

KIC 008953043

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})
008953043-01	OBS	No	529.379271	516.247626	517.2	16.849	7.9	7.9	1.18	6442	2.88	1.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008953043-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

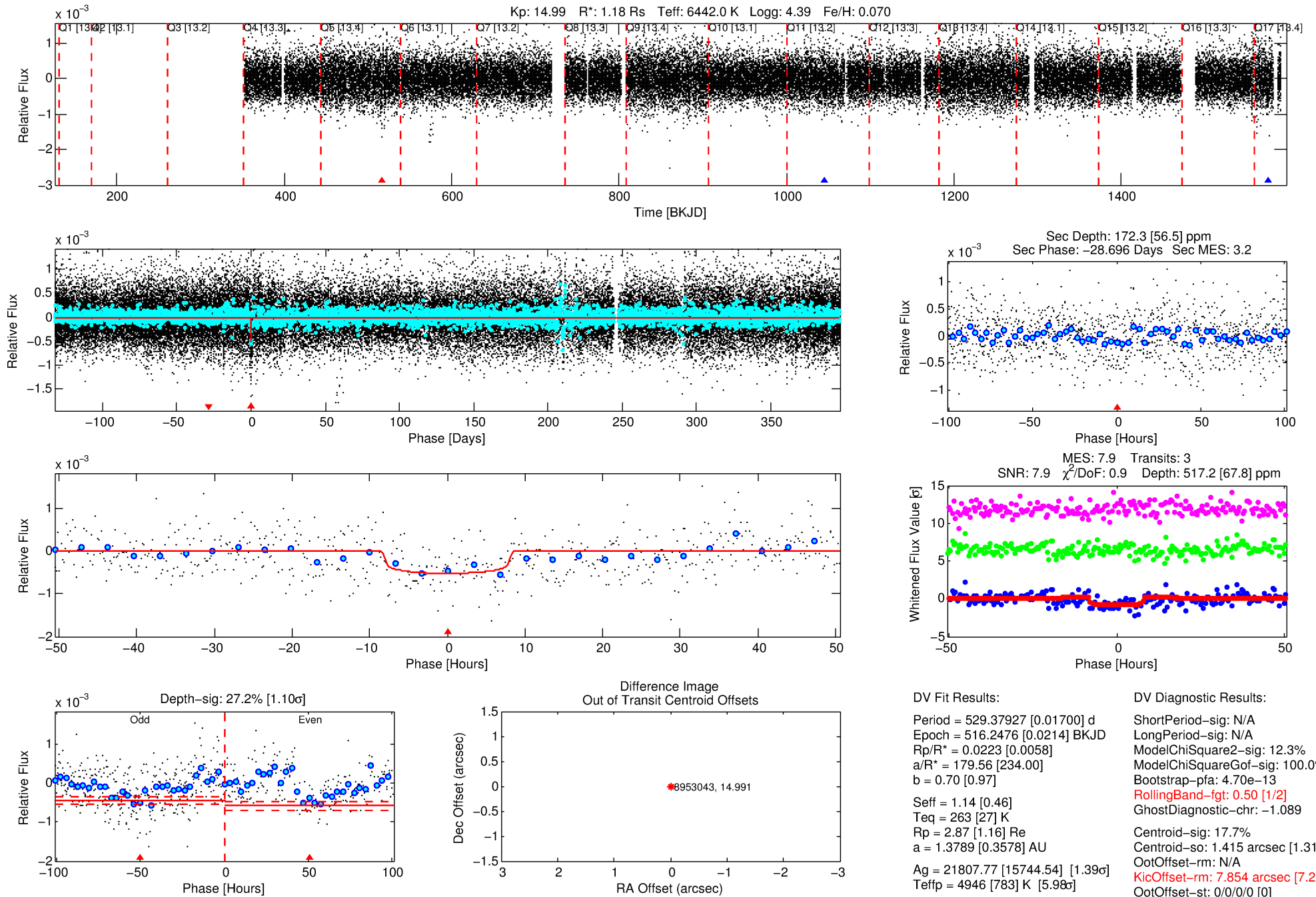
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008953043-01

No Significant Match Found

DV One-Page Summary

KIC: 8953043 Candidate: 1 of 1 Period: 529.379 d



DV Fit Results:

Period = 529.37927 [0.01700] d
Epoch = 516.2476 [0.0214] BKJD
Rp/R* = 0.0223 [0.0058]
a/R* = 179.56 [234.00]
b = 0.70 [0.97]
Seff = 1.14 [0.46]
Teq = 263 [27] K
Rp = 2.87 [1.16] Re
a = 1.3789 [0.3578] AU
Ag = 21807.77 [15744.54] [1.39 σ]
Teffp = 4946 [783] K [5.98 σ]

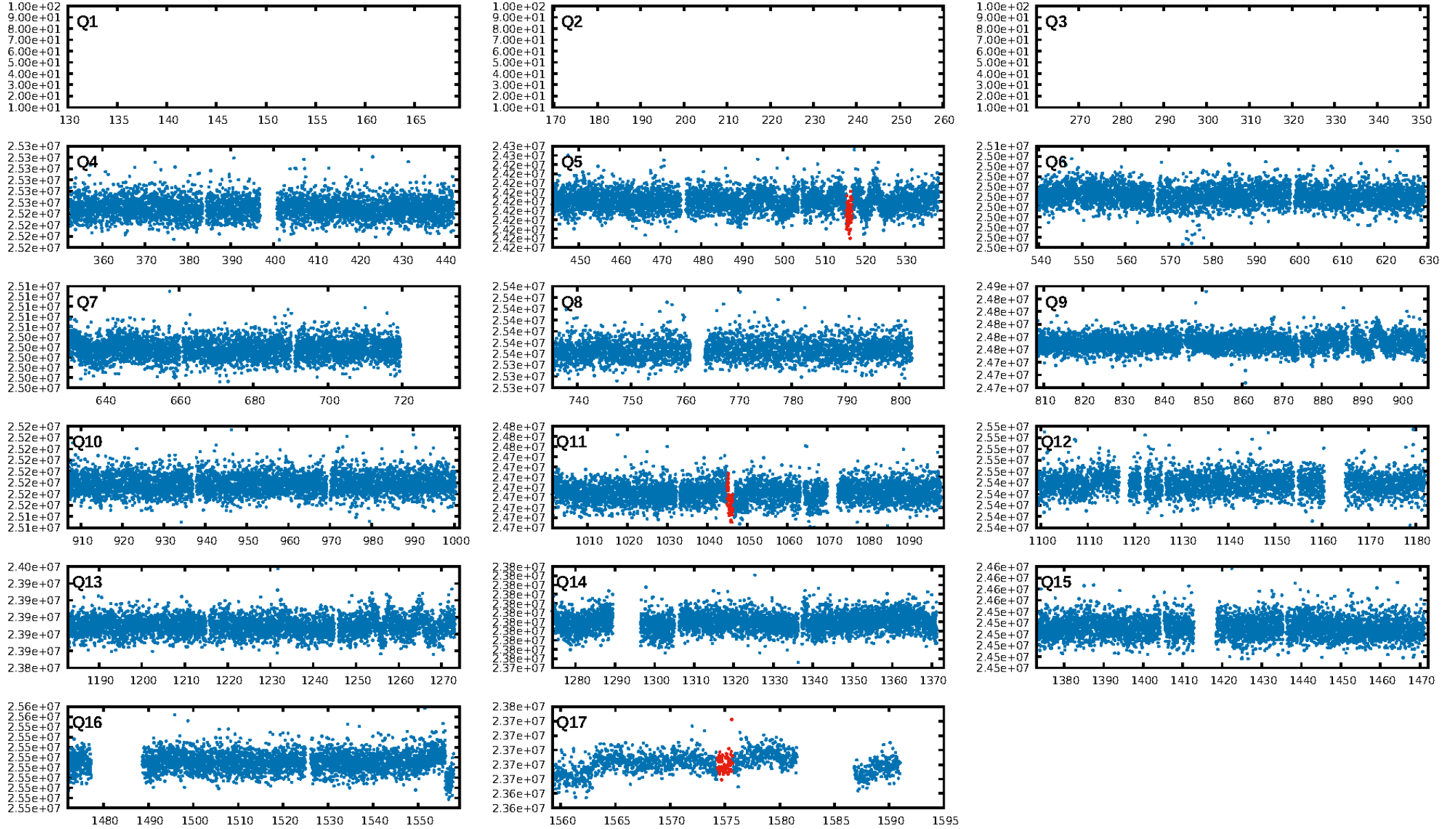
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.70e-13
RollingBand-fgt: 0.50 [1/2]
GhostDiagnostic-chr: -1.089
Centroid-sig: 17.7%
Centroid-so: 1.415 arcsec [1.31 σ]
OotOffset-rm: N/A
KicOffset-rm: 7.854 arcsec [7.25 σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

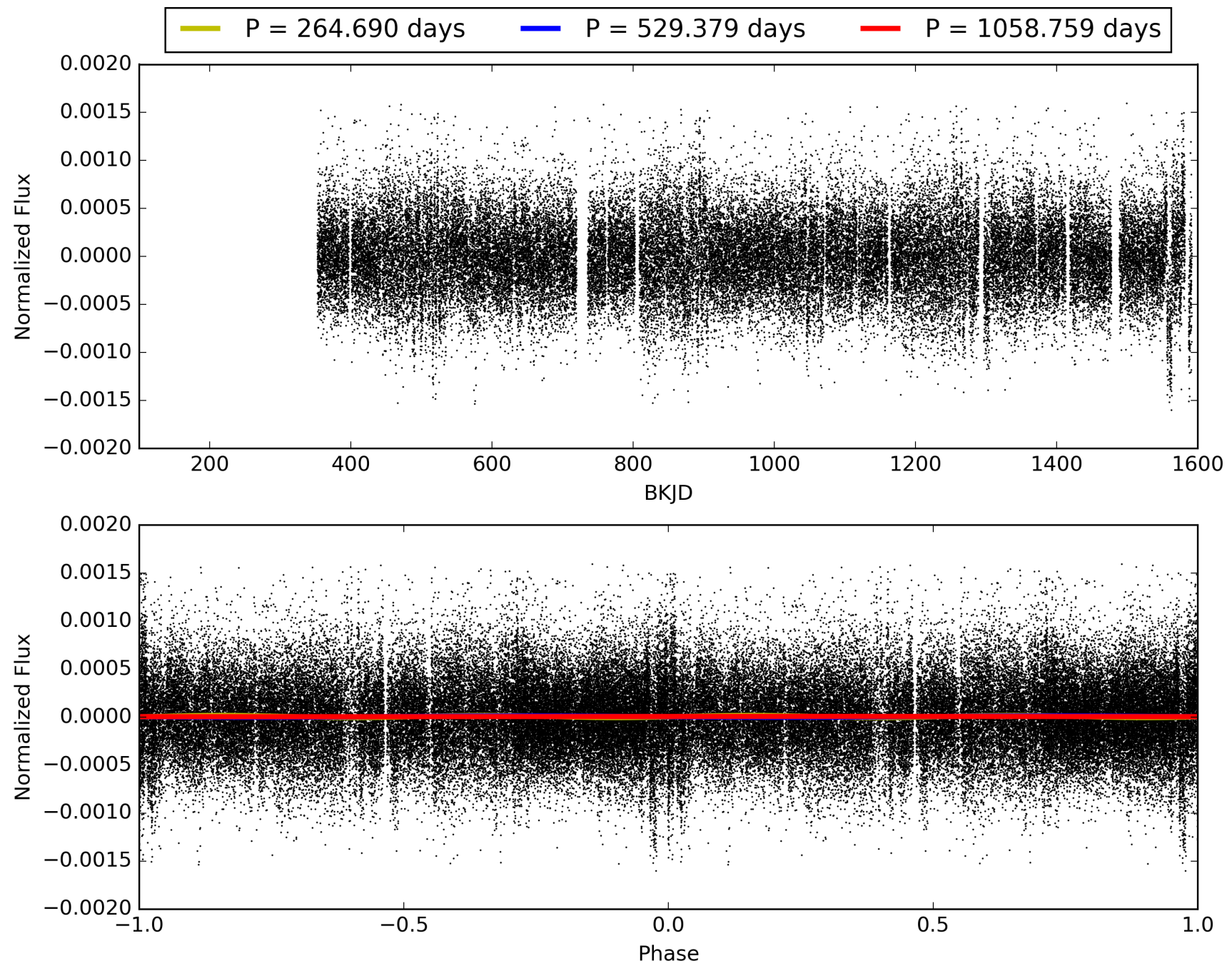
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:35:03 Z

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

TCE 008953043-01, PDC Light Curves

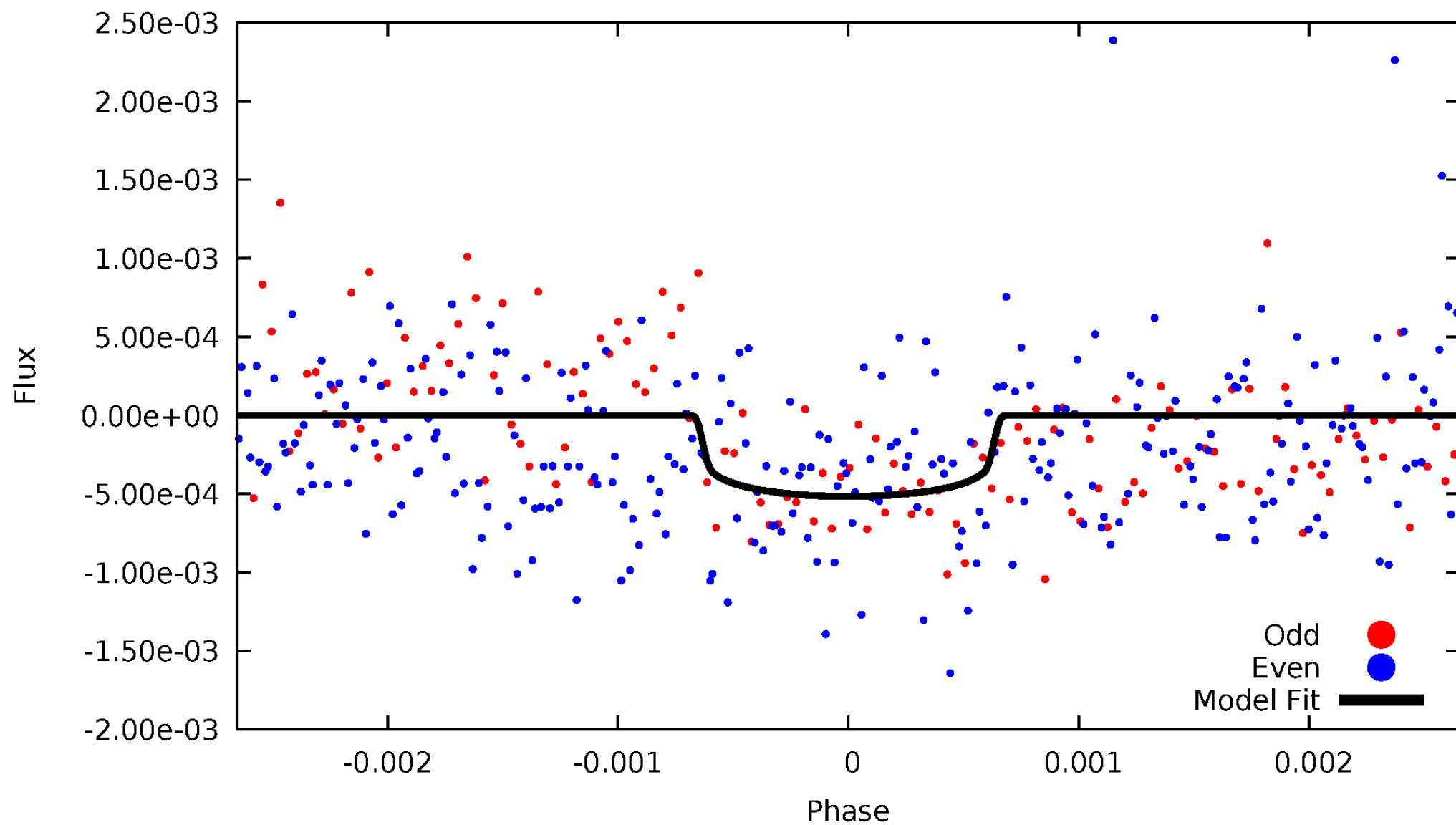


TCE 008953043-01



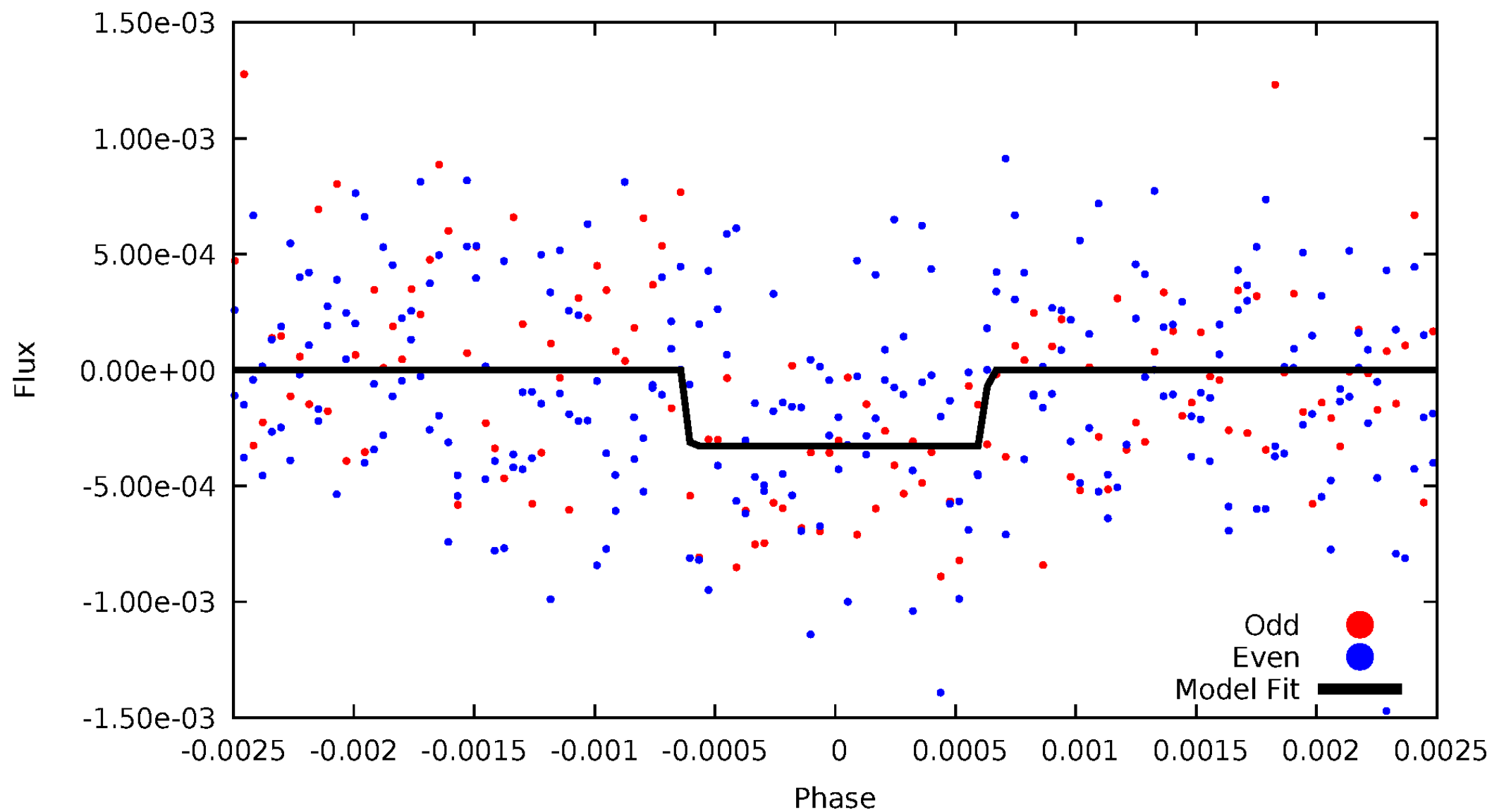
DV Odd/Even

TCE 008953043-01



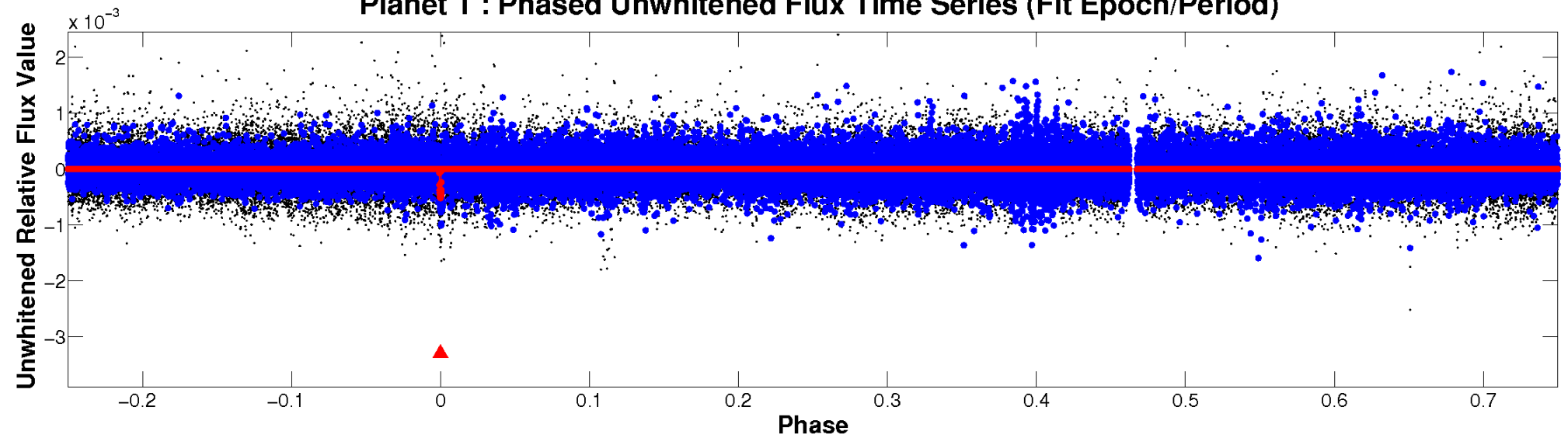
ALT Odd/Even

TCE 008953043-01

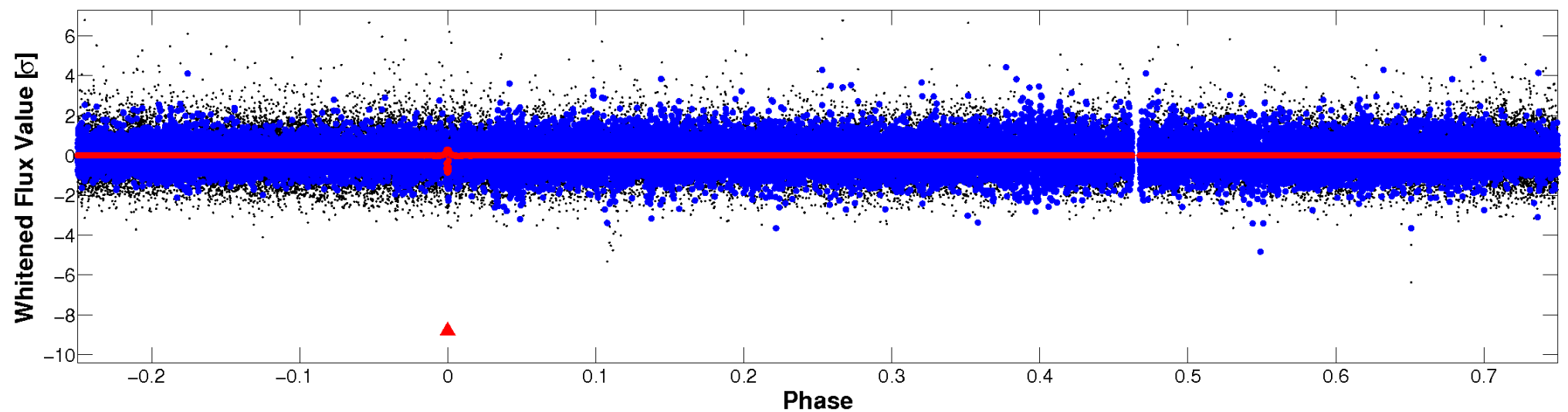


Non-Whitened Vs. Whitened Light Curve

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

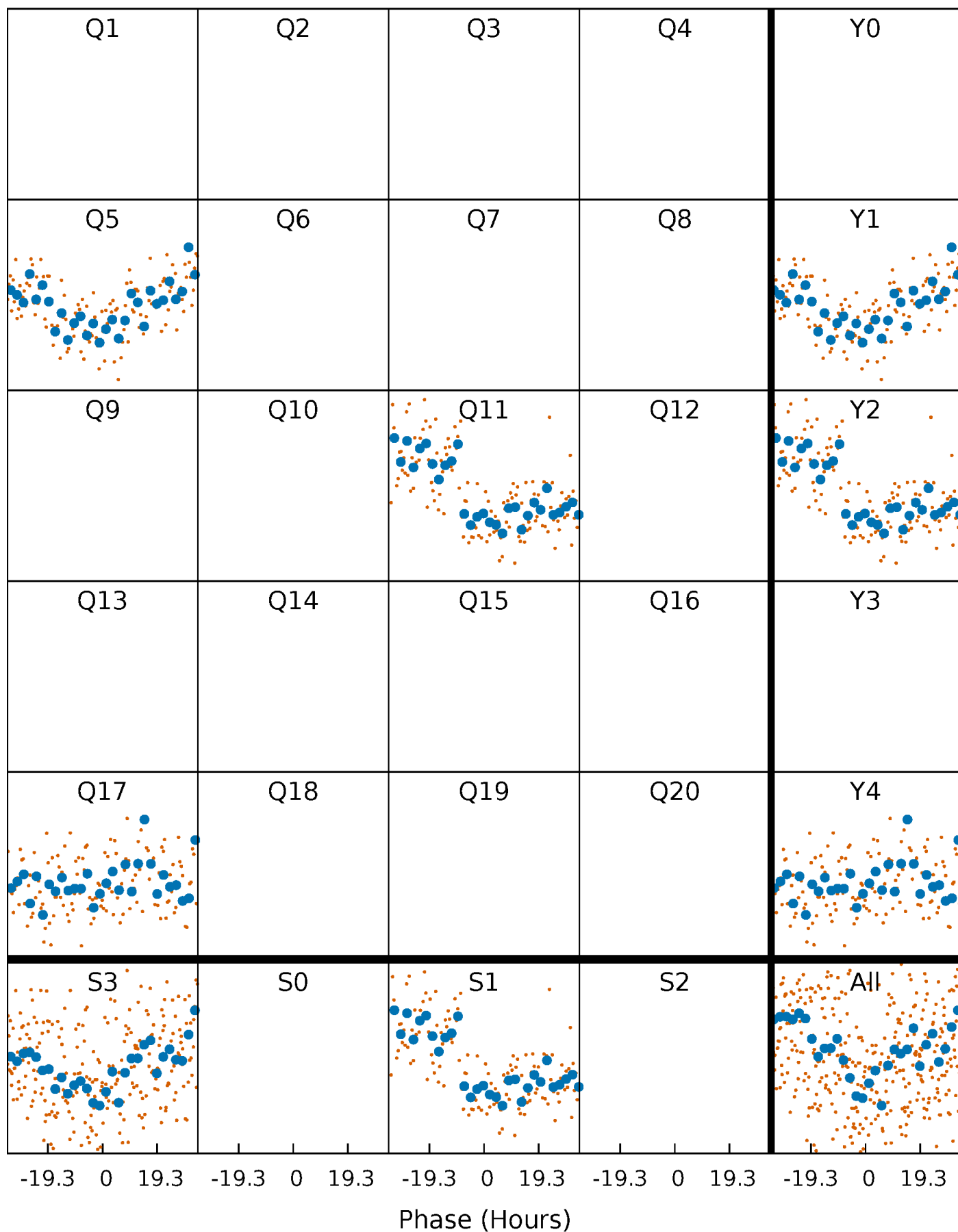


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



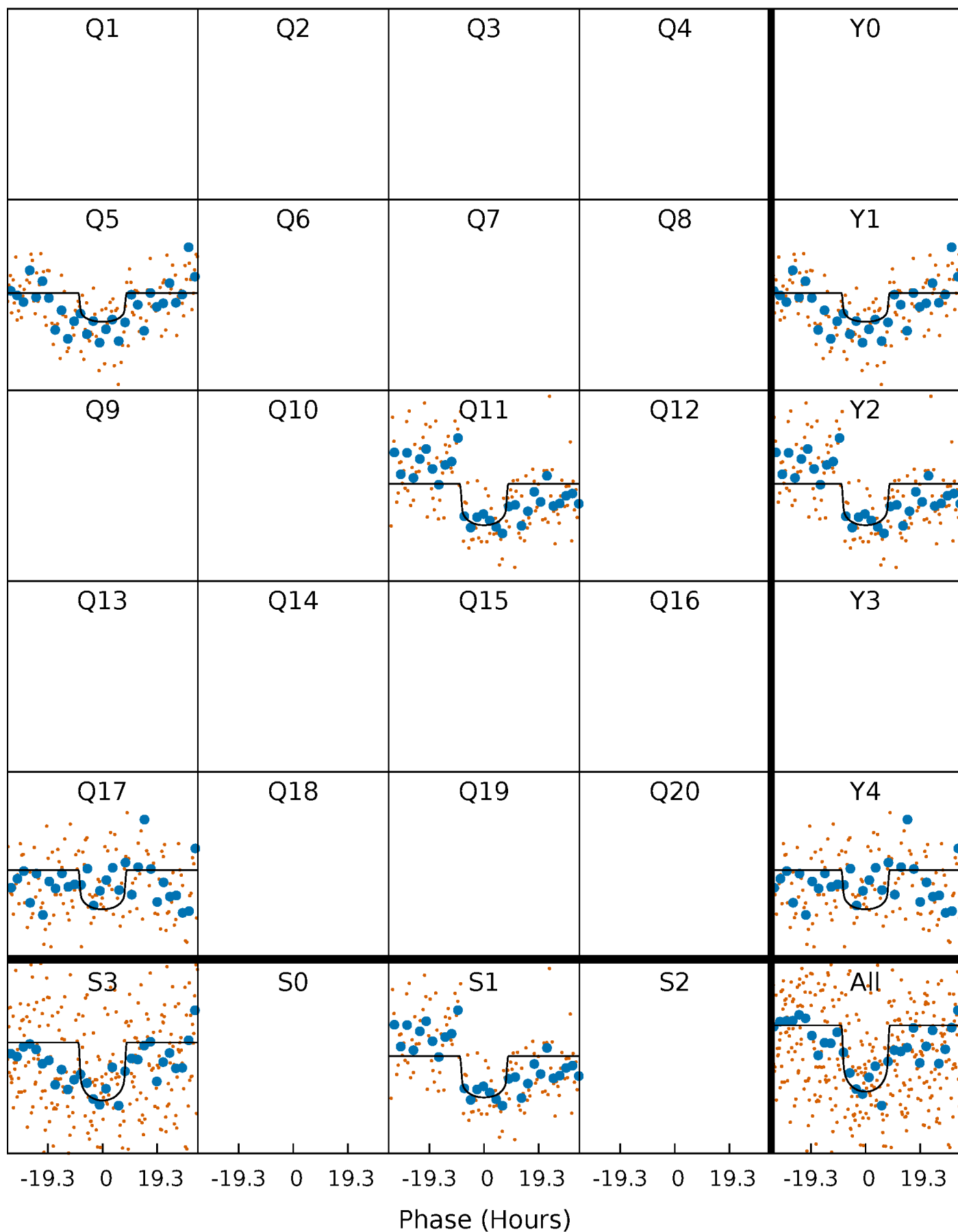
PDC Quarter-Phased Transit Curves

TCE 008953043-01 P=529.379271 Days $T_0=516.247626$ (BKJD)



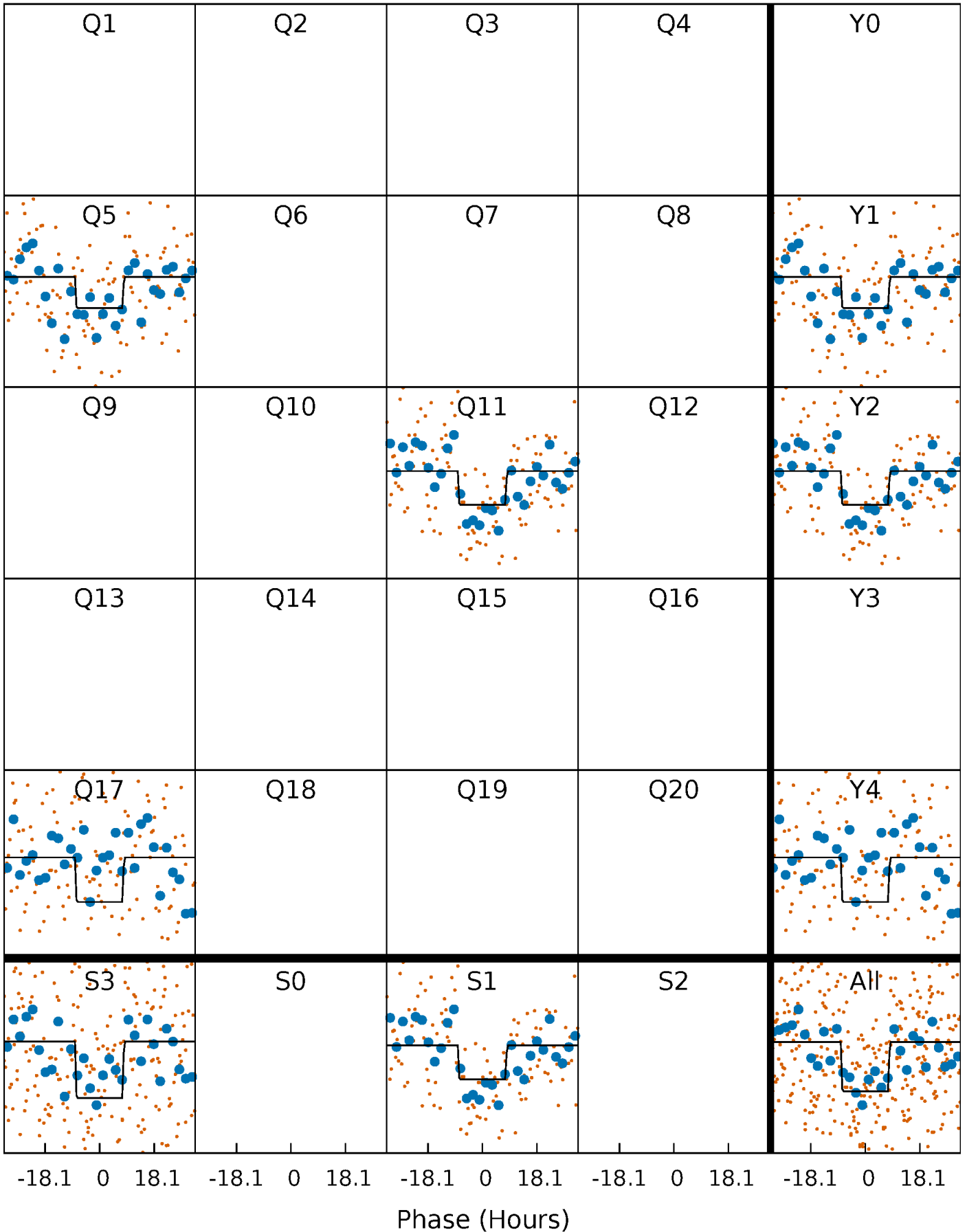
DV Quarter-Phased Transit Curves

TCE 008953043-01 P=529.379271 Days $T_0=516.247626$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

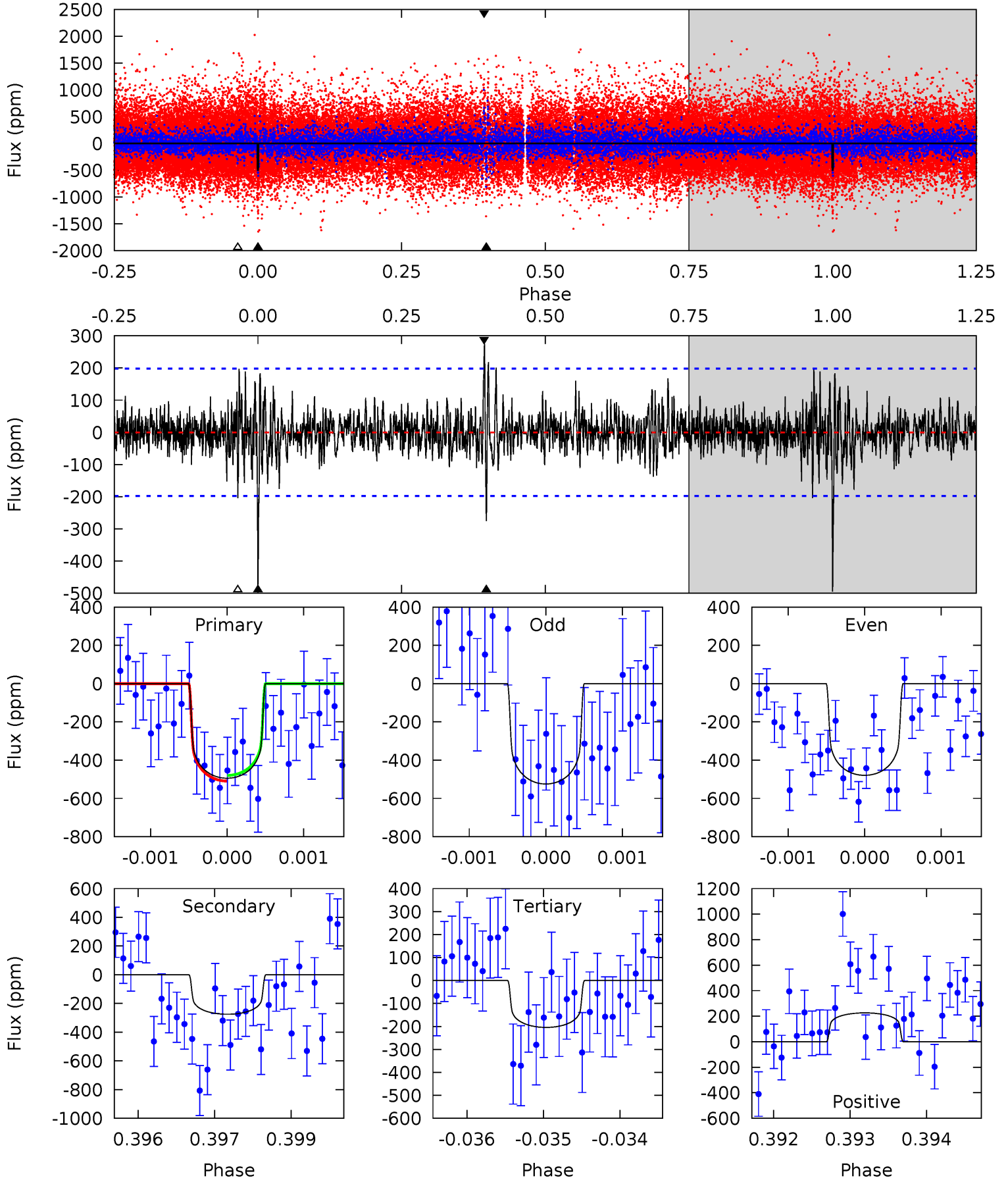
TCE 008953043-01 P=529.372239 Days $T_0=516.249758$ (BKJD)



DV Model-Shift Uniqueness Test

008953043-01, P = 529.379271 Days, E = 516.247626 Days

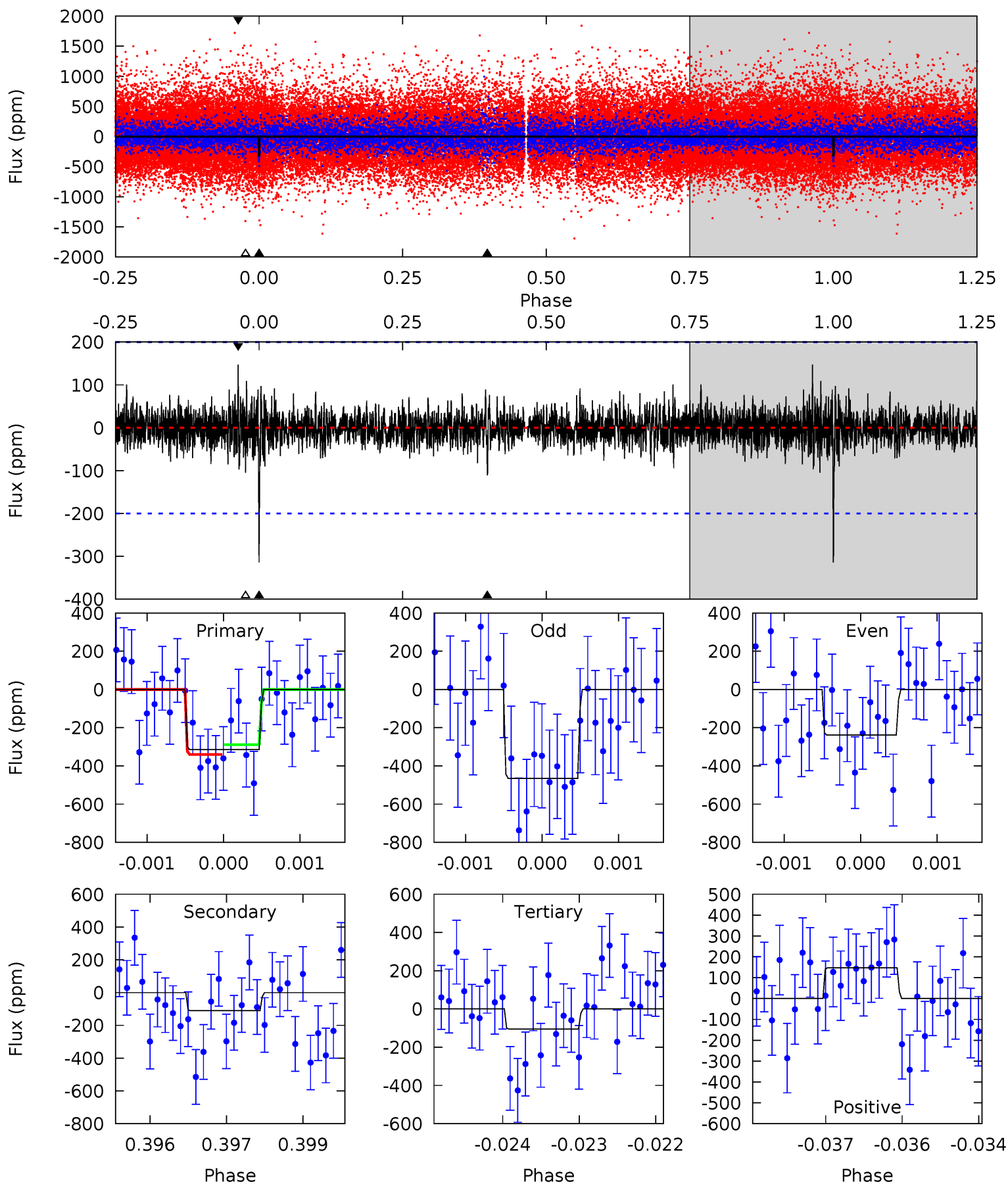
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	7.50	5.57	6.16	5.40	3.20	1.32	7.91	7.32	1.93	1.34	0.58	0.94	0.36	0.40



Alt Model-Shift Uniqueness Test

008953043-01, P = 529.372239 Days, E = 516.249758 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.50	3.00	2.83	3.98	5.41	3.22	0.71	5.66	4.52	0.16	-0.98	2.88	0.72	0.32	0.69



Stellar Parameters For KIC 008953043

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6442^{+179}_{-246}	$4.388^{+0.065}_{-0.208}$	$0.070^{+0.200}_{-0.350}$	$1.183^{+0.363}_{-0.156}$	$1.250^{+0.152}_{-0.202}$	$1.062^{+0.312}_{-0.549}$
	+3%/-4%	+1%/-5%	+286%/-500%	+31%/-13%	+12%/-16%	+29%/-52%
Source	KIC0	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 008953043-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-275 ± 37	$3.01^{+0.86}_{-0.81}$	373^{+27}_{-18}	5534^{+899}_{-573}	31361^{+26591}_{-13286}
Alt.	-111 ± 37	$2.42^{+0.86}_{-0.76}$	375^{+28}_{-20}	4945^{+977}_{-607}	18372^{+22202}_{-8880}

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 $A_{obs} \gg 1.0$

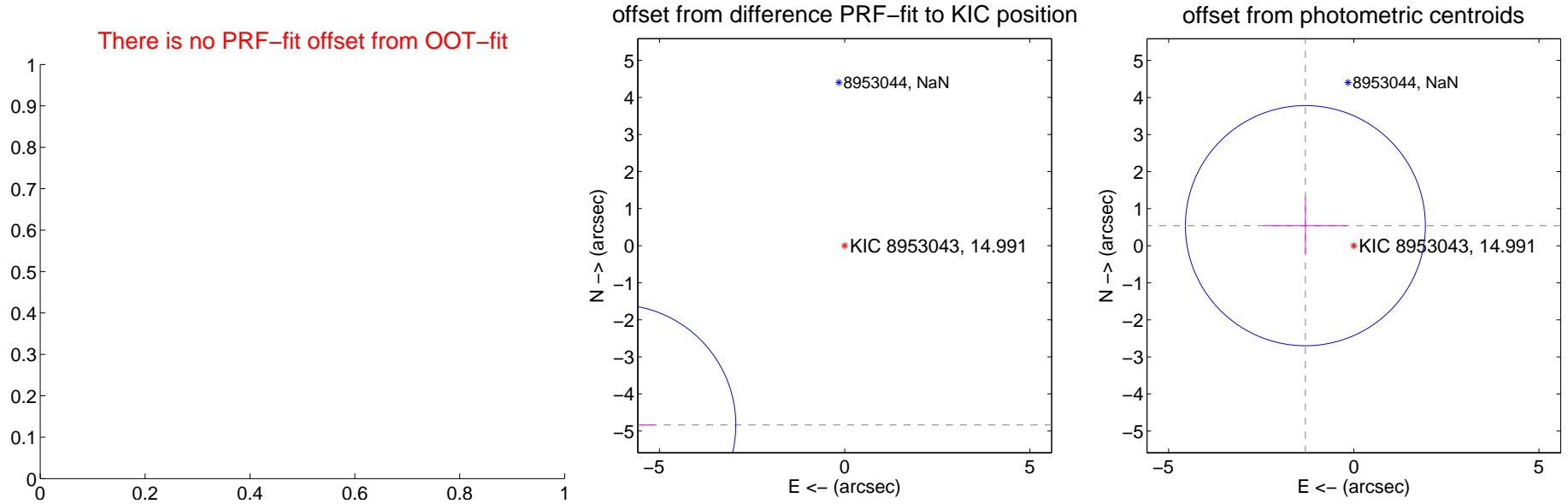
DV Centroid Data

Supplemental centroid analysis for 008953043-01. Kepler magnitude: 14.99. Transit SNR 7.89

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	7.854 ± 1.083	7.25	6.188 ± 1.069	-4.837 ± 1.105
photometric centroid source offset	1.42 ± 1.08	1.31	1.31 ± 1.13	0.54 ± 0.76

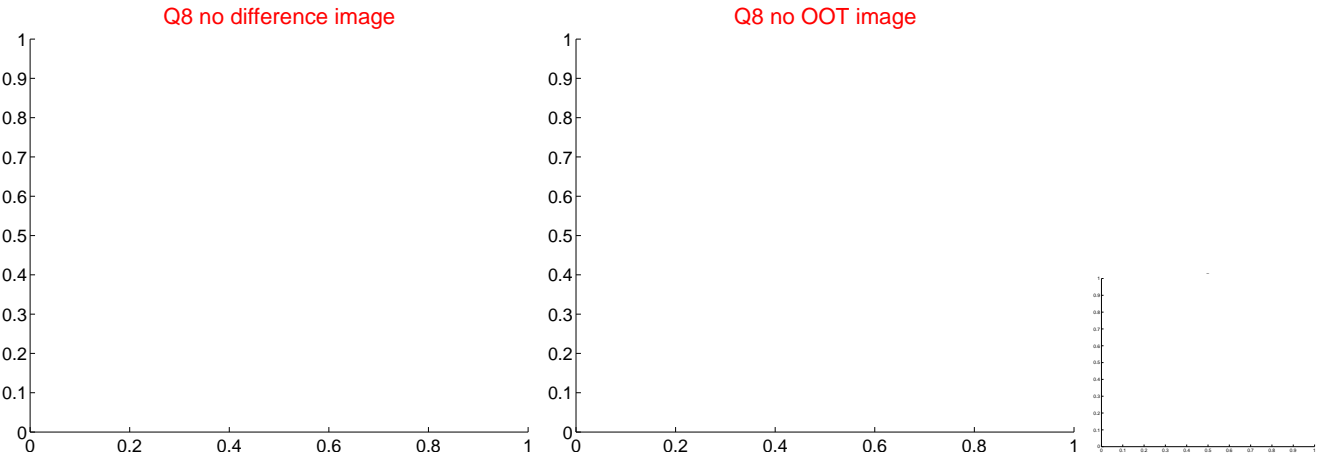
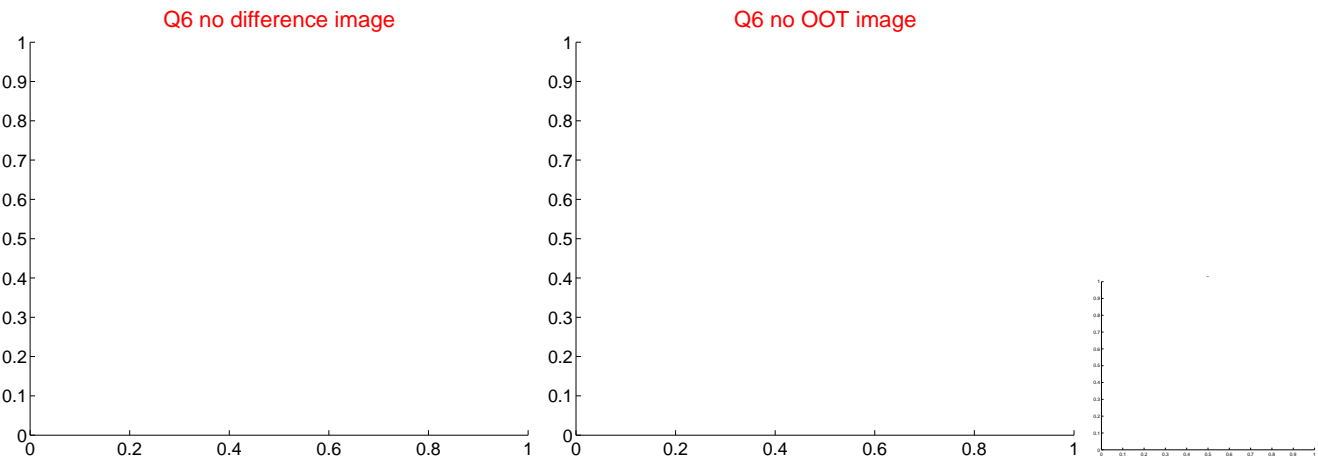
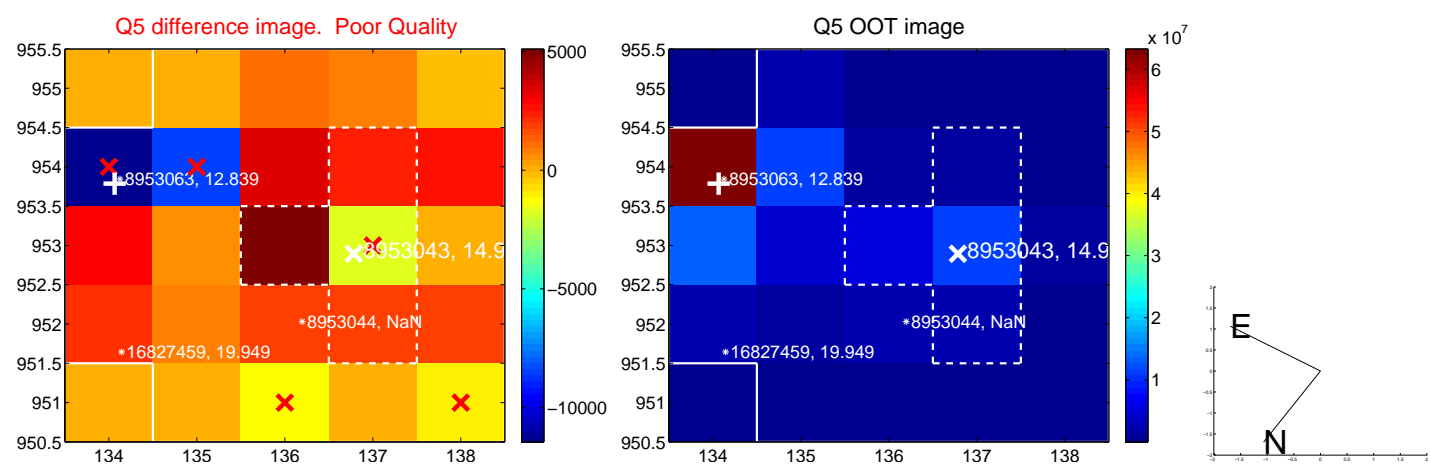


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

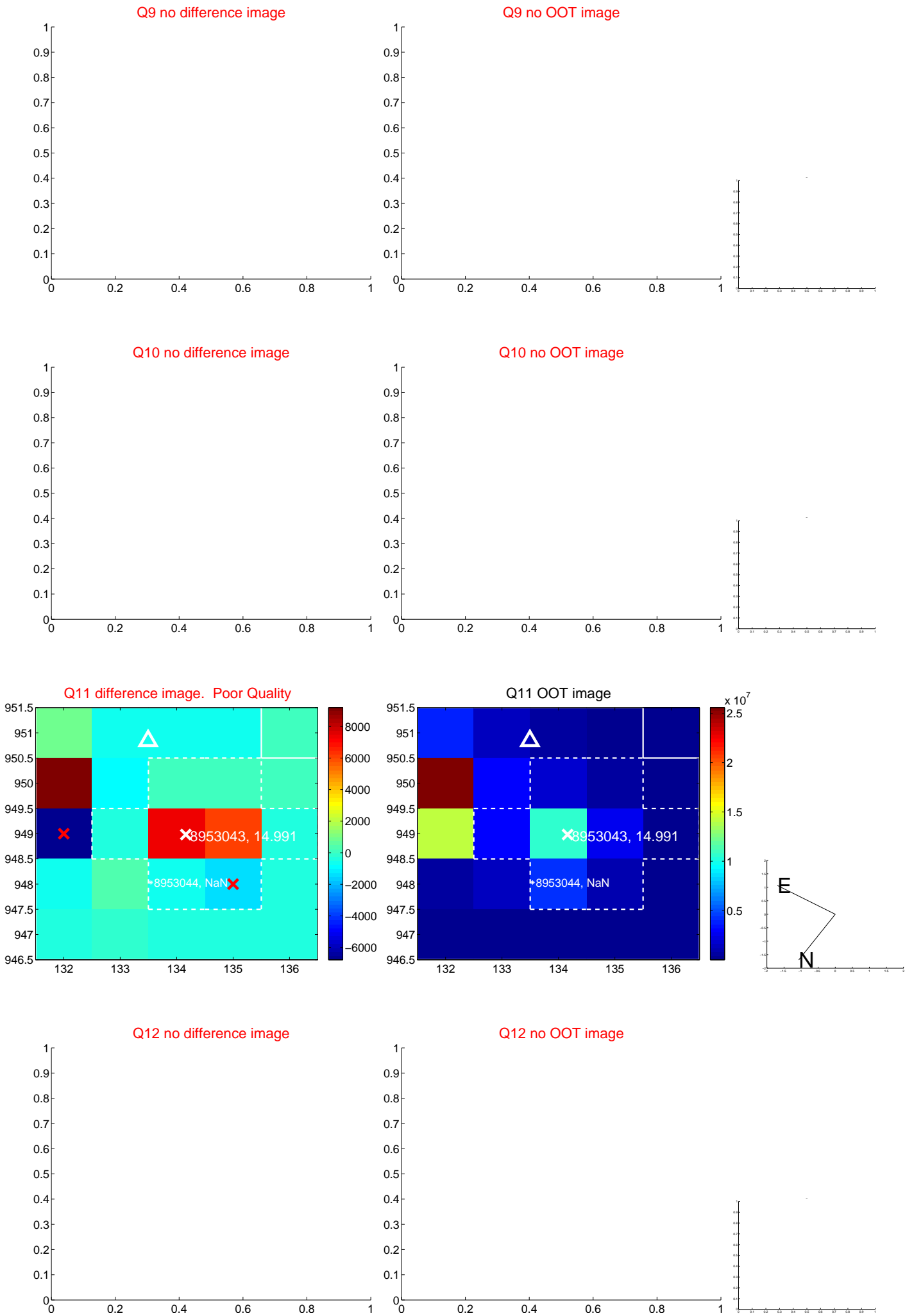
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



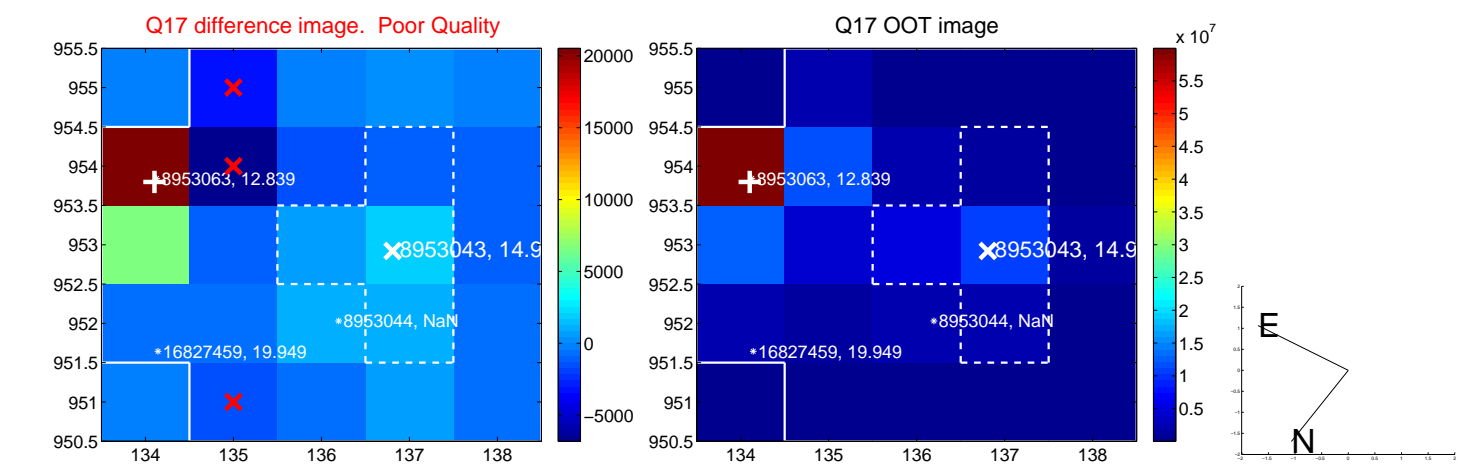
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



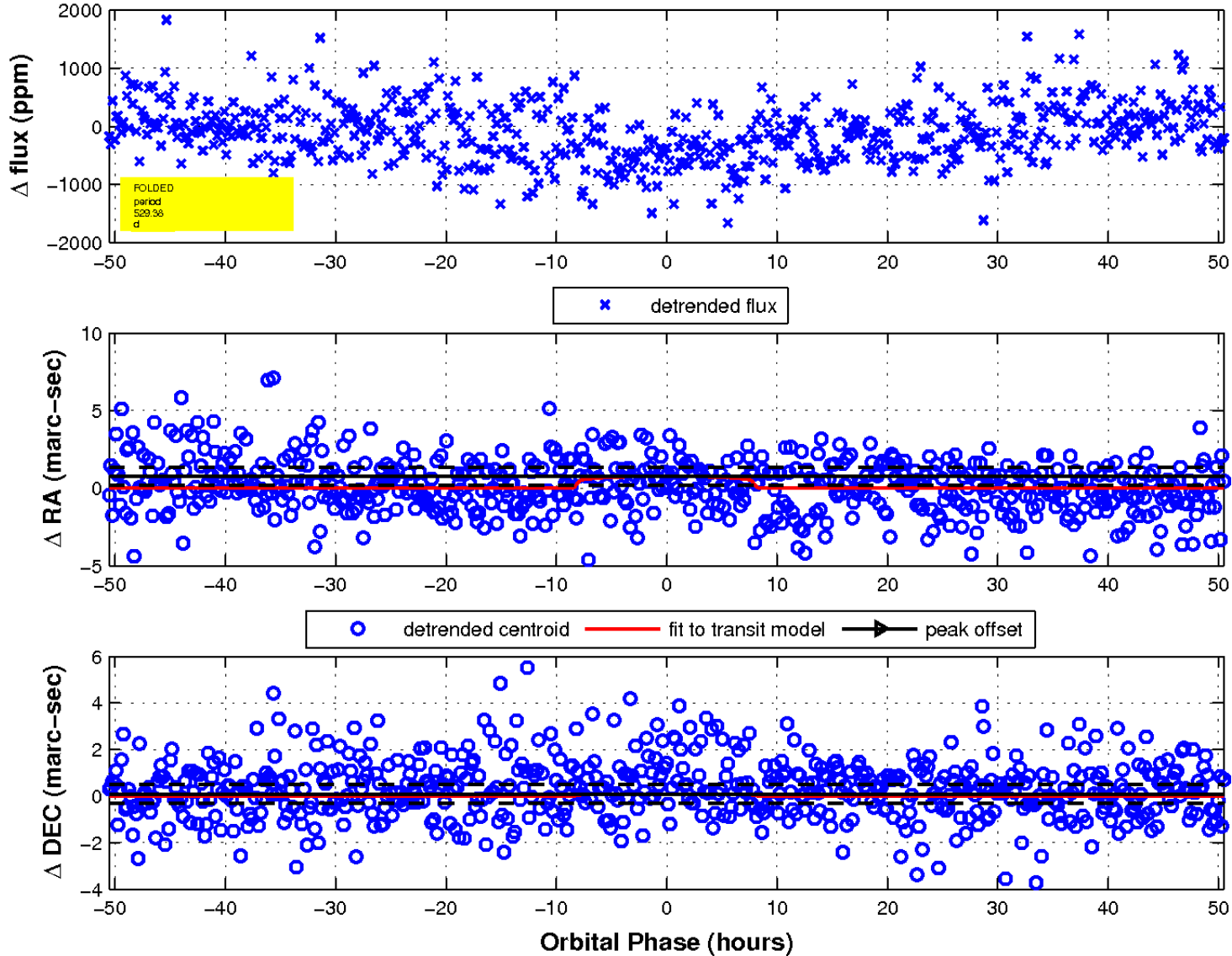
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

