

KIC 006029053

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})
006029053-01	OBS	No	24.087762	148.162137	2700.0	10.063	13.7	4.9	0.21	3288	1.11	0.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006029053-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—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.

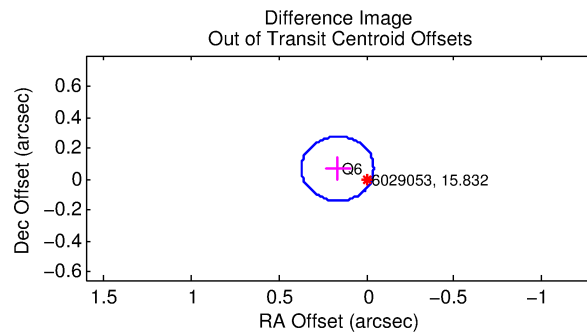
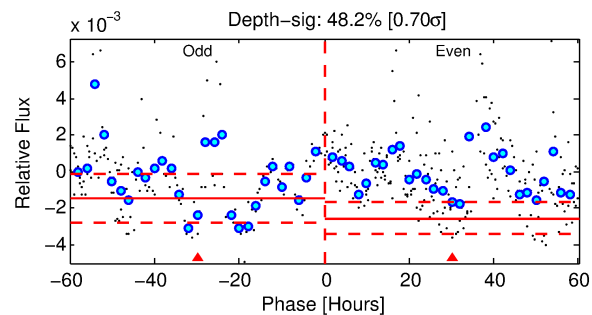
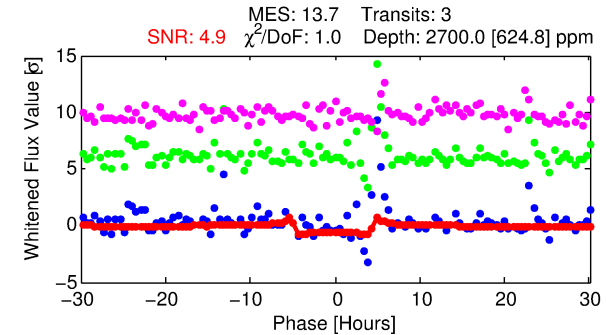
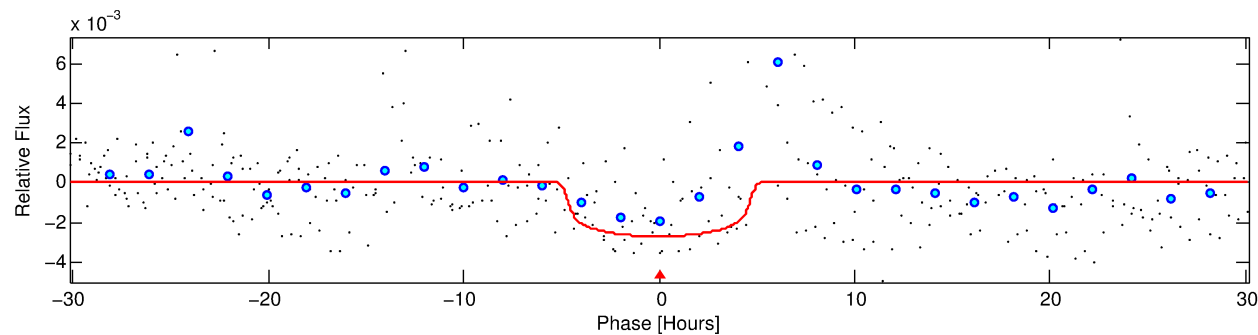
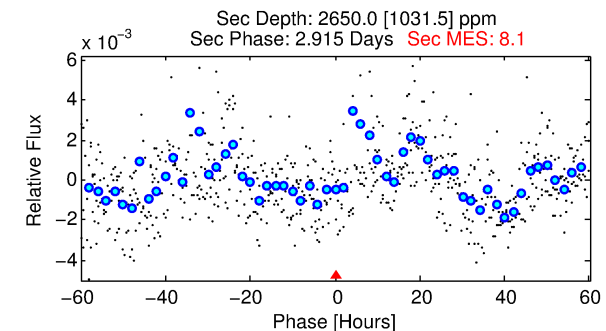
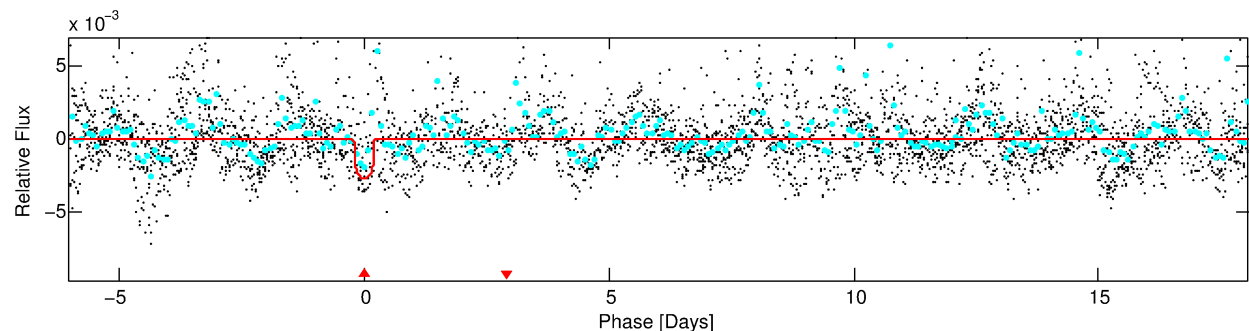
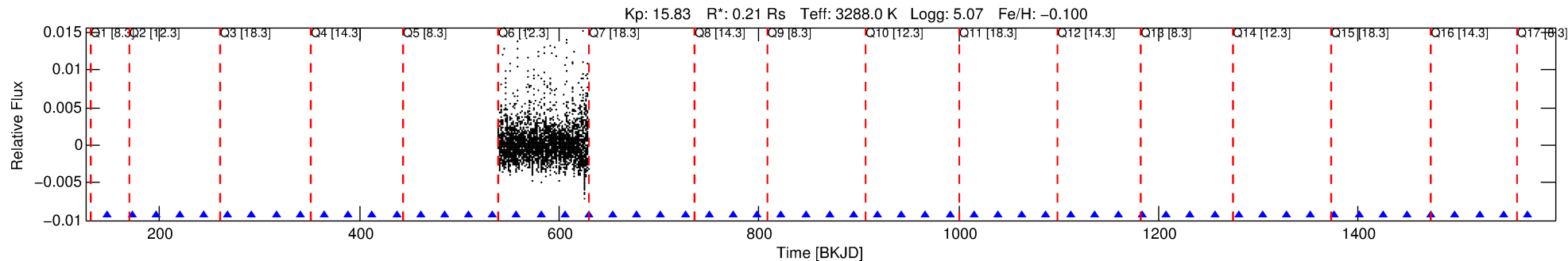
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006029053-01

No Significant Match Found

DV One-Page Summary

KIC: 6029053 Candidate: 1 of 1 Period: 24.088 d



DV Fit Results:

Period = 24.08776 [0.00768] d
Epoch = 148.1621 [0.1415] BKJD
Rp/R* = 0.0485 [0.0219]
a/R* = 16.95 [32.27]
b = 0.49 [2.94]
Seff = 0.53 [0.10]
Teq = 217 [11] K
Rp = 1.11 [0.56] Re
a = 0.0938 [0.0143] AU
Ag = 10364.20 [10349.52] [1.00σ]
Teff = 3386 [834] K [3.80σ]

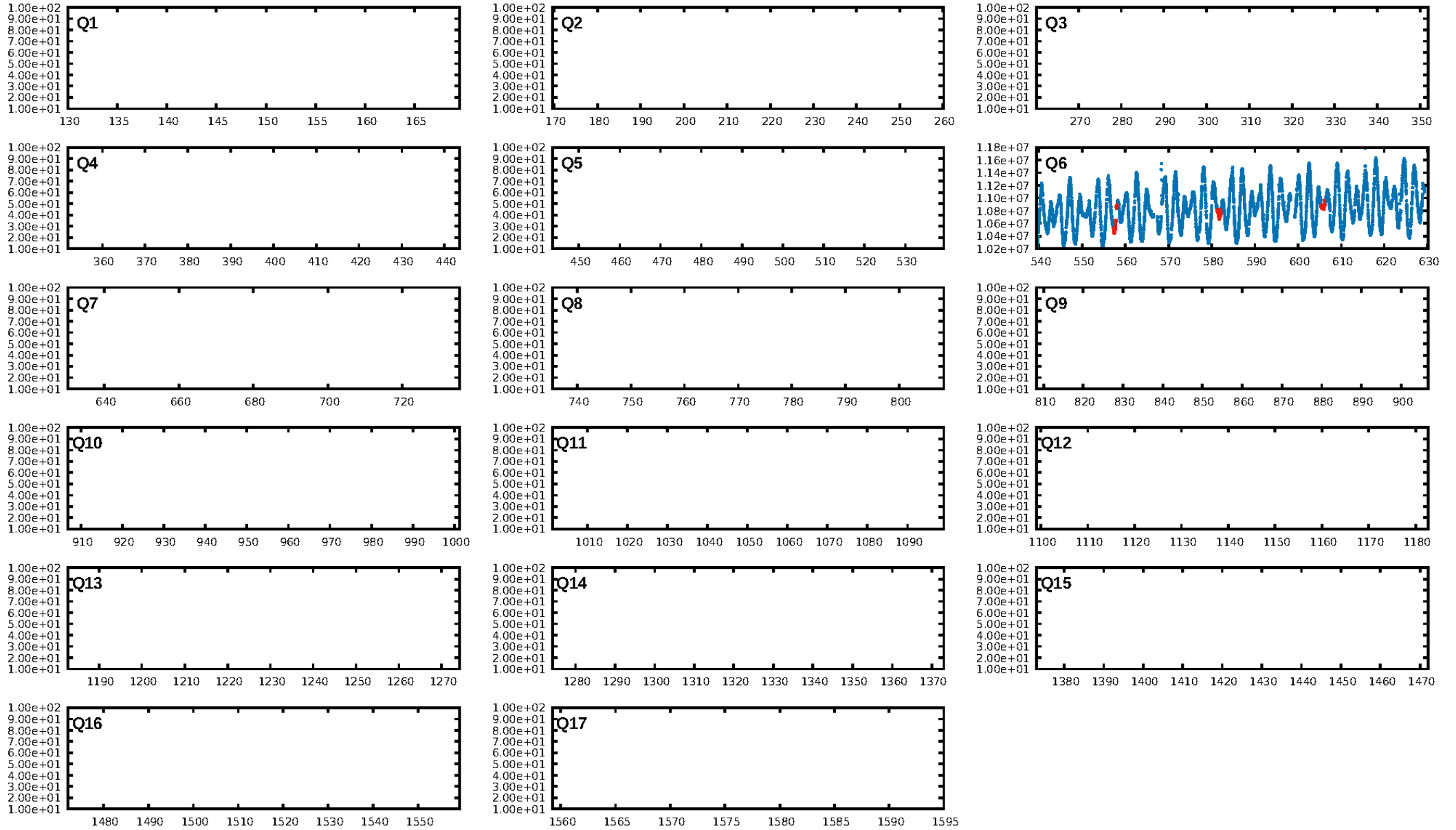
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.0%
ModelChiSquareGof-sig: 98.6%
Bootstrap-pfa: 1.73e-19
RollingBand-ftg: 1.00 [3/3]
GhostDiagnostic-chr: -20.96
Centroid-sig: 45.6%
Centroid-so: 0.399 arcsec [0.64σ]
OotOffset-rm: 0.179 arcsec [2.59σ]
KicOffset-rm: 0.150 arcsec [2.14σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

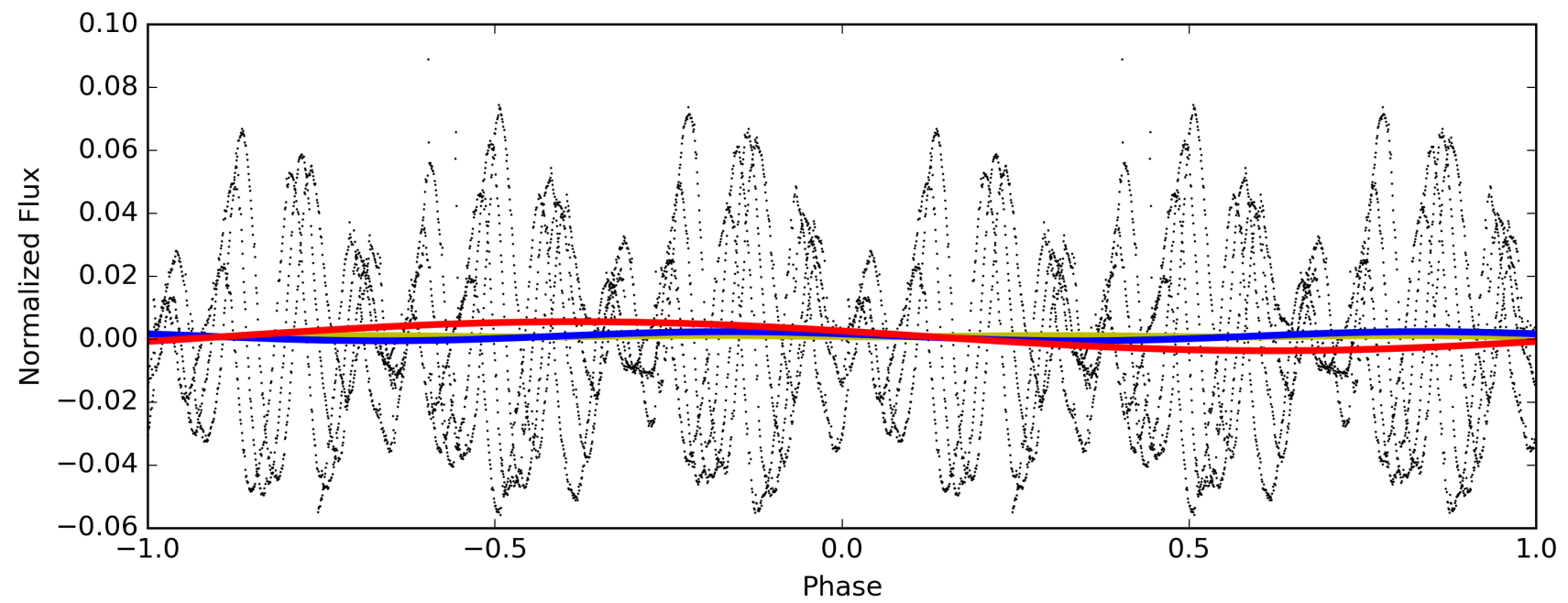
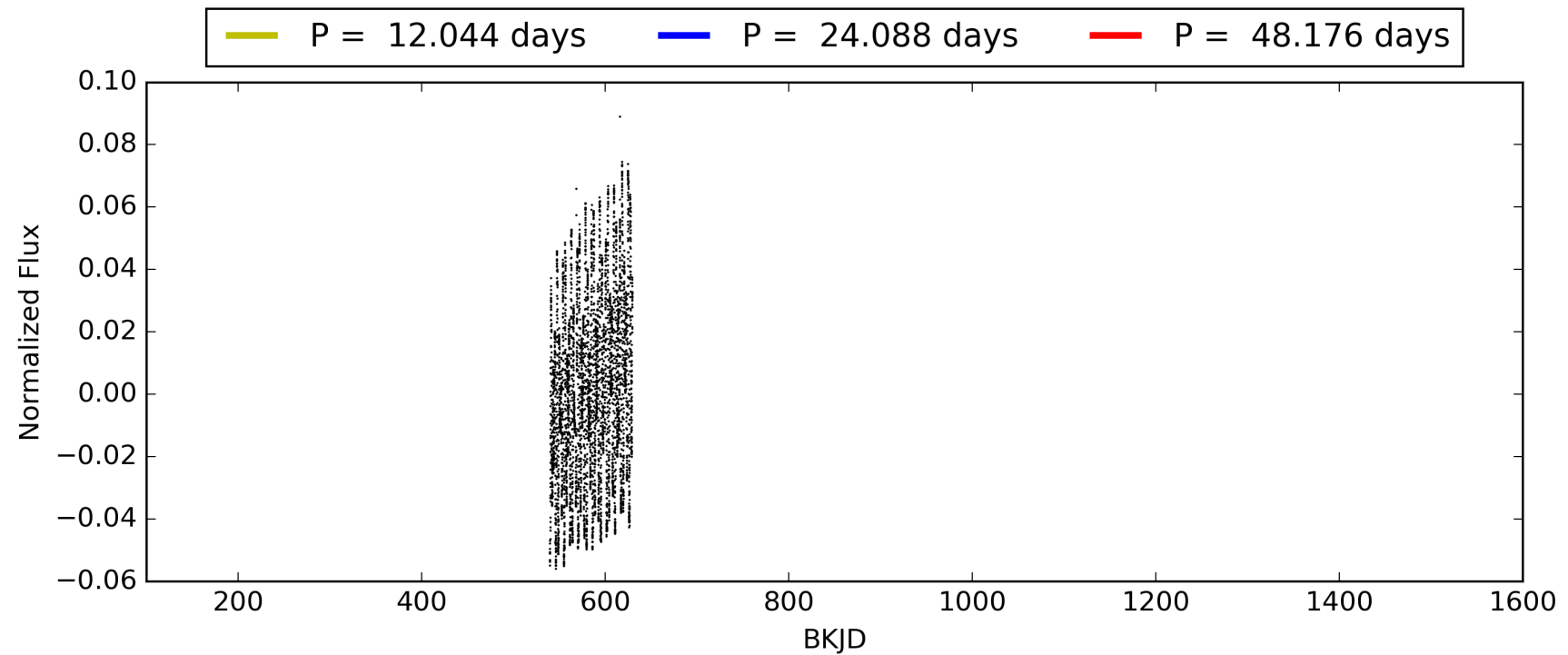
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:16:34 Z

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

TCE 006029053-01, PDC Light Curves

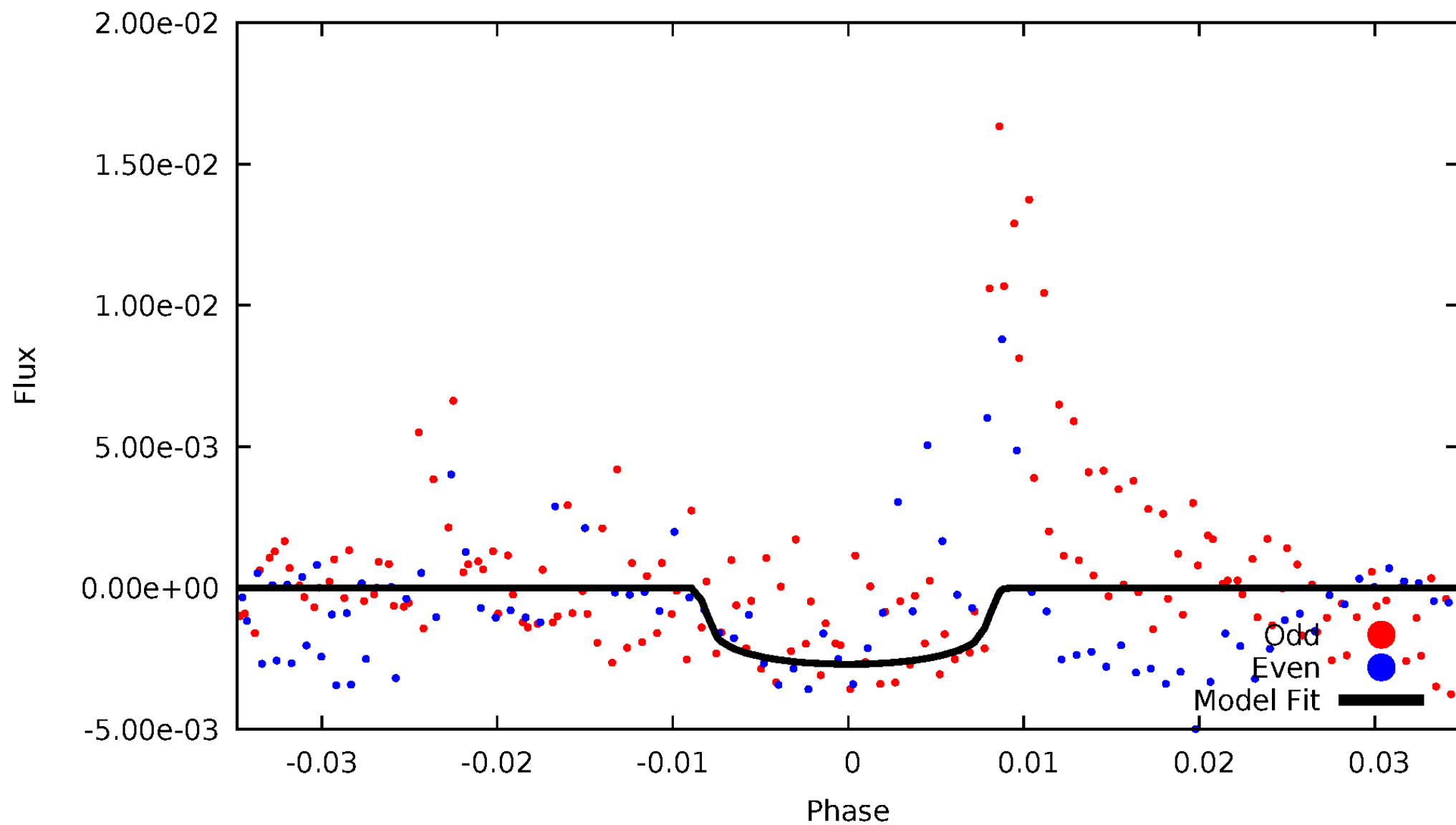


TCE 006029053-01



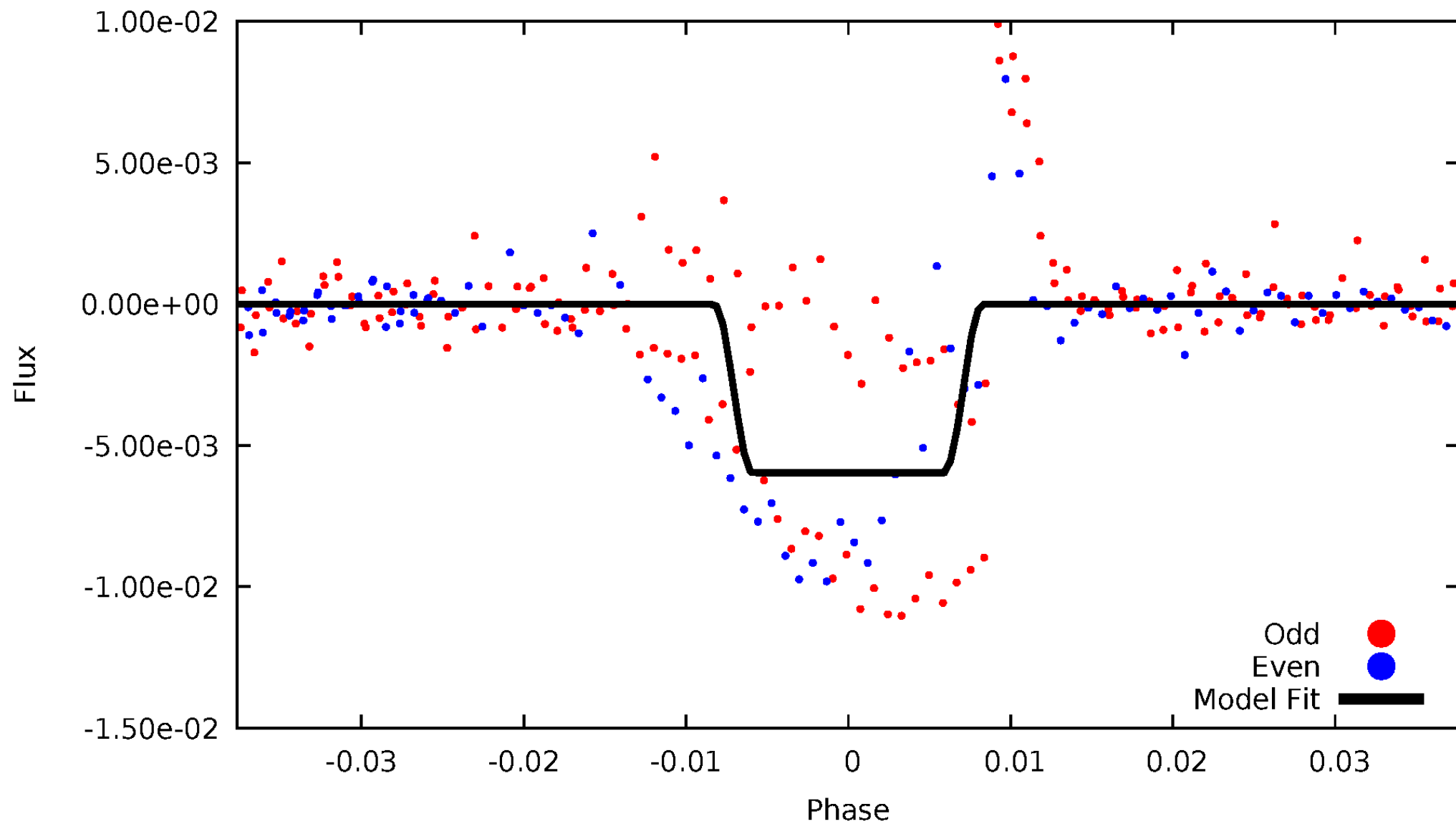
DV Odd/Even

TCE 006029053-01



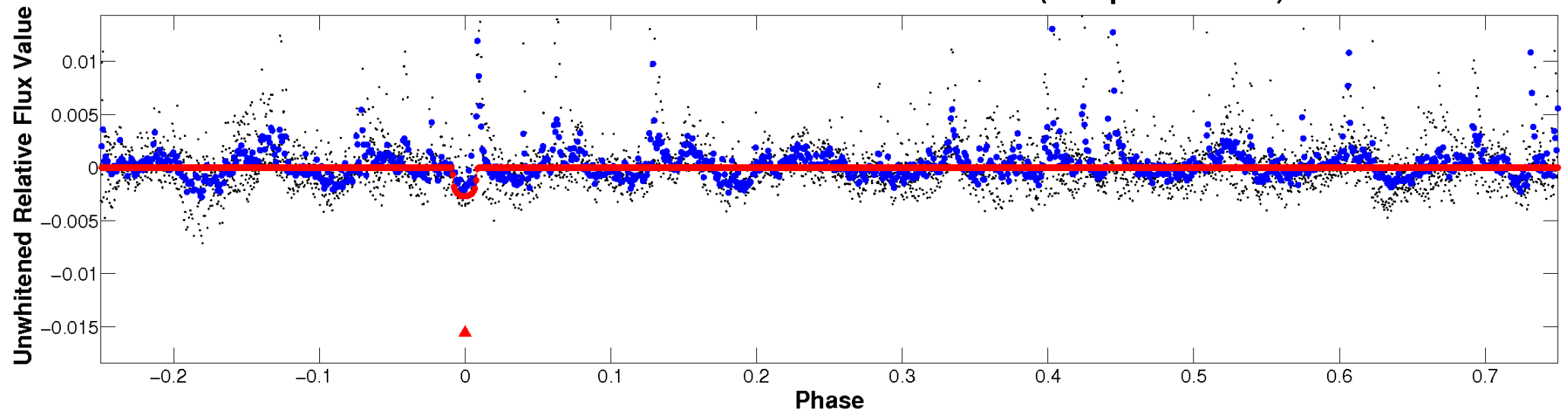
ALT Odd/Even

TCE 006029053-01

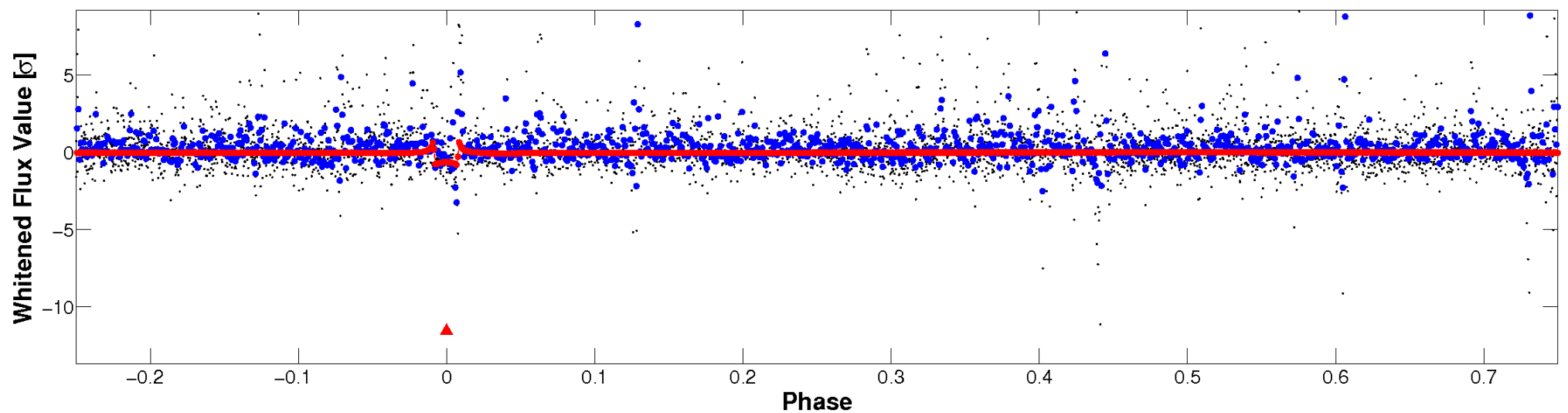


Non-Whitened Vs. Whitened Light Curve

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

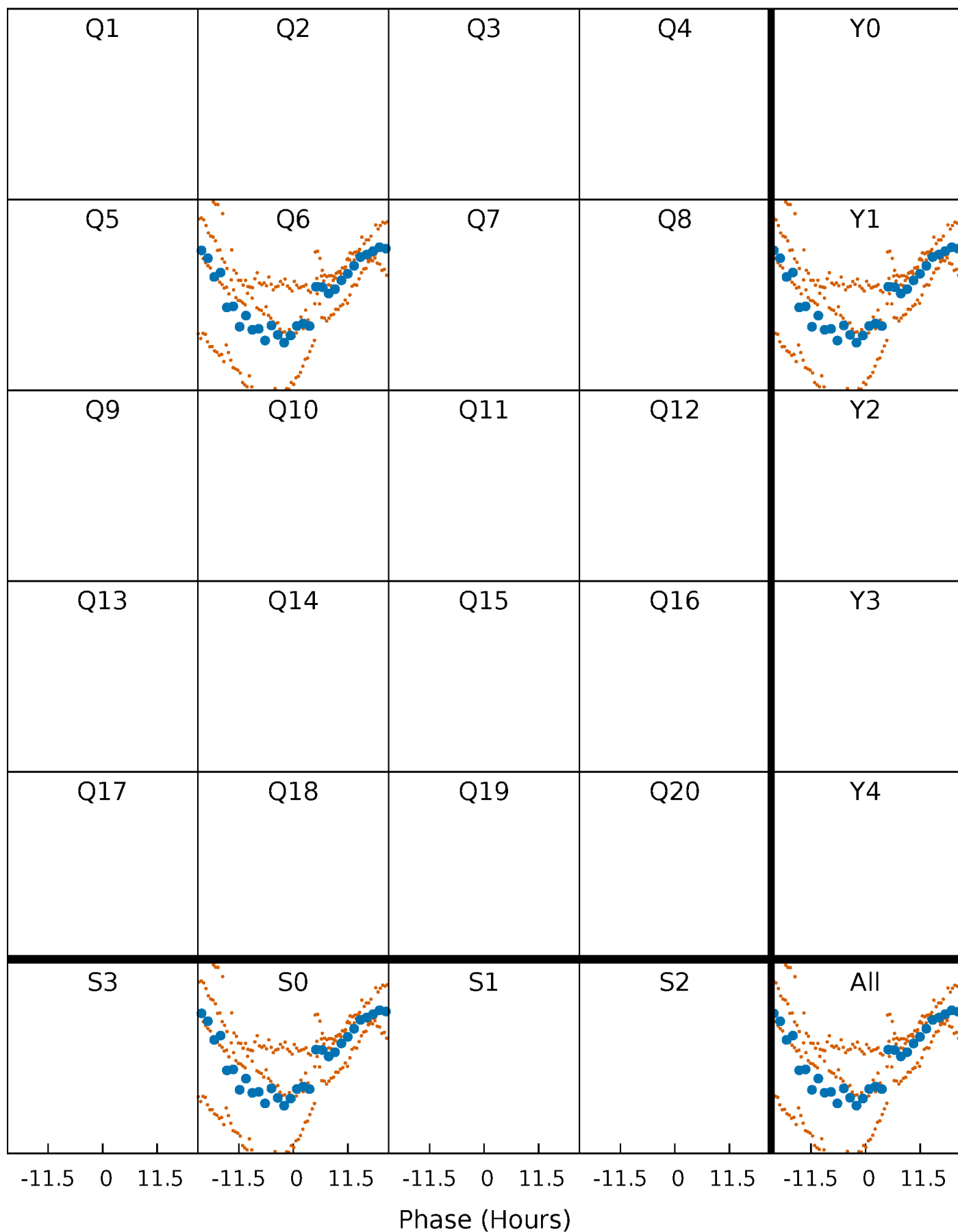


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



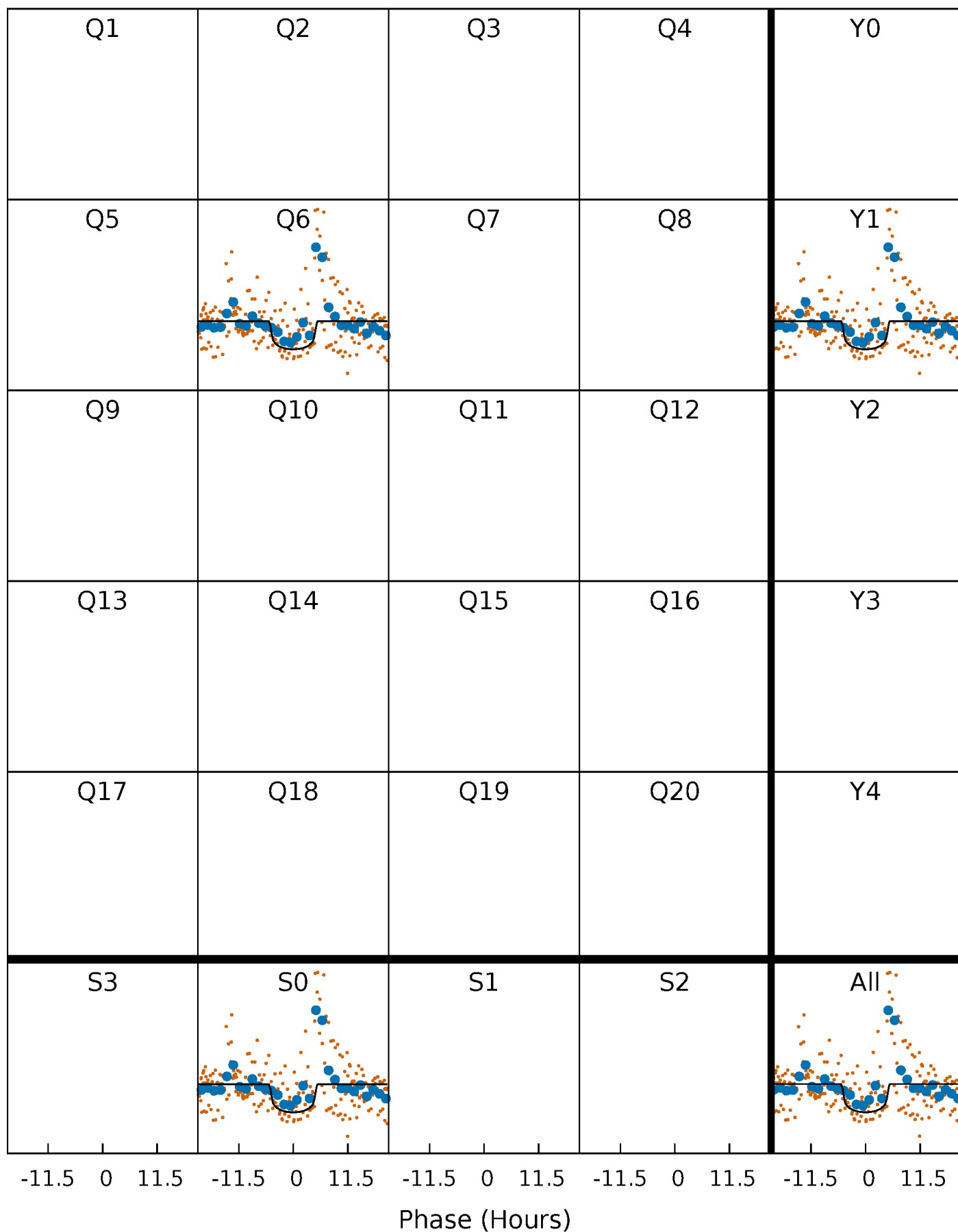
PDC Quarter-Phased Transit Curves

TCE 006029053-01 P= 24.087762 Days $T_0=148.162137$ (BKJD)



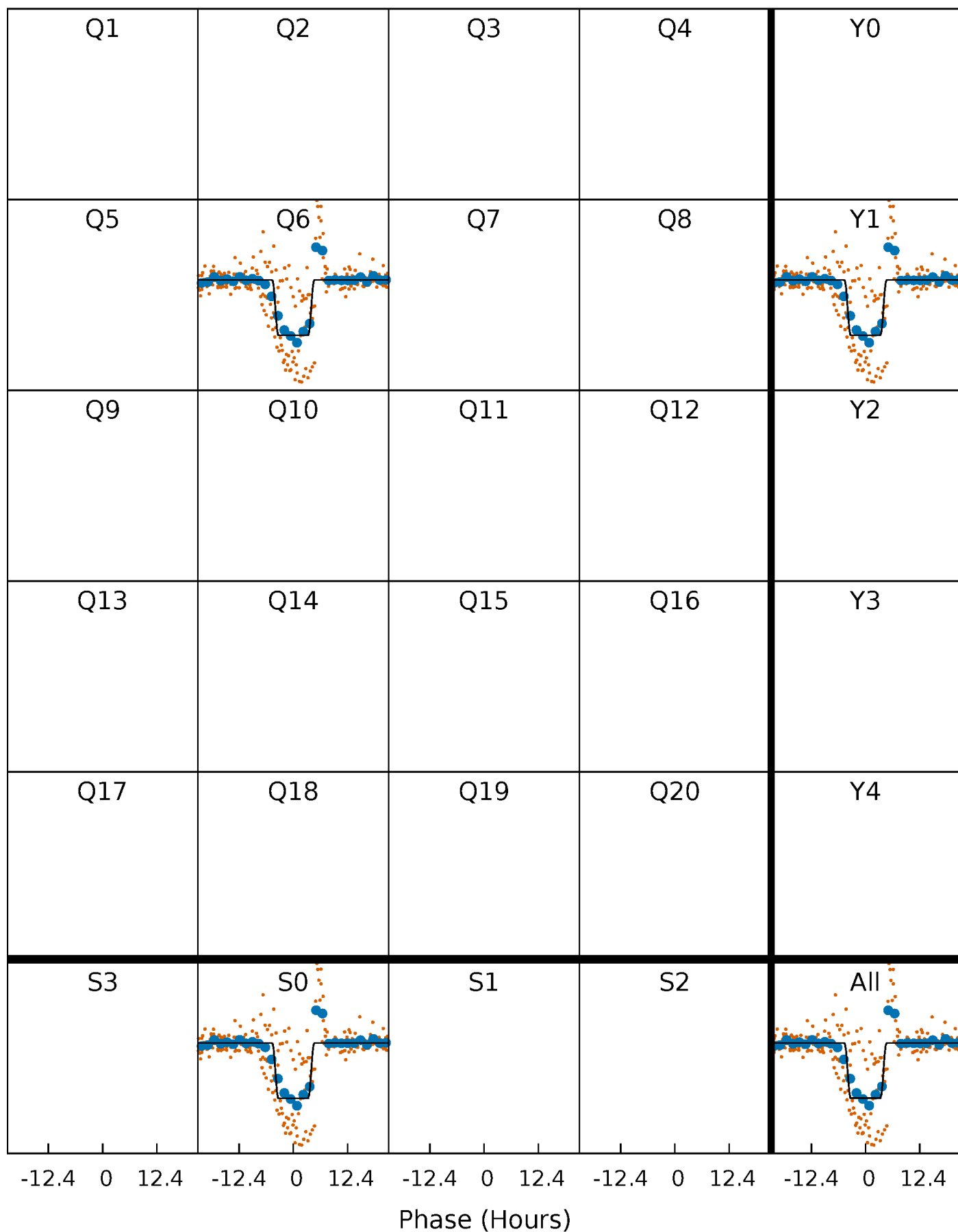
DV Quarter-Phased Transit Curves

TCE 006029053-01 P= 24.087762 Days $T_0=148.162137$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

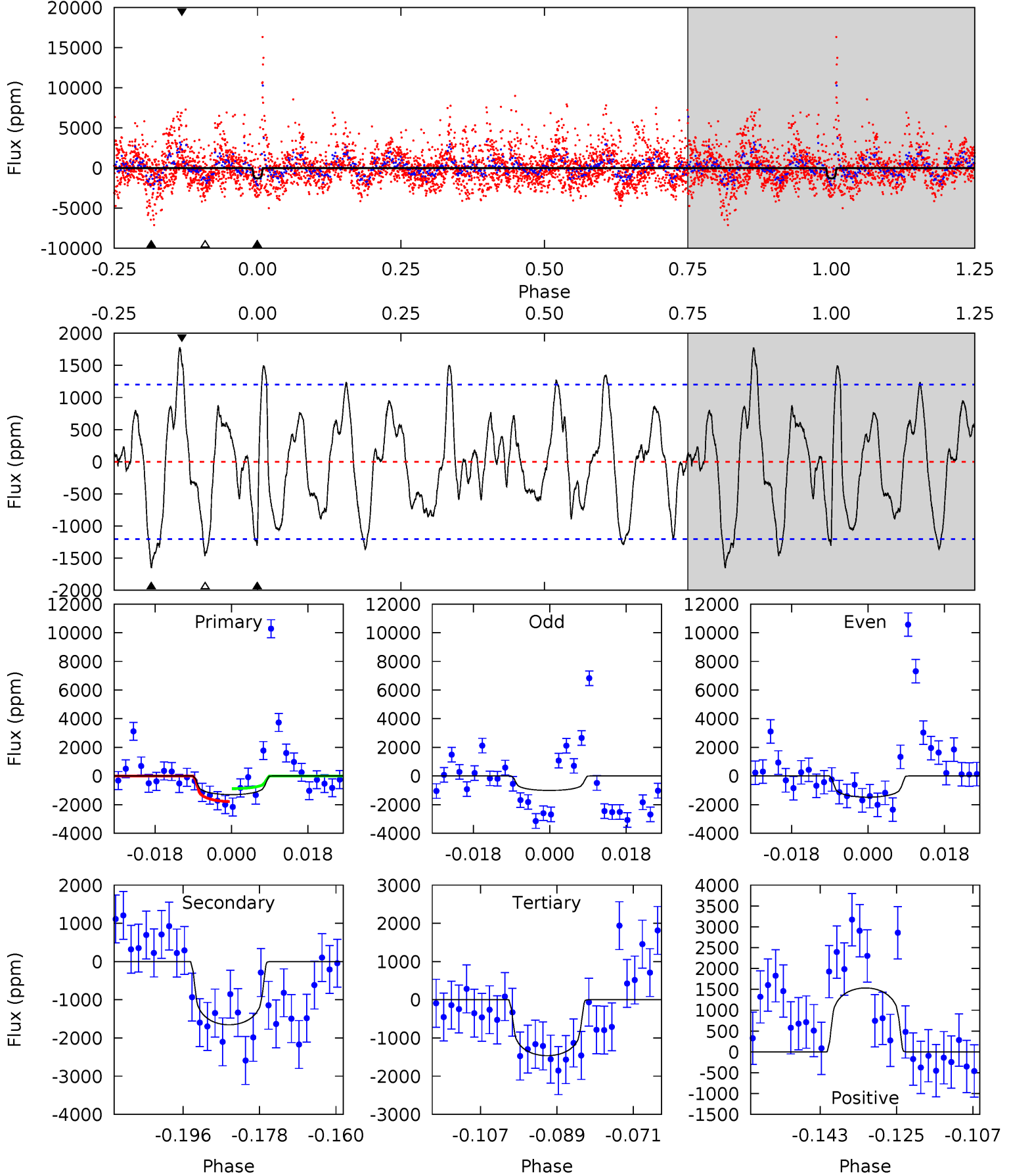
TCE 006029053-01 P= 24.079923 Days $T_0=148.280575$ (BKJD)



DV Model-Shift Uniqueness Test

006029053-01, P = 24.087762 Days, E = 148.162137 Days

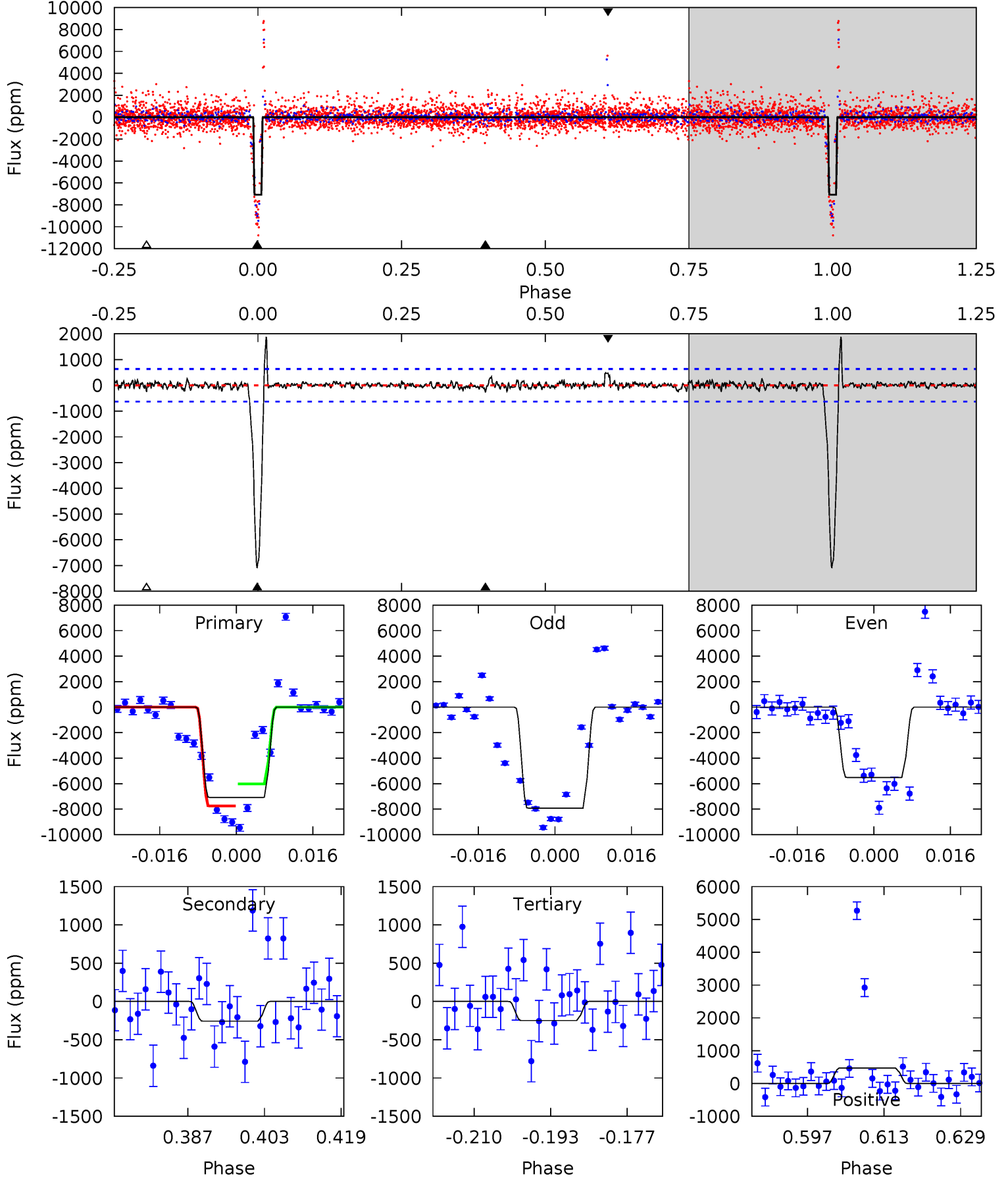
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.32	6.76	5.98	6.26	4.91	2.37	2.62	-0.66	-0.94	0.78	0.50	0.76	1.29	0.52	1.79



Alt Model-Shift Uniqueness Test

006029053-01, P = 24.079923 Days, E = 148.280575 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.0	2.00	1.94	3.68	4.93	2.41	0.79	53.1	51.3	0.06	-1.69	10.6	0.83	0.21	0



Stellar Parameters For KIC 006029053

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3288^{+59}_{-46}	$5.071^{+0.071}_{-0.058}$	$-0.100^{+0.100}_{-0.100}$	$0.210^{+0.045}_{-0.036}$	$0.189^{+0.050}_{-0.036}$	$28.880^{+11.920}_{-7.721}$
	+2%/-1%	+1%/-1%	+100%/-100%	+21%/-17%	+26%/-19%	+41%/-27%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 006029053-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1655 ± 245	$1.11^{+0.50}_{-0.49}$	302^{+11}_{-10}	3124^{+643}_{-320}	6681^{+14211}_{-3697}
Alt.	-257 ± 129	$1.75^{+0.58}_{-0.49}$	303^{+10}_{-11}	2196^{+204}_{-195}	397^{+450}_{-232}

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

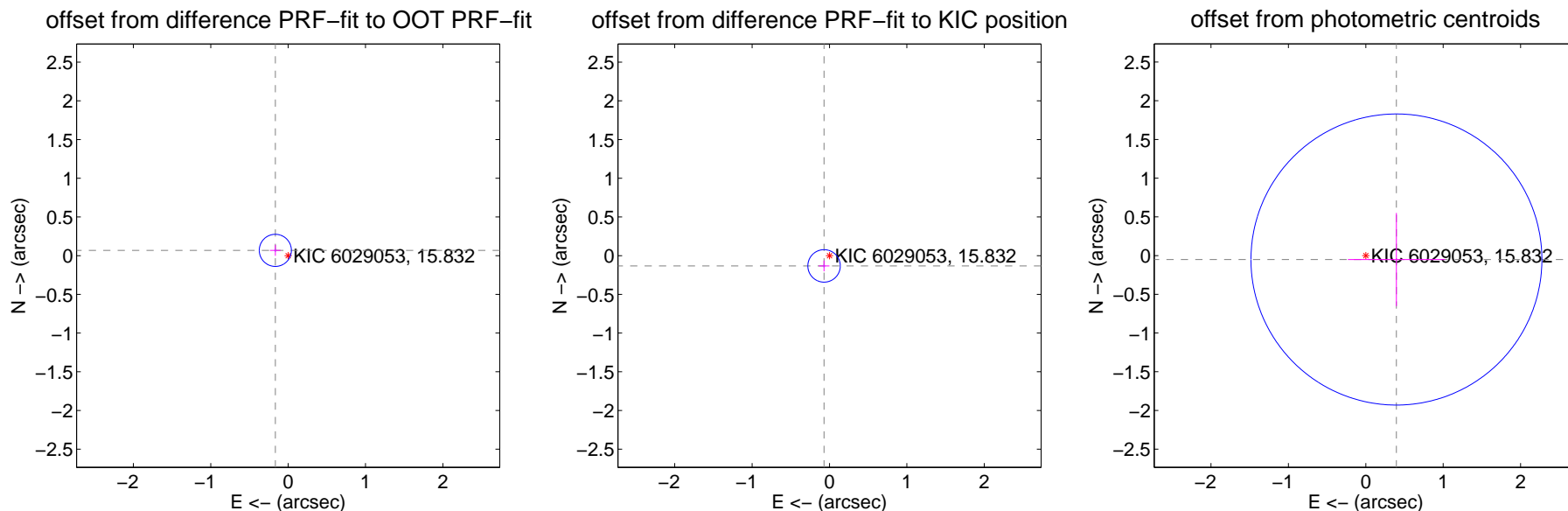
DV Centroid Data

Supplemental centroid analysis for 006029053-01. Kepler magnitude: 15.83. Transit SNR 4.94

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.179 ± 0.069	2.59	0.165 ± 0.069	0.068 ± 0.070
PRF-fit source offset from KIC position	0.150 ± 0.070	2.14	0.070 ± 0.069	-0.132 ± 0.070
photometric centroid source offset	0.40 ± 0.63	0.64	-0.40 ± 0.63	-0.05 ± 0.60

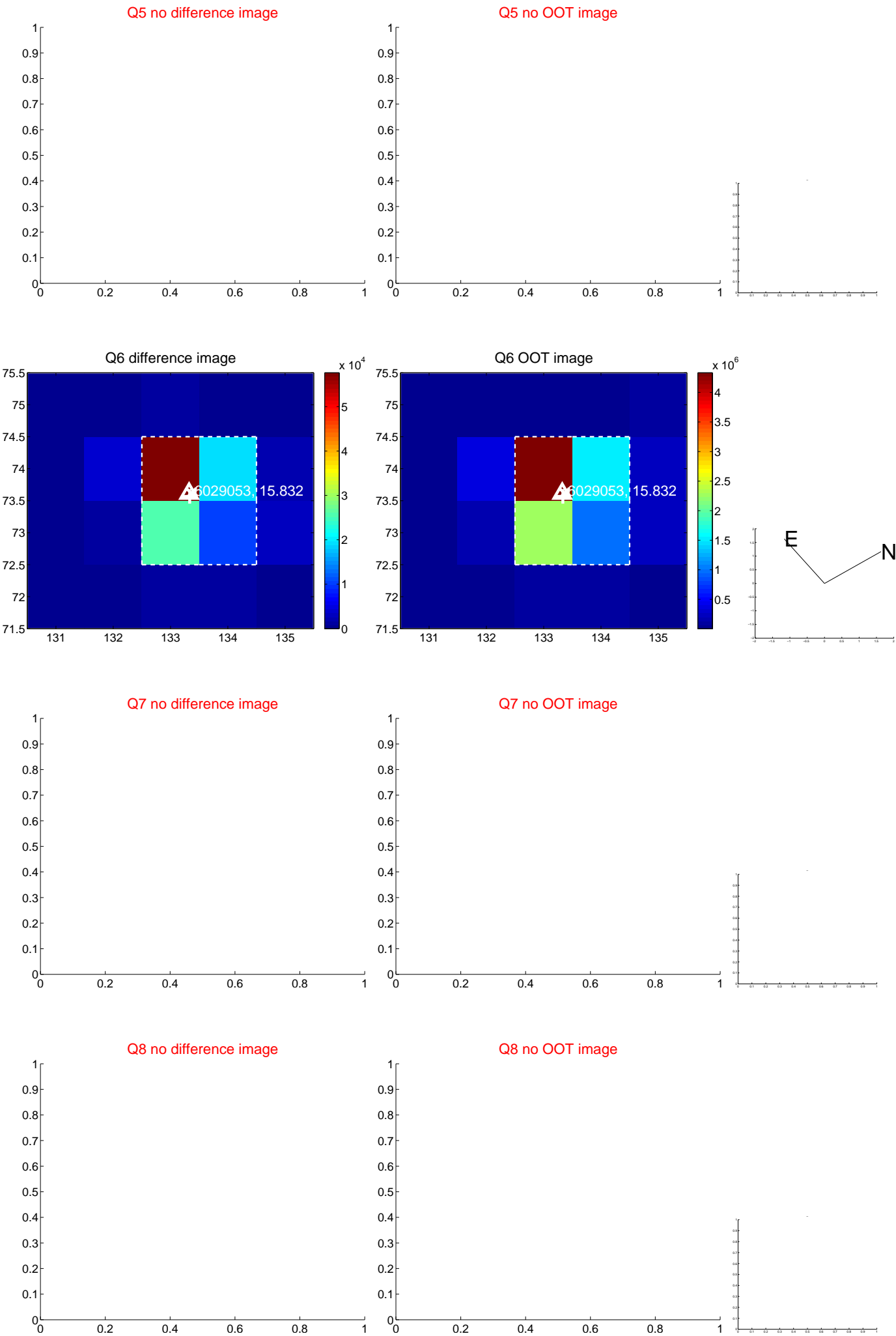


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

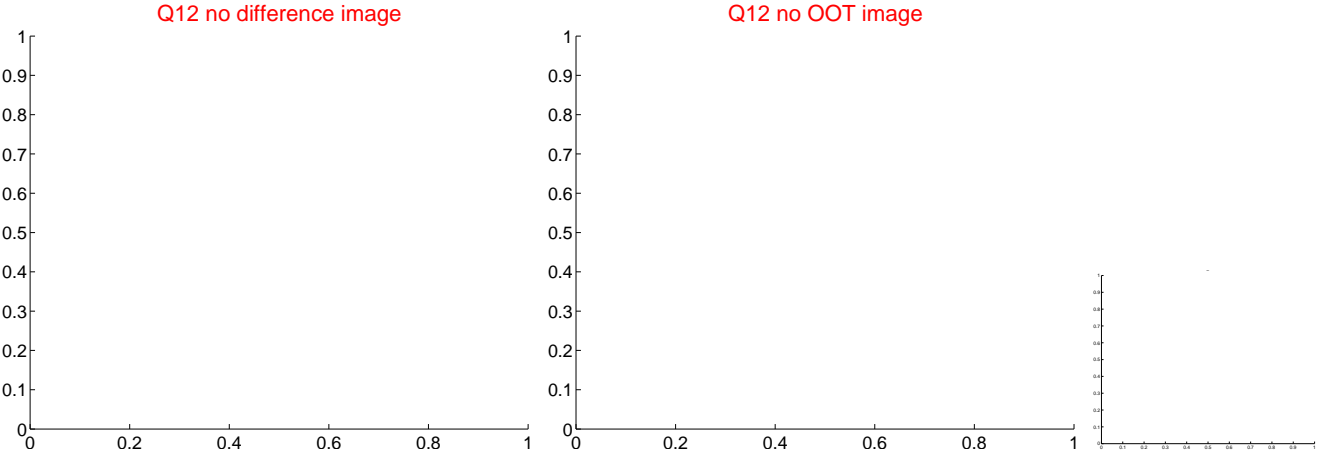
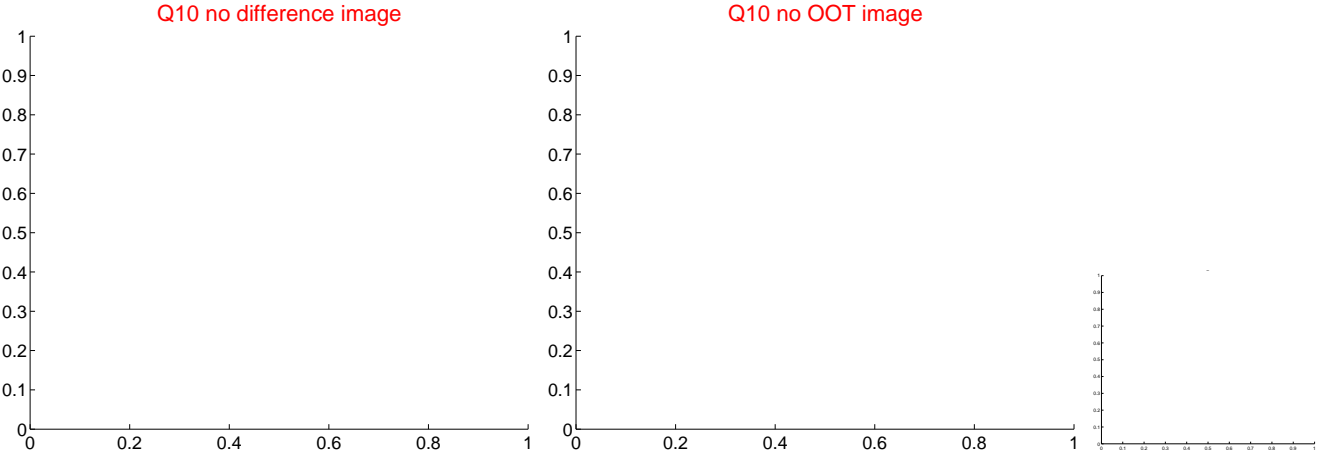
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



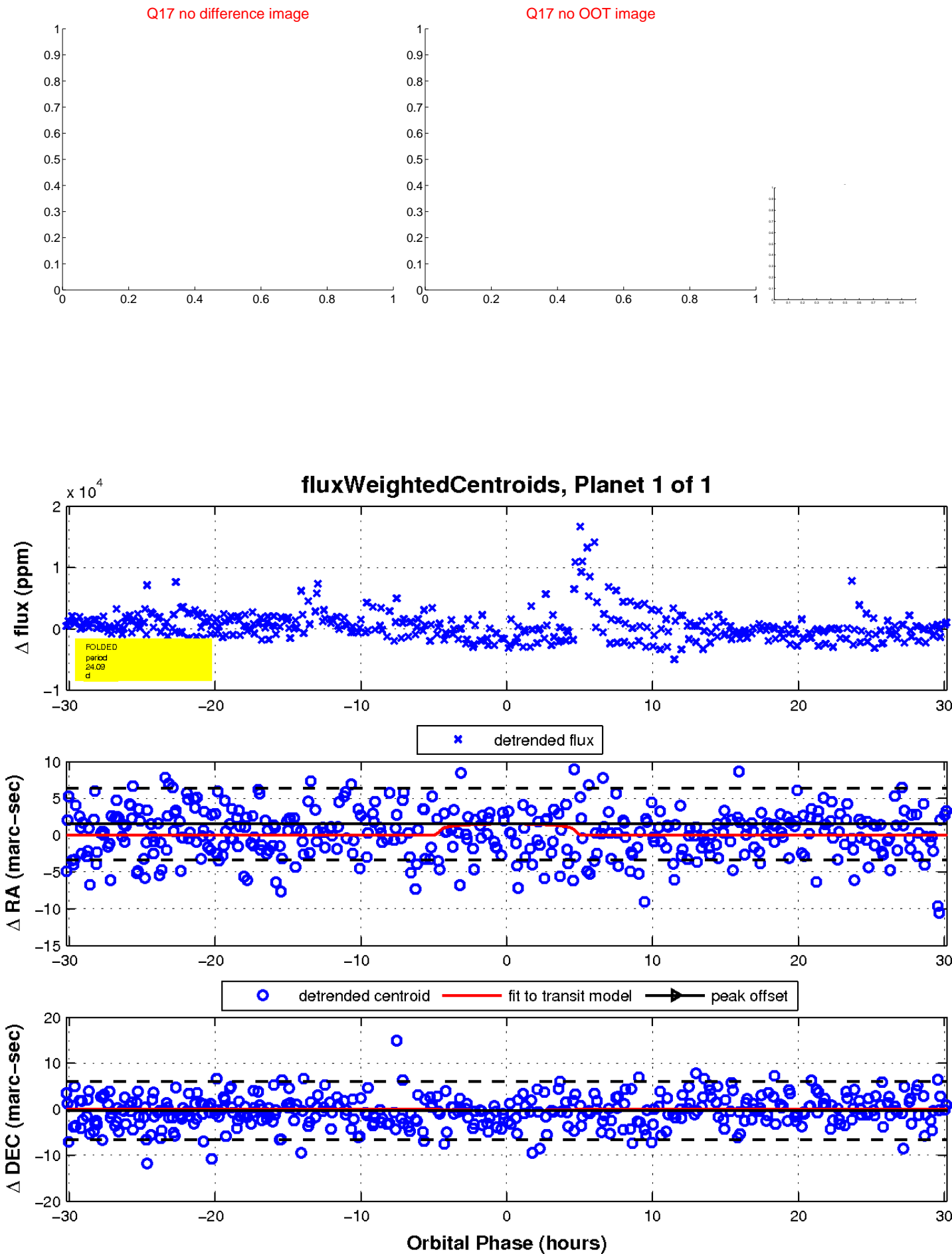
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

