

KIC 003116601

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})
003116601-01	OBS	No	491.260053	343.631110	537.4	4.644	7.4	7.3	0.86	4971	2.28	0.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003116601-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—MOD_NONUNIQ_ALT—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.

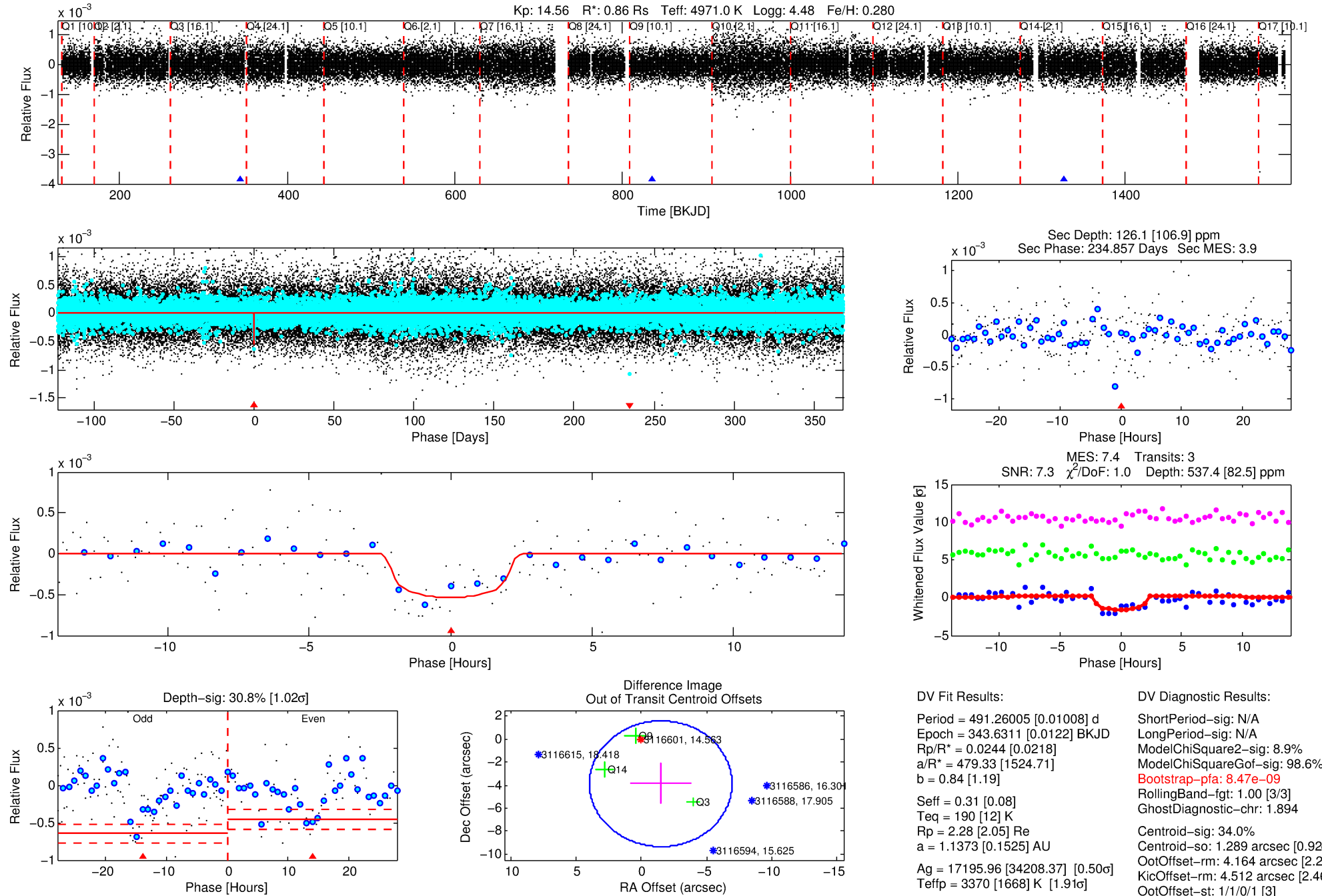
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003116601-01

No Significant Match Found

DV One-Page Summary

KIC: 3116601 Candidate: 1 of 1 Period: 491.260 d



DV Fit Results:

Period = 491.26005 [0.01008] d
 Epoch = 343.6311 [0.0122] BKJD
 Rp/R* = 0.0244 [0.0218]
 a/R* = 479.33 [1524.71]
 b = 0.84 [1.19]
 Seff = 0.31 [0.08]
 Teq = 190 [12] K
 Rp = 2.28 [2.05] Re
 a = 1.1373 [0.1525] AU
 Ag = 17195.96 [34208.37] [0.50] σ
 Tefp = 3370 [1668] K [1.91] σ

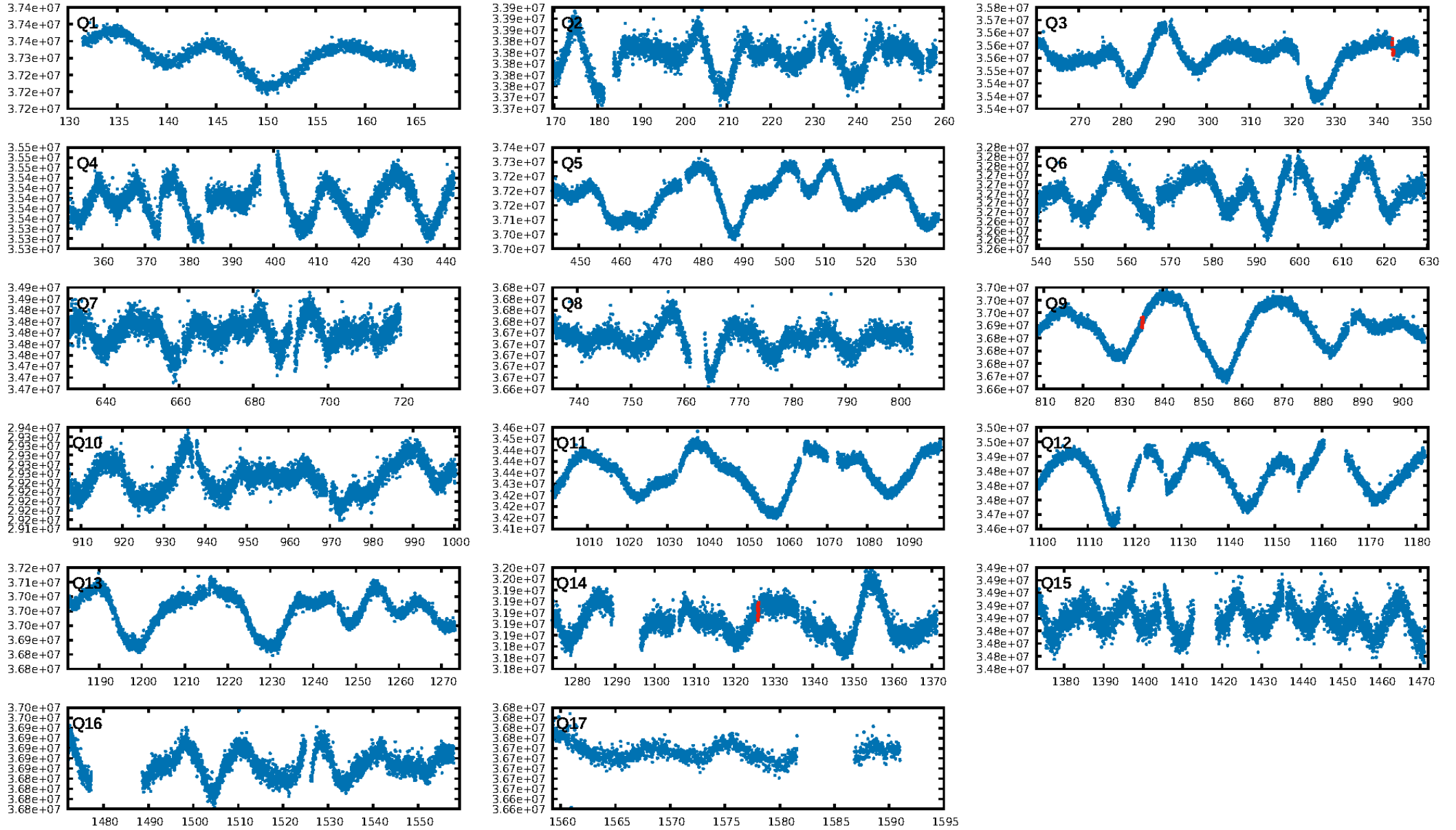
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: 8.9%
 ModelChiSquareGof-sig: 98.6%
Bootstrap-pfa: 8.47e-09
 RollingBand-fgt: 1.00 [3/3]
 GhostDiagnostic-chr: 1.894
 Centroid-sig: 34.0%
 Centroid-so: 1.289 arcsec [0.92] σ
 OotOffset-rm: 4.164 arcsec [2.29] σ
 KicOffset-rm: 4.512 arcsec [2.46] σ
 OotOffset-st: 1/1/0/1 [3]
 KicOffset-st: 1/1/0/1 [3]
 DiffImageQuality-fgm: 0.33 [1/3]
 DiffImageOverlap-fno: 1.00 [3/3]

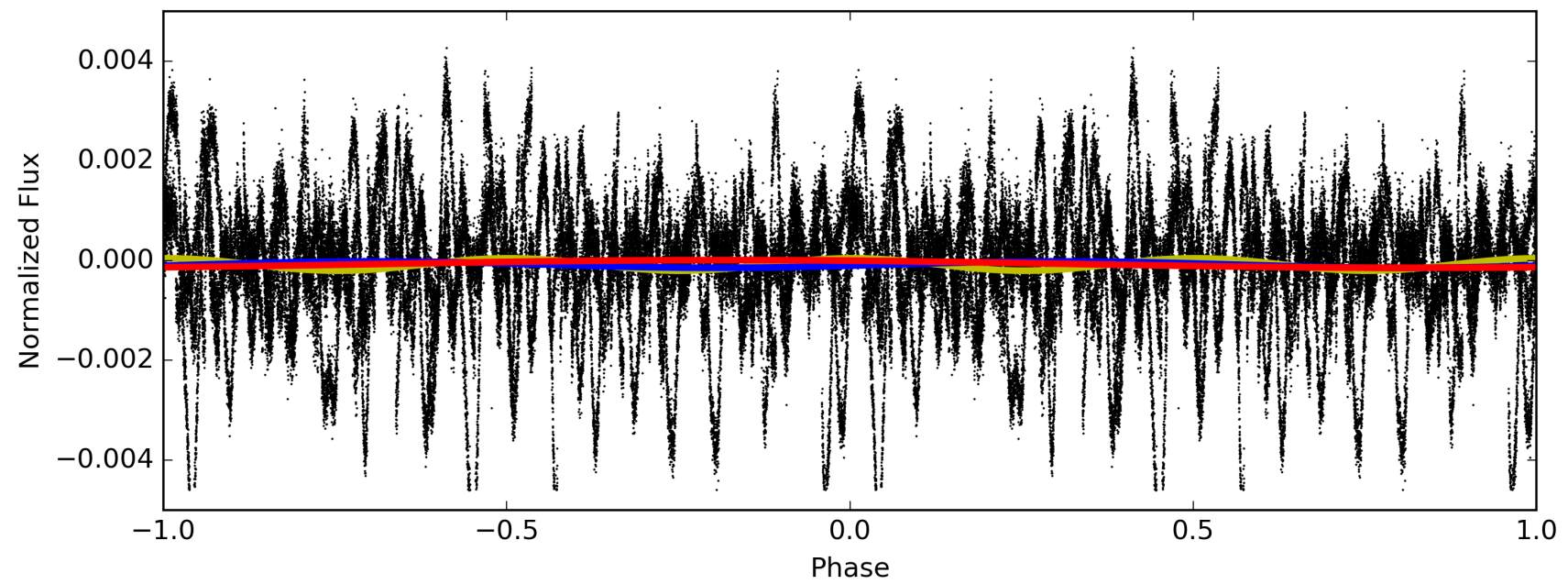
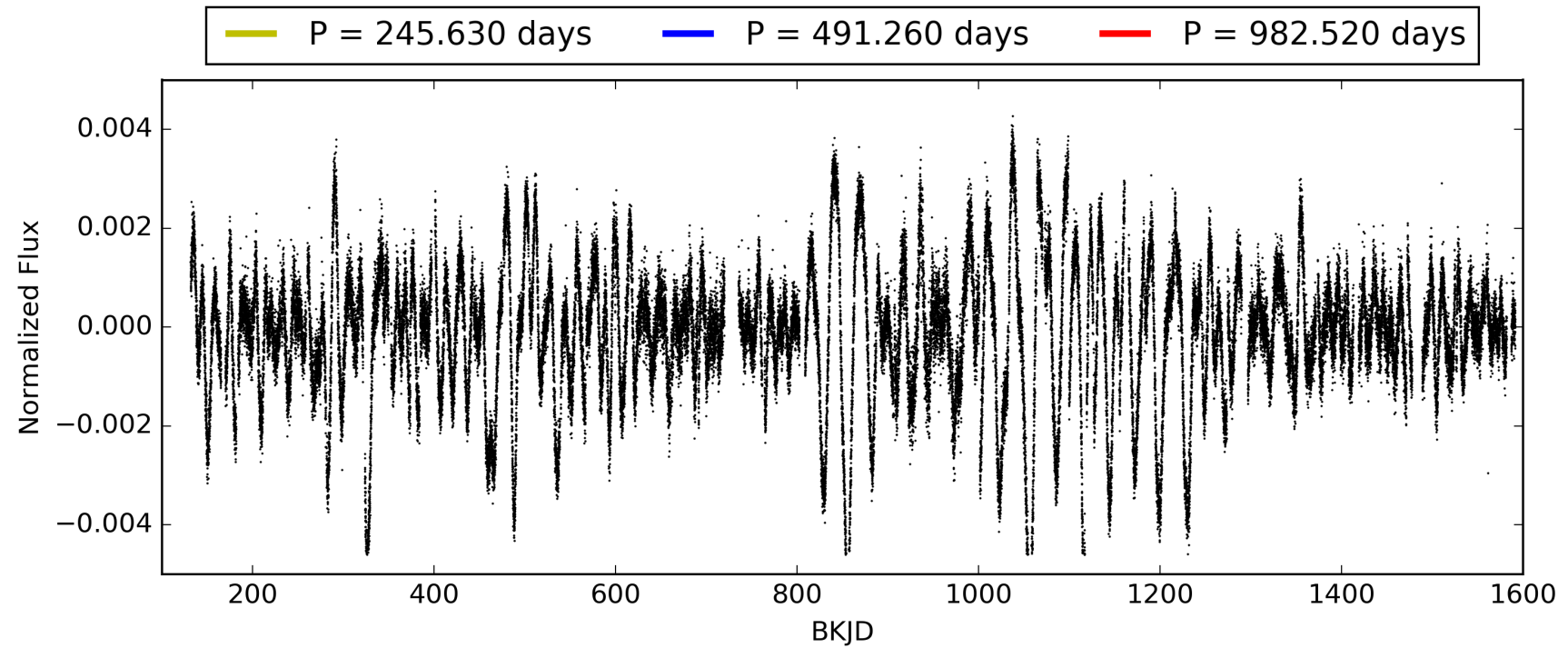
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:45:39 Z

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

TCE 003116601-01, PDC Light Curves

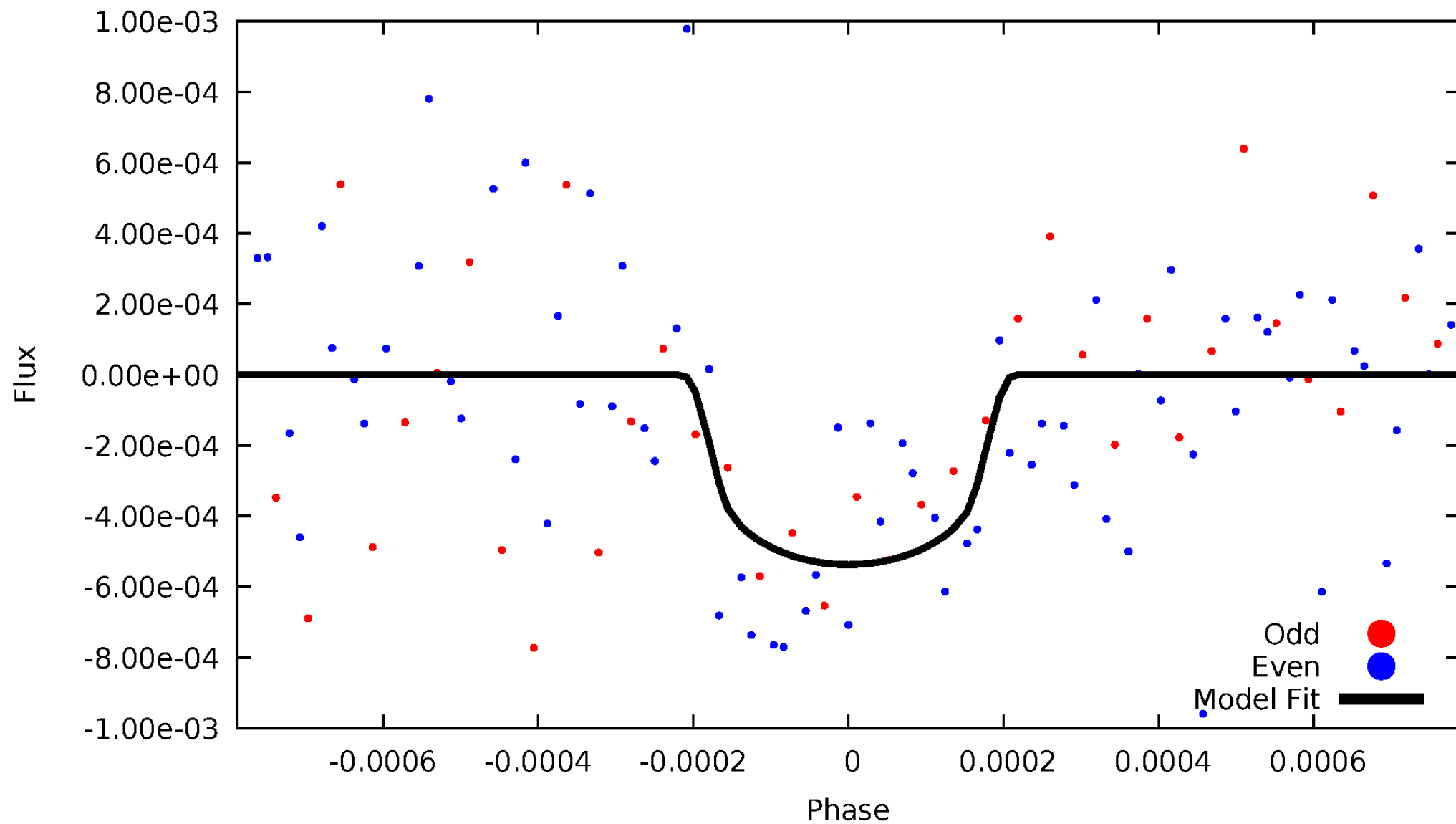


TCE 003116601-01



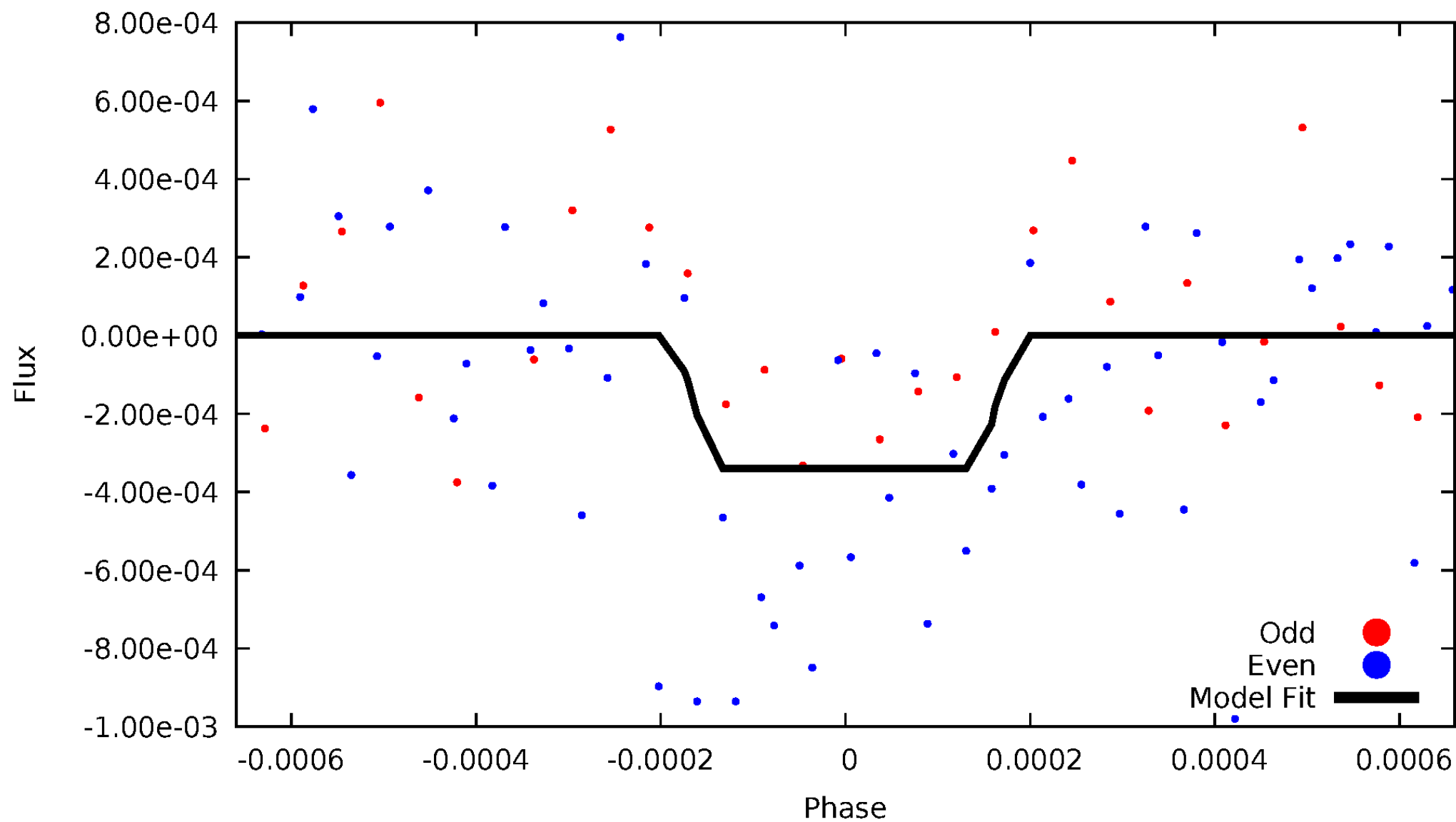
DV Odd/Even

TCE 003116601-01



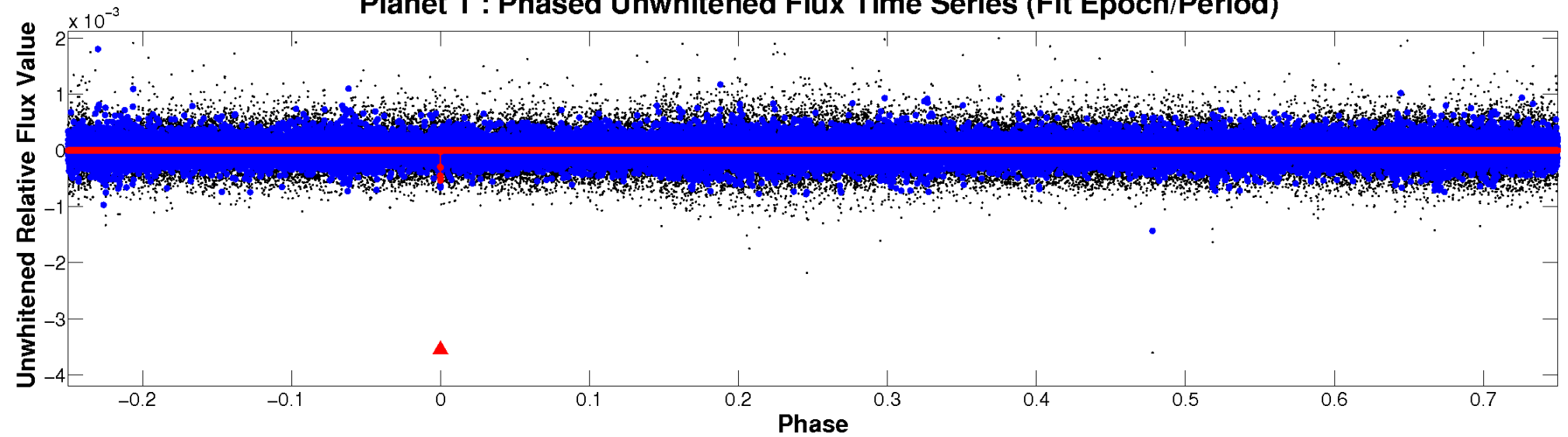
ALT Odd/Even

TCE 003116601-01

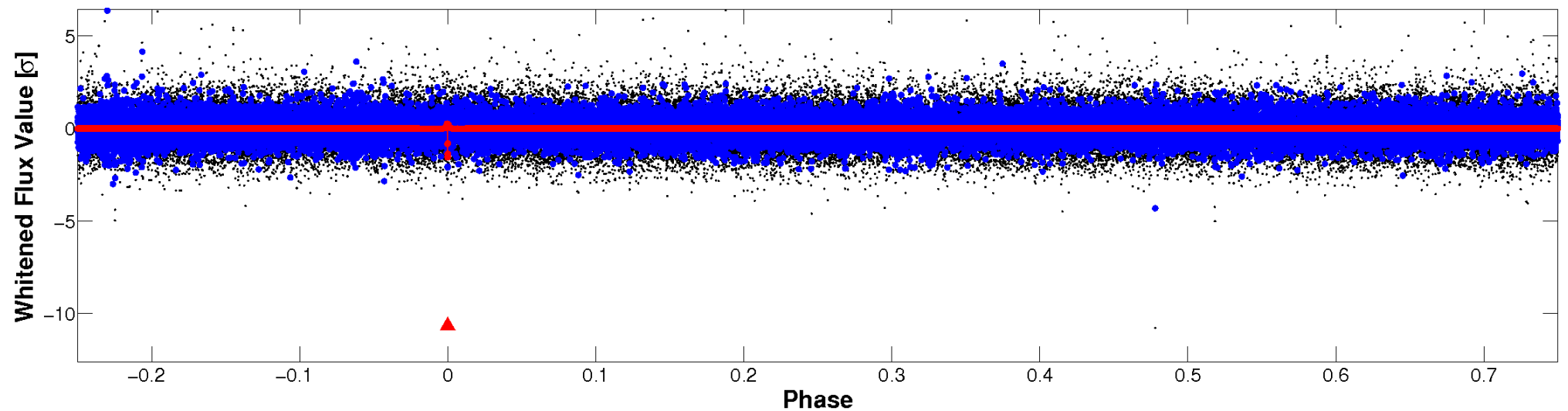


Non-Whitened Vs. Whitened Light Curve

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

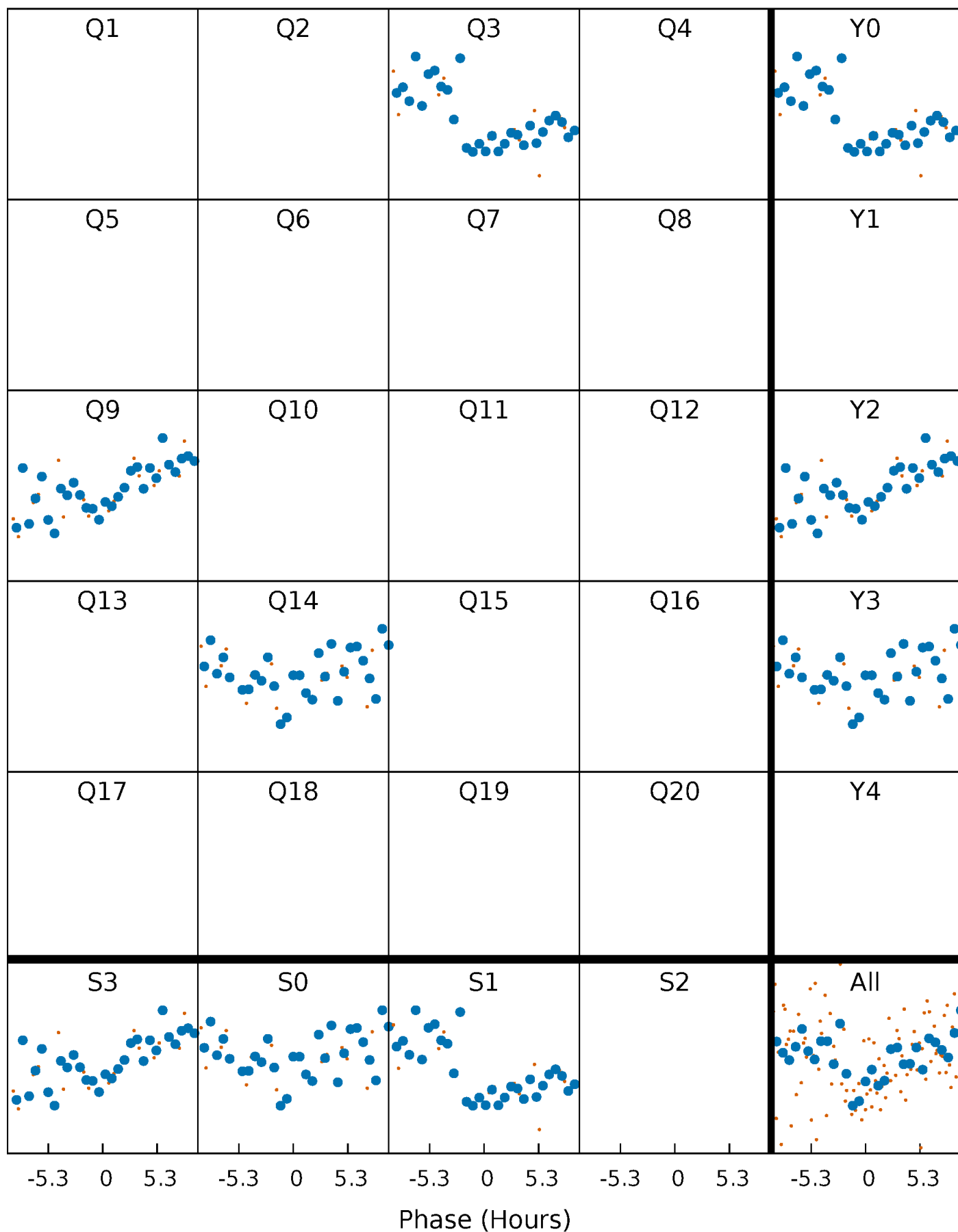


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



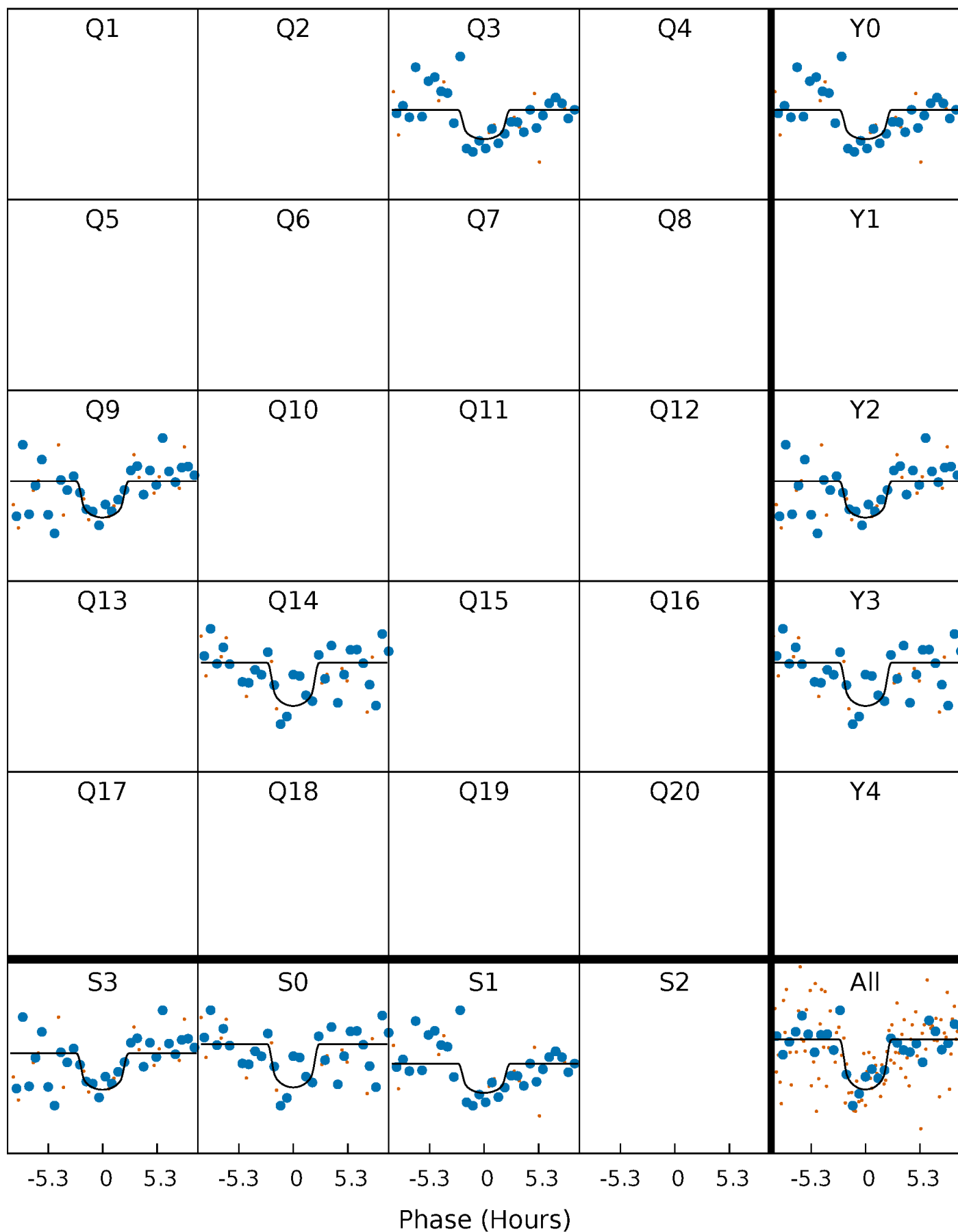
PDC Quarter-Phased Transit Curves

TCE 003116601-01 P=491.260053 Days $T_0=343.631110$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003116601-01 P=491.260053 Days $T_0=343.631110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

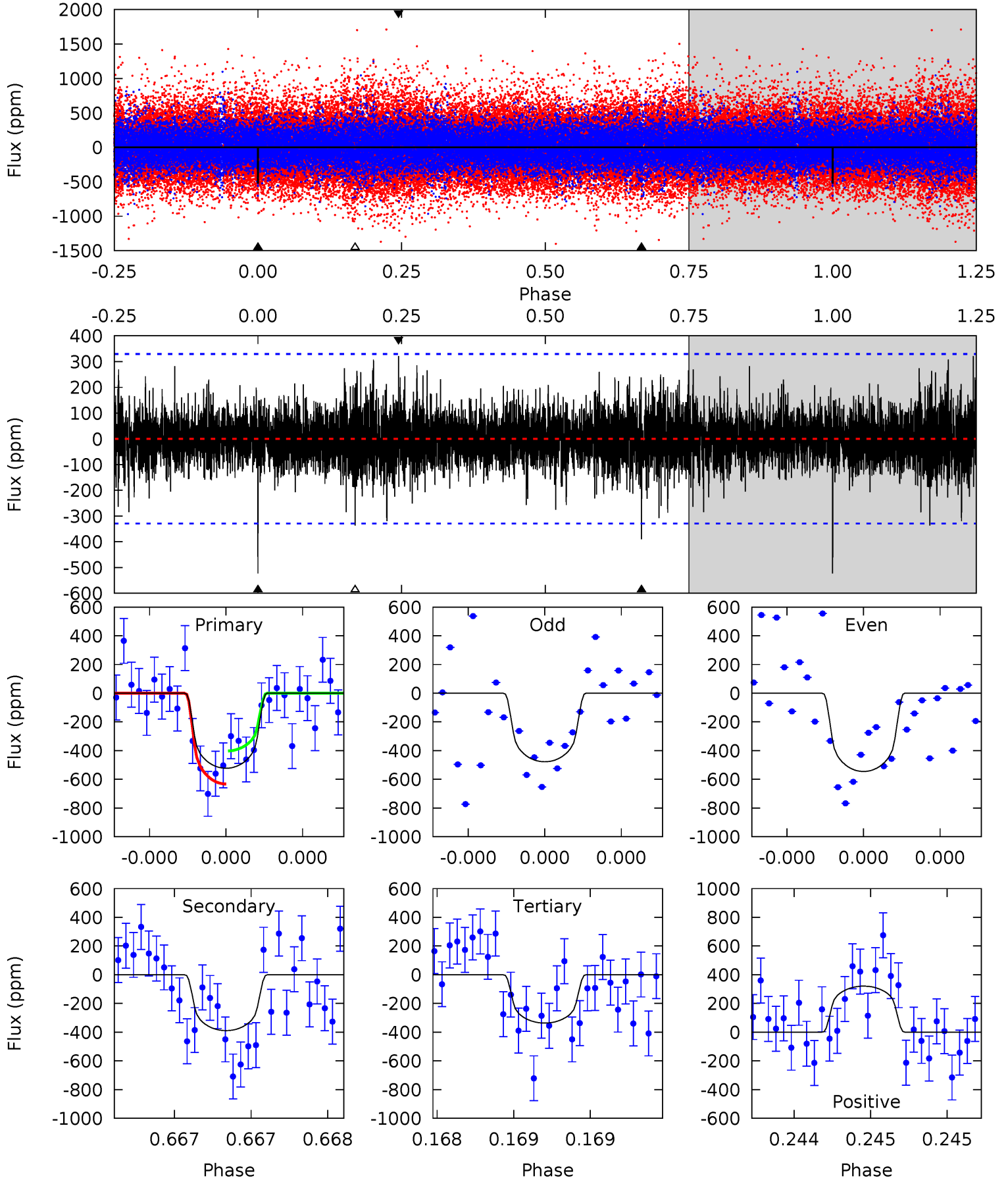
TCE 003116601-01 P=491.250027 Days $T_0=343.648608$ (BKJD)



DV Model-Shift Uniqueness Test

003116601-01, P = 491.260053 Days, E = 343.631110 Days

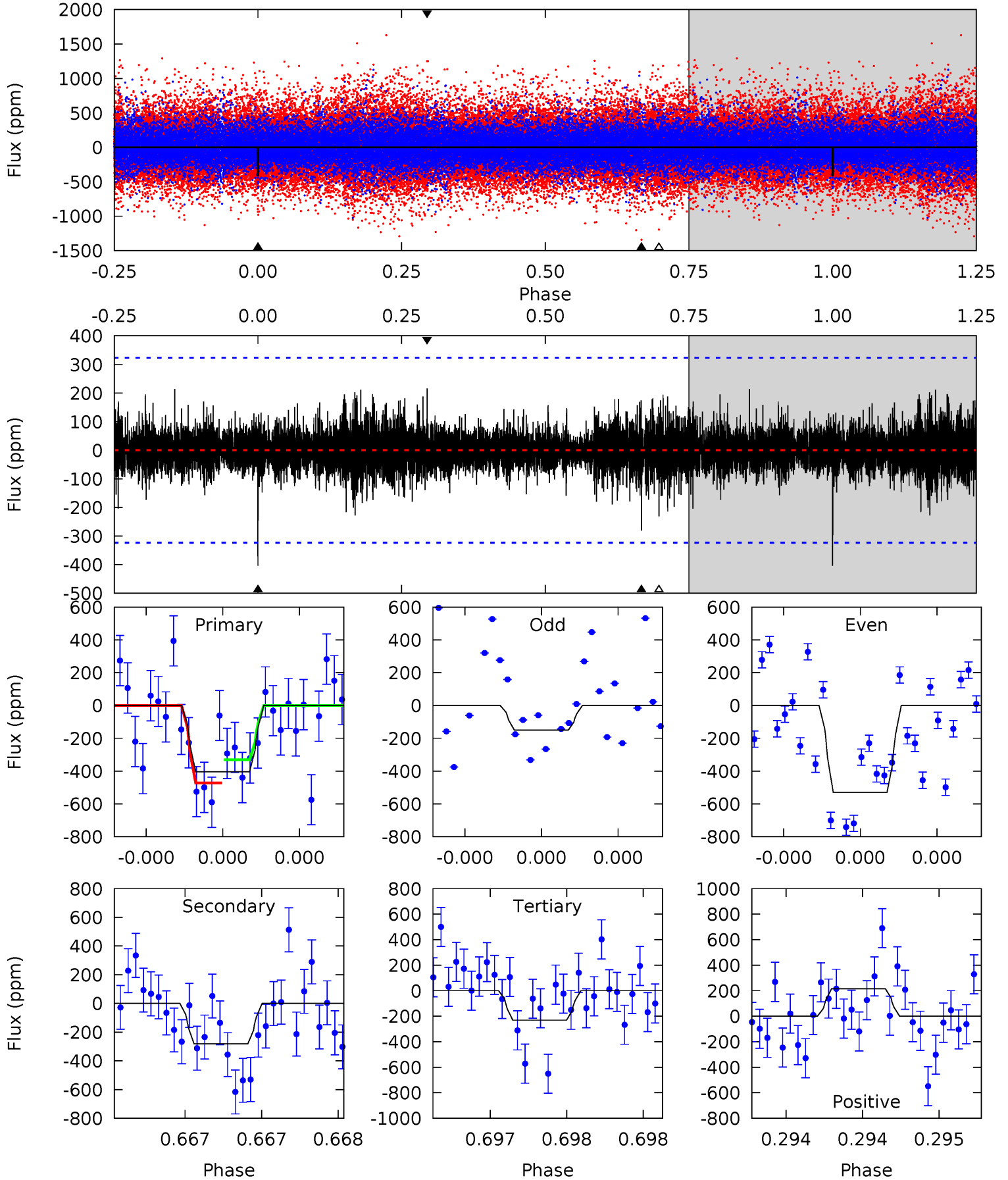
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.92	6.63	5.74	5.47	5.61	3.54	1.26	3.18	3.45	0.90	1.17	0.52	1.09	0.38	1.96



Alt Model-Shift Uniqueness Test

003116601-01, P = 491.250027 Days, E = 343.648608 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.03	4.88	4.02	3.75	5.62	3.56	0.87	3.00	3.28	0.85	1.13	3.05	1.23	0.35	1.23



Stellar Parameters For KIC 003116601

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4971^{+149}_{-134}	$4.482^{+0.099}_{-0.143}$	$0.280^{+0.150}_{-0.300}$	$0.857^{+0.099}_{-0.099}$	$0.813^{+0.068}_{-0.055}$	$1.818^{+0.753}_{-0.577}$
	+3%/-3%	+2%/-3%	+54%/-107%	+12%/-12%	+8%/-7%	+41%/-32%
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 003116601-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-389 ± 59	$2.64^{+2.01}_{-1.49}$	267^{+13}_{-13}	4345^{+1961}_{-789}	$40976^{+167549}_{-28378}$
Alt.	-280 ± 57	$2.32^{+1.84}_{-1.47}$	268^{+12}_{-12}	4254^{+2362}_{-769}	$36148^{+235717}_{-24769}$

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 $A_{obs} \gg 1.0$

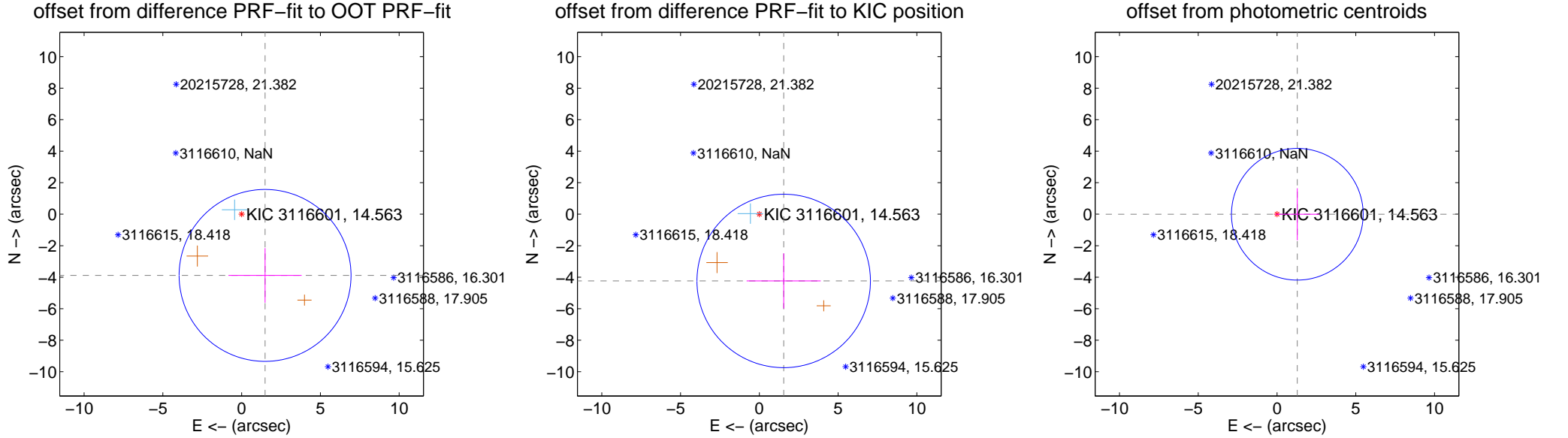
DV Centroid Data

Supplemental centroid analysis for 003116601-01. Kepler magnitude: 14.56. Transit SNR 7.31

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

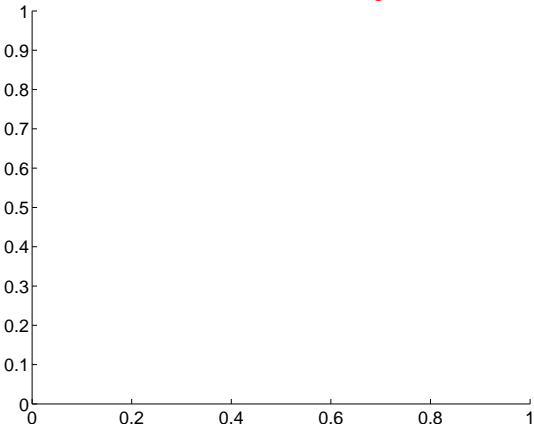
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.164 ± 1.819	2.29	-1.489 ± 2.325	-3.888 ± 1.733
PRF-fit source offset from KIC position	4.512 ± 1.836	2.46	-1.548 ± 2.352	-4.239 ± 1.756
photometric centroid source offset	1.29 ± 1.39	0.92	-1.29 ± 1.39	-0.00 ± 1.65



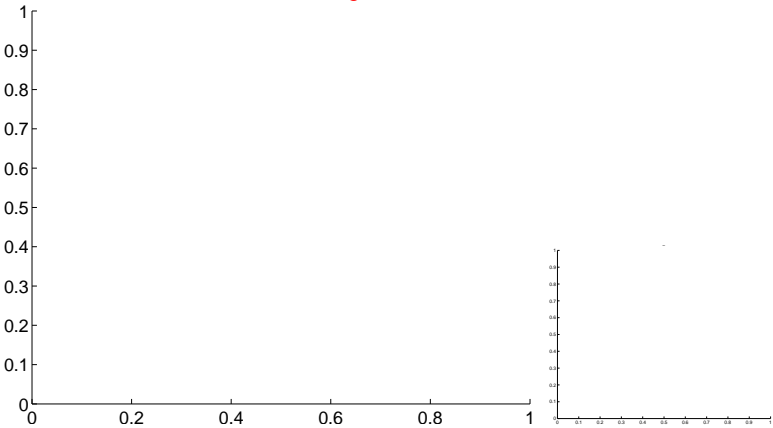
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

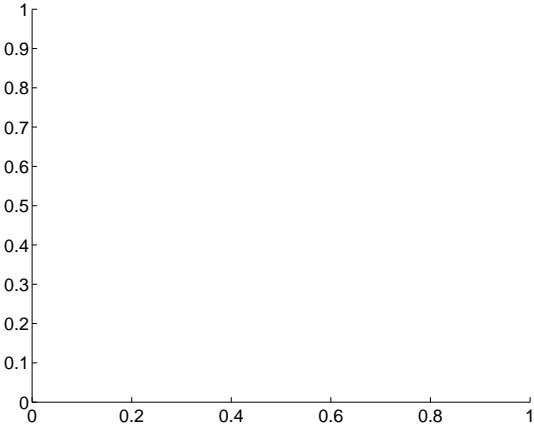
Q1 no difference image



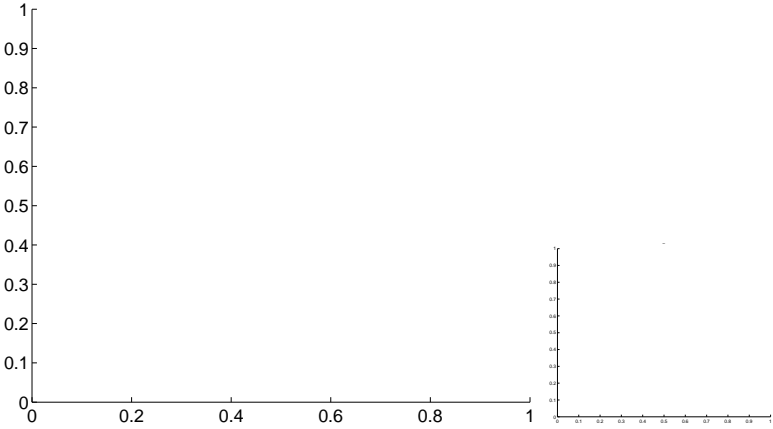
Q1 no OOT image



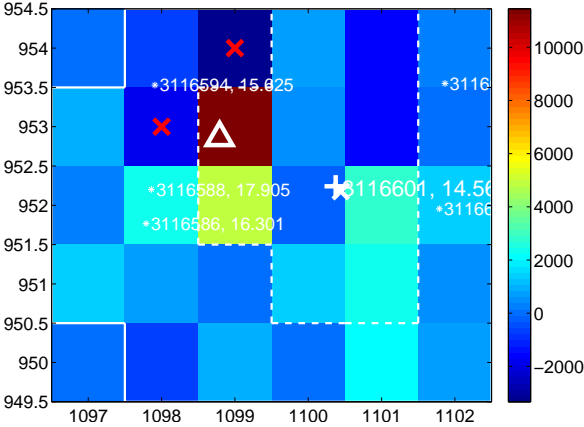
Q2 no difference image



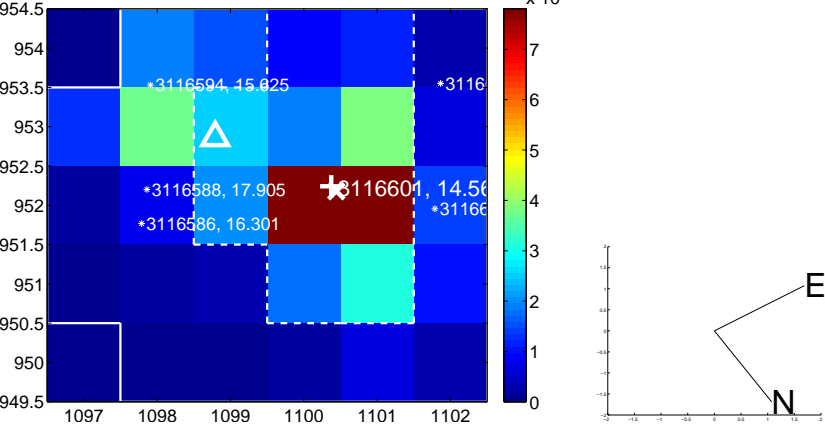
Q2 no OOT image



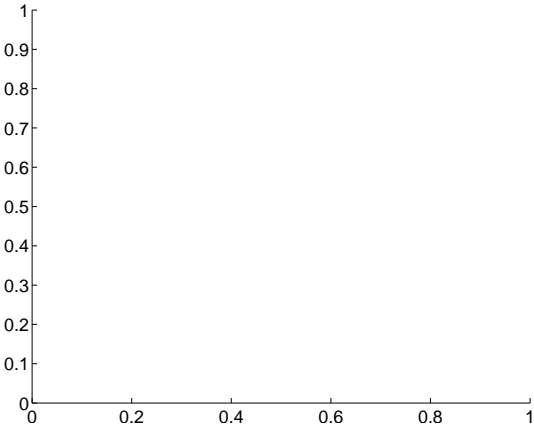
Q3 difference image. Poor Quality



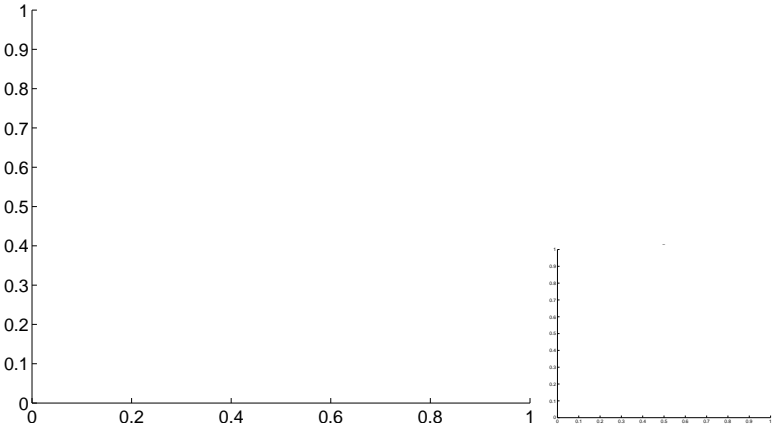
Q3 OOT image



Q4 no difference image



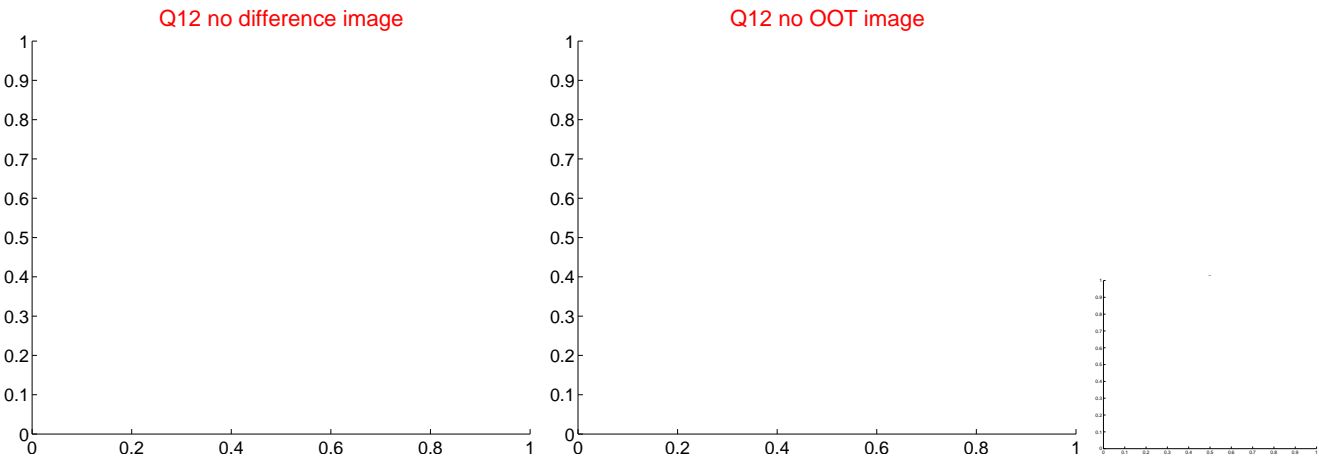
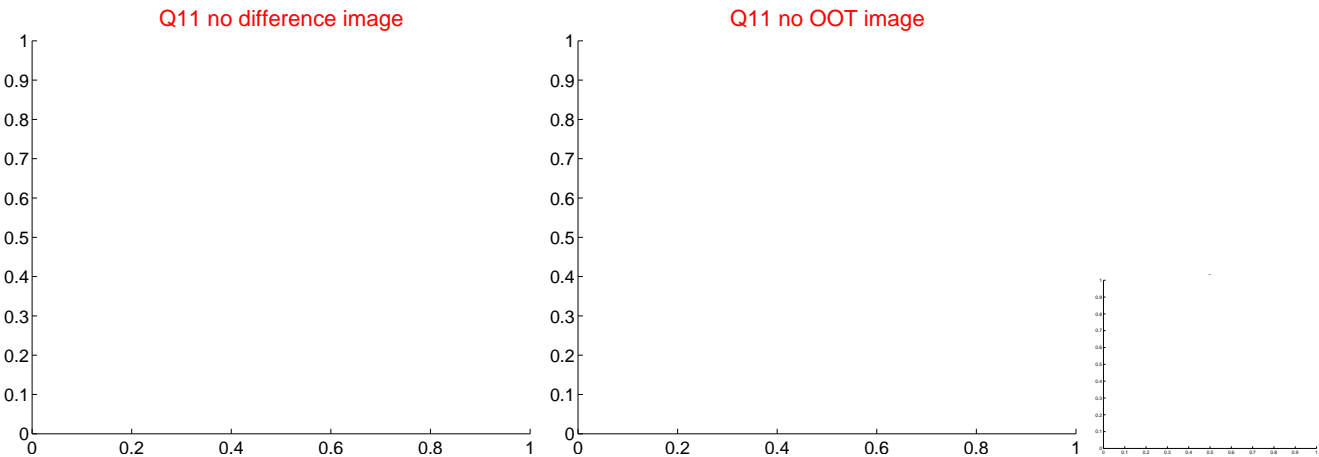
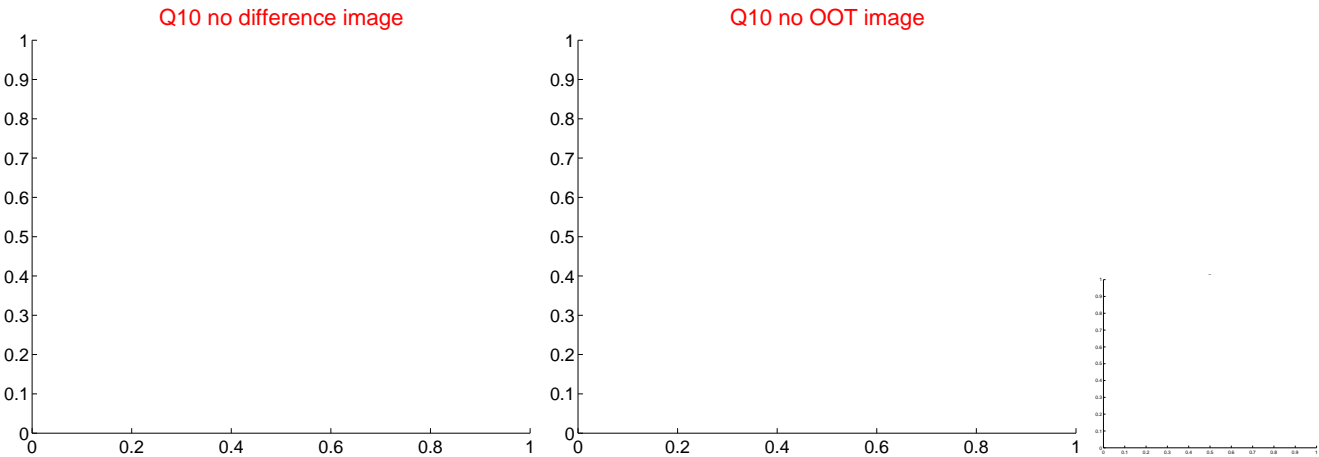
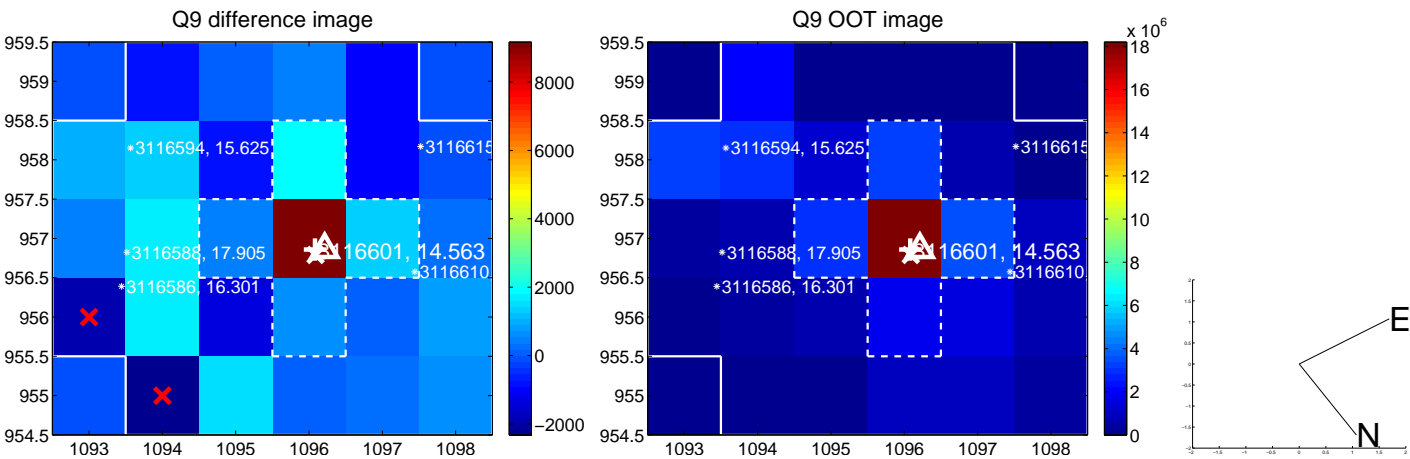
Q4 no OOT image



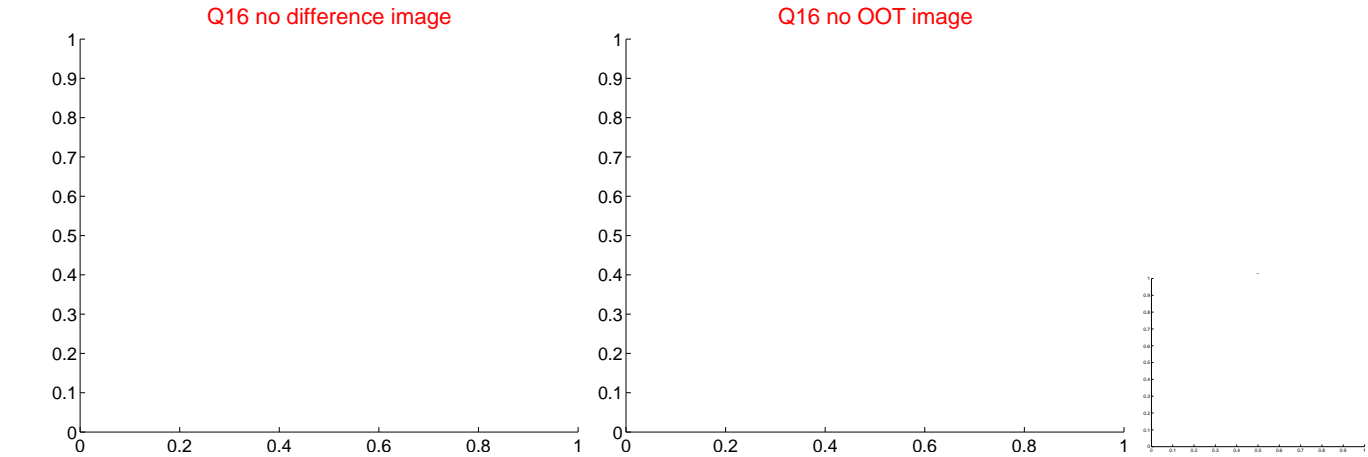
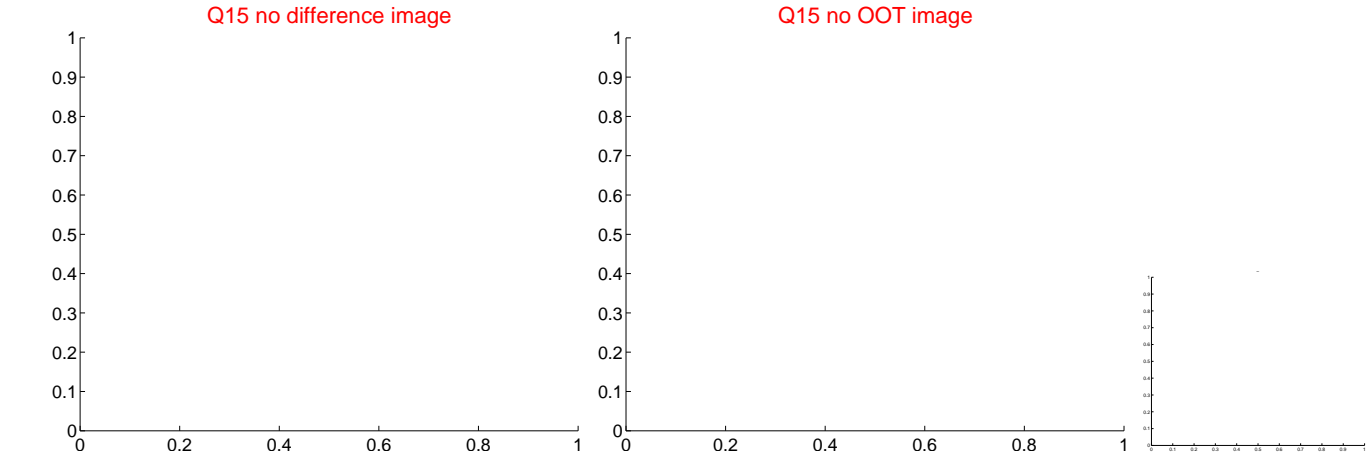
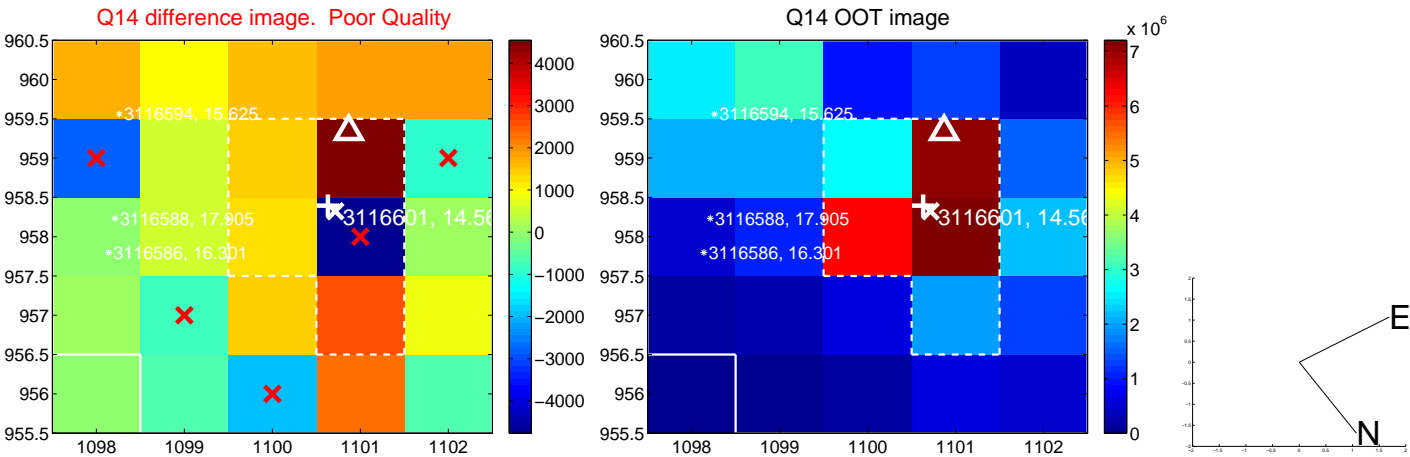
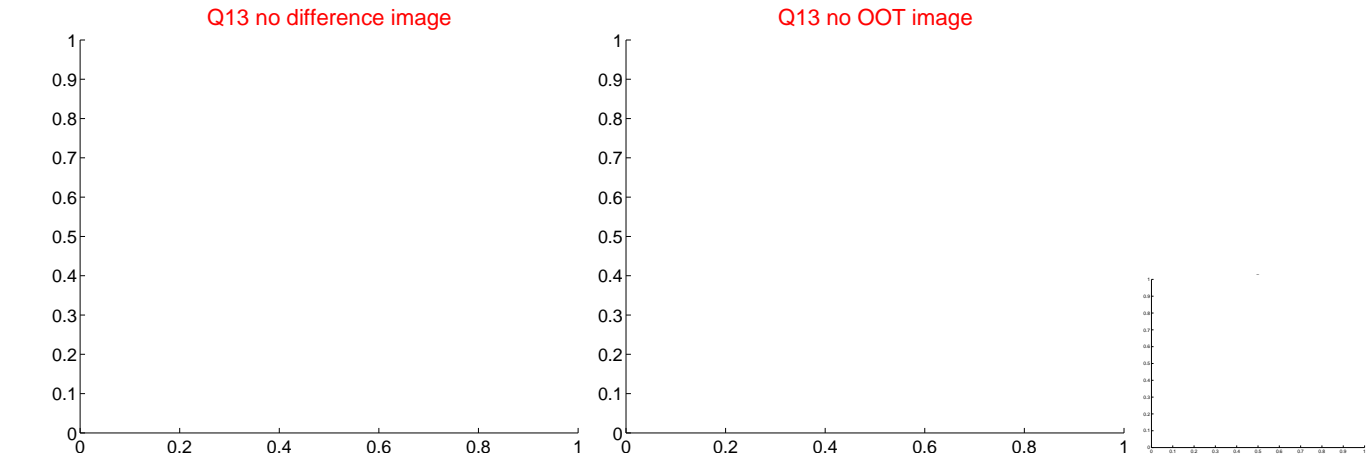
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



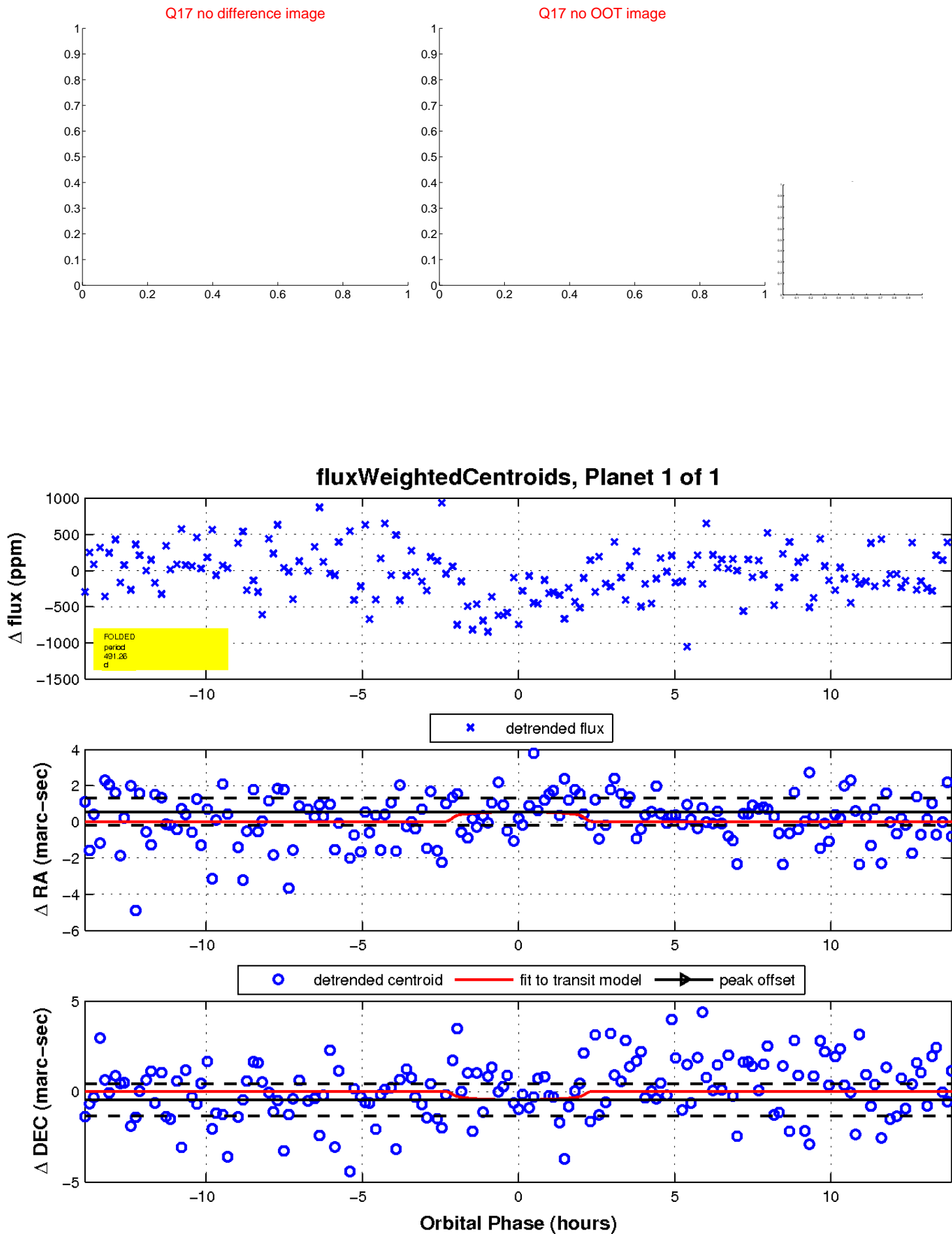
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

