

KIC 010819040

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})
010819040-01	OBS	No	8.242912	134.175508	29.2	22.927	7.2	4.3	2.48	6137	1.49	1069.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010819040-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

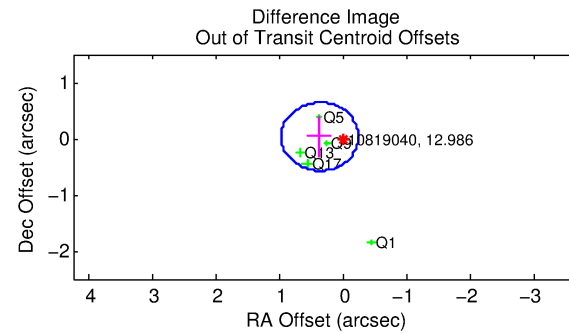
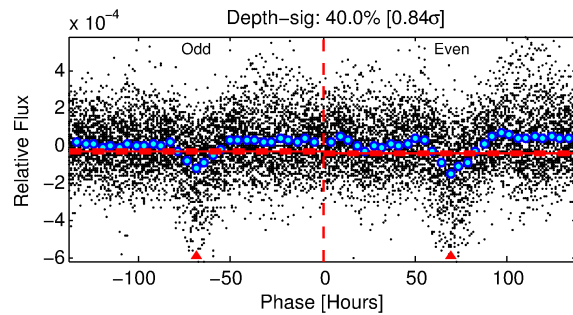
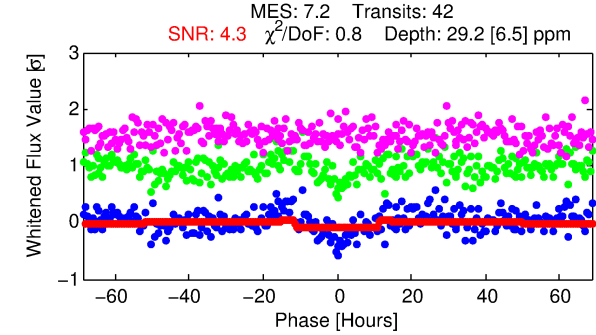
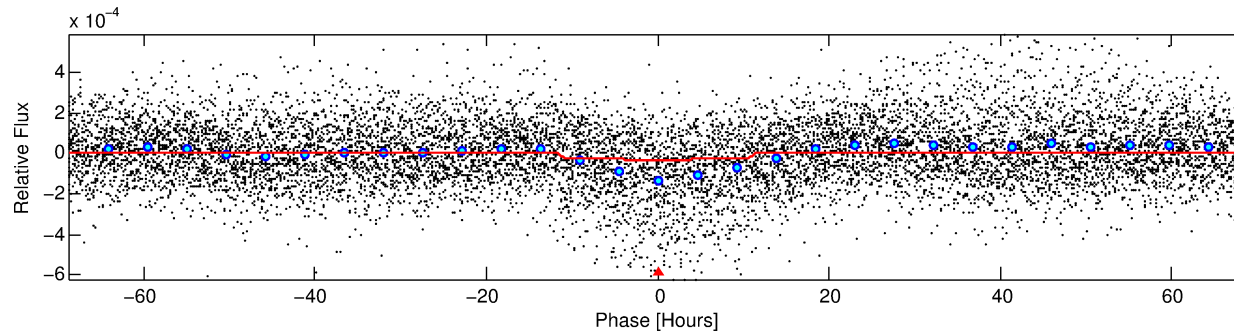
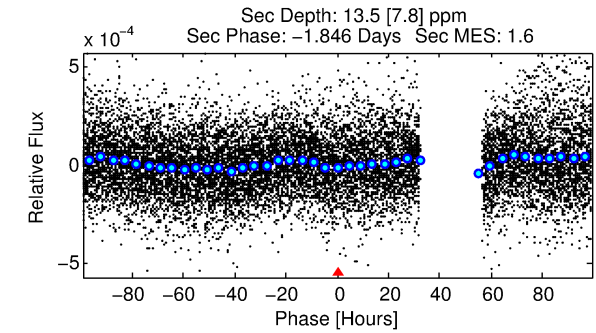
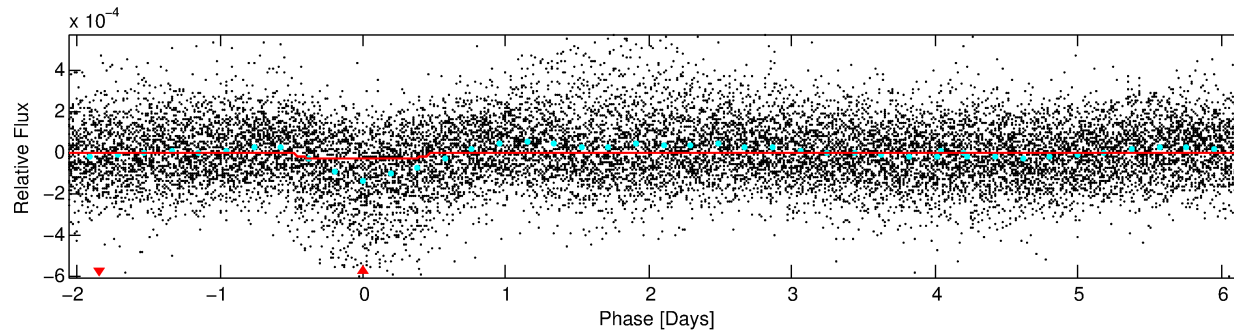
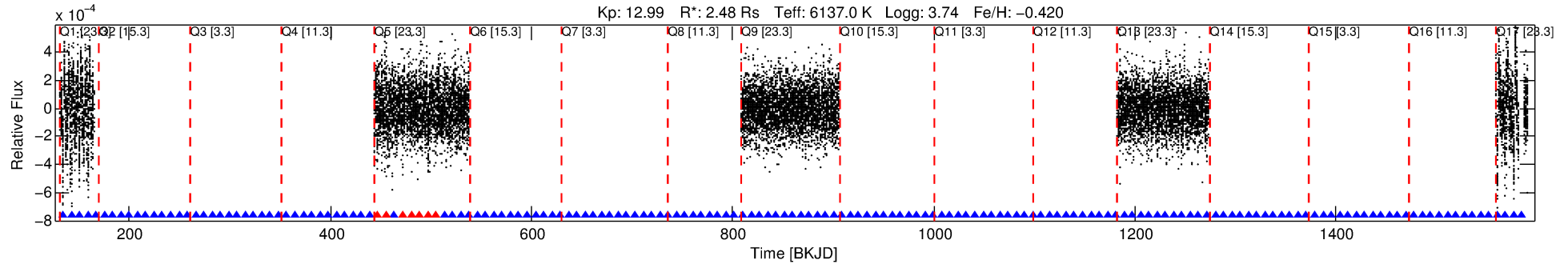
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010819040-01

No Significant Match Found

DV One-Page Summary

KIC: 10819040 Candidate: 1 of 1 Period: 8.243 d



DV Fit Results:

Period = 8.24291 [0.00038] d
Epoch = 134.1755 [0.0350] BKJD
Rp/R* = 0.0055 [0.0016]
a/R* = 1.87 [1.94]
b = 0.81 [0.63]
Seff = 1069.70 [632.35]
Teq = 1458 [216] K
Rp = 1.49 [0.72] Re
a = 0.0856 [0.0309] AU
Ag = 24.54 [24.76] [0.95σ]
Teffp = 5018 [1055] K [3.31σ]

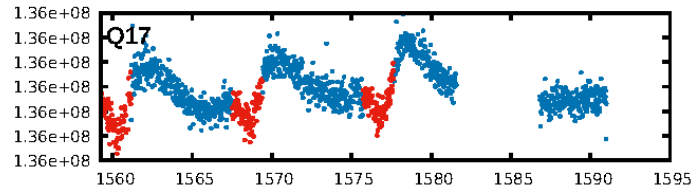
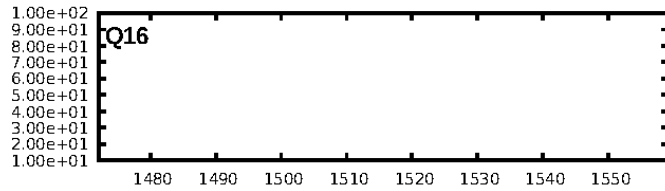
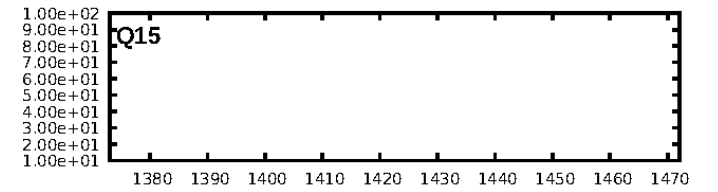
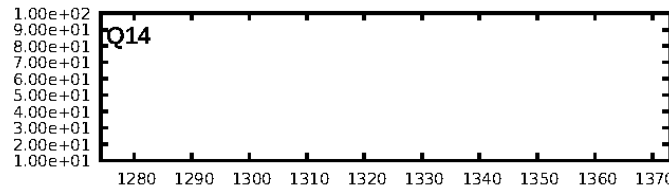
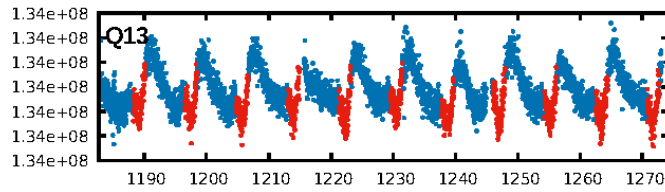
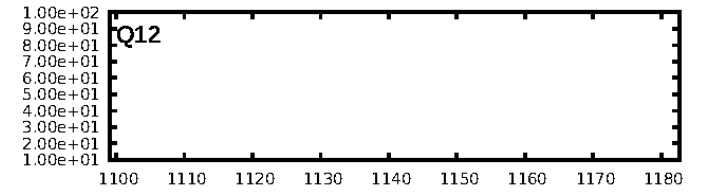
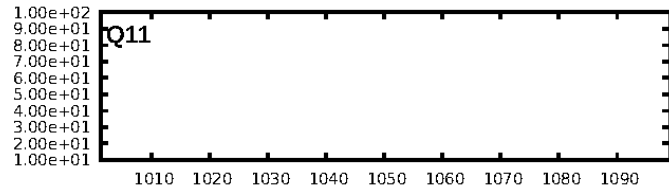
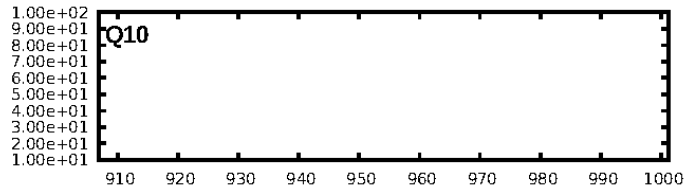
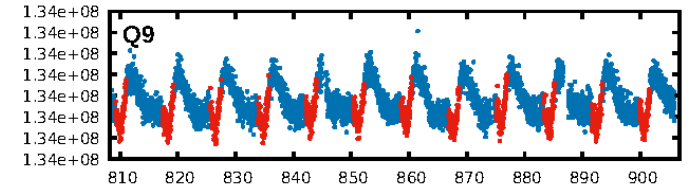
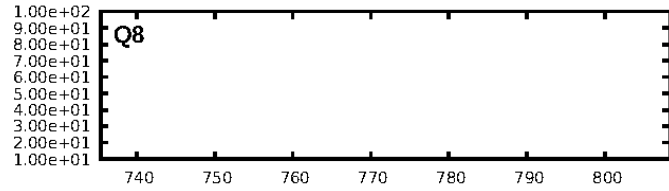
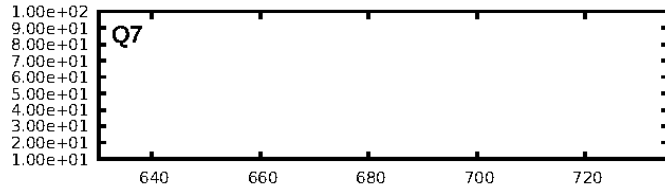
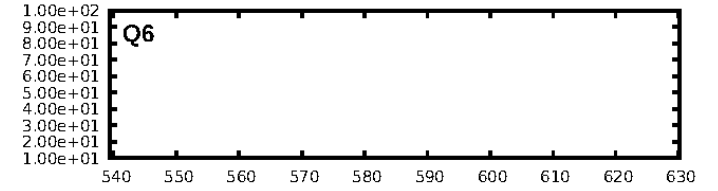
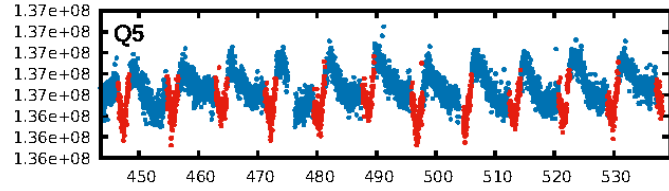
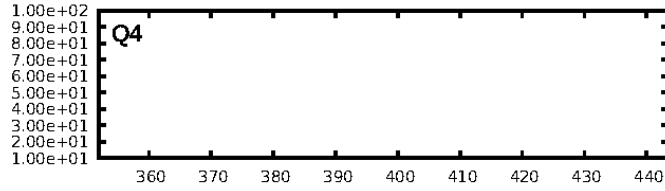
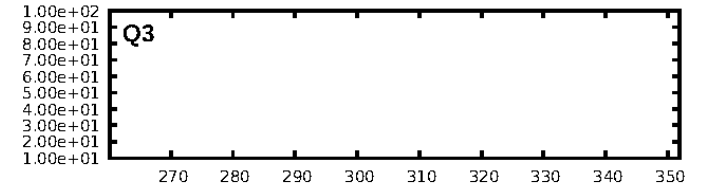
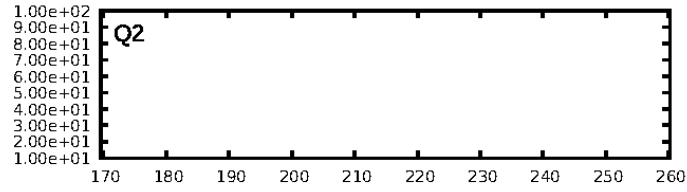
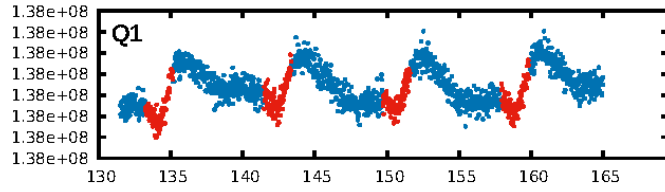
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 47.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.63e-13
RollingBand-fgt: 0.80 [28/35]
GhostDiagnostic-chr: 1.839
Centroid-sig: 0.1%
Centroid-so: 5.362 arcsec [2.46σ]
OotOffset-rm: 0.374 arcsec [1.85σ]
KicOffset-rm: 0.415 arcsec [1.25σ]
OotOffset-st: 0/0/0/5 [5]
KicOffset-st: 0/0/0/5 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [5/5]

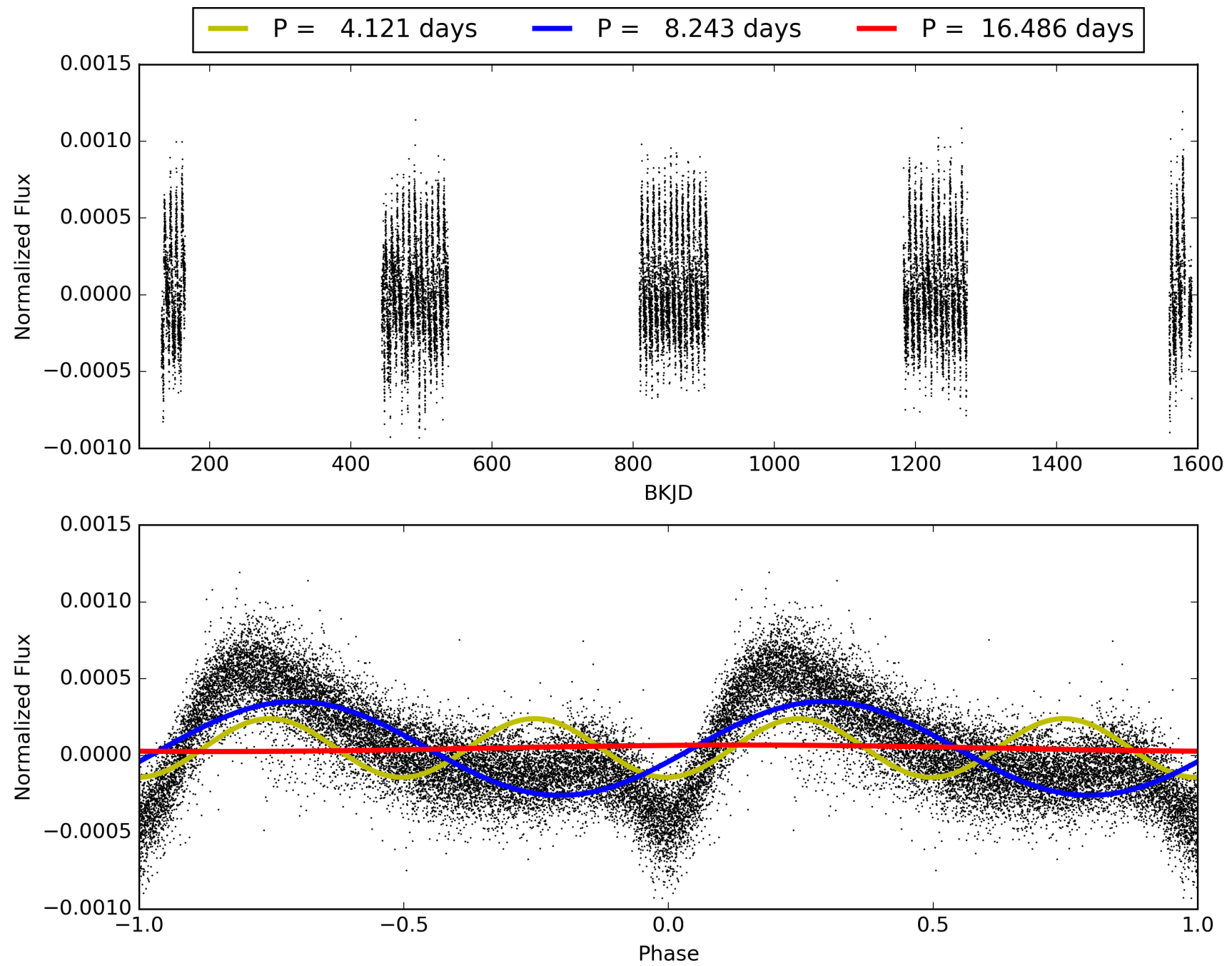
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:01:28 Z

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

TCE 010819040-01, PDC Light Curves

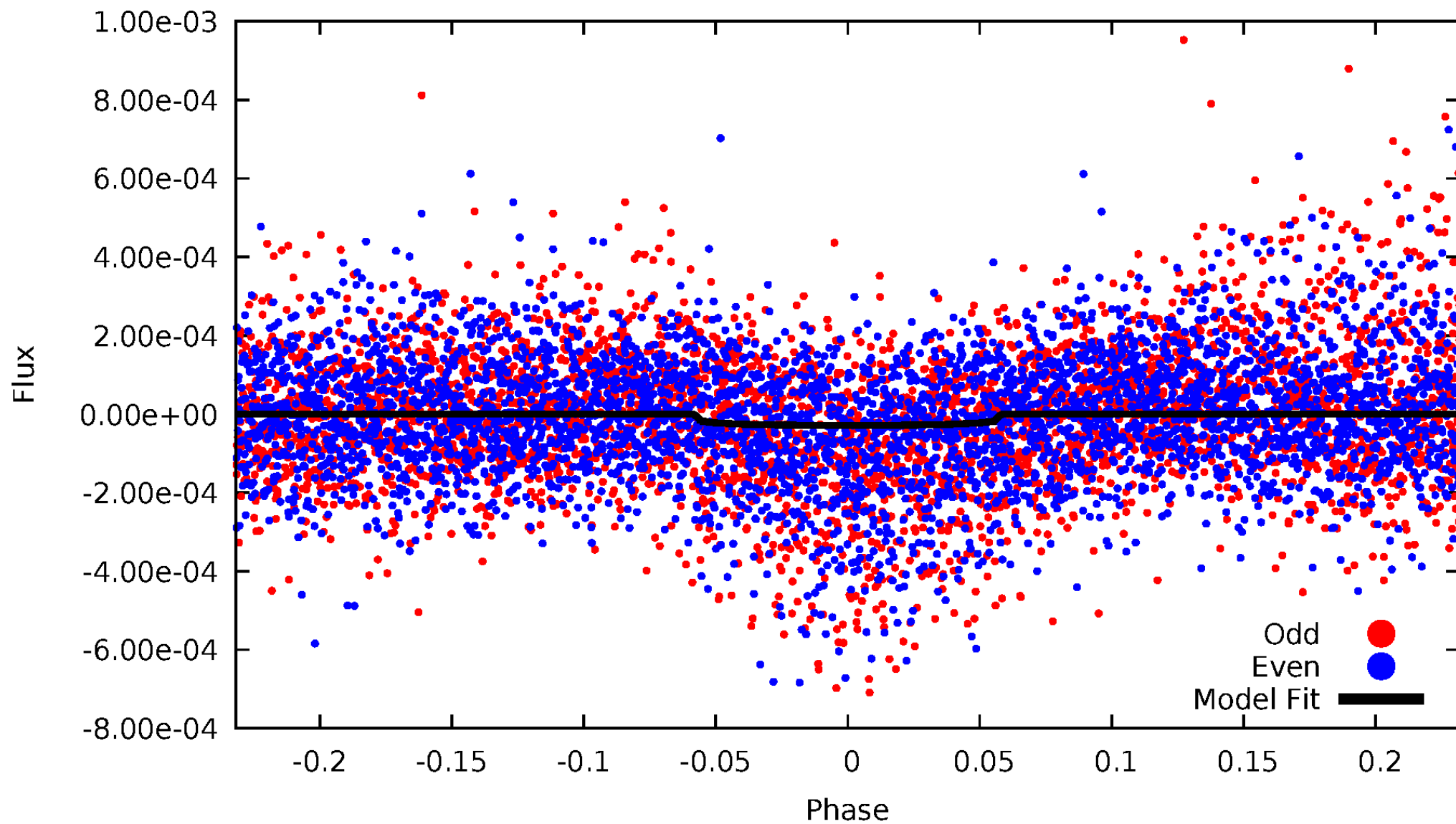


TCE 010819040-01



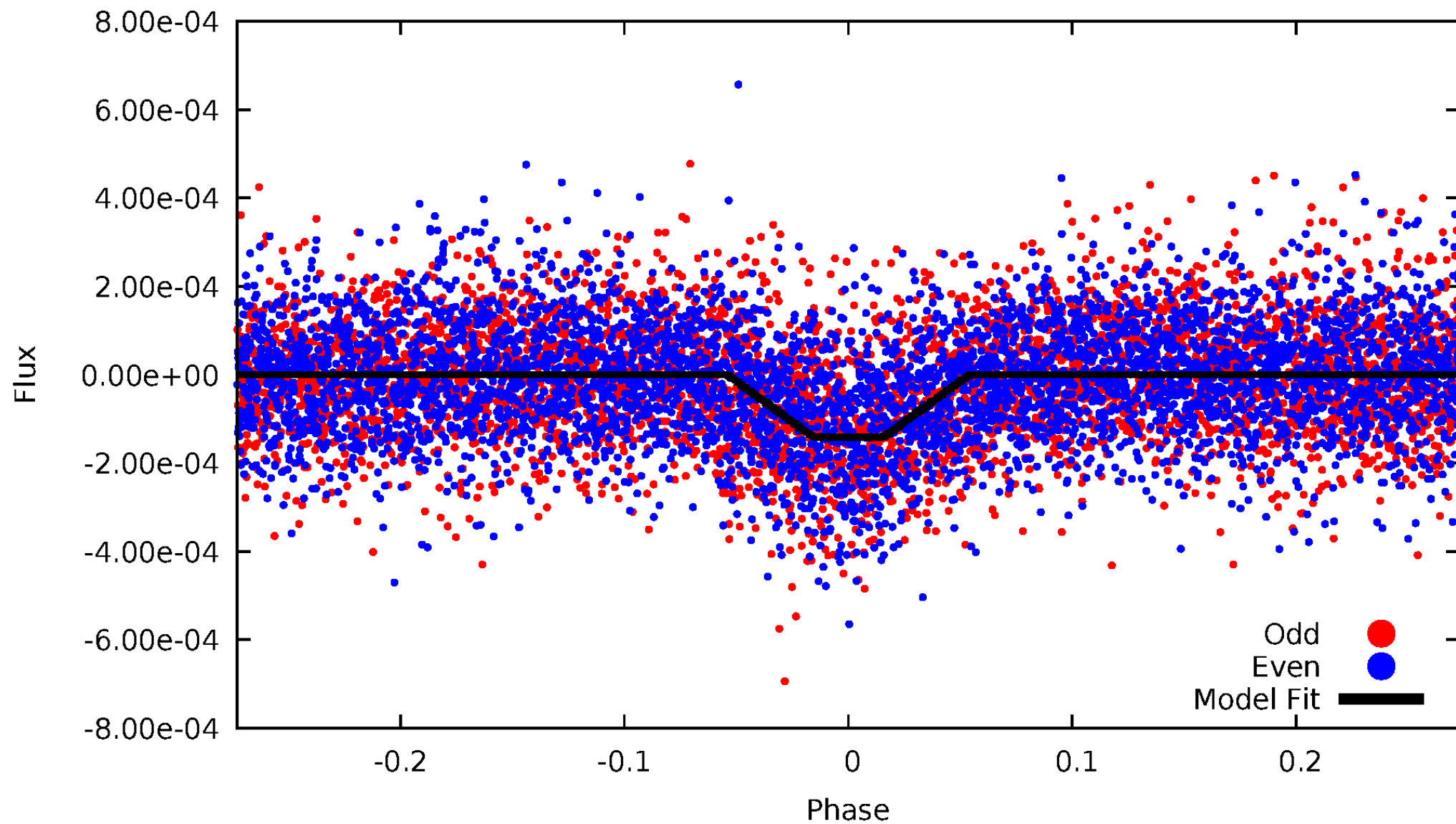
DV Odd/Even

TCE 010819040-01

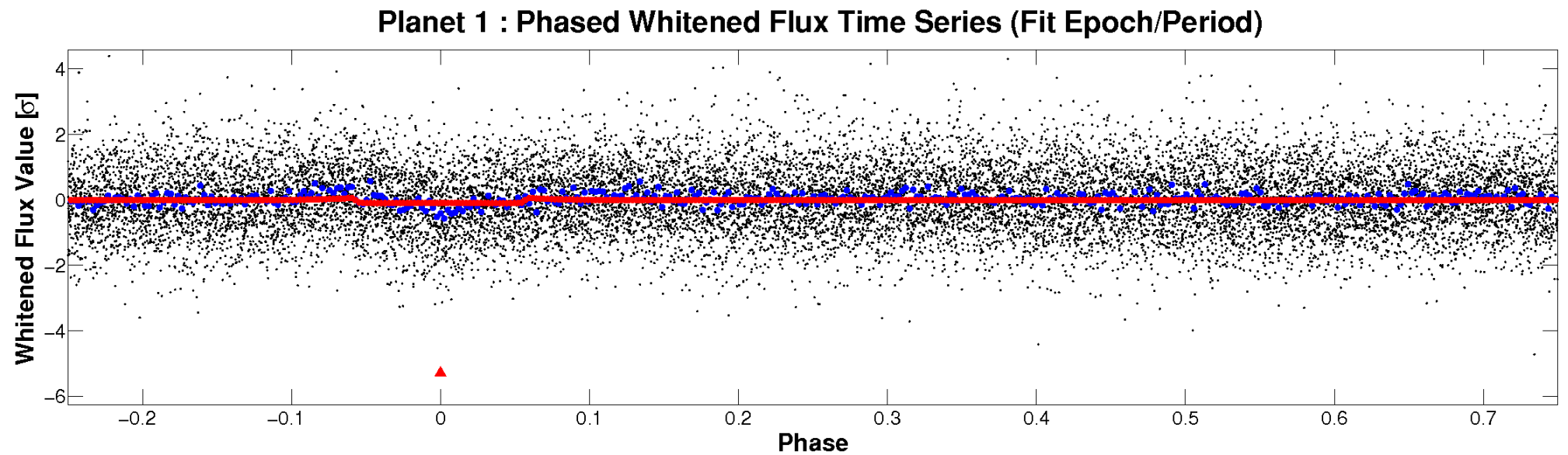
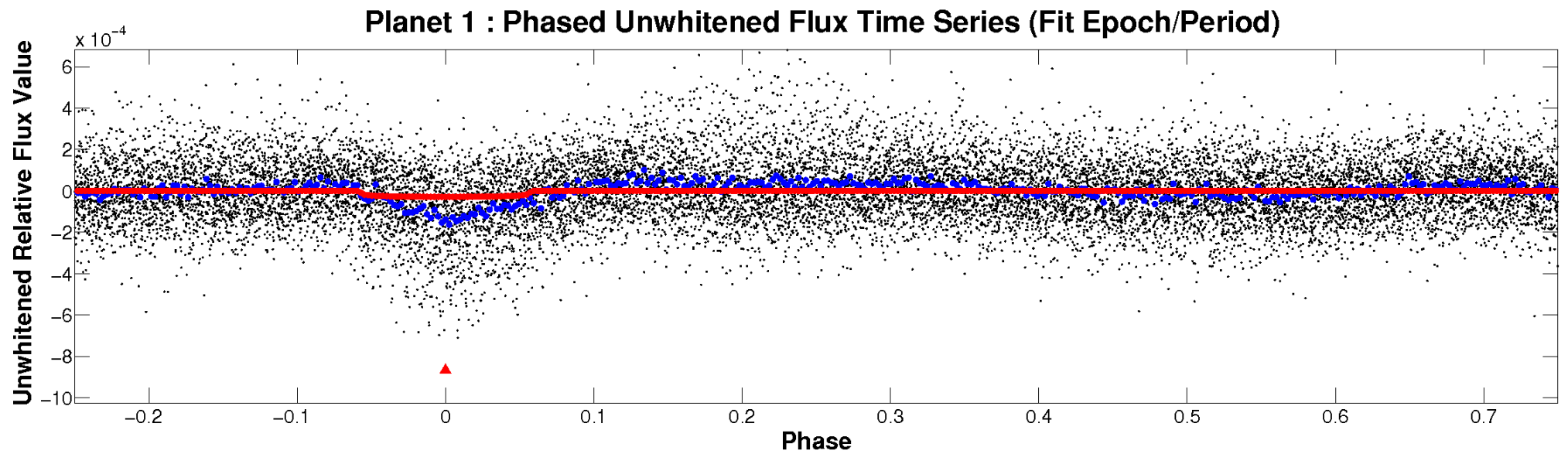


ALT Odd/Even

TCE 010819040-01

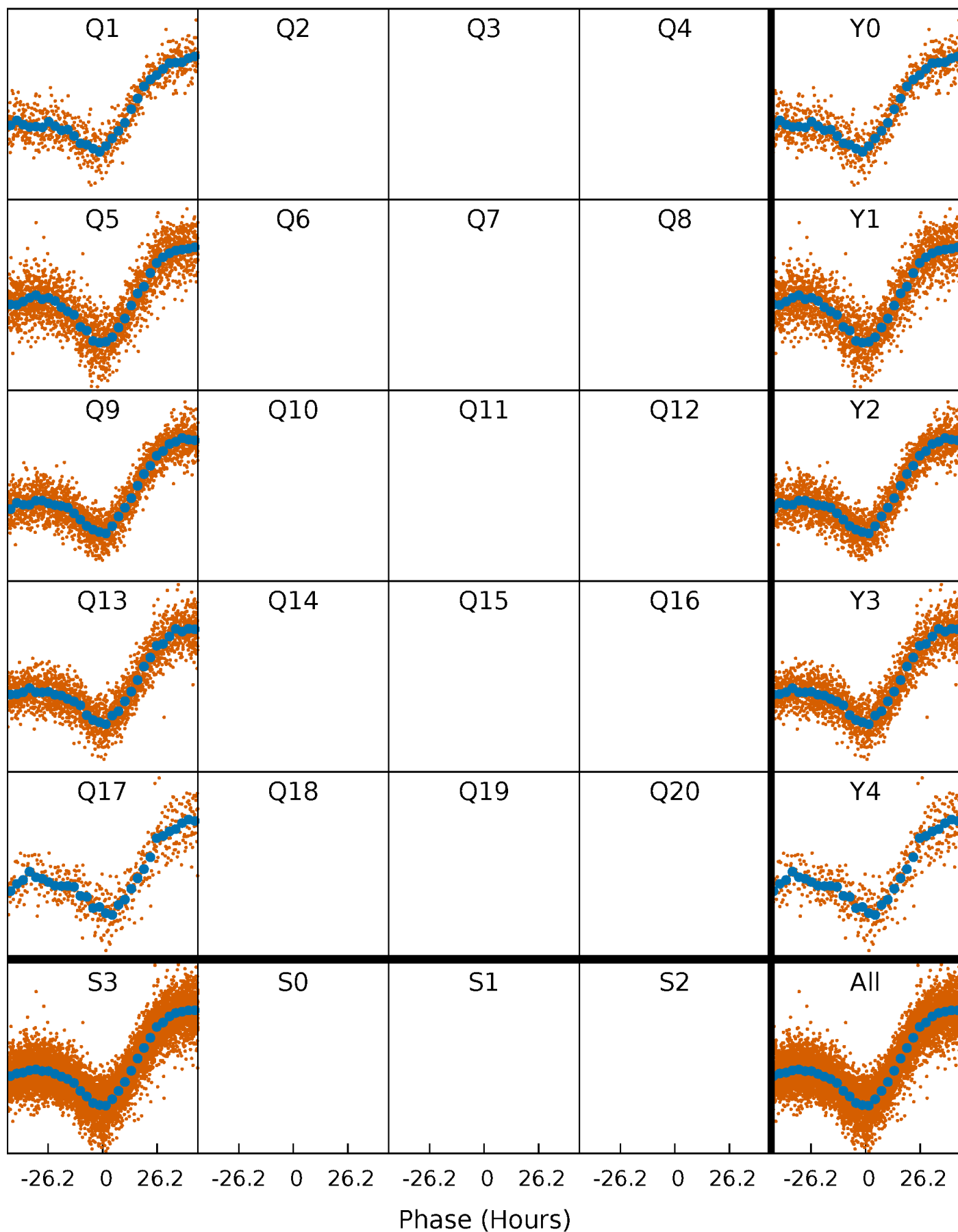


Non-Whitened Vs. Whitened Light Curve



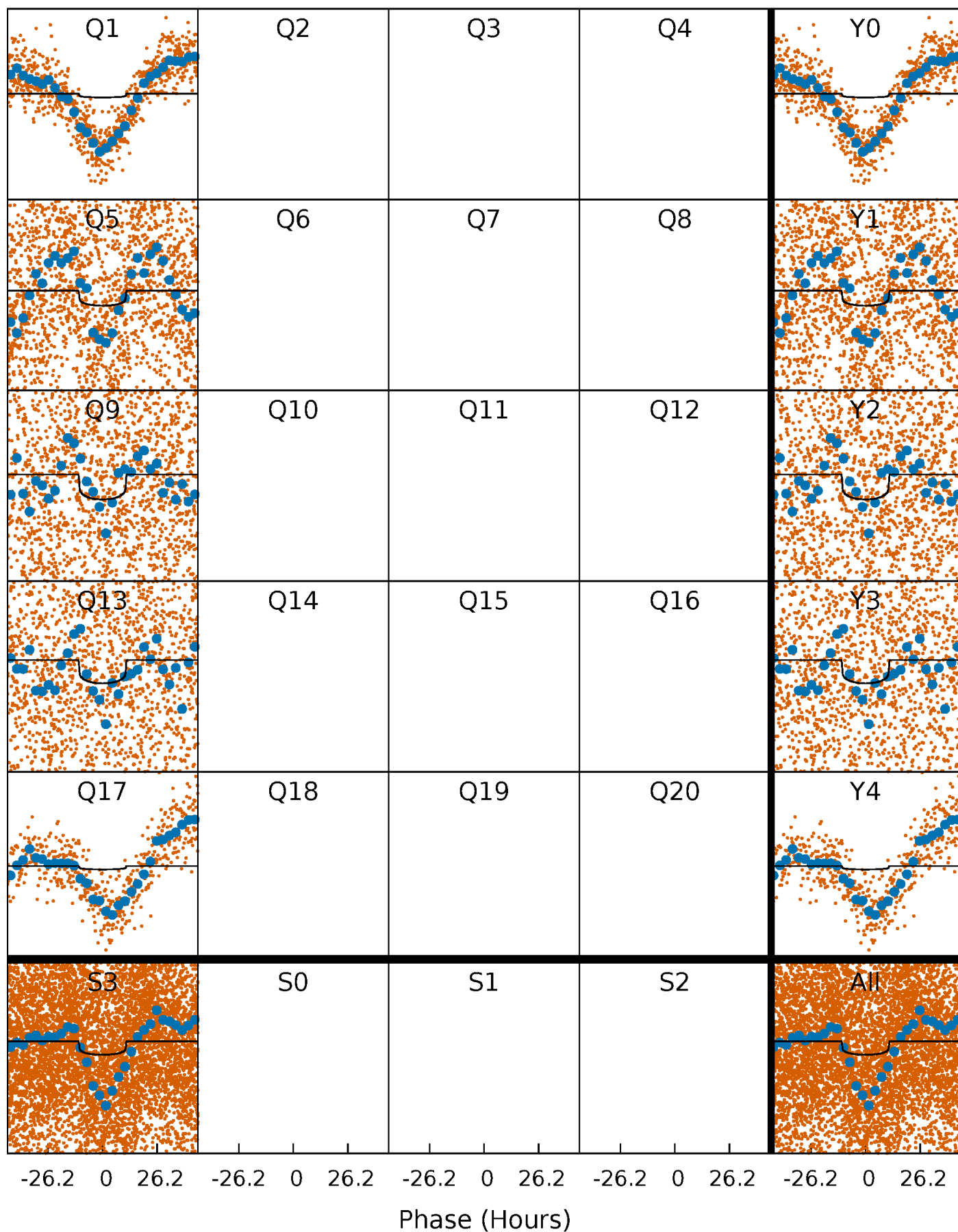
PDC Quarter-Phased Transit Curves

TCE 010819040-01 P= 8.242912 Days $T_0=134.175508$ (BKJD)



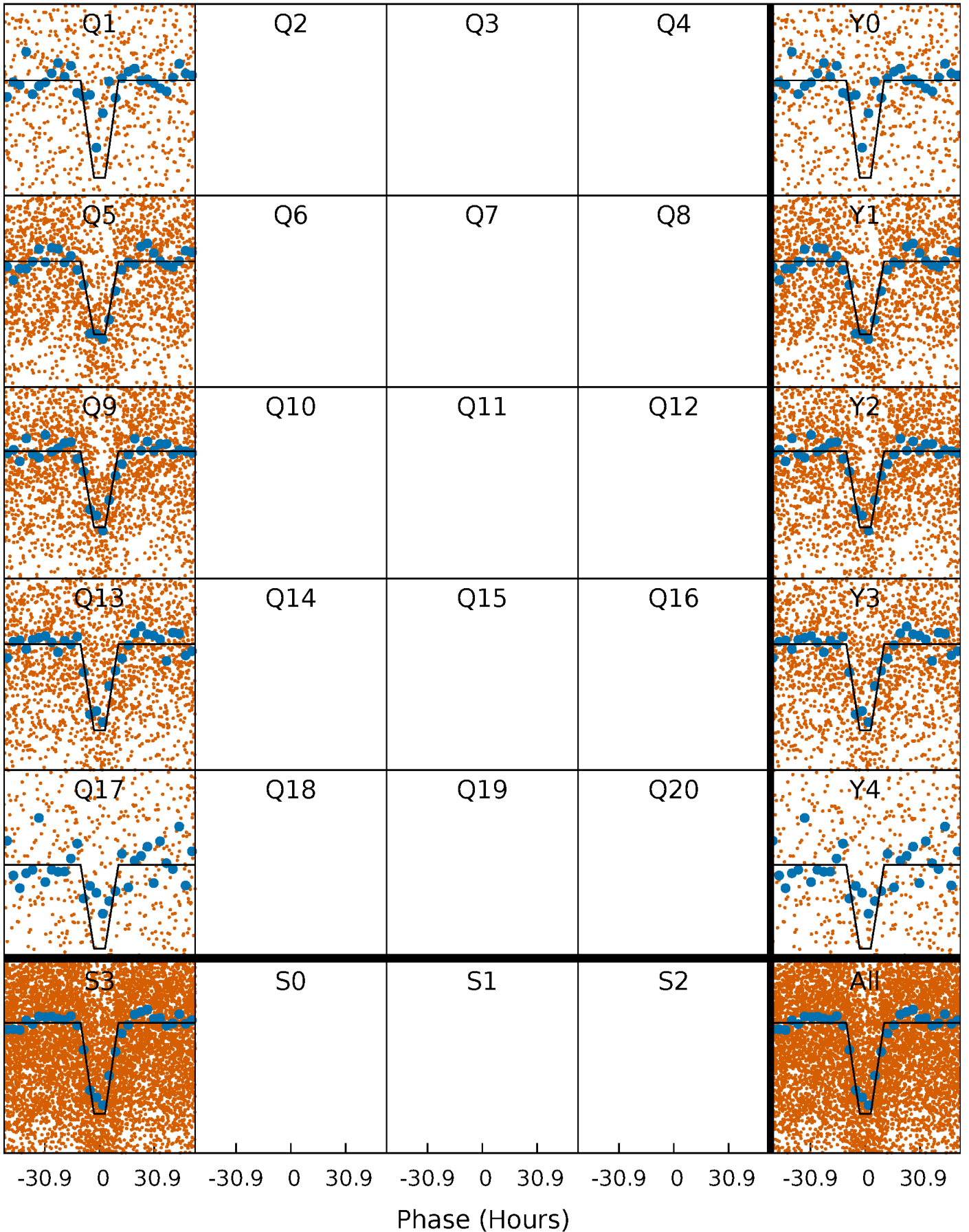
DV Quarter-Phased Transit Curves

TCE 010819040-01 P= 8.242912 Days $T_0=134.175508$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

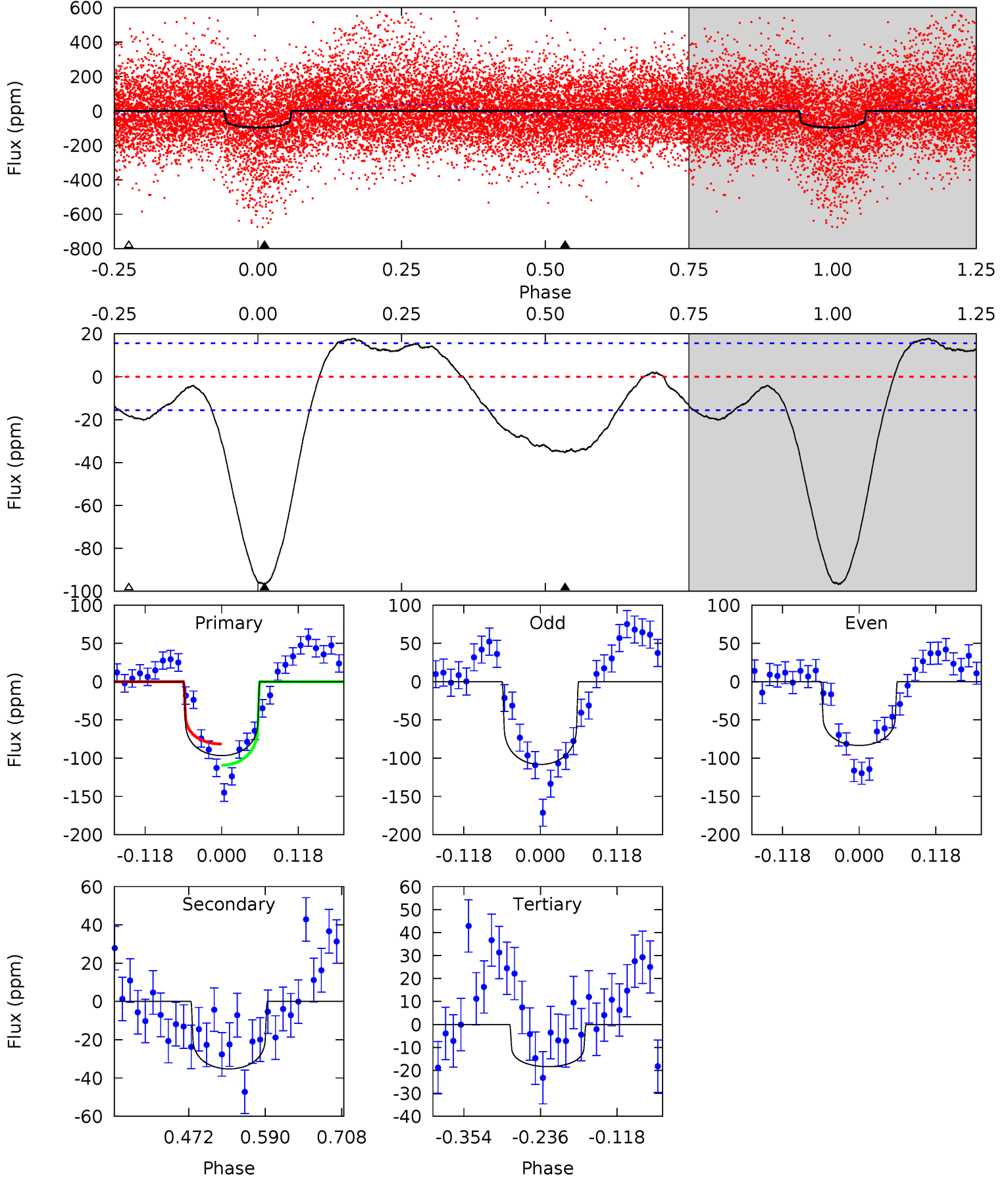
TCE 010819040-01 P= 8.242836 Days $T_0=134.186340$ (BKJD)



DV Model-Shift Uniqueness Test

010819040-01, P = 8.242912 Days, E = 125.932596 Days

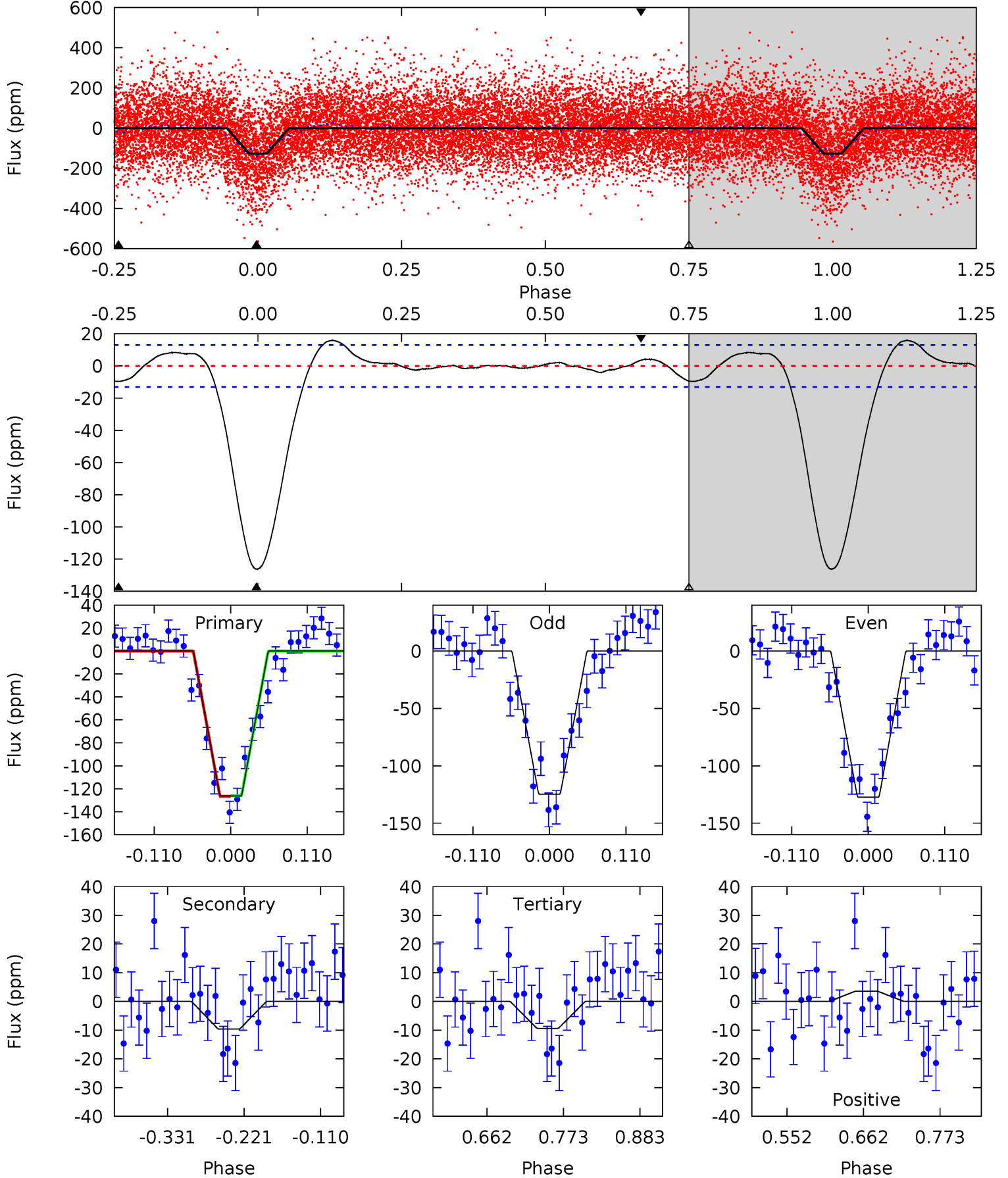
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.1	10.2	5.34	0	4.53	1.56	3.64	22.7	28.1	4.90	10.2	3.60	2.20	0.16	4.06



Alt Model-Shift Uniqueness Test

010819040-01, P = 8.242836 Days, E = 125.943504 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.0	3.35	3.26	1.26	4.54	1.60	1.61	40.7	42.7	0.09	2.09	0.46	0.95	0.11	0.10



Stellar Parameters For KIC 010819040

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6137^{+214}_{-214}	$3.738^{+0.336}_{-0.105}$	$-0.420^{+0.350}_{-0.250}$	$2.483^{+0.404}_{-0.942}$	$1.231^{+0.217}_{-0.265}$	$0.113^{+0.261}_{-0.037}$
	+3%/-3%	+9%/-3%	+83%/-60%	+16%/-38%	+18%/-22%	+231%/-33%
Source	KIC0	FLK73	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 010819040-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-35 ± 3	$1.41^{+0.55}_{-0.49}$	2000^{+134}_{-196}	6345^{+1638}_{-818}	73^{+93}_{-33}
Alt.	-10 ± 3	$3.12^{+0.63}_{-0.68}$	1999^{+132}_{-192}	3529^{+283}_{-269}	$4.019^{+2.702}_{-1.564}$

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

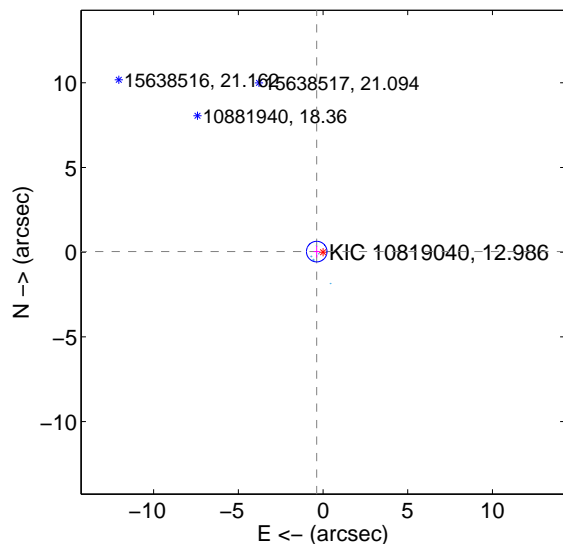
Supplemental centroid analysis for 010819040-01. Kepler magnitude: 12.99. Transit SNR 4.35

There are 5 quarters with good PRF difference image offsets

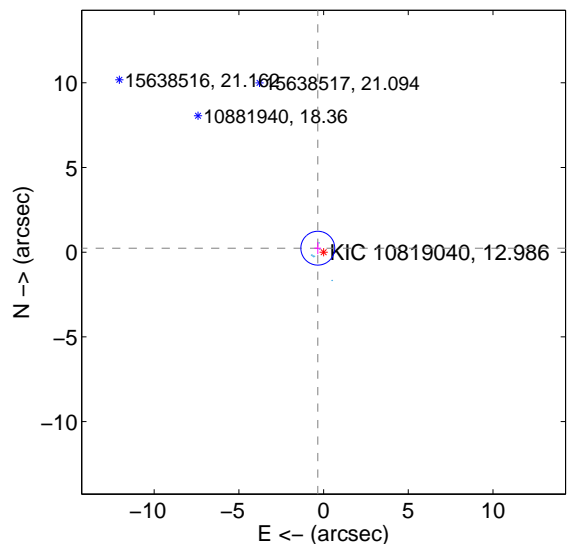
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.374 ± 0.202	1.85	0.373 ± 0.177	0.034 ± 0.351
PRF-fit source offset from KIC position	0.415 ± 0.333	1.25	0.342 ± 0.200	0.235 ± 0.355
photometric centroid source offset	5.36 ± 2.18	2.46	-4.28 ± 2.14	-3.23 ± 2.25

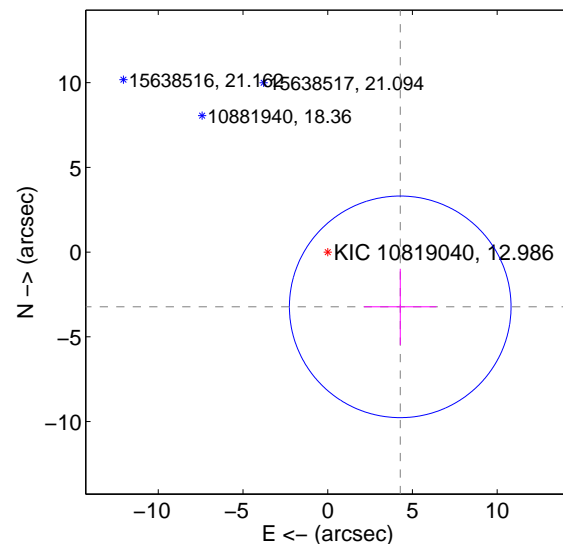
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

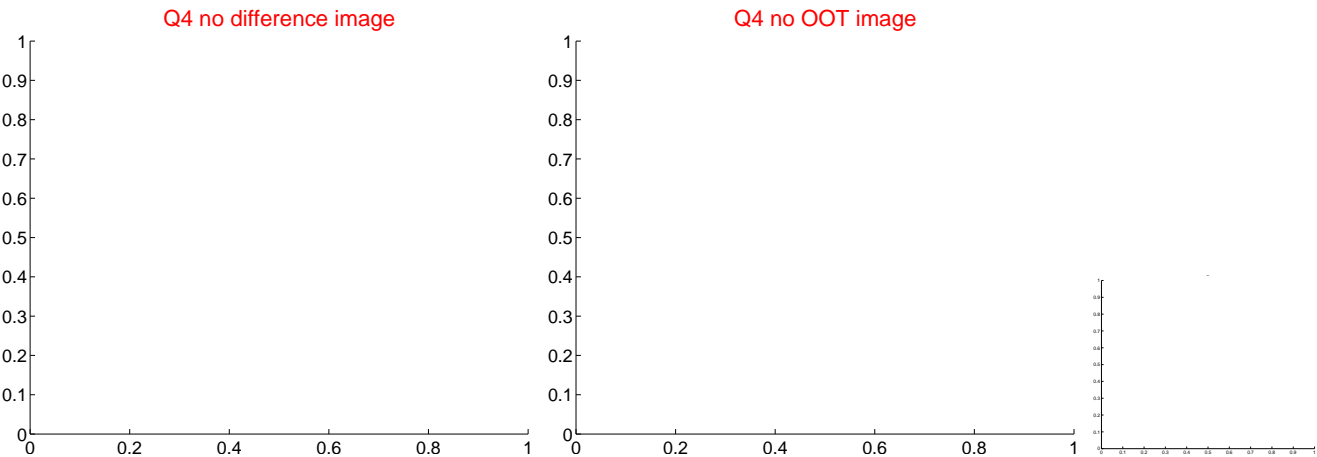
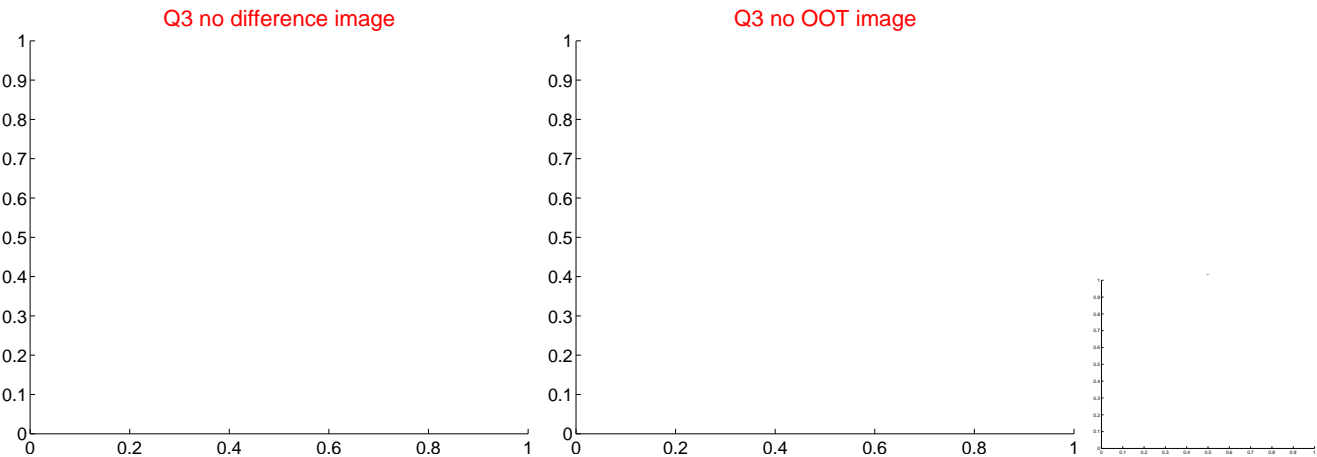
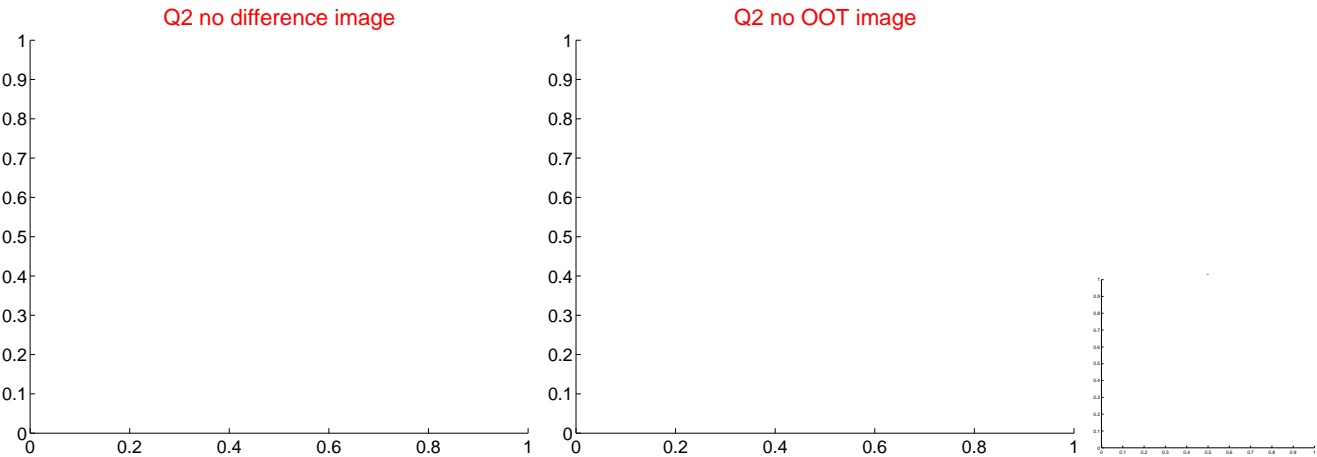
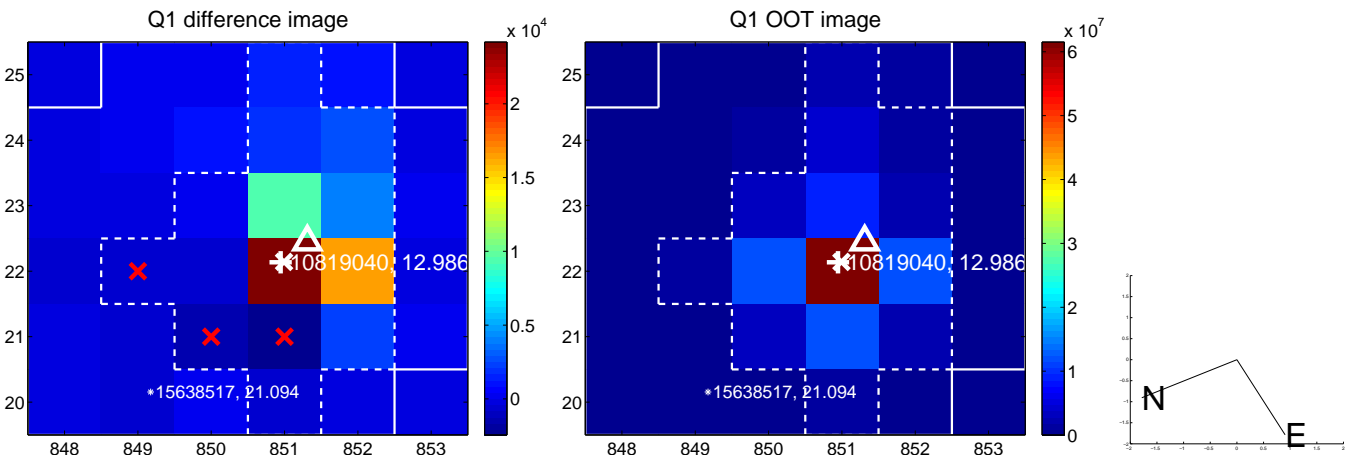


offset from photometric centroids

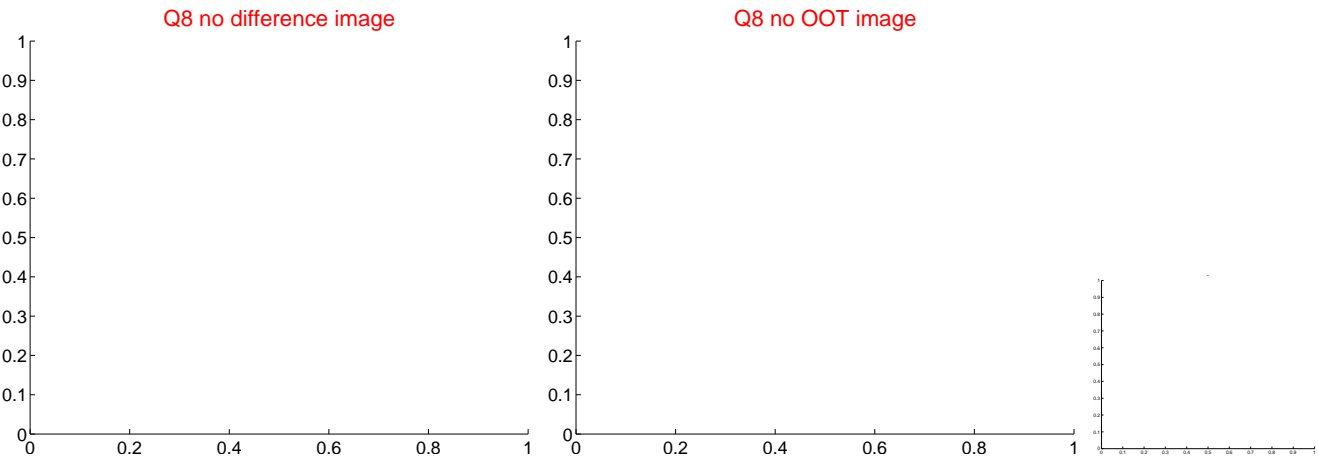
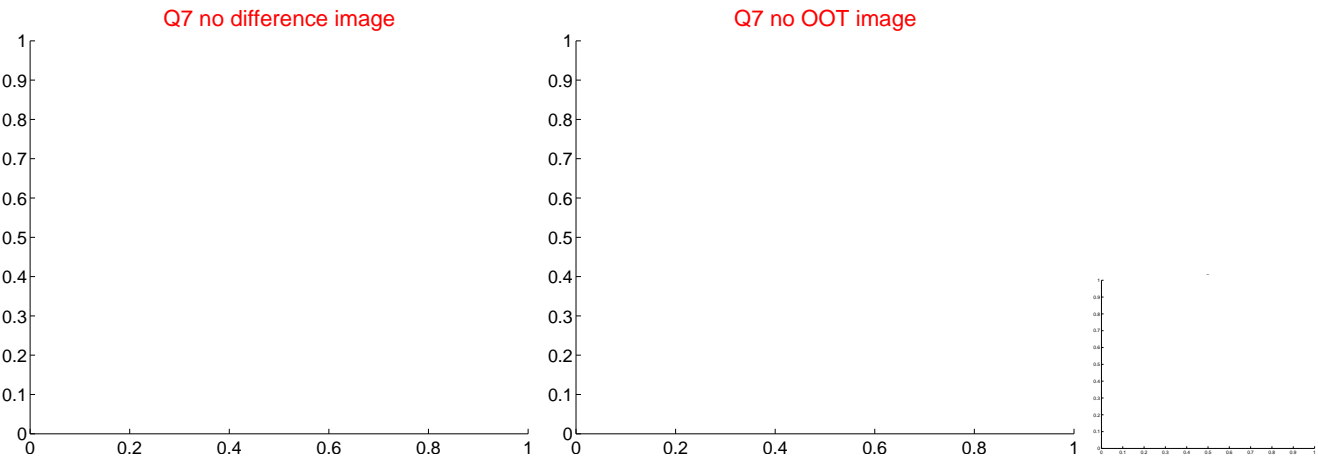
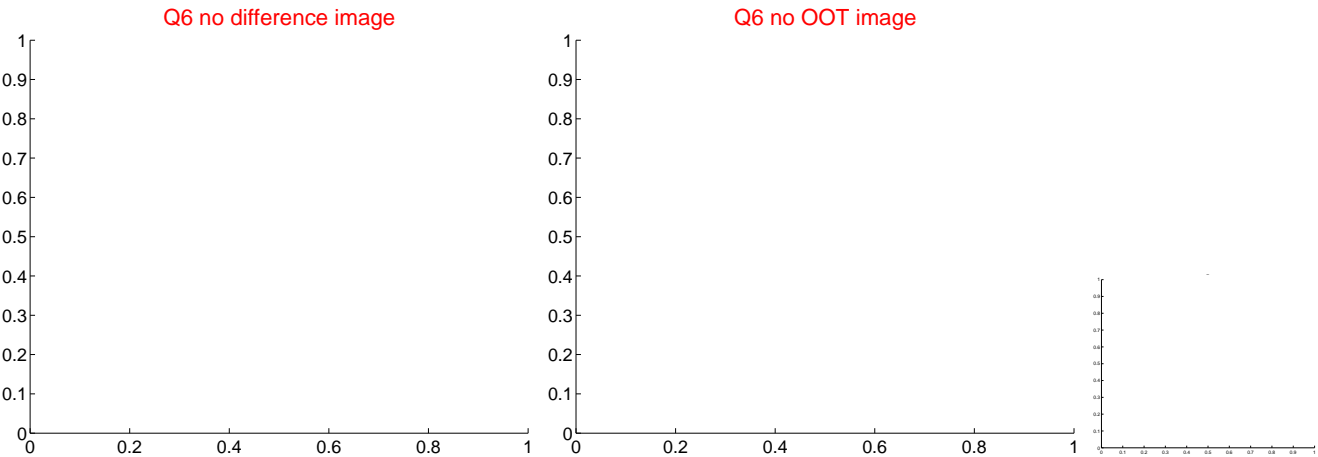
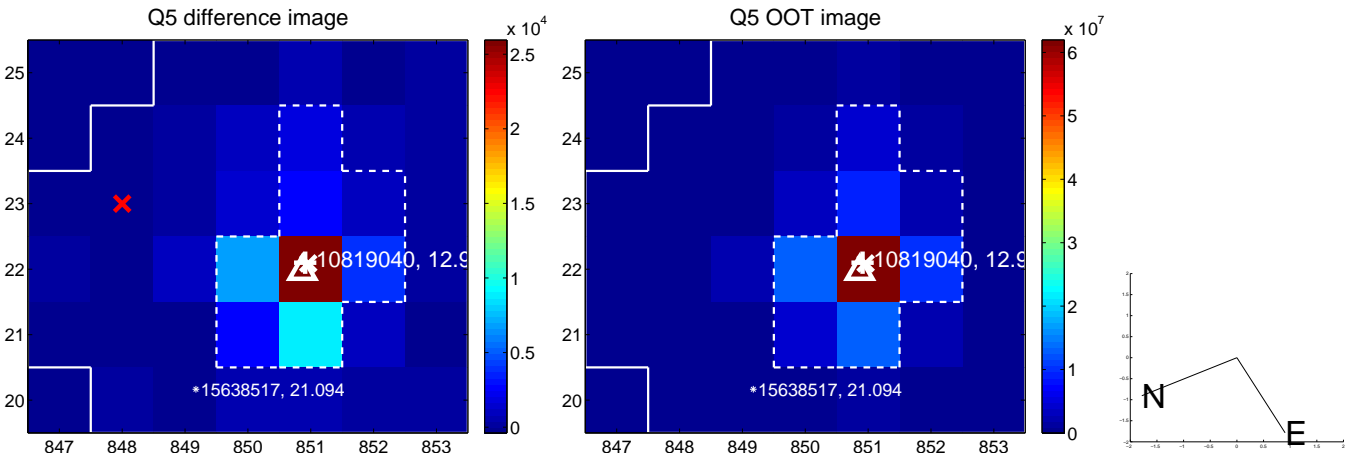


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

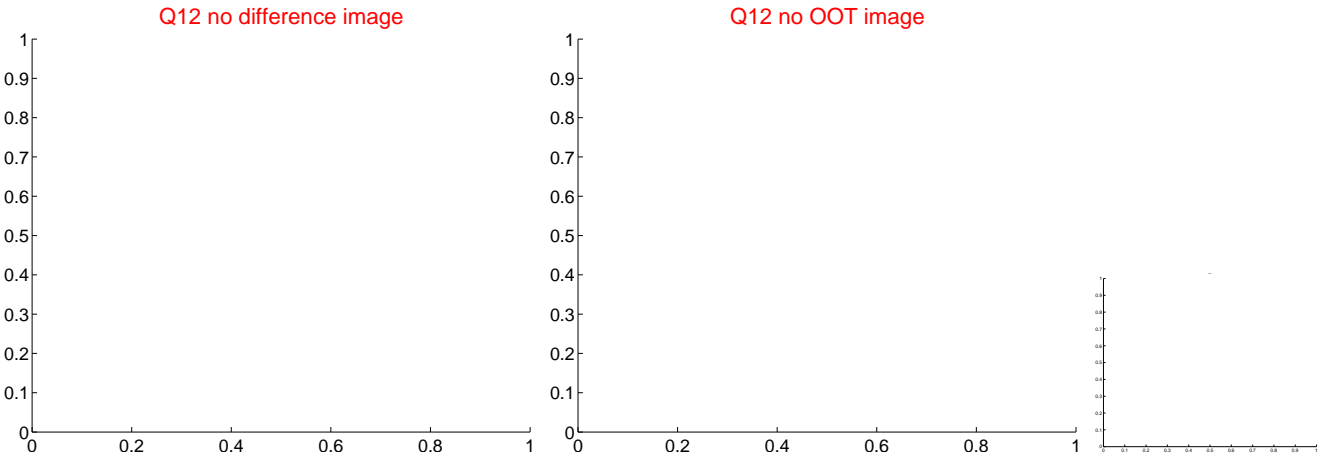
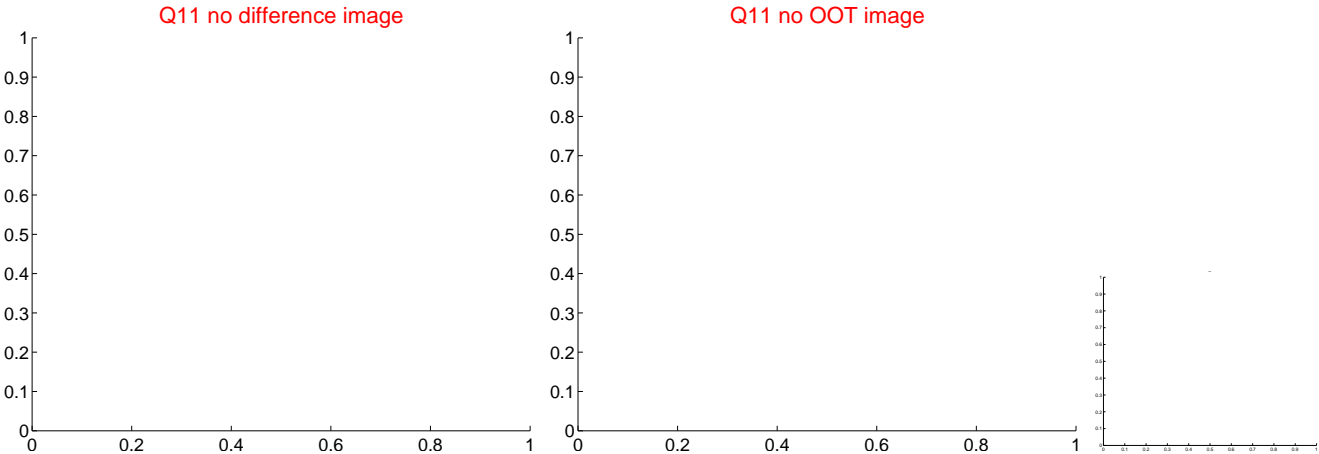
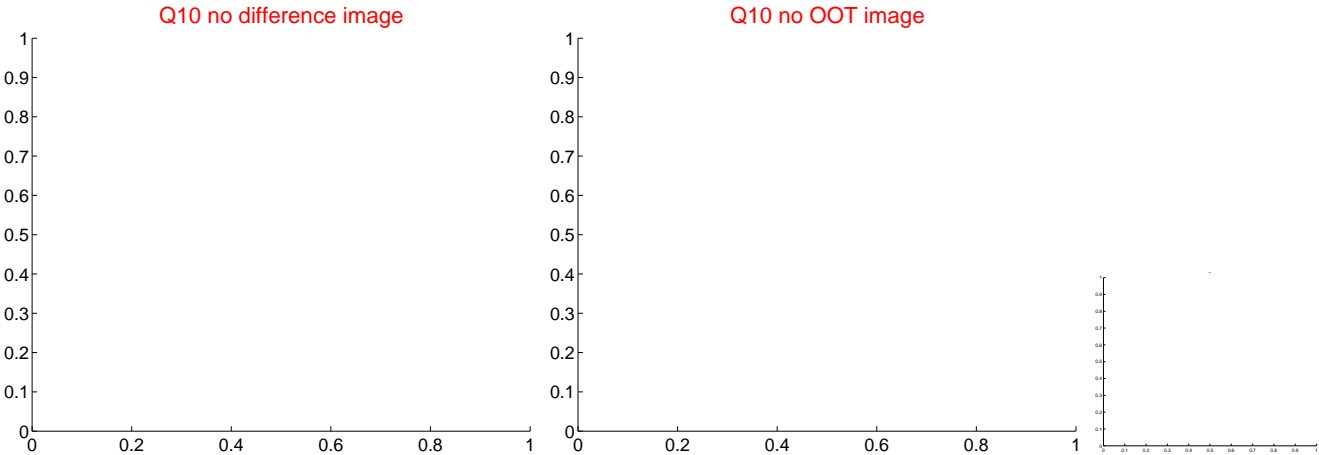
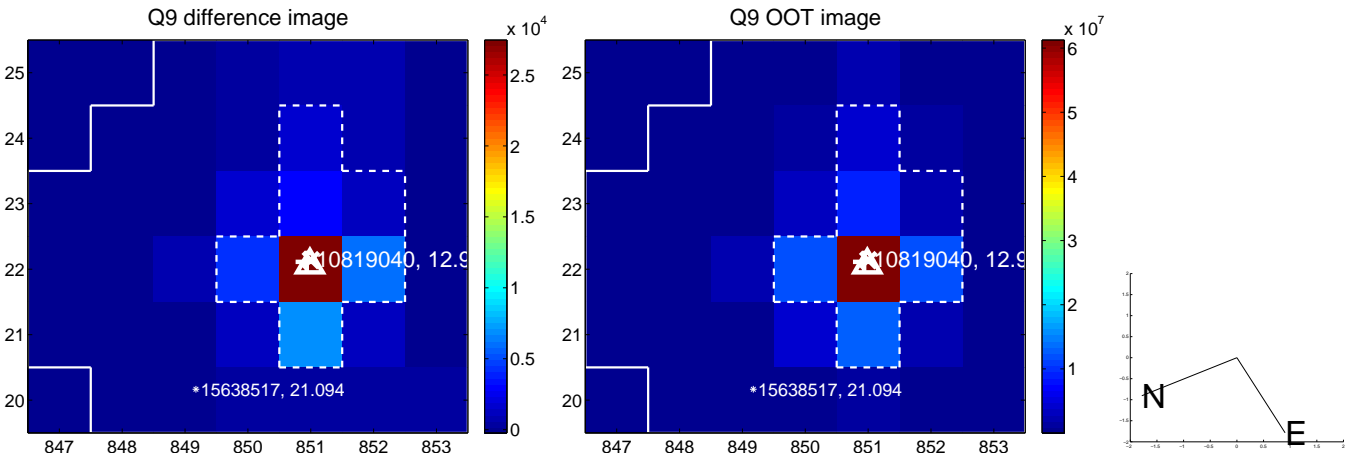
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



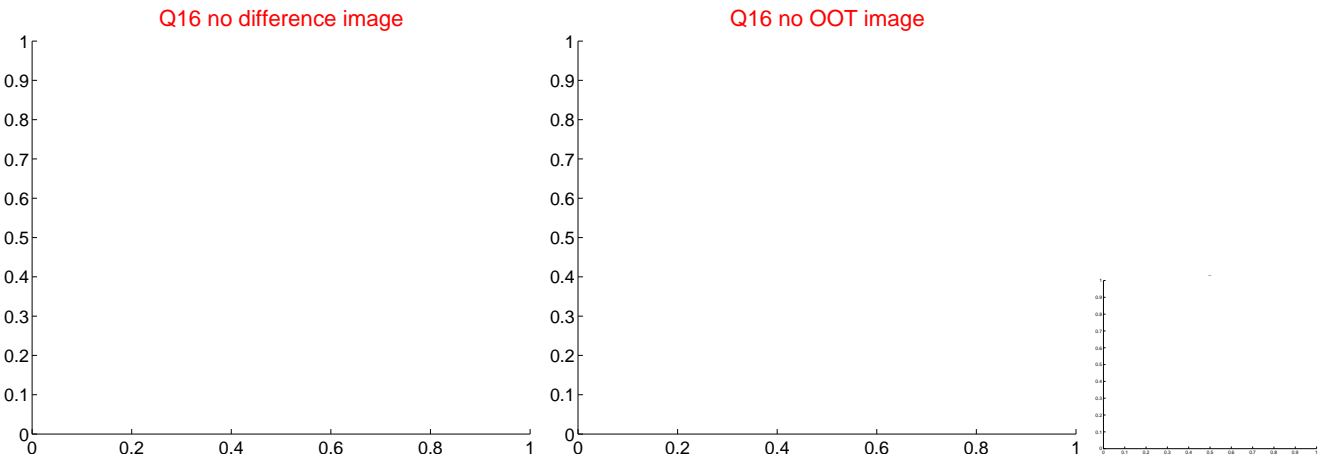
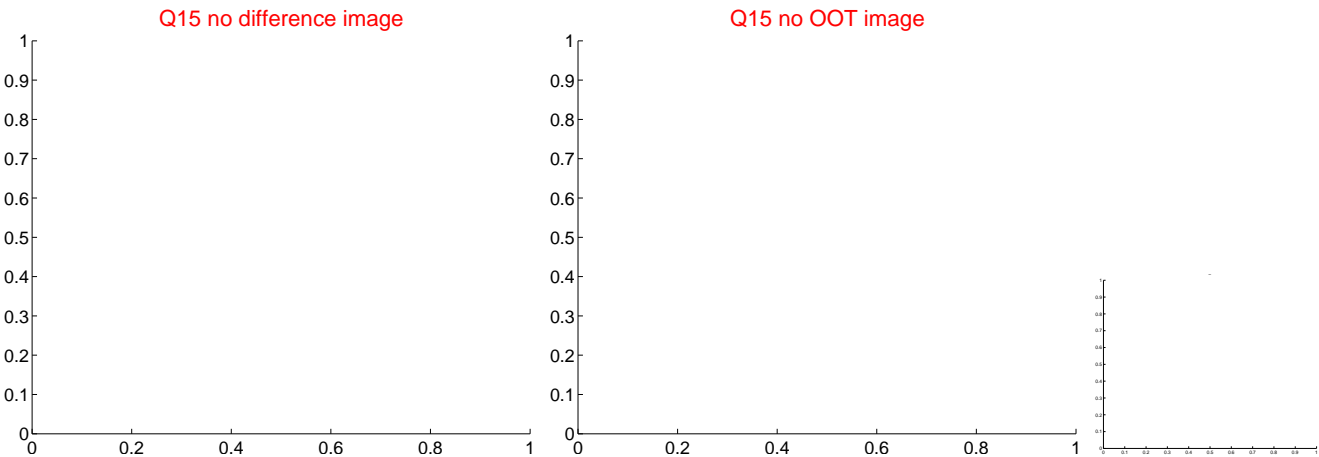
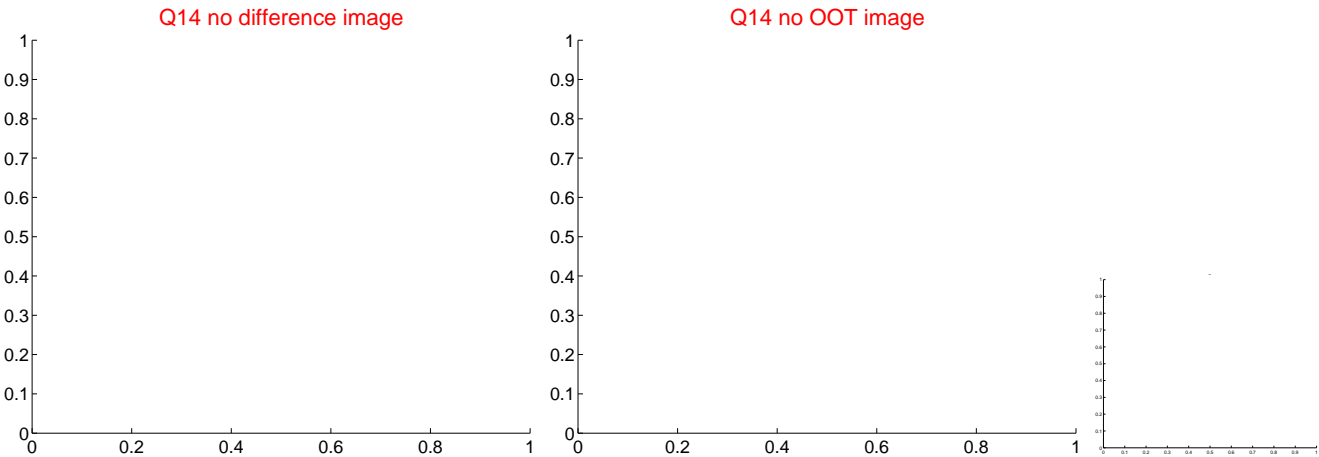
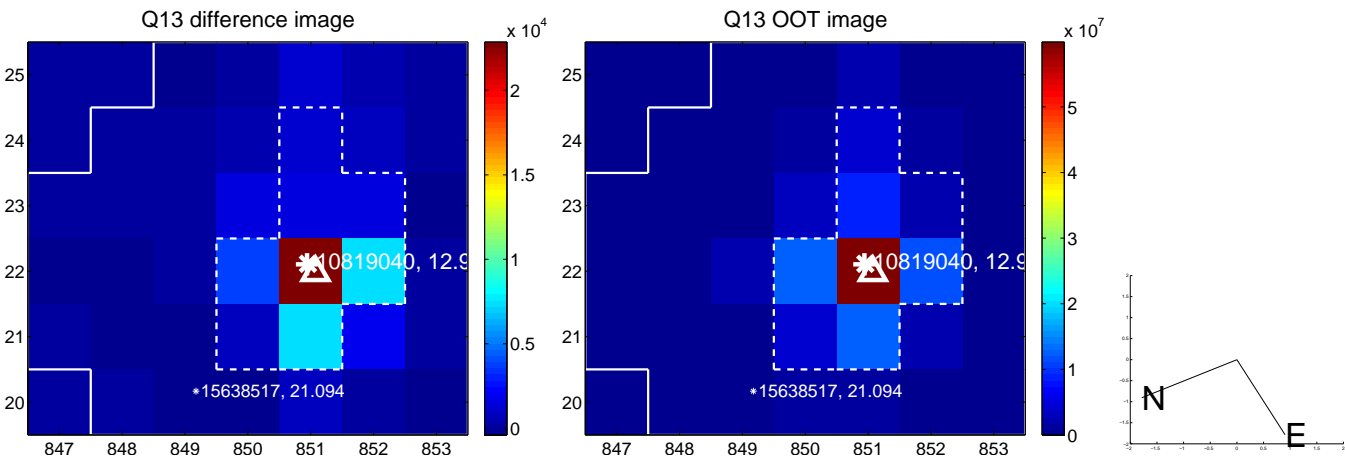
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



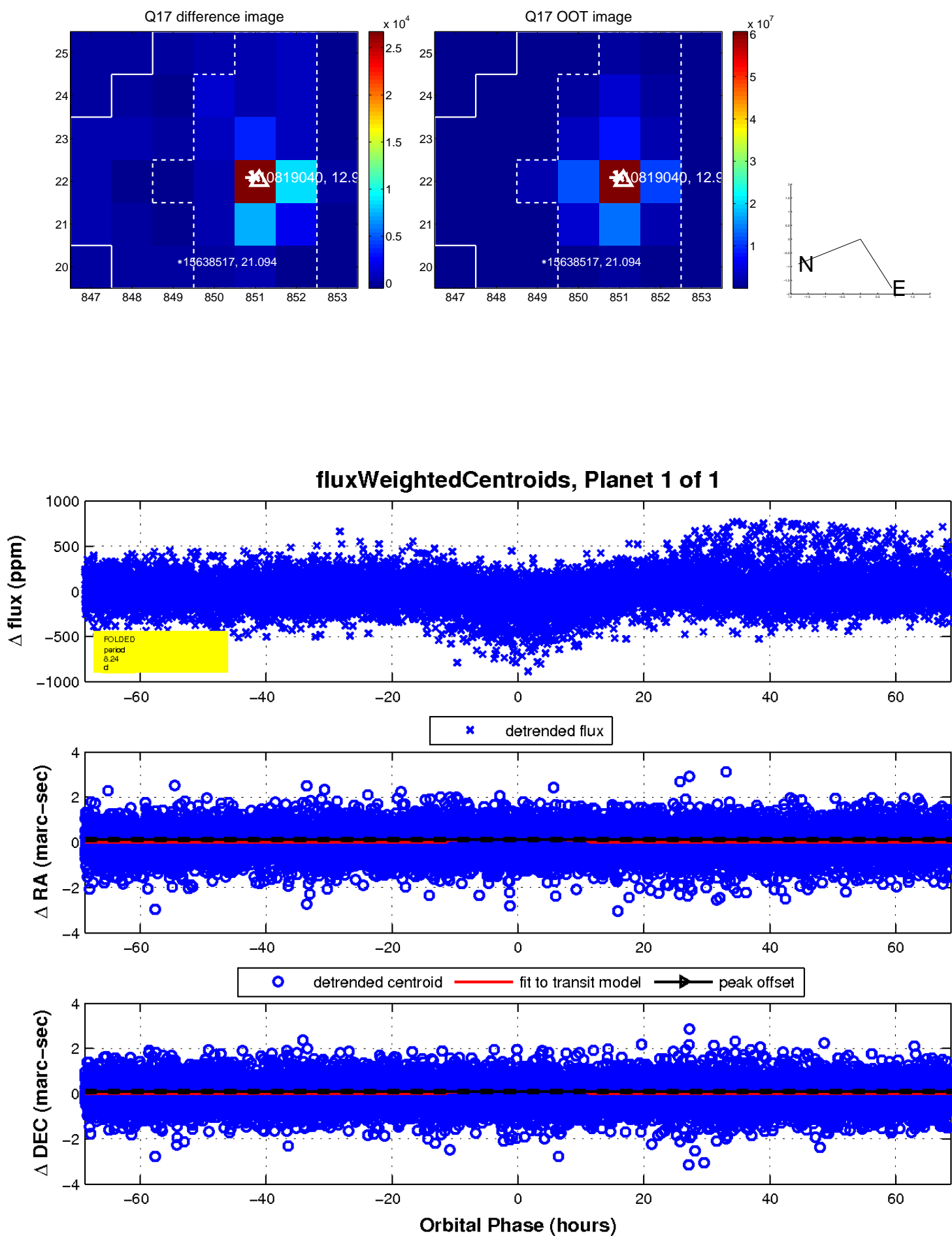
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

