

KIC 011146702

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})
011146702-01	OBS	No	496.435637	512.396559	450.6	7.186	7.6	7.1	0.93	5988	2.19	0.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011146702-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—CENT_FEW_DIFFS

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

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

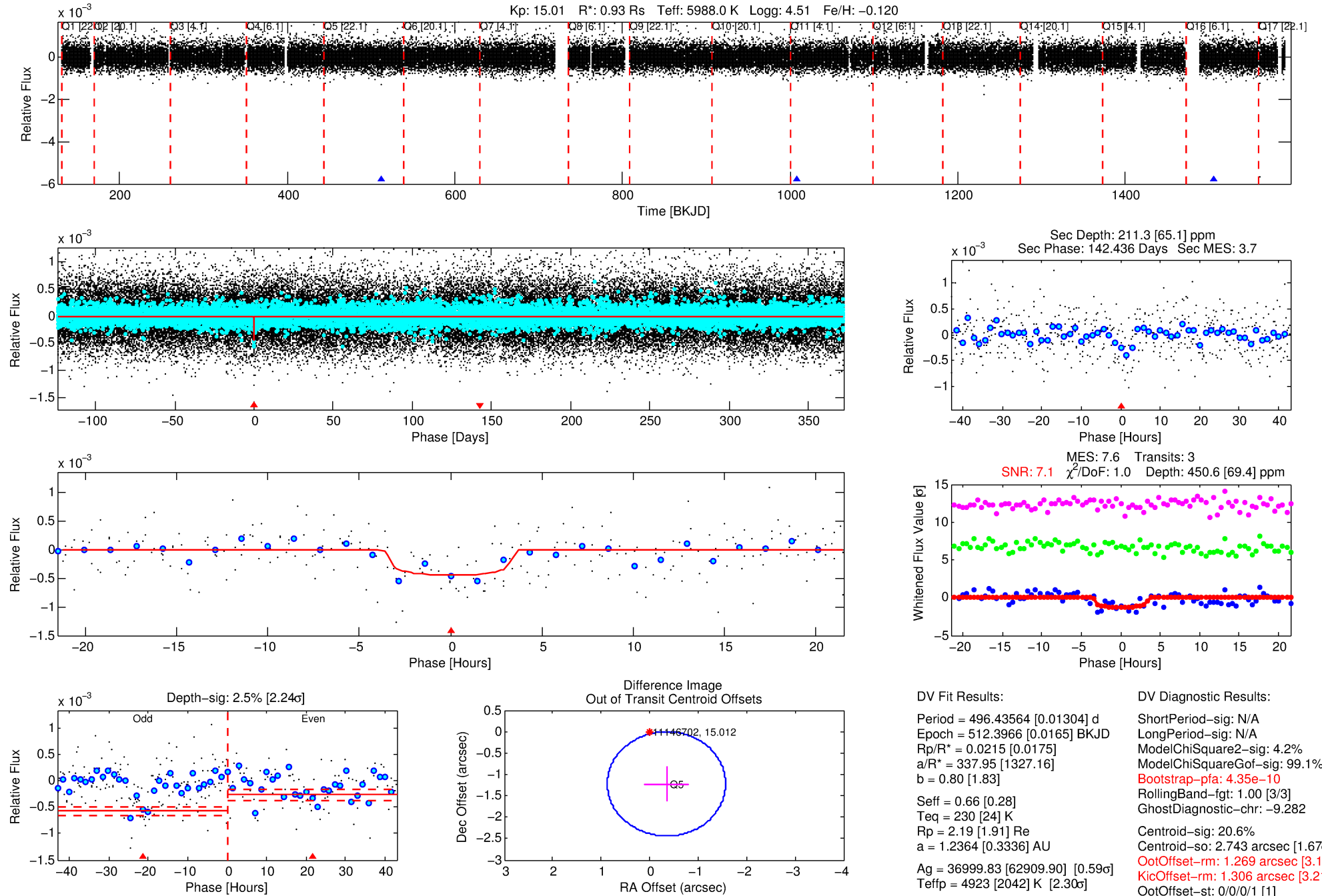
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011146702-01

No Significant Match Found

DV One-Page Summary

KIC: 11146702 Candidate: 1 of 1 Period: 496.436 d



DV Fit Results:

Period = 496.43564 [0.01304] d
Epoch = 512.3966 [0.0165] BKJD
Rp/R* = 0.0215 [0.0175]
a/R* = 337.95 [1327.16]
b = 0.80 [1.83]
Seff = 0.66 [0.28]
Teff = 230 [24] K
Rp = 2.19 [1.91] Re
a = 1.2364 [0.3336] AU
Ag = 36999.83 [62909.90] [0.59 σ]
Teffp = 4923 [2042] K [2.30 σ]

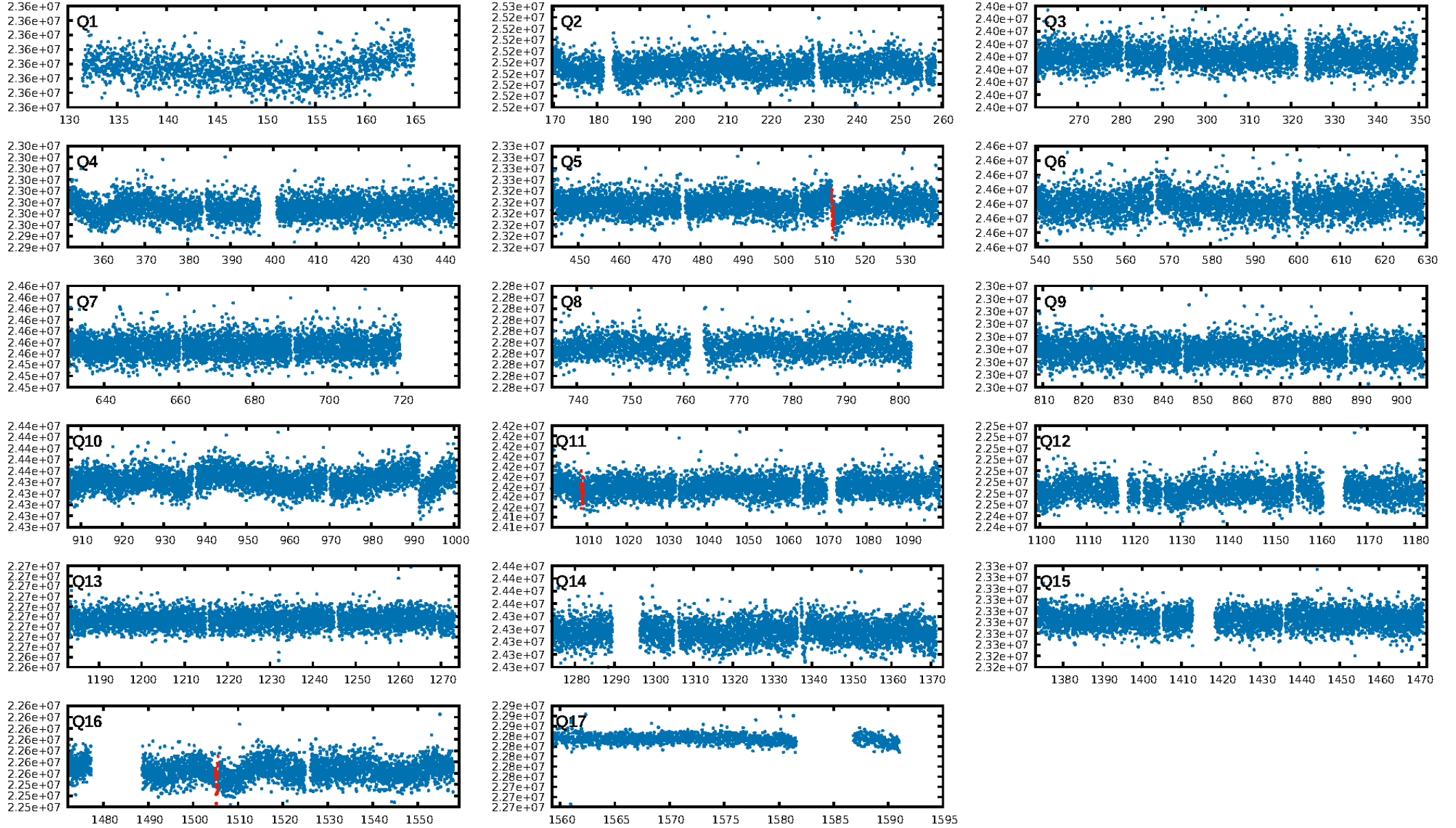
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.2%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 4.35e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -9.282
Centroid-sig: 20.6%
Centroid-so: 2.743 arcsec [1.67 σ]
OotOffset-rm: 1.269 arcsec [3.12 σ]
KicOffset-rm: 1.306 arcsec [3.21 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

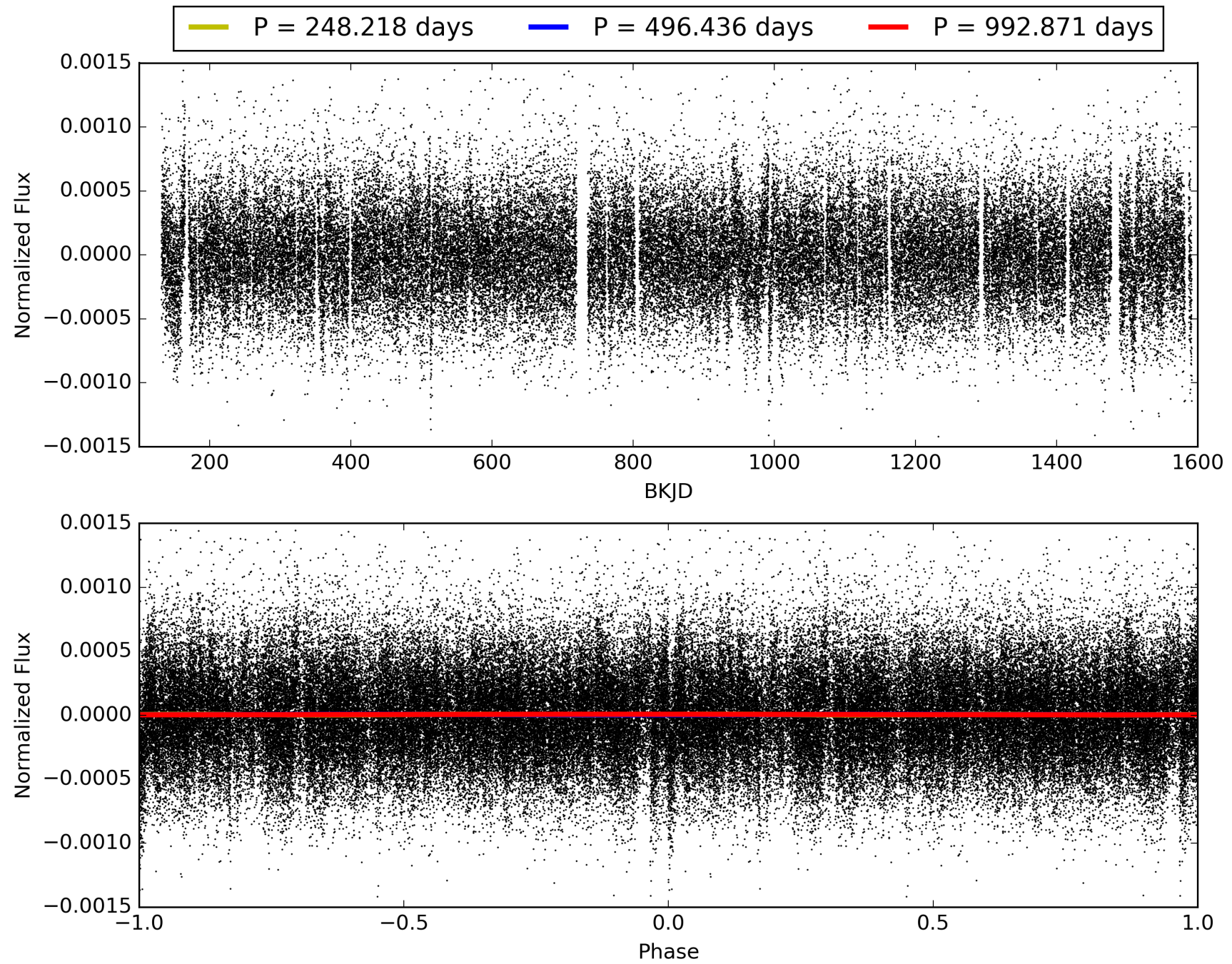
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:06:54 Z

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

TCE 011146702-01, PDC Light Curves

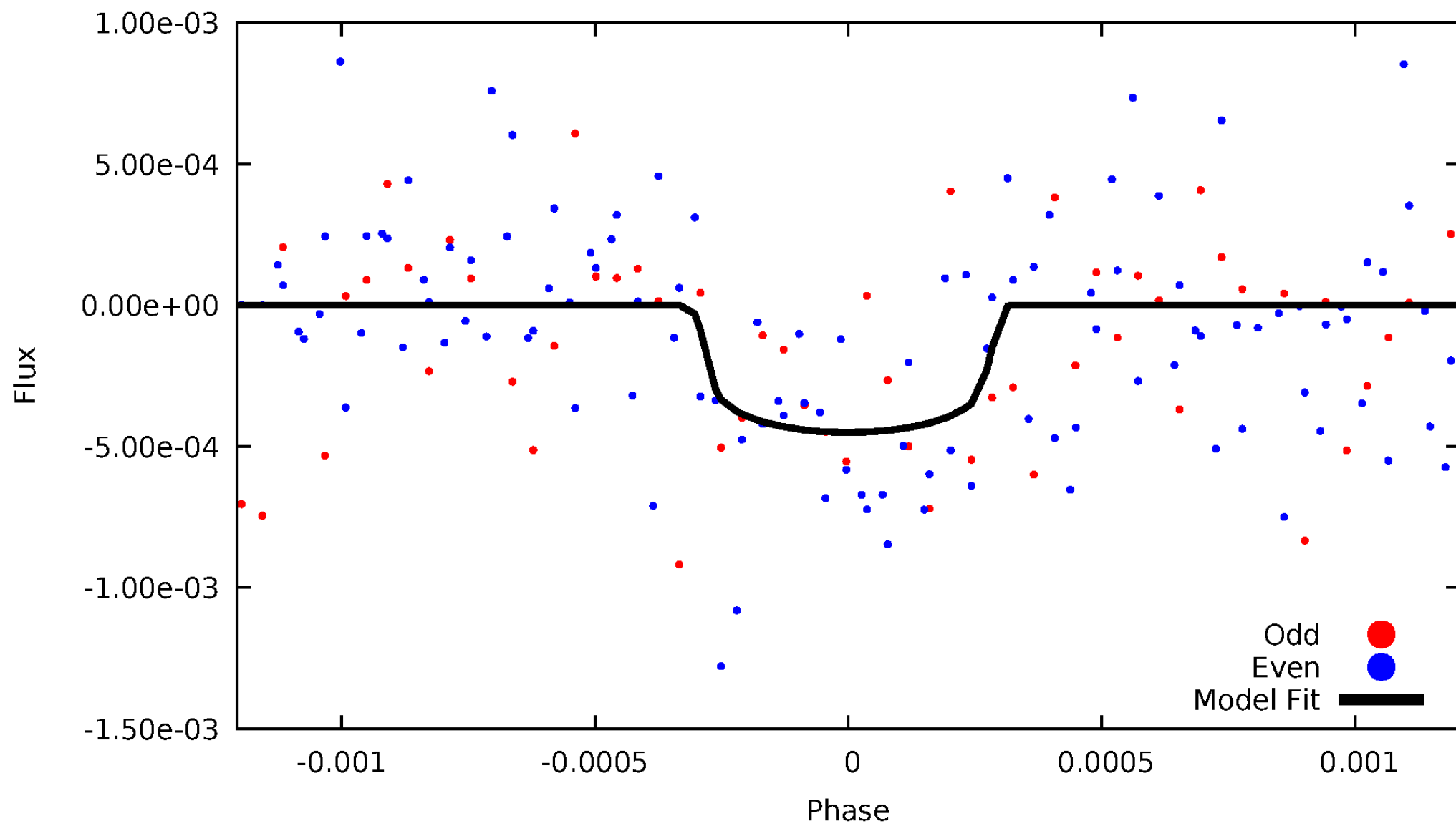


TCE 011146702-01



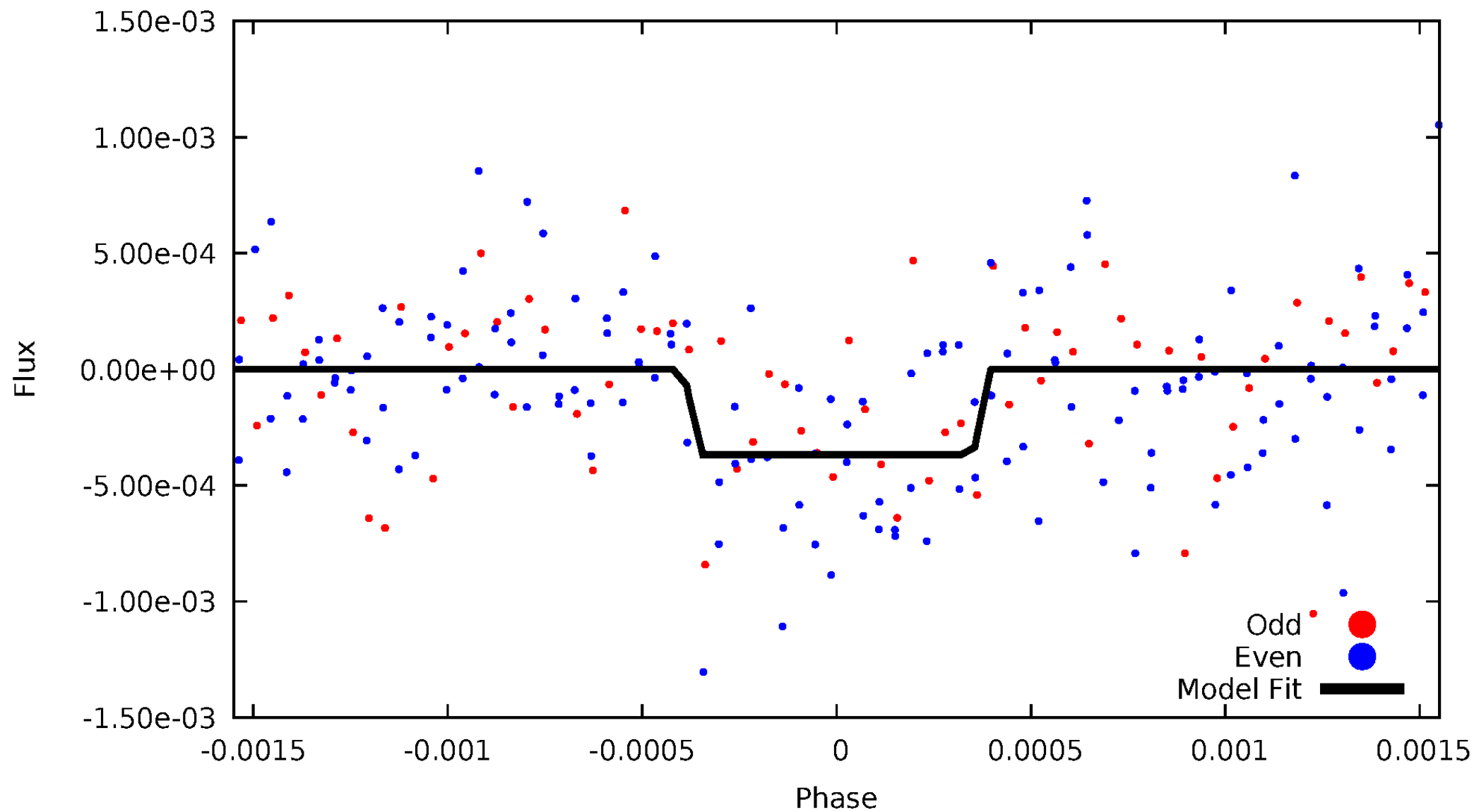
DV Odd/Even

TCE 011146702-01



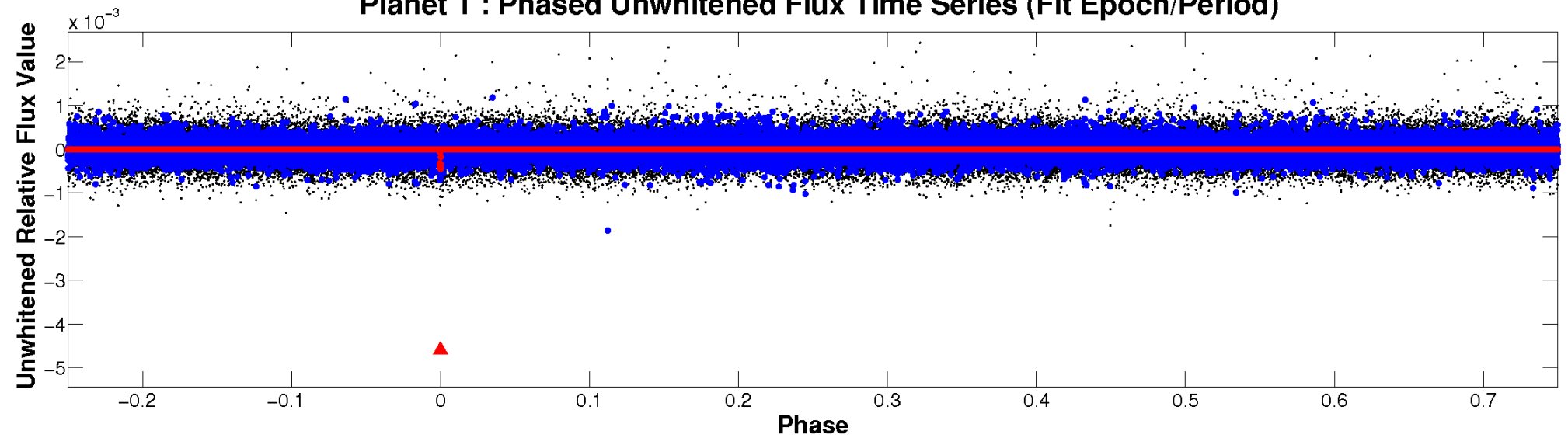
ALT Odd/Even

TCE 011146702-01

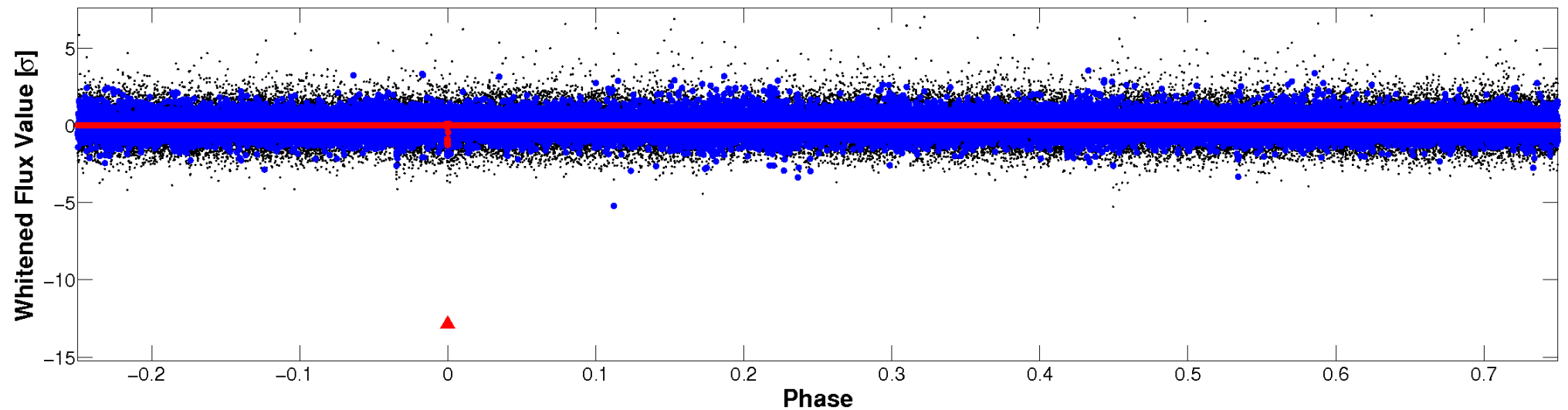


Non-Whitened Vs. Whitened Light Curve

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

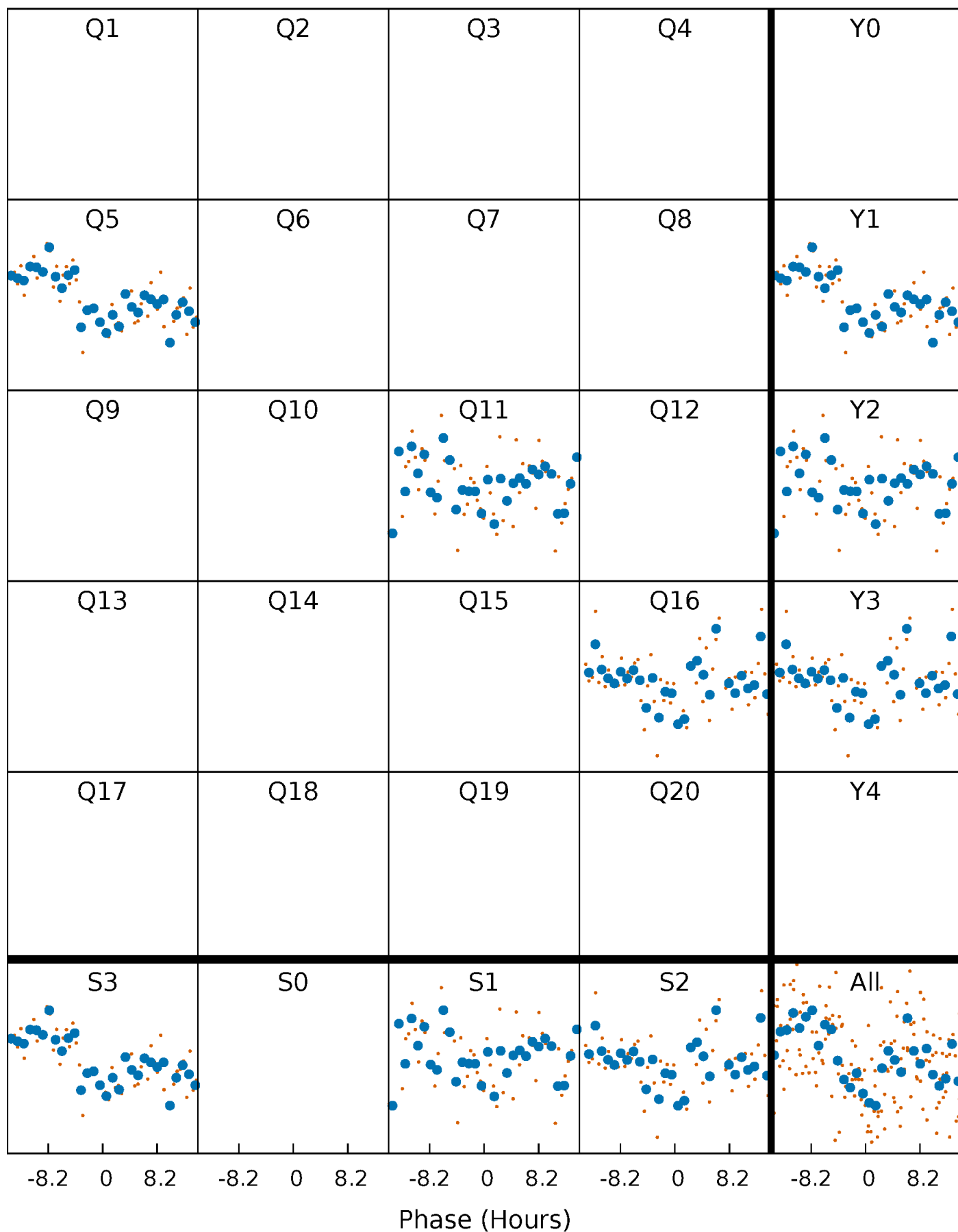


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



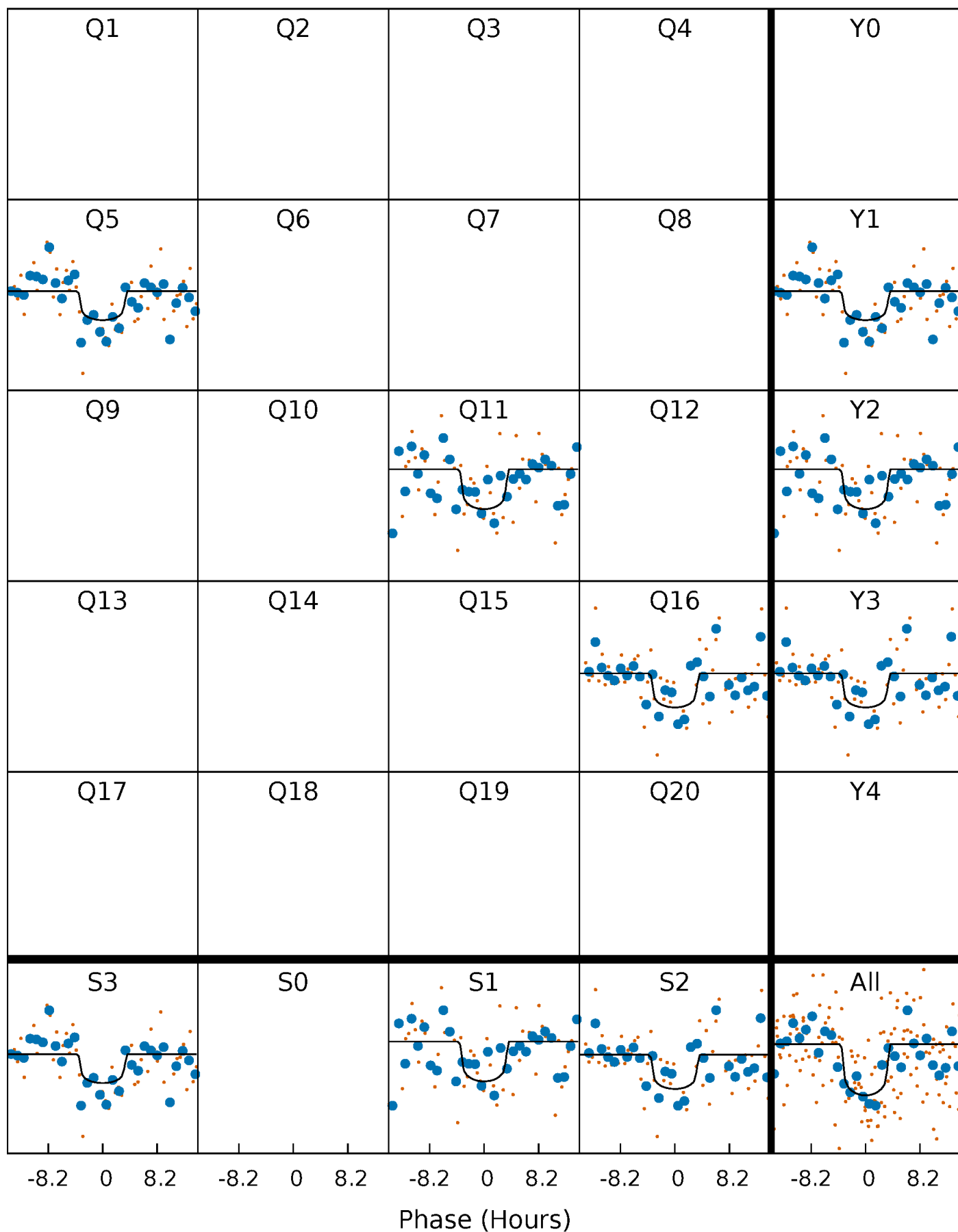
PDC Quarter-Phased Transit Curves

TCE 011146702-01 P=496.435637 Days $T_0=512.396559$ (BKJD)



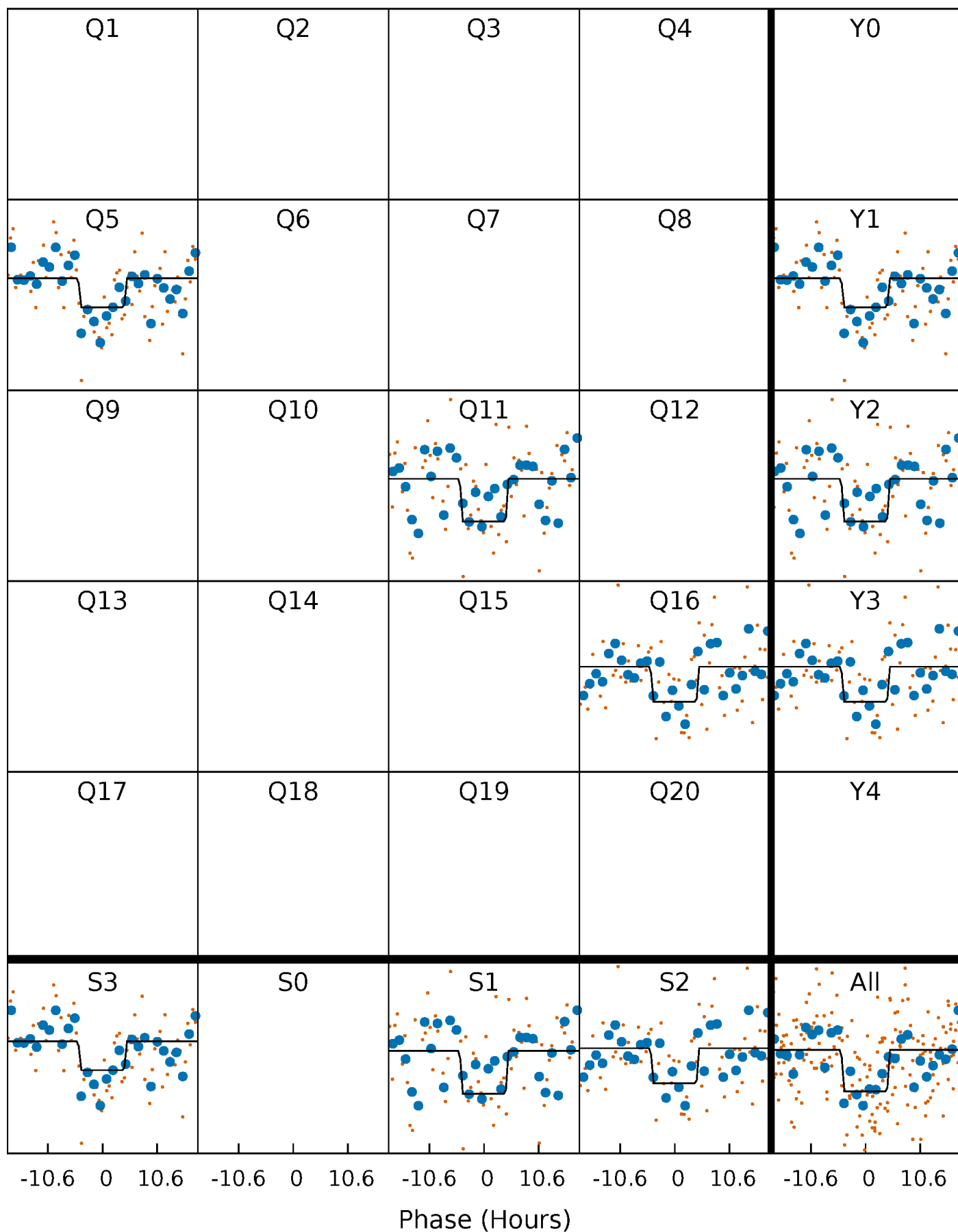
DV Quarter-Phased Transit Curves

TCE 011146702-01 P=496.435637 Days $T_0=512.396559$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

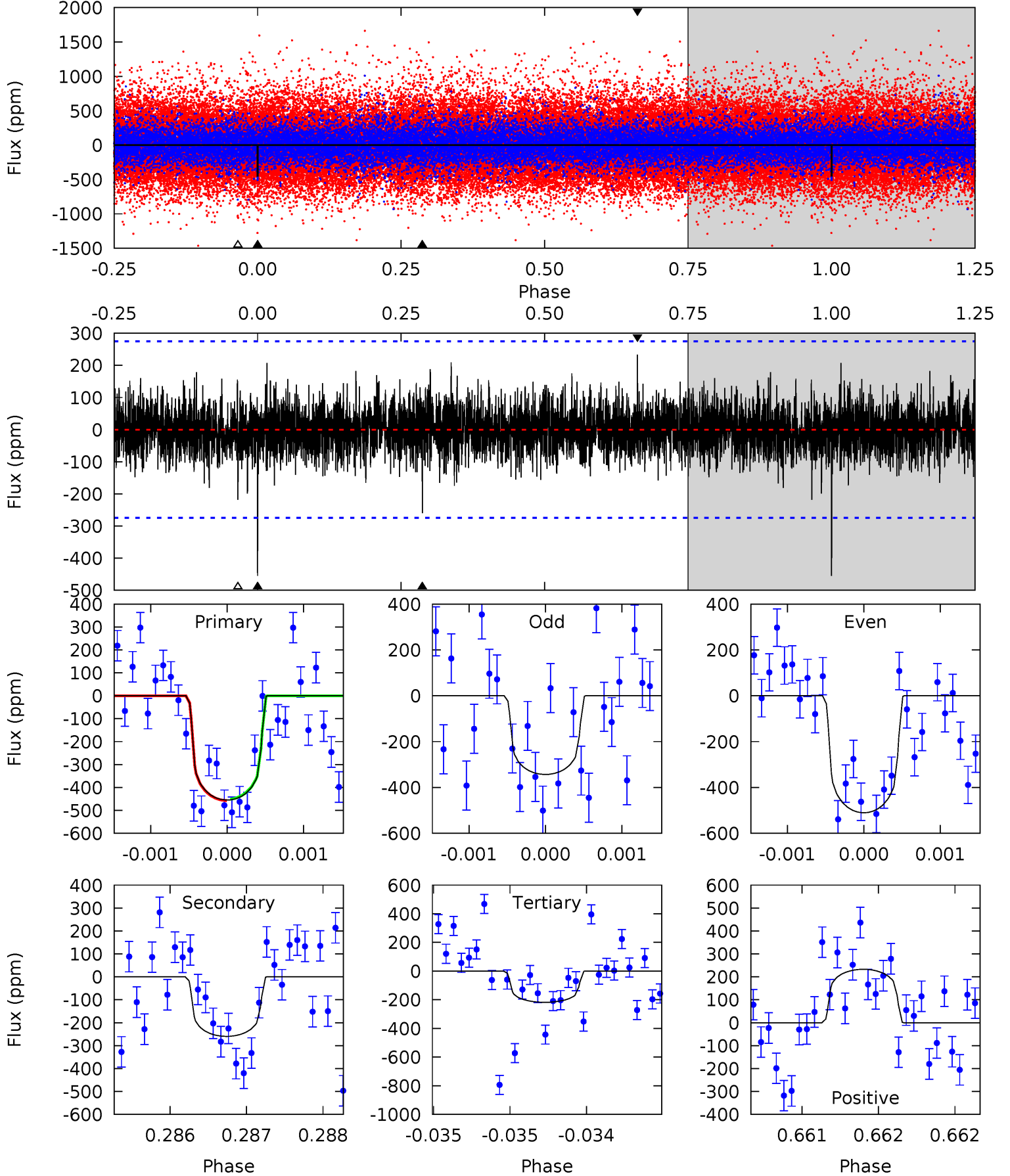
TCE 011146702-01 P=496.392473 Days $T_0=512.442126$ (BKJD)



DV Model-Shift Uniqueness Test

011146702-01, P = 496.435637 Days, E = 15.960922 Days

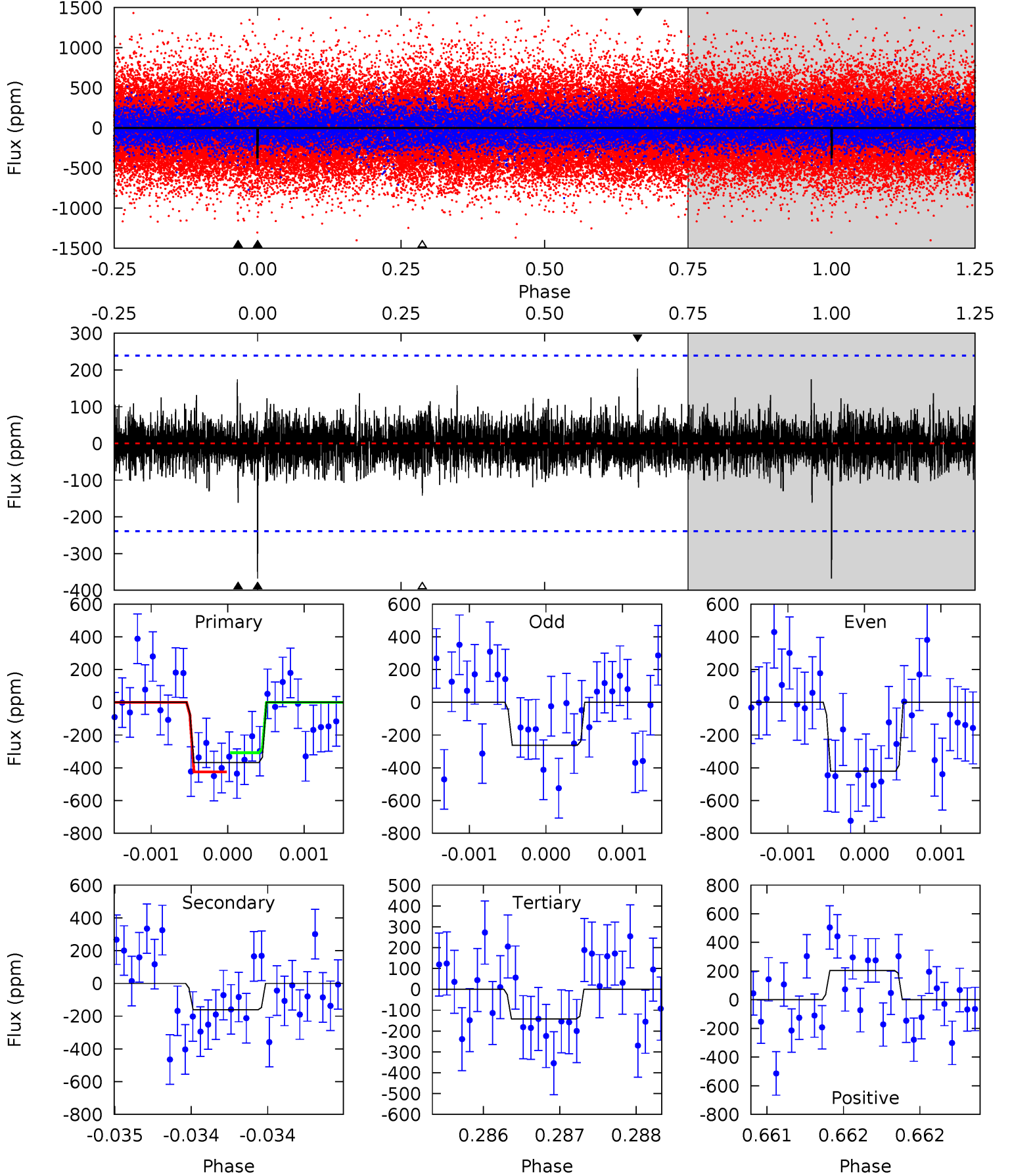
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.17	5.23	4.39	4.69	5.54	3.42	1.08	4.78	4.47	0.84	0.54	1.61	1.15	0.34	0.06



Alt Model-Shift Uniqueness Test

011146702-01, P = 496.392473 Days, E = 16.049653 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.45	3.71	3.26	4.67	5.49	3.36	0.85	5.20	3.78	0.45	-0.97	1.74	1.07	0.36	1.35



Stellar Parameters For KIC 011146702

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5988^{+188}_{-208}	$4.507^{+0.052}_{-0.221}$	$-0.120^{+0.300}_{-0.300}$	$0.934^{+0.294}_{-0.098}$	$1.021^{+0.132}_{-0.132}$	$1.767^{+0.392}_{-0.938}$
	+3%/-3%	+1%/-5%	+250%/-250%	+31%/-10%	+13%/-13%	+22%/-53%
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 011146702-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-260 ± 50	$2.65^{+1.94}_{-1.52}$	328^{+24}_{-16}	4901^{+2788}_{-902}	$30776^{+142872}_{-20595}$
Alt.	-161 ± 44	$2.42^{+1.75}_{-1.49}$	328^{+26}_{-16}	4650^{+2622}_{-920}	$22567^{+128222}_{-15369}$

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

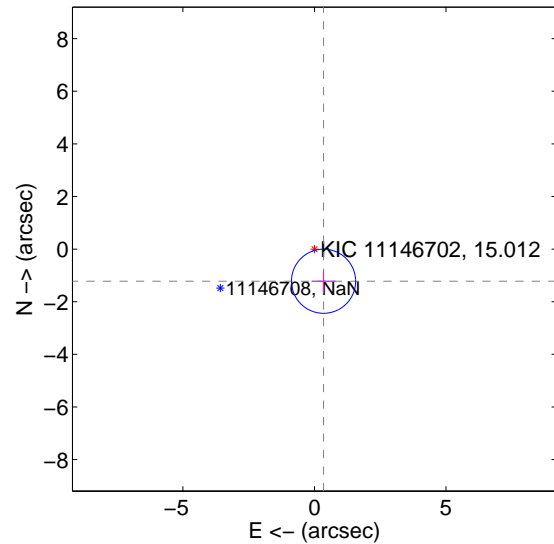
Supplemental centroid analysis for 011146702-01. Kepler magnitude: 15.01. Transit SNR 7.09

There are 1 quarters with good PRF difference image offsets

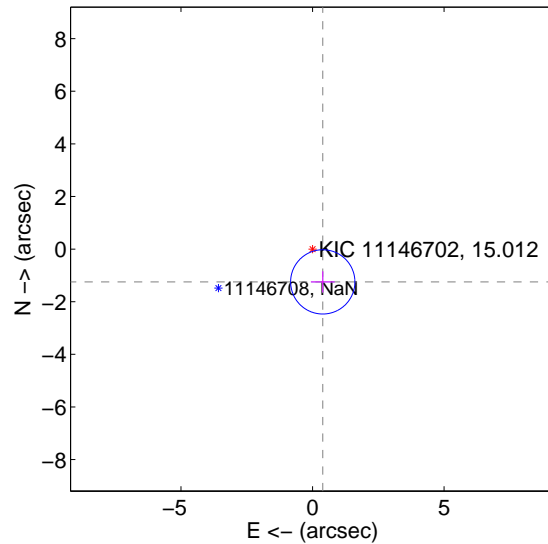
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.269 ± 0.406	3.12	-0.346 ± 0.452	-1.221 ± 0.403
PRF-fit source offset from KIC position	1.306 ± 0.407	3.21	-0.389 ± 0.452	-1.246 ± 0.403
photometric centroid source offset	2.74 ± 1.64	1.67	2.74 ± 1.64	-0.12 ± 1.80

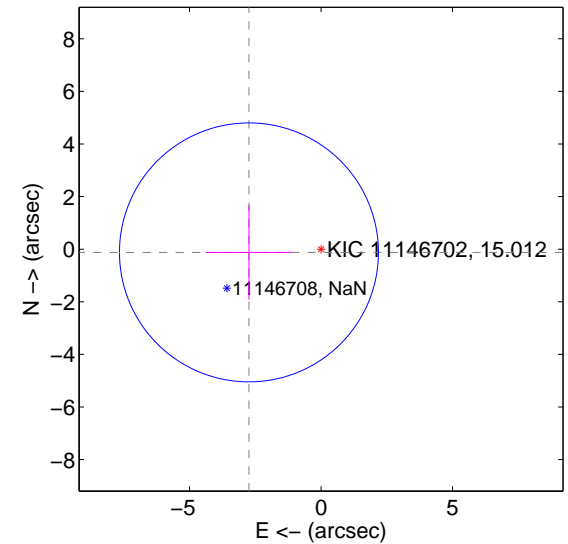
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

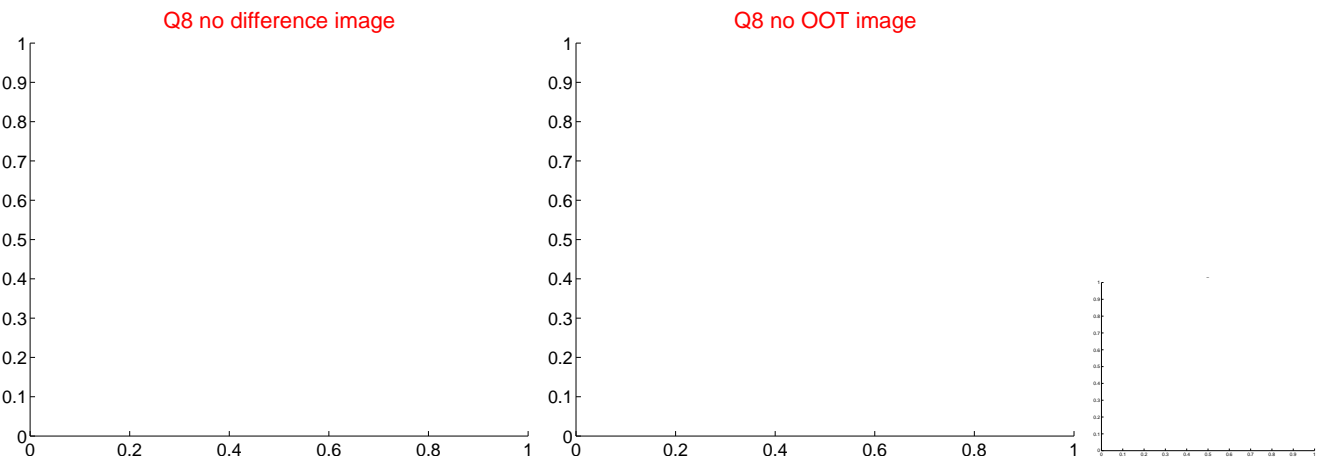
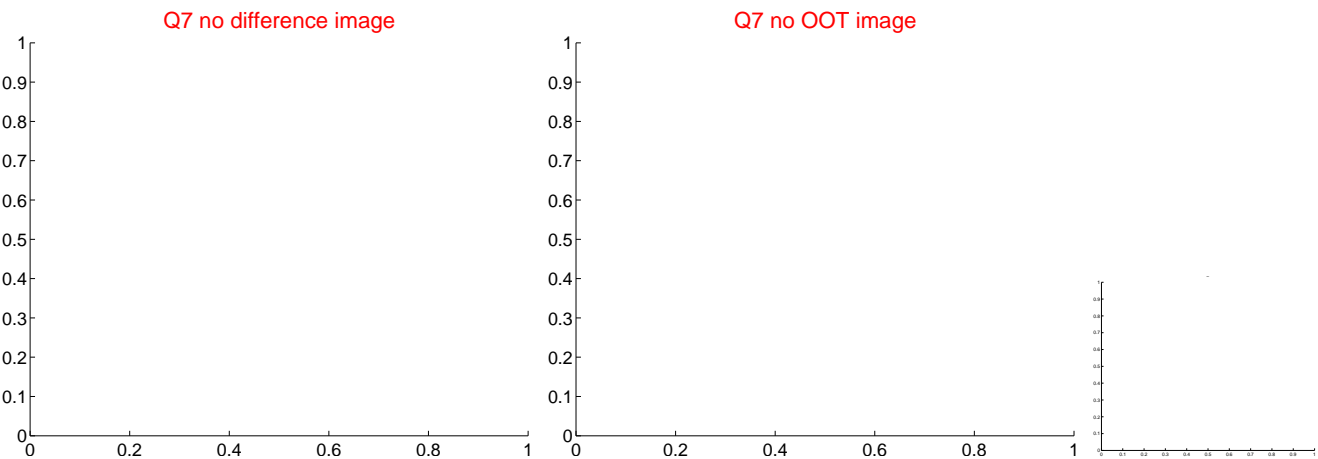
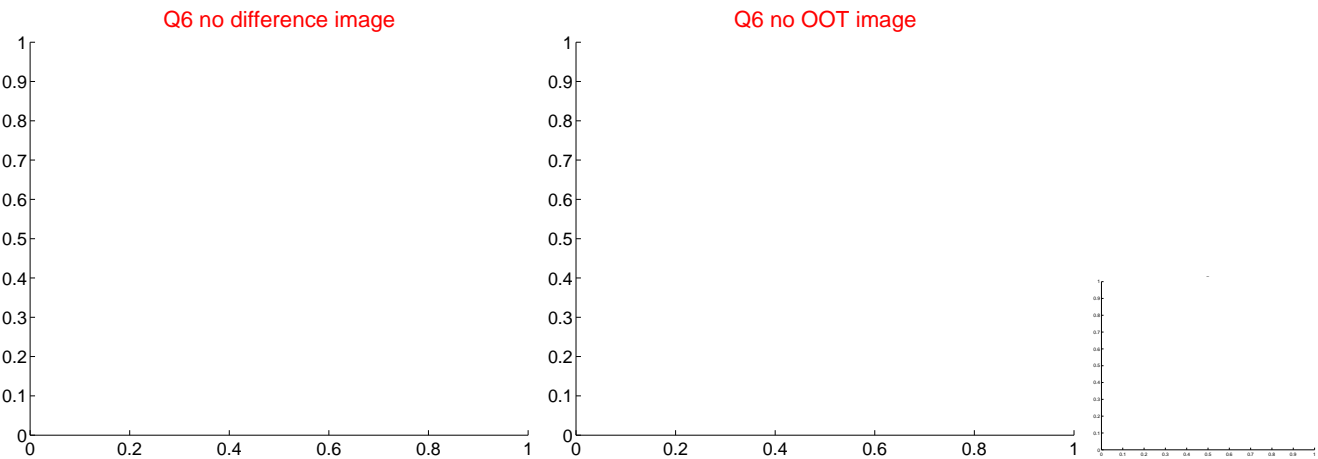
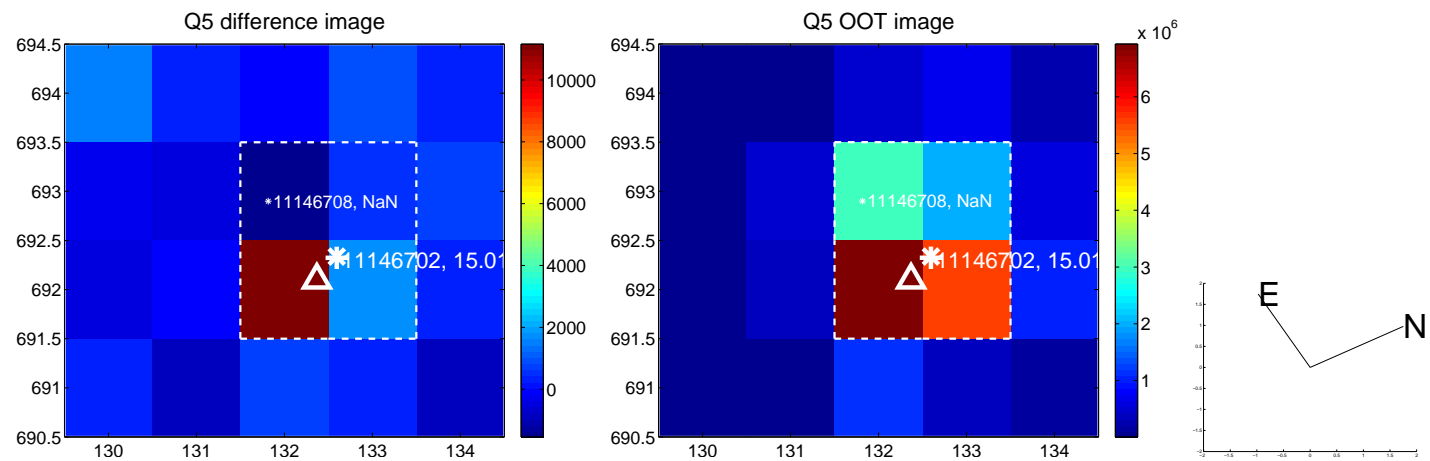


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



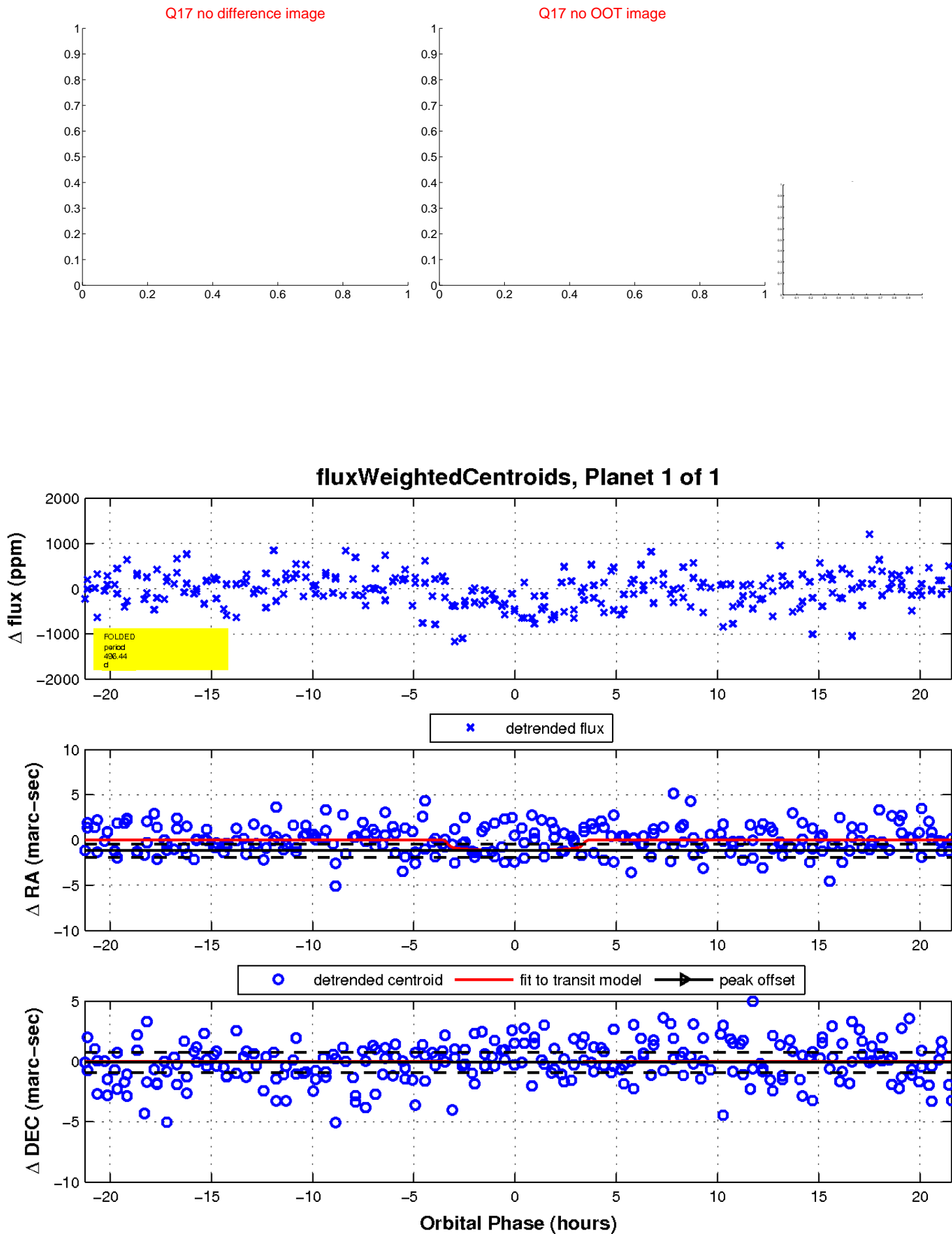
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

