

KIC 008247770

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})
008247770-01	OBS	2569.01	8.281627	136.248597	151.7	3.581	11.9	13.1	1.18	5640	1.71	197.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008247770-01	OBS	PC	0.43	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.

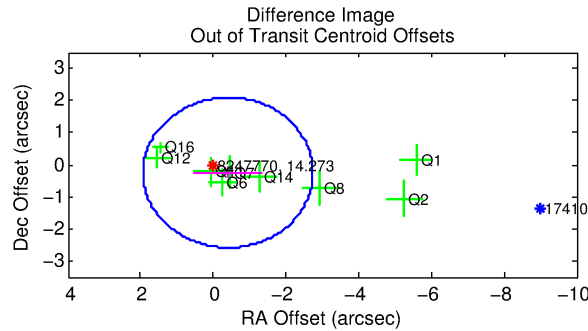
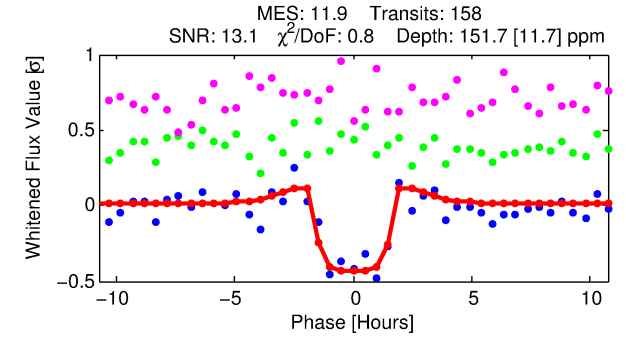
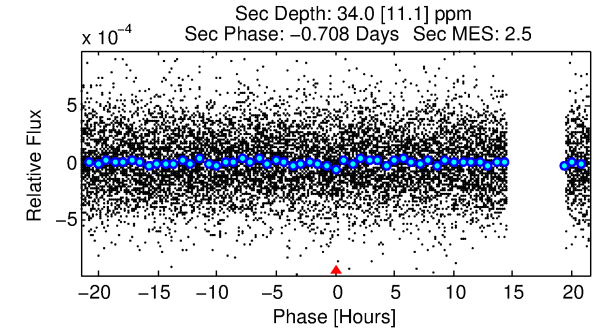
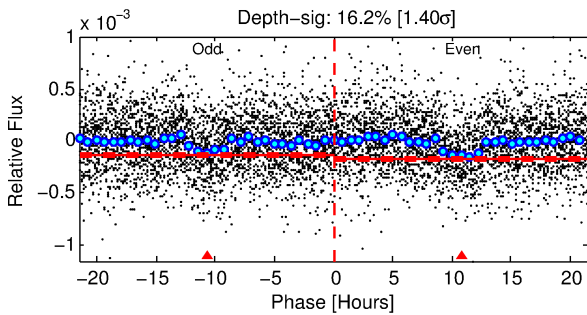
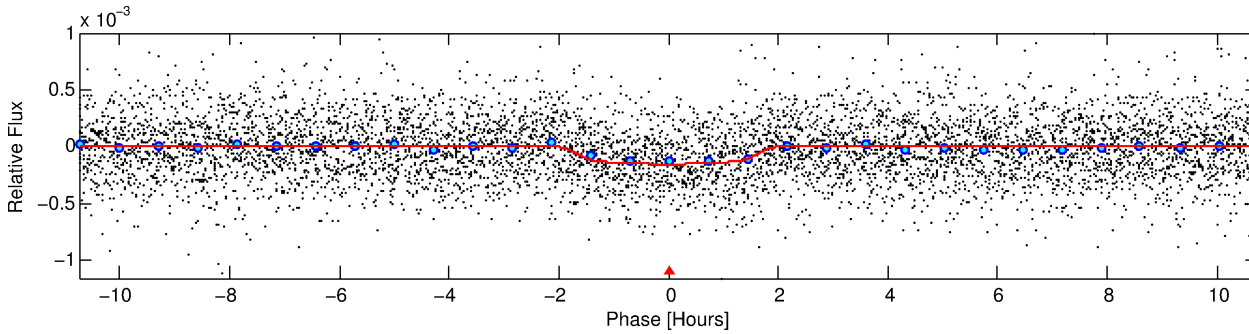
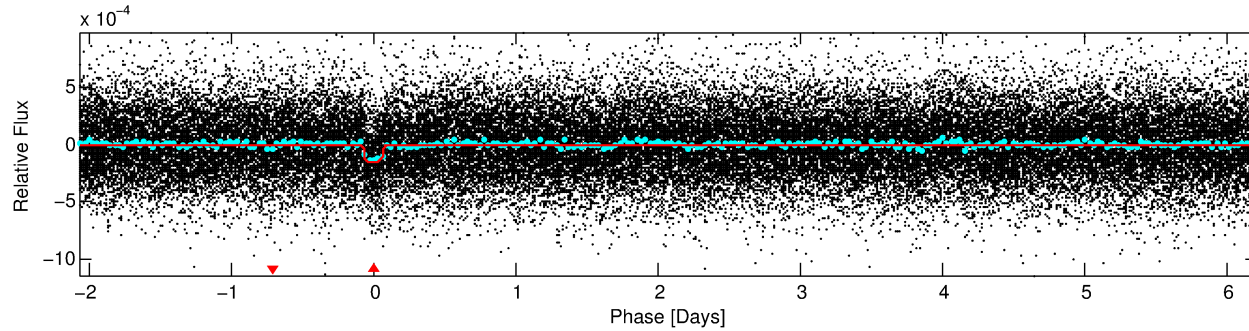
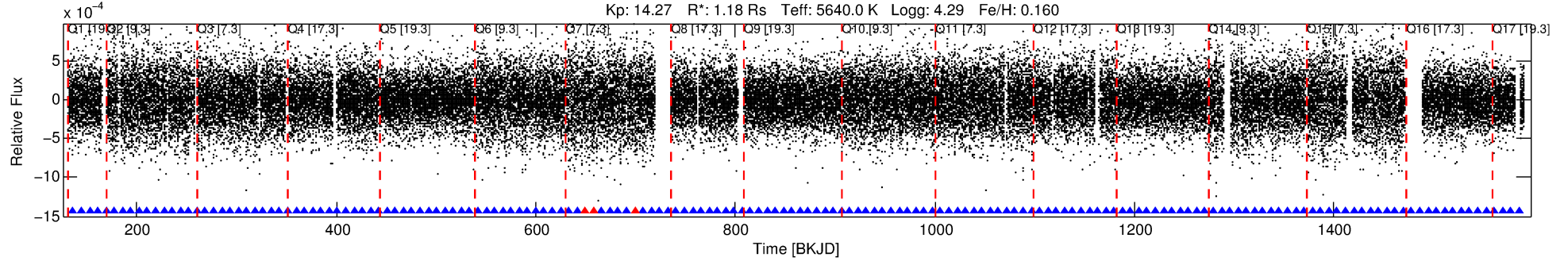
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008247770-01

No Significant Match Found

DV One-Page Summary

KIC: 8247770 Candidate: 1 of 1 Period: 8.282 d
KOI: K02569.01 Corr: 0.949



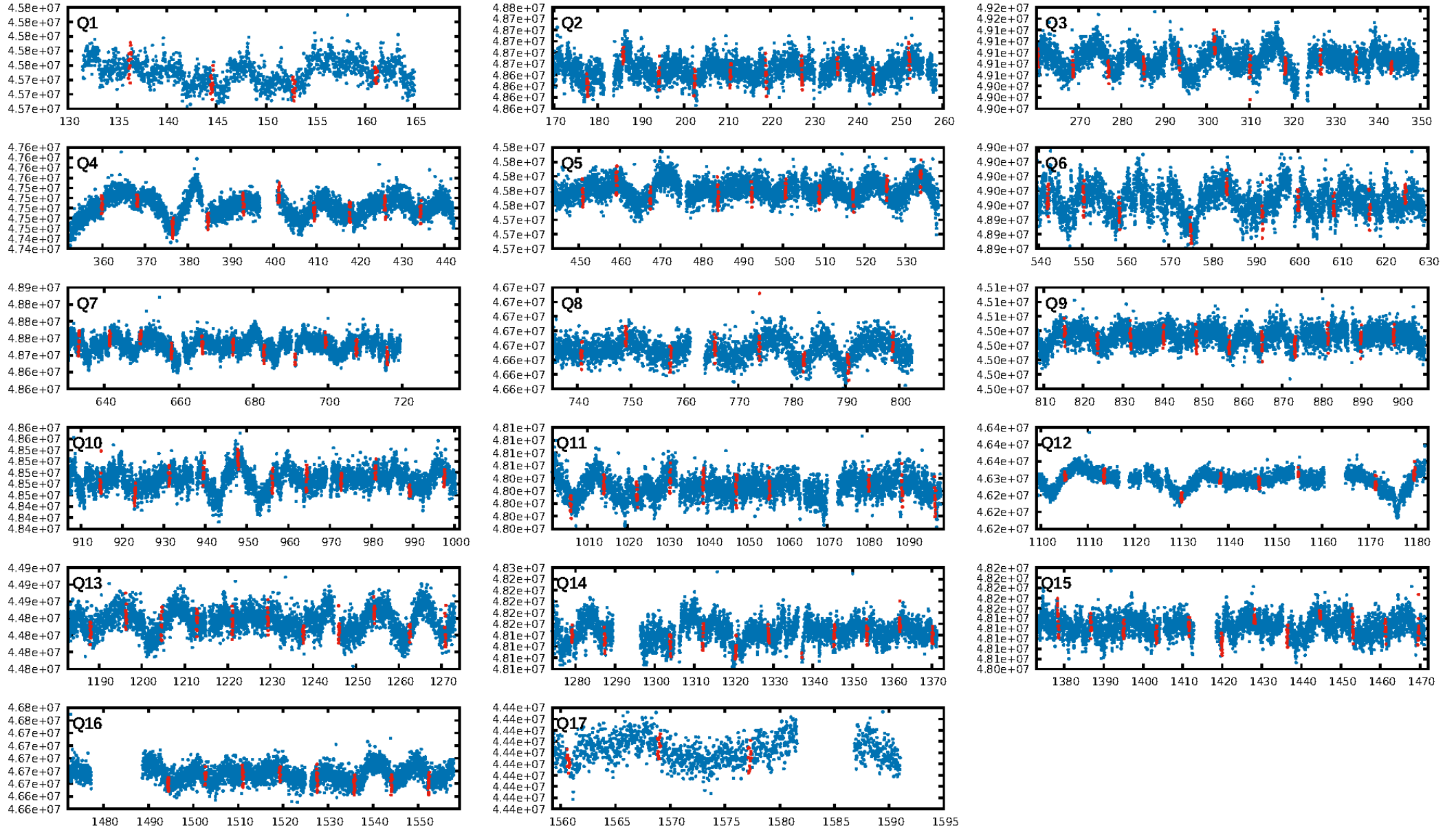
DV Fit Results:

Period = 8.28163 [0.00004] d
Epoch = 136.2486 [0.0042] BKJD
Rp/R* = 0.0134 [0.0047]
a/R* = 8.61 [13.56]
b = 0.89 [0.38]
Seff = 197.95 [49.05]
Teff = 956 [59] K
Rp = 1.71 [0.66] Re
a = 0.0795 [0.0119] AU
Ag = 40.22 [32.86] [1.19 σ]
Teffp = 3724 [728] K [3.79 σ]

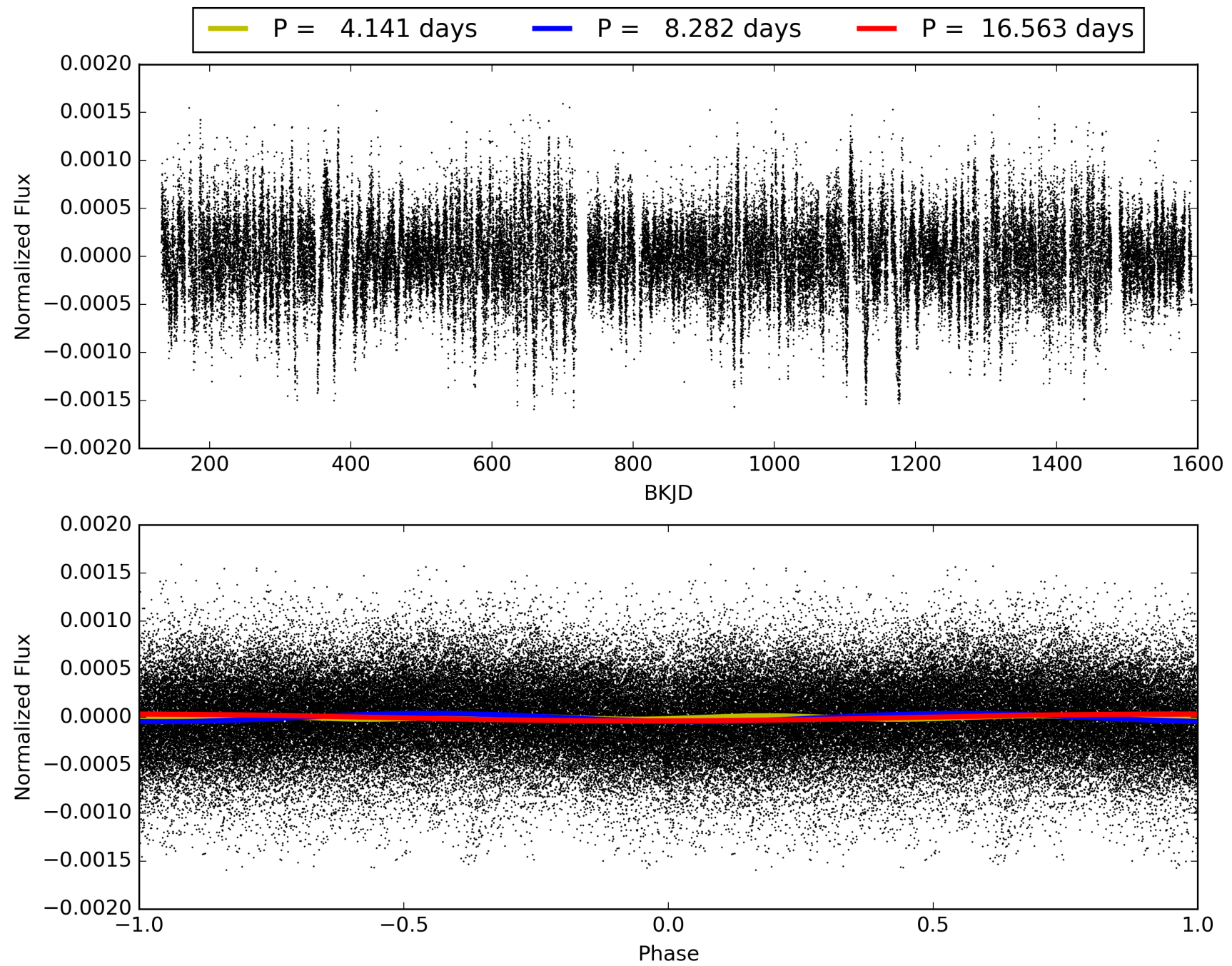
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.63e-31
RollingBand-fgt: 0.98 [148/151]
GhostDiagnostic-chr: -3.33
Centroid-sig: 0.0%
Centroid-so: 0.595 arcsec [0.72 σ]
OotOffset-rm: 0.472 arcsec [0.61 σ]
KicOffset-rm: 2.837 arcsec [3.19 σ]
OotOffset-st: 3/2/3/1 [9]
KicOffset-st: 3/2/3/1 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008247770-01, PDC Light Curves

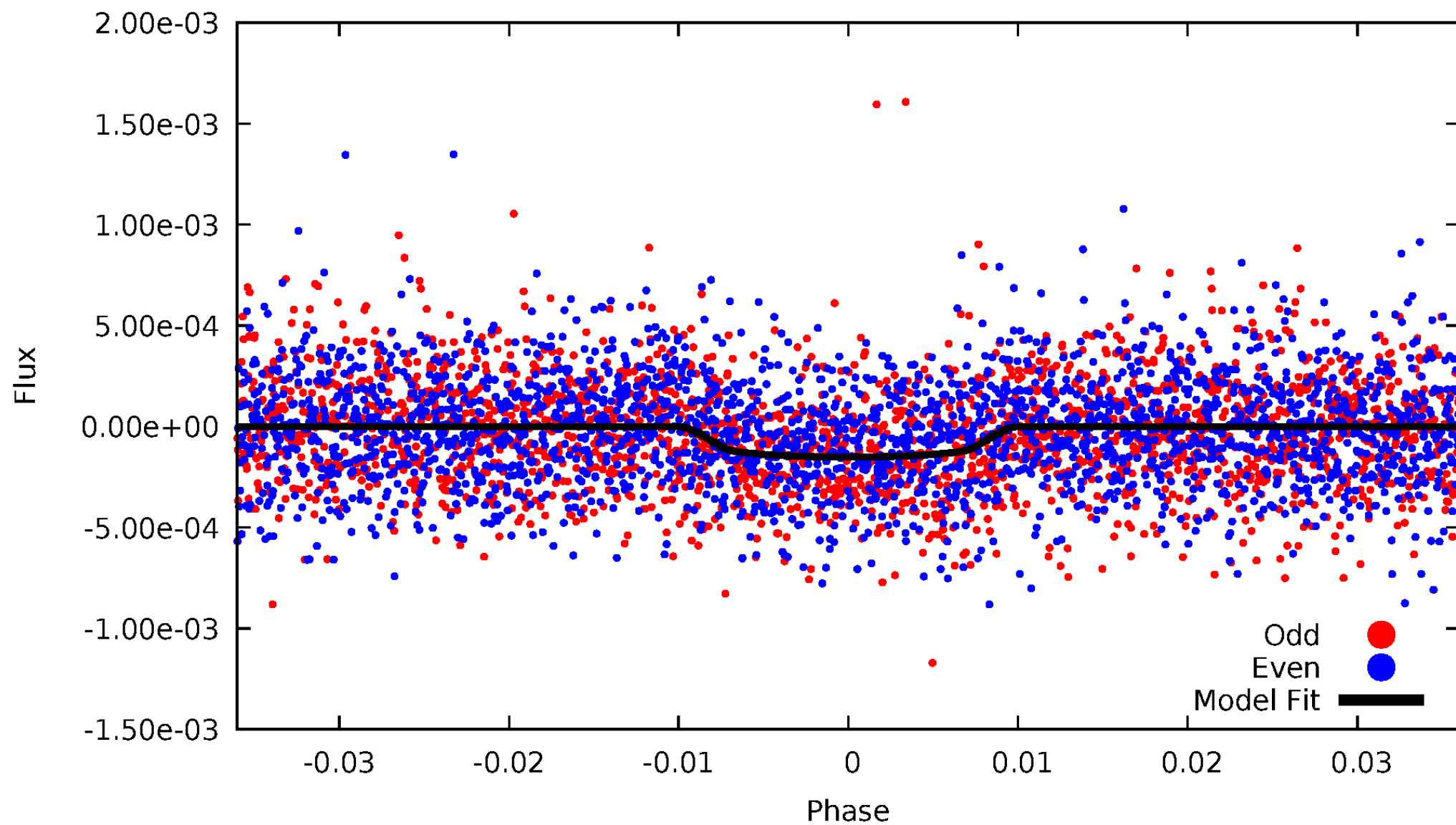


TCE 008247770-01



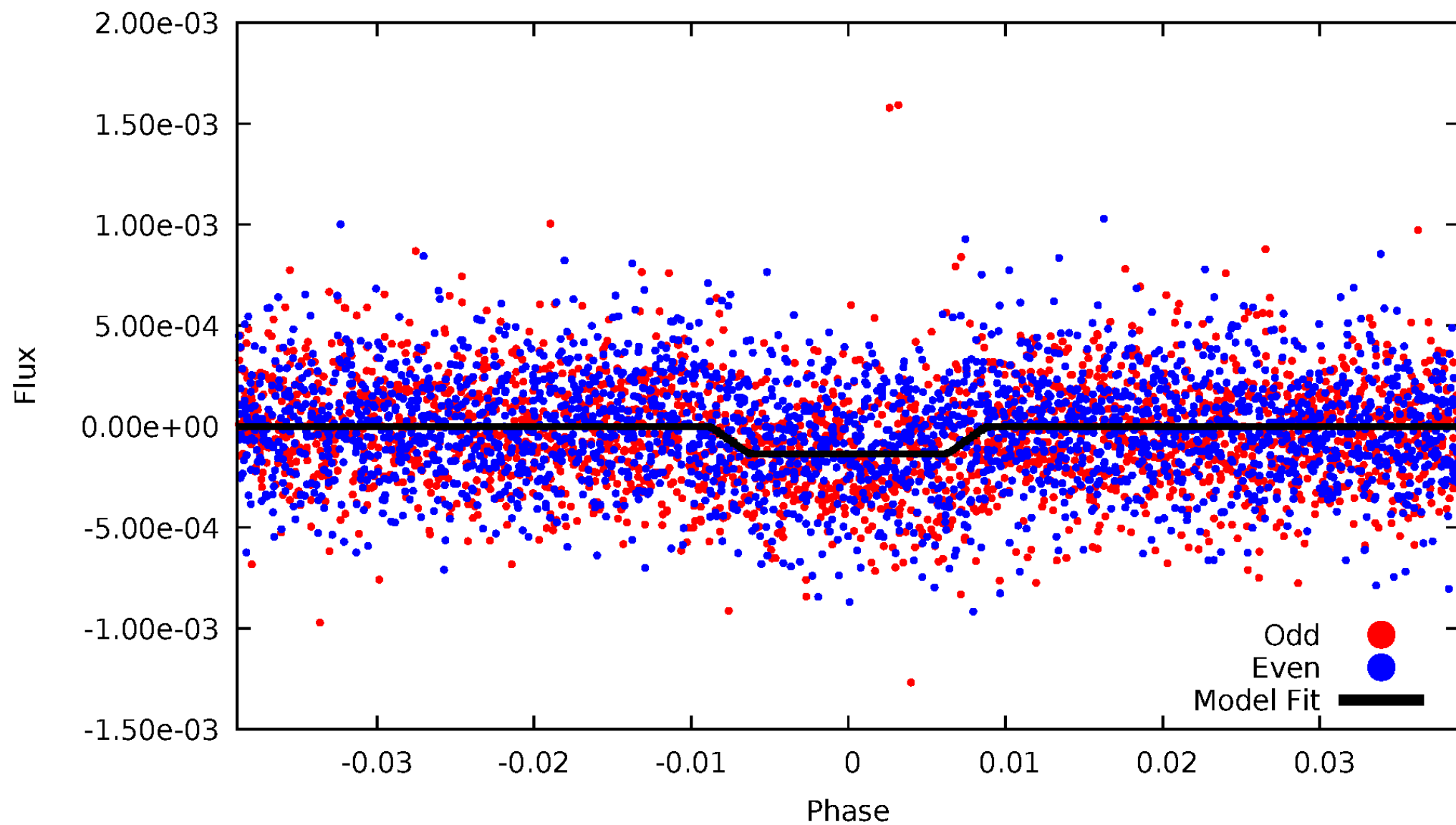
DV Odd/Even

TCE 008247770-01

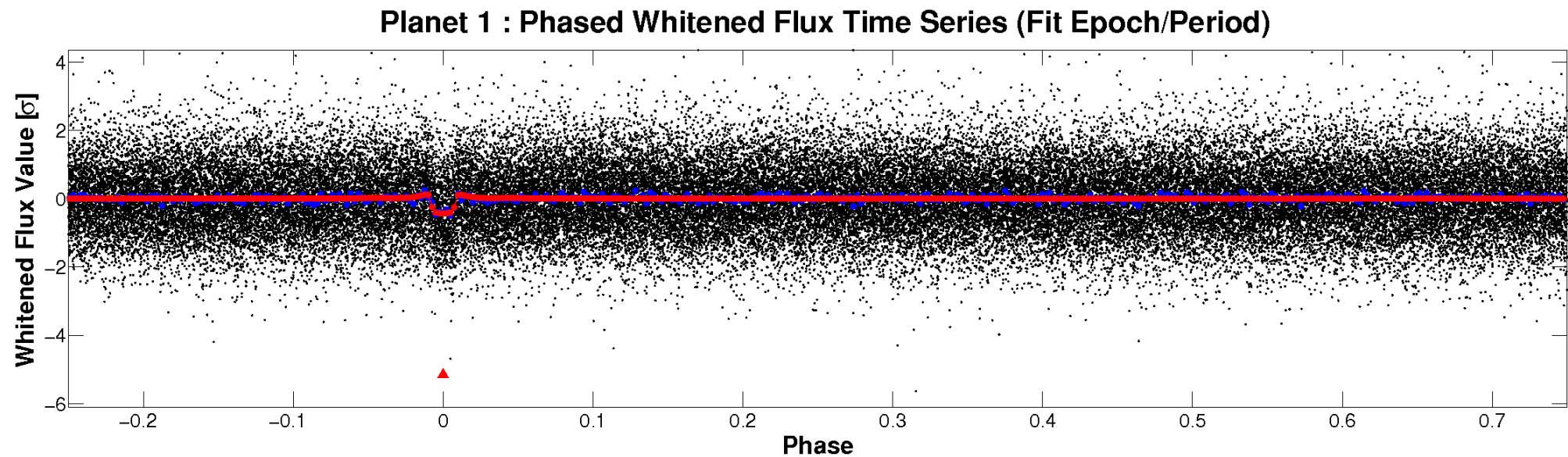
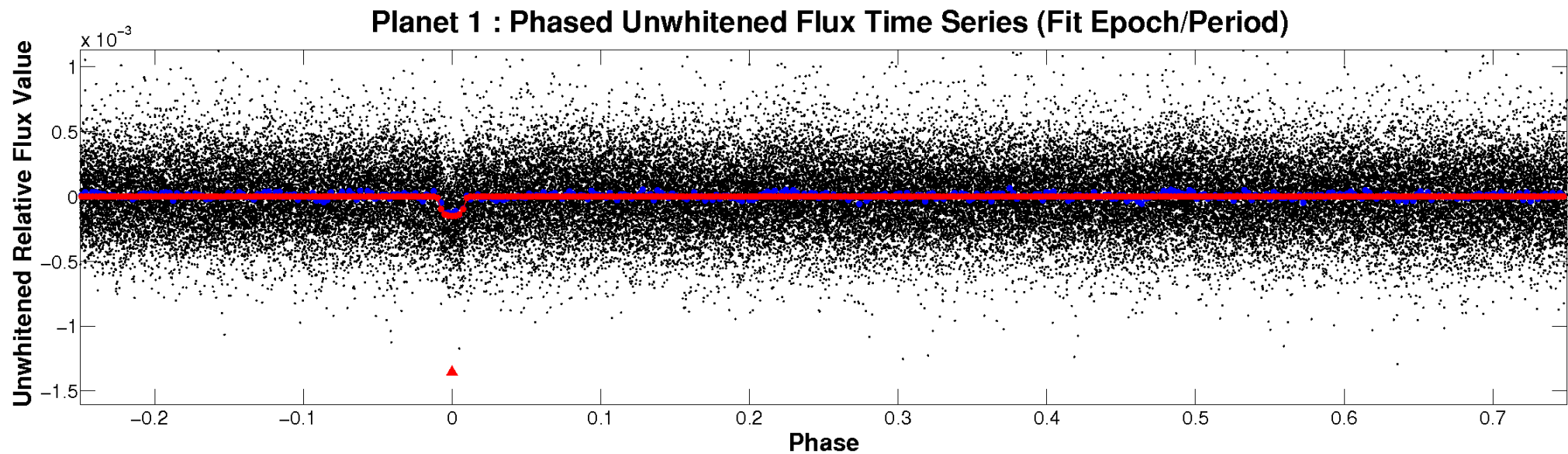


ALT Odd/Even

TCE 008247770-01

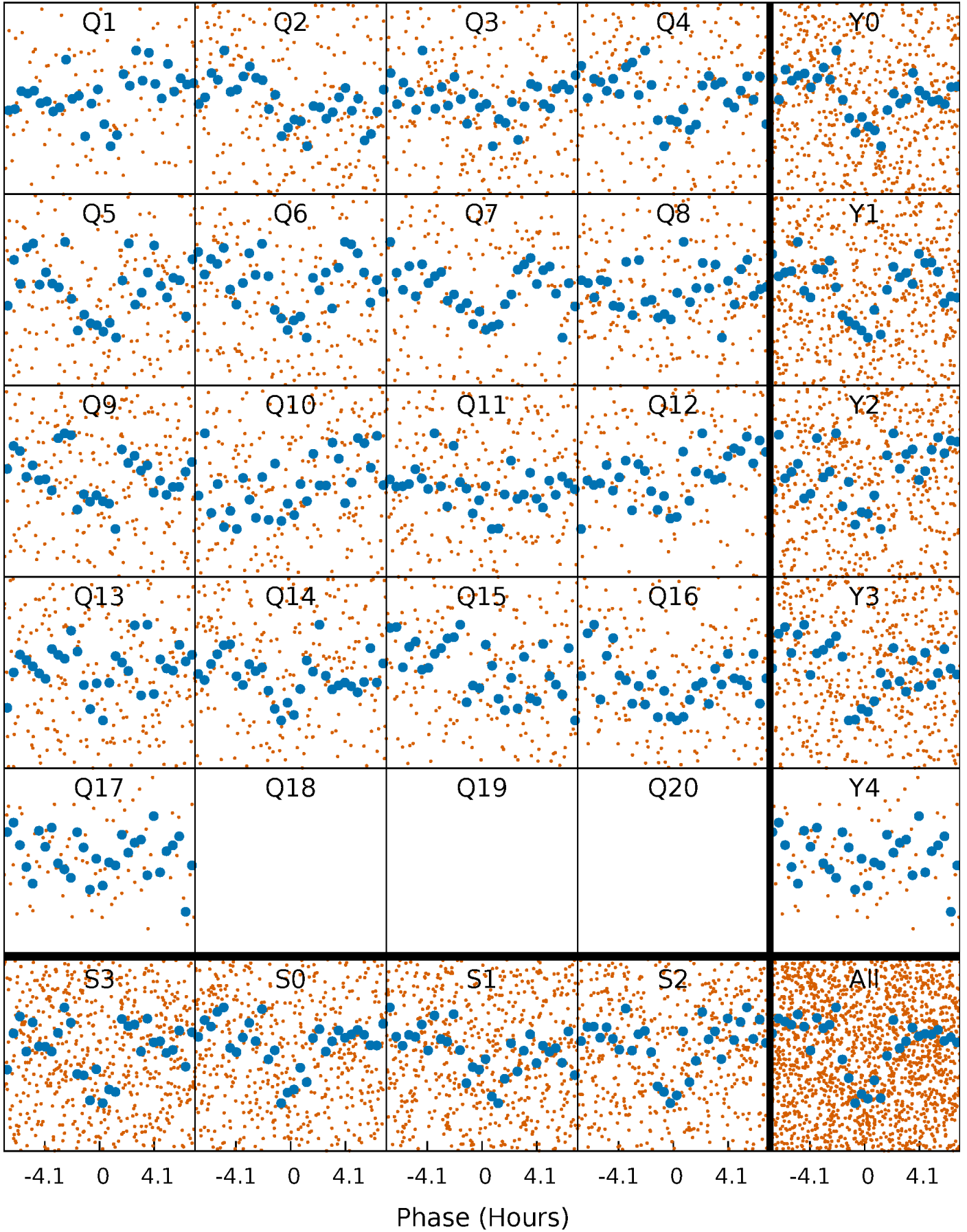


Non-Whitened Vs. Whitened Light Curve



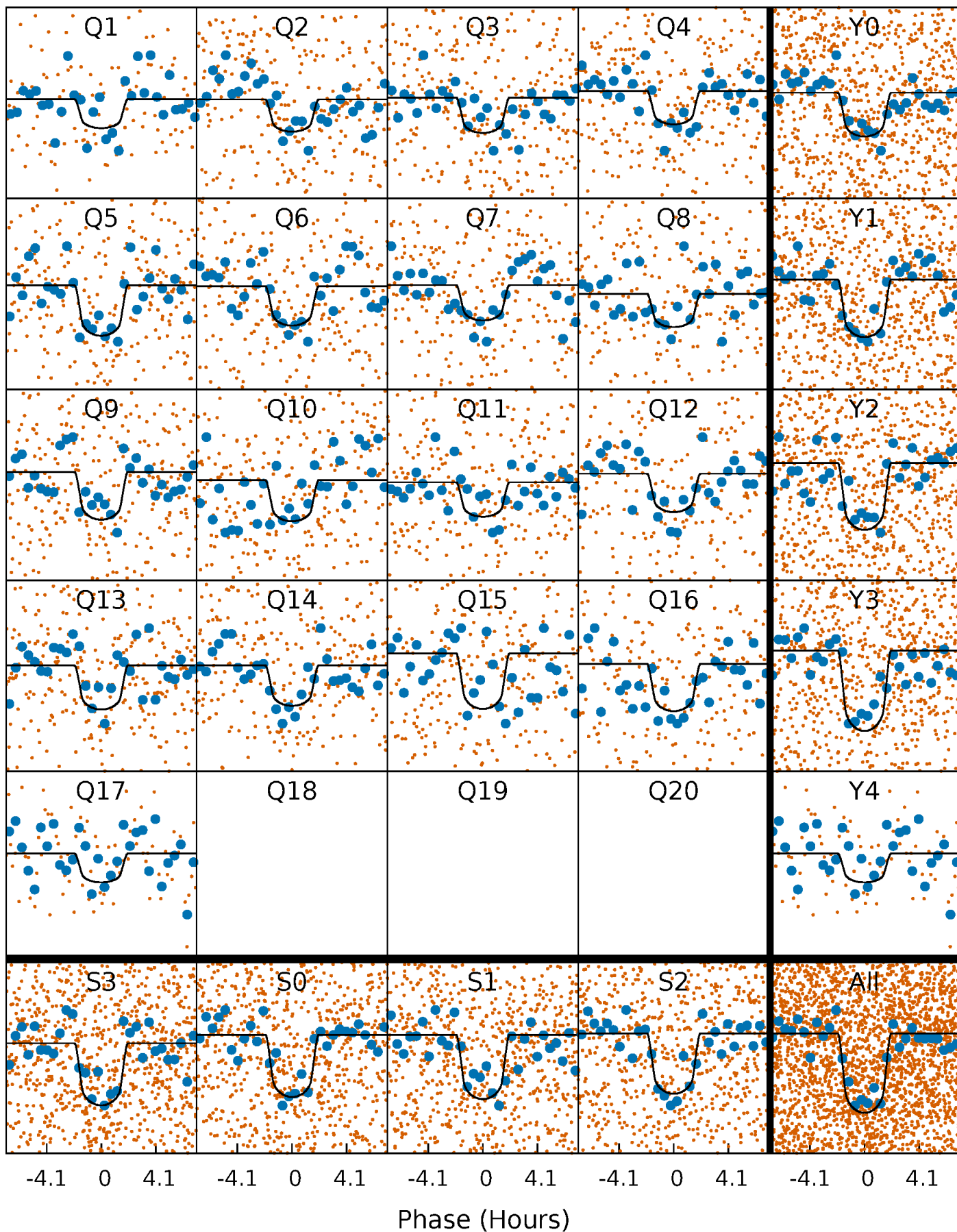
PDC Quarter-Phased Transit Curves

TCE 008247770-01 P= 8.281627 Days $T_0=136.248597$ (BKJD)



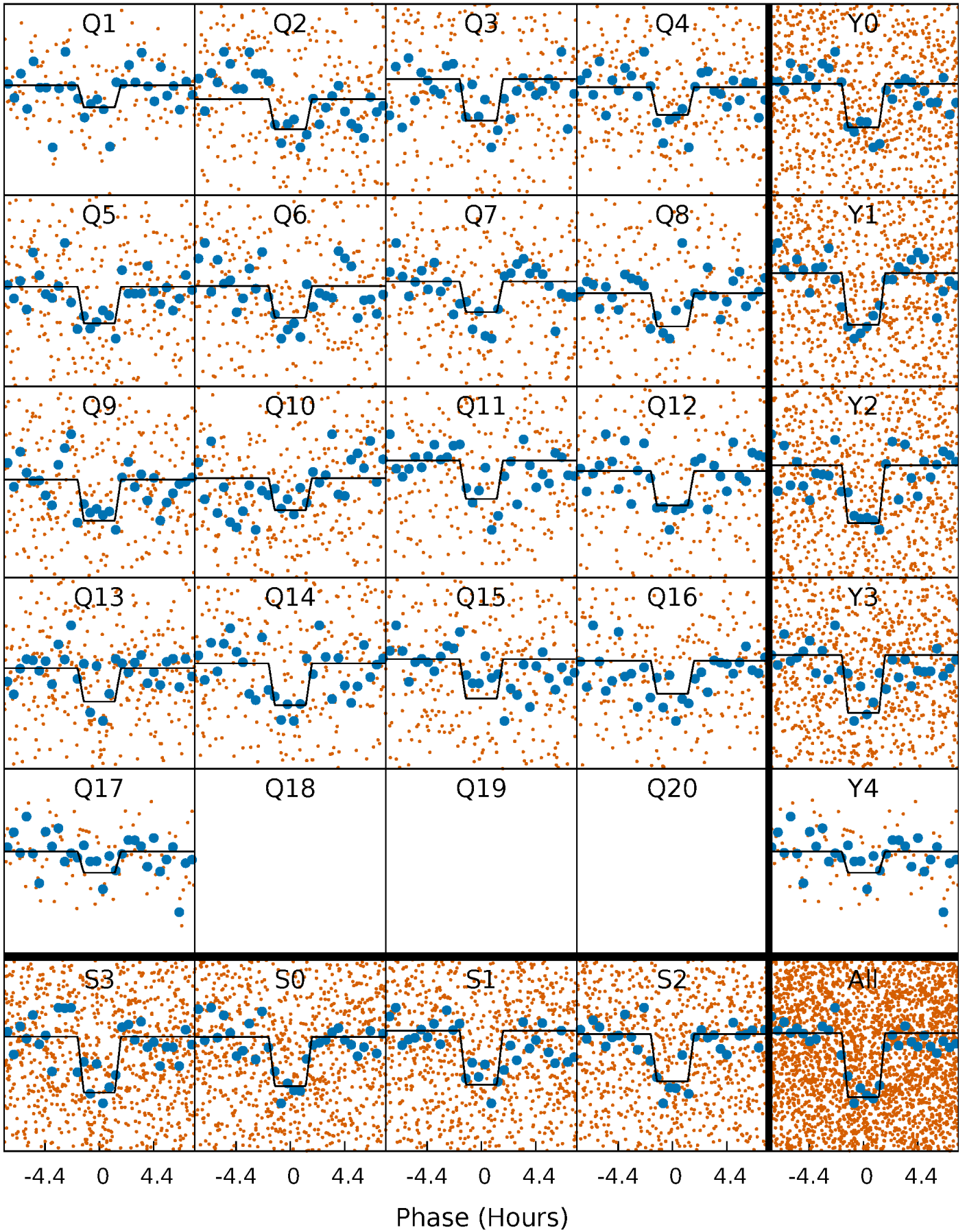
DV Quarter-Phased Transit Curves

TCE 008247770-01 P= 8.281627 Days $T_0=136.248597$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

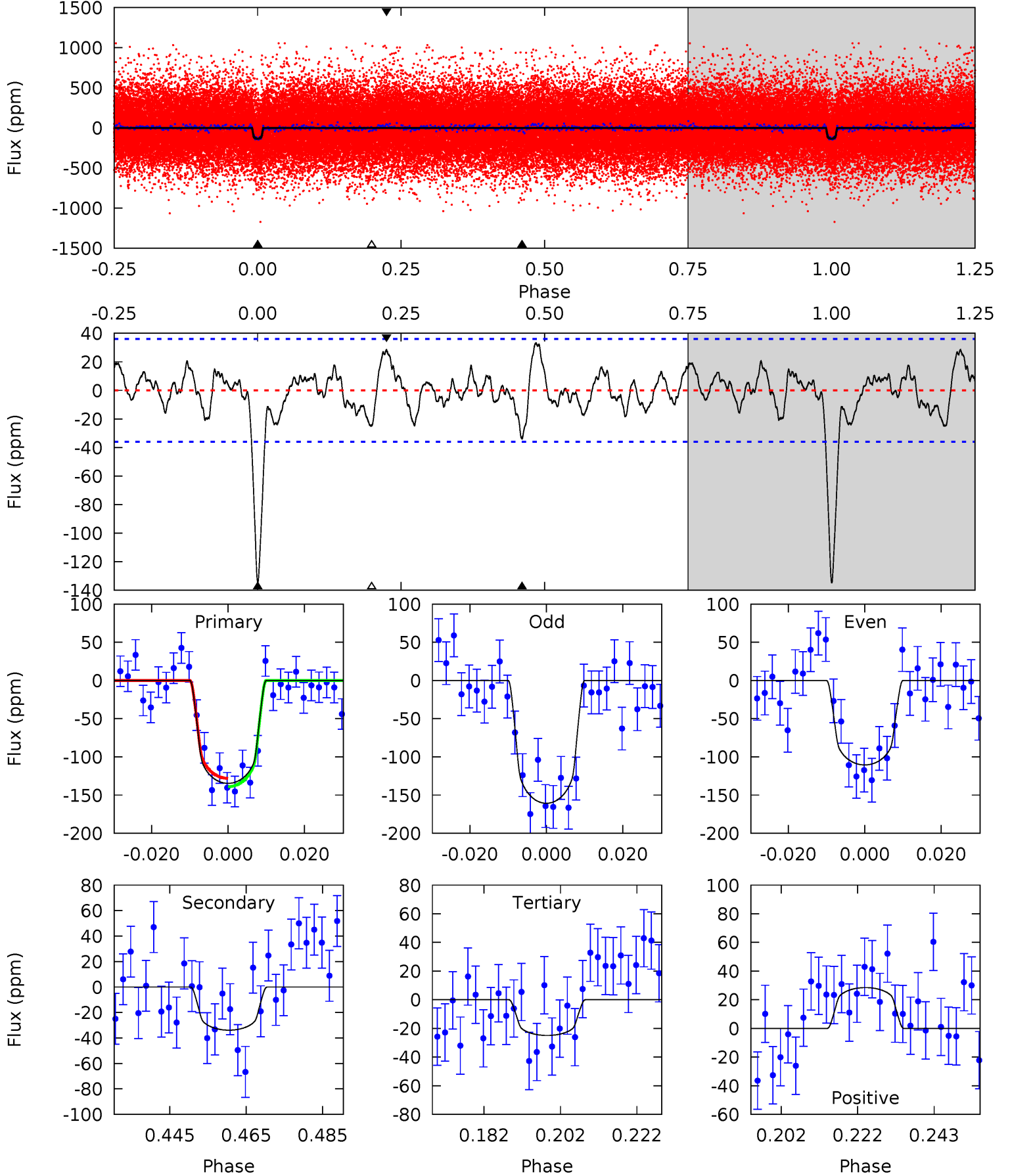
TCE 008247770-01 P= 8.281513 Days $T_0=136.259012$ (BKJD)



DV Model-Shift Uniqueness Test

008247770-01, P = 8.281627 Days, E = 127.966970 Days

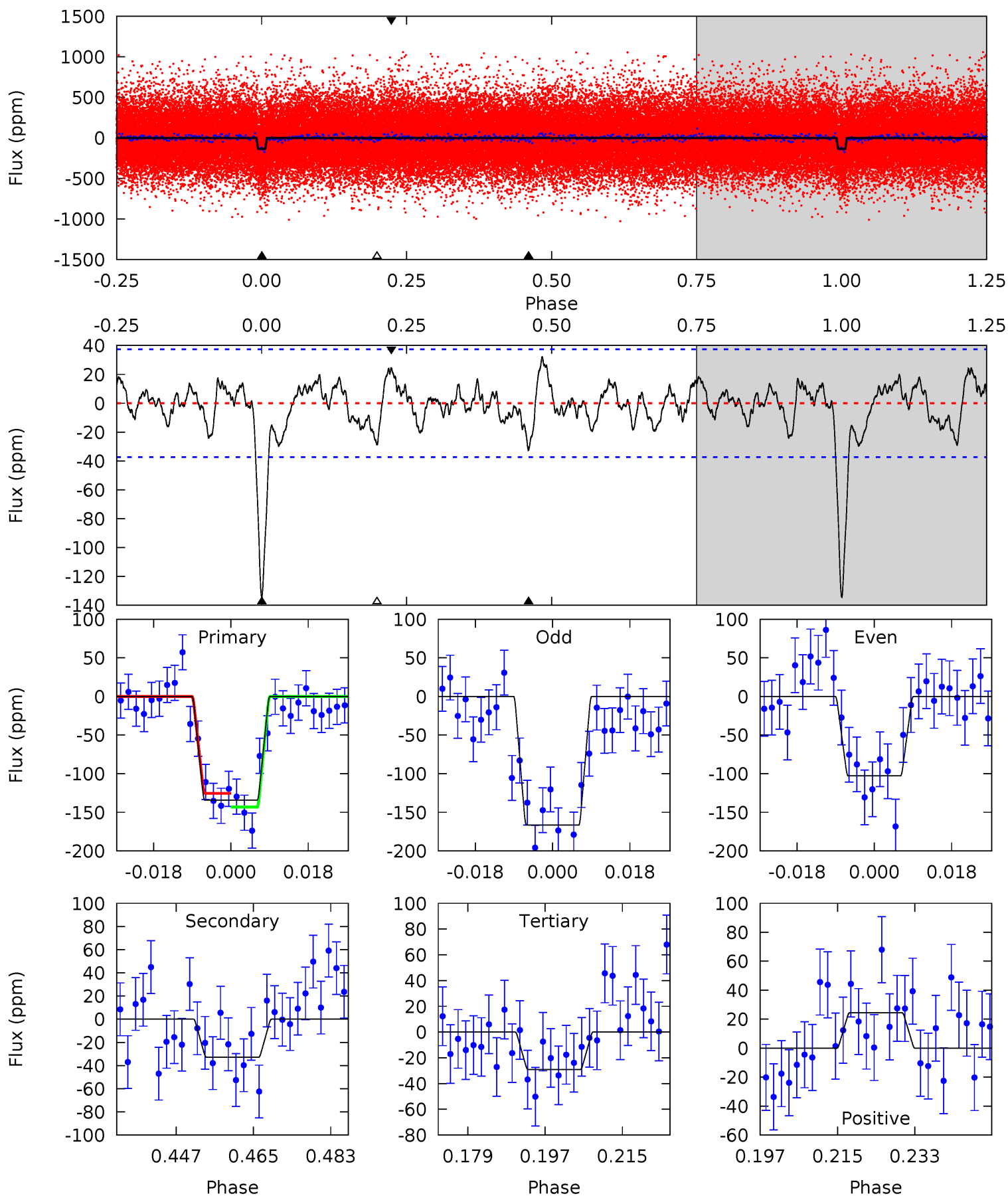
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	4.61	3.39	3.87	4.89	2.32	1.49	14.9	14.4	1.22	0.73	3.42	0.94	0.20	0.74



Alt Model-Shift Uniqueness Test

008247770-01, P = 8.281513 Days, E = 127.977499 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.7	4.30	3.82	3.22	4.91	2.37	1.44	13.9	14.4	0.49	1.08	4.18	0.98	0.19	1.17



Stellar Parameters For KIC 008247770

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5640^{+76}_{-76}	$4.288^{+0.143}_{-0.104}$	$0.160^{+0.150}_{-0.150}$	$1.175^{+0.179}_{-0.179}$	$0.976^{+0.065}_{-0.058}$	$0.848^{+0.603}_{-0.255}$
	+1%/-1%	+3%/-2%	+94%/-94%	+15%/-15%	+7%/-6%	+71%/-30%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008247770-01 / KOI 2569.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-34 ± 7	$1.72^{+0.66}_{-0.62}$	1333^{+57}_{-64}	3981^{+720}_{-422}	39^{+59}_{-19}
Alt.	-33 ± 8	$1.47^{+0.62}_{-0.59}$	1330^{+55}_{-56}	4192^{+1028}_{-517}	53^{+97}_{-29}

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

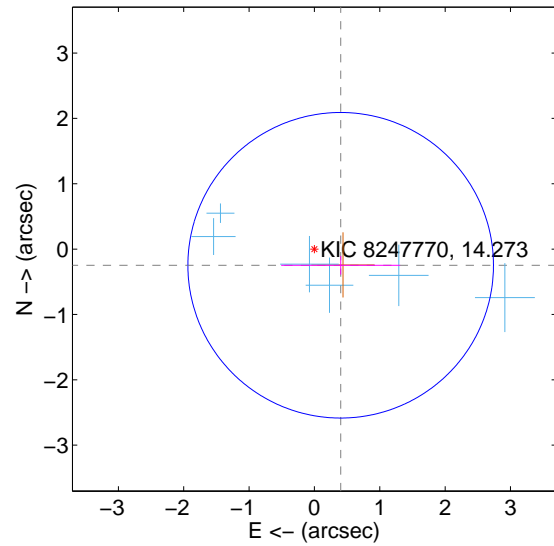
Supplemental centroid analysis for 008247770-01. Kepler magnitude: 14.27. Transit SNR 13.10

There are 6 quarters with good PRF difference image offsets

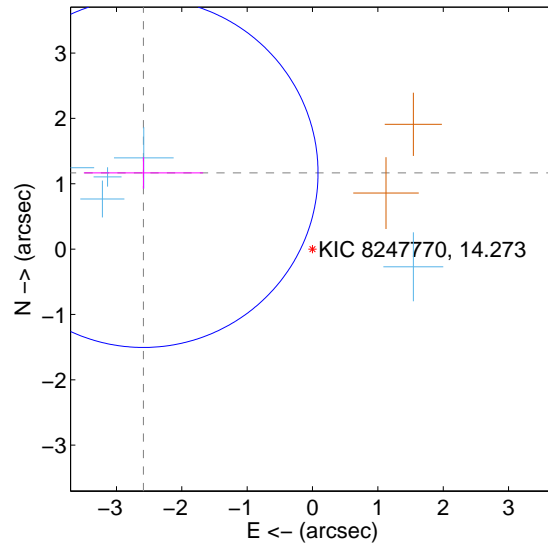
The direct PRF centroid is offset from the target star catalog position by about 1.79 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.472 ± 0.779	0.61	-0.401 ± 0.911	-0.247 ± 0.143
PRF-fit source offset from KIC position	2.837 ± 0.890	3.19	2.587 ± 0.912	1.166 ± 0.242
photometric centroid source offset	0.59 ± 0.83	0.72	0.57 ± 0.84	0.15 ± 0.61

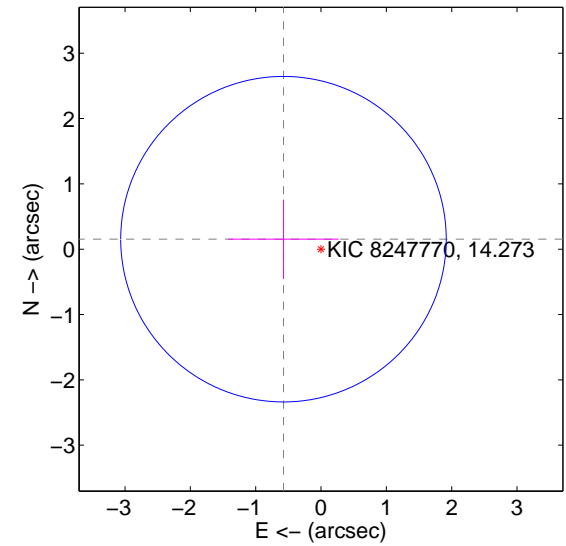
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

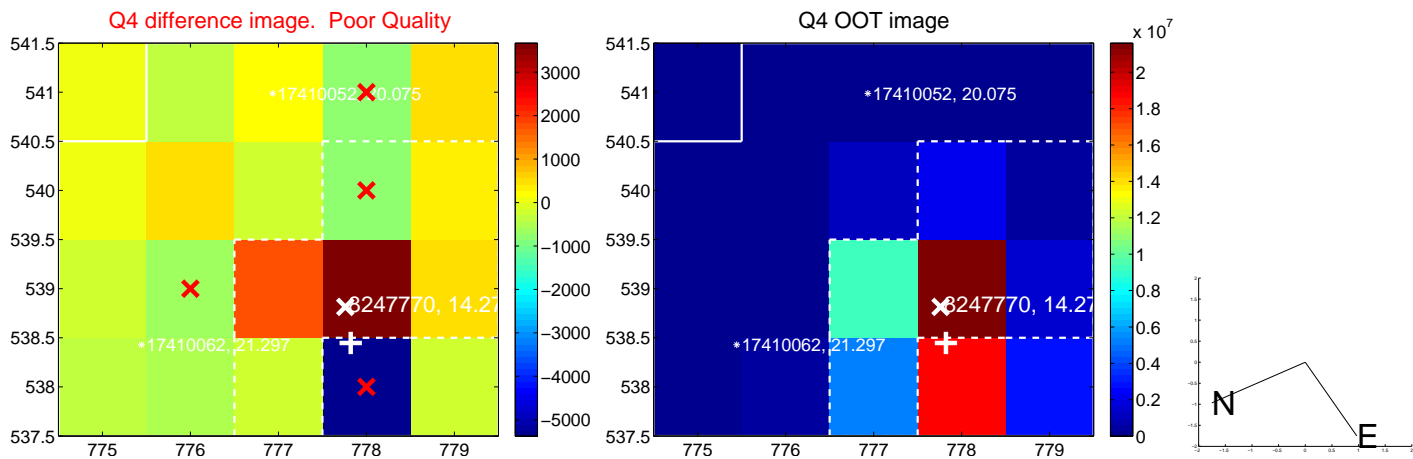
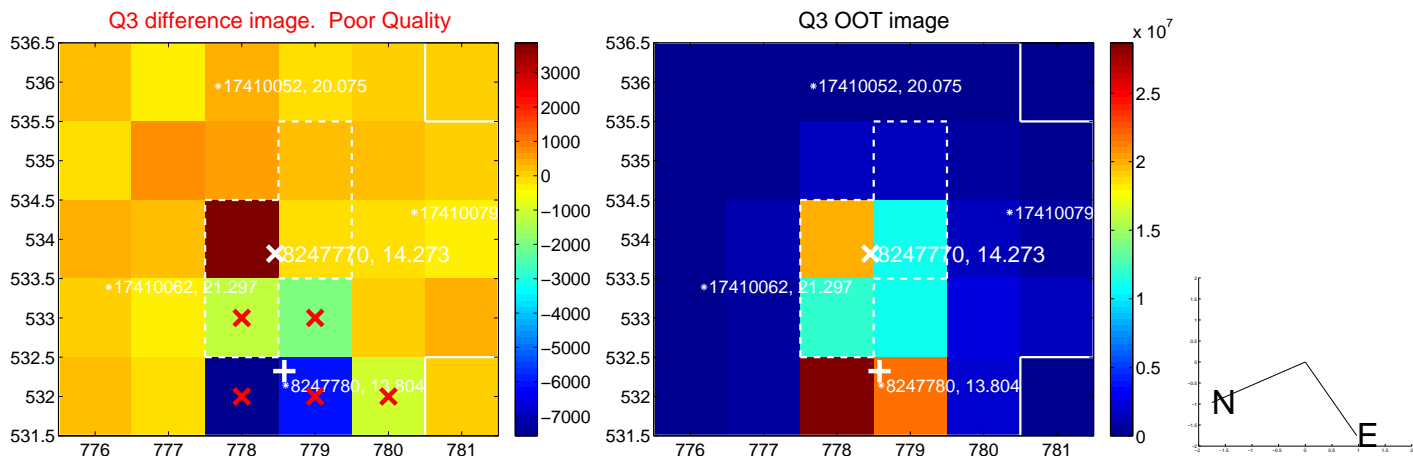
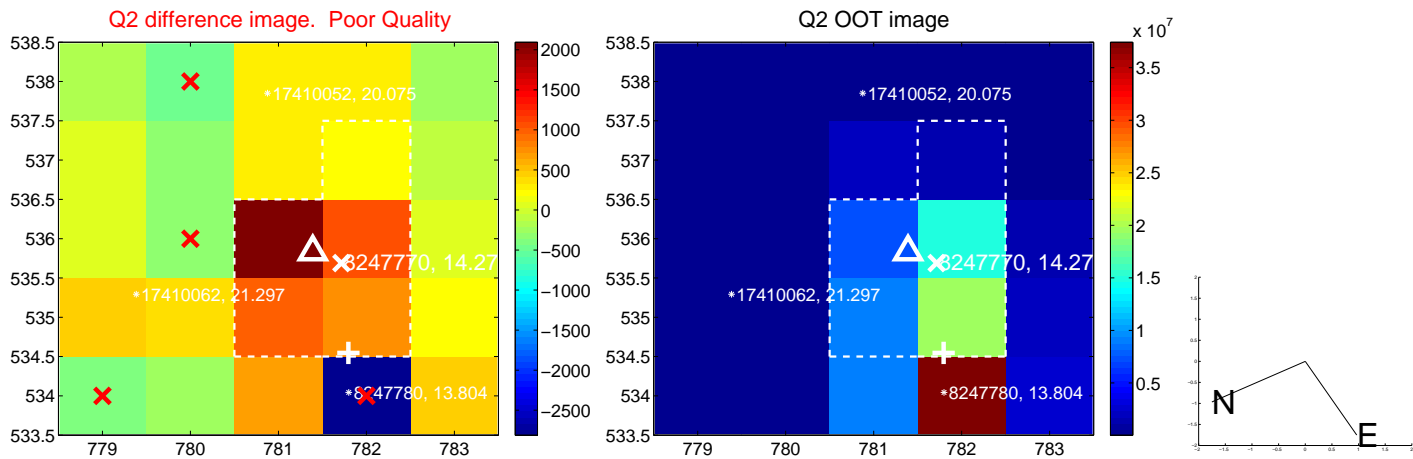
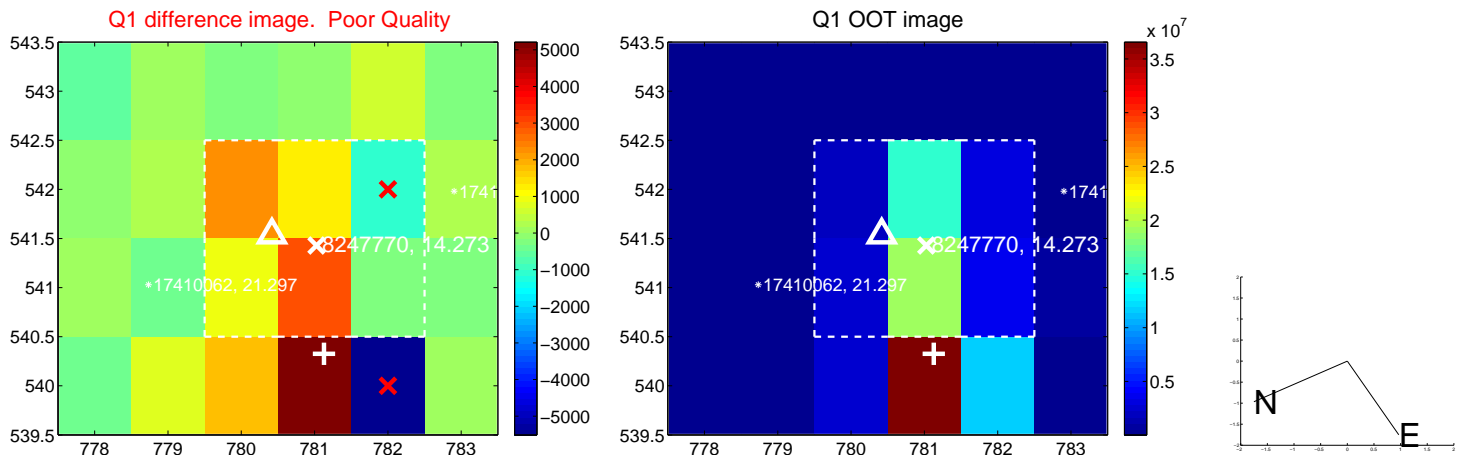


offset from photometric centroids

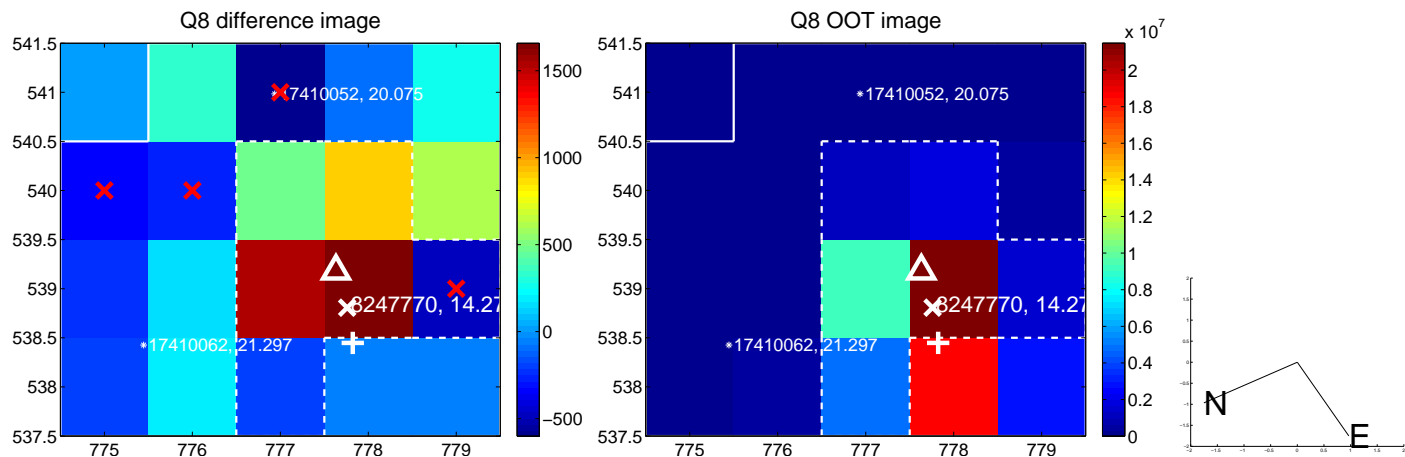
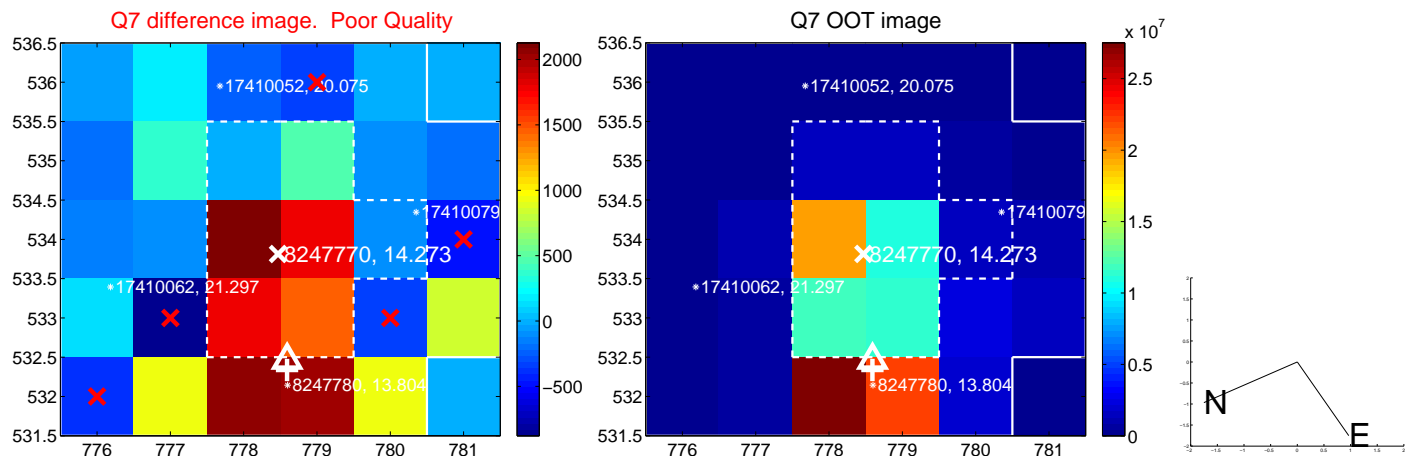
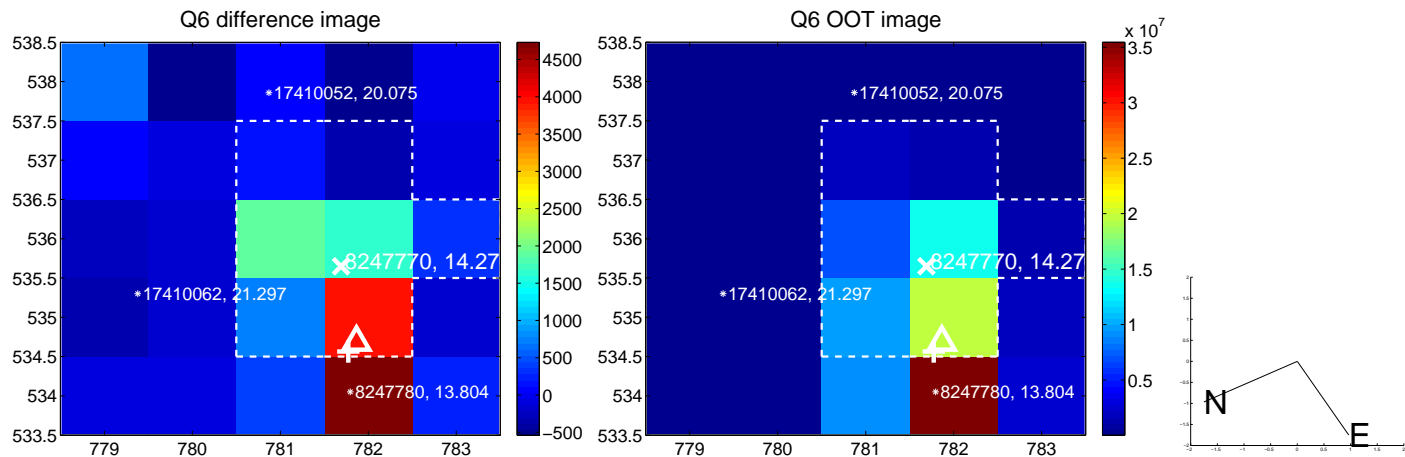
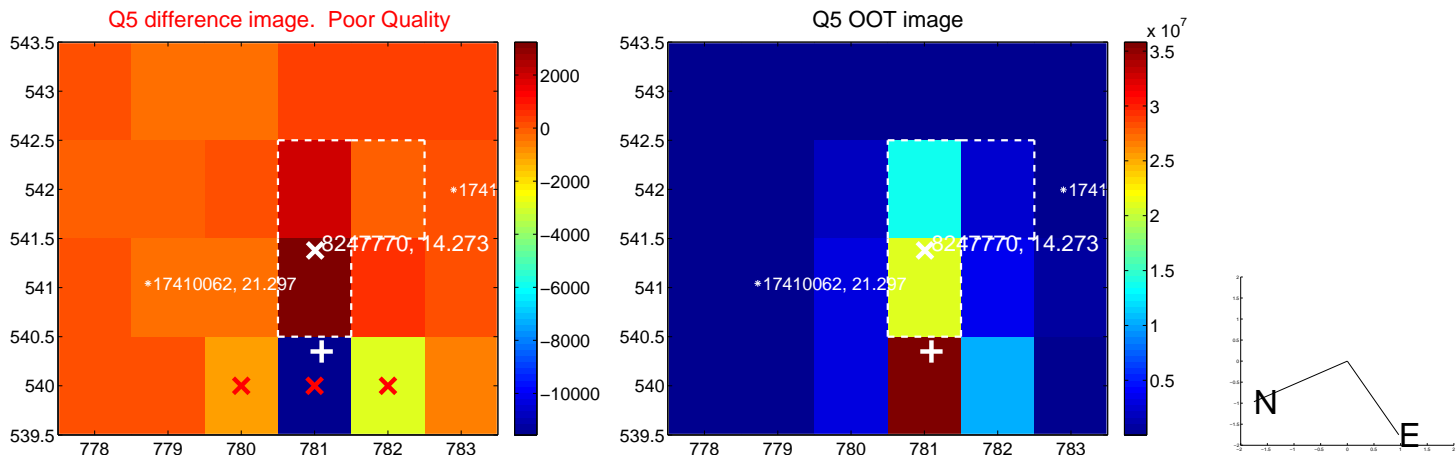


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

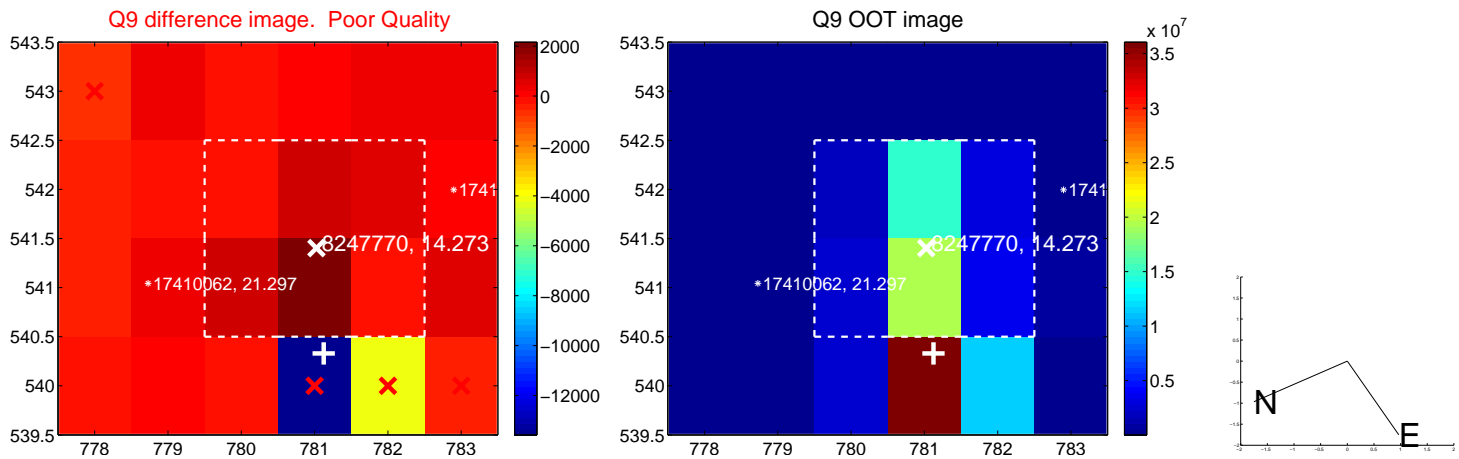
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



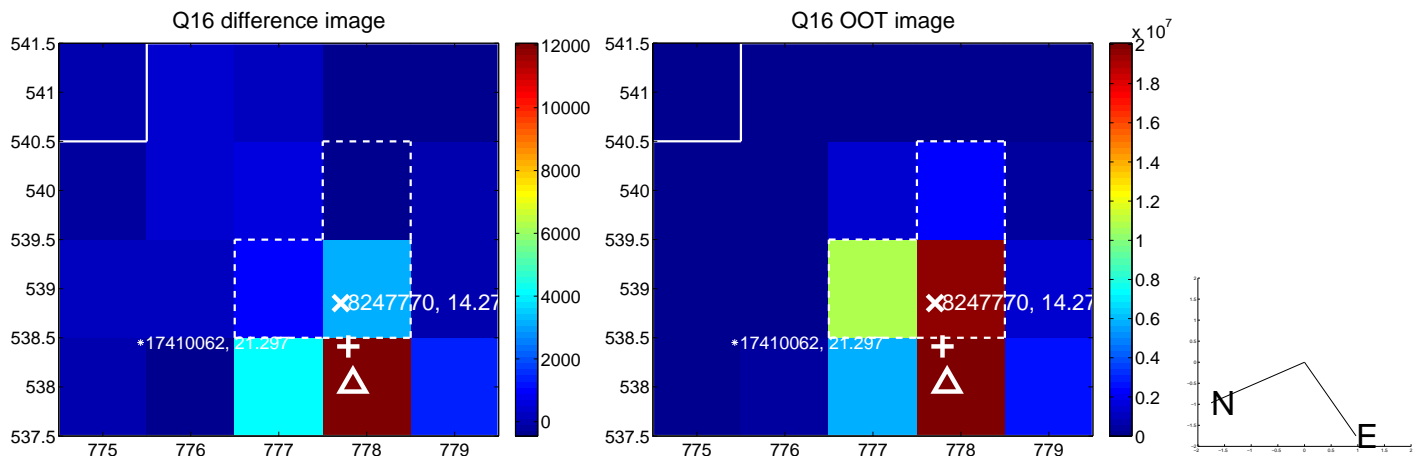
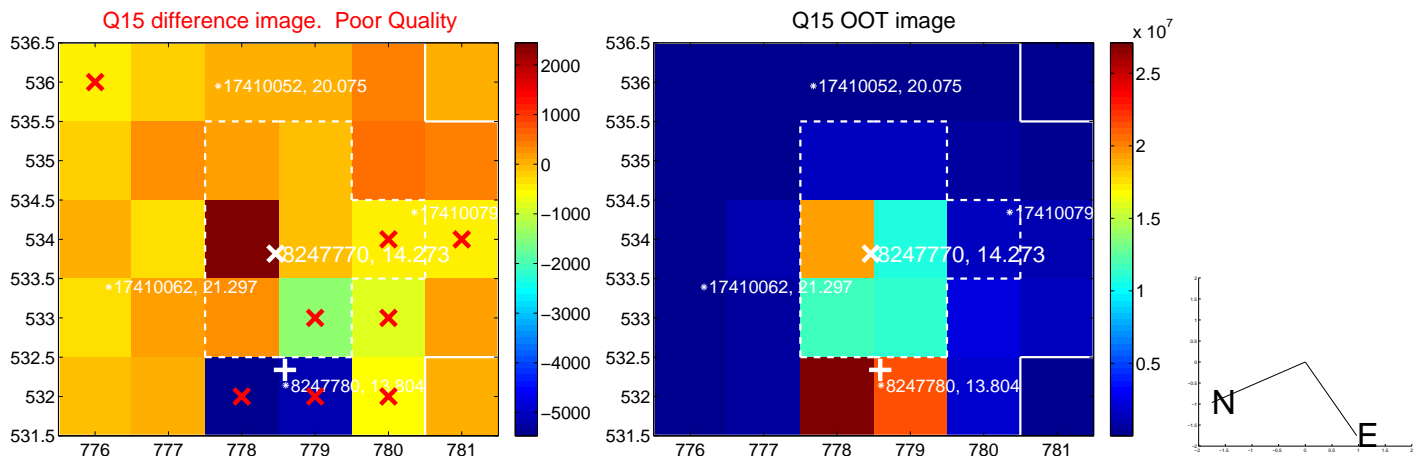
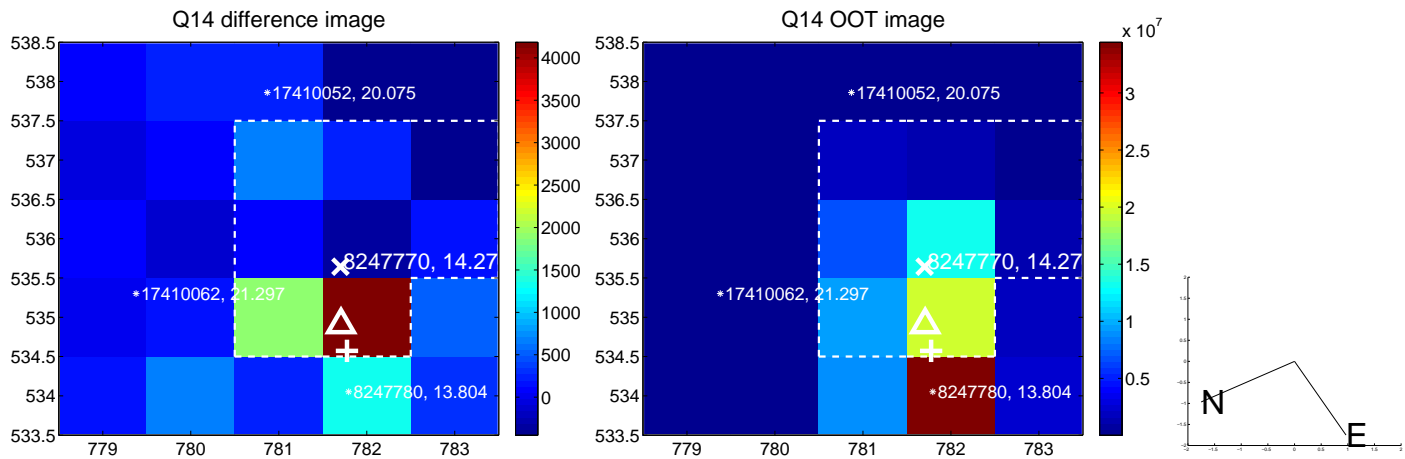
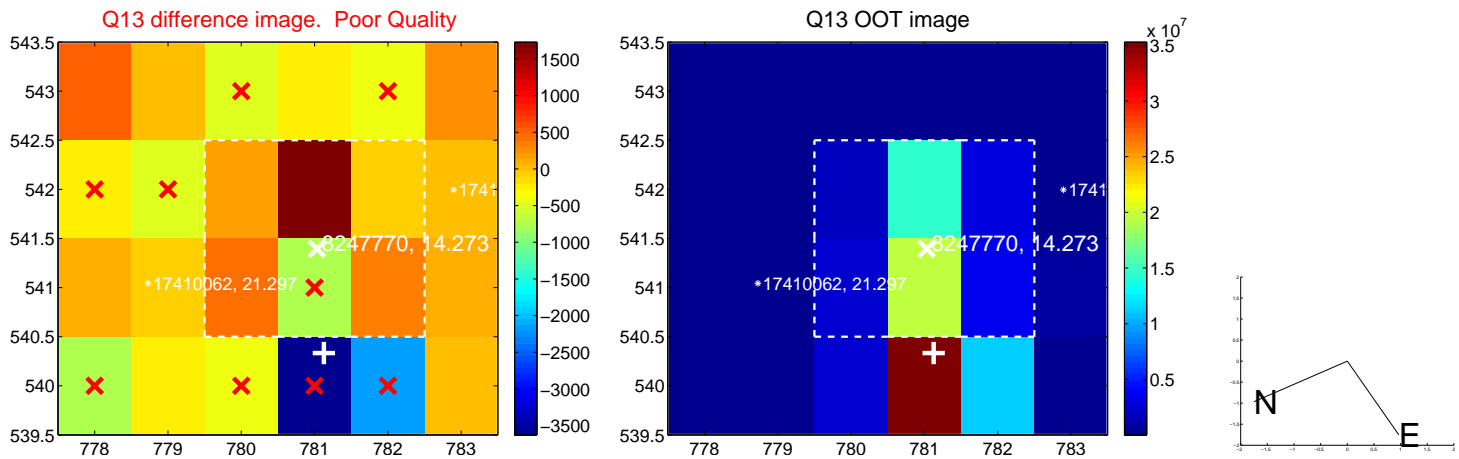
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



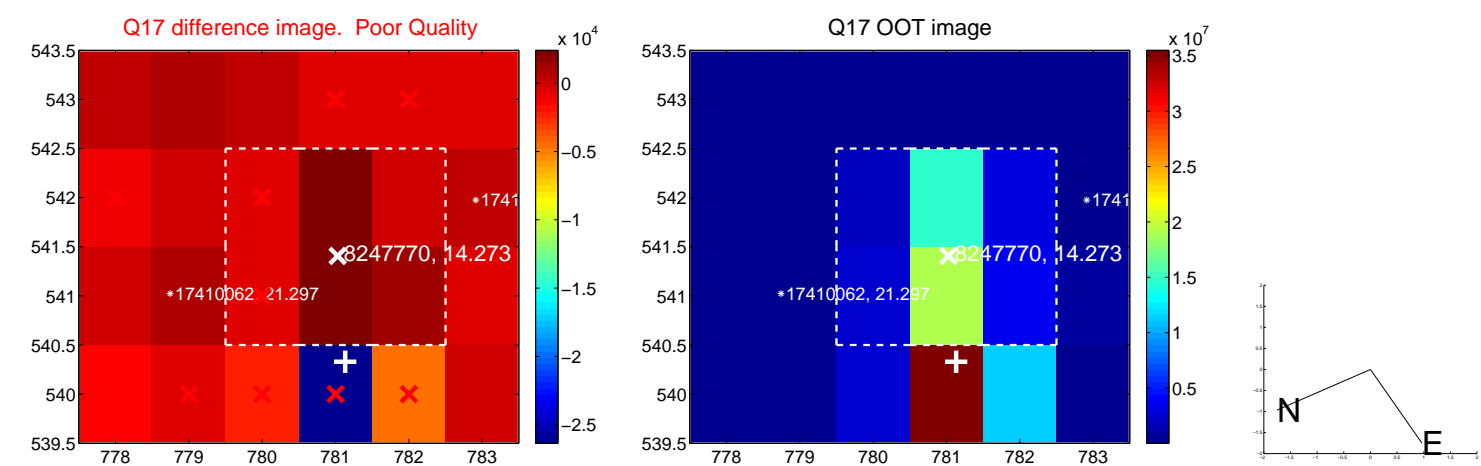
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



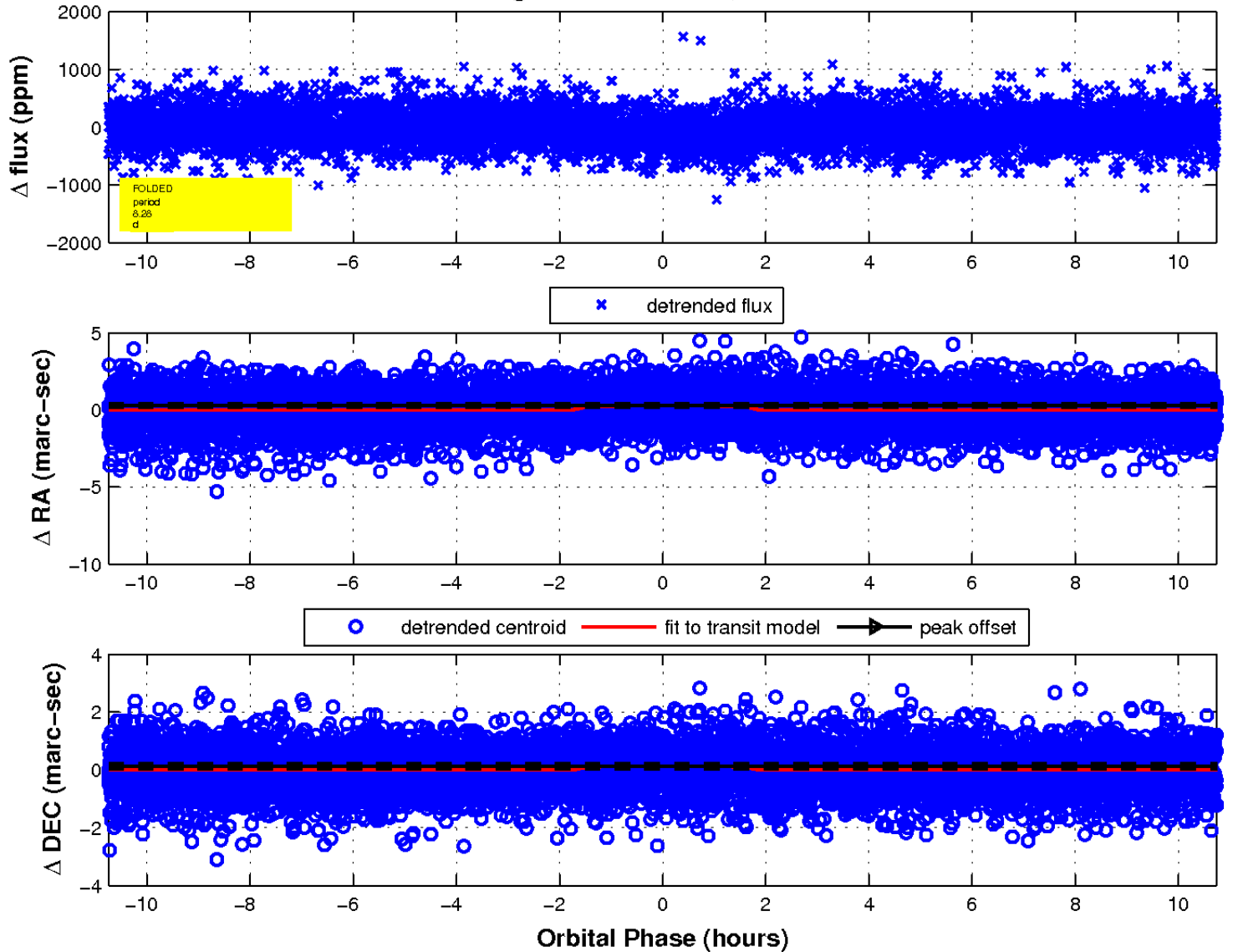
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

