

KIC 011821363

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})
011821363-01	OBS	1494.01	8.195946	136.689406	783.0	2.938	17.2	19.6	0.75	4723	2.45	48.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011821363-01	OBS	PC	0.99	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.

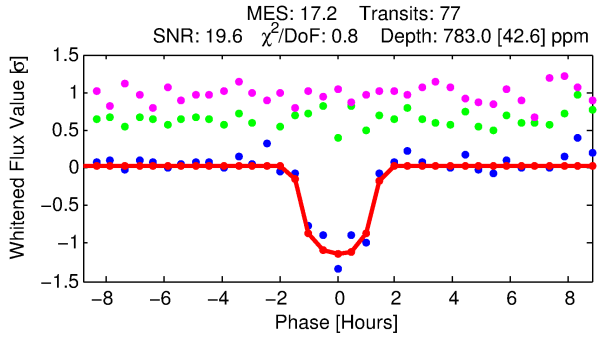
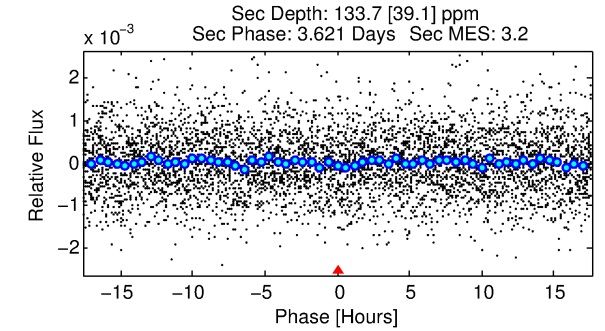
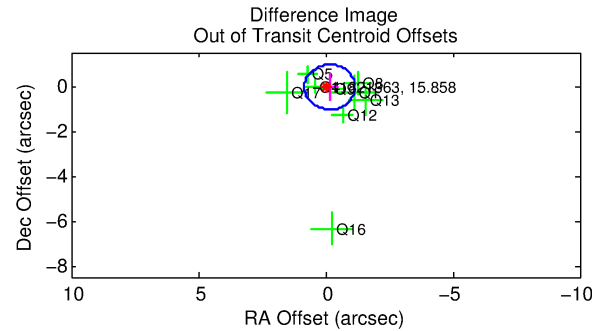
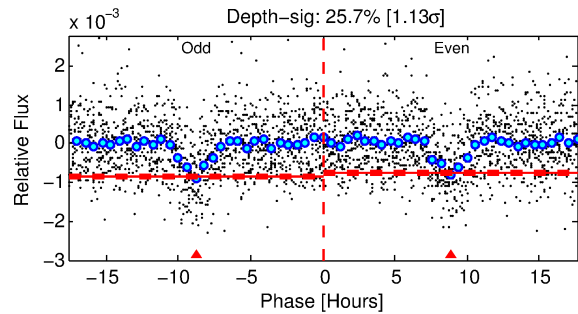
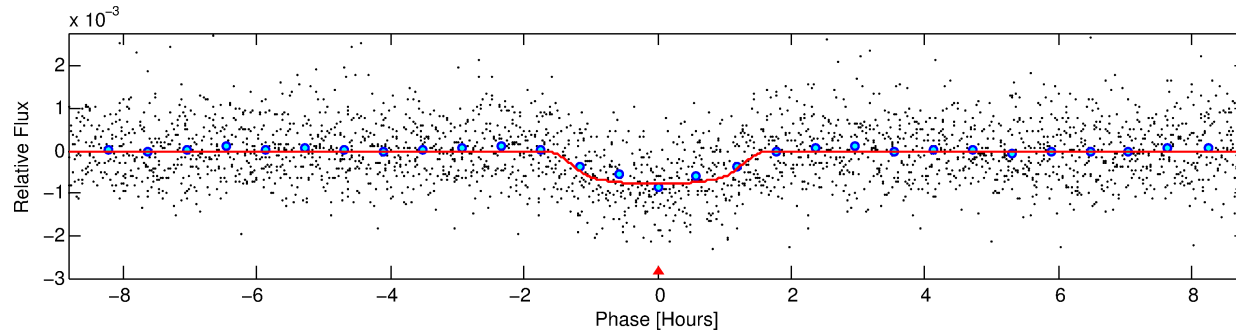
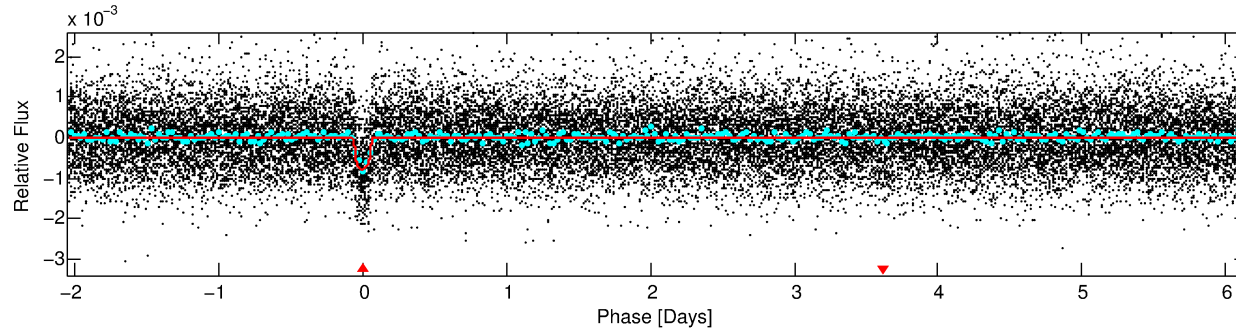
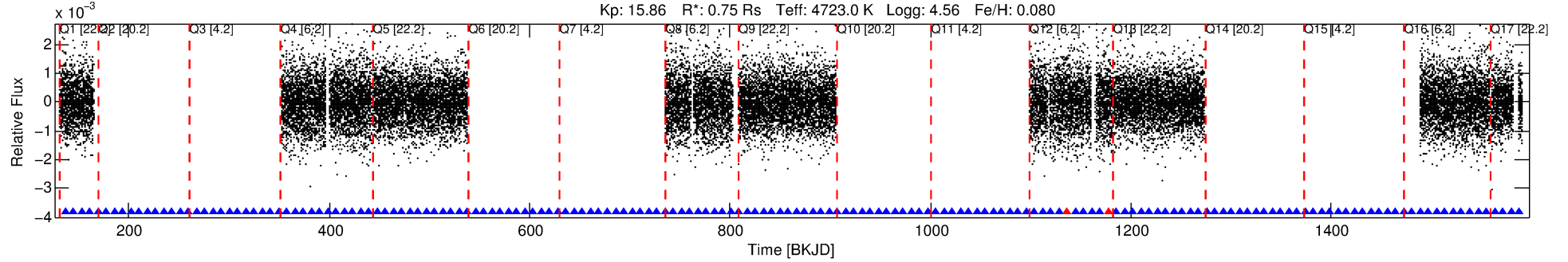
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011821363-01

No Significant Match Found

DV One-Page Summary

KIC: 11821363 Candidate: 1 of 1 Period: 8.196 d
KOI: K01494.01 Corr: 0.984



DV Fit Results:

Period = 8.19595 [0.00004] d
Epoch = 136.6894 [0.0035] BKJD
Rp/R* = 0.0300 [0.0109]
a/R* = 12.35 [15.47]
b = 0.85 [0.42]
Seff = 48.29 [8.79]
Teq = 672 [31] K
Rp = 2.45 [0.91] Re
a = 0.0718 [0.0056] AU
Ag = 63.20 [49.87] [1.25 σ]
Teffp = 2930 [581] K [3.88 σ]

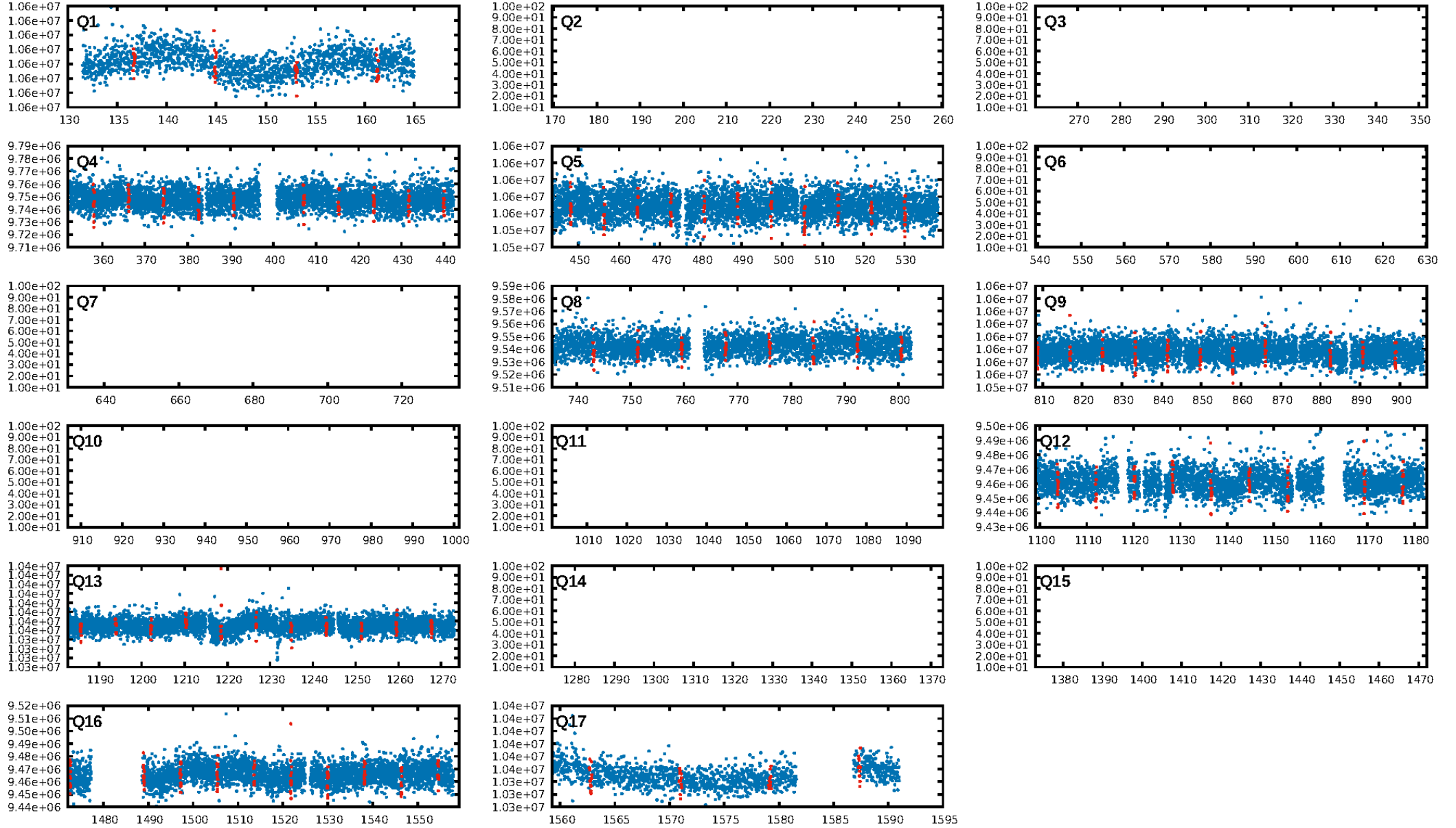
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.46e-67
RollingBand-fgt: 0.97 [67/69]
GhostDiagnostic-chr: 3.806
Centroid-sig: 70.8%
Centroid-so: 0.596 arcsec [0.79 σ]
OotOffset-rm: 0.170 arcsec [0.51 σ]
OotOffset-st: 0/0/4/5 [9]
KicOffset-rm: 0.306 arcsec [0.90 σ]
KicOffset-st: 0/0/4/5 [9]
DiffImageQuality-fgm: 0.78 [7/9]
DiffImageOverlap-fno: 1.00 [9/9]

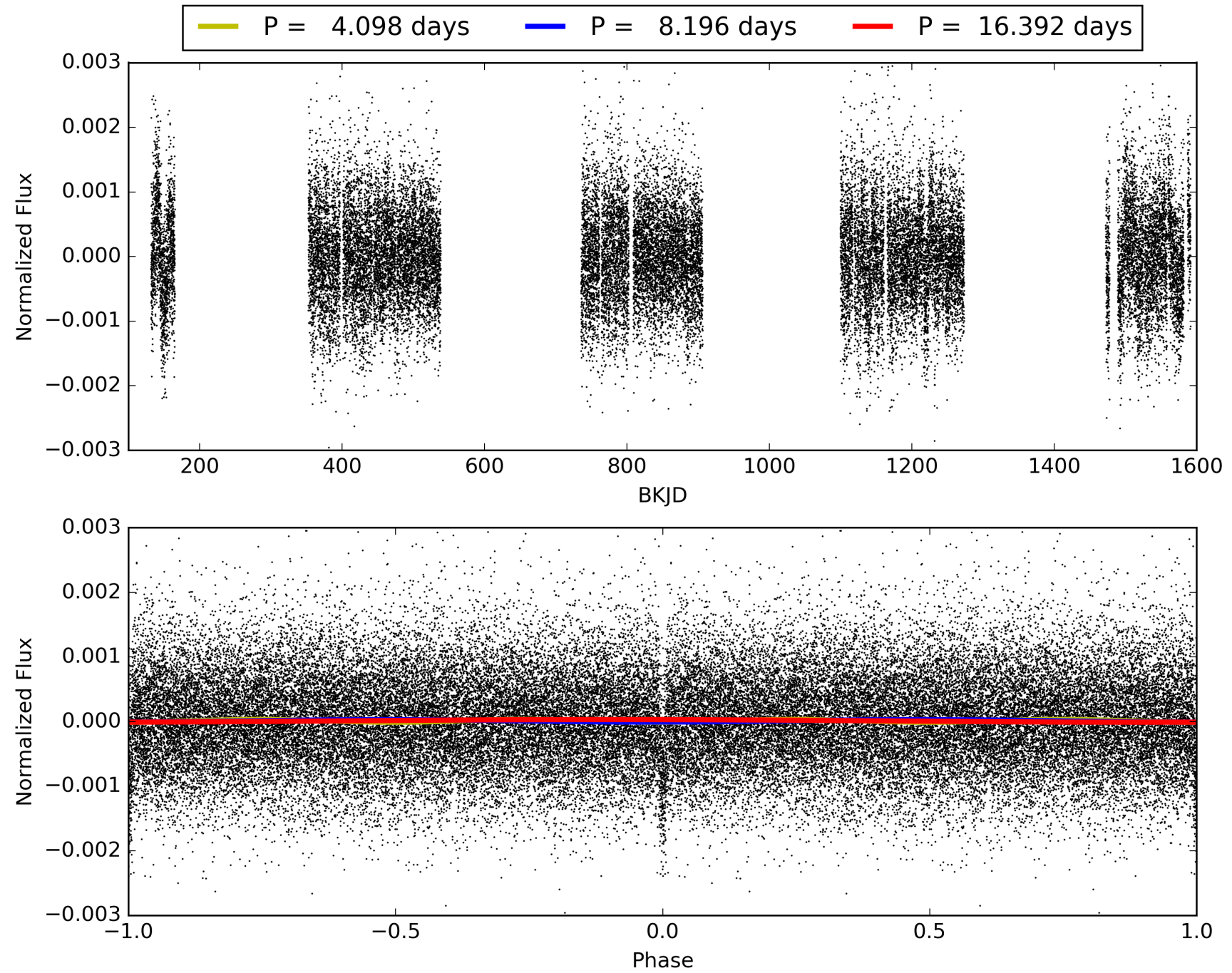
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:51:36 Z

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

TCE 011821363-01, PDC Light Curves

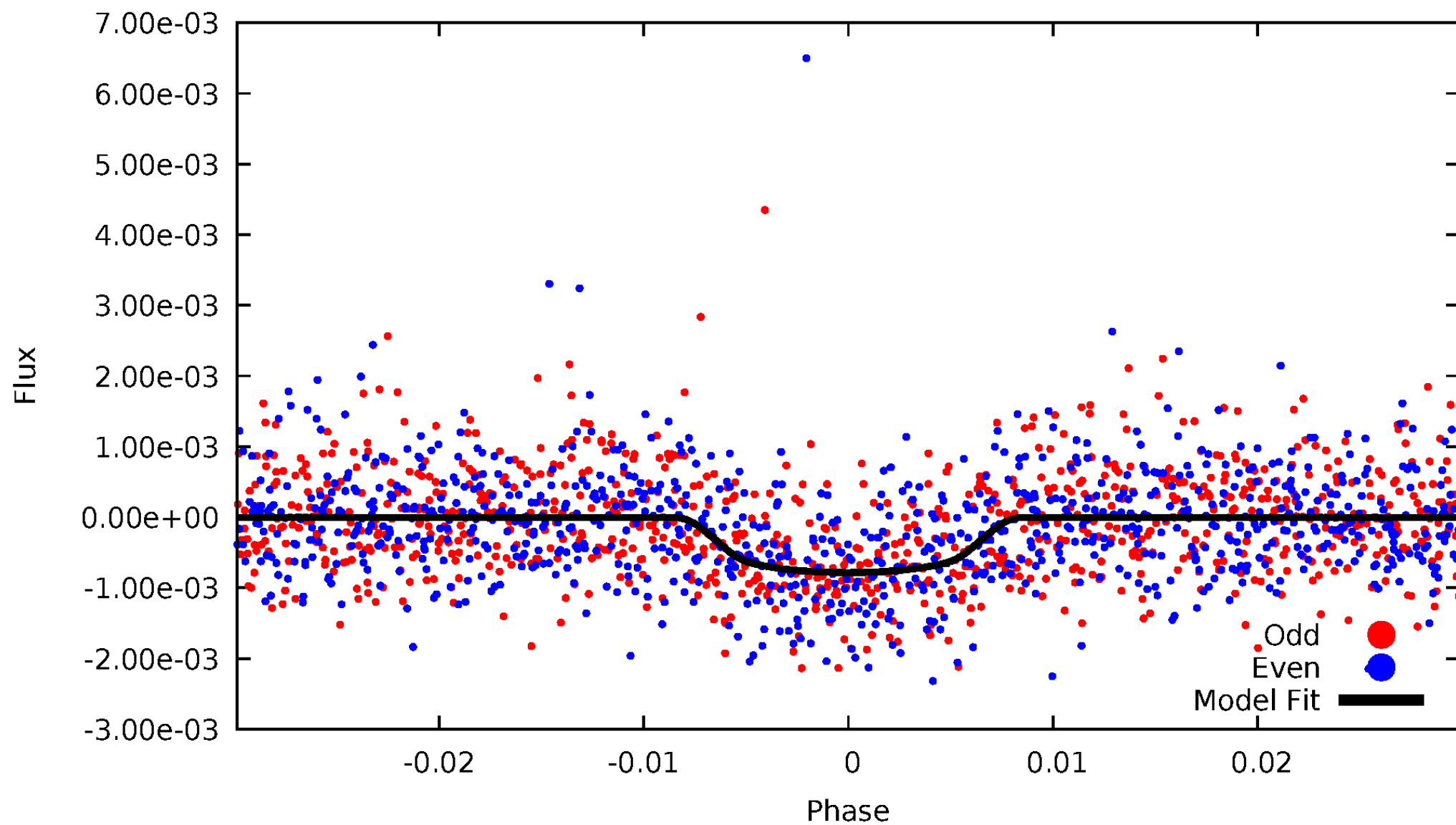


TCE 011821363-01



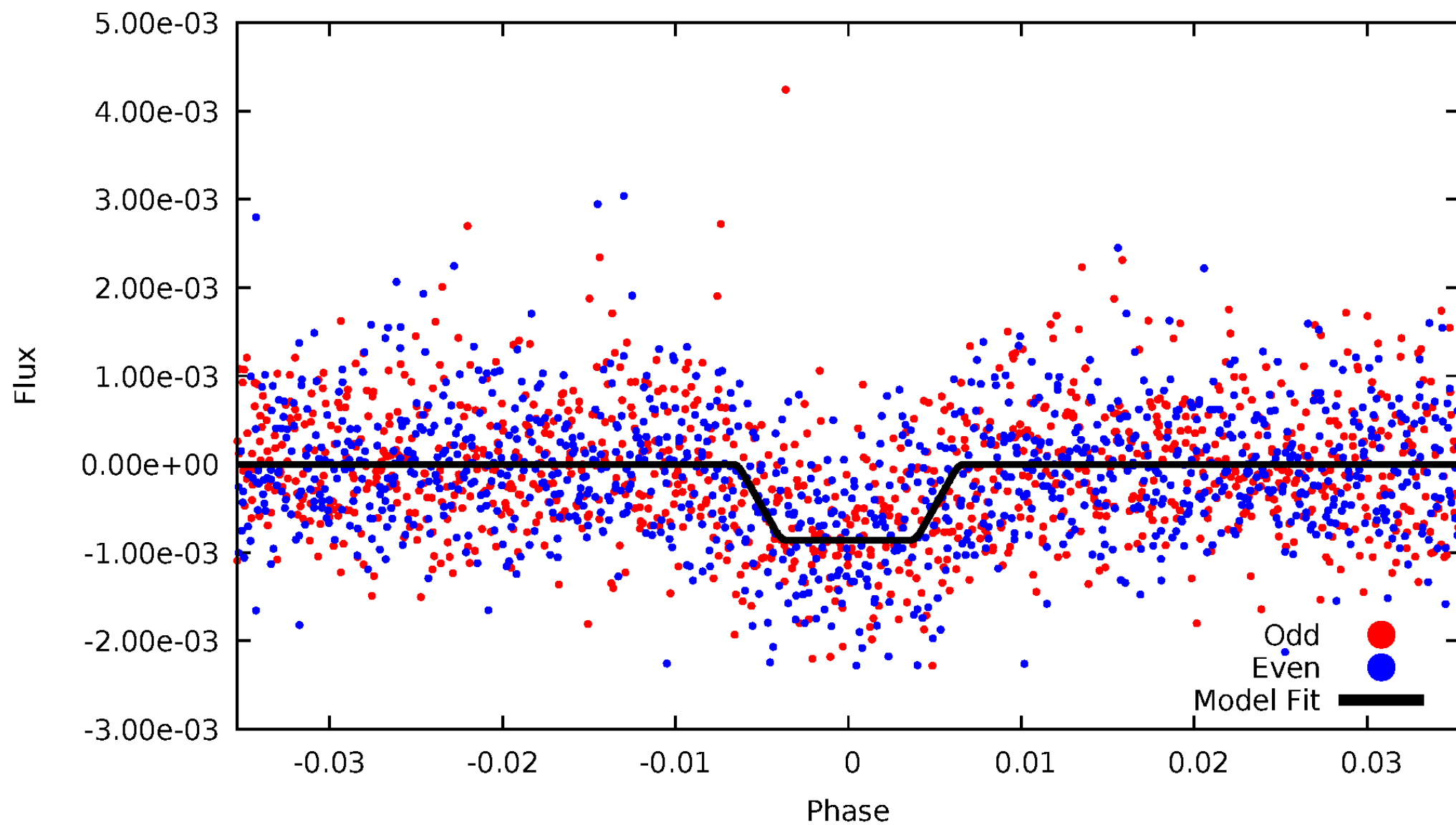
DV Odd/Even

TCE 011821363-01



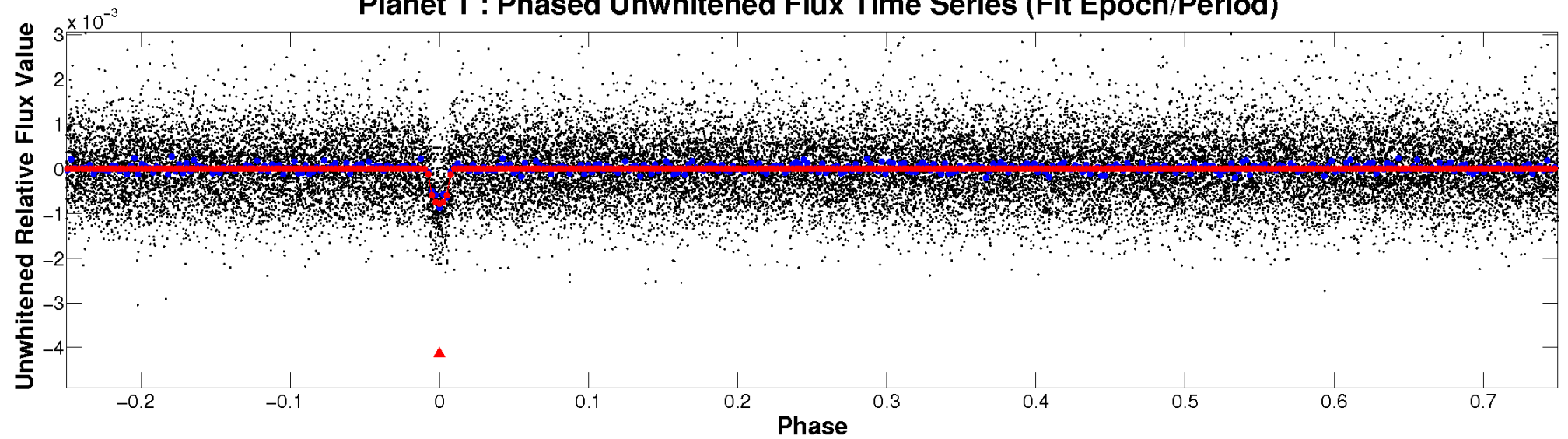
ALT Odd/Even

TCE 011821363-01

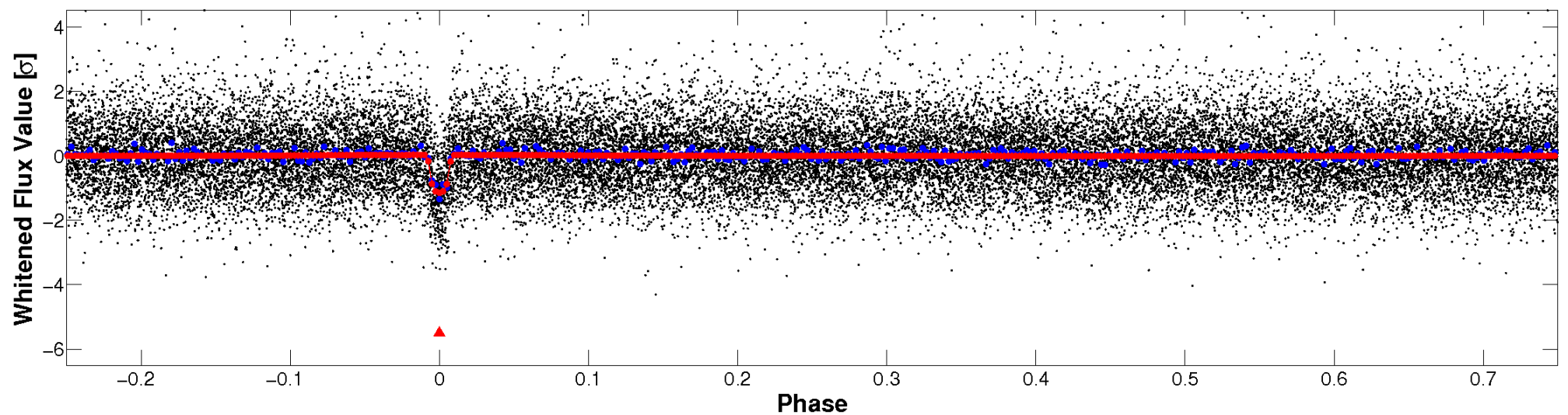


Non-Whitened Vs. Whitened Light Curve

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

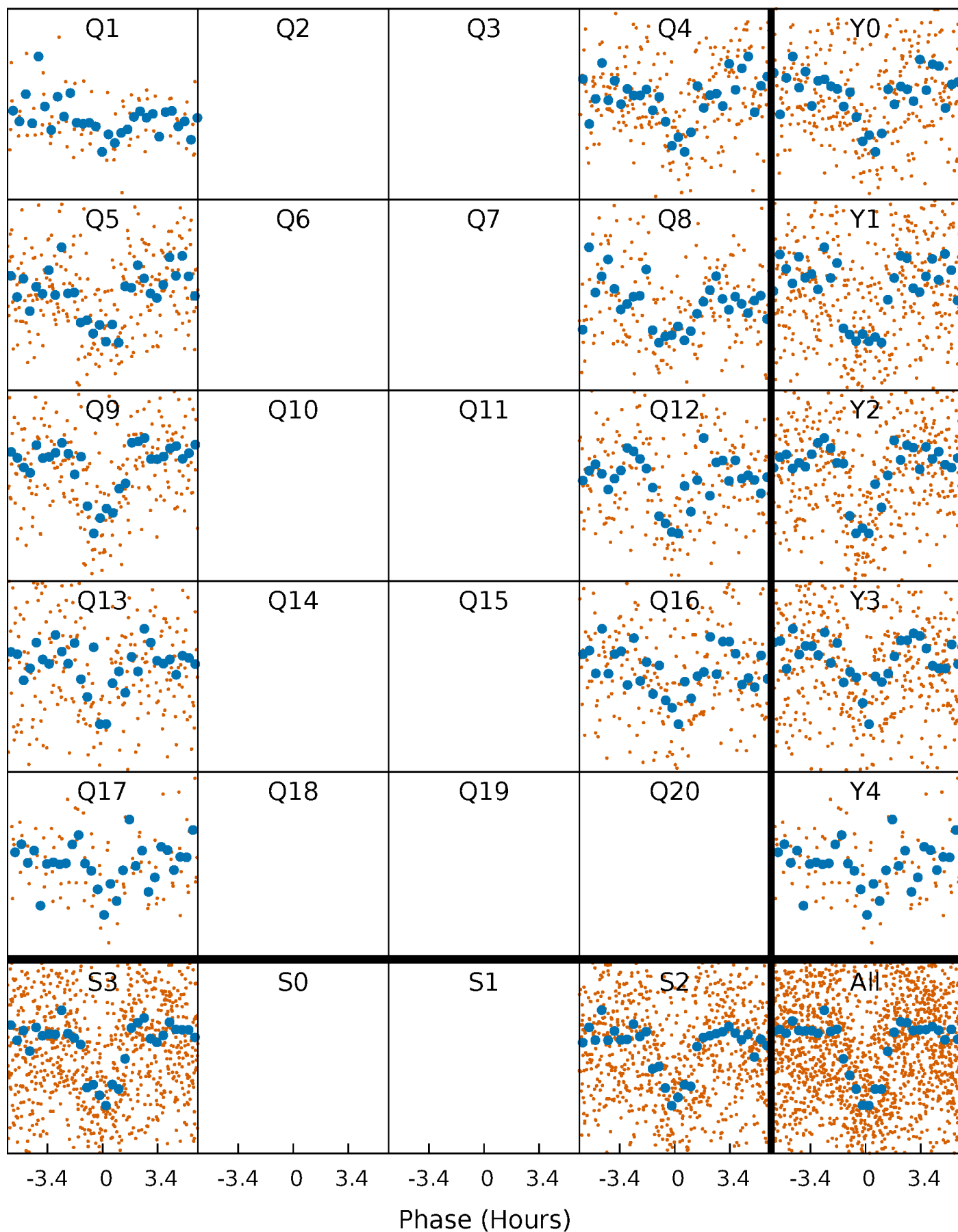


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



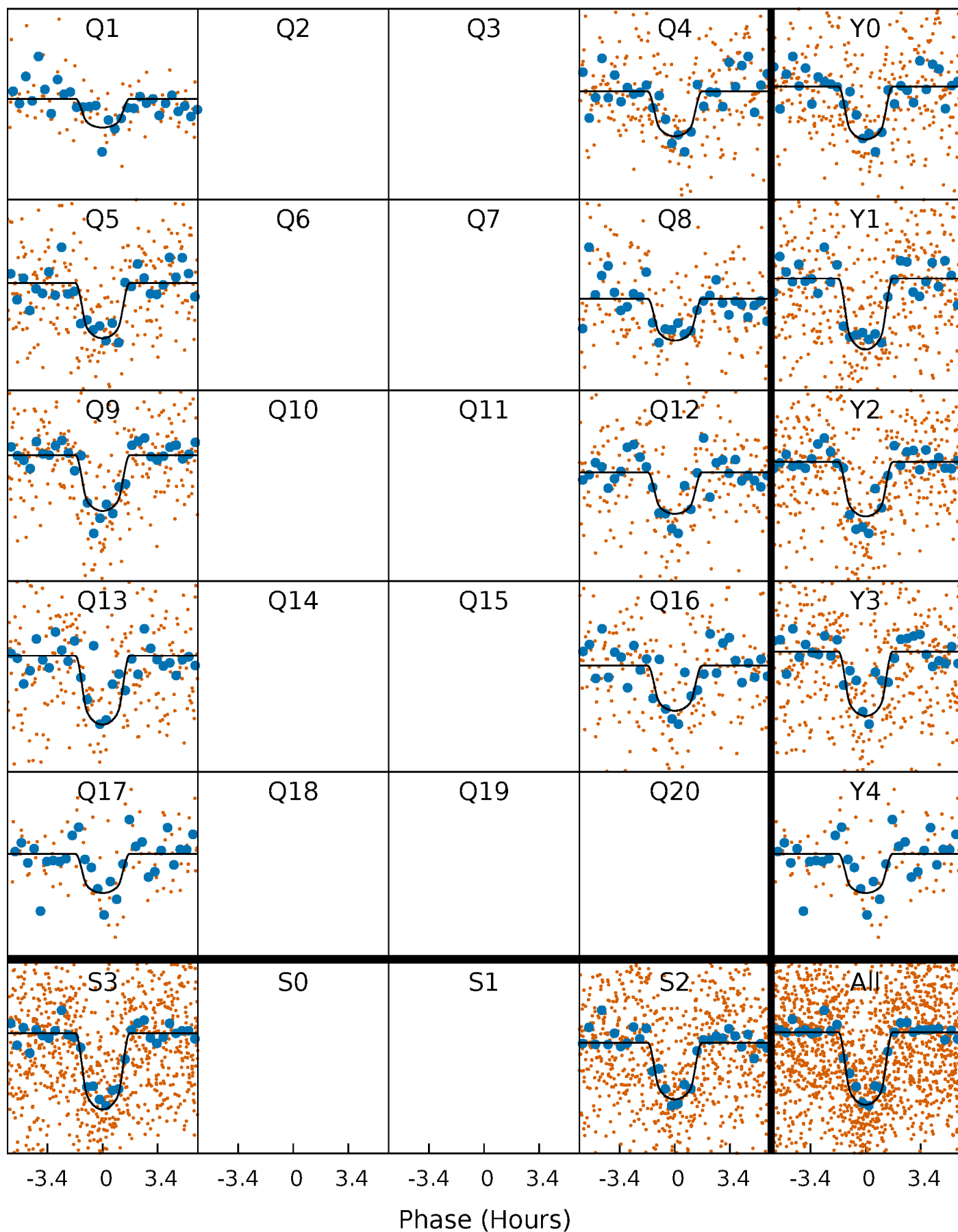
PDC Quarter-Phased Transit Curves

TCE 011821363-01 P= 8.195946 Days $T_0=136.689406$ (BKJD)



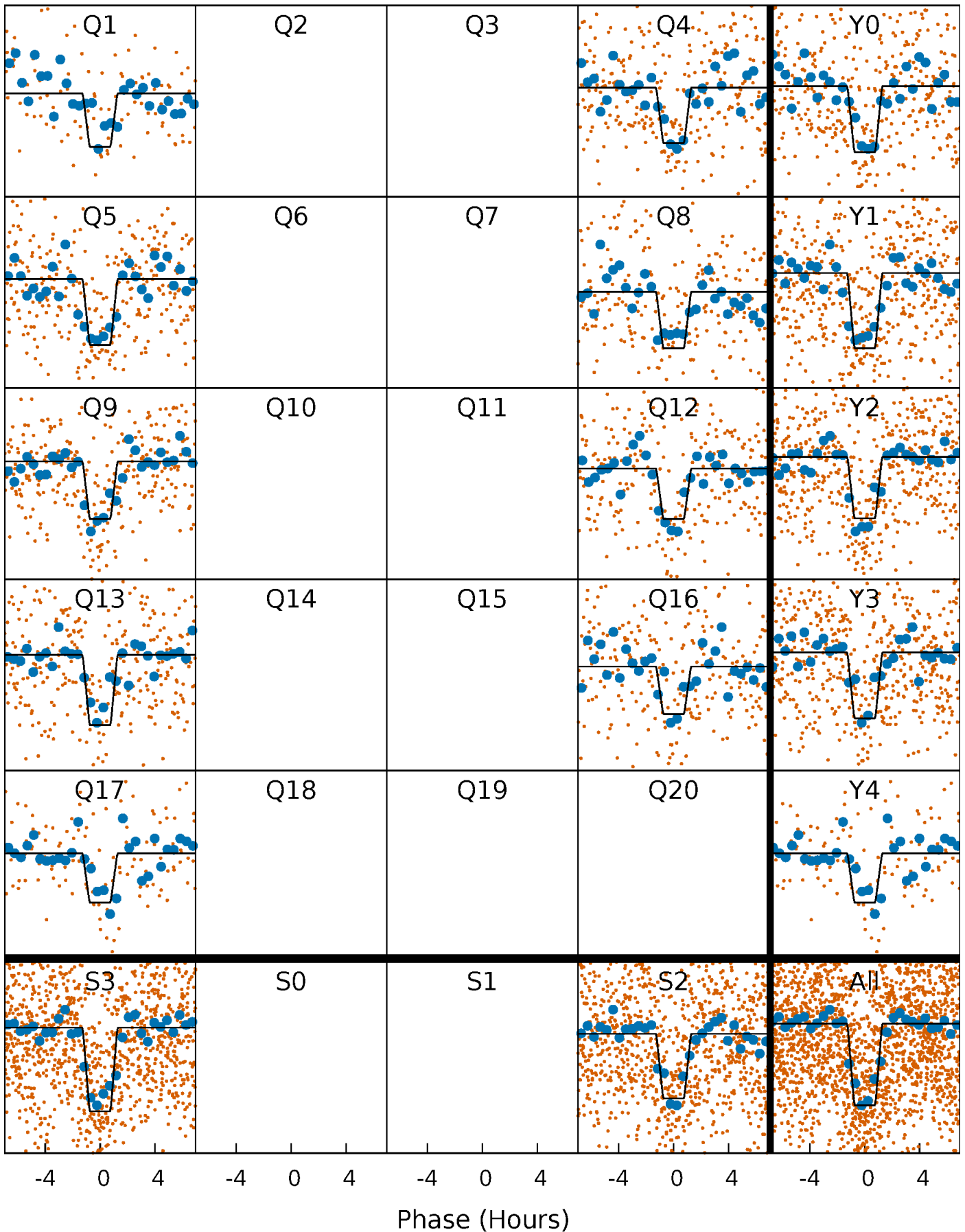
DV Quarter-Phased Transit Curves

TCE 011821363-01 P= 8.195946 Days $T_0=136.689406$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

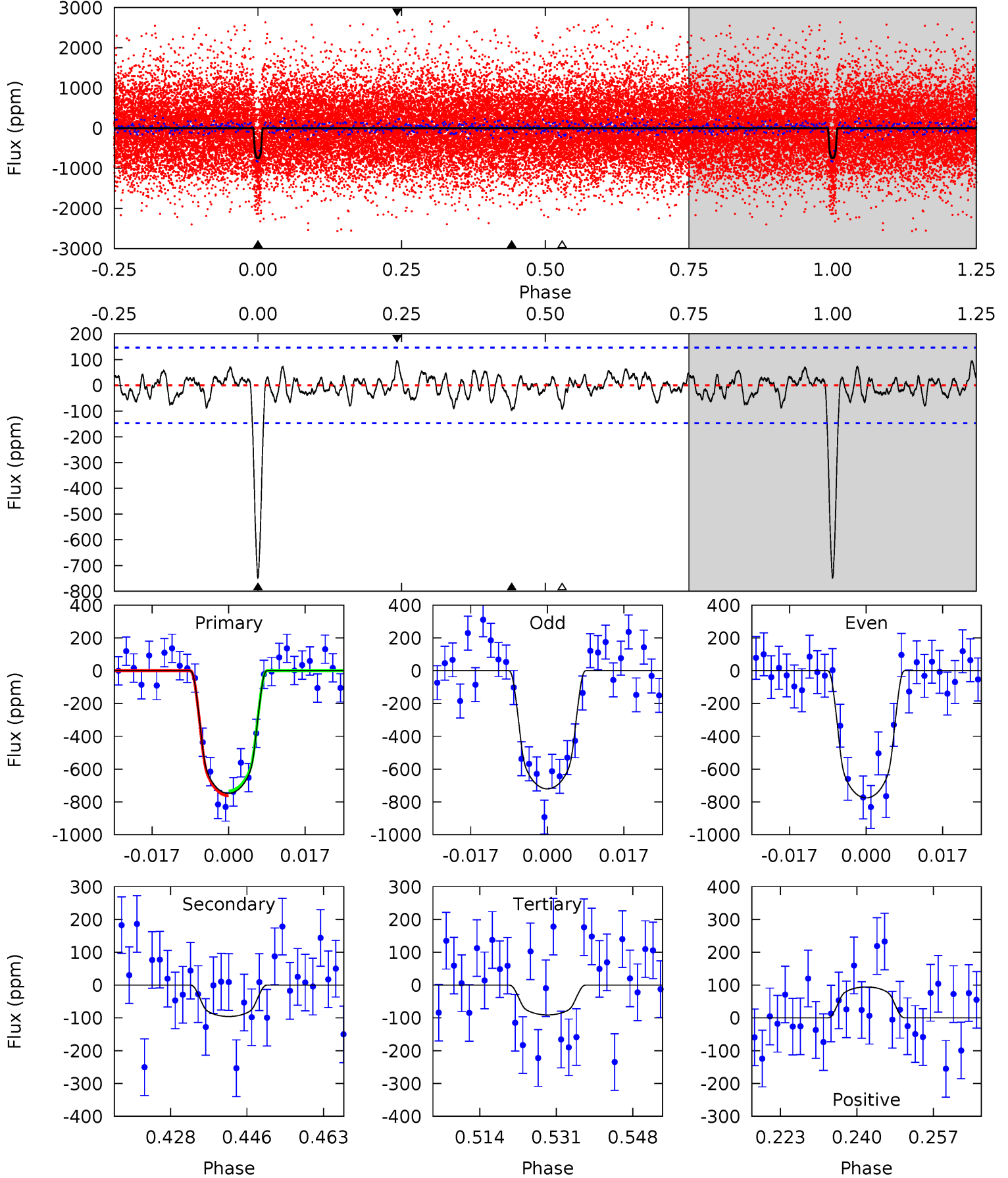
TCE 011821363-01 P= 8.195887 Days $T_0=136.695679$ (BKJD)



DV Model-Shift Uniqueness Test

011821363-01, P = 8.195946 Days, E = 128.493460 Days

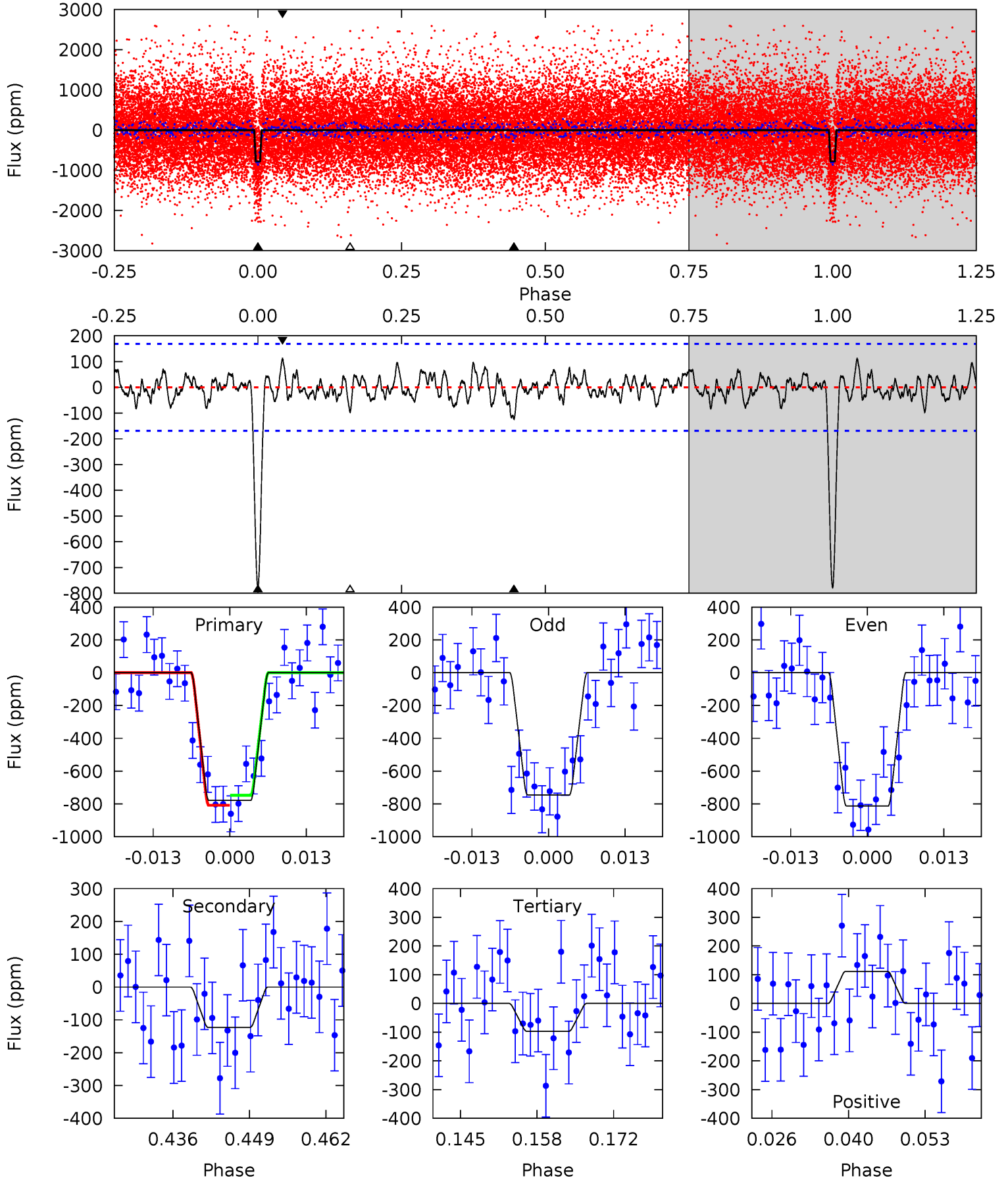
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	3.22	3.06	3.17	4.92	2.38	1.12	22.1	22.0	0.16	0.05	0.93	0.97	0.11	0.49



Alt Model-Shift Uniqueness Test

011821363-01, P = 8.195887 Days, E = 128.499792 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	3.63	2.87	3.29	4.97	2.48	1.06	20.1	19.6	0.76	0.34	0.99	1.01	0.13	0.91



Stellar Parameters For KIC 011821363

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4723^{+167}_{-167}	$4.557^{+0.063}_{-0.032}$	$0.080^{+0.250}_{-0.300}$	$0.747^{+0.046}_{-0.069}$	$0.734^{+0.070}_{-0.058}$	$2.477^{+0.675}_{-0.302}$
	+4%/-4%	+1%/-1%	+312%/-375%	+6%/-9%	+10%/-8%	+27%/-12%
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 011821363-01 / KOI 1494.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-96 ± 30	$2.43^{+0.81}_{-0.85}$	935^{+35}_{-37}	3211^{+486}_{-325}	47^{+74}_{-24}
Alt.	-123 ± 34	$2.32^{+0.93}_{-0.88}$	935^{+38}_{-39}	3387^{+555}_{-381}	67^{+100}_{-36}

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 $A_{obs} \gg 1.0$

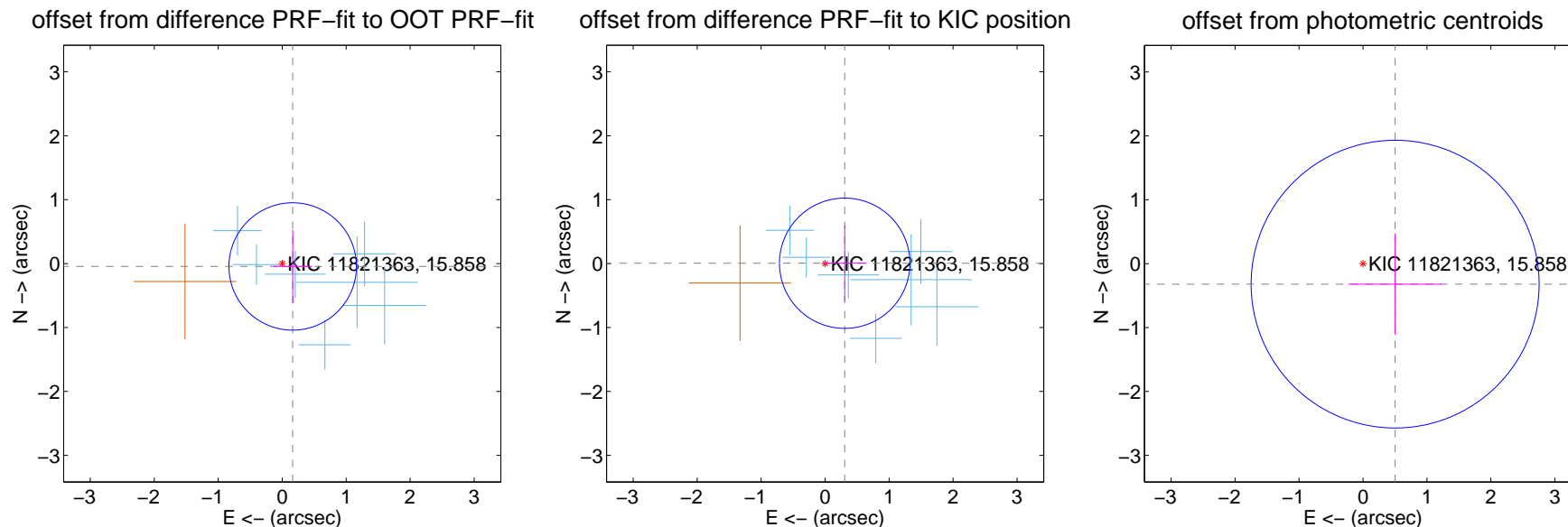
DV Centroid Data

Supplemental centroid analysis for 011821363-01. Kepler magnitude: 15.86. Transit SNR 19.60

There are 7 quarters with good PRF difference image offsets

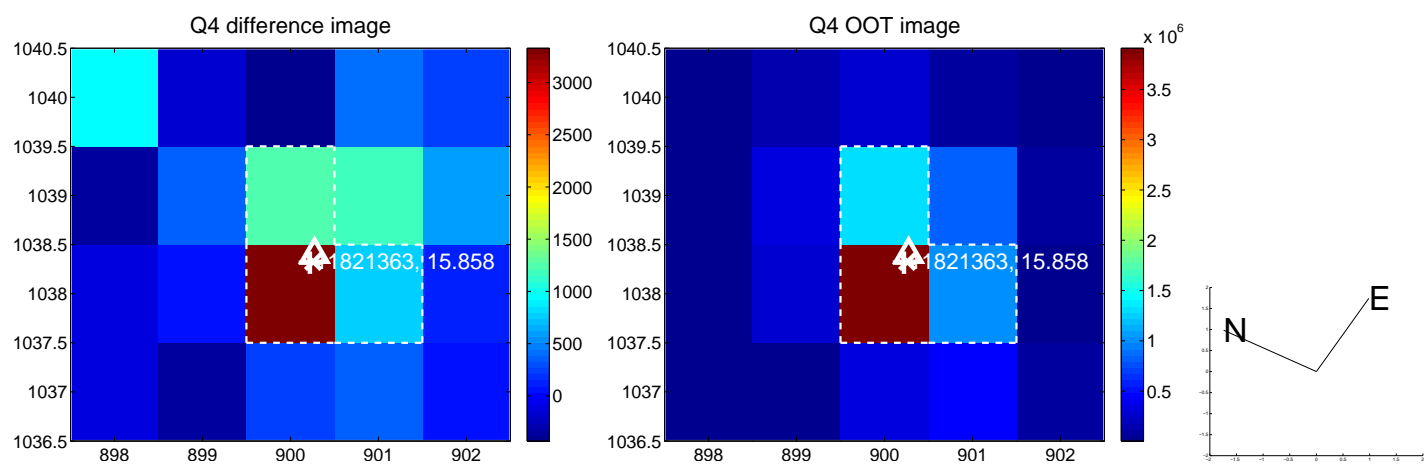
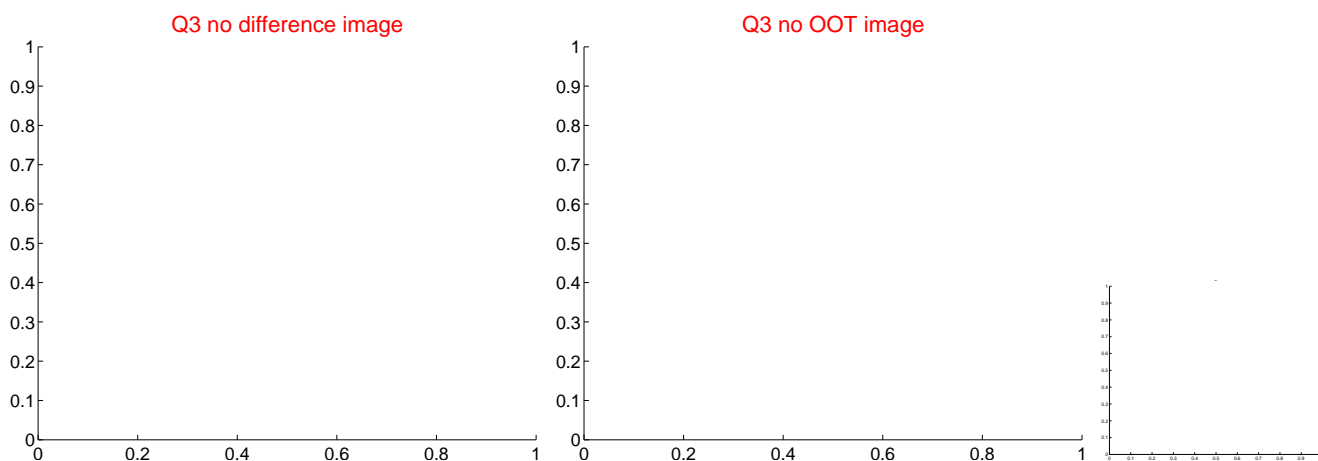
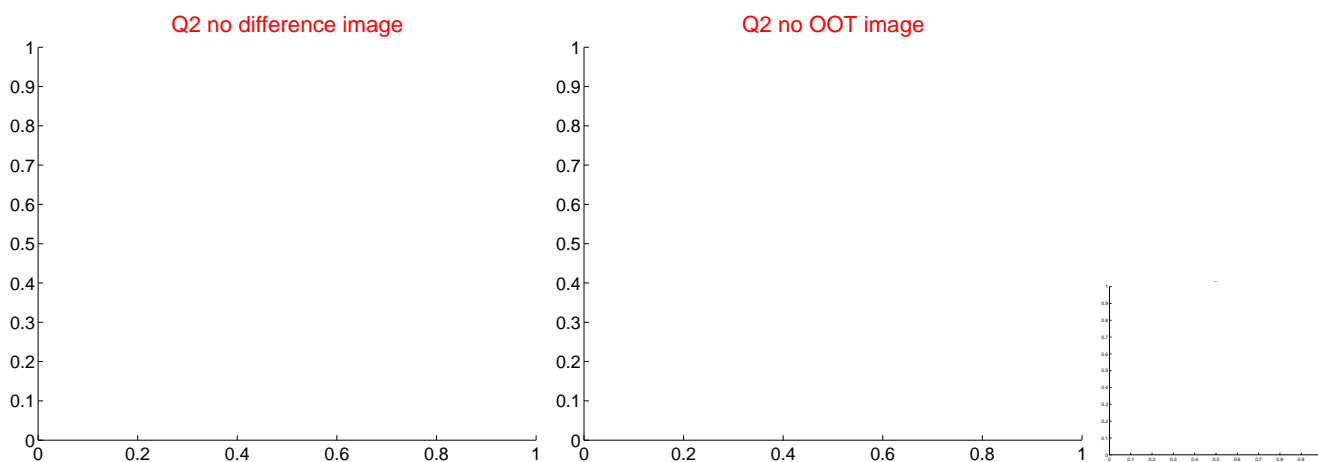
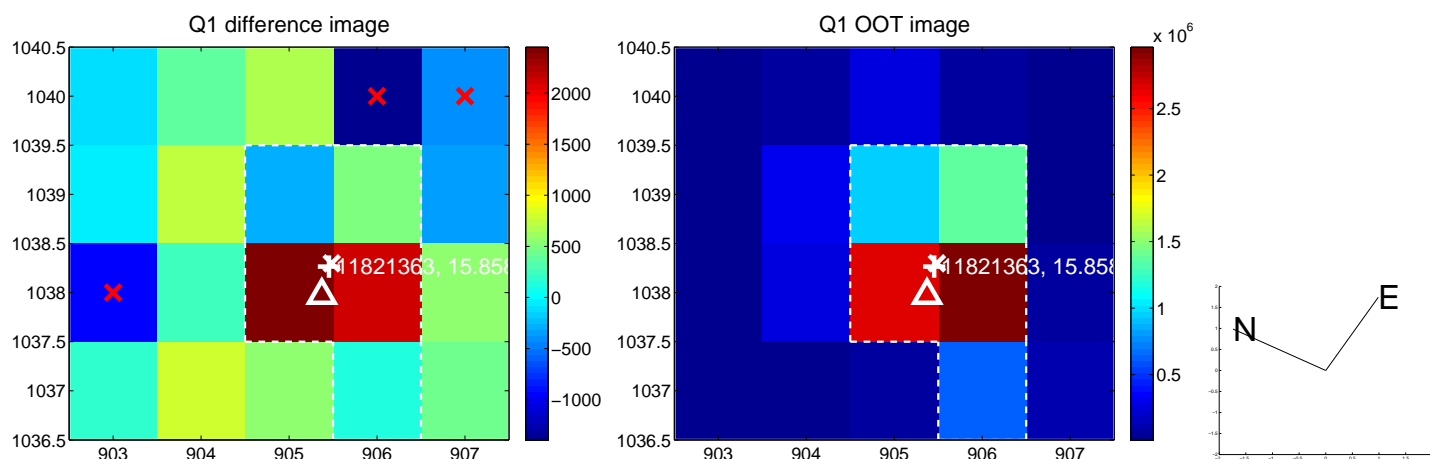
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.170 ± 0.332	0.51	-0.164 ± 0.306	-0.045 ± 0.571
PRF-fit source offset from KIC position	0.306 ± 0.340	0.90	-0.306 ± 0.339	0.005 ± 0.597
photometric centroid source offset	0.60 ± 0.75	0.79	-0.50 ± 0.73	-0.32 ± 0.79

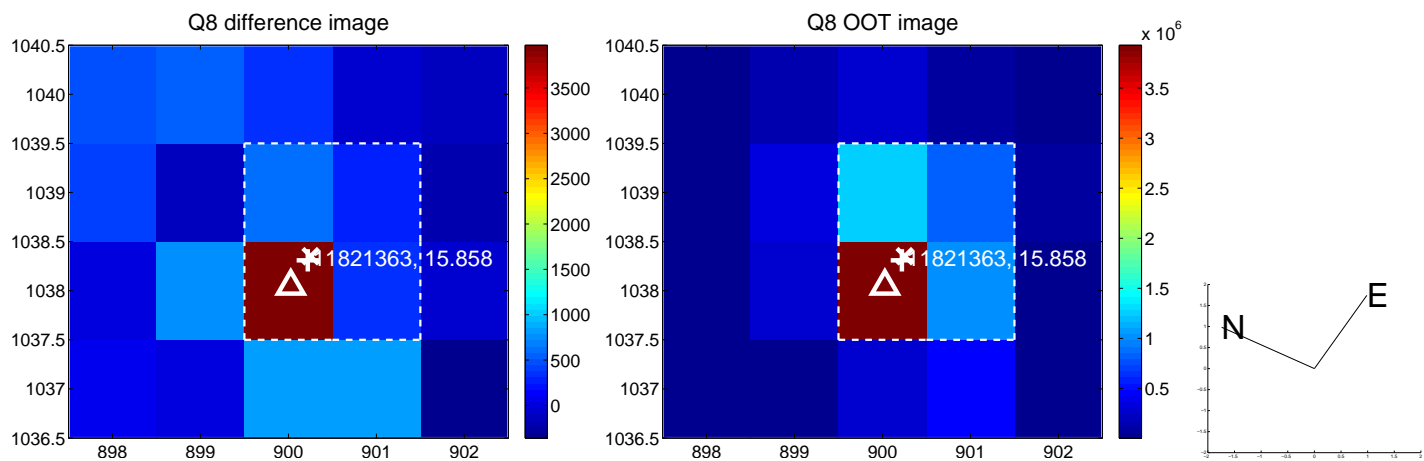
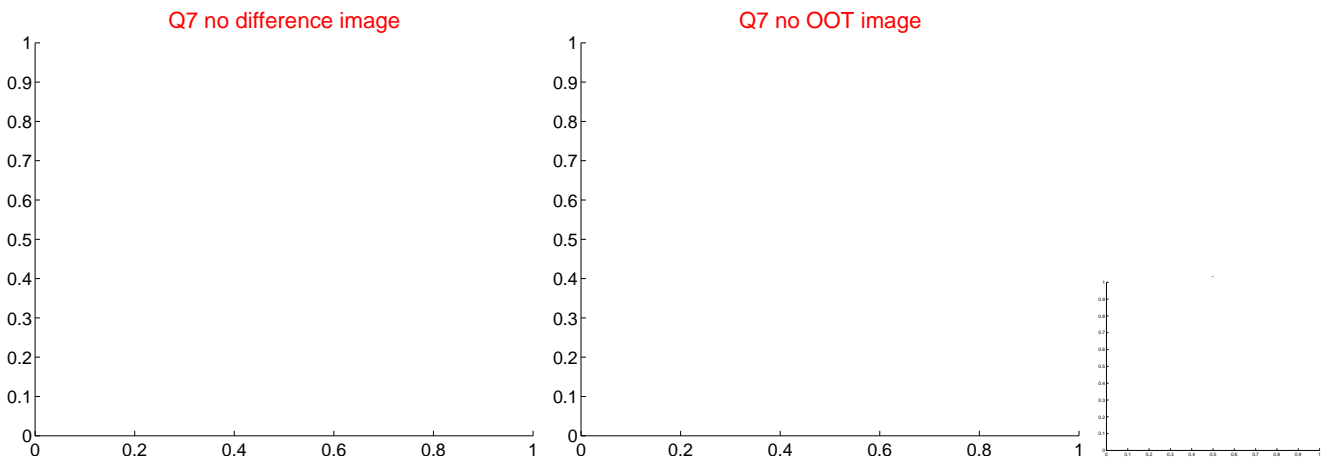
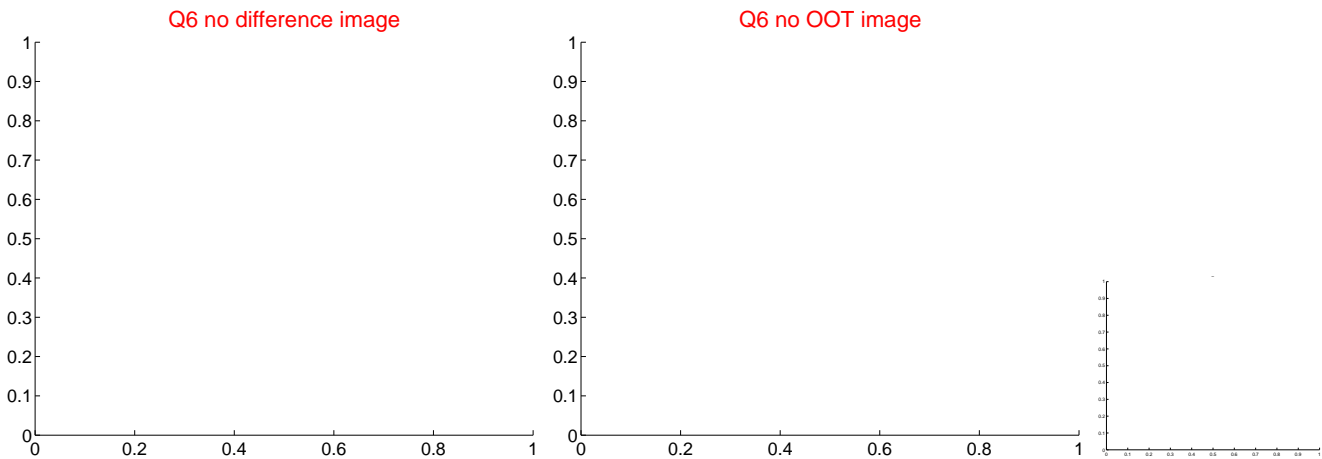
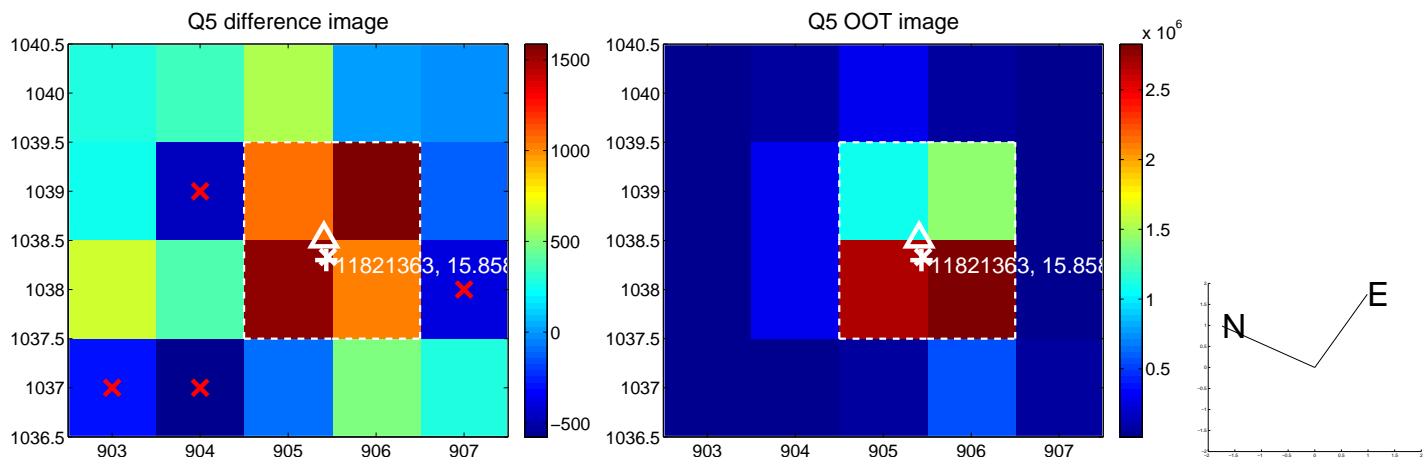


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

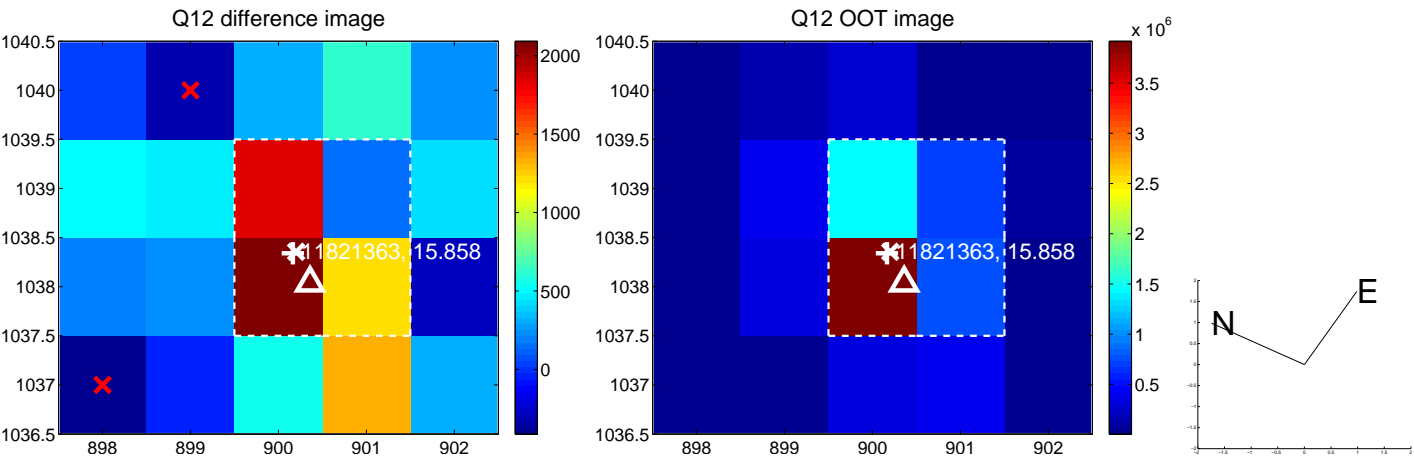
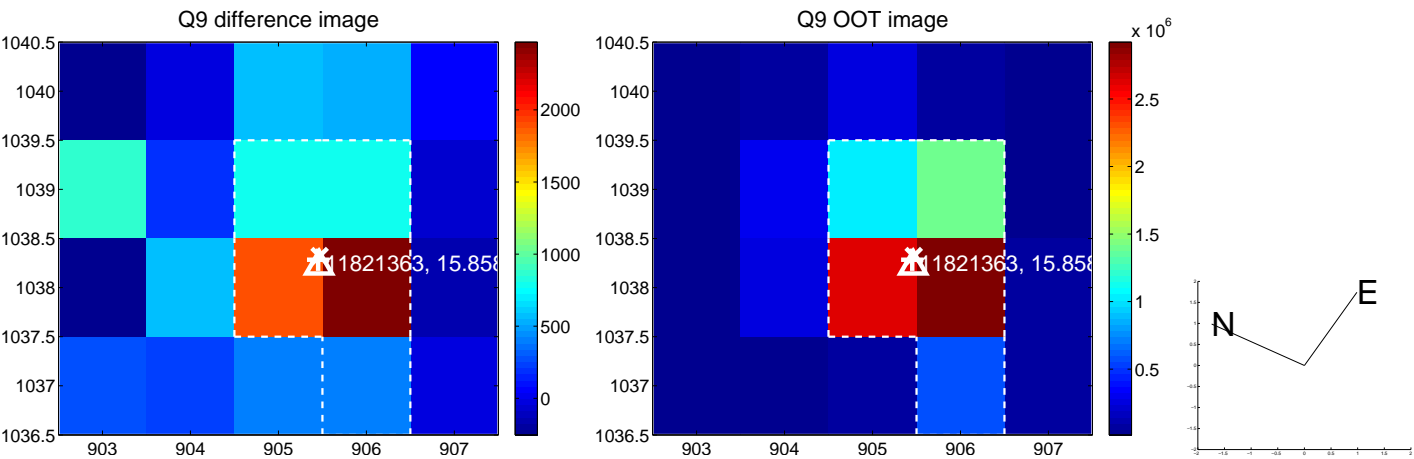
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



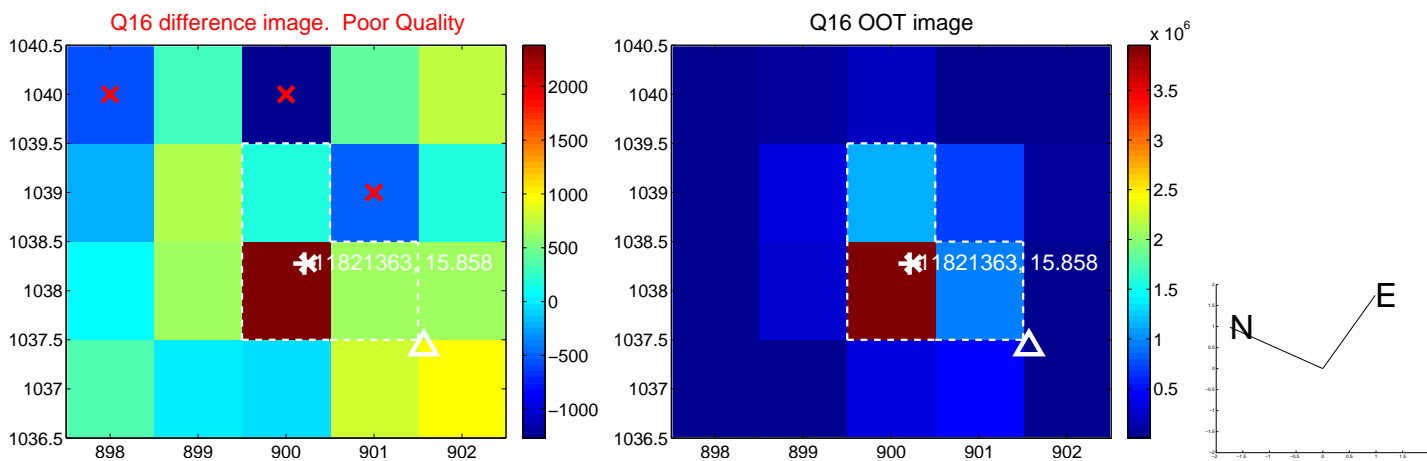
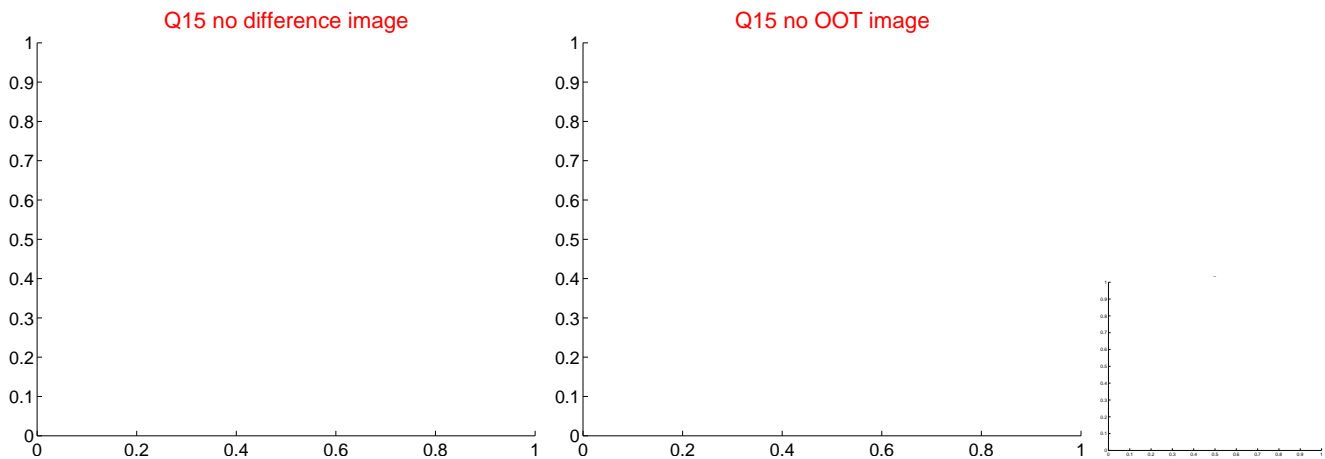
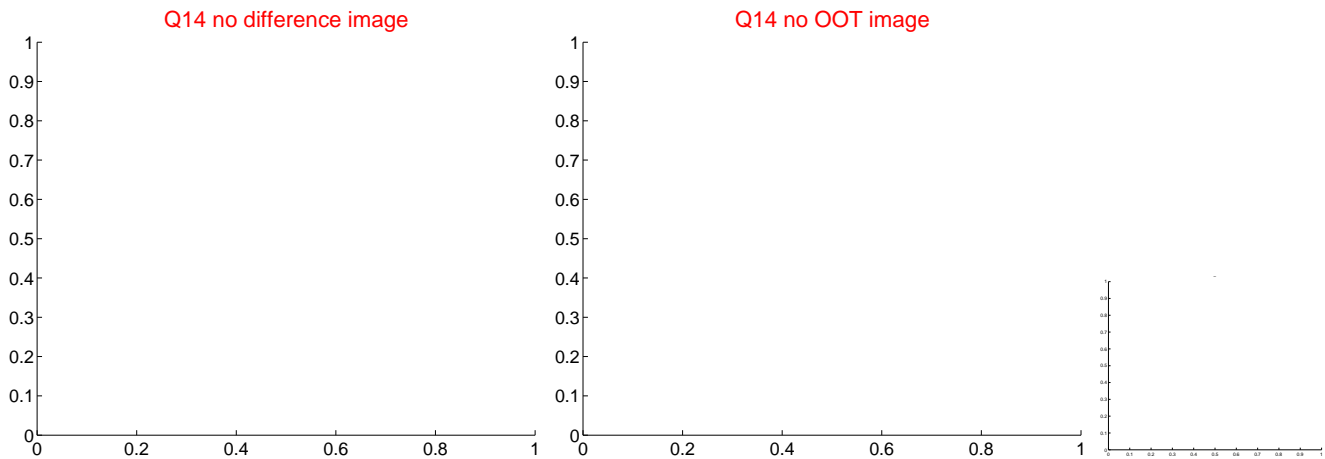
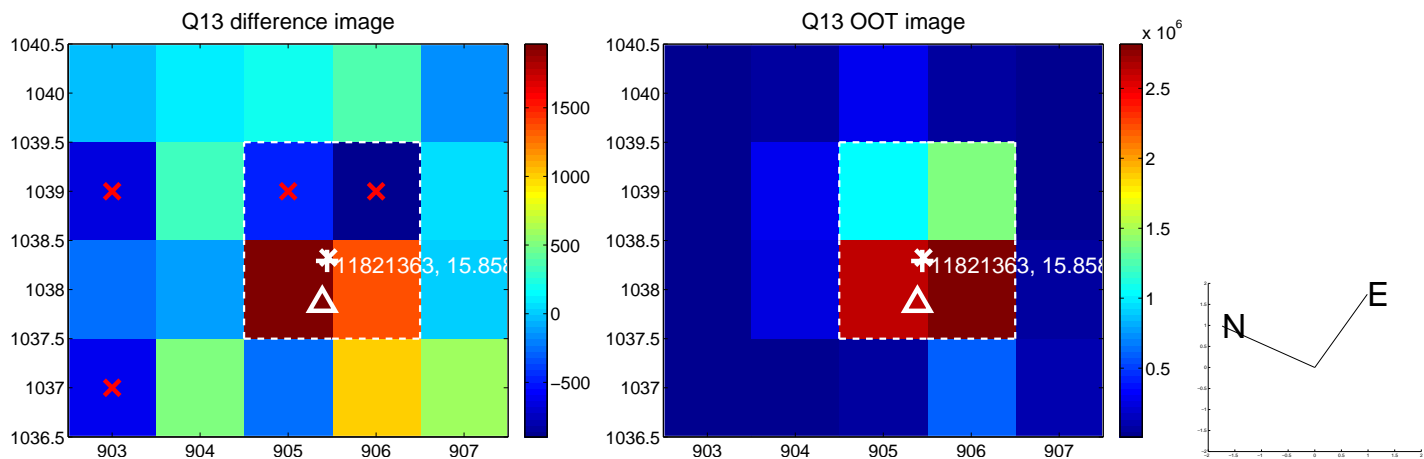
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



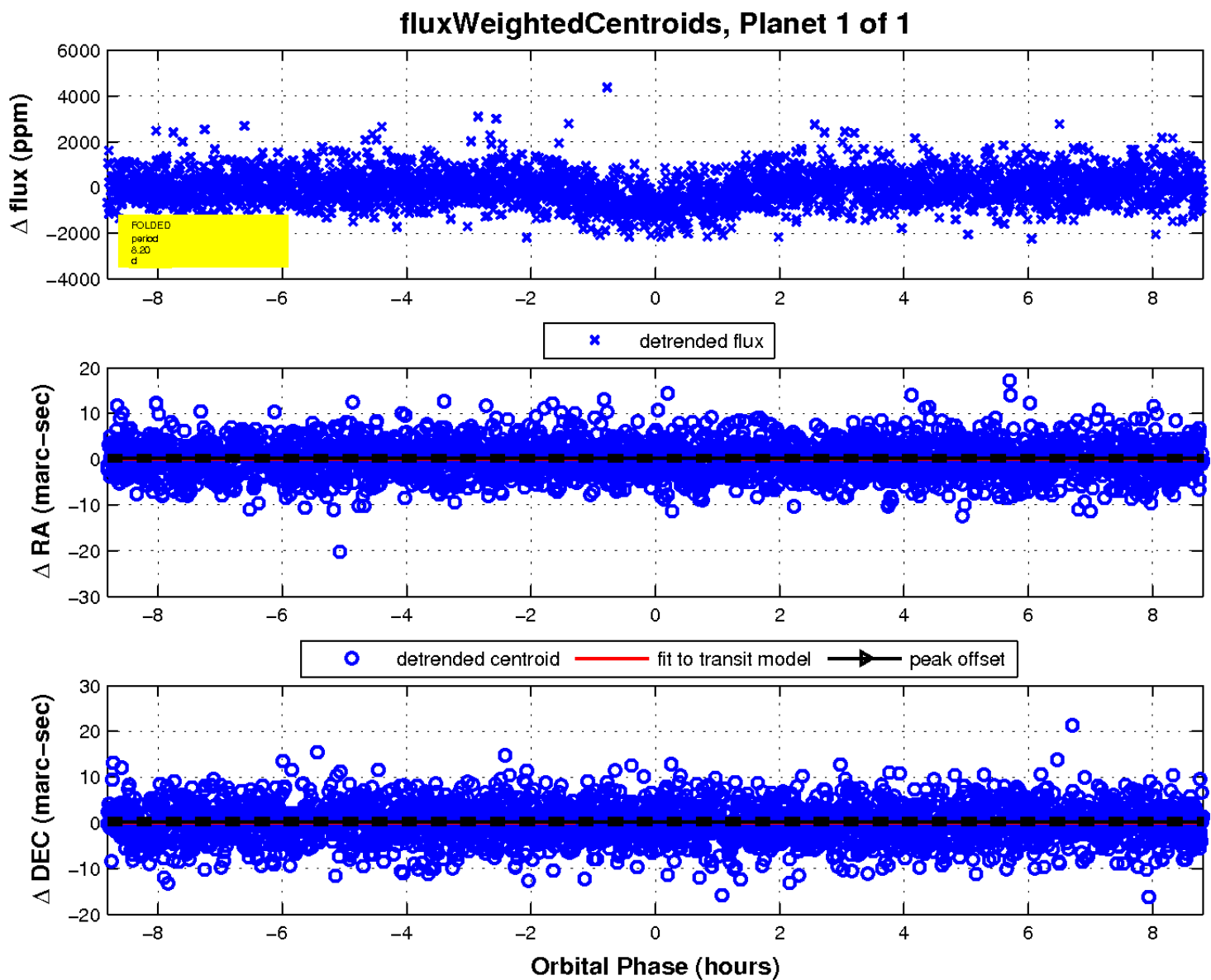
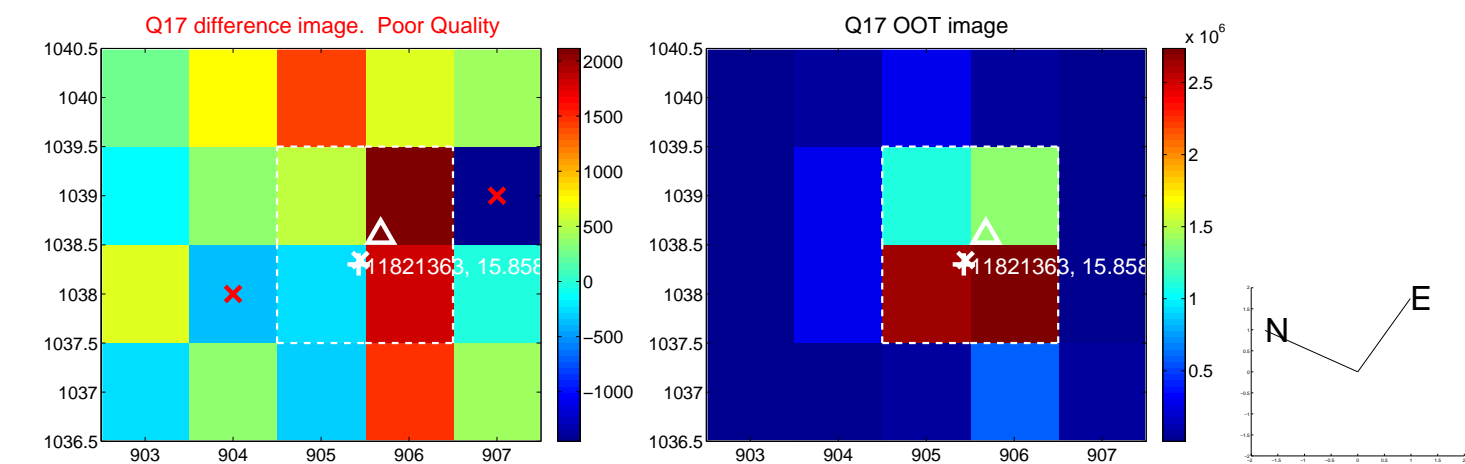
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

