

KIC 007769819

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})
007769819-01	OBS	2778.01	2.215723	131.818209	291.1	1.831	17.9	21.6	0.90	5417	1.86	641.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007769819-01	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.

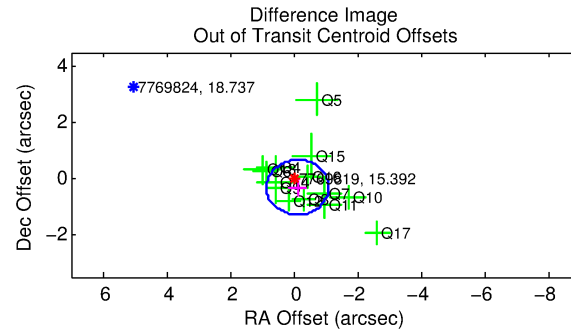
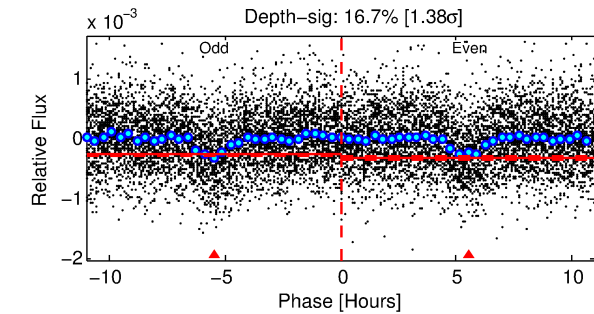
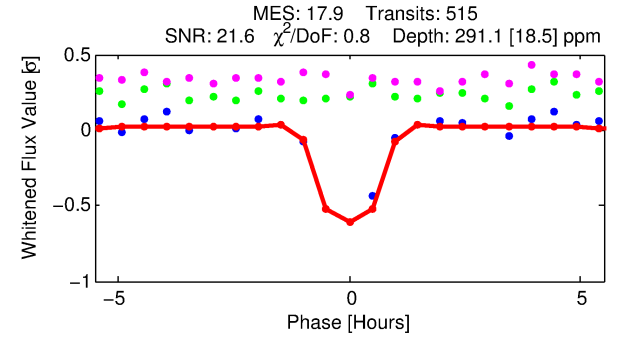
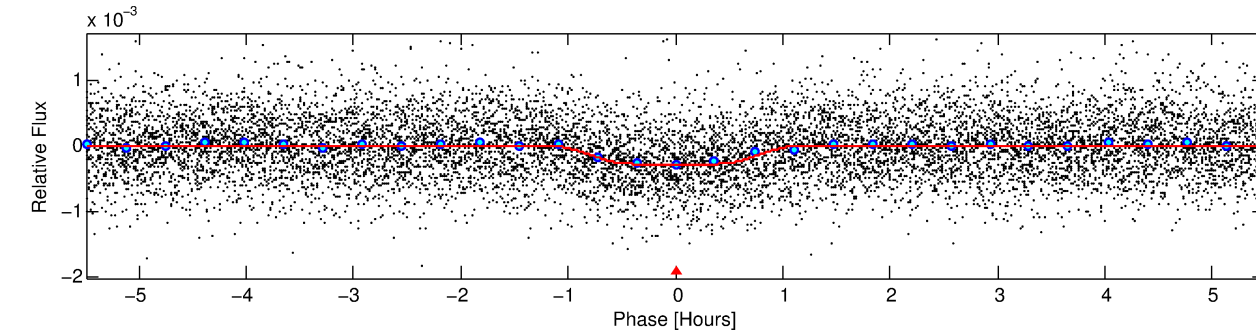
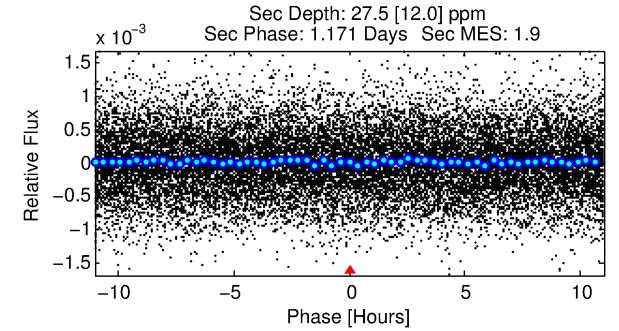
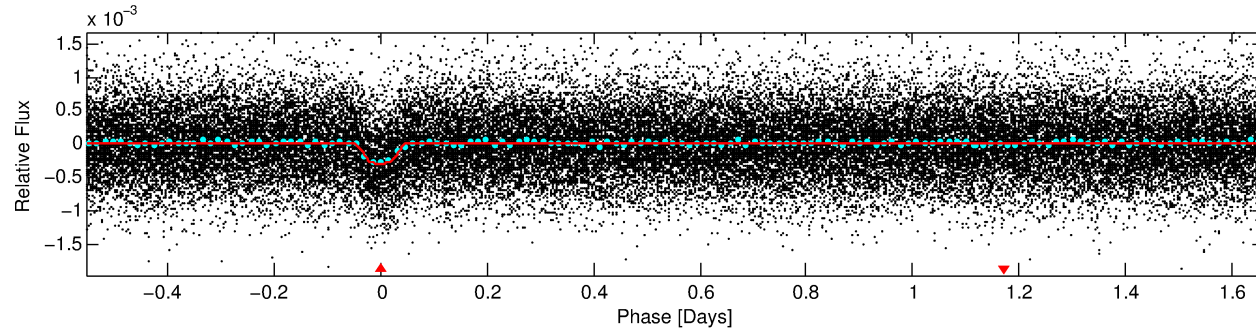
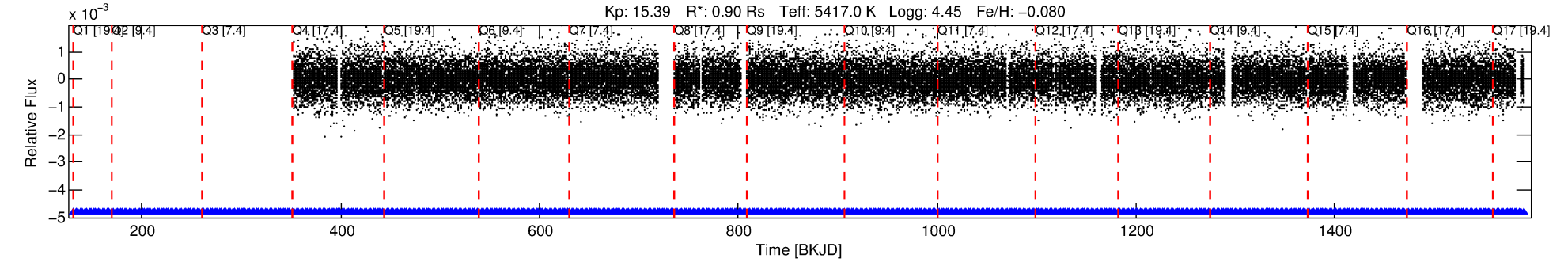
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007769819-01

No Significant Match Found

DV One-Page Summary

KIC: 7769819 Candidate: 1 of 1 Period: 2.216 d
KOI: K02778.01 Corr: 0.972



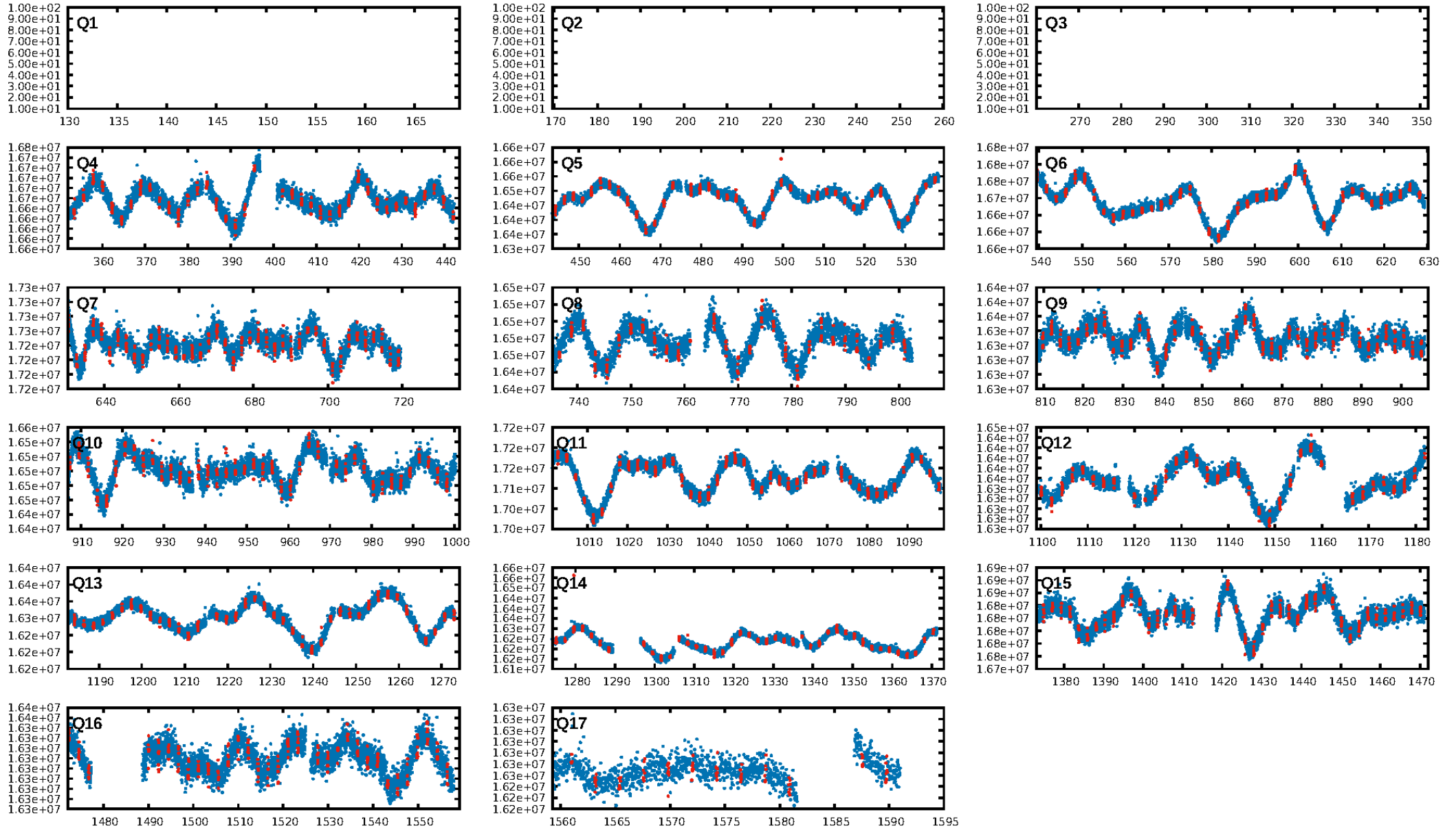
DV Fit Results:

Period = 2.21572 [0.00001] d
Epoch = 131.8182 [0.0013] BKJD
Rp/R* = 0.0189 [0.0061]
a/R* = 4.45 [5.99]
b = 0.90 [0.30]
Seff = 641.30 [204.74]
Teff = 1283 [102] K
Rp = 1.86 [0.72] Re
a = 0.0313 [0.0060] AU
Ag = 4.28 [3.57] [0.92σ]
Teffp = 2853 [567] K [2.73σ]

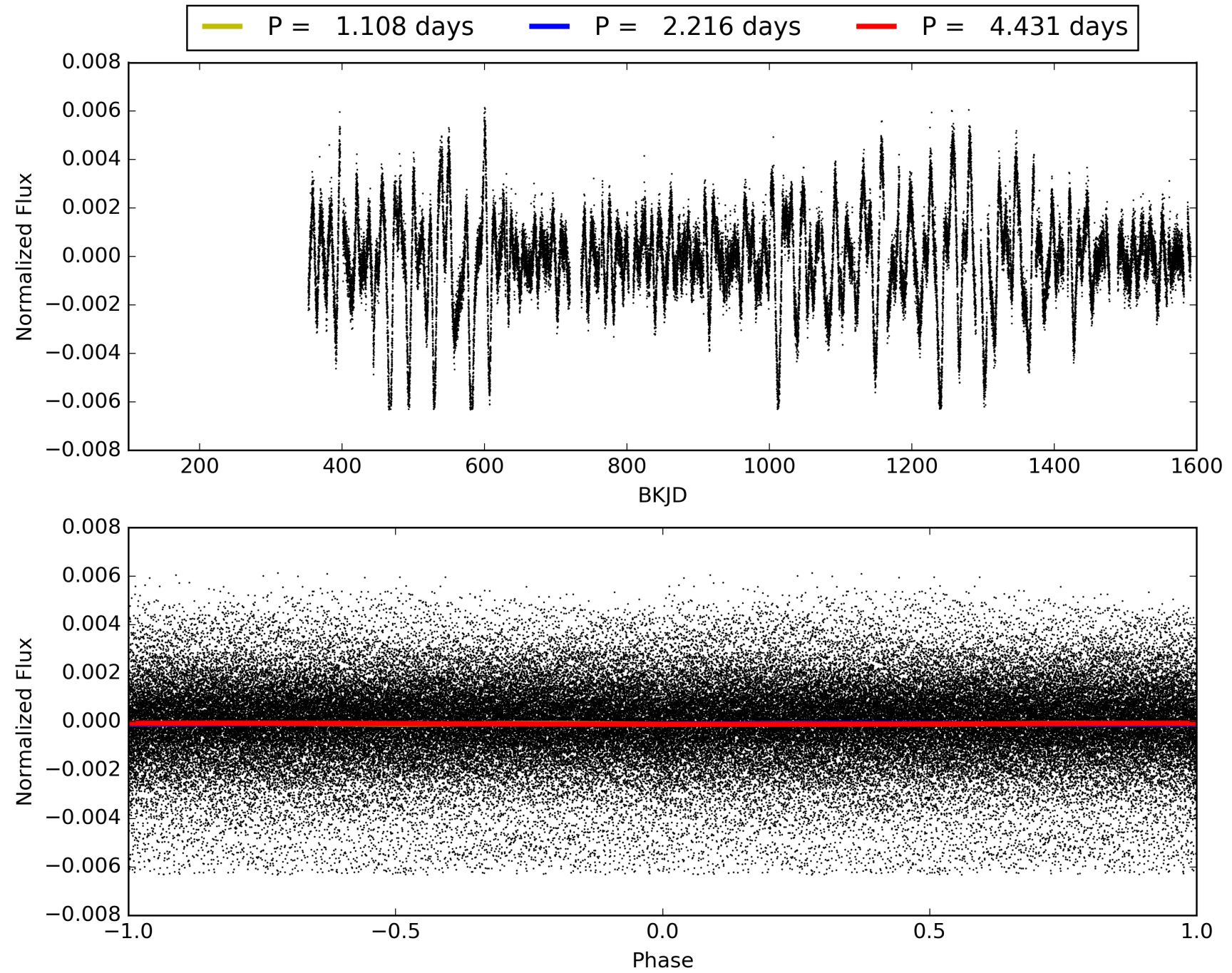
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.87e-71
RollingBand-fgt: 1.00 [503/503]
GhostDiagnostic-chr: 9.523
Centroid-sig: 1.8%
Centroid-so: 0.913 arcsec [1.54σ]
OotOffset-rm: 0.329 arcsec [1.01σ]
KicOffset-rm: 0.298 arcsec [0.88σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.93 [13/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 007769819-01, PDC Light Curves

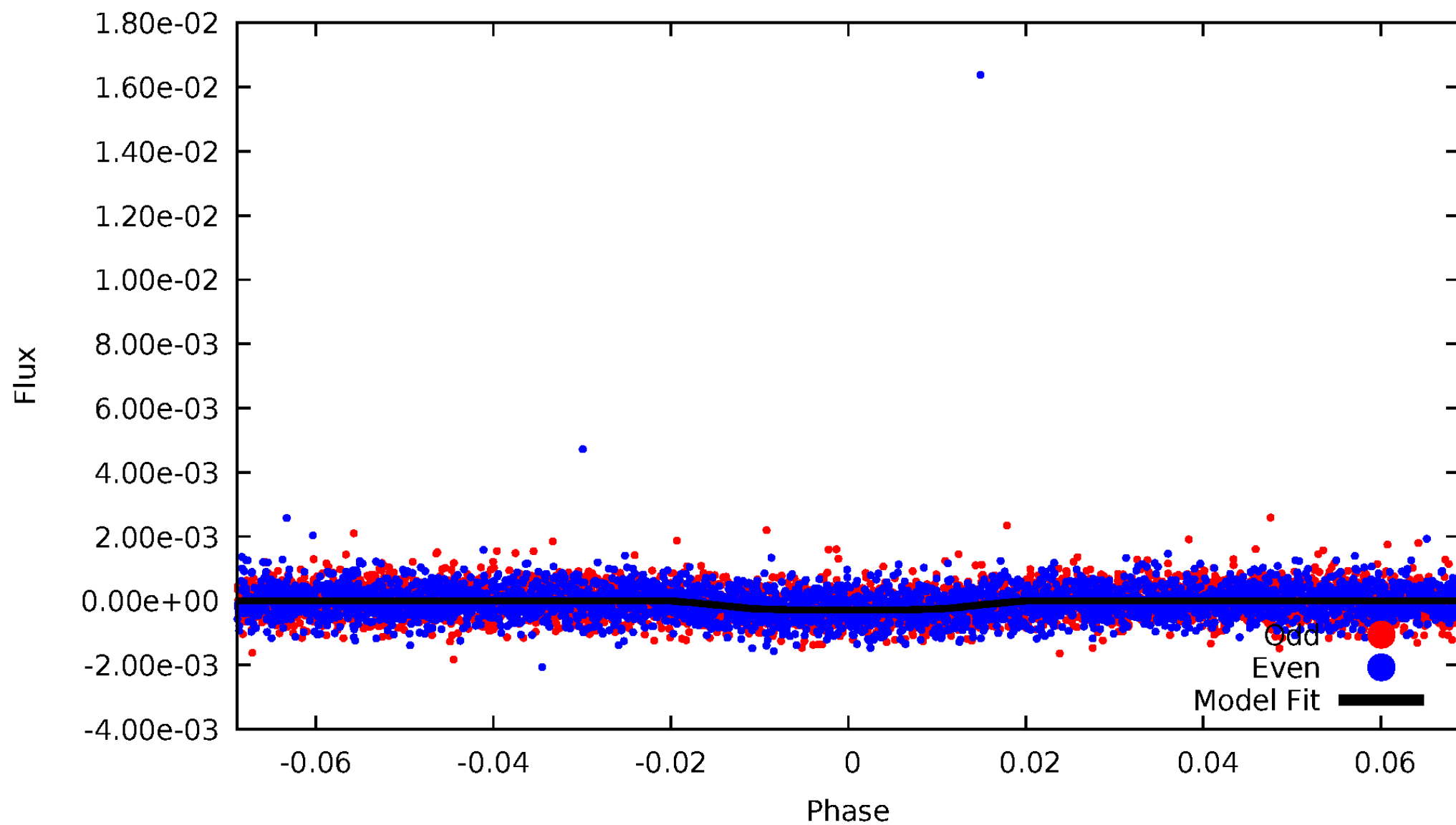


TCE 007769819-01



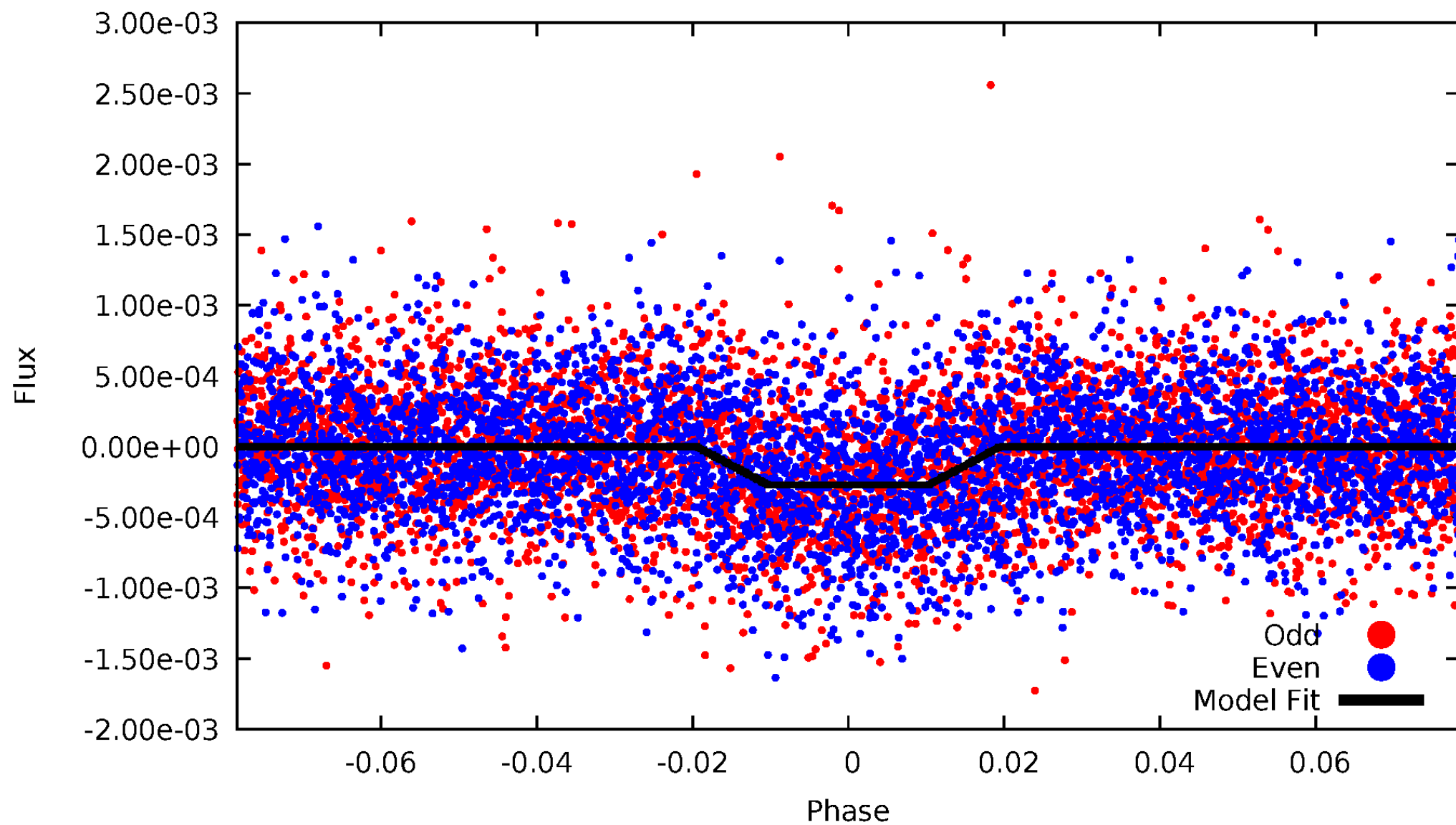
DV Odd/Even

TCE 007769819-01



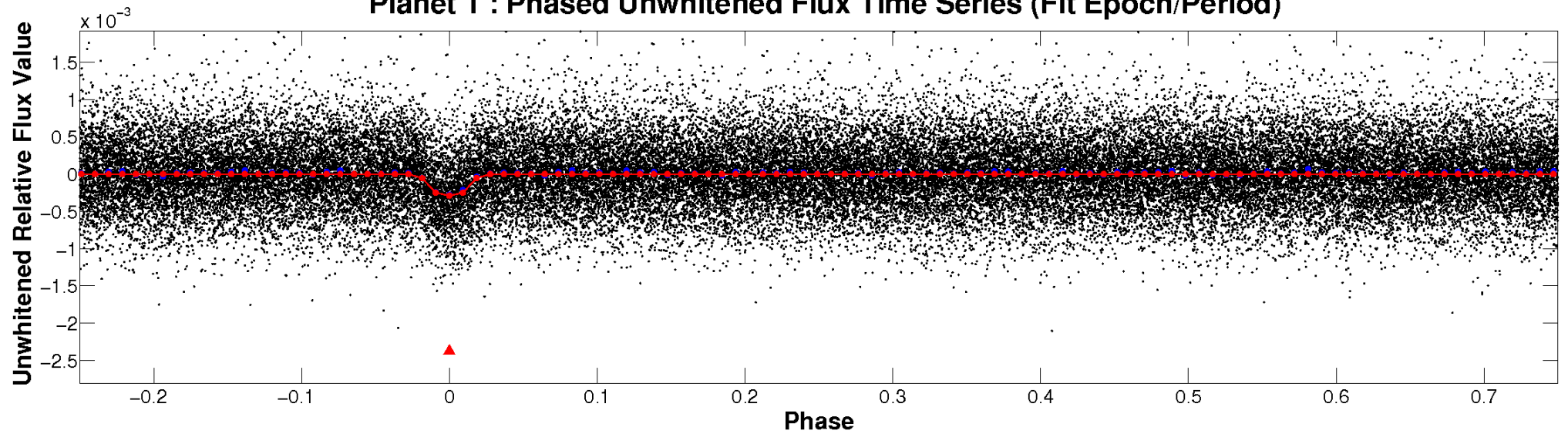
ALT Odd/Even

TCE 007769819-01

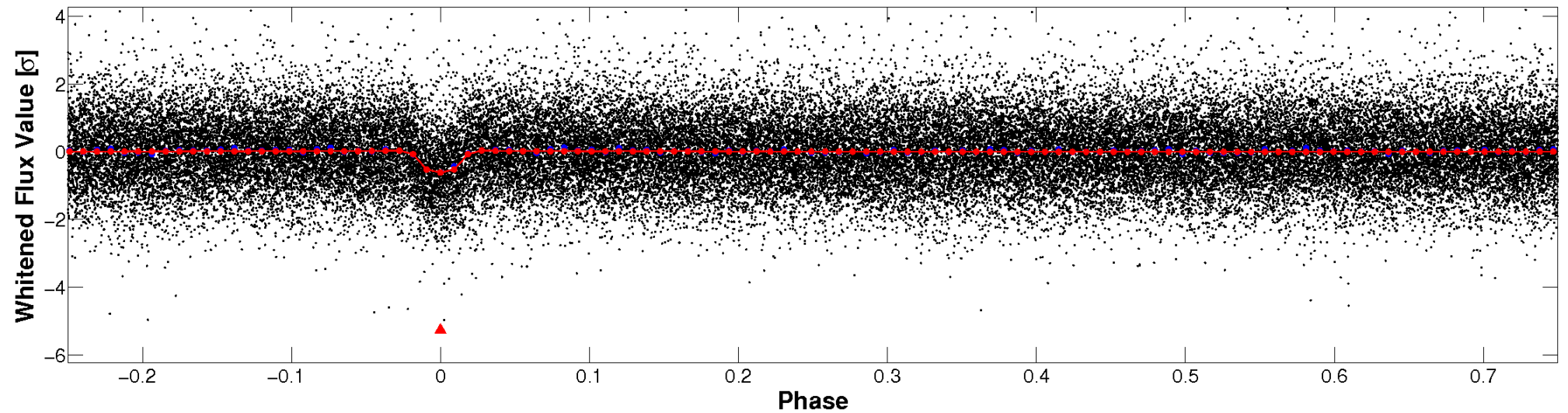


Non-Whitened Vs. Whitened Light Curve

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

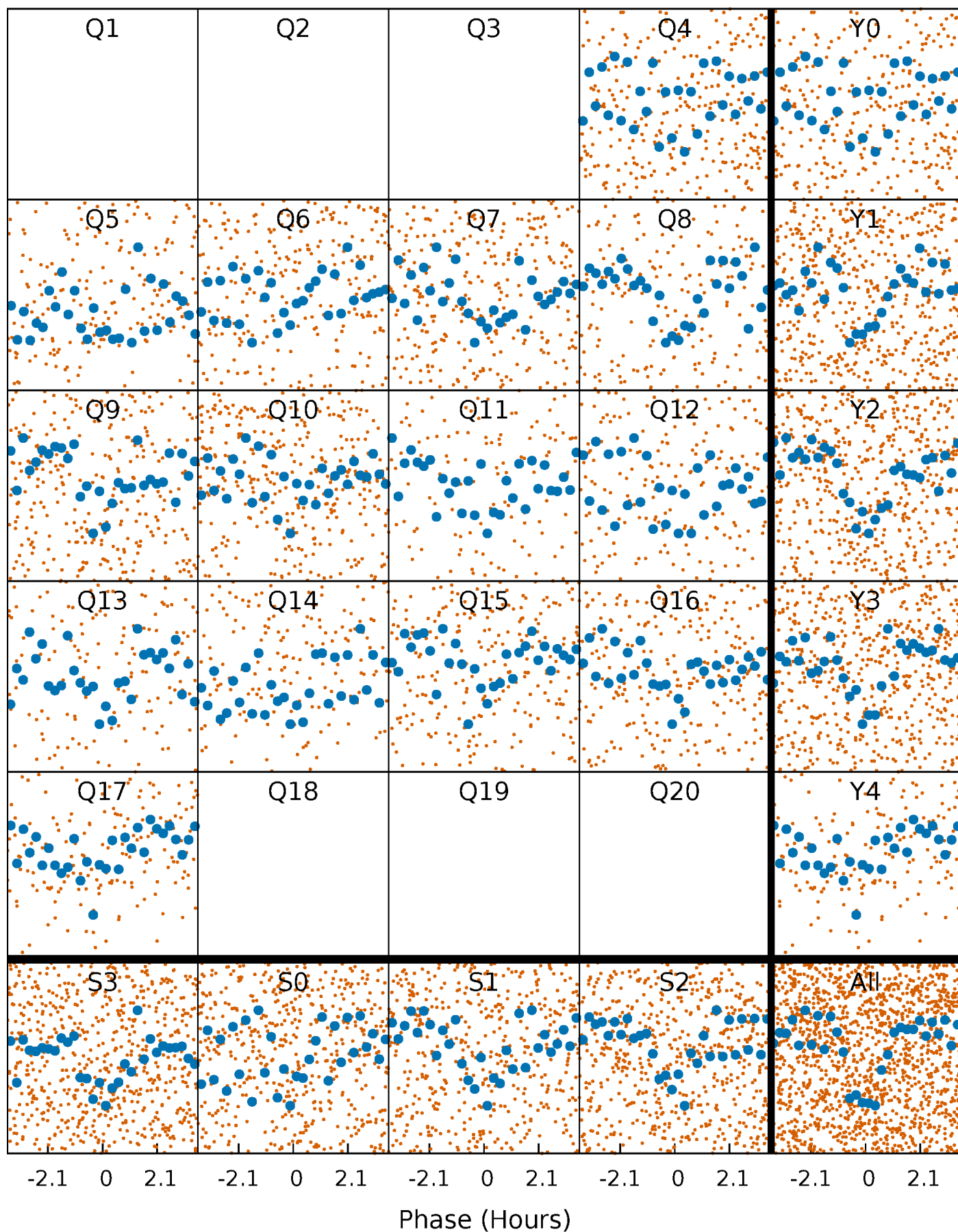


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



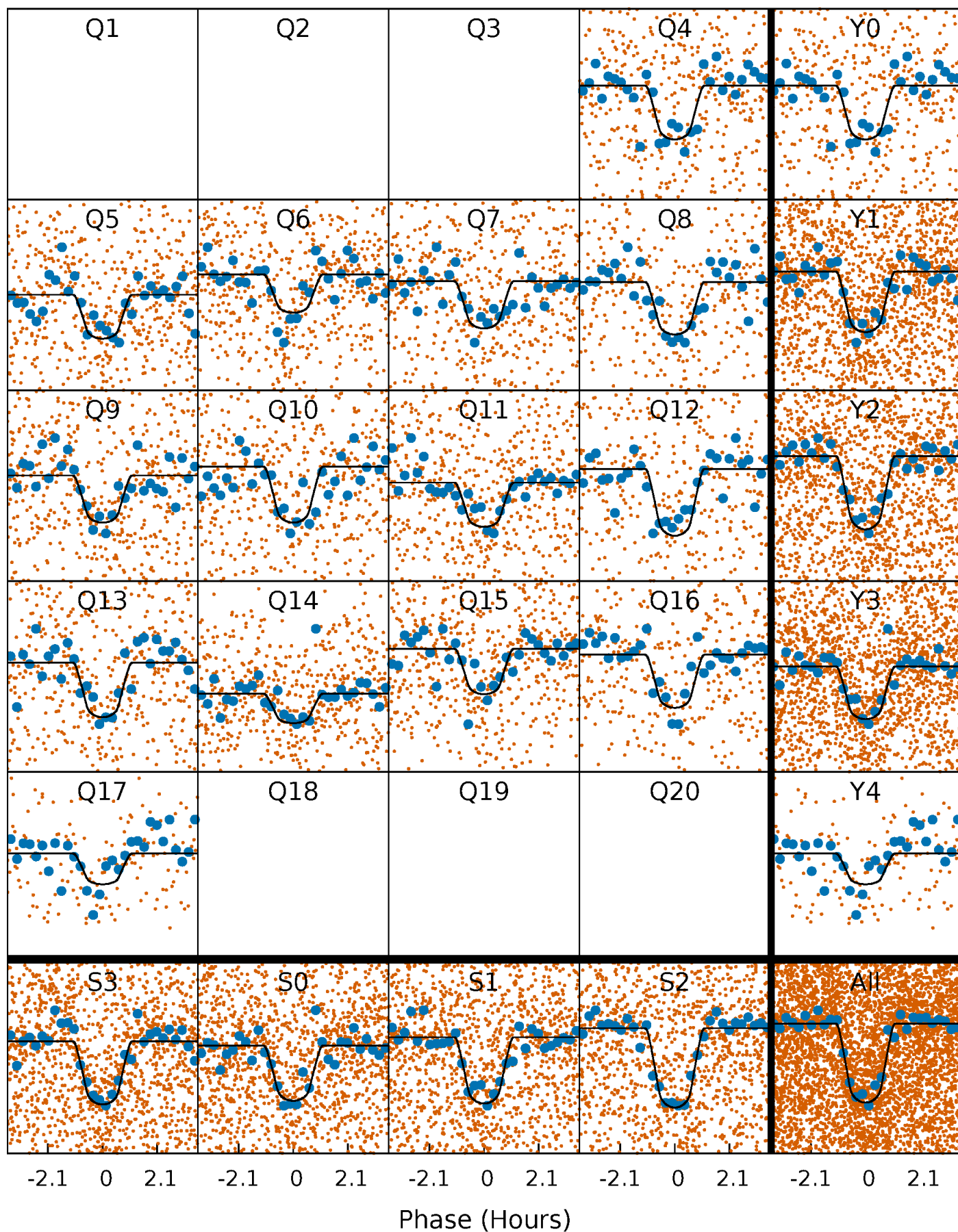
PDC Quarter-Phased Transit Curves

TCE 007769819-01 P= 2.215723 Days $T_0=131.818209$ (BKJD)



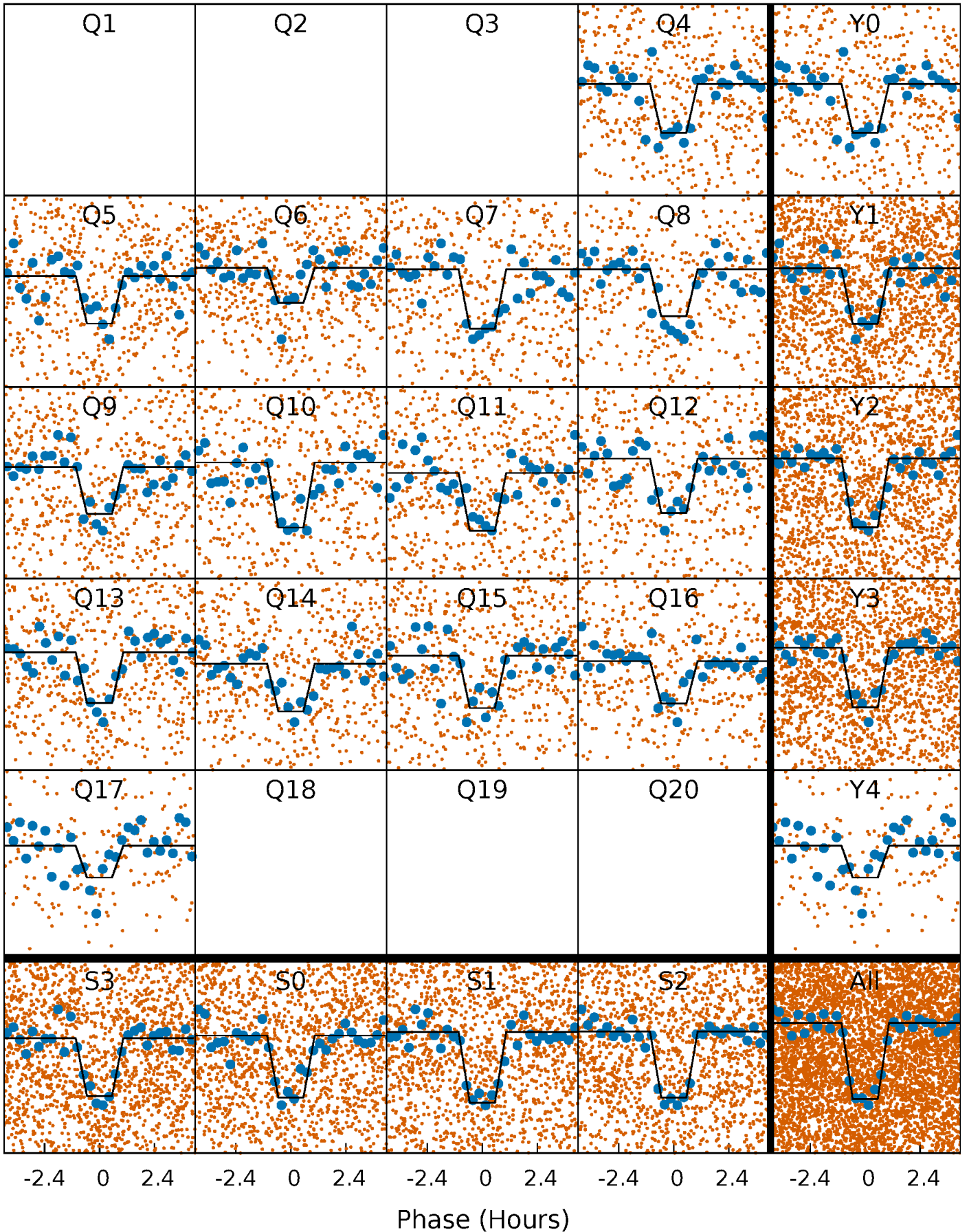
DV Quarter-Phased Transit Curves

TCE 007769819-01 P= 2.215723 Days $T_0=131.818209$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

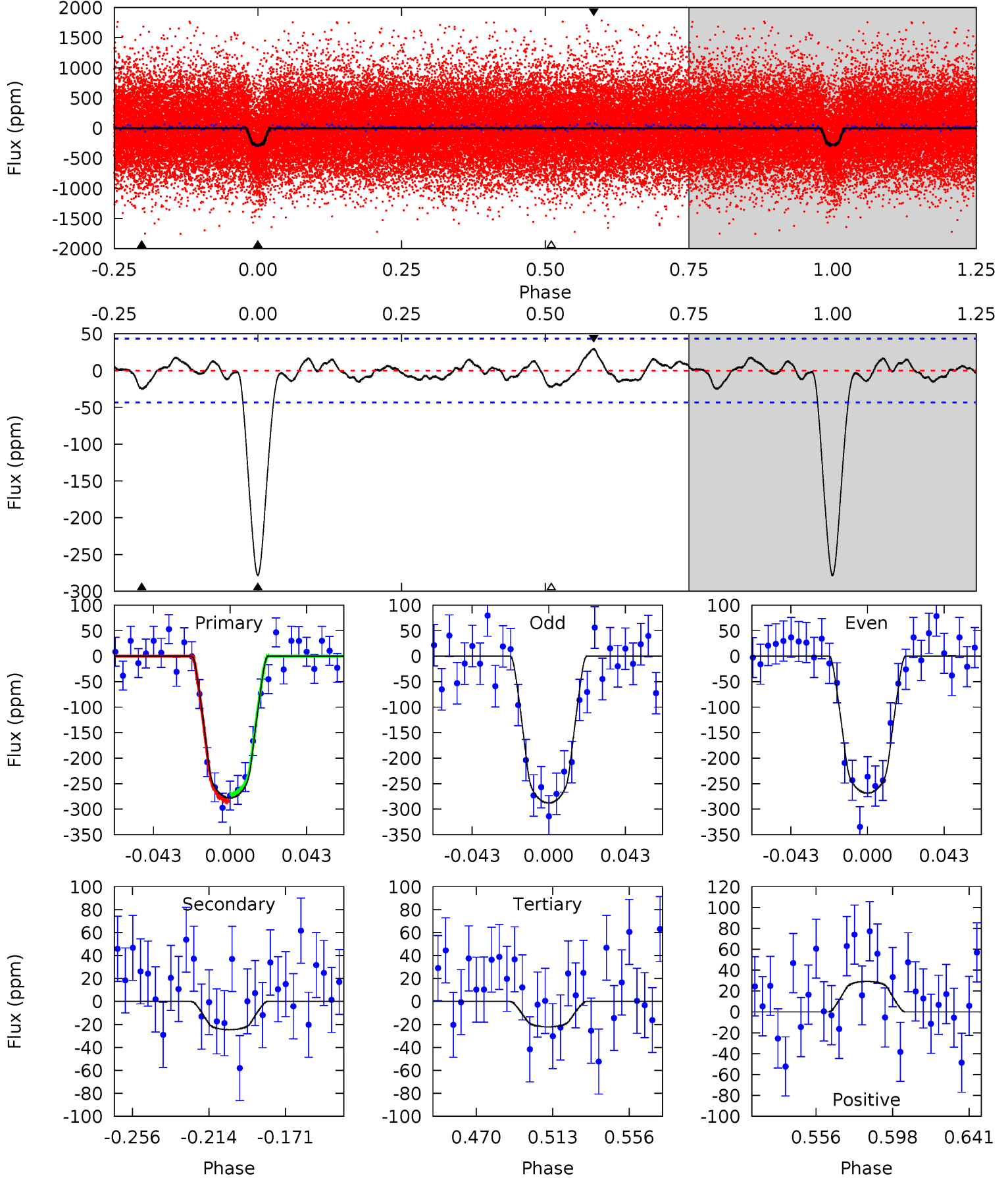
TCE 007769819-01 P= 2.215719 Days $T_0=131.819088$ (BKJD)



DV Model-Shift Uniqueness Test

007769819-01, P = 2.215723 Days, E = 131.818209 Days

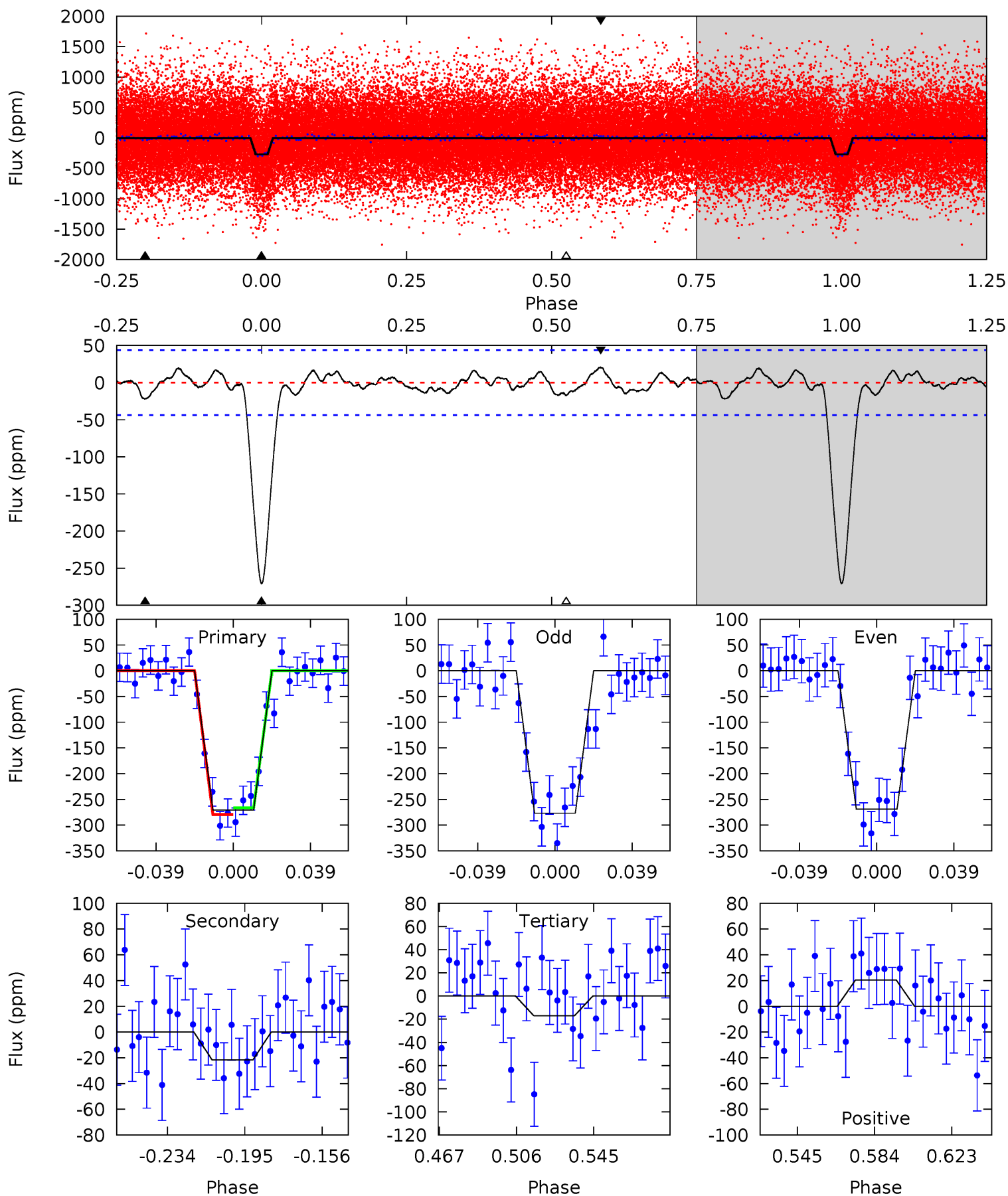
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.4	2.69	2.42	3.19	4.74	2.03	1.12	28.0	27.2	0.27	-0.51	1.06	1.04	0.10	0.76



Alt Model-Shift Uniqueness Test

007769819-01, P = 2.215719 Days, E = 131.819088 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.4	2.36	1.85	2.22	4.76	2.06	0.98	27.6	27.2	0.51	0.13	0.42	1.08	0.07	0.71



Stellar Parameters For KIC 007769819

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5417^{+188}_{-169}	$4.447^{+0.108}_{-0.162}$	$-0.080^{+0.300}_{-0.300}$	$0.901^{+0.195}_{-0.130}$	$0.830^{+0.118}_{-0.069}$	$1.598^{+0.851}_{-0.687}$
	+3%/-3%	+2%/-4%	+375%/-375%	+22%/-14%	+14%/-8%	+53%/-43%
Source	KIC0	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 007769819-01 / KOI 2778.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25 ± 9	$1.86^{+0.65}_{-0.61}$	1808^{+116}_{-99}	3261^{+504}_{-353}	$3.635^{+4.640}_{-1.868}$
Alt.	-22 ± 9	$1.65^{+0.67}_{-0.62}$	1805^{+123}_{-96}	3347^{+595}_{-454}	$4.194^{+6.892}_{-2.422}$

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

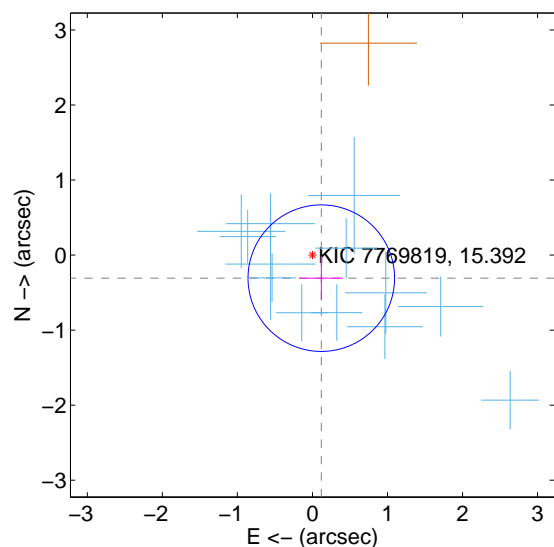
Supplemental centroid analysis for 007769819-01. Kepler magnitude: 15.39. Transit SNR 21.64

There are 13 quarters with good PRF difference image offsets

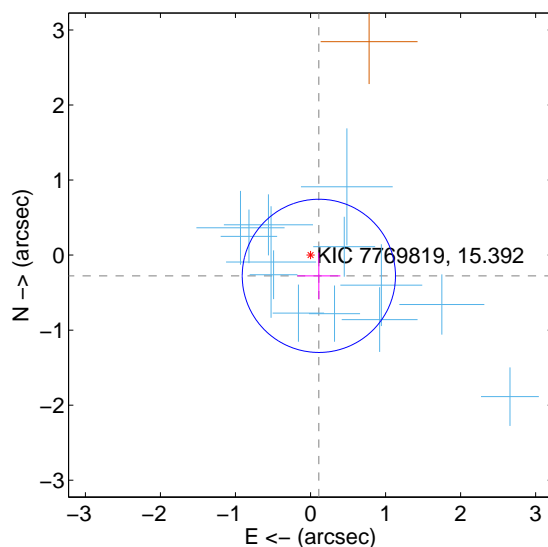
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.329 ± 0.326	1.01	-0.118 ± 0.289	-0.307 ± 0.296
PRF-fit source offset from KIC position	0.298 ± 0.340	0.88	-0.111 ± 0.286	-0.277 ± 0.311
photometric centroid source offset	0.91 ± 0.59	1.54	-0.73 ± 0.60	-0.55 ± 0.58

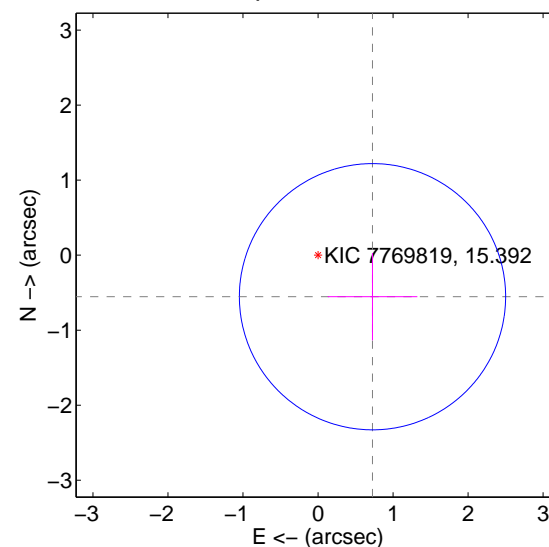
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

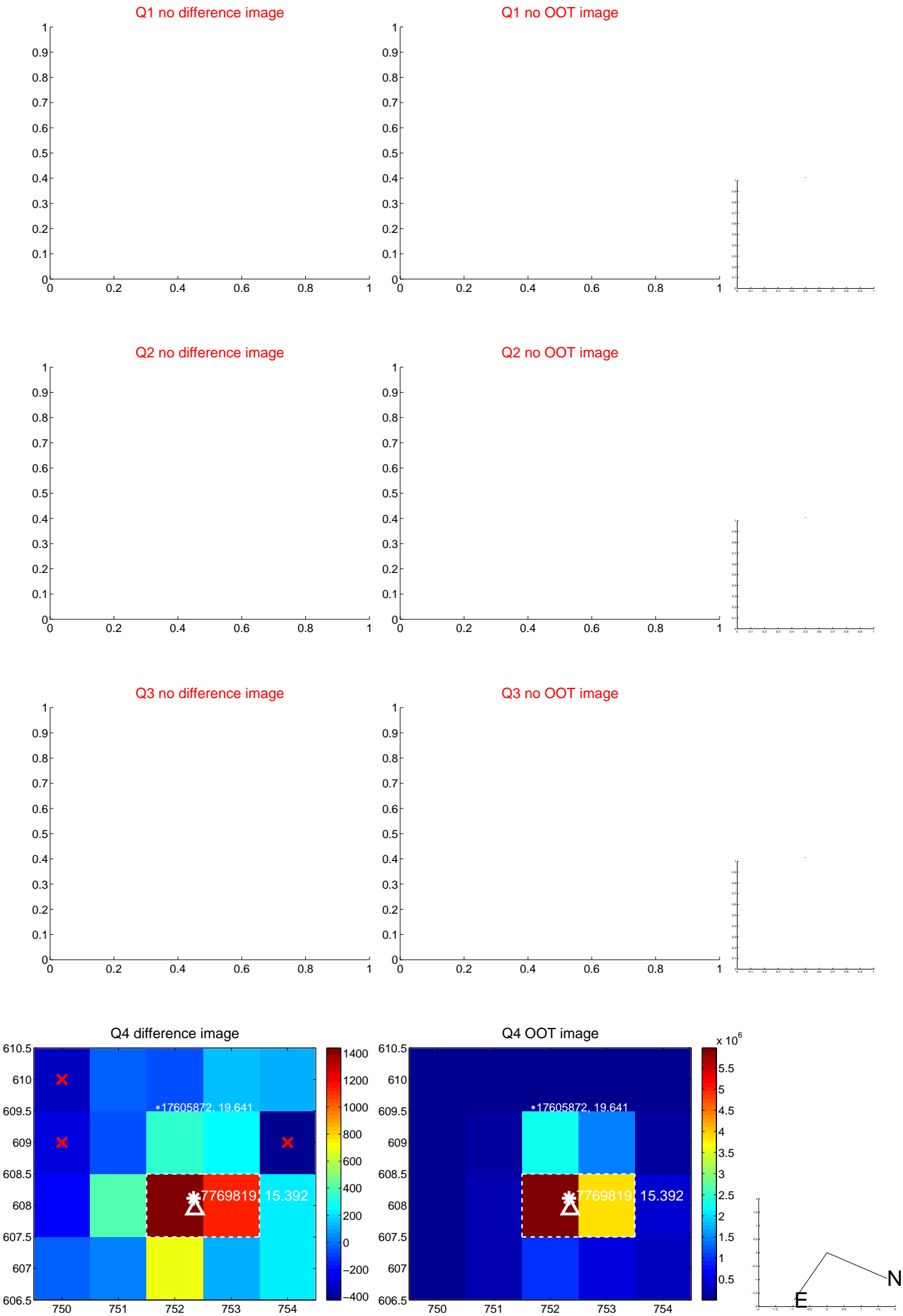


offset from photometric centroids

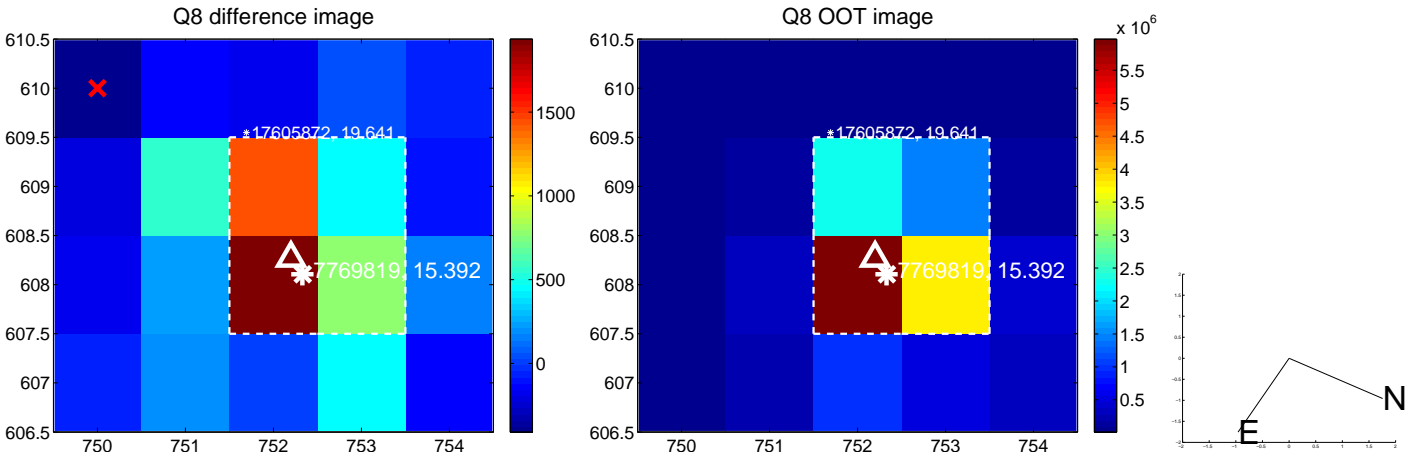
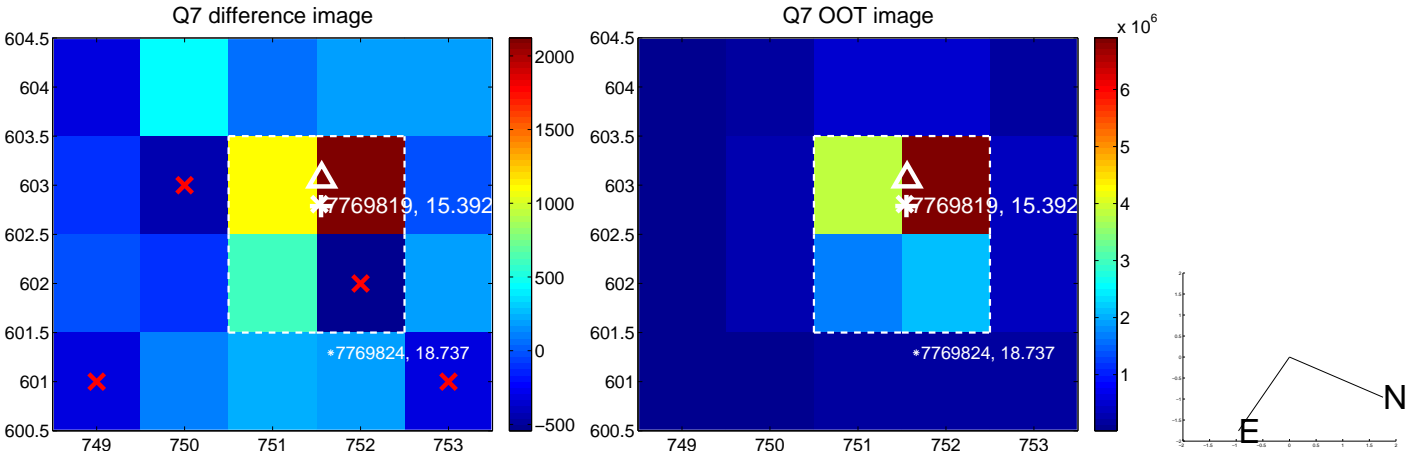
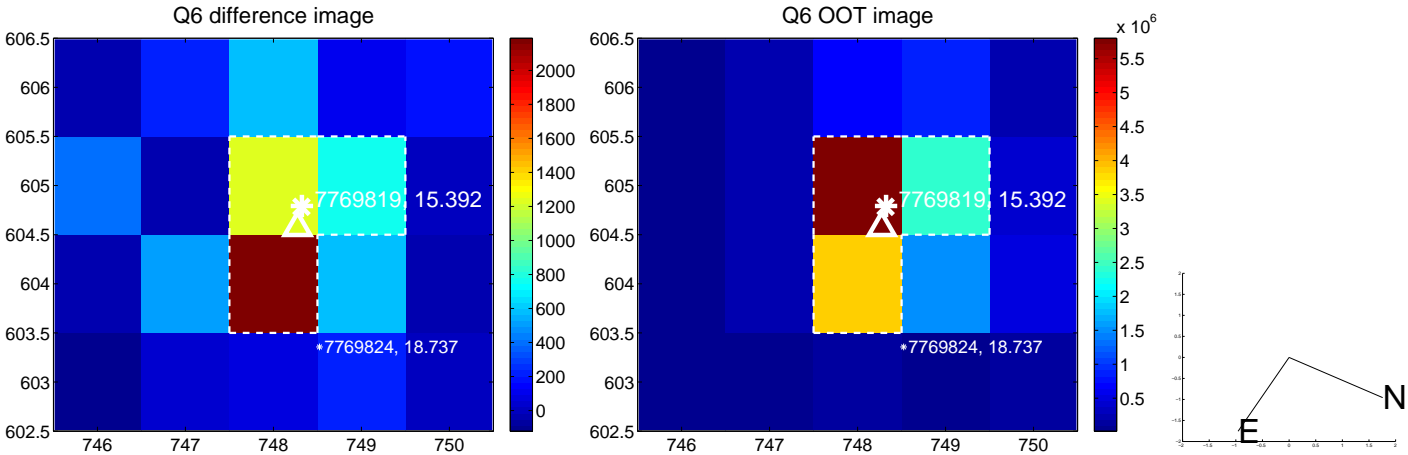
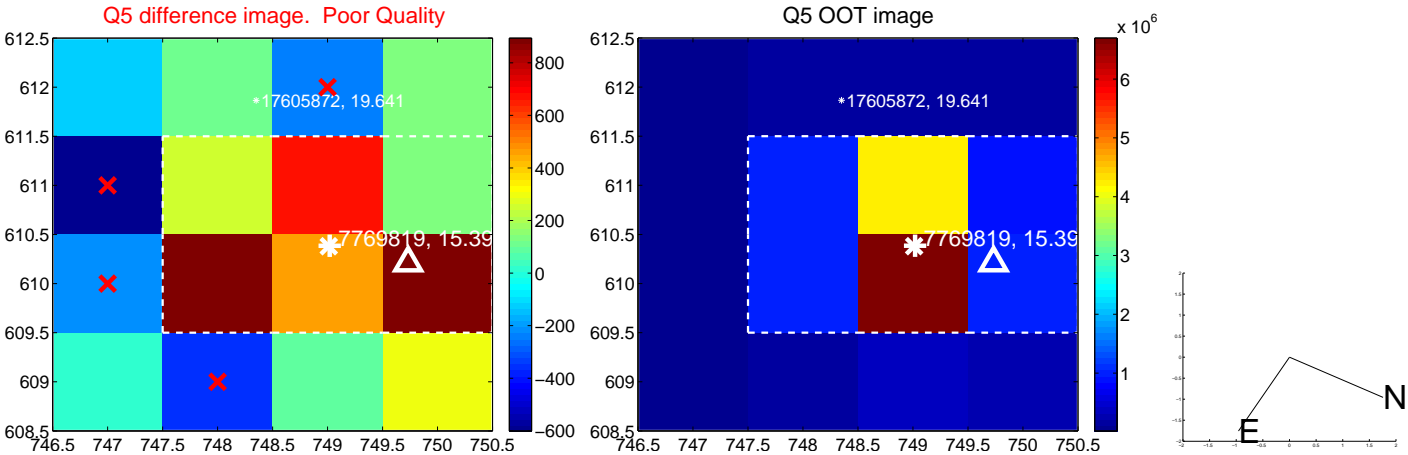


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

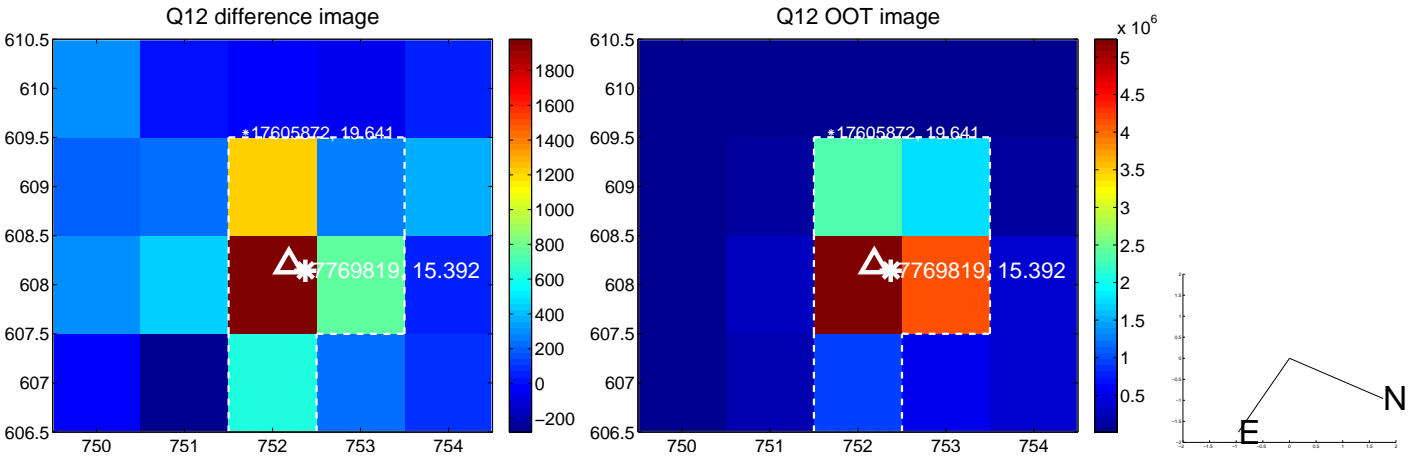
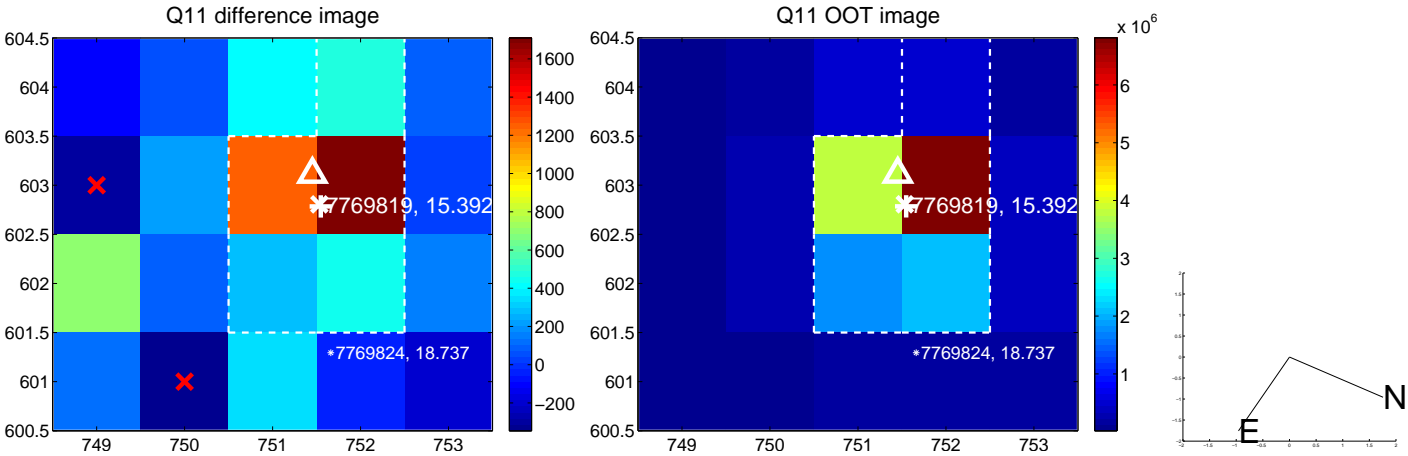
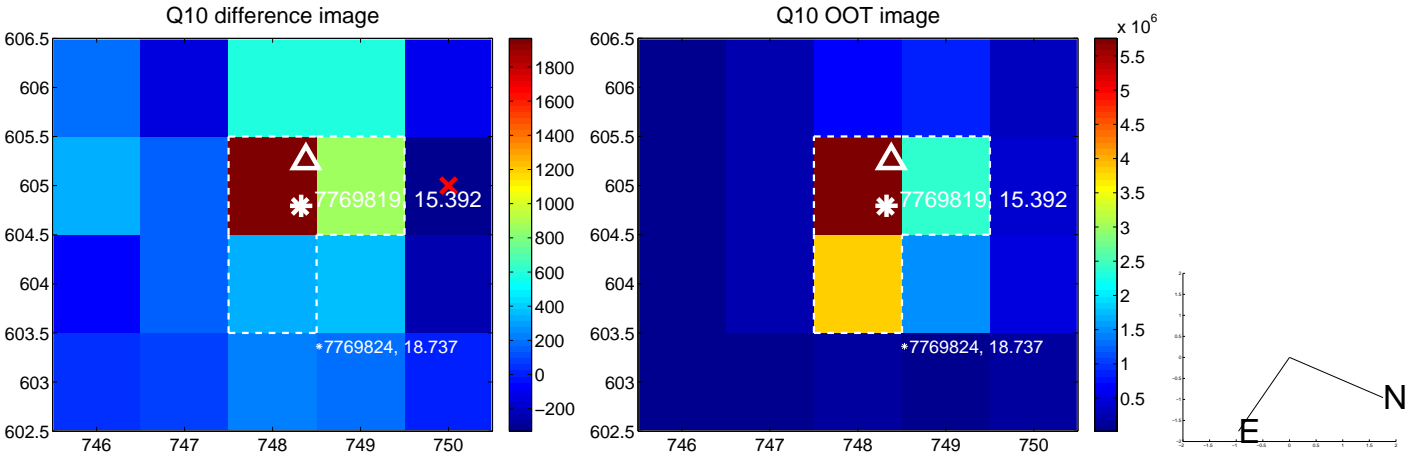
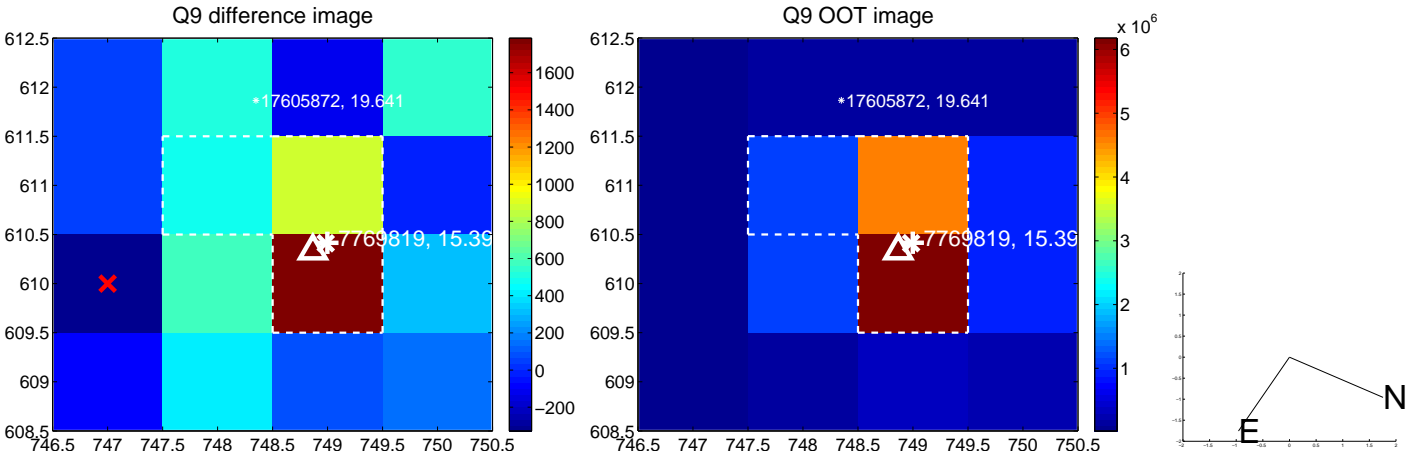
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



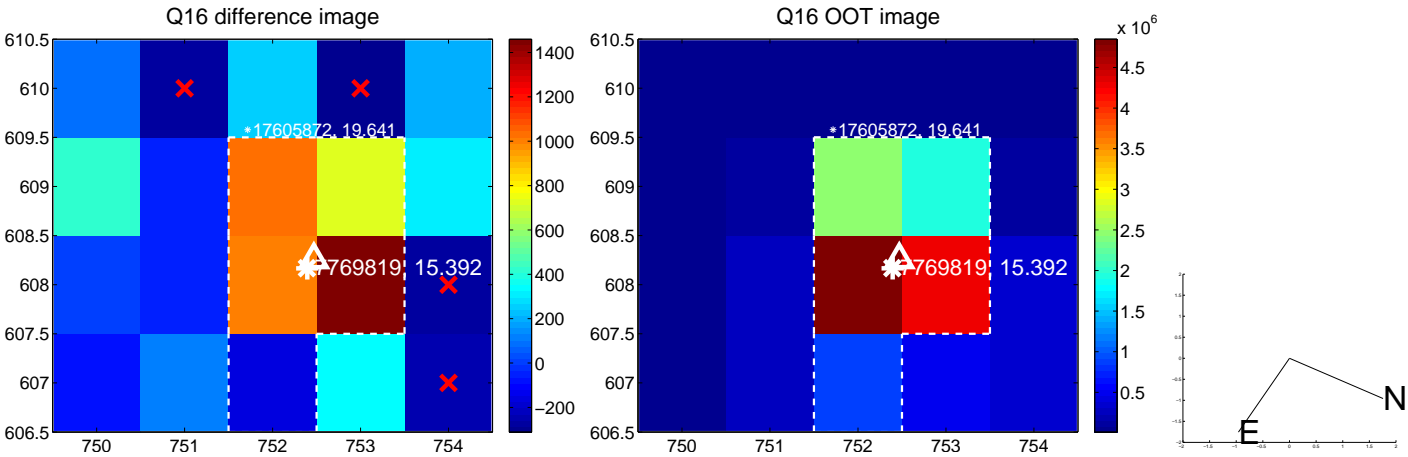
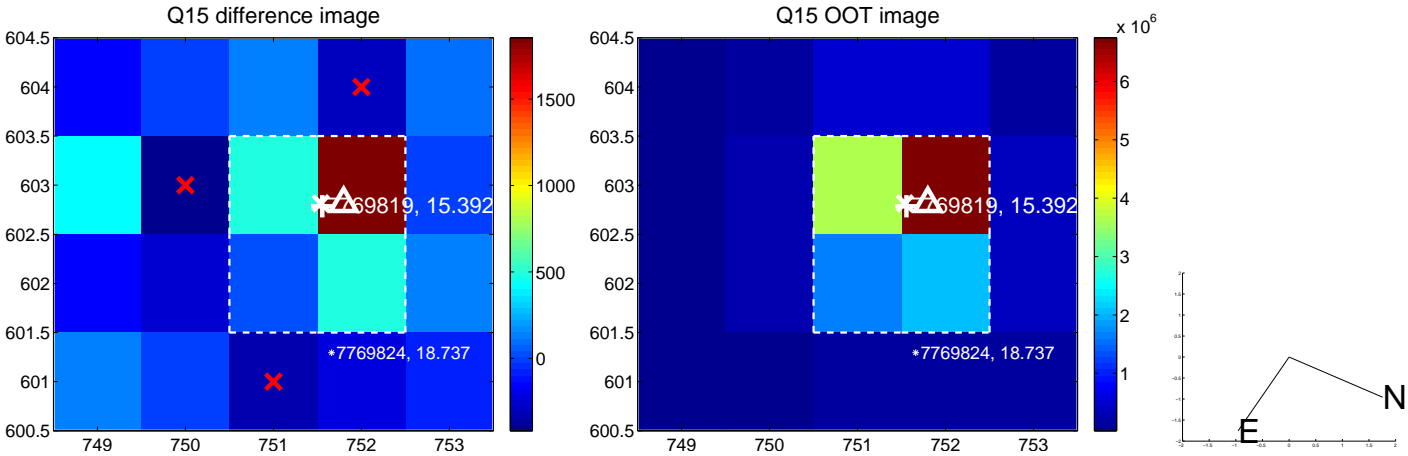
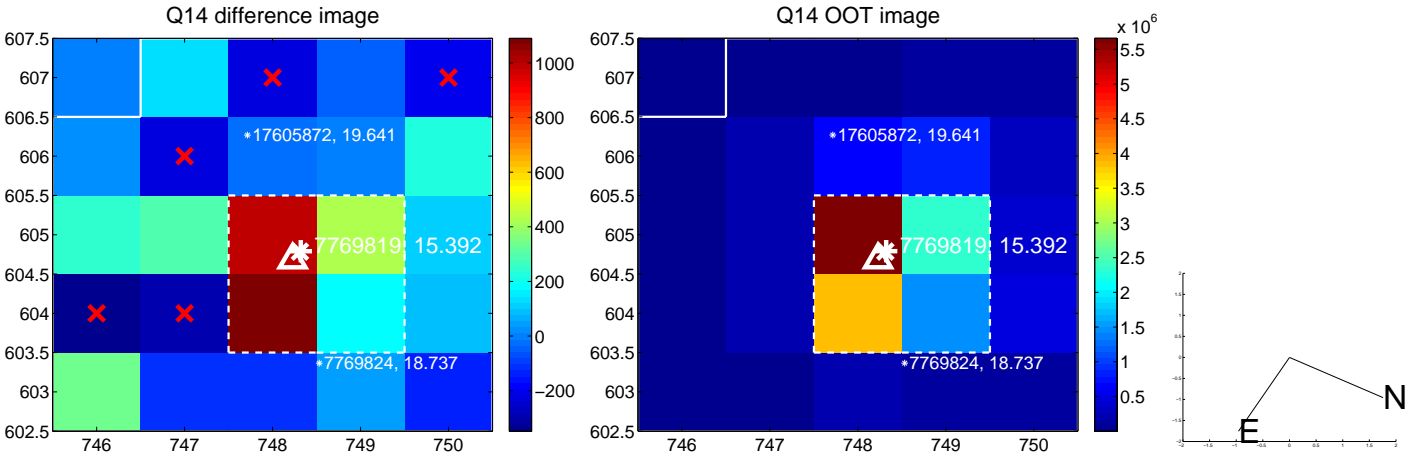
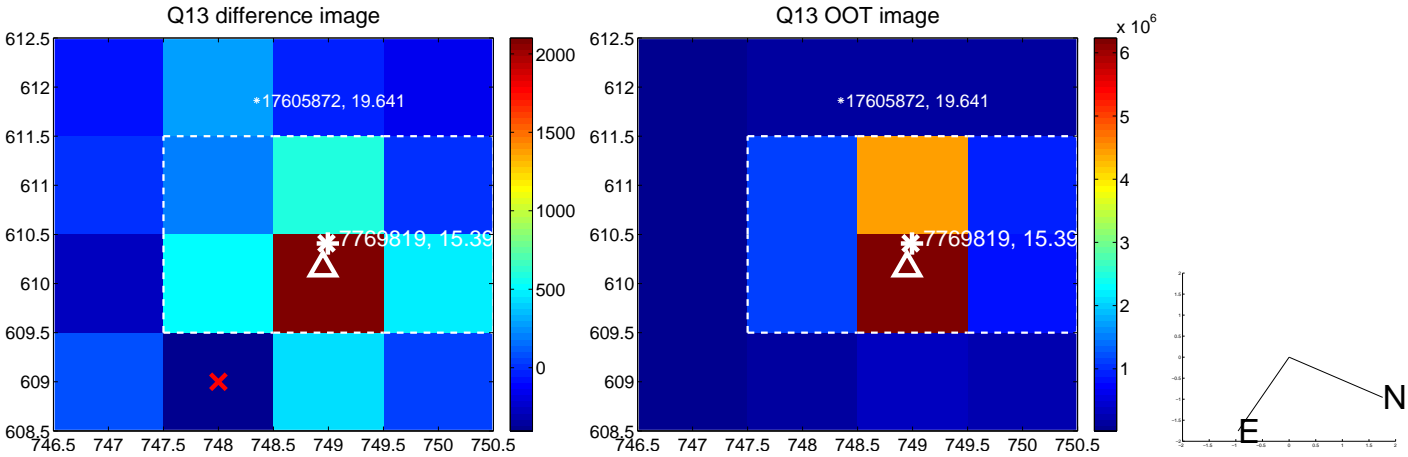
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



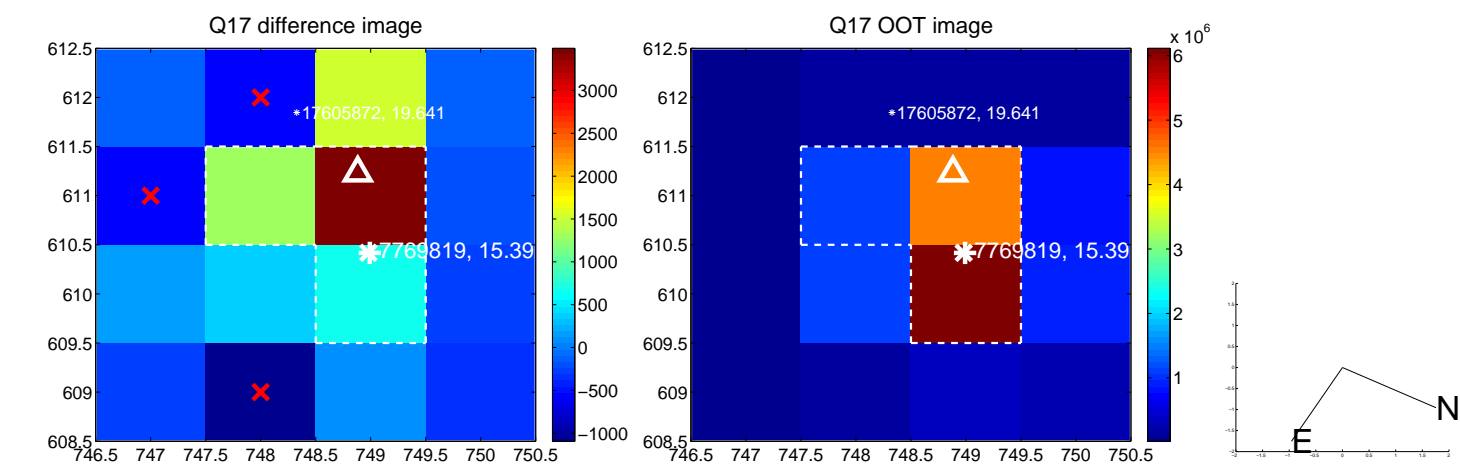
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



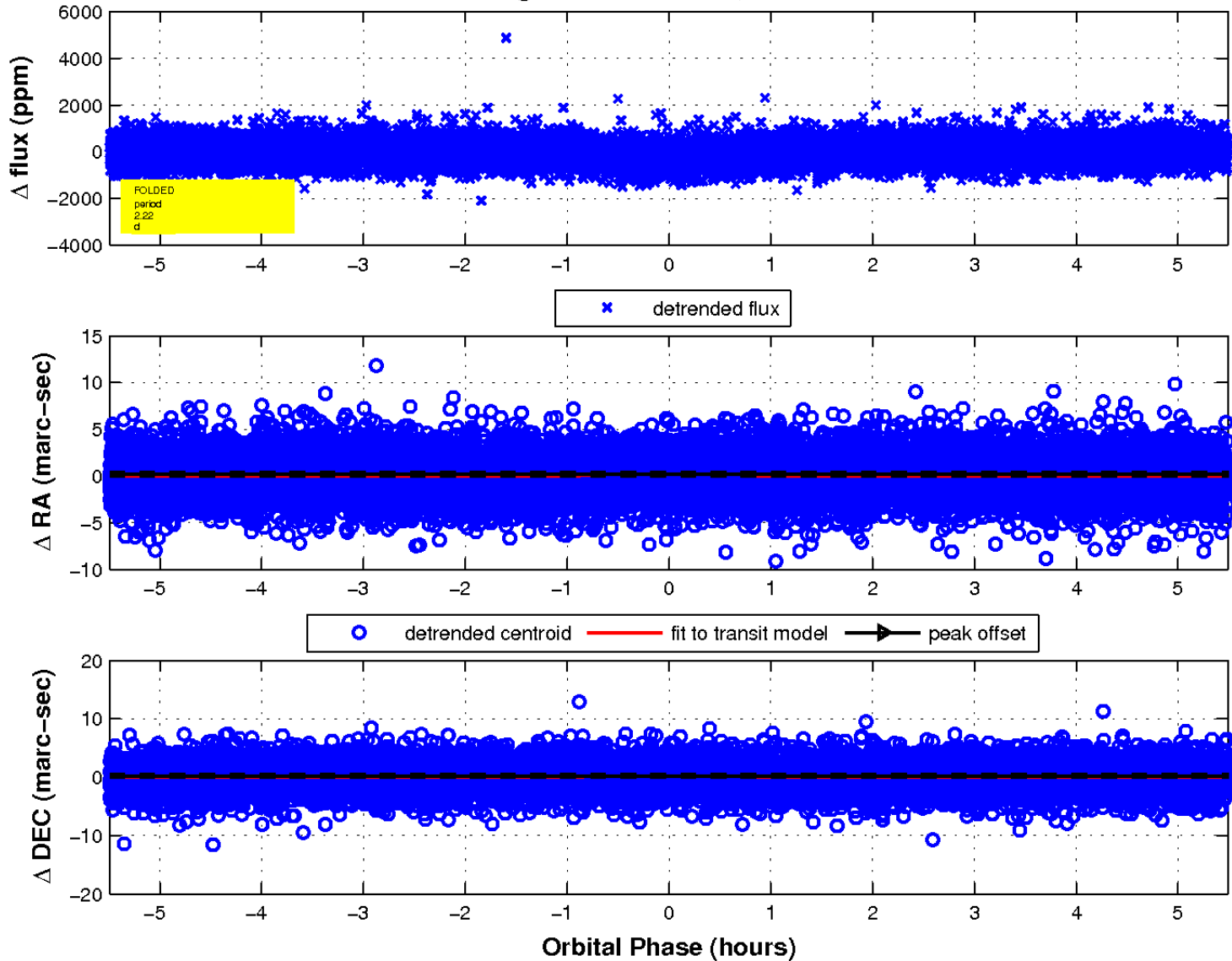
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

