

KIC 008426937

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})
008426937-01	OBS	No	383.407379	158.145672	558.4	25.524	9.8	11.3	0.72	5476	2.13	0.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008426937-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—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.

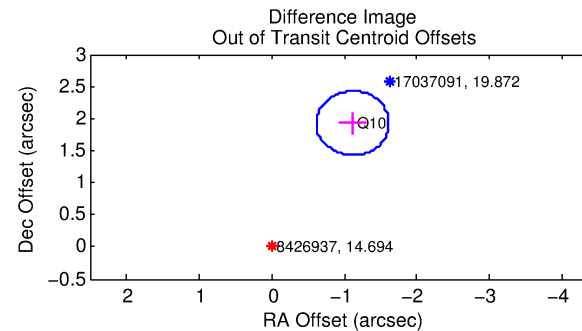
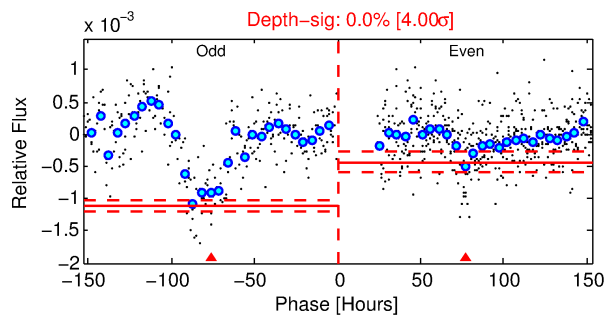
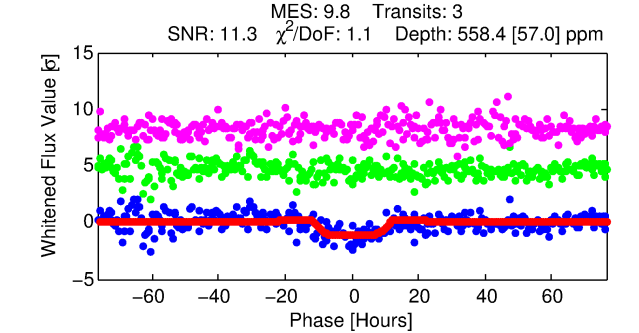
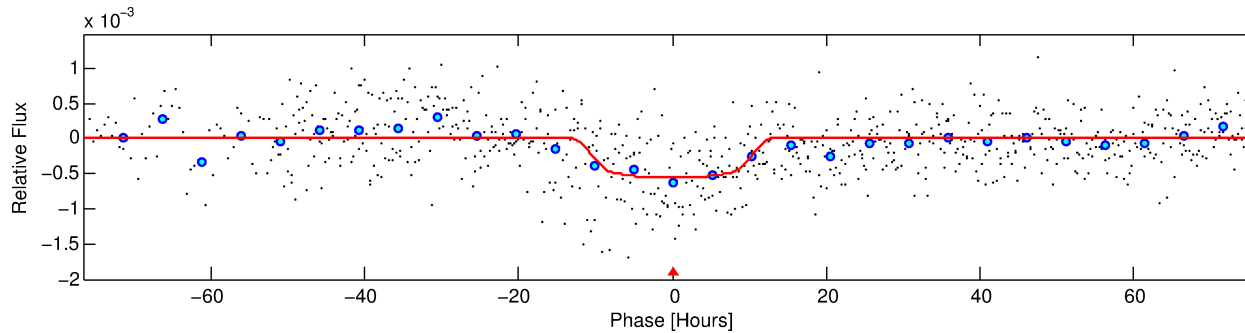
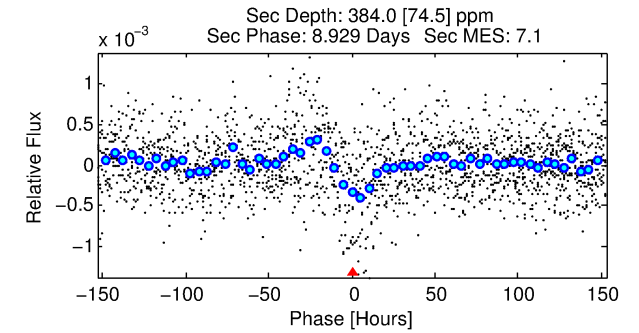
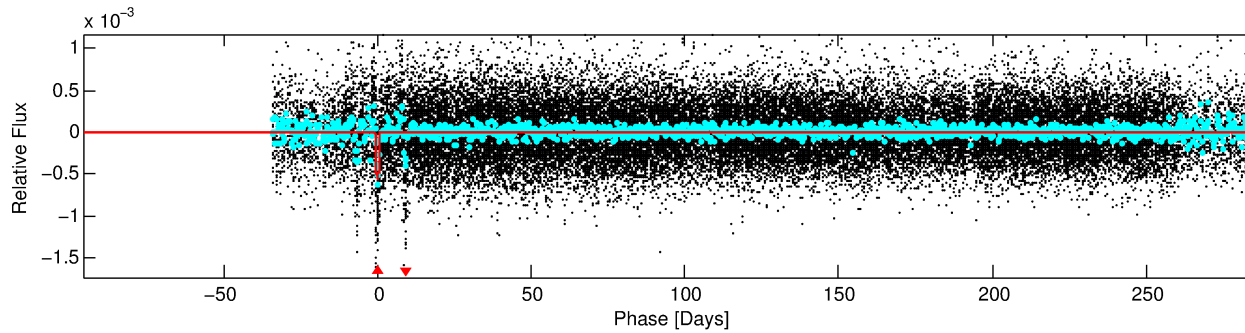
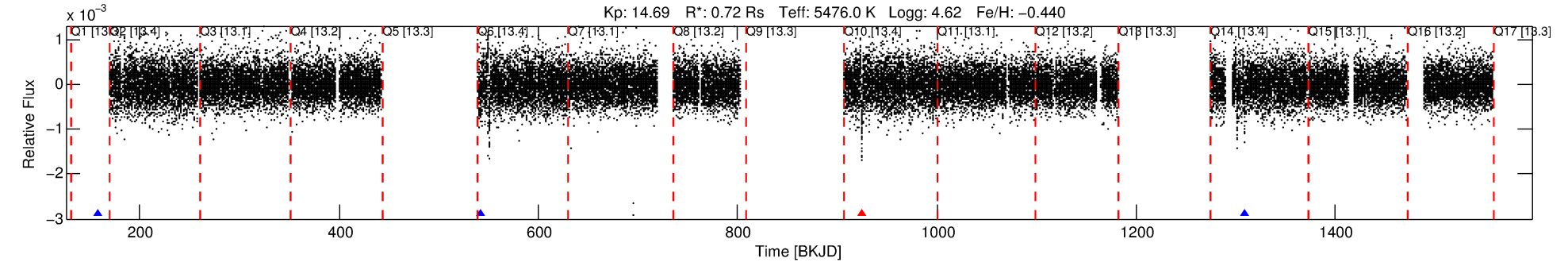
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008426937-01

No Significant Match Found

DV One-Page Summary

KIC: 8426937 Candidate: 1 of 1 Period: 383.407 d



DV Fit Results:

Period = 383.40738 [0.02787] d
Epoch = 158.1457 [0.0620] BKJD
Rp/R* = 0.0270 [0.0023]
a/R* = 48.58 [13.32]
b = 0.94 [0.04]
Seff = 0.46 [0.11]
Teq = 210 [12] K
Rp = 2.13 [0.40] Re
a = 0.9573 [0.1315] AU
Ag = 42541.18 [13737.37] [3.10σ]
Teffp = 4668 [330] K [13.50σ]

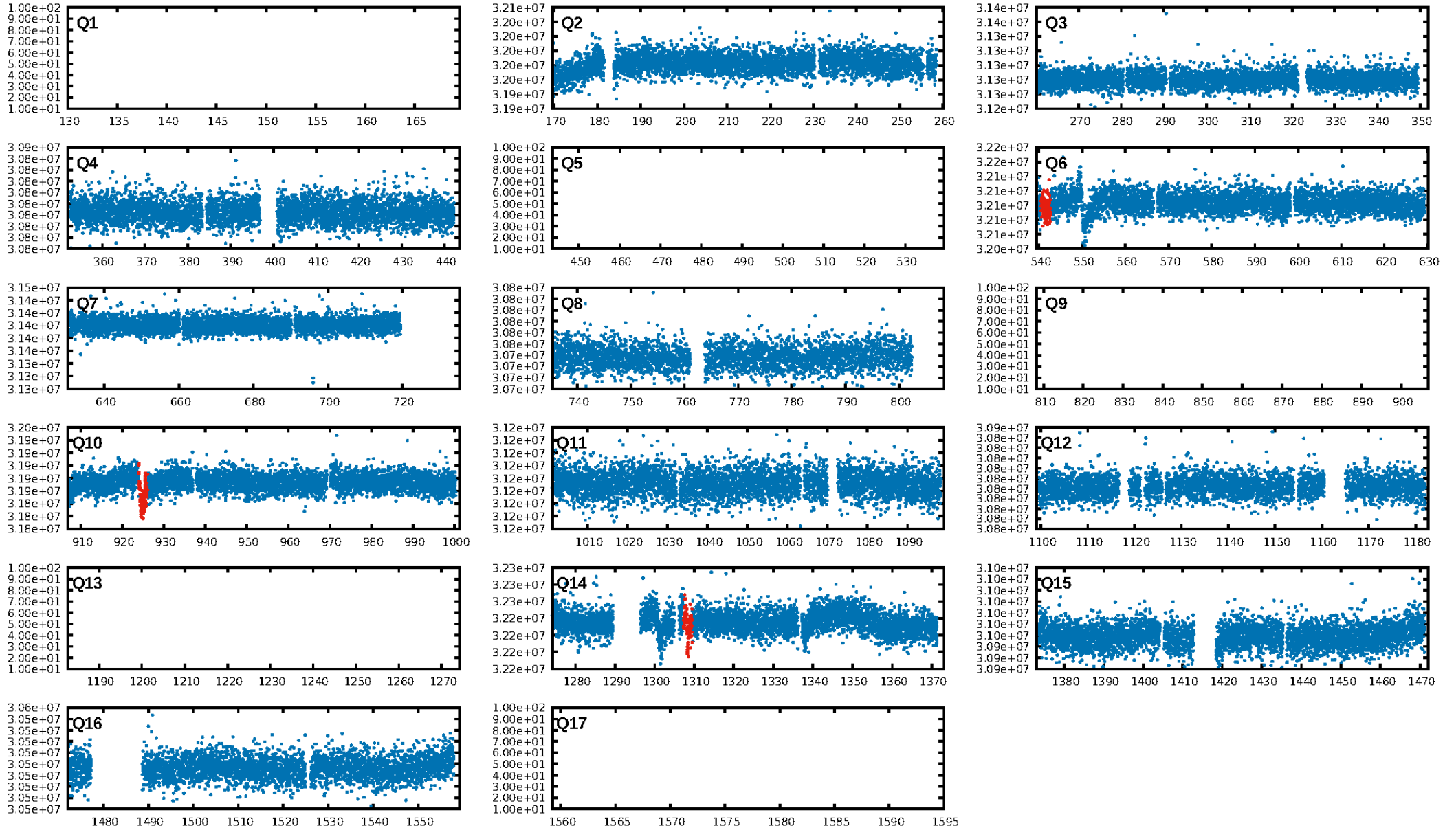
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 90.7%
Bootstrap-pfa: 2.10e-12
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 0.9737
Centroid-sig: 20.6%
Centroid-so: 1.938 arcsec [1.21σ]
OotOffset-rm: 2.226 arcsec [13.36σ]
KicOffset-rm: 2.268 arcsec [13.60σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

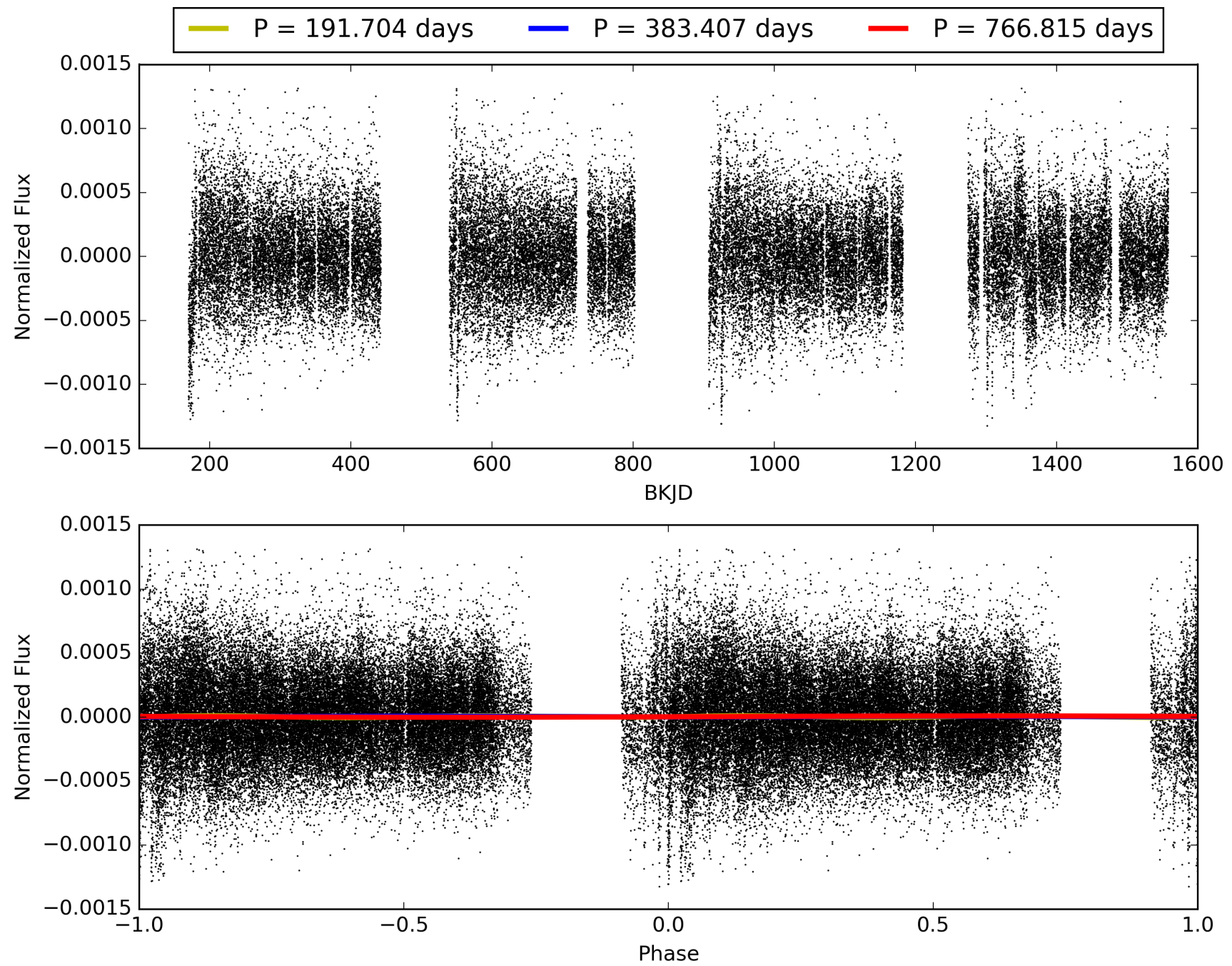
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:20:41 Z

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

TCE 008426937-01, PDC Light Curves

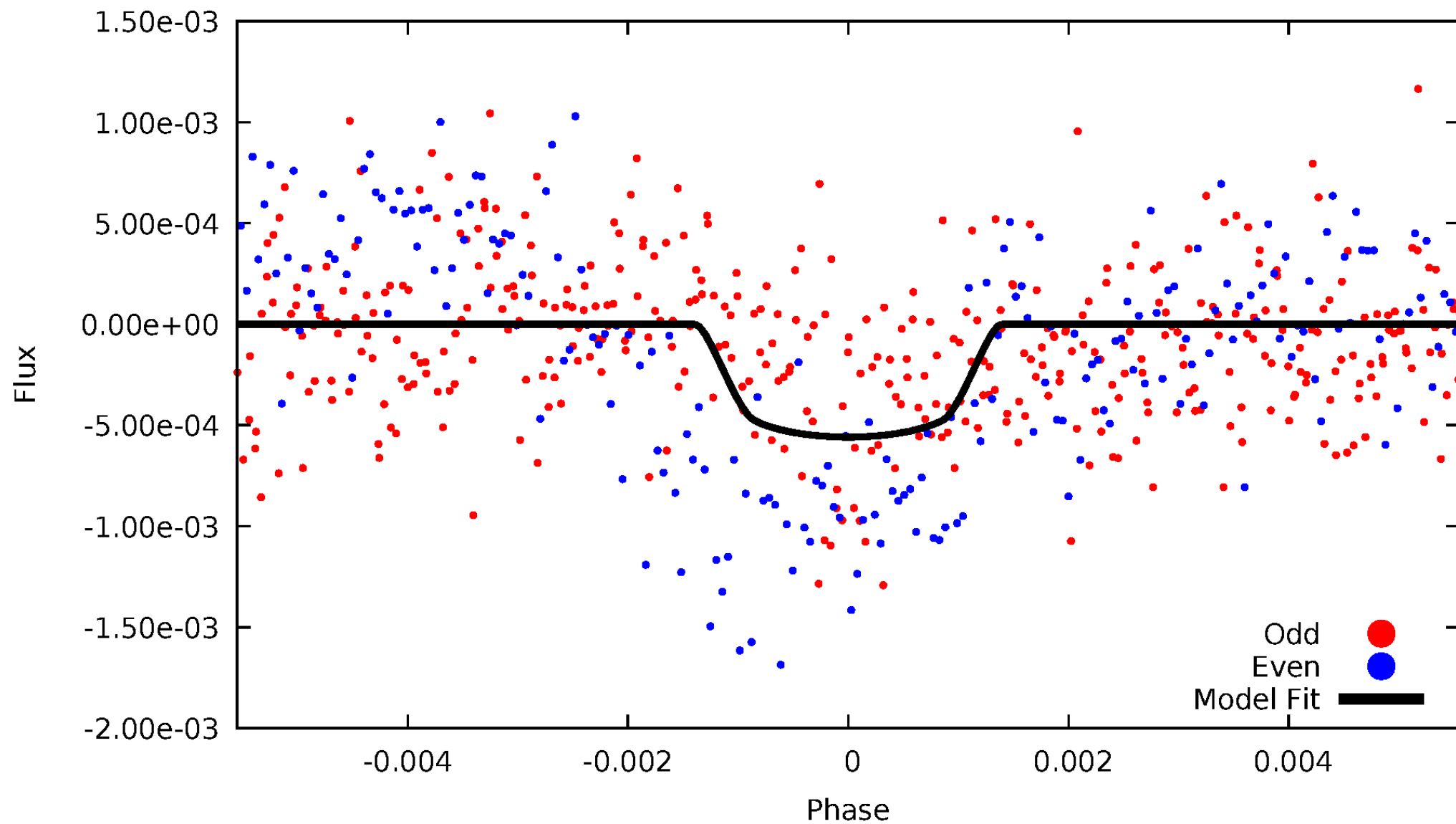


TCE 008426937-01



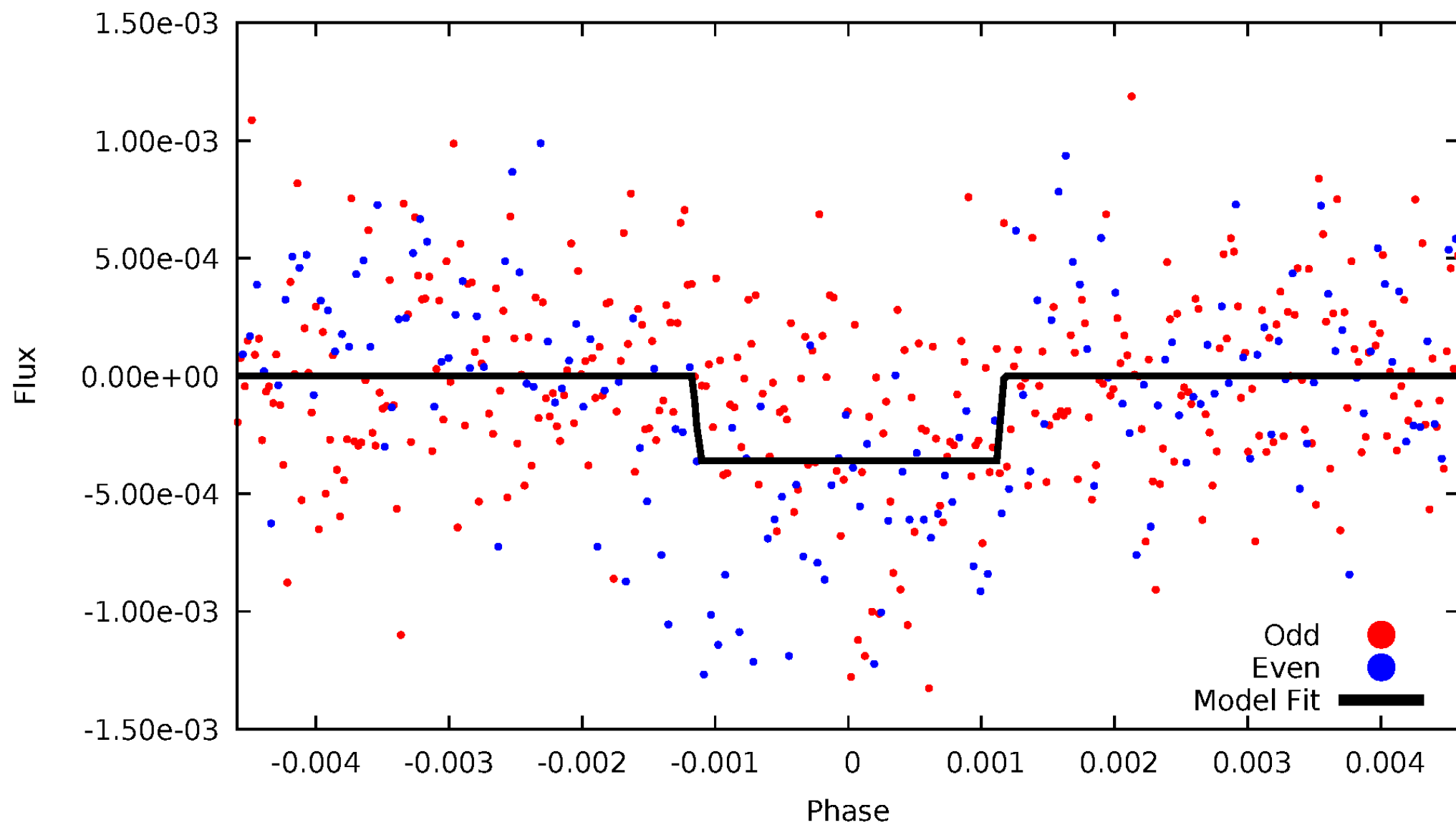
DV Odd/Even

TCE 008426937-01

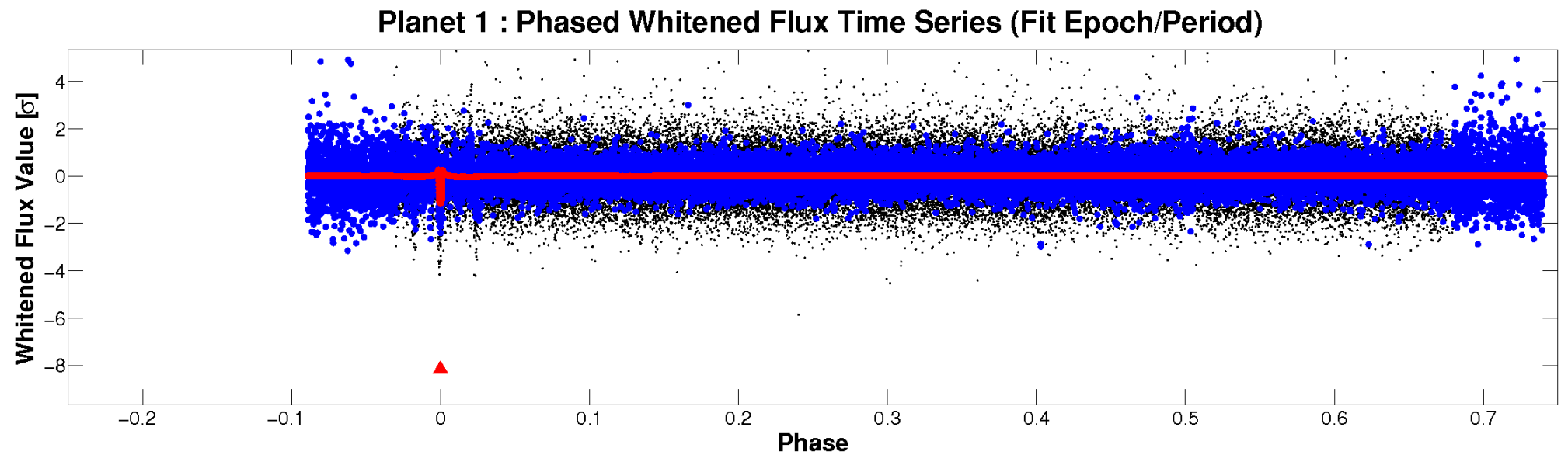
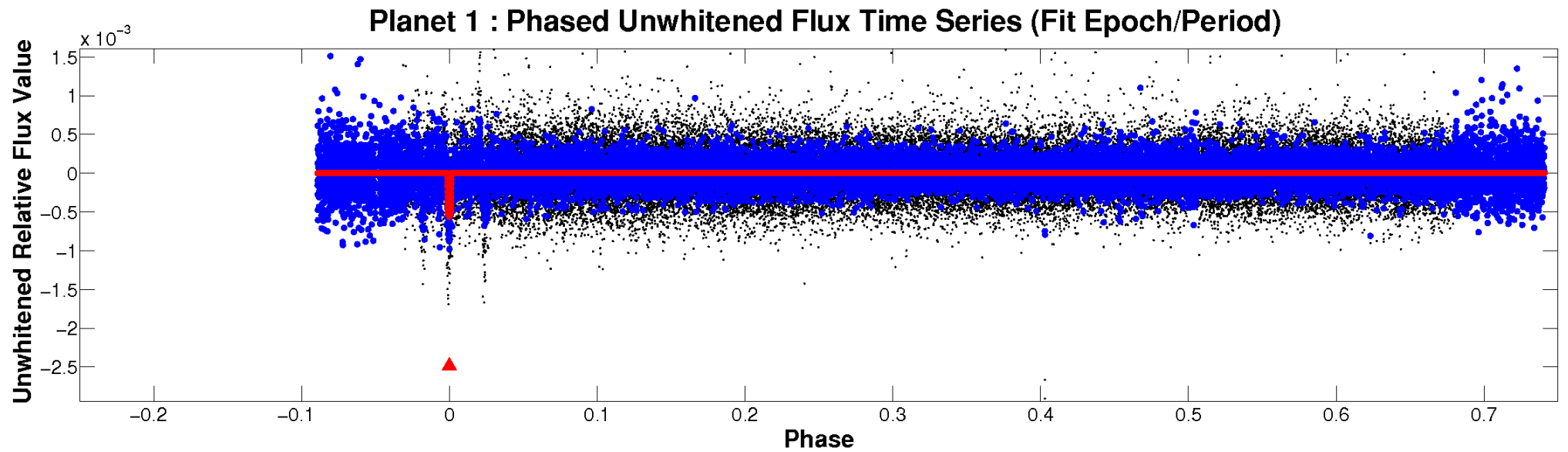


ALT Odd/Even

TCE 008426937-01

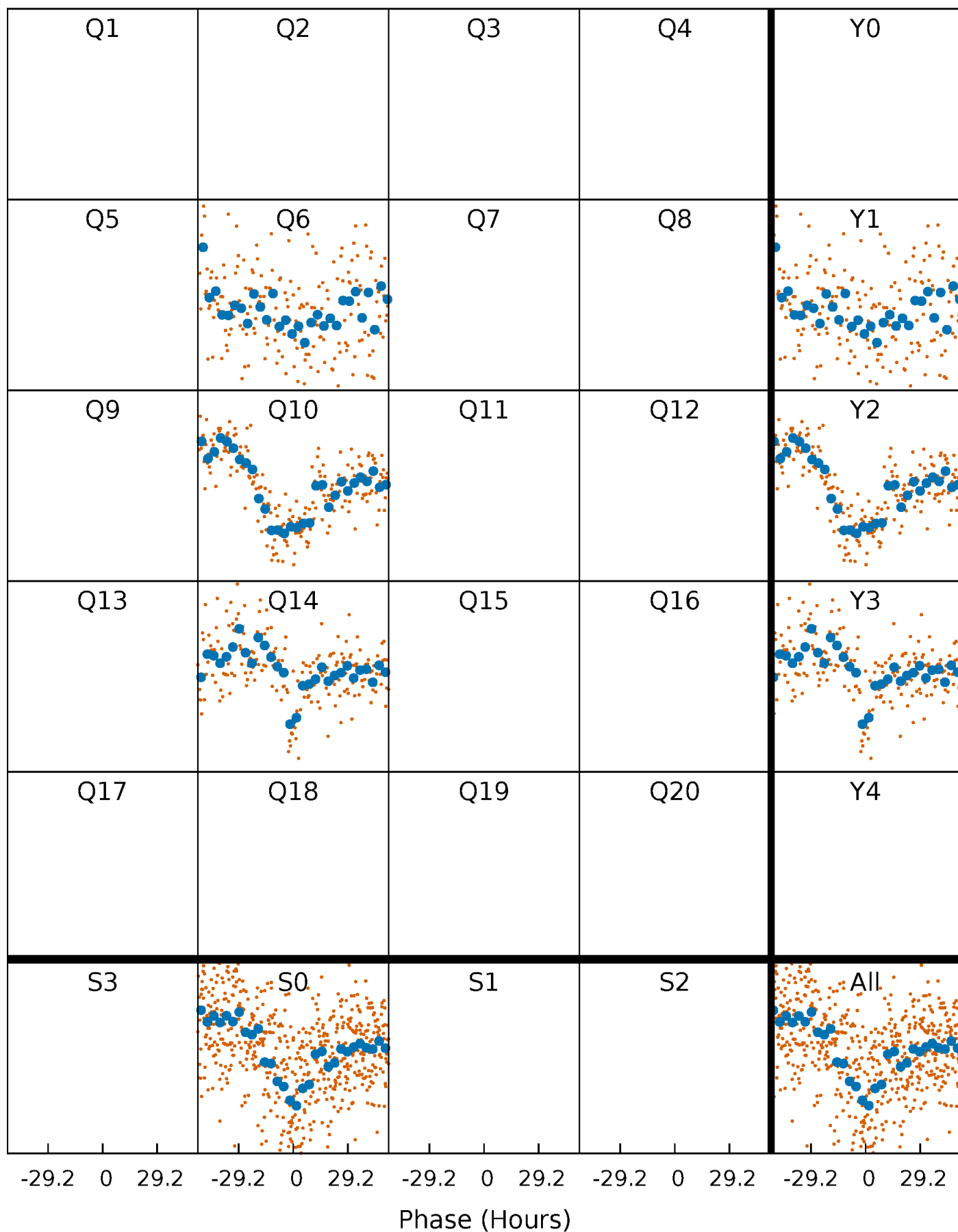


Non-Whitened Vs. Whitened Light Curve



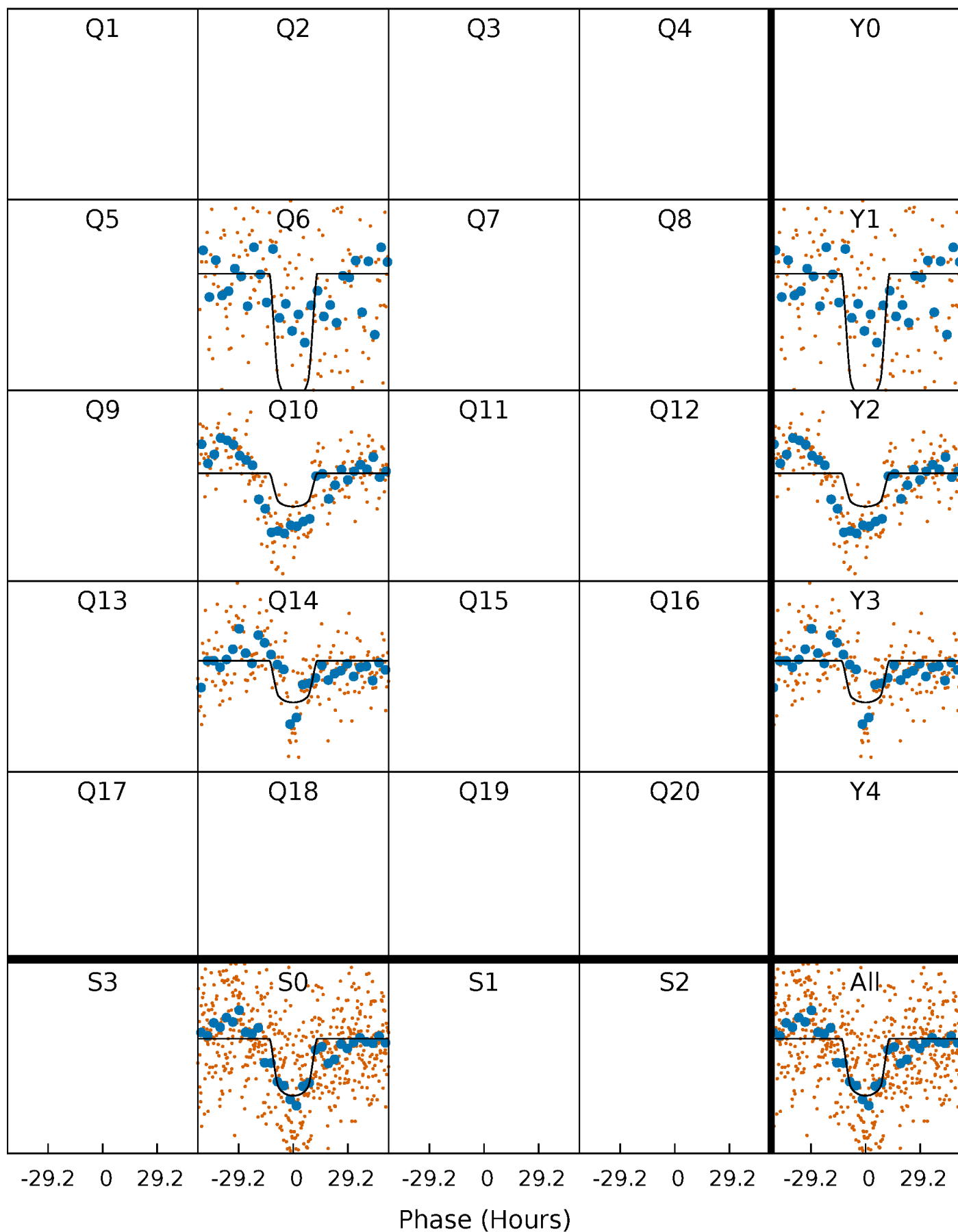
PDC Quarter-Phased Transit Curves

TCE 008426937-01 P=383.407379 Days $T_0=158.145672$ (BKJD)



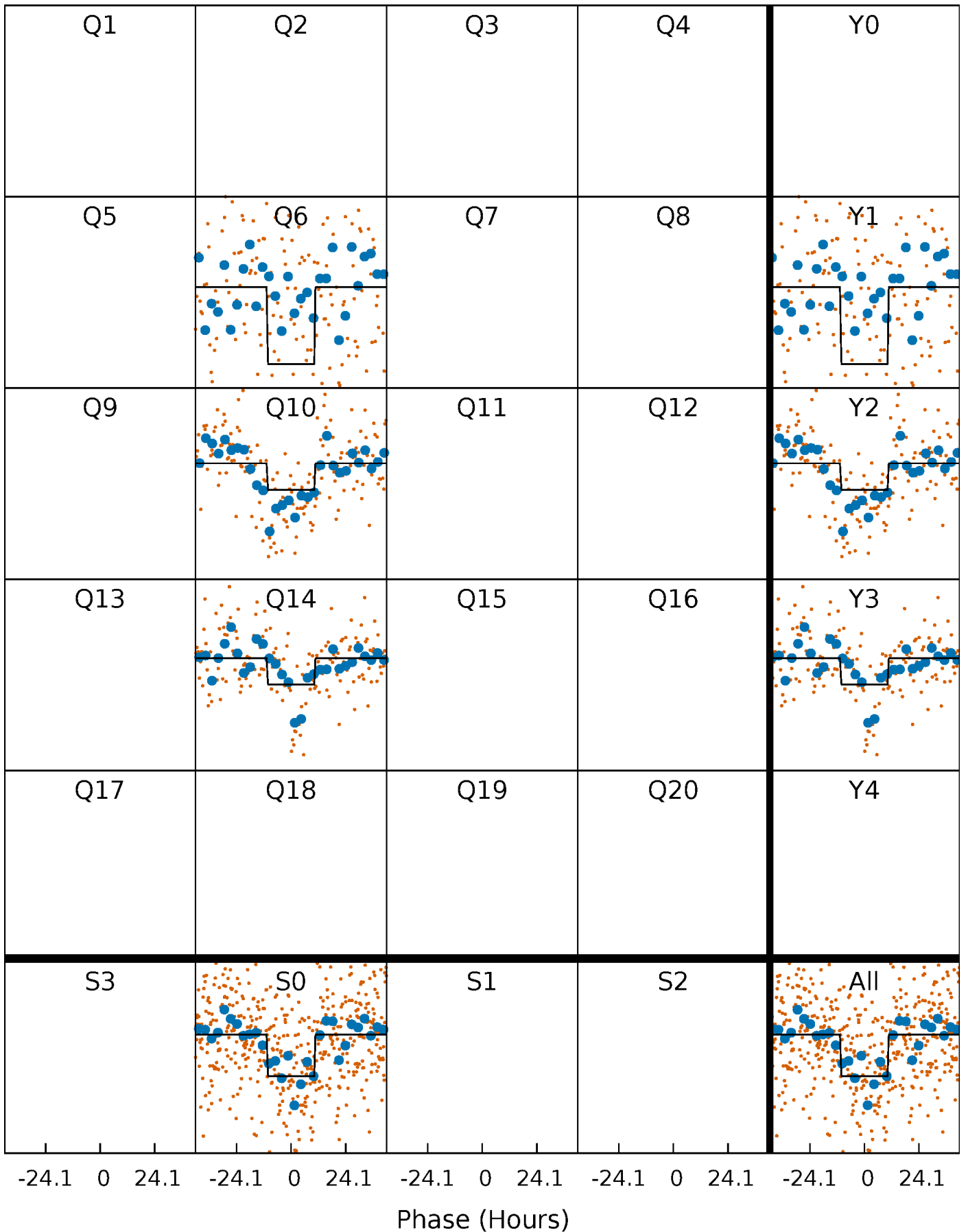
DV Quarter-Phased Transit Curves

TCE 008426937-01 P=383.407379 Days $T_0=158.145672$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

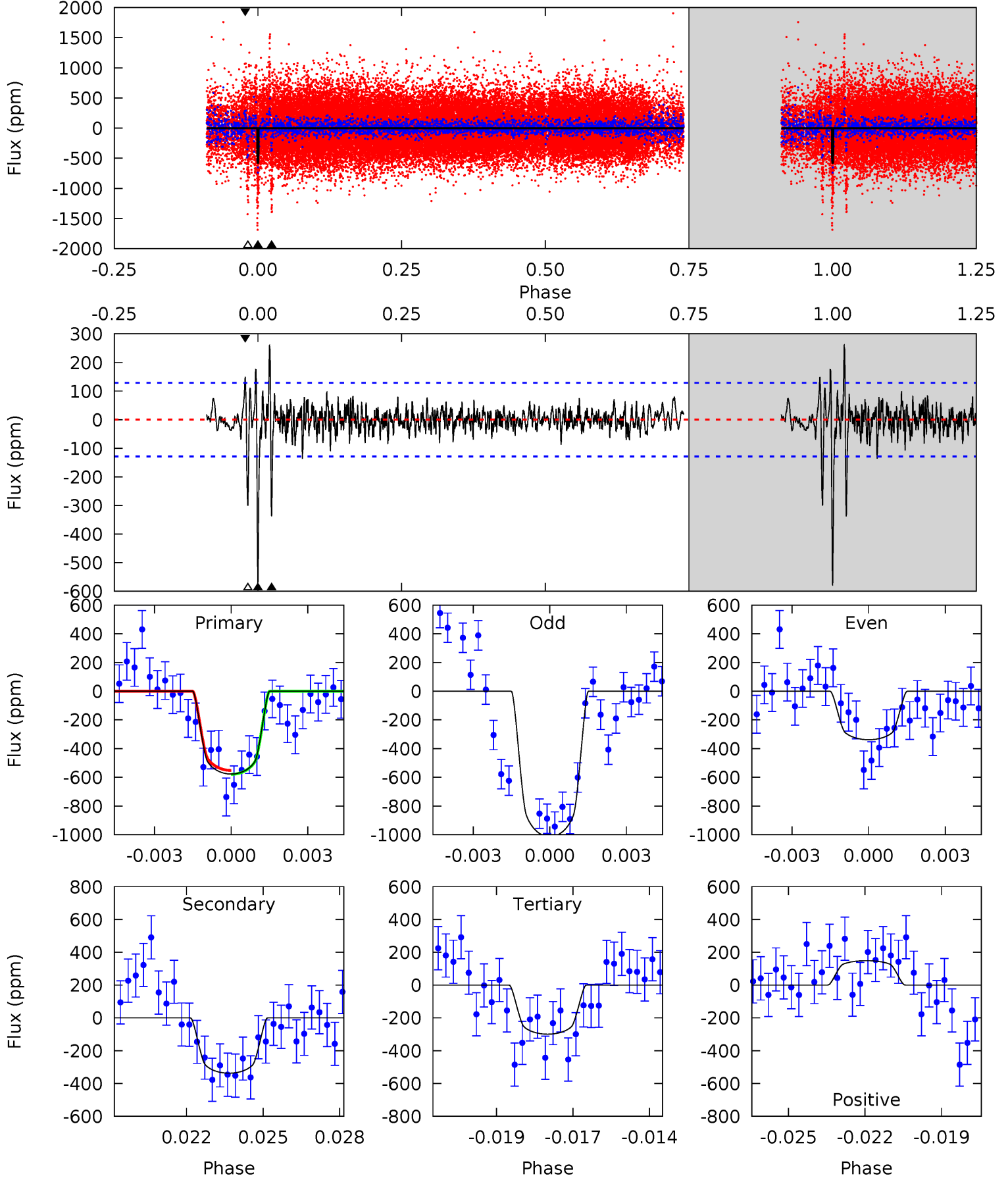
TCE 008426937-01 P=383.360830 Days $T_0=158.175015$ (BKJD)



DV Model-Shift Uniqueness Test

008426937-01, P = 383.407379 Days, E = 158.145672 Days

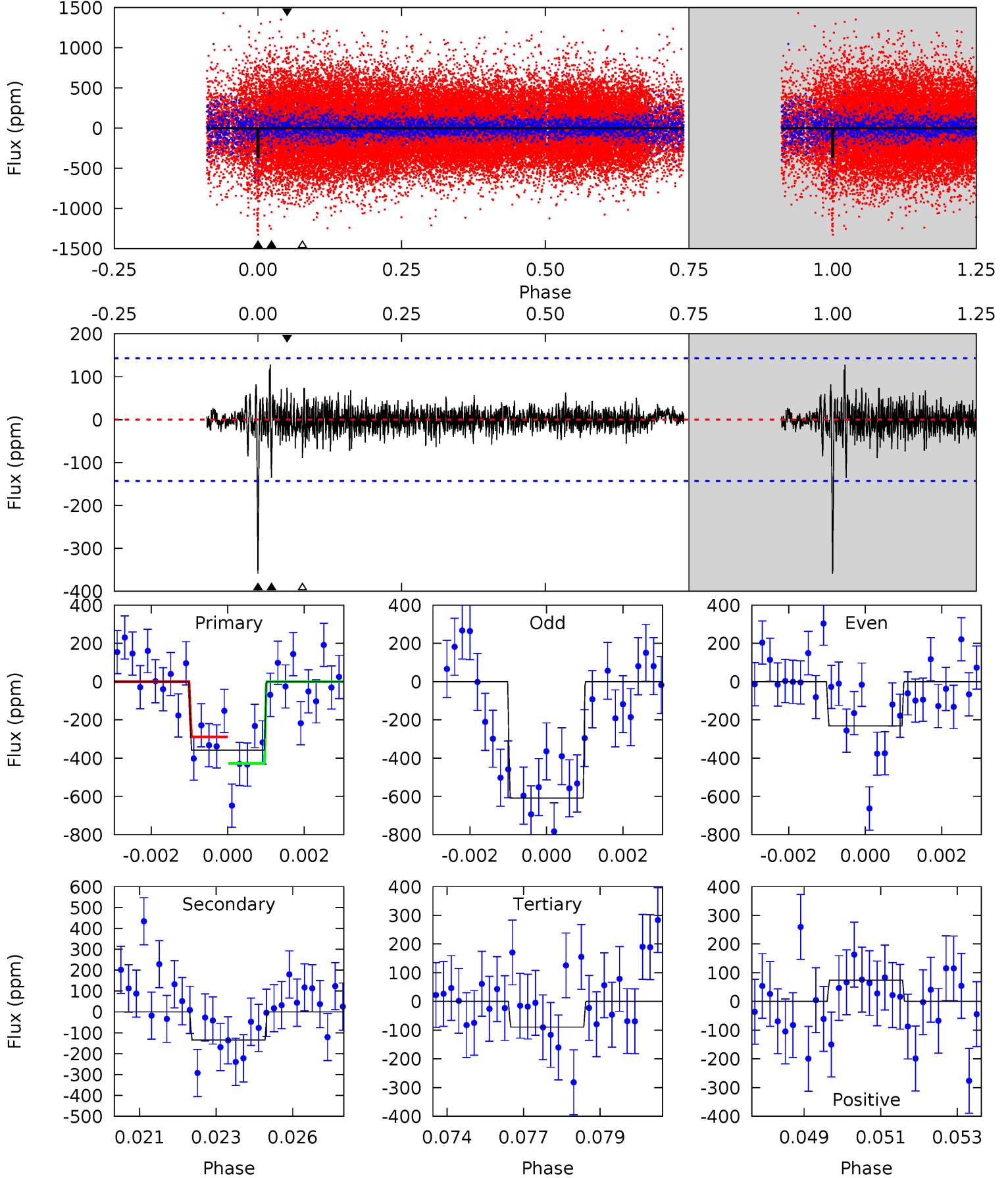
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	13.8	12.2	6.07	5.27	2.99	1.50	11.3	17.5	1.55	7.71	13.1	1.20	0.31	0.55



Alt Model-Shift Uniqueness Test

008426937-01, P = 383.360830 Days, E = 158.175015 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	5.00	3.31	2.75	5.30	3.05	0.74	9.97	10.5	1.69	2.25	6.64	0.95	0.26	2.59



Stellar Parameters For KIC 008426937

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5476^{+146}_{-162}	$4.618^{+0.035}_{-0.105}$	$-0.440^{+0.300}_{-0.300}$	$0.725^{+0.121}_{-0.052}$	$0.811^{+0.075}_{-0.092}$	$2.992^{+0.535}_{-0.952}$
	+3%/-3%	+1%/-2%	+68%/-68%	+17%/-7%	+9%/-11%	+18%/-32%
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 008426937-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-337 ± 24	$2.20^{+0.26}_{-0.23}$	297^{+14}_{-11}	4632^{+206}_{-196}	35218^{+8183}_{-6751}
Alt.	-135 ± 27	$1.54^{+0.23}_{-0.21}$	297^{+13}_{-12}	4430^{+325}_{-274}	27854^{+11357}_{-8039}

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

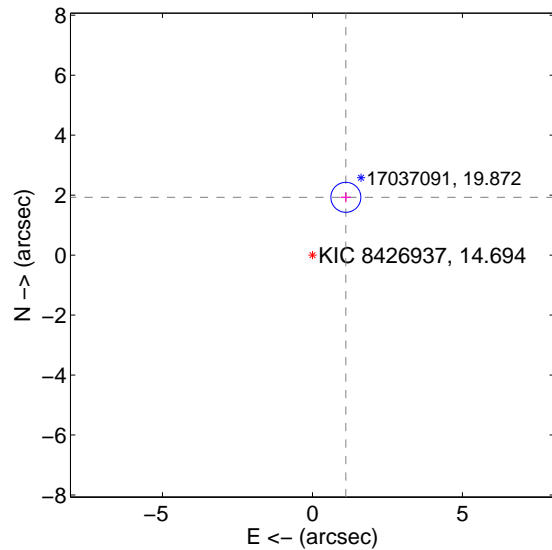
Supplemental centroid analysis for 008426937-01. Kepler magnitude: 14.69. Transit SNR 11.28

There are 0 quarters with good PRF difference image offsets

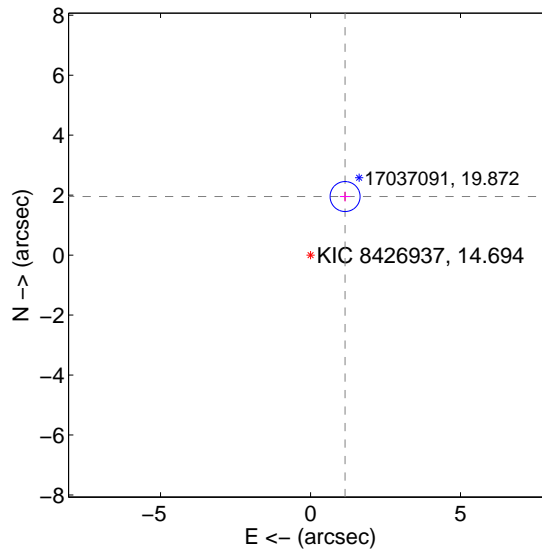
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.226 ± 0.167	13.36	-1.115 ± 0.173	1.927 ± 0.164
PRF-fit source offset from KIC position	2.268 ± 0.167	13.60	-1.153 ± 0.173	1.953 ± 0.164
photometric centroid source offset	1.94 ± 1.60	1.21	1.37 ± 1.75	1.37 ± 1.43

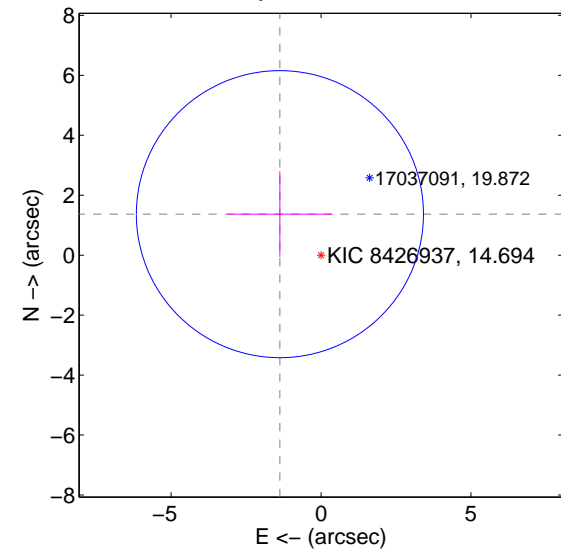
offset from difference PRF-fit to OOT PRF-fit



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.

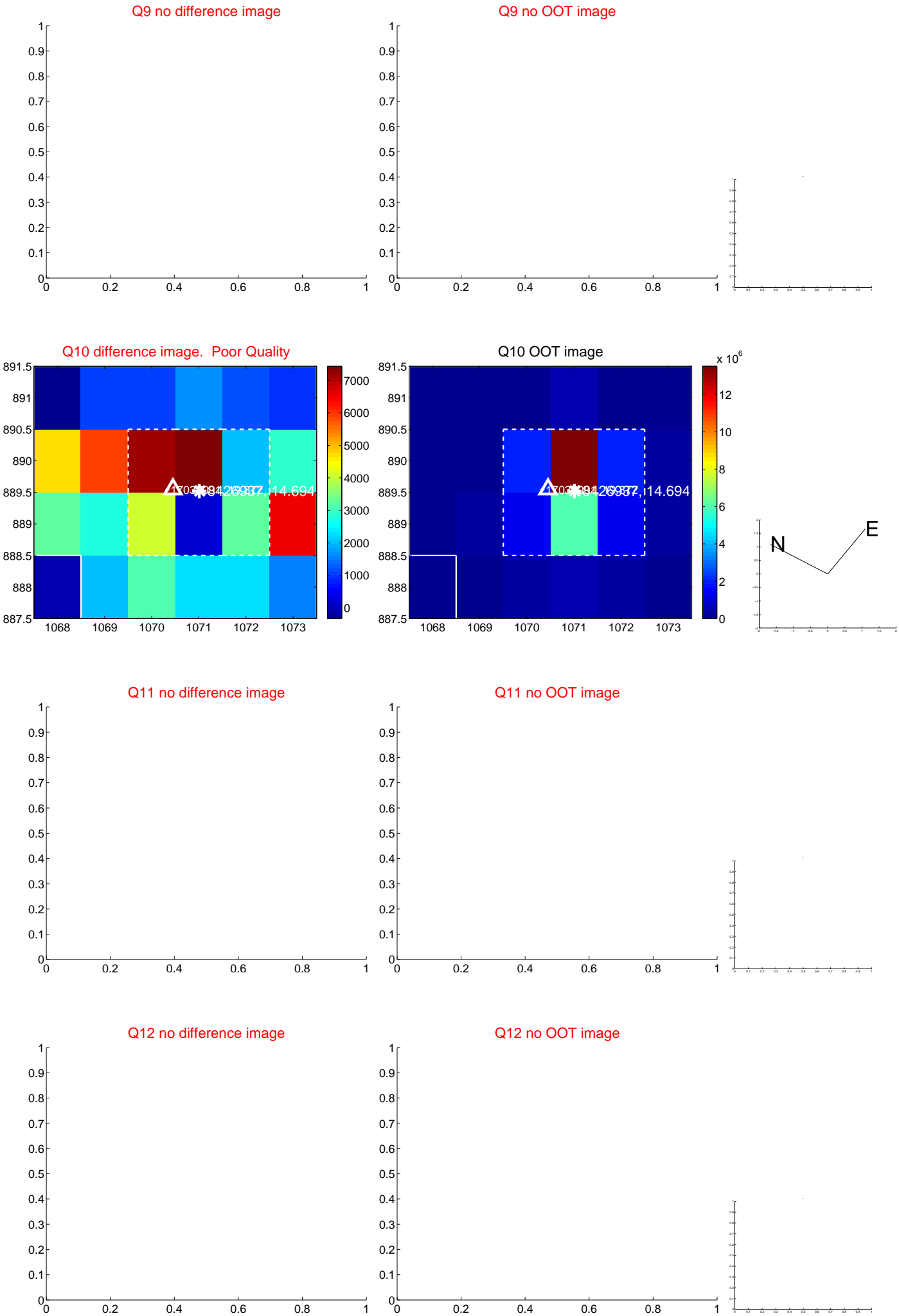
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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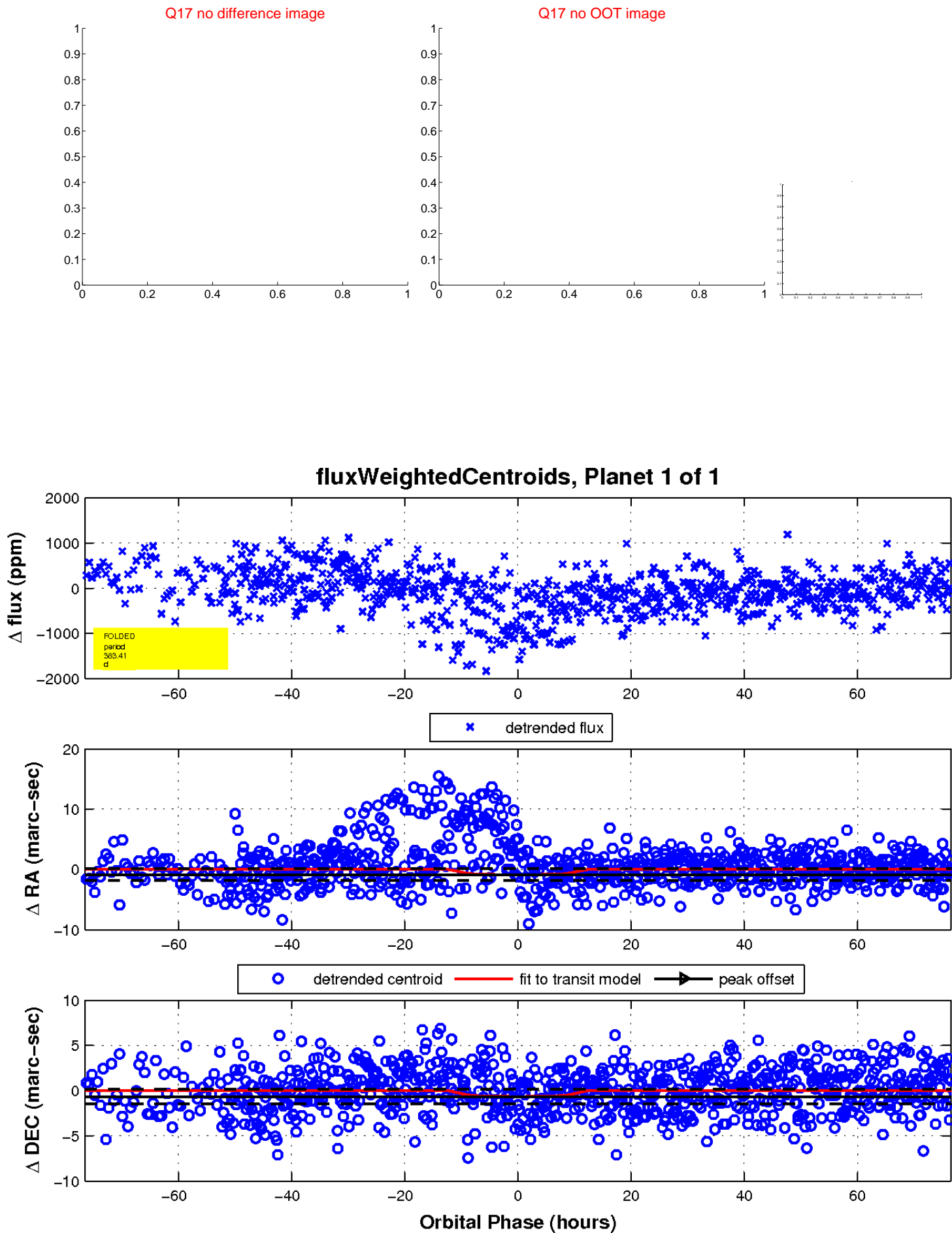
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

