

KIC 010599193

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})
010599193-02	OBS	No	479.685311	469.720065	121.6	16.194	7.8	7.5	1.06	6202	1.30	0.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010599193-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

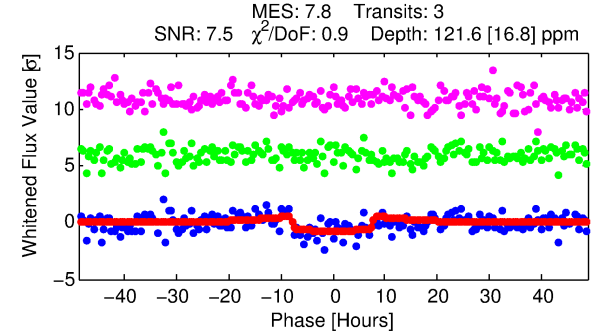
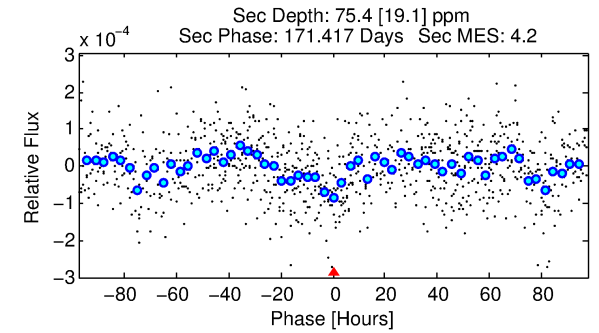
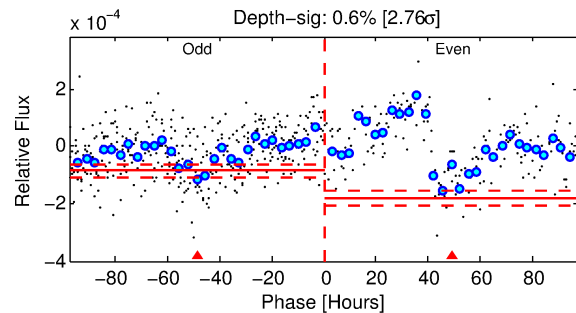
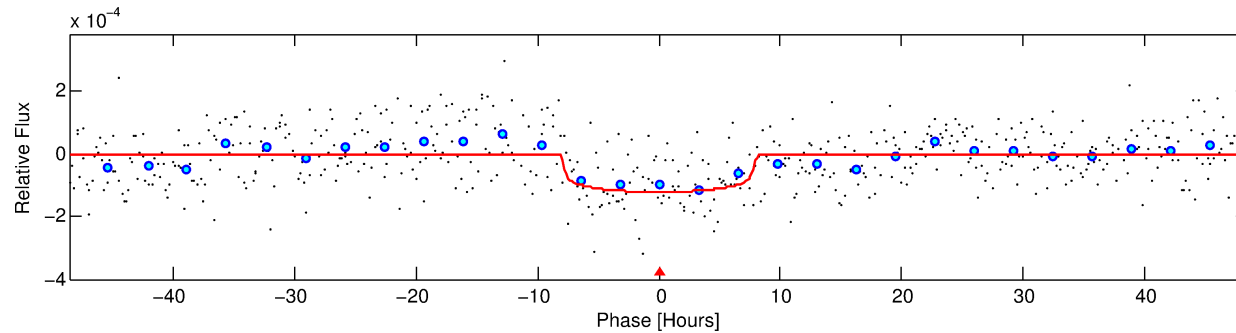
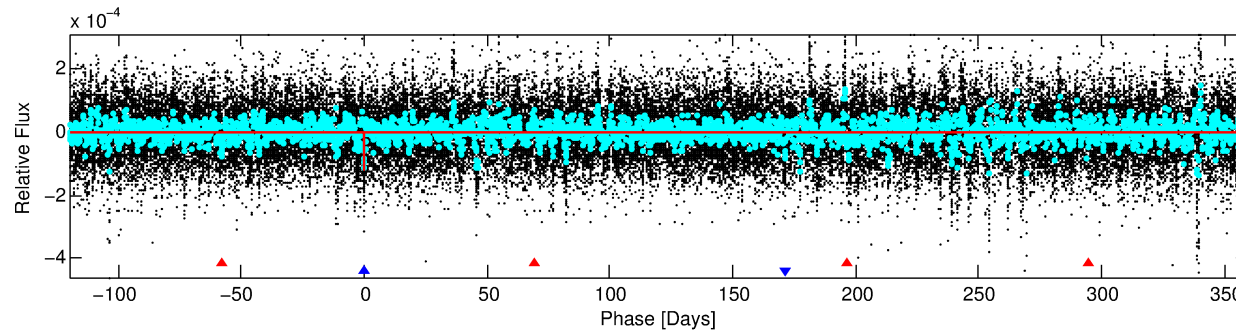
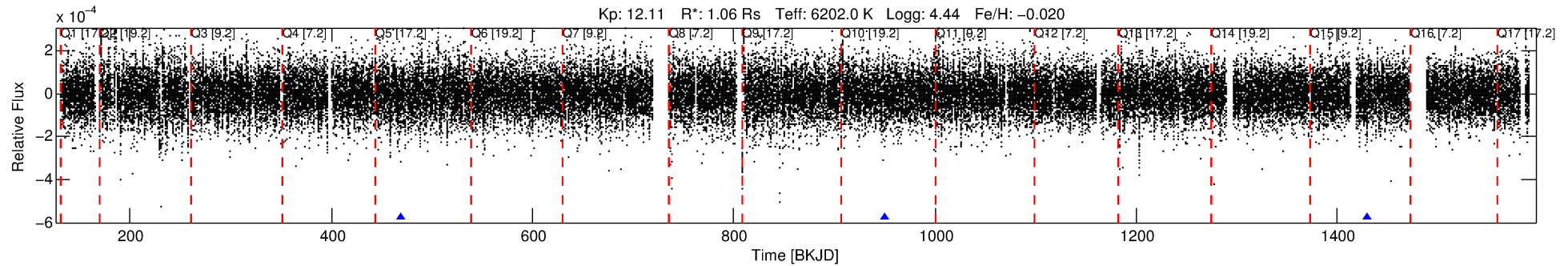
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010599193-02

No Significant Match Found

DV One-Page Summary

KIC: 10599193 Candidate: 2 of 2 Period: 479.685 d



DV Fit Results:

Period = 479.68531 [0.01392] d
Epoch = 469.7201 [0.0181] BKJD
Rp/R* = 0.0112 [0.0026]
a/R* = 136.82 [148.97]
b = 0.81 [0.47]
Seff = 0.96 [0.28]
Teq = 253 [18] K
Rp = 1.30 [0.40] Re
a = 1.2467 [0.2188] AU
Ag = 38049.58 [22124.91] [1.72 σ]
Teffp = 5453 [734] K [7.08 σ]

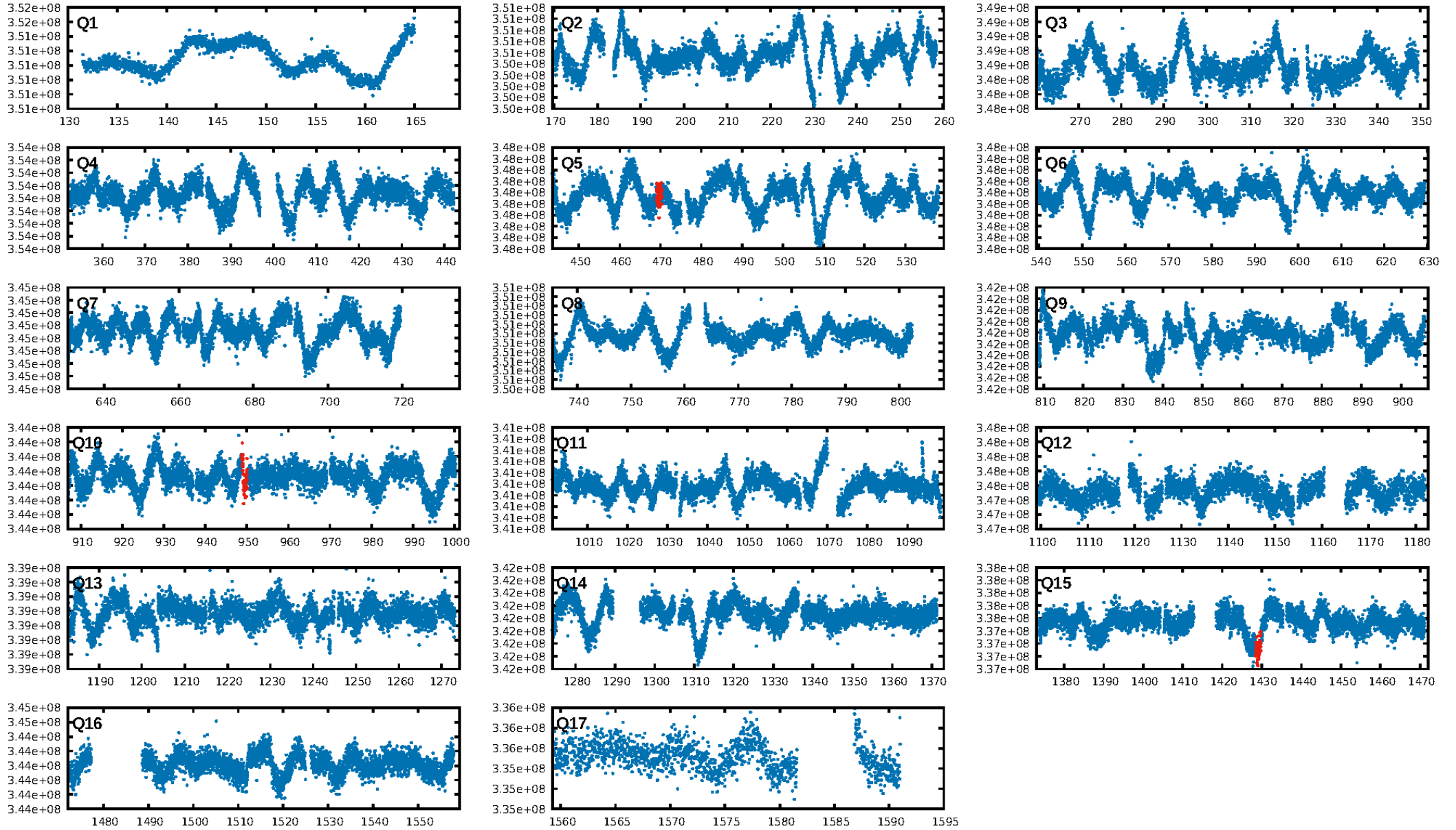
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [158.99 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.9%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.03e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.239
Centroid-sig: 0.2%
Centroid-so: 3.668 arcsec [2.38 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]

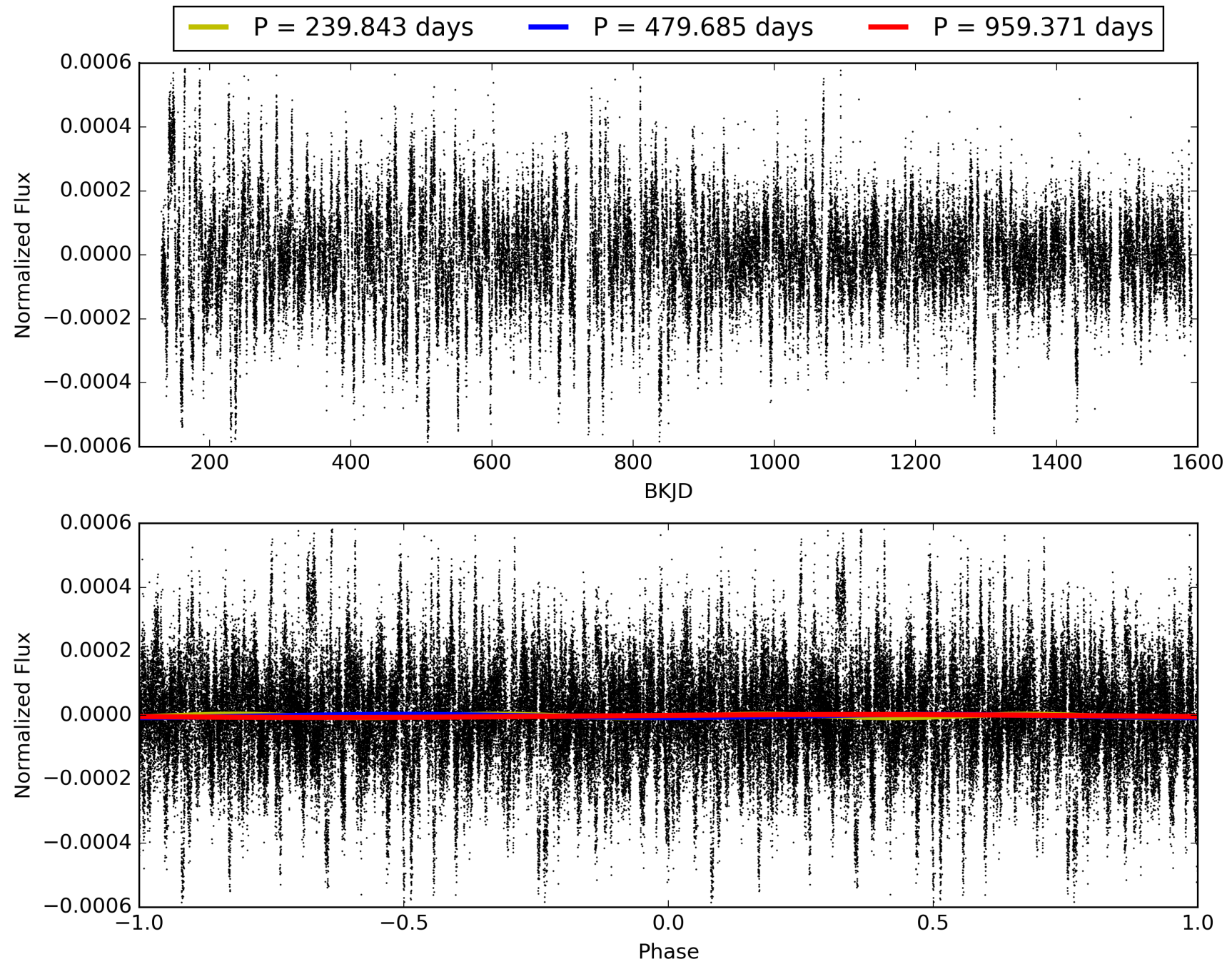
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 03:53:37 Z

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

TCE 010599193-02, PDC Light Curves

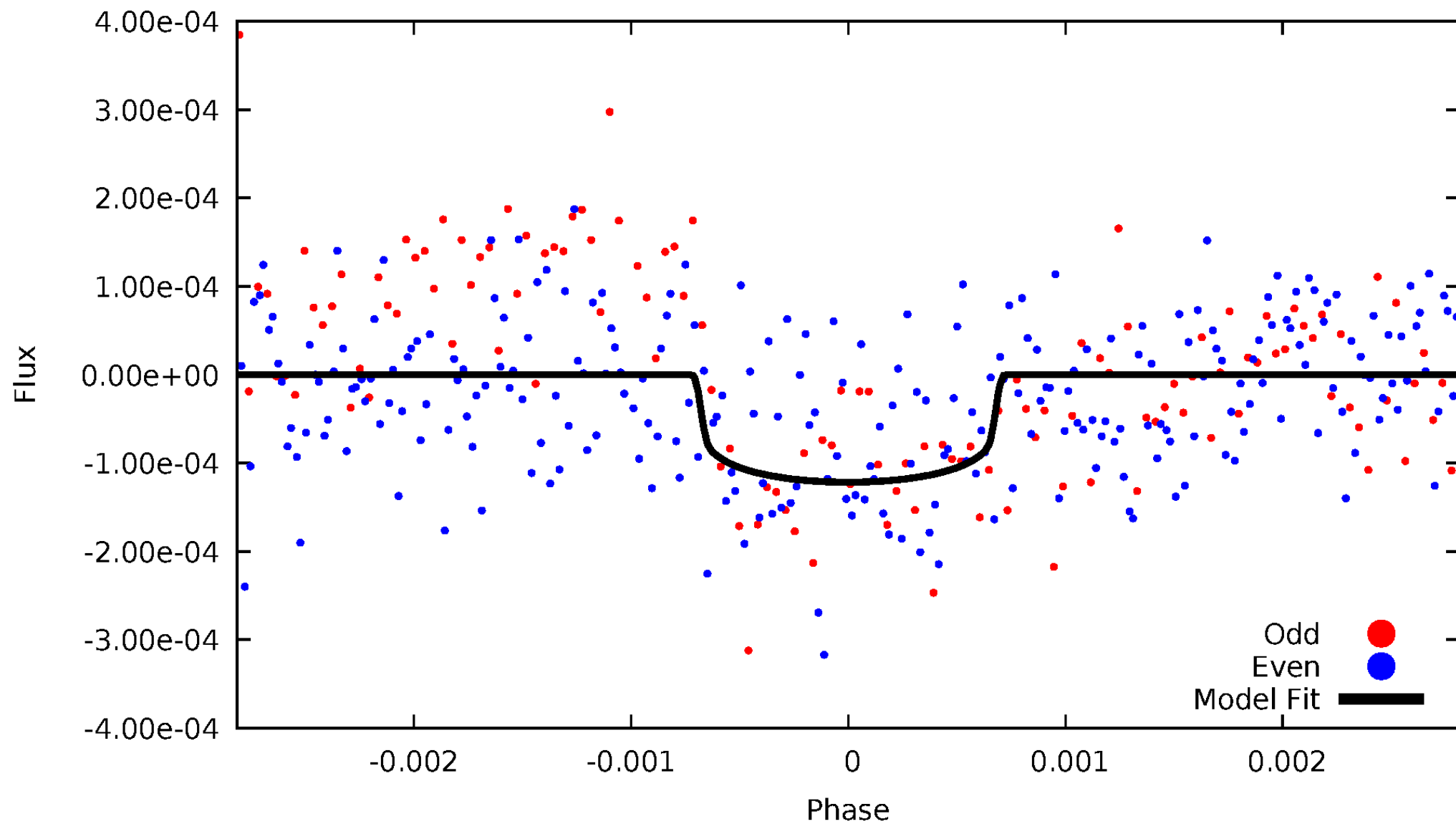


TCE 010599193-02



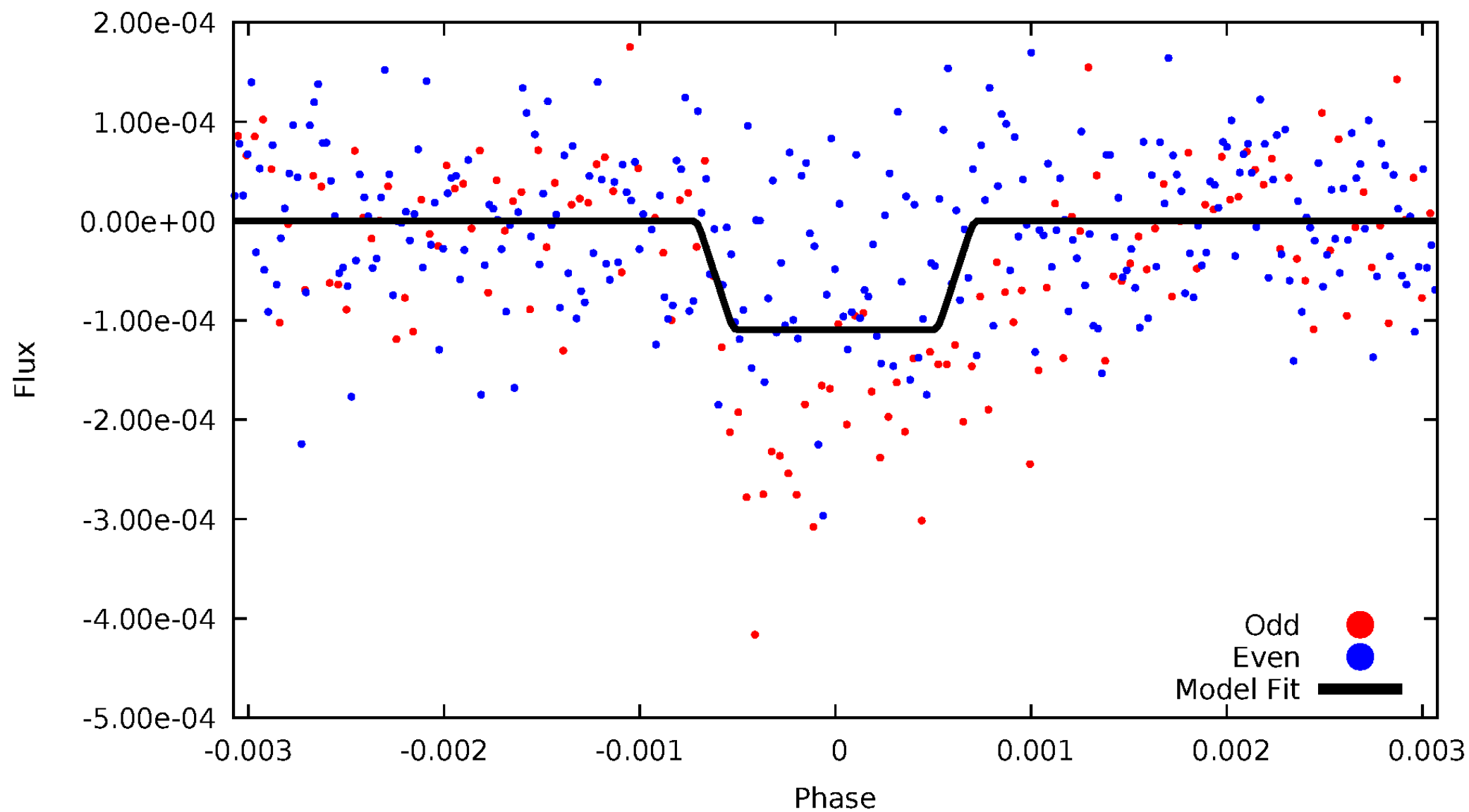
DV Odd/Even

TCE 010599193-02



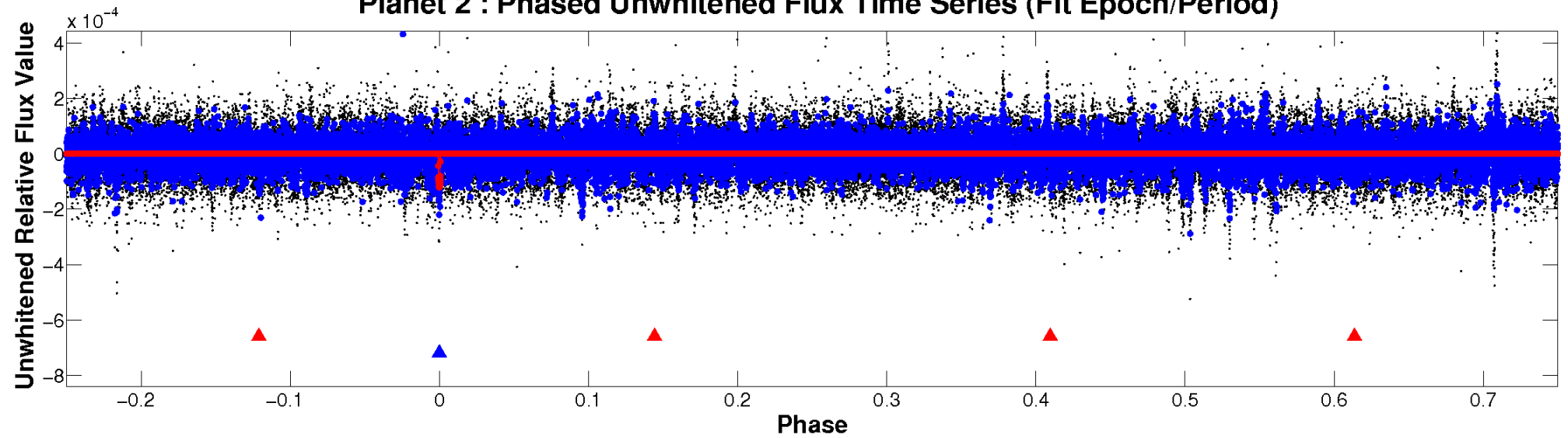
ALT Odd/Even

TCE 010599193-02

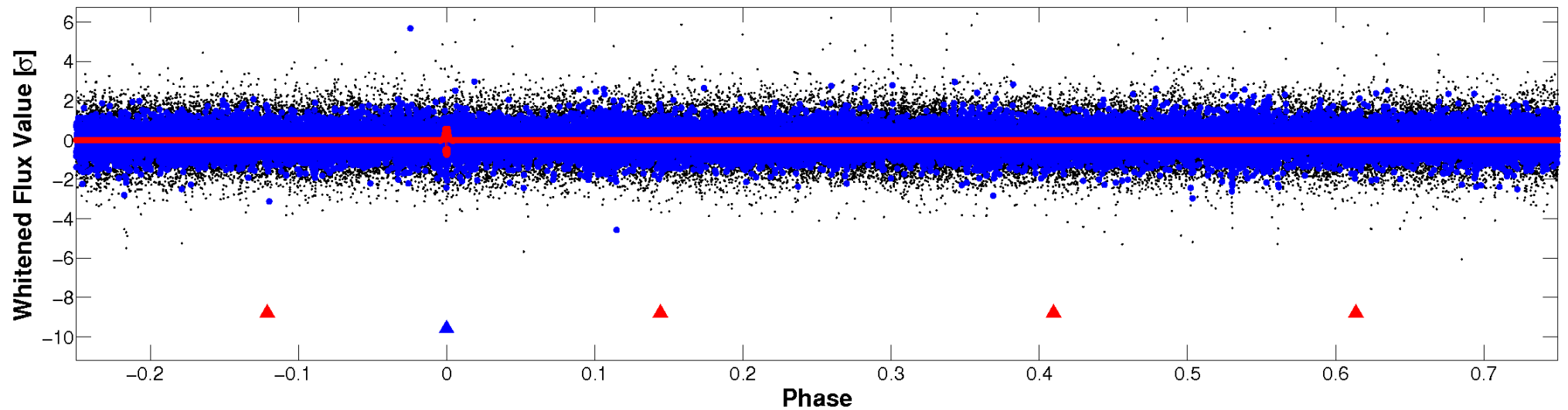


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

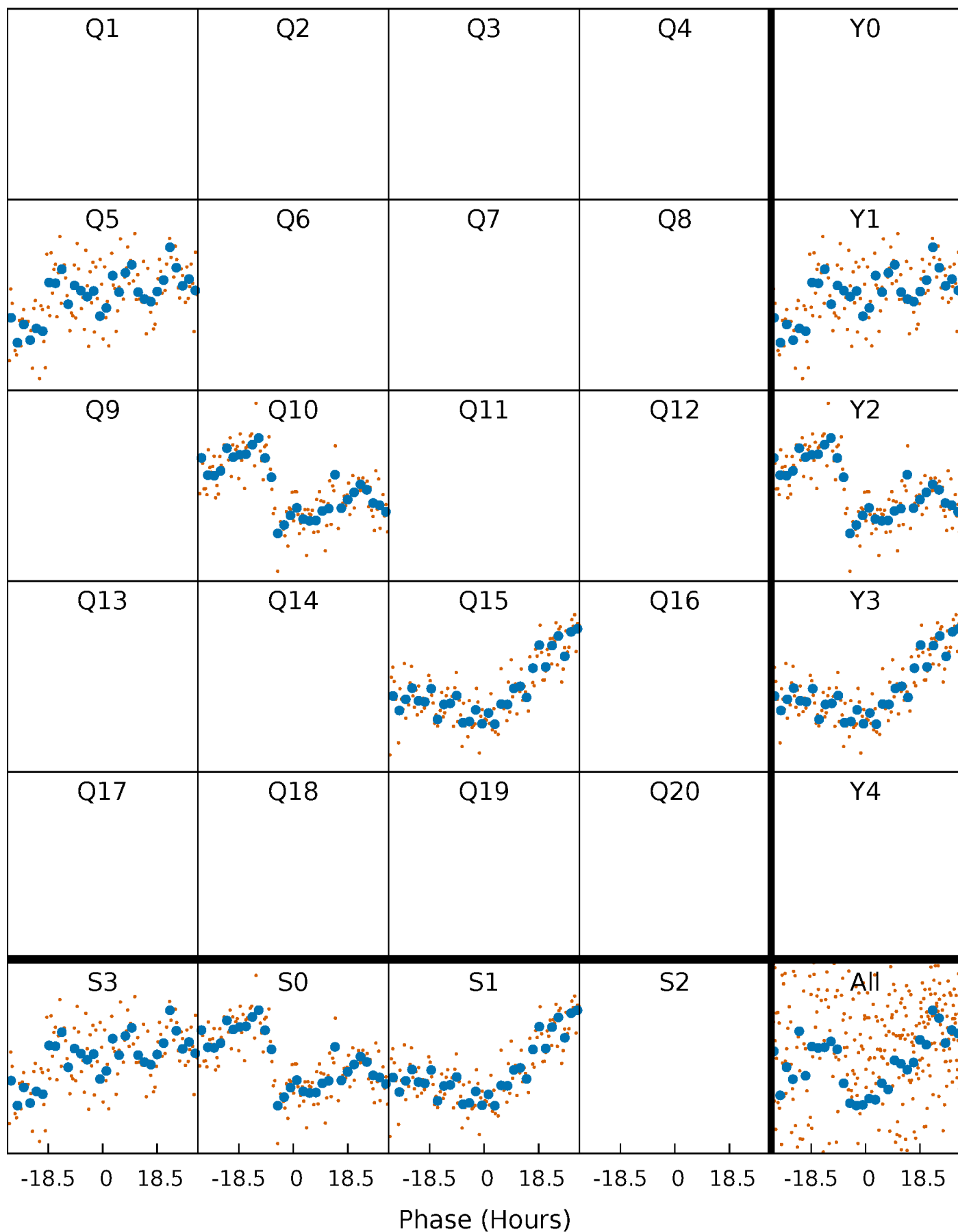


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



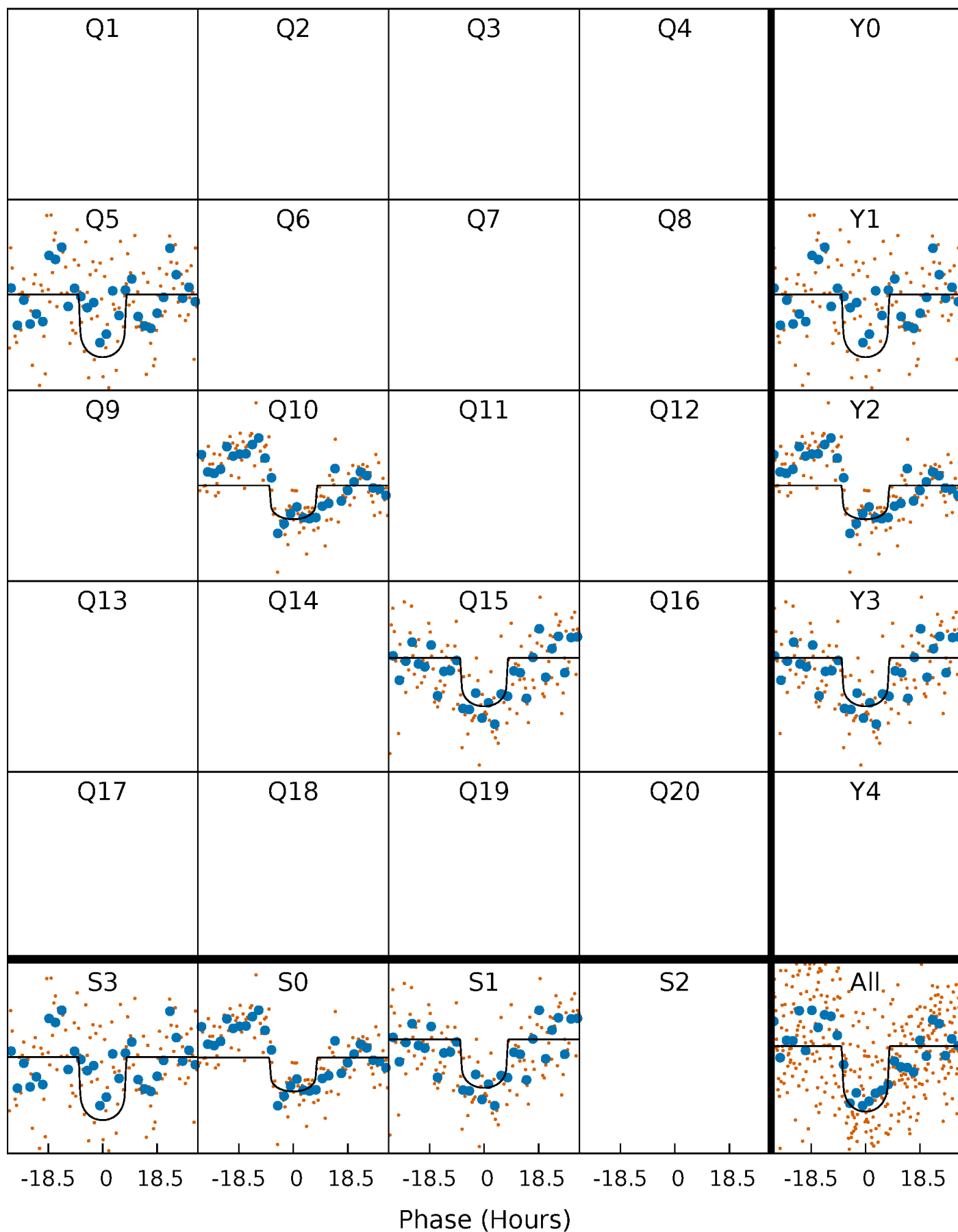
PDC Quarter-Phased Transit Curves

TCE 010599193-02 $P=479.685311$ Days $T_0=469.720065$ (BKJD)



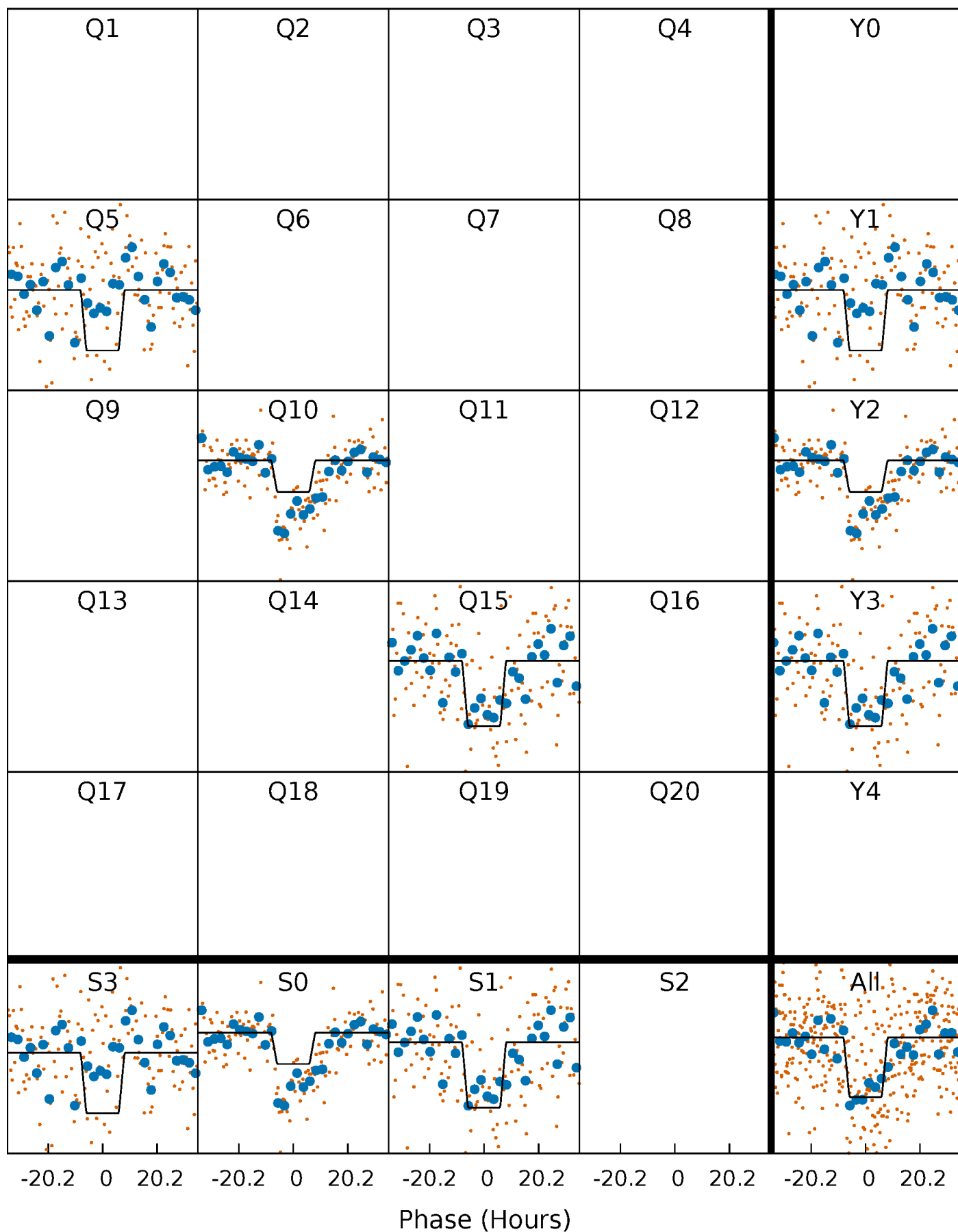
DV Quarter-Phased Transit Curves

TCE 010599193-02 $P=479.685311$ Days $T_0=469.720065$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

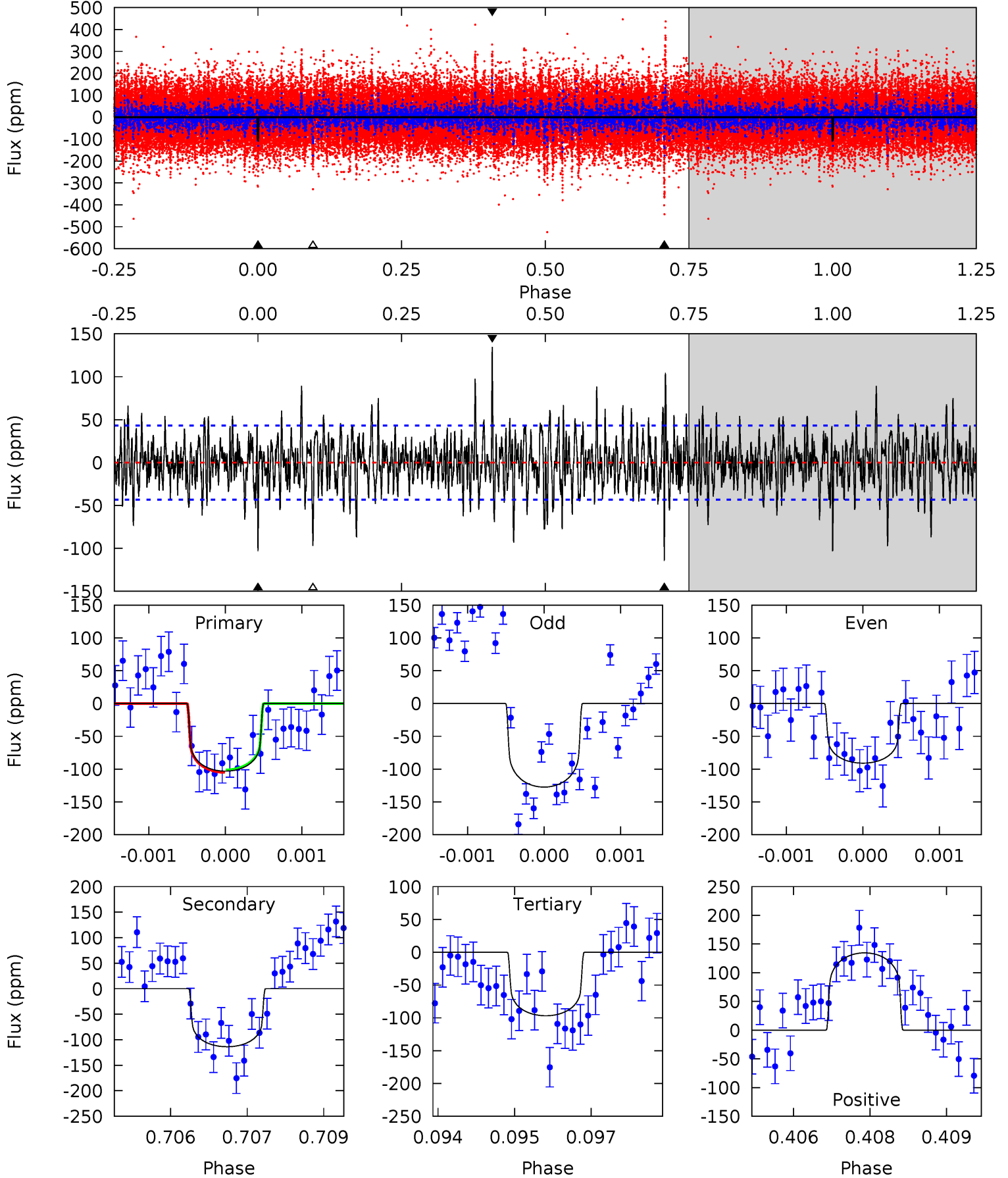
TCE 010599193-02 $P=479.684632$ Days $T_0=469.697229$ (BKJD)



DV Model-Shift Uniqueness Test

010599193-02, P = 479.685311 Days, E = 469.720065 Days

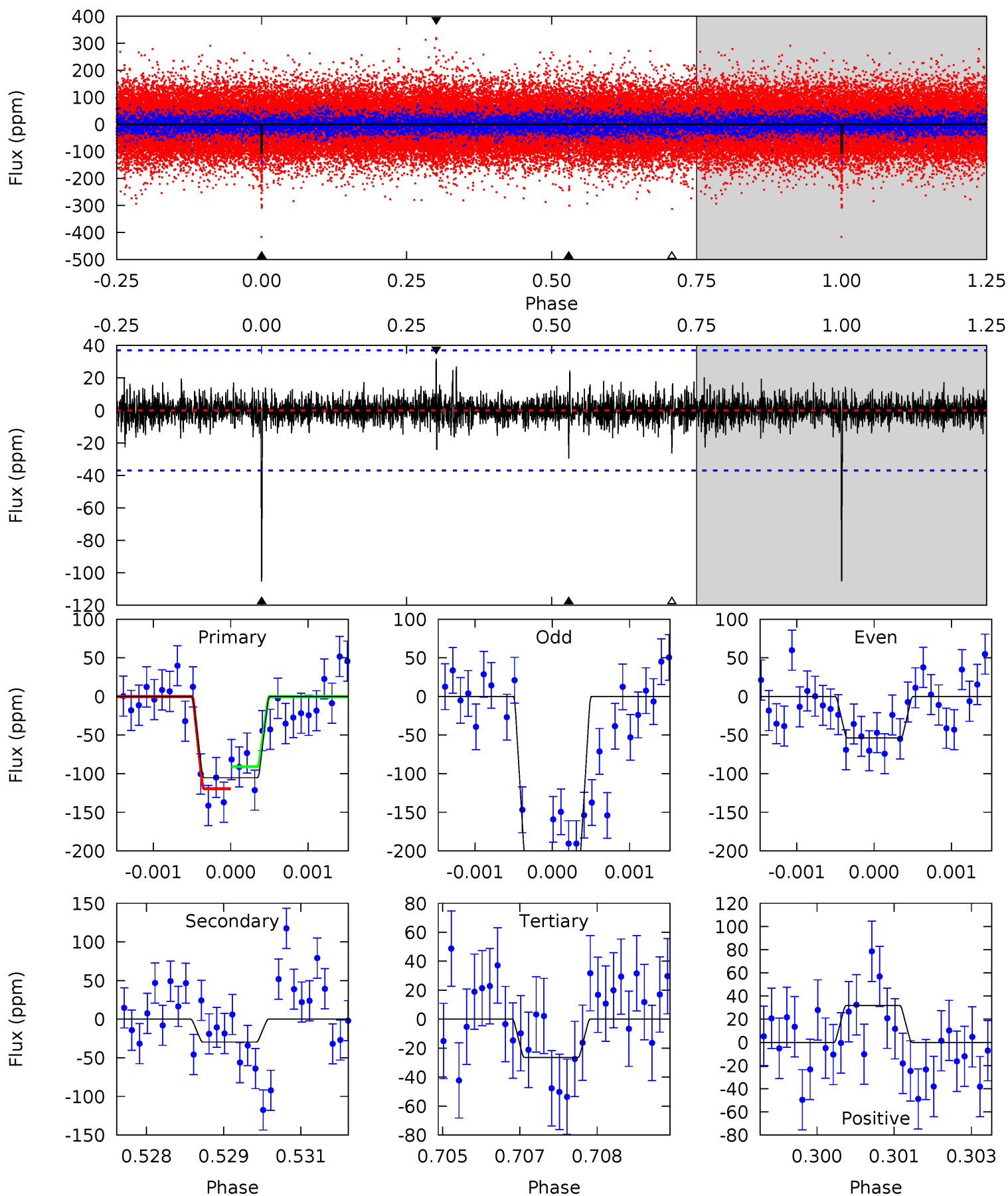
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	14.2	12.1	16.8	5.39	3.19	3.15	0.78	-3.93	2.11	-2.61	2.11	0.81	0.54	0.23



Alt Model-Shift Uniqueness Test

010599193-02, P = 479.684632 Days, E = 469.697229 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	4.31	3.85	4.62	5.39	3.19	0.80	11.5	10.7	0.46	-0.31	10.6	1.21	0.23	2.07



Stellar Parameters For KIC 010599193

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6202^{+147}_{-203}	$4.436^{+0.060}_{-0.140}$	$-0.020^{+0.250}_{-0.350}$	$1.062^{+0.221}_{-0.119}$	$1.122^{+0.117}_{-0.156}$	$1.320^{+0.342}_{-0.520}$
	+2%/-3%	+1%/-3%	+1250%/-1750%	+21%/-11%	+10%/-14%	+26%/-39%
Source	PHO1	FLK73	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 010599193-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-114 ± 8	$1.32^{+0.34}_{-0.33}$	355^{+20}_{-16}	6025^{+931}_{-588}	55003^{+43351}_{-20146}
Alt.	-30 ± 7	$1.27^{+0.33}_{-0.33}$	356^{+19}_{-17}	4566^{+631}_{-420}	15339^{+14189}_{-6512}

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 010599193-02. Kepler magnitude: 12.11. Transit SNR 7.54

There are 0 quarters with good PRF difference image offsets

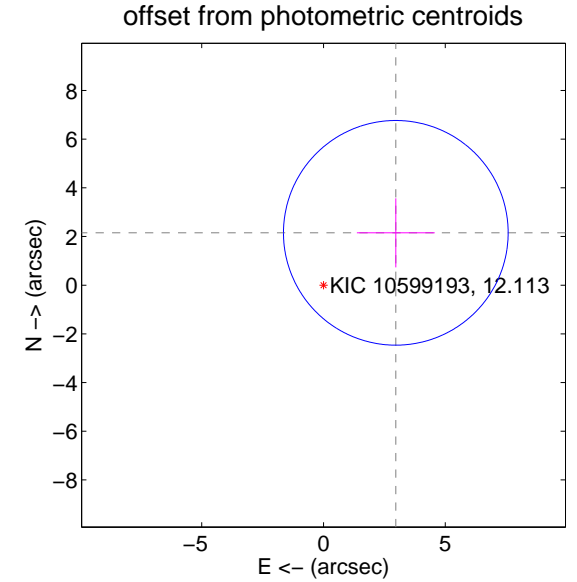
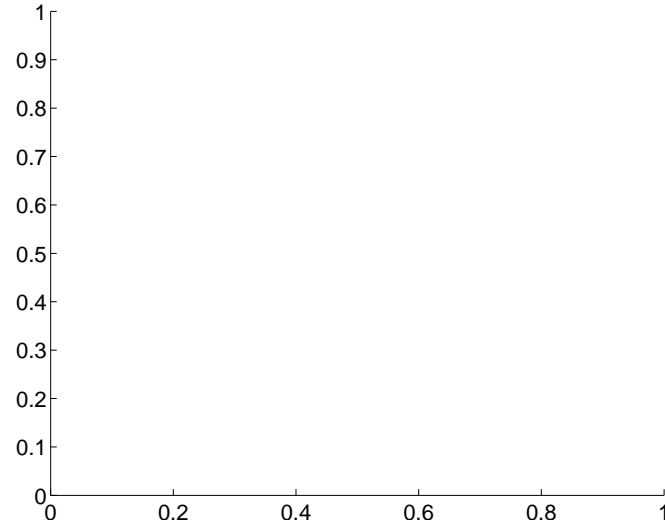
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	3.67 ± 1.54	2.38	-2.97 ± 1.60	2.15 ± 1.42

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

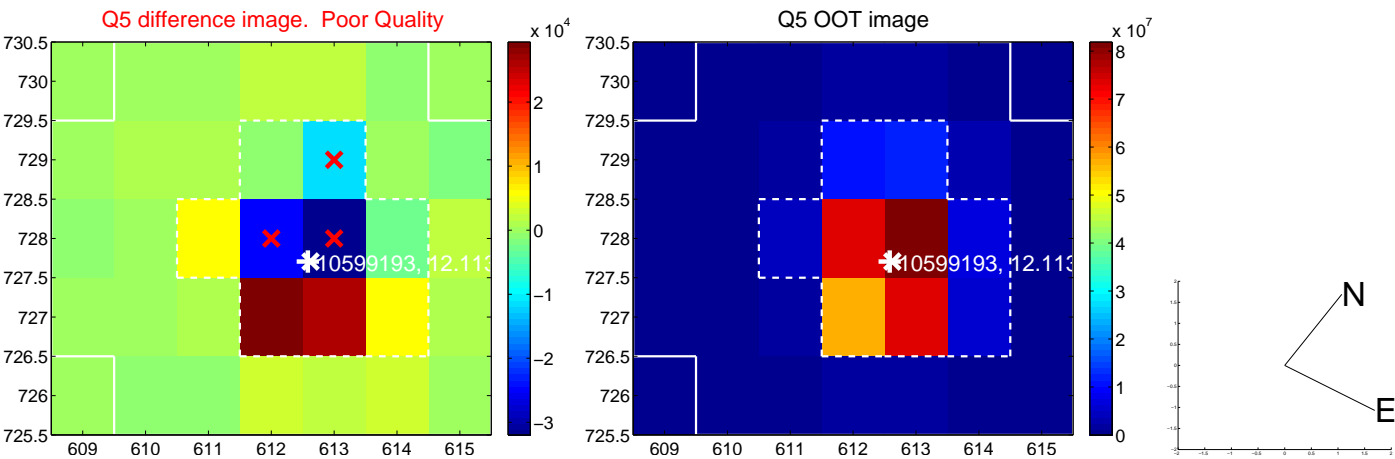


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

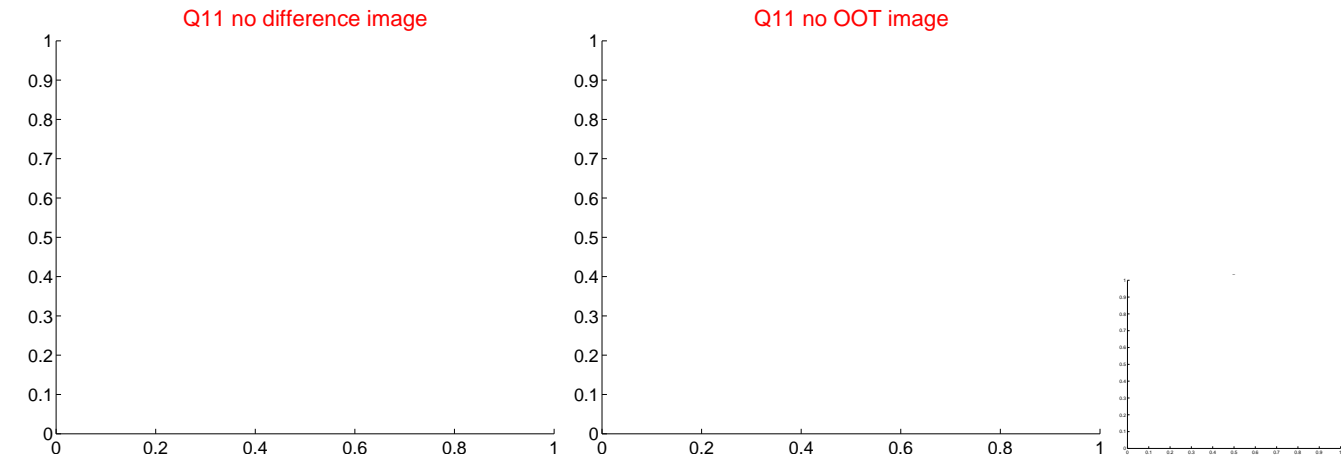
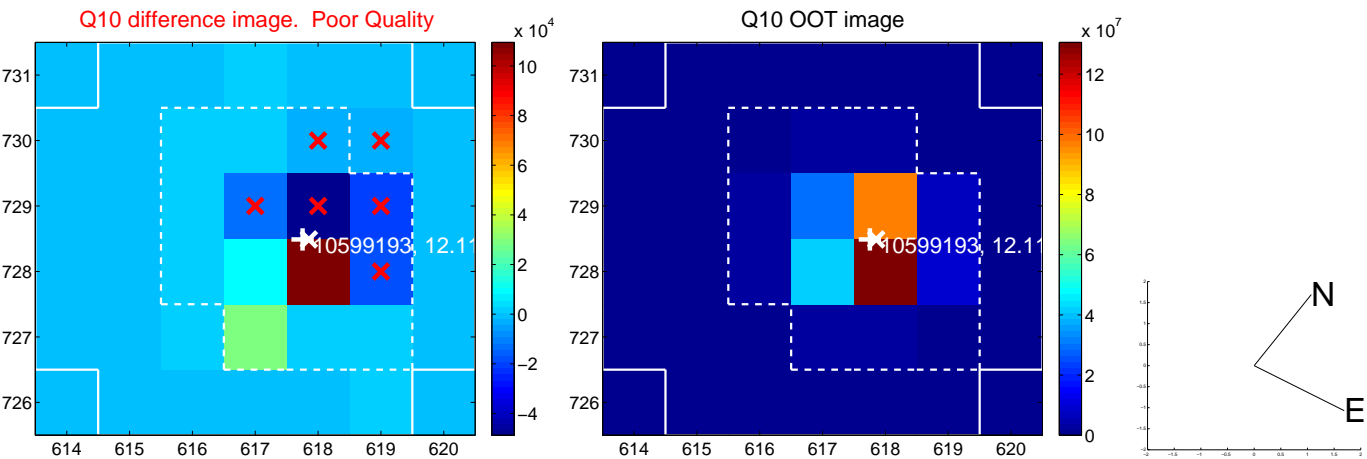
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



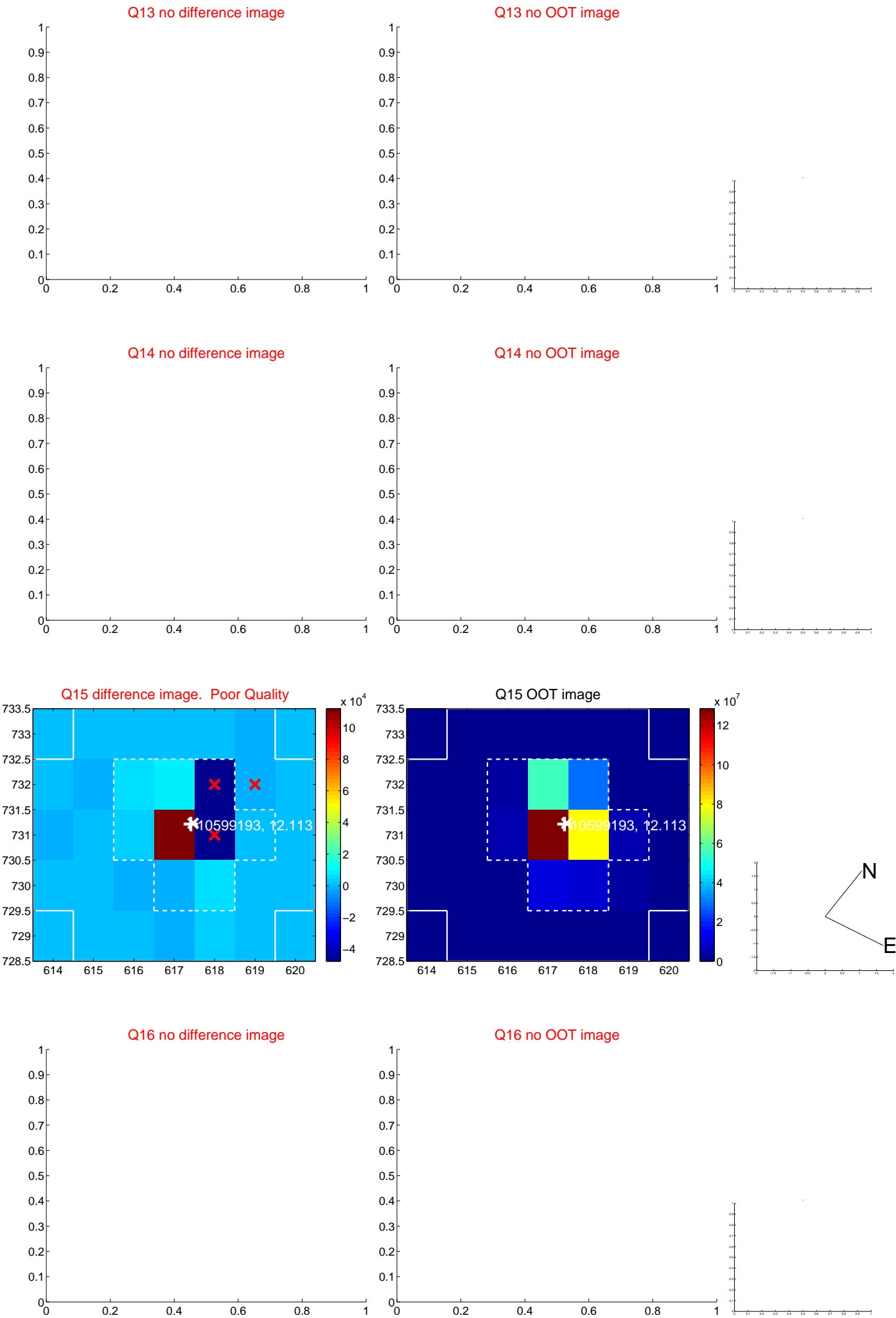
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



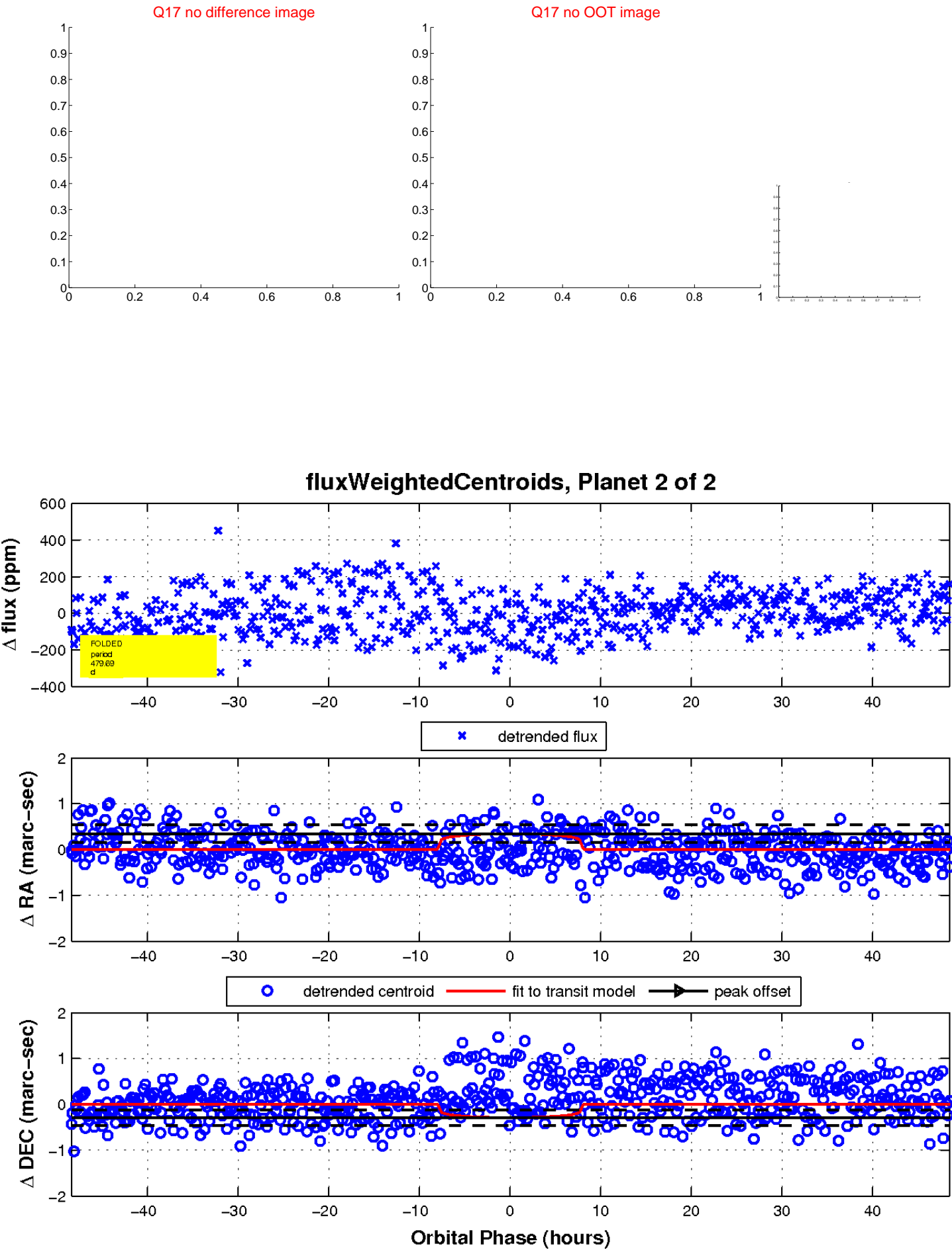
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

