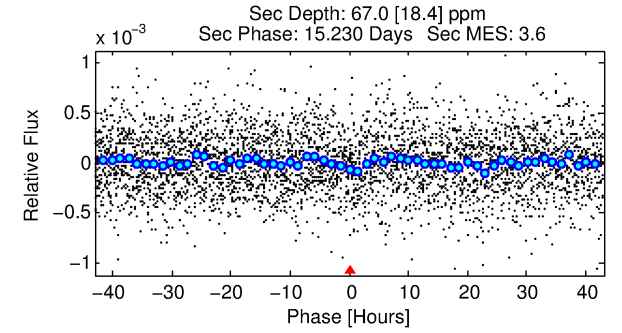
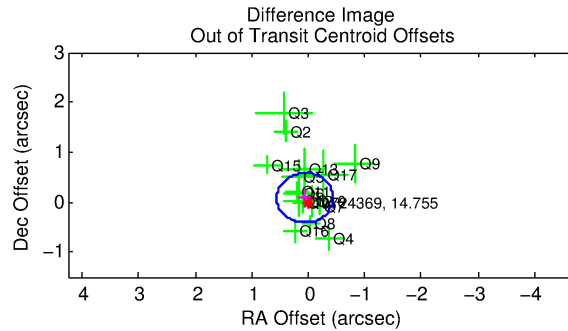
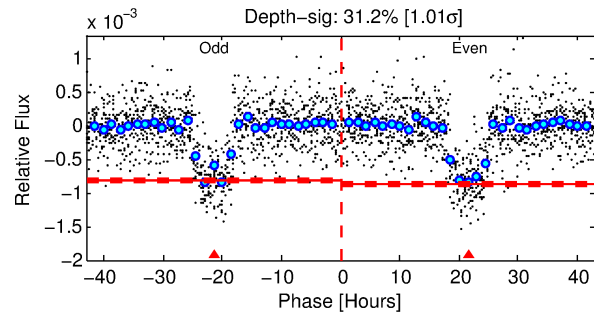
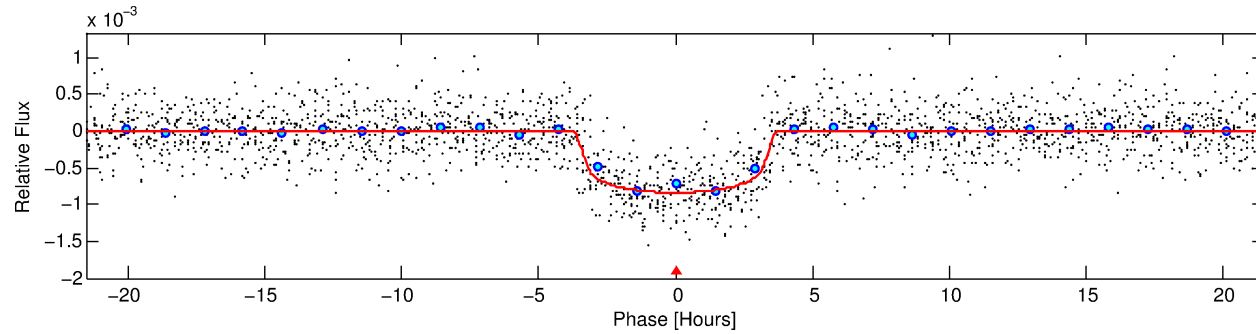
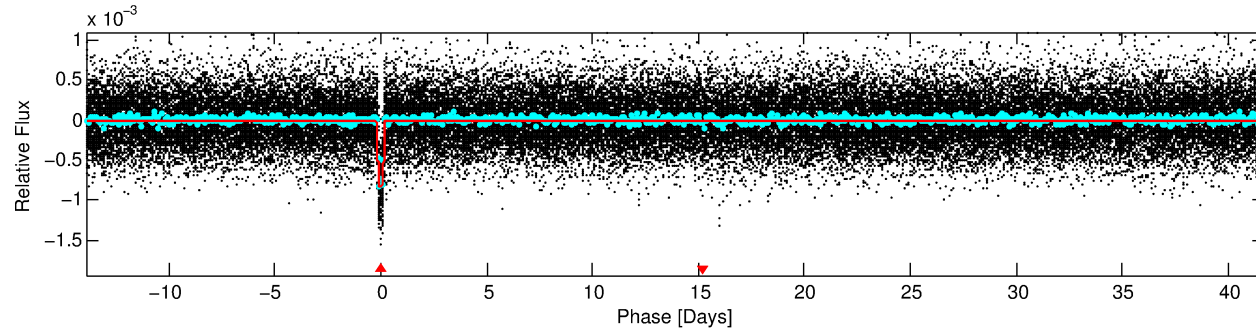
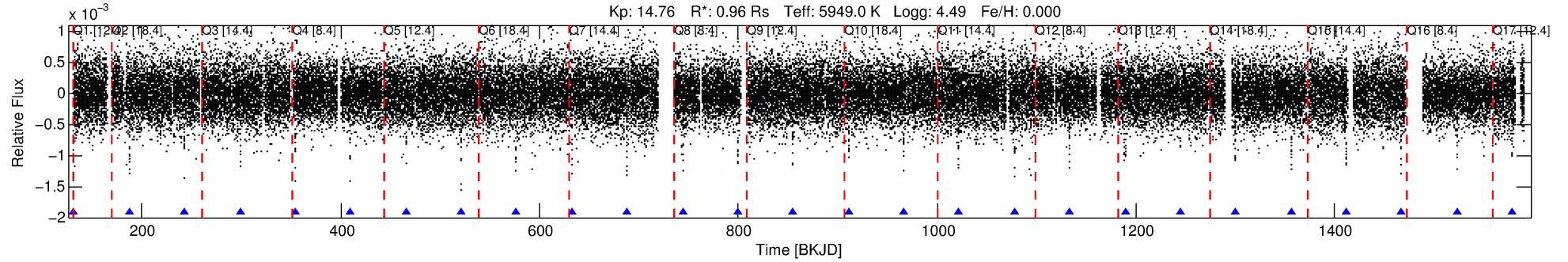
Ephemeris Match Information For 010724369-01

No Significant Match Found

DV One-Page Summary

KIC: 10724369 Candidate: 1 of 1 Period: 55.639 d

KOI: K01302.01 Corr: 0.994



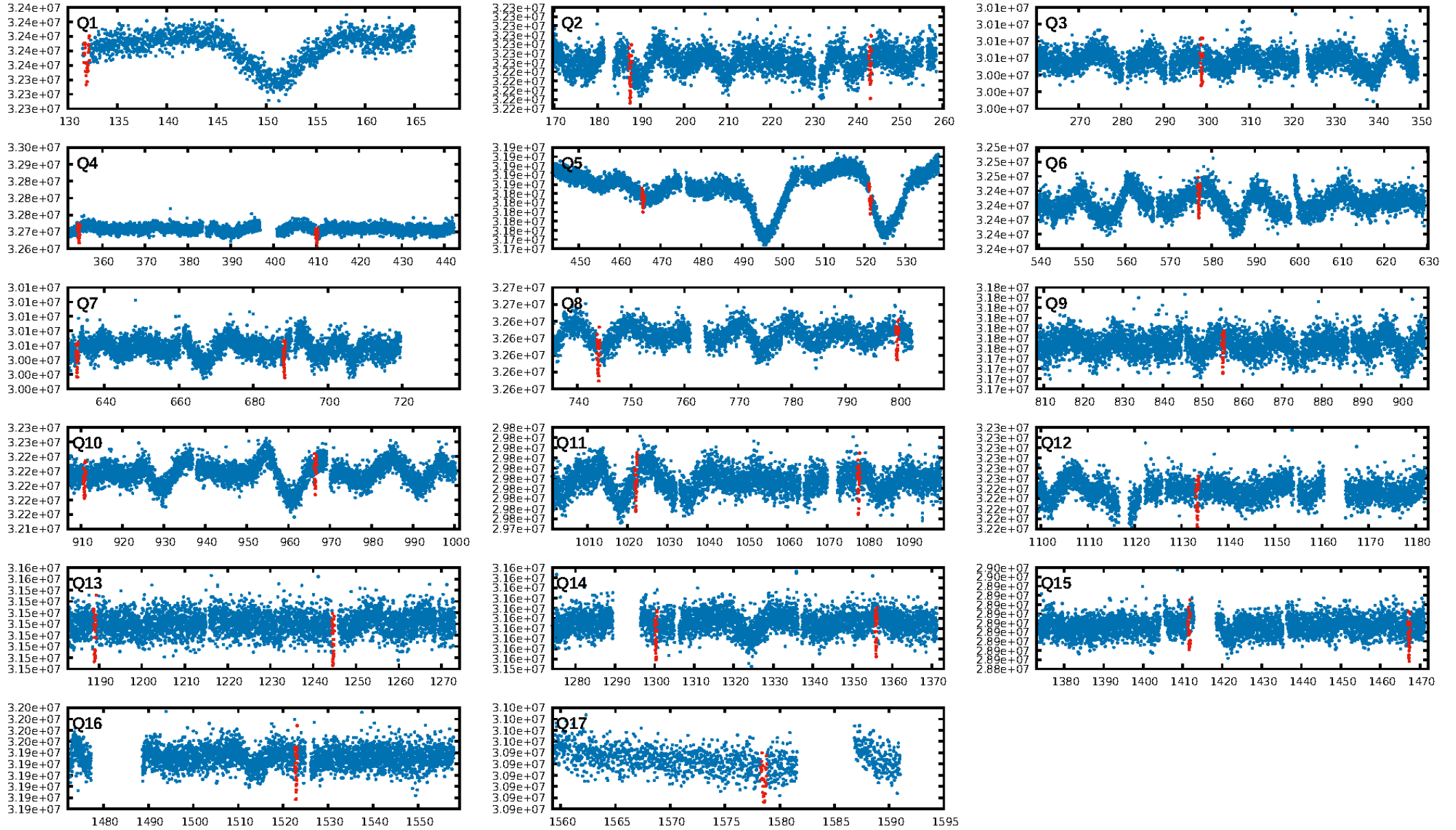
DV Fit Results:

Period = 55.63929 [0.00020] d
Epoch = 131.9105 [0.0031] BKJD
Rp/R* = 0.0282 [0.0036]
a/R* = 45.54 [26.32]
b = 0.68 [0.46]
Seff = 12.35 [4.84]
Teq = 478 [47] K
Rp = 2.96 [0.99] Re
a = 0.2900 [0.0745] AU
Ag = 354.83 [186.48] [1.90 σ]
Teffp = 3208 [317] K [8.51 σ]

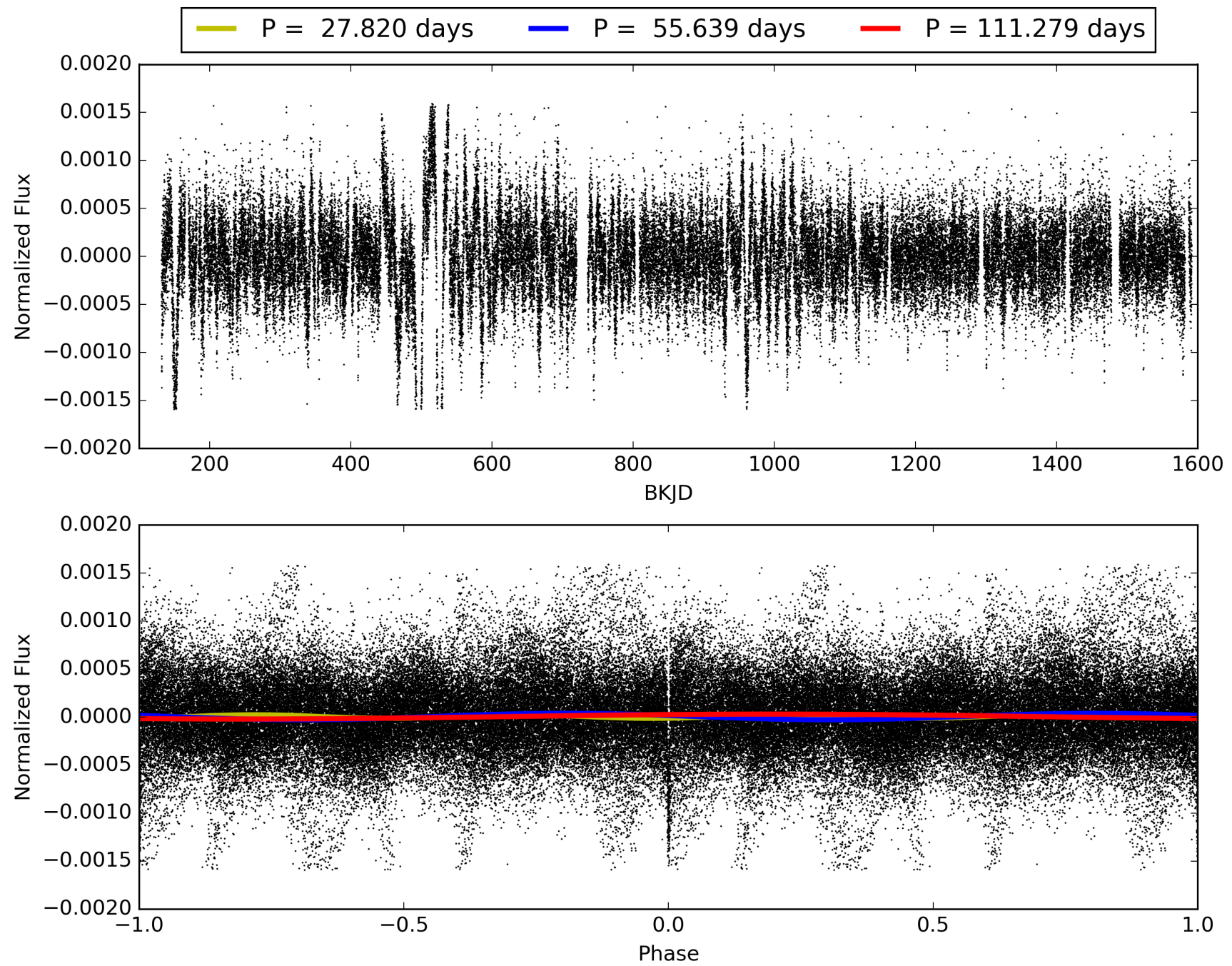
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 34.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [25/25]
GhostDiagnostic-chr: 10.55
Centroid-sig: 1.4%
Centroid-so: 0.471 arcsec [1.76 σ]
OotOffset-rm: 0.108 arcsec [0.65 σ]
KicOffset-rm: 0.068 arcsec [0.44 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 010724369-01, PDC Light Curves

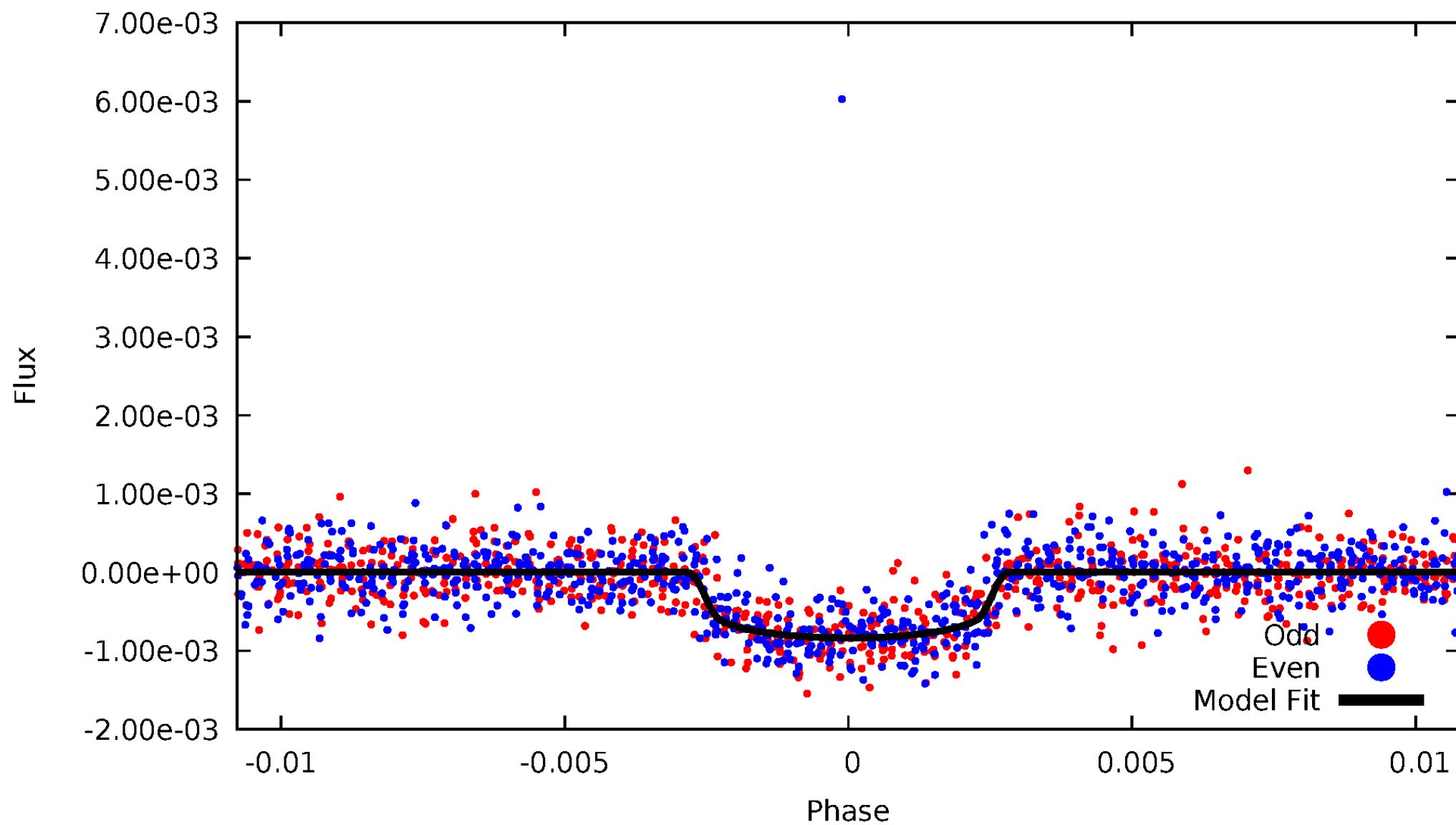


TCE 010724369-01



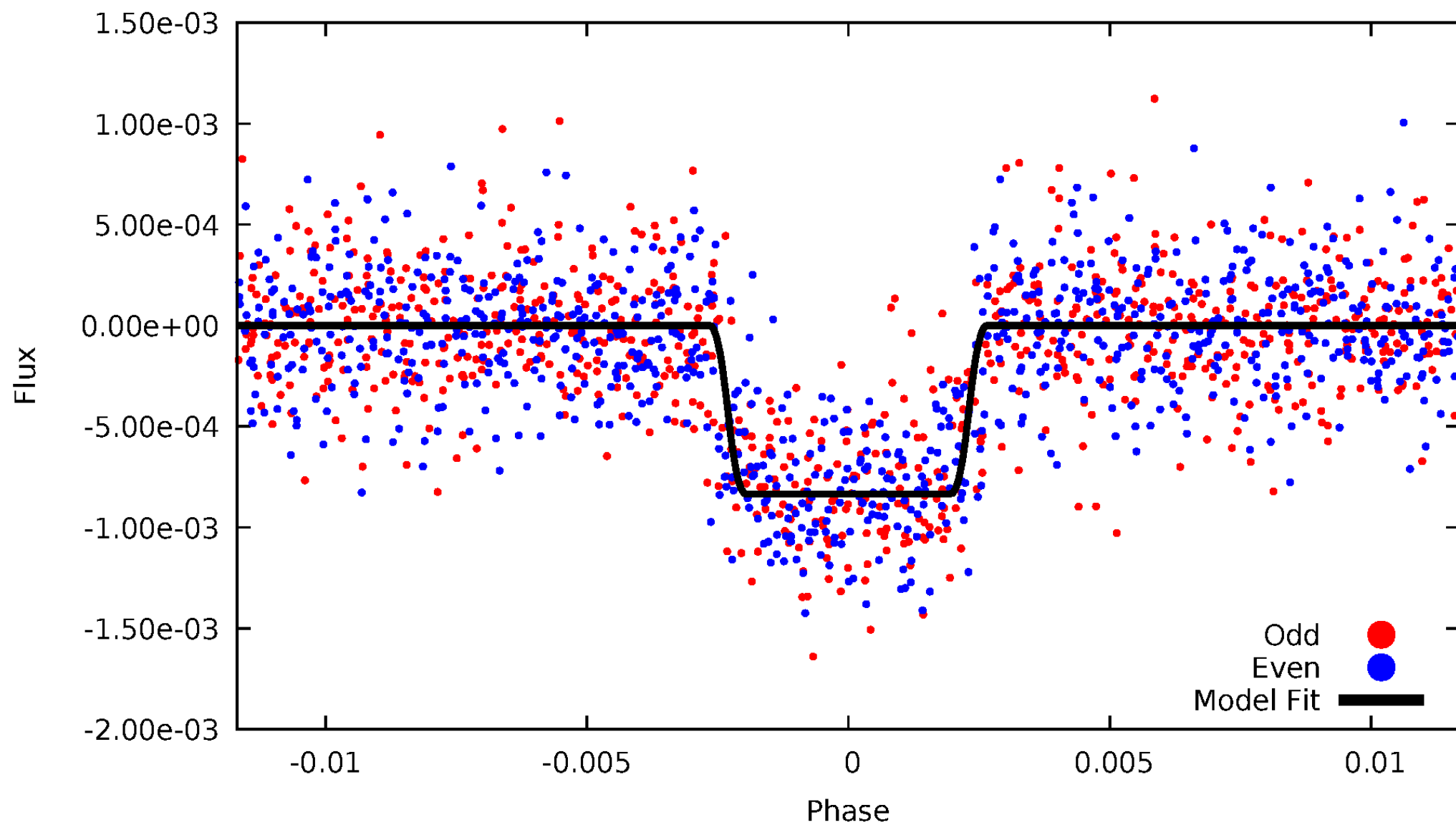
DV Odd/Even

TCE 010724369-01

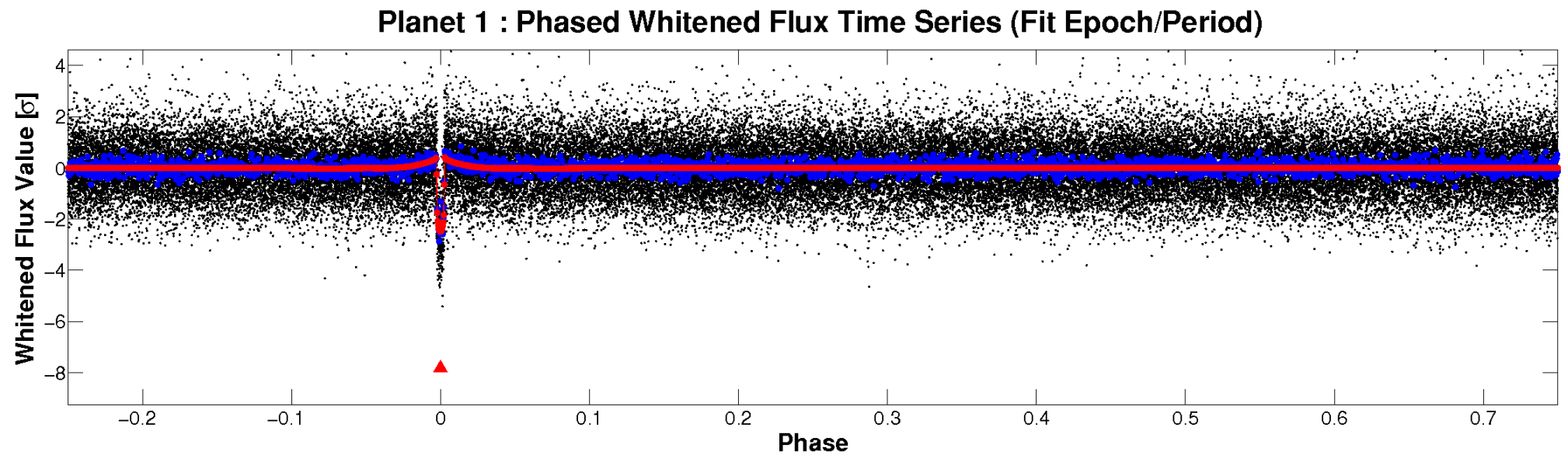
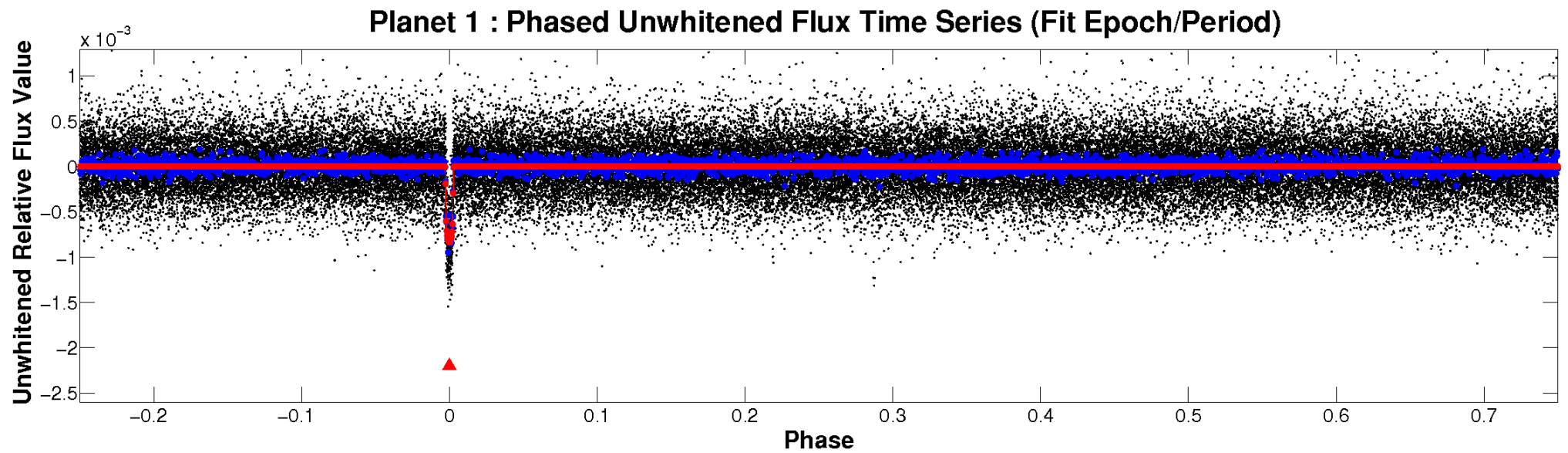


ALT Odd/Even

TCE 010724369-01

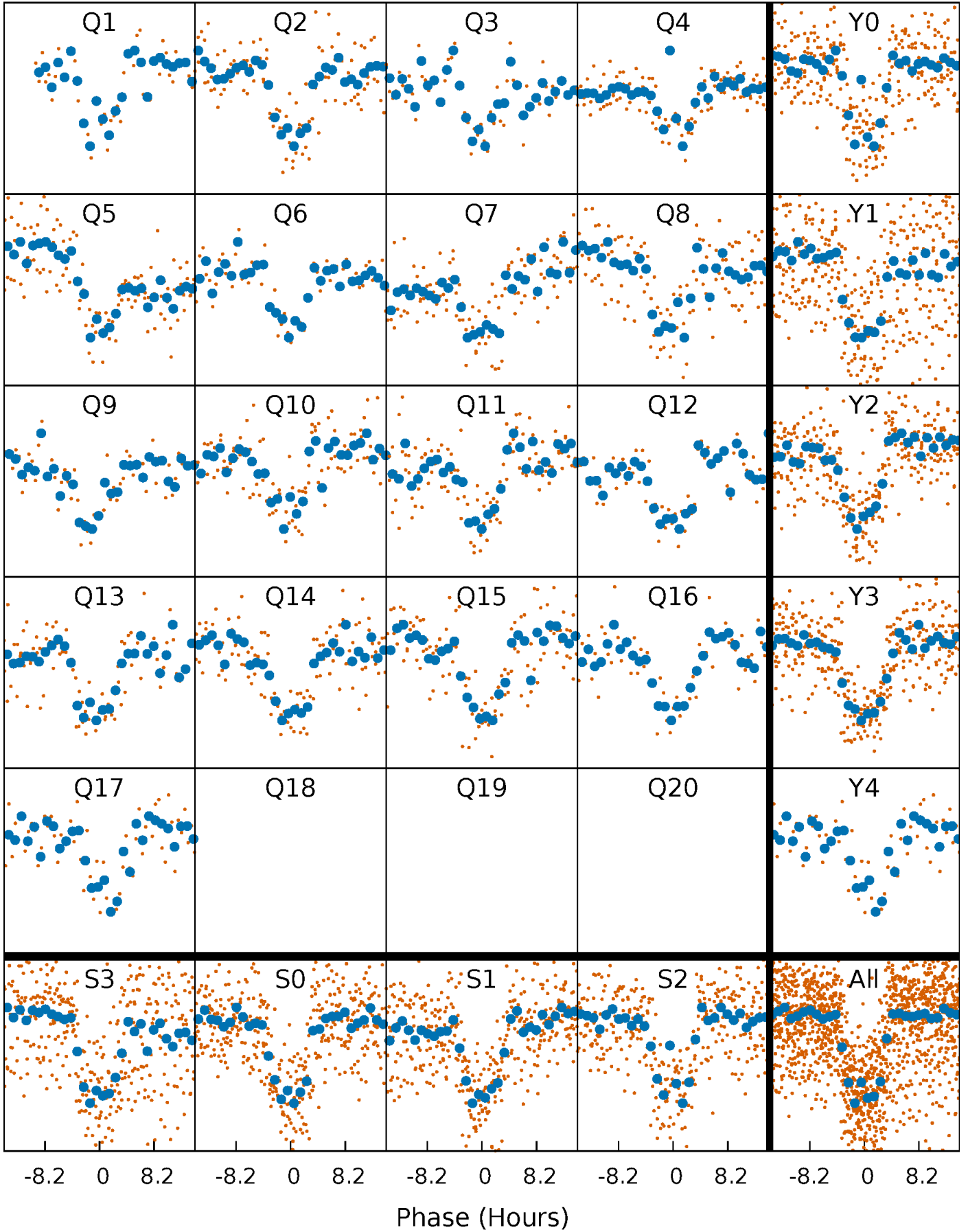


Non-Whitened Vs. Whitened Light Curve



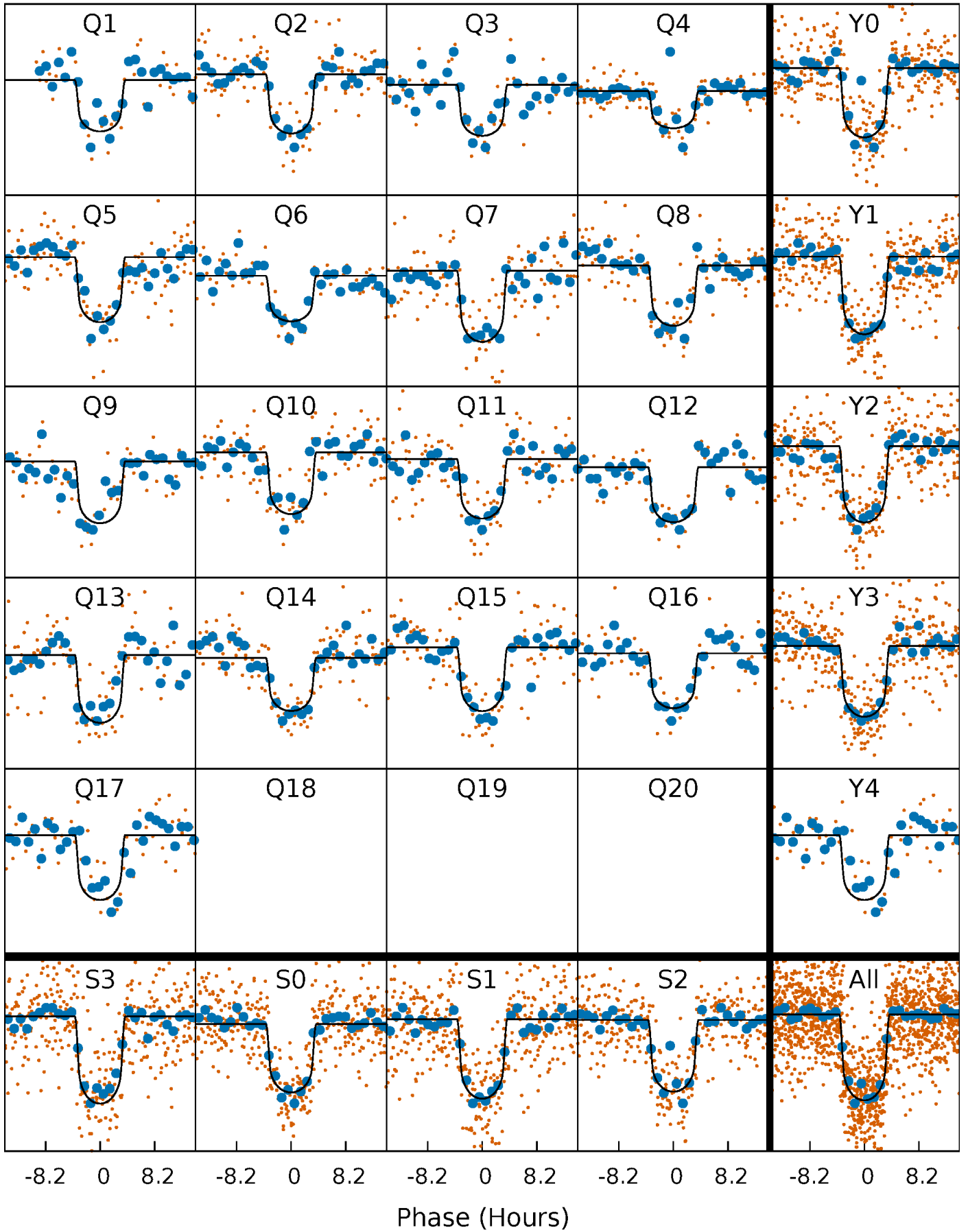
PDC Quarter-Phased Transit Curves

TCE 010724369-01 P= 55.639289 Days $T_0=131.910488$ (BKJD)



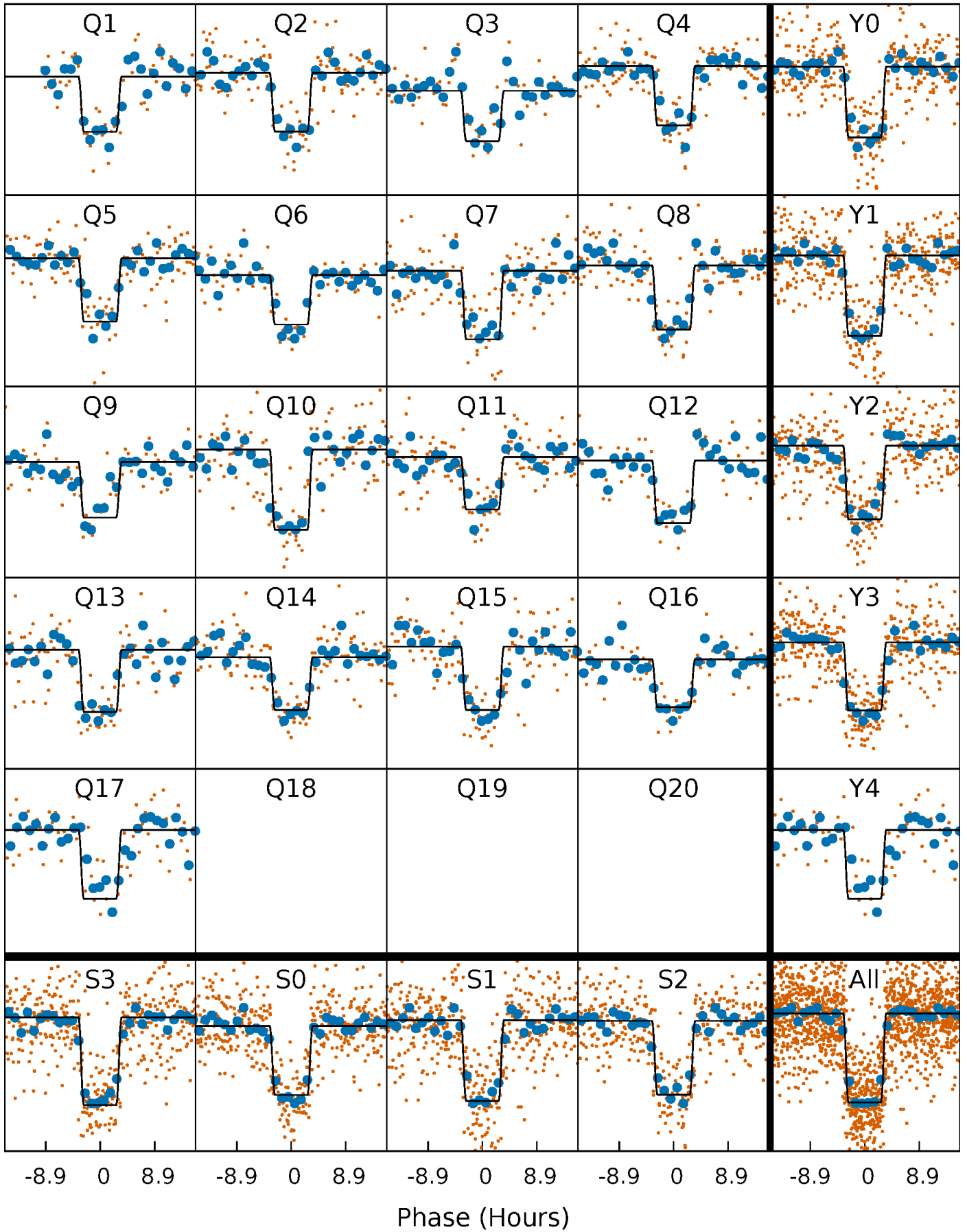
DV Quarter-Phased Transit Curves

TCE 010724369-01 P= 55.639289 Days $T_0=131.910488$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

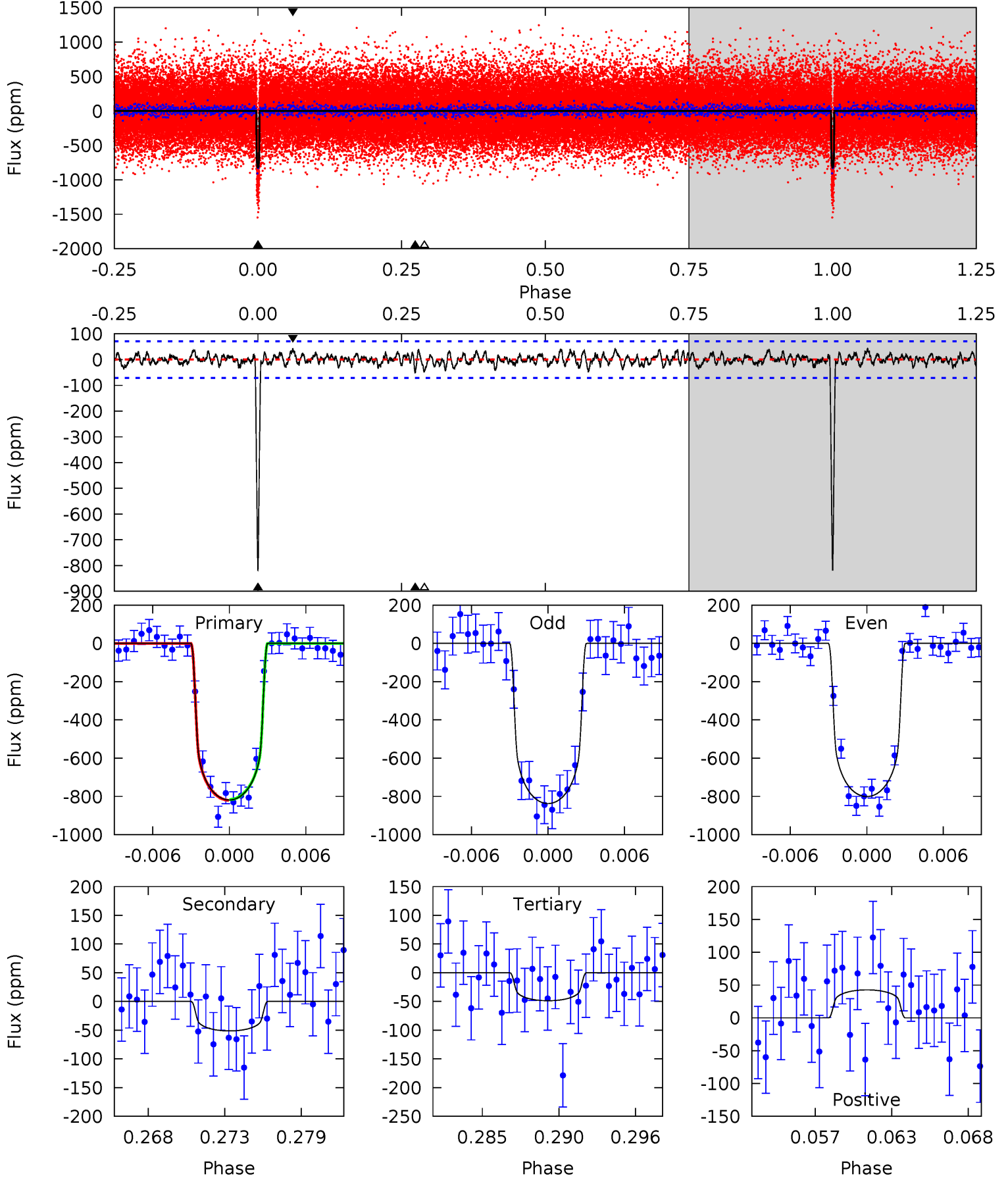
TCE 010724369-01 P= 55.639581 Days $T_0=131.905598$ (BKJD)



DV Model-Shift Uniqueness Test

010724369-01, P = 55.639289 Days, E = 76.271199 Days

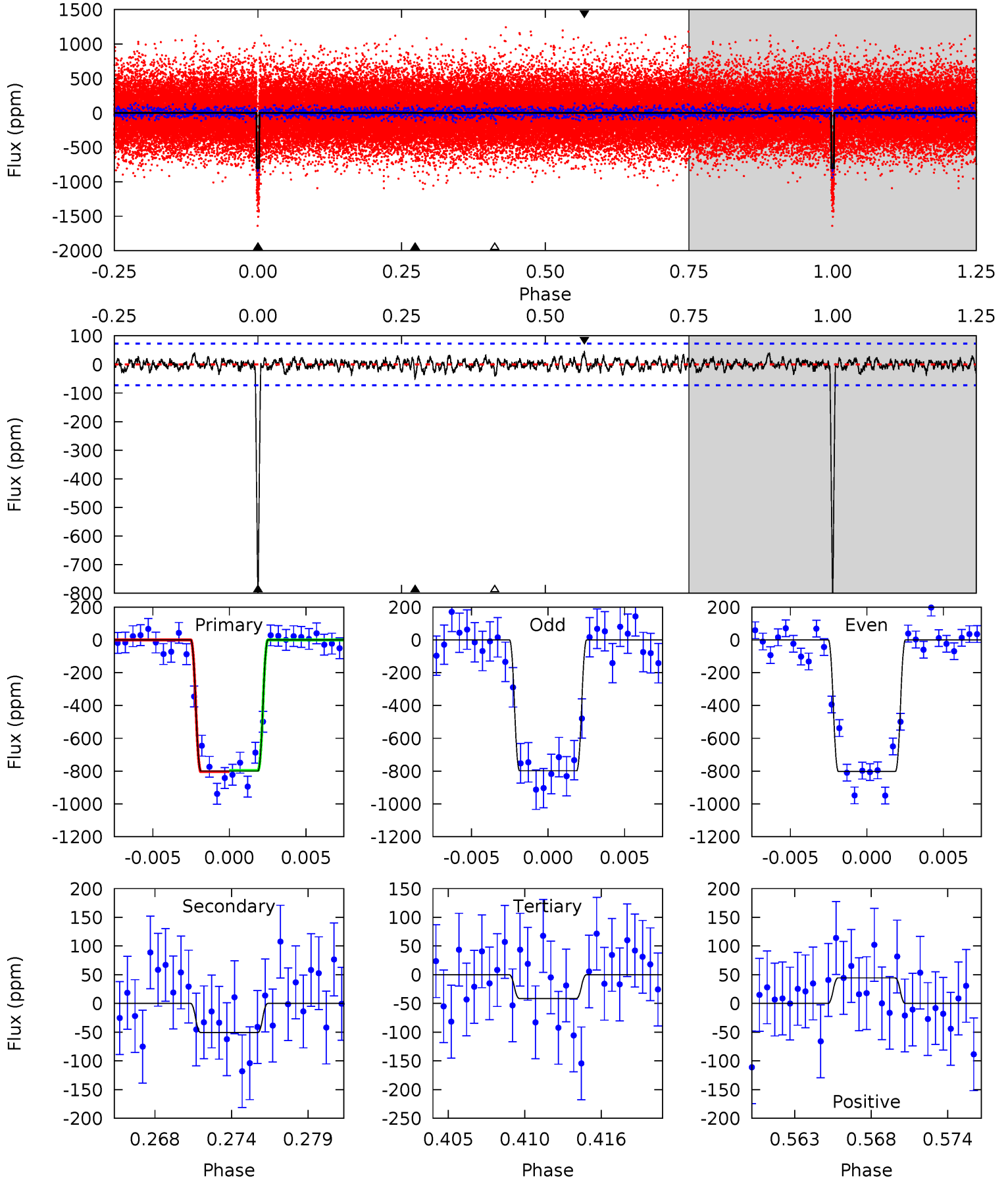
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
59.0	3.70	3.52	3.08	5.13	2.76	1.14	55.5	56.0	0.18	0.63	1.32	0.94	0.05	0.13



Alt Model-Shift Uniqueness Test

010724369-01, P = 55.639581 Days, E = 76.266017 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.6	3.59	2.93	3.15	5.15	2.79	0.93	53.7	53.5	0.66	0.44	0.13	0.97	0.05	0.26



Stellar Parameters For KIC 010724369

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5949^{+176}_{-193}	$4.493^{+0.050}_{-0.200}$	$0.000^{+0.250}_{-0.350}$	$0.962^{+0.297}_{-0.099}$	$1.050^{+0.124}_{-0.138}$	$1.663^{+0.442}_{-0.879}$
	+3%/-3%	+1%/-4%	+inf%/-inf%	+31%/-10%	+12%/-13%	+27%/-53%
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 010724369-01 / KOI 1302.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-51 ± 14	$3.06^{+0.61}_{-0.44}$	684^{+51}_{-35}	3472^{+210}_{-208}	240^{+113}_{-89}
Alt.	-51 ± 14	$3.19^{+0.58}_{-0.50}$	682^{+54}_{-33}	3453^{+197}_{-229}	218^{+123}_{-79}

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

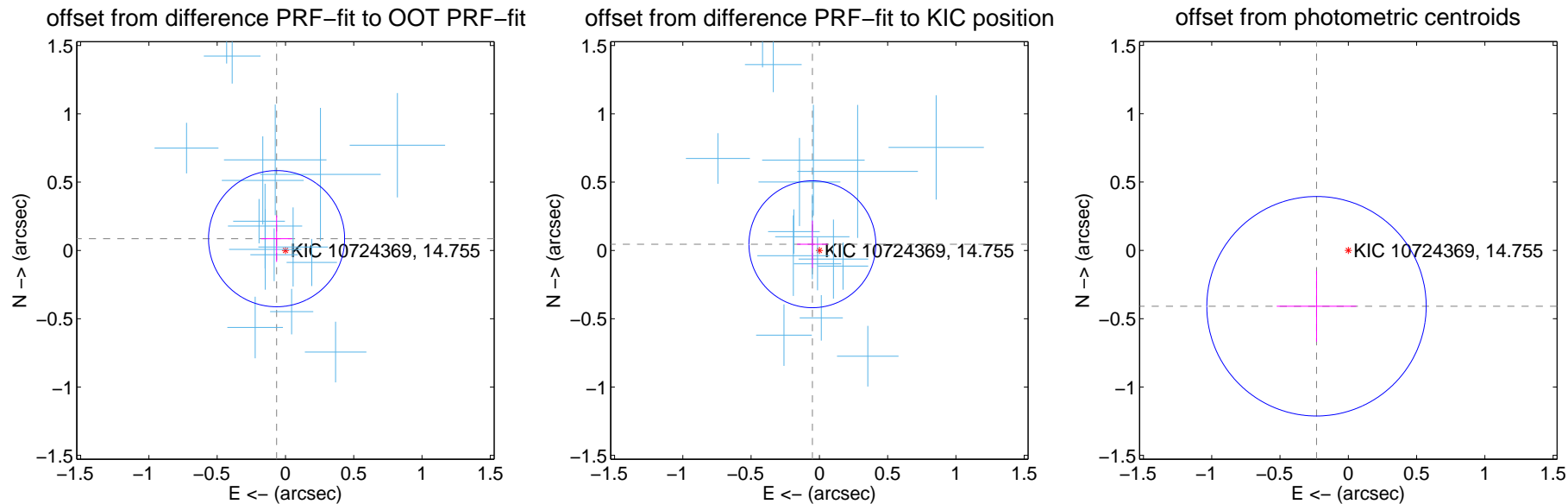
DV Centroid Data

Supplemental centroid analysis for 010724369-01. Kepler magnitude: 14.76. Transit SNR 41.72

There are 16 quarters with good PRF difference image offsets

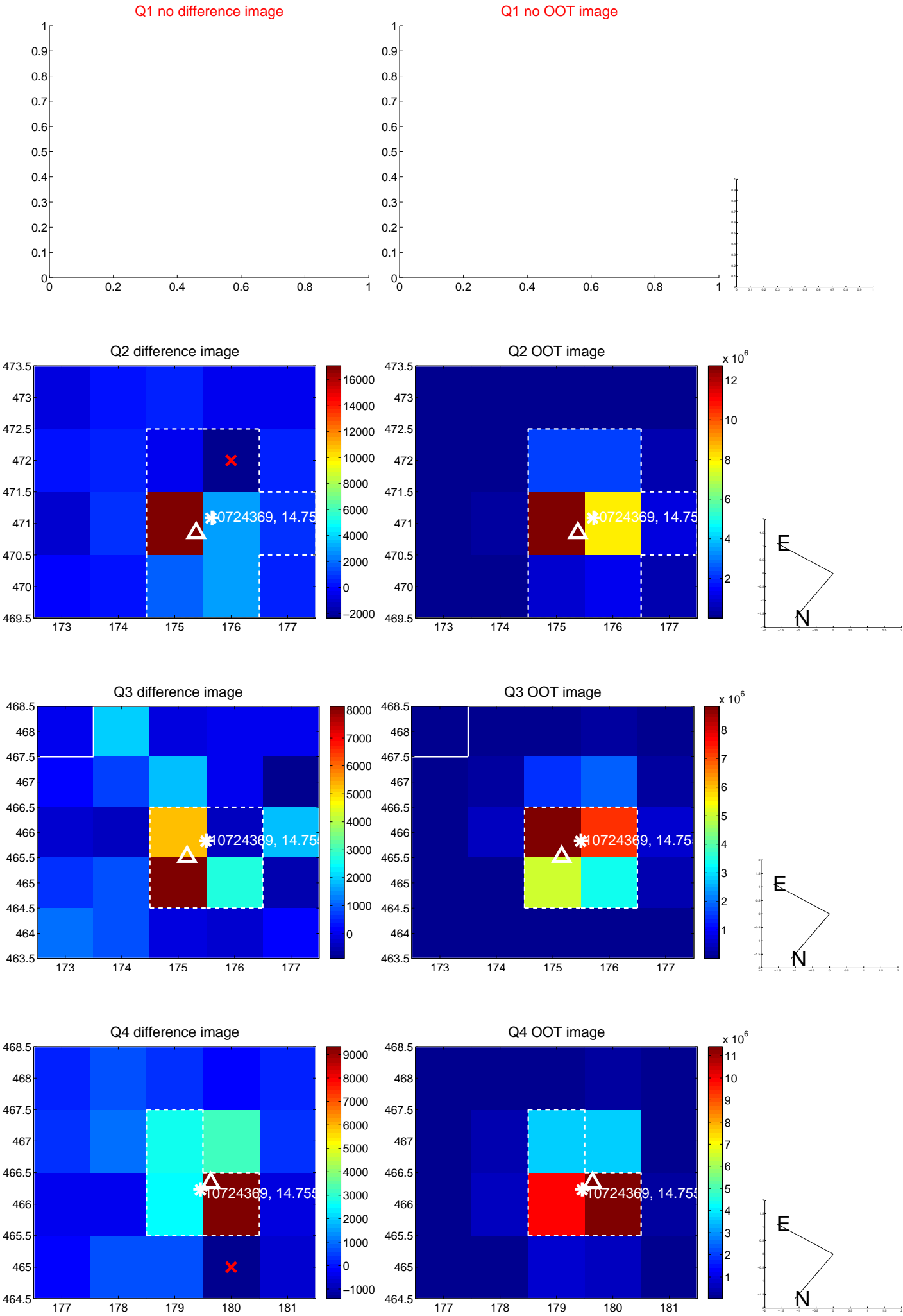
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.108 ± 0.166	0.65	0.065 ± 0.113	0.086 ± 0.171
PRF-fit source offset from KIC position	0.068 ± 0.155	0.44	0.051 ± 0.112	0.045 ± 0.173
photometric centroid source offset	0.47 ± 0.27	1.76	0.23 ± 0.29	-0.41 ± 0.26

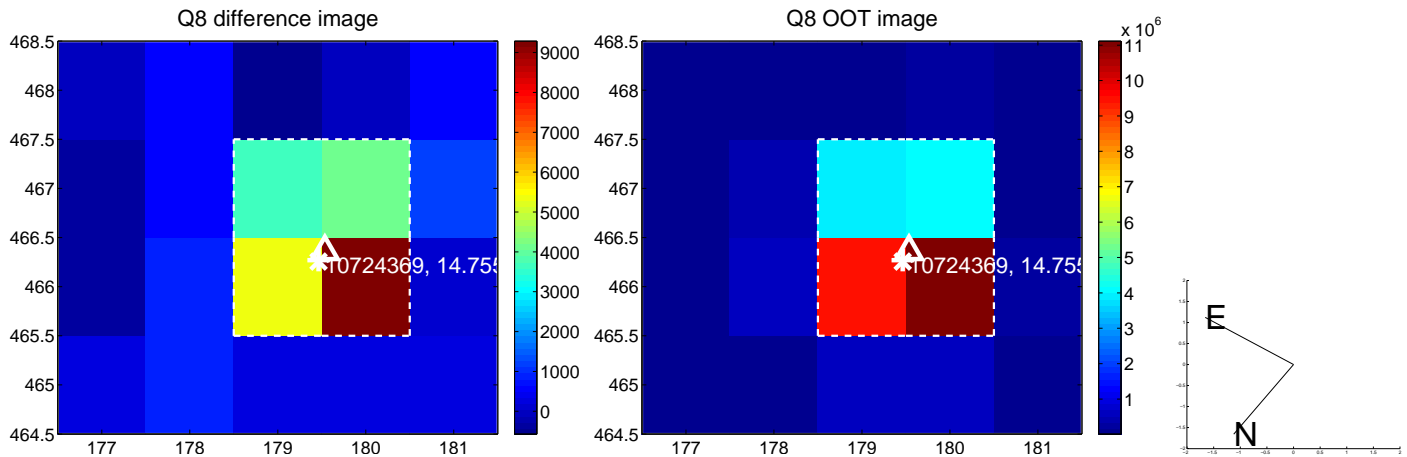
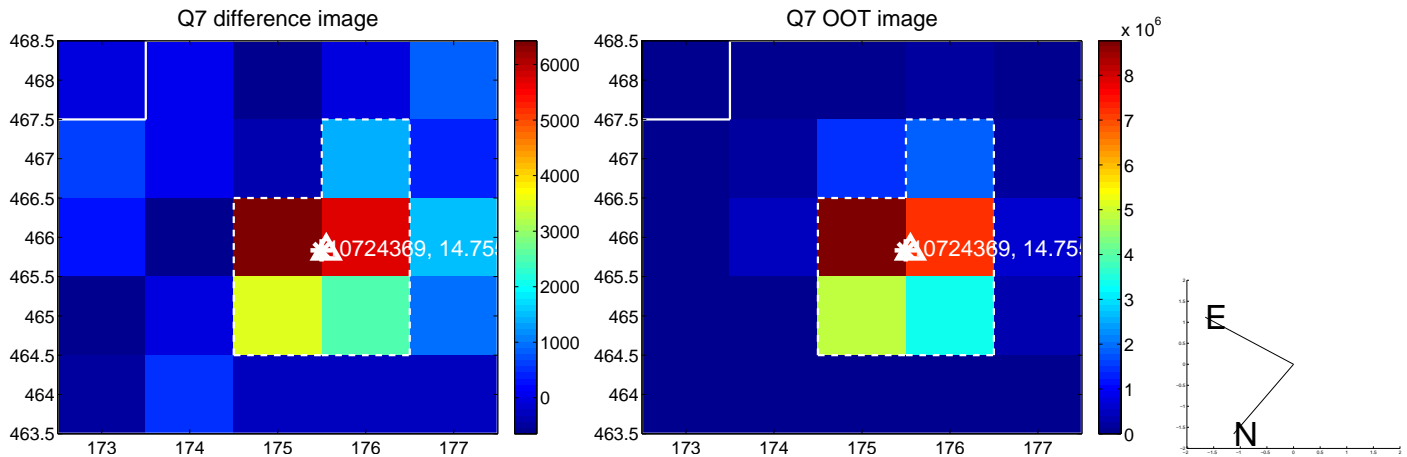
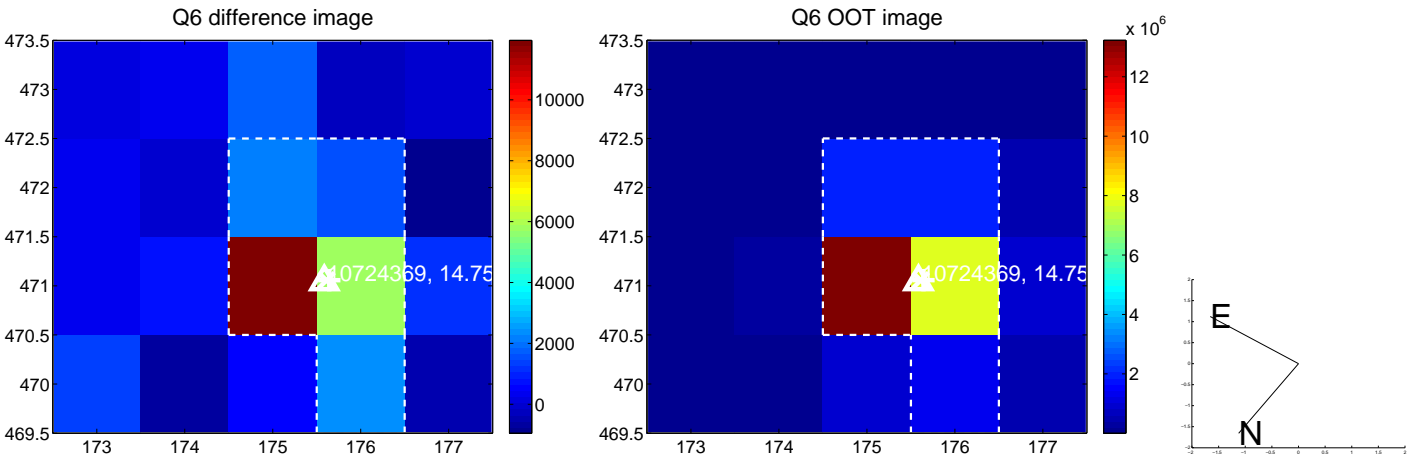
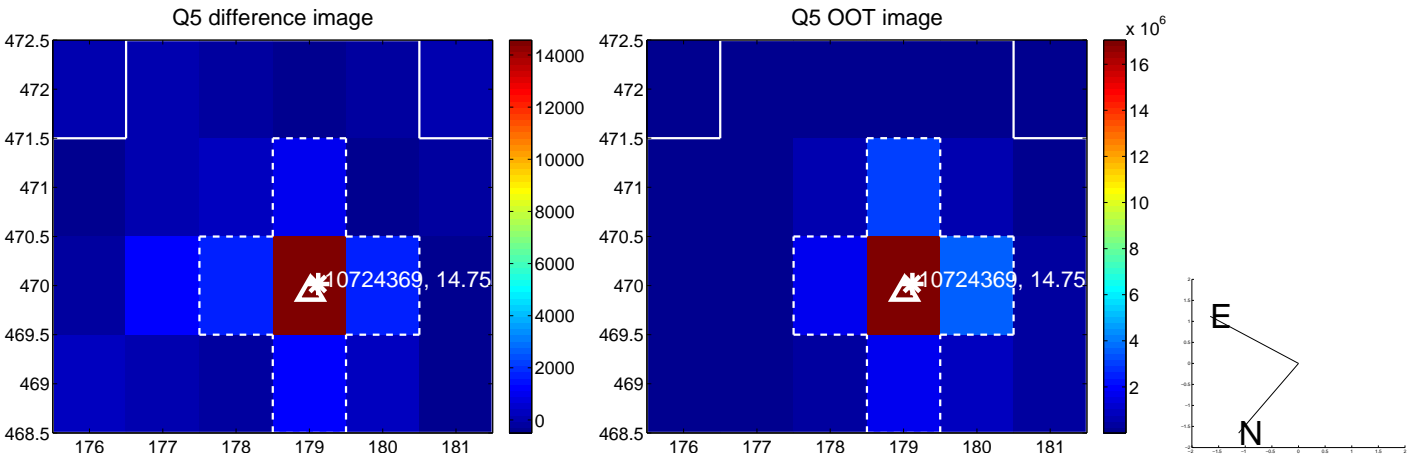


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

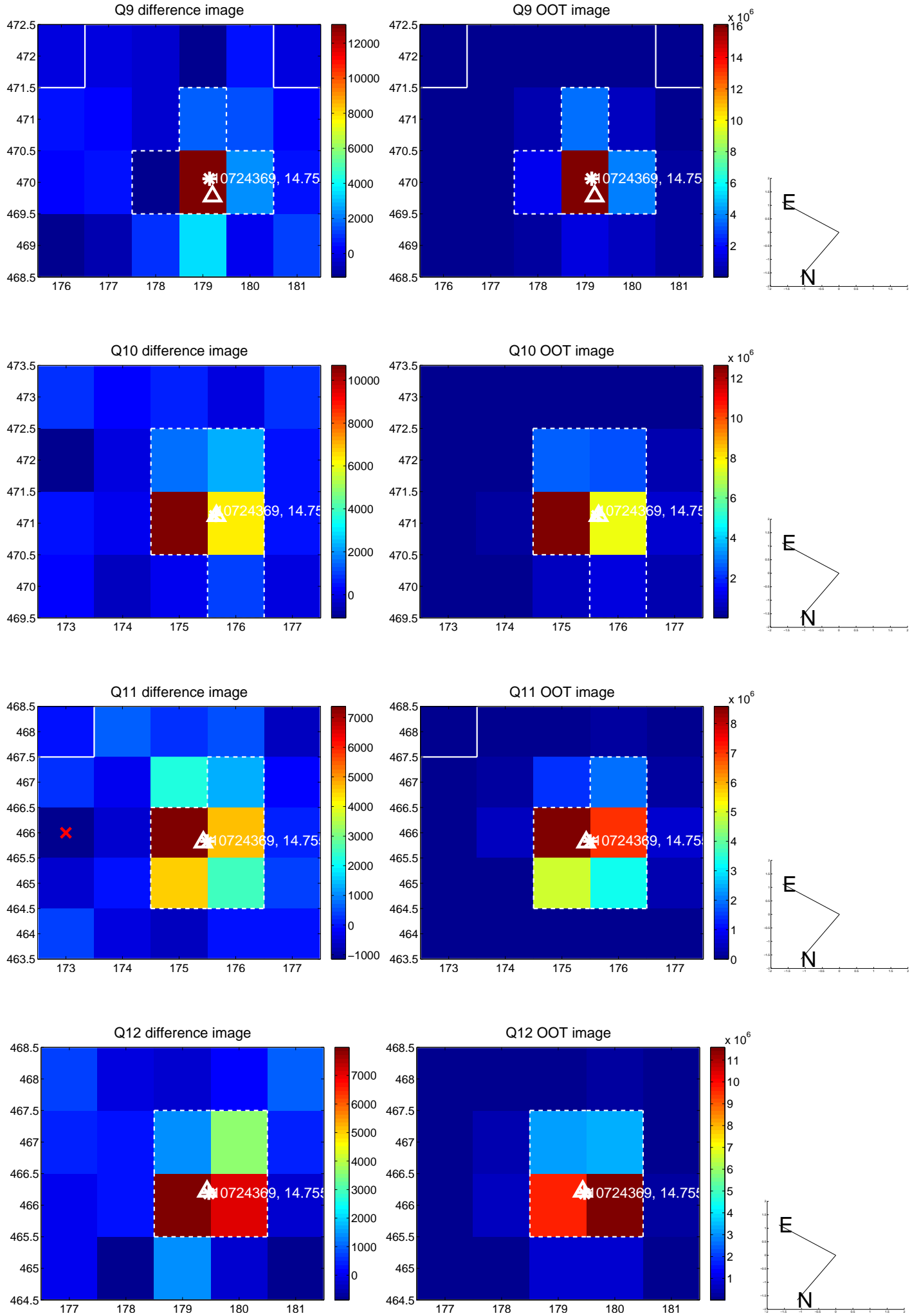
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



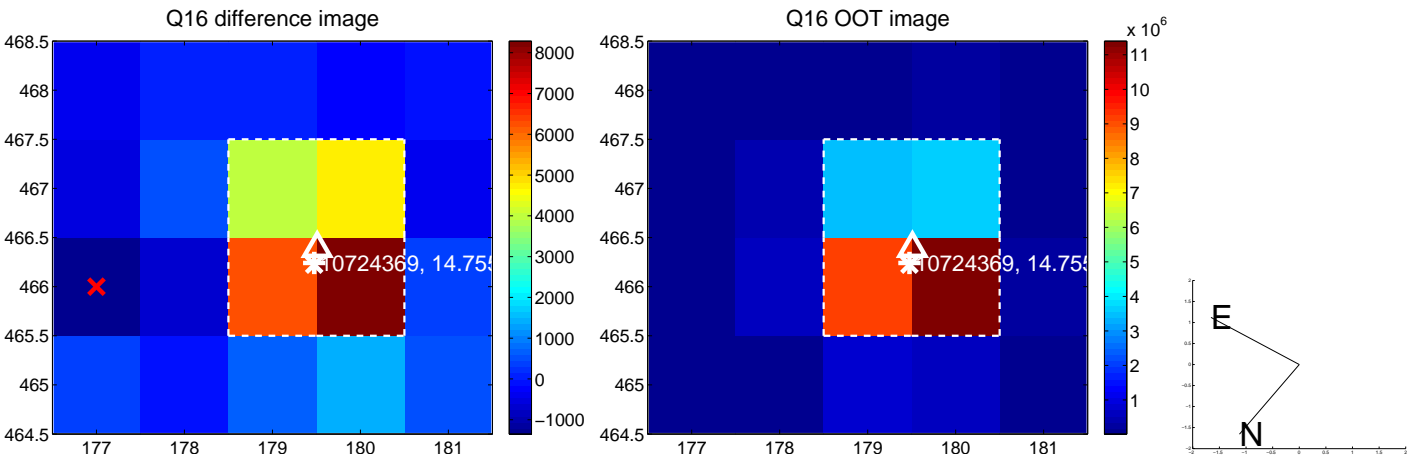
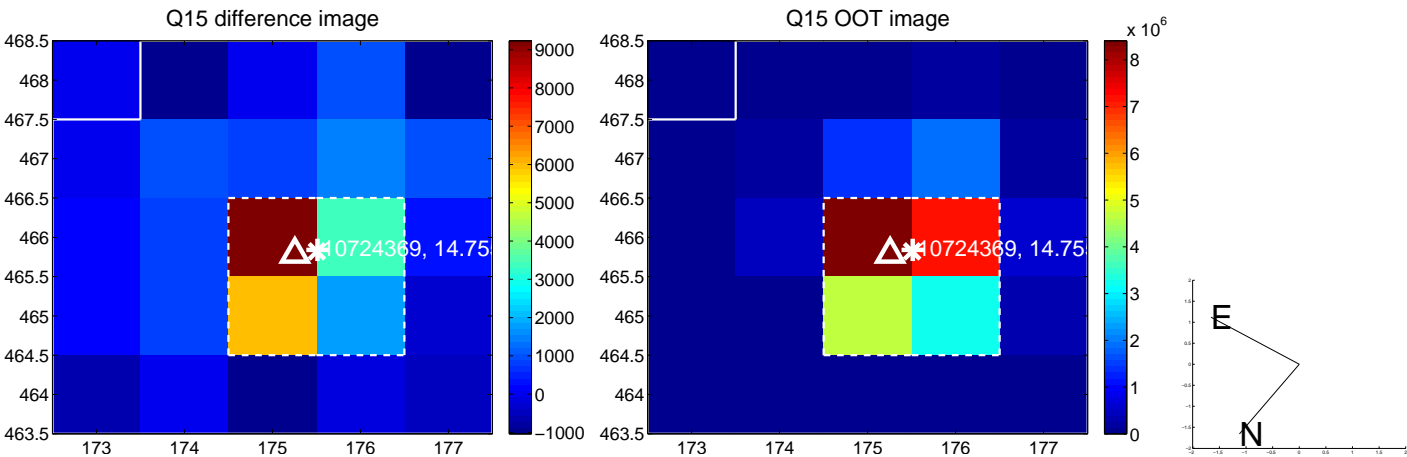
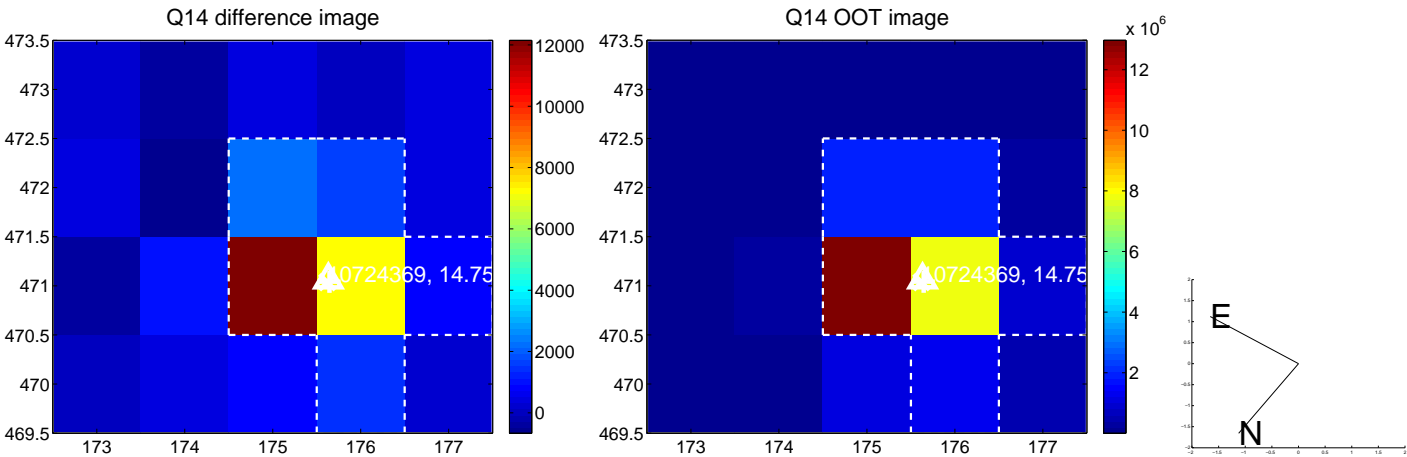
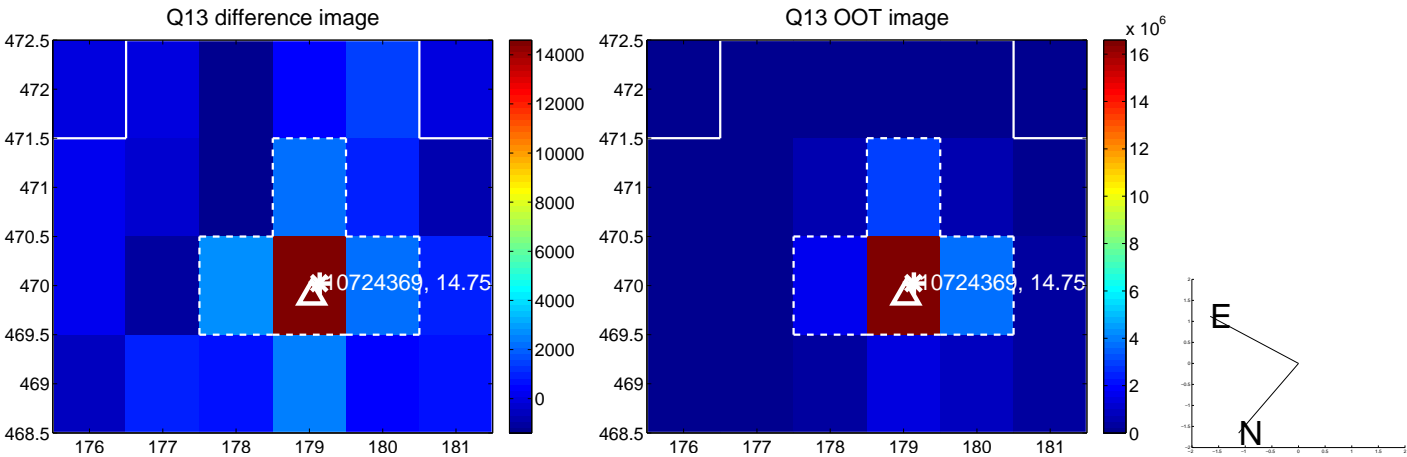
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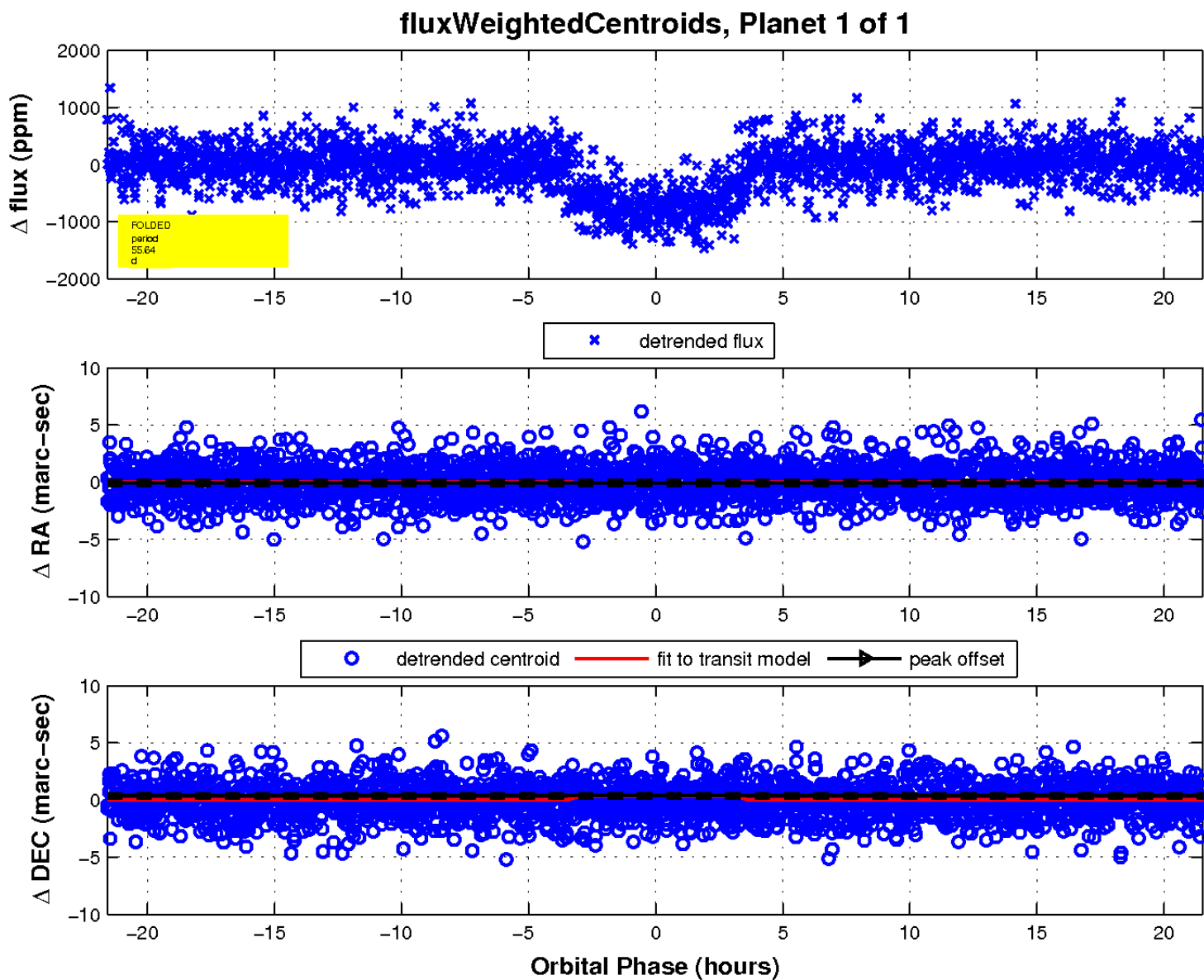
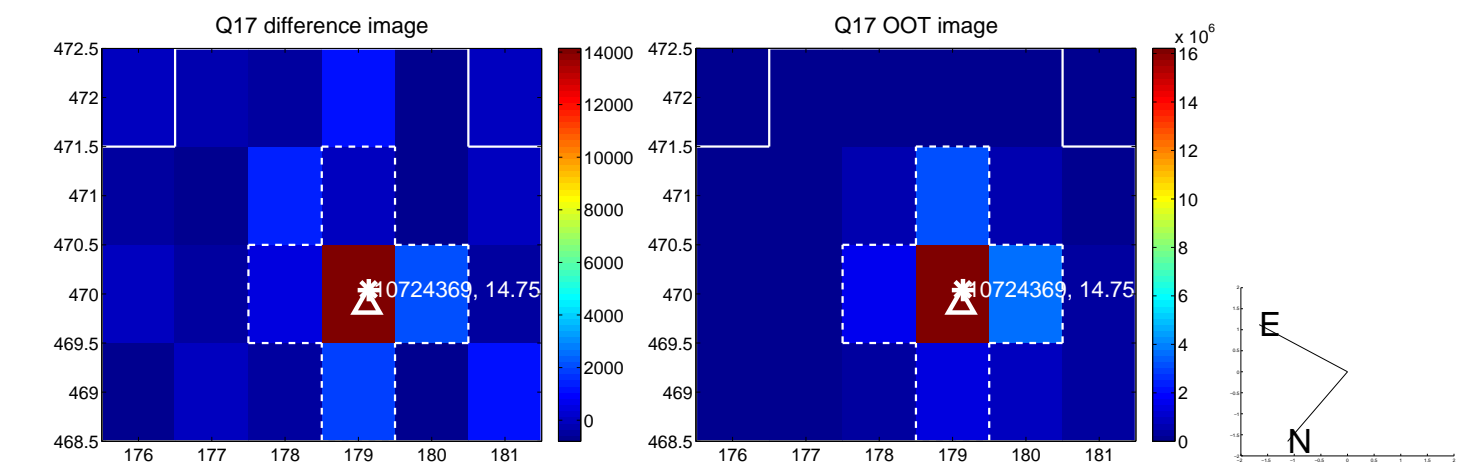
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UKIRT Image

