

KIC 012504054

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})
012504054-01	OBS	No	278.829549	163.428215	154.7	12.500	11.0	-1.0	102.52	3570	117.39	1542.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012504054-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST

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

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

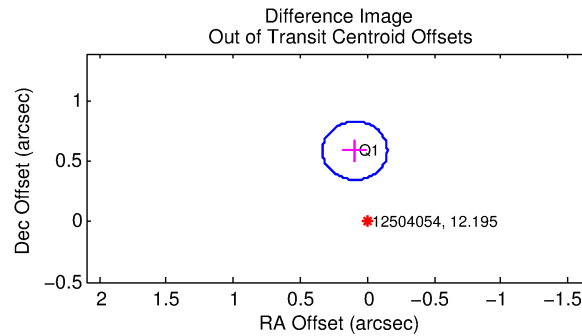
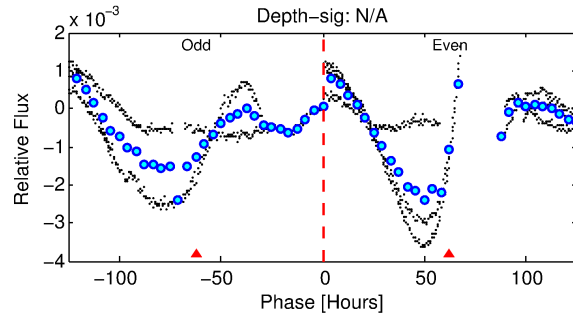
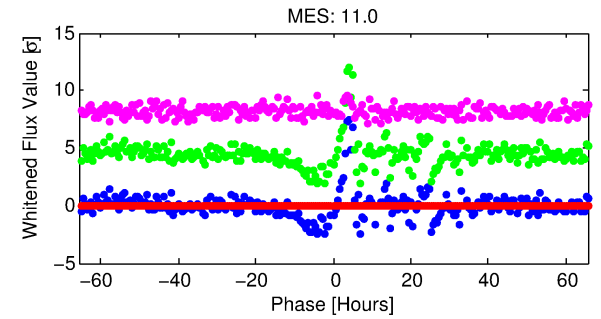
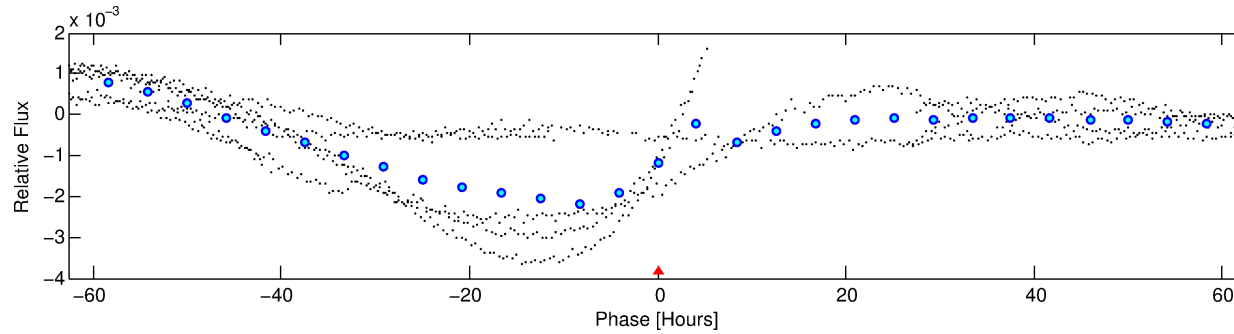
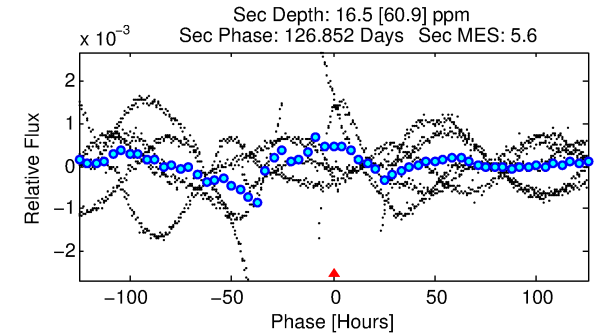
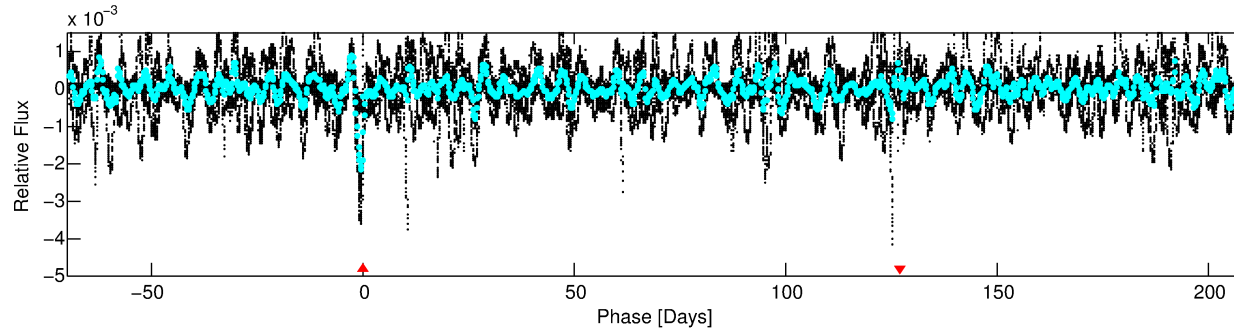
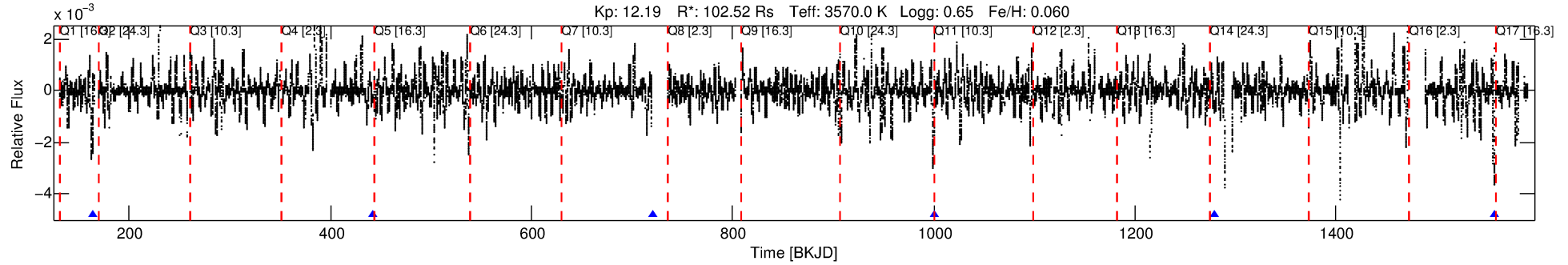
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012504054-01

No Significant Match Found

DV One-Page Summary

KIC: 12504054 Candidate: 1 of 1 Period: 278.830 d



TPS TCE Results:

Period = 278.82955 d
Epoch = 163.4282 BKJD

DV fit results are unavailable

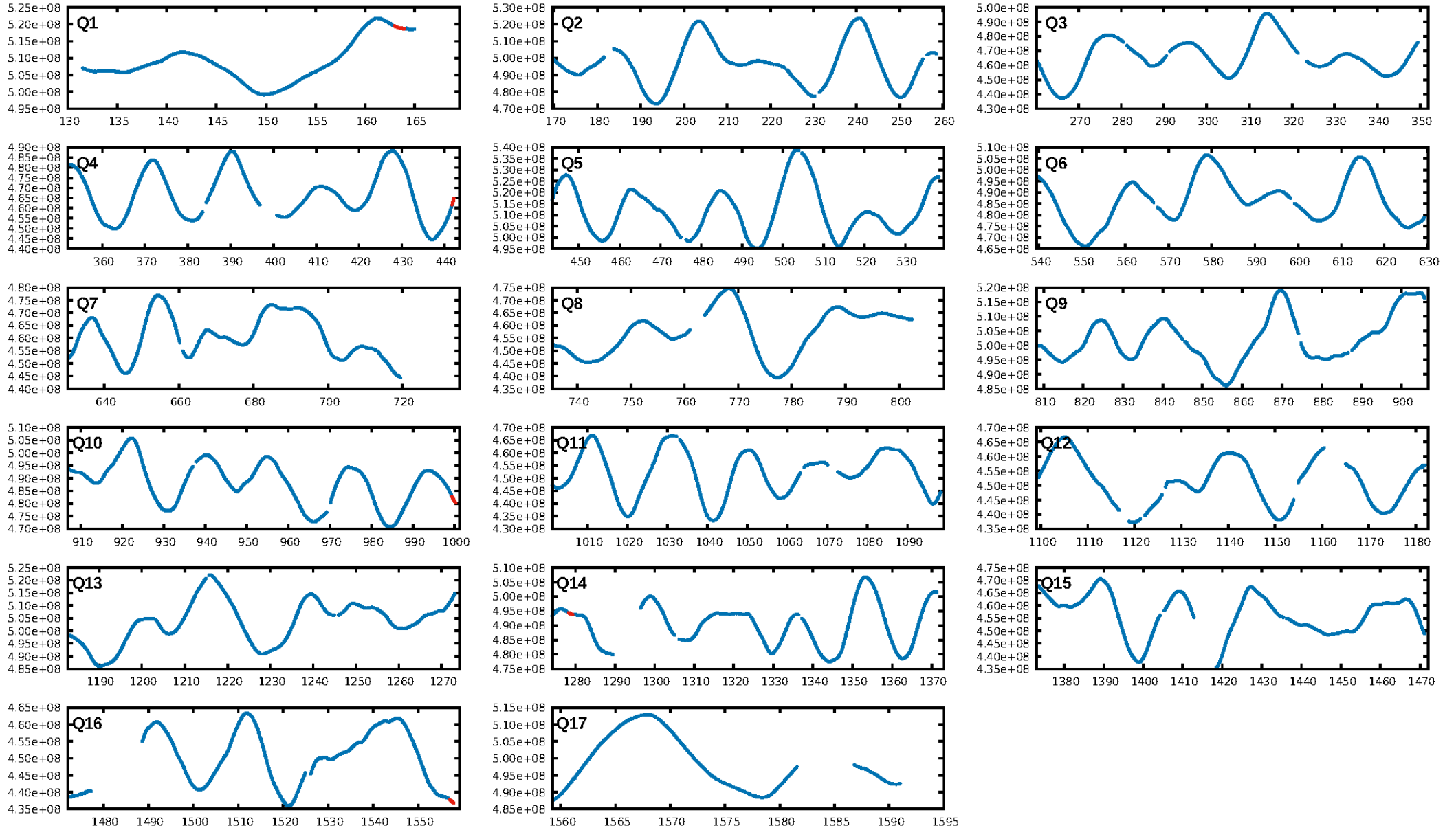
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.95e-08
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.005851
Centroid-sig: 3.1%
Centroid-so: 0.233 arcsec [6.57σ]
OotOffset-rm: 0.600 arcsec [7.42σ]
KicOffset-rm: 0.681 arcsec [8.43σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

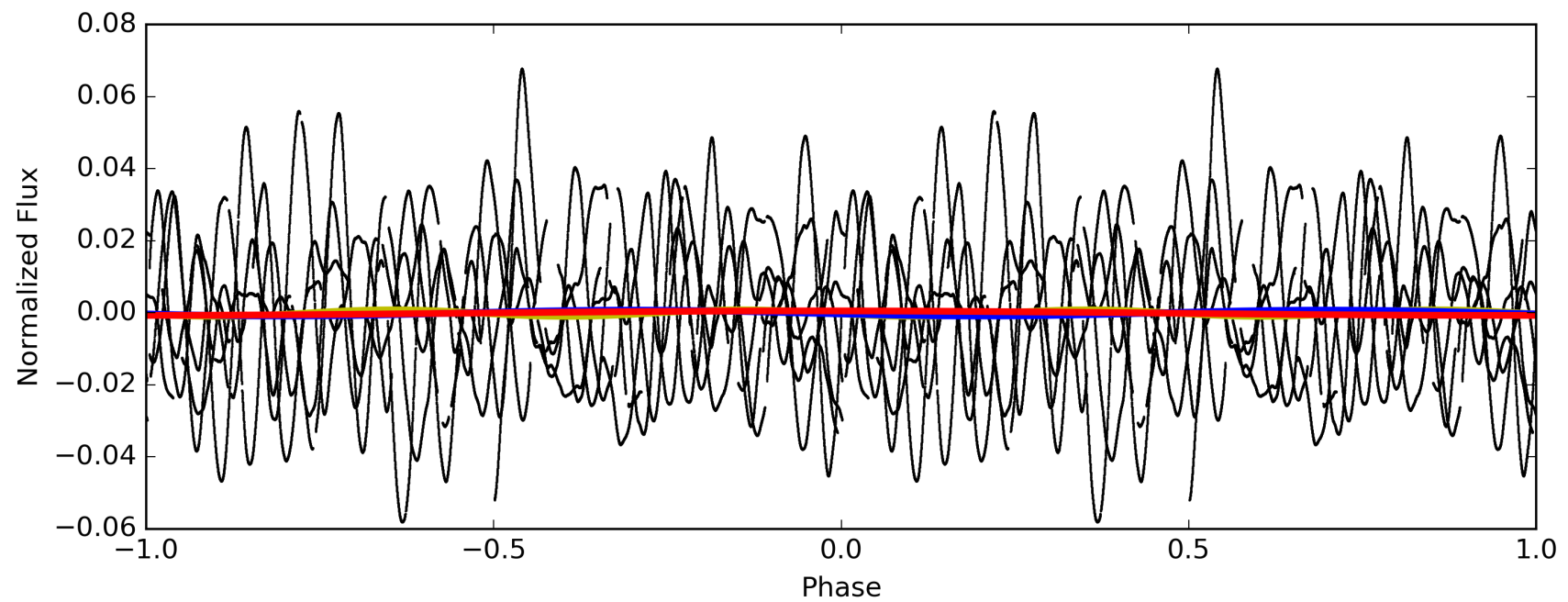
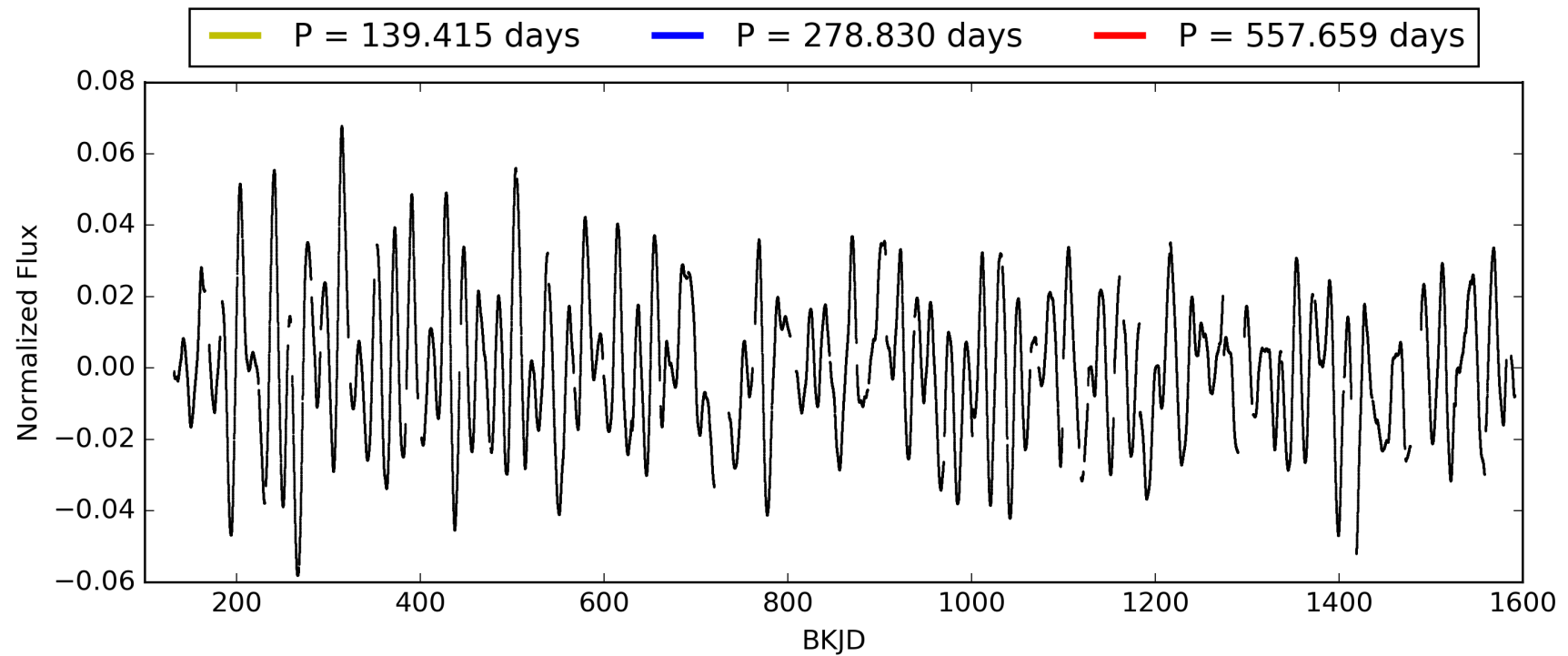
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:09:02 Z

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

TCE 012504054-01, PDC Light Curves

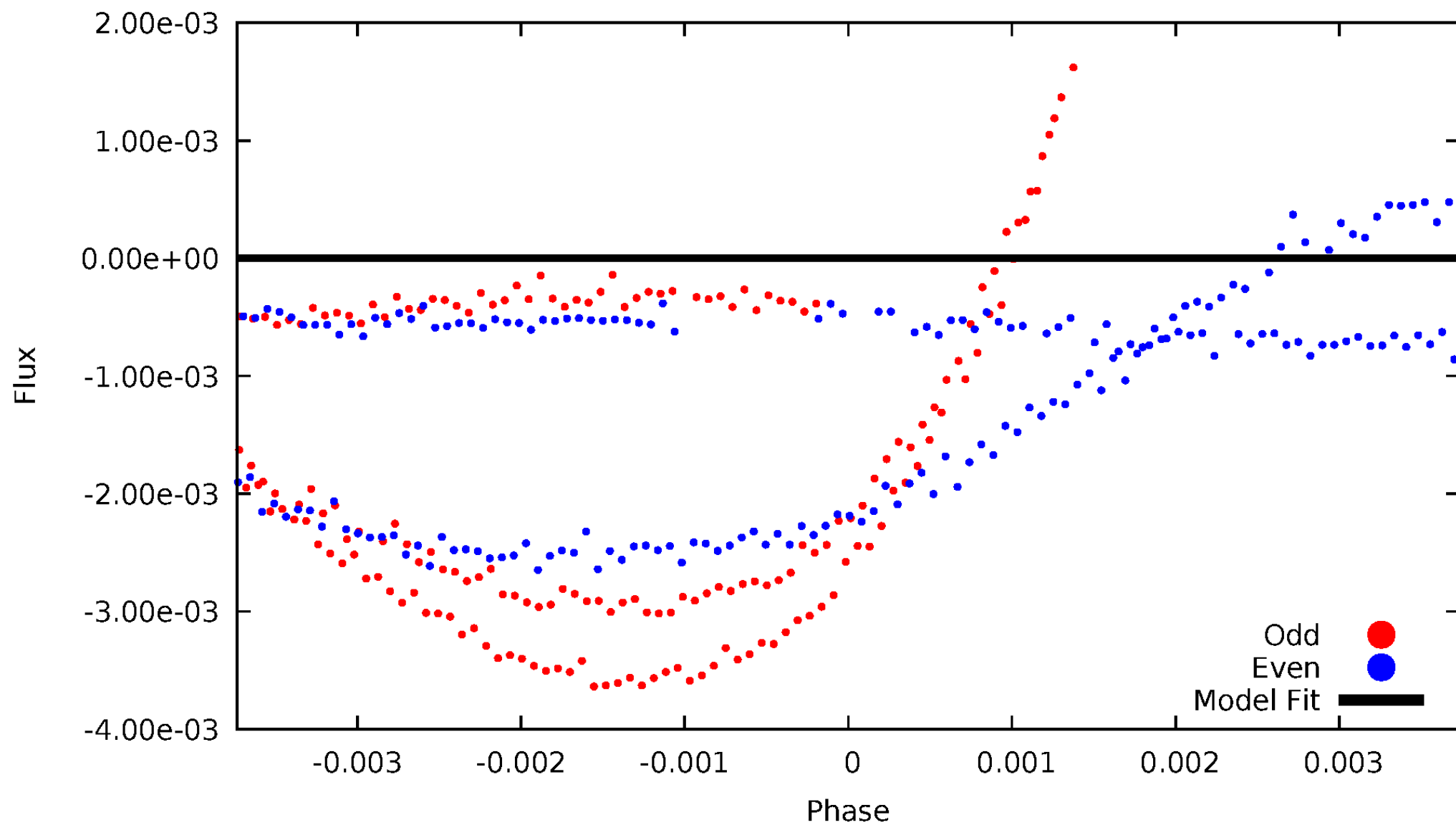


TCE 012504054-01



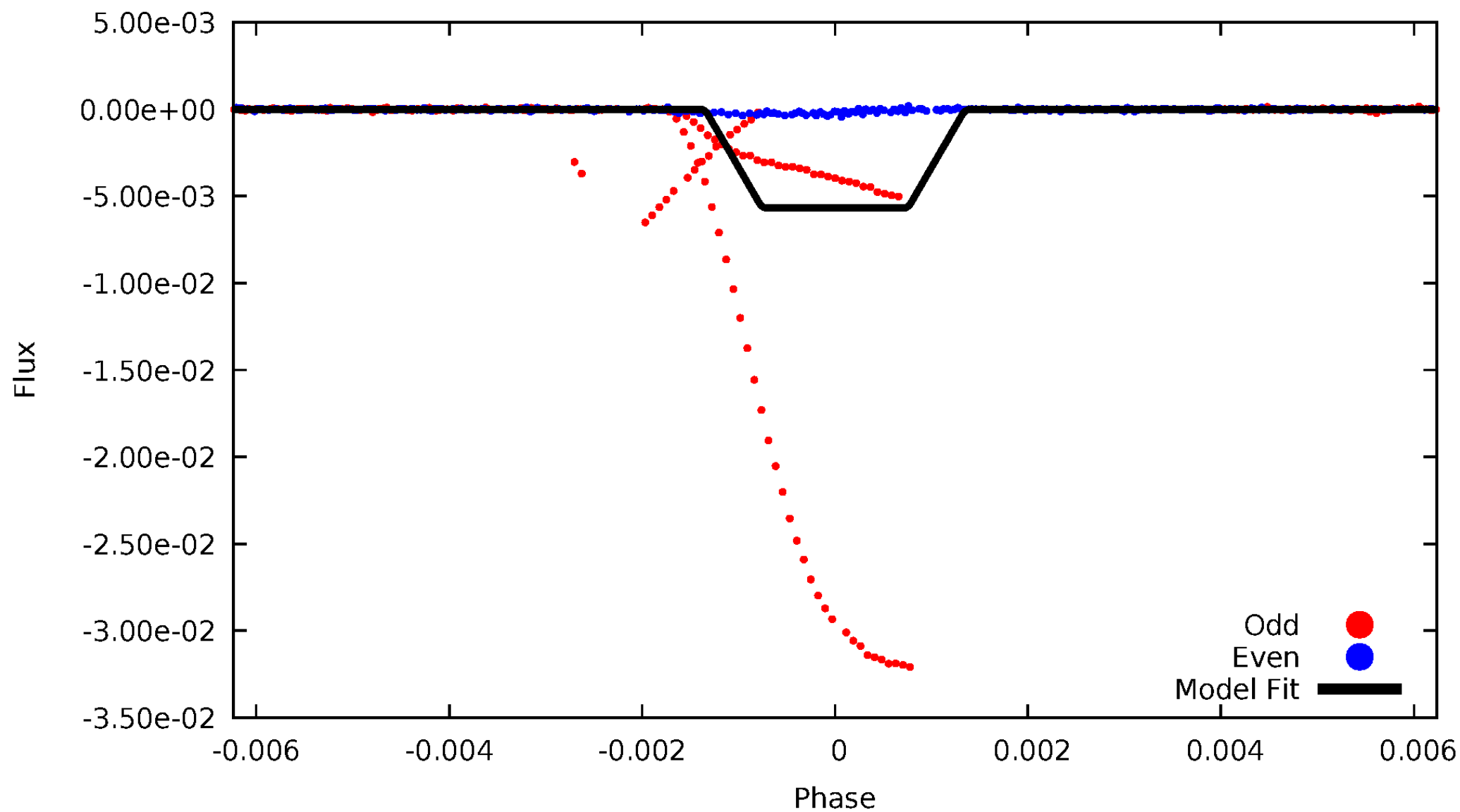
DV Odd/Even

TCE 012504054-01



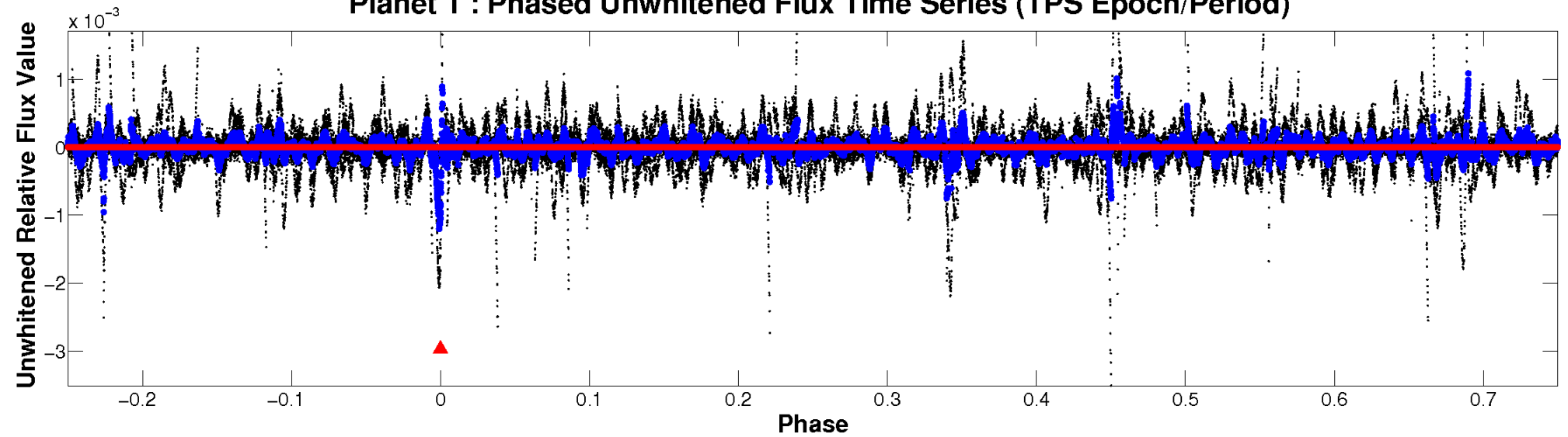
ALT Odd/Even

TCE 012504054-01



Non-Whitened Vs. Whitened Light Curve

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

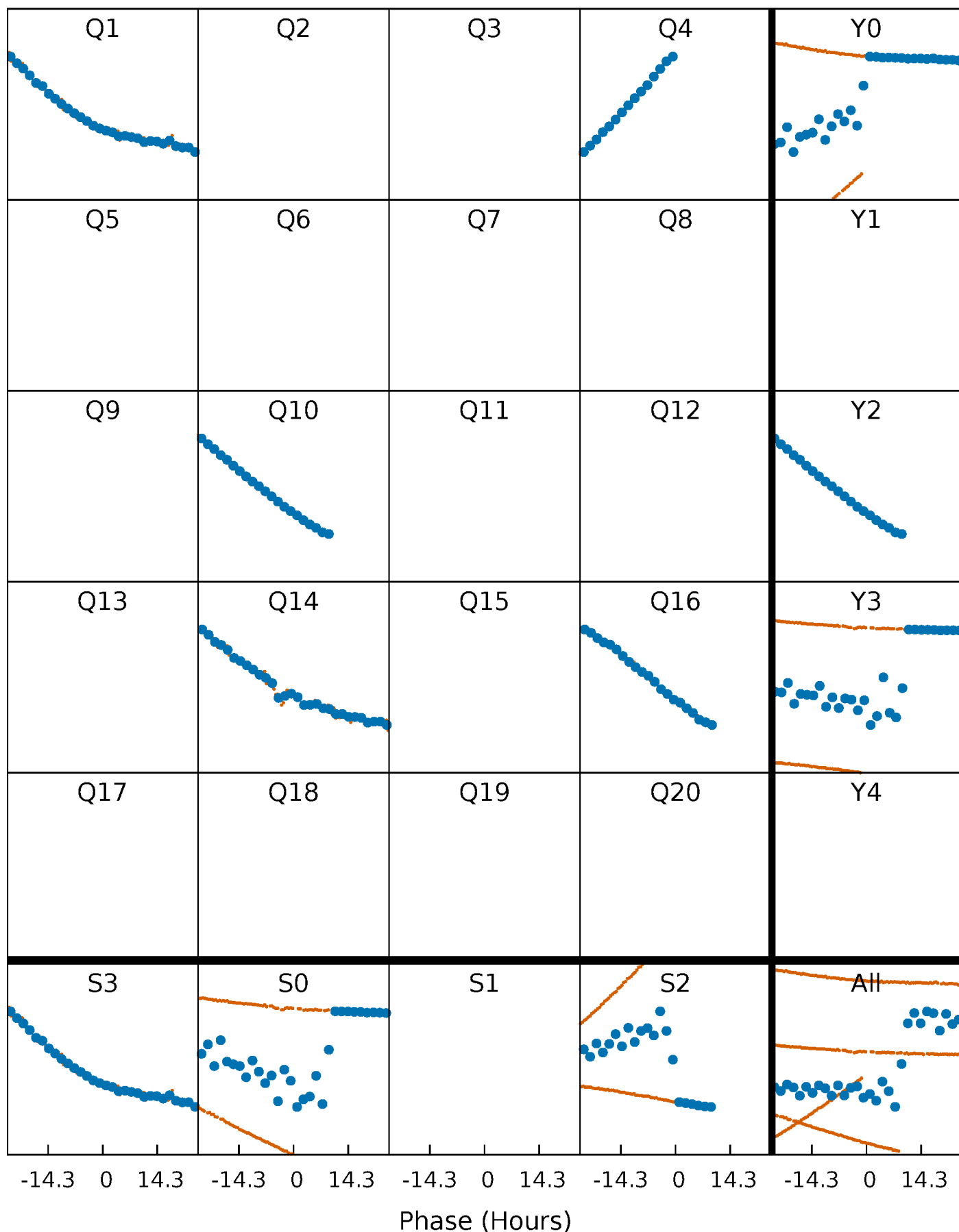


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



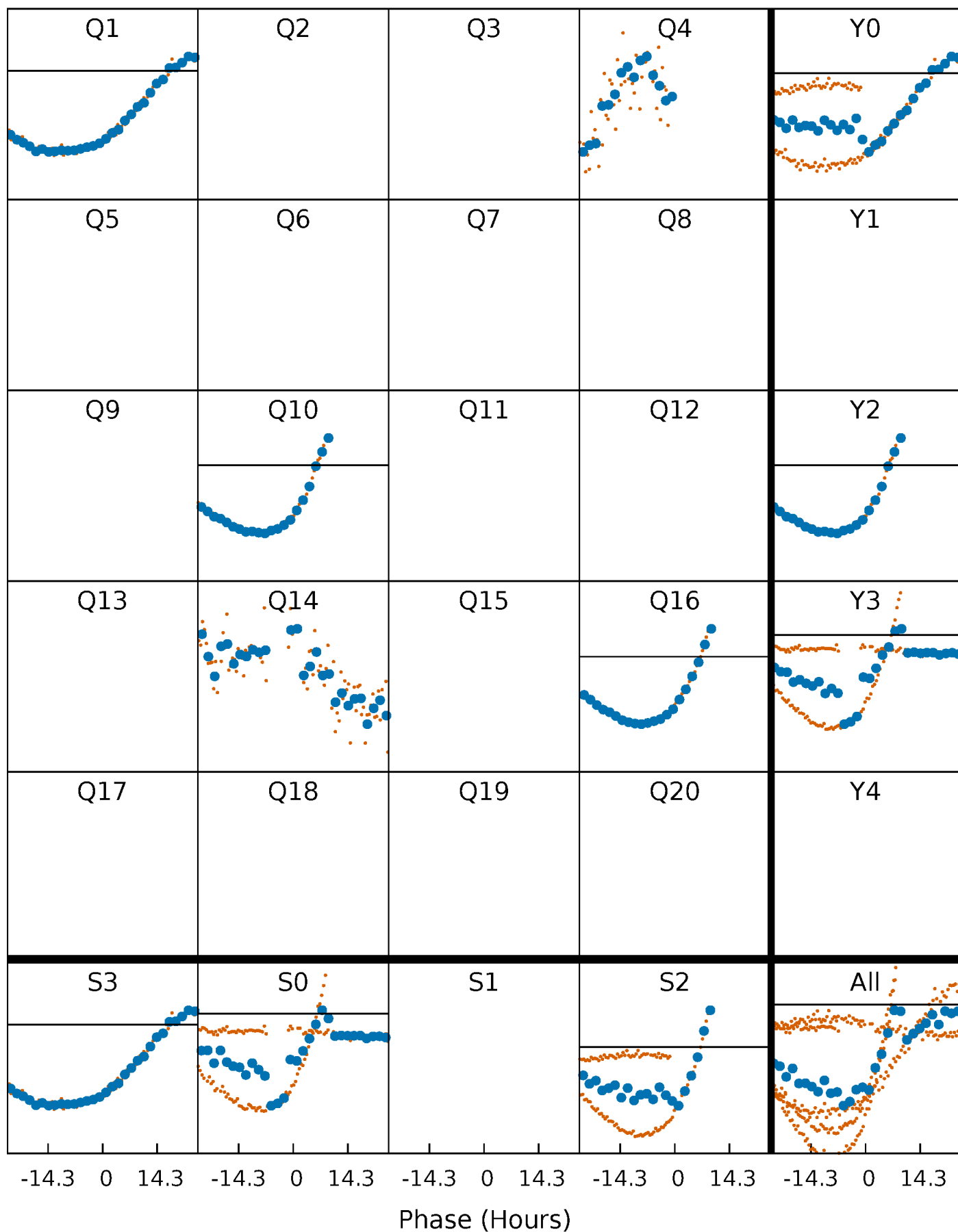
PDC Quarter-Phased Transit Curves

TCE 012504054-01 P=278.829549 Days $T_0=163.428214$ (BKJD)



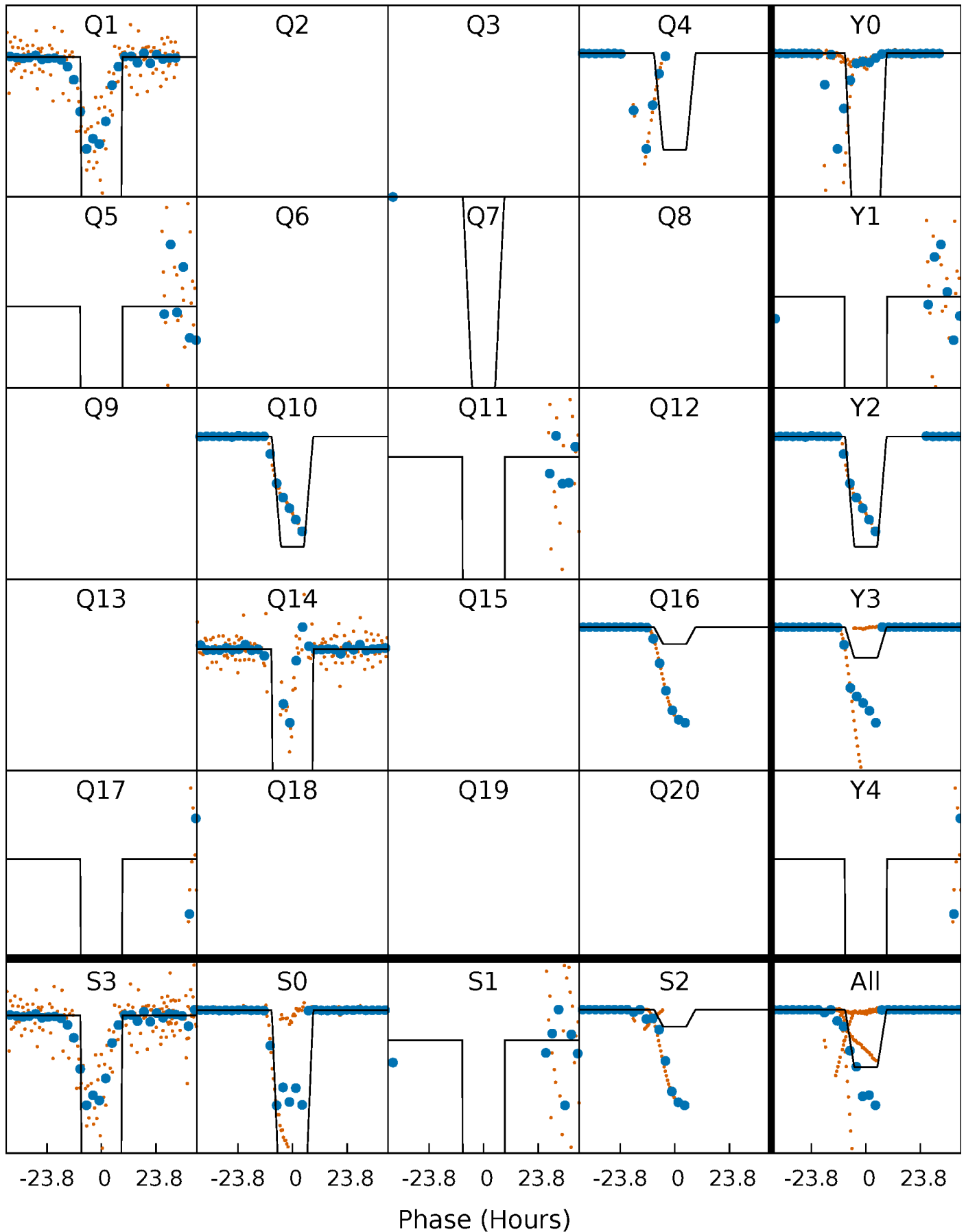
DV Quarter-Phased Transit Curves

TCE 012504054-01 P=278.829549 Days $T_0=163.428214$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

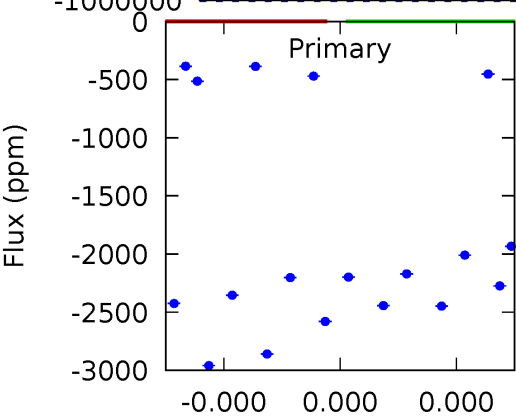
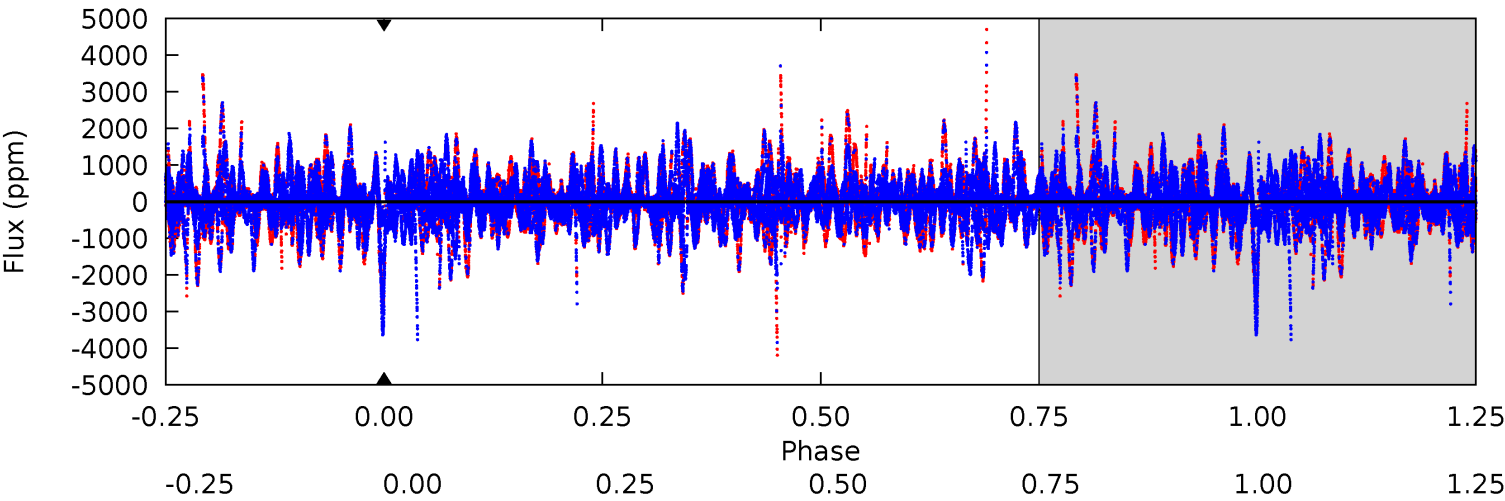
TCE 012504054-01 P=278.829549 Days $T_0=163.595481$ (BKJD)



DV Model-Shift Uniqueness Test

012504054-01, P = 278.829549 Days, E = 163.428214 Days

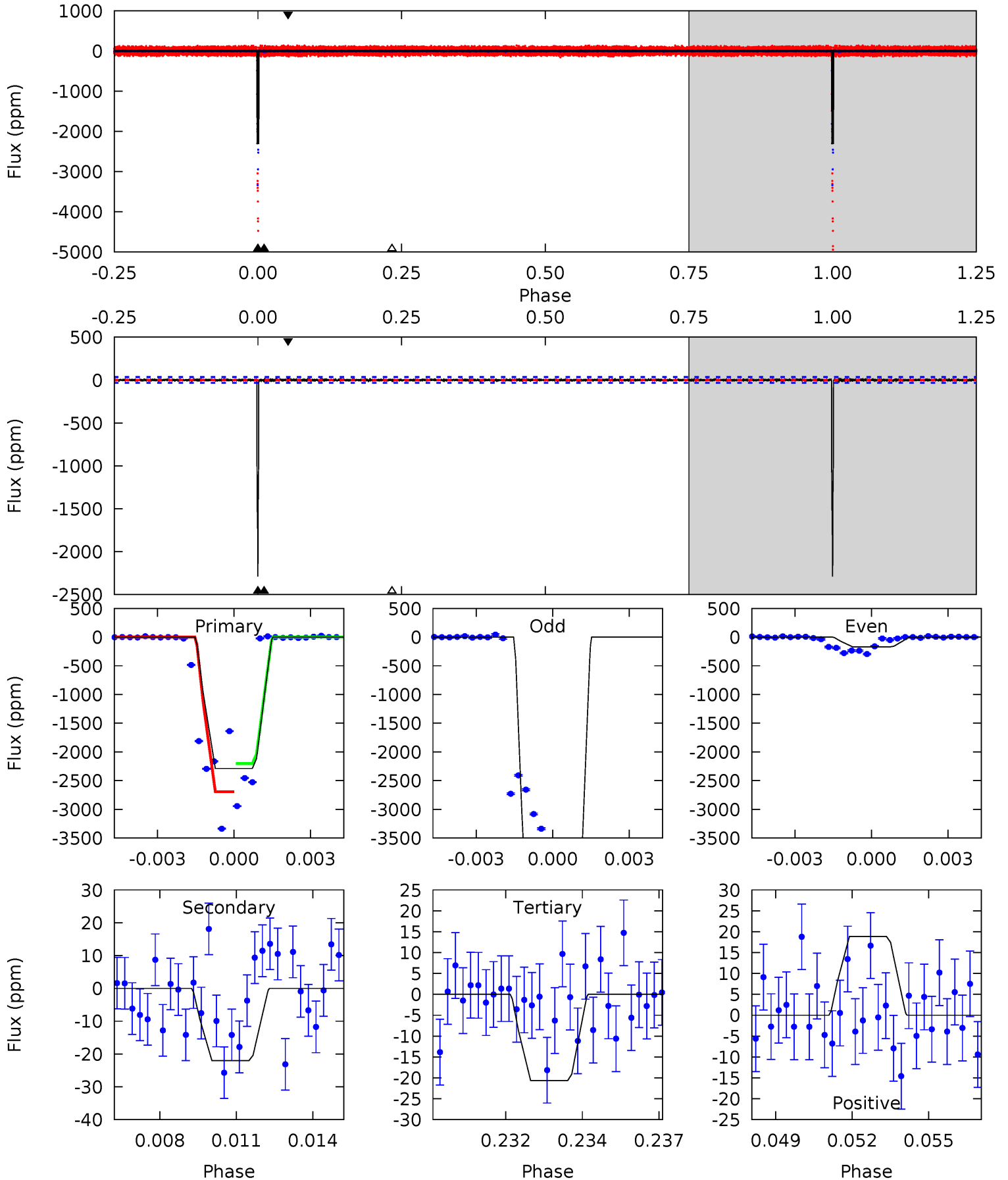
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

012504054-01, P = 278.829549 Days, E = 163.595481 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
362.0	3.48	3.27	2.98	5.27	3.00	0.58	358.7	359.0	0.22	0.50	736.7	4.64	0.01	39.2



Stellar Parameters For KIC 012504054

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3570^{+85}_{-96}	$0.645^{+0.030}_{-0.030}$	$0.060^{+0.200}_{-0.250}$	$102.519^{+4.491}_{-19.087}$	$1.694^{+0.061}_{-0.547}$	$0.000^{+0.000}_{-0.000}$
	+2%/-3%	+5%/-5%	+333%/-417%	+4%/-19%	+4%/-32%	+27%/-9%
Source	PHO54	AST54	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 012504054-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$796.98^{+845.41}_{-556.72}$	2238^{+55}_{-74}	-3167^{+11083}_{-4147}	$-1.898^{+174.573}_{-121.423}$
Alt.	-22 ± 6	$1142.79^{+1040.49}_{-741.44}$	2236^{+59}_{-66}	-2437^{+88}_{-55}	$0.009^{+0.067}_{-0.007}$

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 $A_{obs} \gg 1.0$

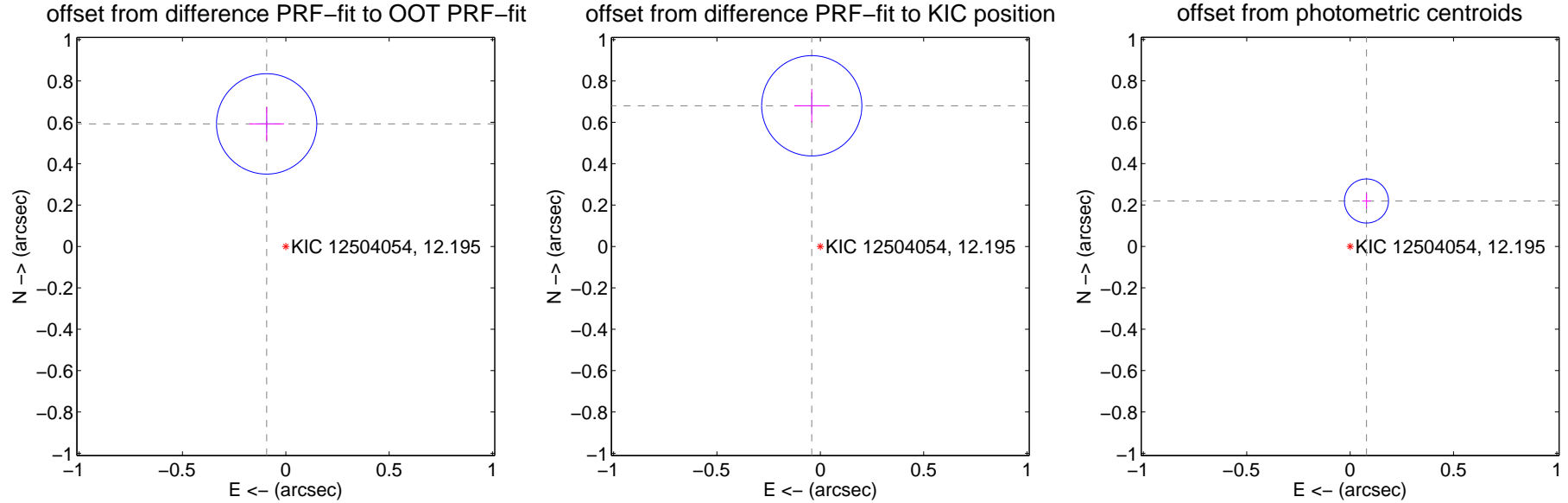
DV Centroid Data

Supplemental centroid analysis for 012504054-01. Kepler magnitude: 12.20. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

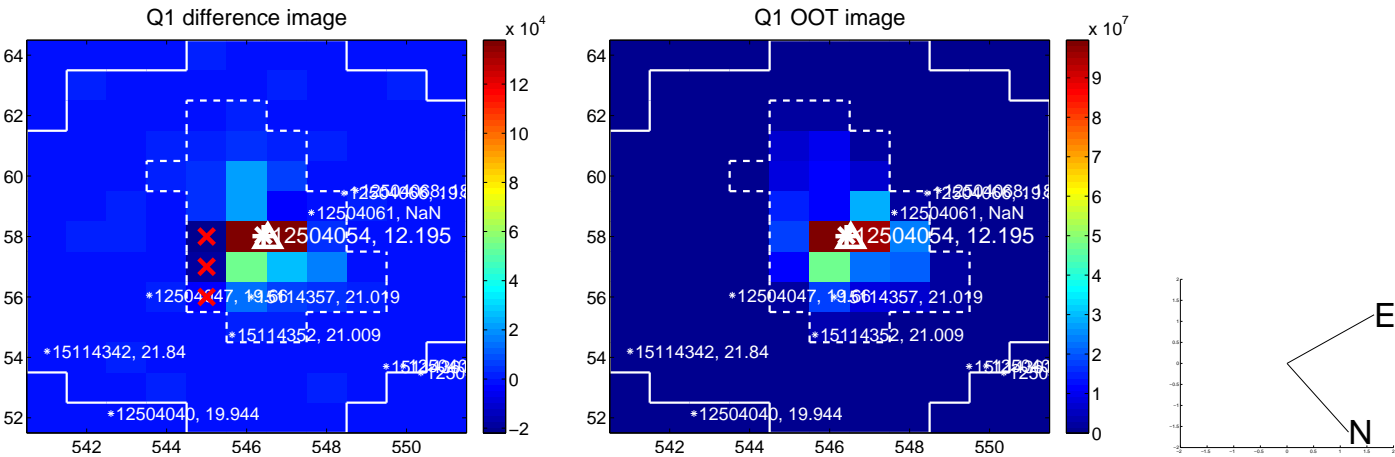
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.600 ± 0.081	7.42	0.093 ± 0.084	0.592 ± 0.081
PRF-fit source offset from KIC position	0.681 ± 0.081	8.43	0.041 ± 0.084	0.680 ± 0.081
photometric centroid source offset	0.23 ± 0.04	6.57	-0.08 ± 0.02	0.22 ± 0.04



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.



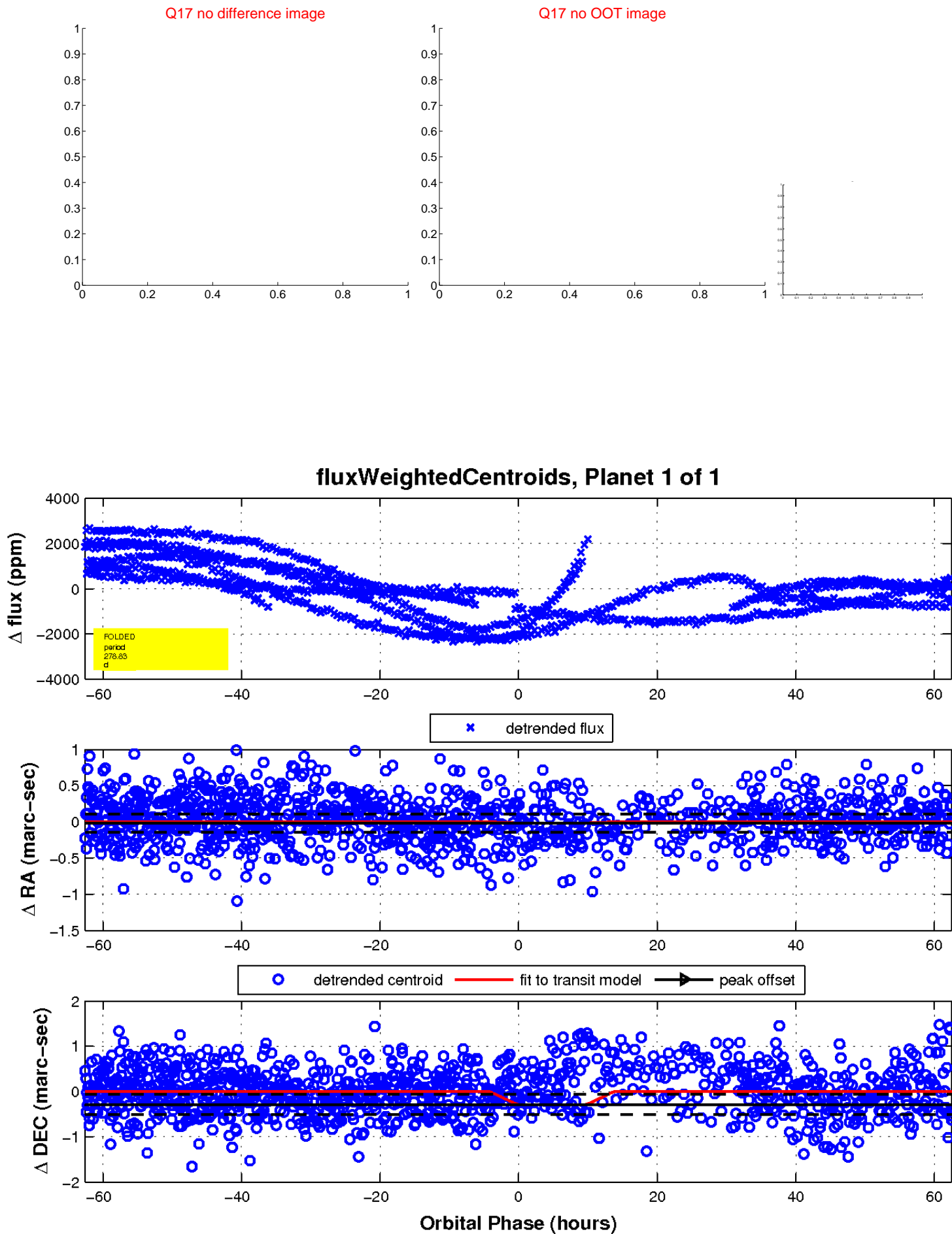
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

