

KIC 009582872

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})
009582872-01	OBS	No	539.547490	200.671329	739.6	13.114	10.9	8.7	0.77	4962	2.23	0.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009582872-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

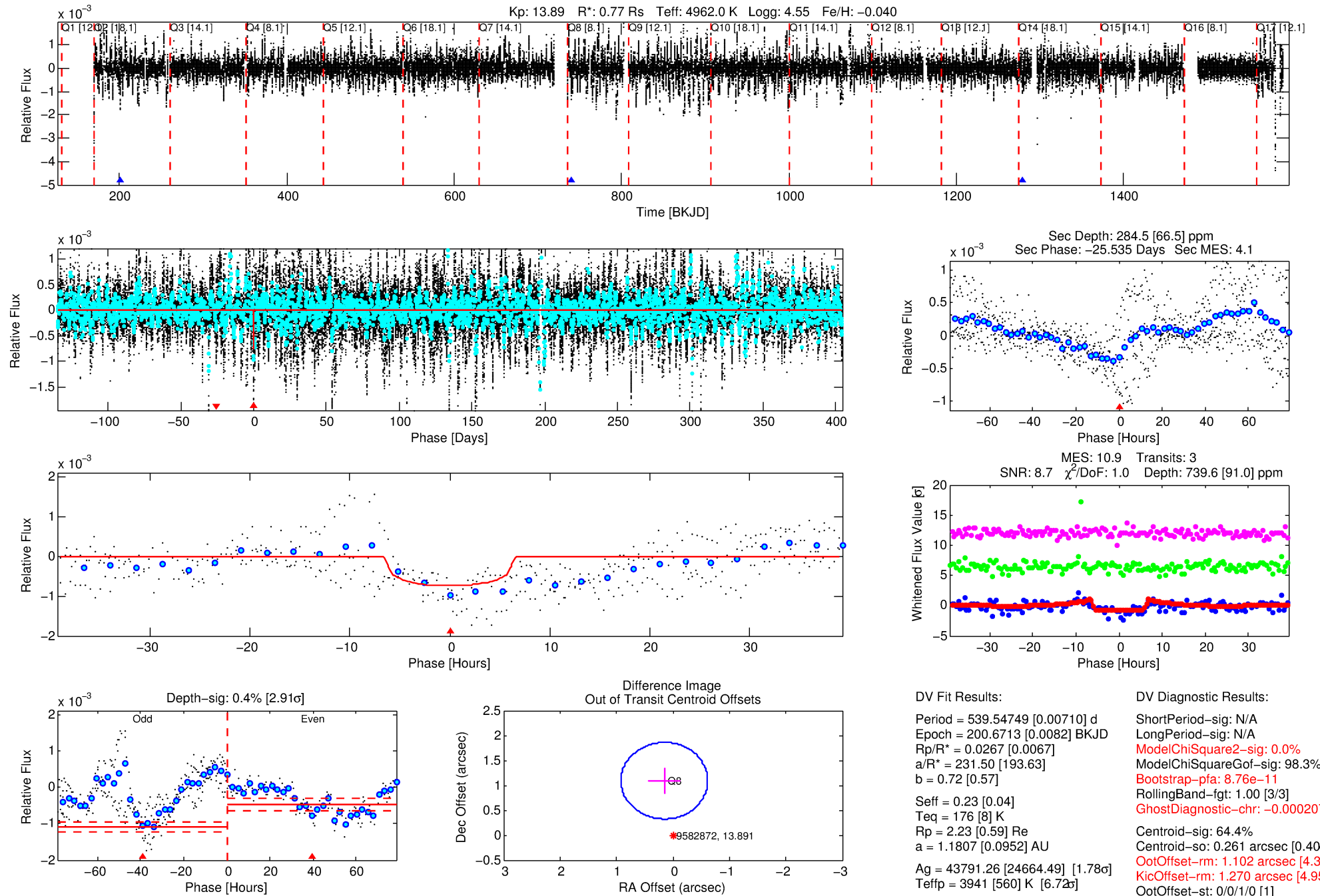
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009582872-01

No Significant Match Found

DV One-Page Summary

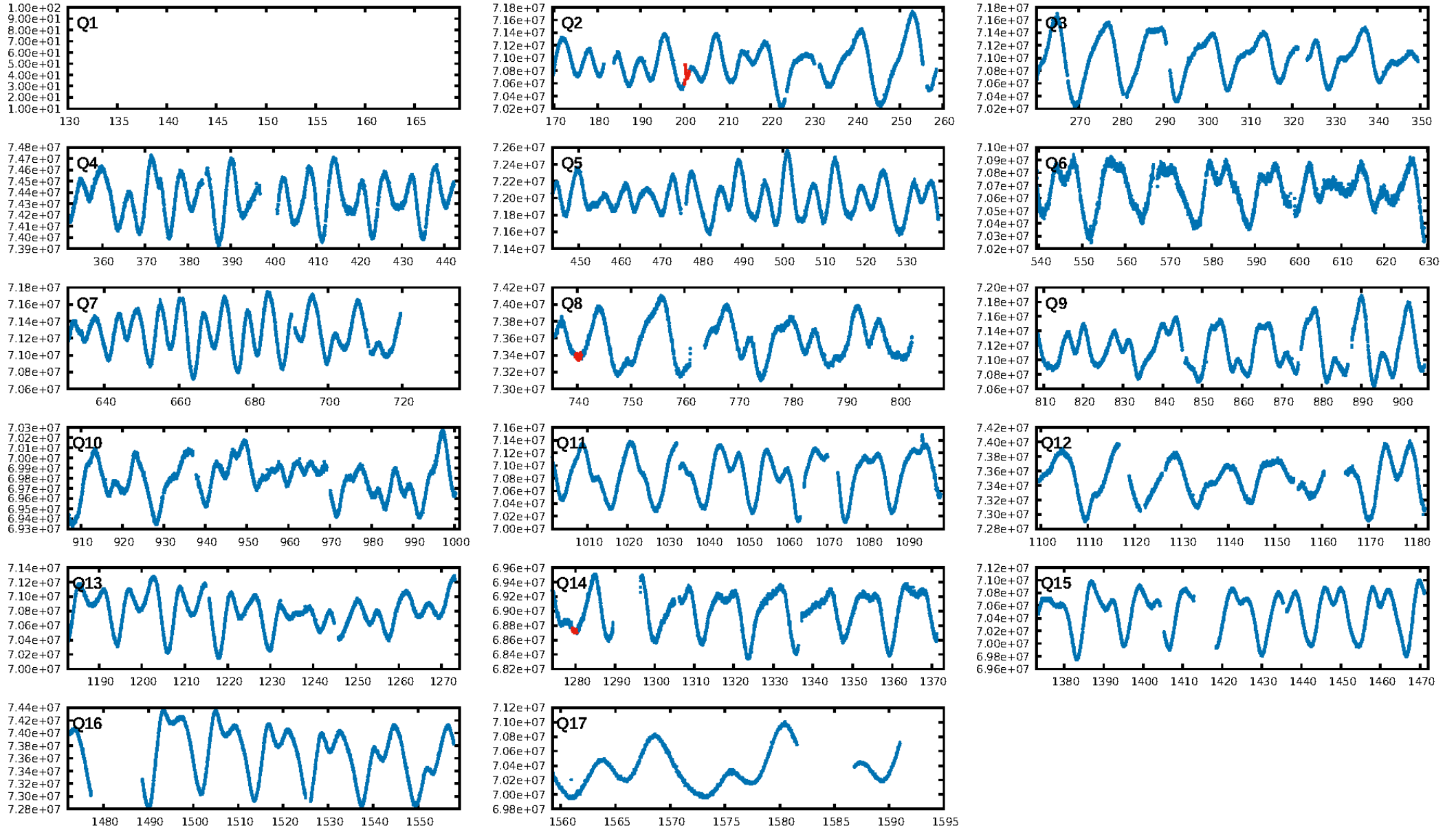
KIC: 9582872 Candidate: 1 of 1 Period: 539.547 d



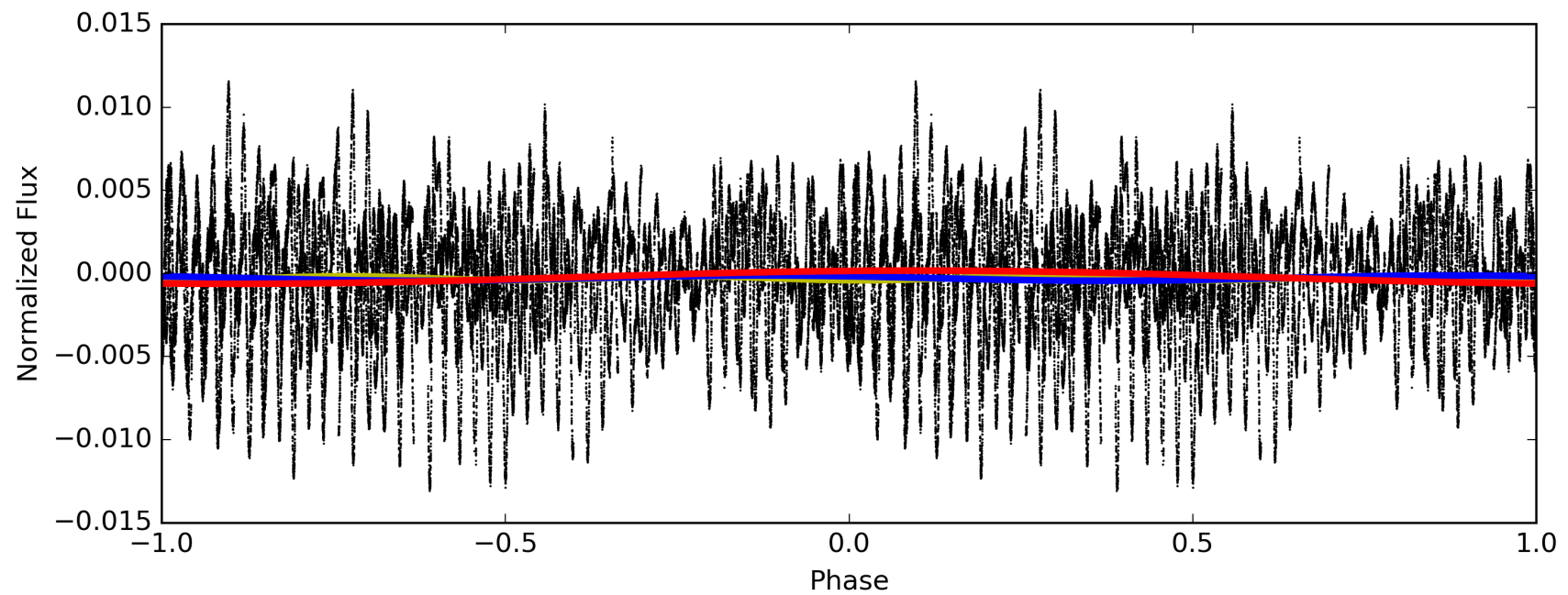
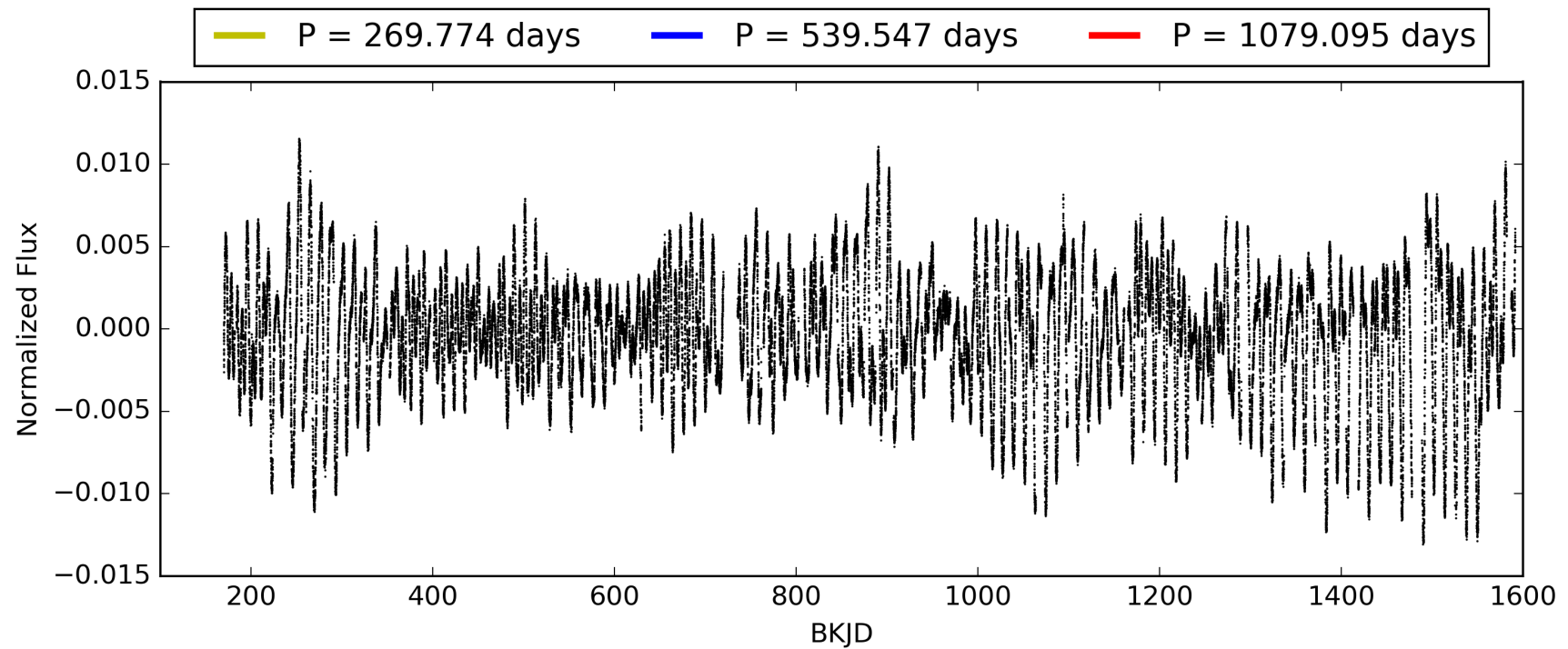
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:10:31 Z

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

TCE 009582872-01, PDC Light Curves

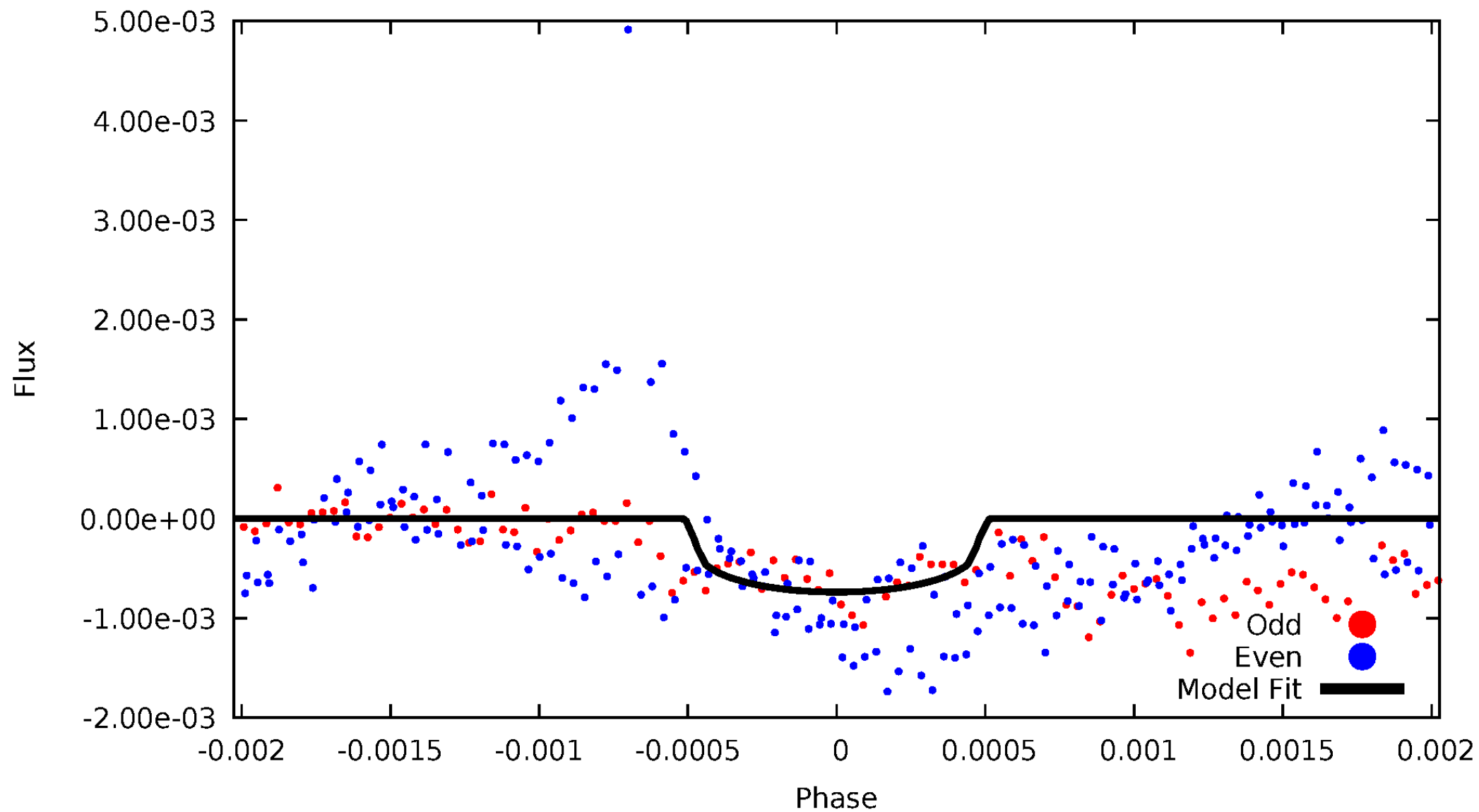


TCE 009582872-01



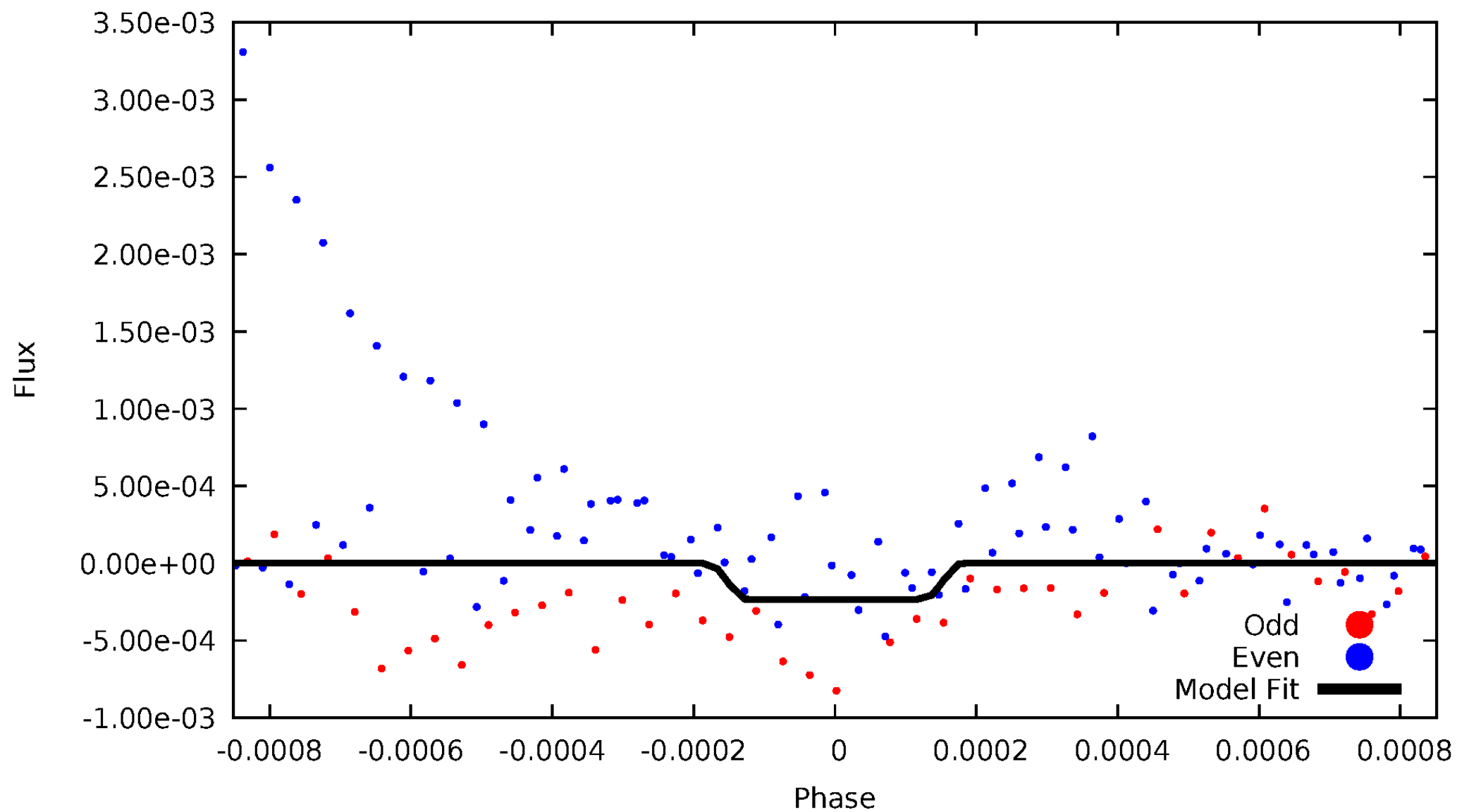
DV Odd/Even

TCE 009582872-01



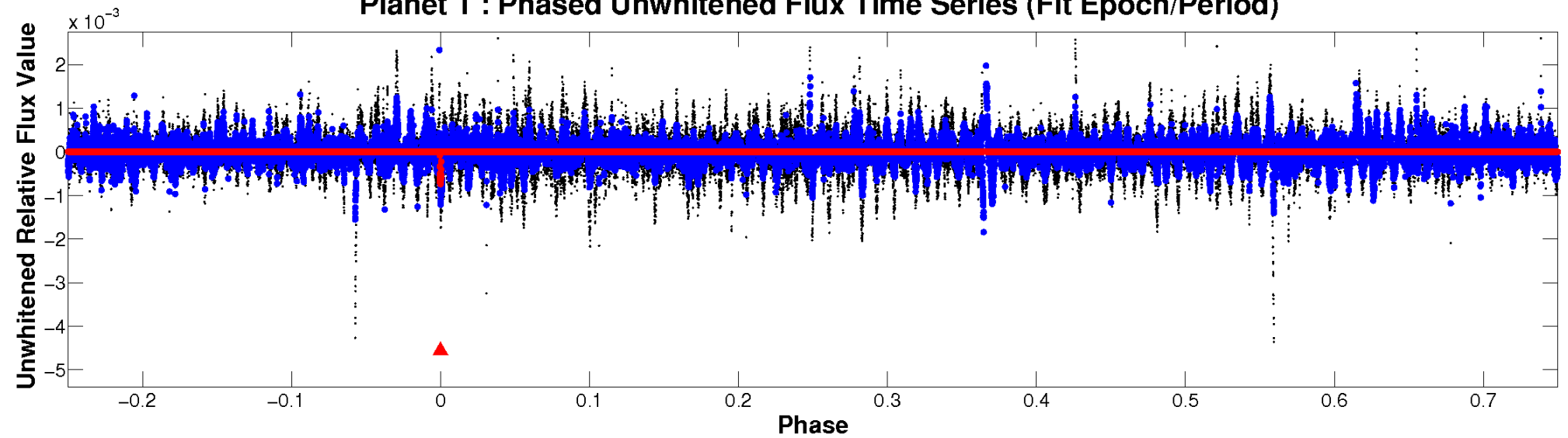
ALT Odd/Even

TCE 009582872-01

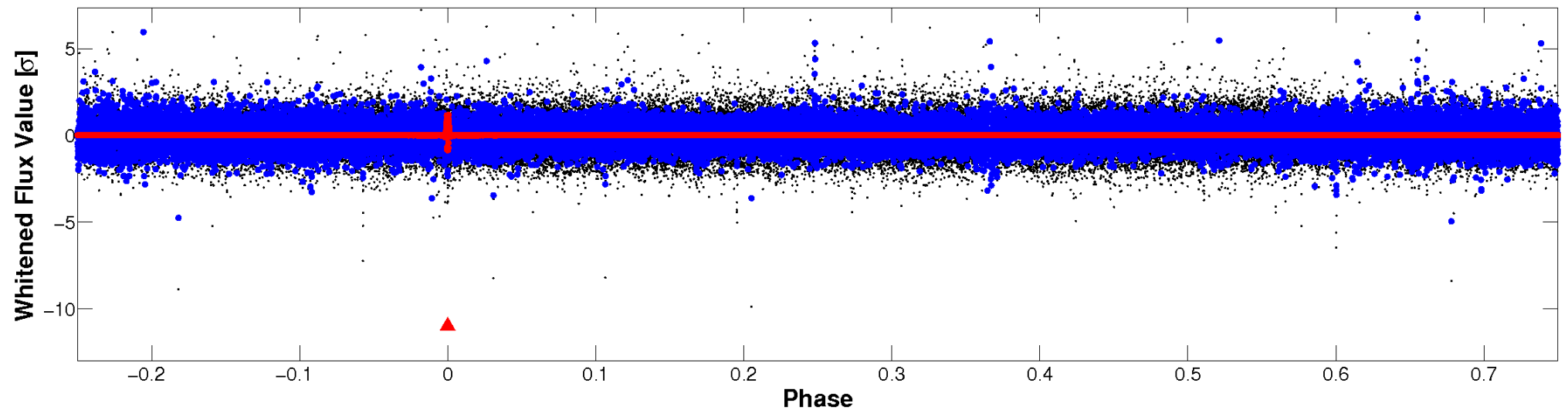


Non-Whitened Vs. Whitened Light Curve

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

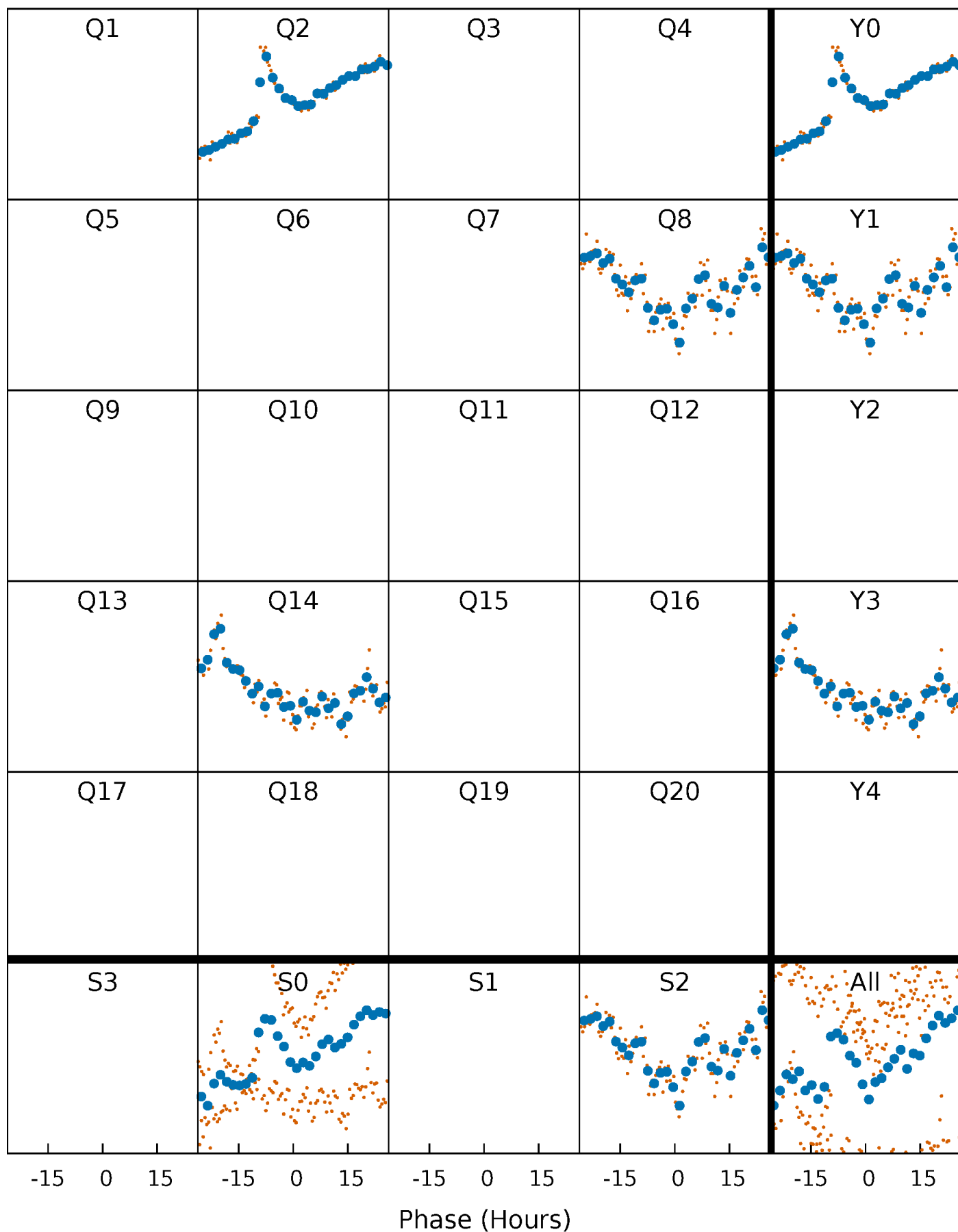


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



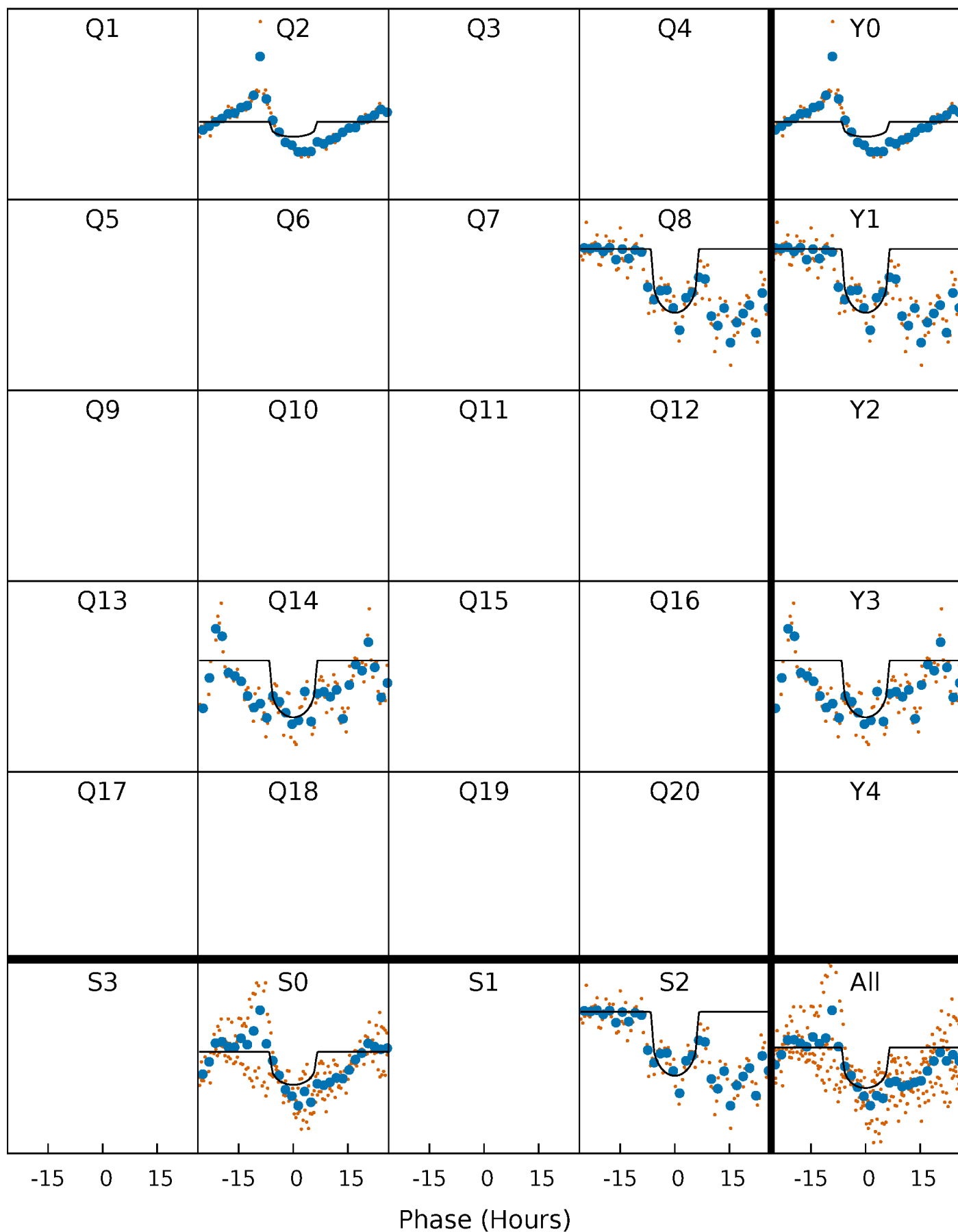
PDC Quarter-Phased Transit Curves

TCE 009582872-01 $P=539.547490$ Days $T_0=200.671329$ (BKJD)



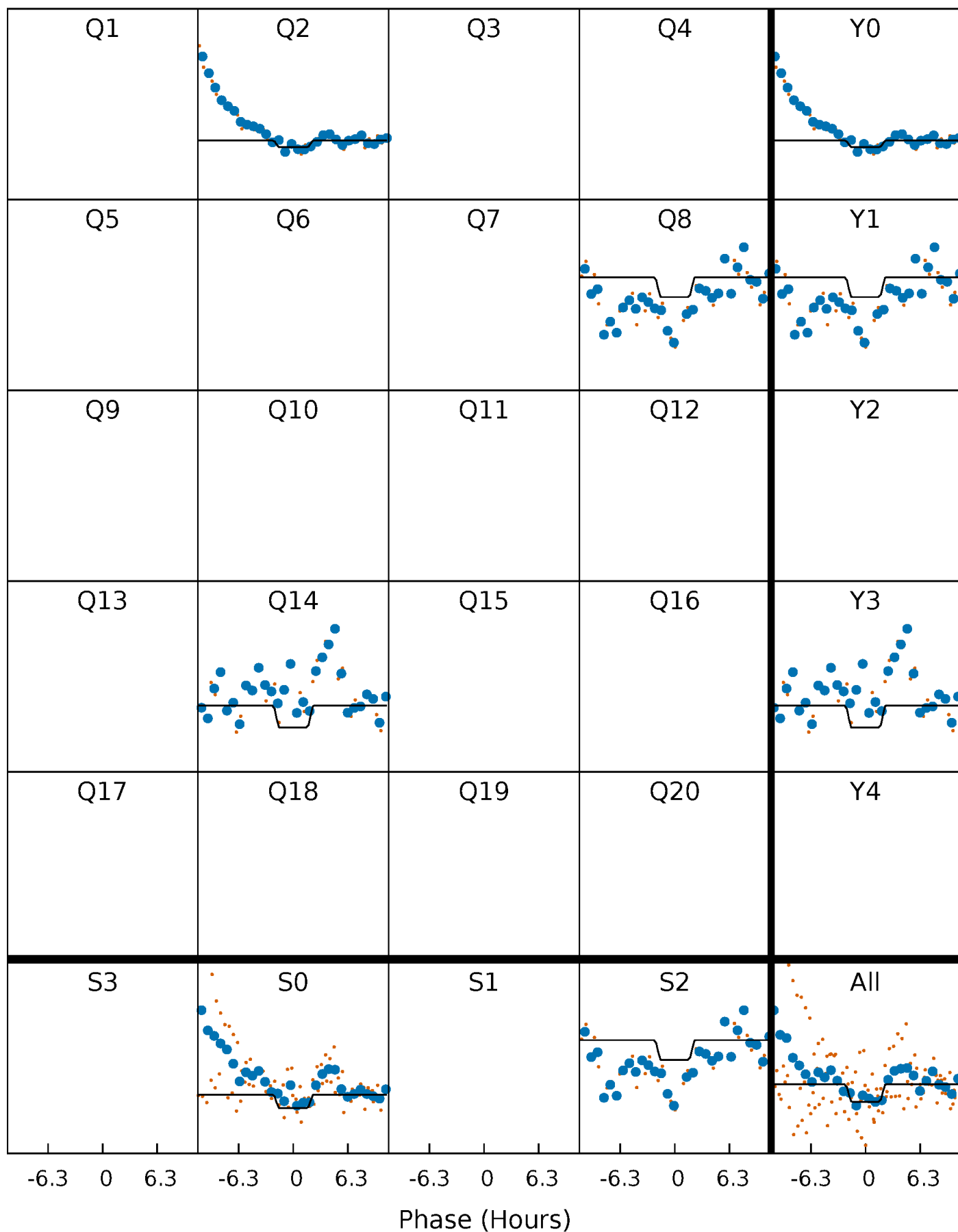
DV Quarter-Phased Transit Curves

TCE 009582872-01 P=539.547490 Days $T_0=200.671329$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

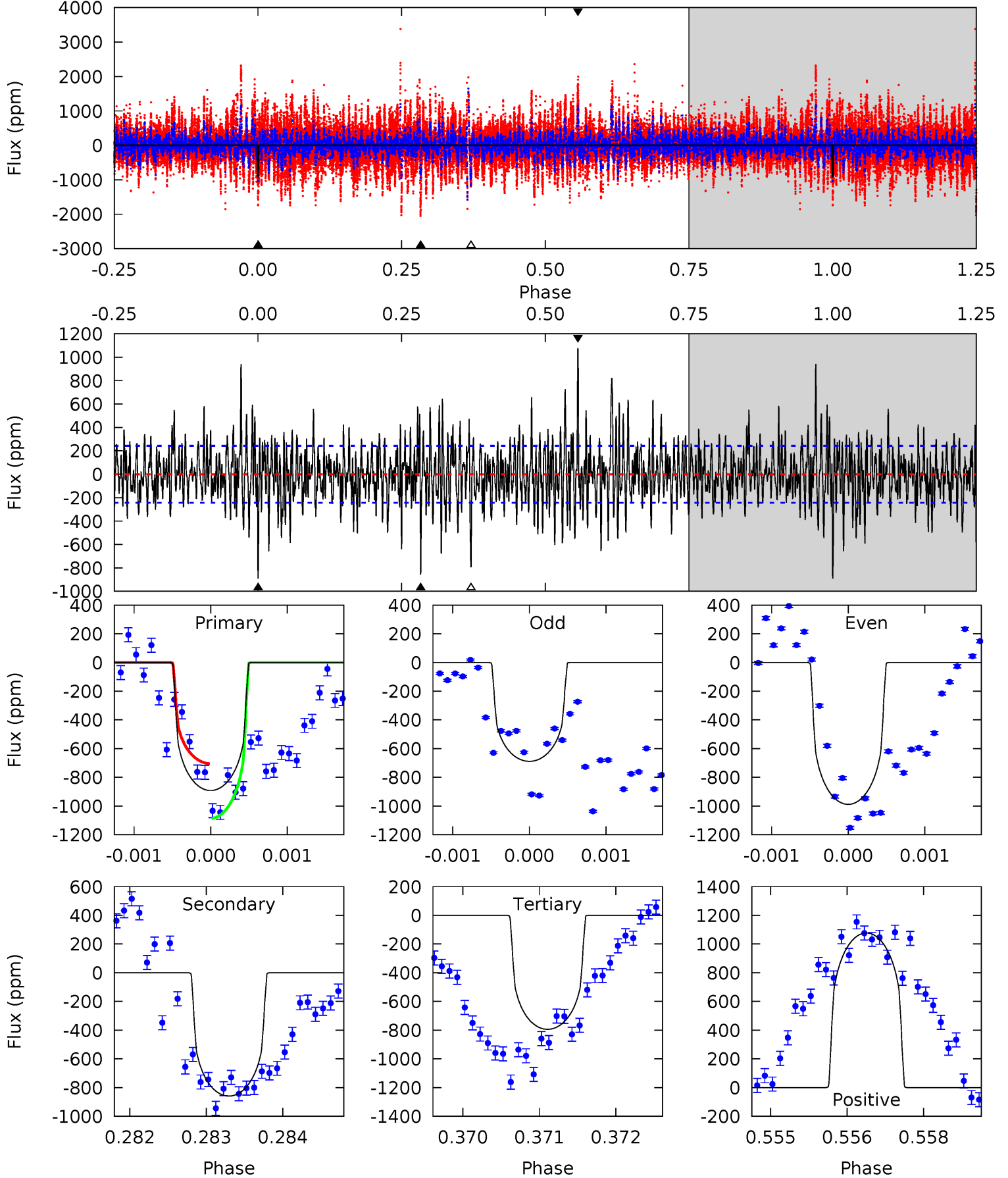
TCE 009582872-01 P=539.459606 Days $T_0=200.806766$ (BKJD)



DV Model-Shift Uniqueness Test

009582872-01, P = 539.547490 Days, E = 200.671329 Days

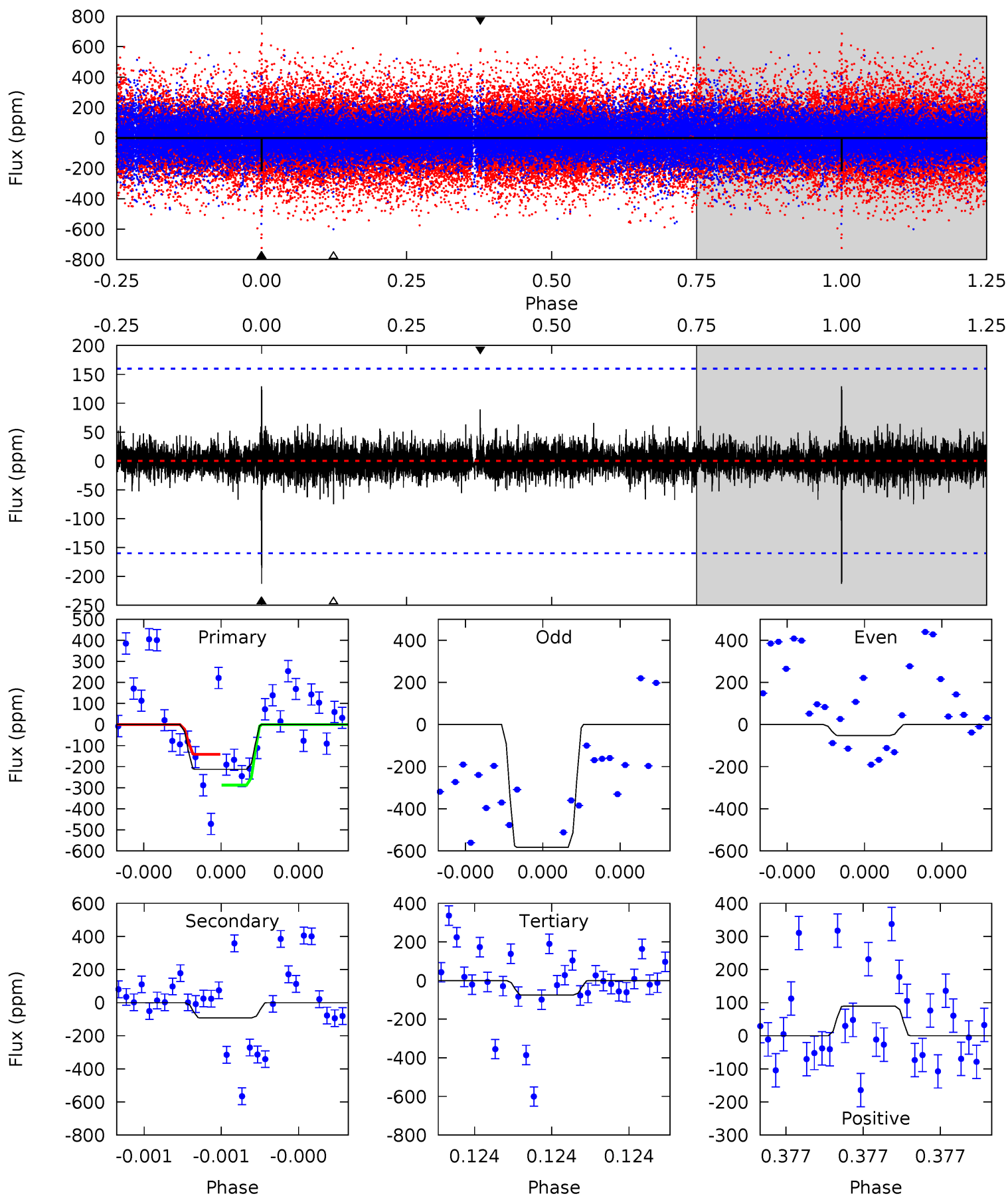
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	19.2	17.8	24.1	5.45	3.28	4.89	2.20	-4.15	1.46	-4.88	2.81	1.19	0.55	4.28



Alt Model-Shift Uniqueness Test

009582872-01, P = 539.459606 Days, E = 200.806766 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.50	3.25	2.63	3.15	5.63	3.57	0.52	4.86	4.35	0.62	0.10	9.03	1.04	0.38	2.58



Stellar Parameters For KIC 009582872

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4962^{+176}_{-176}	$4.548^{+0.066}_{-0.050}$	$-0.040^{+0.300}_{-0.300}$	$0.765^{+0.072}_{-0.072}$	$0.755^{+0.087}_{-0.063}$	$2.374^{+0.686}_{-0.446}$
	+4%/-4%	+1%/-1%	+750%/-750%	+9%/-9%	+12%/-8%	+29%/-19%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009582872-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-859 ± 45	$2.23^{+0.60}_{-0.56}$	246^{+10}_{-11}	5188^{+763}_{-535}	$135875^{+105137}_{-52331}$
Alt.	-92 ± 28	$1.32^{+0.52}_{-0.60}$	246^{+10}_{-11}	4066^{+1104}_{-481}	39946^{+97008}_{-21037}

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 $A_{\text{obs}} \gg 1.0$

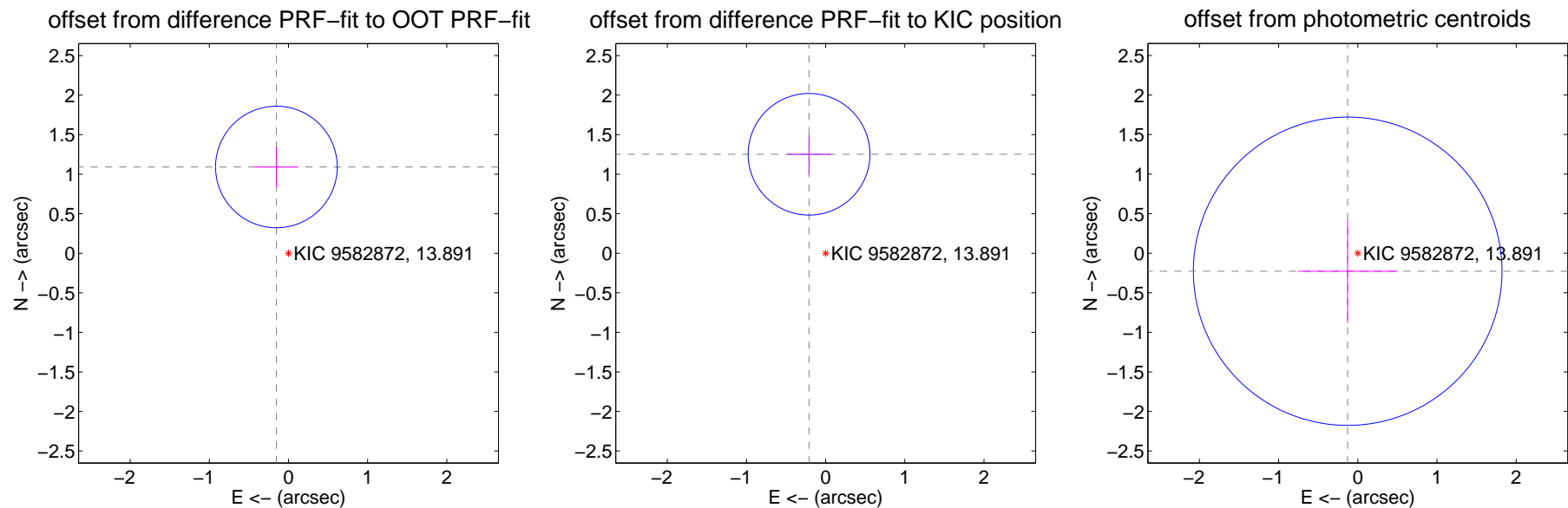
DV Centroid Data

Supplemental centroid analysis for 009582872-01. Kepler magnitude: 13.89. Transit SNR 8.69

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.102 ± 0.256	4.30	0.153 ± 0.274	1.091 ± 0.256
PRF-fit source offset from KIC position	1.270 ± 0.256	4.95	0.210 ± 0.274	1.252 ± 0.256
photometric centroid source offset	0.26 ± 0.65	0.40	0.13 ± 0.63	-0.23 ± 0.66

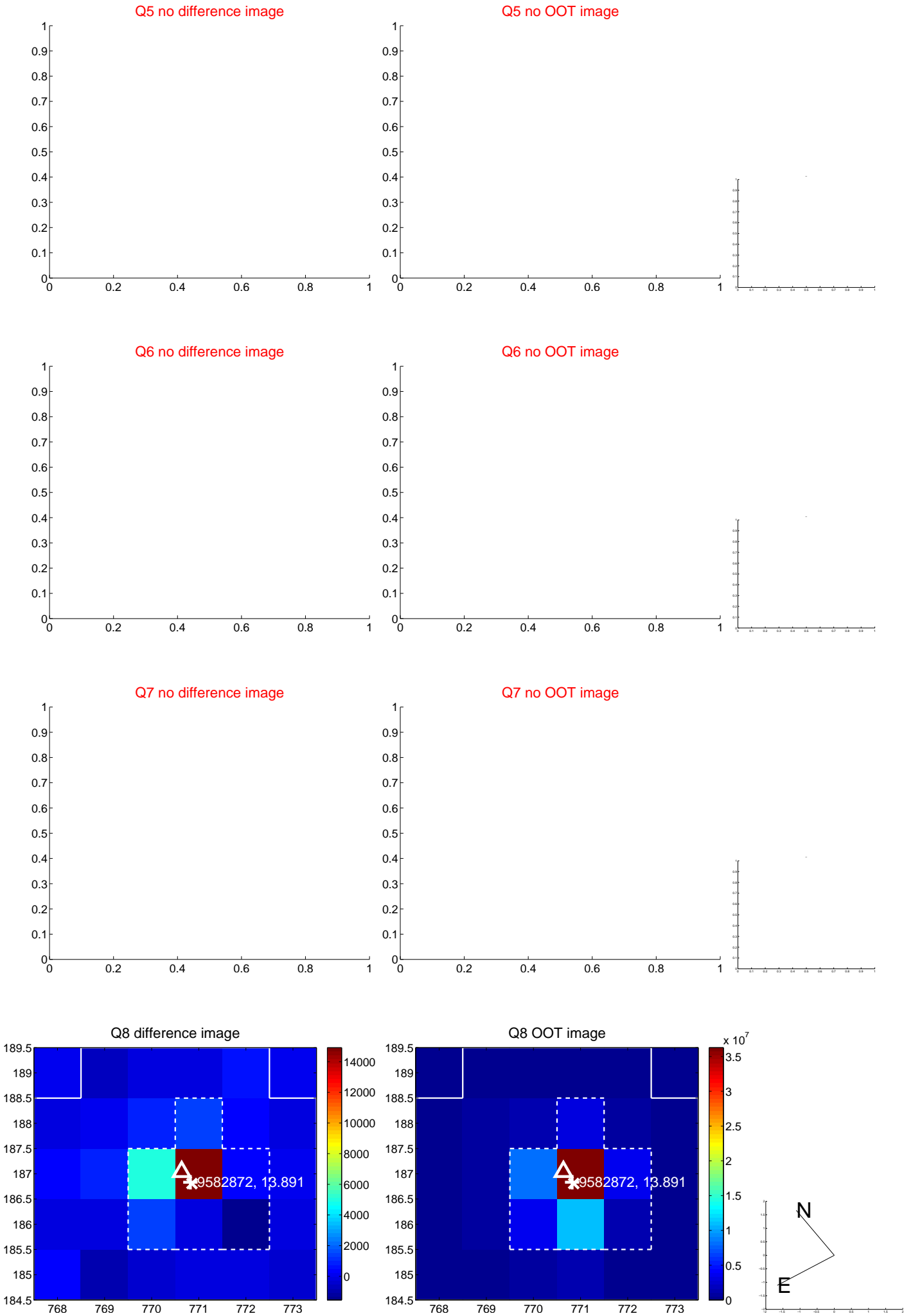


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



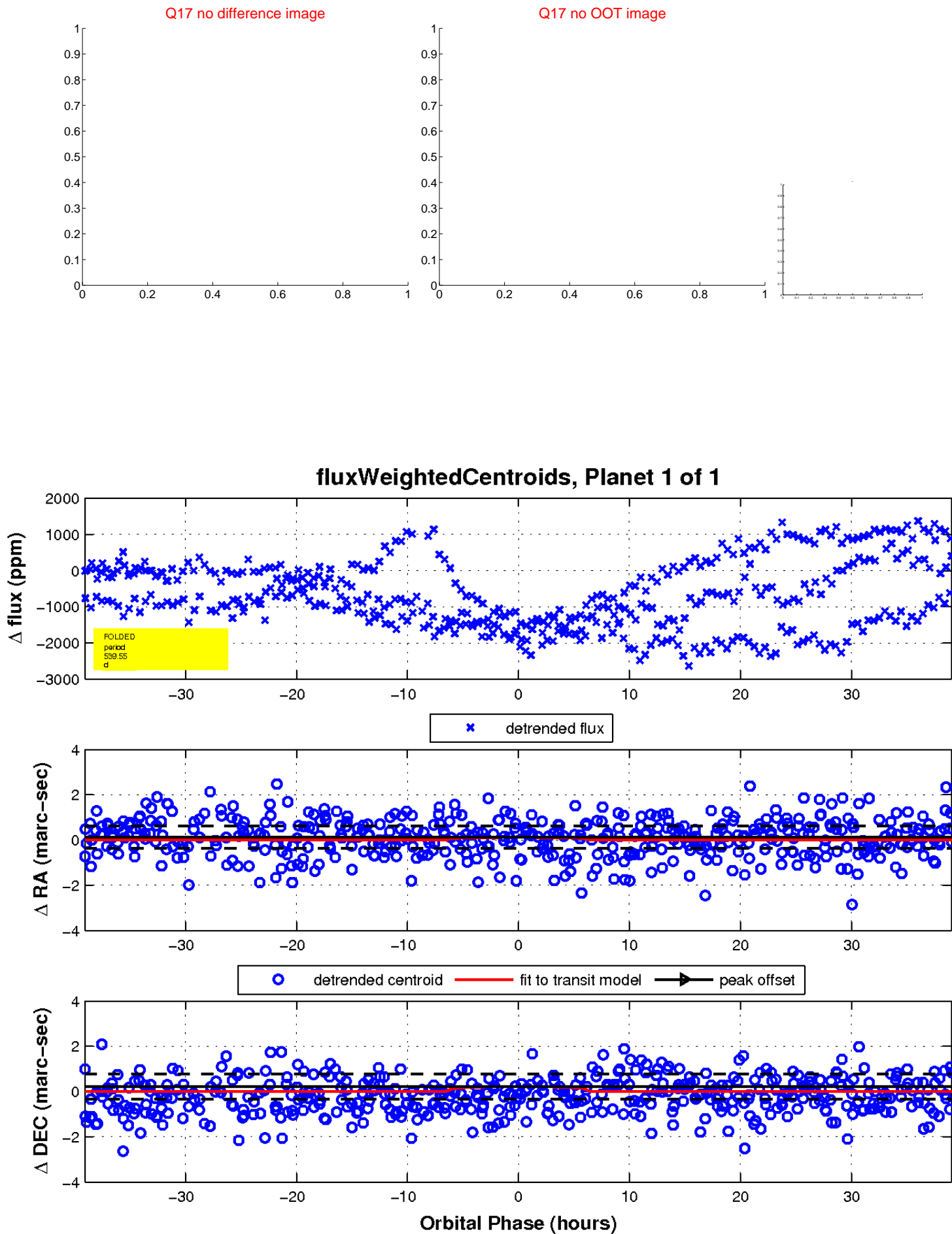
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UKIRT Image

Declination

