

KIC 004749912

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})
004749912-01	OBS	No	384.583022	471.990313	766.7	4.675	13.3	6.6	1.13	5734	3.22	1.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004749912-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

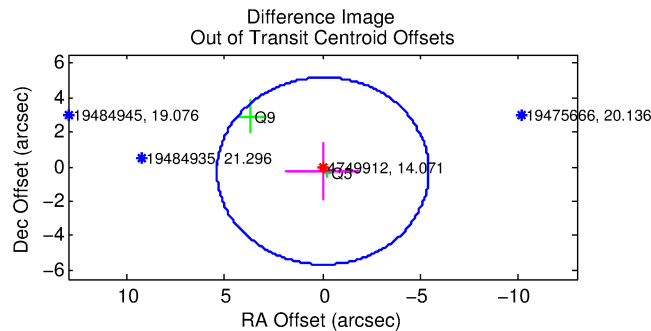
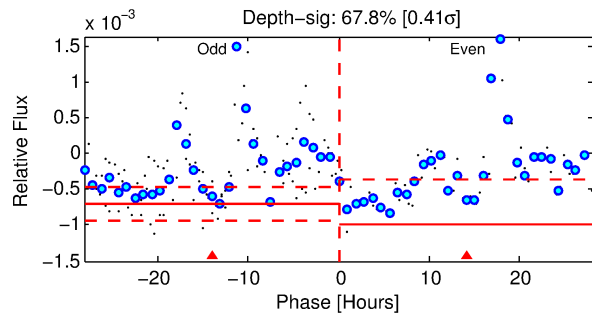
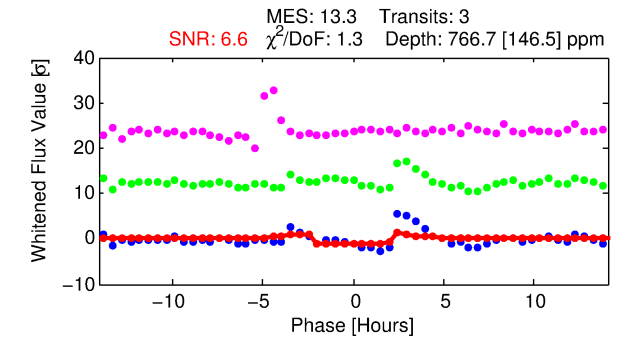
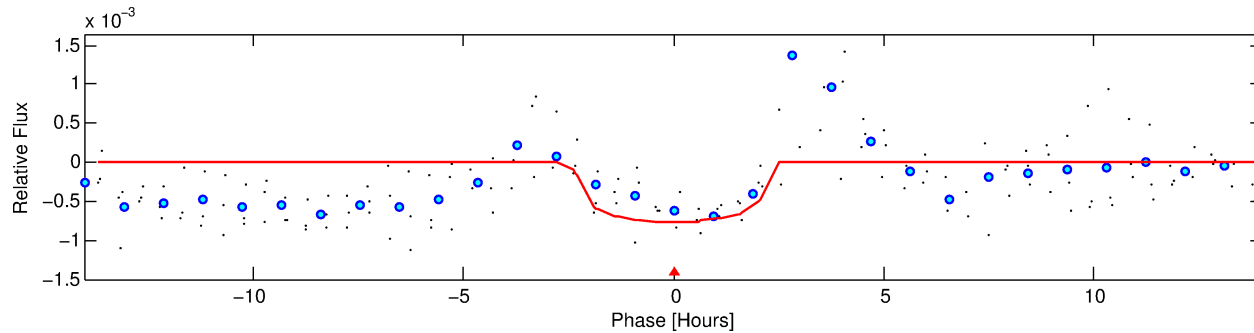
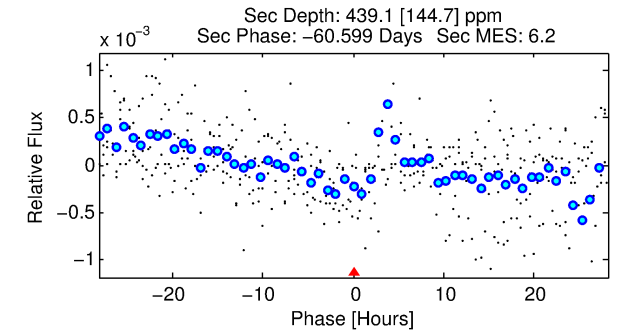
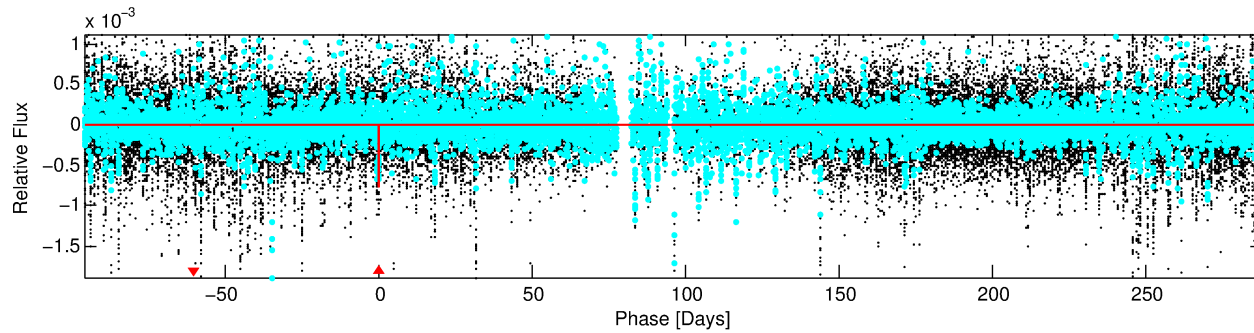
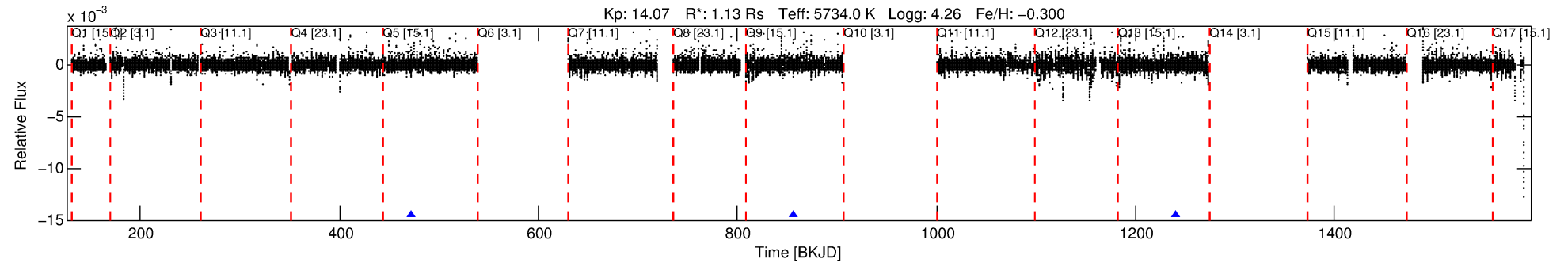
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004749912-01

No Significant Match Found

DV One-Page Summary

KIC: 4749912 Candidate: 1 of 1 Period: 384.583 d



DV Fit Results:

Period = 384.58302 [0.00644] d
Epoch = 471.9903 [0.0078] BKJD
Rp/R* = 0.0262 [0.0353]
a/R* = 546.70 [3332.40]
b = 0.54 [7.94]
Seff = 1.29 [0.56]
Teq = 272 [30] K
Rp = 3.22 [4.46] Re
a = 0.9772 [0.2705] AU
Ag = 22273.39 [61318.12] [0.36σ]
Teffp = 5131 [3492] K [1.39σ]

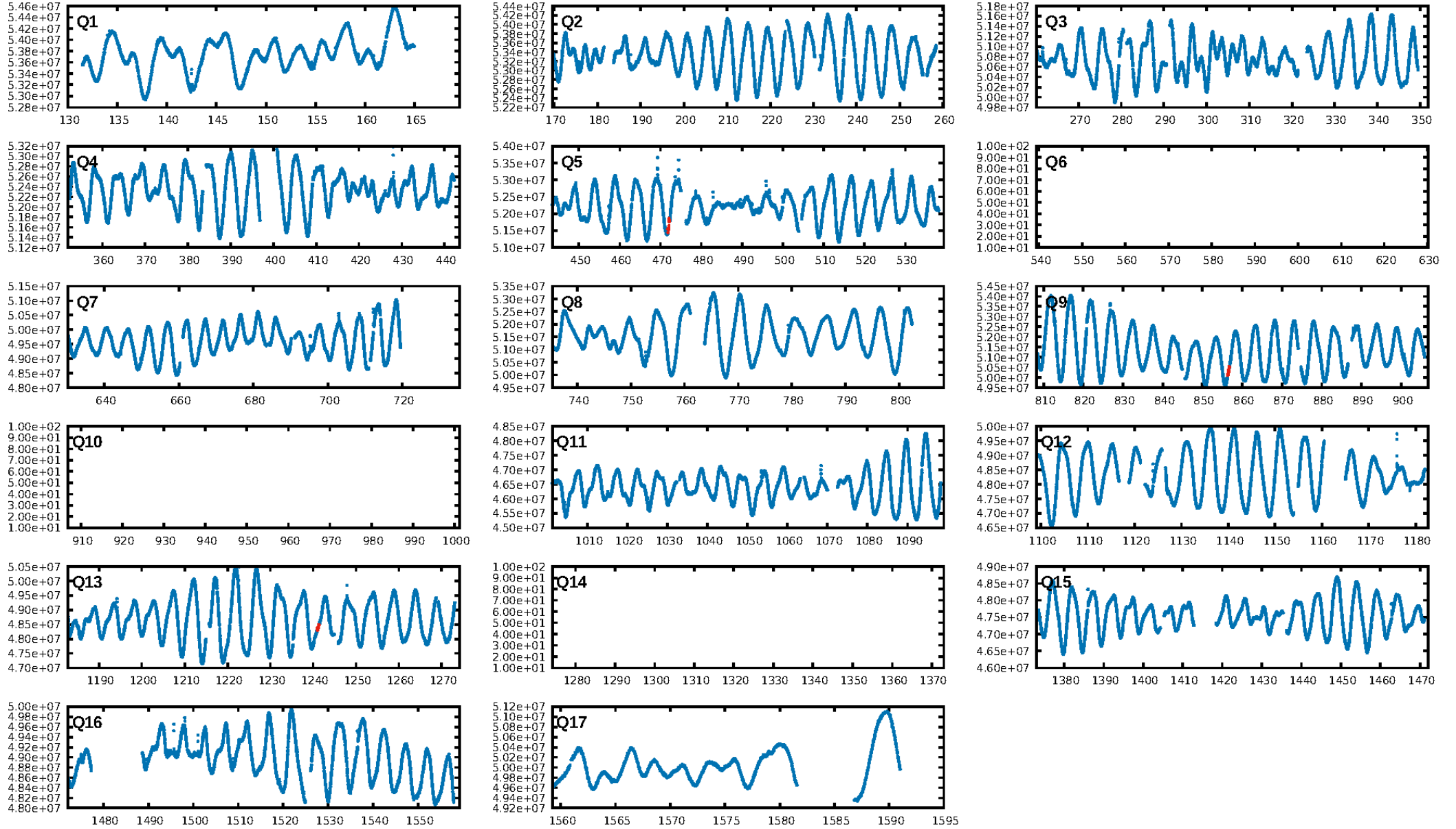
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 76.8%
ModelChiSquareGof-sig: 88.1%
Bootstrap-pfa: 2.56e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.027
Centroid-sig: 30.4%
Centroid-so: 0.887 arcsec [1.13σ]
OotOffset-rm: 0.257 arcsec [0.14σ]
KicOffset-rm: 0.181 arcsec [0.22σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

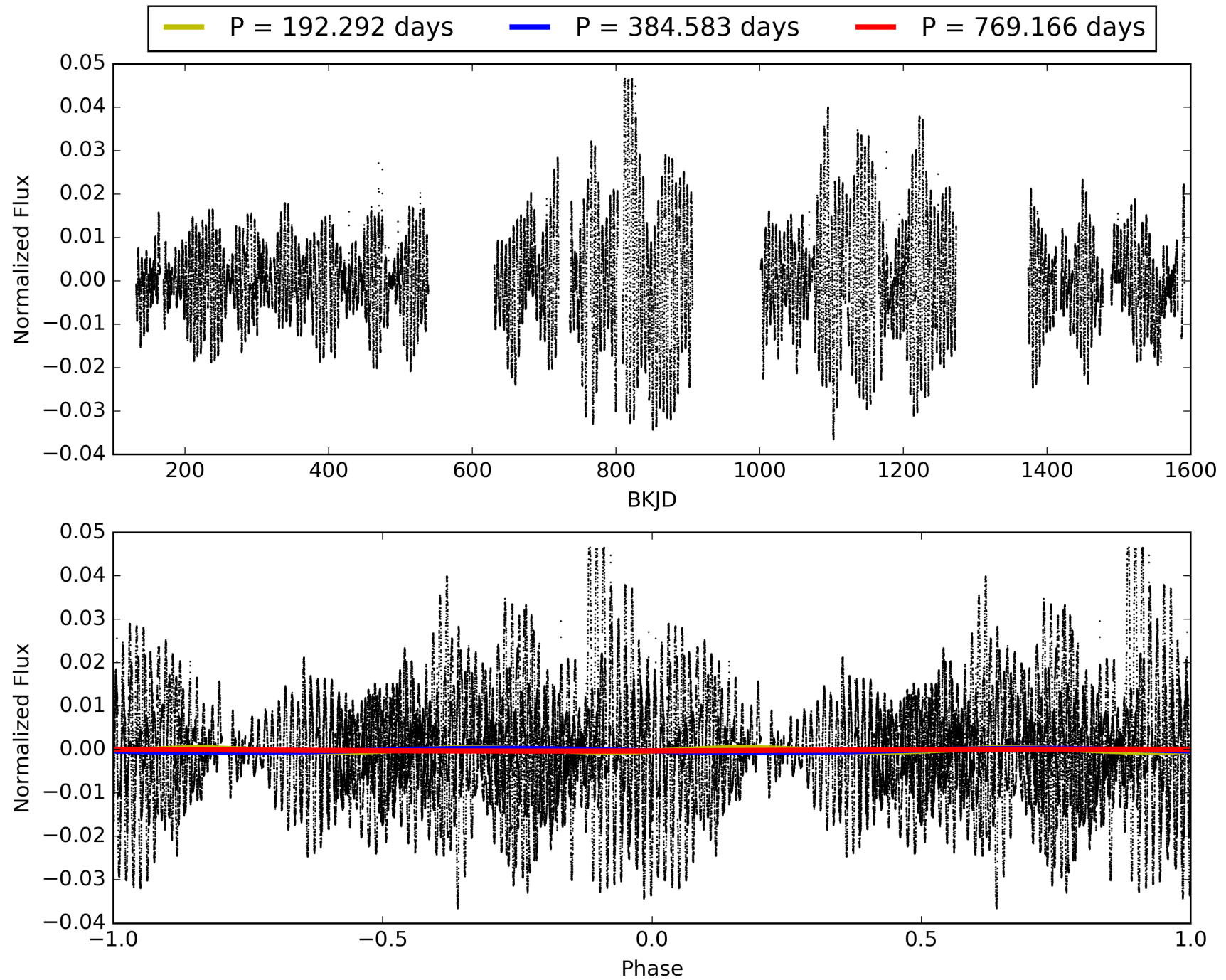
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:39:27 Z

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

TCE 004749912-01, PDC Light Curves

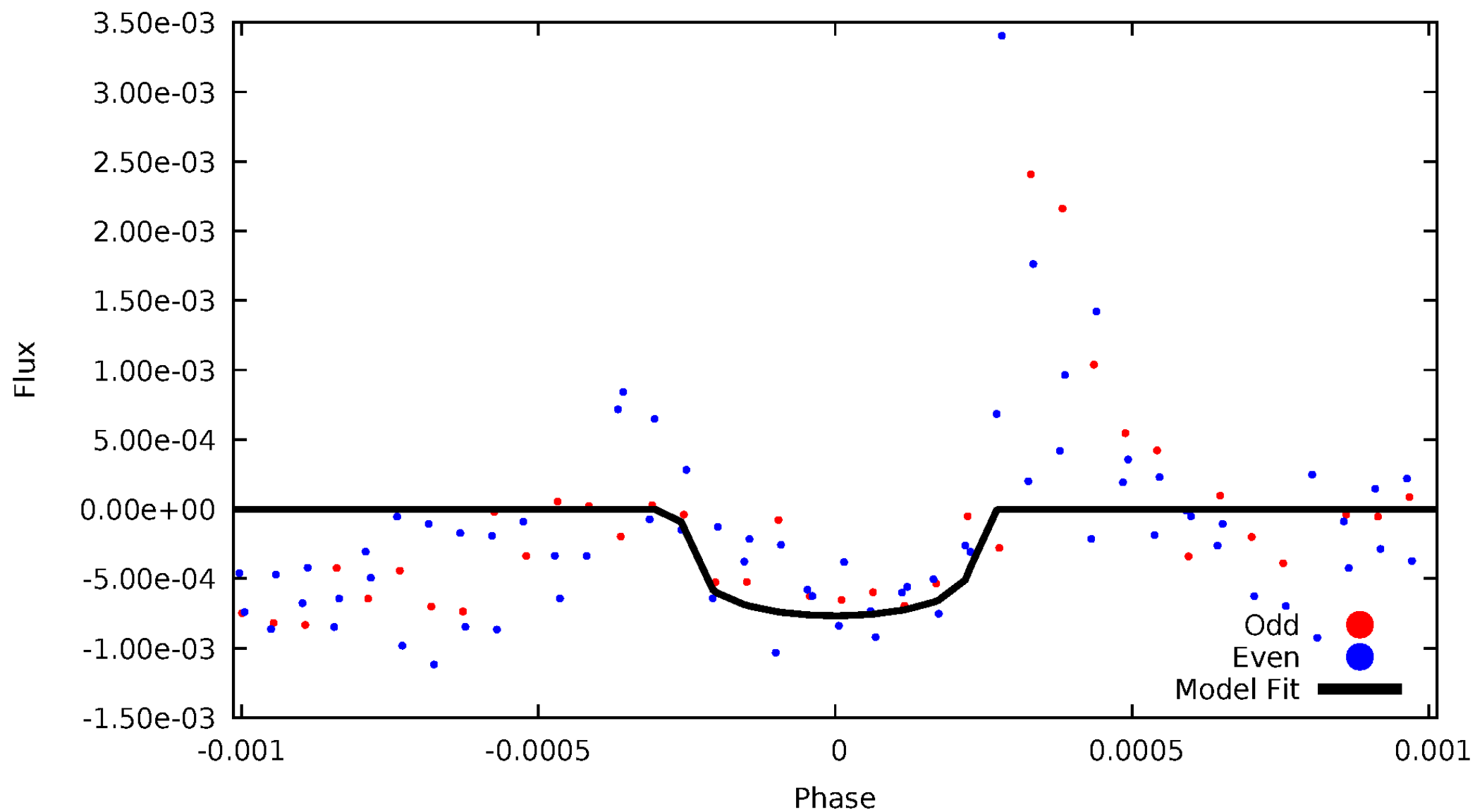


TCE 004749912-01



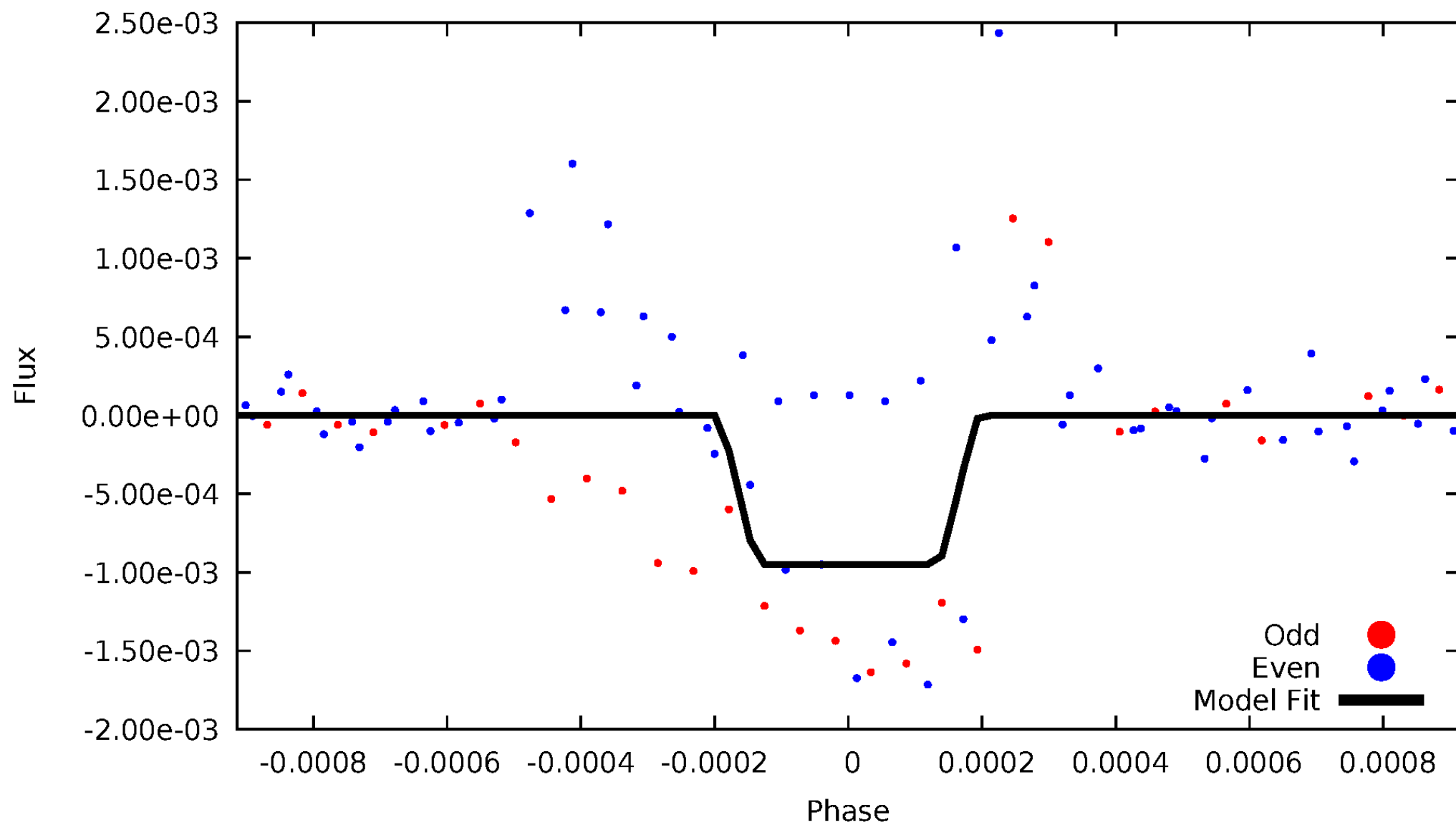
DV Odd/Even

TCE 004749912-01



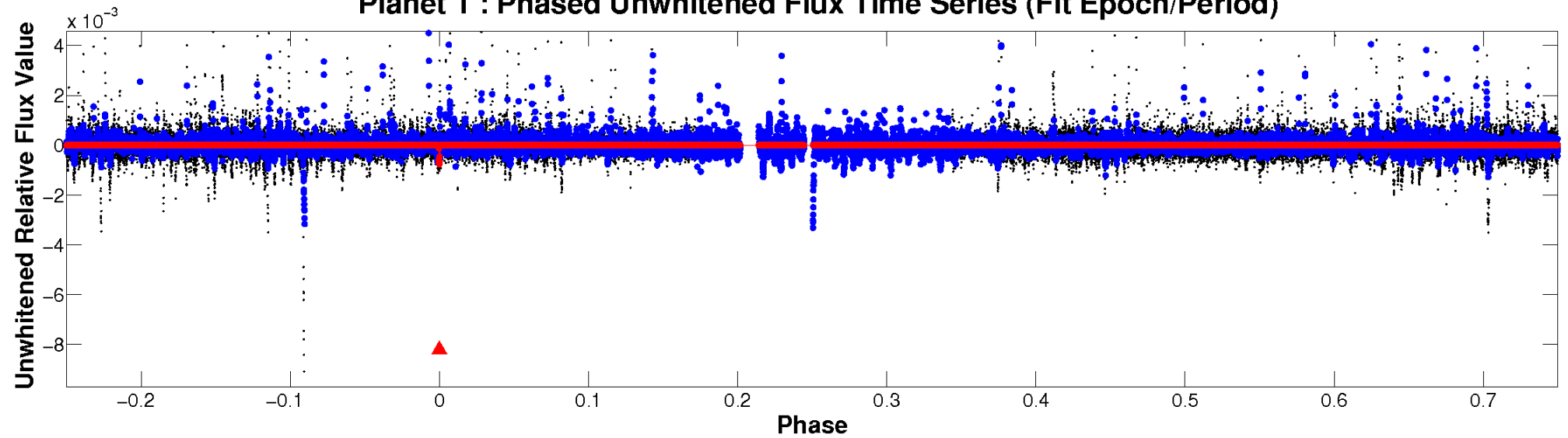
ALT Odd/Even

TCE 004749912-01

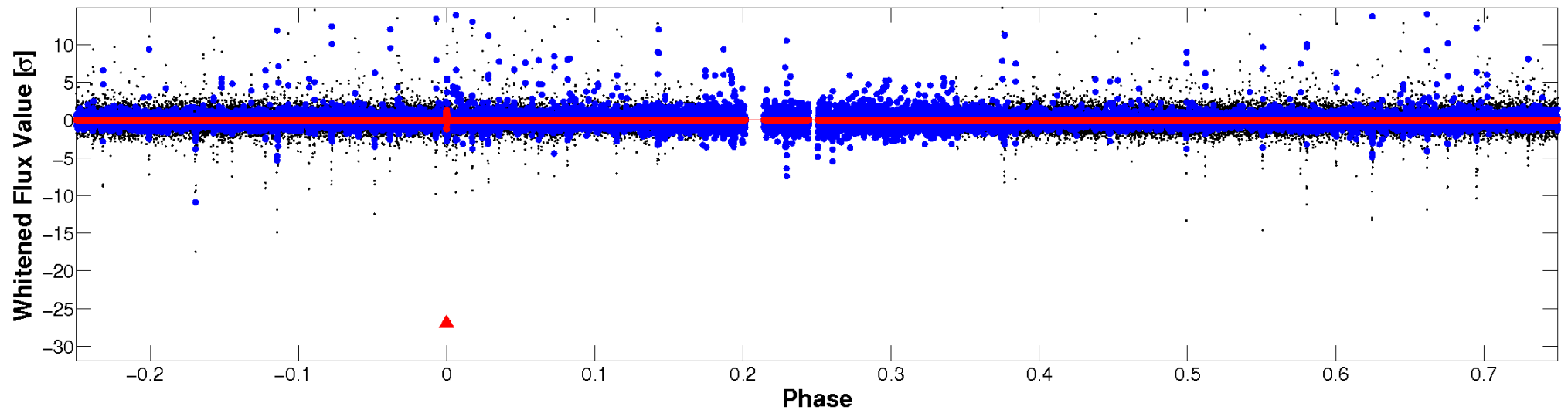


Non-Whitened Vs. Whitened Light Curve

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

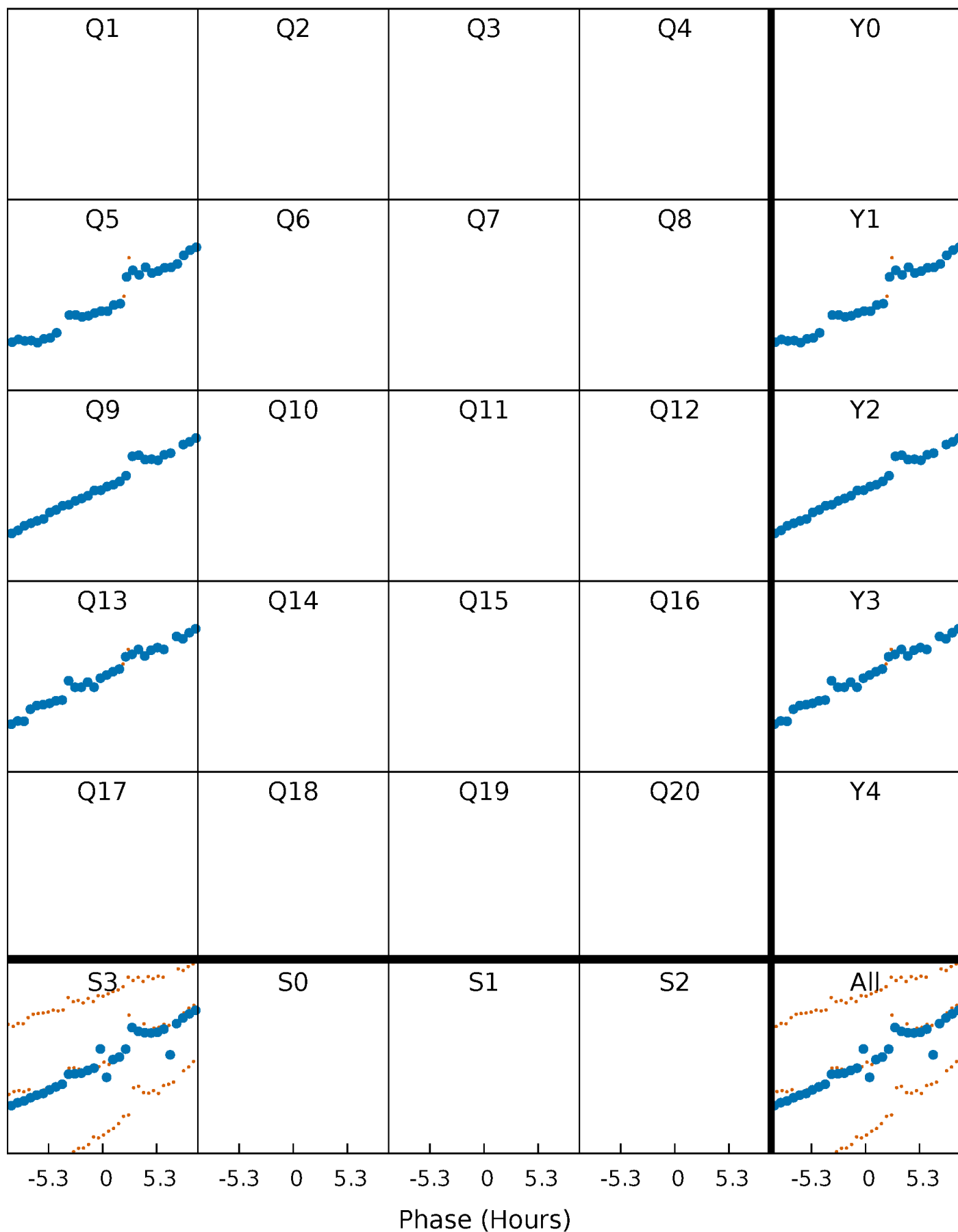


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



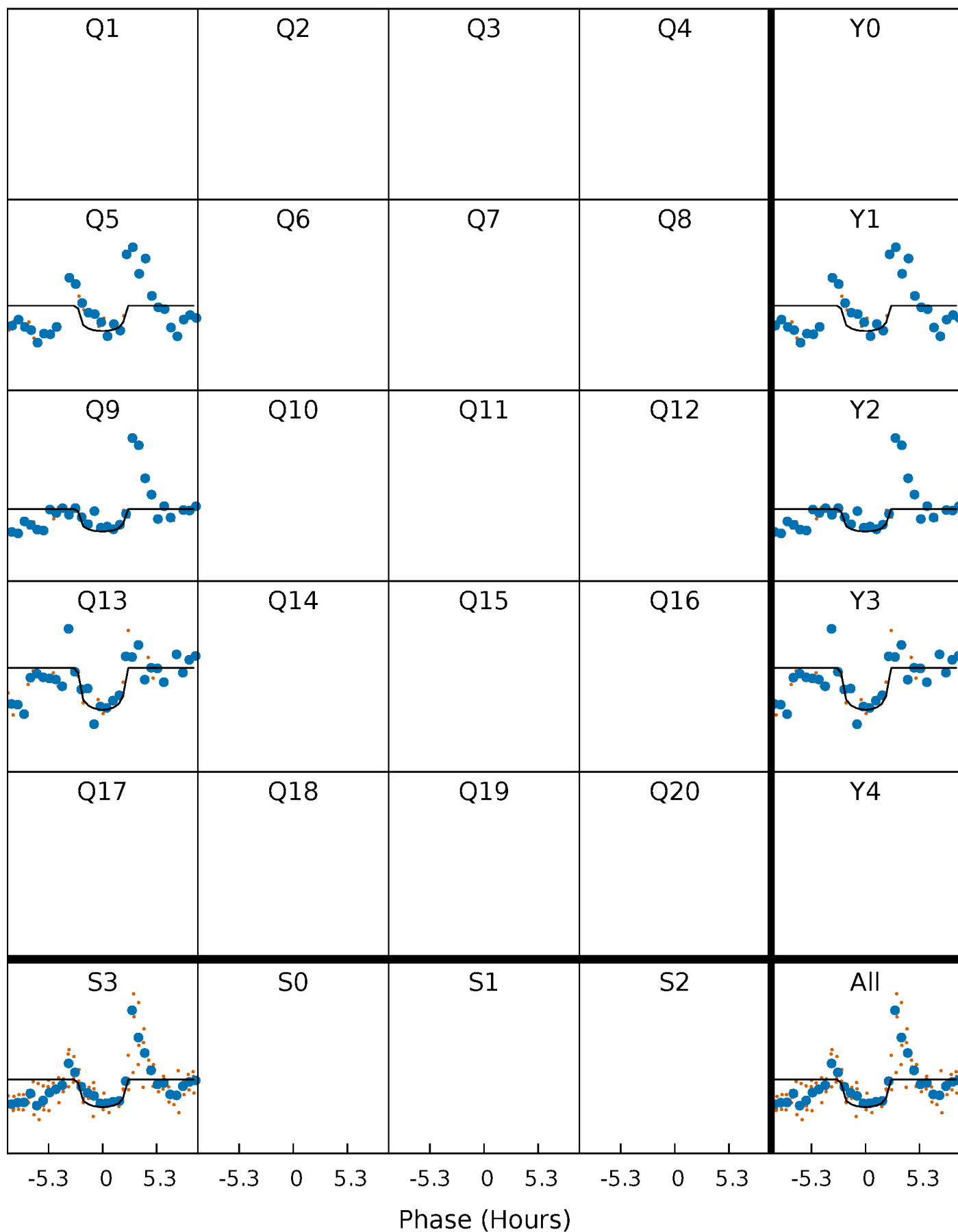
PDC Quarter-Phased Transit Curves

TCE 004749912-01 P=384.583022 Days $T_0=471.990313$ (BKJD)



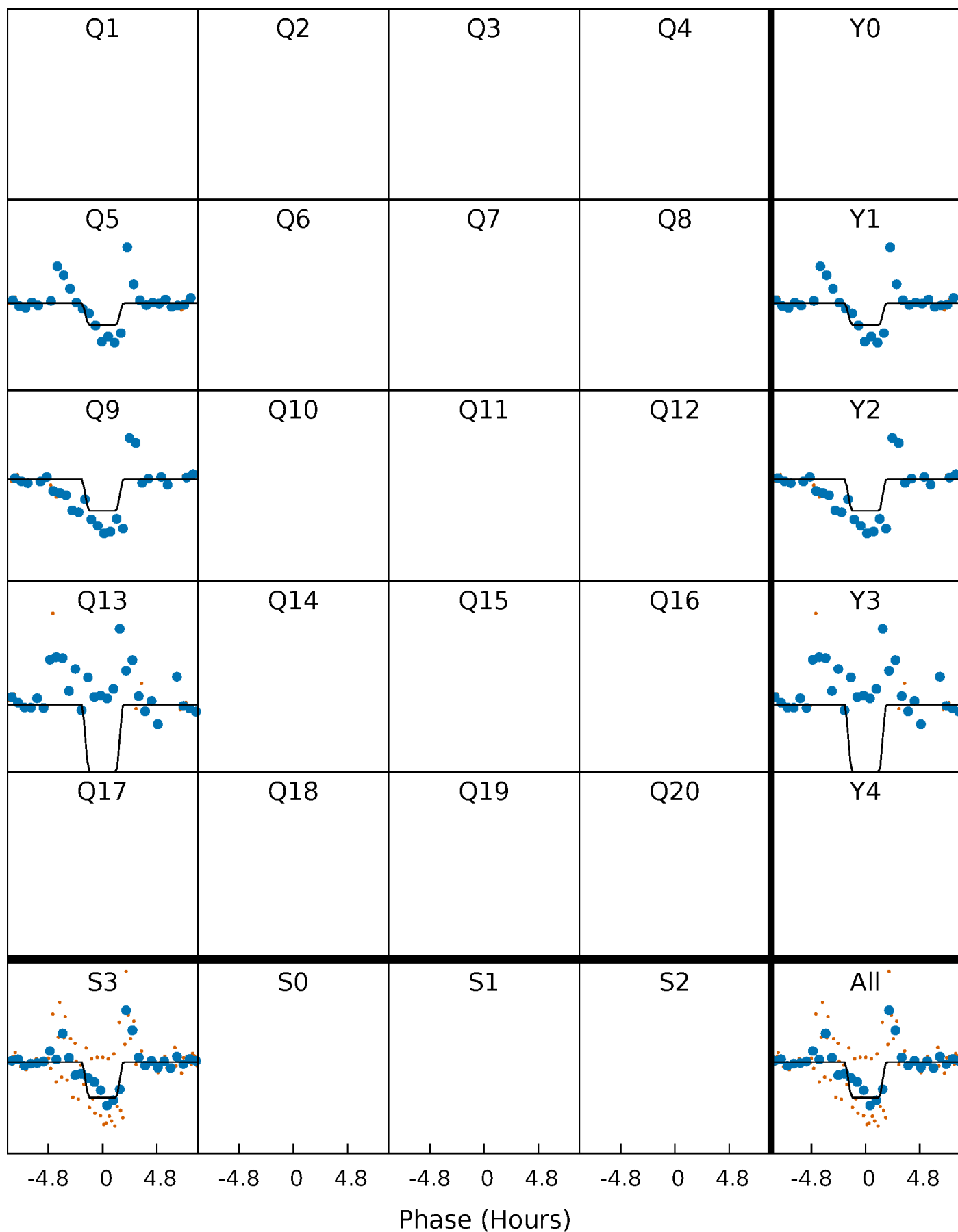
DV Quarter-Phased Transit Curves

TCE 004749912-01 P=384.583022 Days $T_0=471.990313$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

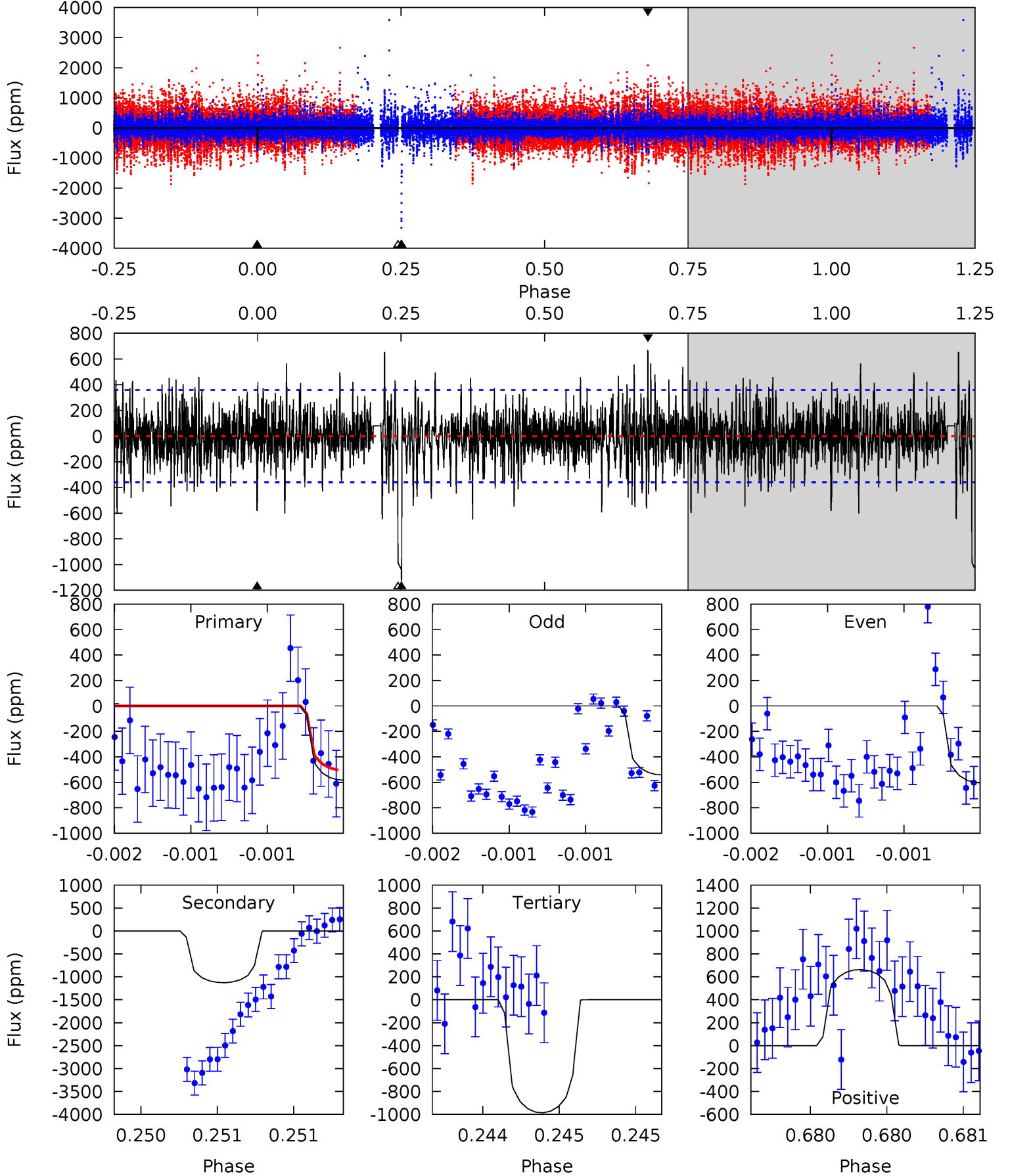
TCE 004749912-01 P=384.593655 Days $T_0=472.011662$ (BKJD)



DV Model-Shift Uniqueness Test

004749912-01, P = 384.583022 Days, E = 87.407291 Days

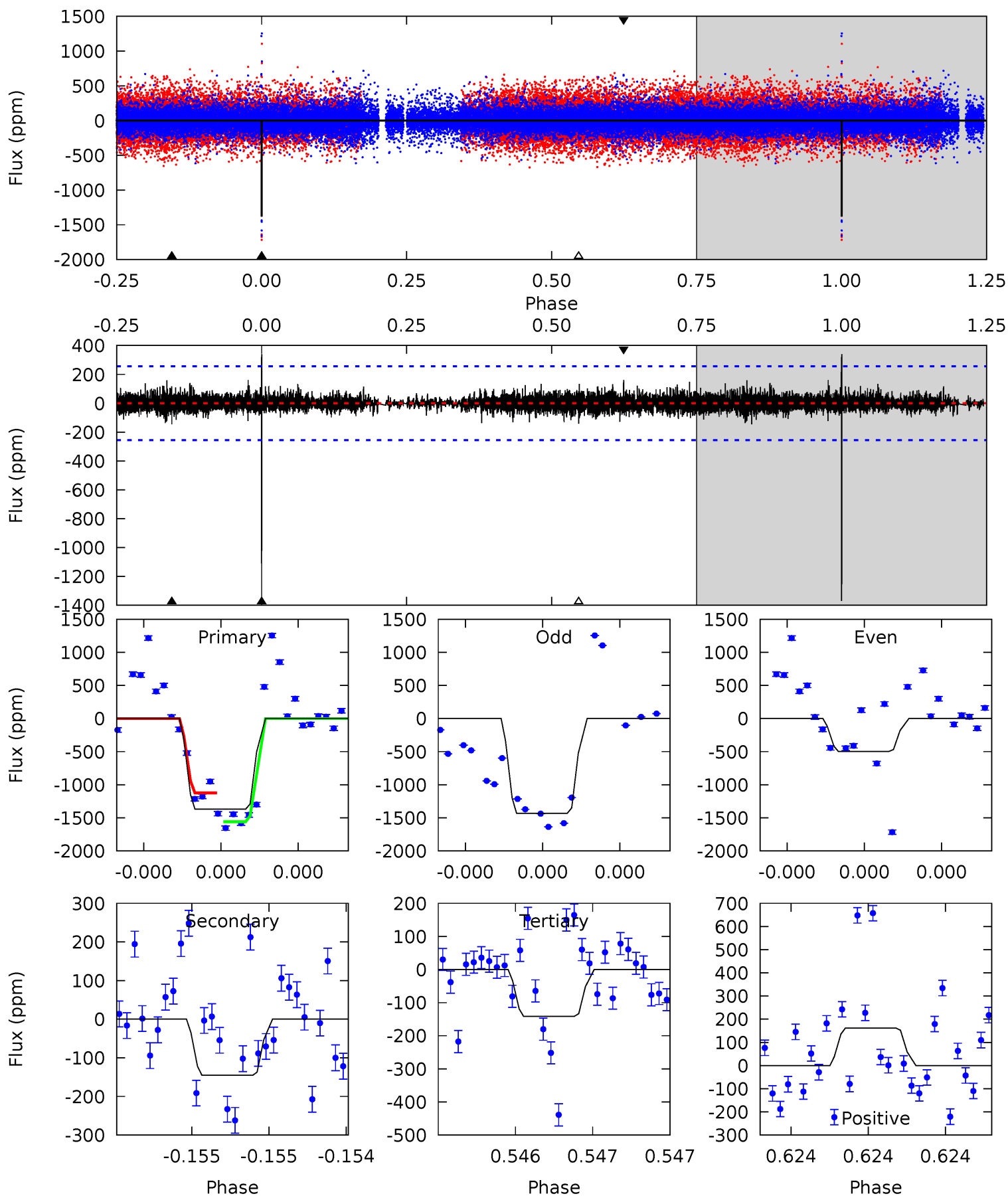
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.05	17.5	15.3	10.3	5.56	3.46	2.30	-6.24	-1.24	2.21	7.21	0.39	1.08	0.37	1.14



Alt Model-Shift Uniqueness Test

004749912-01, P = 384.593655 Days, E = 87.418007 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.0	3.19	3.10	3.54	5.62	3.56	0.69	26.9	26.5	0.09	-0.35	11.1	0.63	0.20	4.66



Stellar Parameters For KIC 004749912

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5734^{+155}_{-155}	$4.259^{+0.242}_{-0.198}$	$-0.300^{+0.300}_{-0.250}$	$1.127^{+0.347}_{-0.284}$	$0.840^{+0.130}_{-0.060}$	$0.828^{+1.115}_{-0.408}$
	+3%/-3%	+6%/-5%	+100%/-83%	+31%/-25%	+15%/-7%	+135%/-49%
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 004749912-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1128 ± 64	$4.46^{+3.78}_{-3.01}$	379^{+31}_{-31}	5558^{+4942}_{-1222}	$30855^{+257358}_{-21822}$
Alt.	-145 ± 46	$4.89^{+4.06}_{-2.85}$	378^{+33}_{-31}	3563^{+1361}_{-564}	3081^{+15535}_{-2155}

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 $A_{\text{obs}} \gg 1.0$

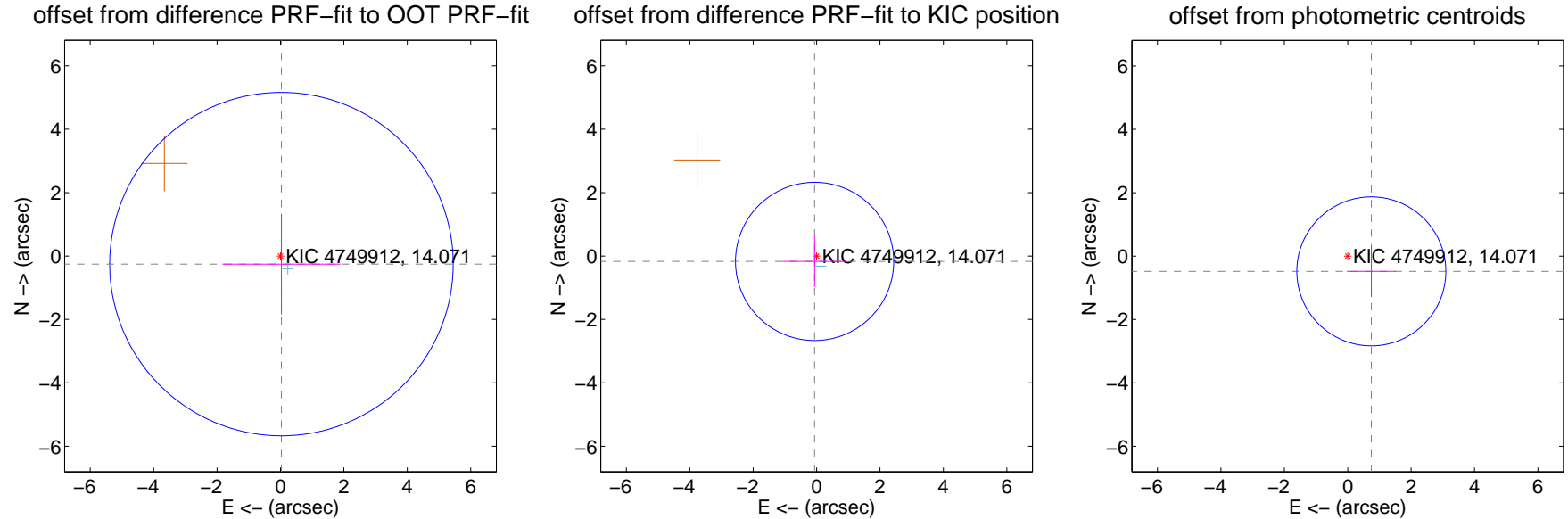
DV Centroid Data

Supplemental centroid analysis for 004749912-01. Kepler magnitude: 14.07. Transit SNR 6.59

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.257 ± 1.805	0.14	-0.031 ± 1.865	-0.255 ± 1.591
PRF-fit source offset from KIC position	0.181 ± 0.832	0.22	0.062 ± 1.013	-0.170 ± 0.804
photometric centroid source offset	0.89 ± 0.78	1.13	-0.74 ± 0.77	-0.48 ± 0.81

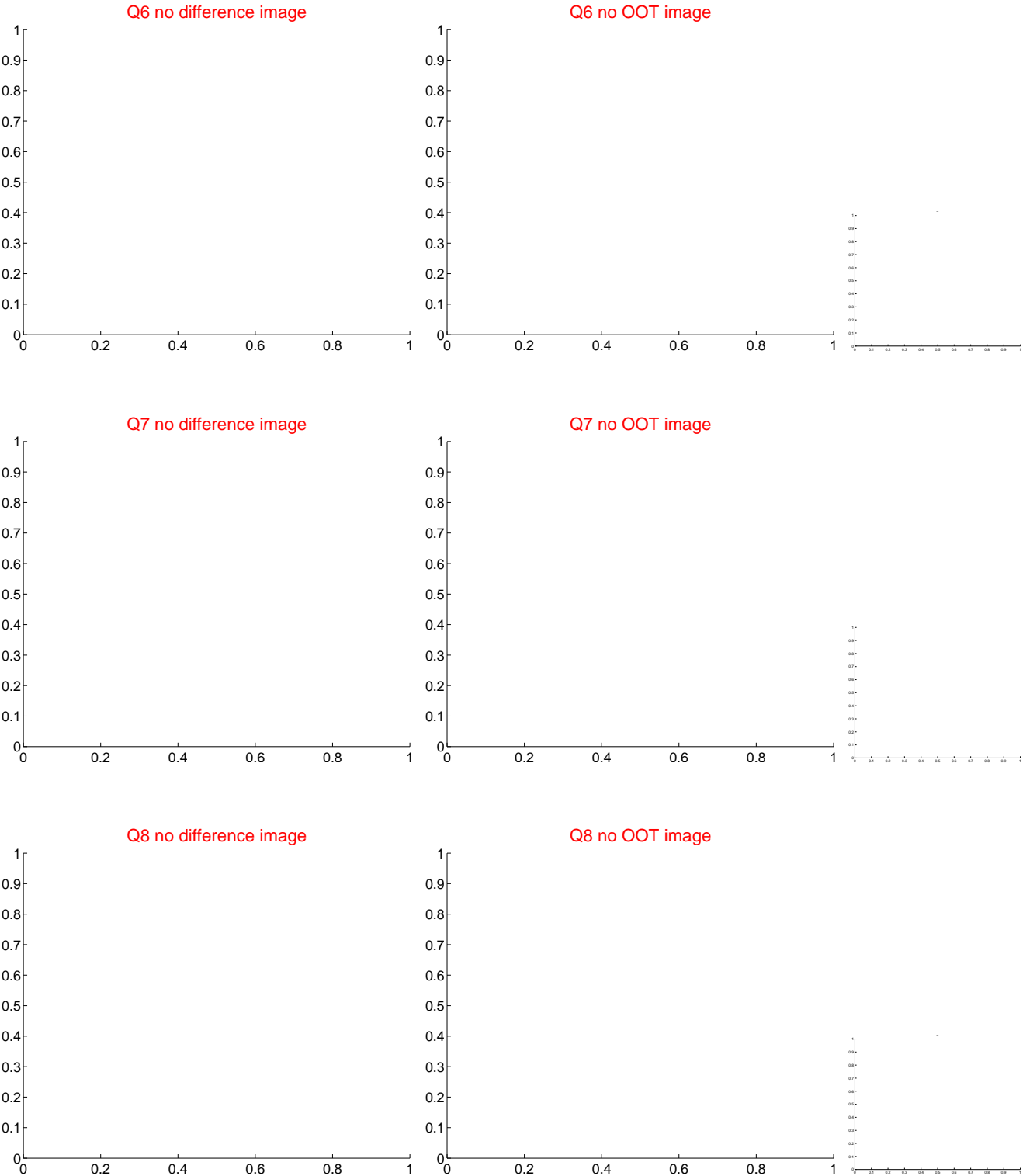
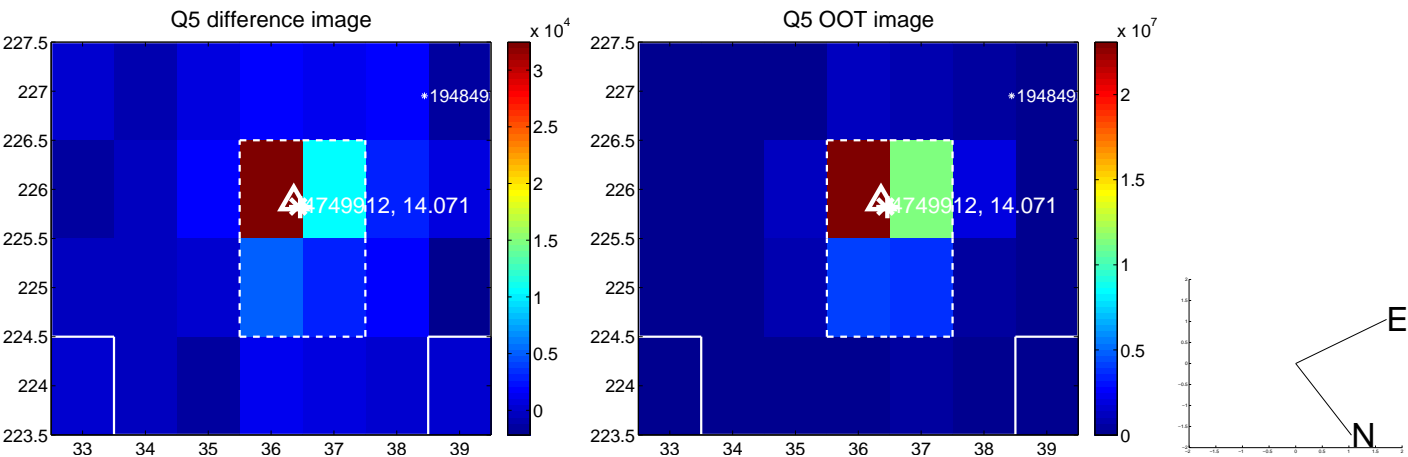


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

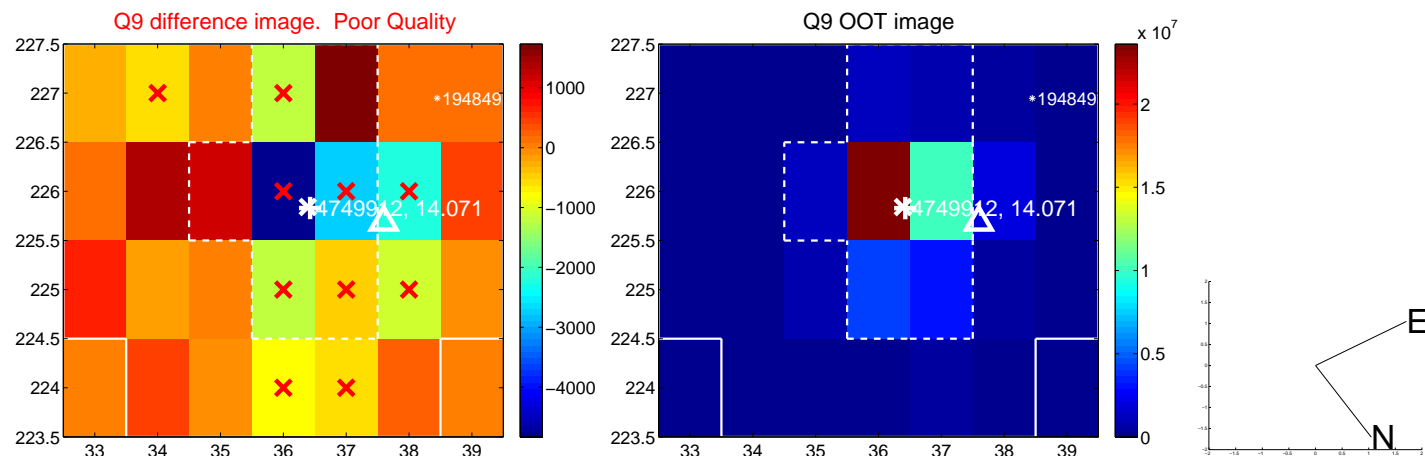
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



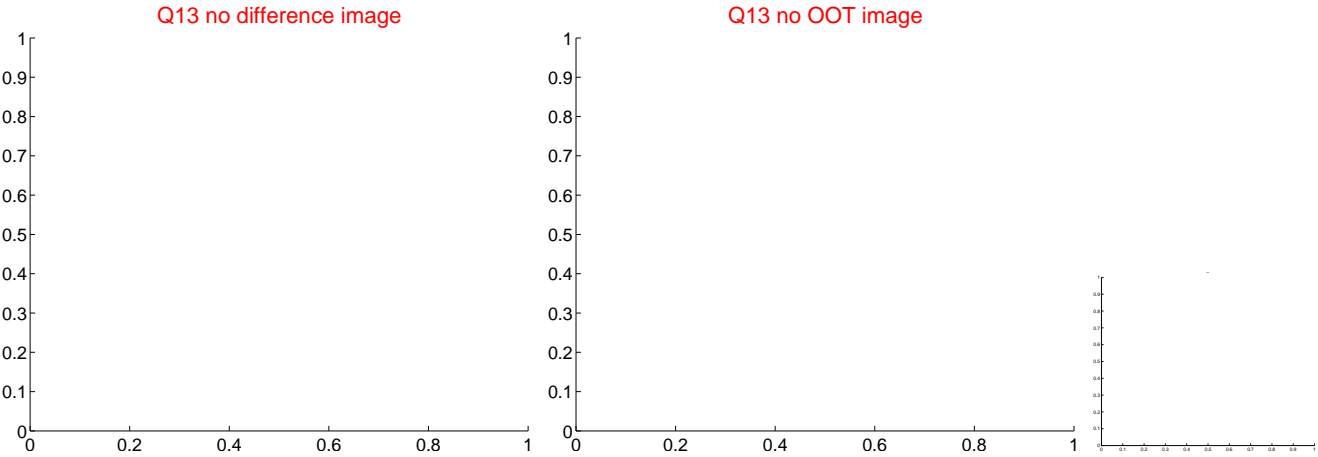
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



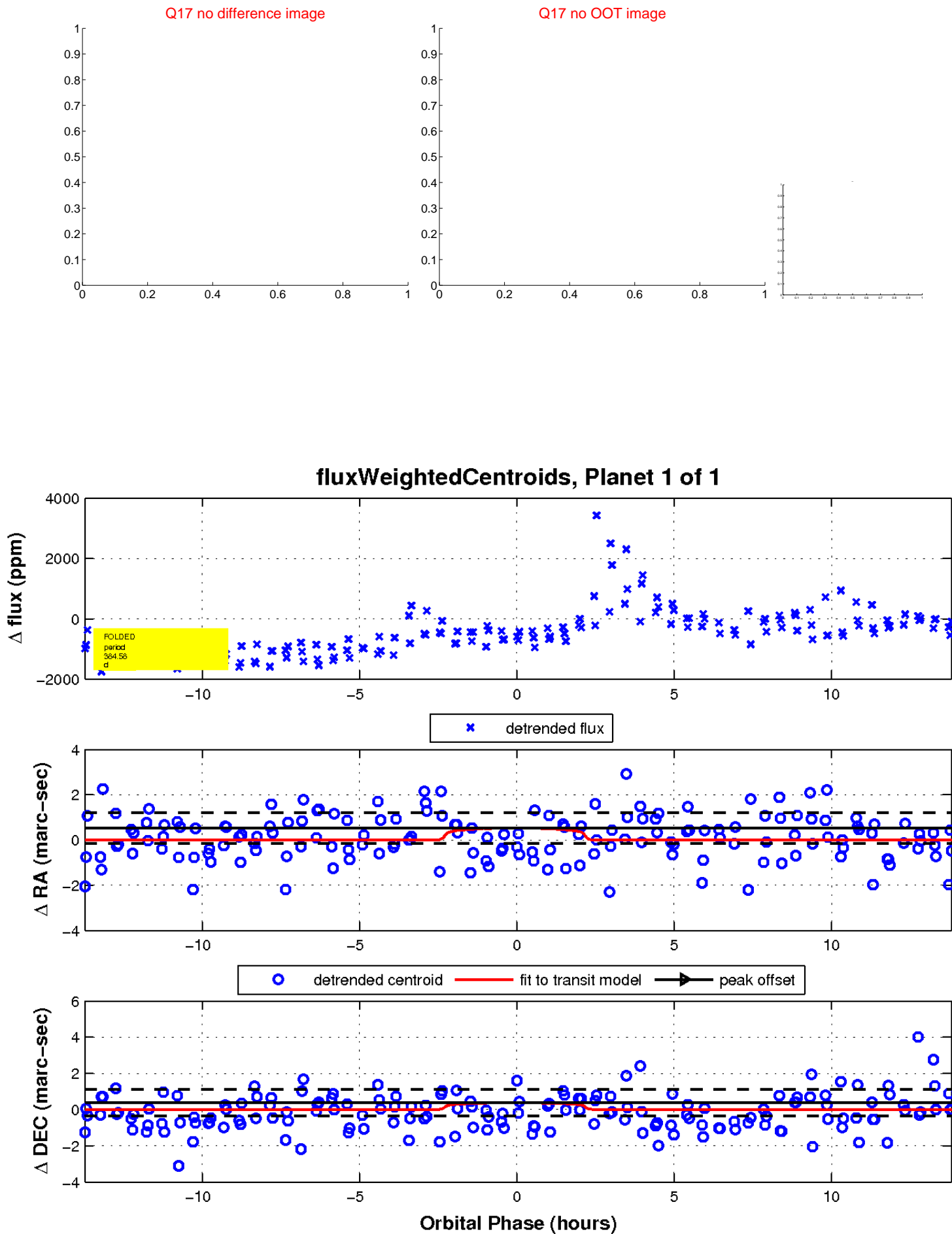
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



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



UKIRT Image

Declination

