

KIC 008621739

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})
008621739-03	OBS	No	501.976820	542.293867	801.5	6.754	12.3	5.1	1.15	6198	3.40	1.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008621739-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—MOD_NONUNIQ_DV—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.

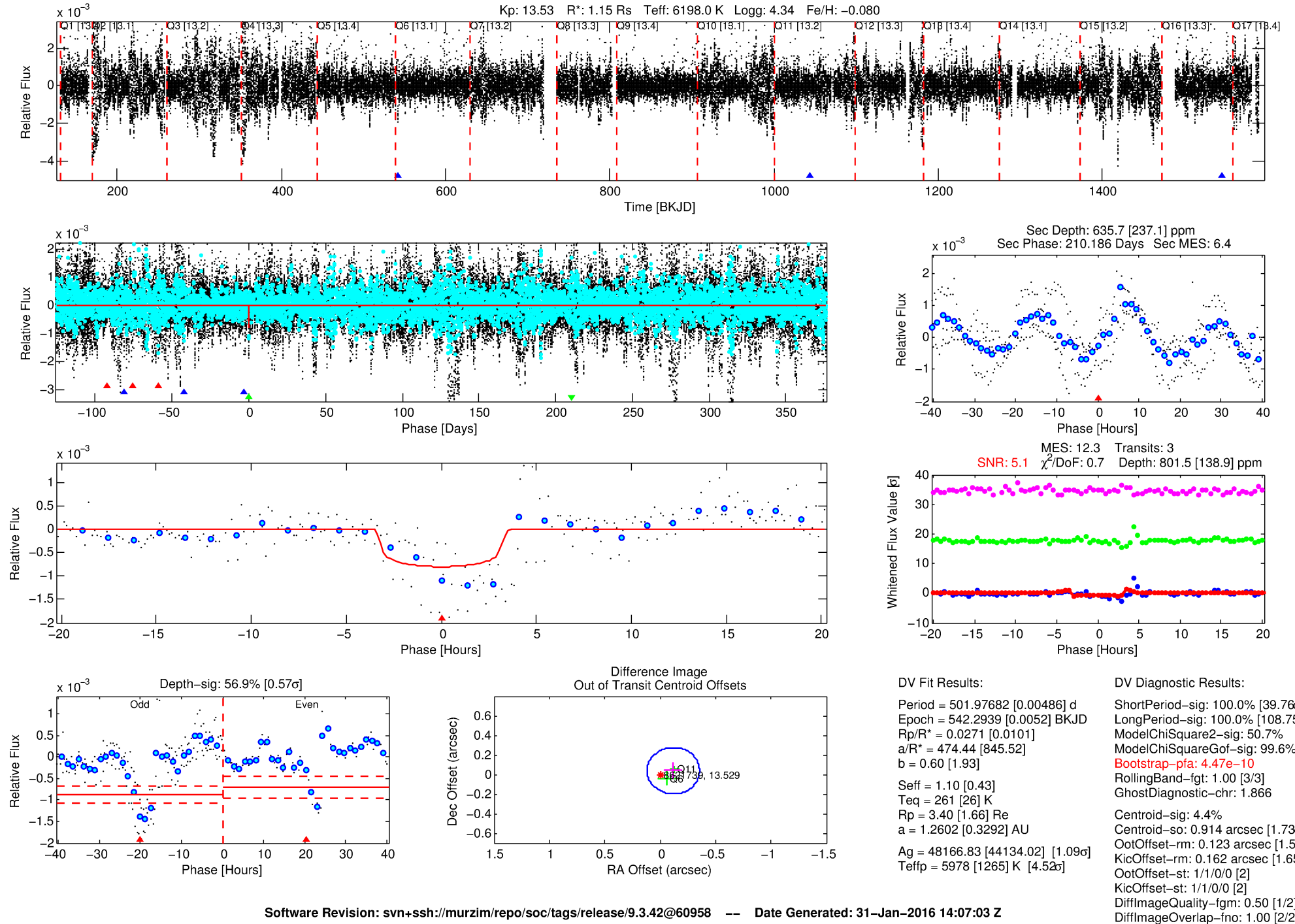
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008621739-03

No Significant Match Found

DV One-Page Summary

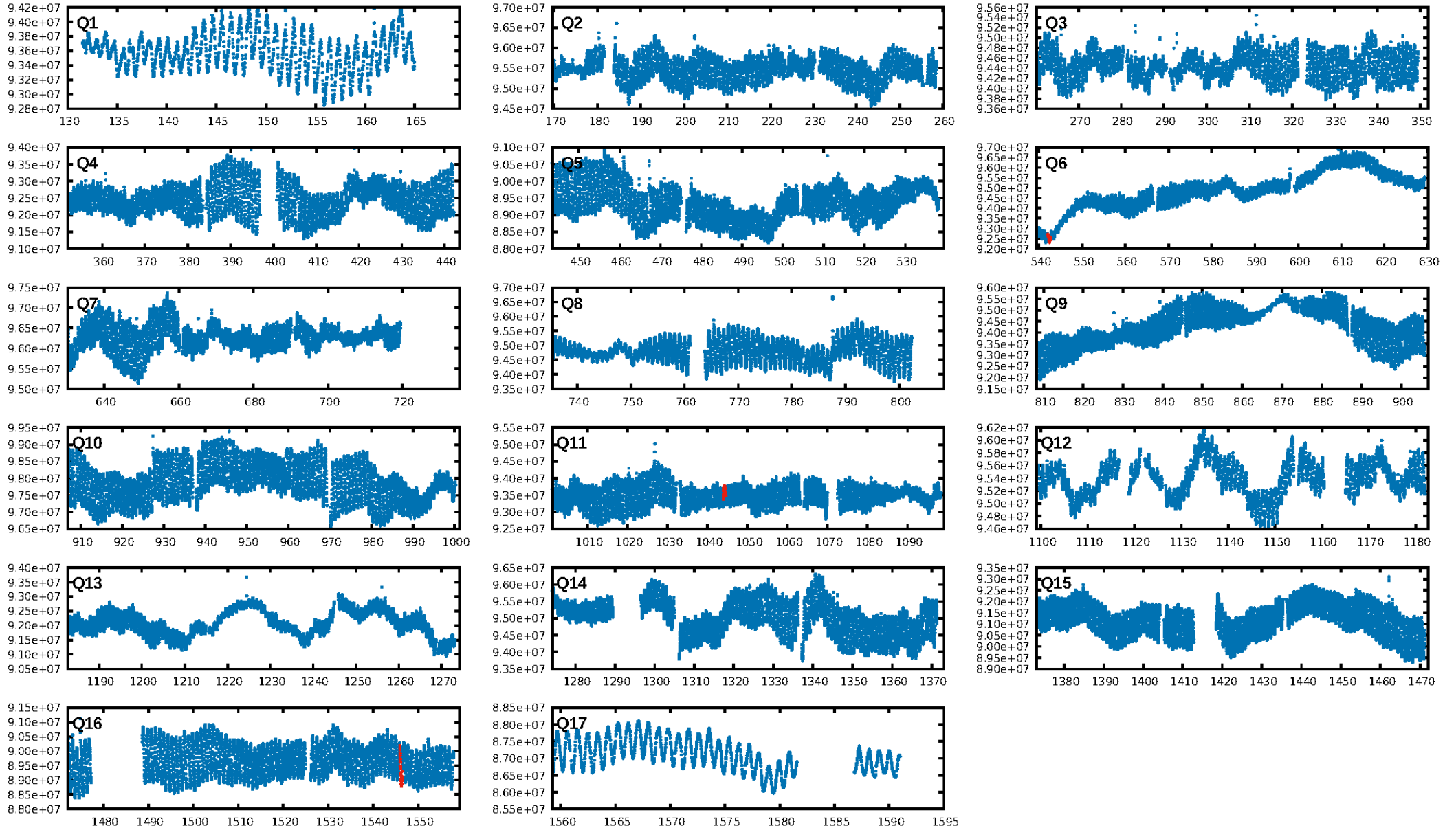
KIC: 8621739 Candidate: 3 of 3 Period: 501.977 d



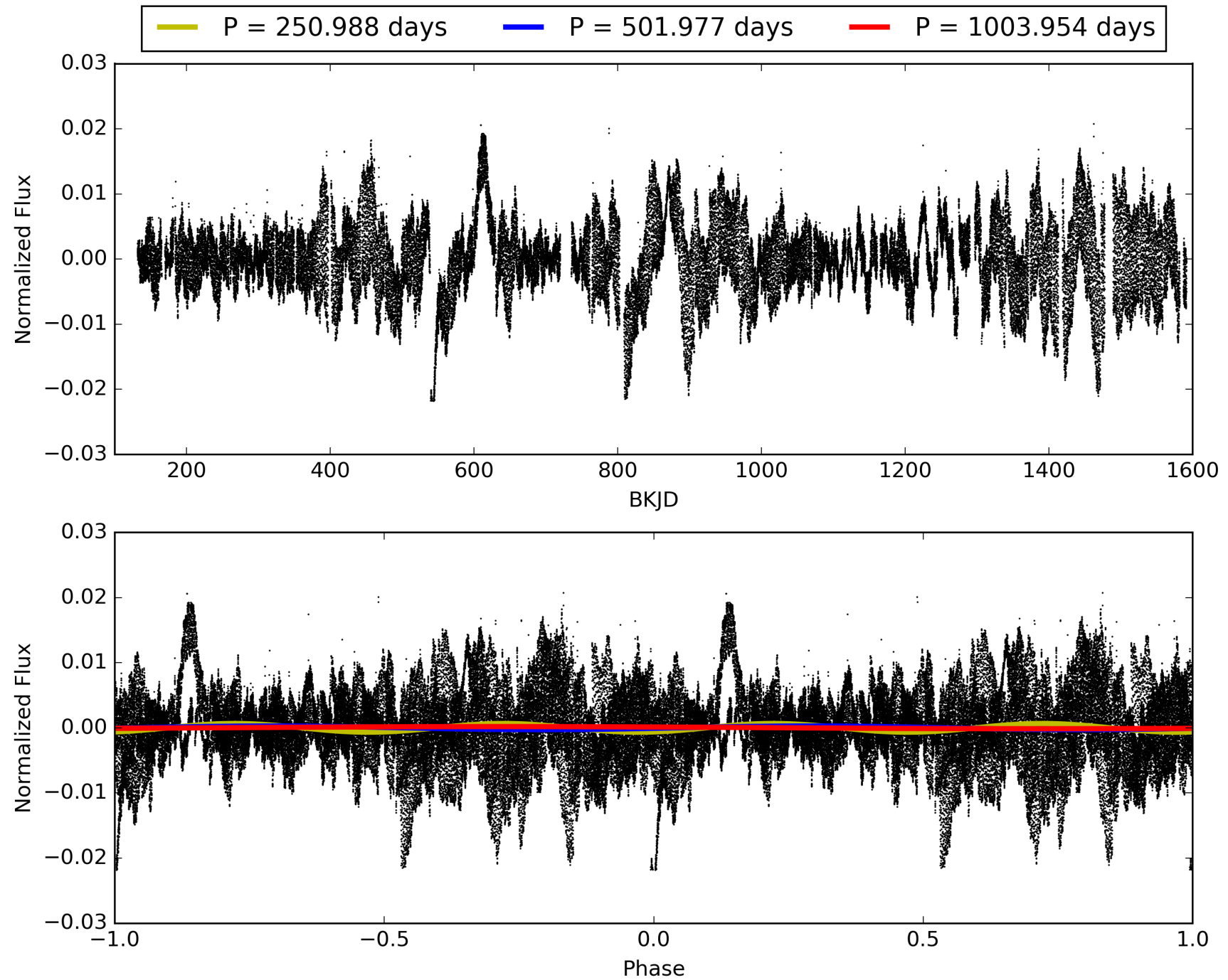
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:07:03 Z

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

TCE 008621739-03, PDC Light Curves

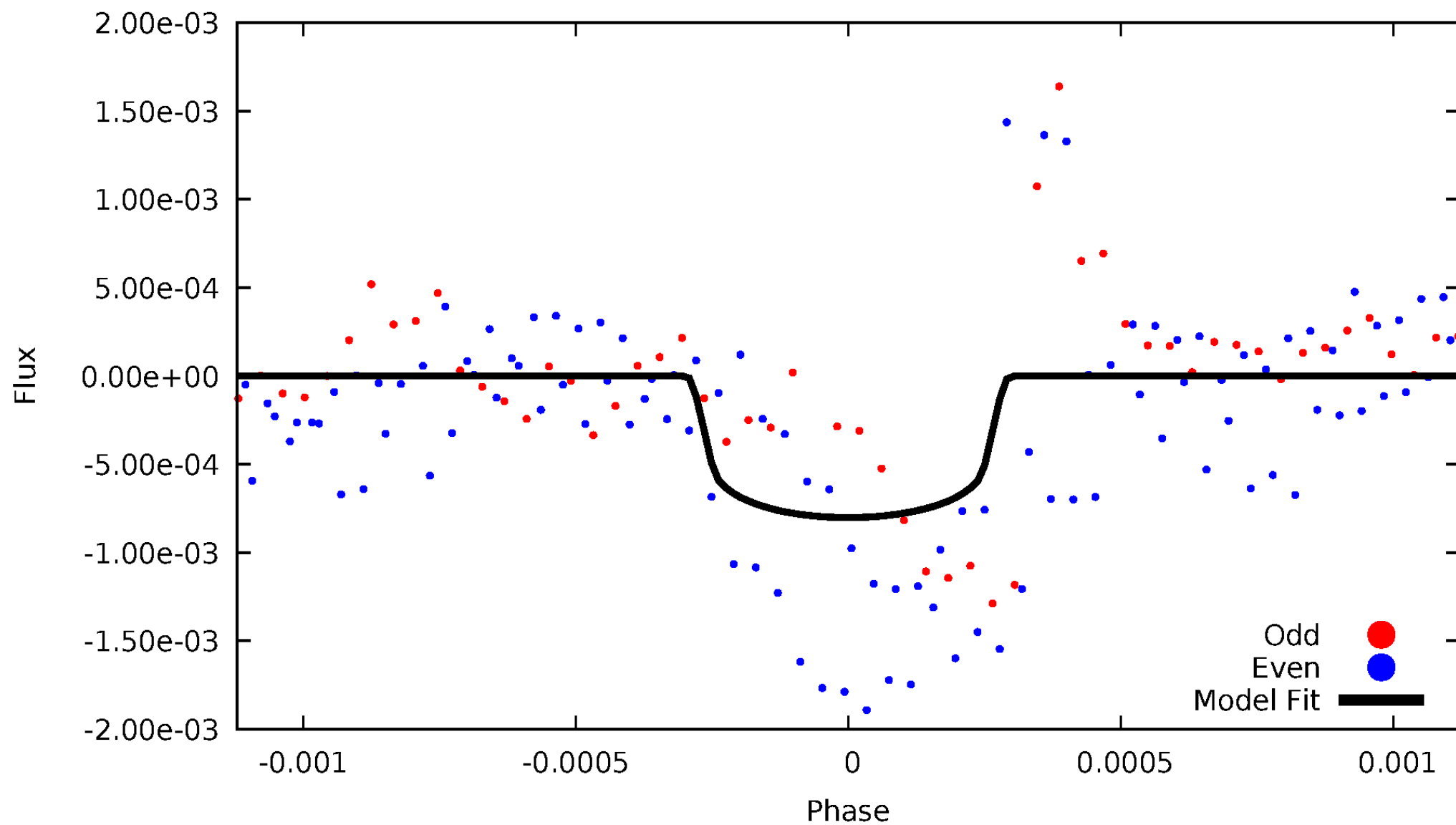


TCE 008621739-03



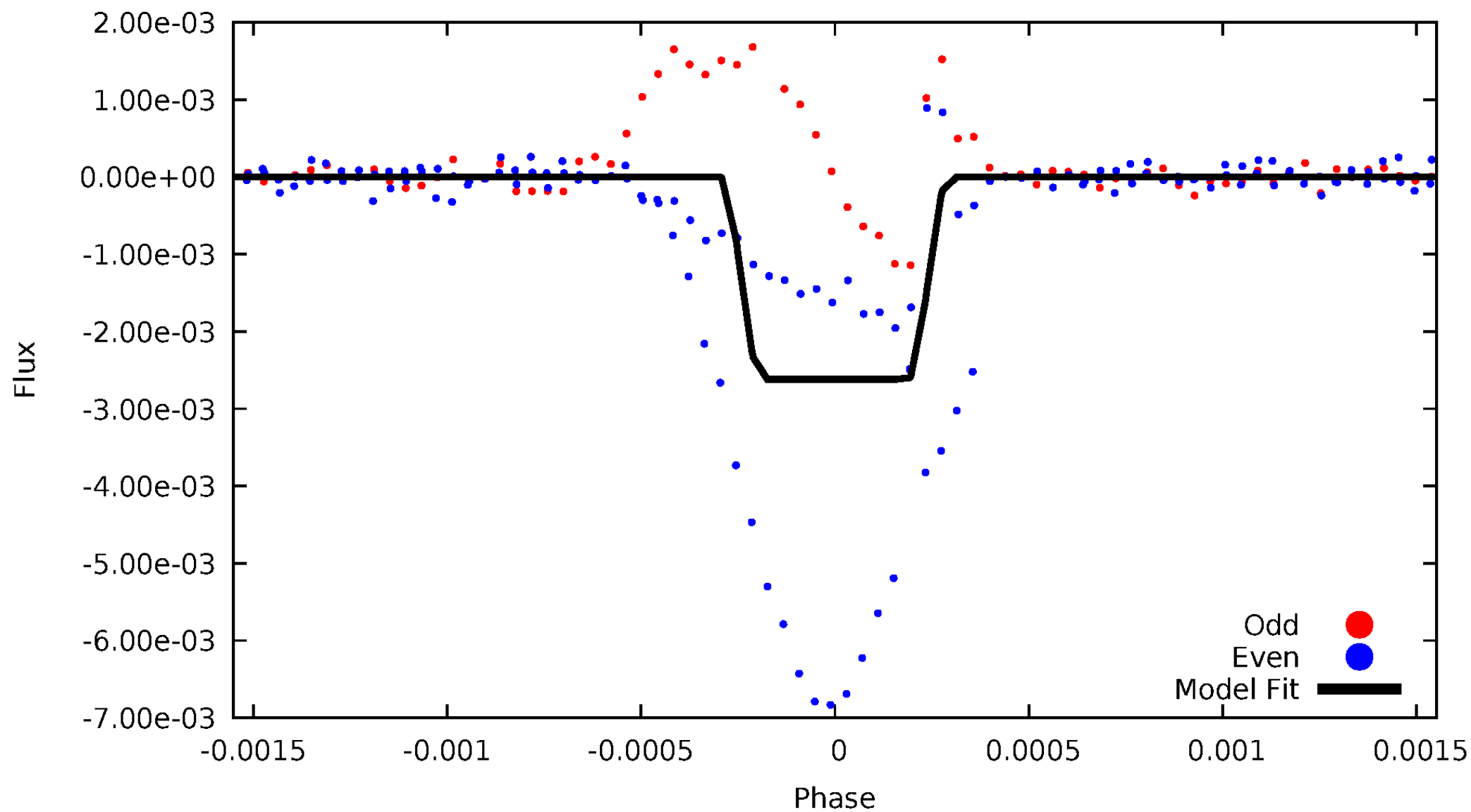
DV Odd/Even

TCE 008621739-03



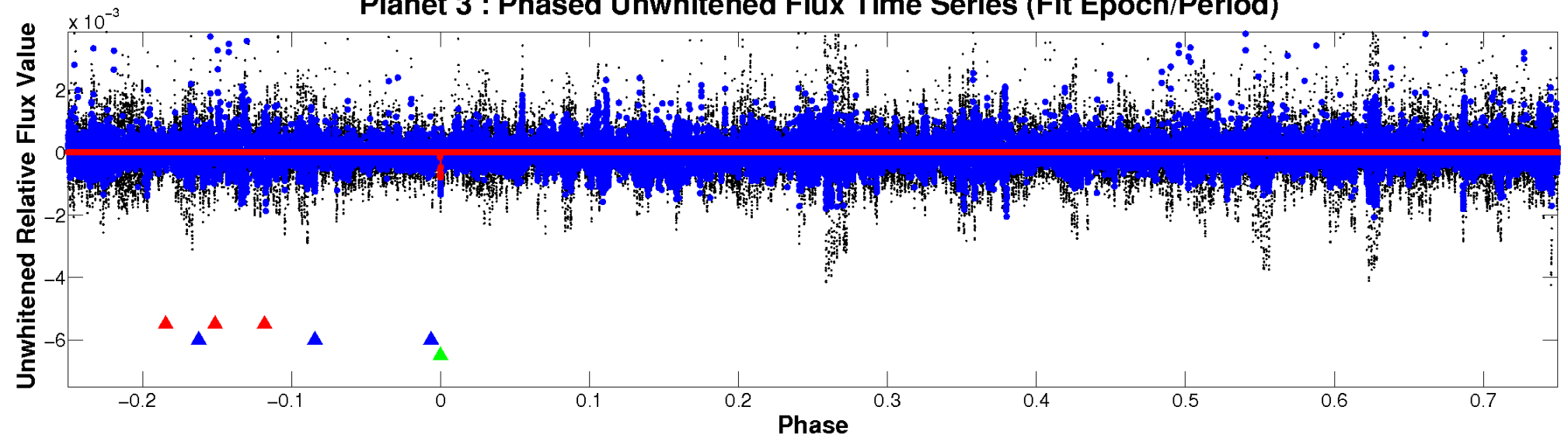
ALT Odd/Even

TCE 008621739-03

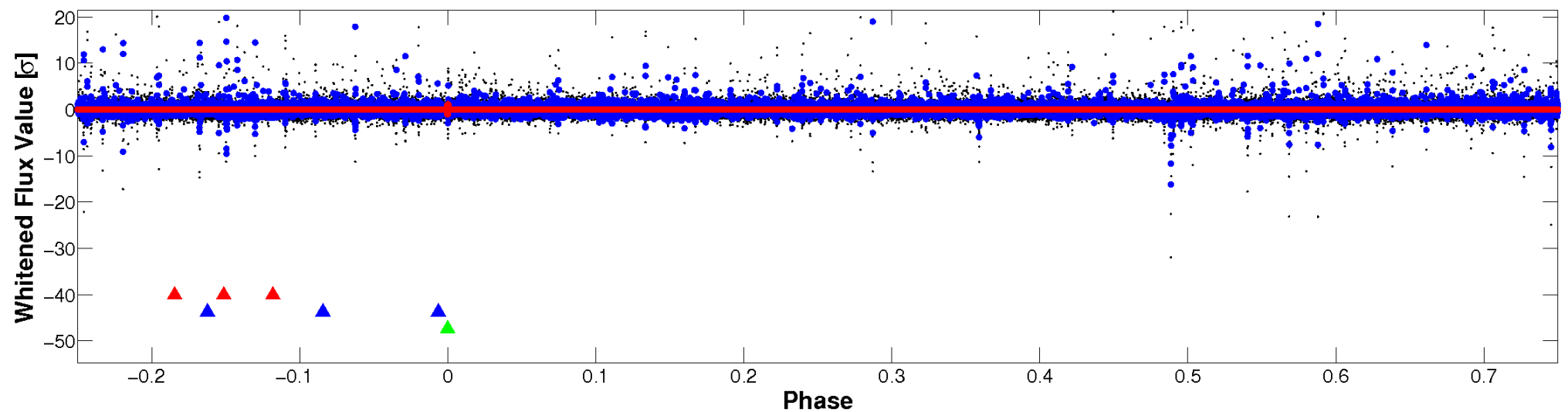


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

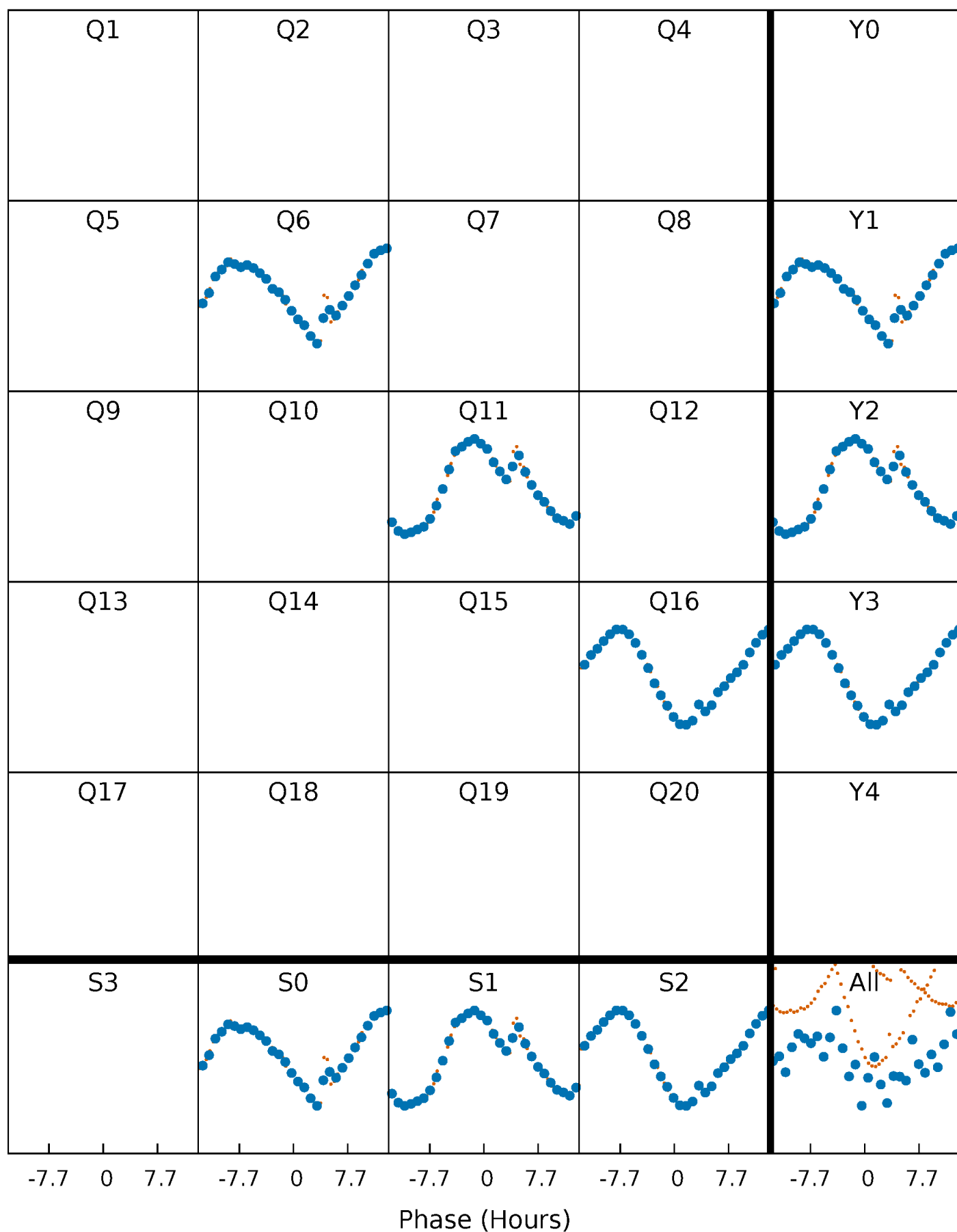


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



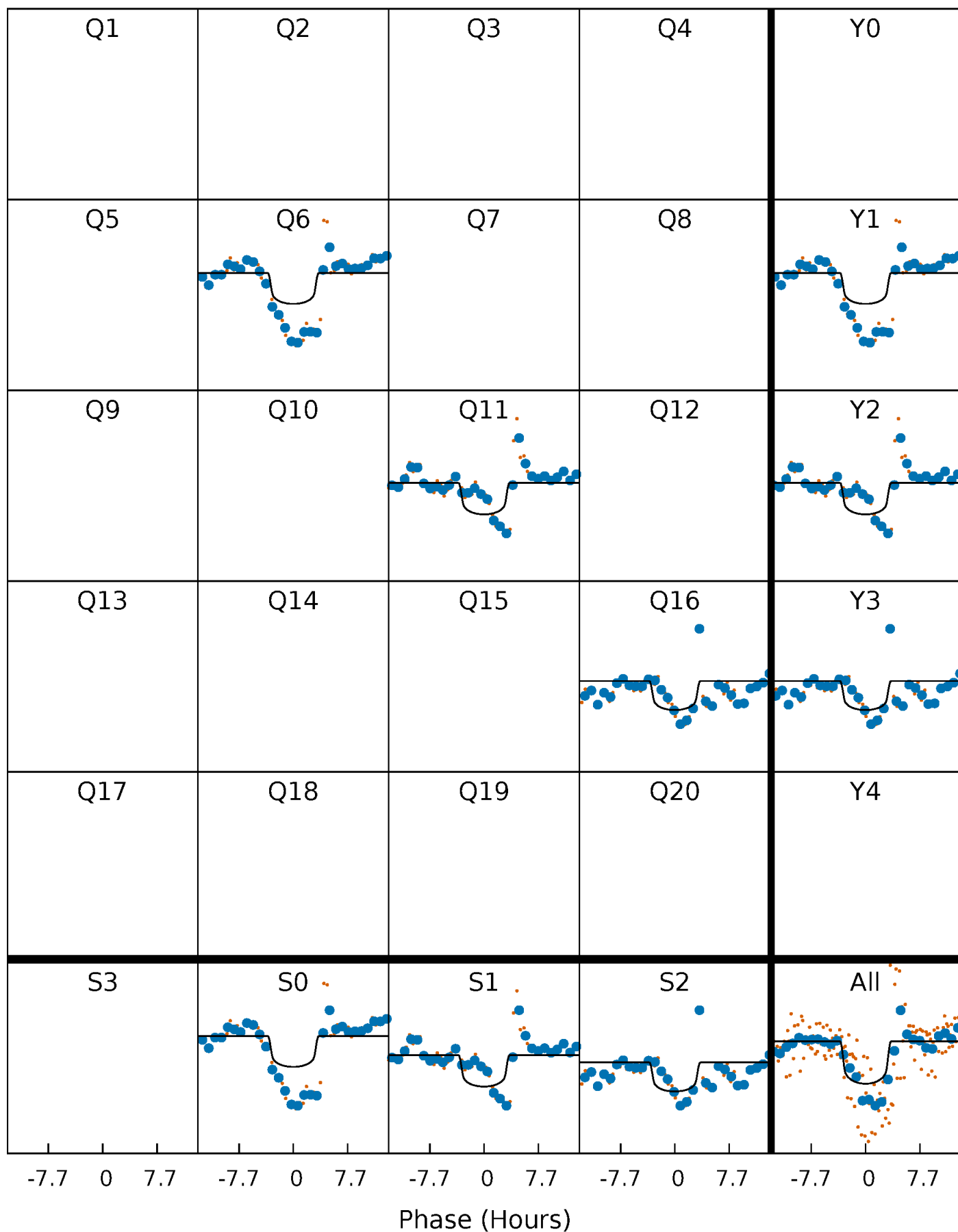
PDC Quarter-Phased Transit Curves

TCE 008621739-03 $P=501.976820$ Days $T_0=542.293867$ (BKJD)



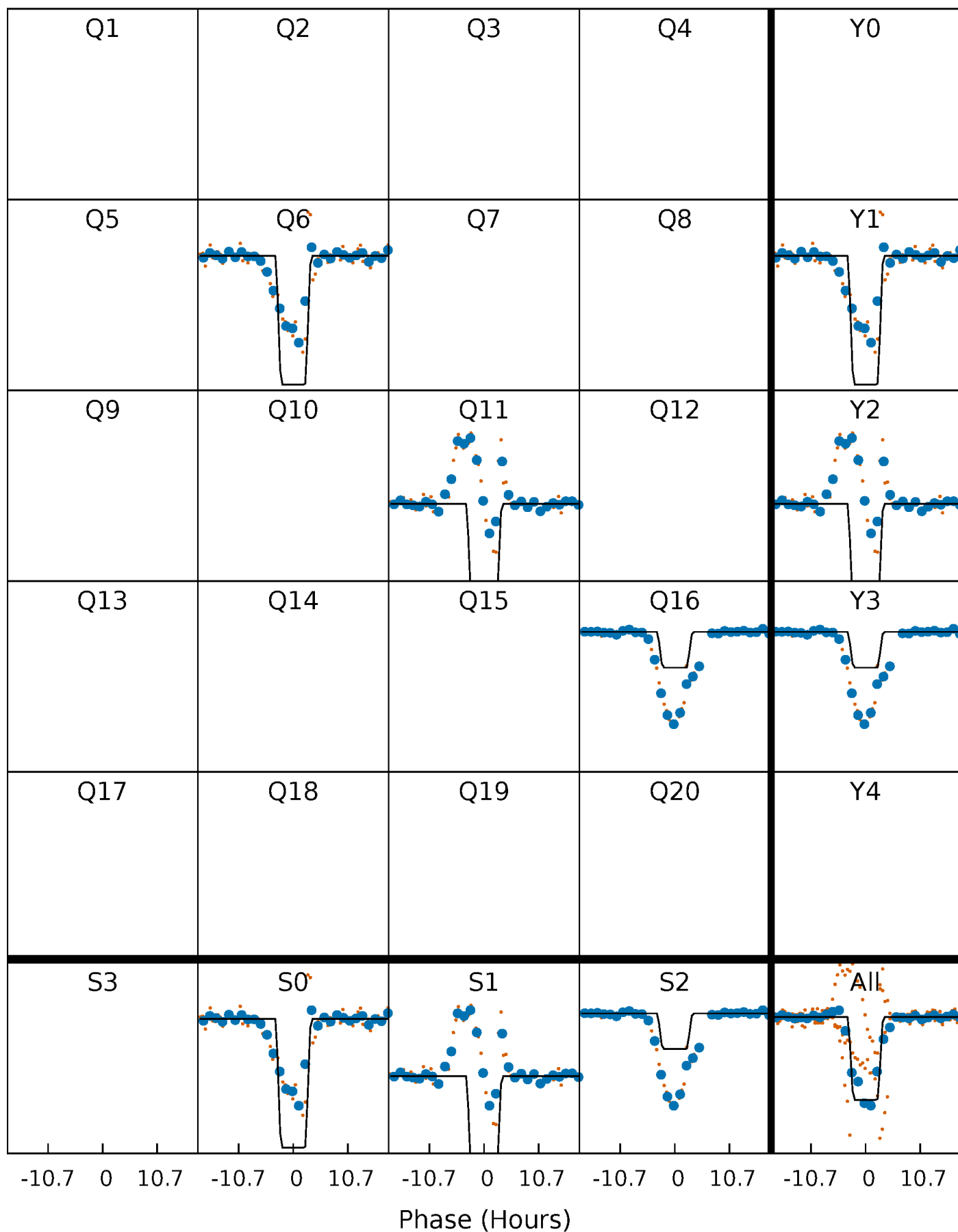
DV Quarter-Phased Transit Curves

TCE 008621739-03 P=501.976820 Days $T_0=542.293867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

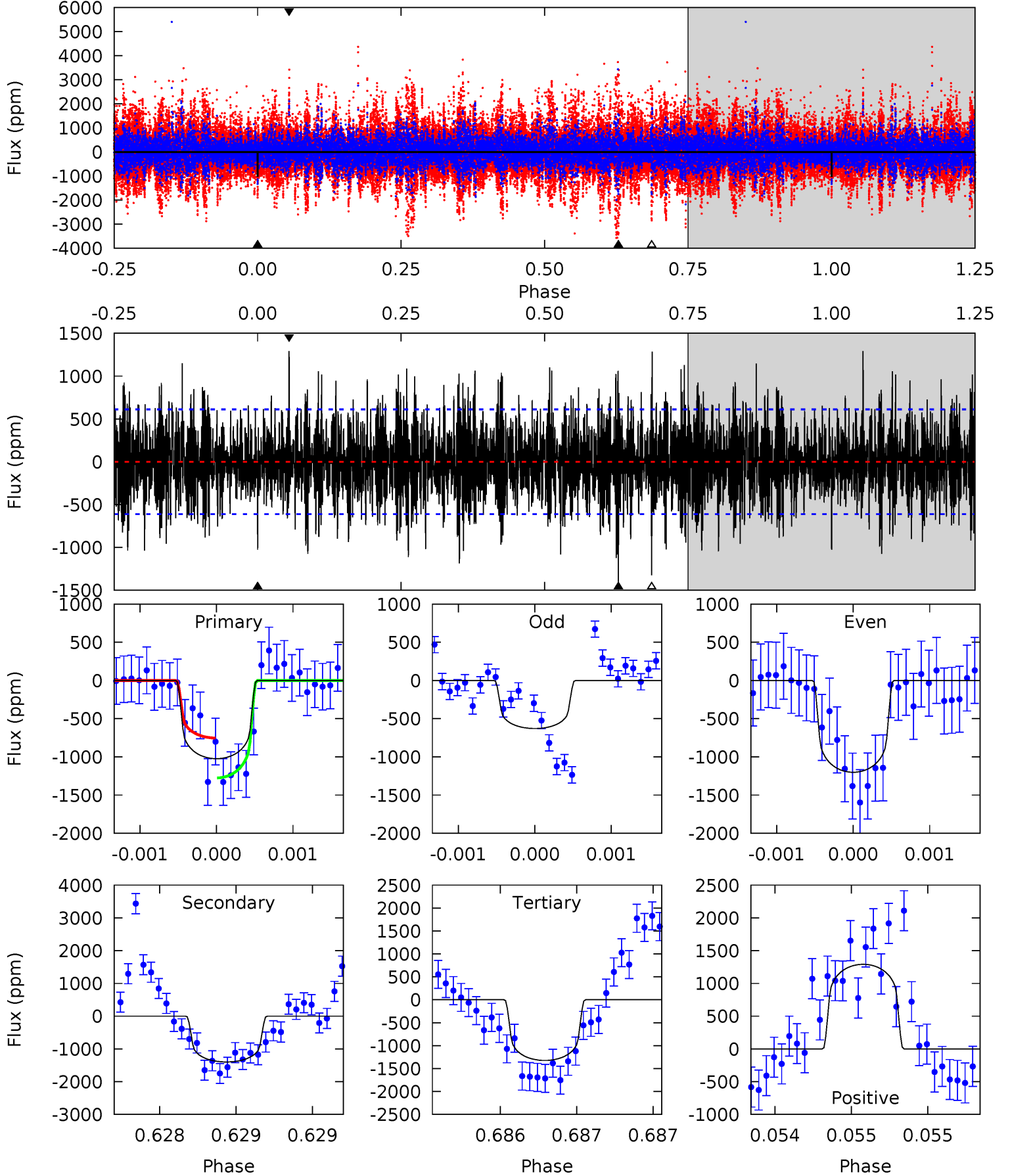
TCE 008621739-03 P=501.970835 Days $T_0=542.355095$ (BKJD)



DV Model-Shift Uniqueness Test

008621739-03, P = 501.976820 Days, E = 40.317047 Days

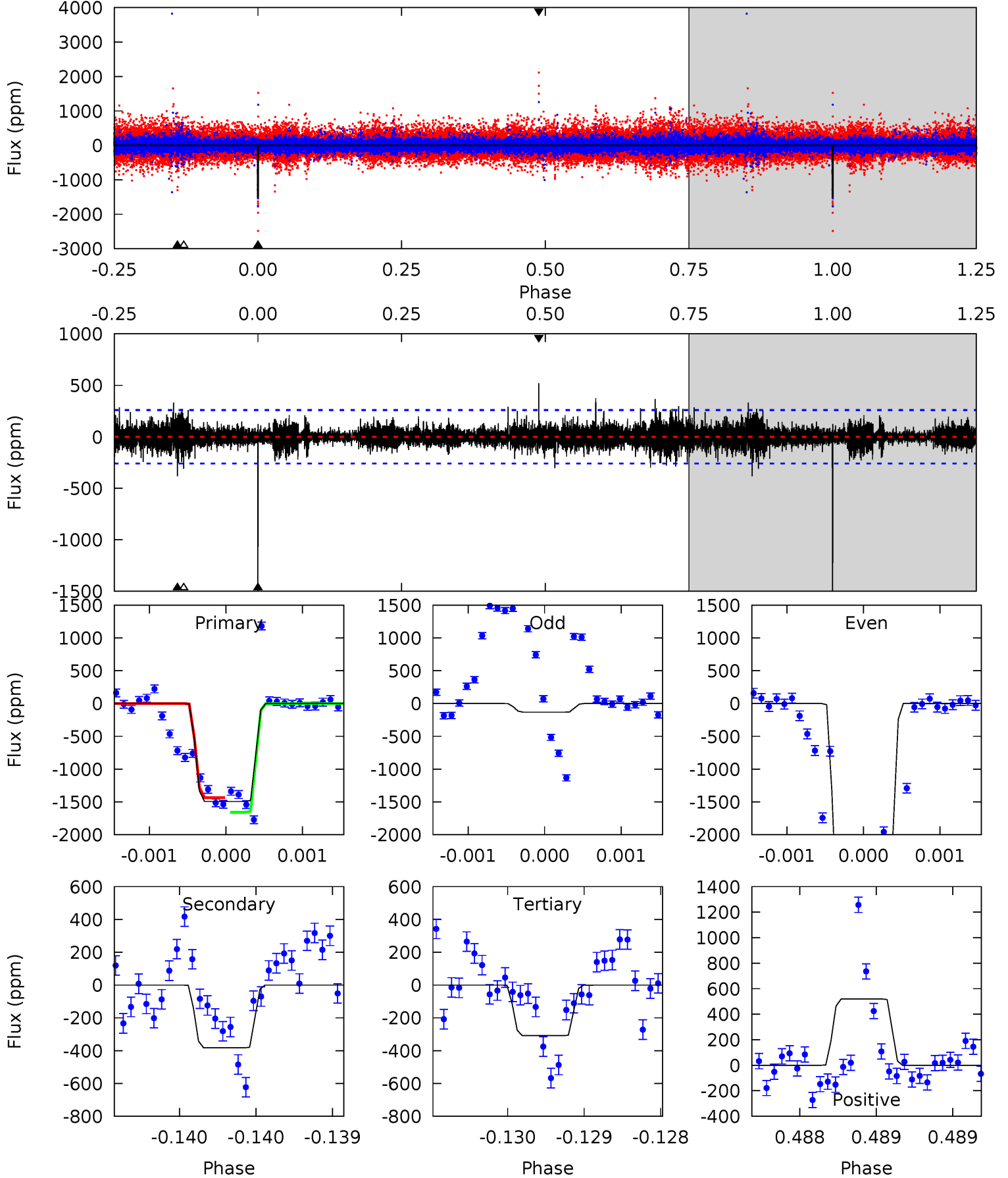
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.31	12.7	12.0	11.7	5.55	3.45	3.16	-2.73	-2.43	0.69	0.99	2.30	1.34	0.48	2.39



Alt Model-Shift Uniqueness Test

008621739-03, P = 501.970835 Days, E = 40.384260 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.9	8.17	6.59	11.1	5.54	3.43	1.26	25.3	20.8	1.58	-2.92	46.1	1.62	0.26	2.25



Stellar Parameters For KIC 008621739

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6198^{+166}_{-203}	$4.343^{+0.108}_{-0.201}$	$-0.080^{+0.250}_{-0.300}$	$1.148^{+0.363}_{-0.168}$	$1.055^{+0.169}_{-0.127}$	$0.981^{+0.485}_{-0.520}$
	+3%/-3%	+2%/-5%	+312%/-375%	+32%/-15%	+16%/-12%	+49%/-53%
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 008621739-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1400 ± 110	$3.52^{+1.37}_{-1.29}$	369^{+31}_{-20}	7349^{+2479}_{-1250}	$95643^{+158032}_{-45280}$
Alt.	-383 ± 47	$6.58^{+1.63}_{-1.44}$	368^{+28}_{-21}	4107^{+376}_{-281}	7683^{+4913}_{-2854}

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 $A_{obs} \gg 1.0$

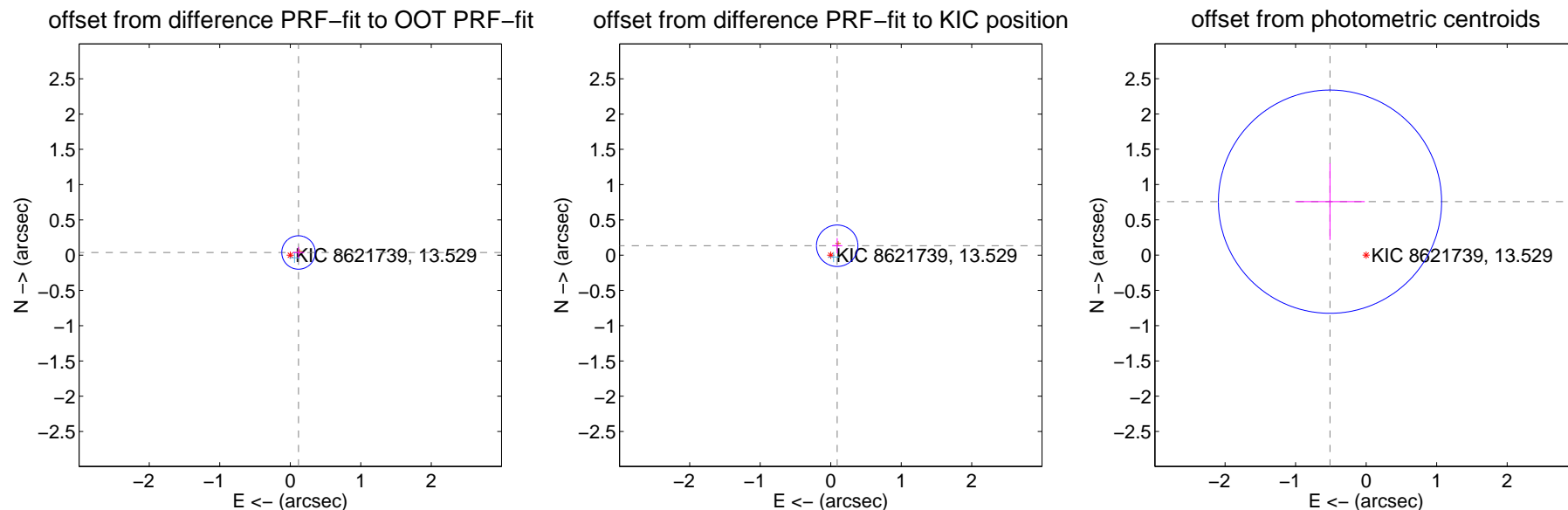
DV Centroid Data

Supplemental centroid analysis for 008621739-03. Kepler magnitude: 13.53. Transit SNR 5.13

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.123 ± 0.079	1.55	-0.117 ± 0.079	0.038 ± 0.077
PRF-fit source offset from KIC position	0.162 ± 0.098	1.65	-0.092 ± 0.073	0.133 ± 0.108
photometric centroid source offset	0.91 ± 0.53	1.73	0.51 ± 0.49	0.76 ± 0.54

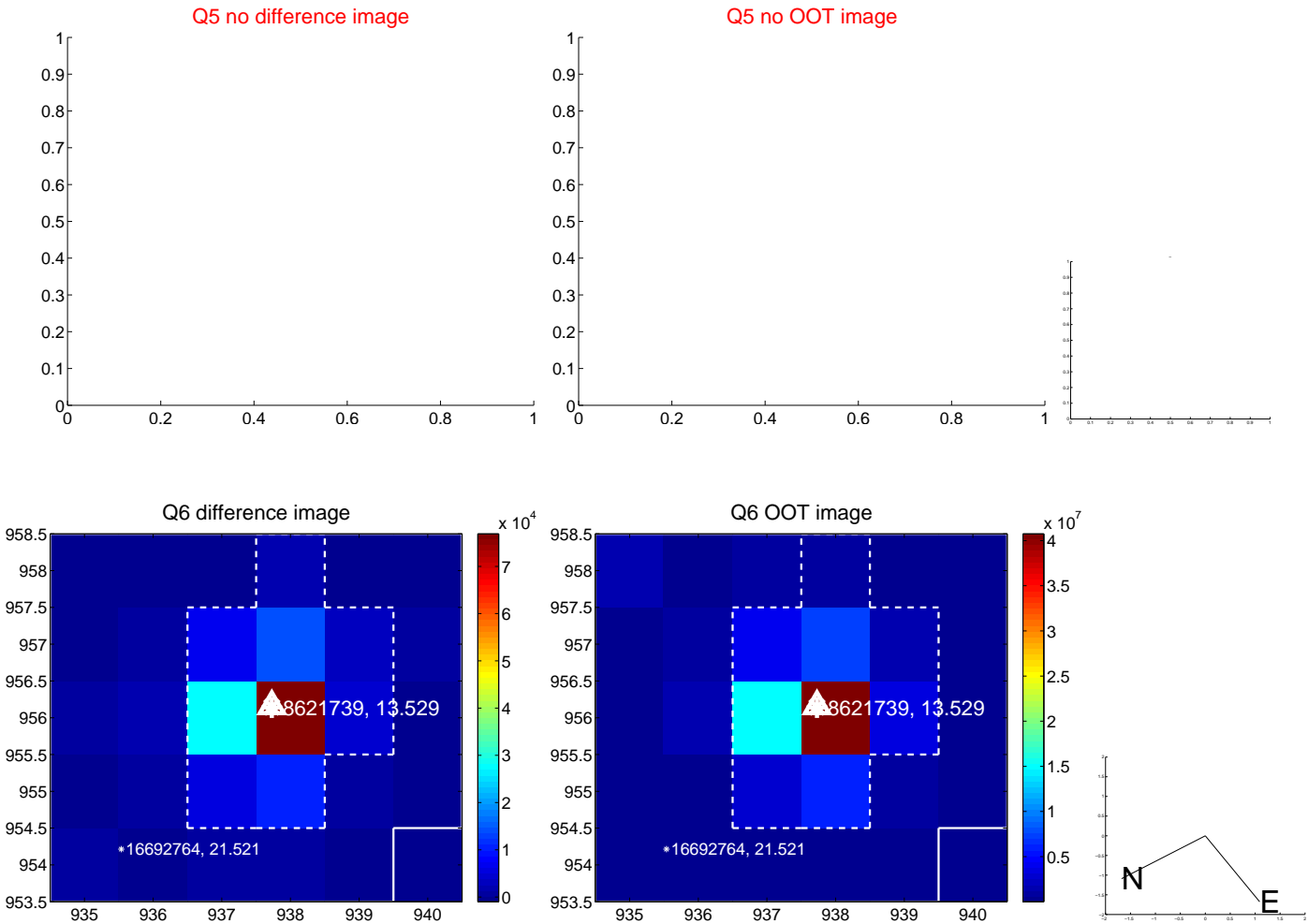


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

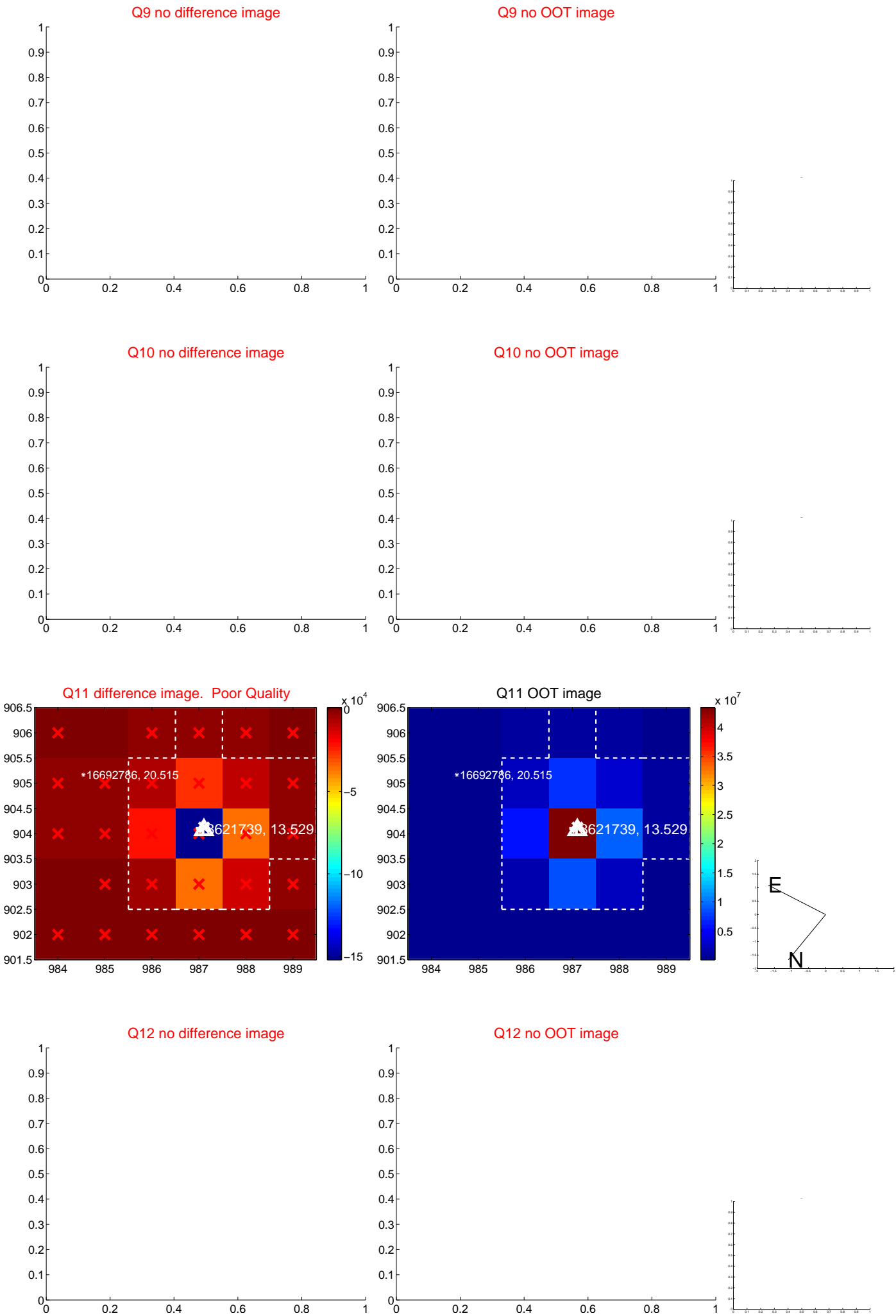
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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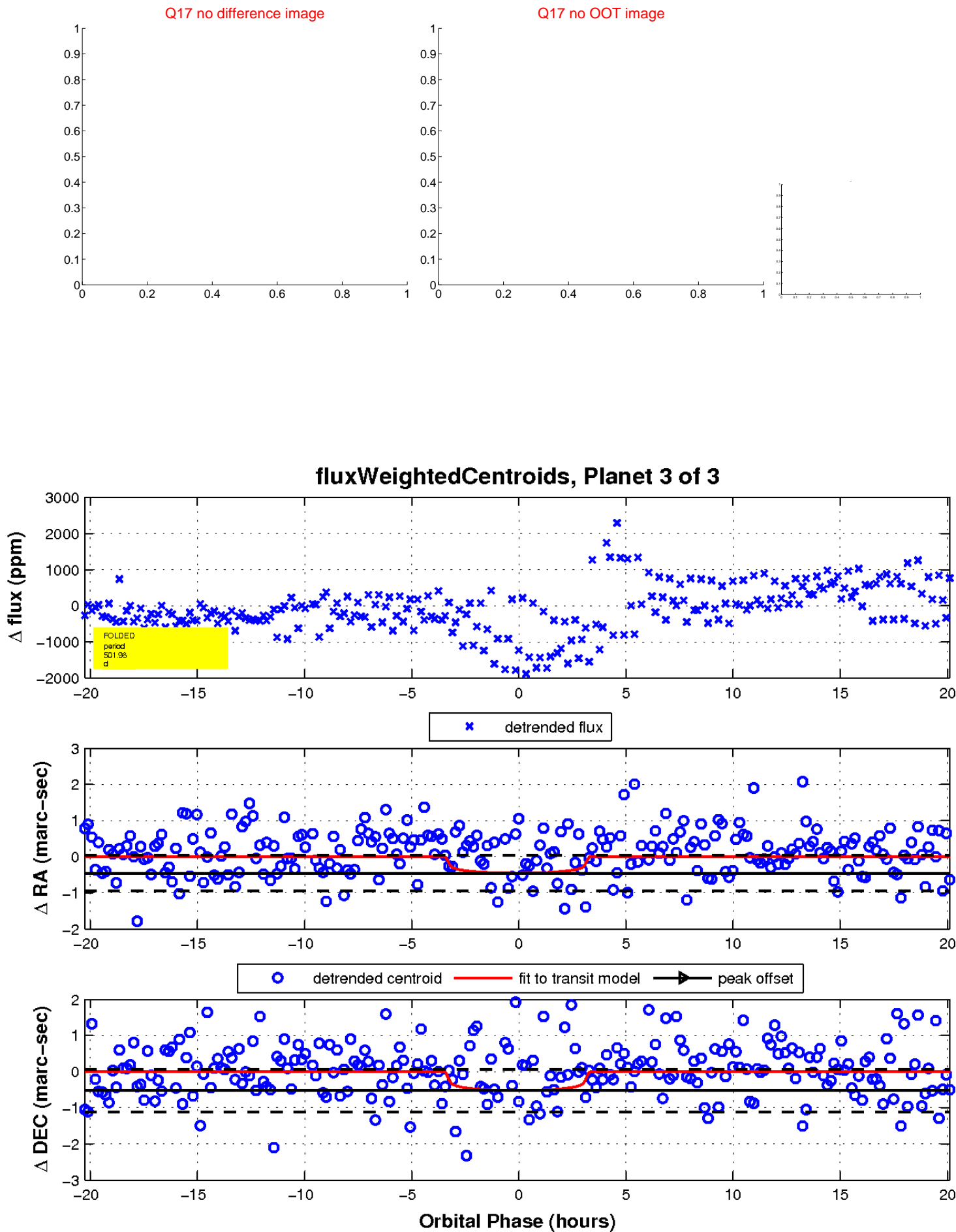
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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UKIRT Image

Declination

