

KIC 008210018

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})
008210018-01	OBS	2762.01	132.997089	258.383489	1293.4	7.519	21.0	23.3	0.66	4523	2.37	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008210018-01	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 008210018-01

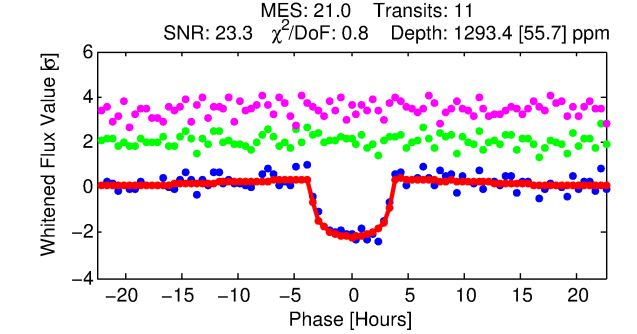
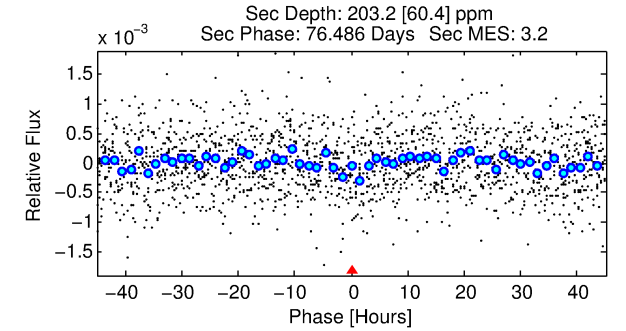
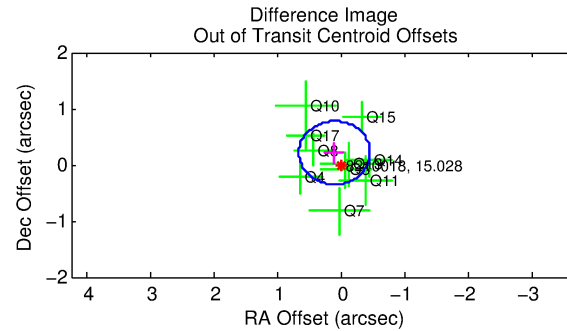
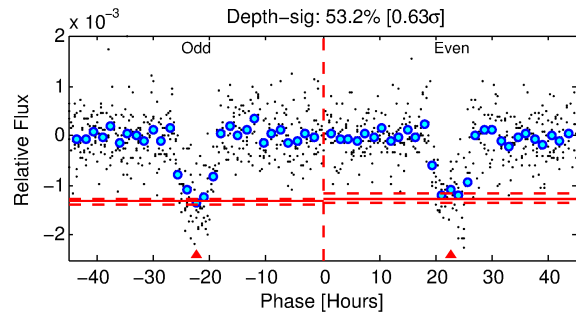
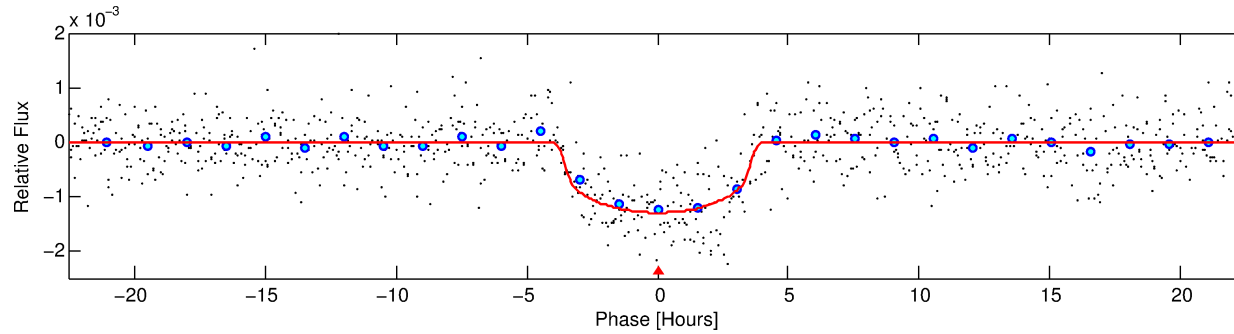
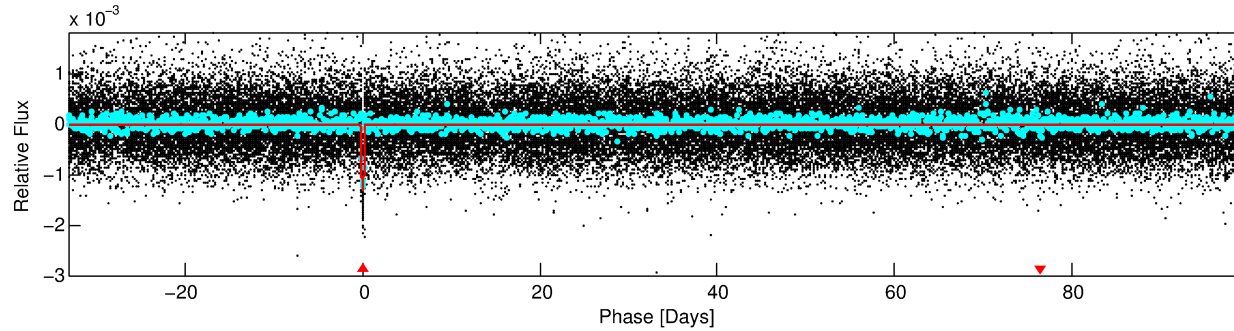
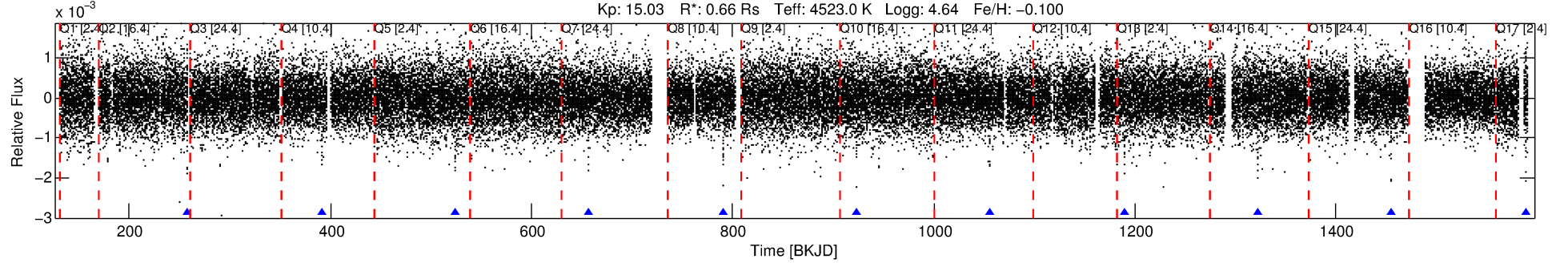
No Significant Match Found

DV One-Page Summary

KIC: 8210018 Candidate: 1 of 1 Period: 132.997 d

KOI: K02762.01 Corr: 0.997

Kp: 15.03 R*: 0.66 Rs Teff: 4523.0 K Logg: 4.64 Fe/H: -0.100



DV Fit Results:

Period = 132.99709 [0.00093] d
Epoch = 258.3835 [0.0055] BKJD
Rp/R* = 0.0329 [0.0124]
a/R* = 123.16 [139.99]
b = 0.49 [1.82]
Seff = 0.81 [0.13]
Teq = 242 [10] K
Rp = 2.37 [0.91] Re
a = 0.4496 [0.0284] AU
Ag = 4030.32 [3277.20] [1.23σ]
Teffp = 2976 [611] K [4.47σ]

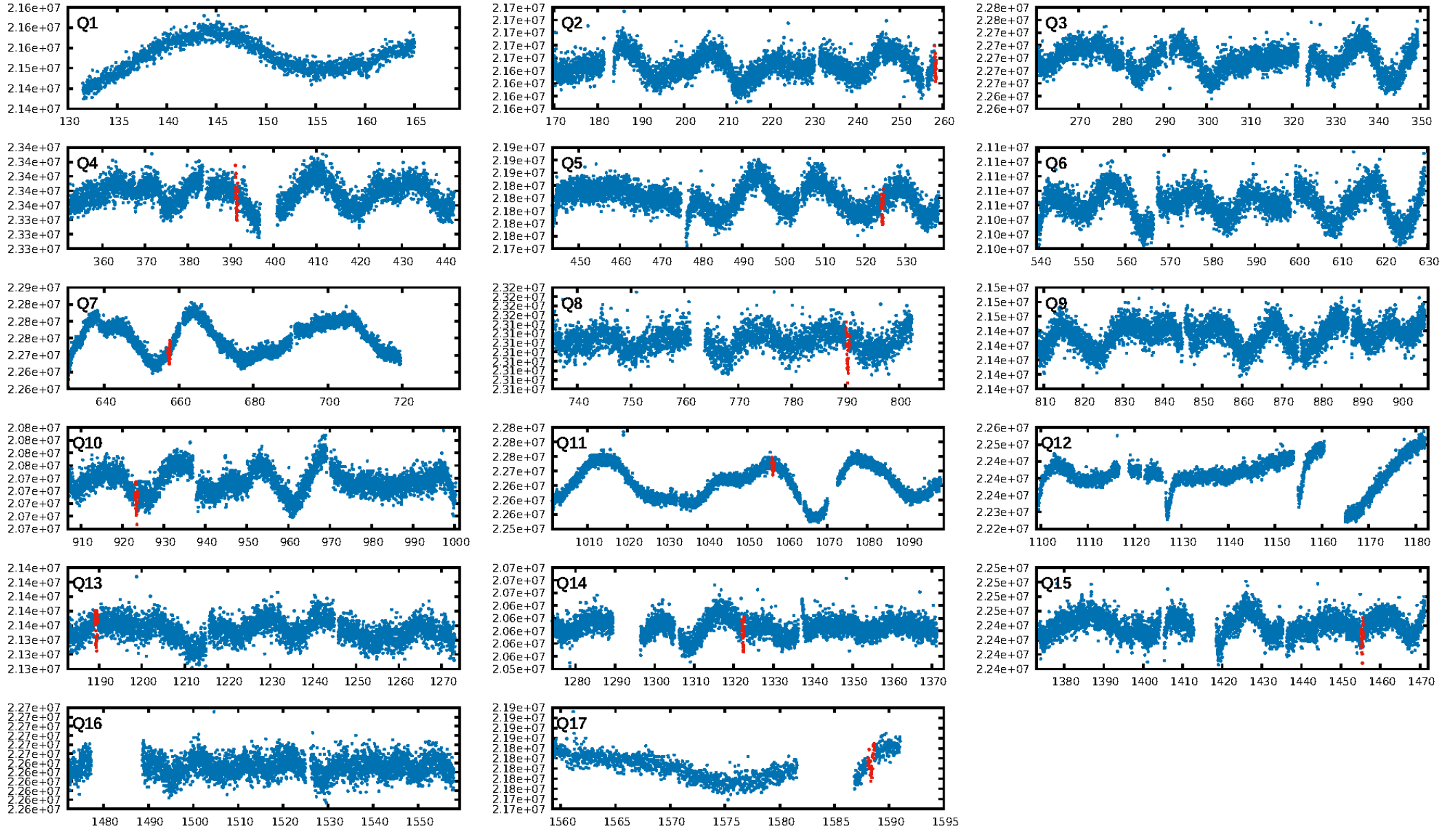
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.29e-76
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 3.733
Centroid-sig: 10.2%
Centroid-so: 0.710 arcsec [1.40σ]
OotOffset-rm: 0.238 arcsec [1.27σ]
KicOffset-rm: 0.290 arcsec [1.59σ]
OotOffset-st: 2/3/2/3 [10]
KicOffset-st: 2/3/2/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

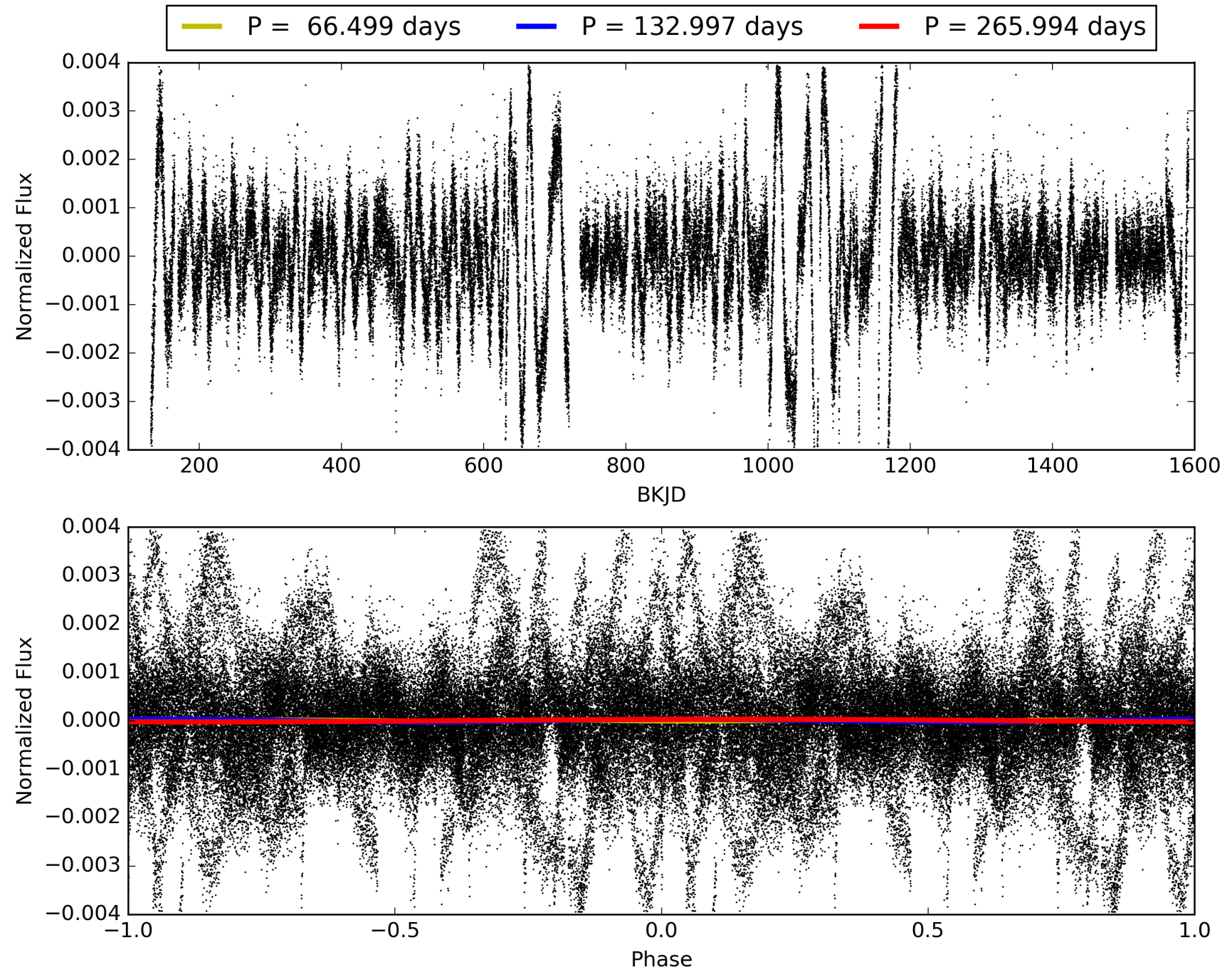
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:26:28 Z

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

TCE 008210018-01, PDC Light Curves

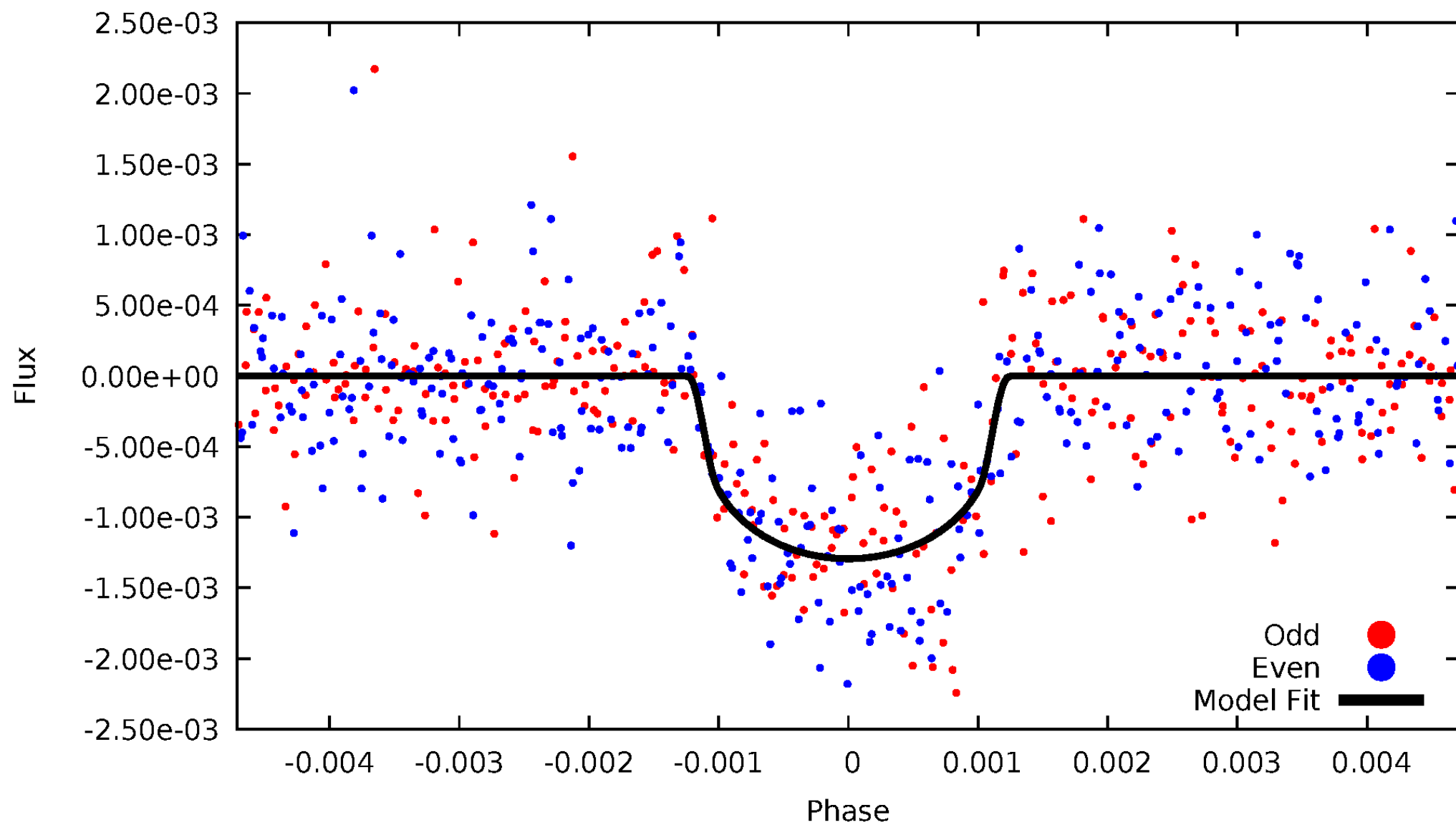


TCE 008210018-01



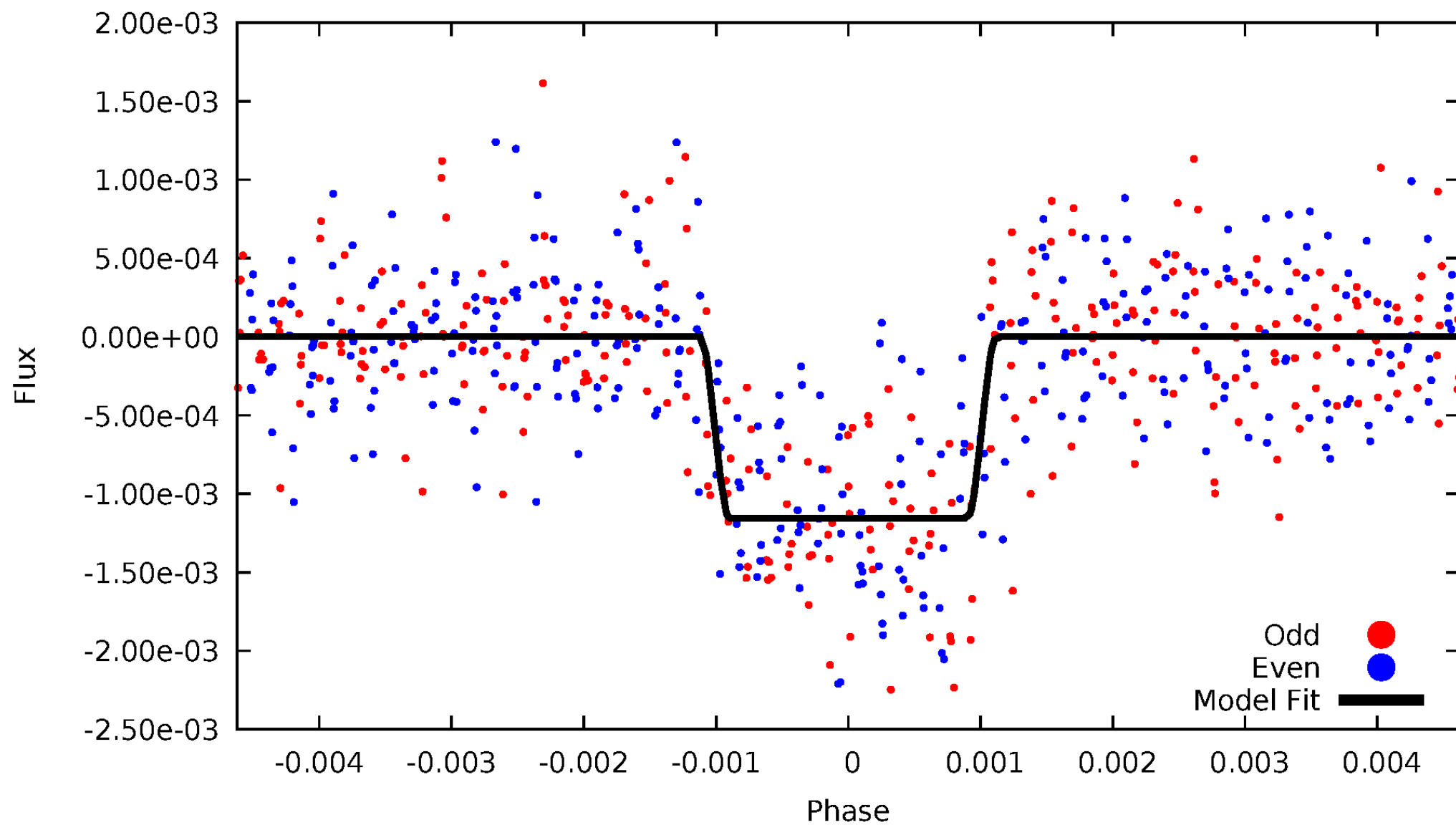
DV Odd/Even

TCE 008210018-01



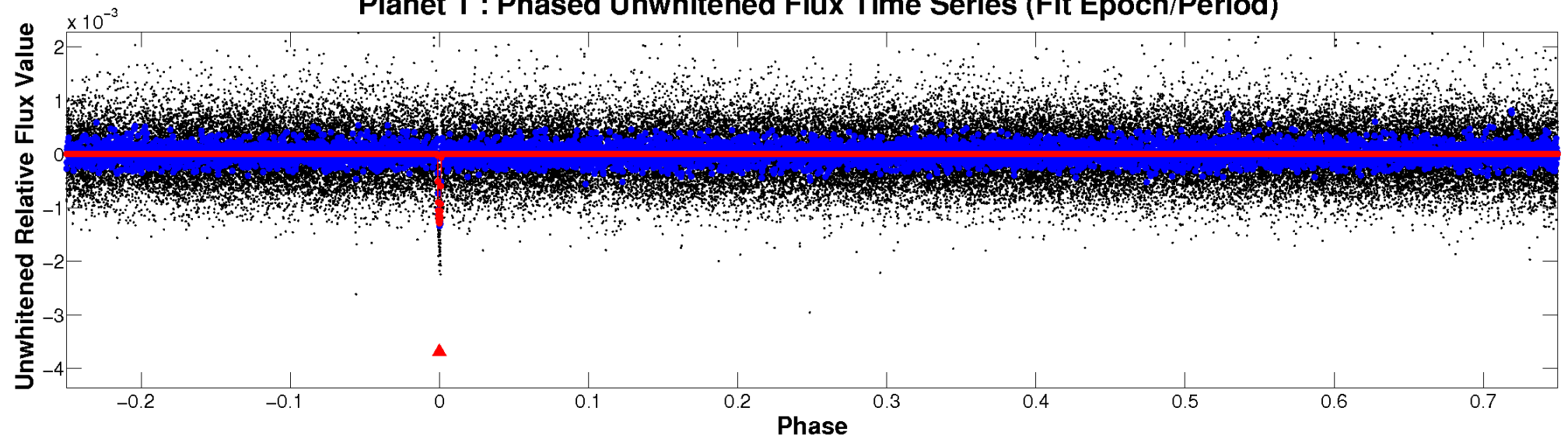
ALT Odd/Even

TCE 008210018-01

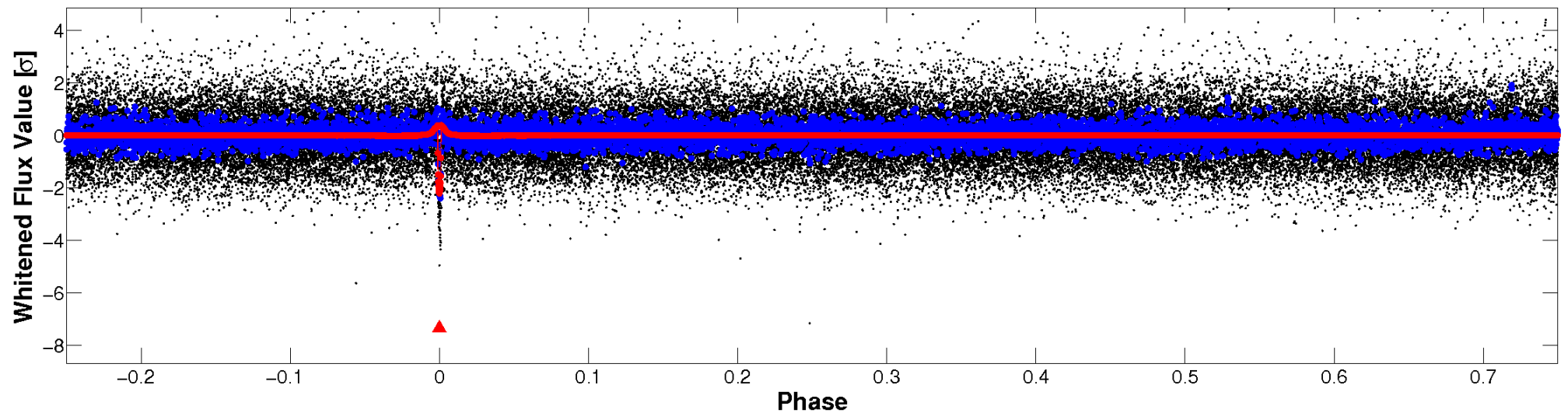


Non-Whitened Vs. Whitened Light Curve

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

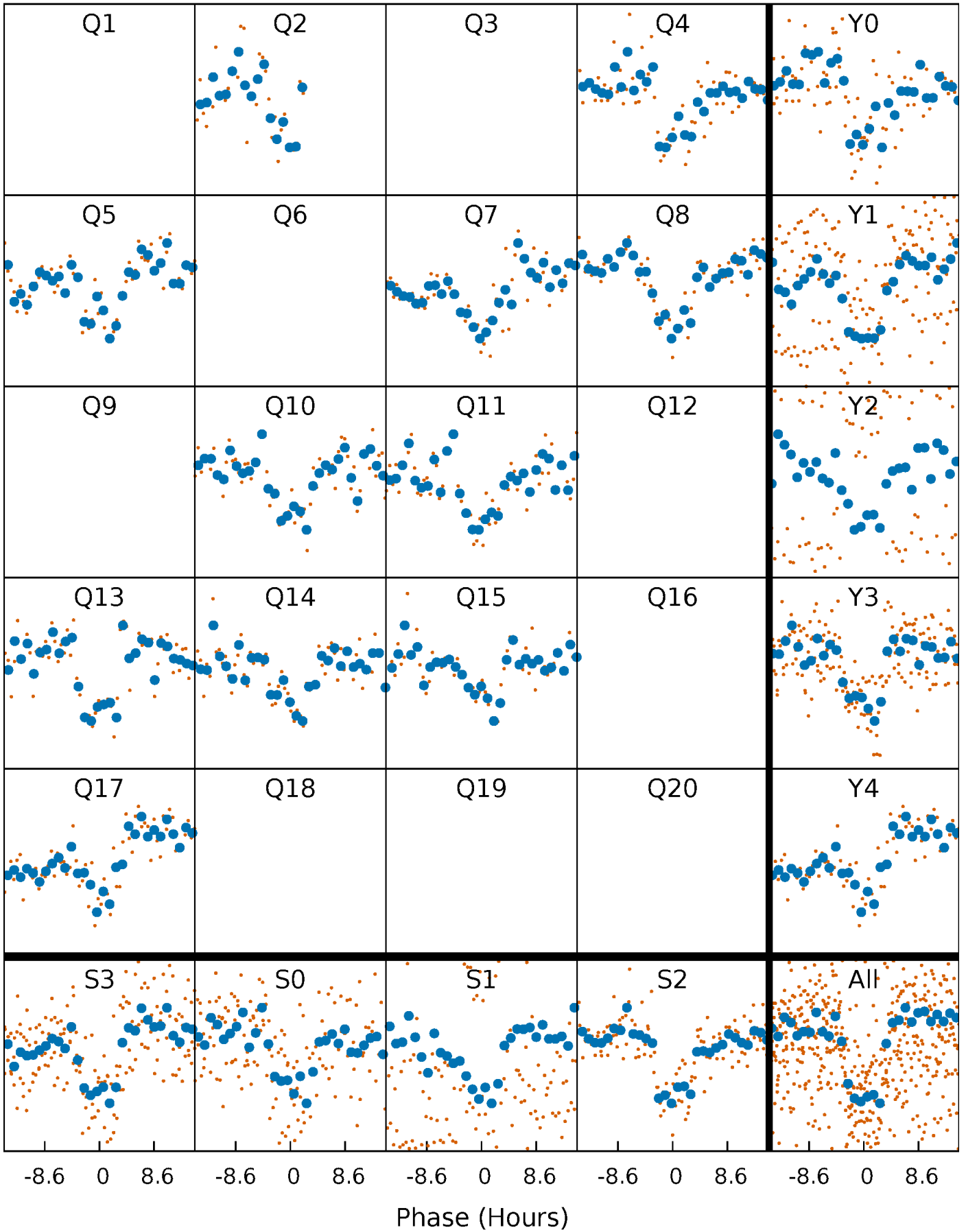


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



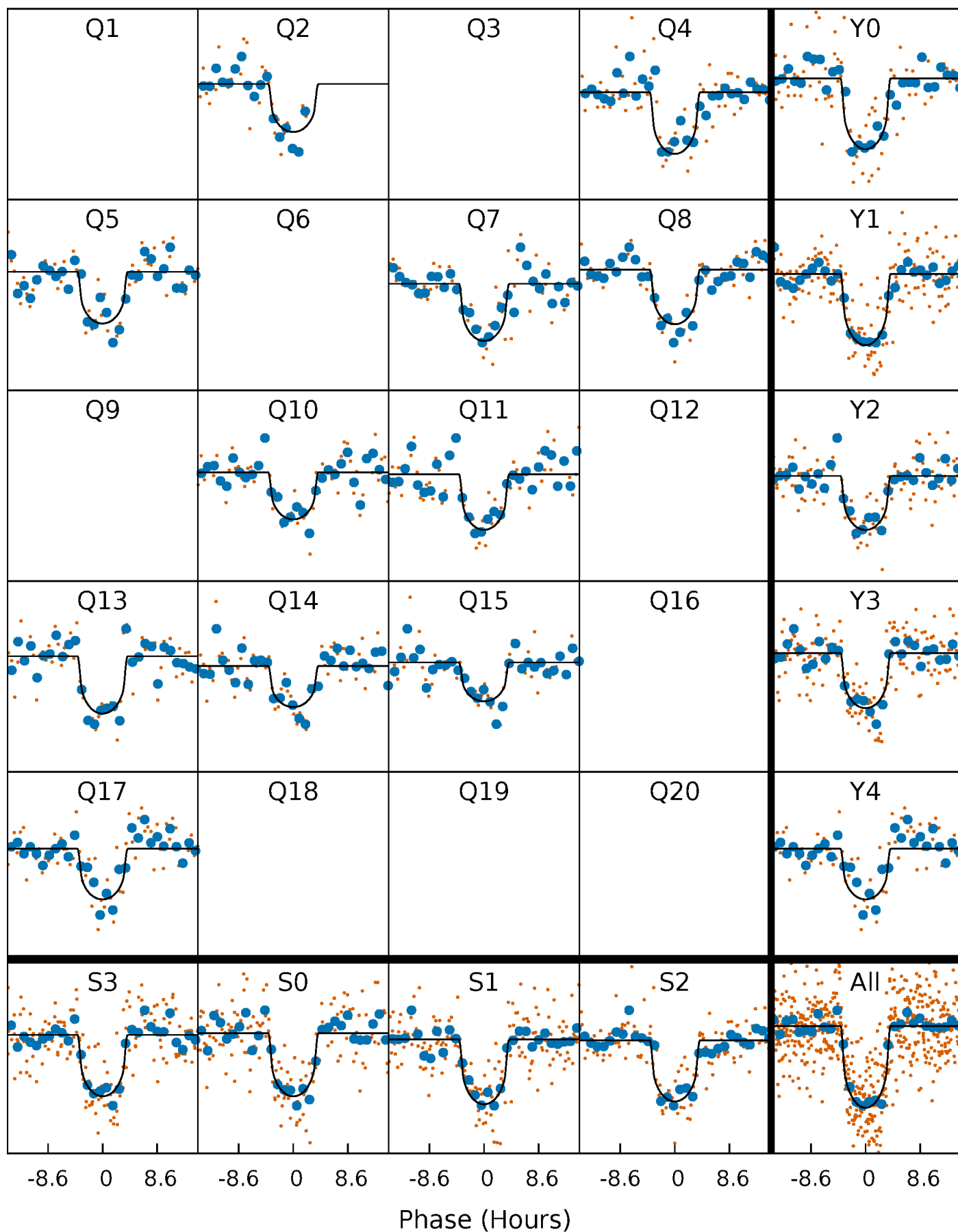
PDC Quarter-Phased Transit Curves

TCE 008210018-01 P=132.997089 Days $T_0=258.383489$ (BKJD)



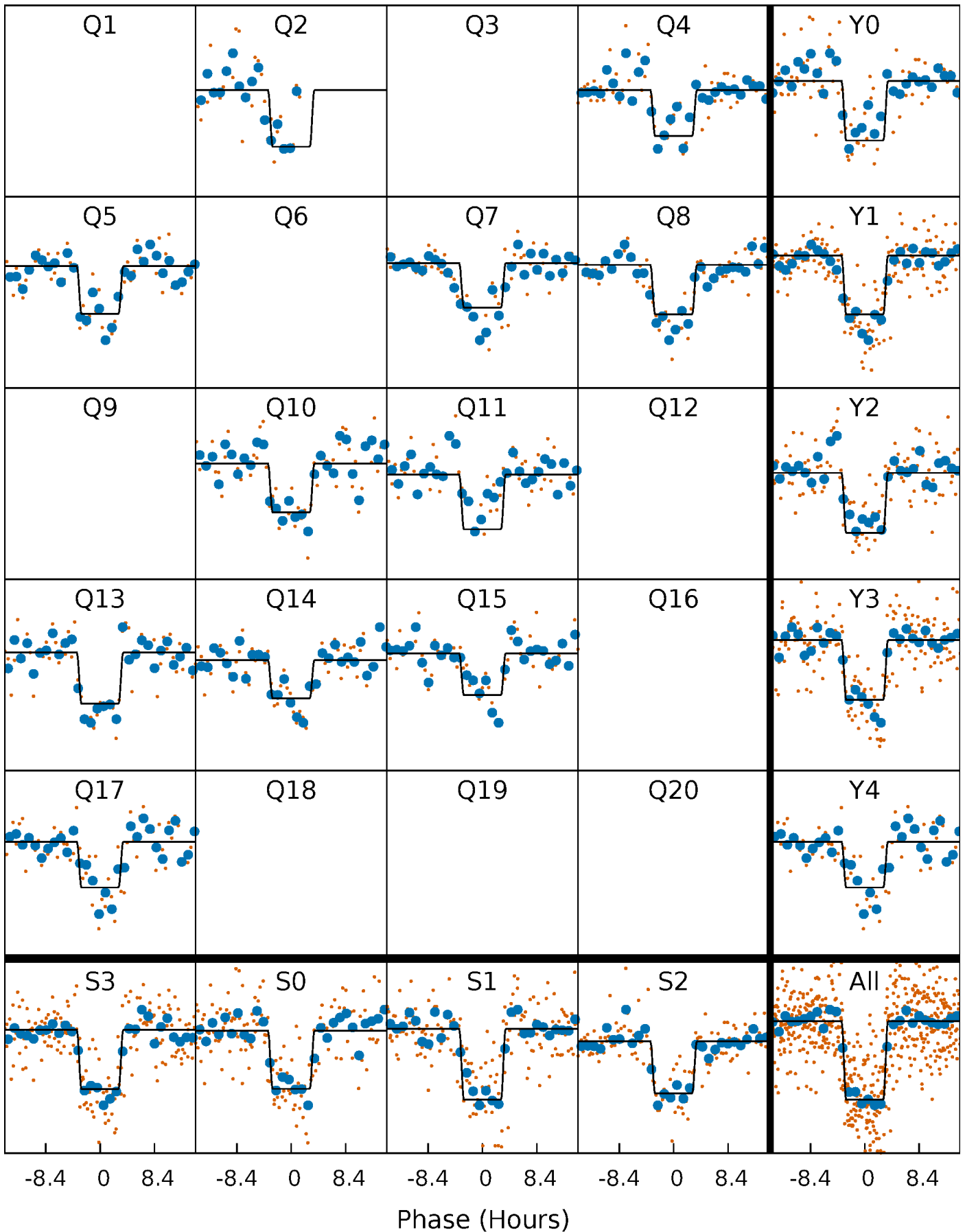
DV Quarter-Phased Transit Curves

TCE 008210018-01 P=132.997089 Days $T_0=258.383489$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

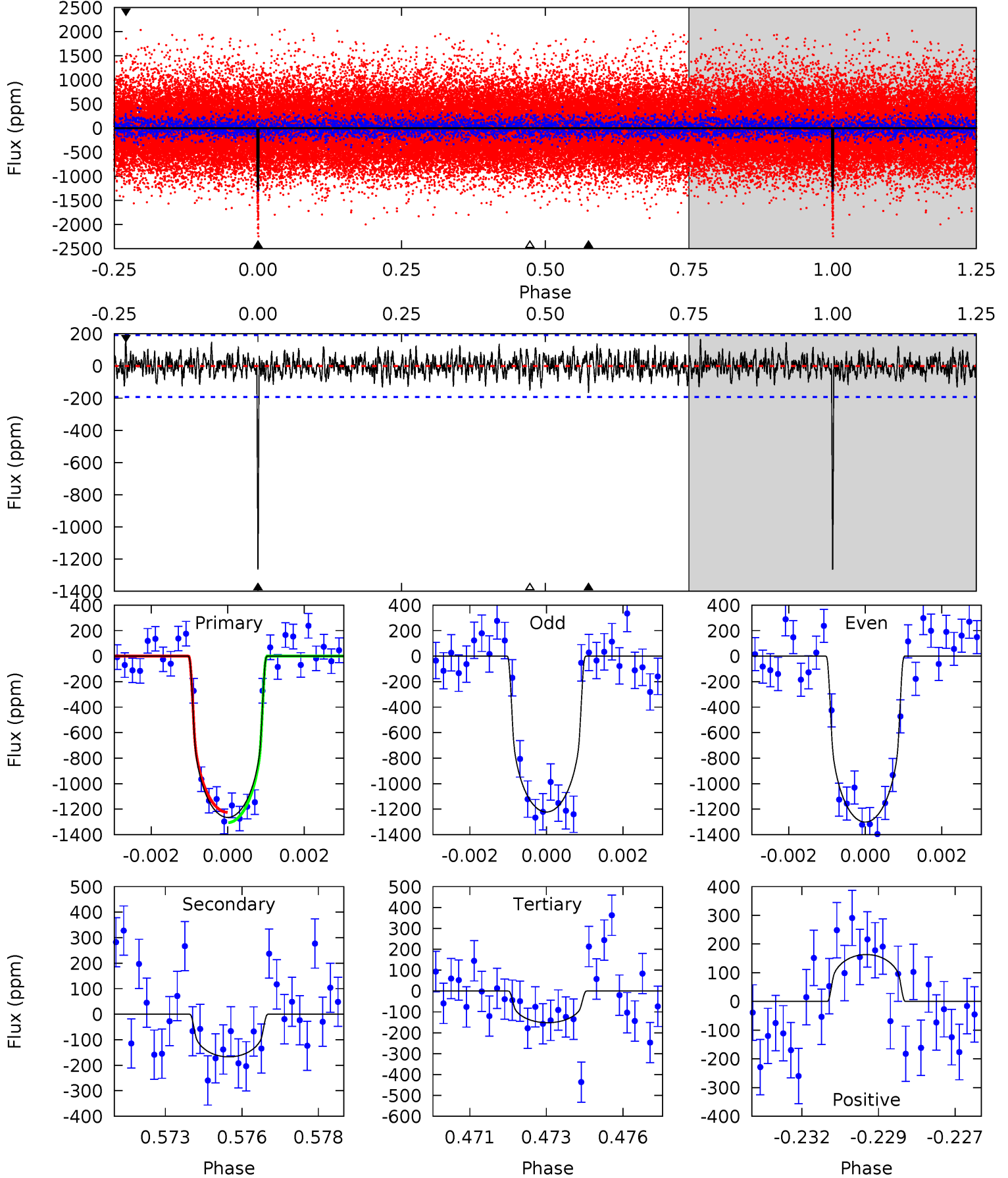
TCE 008210018-01 P=132.992049 Days $T_0=258.412887$ (BKJD)



DV Model-Shift Uniqueness Test

008210018-01, P = 132.997089 Days, E = 125.386400 Days

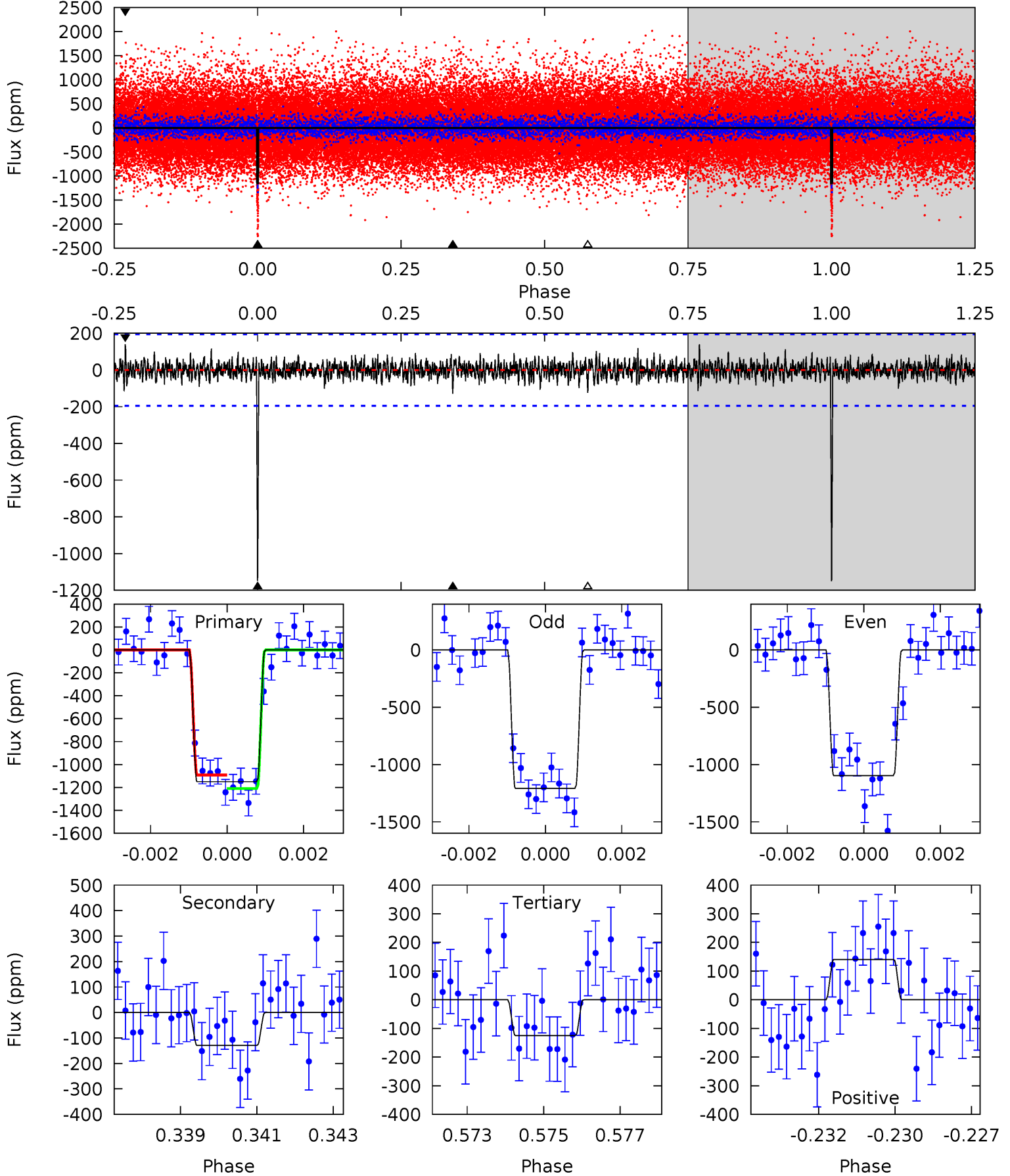
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.9	4.61	4.18	4.50	5.29	3.03	1.30	30.7	30.4	0.42	0.10	1.08	0.99	0.11	1.11



Alt Model-Shift Uniqueness Test

008210018-01, P = 132.992049 Days, E = 125.420838 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.3	3.53	3.40	3.83	5.30	3.05	0.89	27.9	27.5	0.13	-0.30	1.52	0.93	0.11	1.60



Stellar Parameters For KIC 008210018

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4523^{+161}_{-161}	$4.636^{+0.032}_{-0.039}$	$-0.100^{+0.300}_{-0.300}$	$0.659^{+0.055}_{-0.055}$	$0.687^{+0.060}_{-0.066}$	$3.372^{+0.586}_{-0.498}$
	+4%/-4%	+1%/-1%	+300%/-300%	+8%/-8%	+9%/-10%	+17%/-15%
Source	PHO16	PHO16	PHO16	DSEP		

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

Secondary Eclipse Parameters for KIC 008210018-01 / KOI 2762.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-167 ± 36	$2.35^{+0.93}_{-0.89}$	338^{+14}_{-13}	3272^{+579}_{-297}	3309^{+5306}_{-1665}
Alt.	-129 ± 37	$2.47^{+0.90}_{-0.91}$	338^{+13}_{-13}	3105^{+483}_{-289}	2256^{+3501}_{-1145}

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

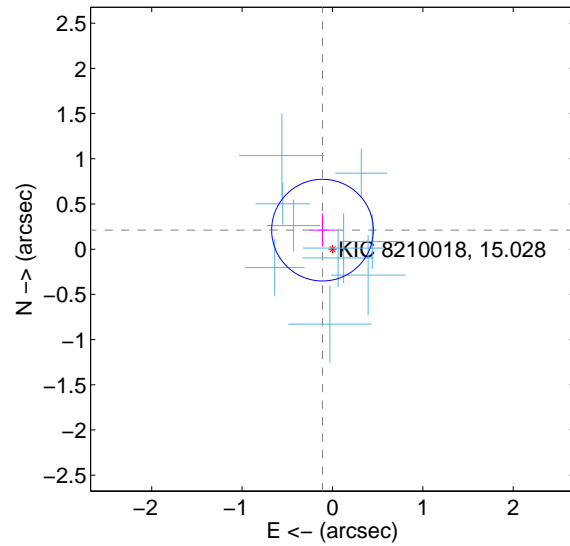
Supplemental centroid analysis for 008210018-01. Kepler magnitude: 15.03. Transit SNR 23.30

There are 10 quarters with good PRF difference image offsets

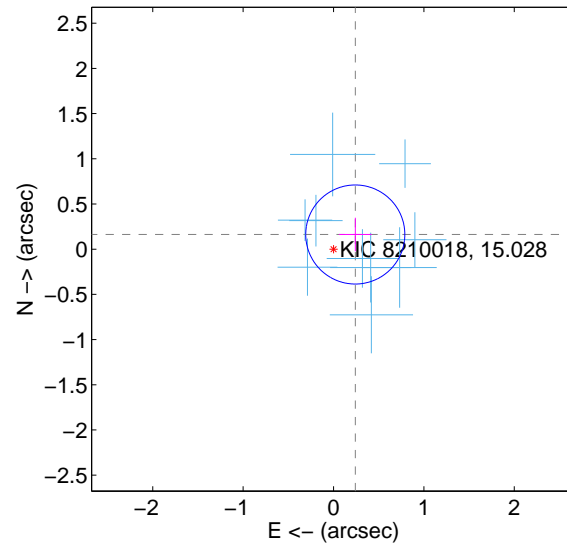
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.238 ± 0.187	1.27	0.110 ± 0.141	0.211 ± 0.182
PRF-fit source offset from KIC position	0.290 ± 0.183	1.59	-0.241 ± 0.181	0.162 ± 0.186
photometric centroid source offset	0.71 ± 0.51	1.40	-0.69 ± 0.51	0.18 ± 0.49

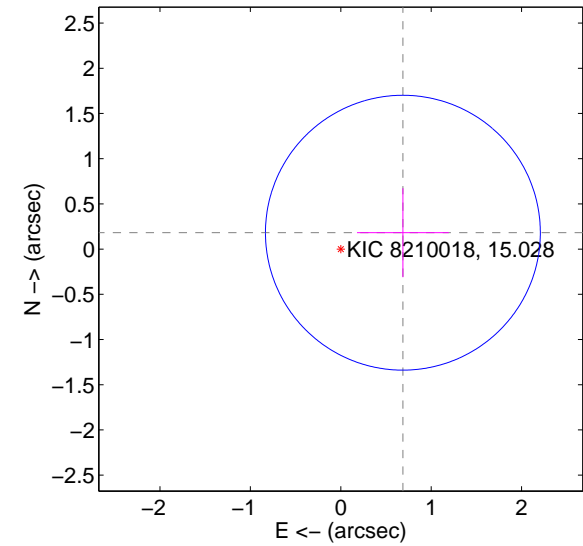
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

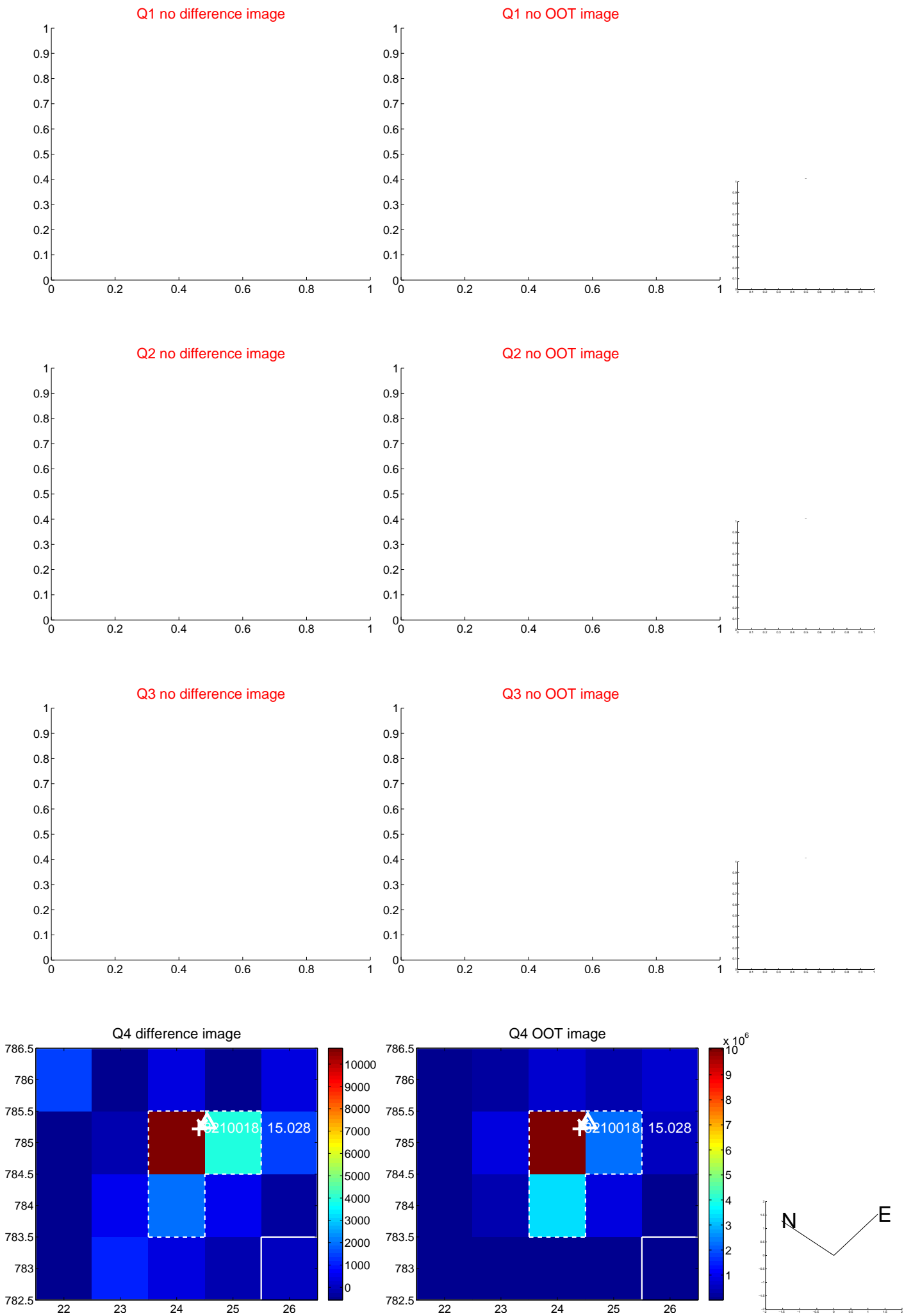


offset from photometric centroids

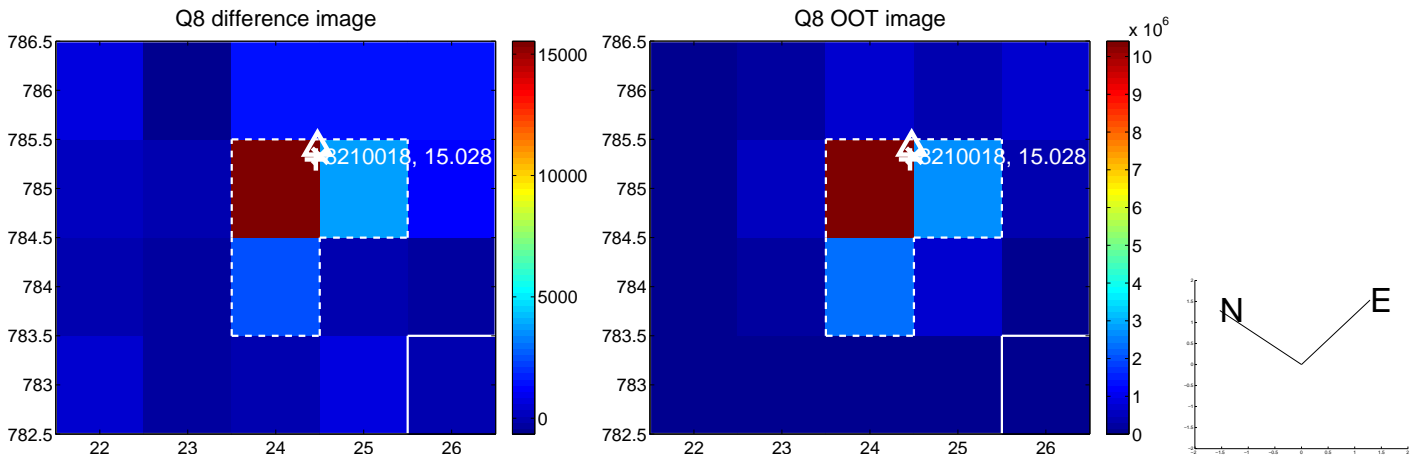
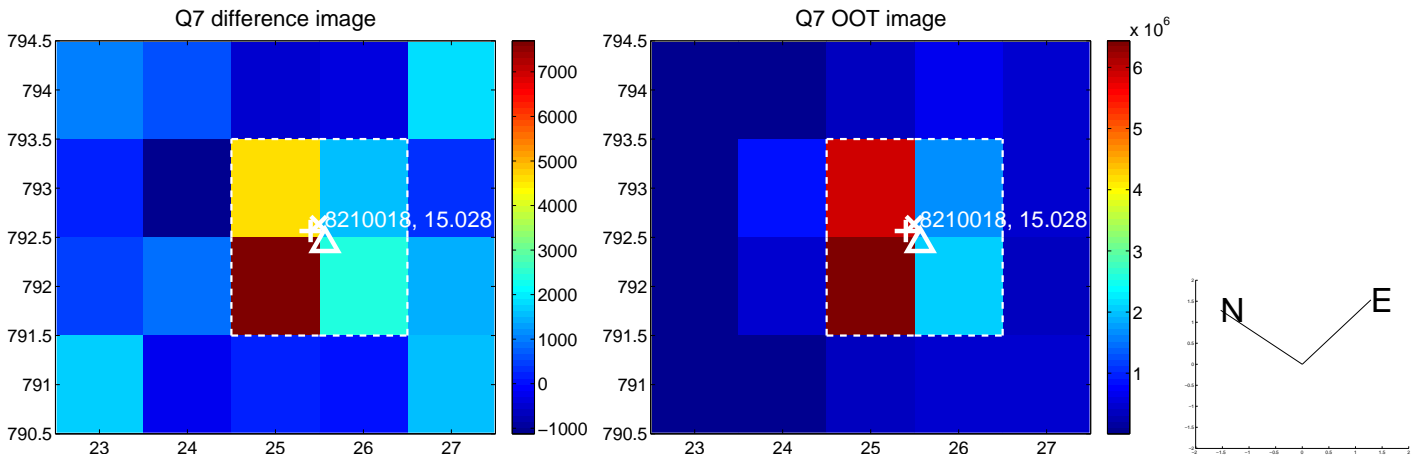
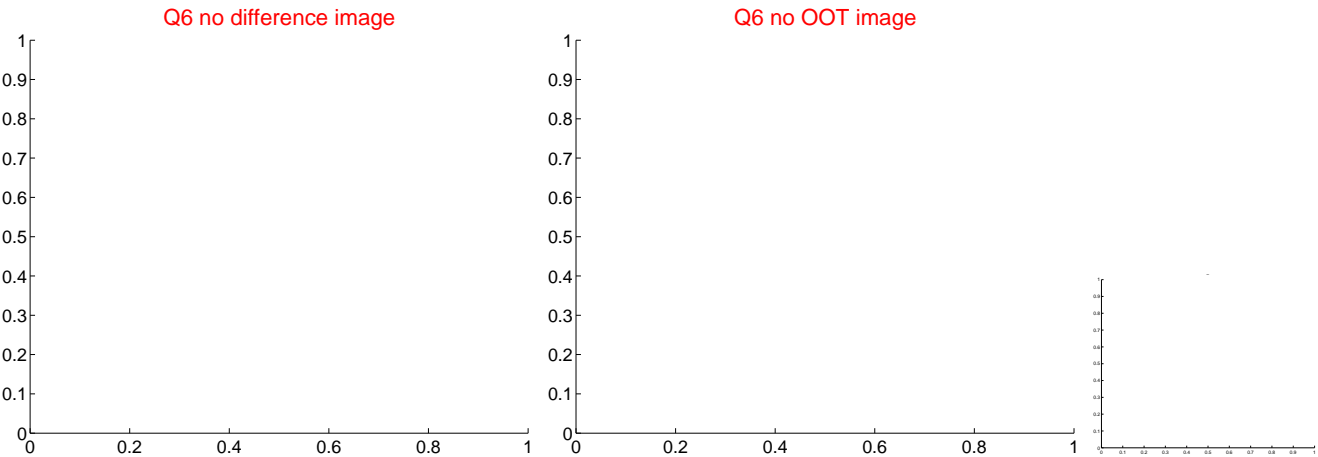
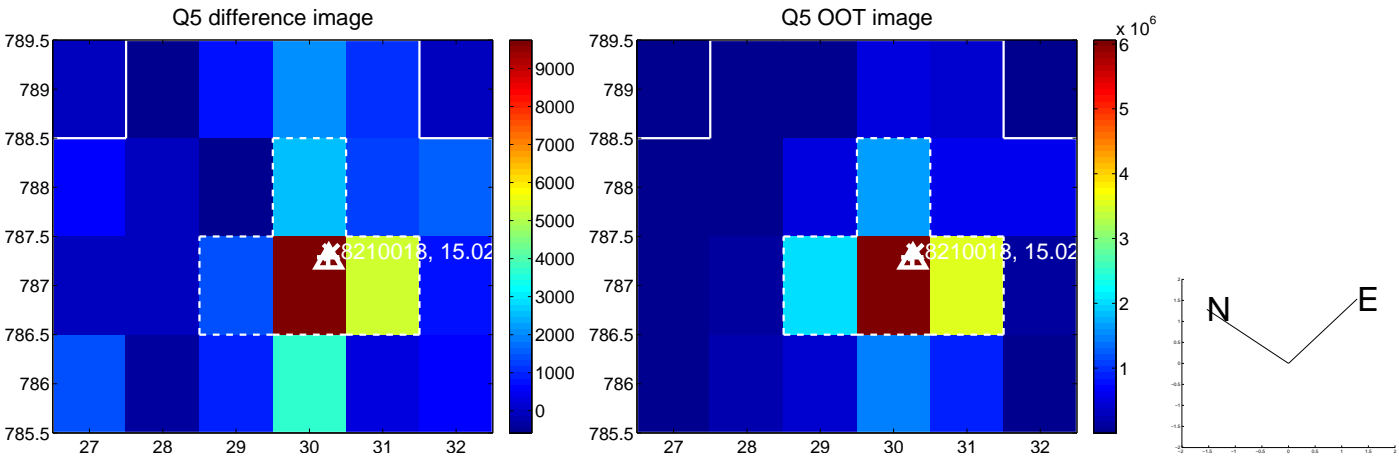


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

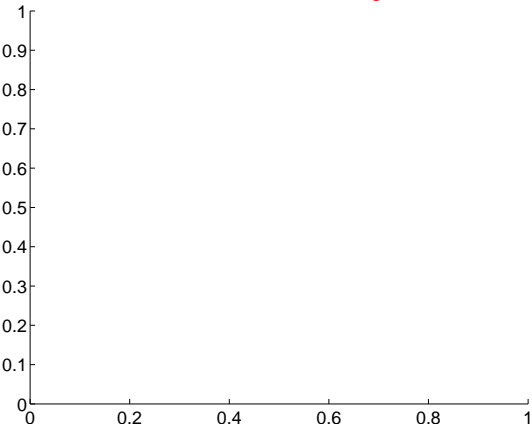


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

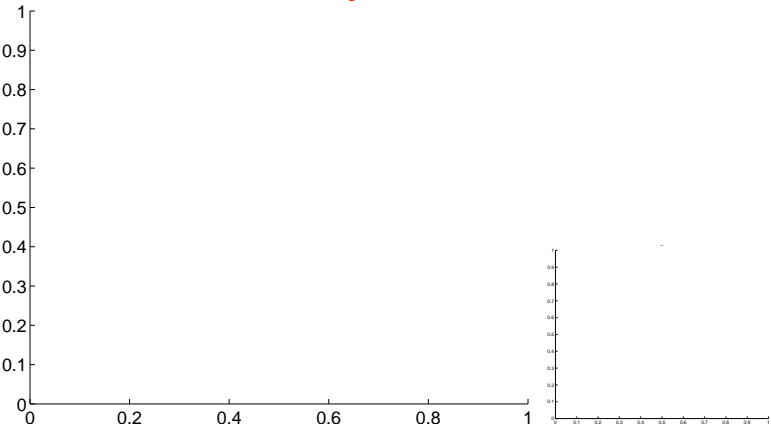


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

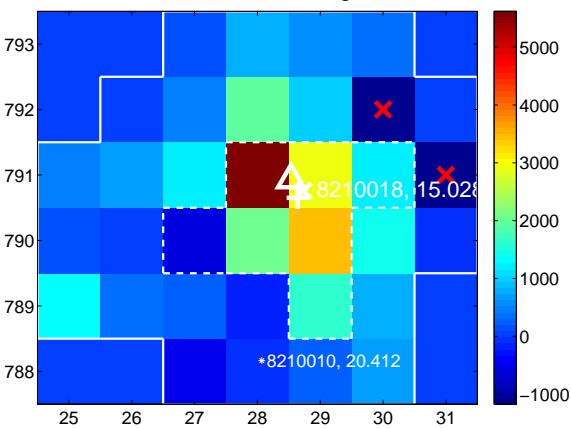
Q9 no difference image



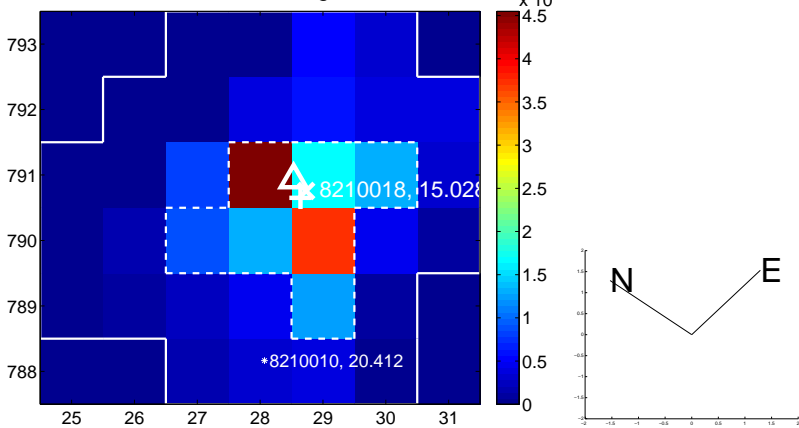
Q9 no OOT image



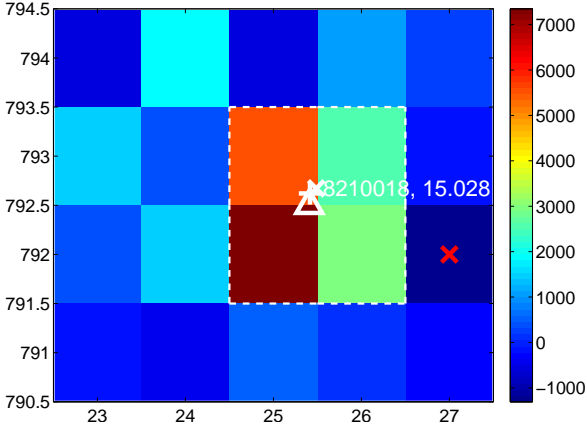
Q10 difference image



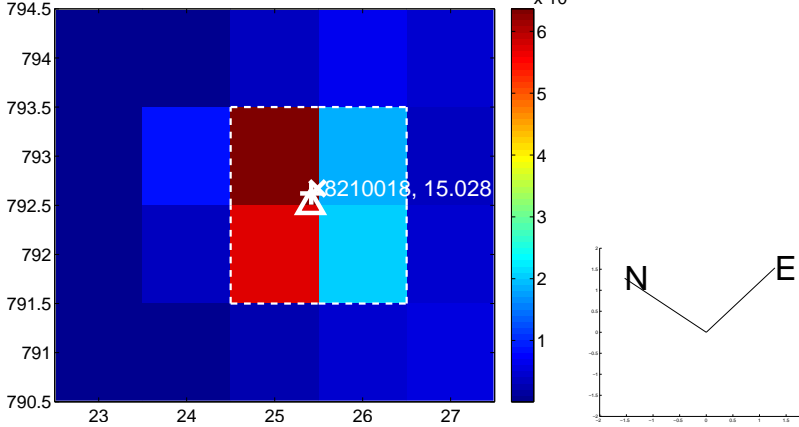
Q10 OOT image



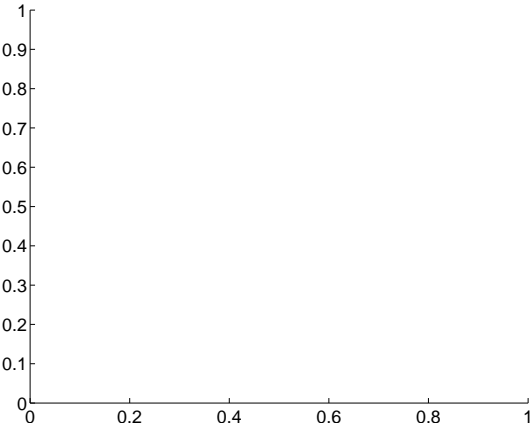
Q11 difference image



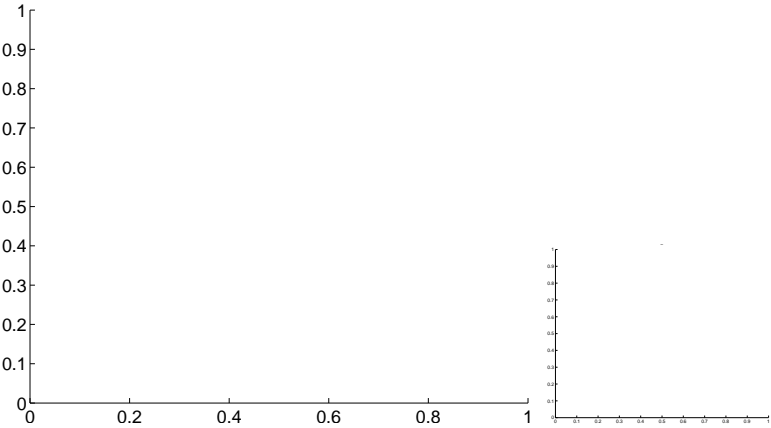
Q11 OOT image



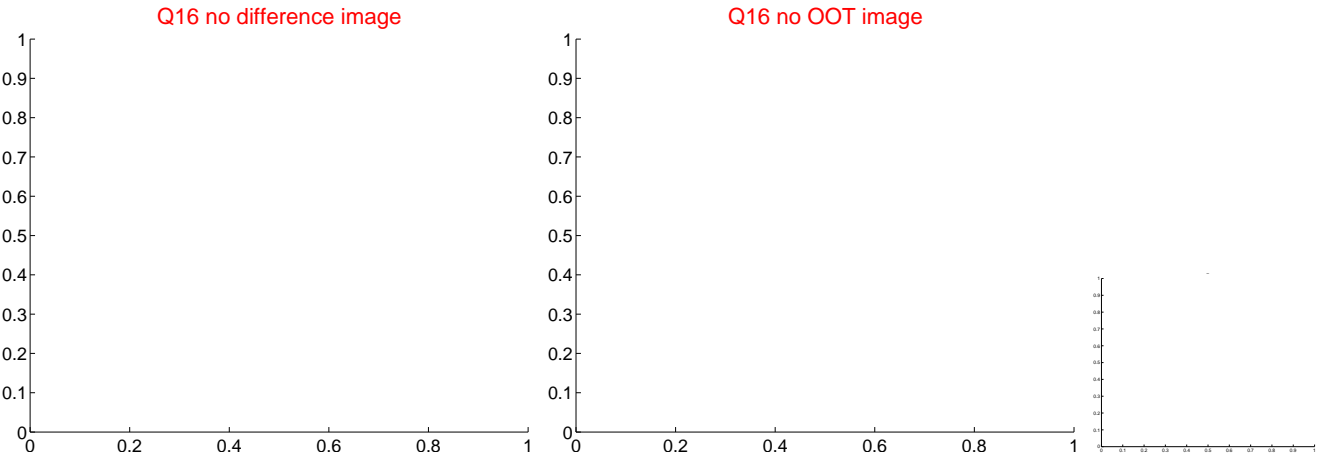
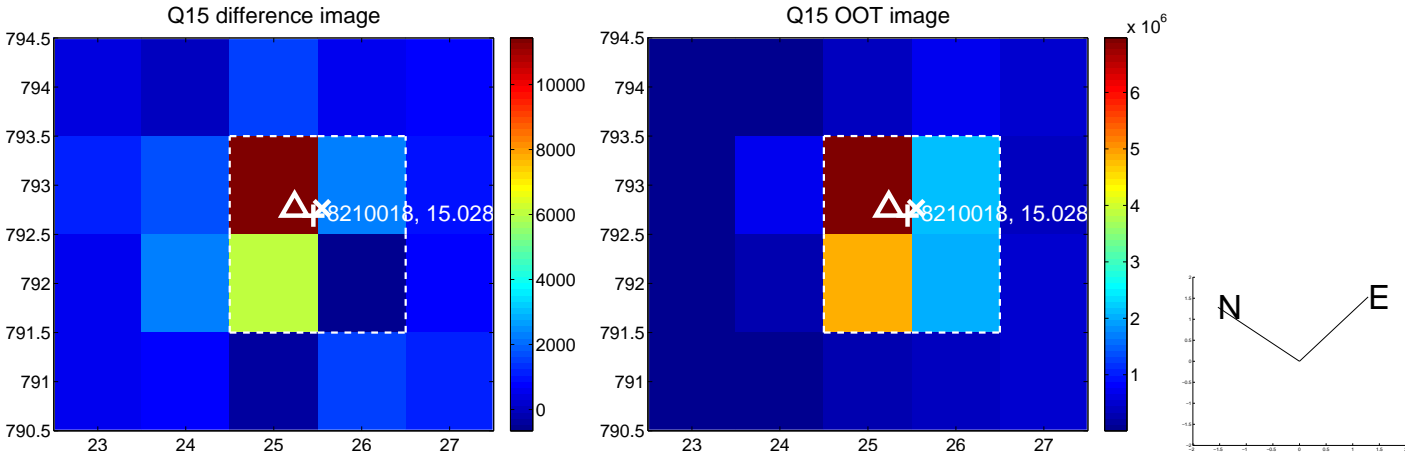
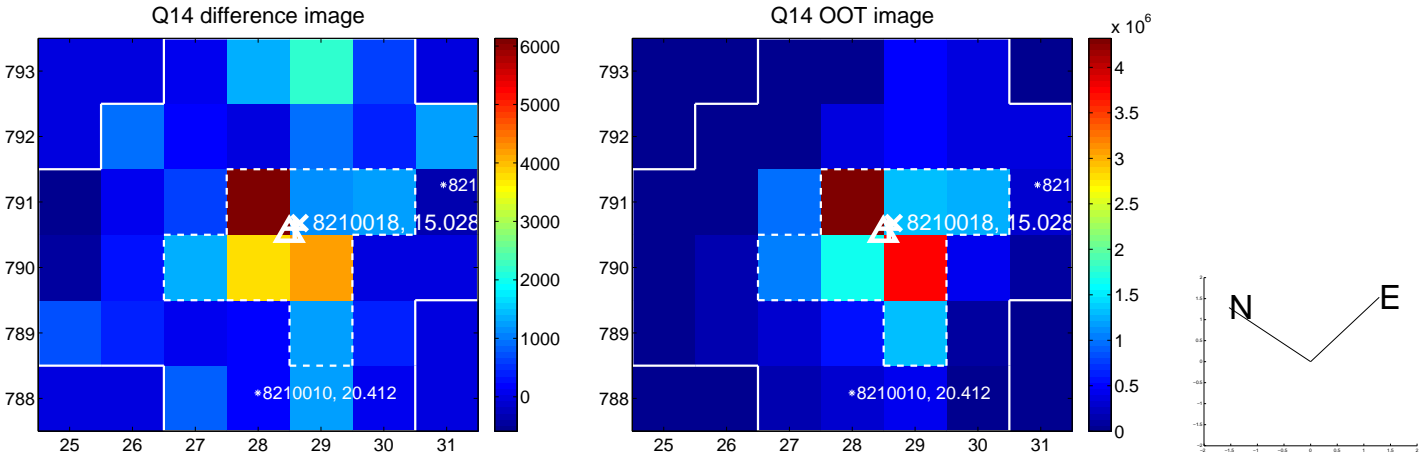
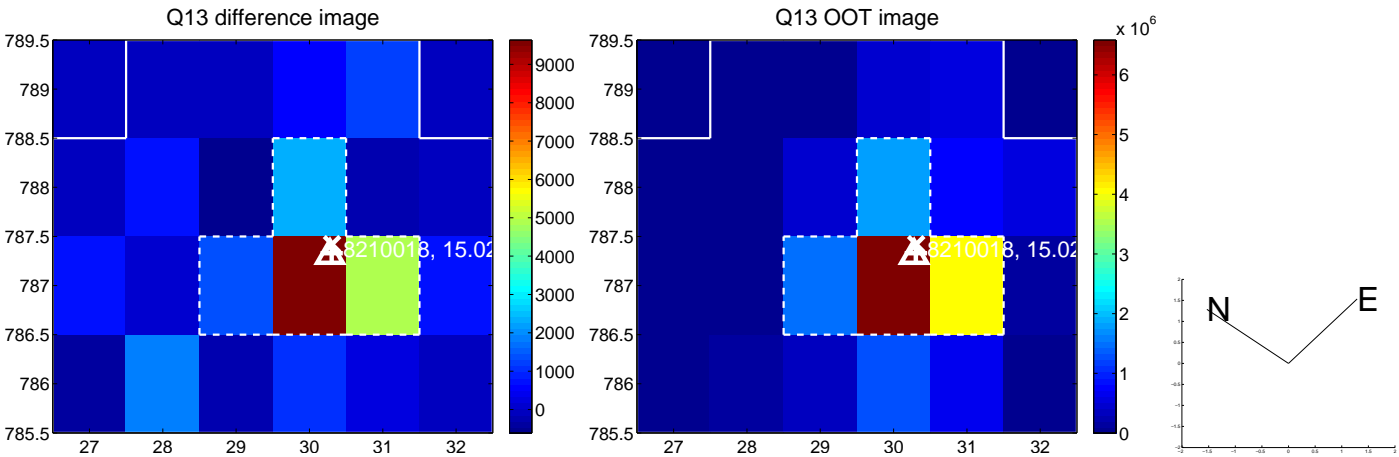
Q12 no difference image



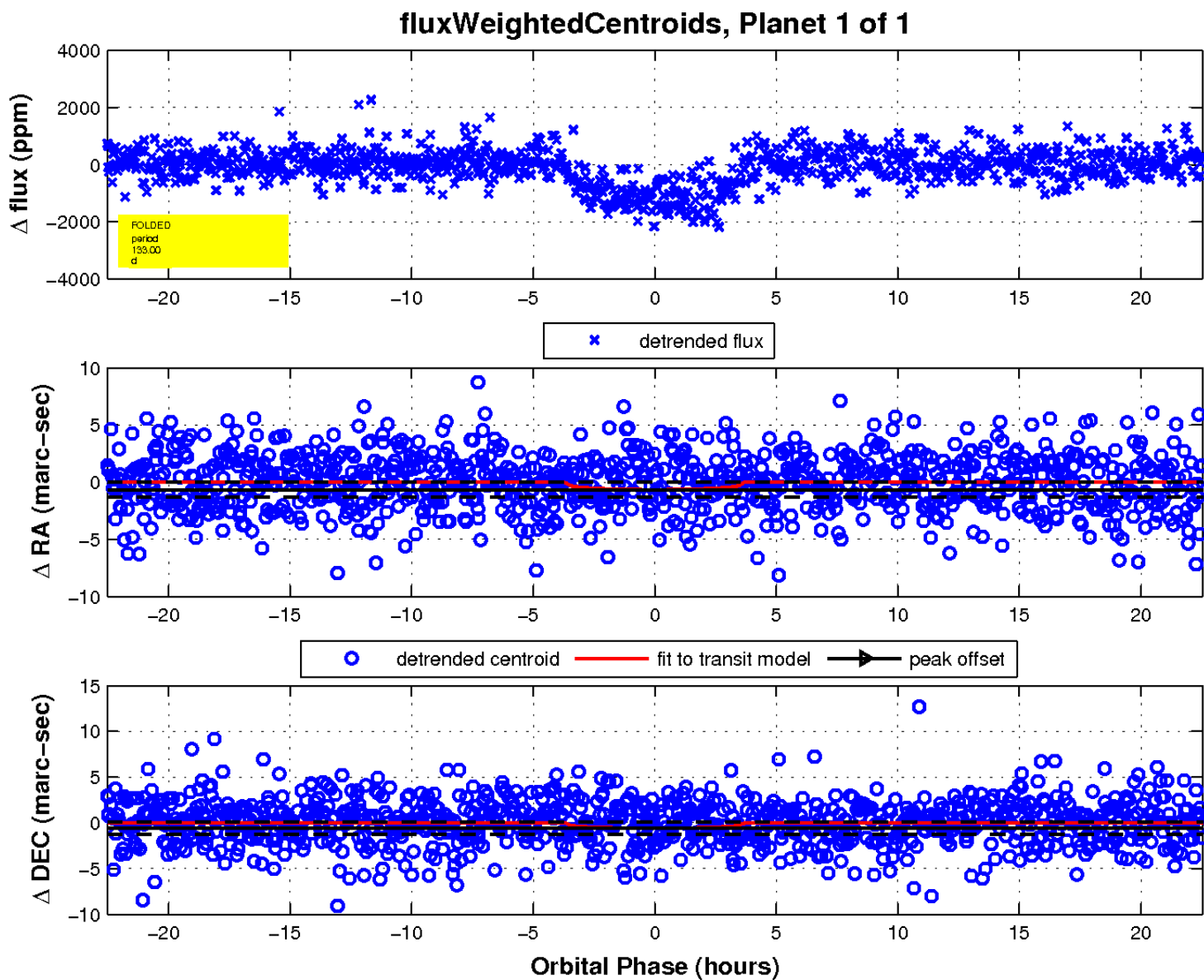
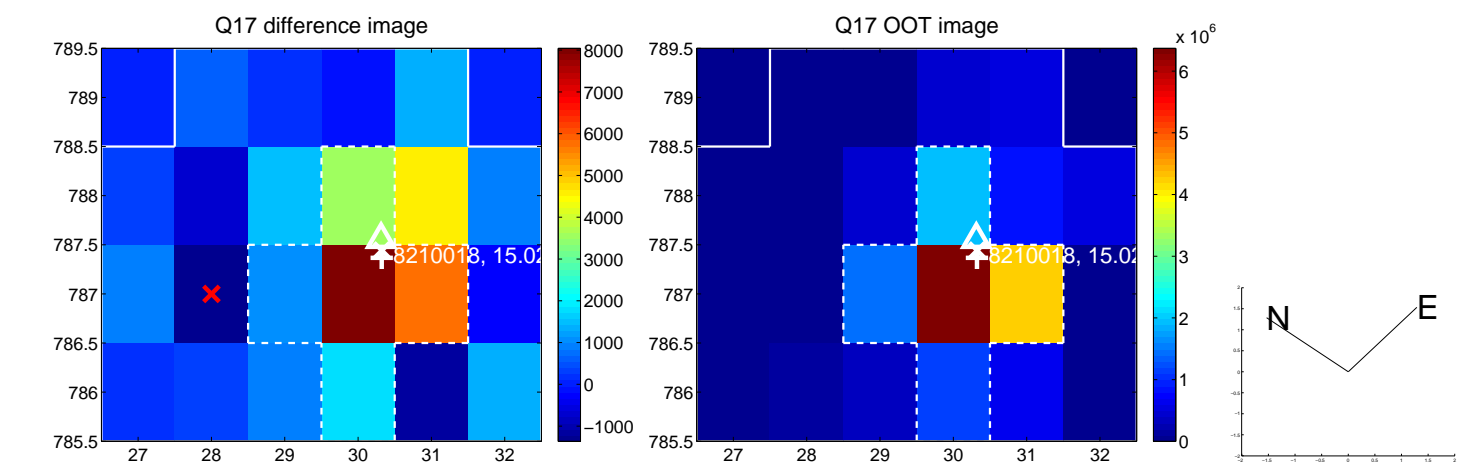
Q12 no OOT image



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

