

KIC 006127703

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})
006127703-01	OBS	No	596.828283	356.357354	342.9	16.607	7.6	7.6	1.11	6355	2.20	0.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006127703-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

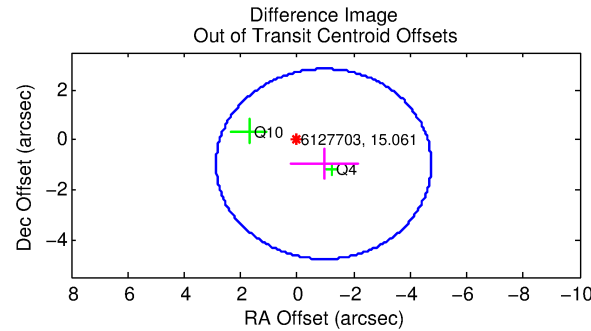
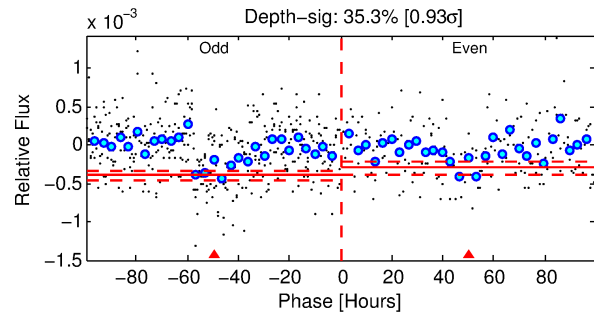
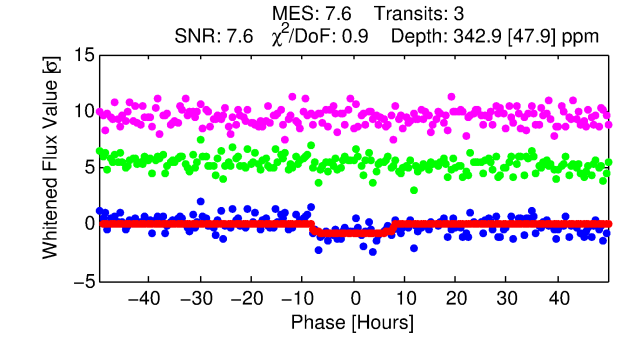
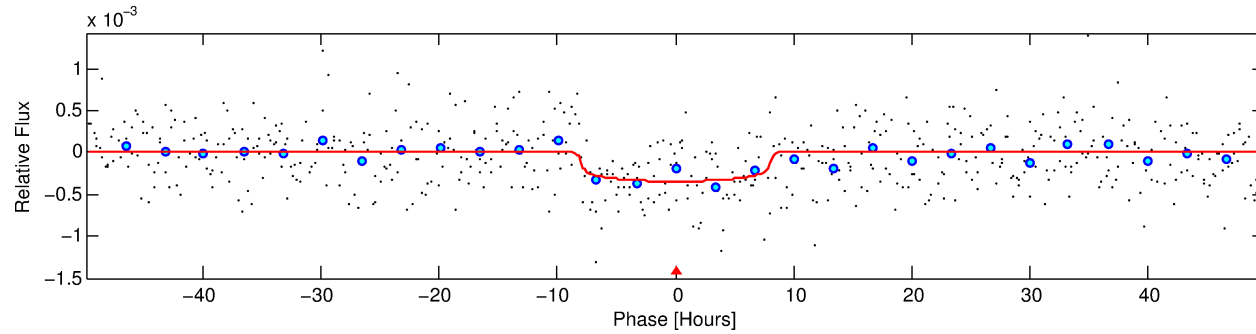
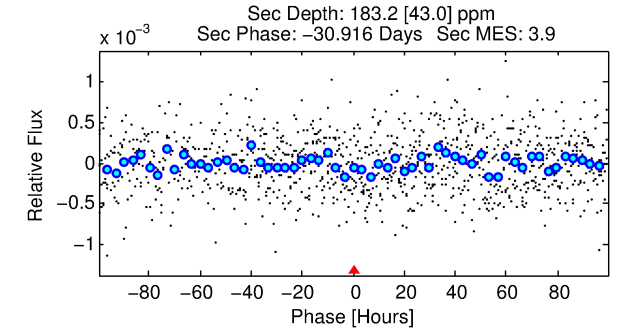
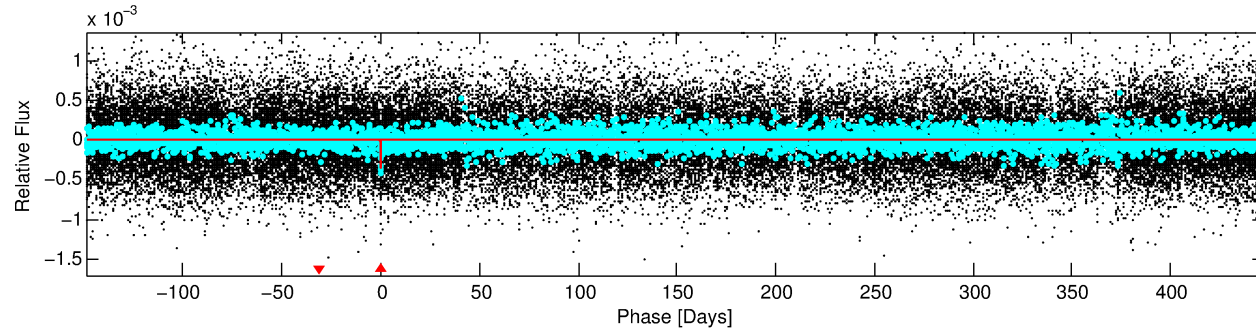
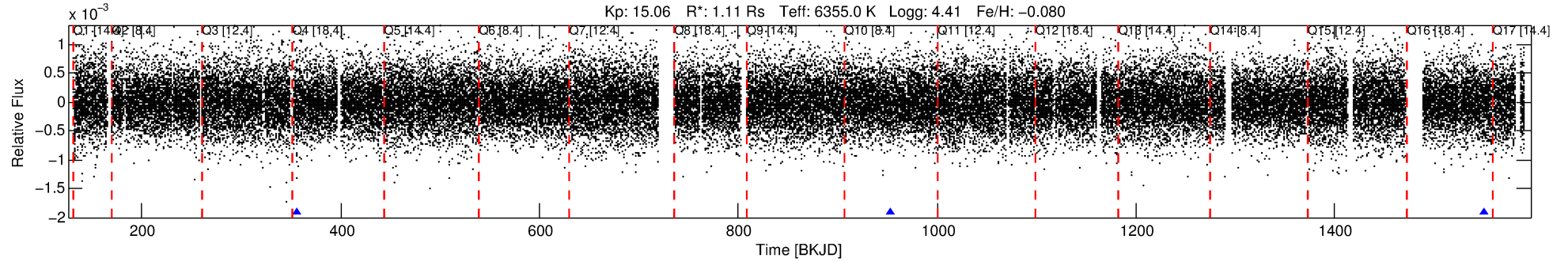
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006127703-01

No Significant Match Found

DV One-Page Summary

KIC: 6127703 Candidate: 1 of 1 Period: 596.828 d



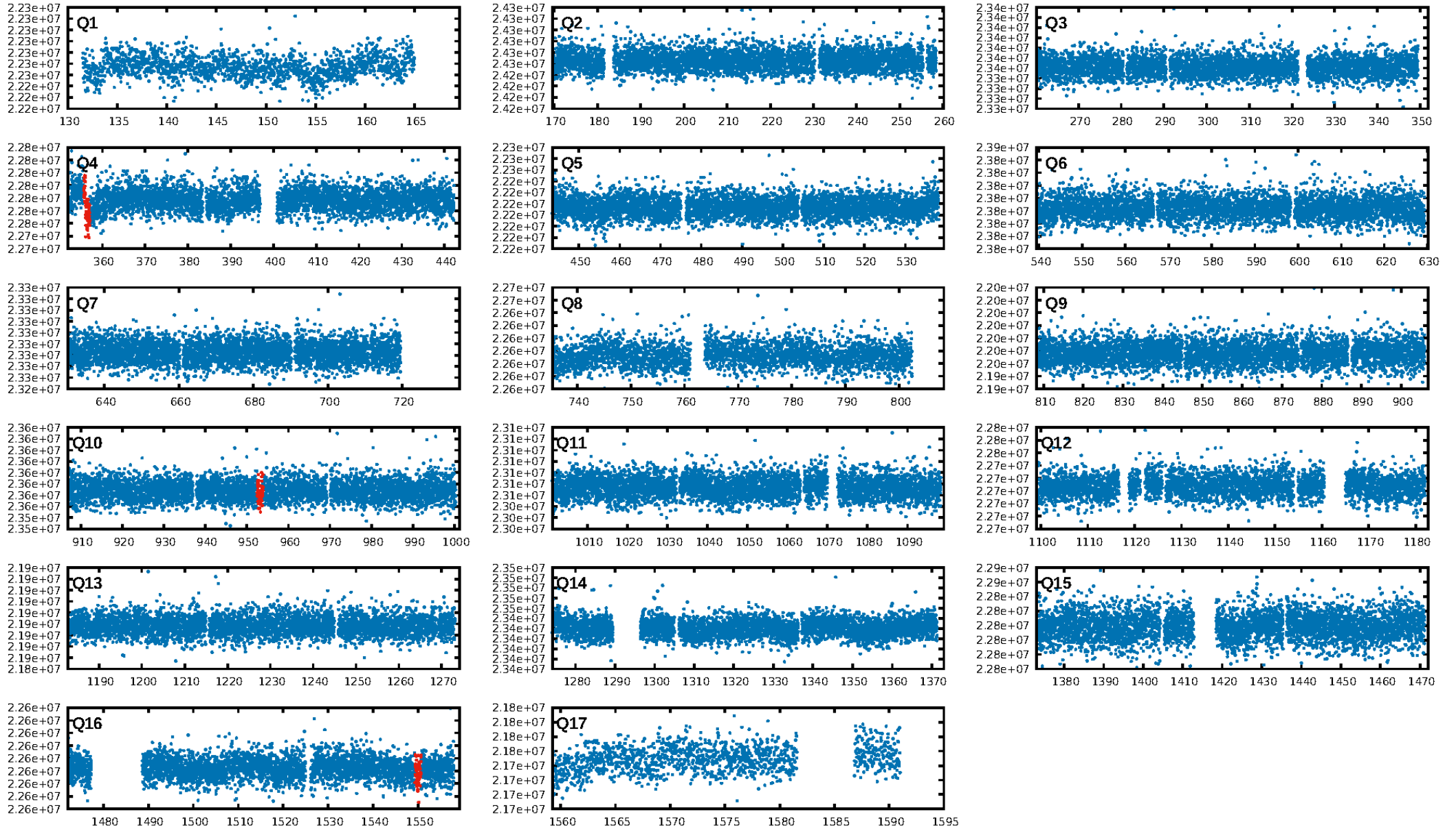
DV Fit Results:

Period = 596.82828 [0.02067] d
Epoch = 356.3574 [0.0276] BKJD
Rp/R* = 0.0182 [0.0071]
a/R* = 201.98 [411.28]
b = 0.70 [1.46]
Seff = 0.85 [0.33]
Teff = 245 [24] K
Rp = 2.20 [1.11] Re
a = 1.4542 [0.3757] AU
Ag = 44159.88 [39631.18] [1.11 σ]
Teffp = 5485 [1138] K [4.60 σ]

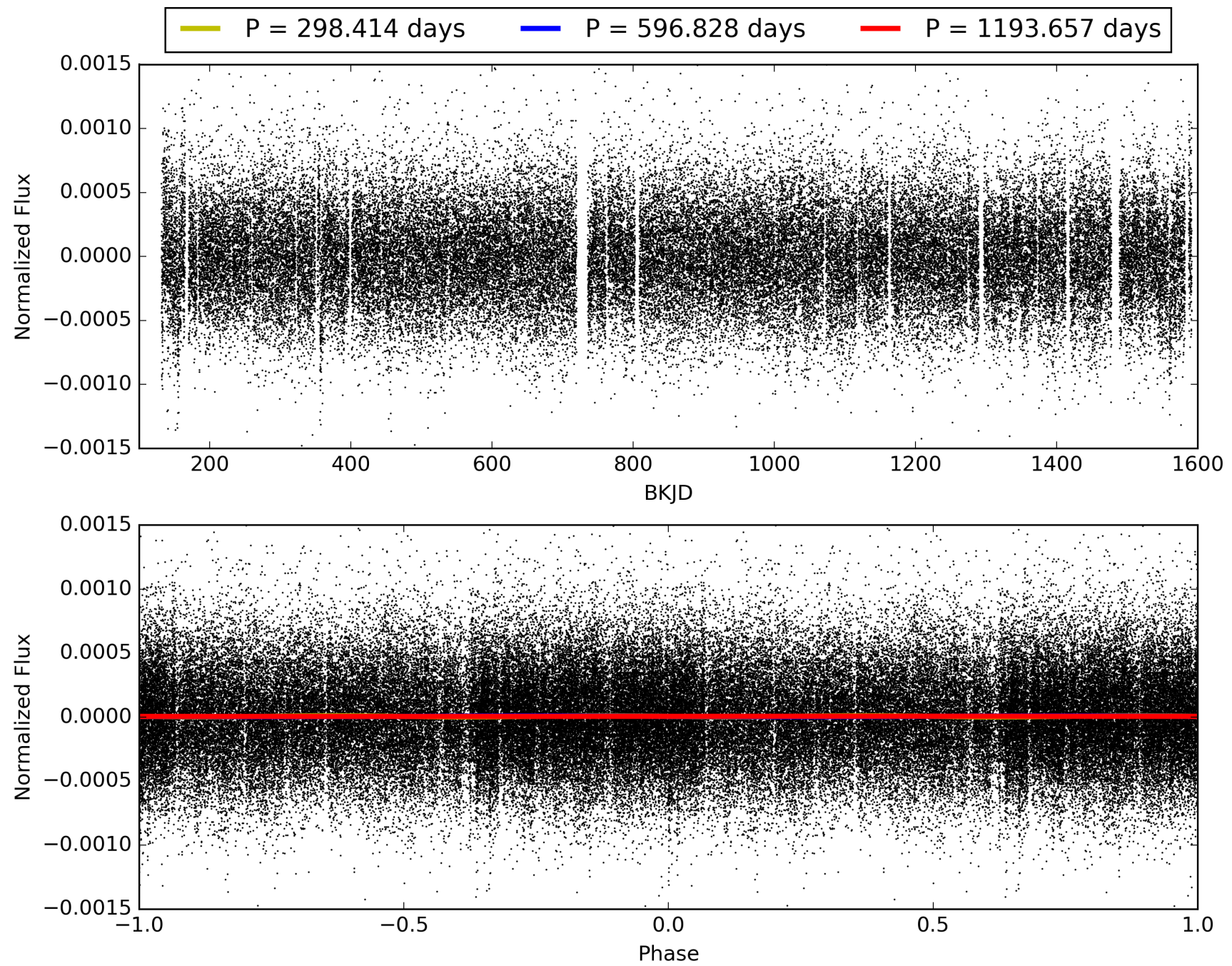
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.48e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.734
Centroid-sig: 0.0%
Centroid-so: 4.884 arcsec [2.68 σ]
OotOffset-rm: 1.352 arcsec [1.07 σ]
KicOffset-rm: 1.390 arcsec [1.77 σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 006127703-01, PDC Light Curves

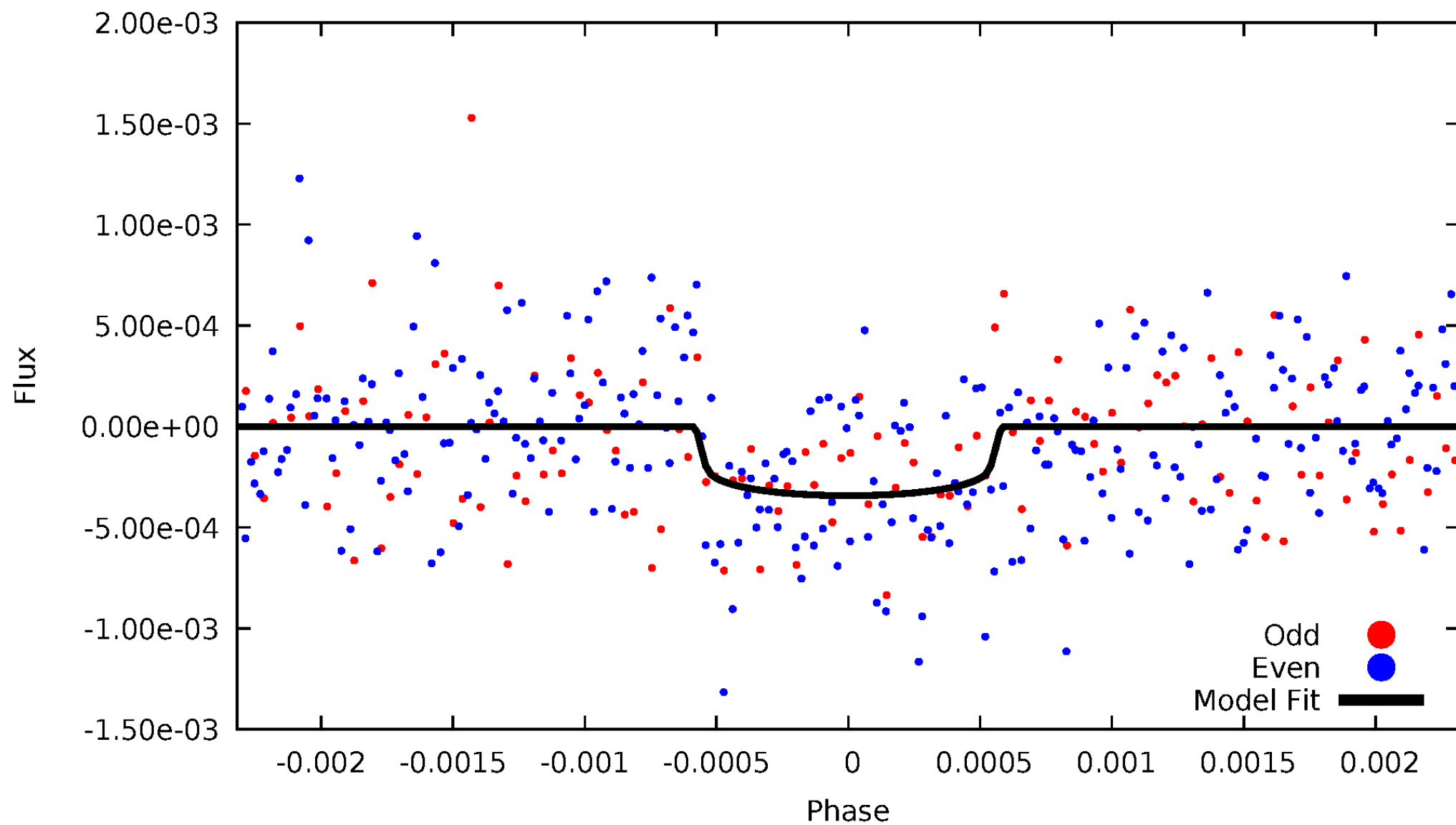


TCE 006127703-01



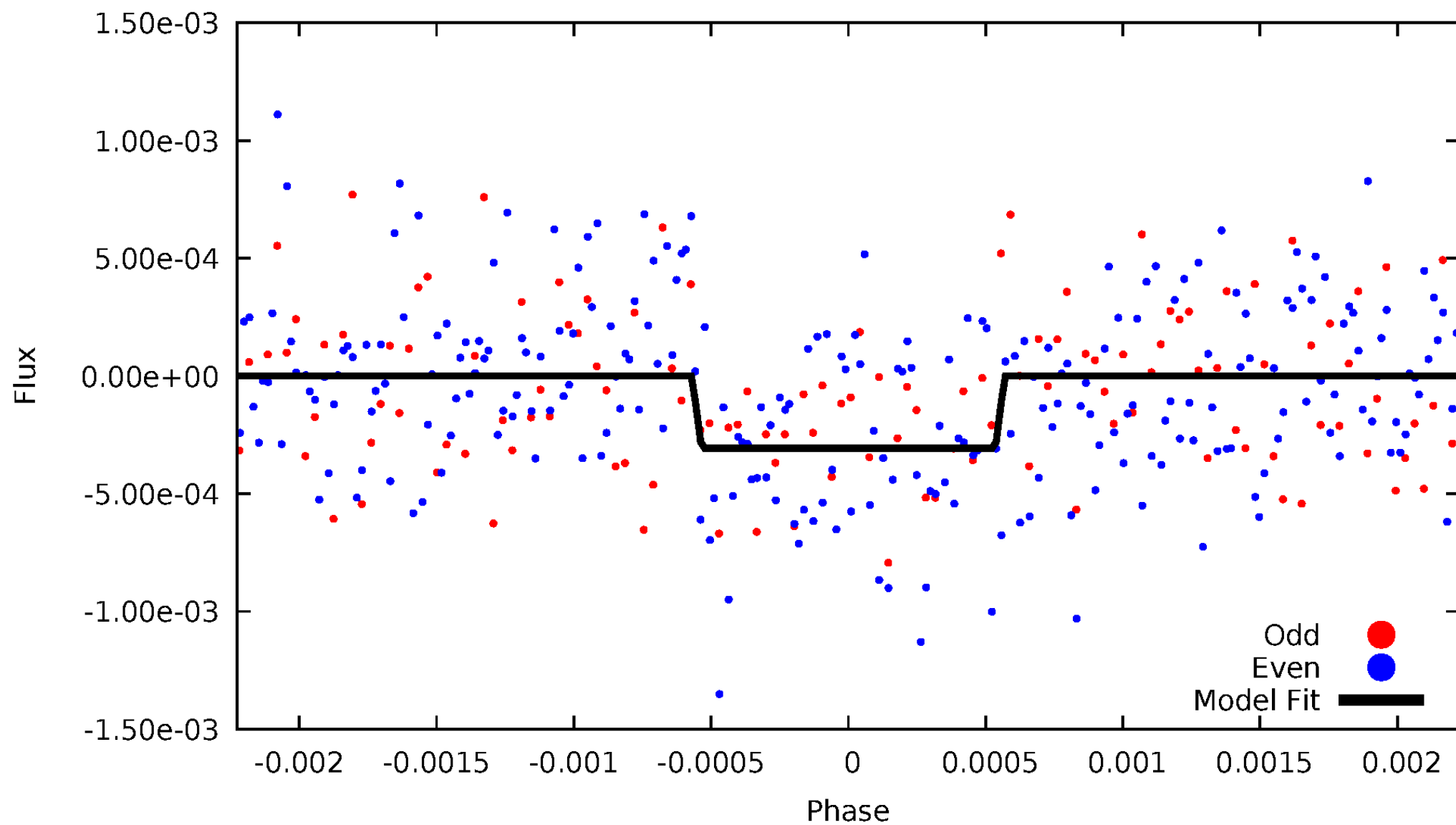
DV Odd/Even

TCE 006127703-01



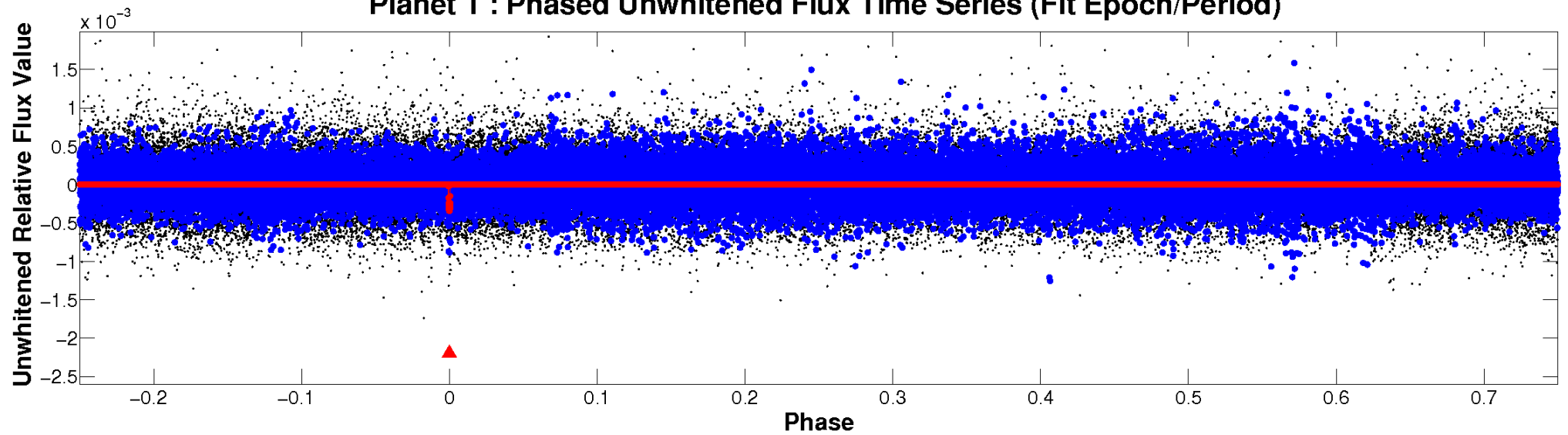
ALT Odd/Even

TCE 006127703-01

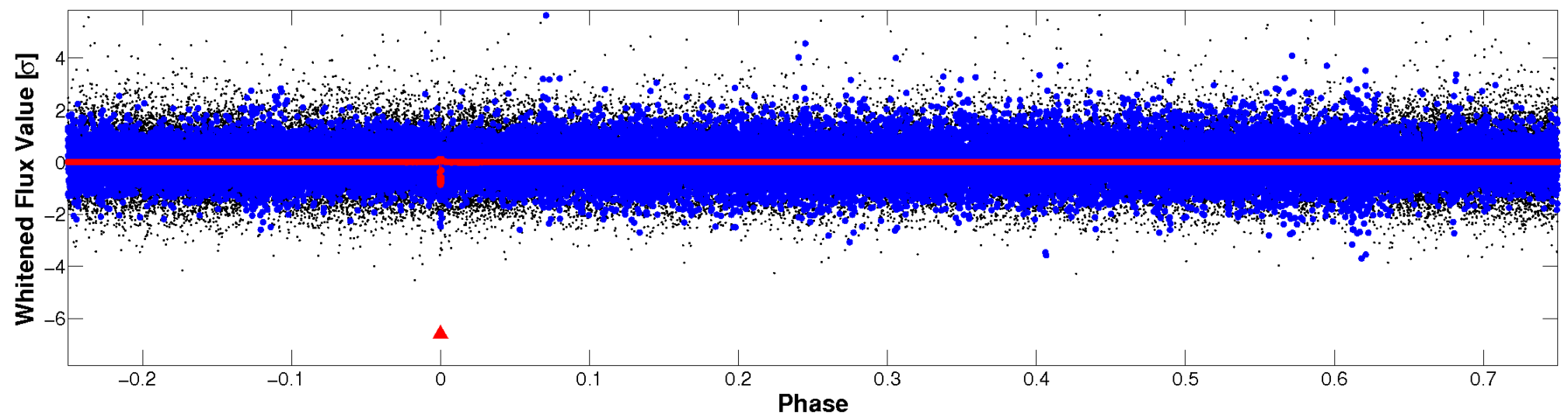


Non-Whitened Vs. Whitened Light Curve

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 006127703-01 P=596.828283 Days $T_0=356.357354$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006127703-01 P=596.828283 Days $T_0=356.357354$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

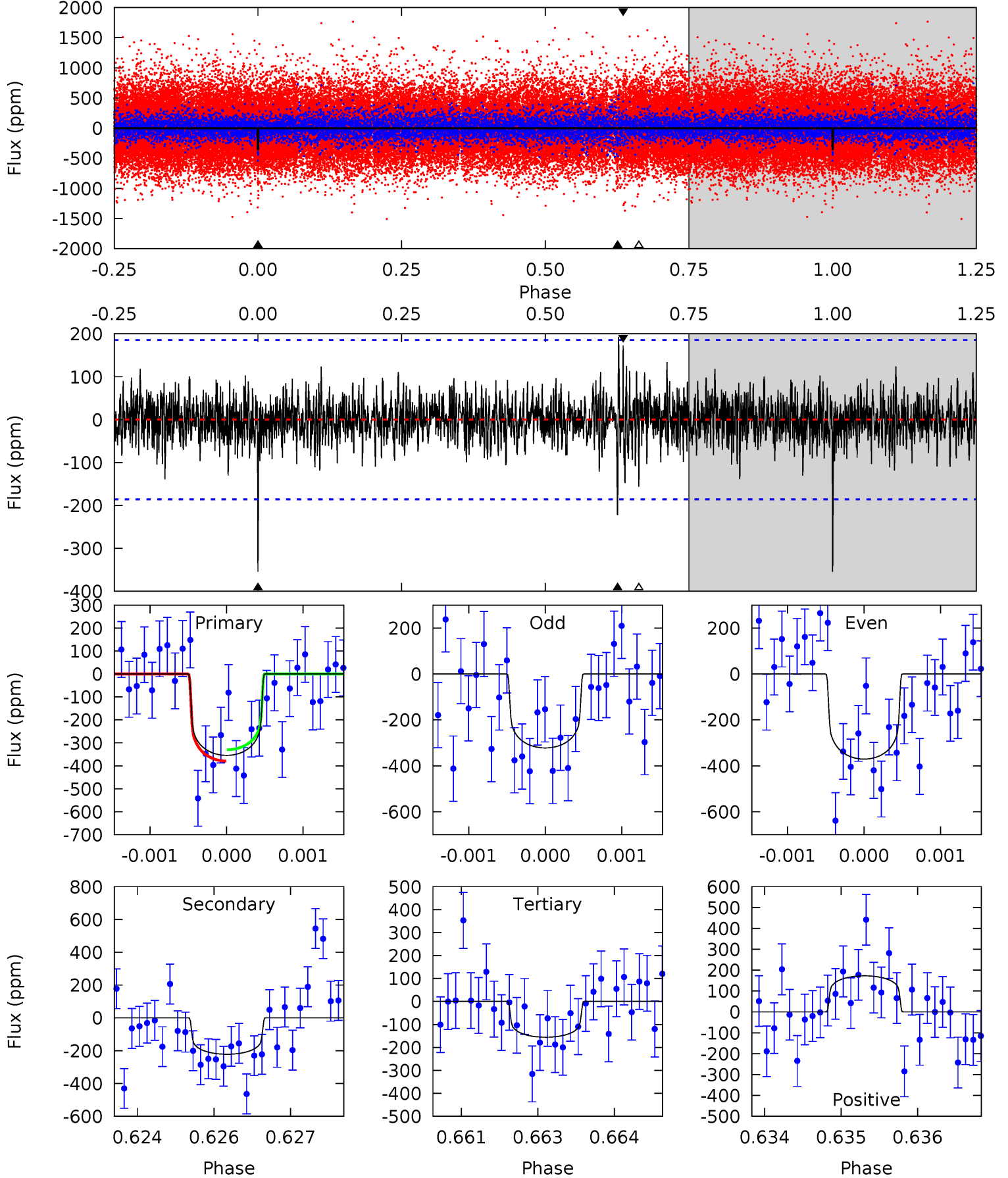
TCE 006127703-01 P=596.830232 Days $T_0=356.355302$ (BKJD)



DV Model-Shift Uniqueness Test

006127703-01, P = 596.828283 Days, E = 356.357354 Days

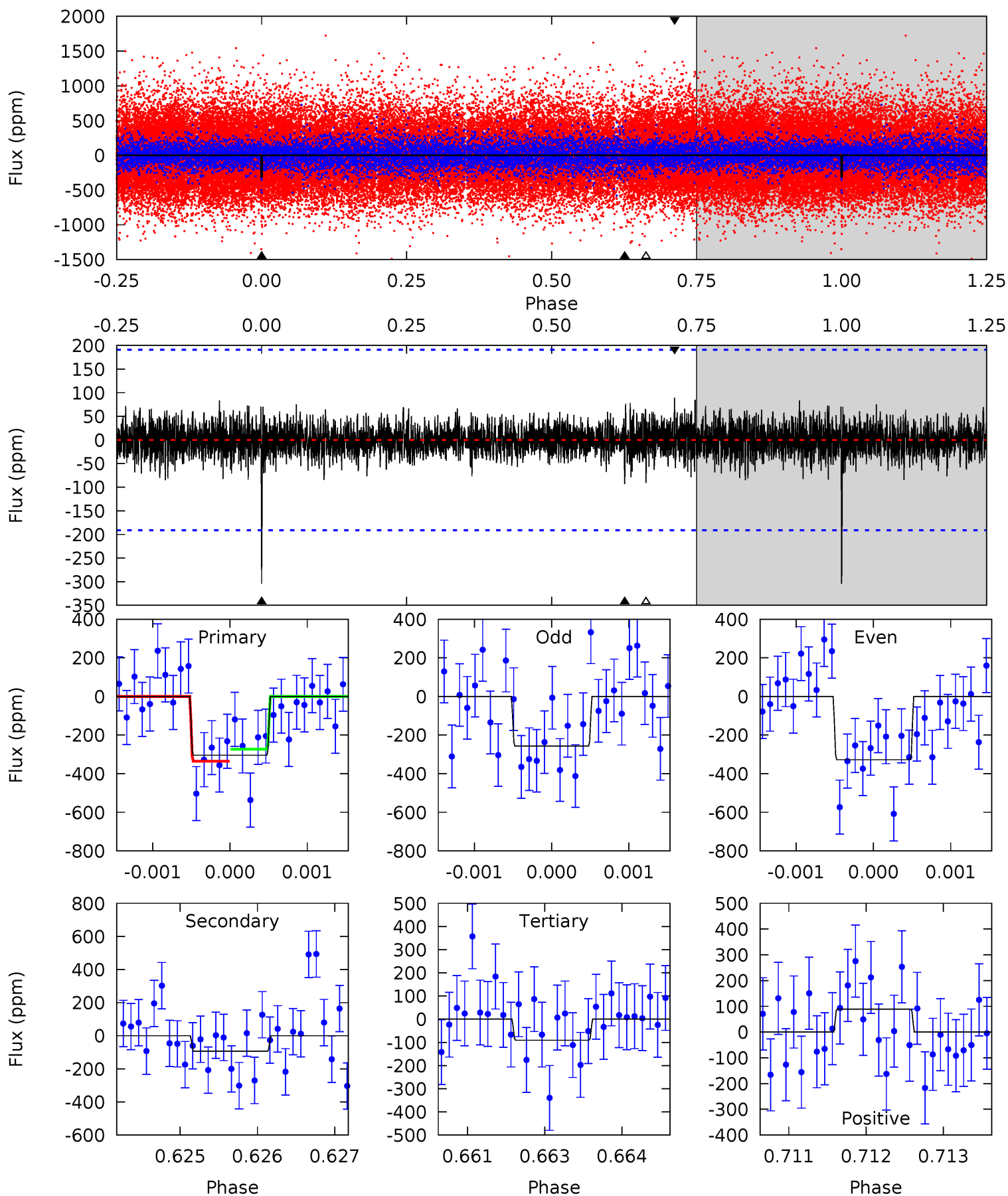
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	6.47	4.54	5.04	5.42	3.24	1.14	5.80	5.31	1.93	1.43	0.67	1.10	0.35	0.72



Alt Model-Shift Uniqueness Test

006127703-01, P = 596.830232 Days, E = 356.355302 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.66	2.66	2.58	2.54	5.43	3.26	0.66	6.08	6.12	0.08	0.12	0.94	1.18	0.23	0.90



Stellar Parameters For KIC 006127703

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6355^{+173}_{-211}	$4.410^{+0.065}_{-0.195}$	$-0.080^{+0.250}_{-0.300}$	$1.108^{+0.350}_{-0.117}$	$1.151^{+0.157}_{-0.157}$	$1.191^{+0.349}_{-0.645}$
	+3%/-3%	+1%/-4%	+312%/-375%	+32%/-11%	+14%/-14%	+29%/-54%
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 006127703-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-222 ± 34	$2.31^{+0.88}_{-0.85}$	346^{+27}_{-16}	5692^{+1585}_{-755}	46651^{+75554}_{-22795}
Alt.	-93 ± 35	$2.21^{+0.91}_{-0.92}$	347^{+23}_{-18}	4803^{+1458}_{-674}	21246^{+48965}_{-11416}

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

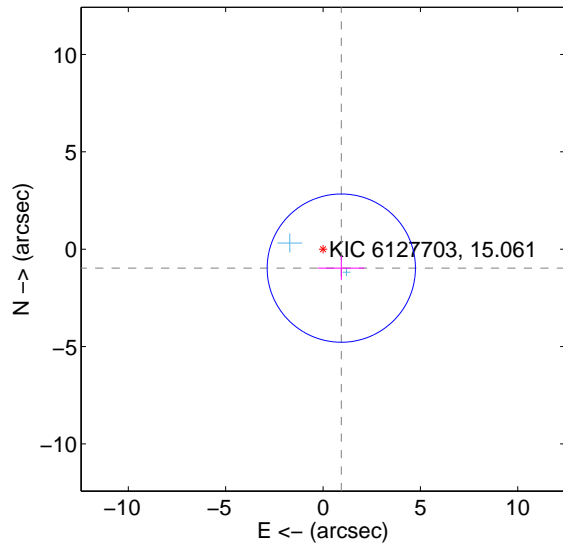
Supplemental centroid analysis for 006127703-01. Kepler magnitude: 15.06. Transit SNR 7.64

There are 2 quarters with good PRF difference image offsets

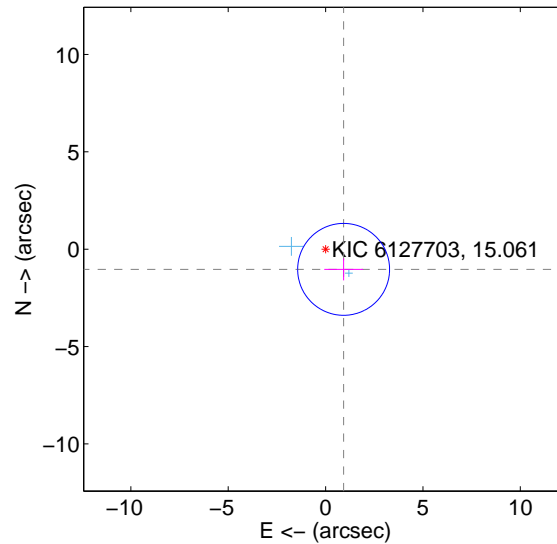
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.352 ± 1.269	1.07	-0.938 ± 1.191	-0.973 ± 0.617
PRF-fit source offset from KIC position	1.390 ± 0.787	1.77	-0.927 ± 0.997	-1.037 ± 0.565
photometric centroid source offset	4.88 ± 1.82	2.68	-3.77 ± 1.81	-3.10 ± 1.85

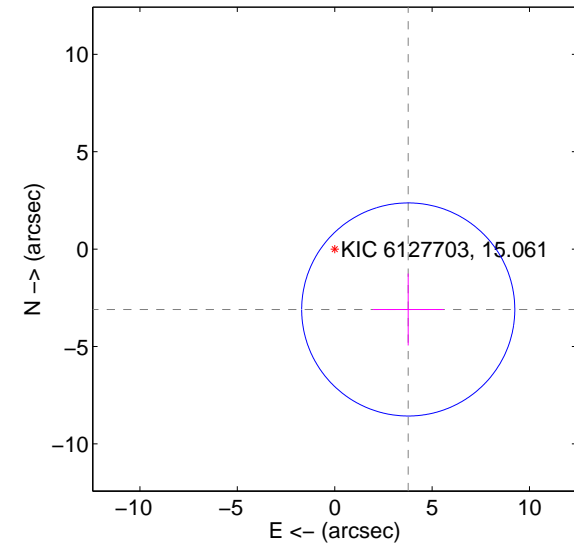
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

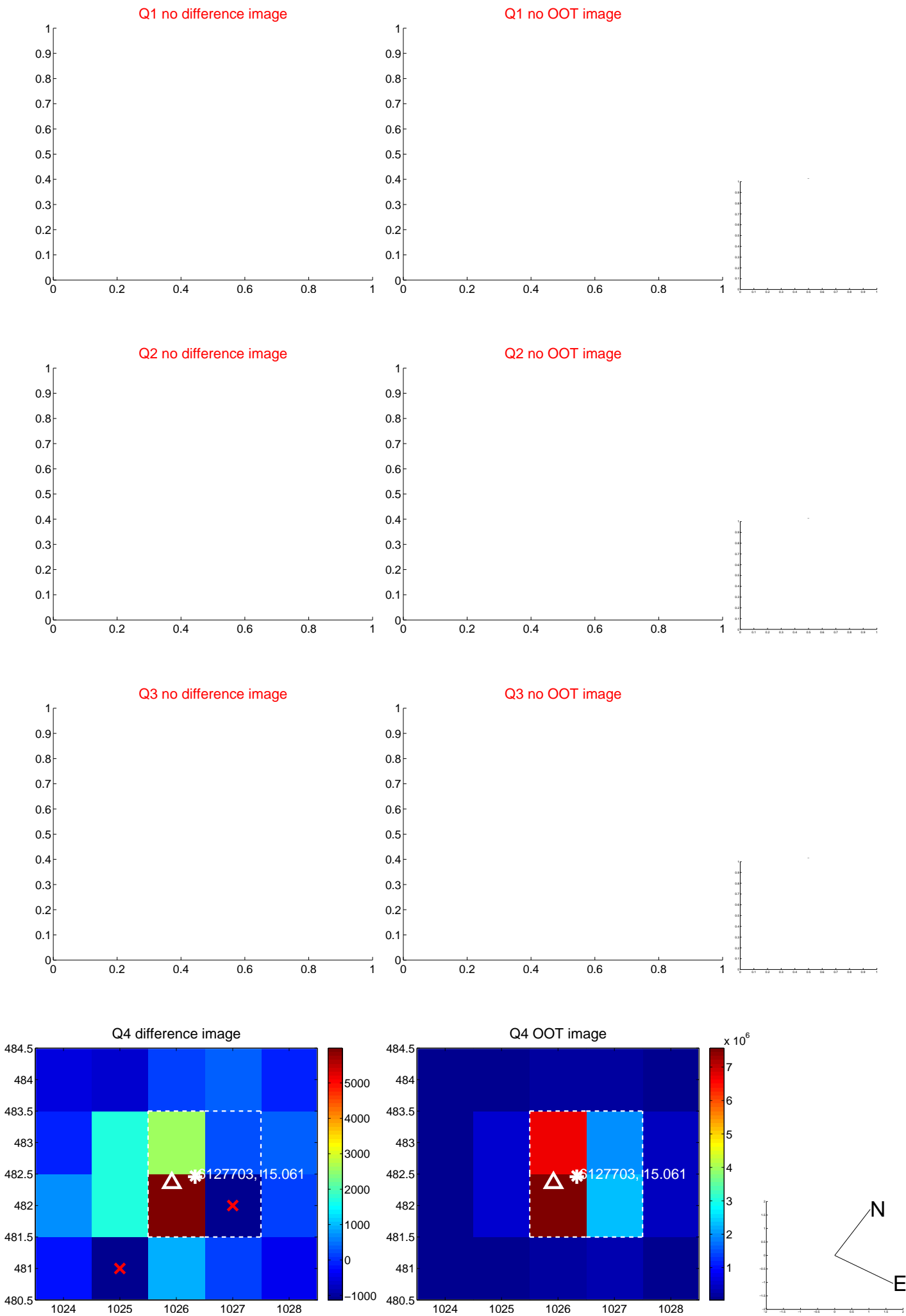


offset from photometric centroids



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.

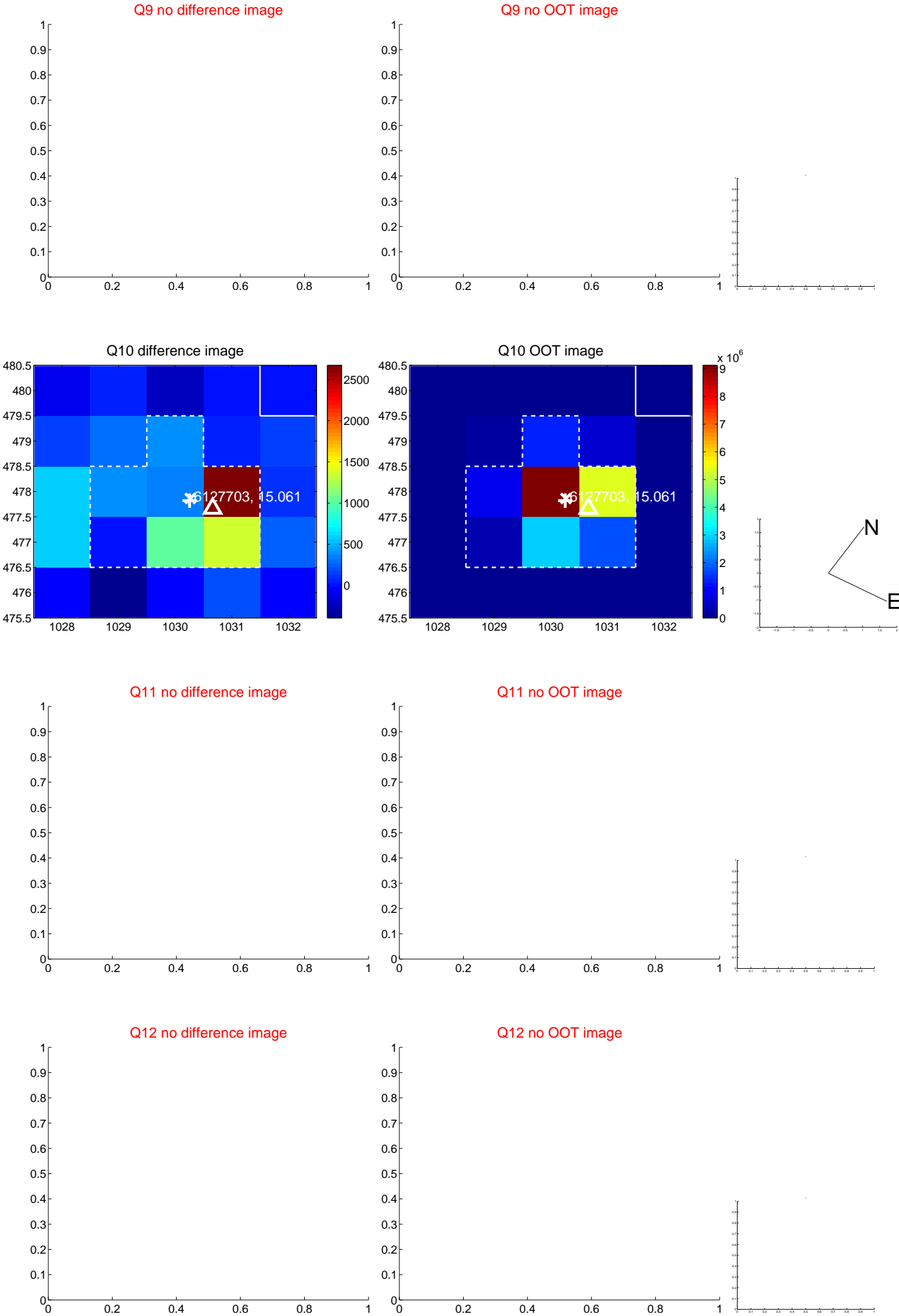
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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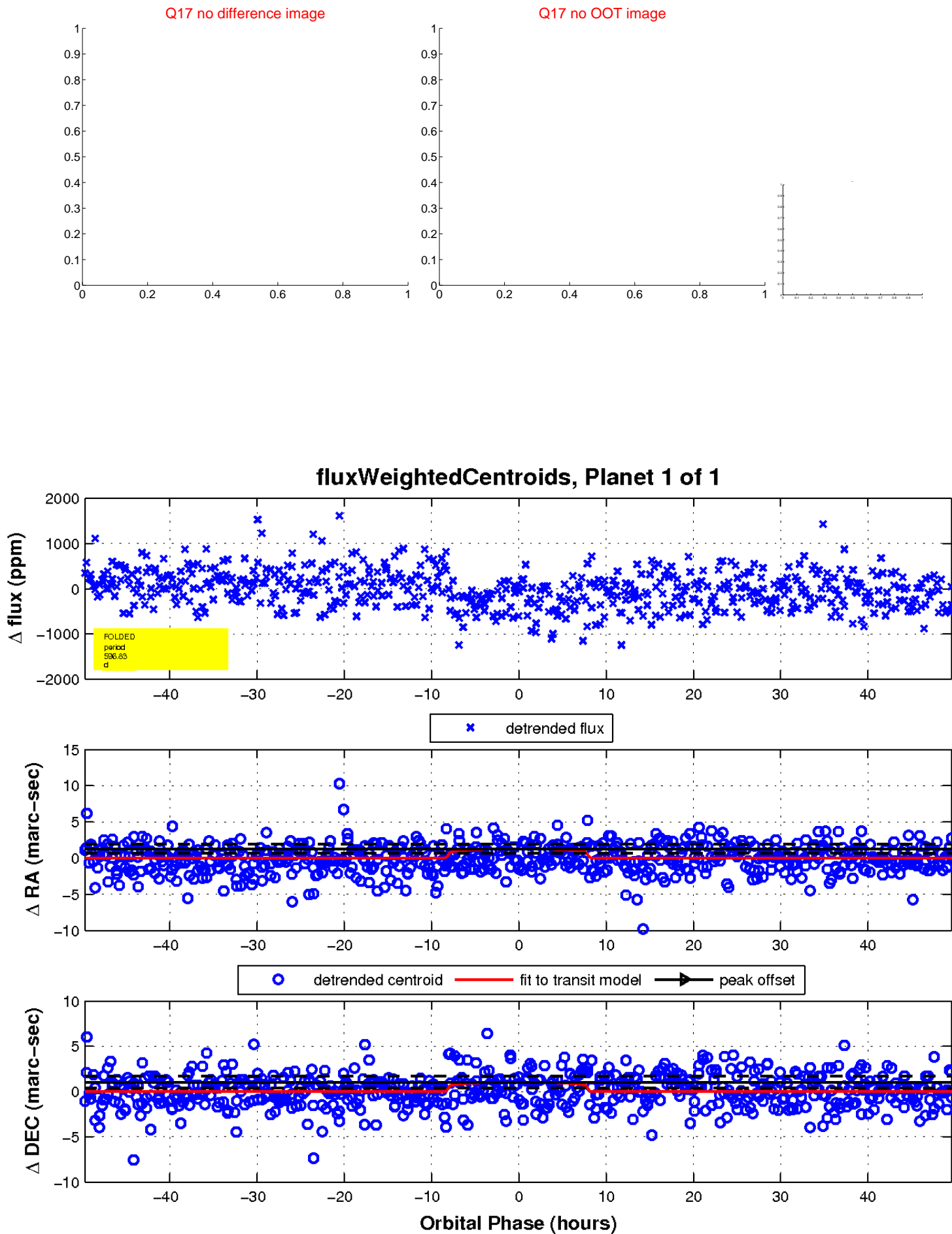
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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.



UKIRT Image

Declination

