

KIC 007686047

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})
007686047-01	OBS	No	546.011905	247.336685	1363.4	19.379	8.1	8.7	0.65	4453	4.83	0.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007686047-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_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.

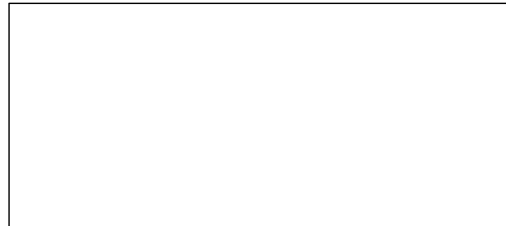
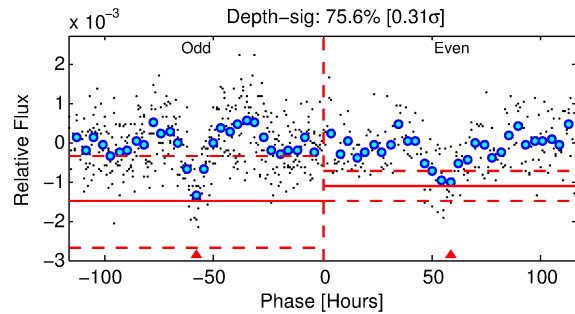
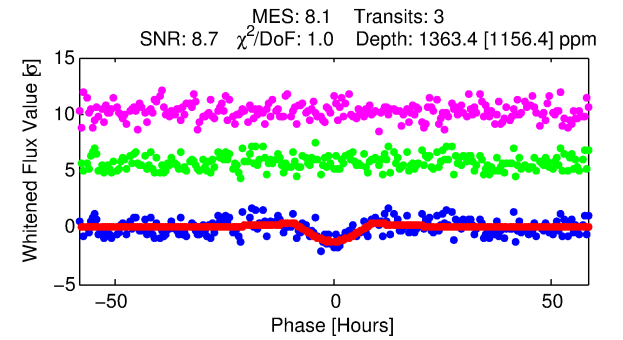
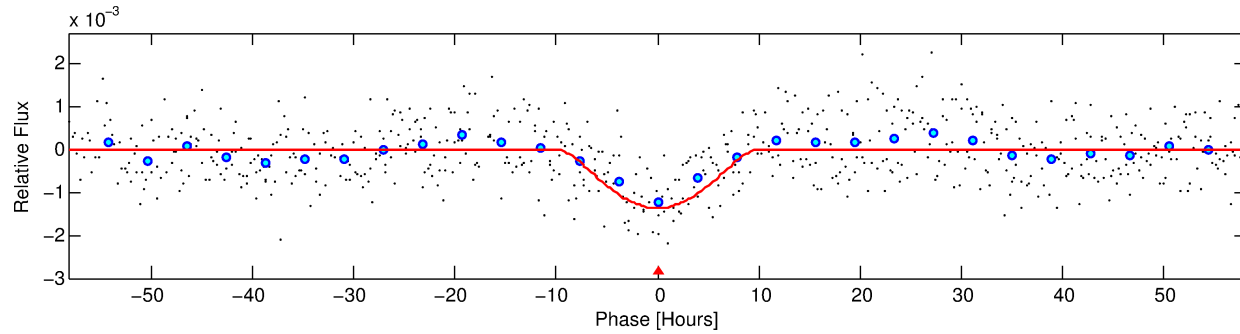
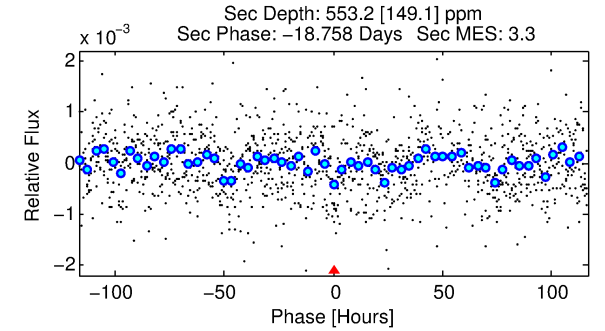
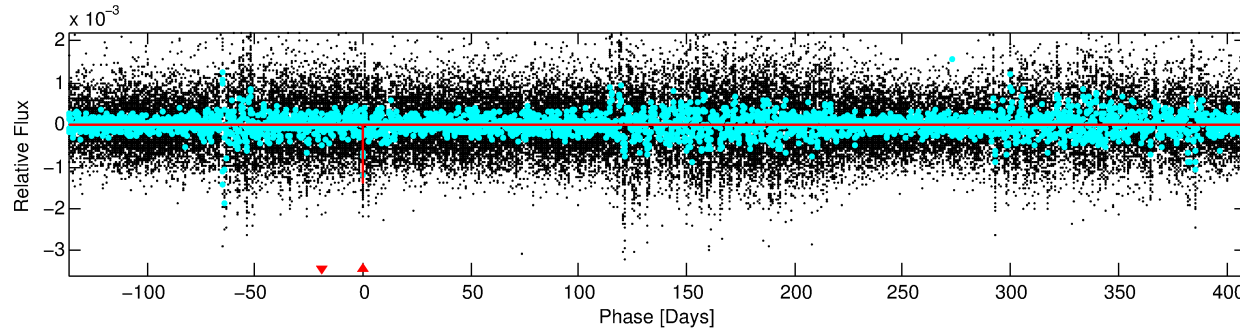
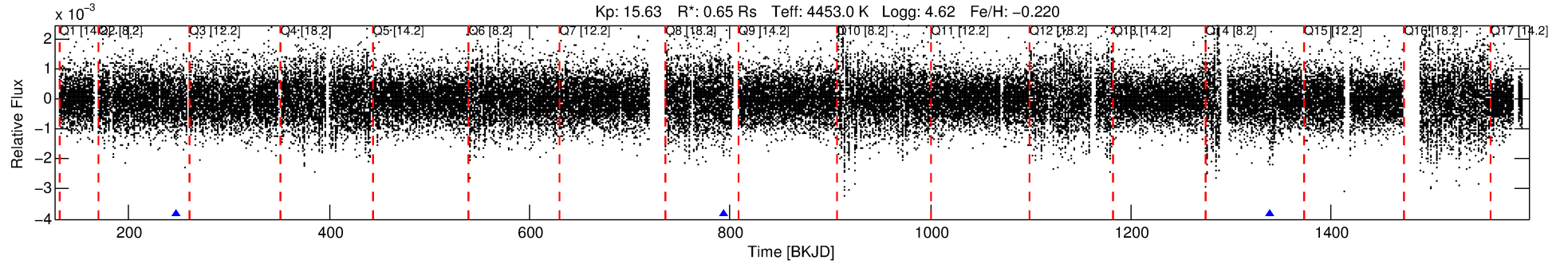
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007686047-01

No Significant Match Found

DV One-Page Summary

KIC: 7686047 Candidate: 1 of 1 Period: 546.012 d



DV Fit Results:

Period = 546.01191 [0.02437] d
Epoch = 247.3367 [0.0338] BKJD
Rp/R* = 0.0686 [0.2371]
a/R* = 81.13 [60.98]
b = 1.00 [0.30]
Seff = 0.12 [0.02]
Teq = 149 [6] K
Rp = 4.83 [16.69] Re
a = 1.1243 [0.0771] AU
Ag = 16481.97 [113966.46] [0.14σ]
Teffp = 2607 [4506] K [0.55σ]

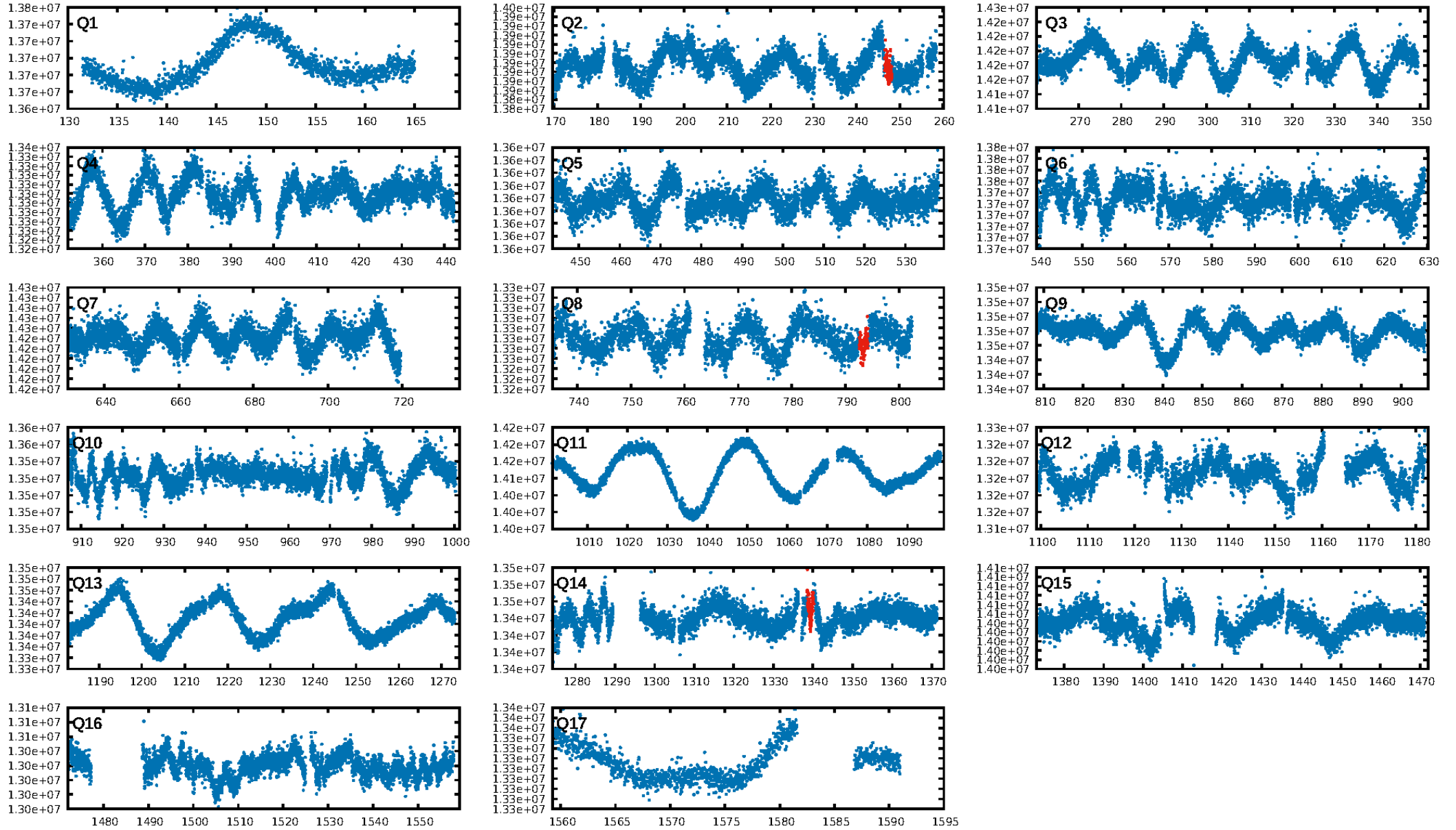
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.9%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.69e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.642
Centroid-sig: 13.9%
Centroid-so: 2.063 arcsec [1.46σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [1/1]

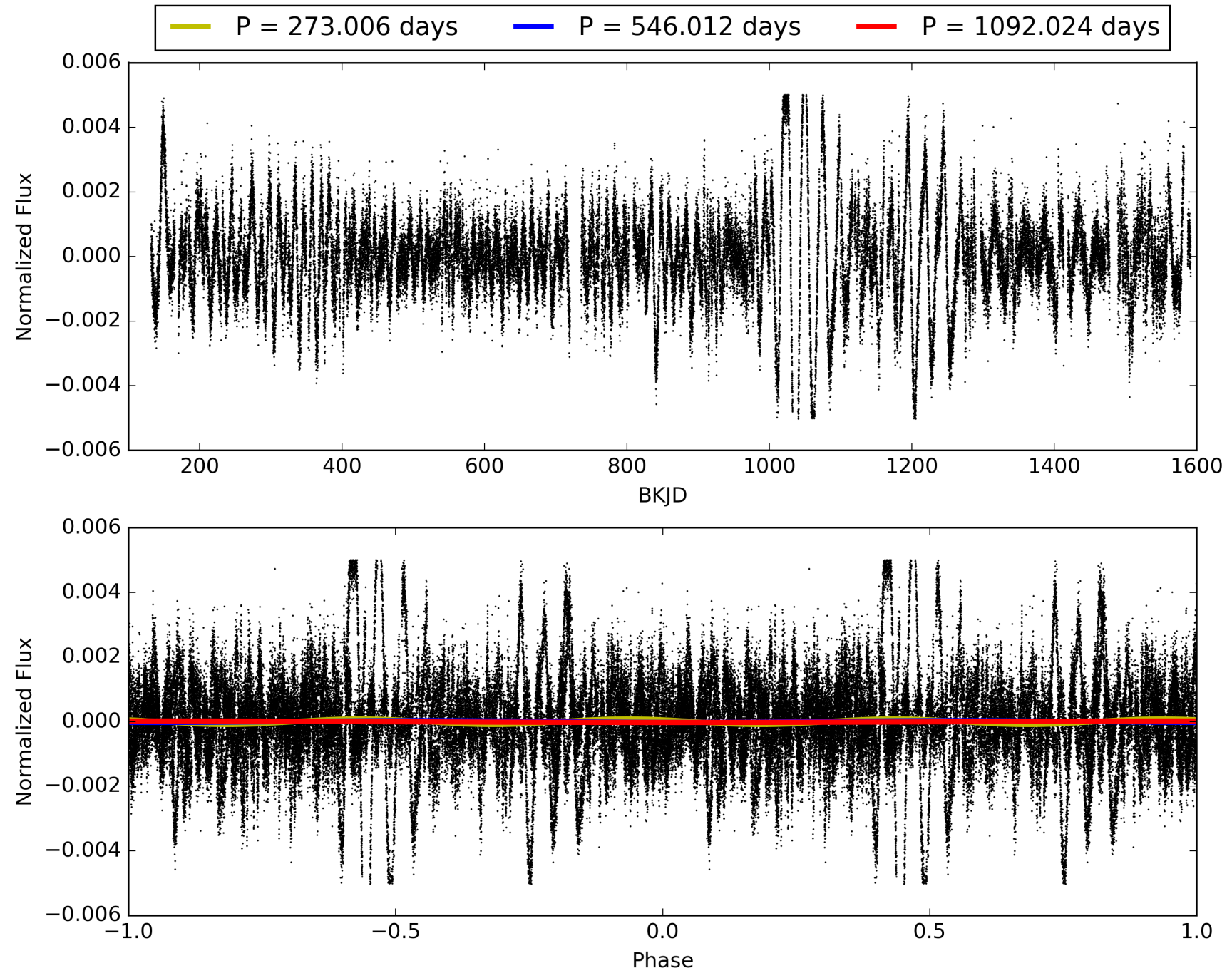
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:34:40 Z

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

TCE 007686047-01, PDC Light Curves

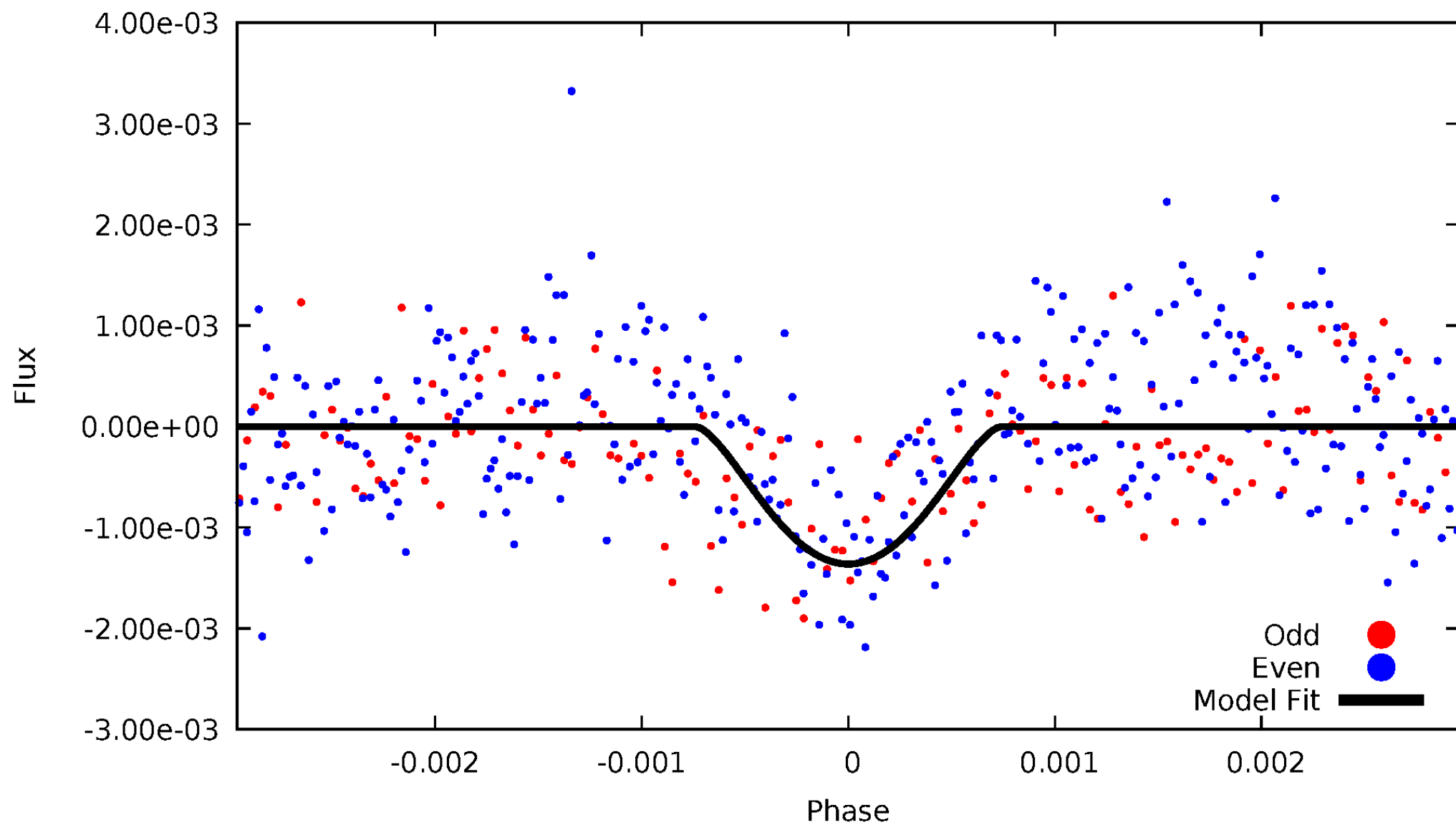


TCE 007686047-01



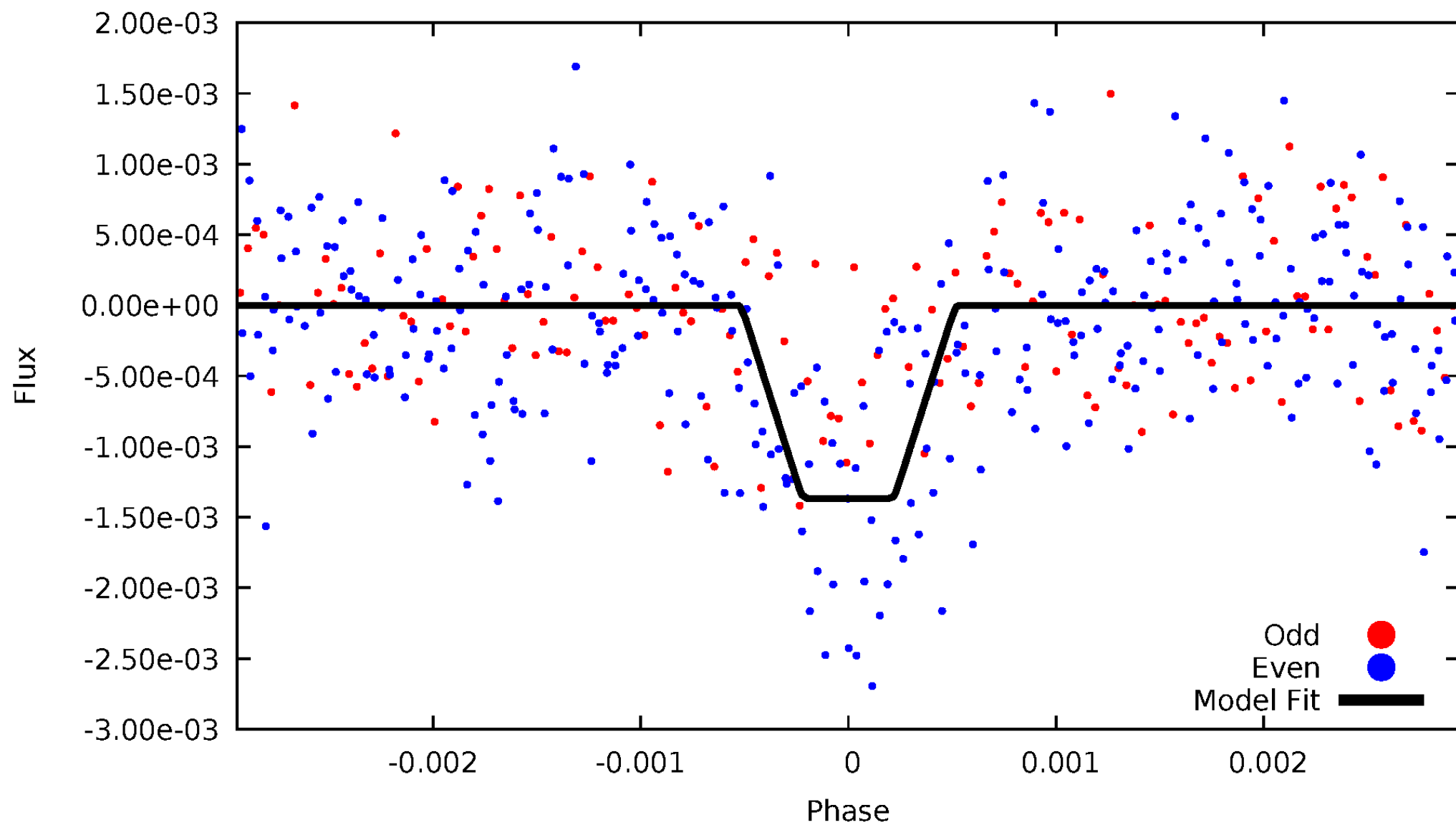
DV Odd/Even

TCE 007686047-01



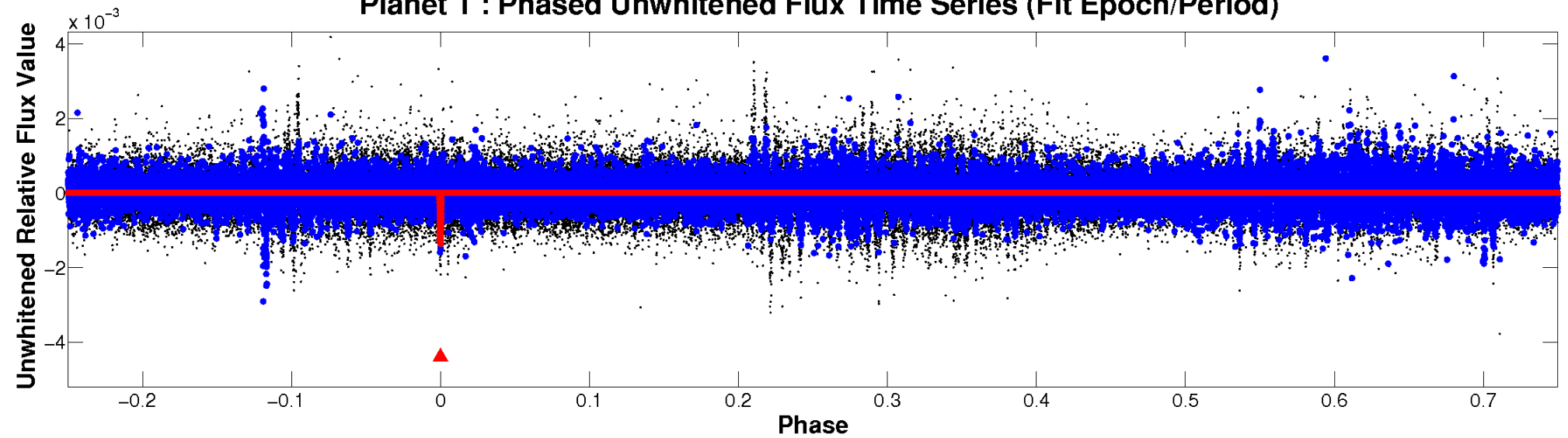
ALT Odd/Even

TCE 007686047-01

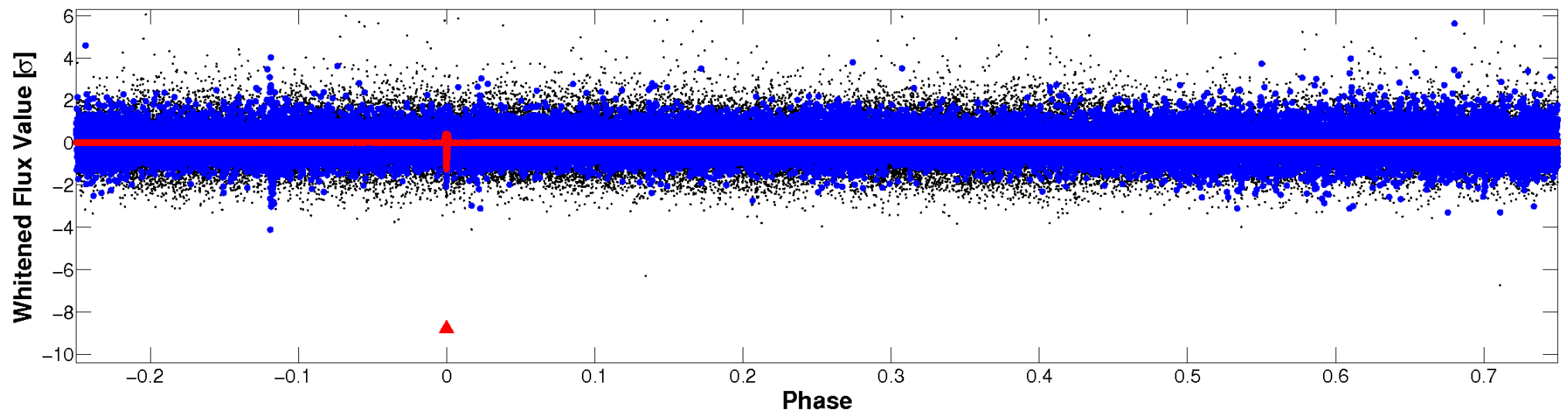


Non-Whitened Vs. Whitened Light Curve

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

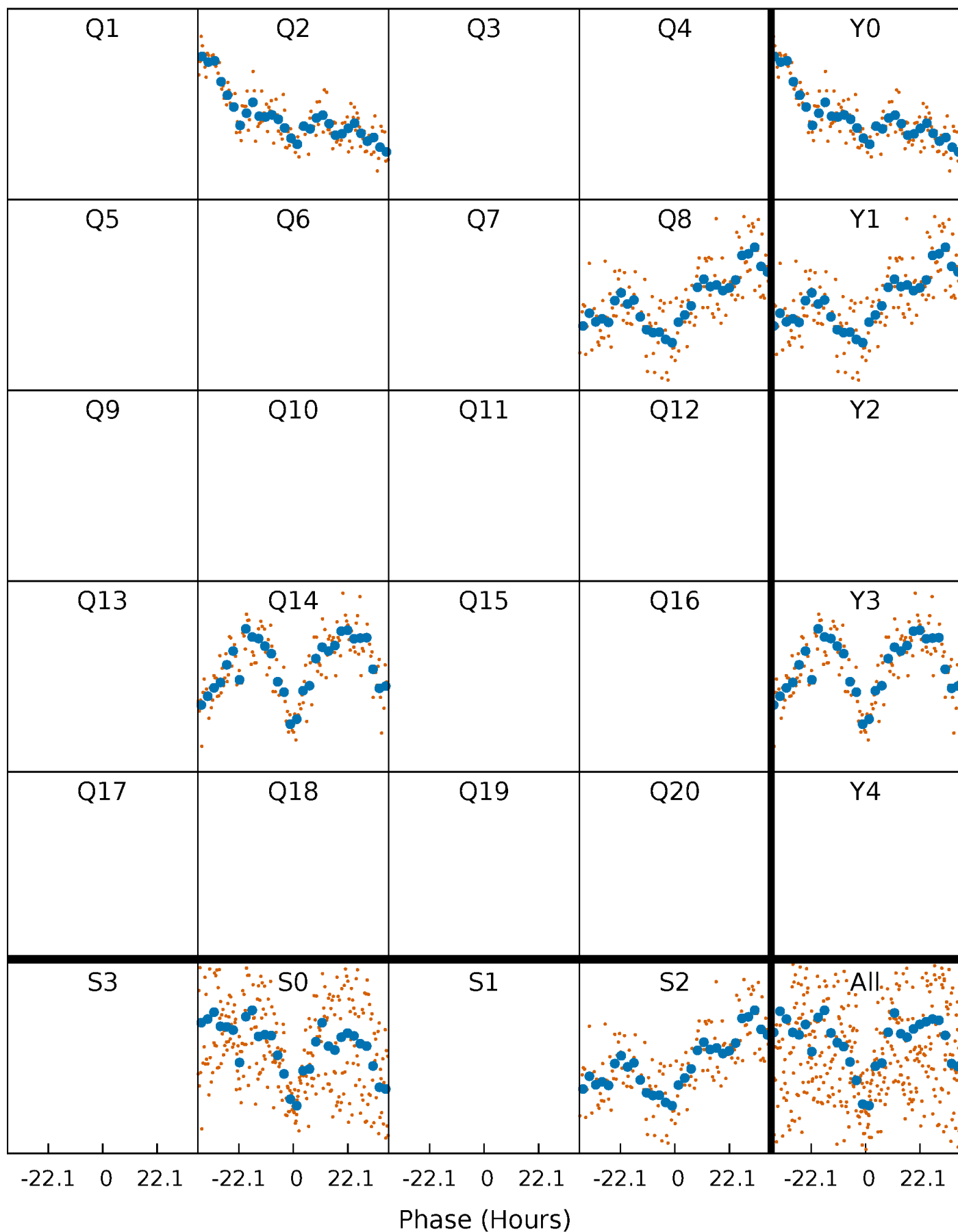


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



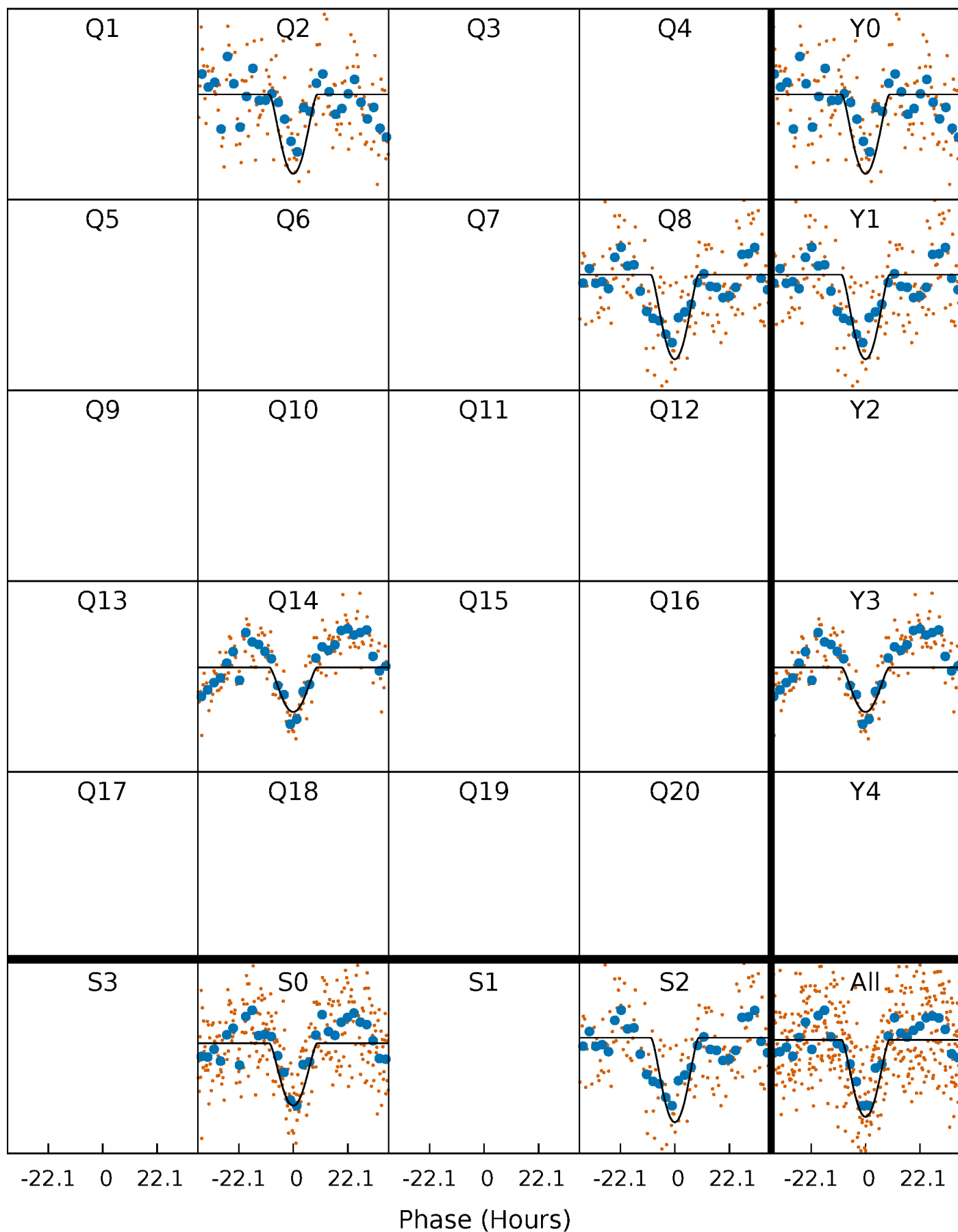
PDC Quarter-Phased Transit Curves

TCE 007686047-01 P=546.011906 Days $T_0=247.336685$ (BKJD)



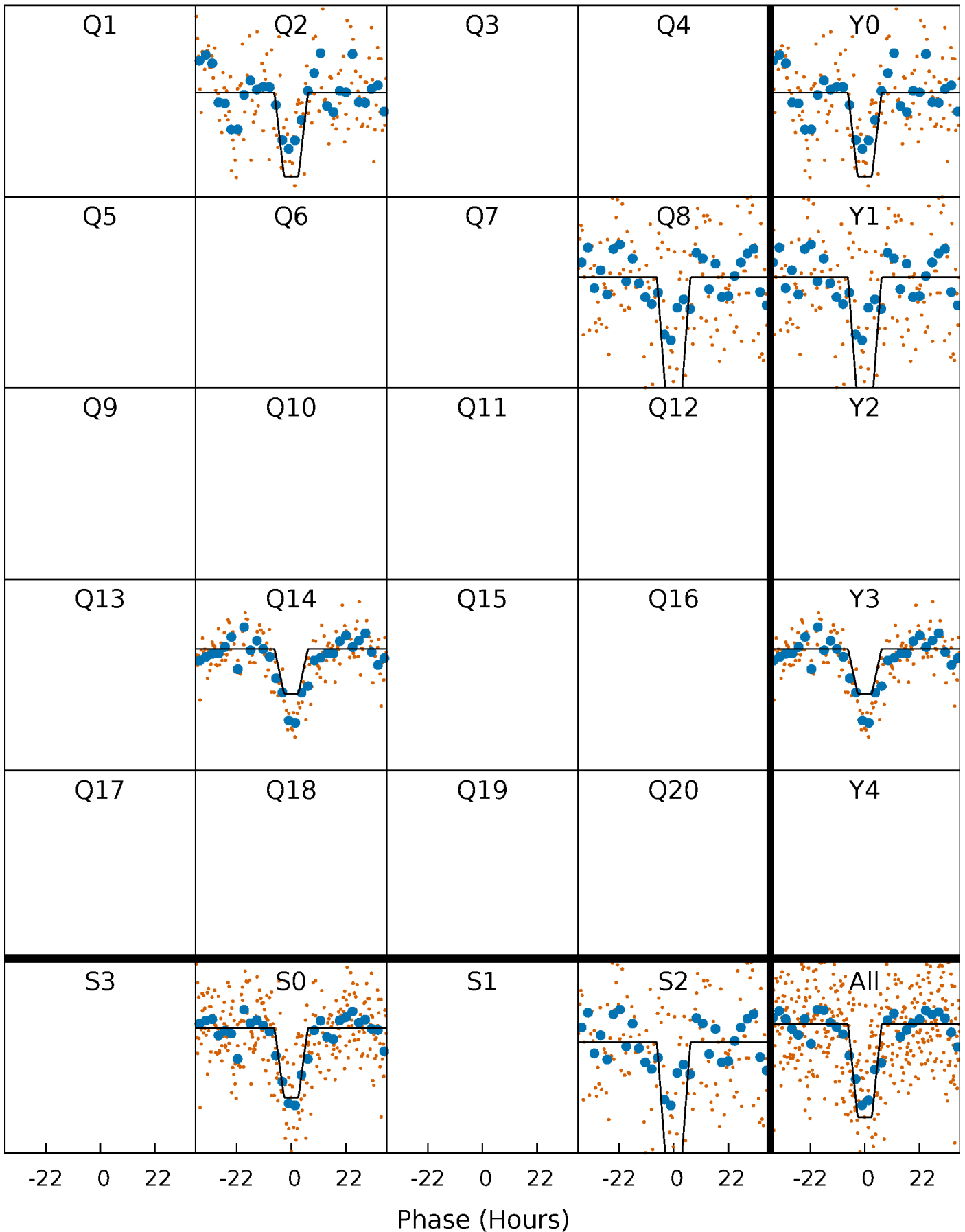
DV Quarter-Phased Transit Curves

TCE 007686047-01 P=546.011906 Days $T_0=247.336685$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

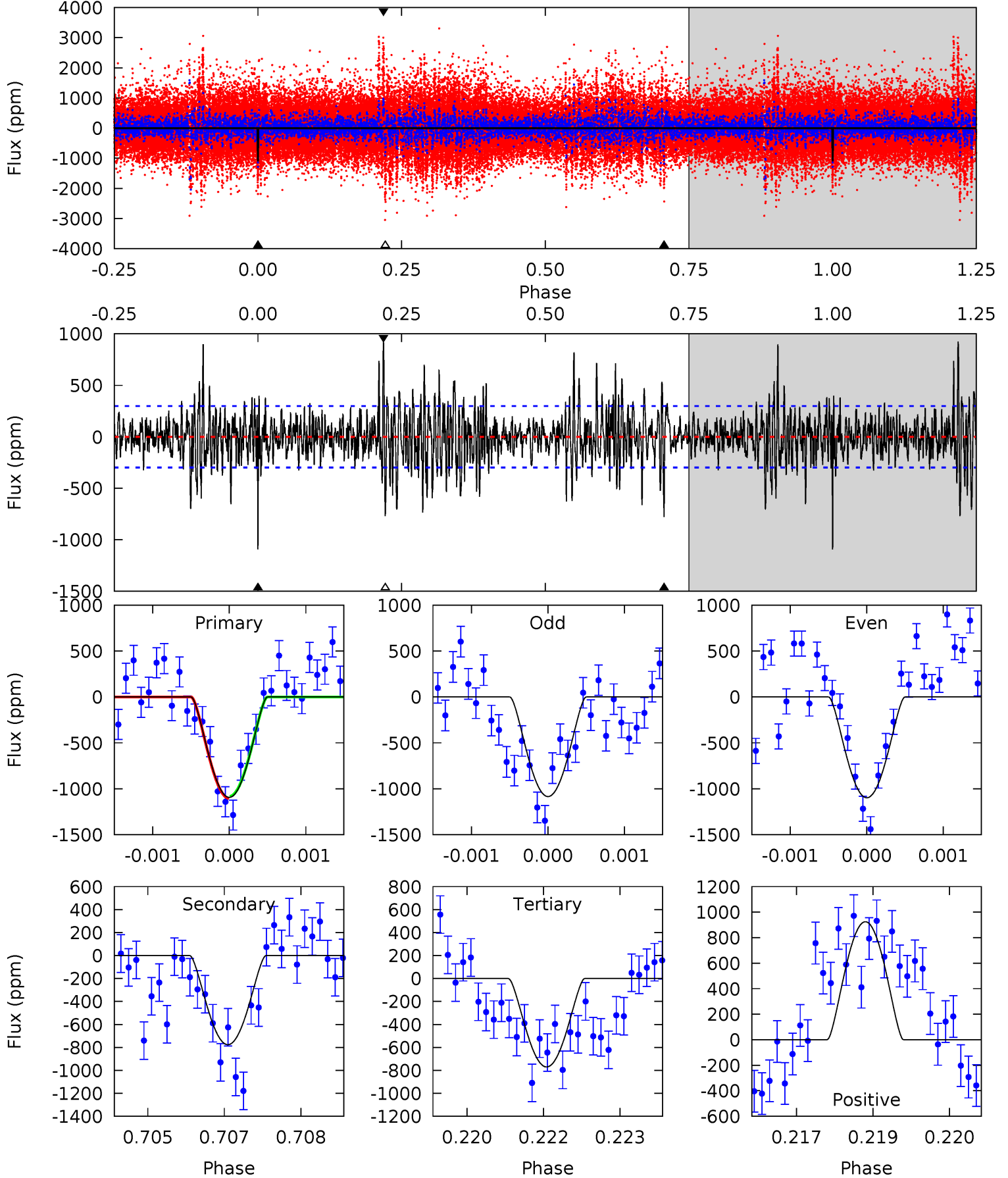
TCE 007686047-01 P=545.984723 Days $T_0=247.373800$ (BKJD)



DV Model-Shift Uniqueness Test

007686047-01, P = 546.011906 Days, E = 247.336685 Days

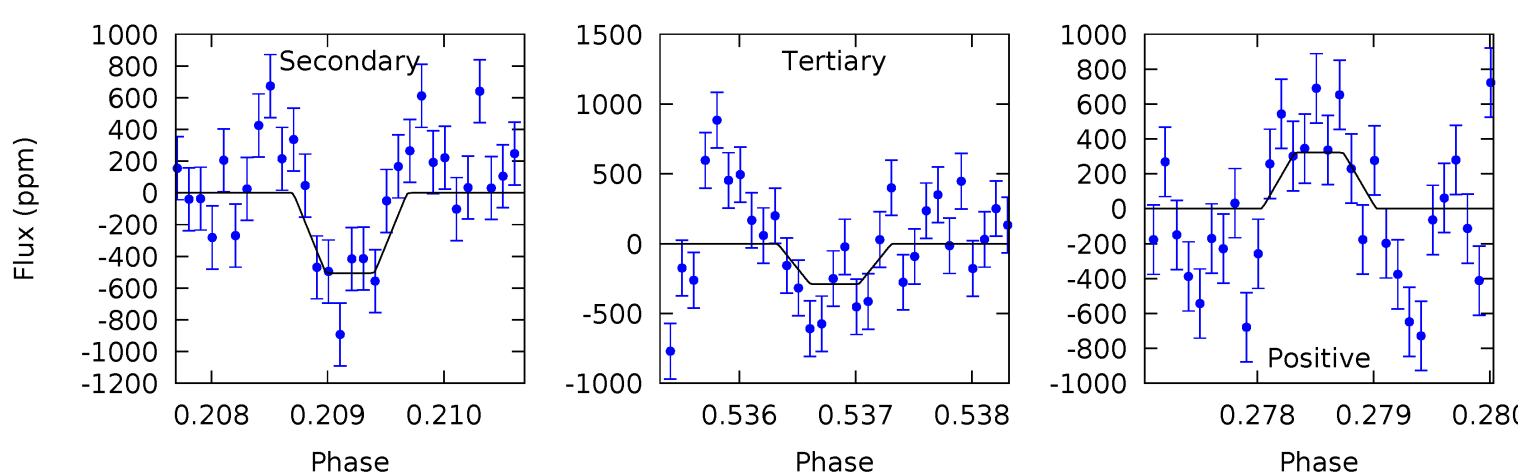
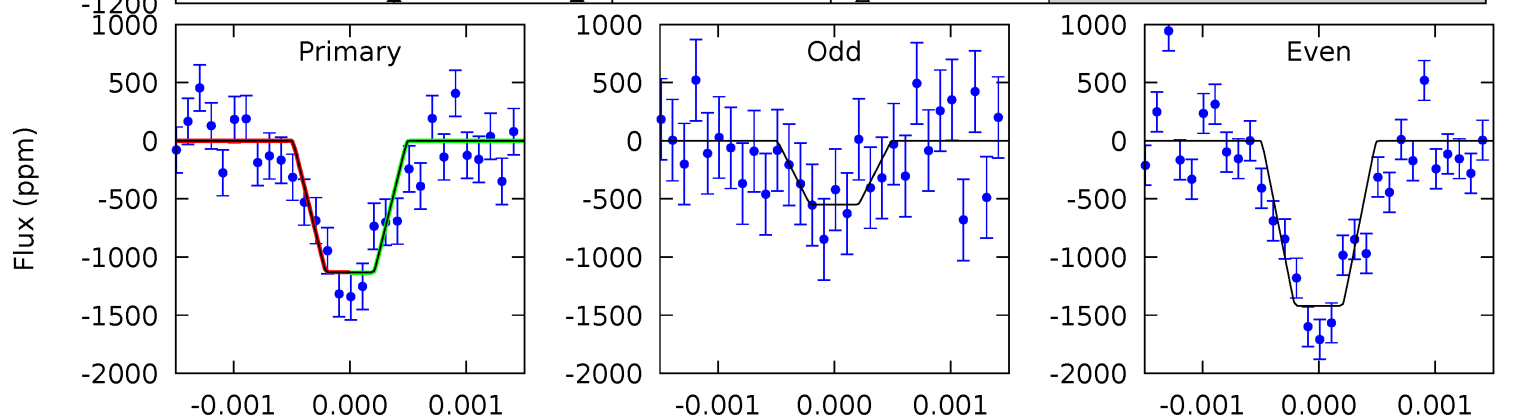
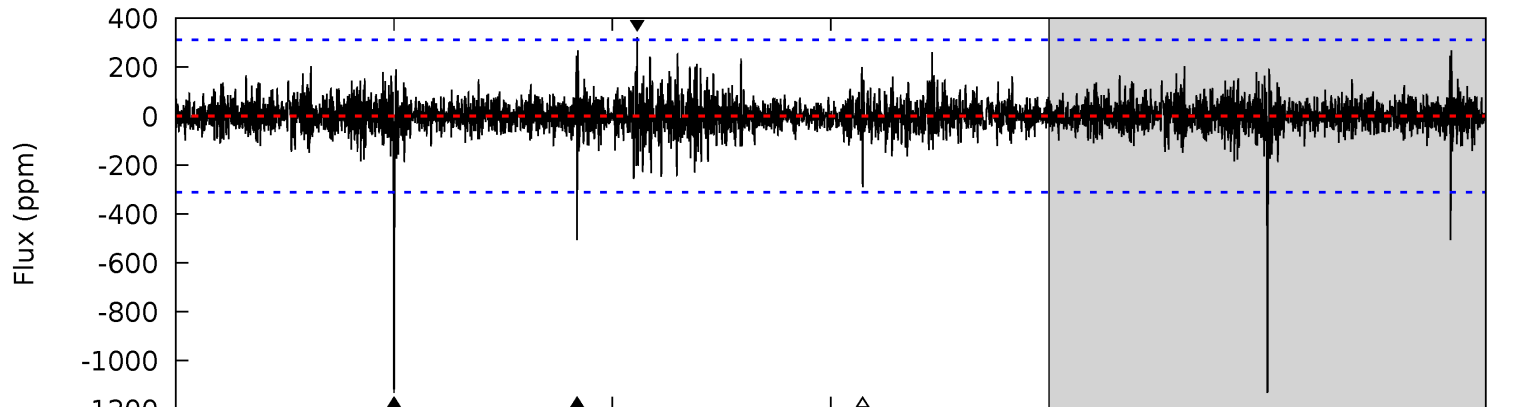
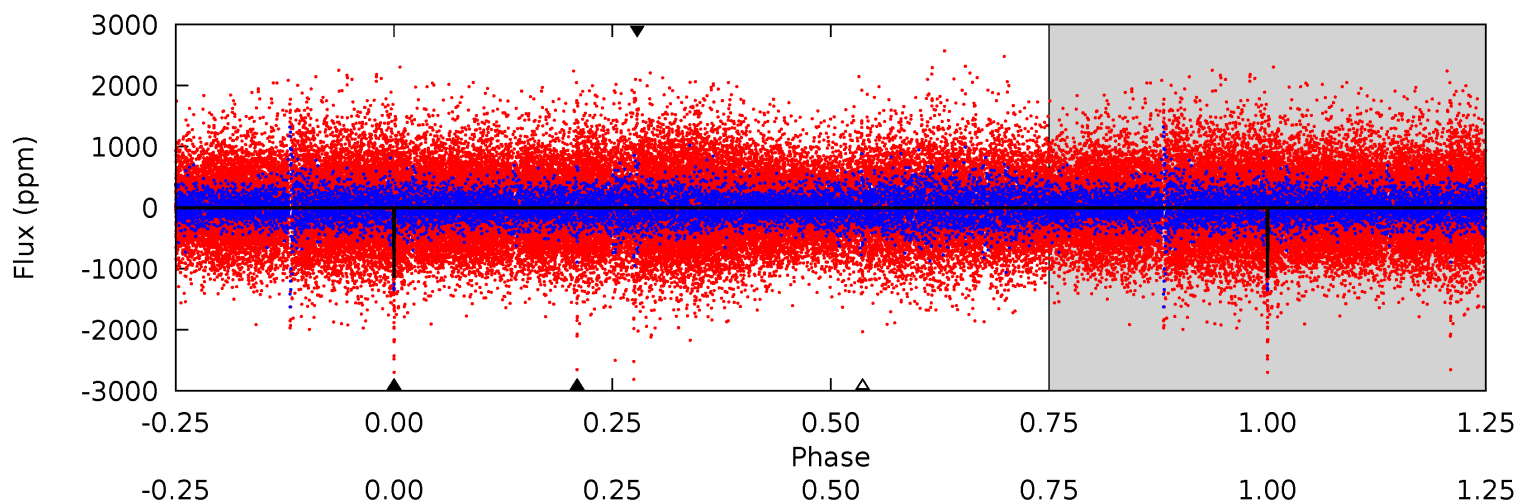
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	14.0	13.9	16.7	5.38	3.18	3.73	5.83	3.05	0.11	-2.67	0.11	1.01	0.46	0.19



Alt Model-Shift Uniqueness Test

007686047-01, P = 545.984723 Days, E = 247.373800 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	8.83	5.08	5.63	5.44	3.28	0.96	14.7	14.2	3.76	3.21	7.17	1.46	0.22	0.06



Stellar Parameters For KIC 007686047

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4453^{+133}_{-133}	$4.622^{+0.048}_{-0.024}$	$-0.220^{+0.300}_{-0.300}$	$0.645^{+0.046}_{-0.056}$	$0.636^{+0.070}_{-0.051}$	$3.331^{+0.771}_{-0.353}$
	+3%/-3%	+1%/-1%	+136%/-136%	+7%/-9%	+11%/-8%	+23%/-11%
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 007686047-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-776 ± 55	$12.86^{+13.82}_{-9.46}$	207^{+7}_{-7}	2518^{+1161}_{-397}	3316^{+46189}_{-2552}
Alt.	-506 ± 57	$12.74^{+12.35}_{-8.95}$	207^{+7}_{-7}	2404^{+939}_{-357}	2285^{+23130}_{-1724}

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 $A_{obs} \gg 1.0$

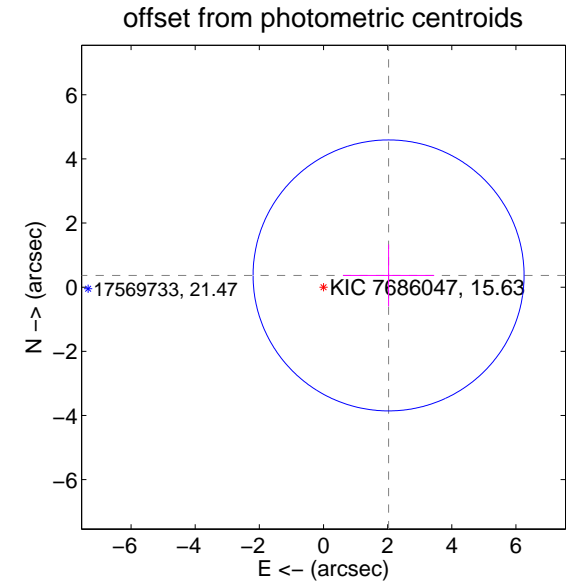
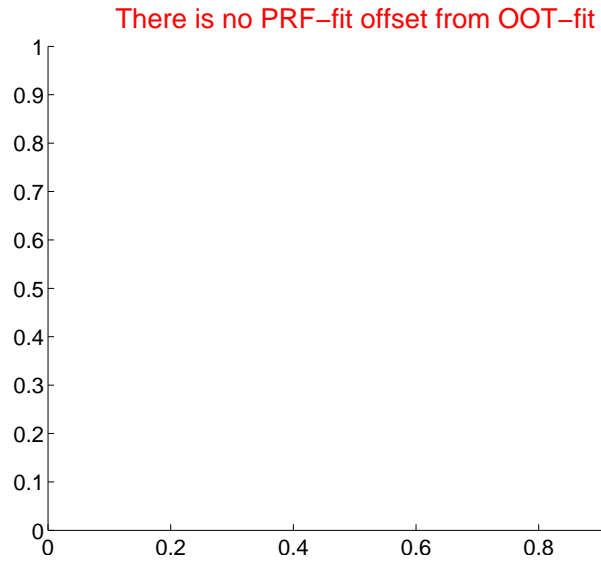
DV Centroid Data

Supplemental centroid analysis for 007686047-01. Kepler magnitude: 15.63. Transit SNR 8.74

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.06 ± 1.41	1.46	-2.03 ± 1.42	0.37 ± 0.96

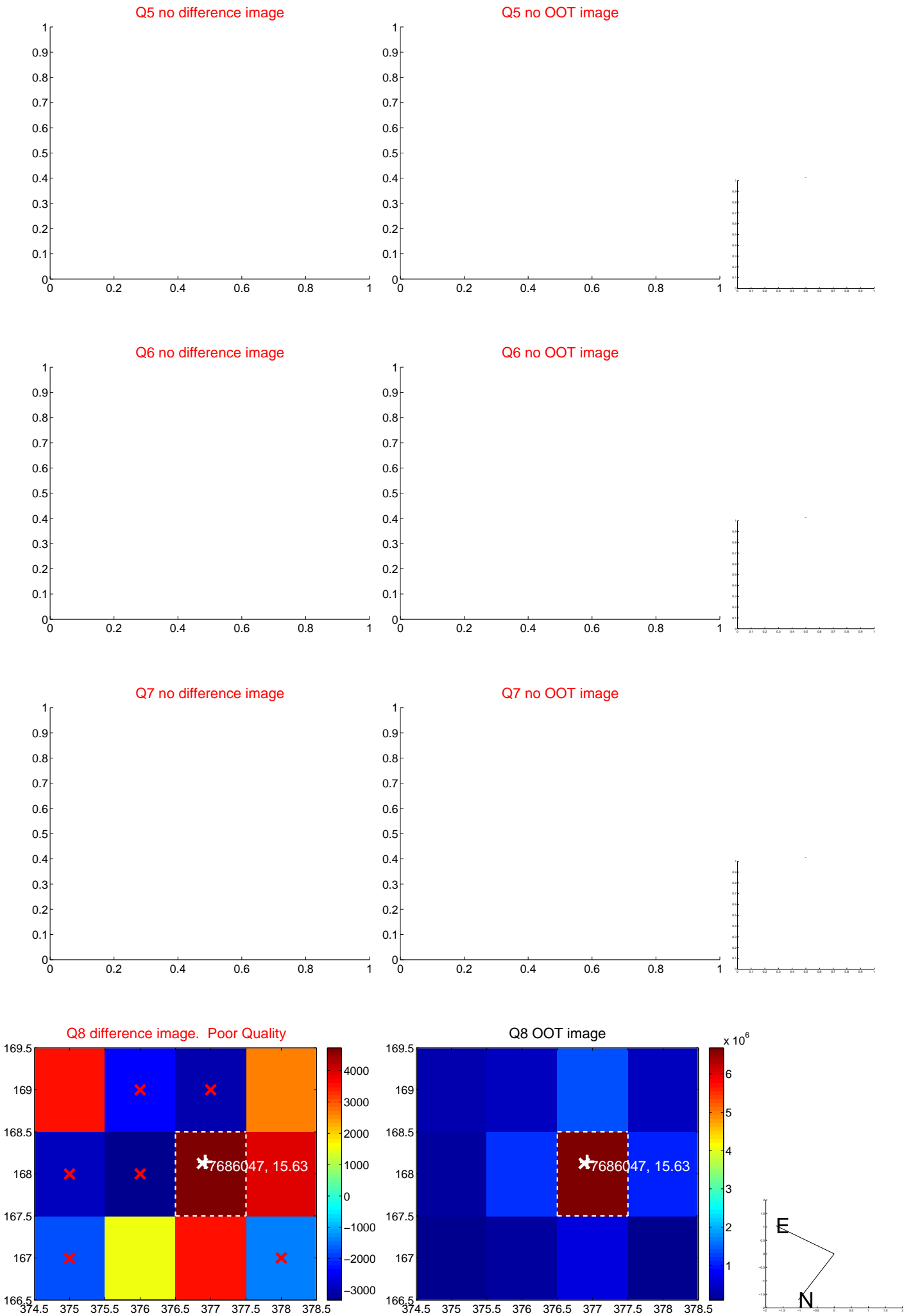


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



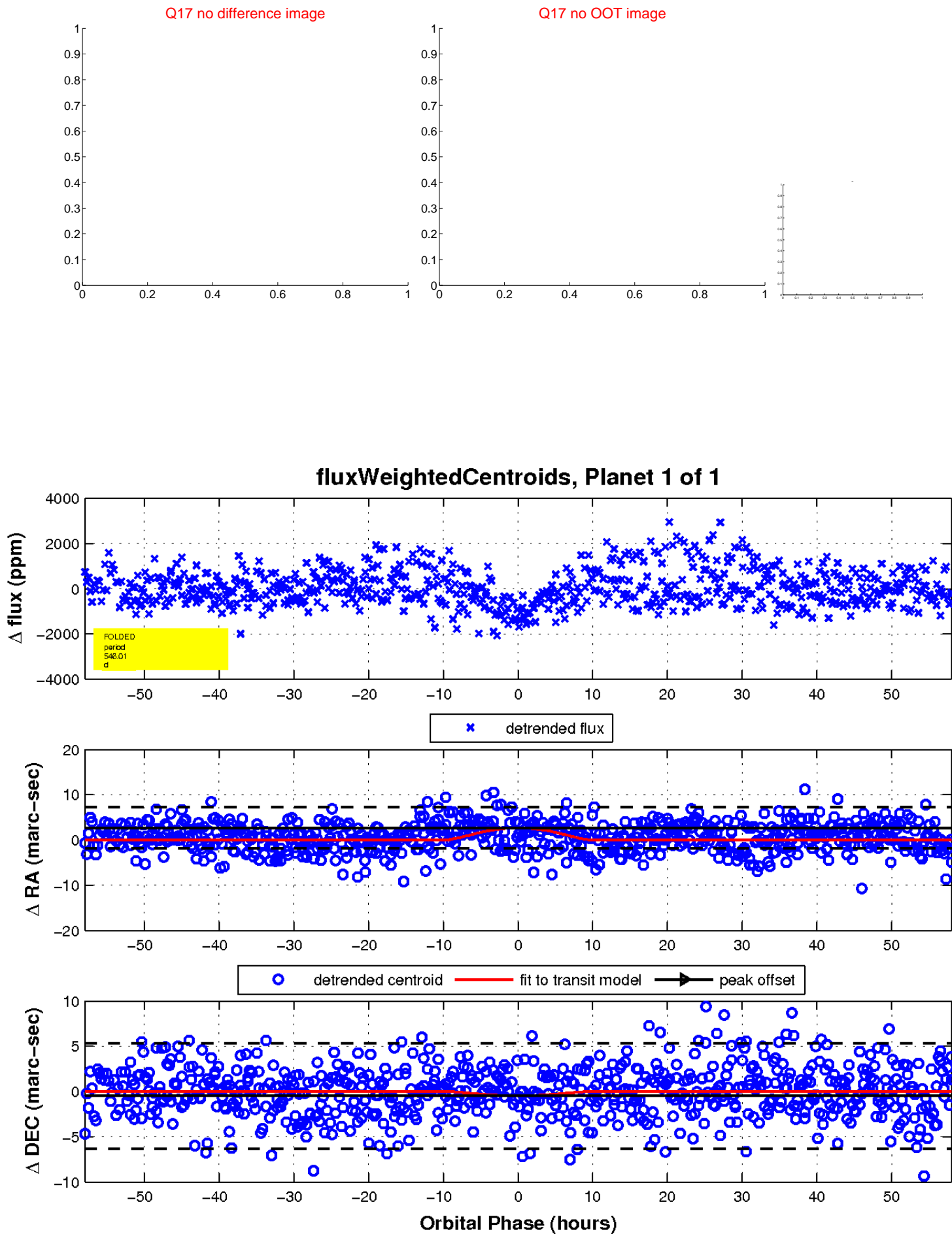
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

