

KIC 006071903

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})
006071903-01	OBS	0306.01	24.307888	154.056756	688.0	2.707	68.1	68.9	0.82	5313	2.44	18.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006071903-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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

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

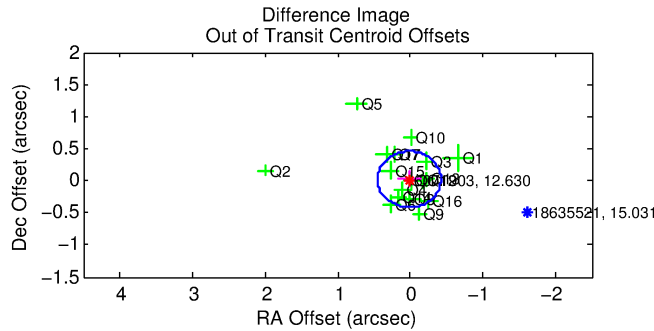
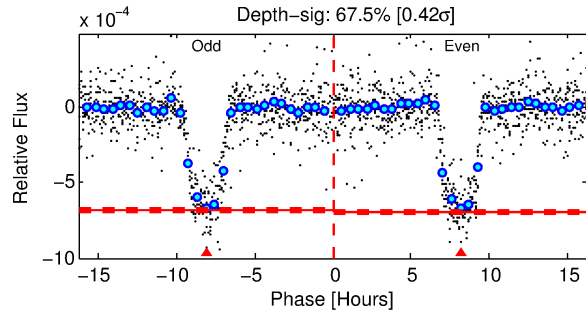
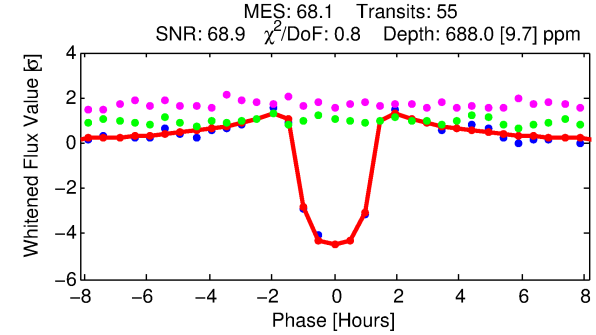
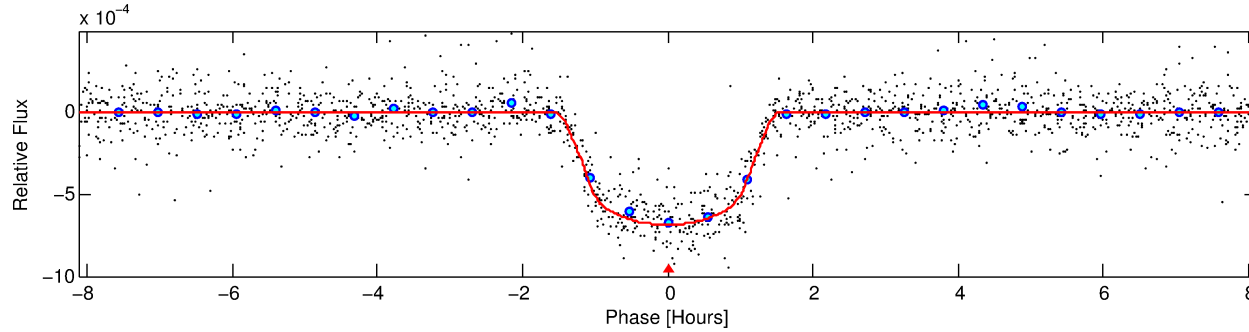
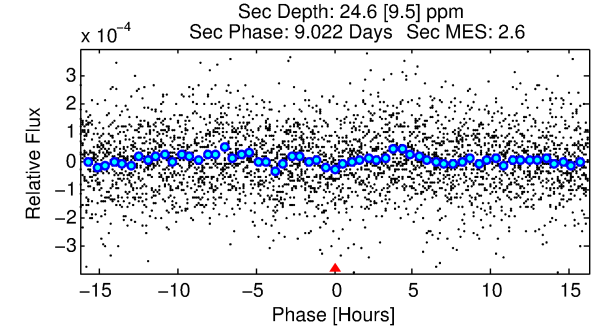
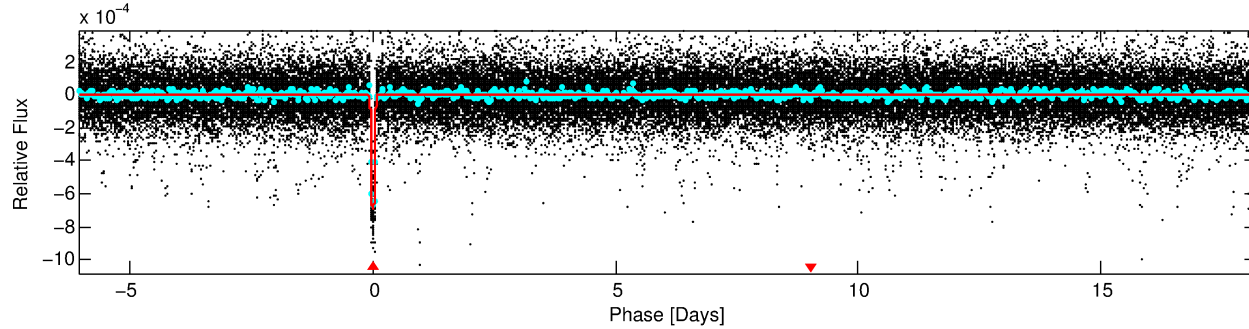
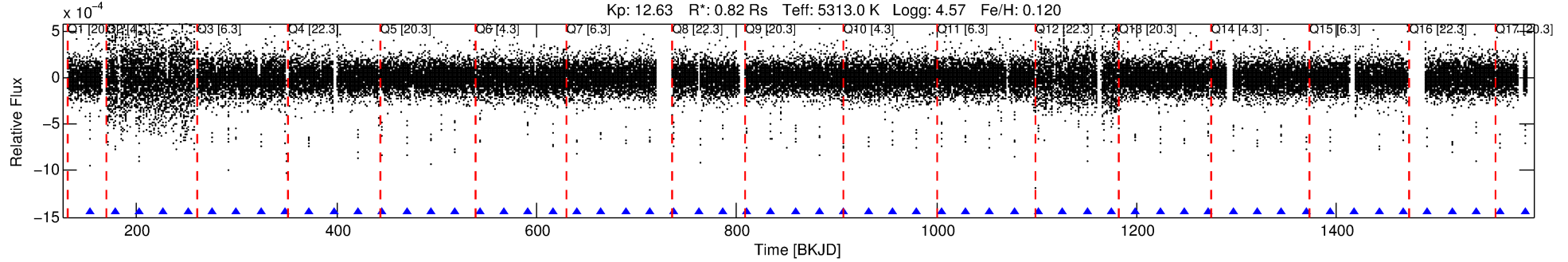
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006071903-01

No Significant Match Found

DV One-Page Summary

KIC: 6071903 Candidate: 1 of 1 Period: 24.308 d
KOI: K00306.01 Corr: 0.980



DV Fit Results:

Period = 24.30789 [0.00002] d
Epoch = 154.0568 [0.0008] BKJD
Rp/R* = 0.0273 [0.0024]
a/R* = 41.86 [13.92]
b = 0.83 [0.13]
Seff = 18.90 [3.14]
Teff = 532 [22] K
Rp = 2.44 [0.32] Re
a = 0.1594 [0.0147] AU
Ag = 57.63 [25.68] [2.21σ]
Teffp = 2265 [243] K [7.11σ]

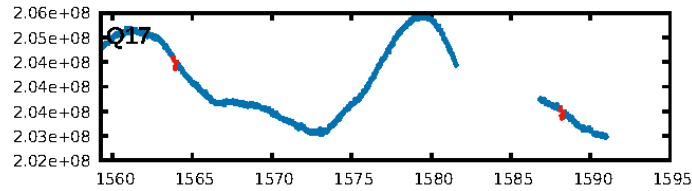
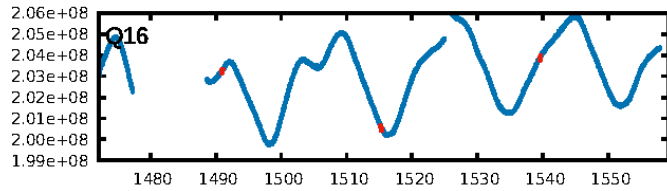
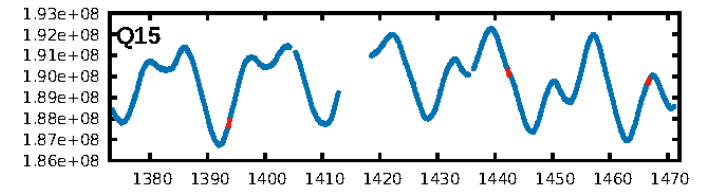
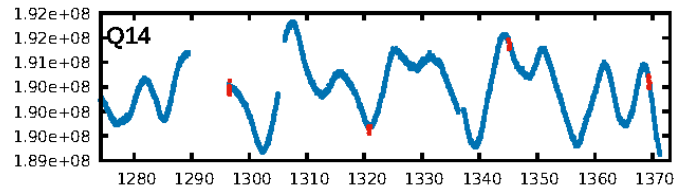
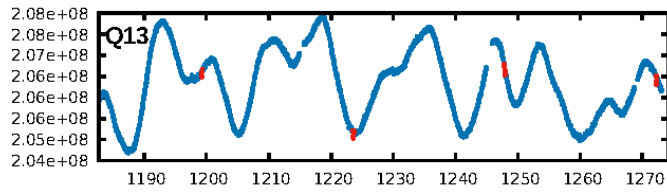
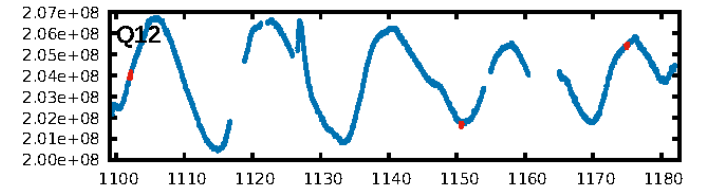
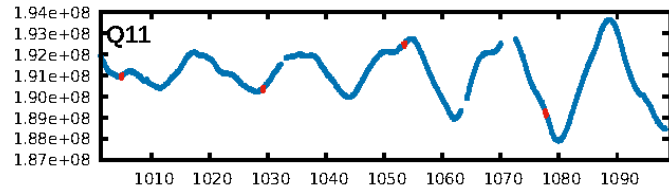
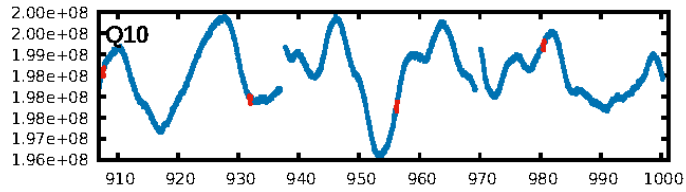
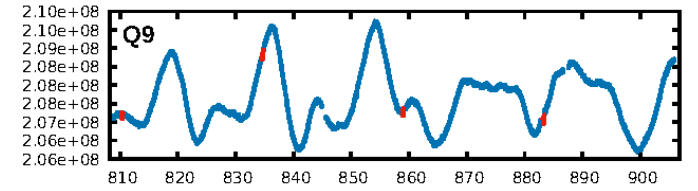
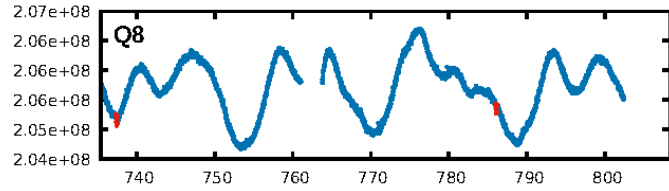
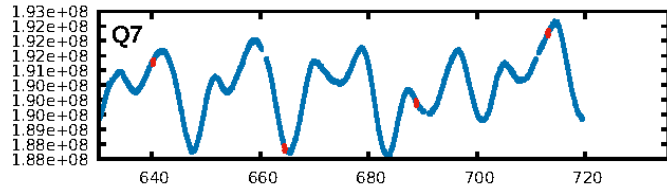
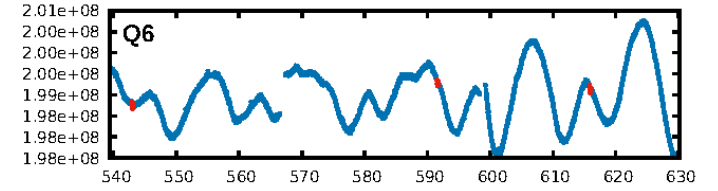
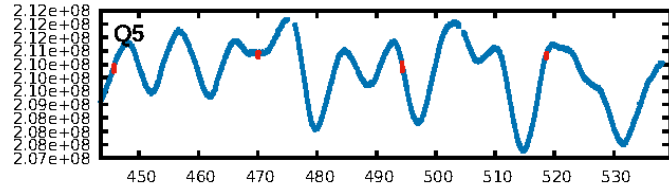
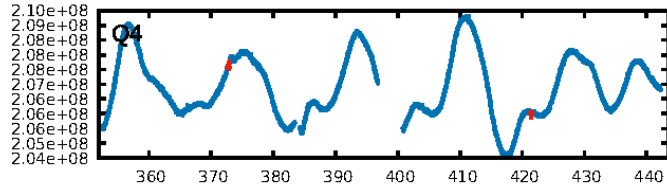
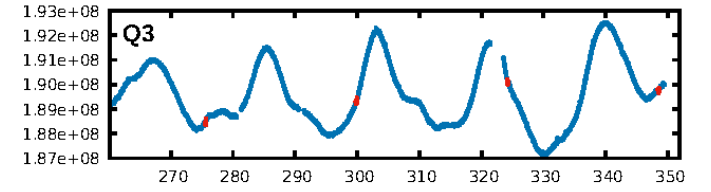
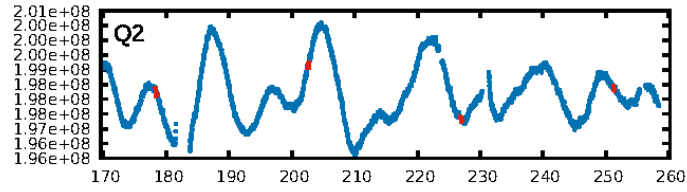
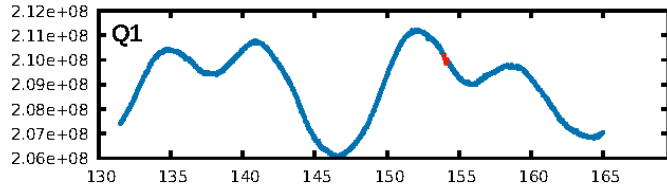
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [52/52]
GhostDiagnostic-chr: 1.908
Centroid-sig: 10.3%
Centroid-so: 0.335 arcsec [1.99σ]
OotOffset-rm: 0.028 arcsec [0.20σ]
KicOffset-rm: 0.481 arcsec [3.33σ]
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]

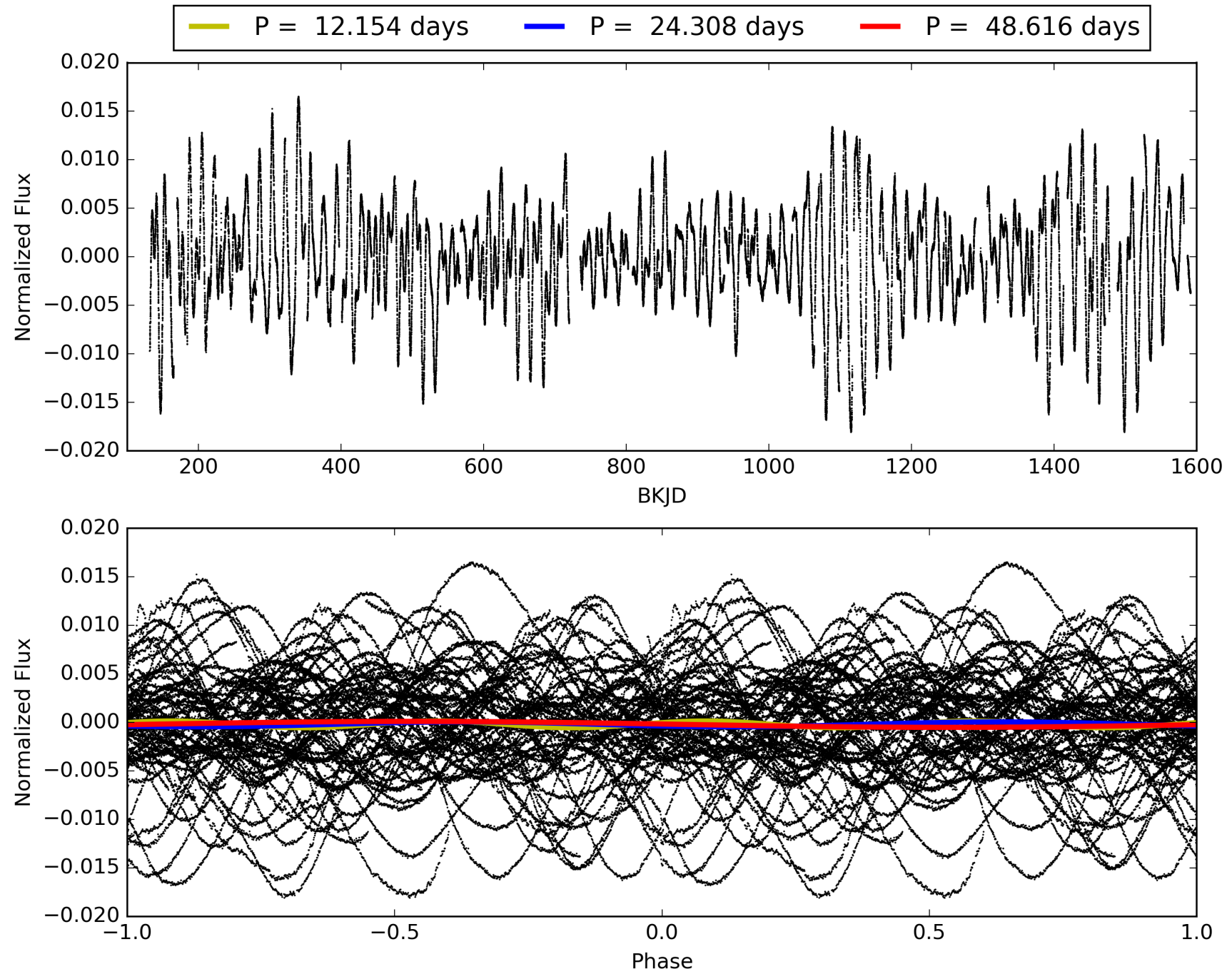
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:21:37 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006071903-01, PDC Light Curves

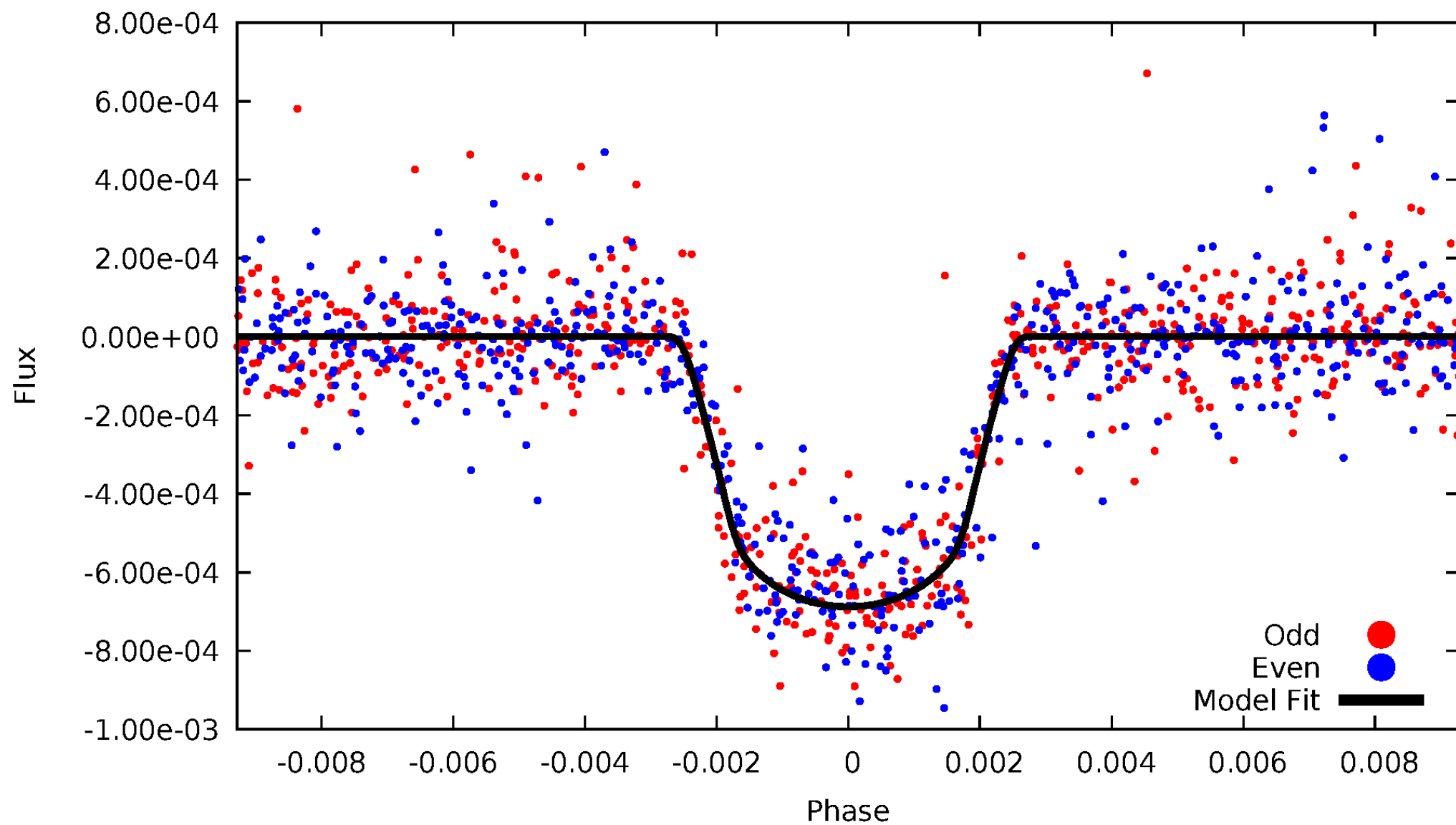


TCE 006071903-01



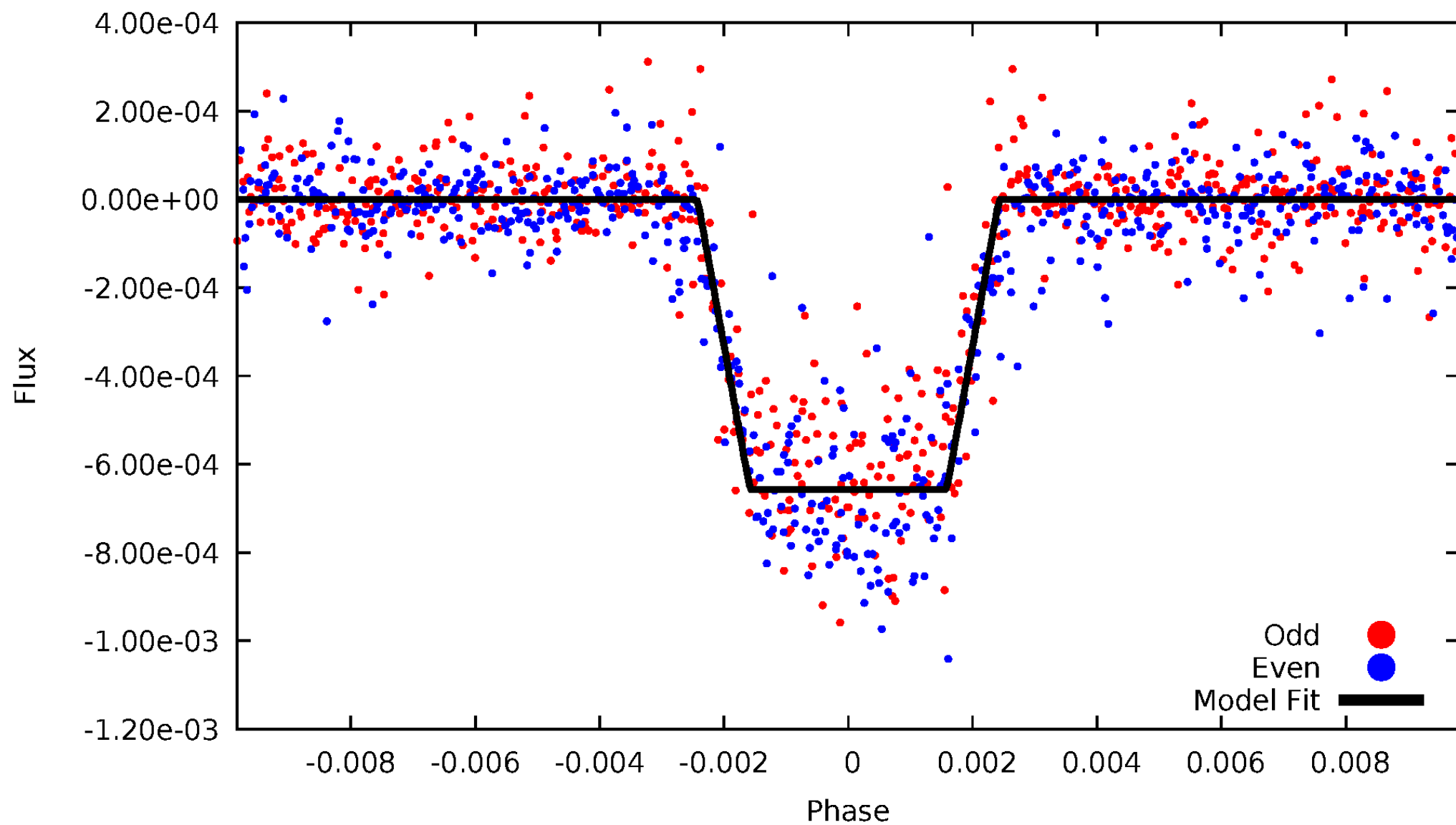
DV Odd/Even

TCE 006071903-01



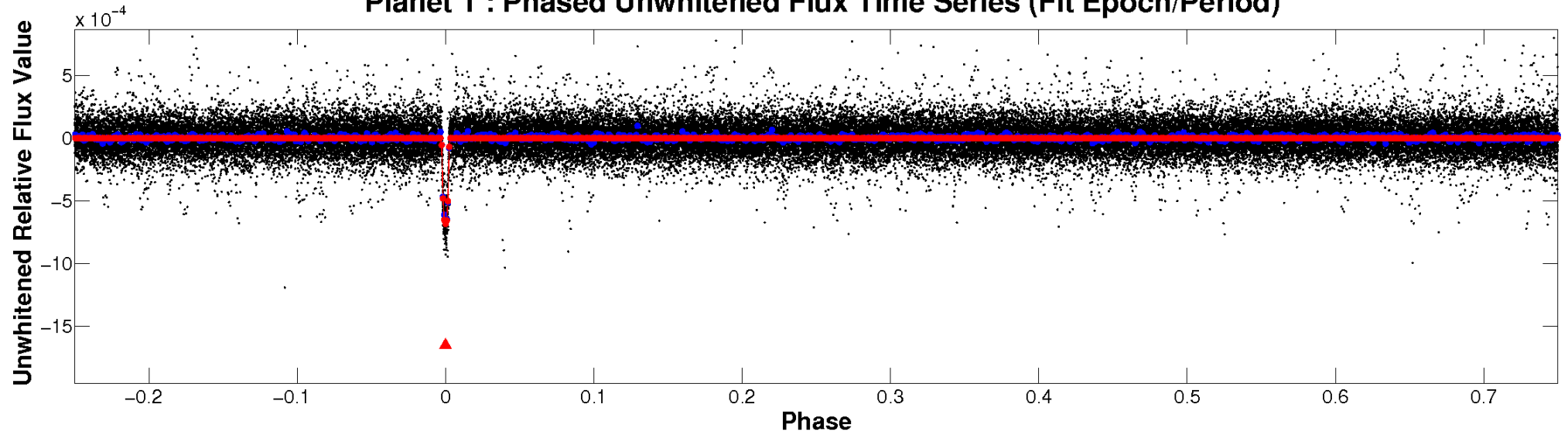
ALT Odd/Even

TCE 006071903-01

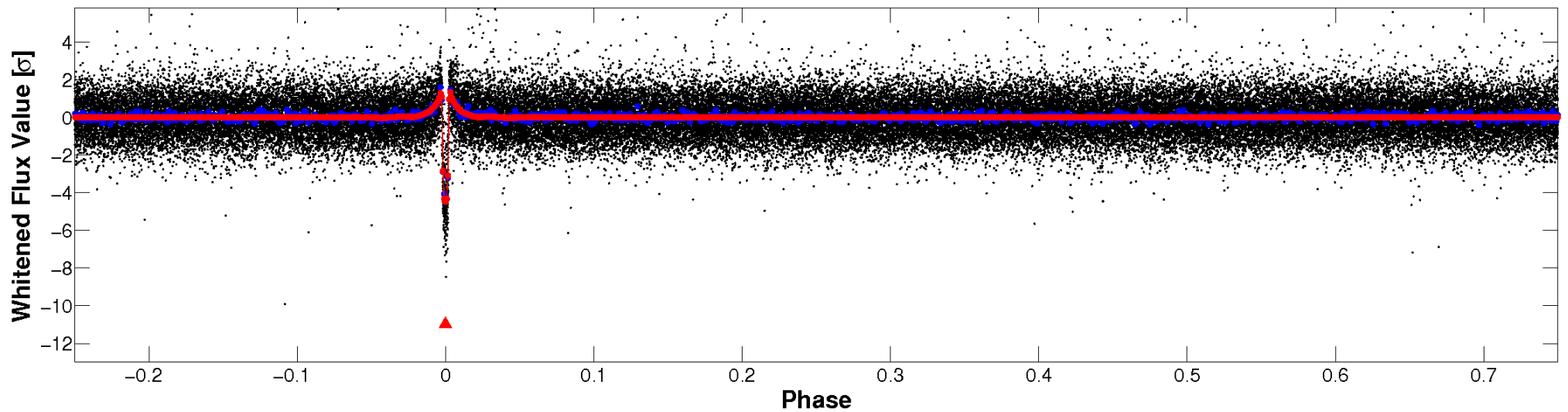


Non-Whitened Vs. Whitened Light Curve

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

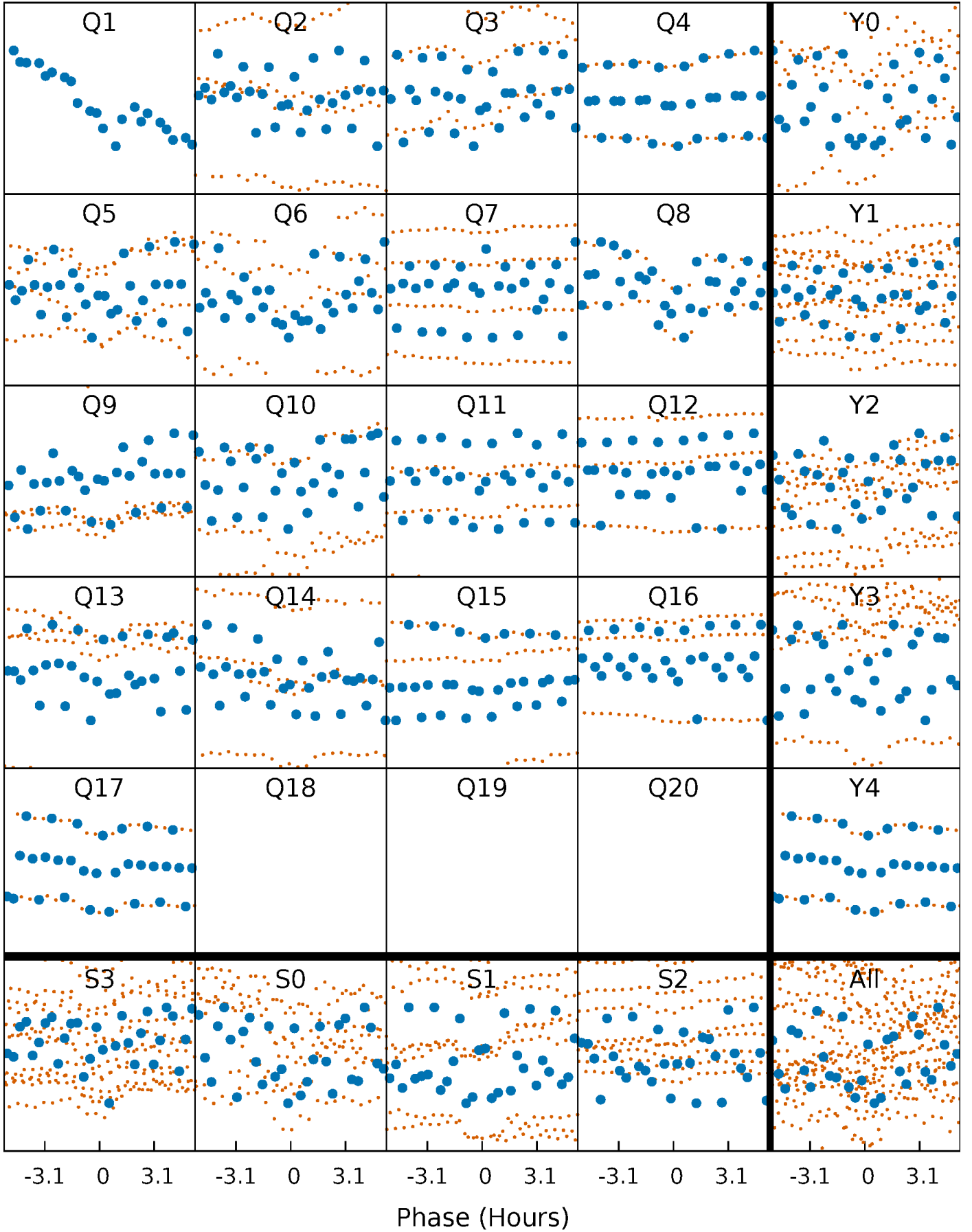


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



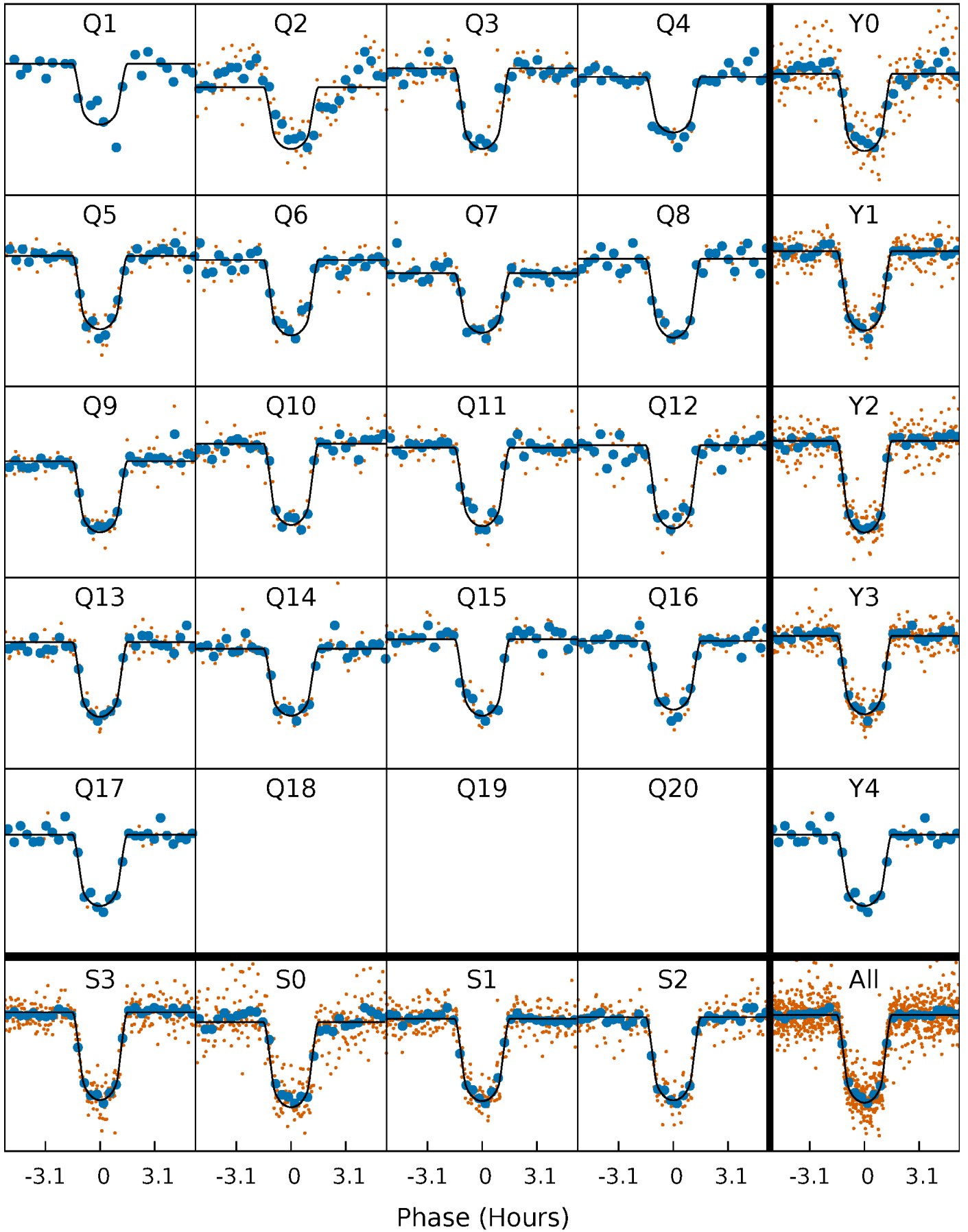
PDC Quarter-Phased Transit Curves

TCE 006071903-01 P= 24.307888 Days $T_0=154.056756$ (BKJD)



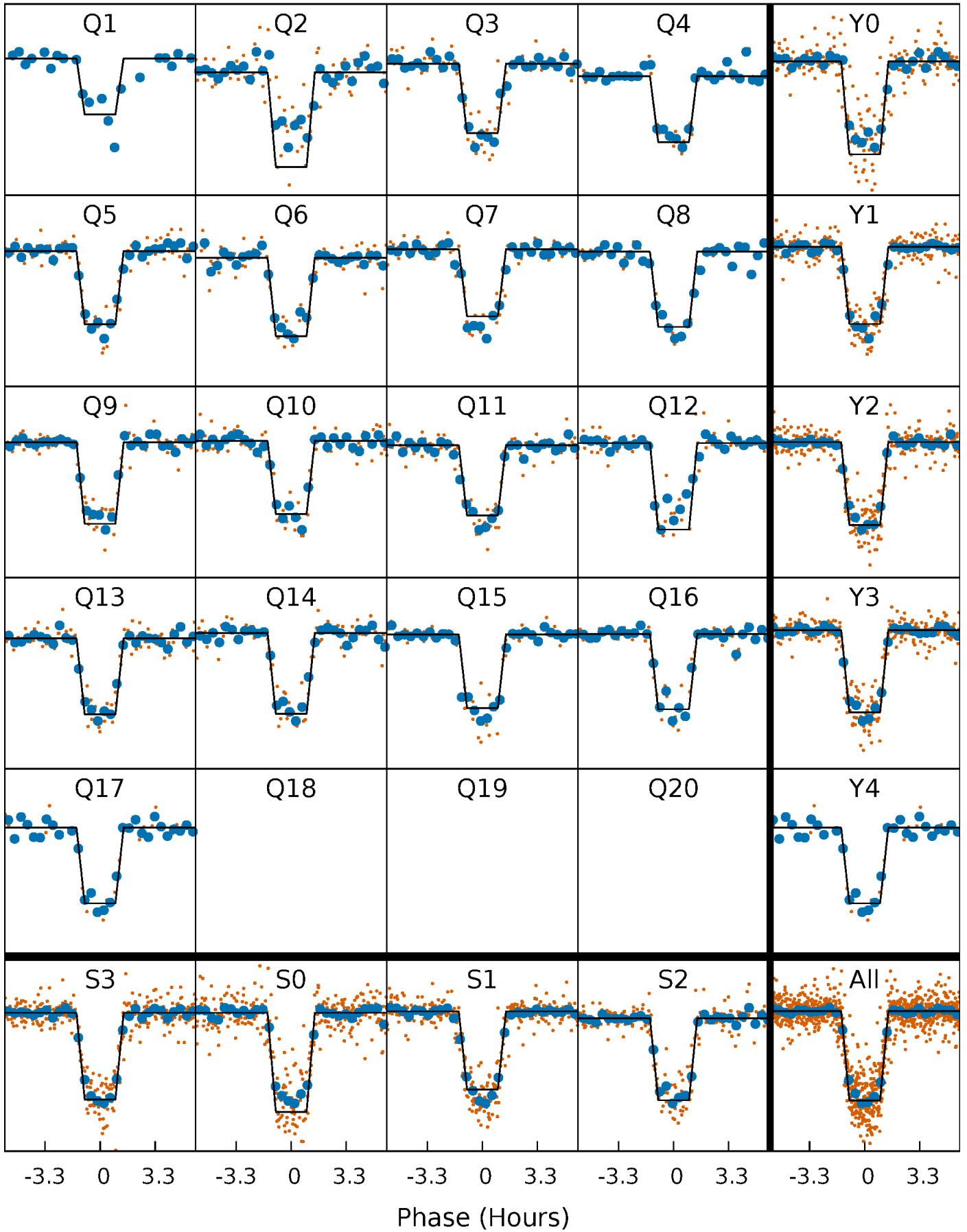
DV Quarter-Phased Transit Curves

TCE 006071903-01 P= 24.307888 Days $T_0=154.056756$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

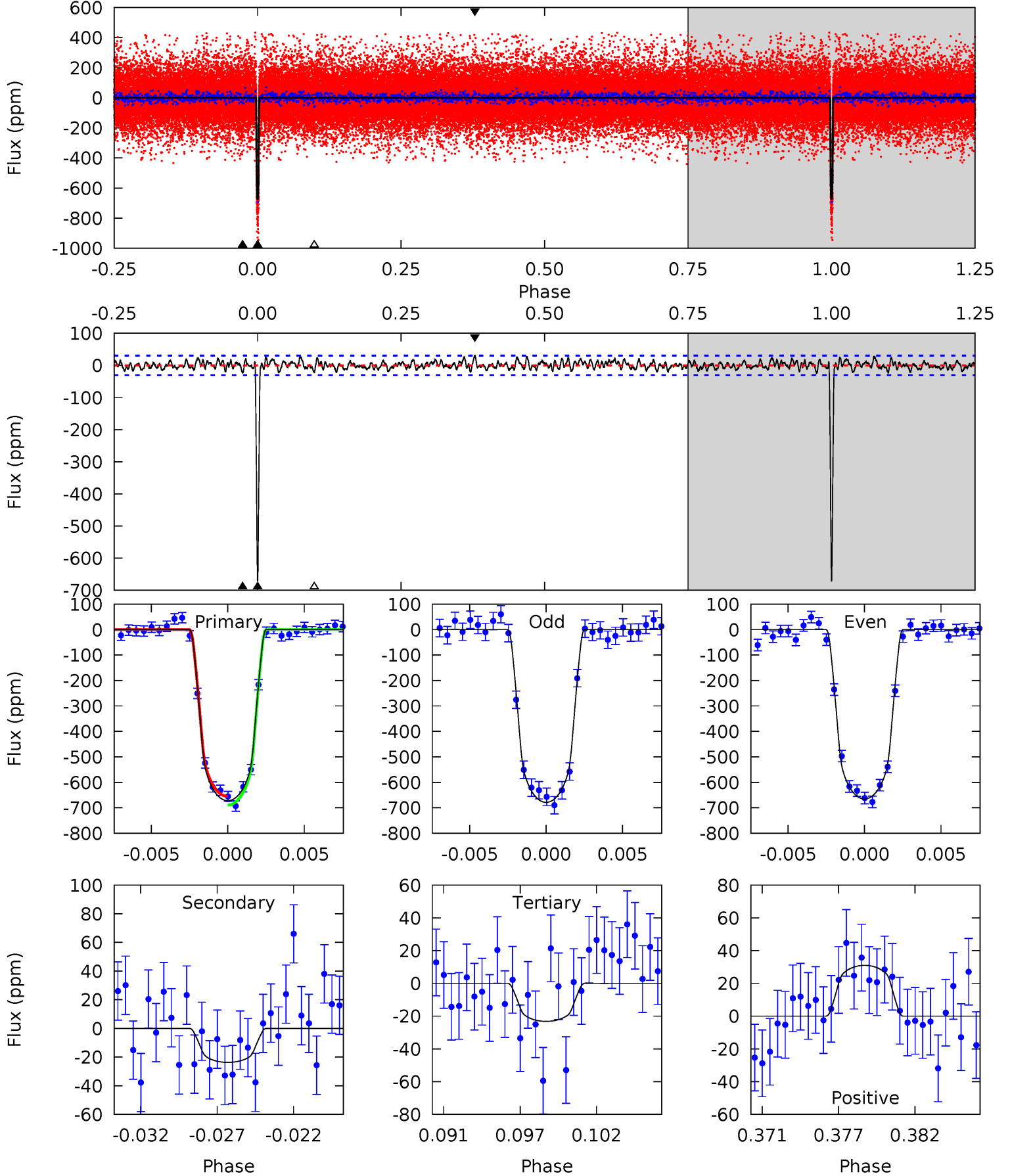
TCE 006071903-01 P= 24.308010 Days $T_0=154.053003$ (BKJD)



DV Model-Shift Uniqueness Test

006071903-01, $P = 24.307888$ Days, $E = 129.748868$ Days

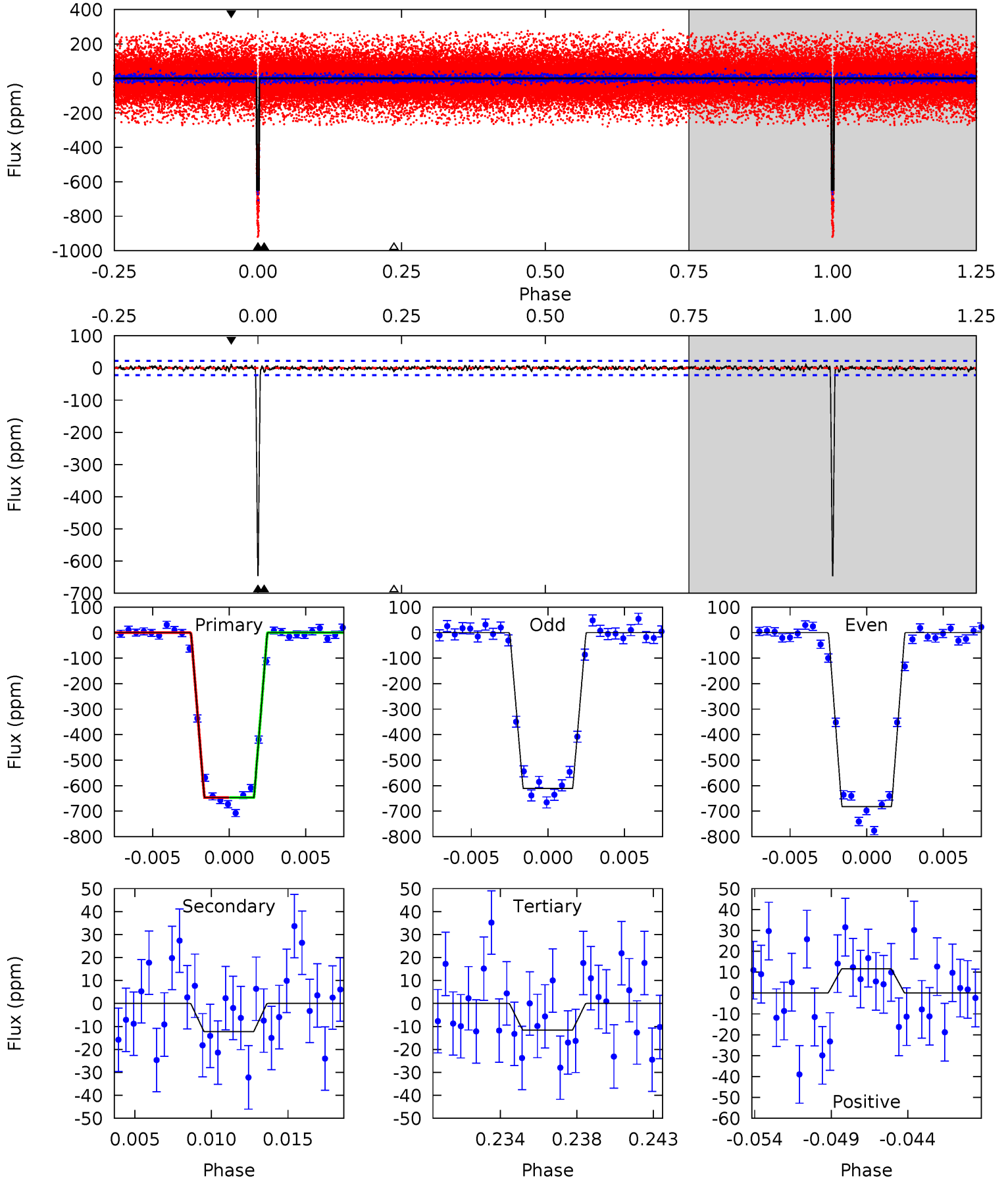
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
114.2	4.03	3.94	5.27	5.14	2.78	1.62	110.3	109.0	0.09	-1.24	1.17	0.99	0.04	2.91



Alt Model-Shift Uniqueness Test

006071903-01, P = 24.308010 Days, E = 129.744993 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
151.6	2.87	2.73	2.71	5.16	2.82	0.69	148.9	148.9	0.14	0.16	8.37	0.99	0.02	0.01



Stellar Parameters For KIC 006071903

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5313^{+106}_{-106}	$4.571^{+0.015}_{-0.085}$	$0.120^{+0.150}_{-0.150}$	$0.820^{+0.080}_{-0.034}$	$0.913^{+0.037}_{-0.064}$	$2.335^{+0.210}_{-0.562}$
	+2%/-2%	+0%/-2%	+125%/-125%	+10%/-4%	+4%/-7%	+9%/-24%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 006071903-01 / KOI 0306.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 6	$2.49^{+0.26}_{-0.23}$	751^{+23}_{-18}	2913^{+137}_{-124}	52^{+17}_{-14}
Alt.	-12 ± 4	$2.35^{+0.24}_{-0.23}$	752^{+21}_{-20}	2712^{+139}_{-153}	30^{+14}_{-11}

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 $A_{obs} \gg 1.0$

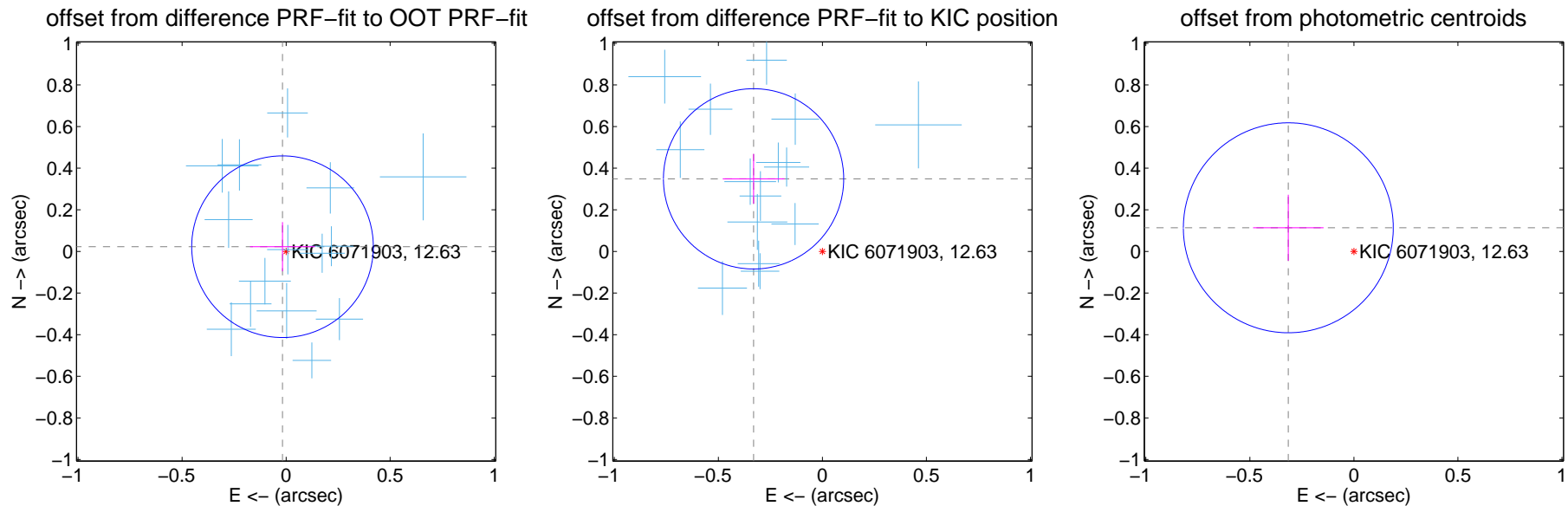
DV Centroid Data

Supplemental centroid analysis for 006071903-01. Kepler magnitude: 12.63. Transit SNR 68.92

There are 17 quarters with good PRF difference image offsets

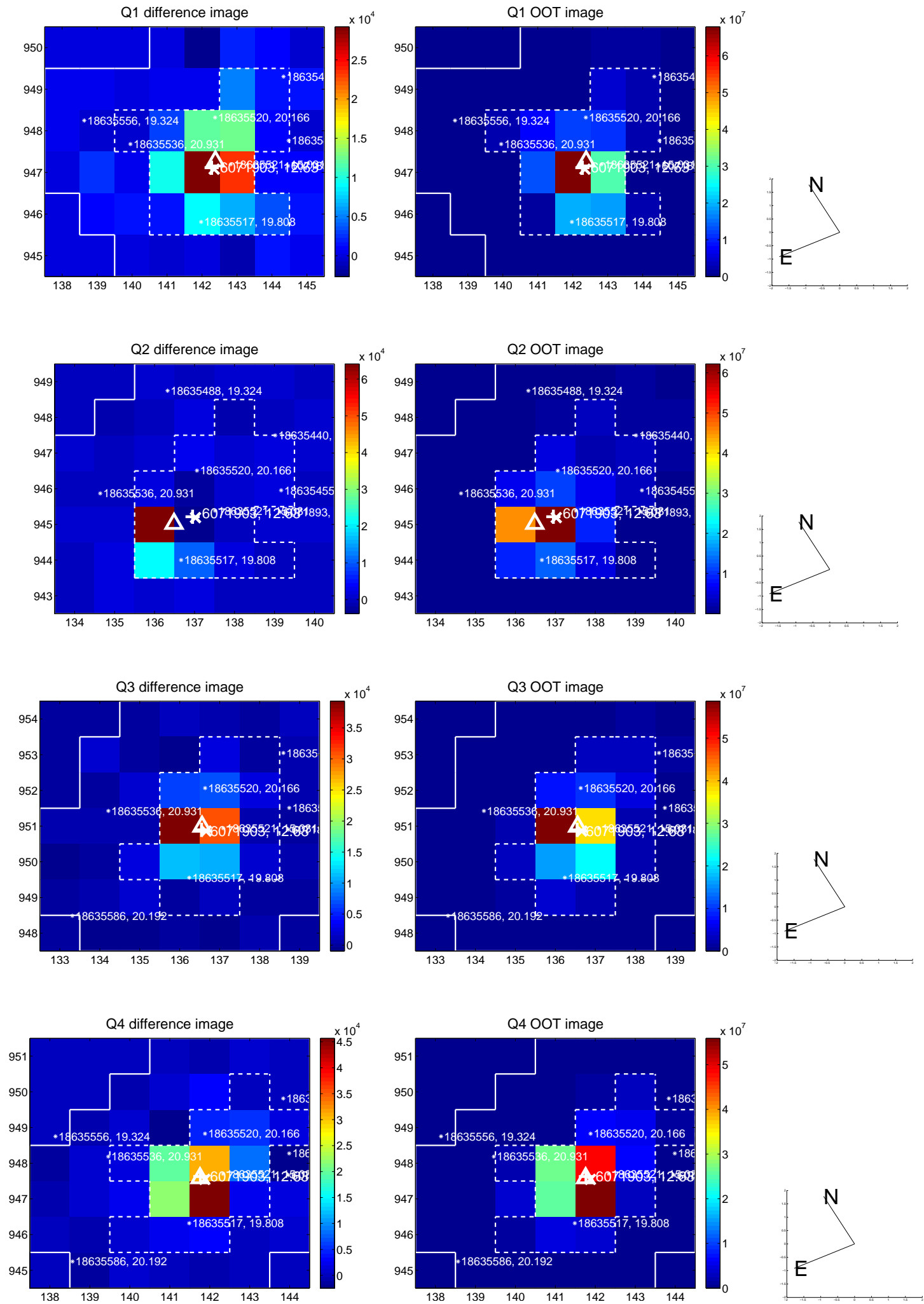
The direct PRF centroid is offset from the target star catalog position by about 0.62 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.028 ± 0.145	0.20	0.017 ± 0.156	0.023 ± 0.118
PRF-fit source offset from KIC position	0.481 ± 0.144	3.33	0.331 ± 0.148	0.349 ± 0.120
photometric centroid source offset	0.34 ± 0.17	1.99	0.32 ± 0.17	0.11 ± 0.16

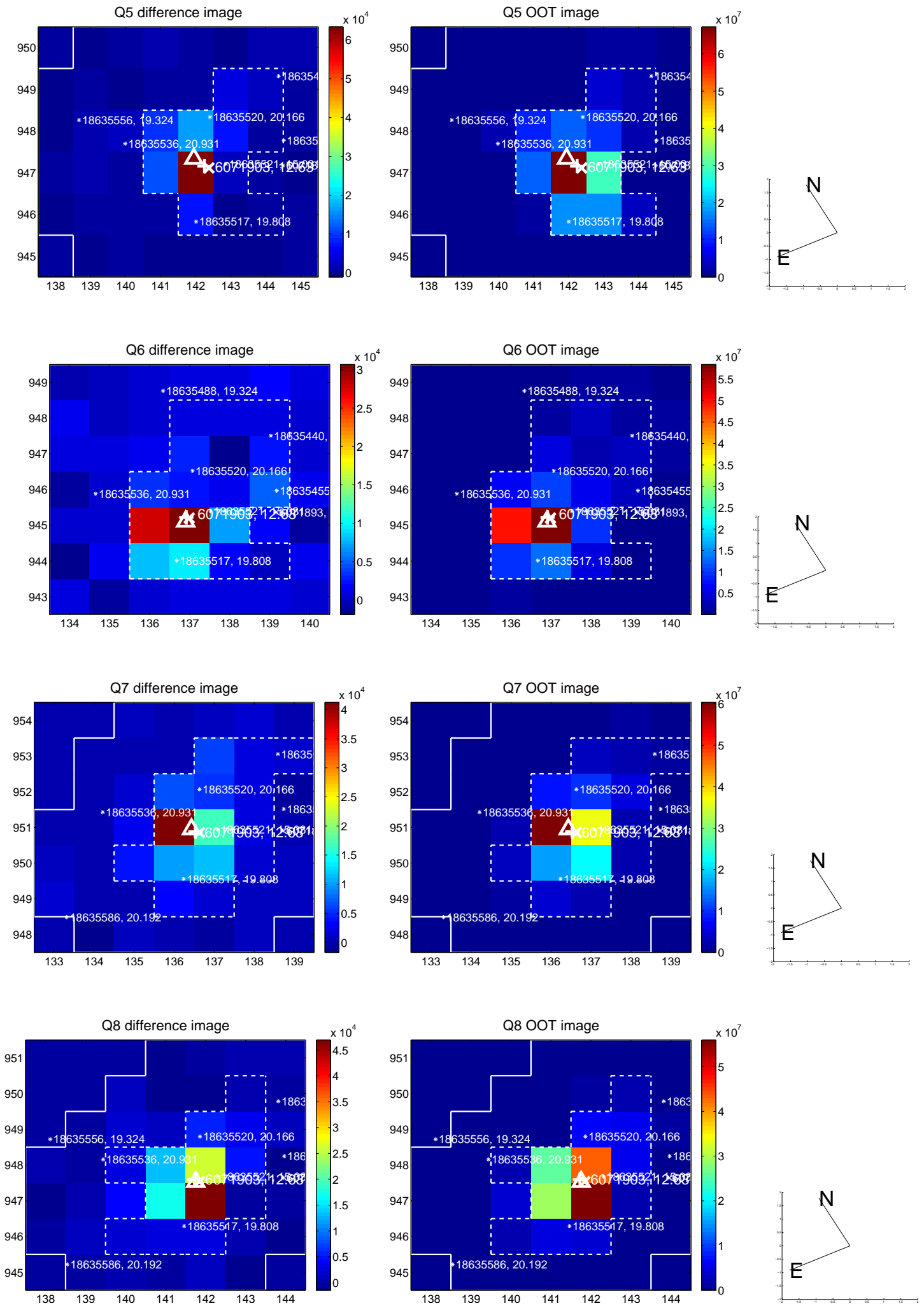


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

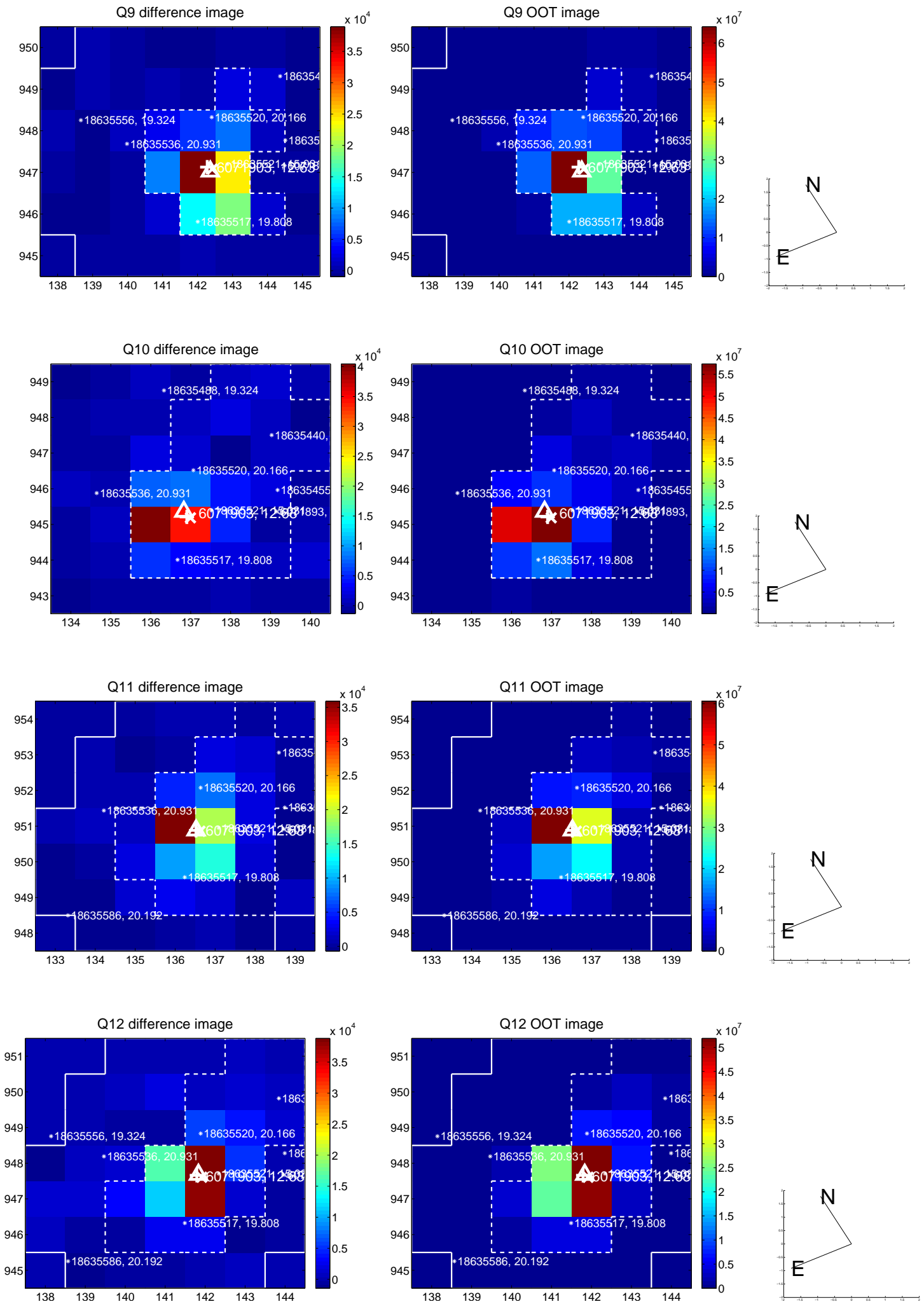
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



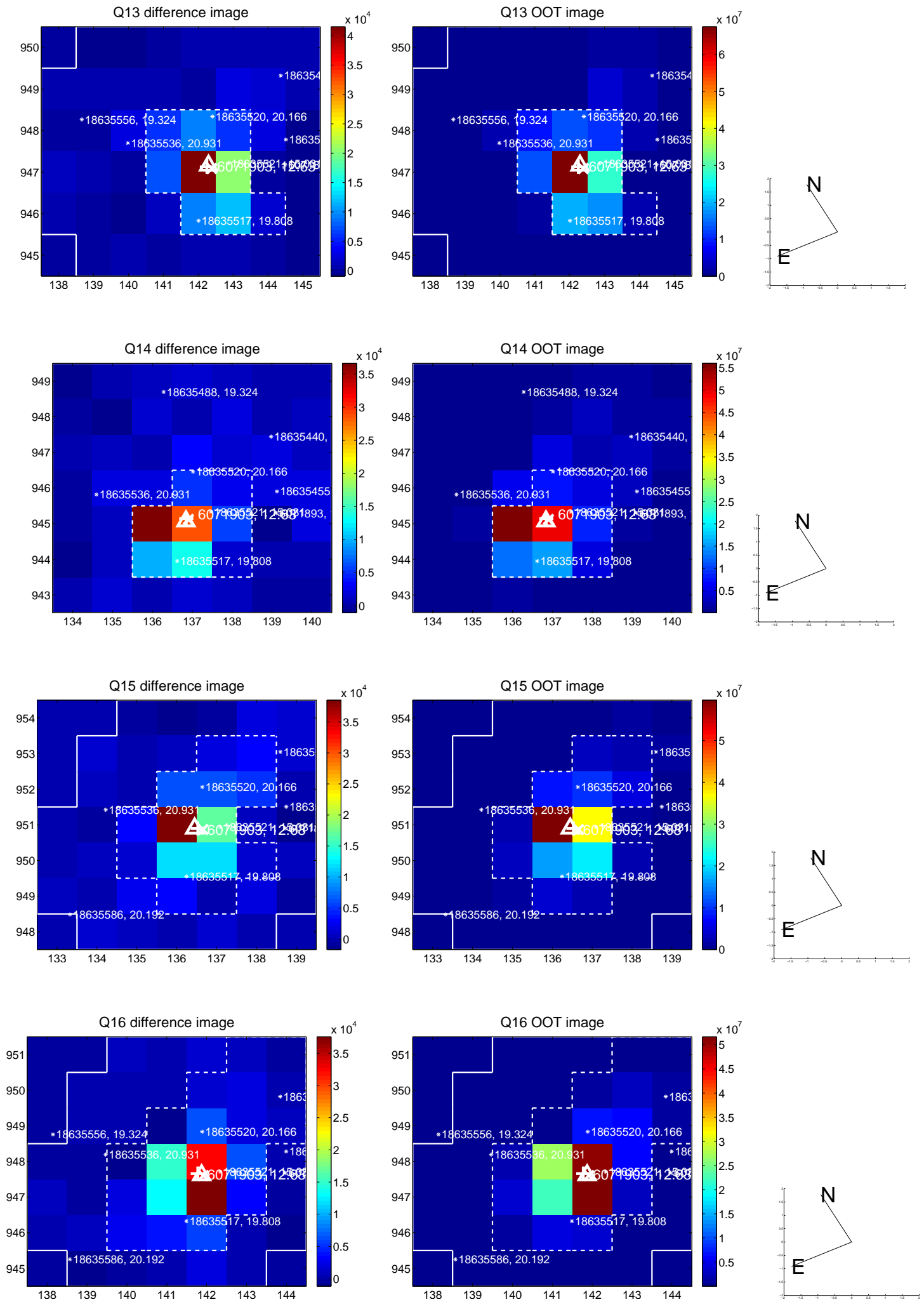
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



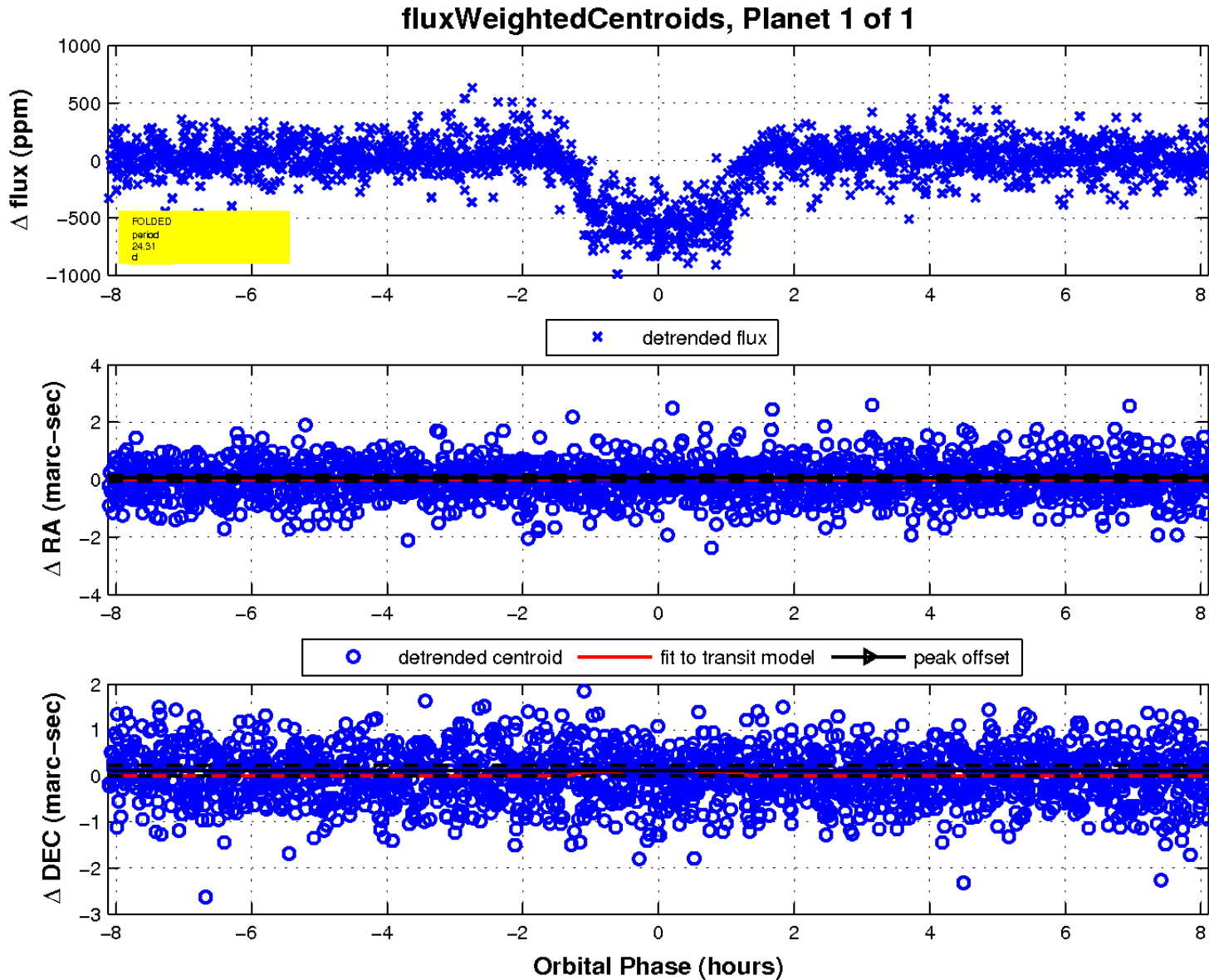
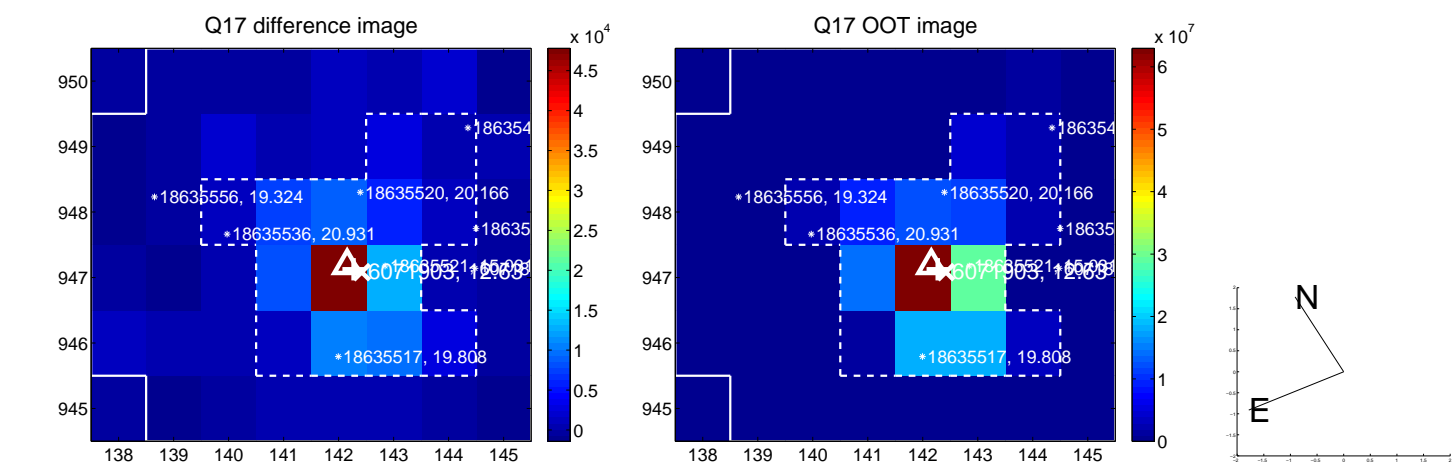
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

