

KIC 010599933

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})
010599933-01	OBS	No	298.030441	284.820119	541.3	8.637	7.9	7.6	0.66	4376	1.84	0.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010599933-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

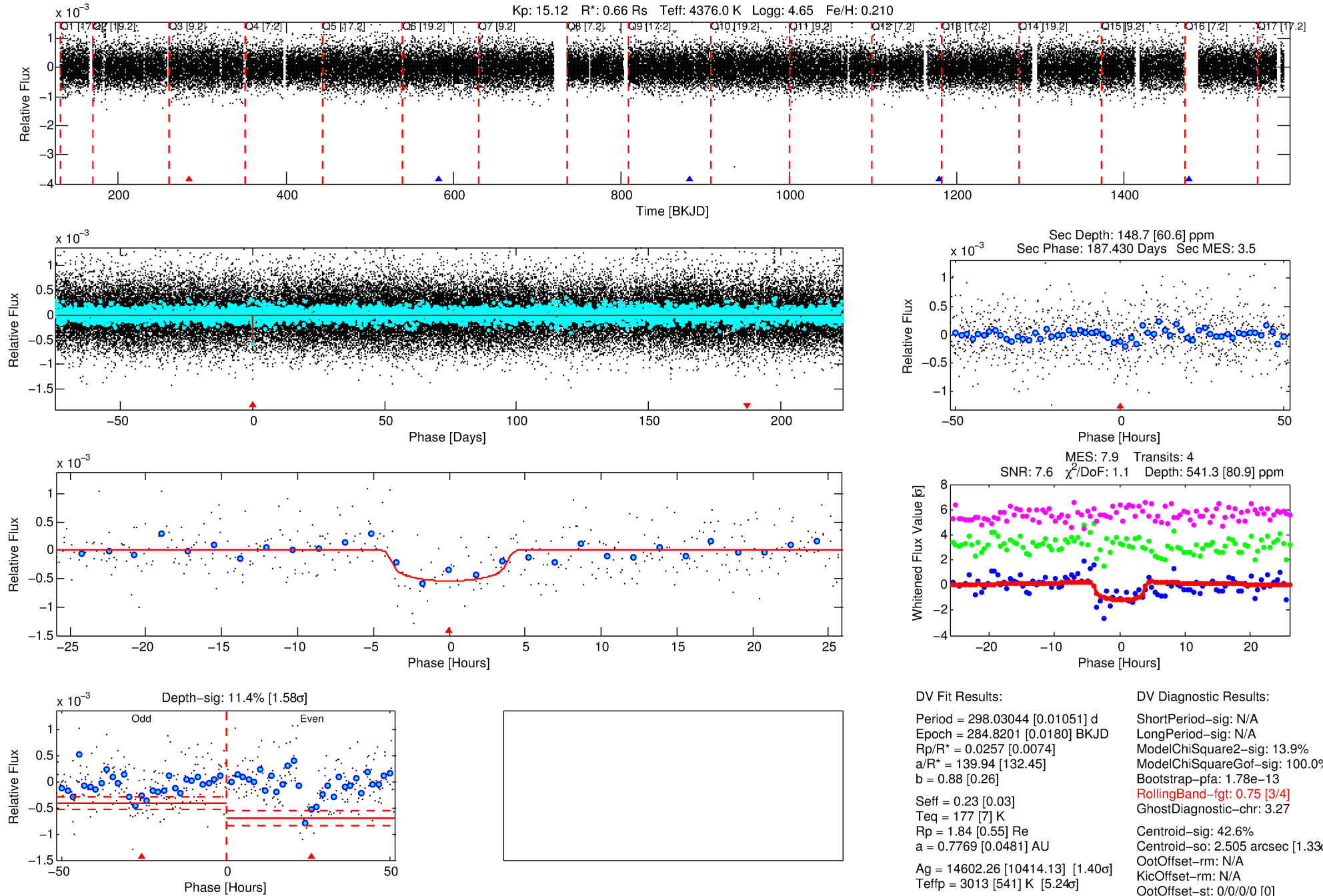
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010599933-01

No Significant Match Found

DV One-Page Summary

KIC: 10599933 Candidate: 1 of 1 Period: 298.030 d



DV Fit Results:

Period = 298.03044 [0.01051] d
Epoch = 284.8201 [0.0180] BKJD
Rp/R* = 0.0257 [0.0074]
a/R* = 139.94 [132.45]
b = 0.88 [0.26]
Seff = 0.23 [0.03]
Teq = 177 [7] K
Rp = 1.84 [0.55] Re
a = 0.7769 [0.0481] AU
Ag = 14602.26 [10414.13] [1.40 σ]
Teffp = 3013 [541] K [5.24 σ]

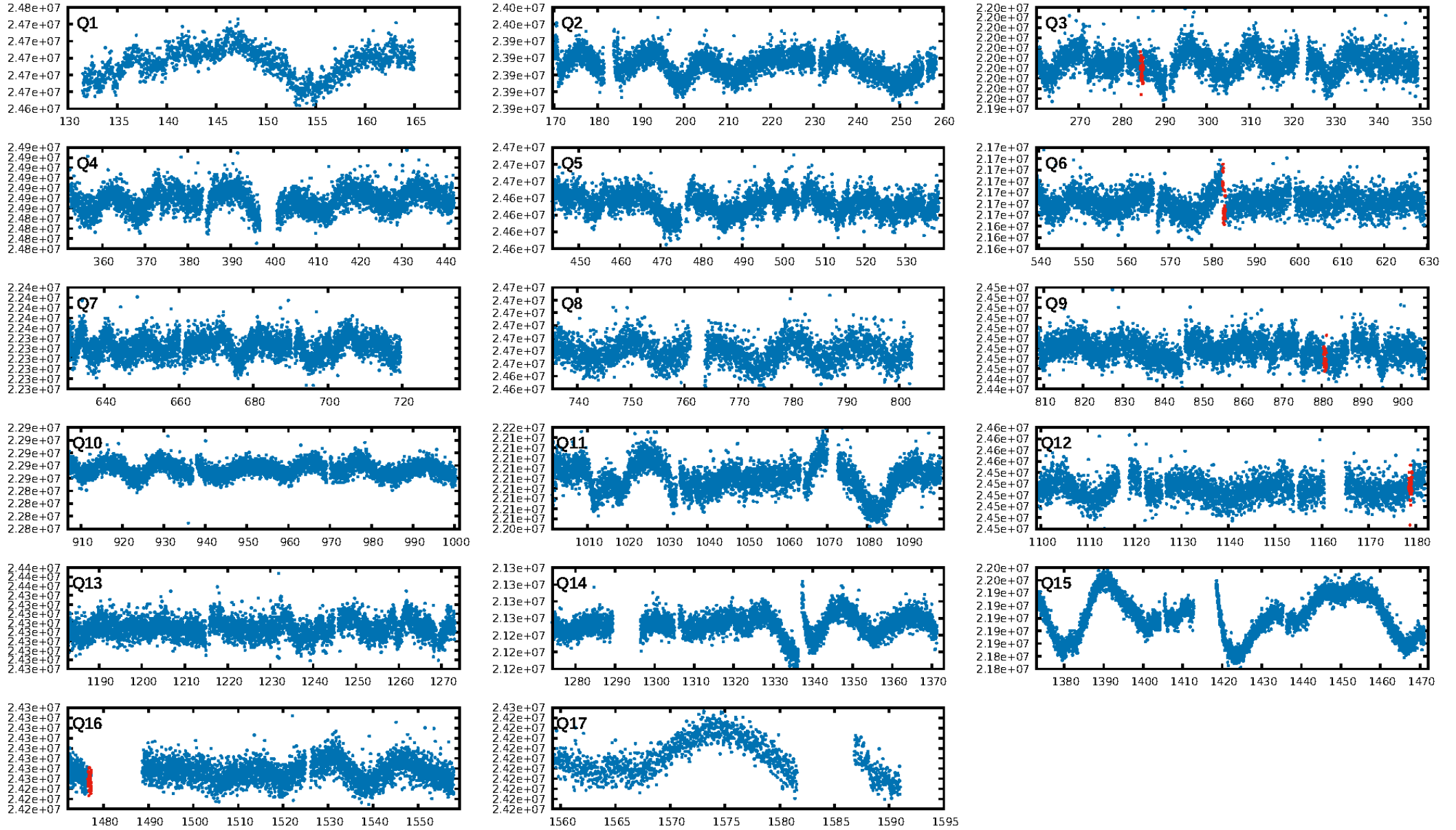
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 13.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.78e-13
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 3.27
Centroid-sig: 42.6%
Centroid-so: 2.505 arcsec [1.33 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [3/3]

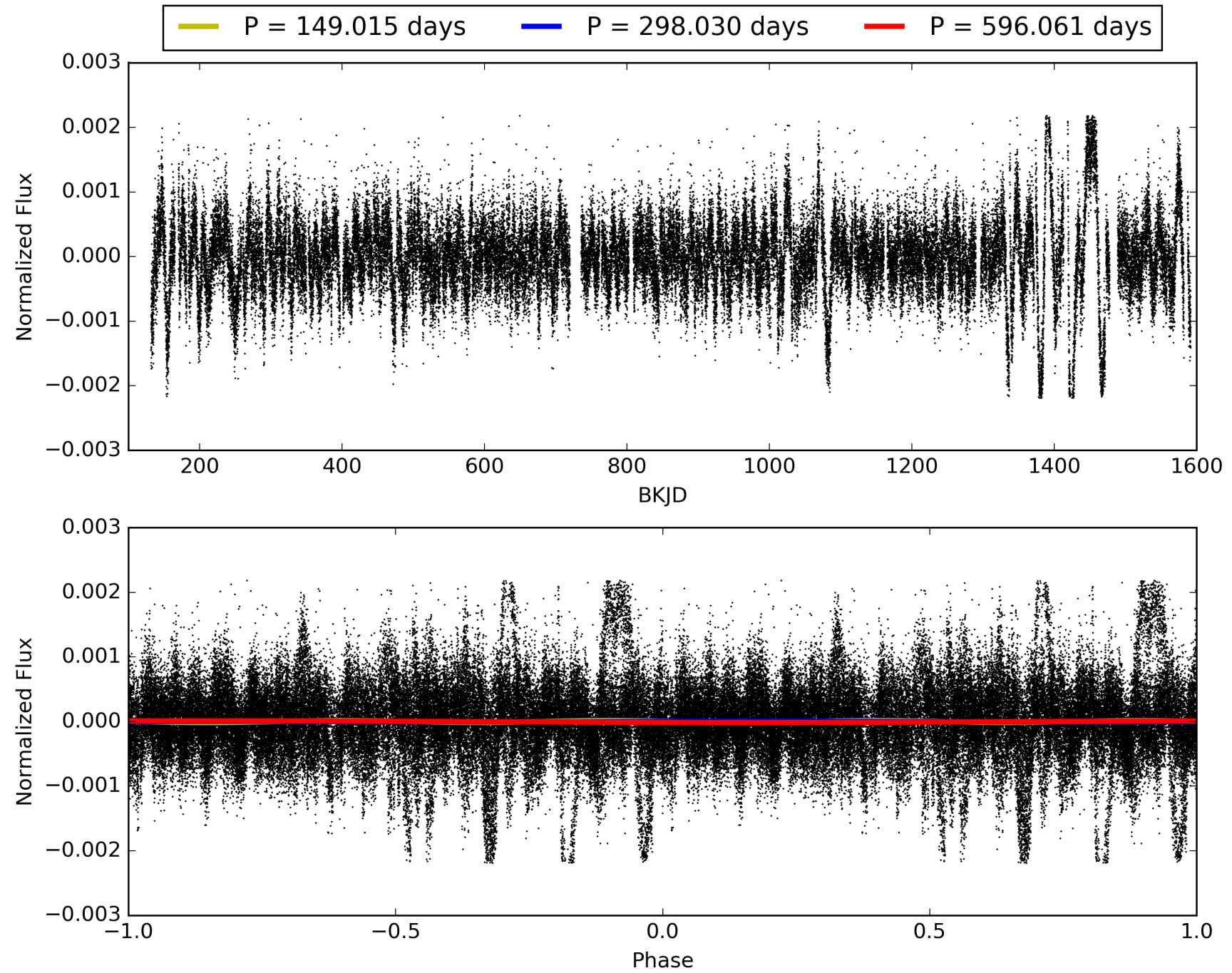
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:54:55 Z

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

TCE 010599933-01, PDC Light Curves

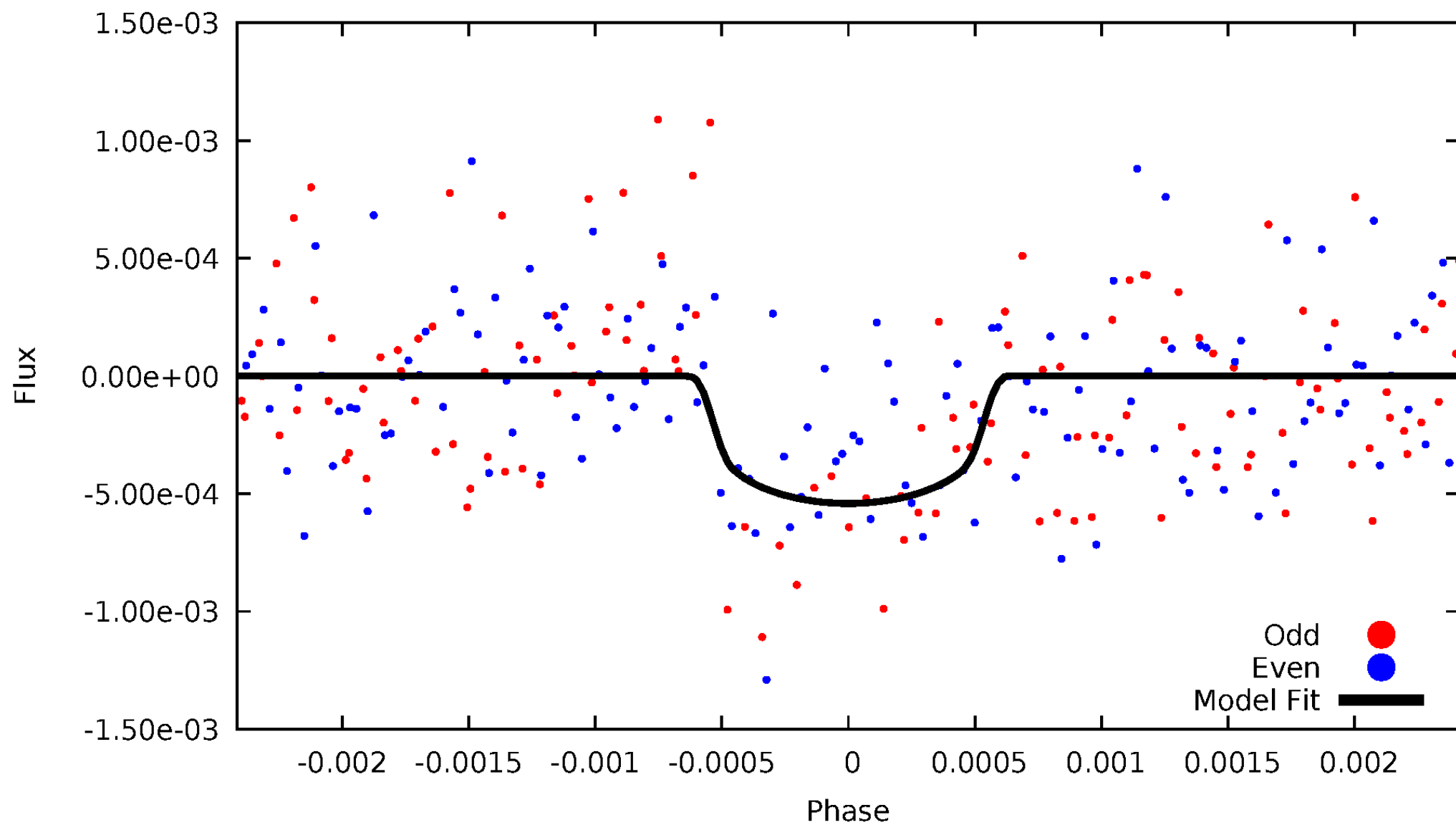


TCE 010599933-01



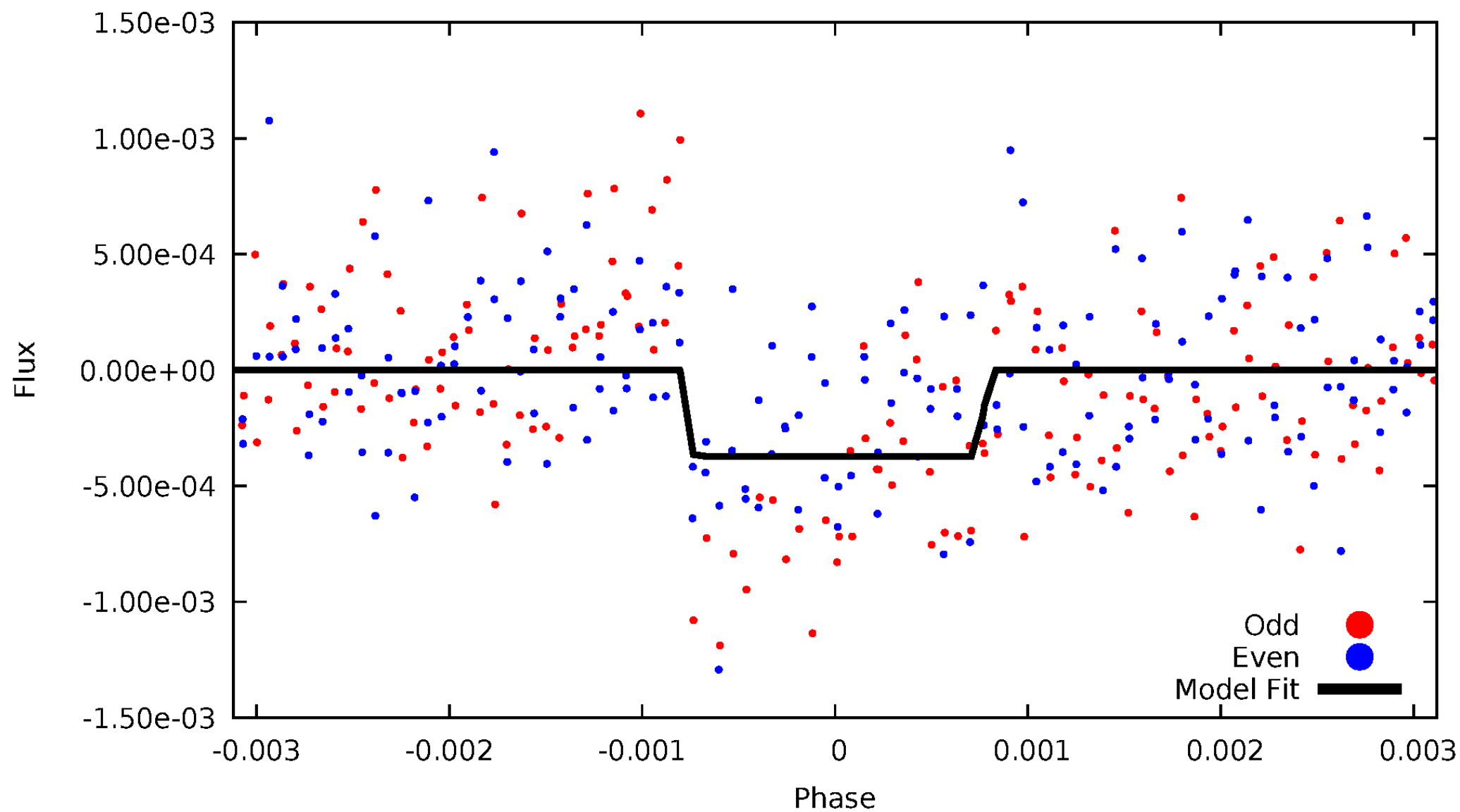
DV Odd/Even

TCE 010599933-01



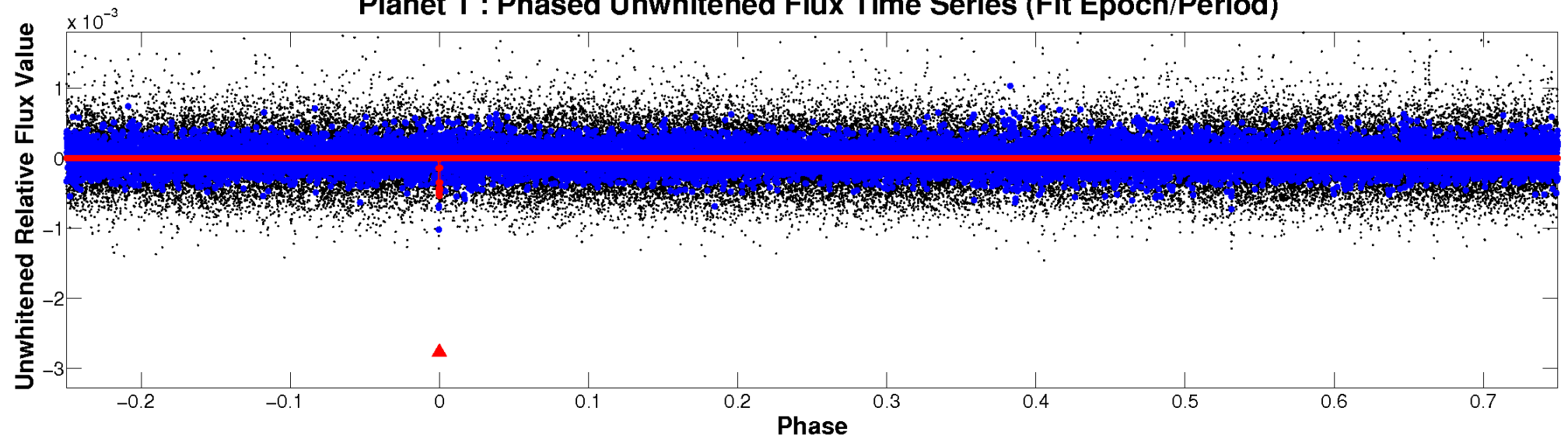
ALT Odd/Even

TCE 010599933-01

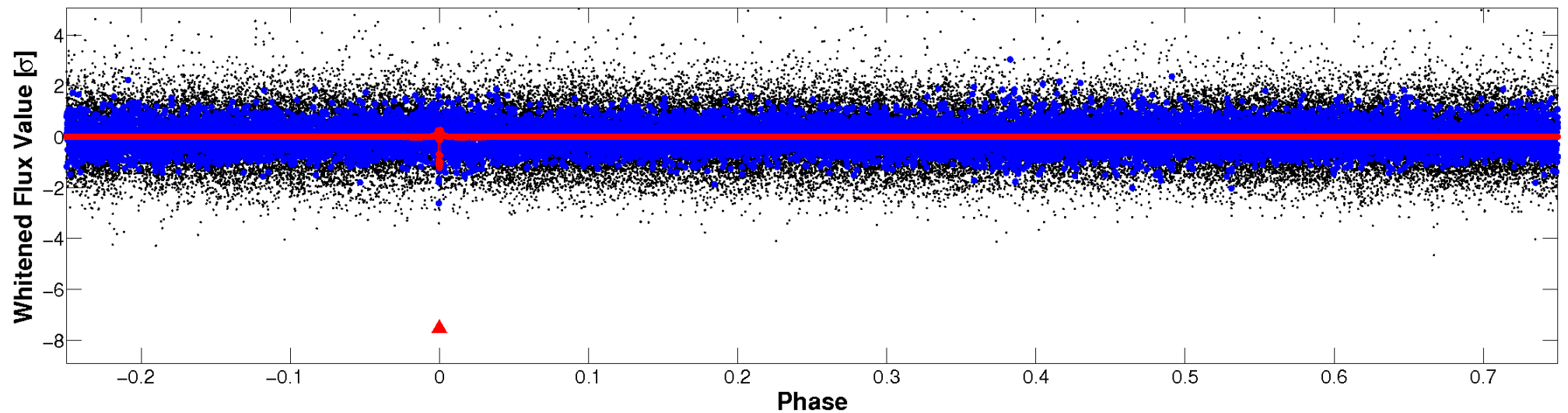


Non-Whitened Vs. Whitened Light Curve

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

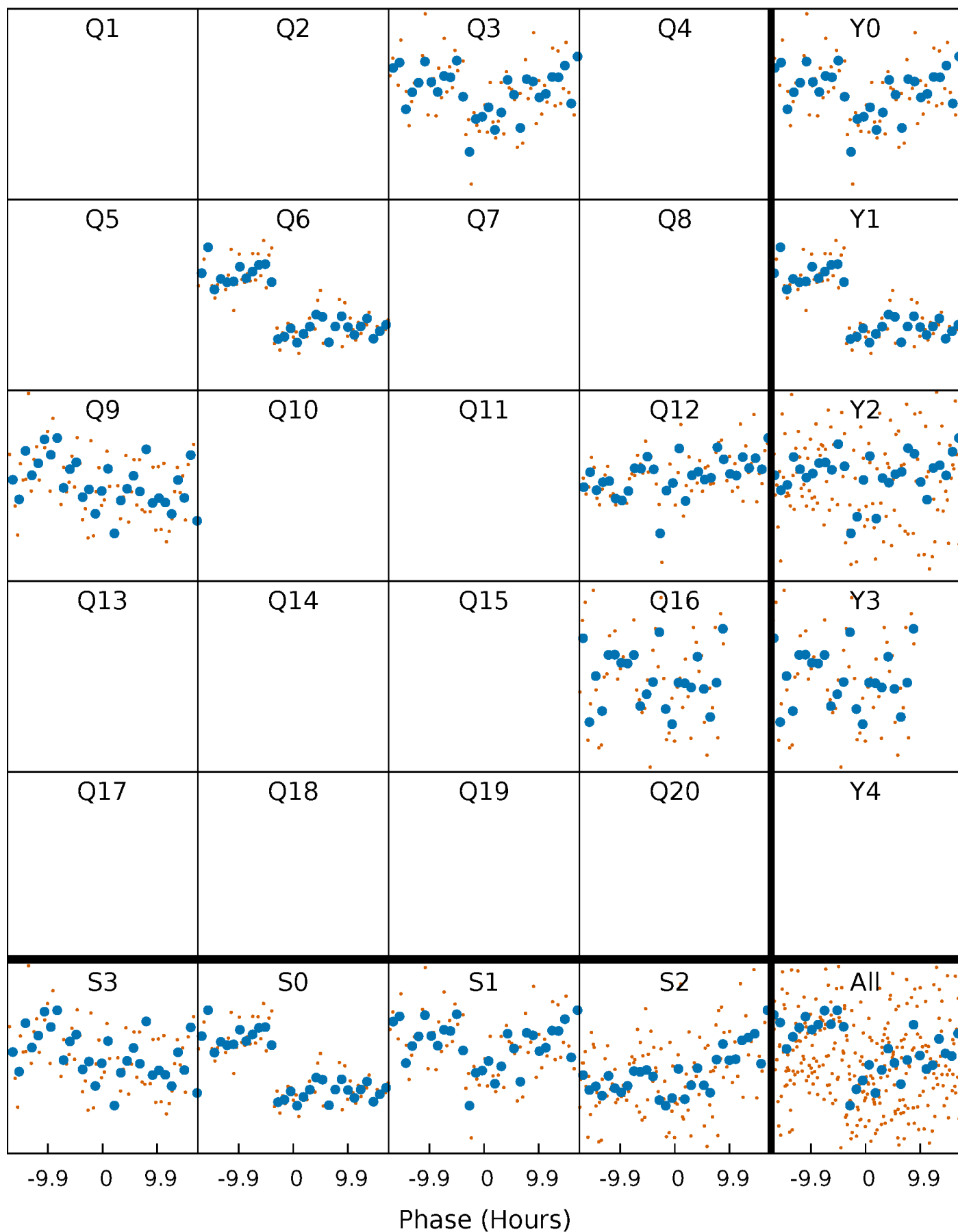


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



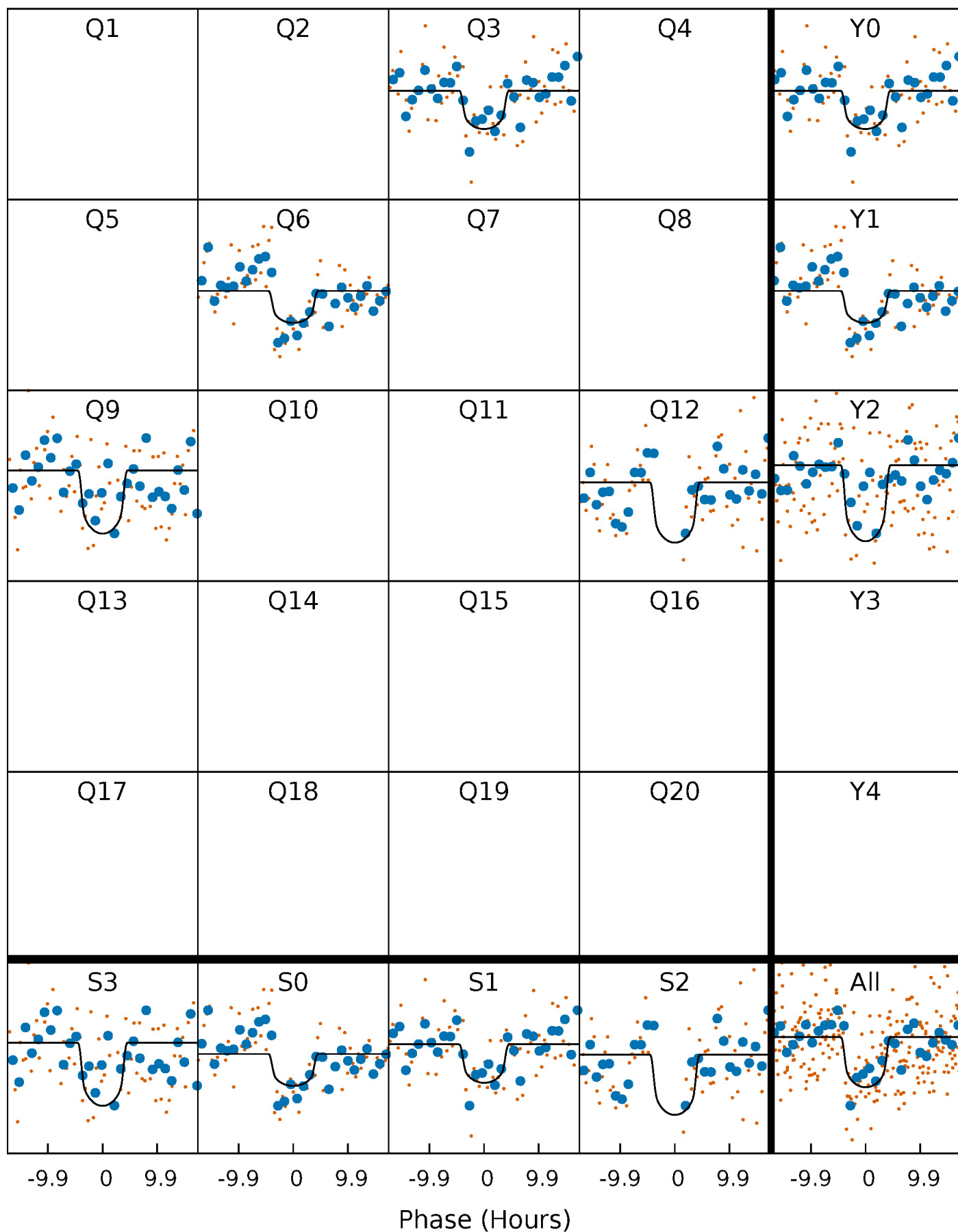
PDC Quarter-Phased Transit Curves

TCE 010599933-01 P=298.030441 Days $T_0=284.820119$ (BKJD)



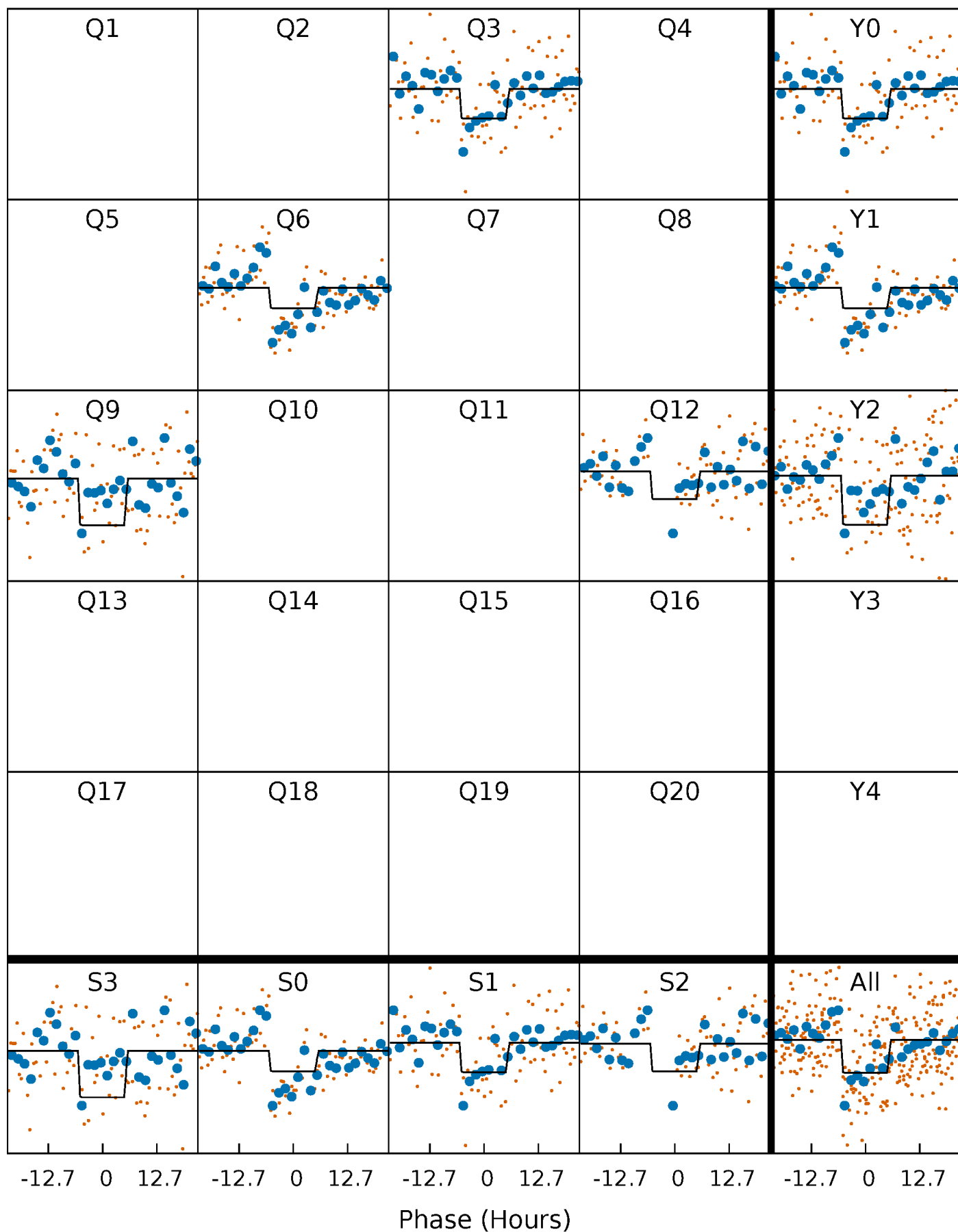
DV Quarter-Phased Transit Curves

TCE 010599933-01 P=298.030441 Days $T_0=284.820119$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

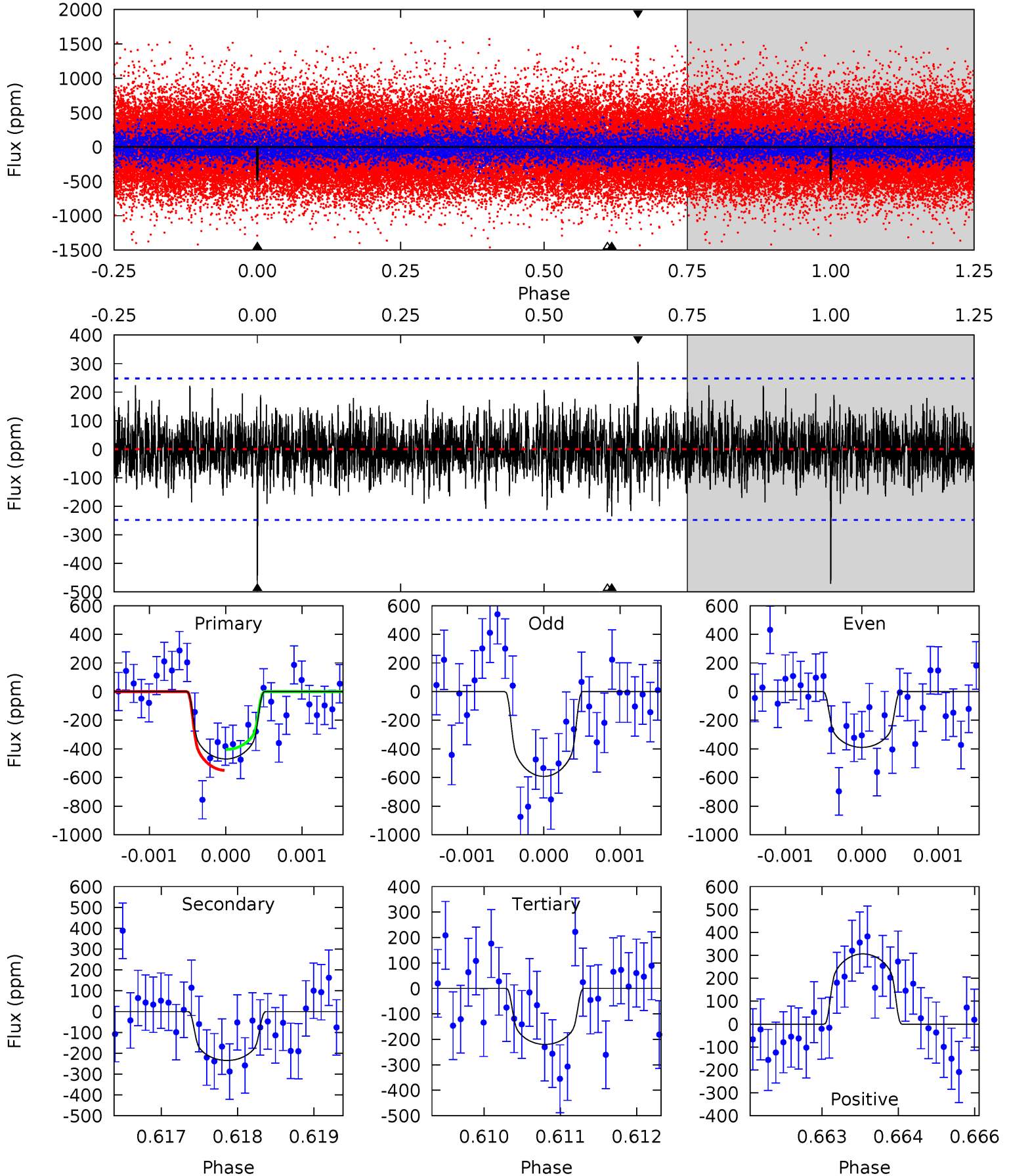
TCE 010599933-01 P=298.023473 Days $T_0=284.903445$ (BKJD)



DV Model-Shift Uniqueness Test

010599933-01, P = 298.030441 Days, E = 284.820119 Days

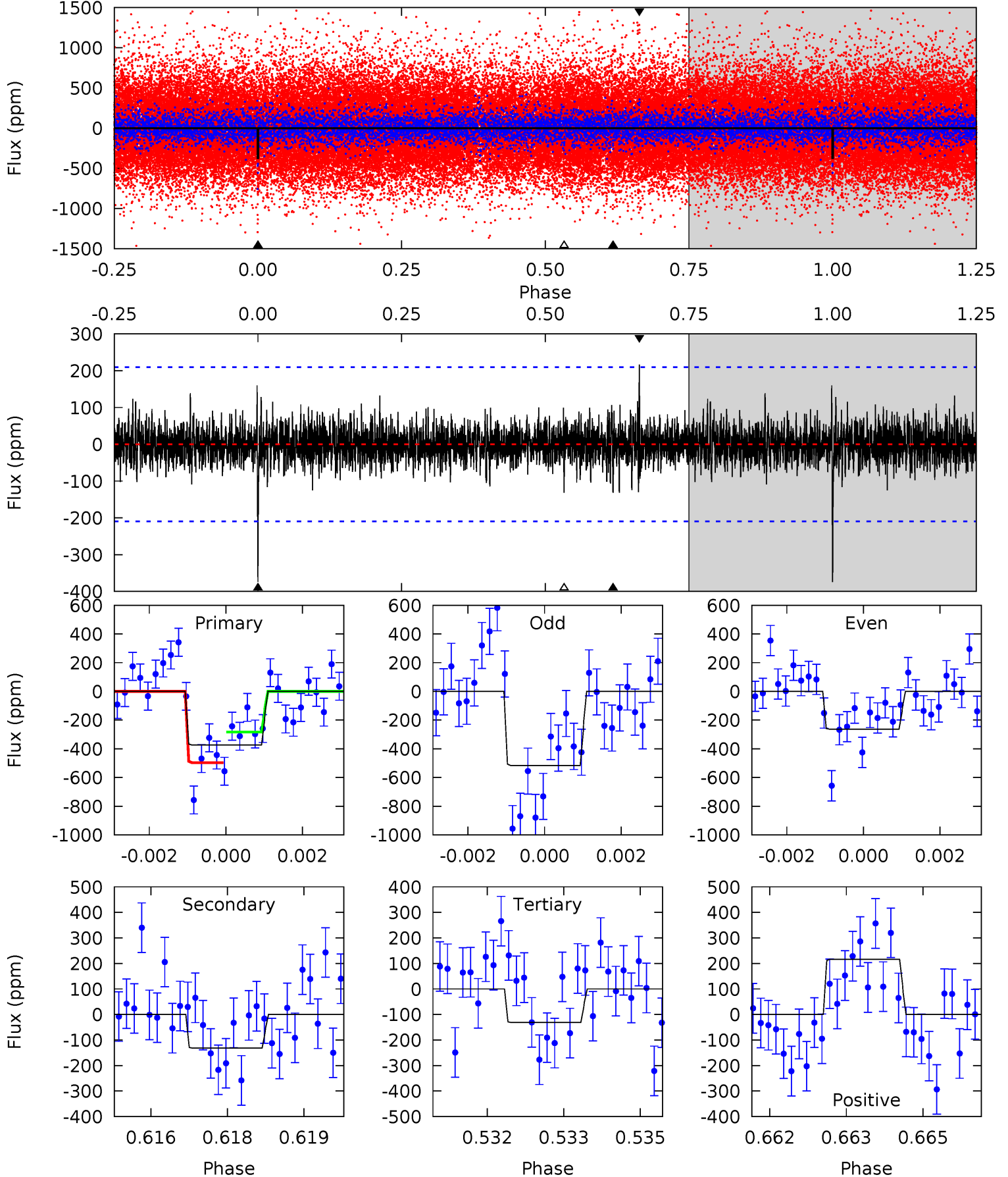
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	5.12	4.80	6.69	5.41	3.23	1.39	5.47	3.59	0.32	-1.56	2.18	1.10	0.39	1.58



Alt Model-Shift Uniqueness Test

010599933-01, P = 298.023473 Days, E = 284.903445 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.59	3.38	3.37	5.54	5.38	3.17	0.90	6.22	4.05	0.01	-2.16	3.22	1.09	0.37	2.70



Stellar Parameters For KIC 010599933

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4376^{+132}_{-132}	$4.653^{+0.021}_{-0.046}$	$0.210^{+0.200}_{-0.300}$	$0.655^{+0.050}_{-0.038}$	$0.723^{+0.032}_{-0.064}$	$3.622^{+0.368}_{-0.637}$
	+3%/-3%	+0%/-1%	+95%/-143%	+8%/-6%	+4%/-9%	+10%/-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 010599933-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-235 ± 46	$1.86^{+0.57}_{-0.56}$	250^{+9}_{-8}	3654^{+505}_{-313}	22398^{+24215}_{-9557}
Alt.	-132 ± 39	$1.38^{+0.56}_{-0.51}$	249^{+9}_{-8}	3649^{+665}_{-410}	22300^{+32554}_{-11238}

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

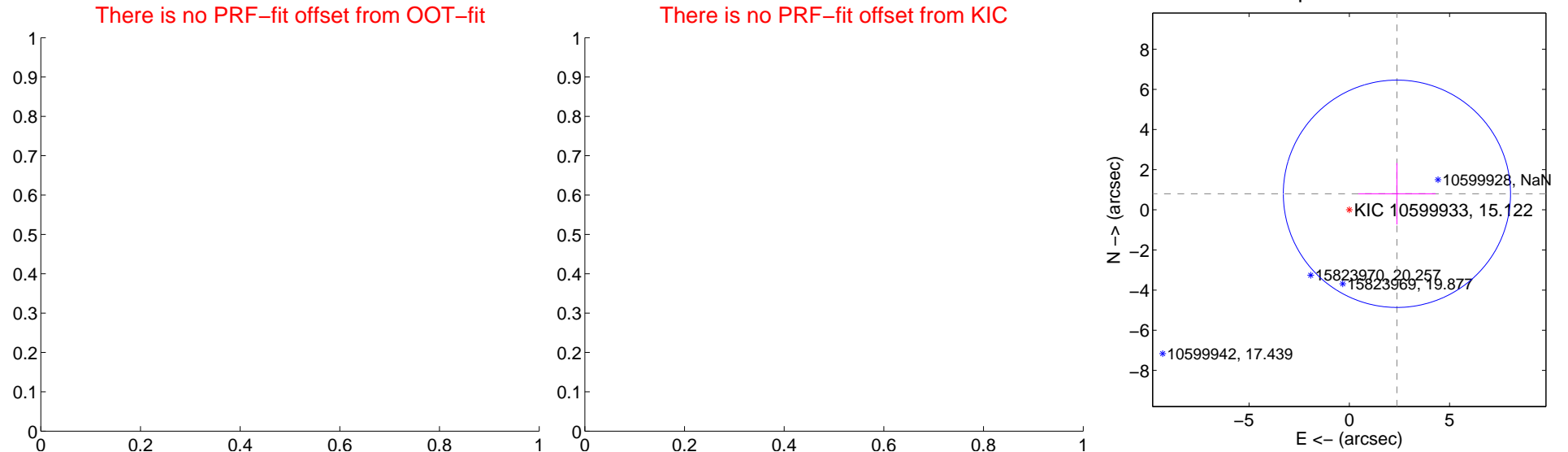
DV Centroid Data

Supplemental centroid analysis for 010599933-01. Kepler magnitude: 15.12. Transit SNR 7.62

There are 0 quarters with good PRF difference image offsets

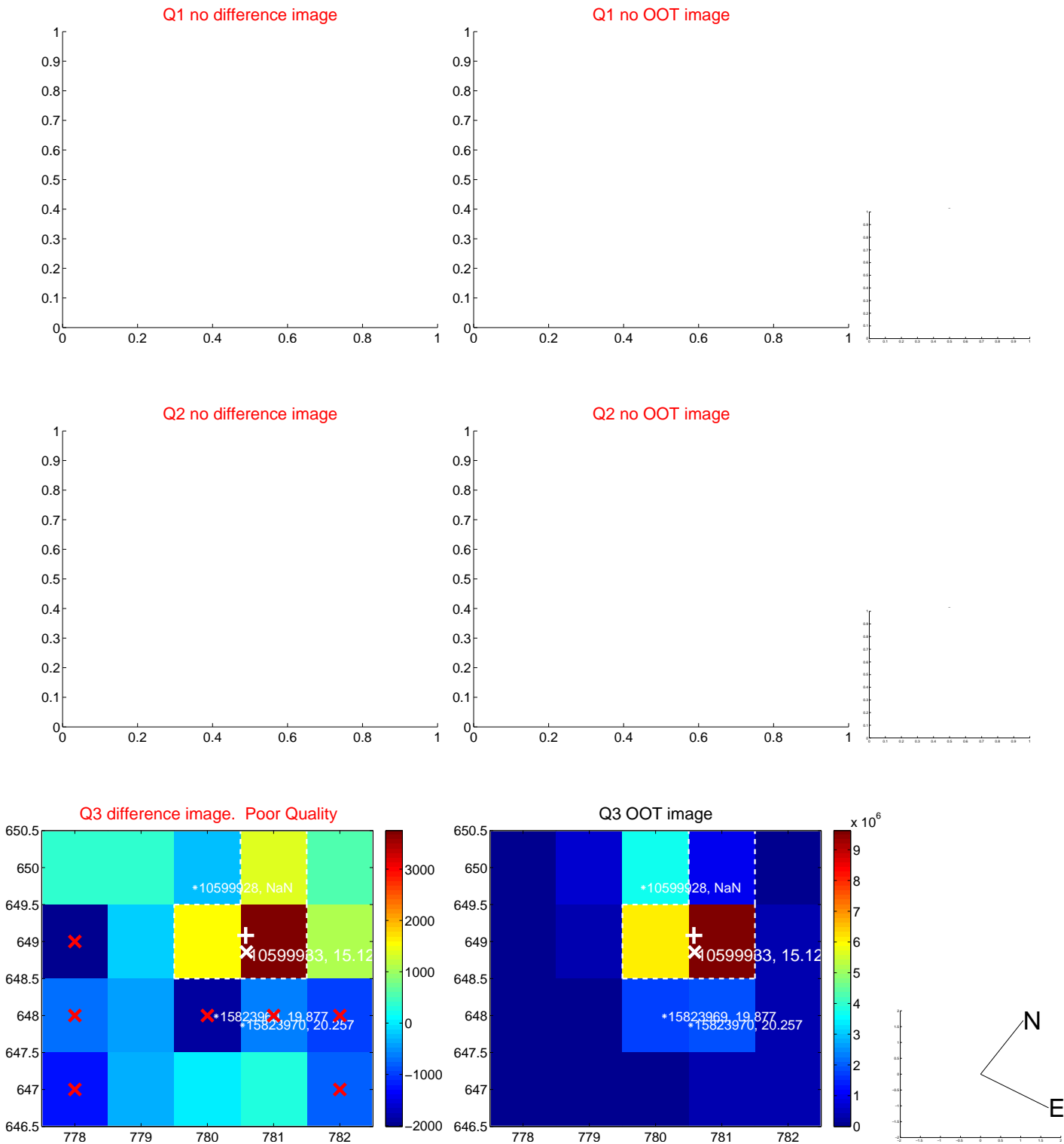
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.51 ± 1.89	1.33	-2.37 ± 1.92	0.80 ± 1.53

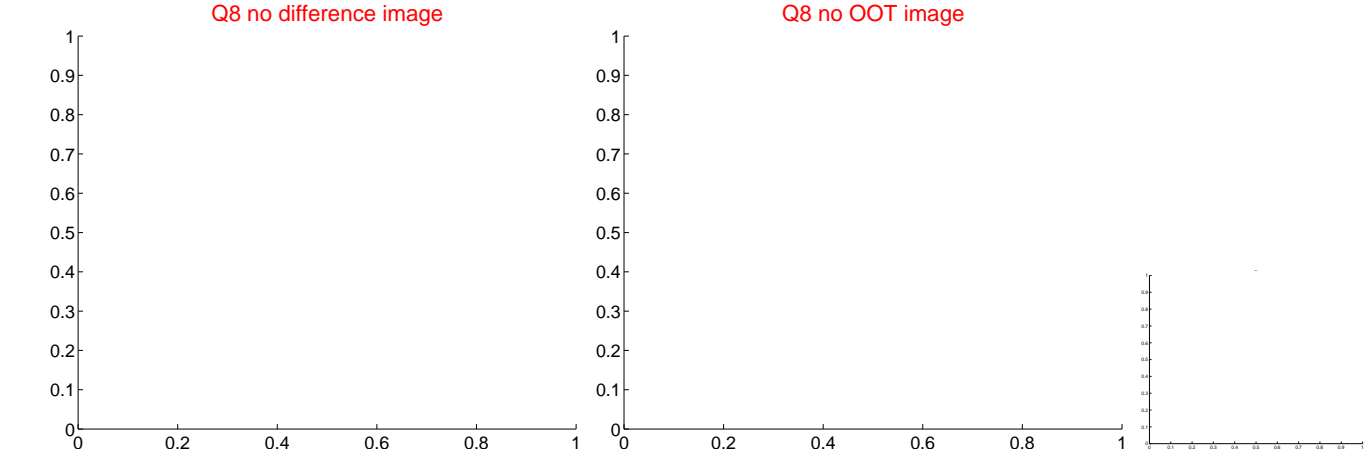
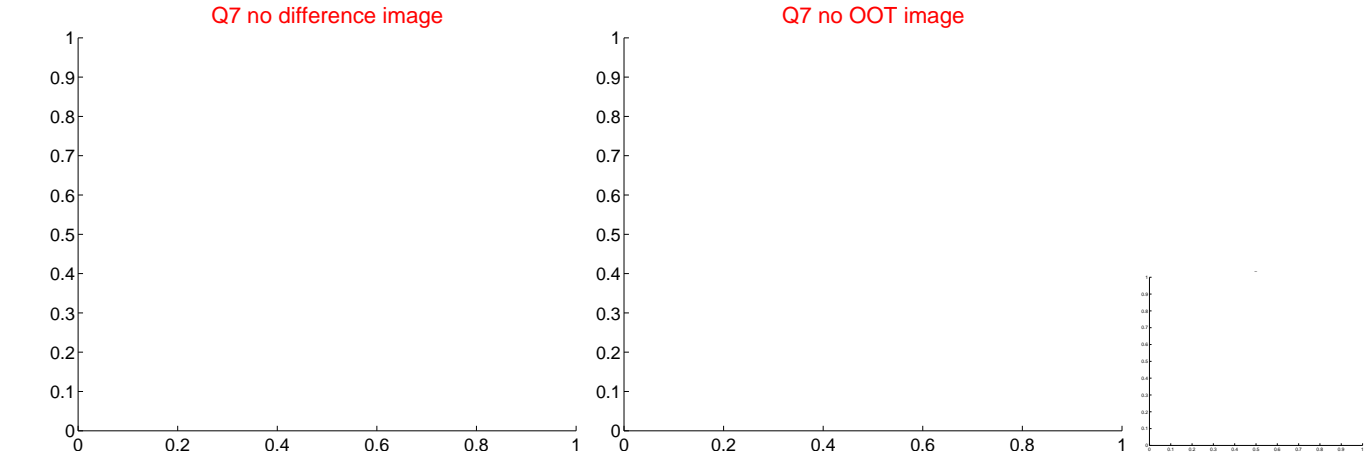
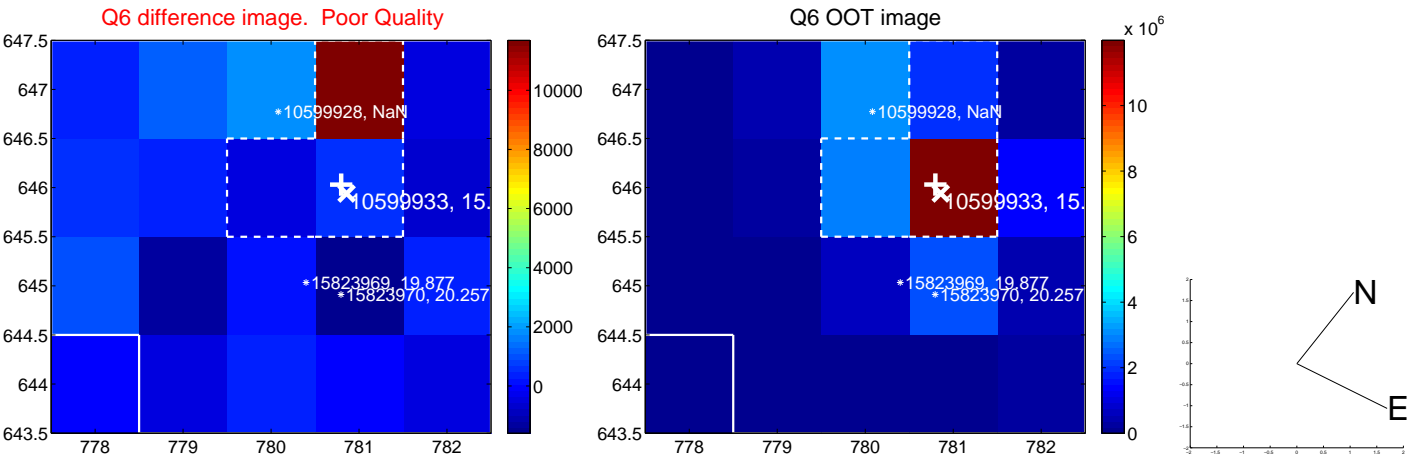
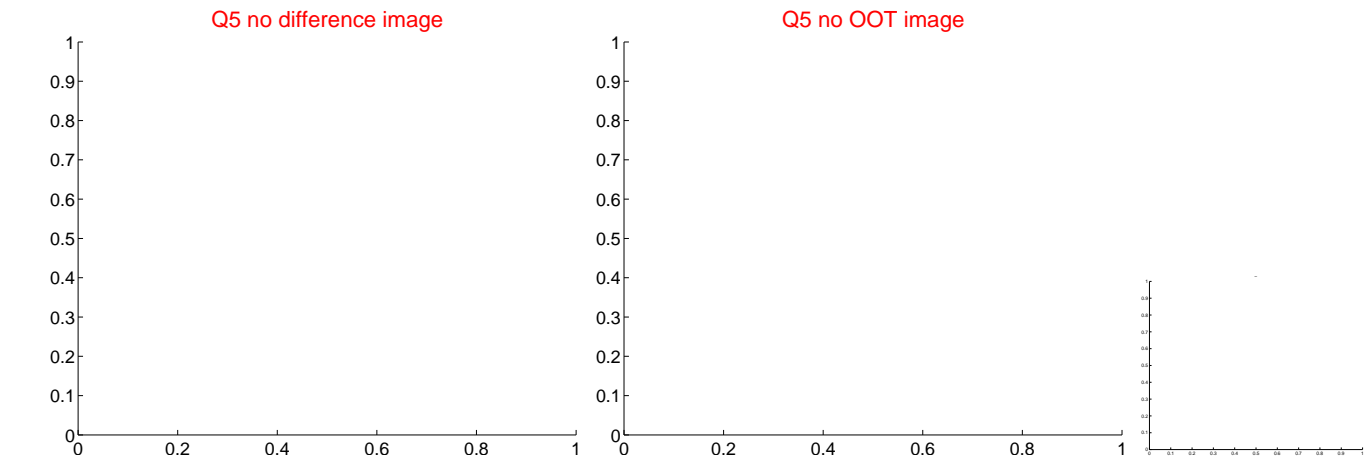


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

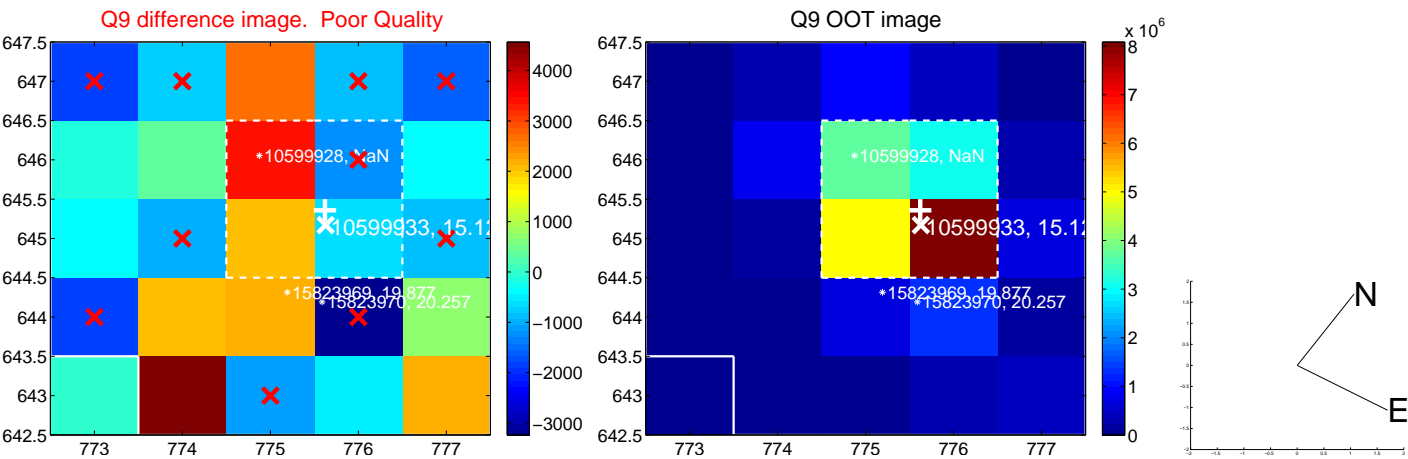
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



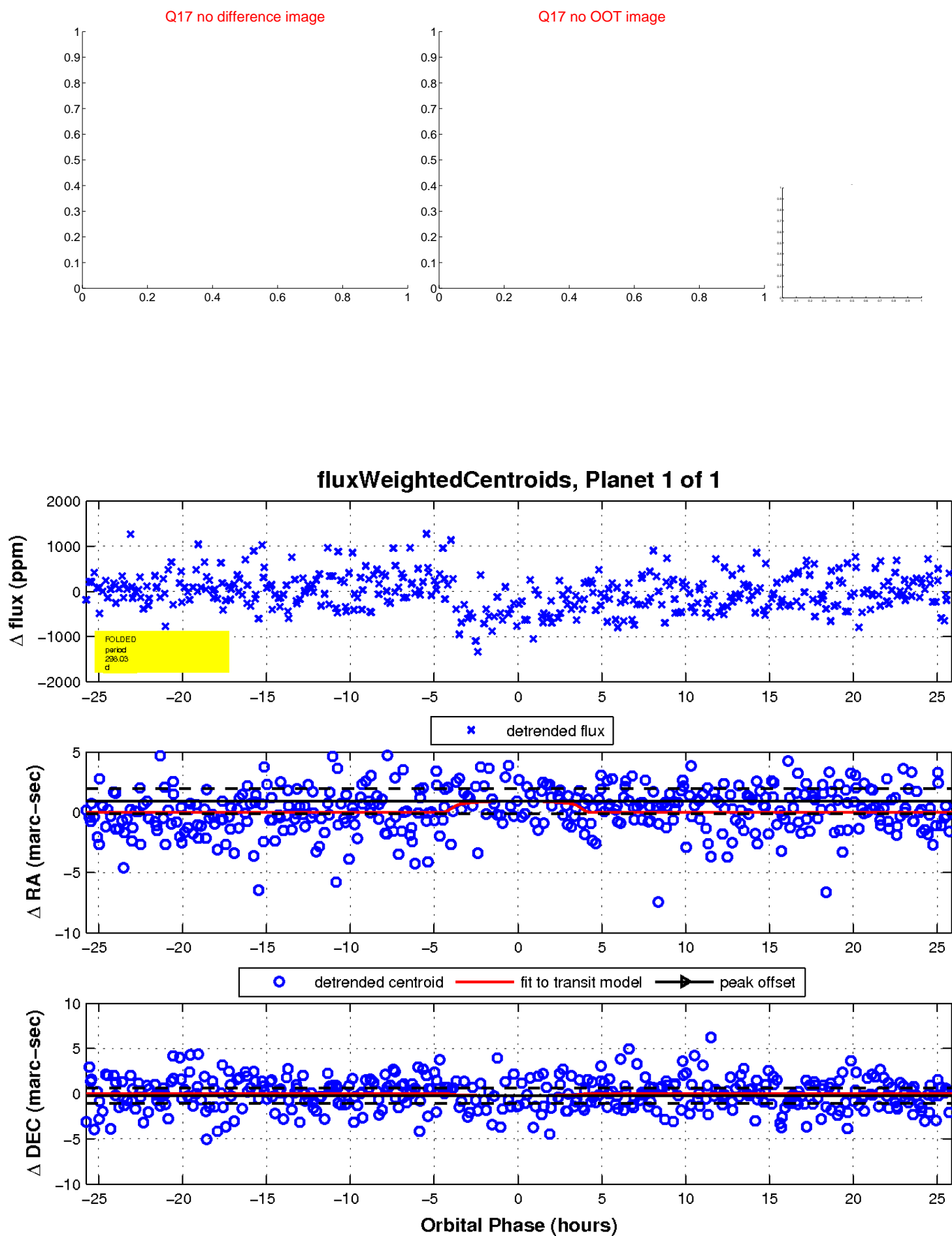
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

