

KIC 011969772

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})
011969772-01	OBS	No	403.551335	432.418521	799.2	5.965	11.5	7.4	0.65	5155	2.26	0.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011969772-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—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.

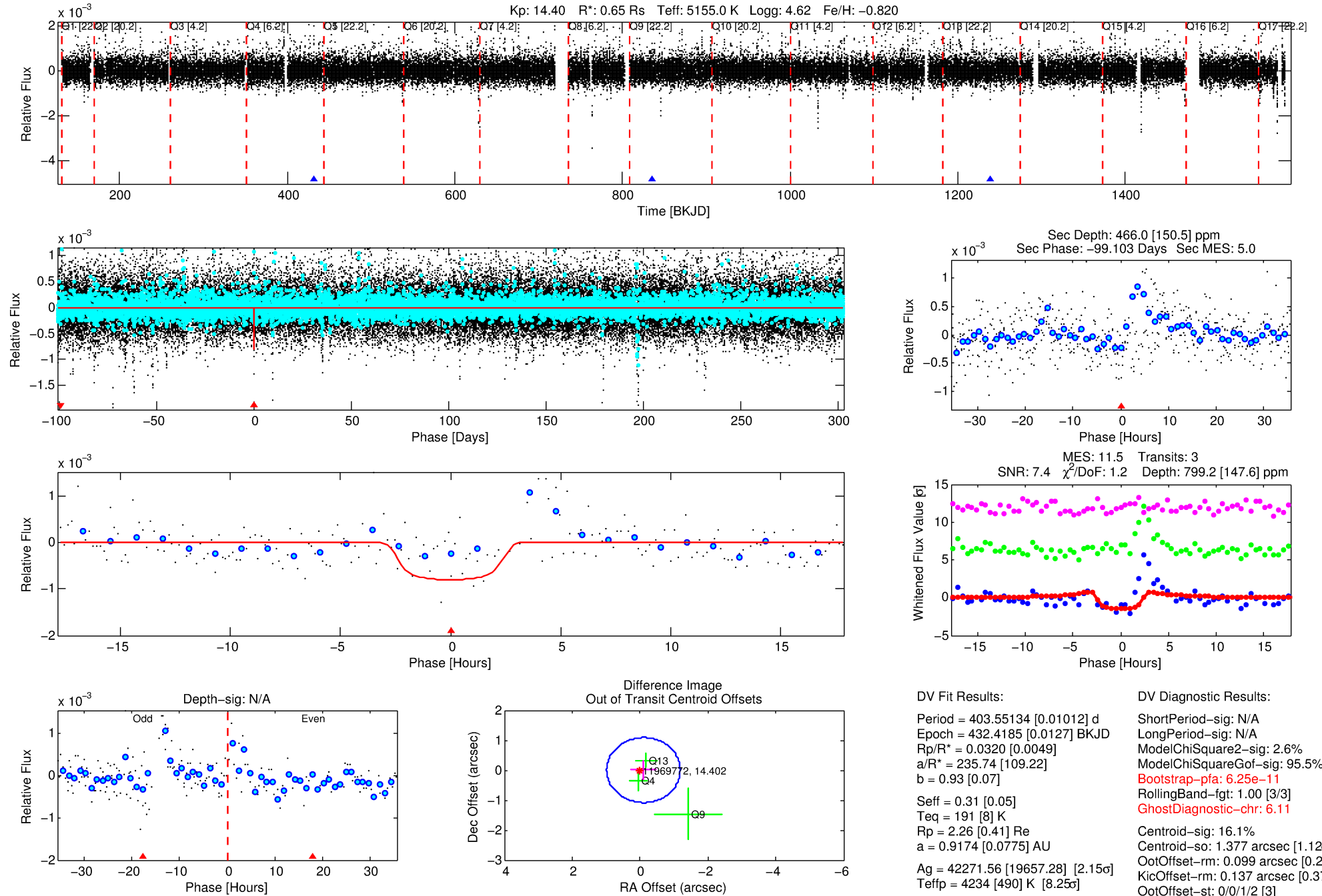
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011969772-01

No Significant Match Found

DV One-Page Summary

KIC: 11969772 Candidate: 1 of 1 Period: 403.551 d



DV Fit Results:

Period = 403.55134 [0.01012] d
Epoch = 432.4185 [0.0127] BKJD
Rp/R* = 0.0320 [0.0049]
a/R* = 235.74 [109.22]
b = 0.93 [0.07]
Seff = 0.31 [0.05]
Teq = 191 [8] K
Rp = 2.26 [0.41] Re
a = 0.9174 [0.0775] AU
Ag = 42271.56 [19657.28] [2.15σ]
Teffp = 4234 [490] K [8.25σ]

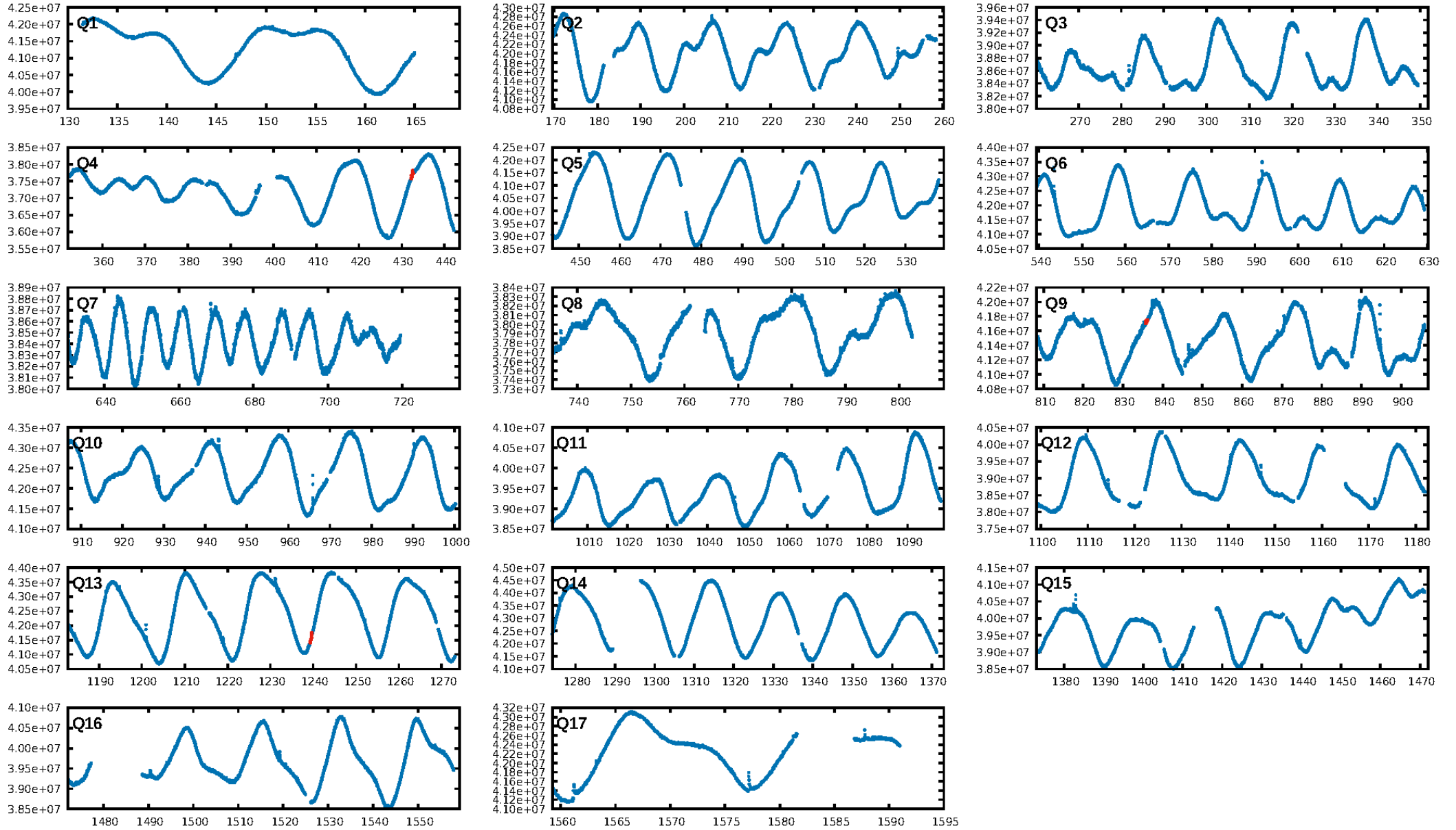
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.6%
ModelChiSquareGof-sig: 95.5%
Bootstrap-pfa: 6.25e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 6.11
Centroid-sig: 16.1%
Centroid-so: 1.377 arcsec [1.12σ]
OotOffset-rm: 0.099 arcsec [0.27σ]
KicOffset-rm: 0.137 arcsec [0.37σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

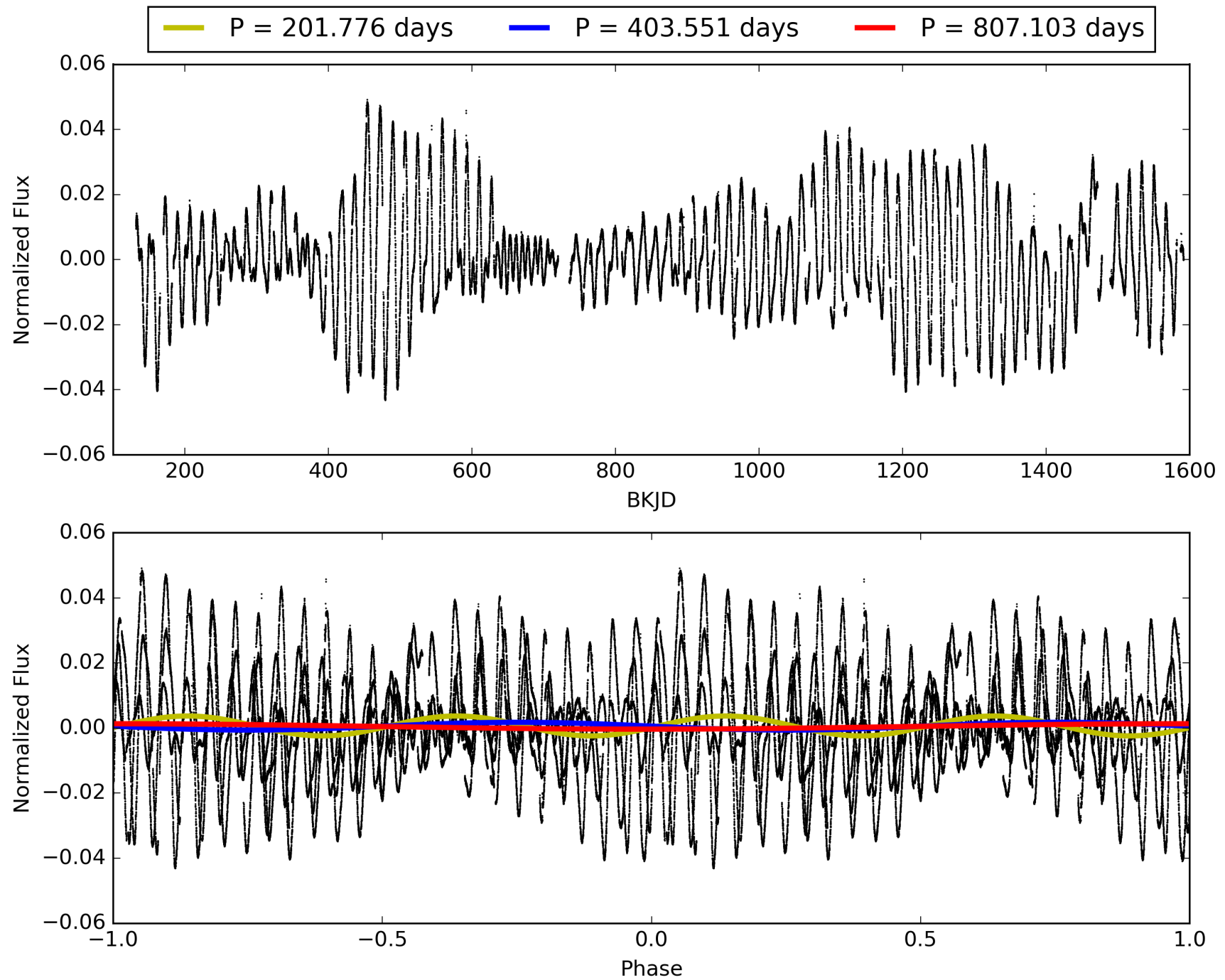
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:39:21 Z

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

TCE 011969772-01, PDC Light Curves

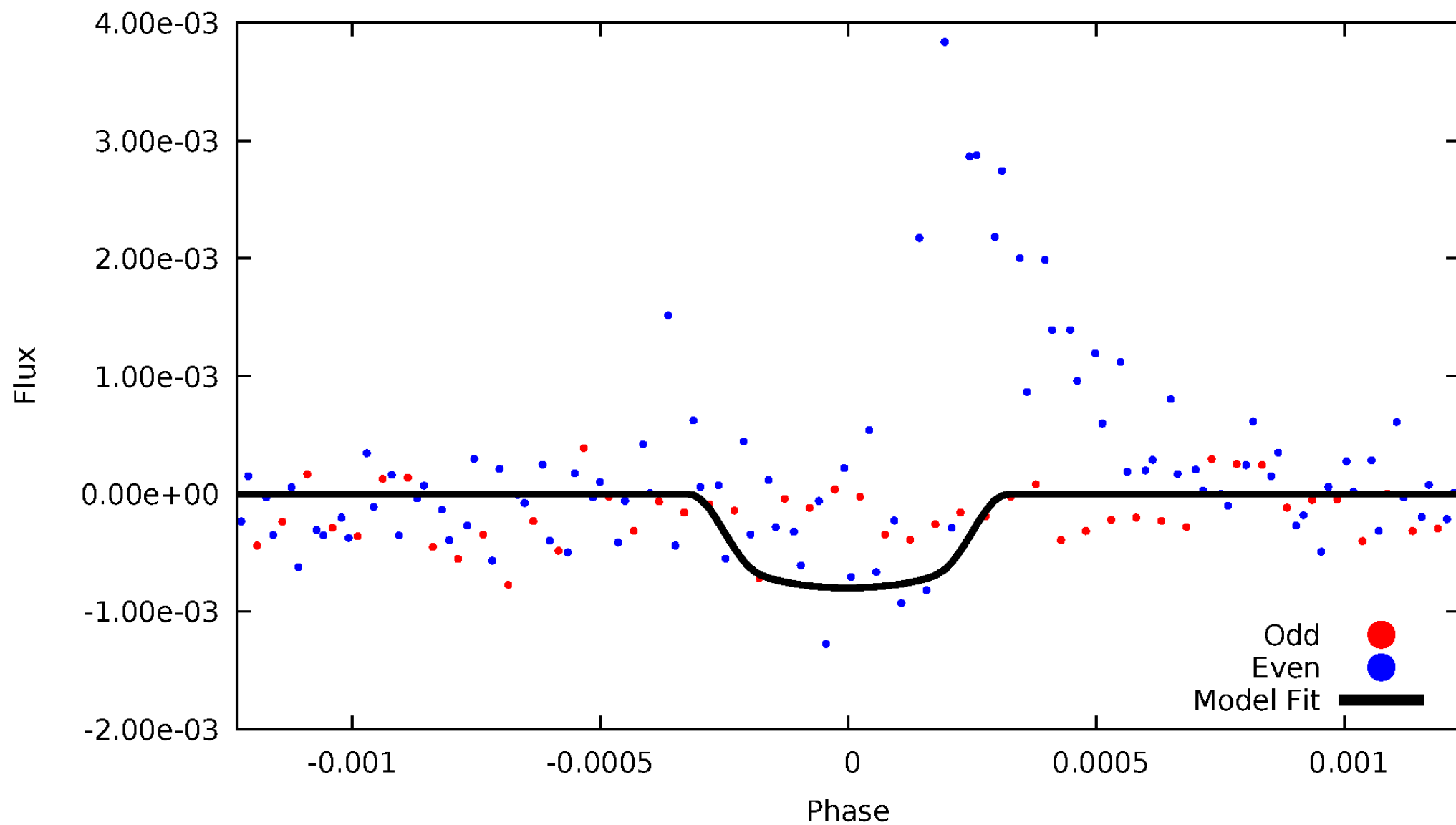


TCE 011969772-01



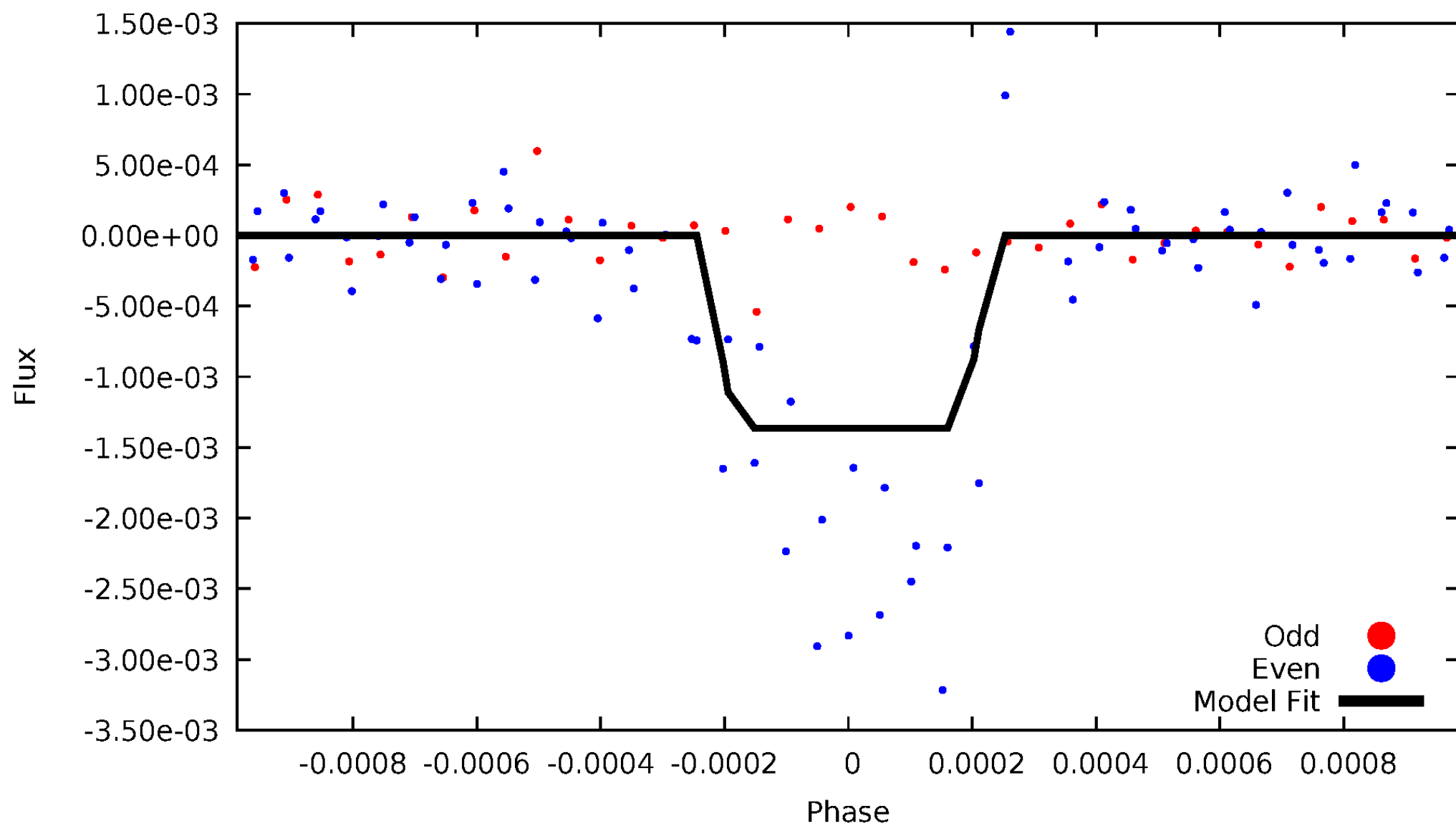
DV Odd/Even

TCE 011969772-01



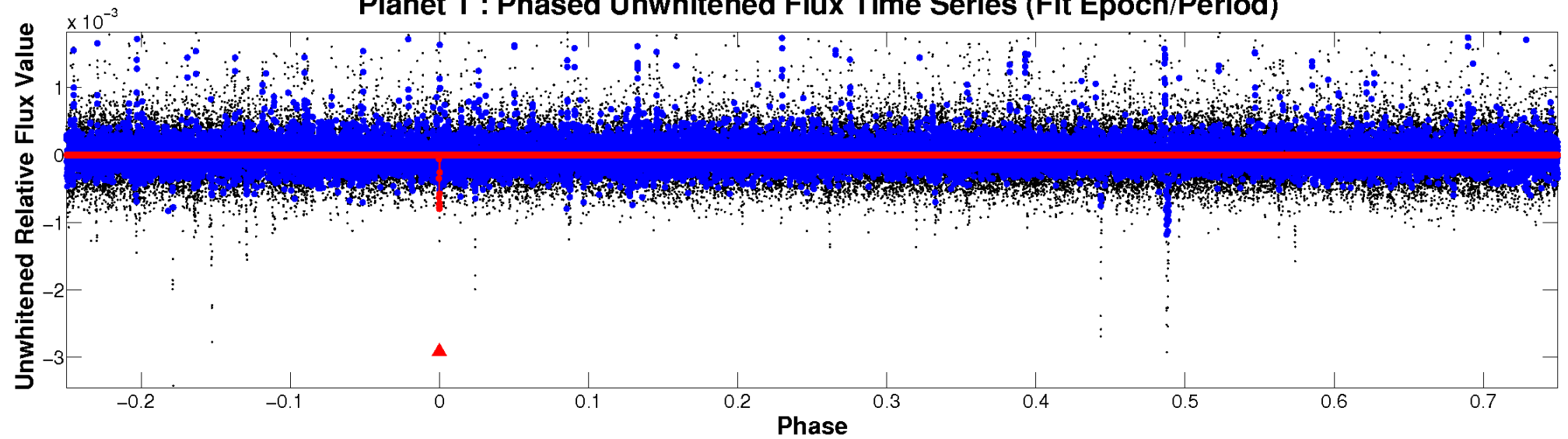
ALT Odd/Even

TCE 011969772-01

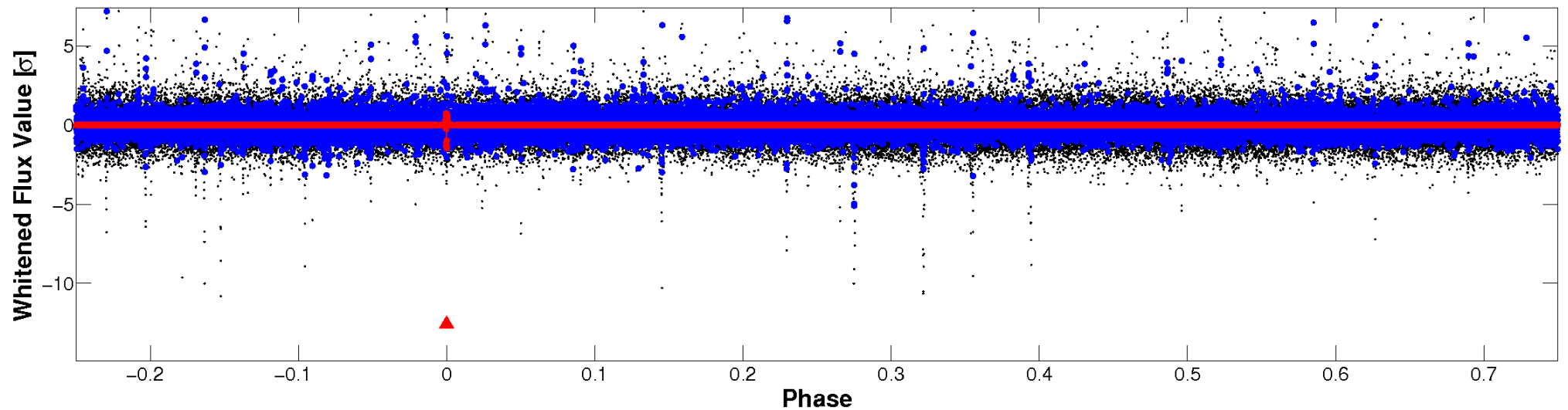


Non-Whitened Vs. Whitened Light Curve

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

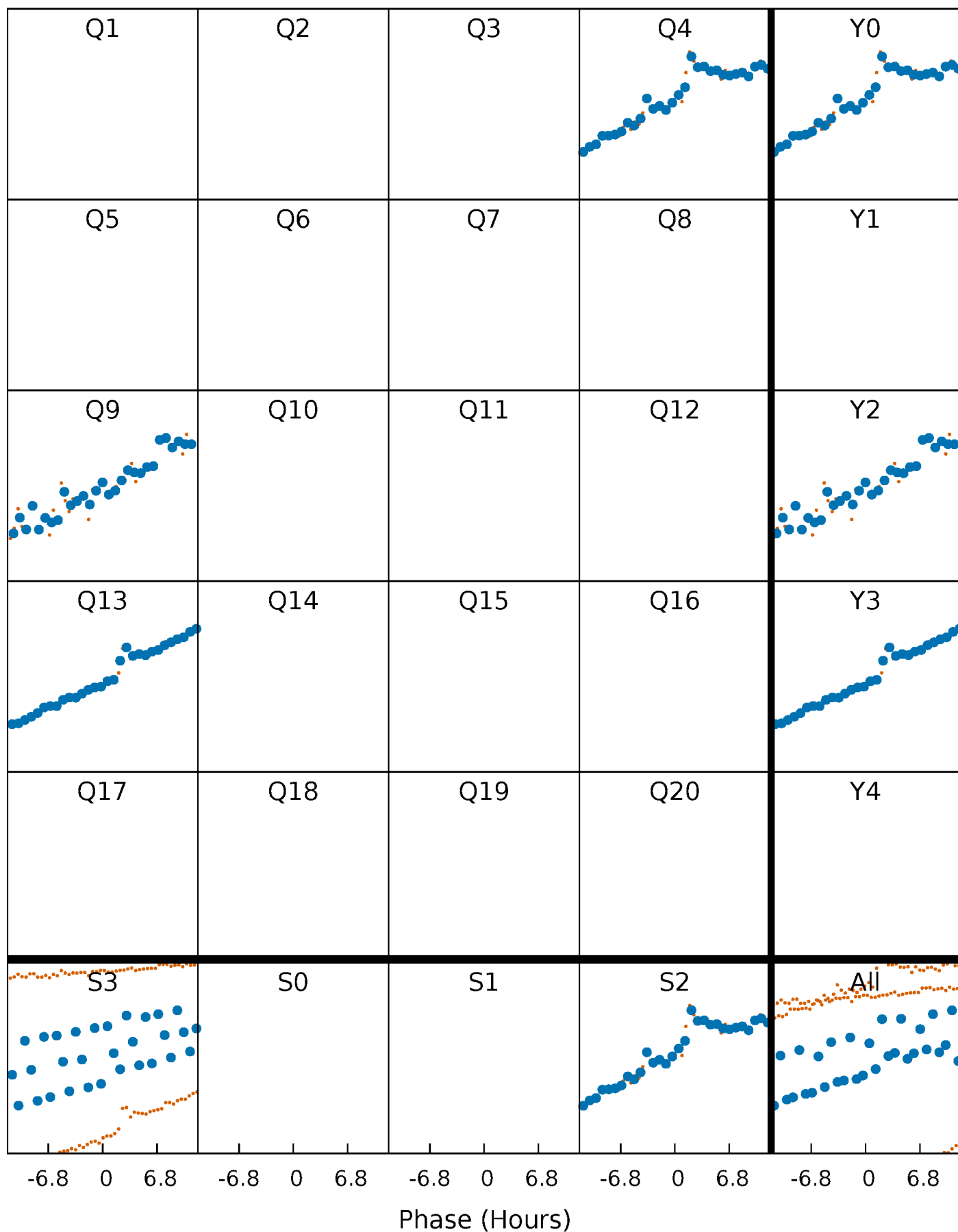


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



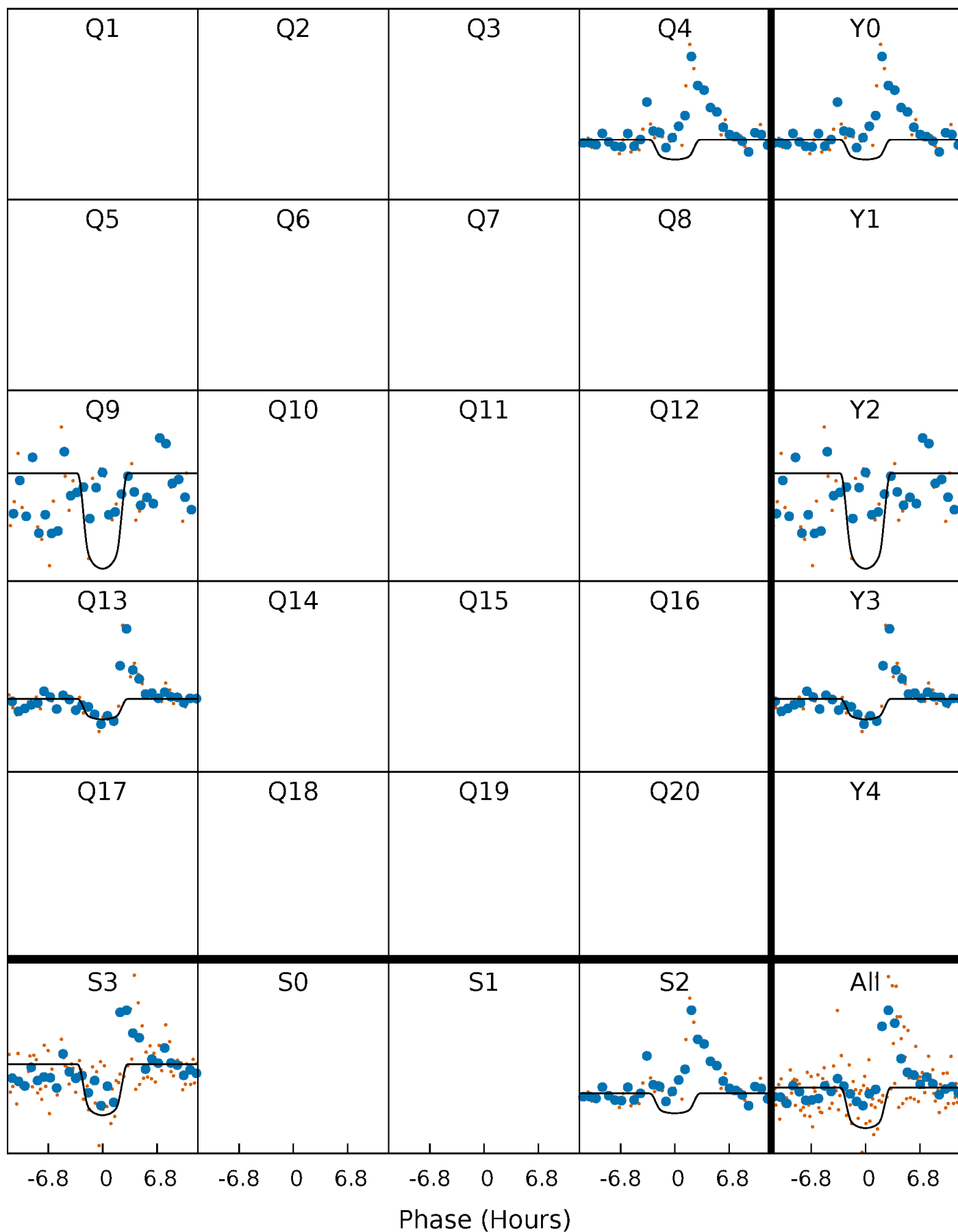
PDC Quarter-Phased Transit Curves

TCE 011969772-01 P=403.551335 Days $T_0=432.418521$ (BKJD)



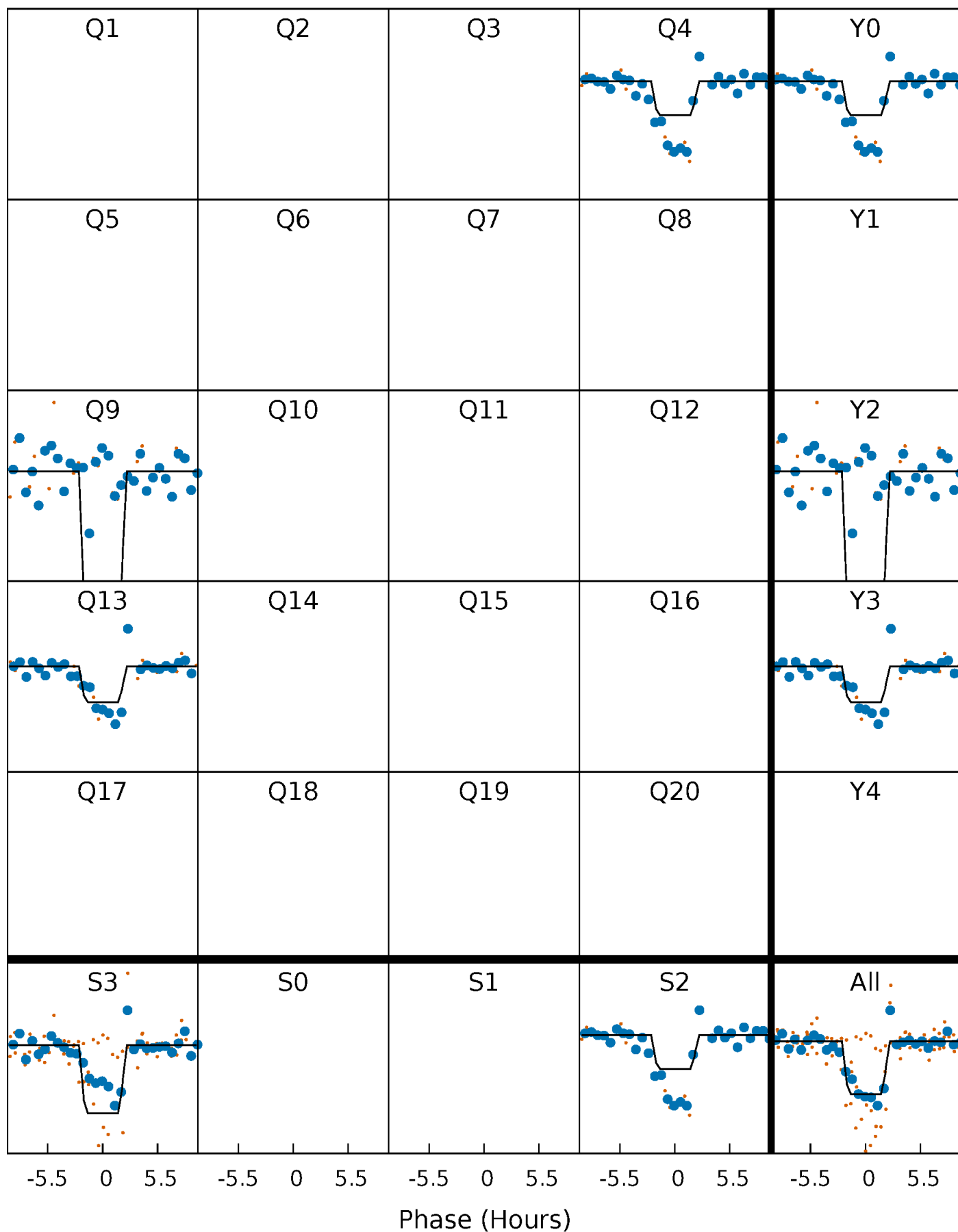
DV Quarter-Phased Transit Curves

TCE 011969772-01 P=403.551335 Days $T_0=432.418521$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

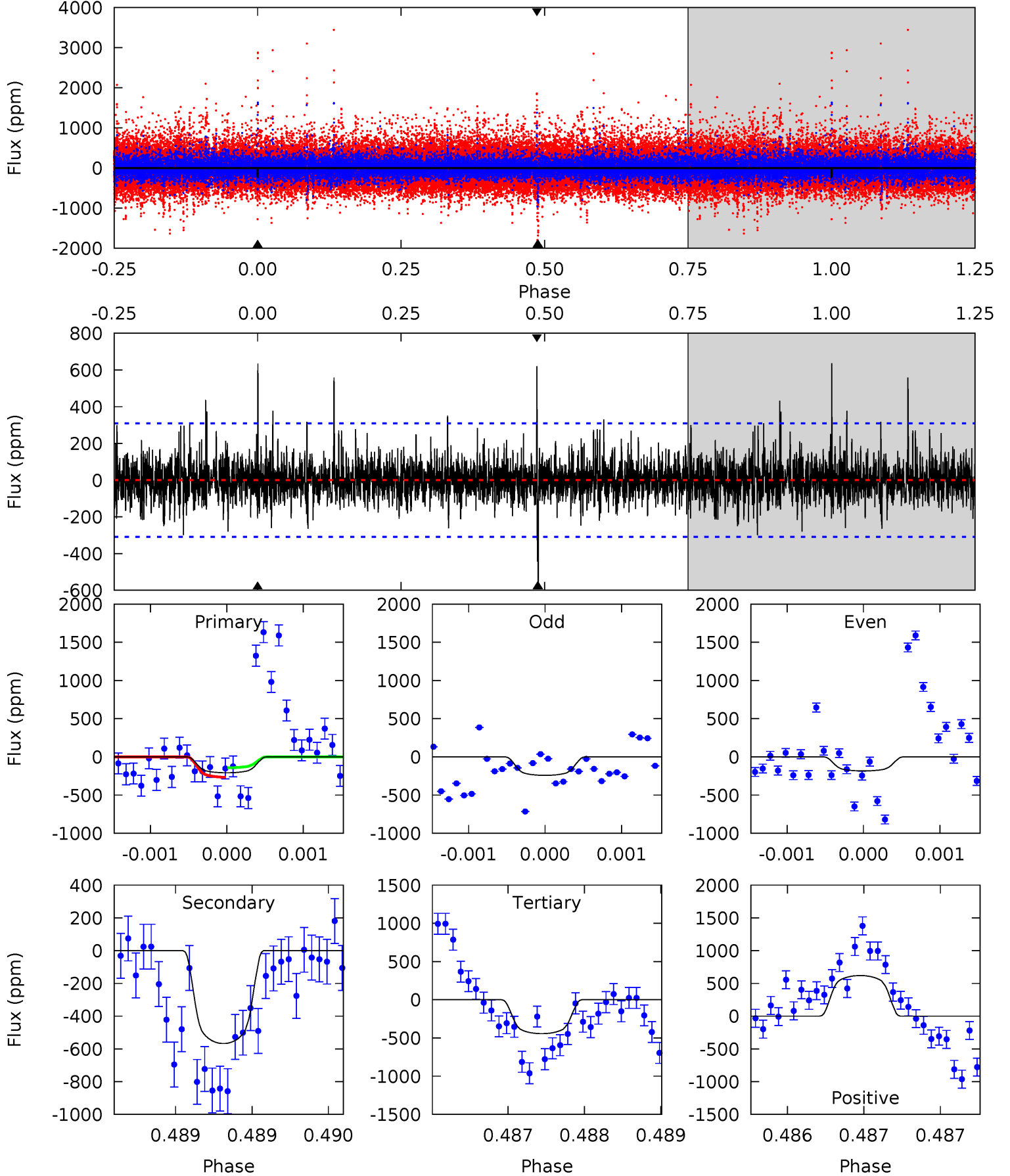
TCE 011969772-01 P=403.562810 Days $T_0=432.394494$ (BKJD)



DV Model-Shift Uniqueness Test

011969772-01, $P = 403.551335$ Days, $E = 28.867186$ Days

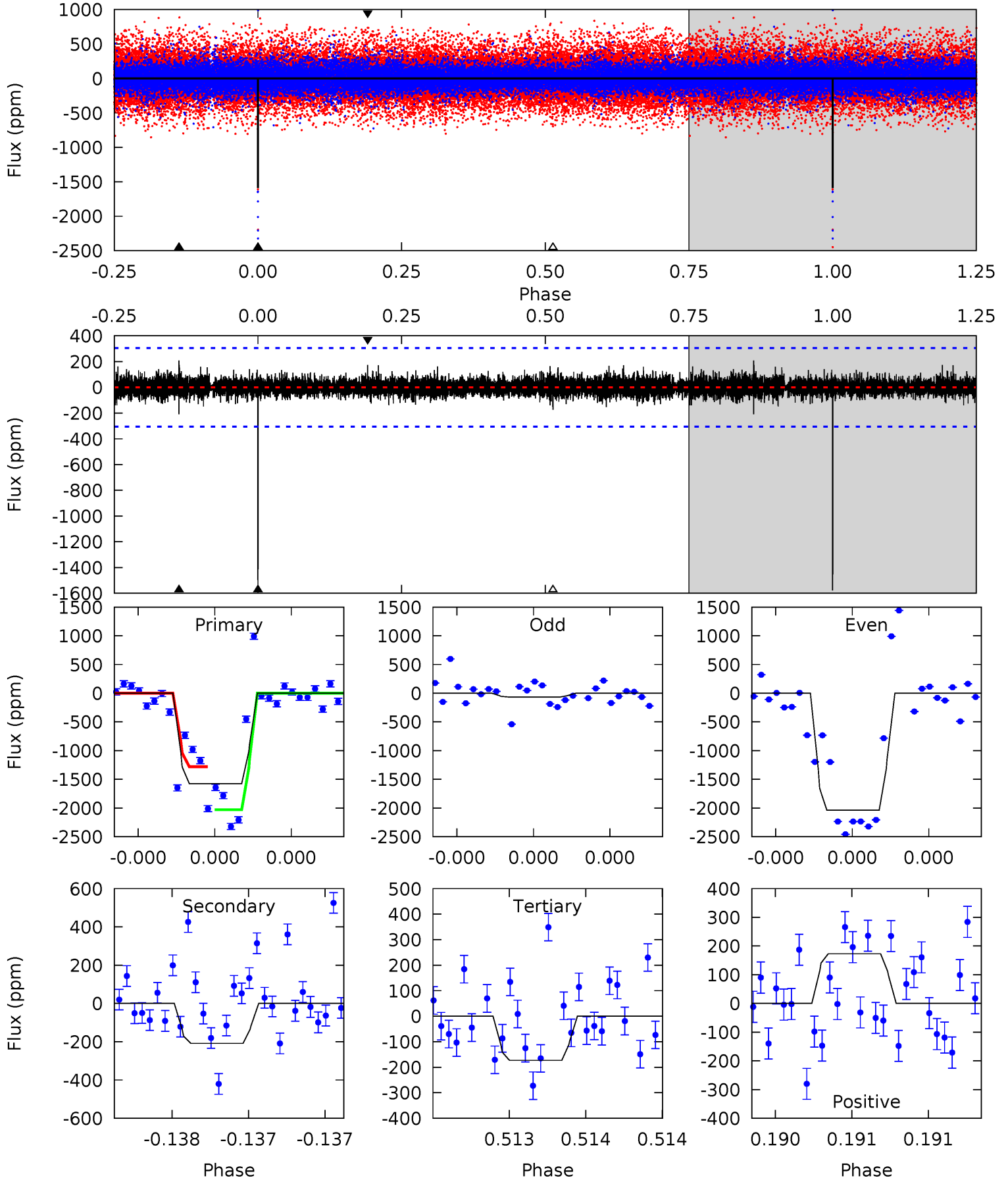
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.73	10.2	7.94	11.1	5.53	3.42	1.40	-4.21	-7.36	2.21	-0.94	0.45	-0.07	0.53	1.12



Alt Model-Shift Uniqueness Test

011969772-01, P = 403.562810 Days, E = 28.831684 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.9	3.82	3.17	3.17	5.59	3.51	0.66	25.7	25.7	0.65	0.65	23.8	0.84	0.12	7.06



Stellar Parameters For KIC 011969772

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5155^{+153}_{-153}	$4.617^{+0.072}_{-0.048}$	$-0.820^{+0.350}_{-0.300}$	$0.647^{+0.062}_{-0.051}$	$0.633^{+0.069}_{-0.028}$	$3.286^{+0.898}_{-0.590}$
	+3%/-3%	+2%/-1%	+43%/-37%	+10%/-8%	+11%/-4%	+27%/-18%
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 011969772-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-567 ± 56	$2.25^{+0.38}_{-0.35}$	266^{+8}_{-10}	4560^{+341}_{-276}	51782^{+23799}_{-13139}
Alt.	-209 ± 55	$2.62^{+0.37}_{-0.37}$	265^{+10}_{-9}	3617^{+232}_{-248}	14155^{+6275}_{-4522}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

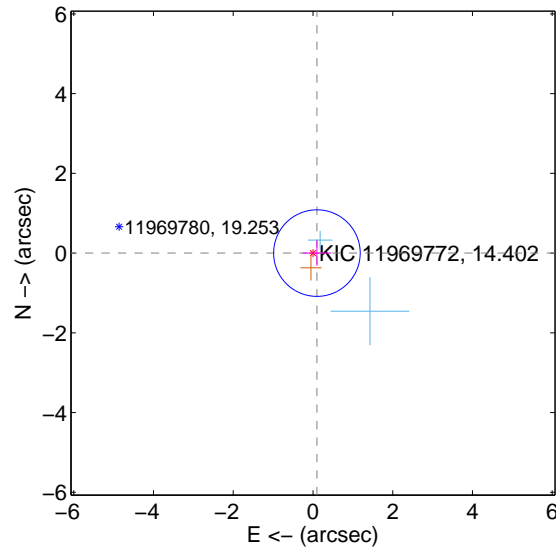
Supplemental centroid analysis for 011969772-01. Kepler magnitude: 14.40. Transit SNR 7.39

There are 2 quarters with good PRF difference image offsets

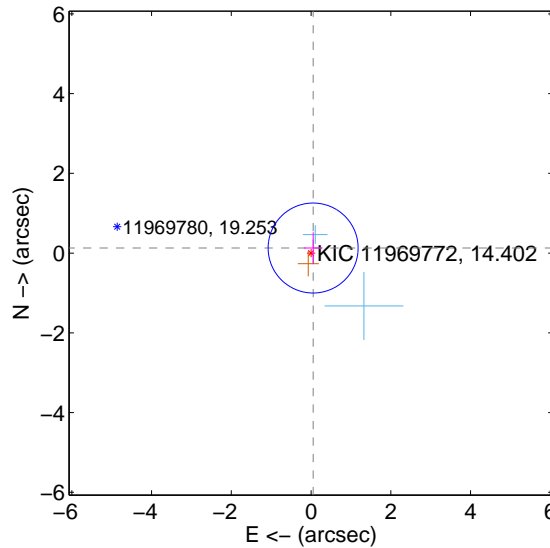
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.099 ± 0.362	0.27	-0.099 ± 0.362	0.000 ± 0.321
PRF-fit source offset from KIC position	0.137 ± 0.376	0.37	-0.052 ± 0.230	0.127 ± 0.395
photometric centroid source offset	1.38 ± 1.23	1.12	-0.49 ± 1.07	1.29 ± 1.25

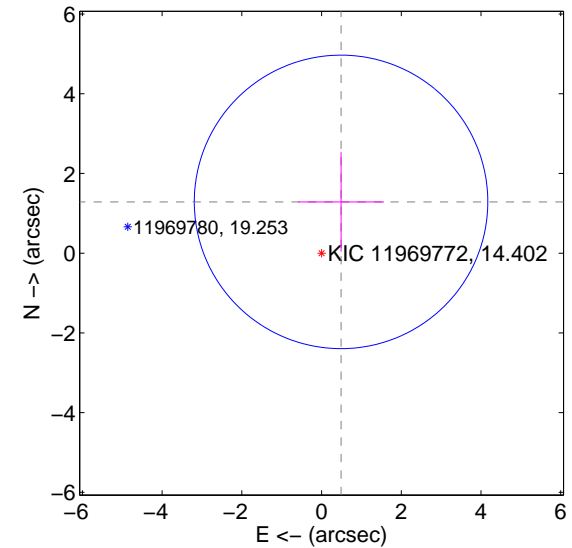
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

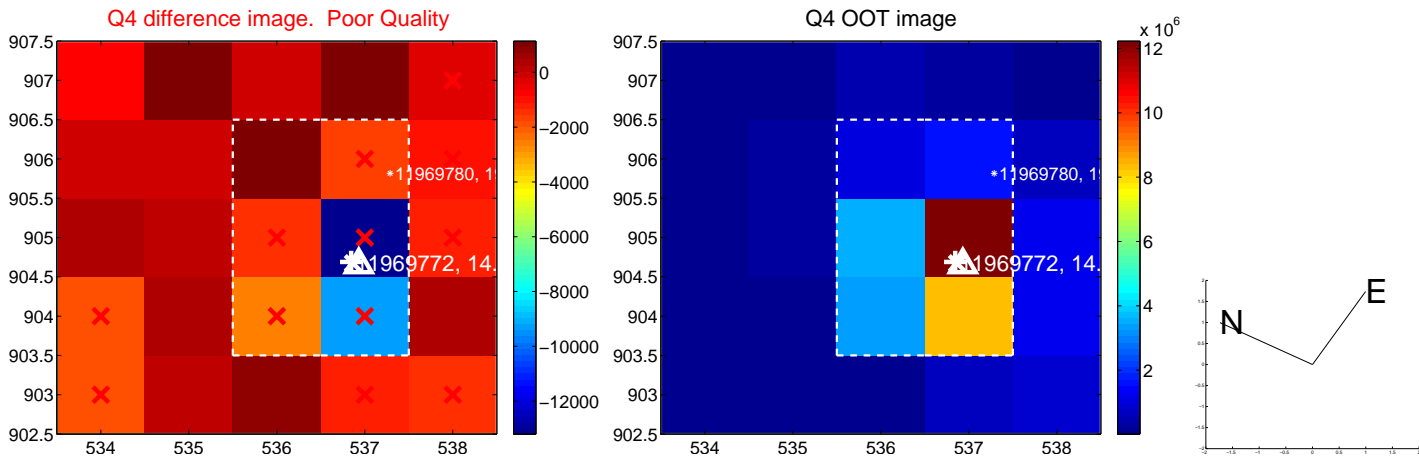


offset from photometric centroids



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.

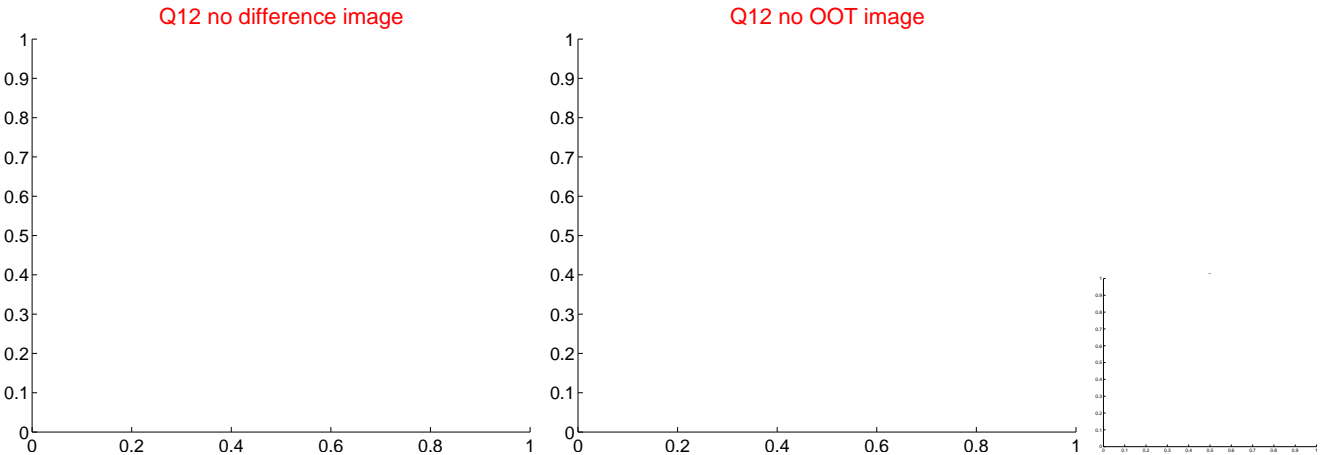
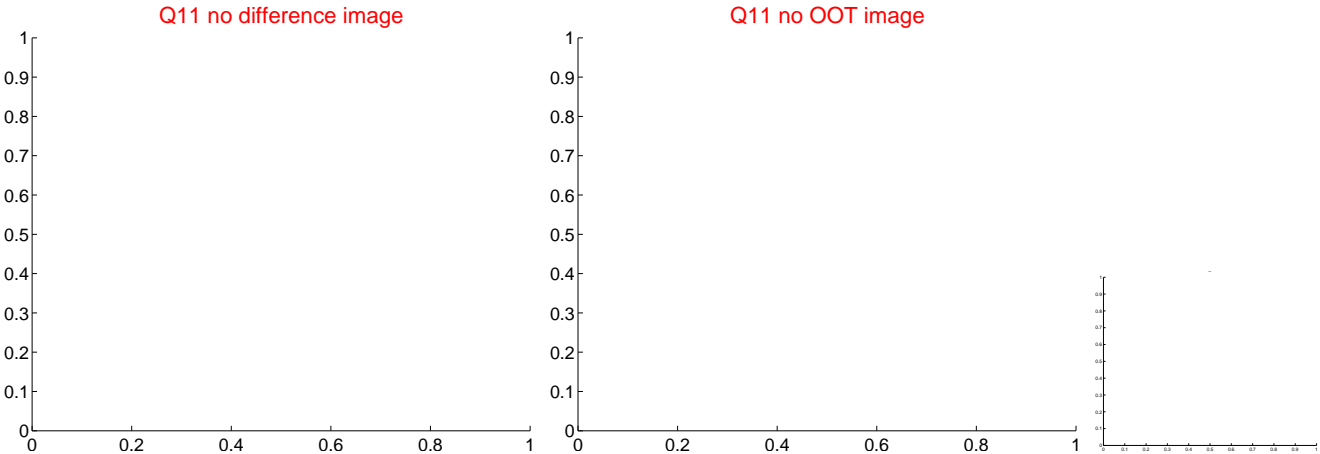
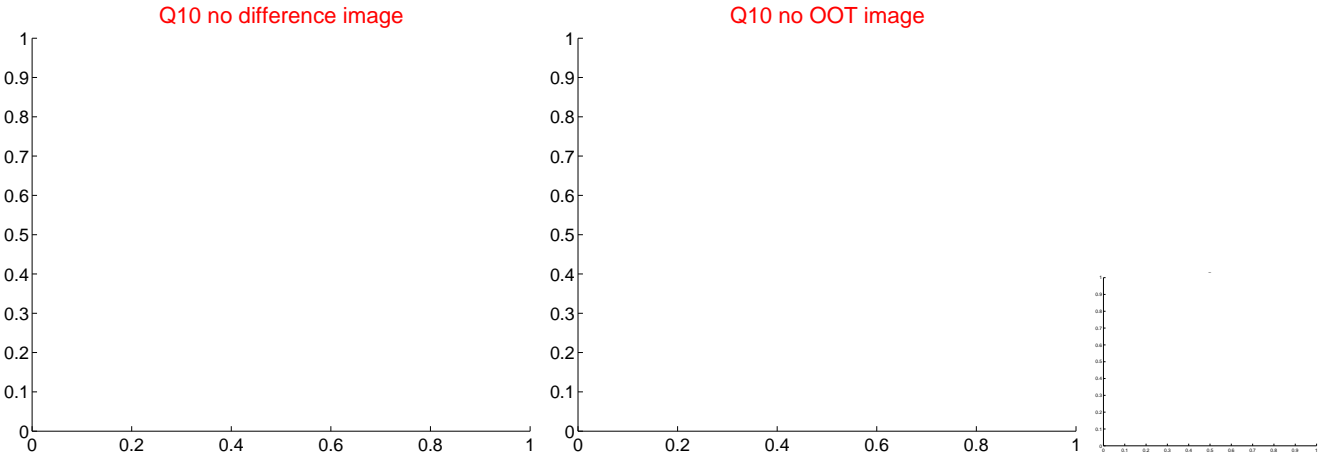
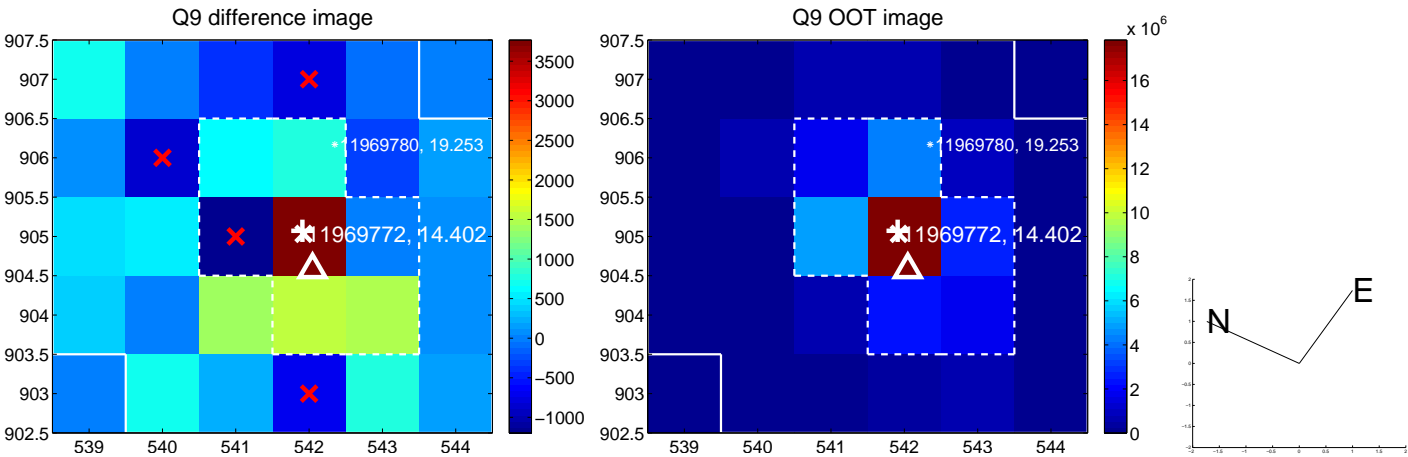
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



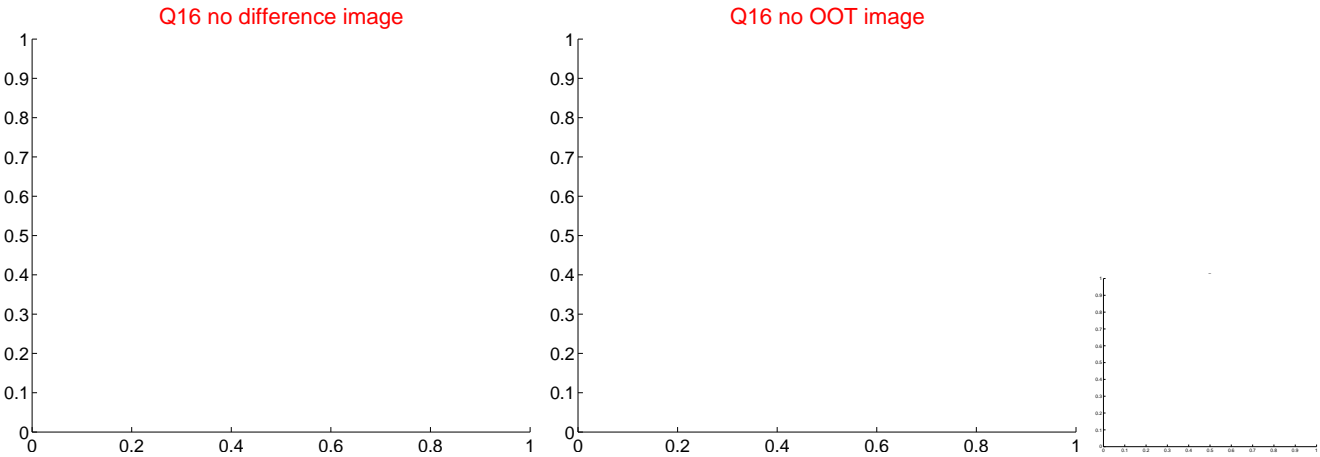
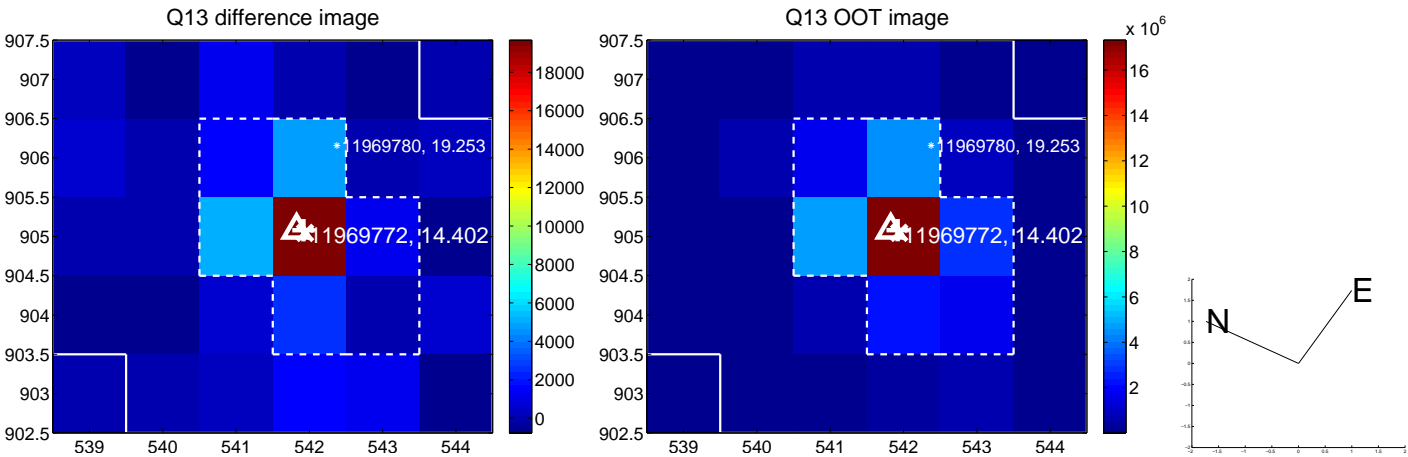
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



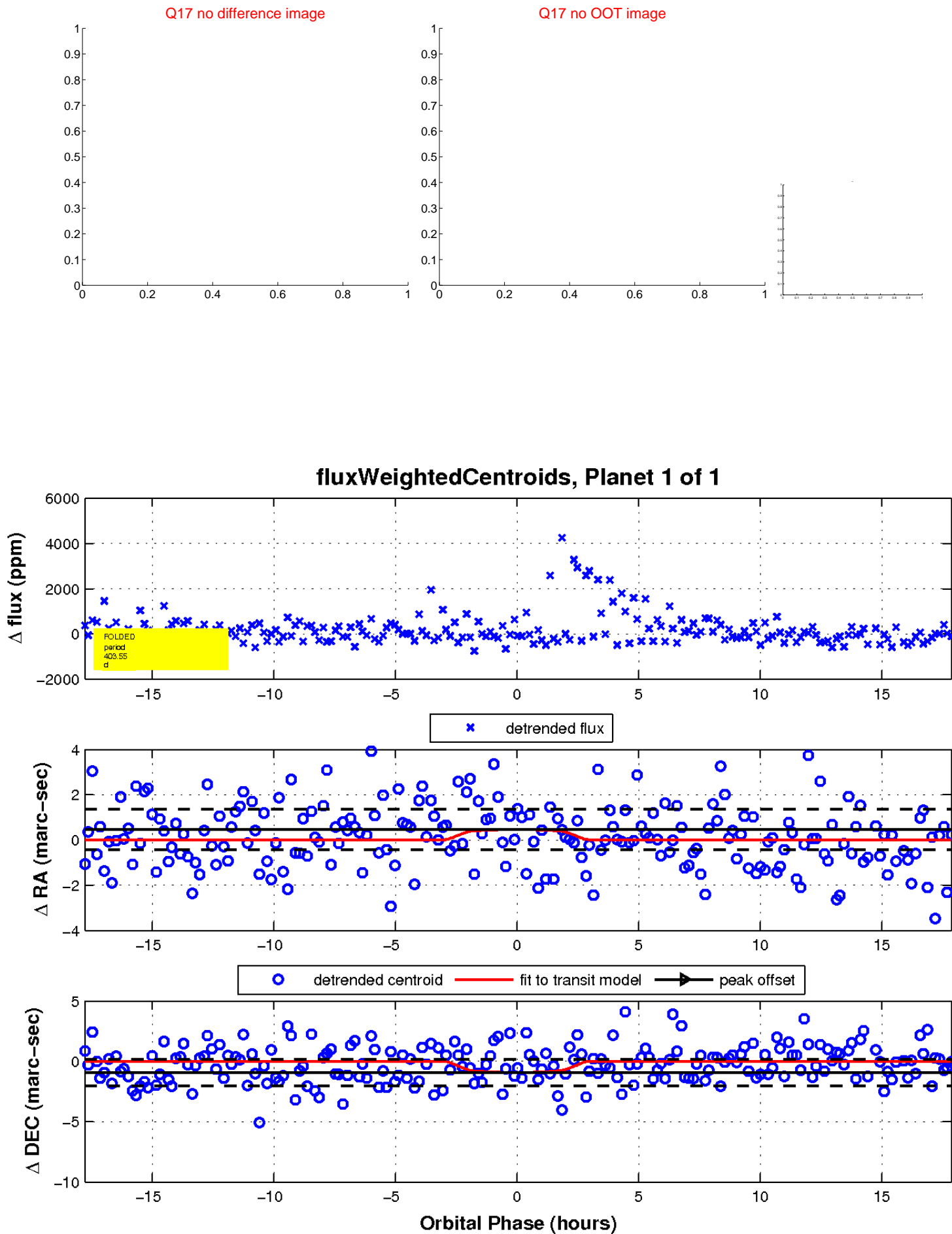
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UKIRT Image

Declination

