

KIC 007537953

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})
007537953-01	OBS	No	562.270715	403.514733	1297.6	24.808	8.3	8.8	0.66	5168	4.63	0.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007537953-01	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.

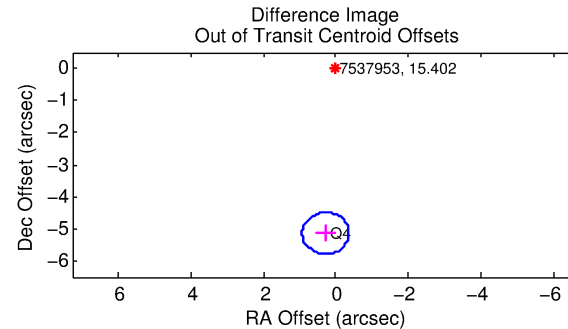
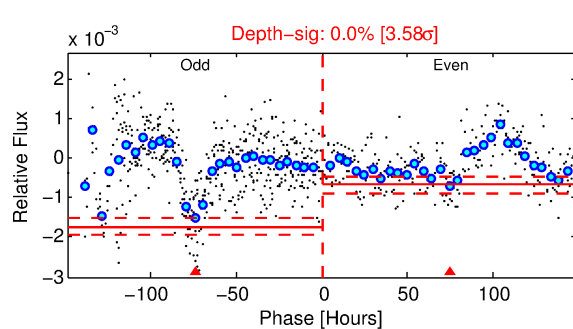
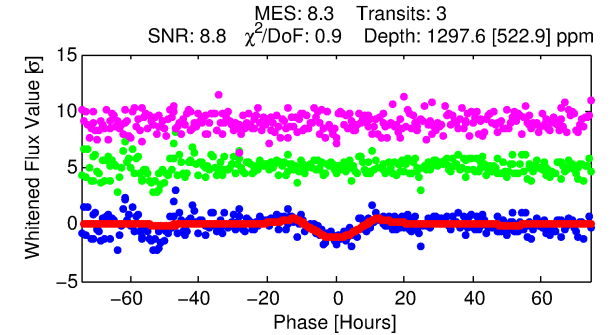
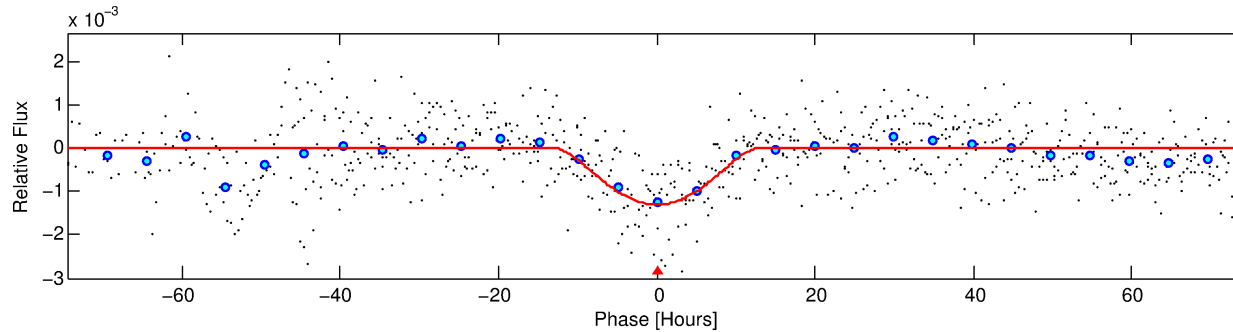
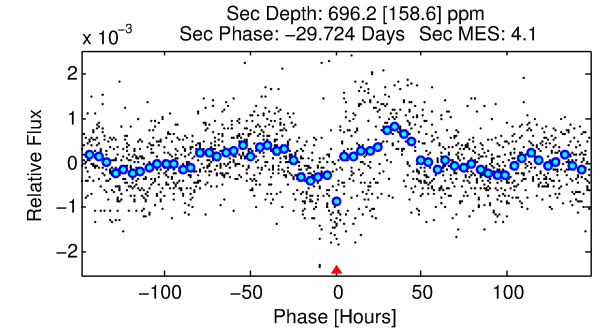
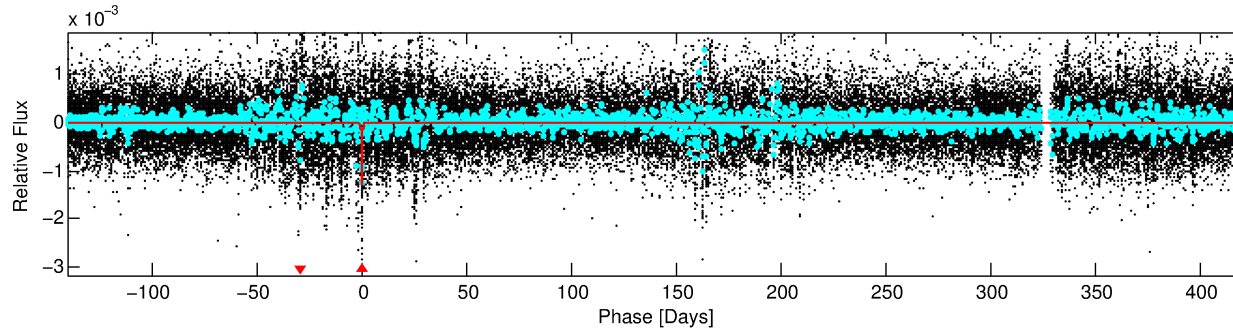
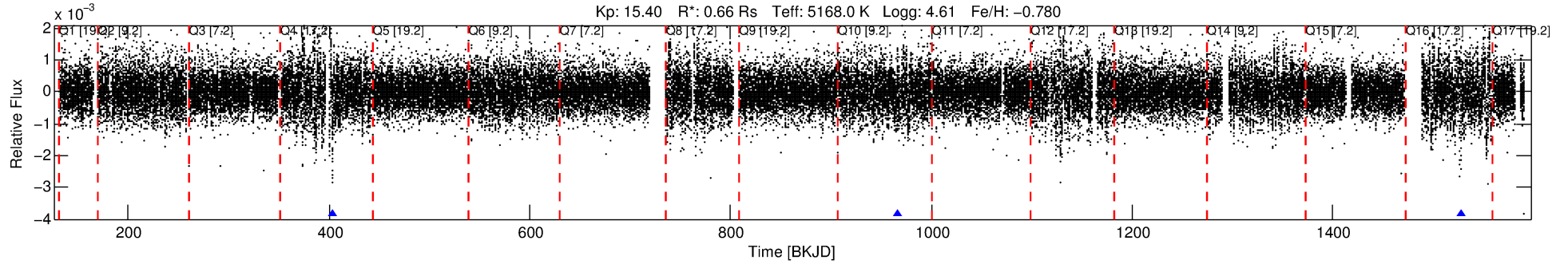
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007537953-01

No Significant Match Found

DV One-Page Summary

KIC: 7537953 Candidate: 1 of 1 Period: 562.271 d



DV Fit Results:

Period = 562.27072 [0.03123] d
Epoch = 403.5147 [0.0388] BKJD
Rp/R* = 0.0646 [0.1744]
a/R* = 63.32 [38.47]
b = 1.00 [0.26]
Seff = 0.21 [0.04]
Teq = 172 [7] K
Rp = 4.63 [12.51] Re
a = 1.1491 [0.0919] AU
Ag = 23549.48 [127214.09] [0.19σ]
Teff = 3302 [4459] K [0.70σ]

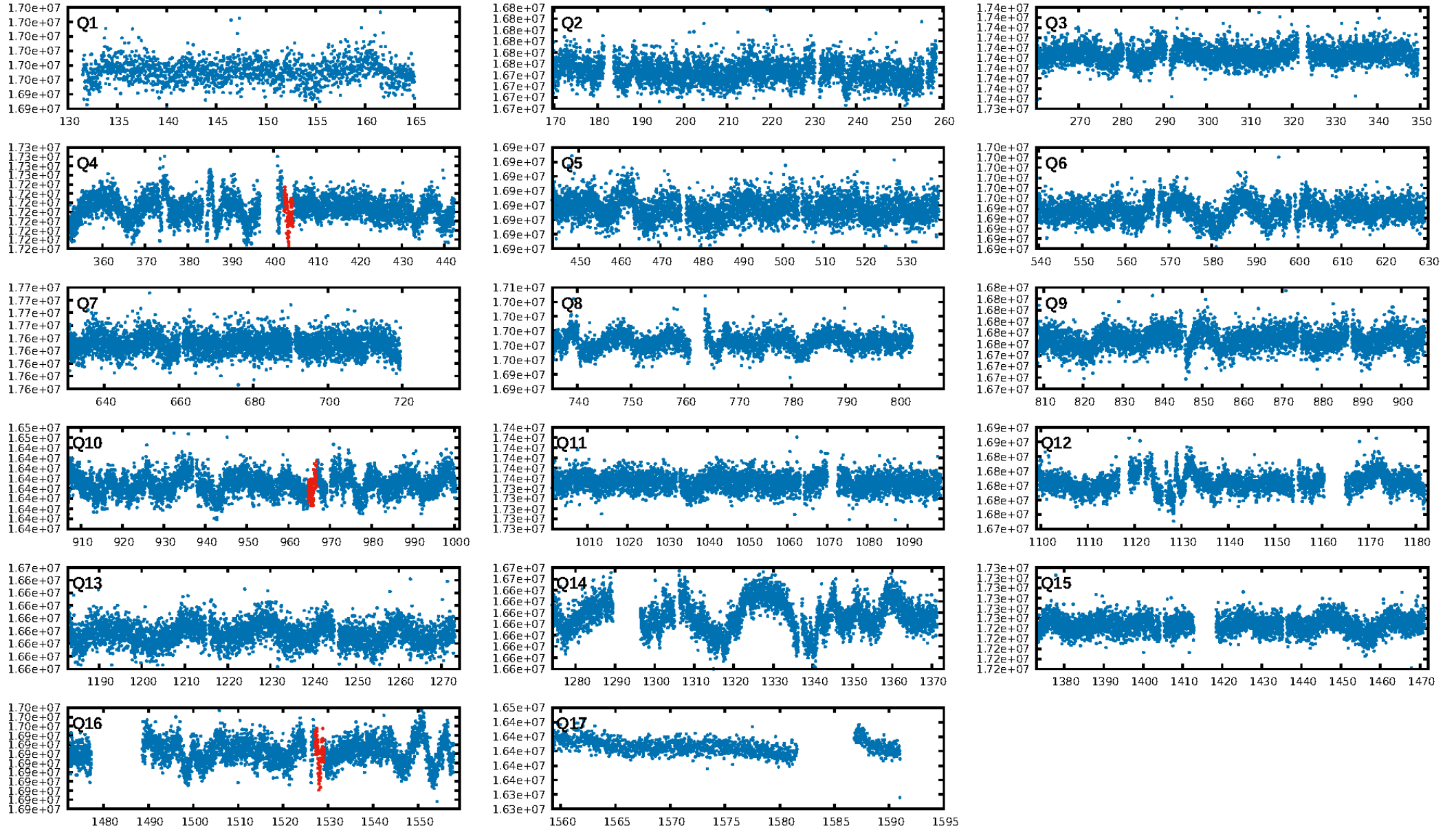
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.8%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 1.30e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.4634
Centroid-sig: 26.8%
Centroid-so: 1.666 arcsec [0.96σ]
OotOffset-rm: 5.147 arcsec [23.94σ]
KicOffset-rm: 5.329 arcsec [24.79σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [1/1]

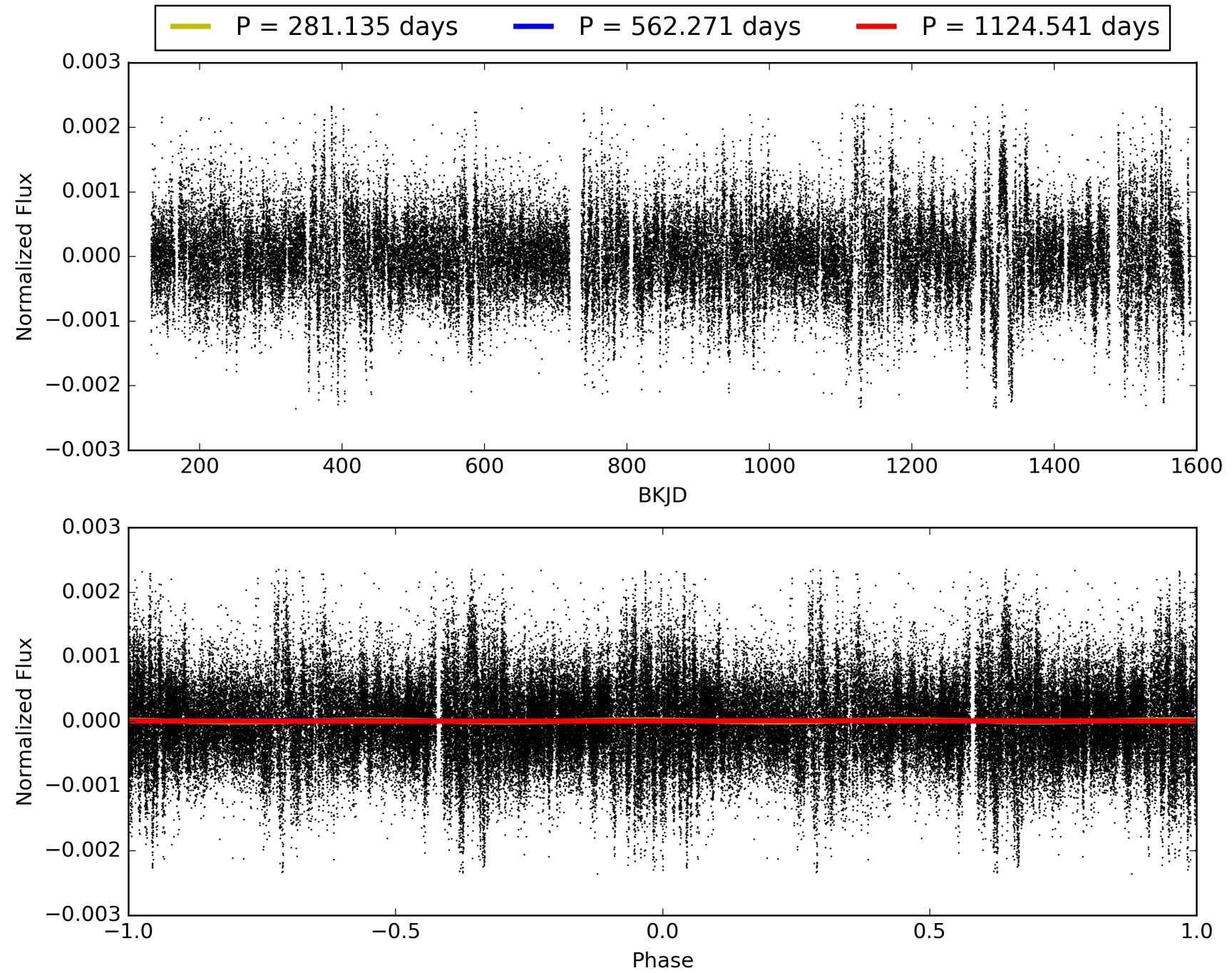
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:07:31 Z

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

TCE 007537953-01, PDC Light Curves

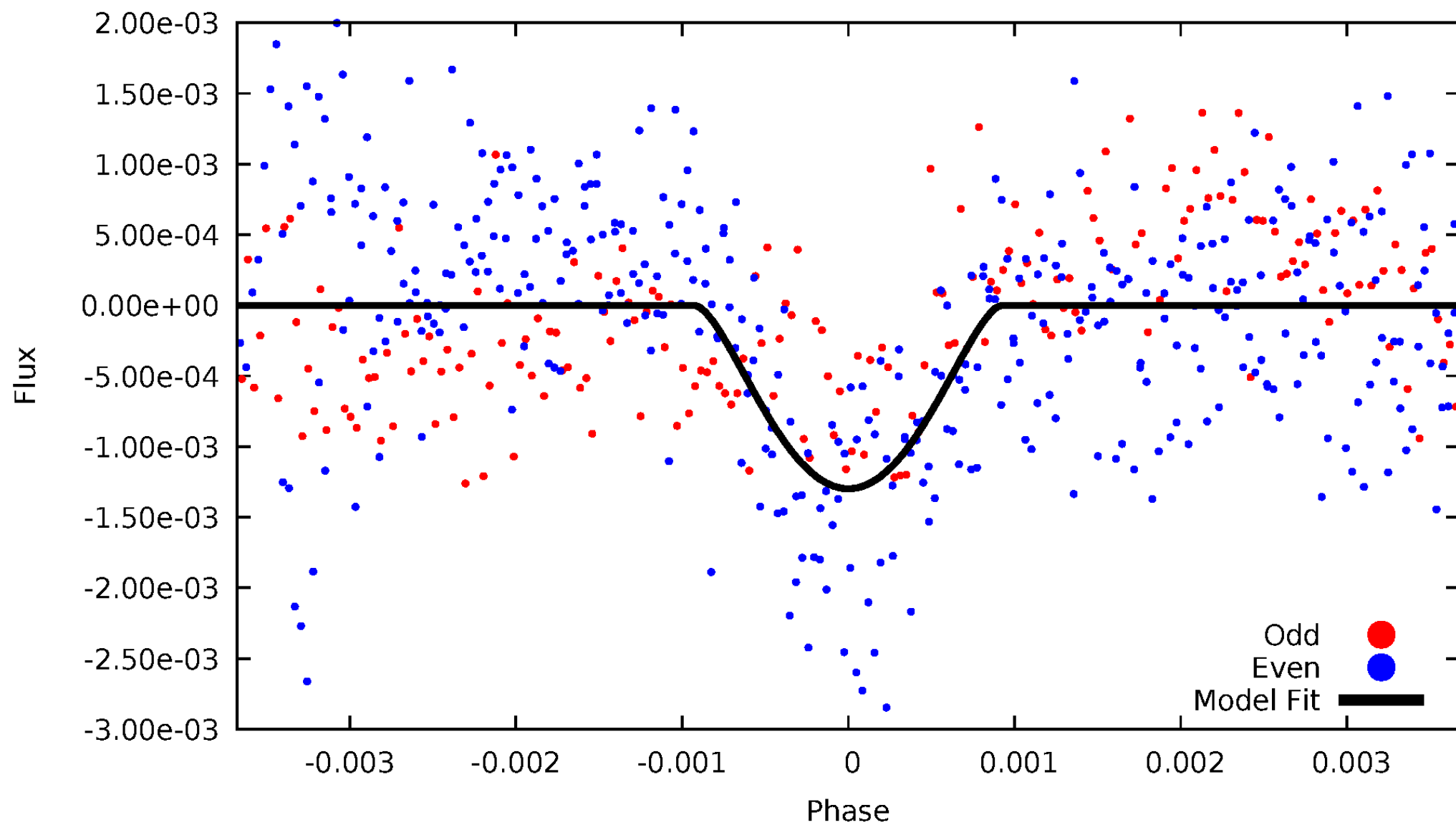


TCE 007537953-01



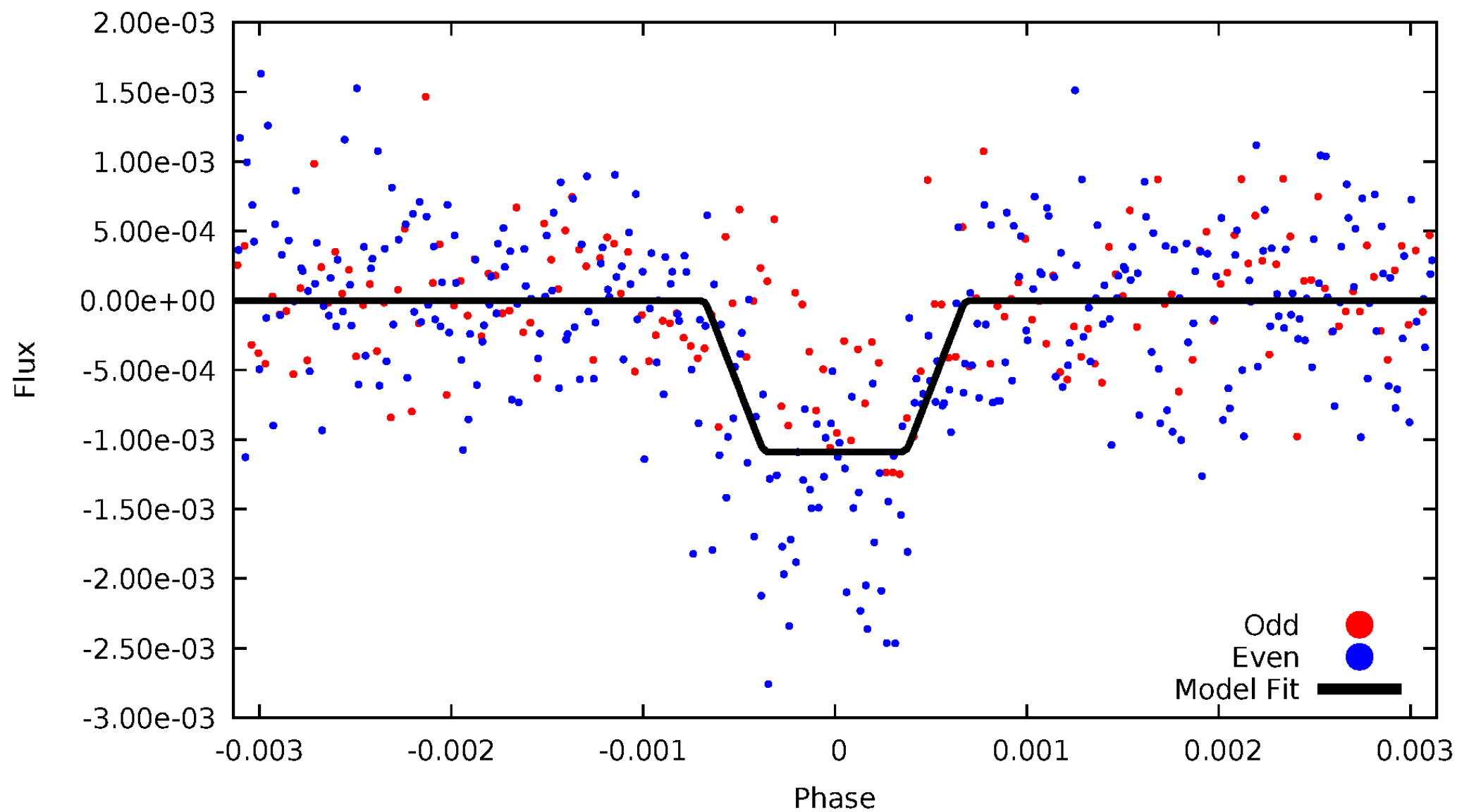
DV Odd/Even

TCE 007537953-01



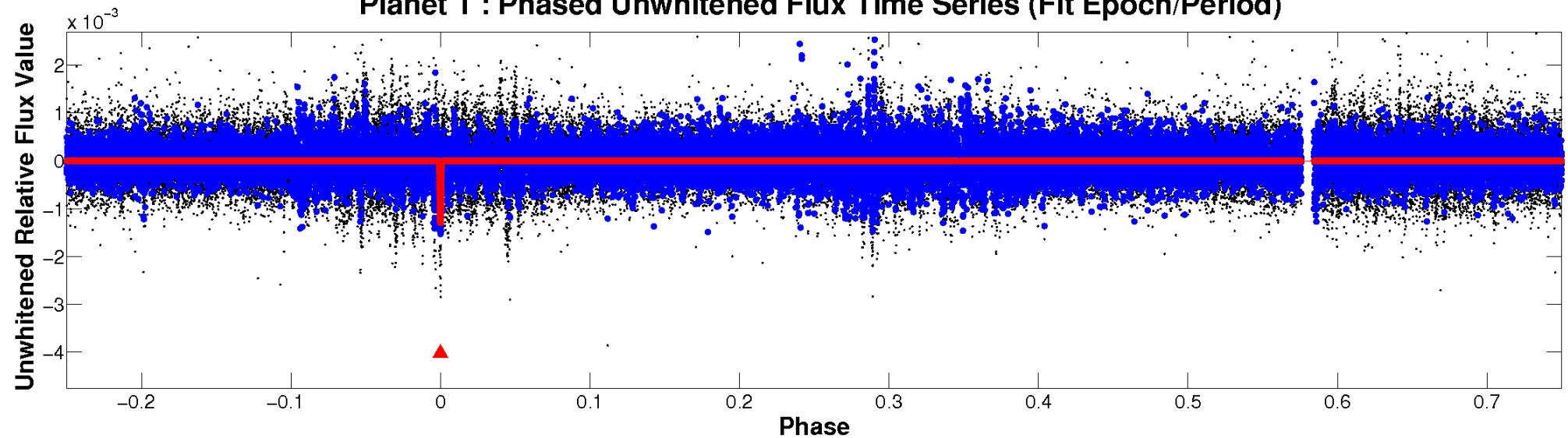
ALT Odd/Even

TCE 007537953-01

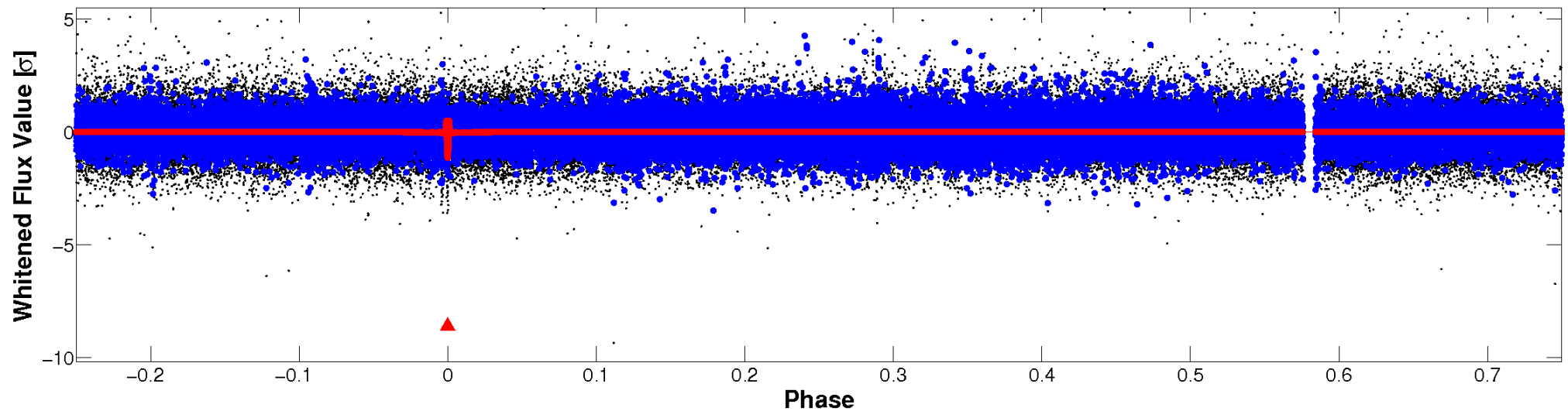


Non-Whitened Vs. Whitened Light Curve

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

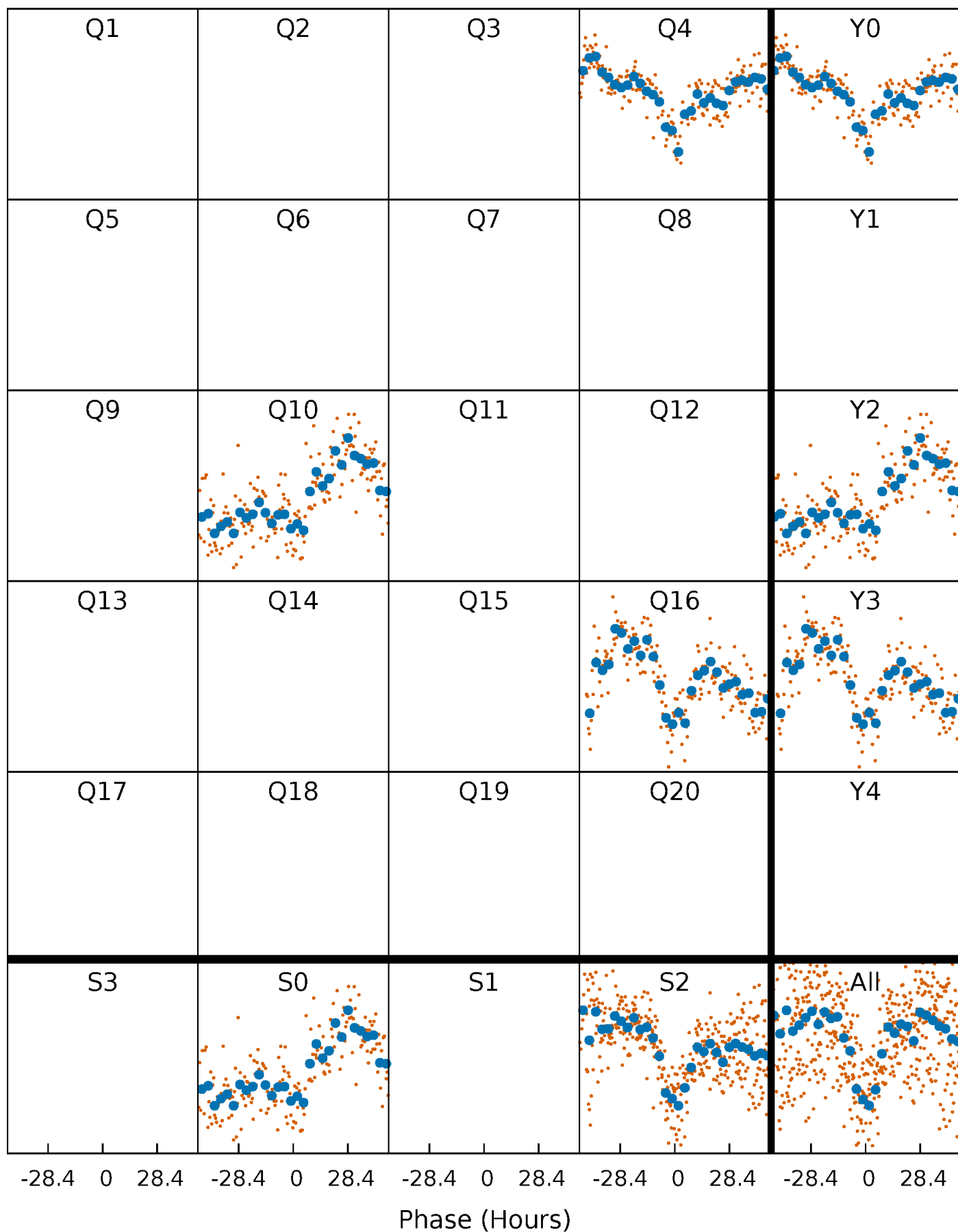


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



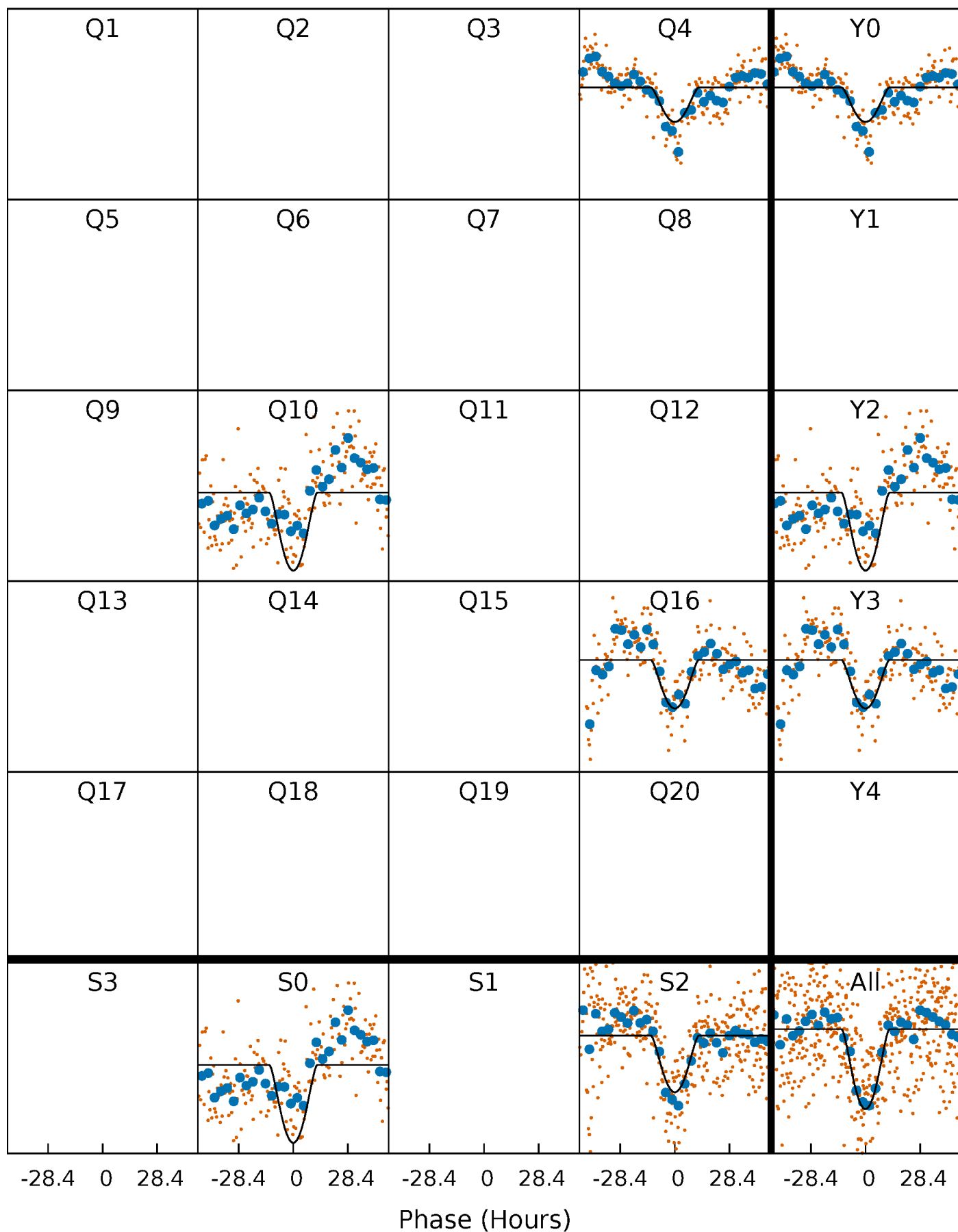
PDC Quarter-Phased Transit Curves

TCE 007537953-01 P=562.270715 Days $T_0=403.514733$ (BKJD)



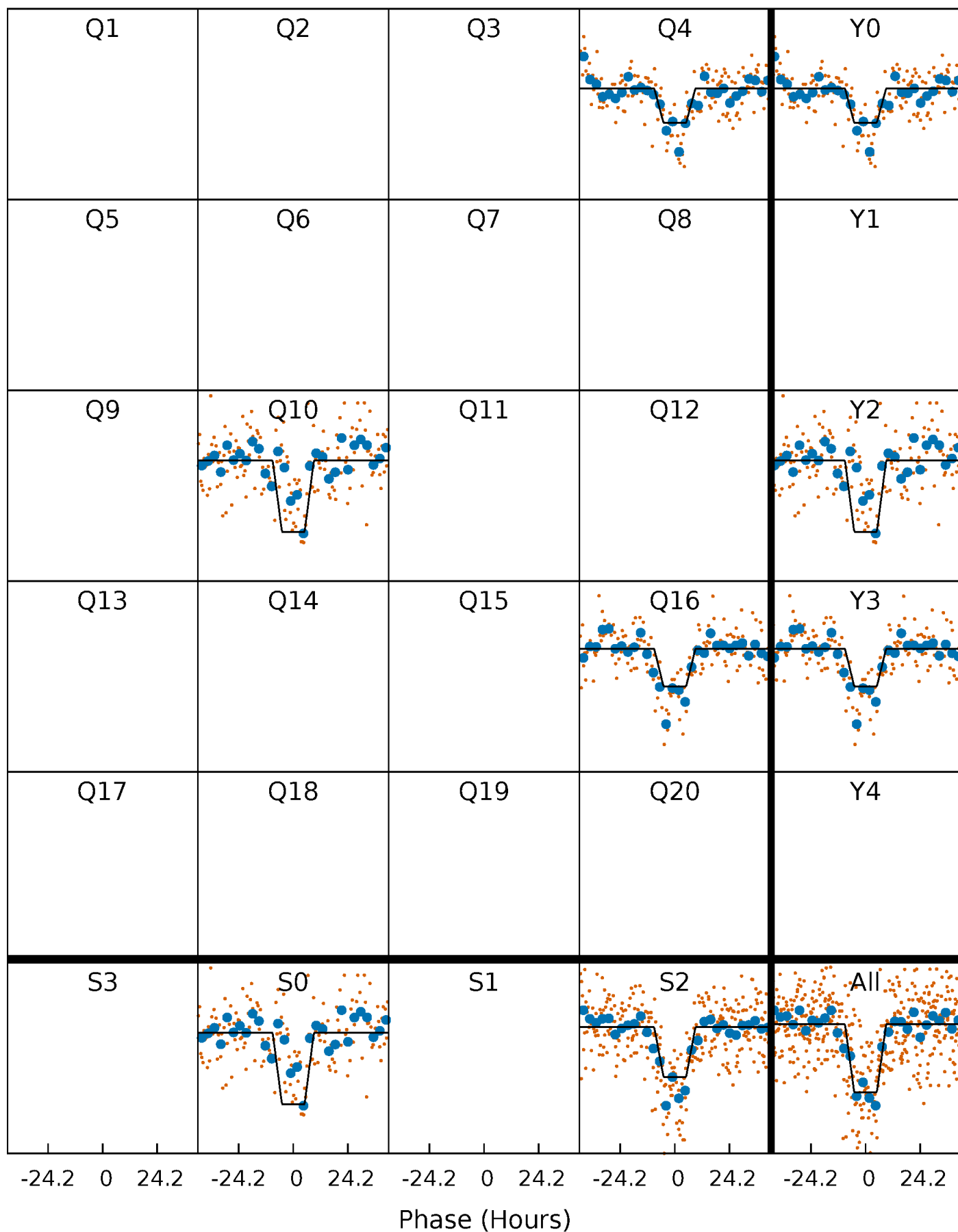
DV Quarter-Phased Transit Curves

TCE 007537953-01 P=562.270715 Days $T_0=403.514733$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

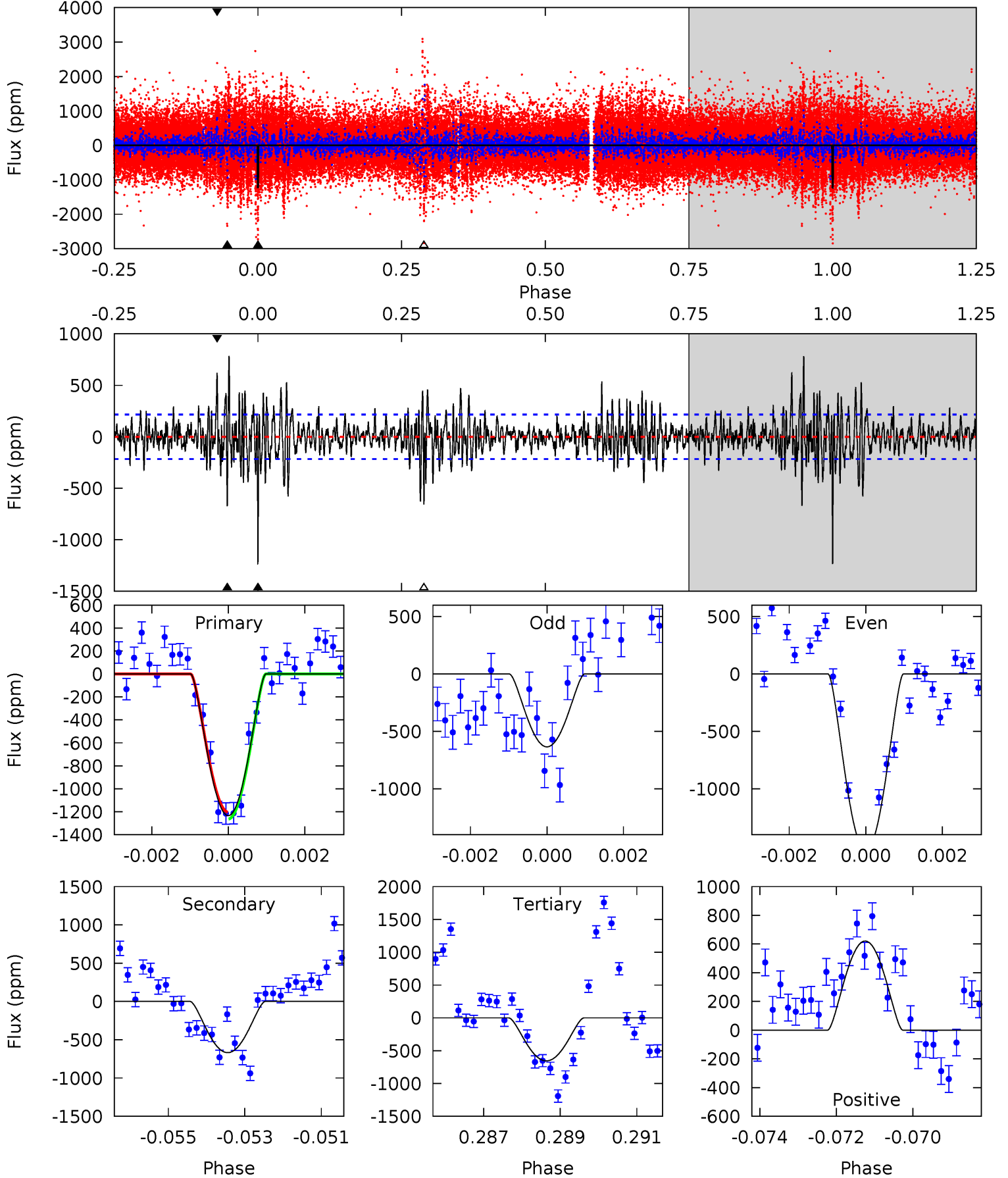
TCE 007537953-01 P=562.324760 Days $T_0=403.466937$ (BKJD)



DV Model-Shift Uniqueness Test

007537953-01, P = 562.270715 Days, E = 403.514733 Days

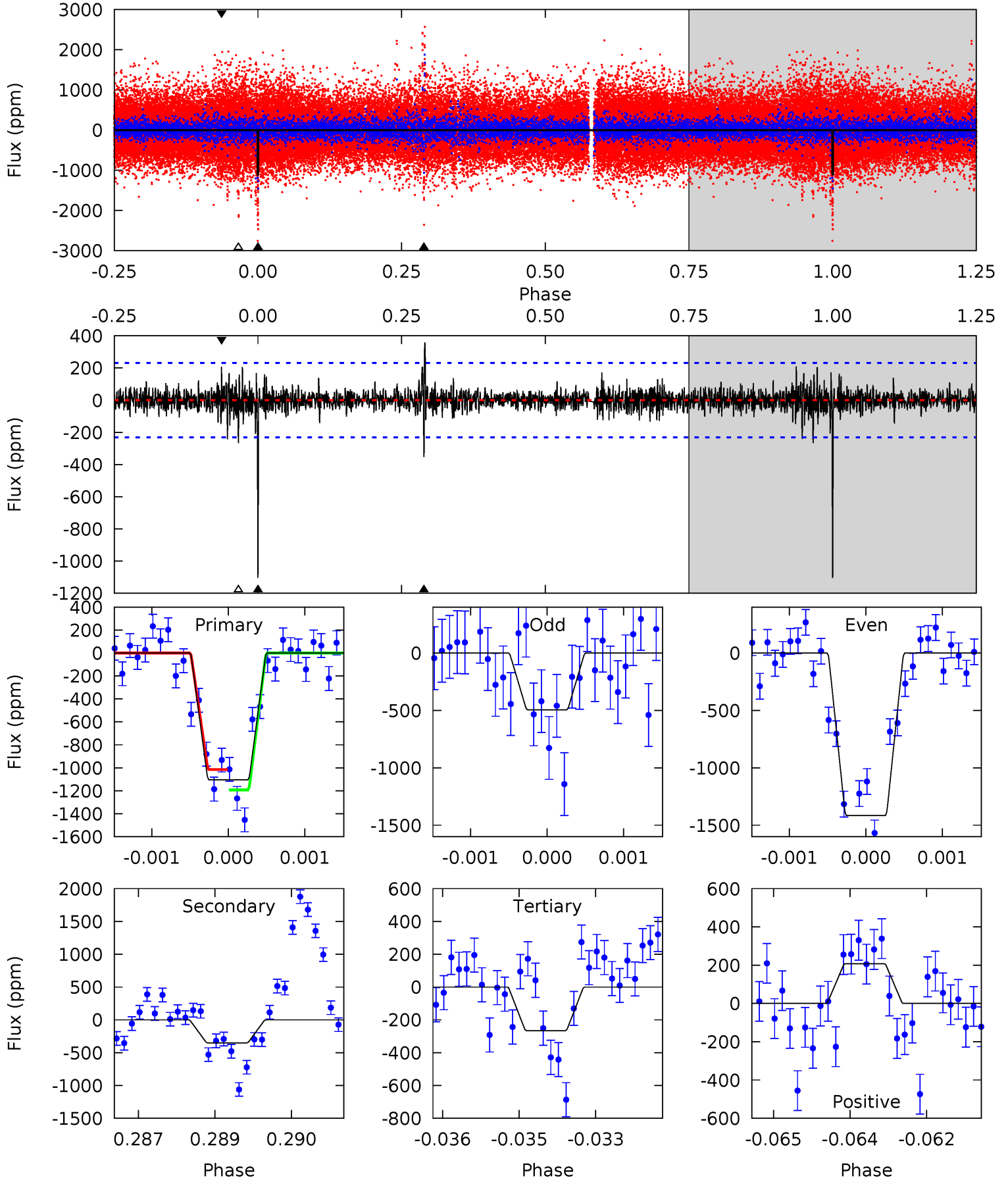
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.5	16.5	16.2	15.3	5.34	3.11	3.76	14.3	15.2	0.33	1.18	10.5	1.01	0.39	0.74



Alt Model-Shift Uniqueness Test

007537953-01, P = 562.324760 Days, E = 403.466937 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.8	8.19	6.20	4.85	5.39	3.20	1.05	19.6	20.9	2.00	3.35	10.1	0.84	0.24	2.07



Stellar Parameters For KIC 007537953

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5168^{+156}_{-156}	$4.609^{+0.072}_{-0.044}$	$-0.780^{+0.300}_{-0.300}$	$0.657^{+0.057}_{-0.057}$	$0.639^{+0.066}_{-0.028}$	$3.179^{+0.874}_{-0.515}$
	+3%/-3%	+2%/-1%	+38%/-38%	+9%/-9%	+10%/-4%	+27%/-16%
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 007537953-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-669 ± 40	$10.57^{+10.21}_{-7.40}$	239^{+8}_{-9}	2855^{+1268}_{-445}	4470^{+43091}_{-3352}
Alt.	-351 ± 43	$9.42^{+10.00}_{-6.15}$	239^{+9}_{-9}	2673^{+998}_{-415}	2790^{+21749}_{-2128}

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

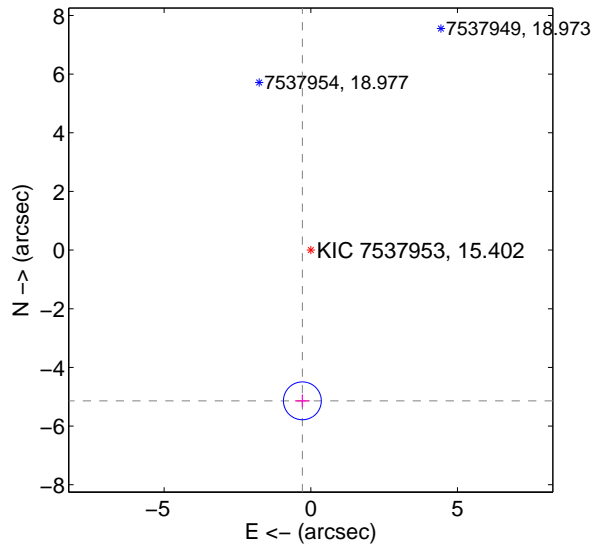
Supplemental centroid analysis for 007537953-01. Kepler magnitude: 15.40. Transit SNR 8.82

There are 0 quarters with good PRF difference image offsets

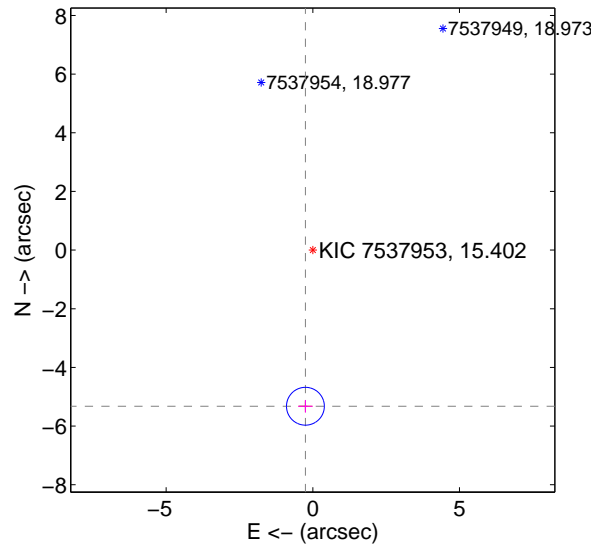
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.147 ± 0.215	23.94	0.287 ± 0.246	-5.139 ± 0.215
PRF-fit source offset from KIC position	5.329 ± 0.215	24.79	0.252 ± 0.246	-5.324 ± 0.215
photometric centroid source offset	1.67 ± 1.74	0.96	1.41 ± 1.54	0.90 ± 2.14

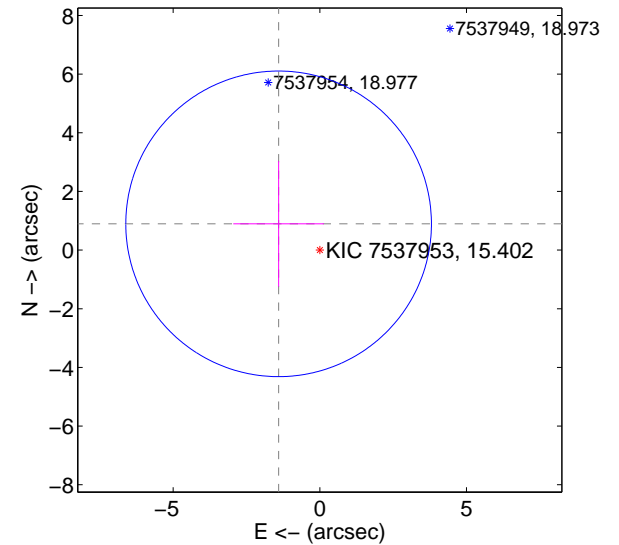
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

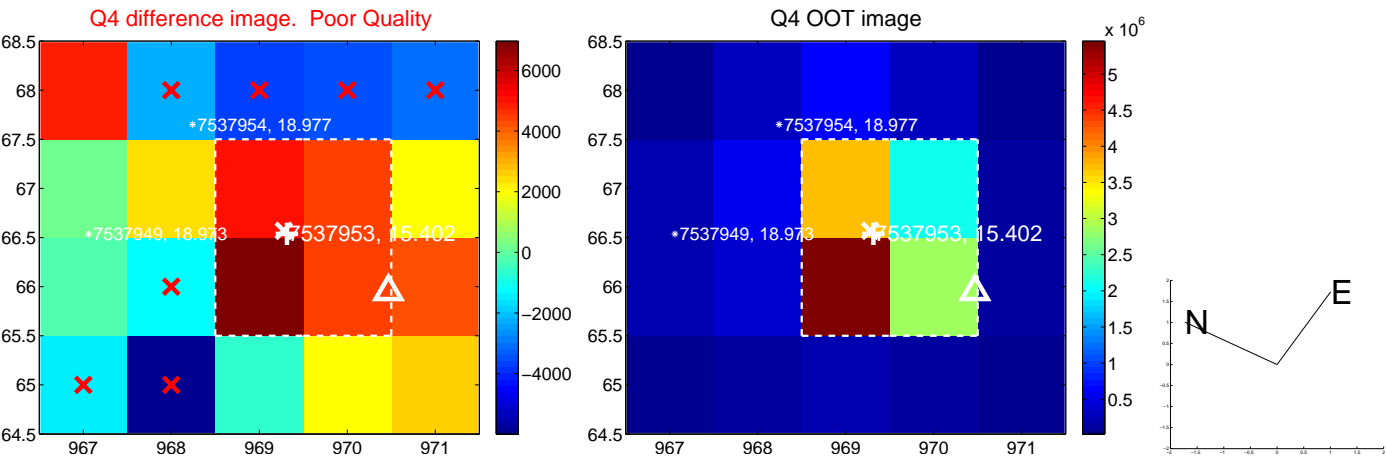


offset from photometric centroids



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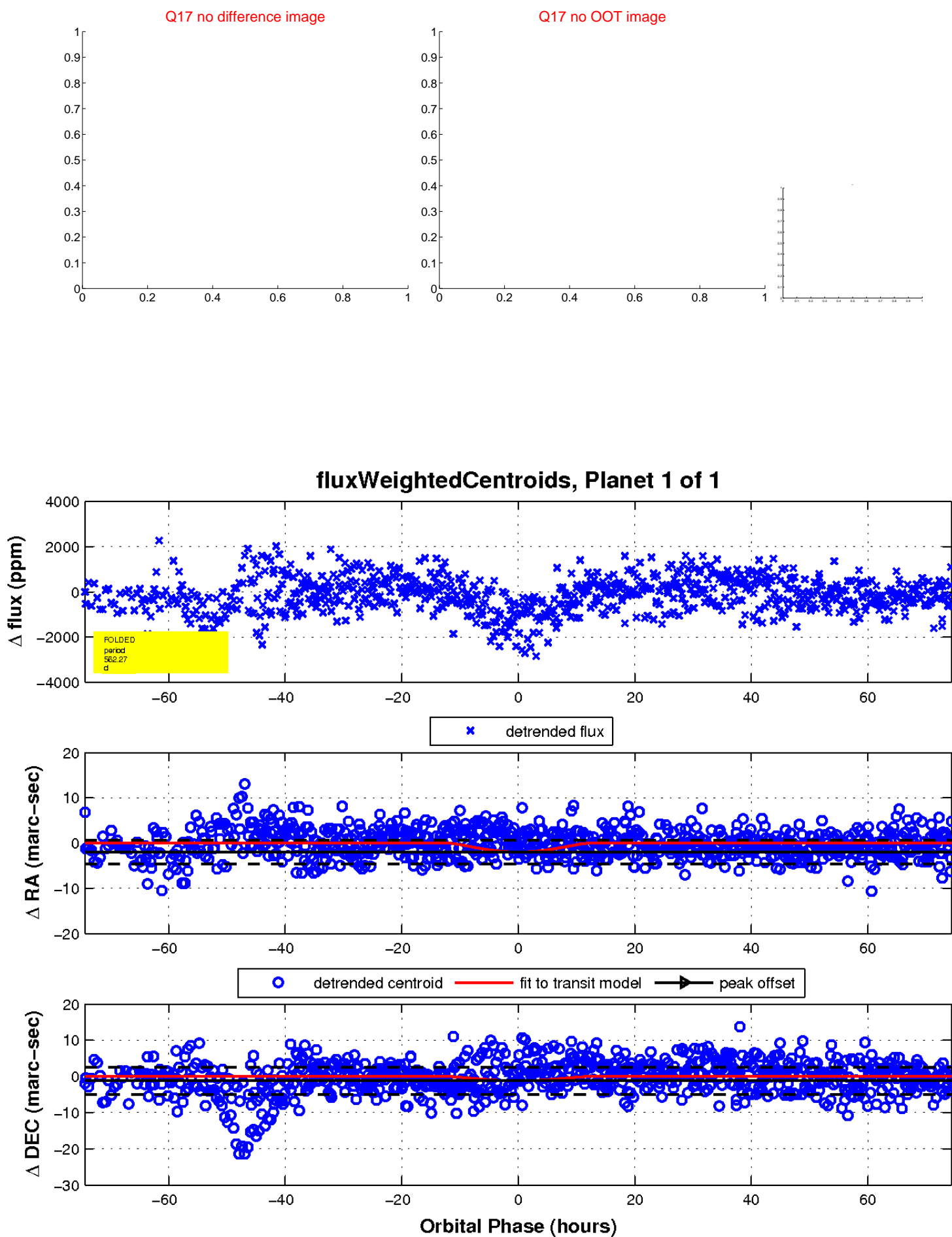
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

