

KIC 011875734

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})
011875734-01	OBS	1828.01	99.746773	208.396543	1253.8	6.720	38.4	39.4	0.97	5620	3.90	5.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011875734-01	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.

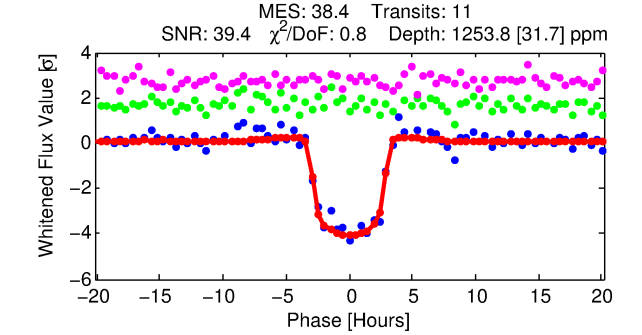
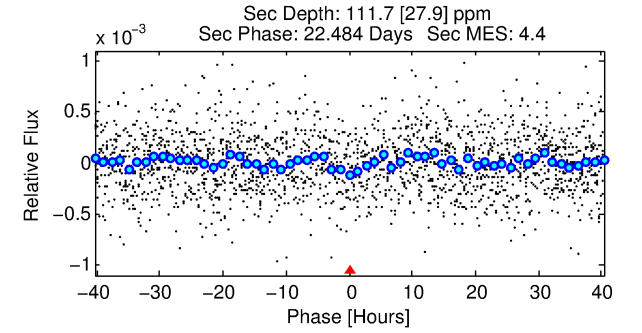
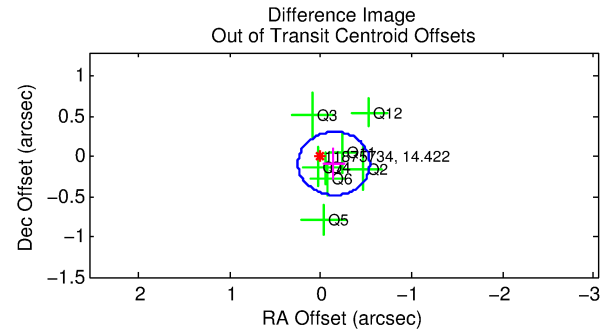
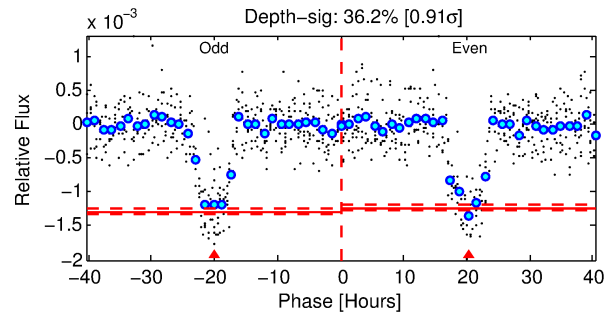
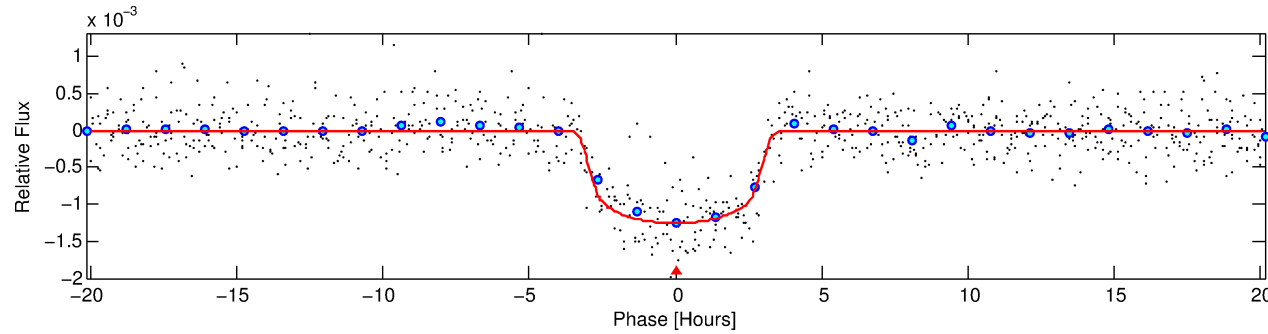
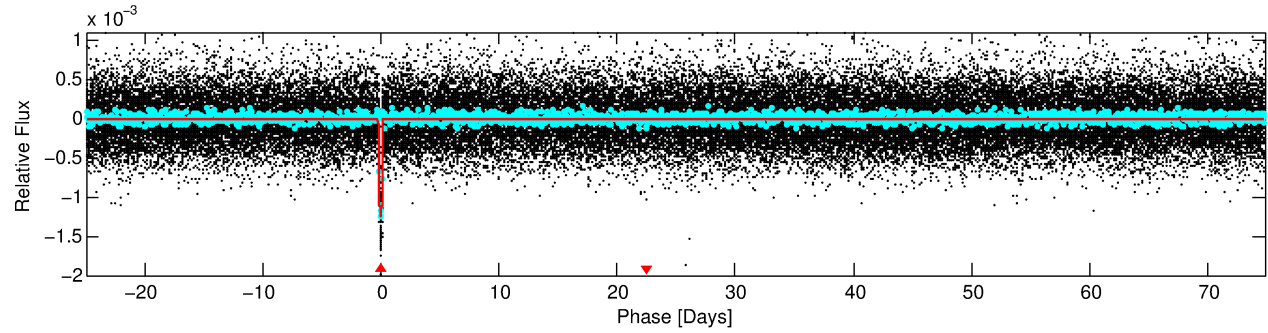
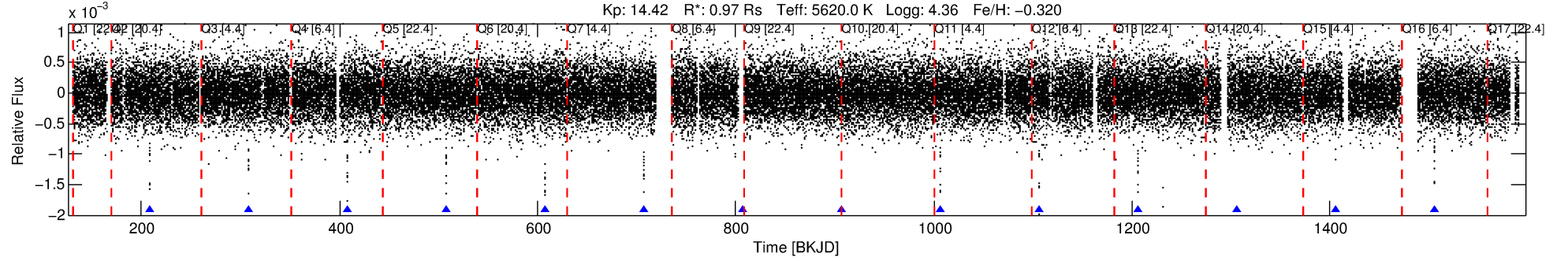
Ephemeris Match Information For 011875734-01

No Significant Match Found

DV One-Page Summary

KIC: 11875734 Candidate: 1 of 1 Period: 99.747 d

KOI: K01828.01 Corr: 0.984



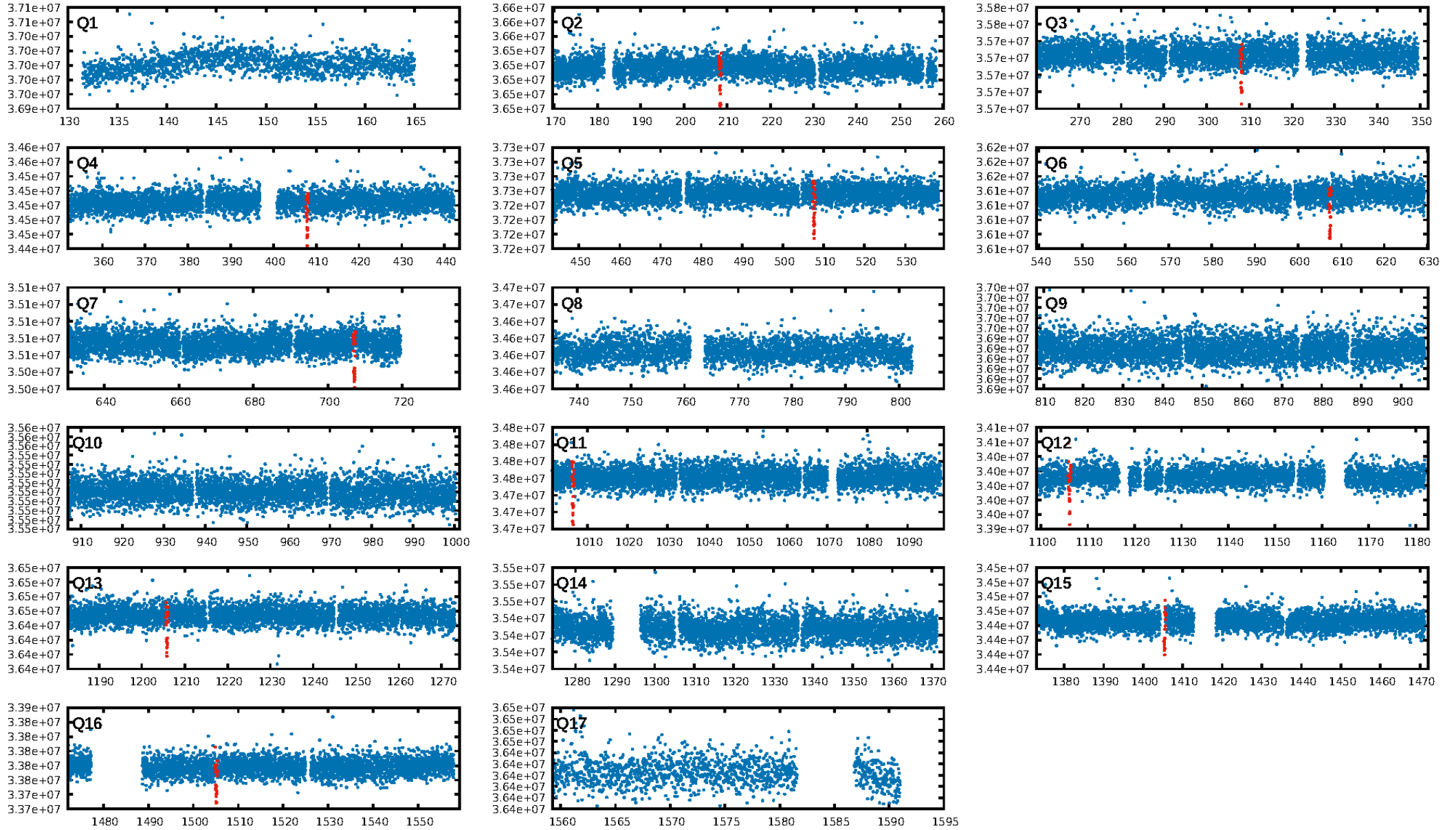
DV Fit Results:

Period = 99.74677 [0.00042] d
Epoch = 208.3965 [0.0030] BKJD
Rp/R* = 0.0366 [0.0018]
a/R* = 70.12 [14.08]
b = 0.83 [0.08]
Seff = 5.56 [2.50]
Teff = 392 [44] K
Rp = 3.90 [1.40] Re
a = 0.3905 [0.1166] AU
Ag = 617.65 [314.92] [1.96 σ]
Teffp = 3018 [221] K [11.64 σ]

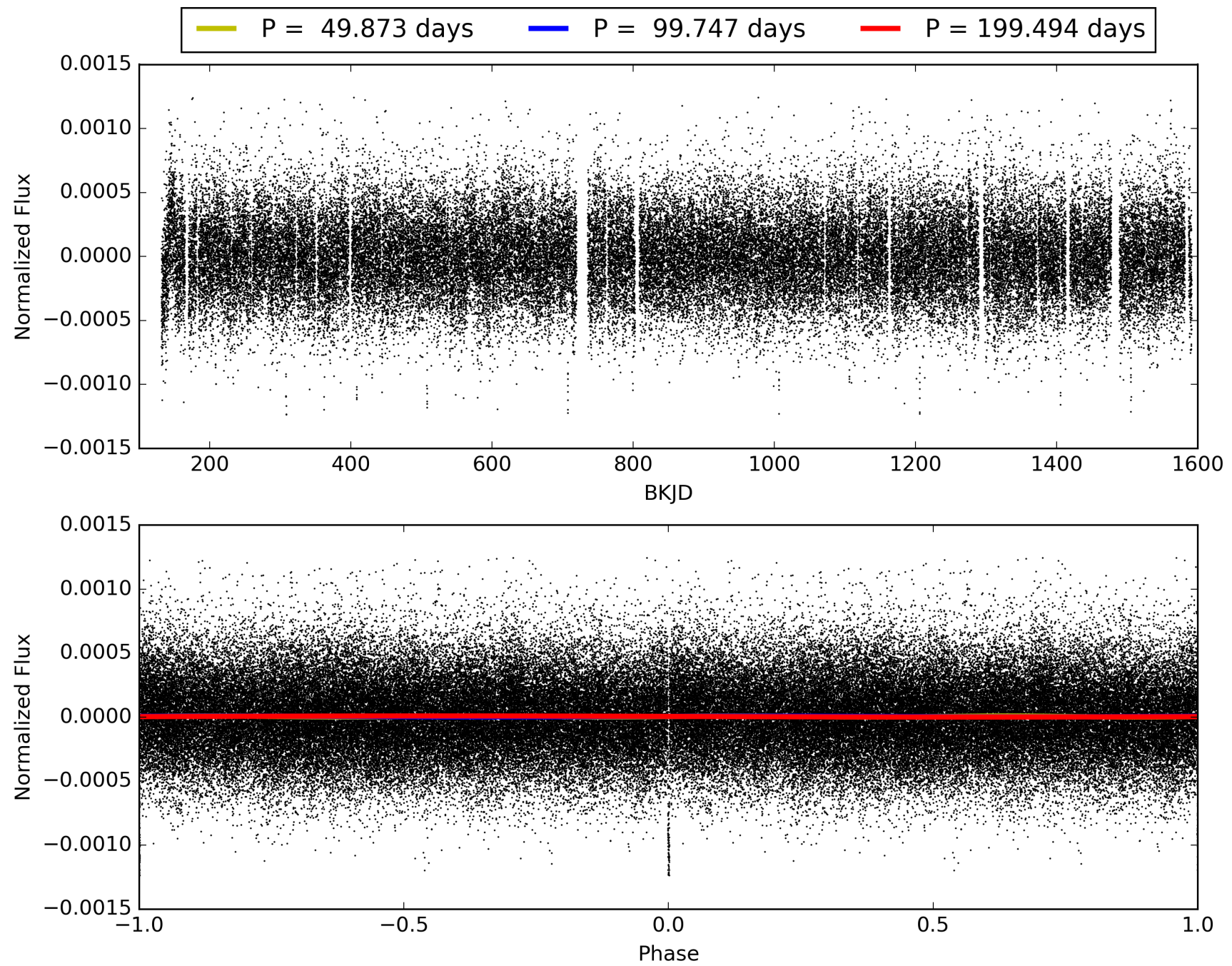
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 16.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.14e-290
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 3.929
Centroid-sig: 26.3%
Centroid-so: 1.015 arcsec [3.08 σ]
OotOffset-rm: 0.169 arcsec [1.28 σ]
KicOffset-rm: 0.115 arcsec [1.06 σ]
OotOffset-st: 2/3/2/1 [8]
KicOffset-st: 2/3/2/1 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 011875734-01, PDC Light Curves

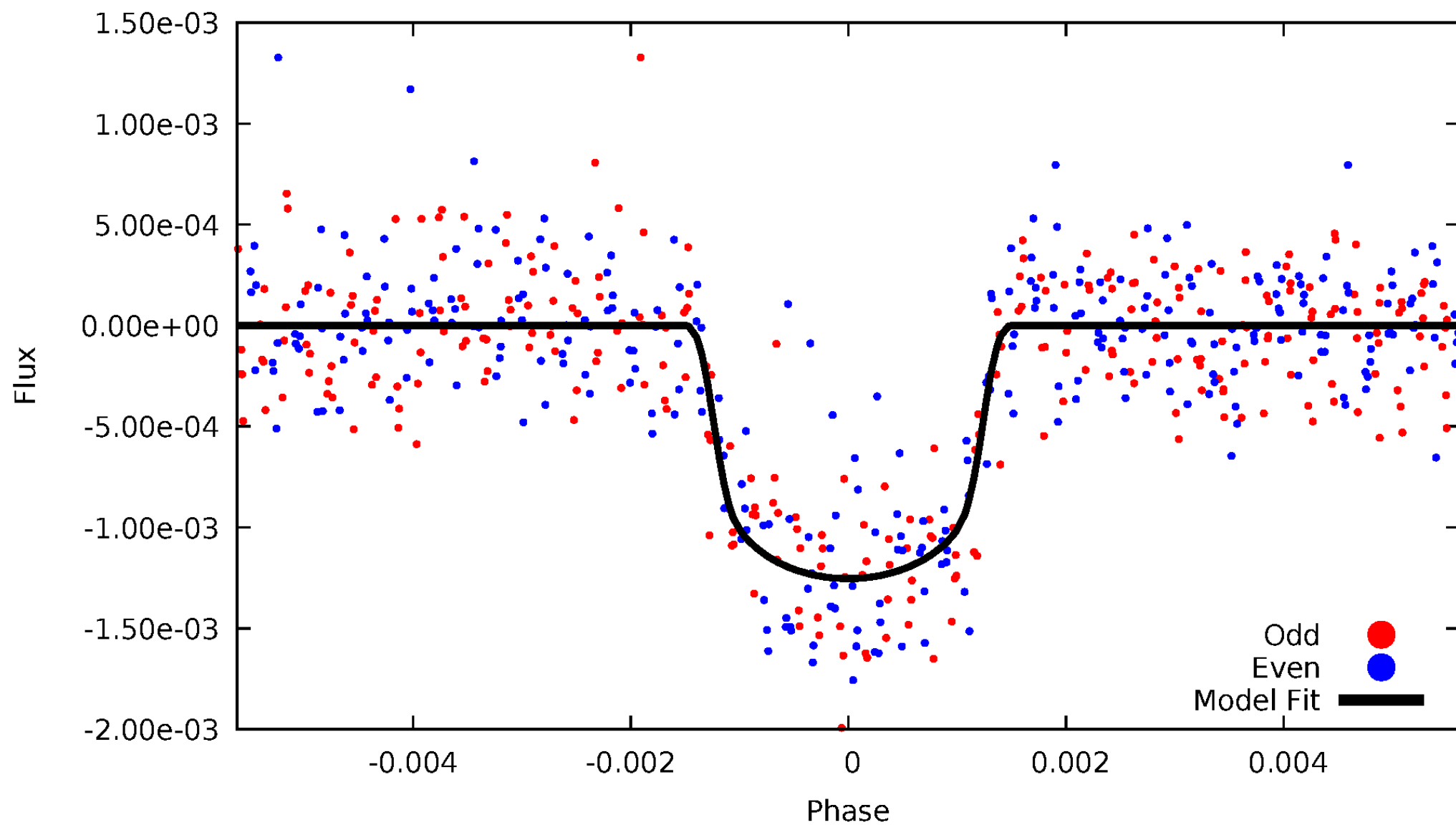


TCE 011875734-01



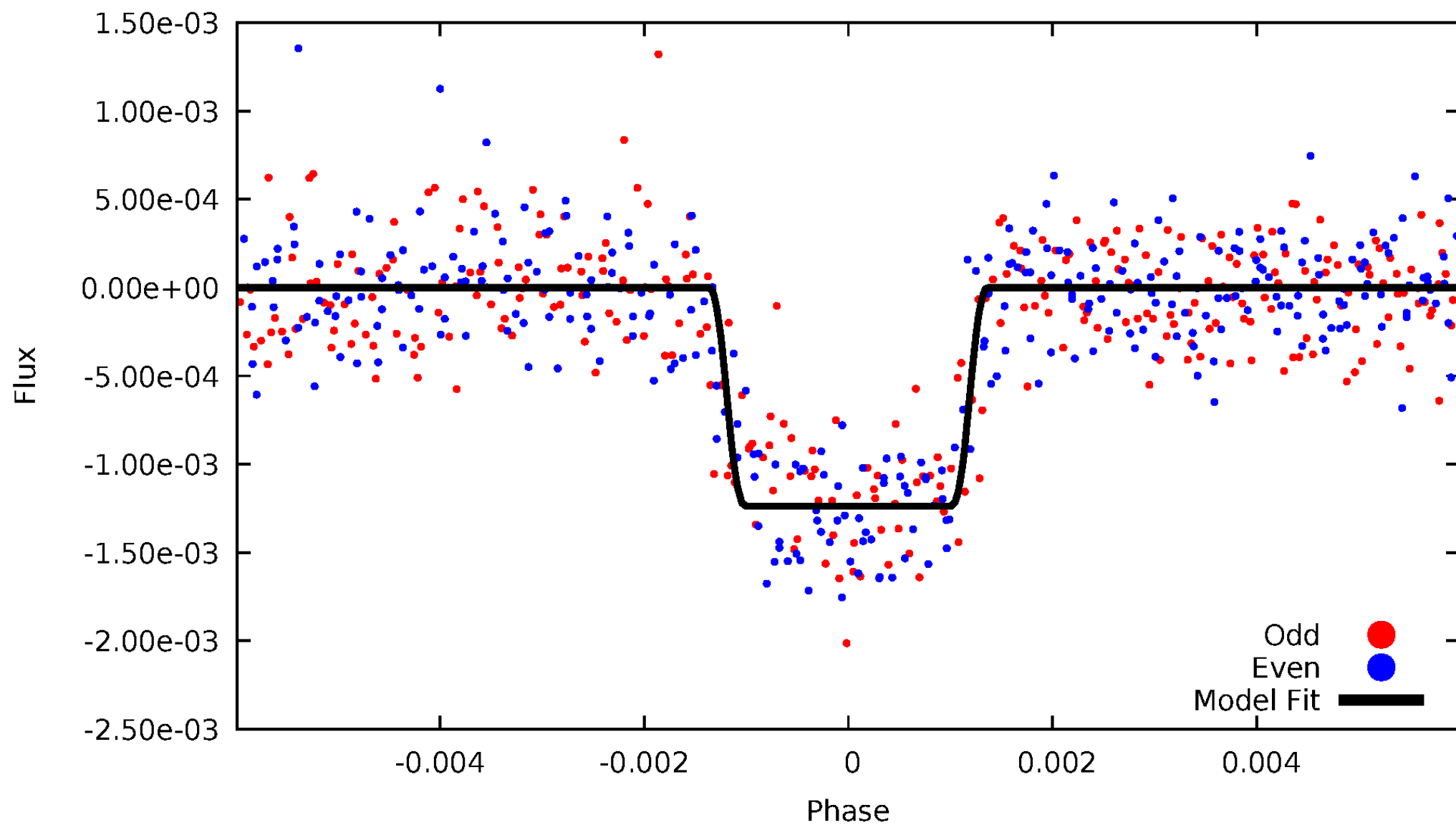
DV Odd/Even

TCE 011875734-01



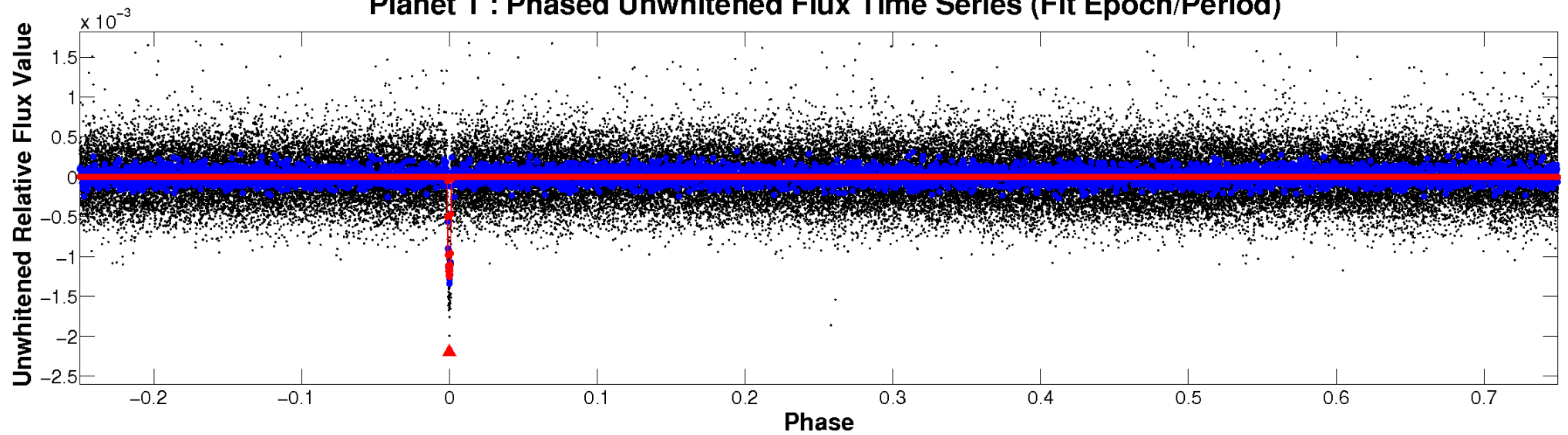
ALT Odd/Even

TCE 011875734-01

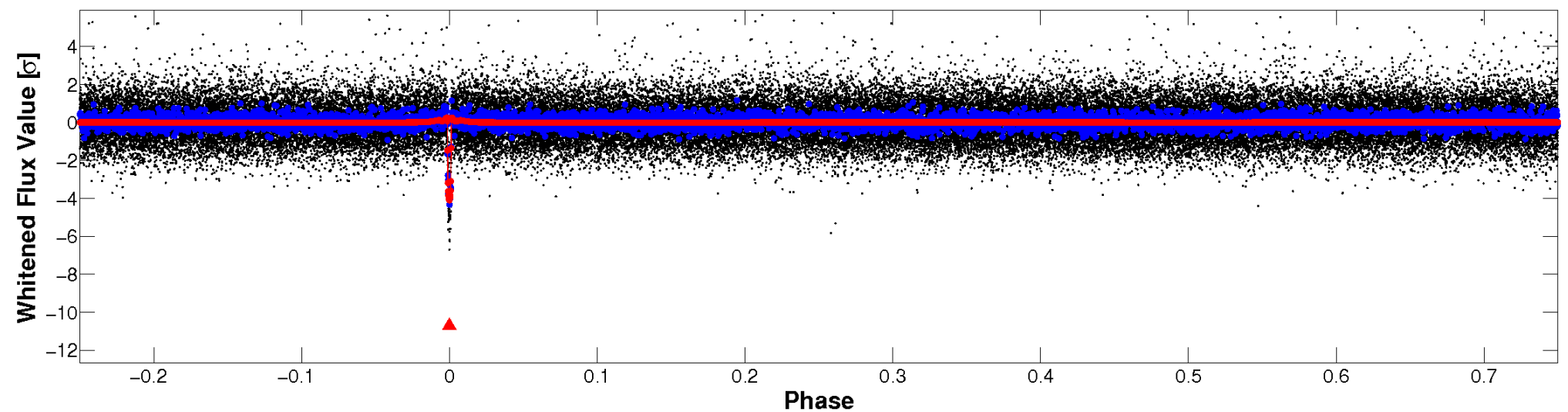


Non-Whitened Vs. Whitened Light Curve

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

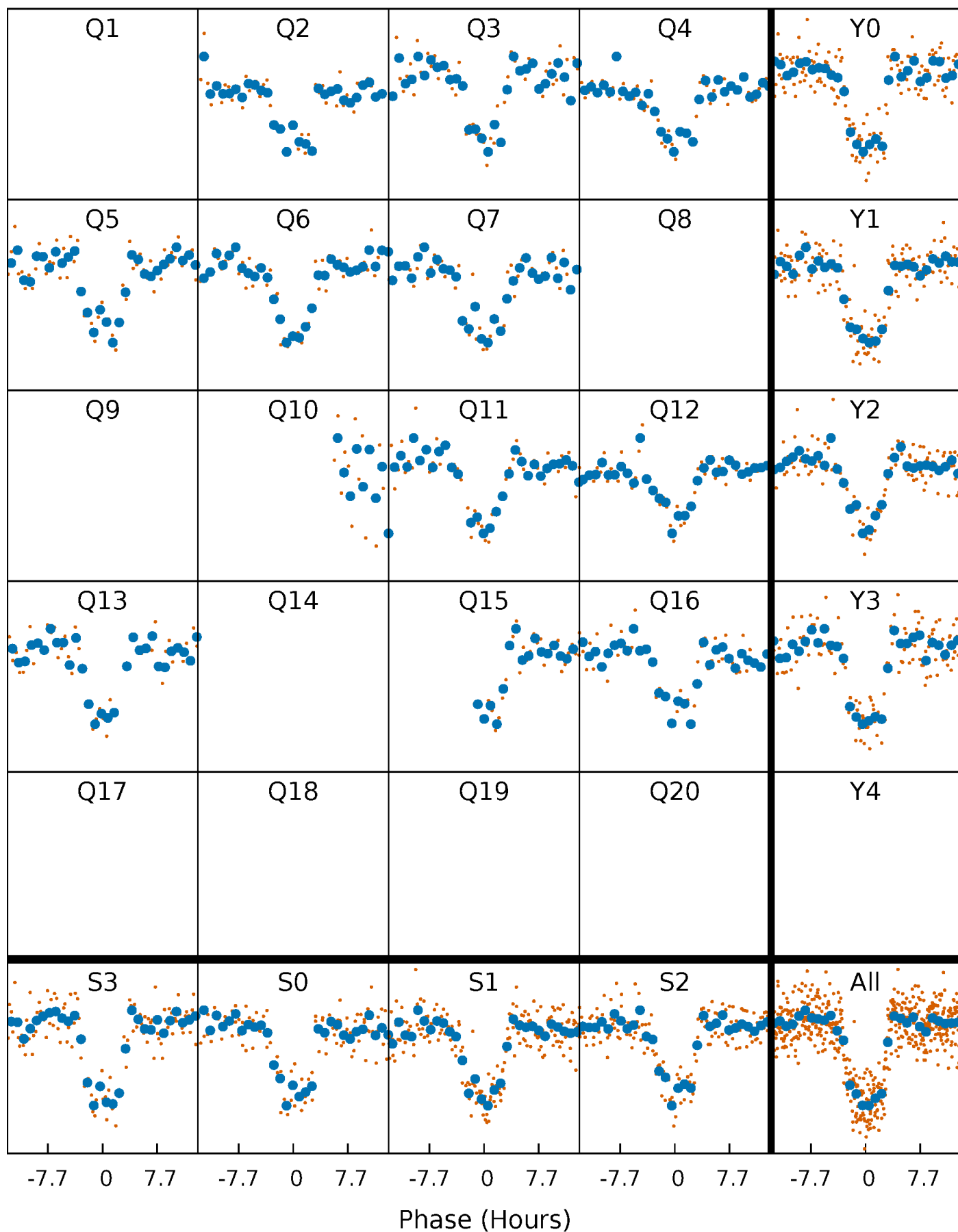


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



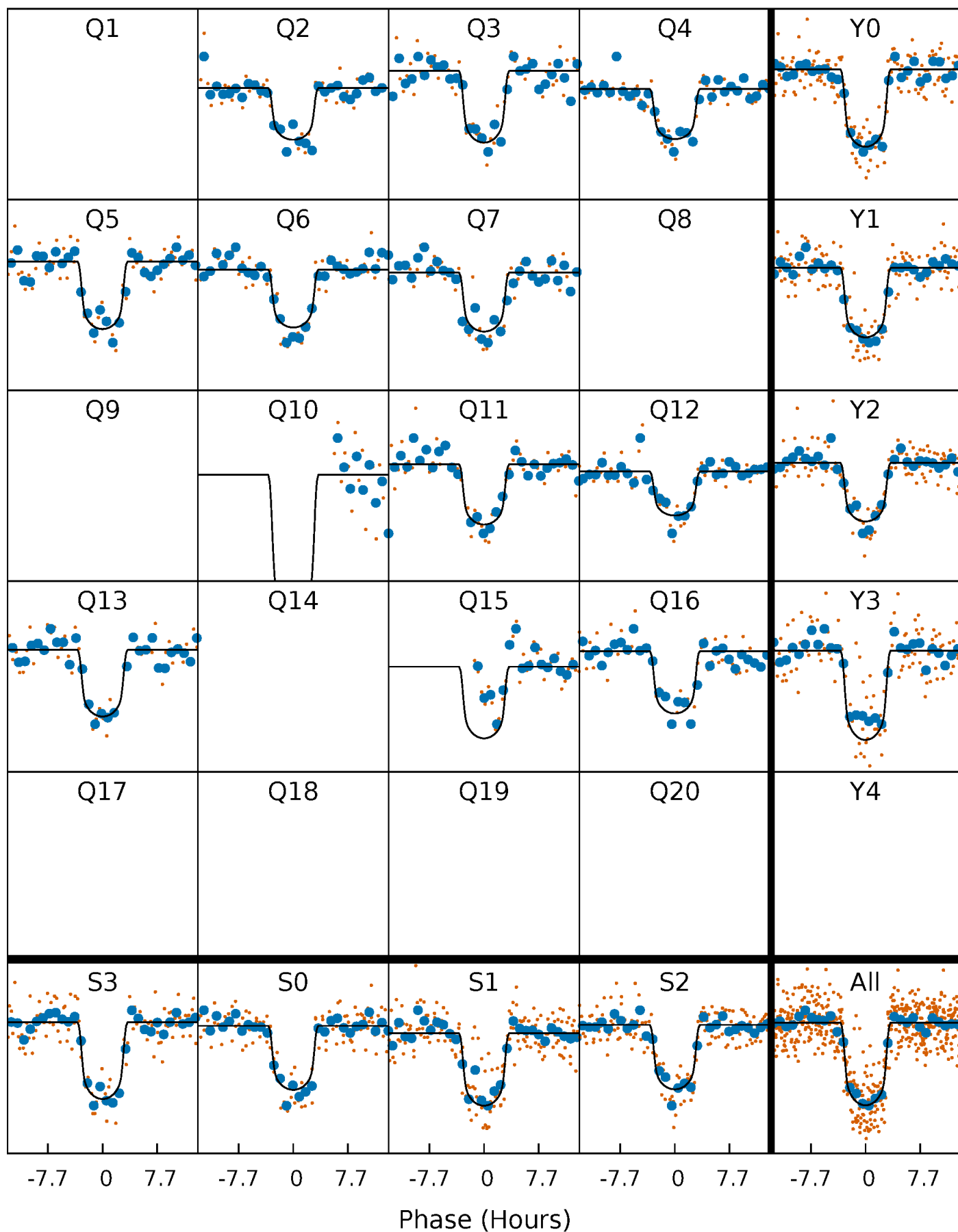
PDC Quarter-Phased Transit Curves

TCE 011875734-01 P= 99.746773 Days $T_0=208.396543$ (BKJD)



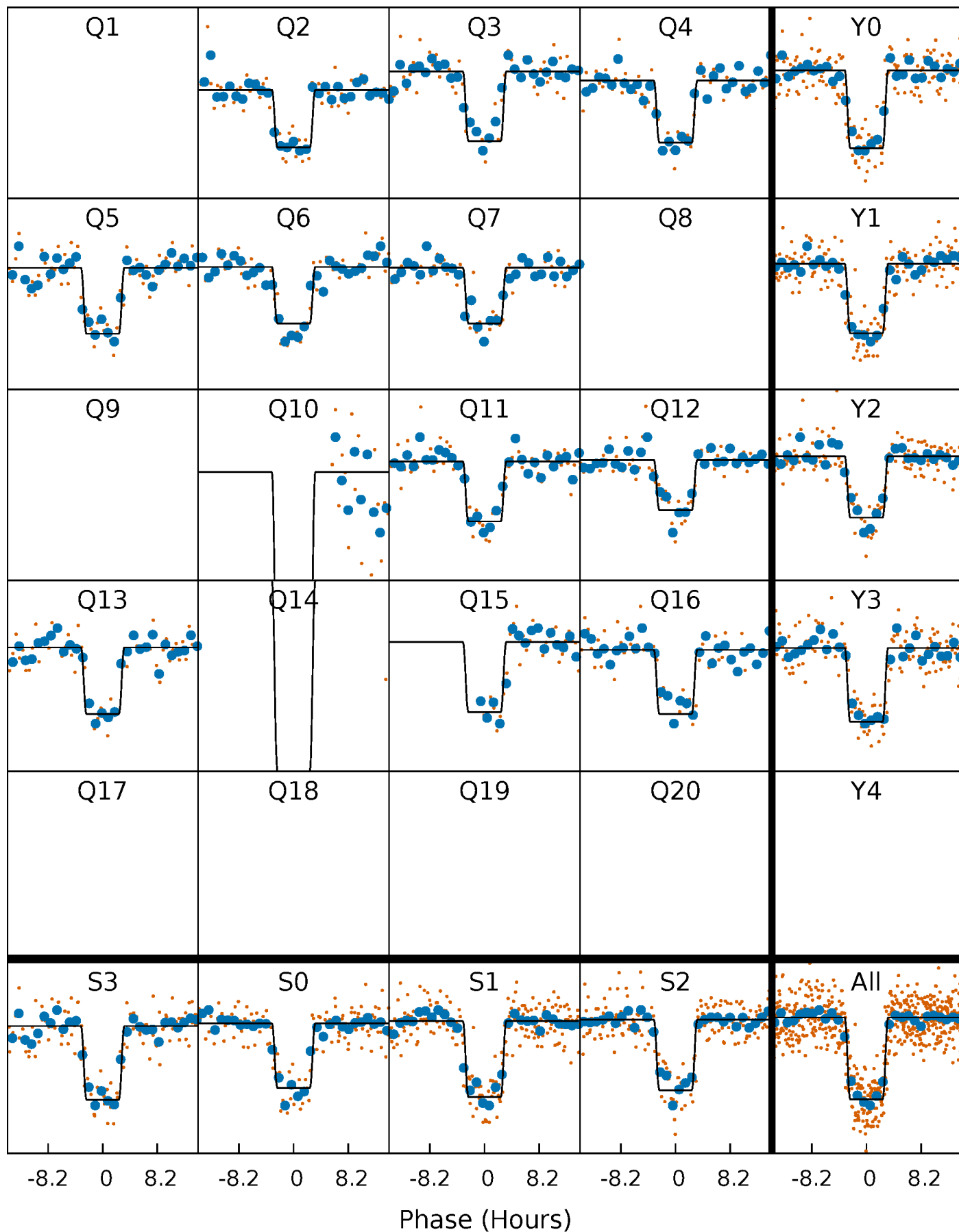
DV Quarter-Phased Transit Curves

TCE 011875734-01 P= 99.746773 Days $T_0=208.396543$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

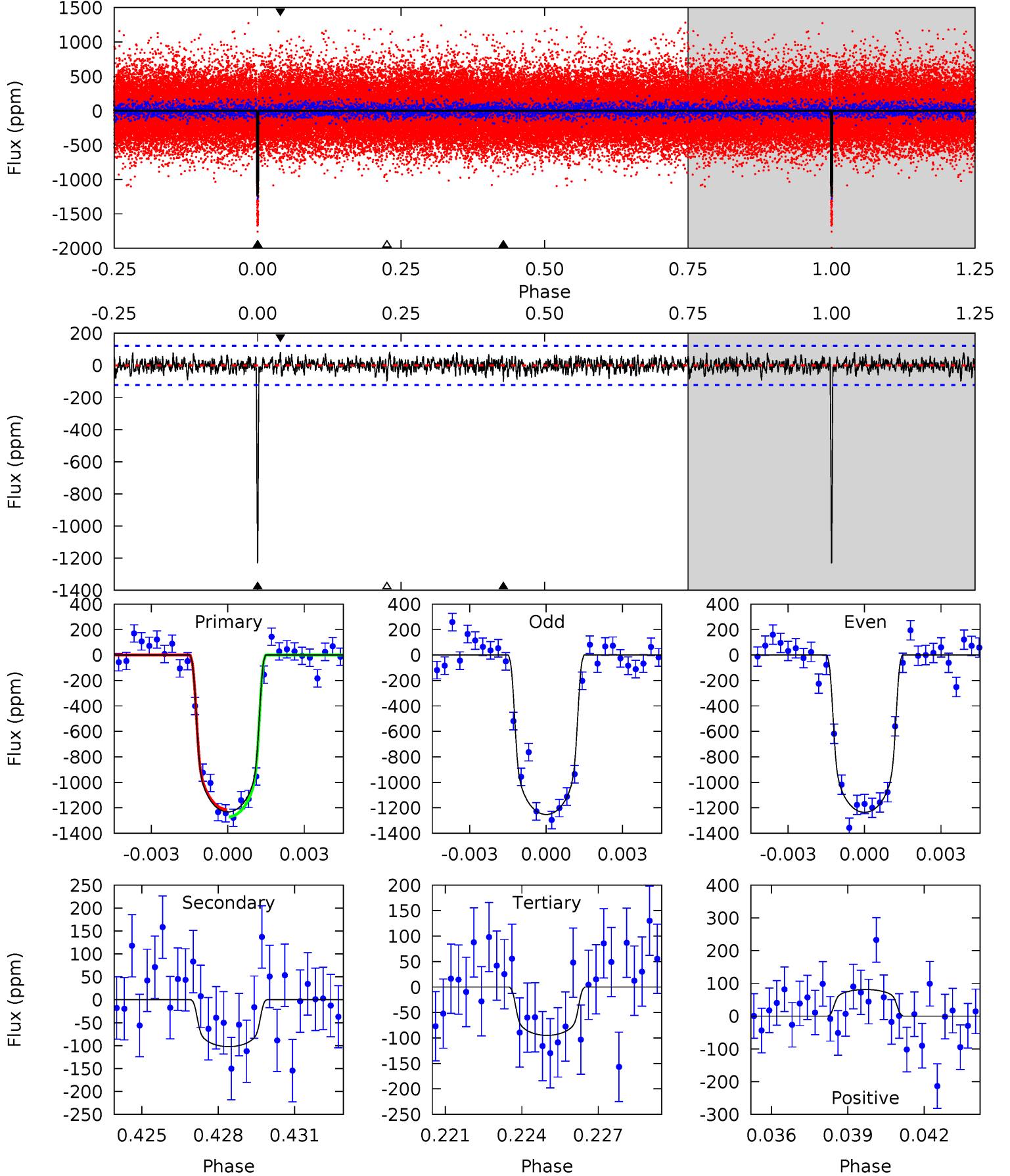
TCE 011875734-01 P= 99.744619 Days $T_0=208.411431$ (BKJD)



DV Model-Shift Uniqueness Test

011875734-01, $P = 99.746773$ Days, $E = 108.649770$ Days

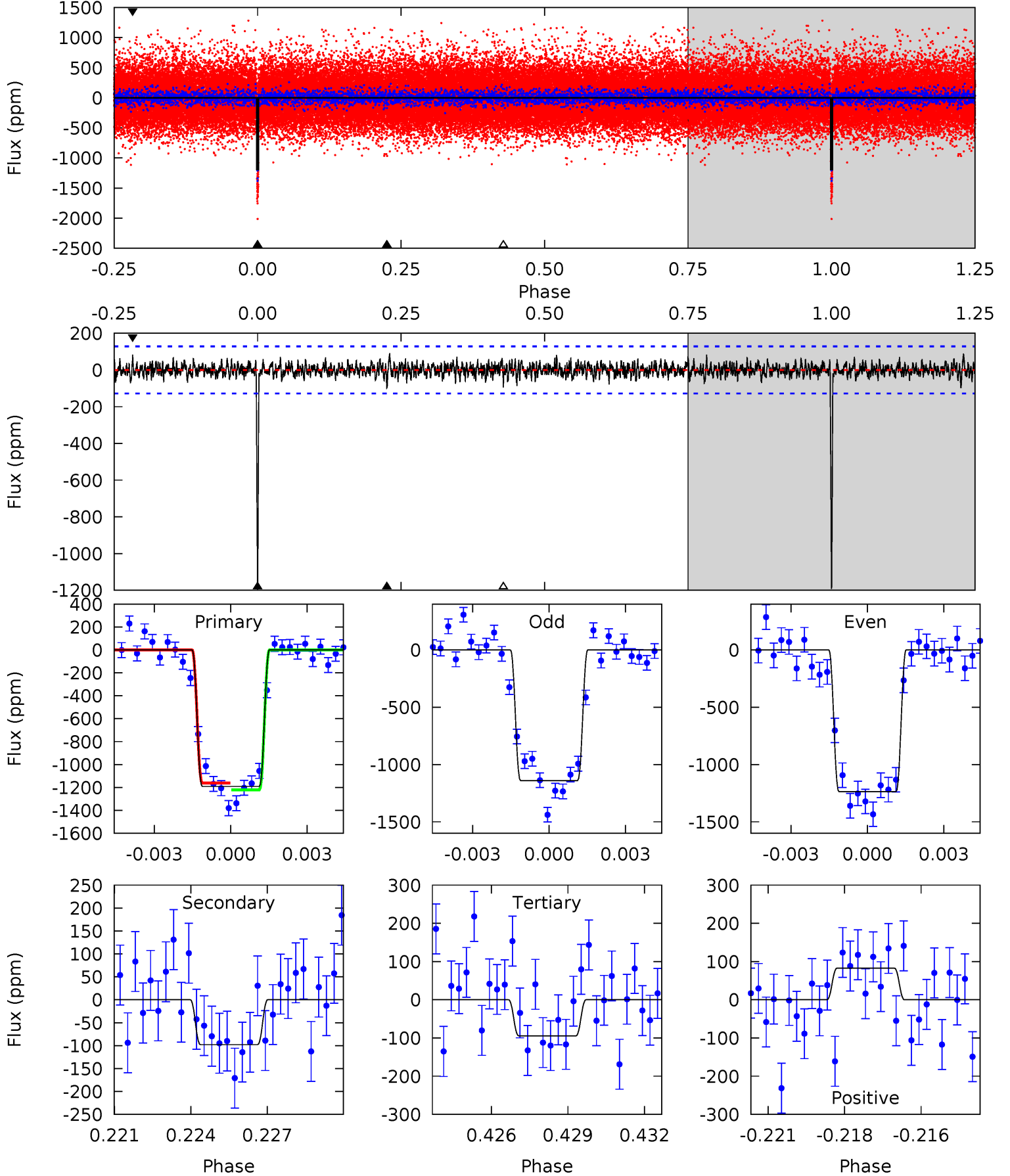
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.9	4.39	4.08	3.49	5.25	2.97	1.19	48.8	49.4	0.31	0.90	0.36	0.96	0.06	1.23



Alt Model-Shift Uniqueness Test

011875734-01, $P = 99.744619$ Days, $E = 108.666812$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.1	4.03	3.90	3.41	5.27	3.00	1.03	45.2	45.6	0.13	0.62	2.00	0.99	0.07	1.23



Stellar Parameters For KIC 011875734

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5620^{+169}_{-152}	$4.363^{+0.194}_{-0.237}$	$-0.320^{+0.350}_{-0.250}$	$0.974^{+0.346}_{-0.186}$	$0.797^{+0.117}_{-0.058}$	$1.217^{+1.166}_{-0.673}$
	+3%/-3%	+4%/-5%	+109%/-78%	+36%/-19%	+15%/-7%	+96%/-55%
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 011875734-01 / KOI 1828.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-102 ± 23	$3.94^{+0.77}_{-0.52}$	551^{+51}_{-40}	3445^{+146}_{-145}	549^{+228}_{-188}
Alt.	-98 ± 24	$3.73^{+0.78}_{-0.49}$	547^{+54}_{-39}	3462^{+162}_{-171}	561^{+283}_{-203}

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

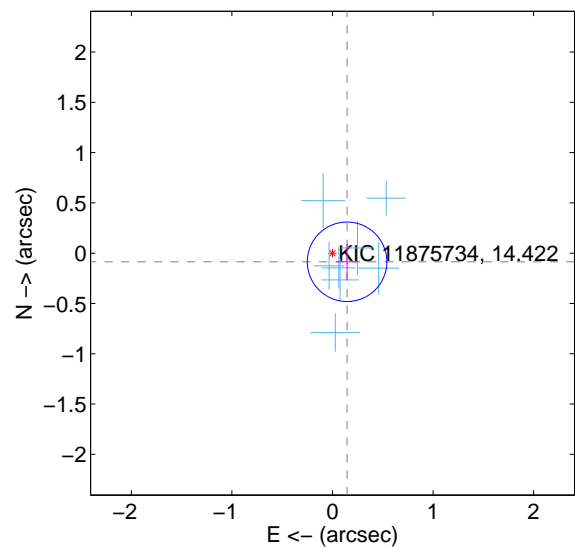
Supplemental centroid analysis for 011875734-01. Kepler magnitude: 14.42. Transit SNR 39.42

There are 8 quarters with good PRF difference image offsets

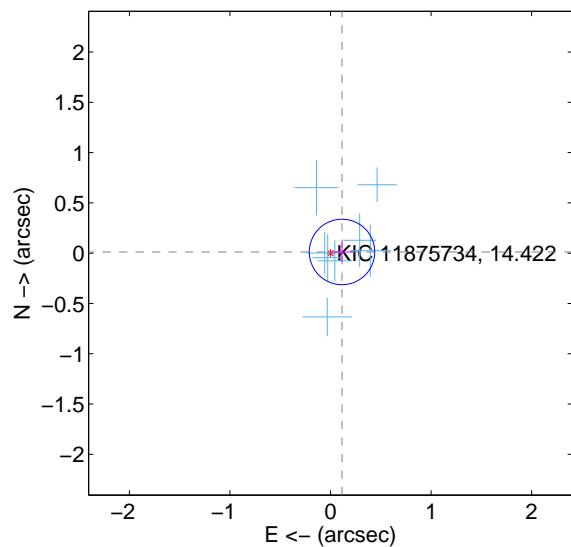
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.169 ± 0.132	1.28	-0.145 ± 0.109	-0.086 ± 0.181
PRF-fit source offset from KIC position	0.115 ± 0.108	1.06	-0.114 ± 0.109	0.012 ± 0.099
photometric centroid source offset	1.02 ± 0.33	3.08	0.89 ± 0.33	0.49 ± 0.33

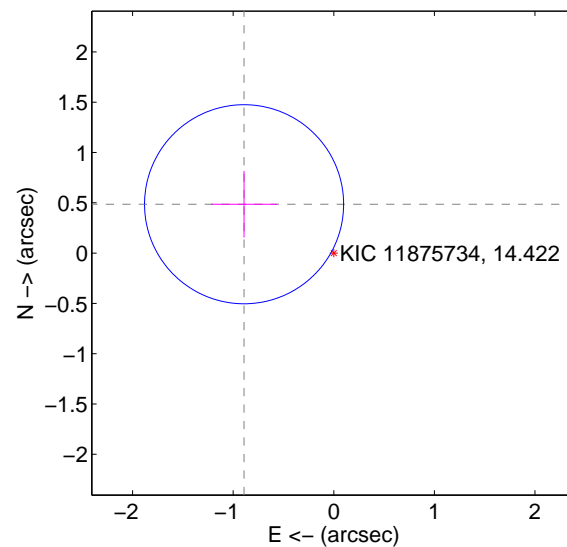
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

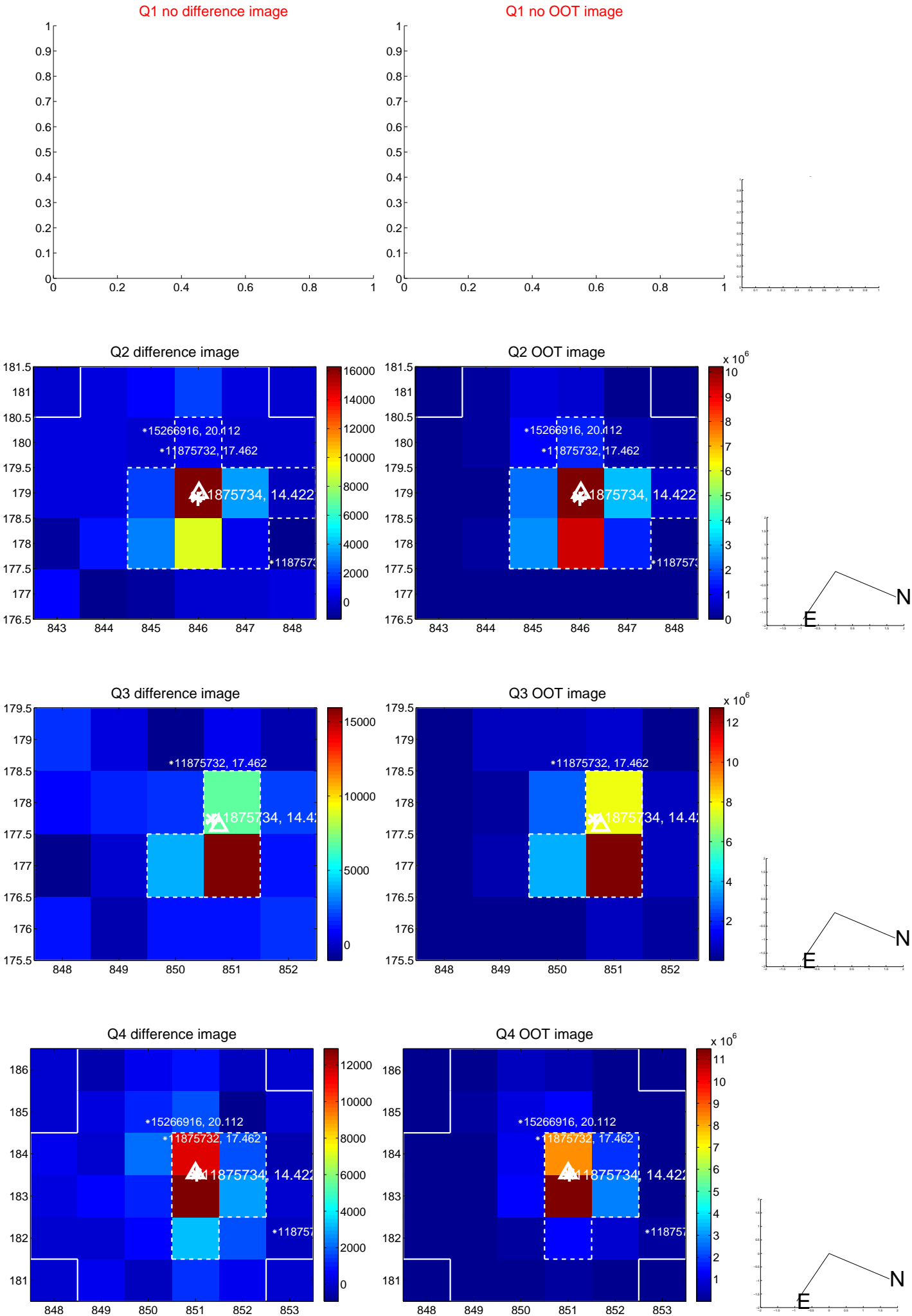


offset from photometric centroids

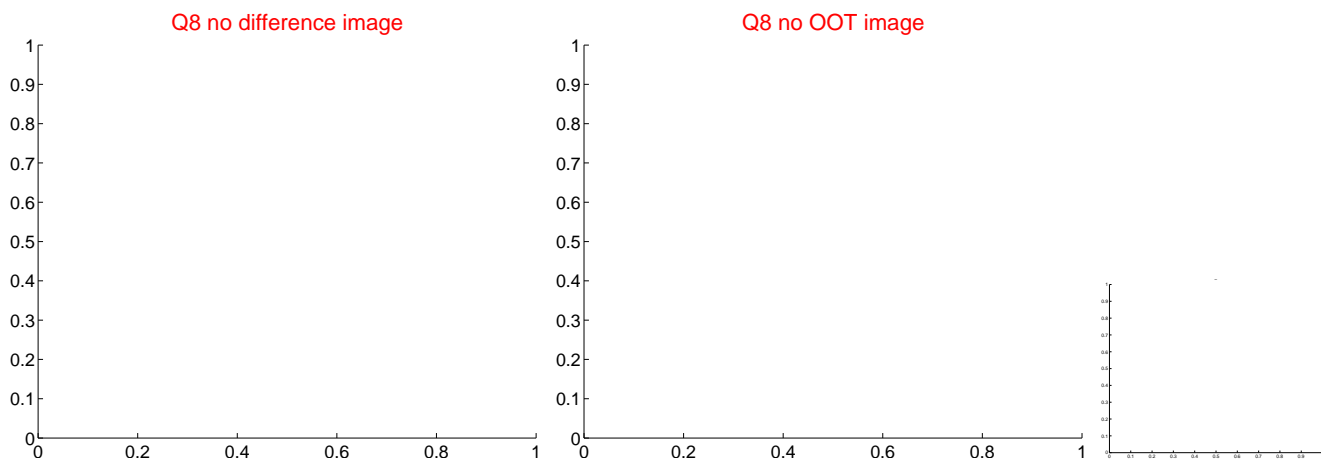
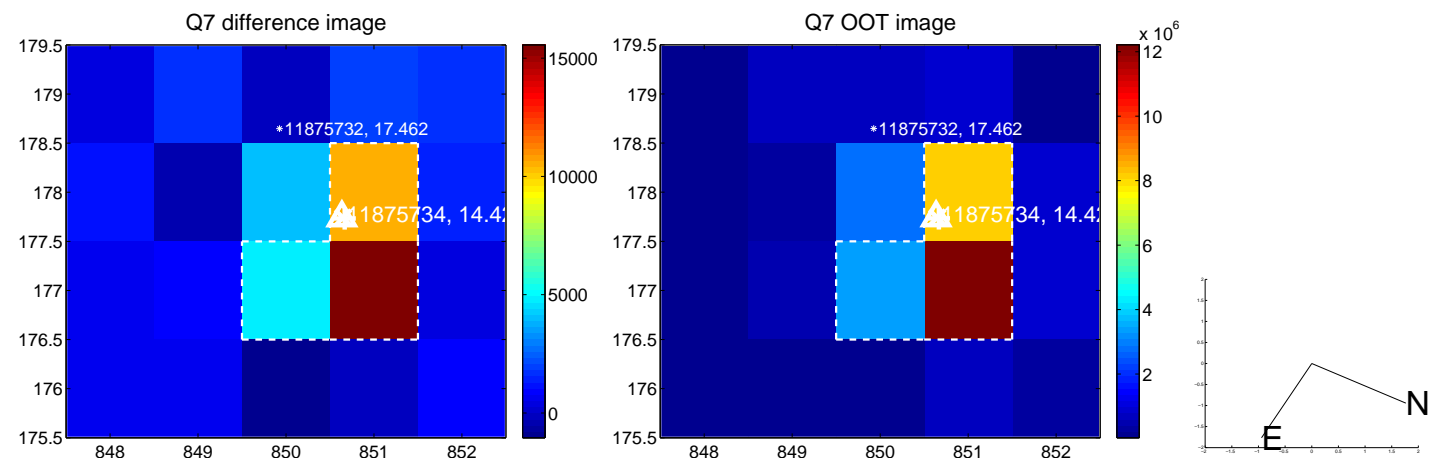
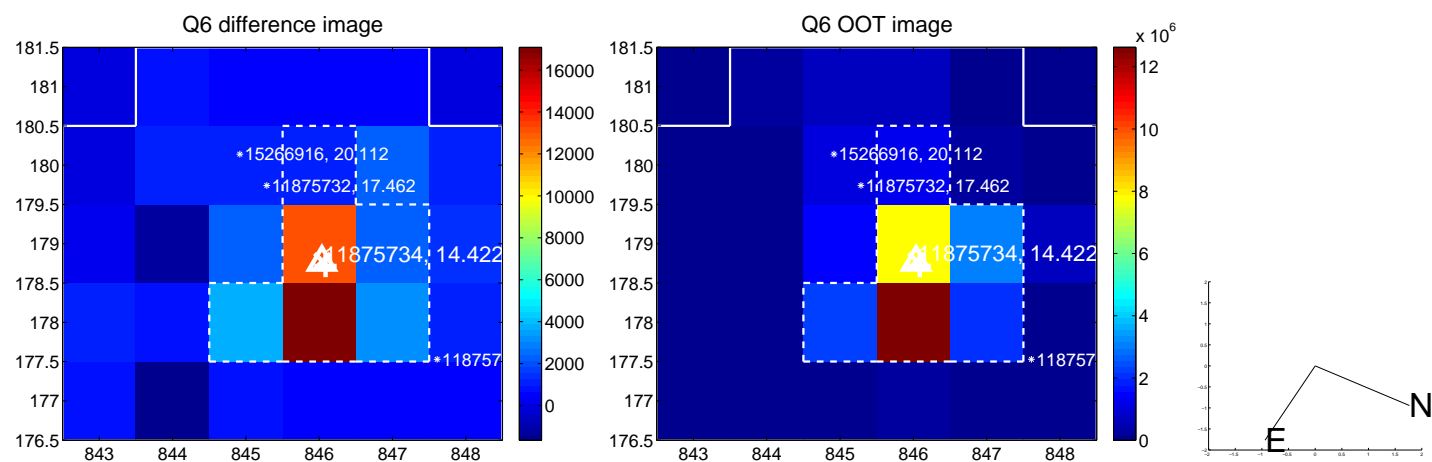
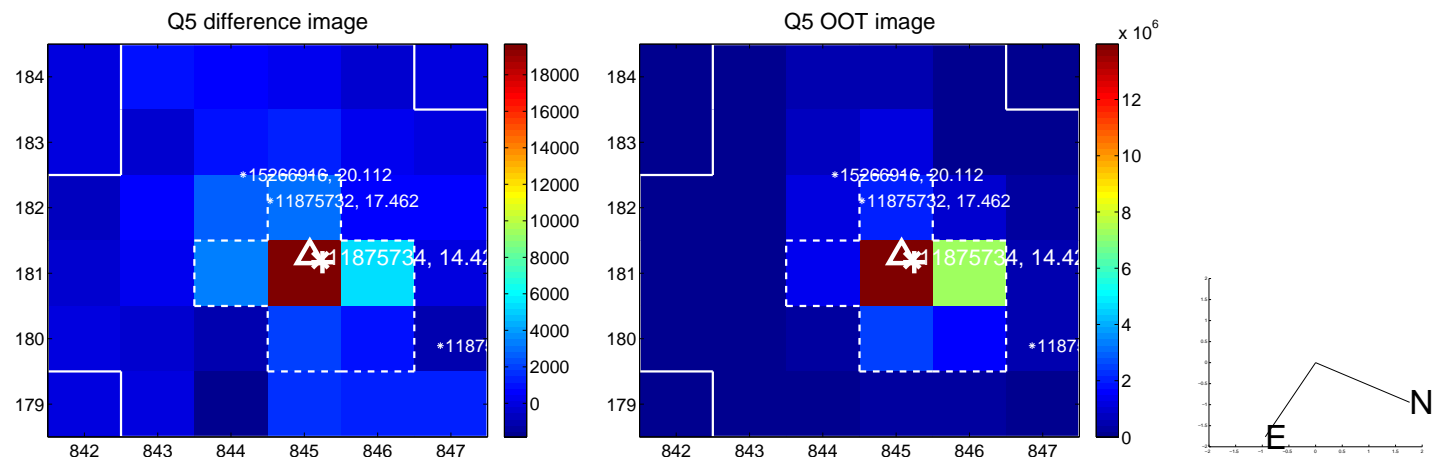


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

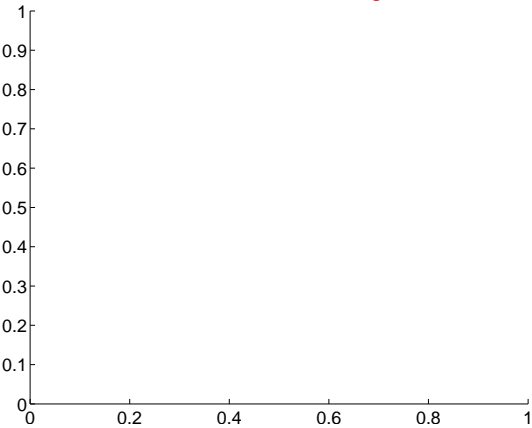


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

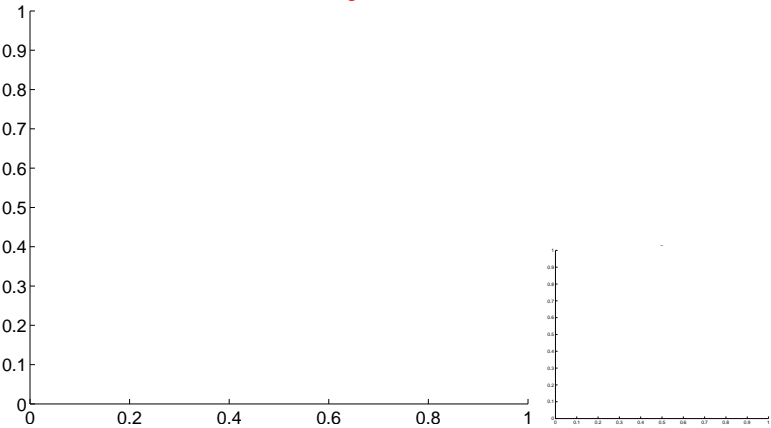


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

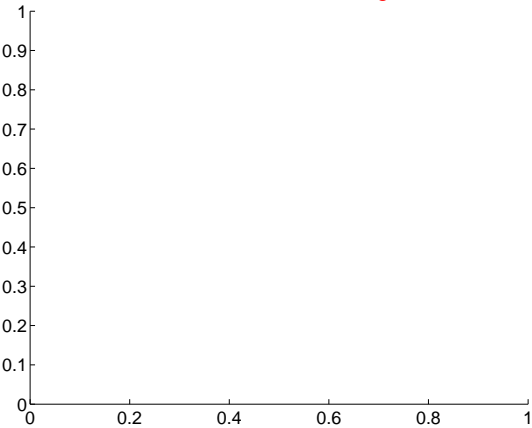
Q9 no difference image



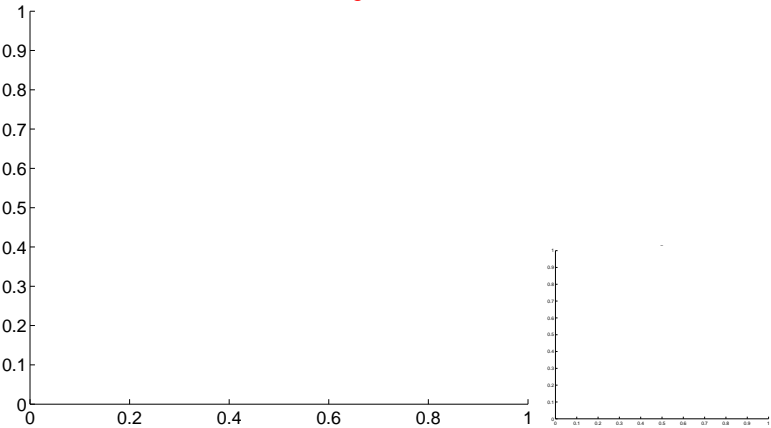
Q9 no OOT image



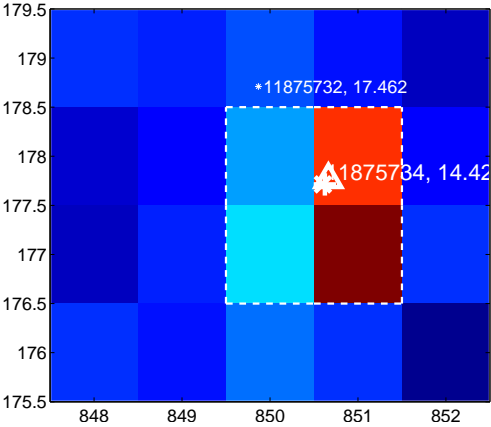
Q10 no difference image



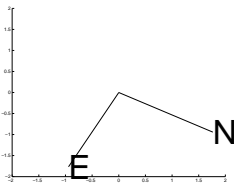
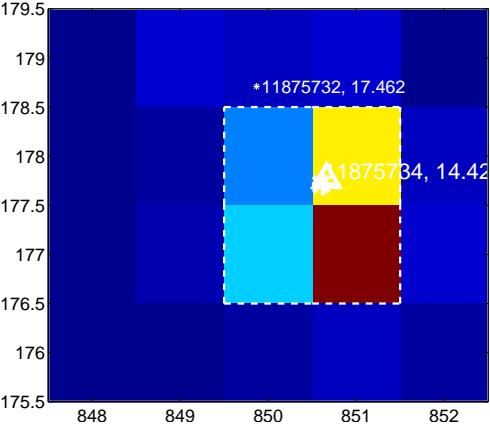
Q10 no OOT image



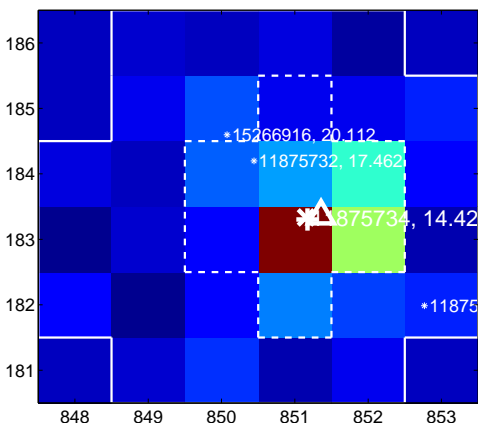
Q11 difference image



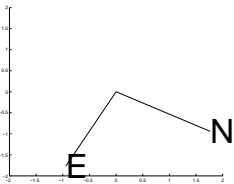
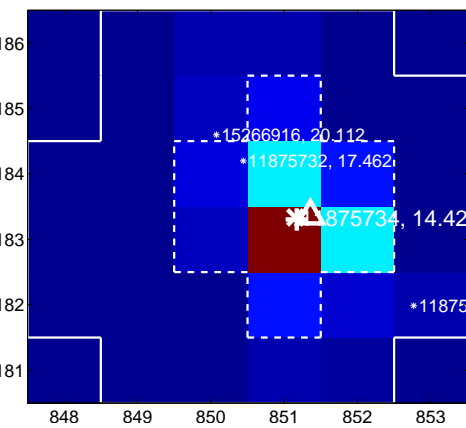
Q11 OOT image



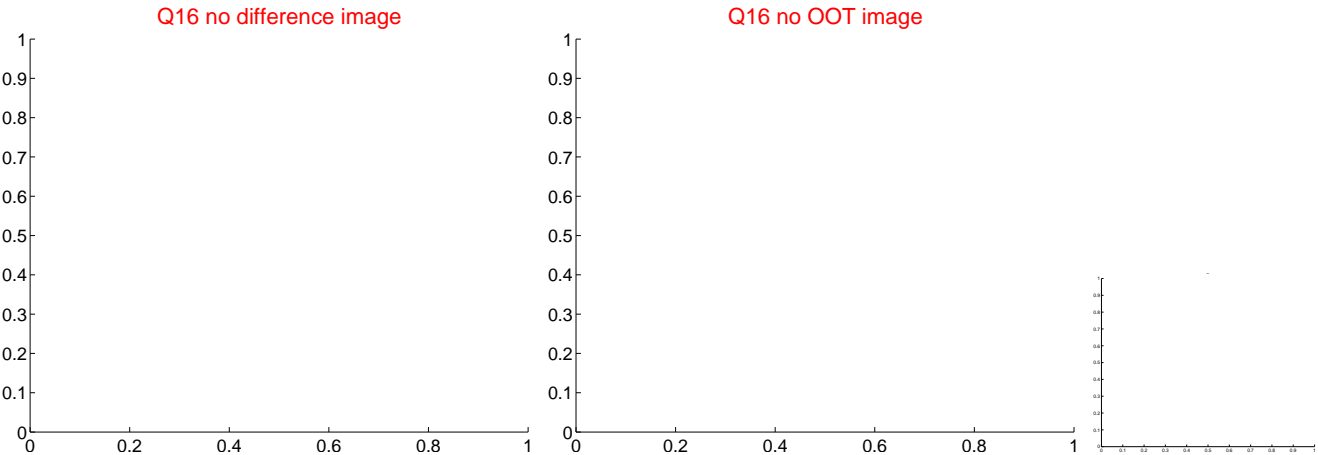
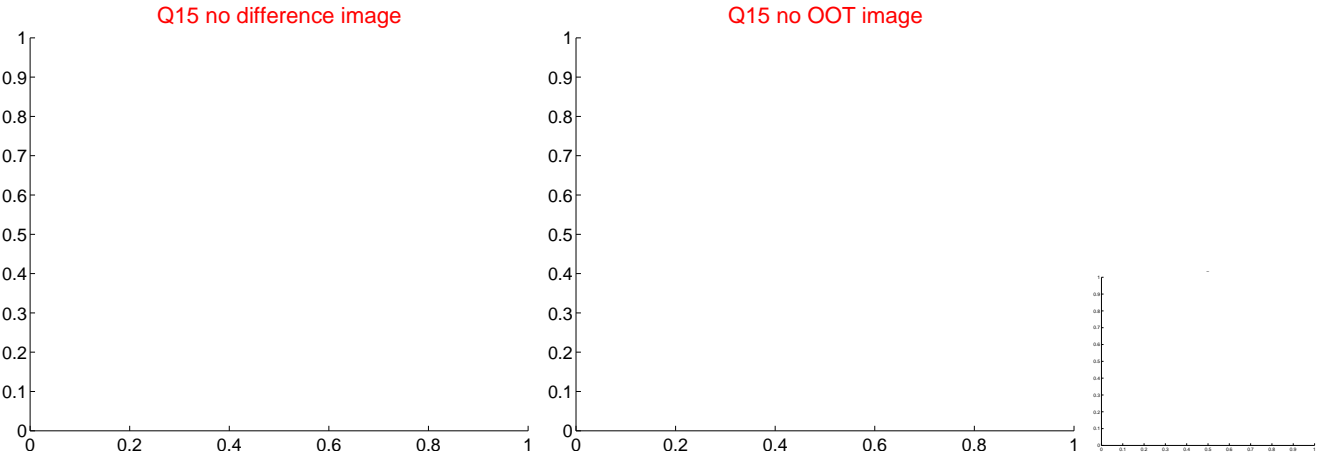
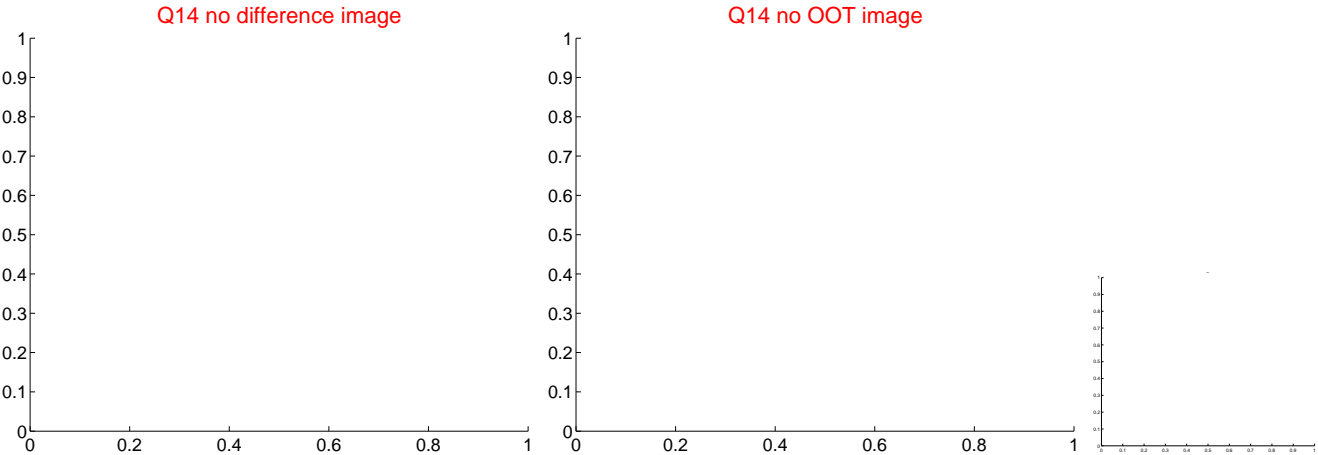
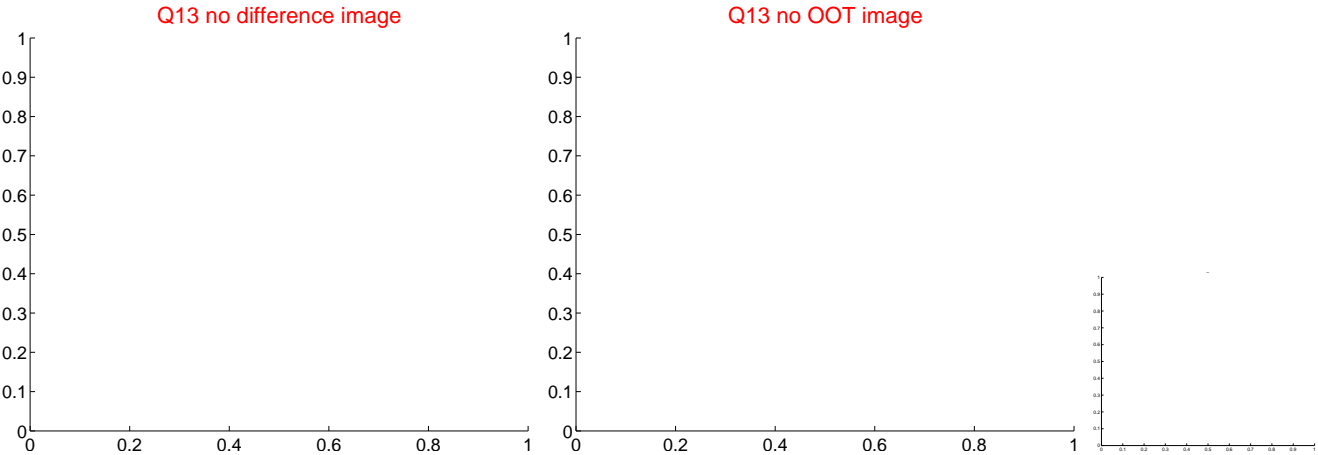
Q12 difference image



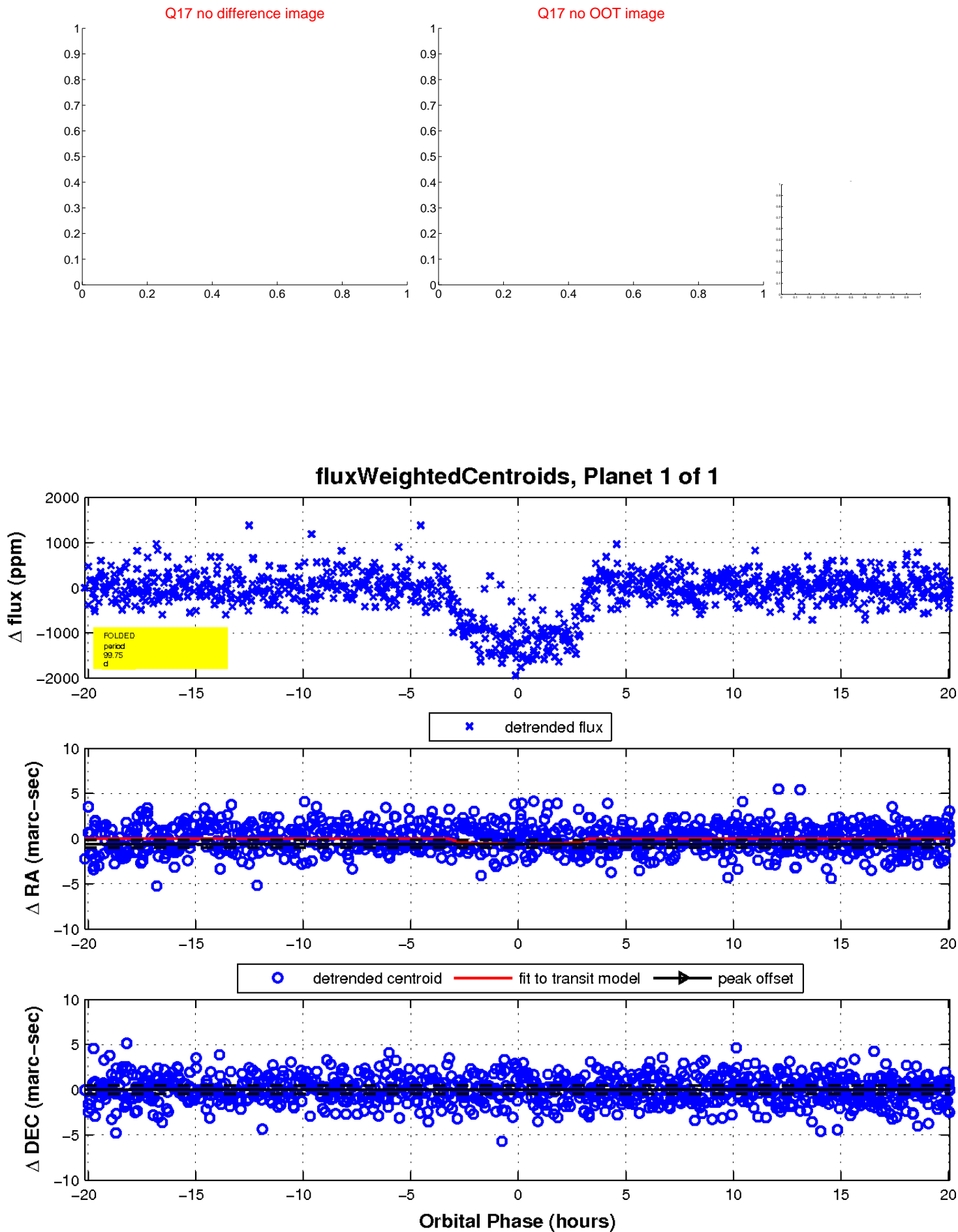
Q12 OOT image



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

