

KIC 008160182

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})
008160182-01	OBS	No	369.960057	299.560598	11753.8	69.076	9.8	14.7	1.00	5780	19.27	0.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008160182-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_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.

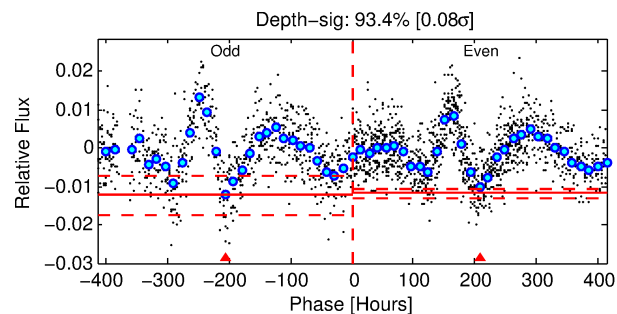
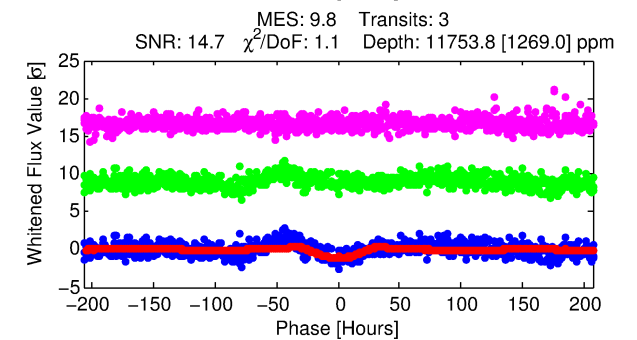
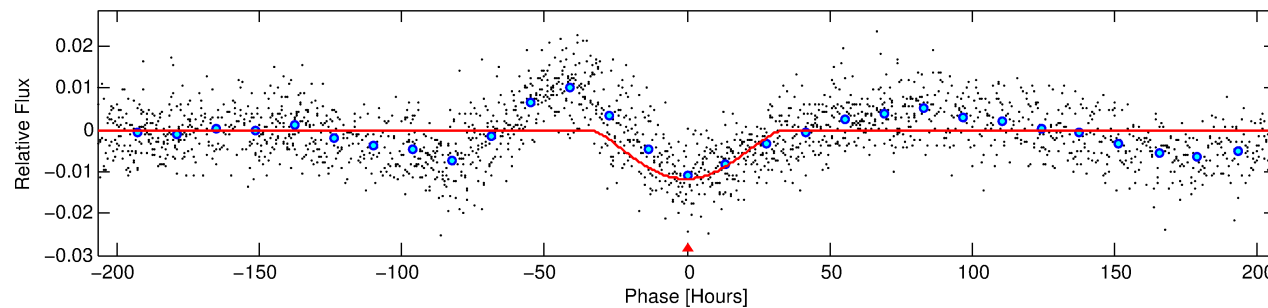
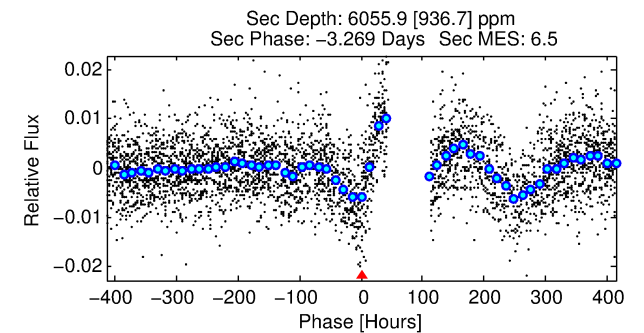
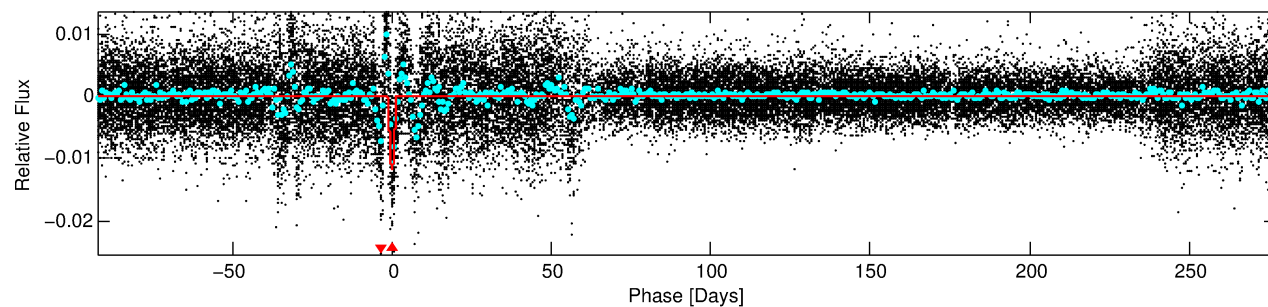
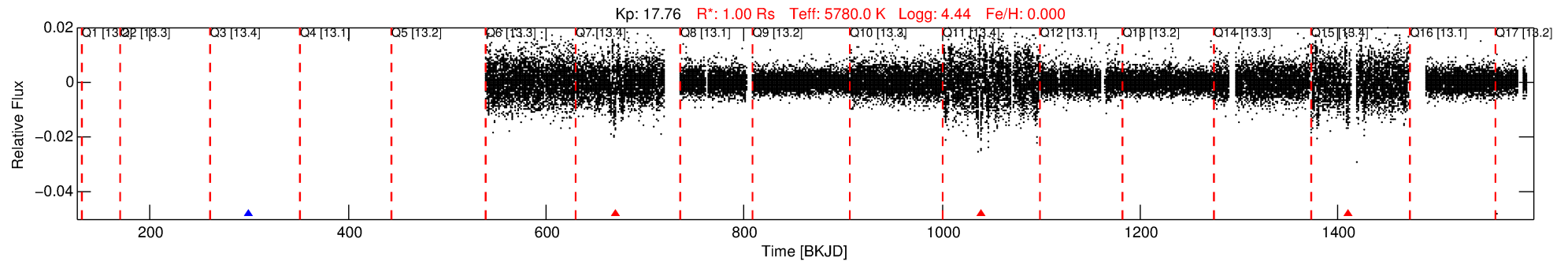
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008160182-01

No Significant Match Found

DV One-Page Summary

KIC: 8160182 Candidate: 1 of 1 Period: 369.960 d



DV Fit Results:

Period = 369.96006 [0.05841] d
Epoch = 299.5606 [0.1046] BKJD
Rp/R* = 0.1766 [0.3820]
a/R* = 25.55 [7.59]
b = 1.00 [0.54]
Seff = 0.98 [0.00]
Teq = 254 [0] K
Rp = 19.27 [41.68] Re
a = 1.0088 [0.0001] AU
Ag = 9129.47 [39518.71] [0.23σ]
Teffp = 3837 [4152] K [0.86σ]

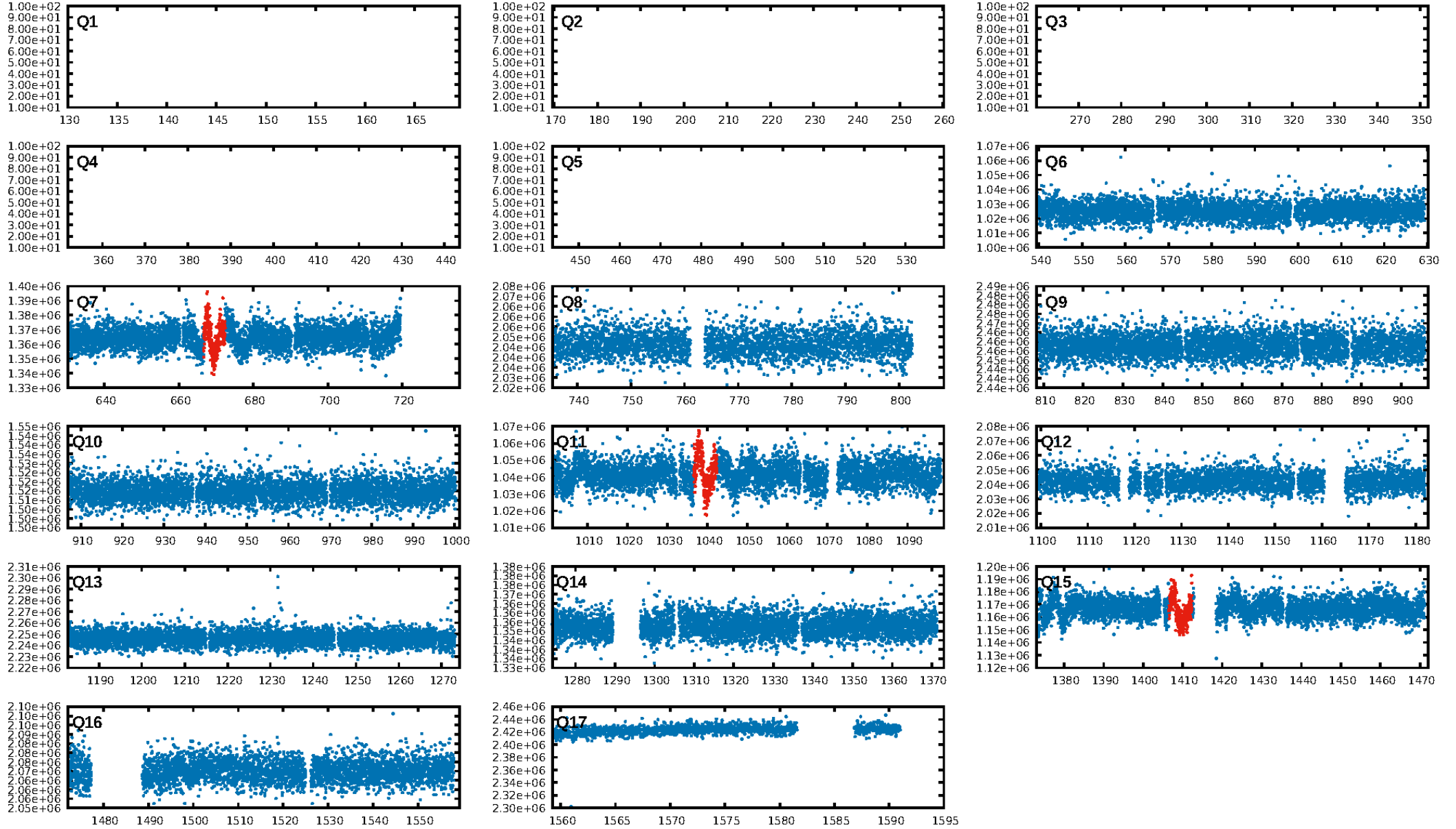
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.44e-11
RollingBand-fgt: 0.00 [0/3]
GhostDiagnostic-chr: 203.9
Centroid-sig: 0.2%
Centroid-so: 0.898 arcsec [2.42σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [1/1]

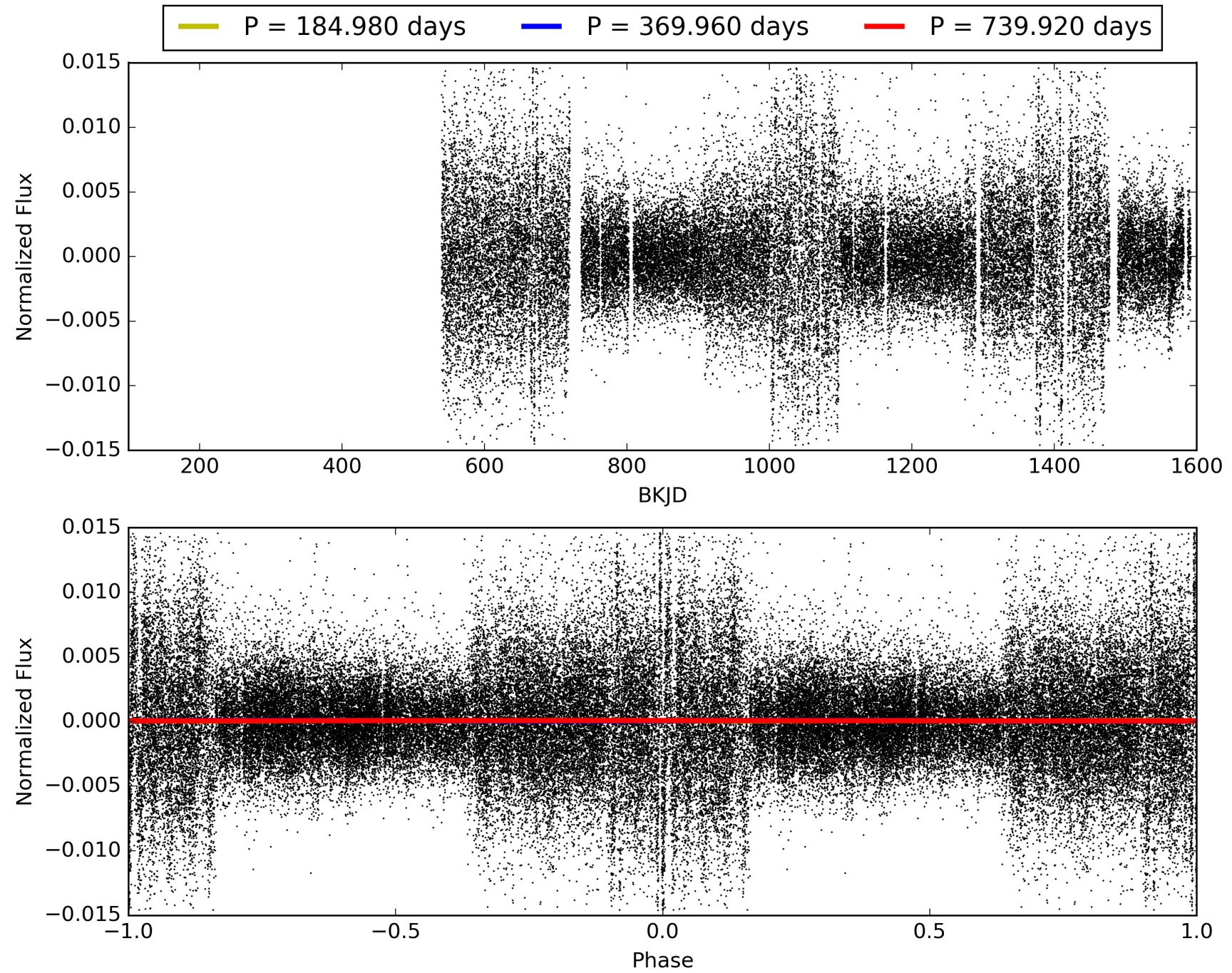
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:10:01 Z

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

TCE 008160182-01, PDC Light Curves

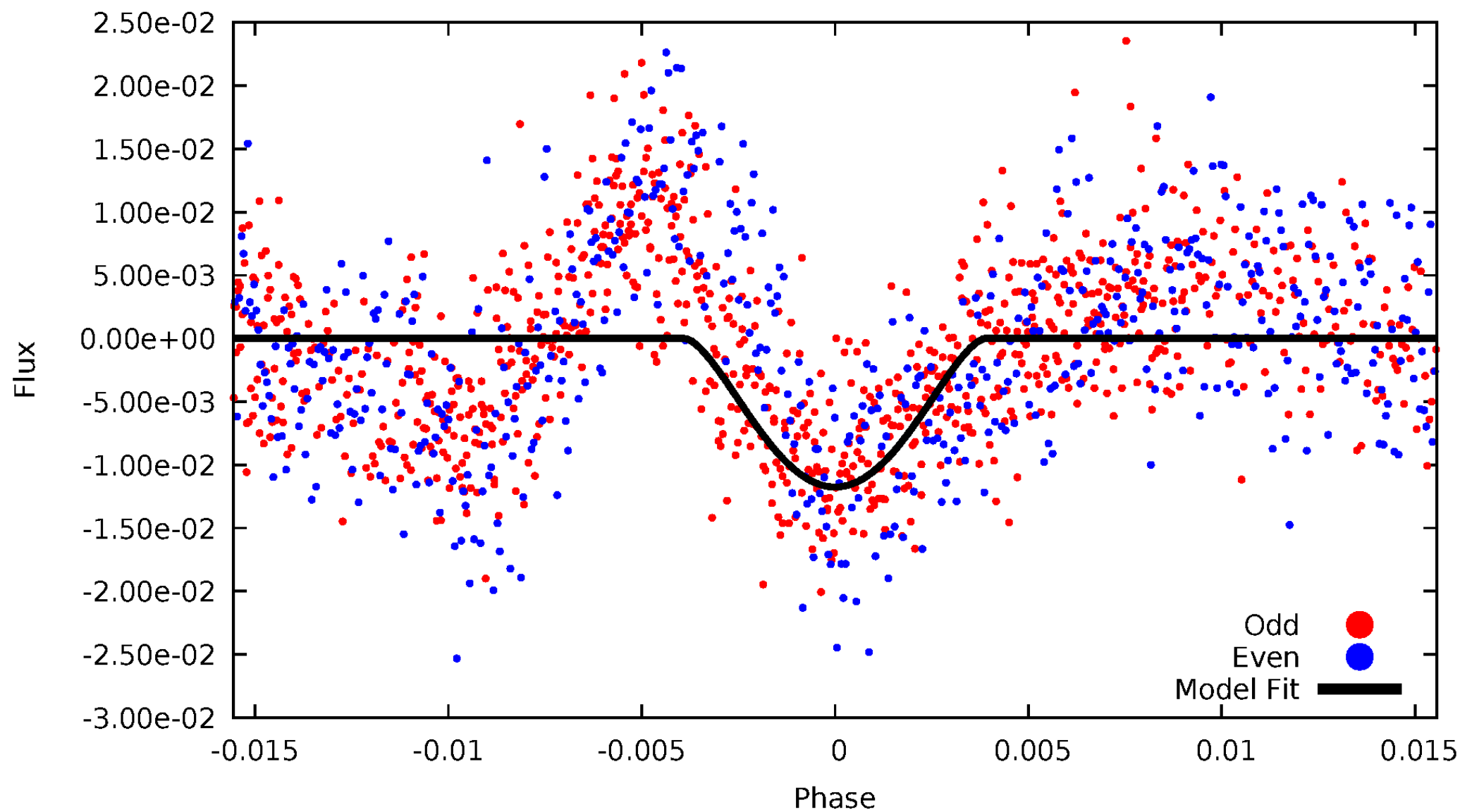


TCE 008160182-01



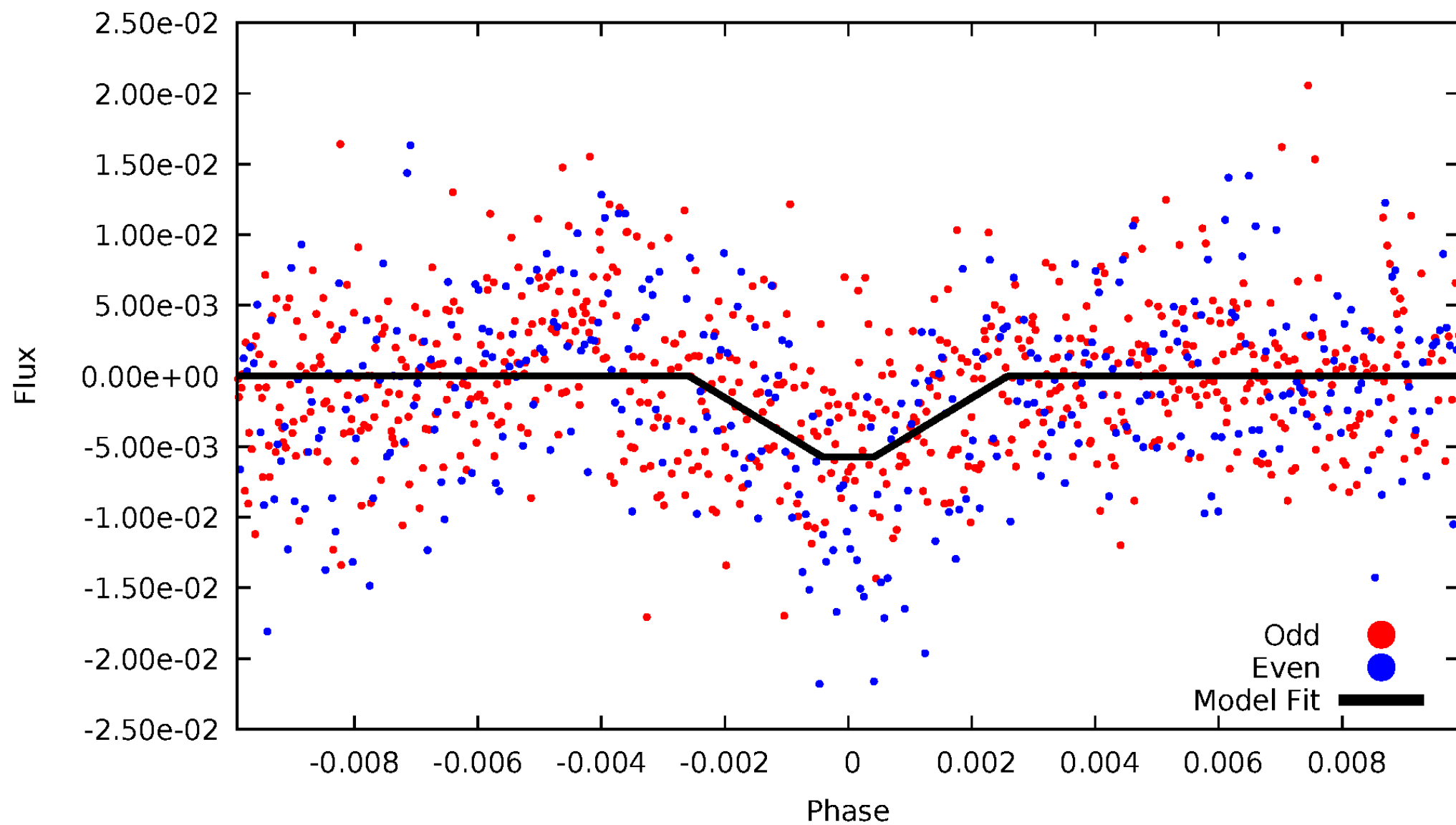
DV Odd/Even

TCE 008160182-01



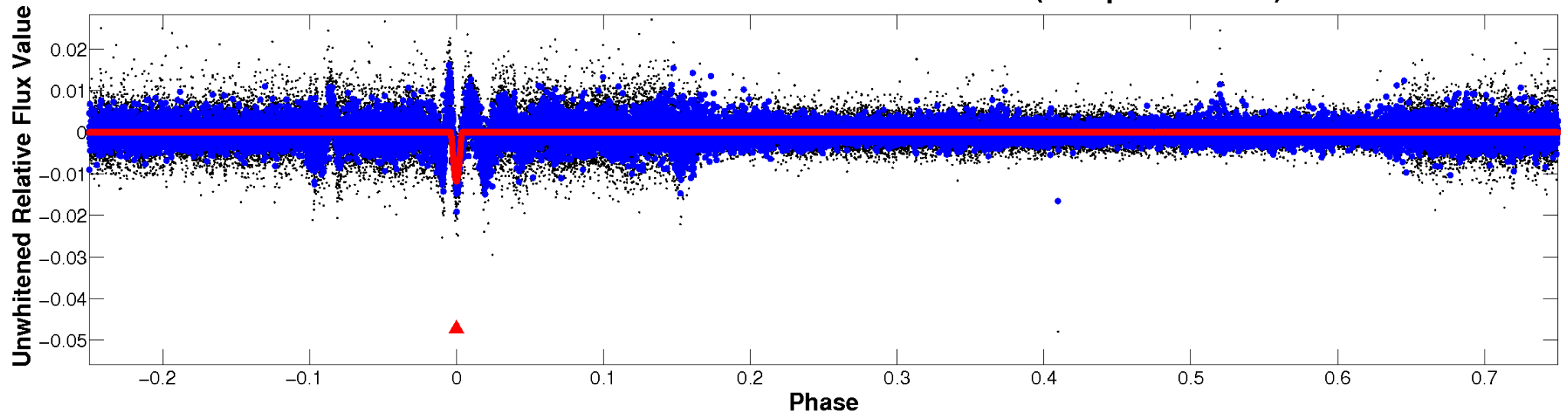
ALT Odd/Even

TCE 008160182-01

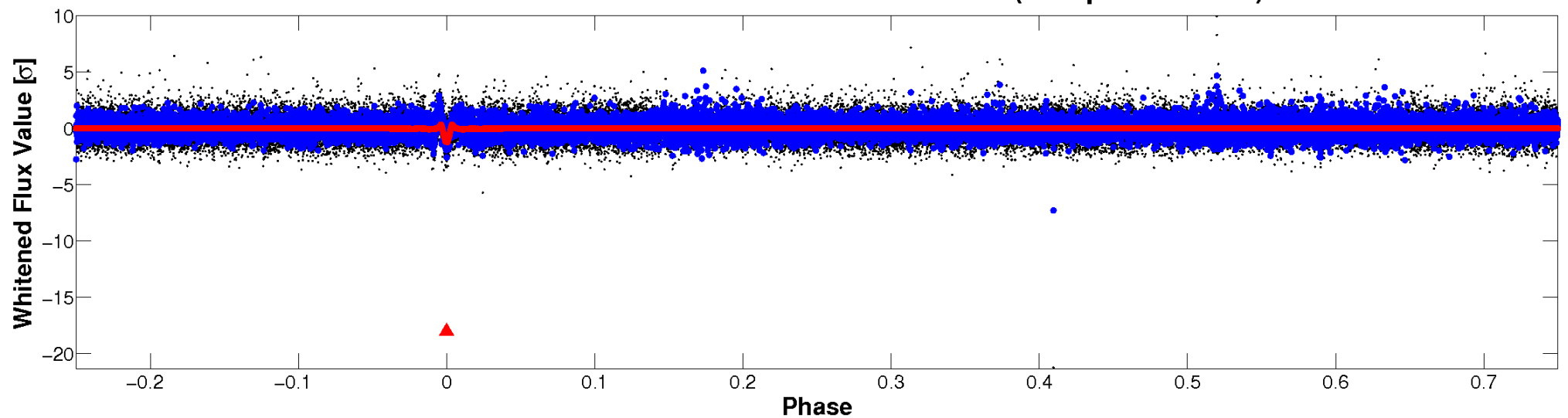


Non-Whitened Vs. Whitened Light Curve

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

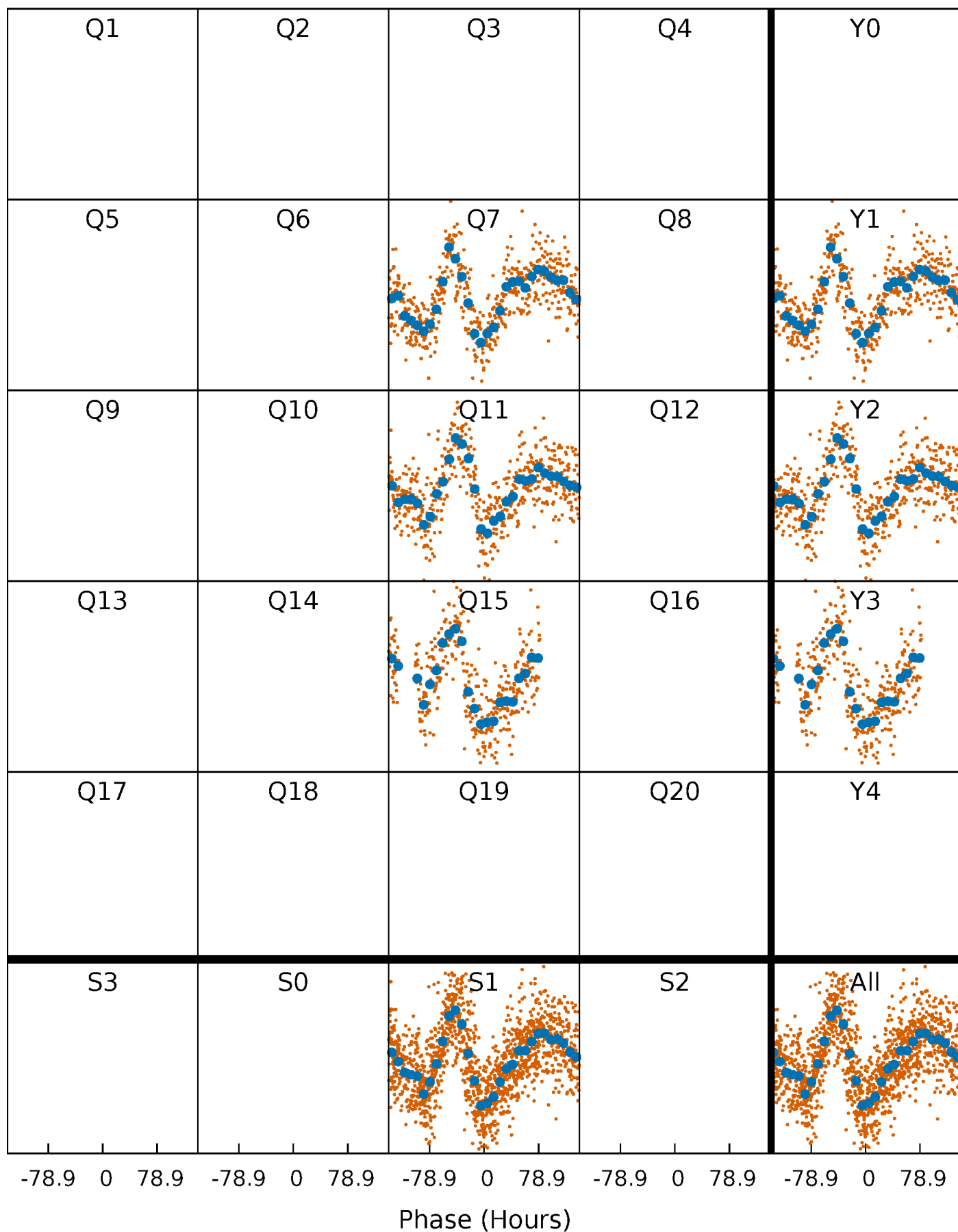


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



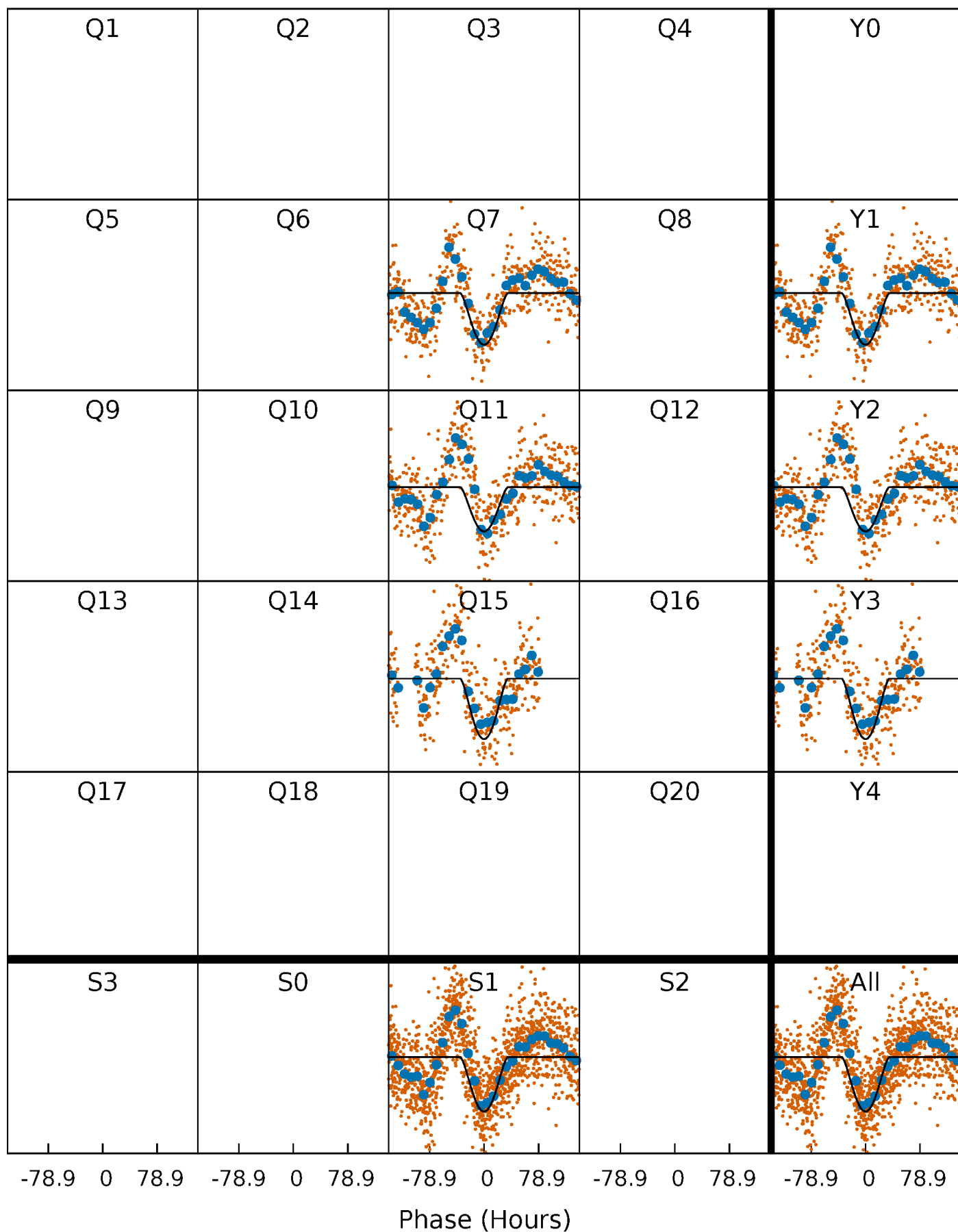
PDC Quarter-Phased Transit Curves

TCE 008160182-01 P=369.960057 Days $T_0=299.560598$ (BKJD)



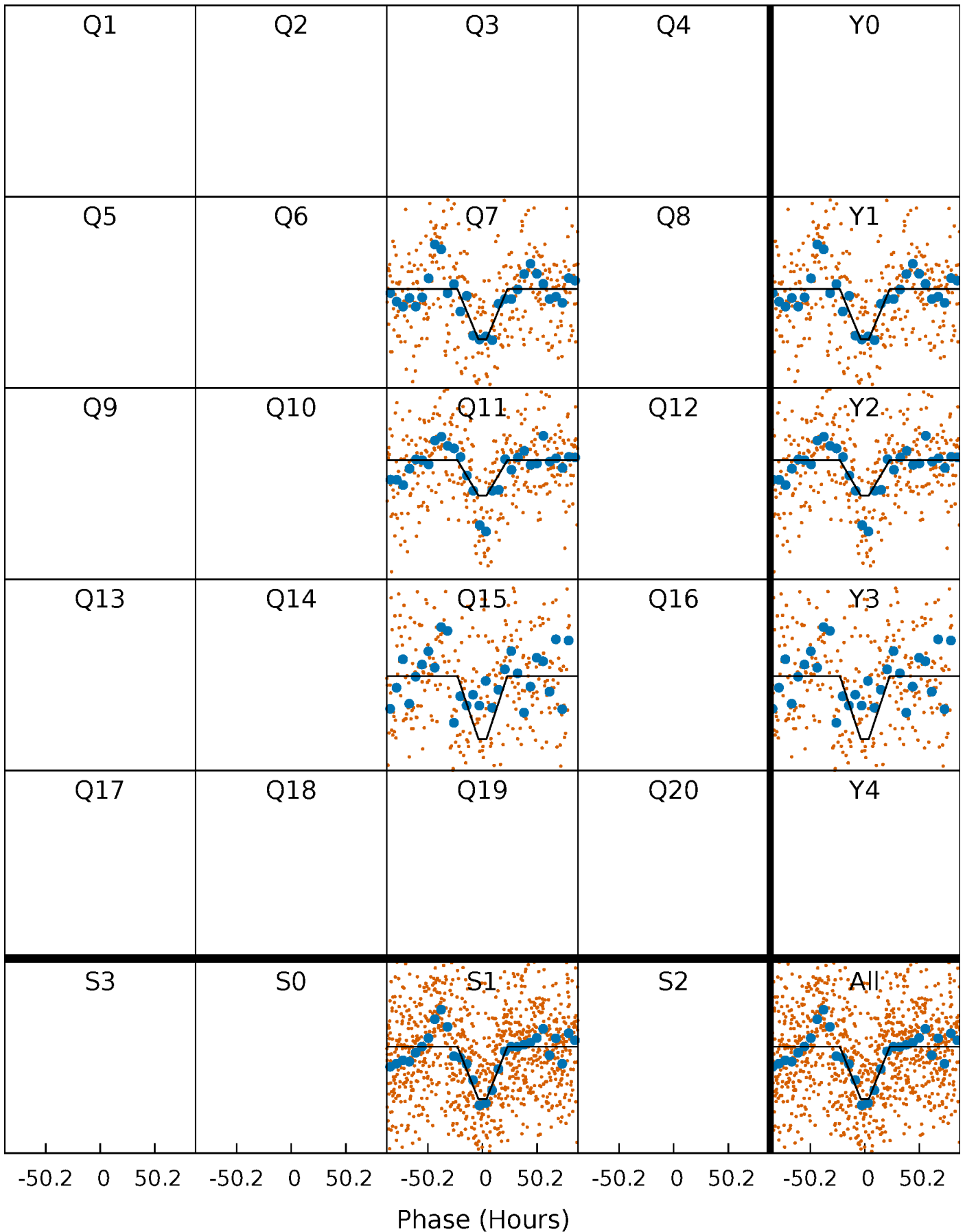
DV Quarter-Phased Transit Curves

TCE 008160182-01 P=369.960057 Days $T_0=299.560598$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

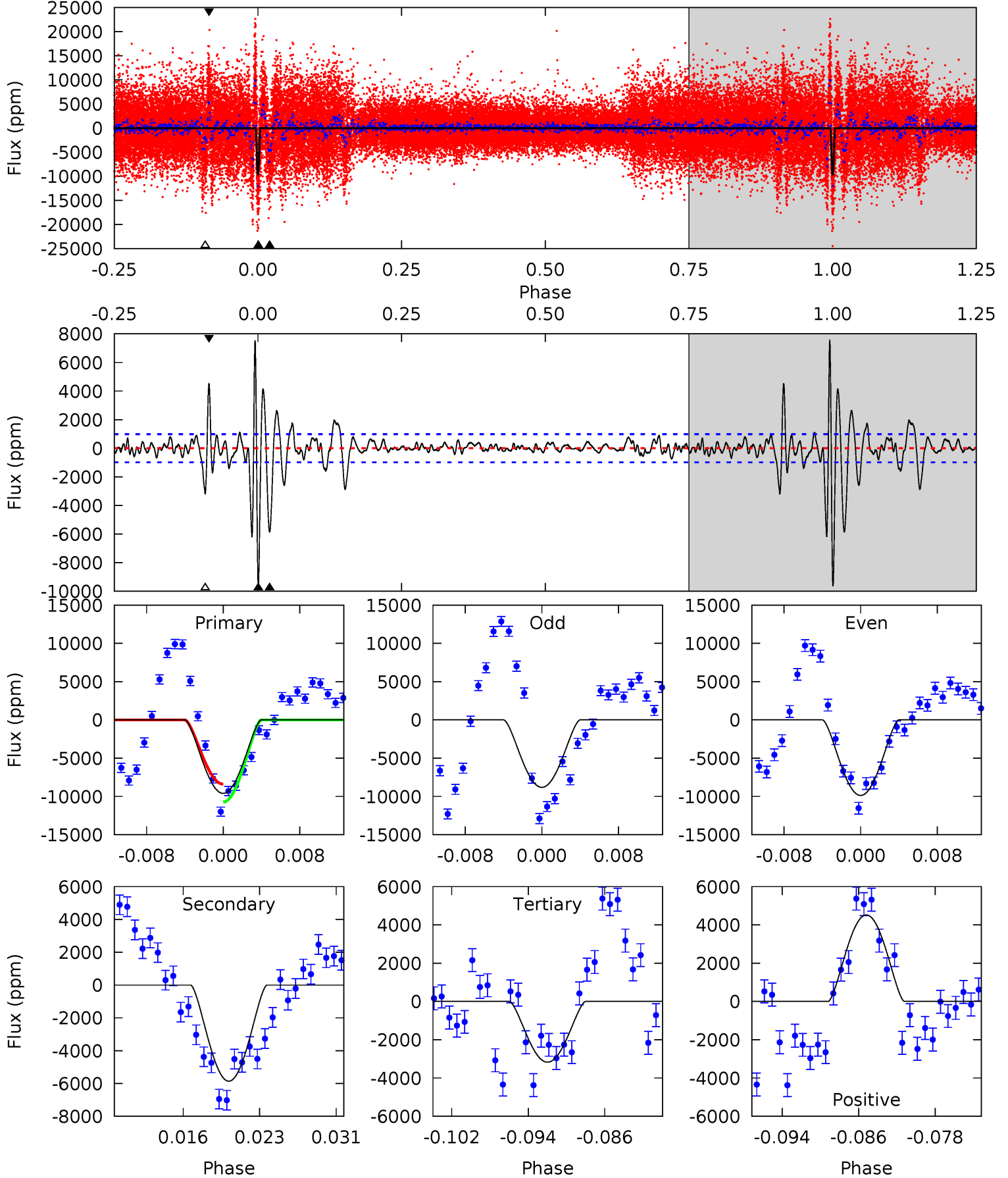
TCE 008160182-01 P=370.126695 Days $T_0=299.092008$ (BKJD)



DV Model-Shift Uniqueness Test

008160182-01, P = 369.960057 Days, E = 299.560598 Days

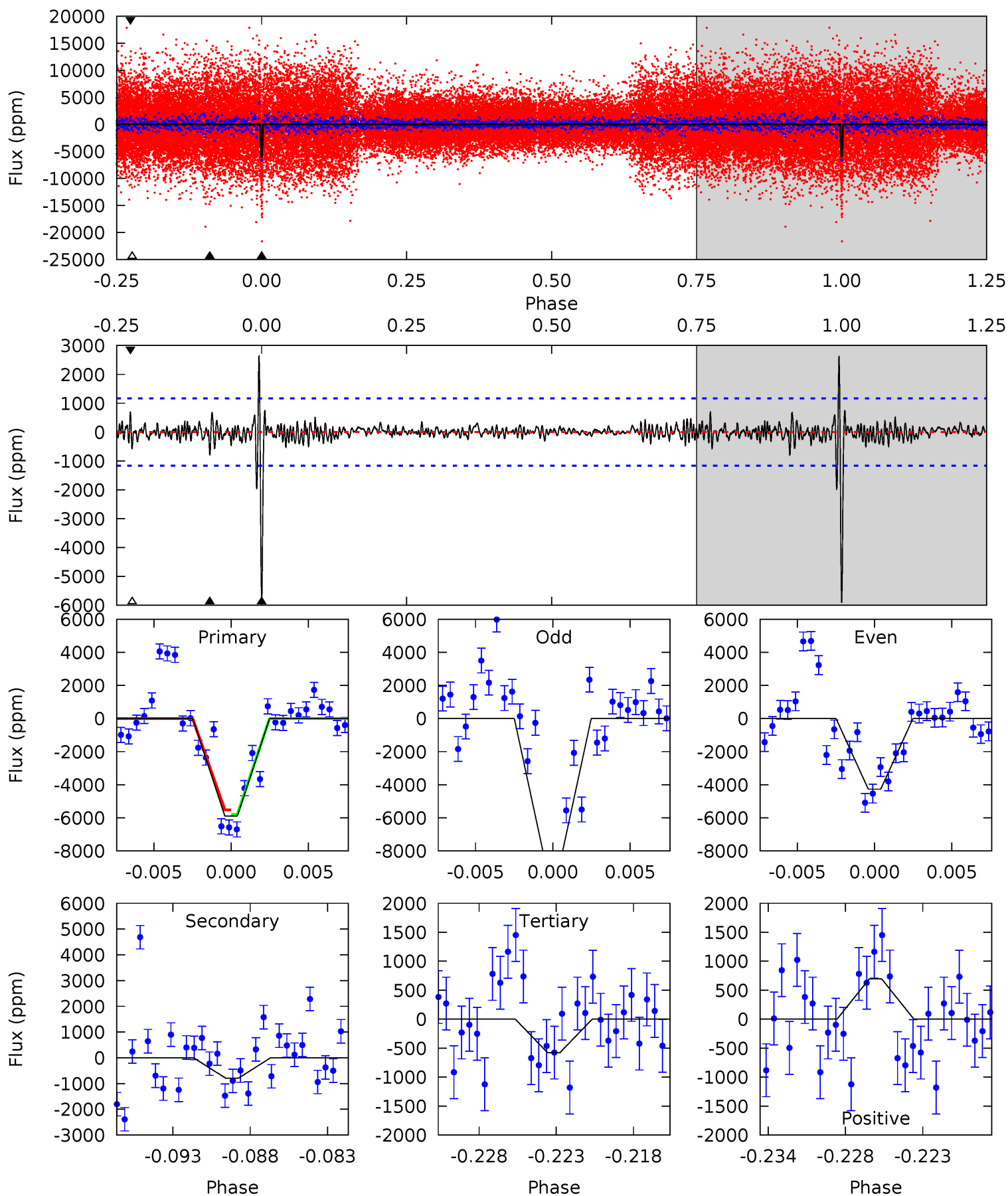
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.6	30.2	16.4	23.3	5.07	2.66	4.15	33.2	26.2	13.9	6.92	2.58	1.05	0.44	6.06



Alt Model-Shift Uniqueness Test

008160182-01, P = 370.126695 Days, E = 299.092008 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	3.51	2.55	3.07	5.15	2.80	0.87	23.5	23.0	0.96	0.44	10.1	0.98	0.31	0.59



Stellar Parameters For KIC 008160182

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 008160182-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5859 ± 194	$38.02^{+35.51}_{-26.19}$	354^{+18}_{-16}	3301^{+1627}_{-571}	2372^{+20989}_{-1759}
Alt.	-794 ± 226	$32.87^{+30.61}_{-22.33}$	355^{+17}_{-19}	2595^{+970}_{-392}	427^{+3471}_{-322}

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 $A_{obs} \gg 1.0$

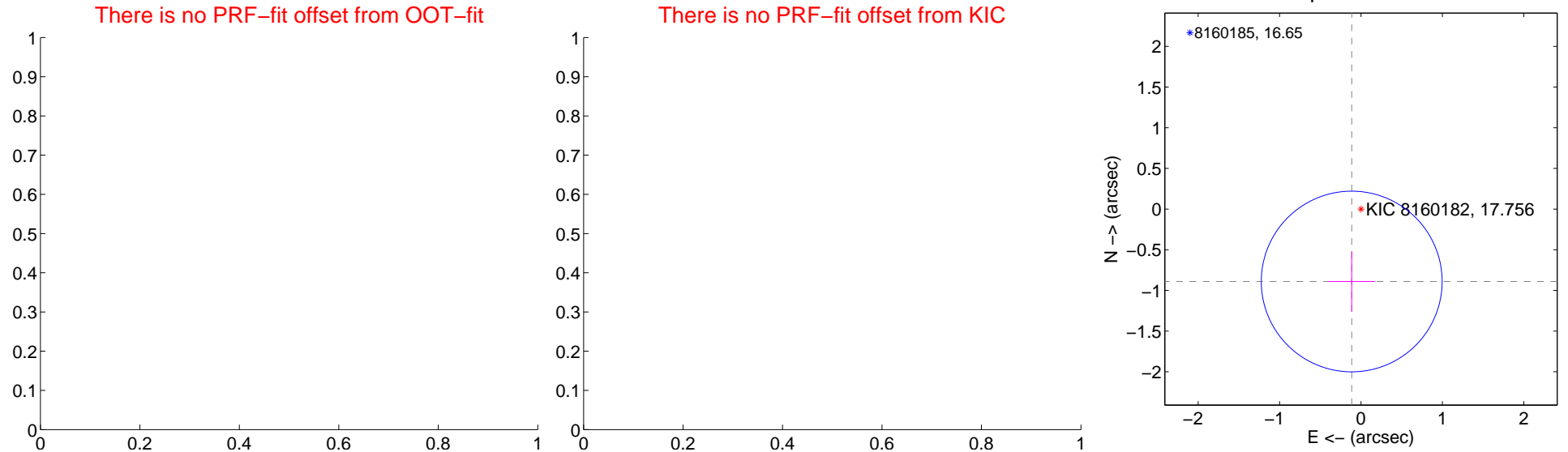
DV Centroid Data

Supplemental centroid analysis for 008160182-01. Kepler magnitude: 17.76. Transit SNR 14.68

There are 0 quarters with good PRF difference image offsets

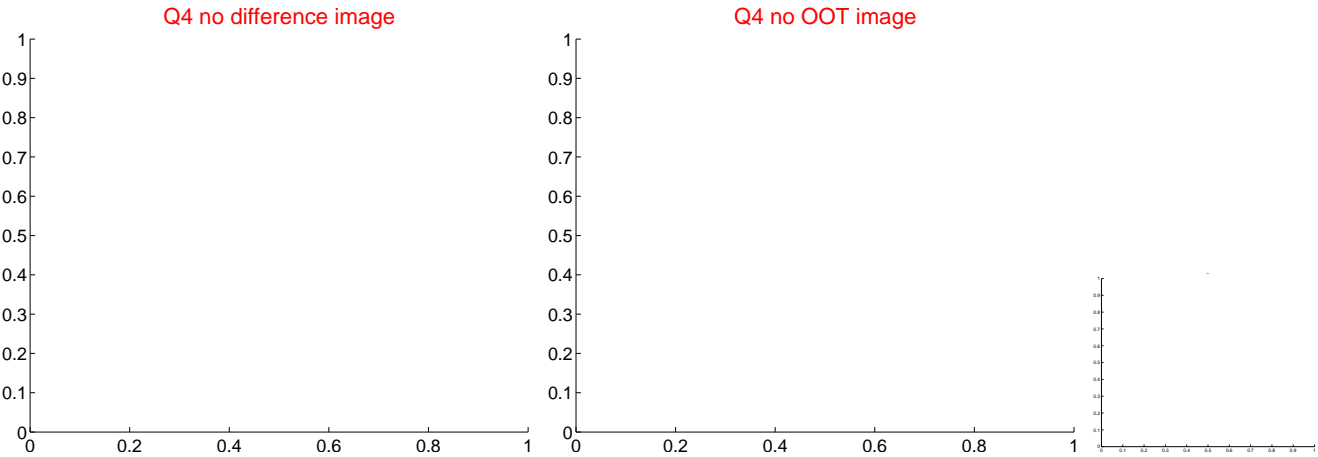
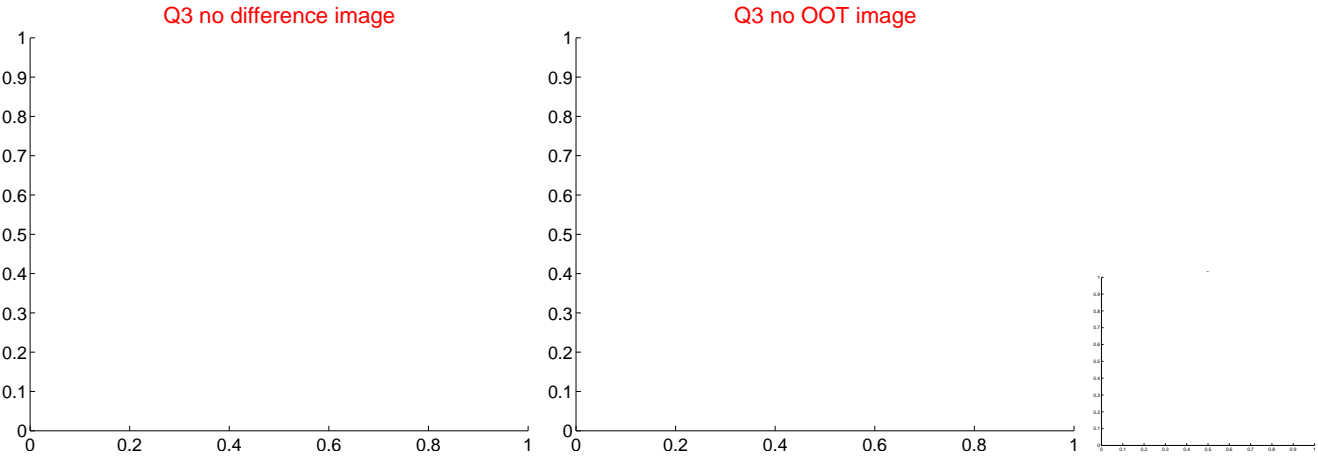
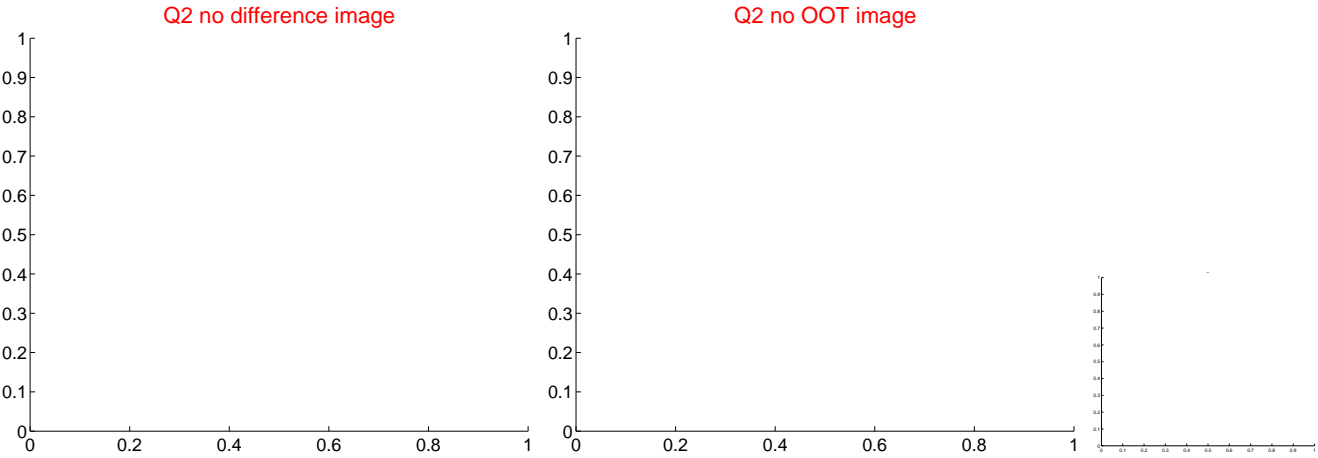
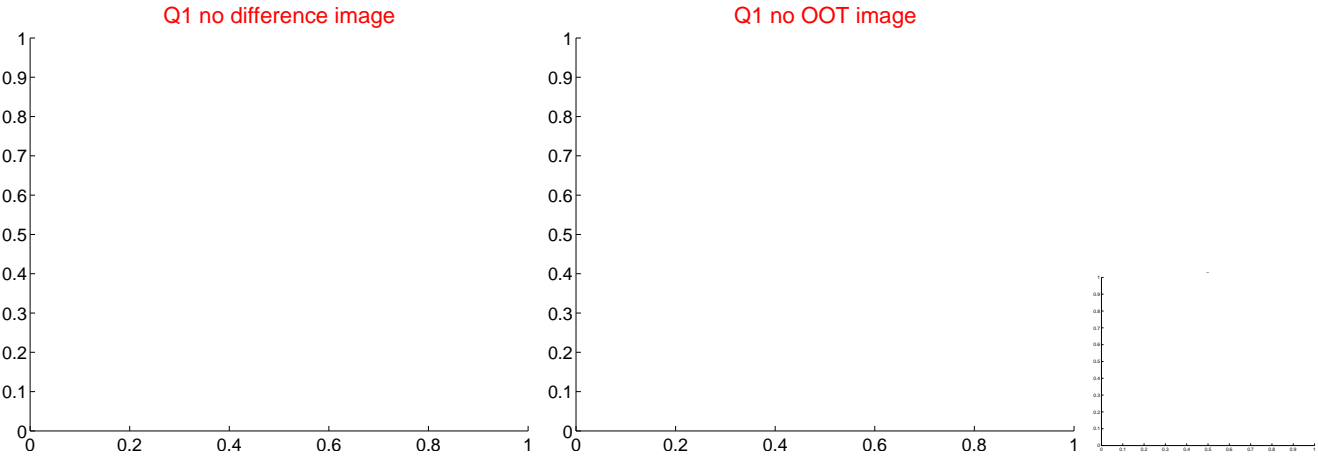
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	0.90 ± 0.37	2.42	0.11 ± 0.29	-0.89 ± 0.37

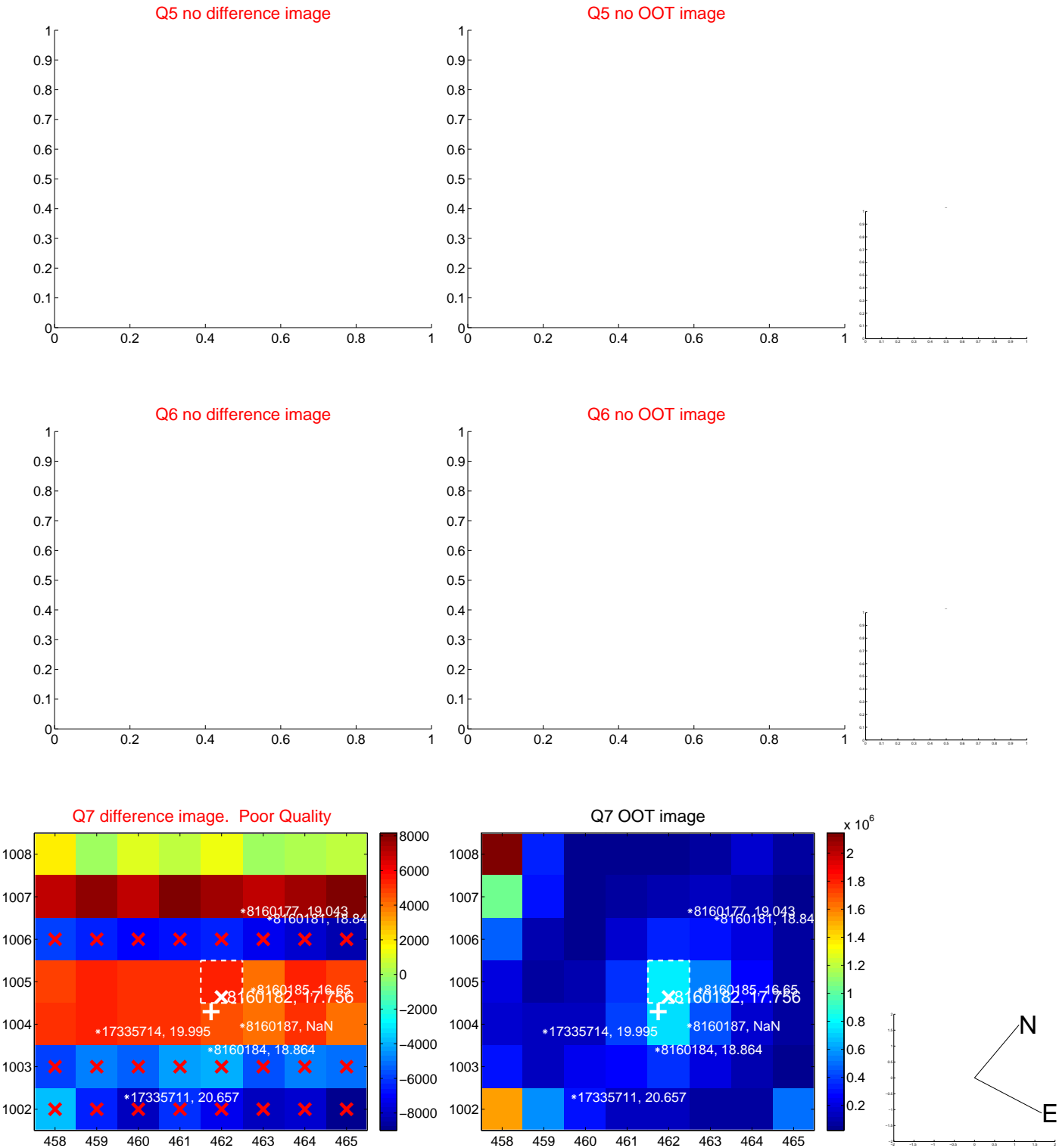


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



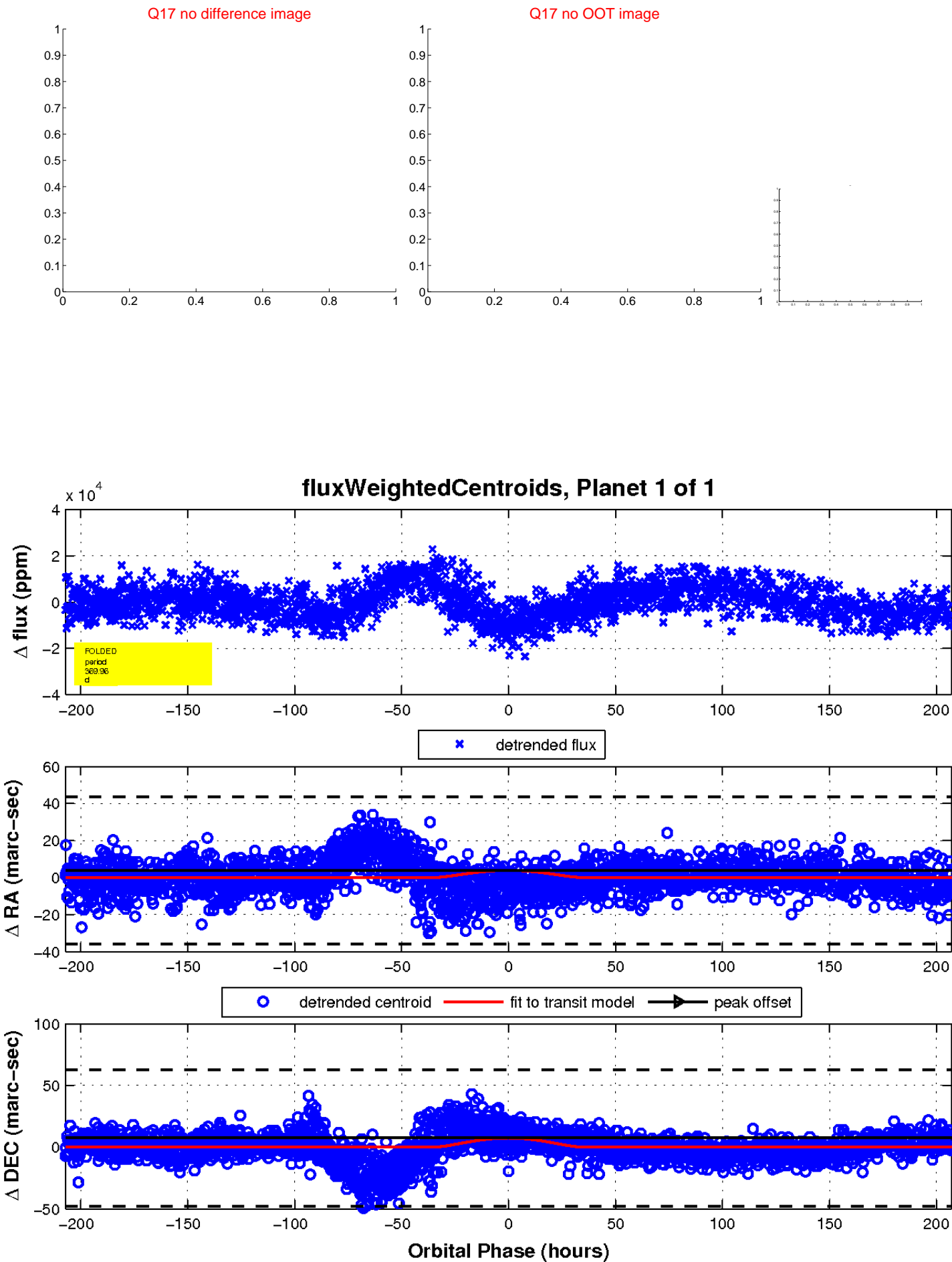
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

