

KIC 011706231

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})
011706231-01	OBS	No	282.802515	160.044952	490.7	3.218	28.6	27.9	154.30	3274	393.11	3207.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011706231-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

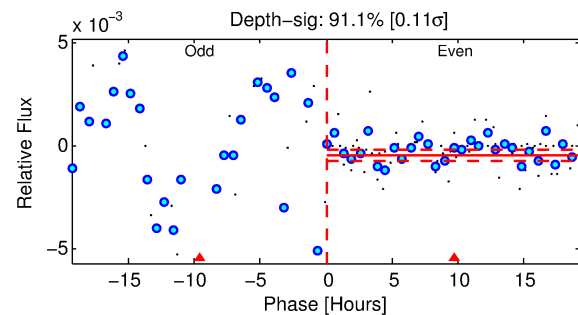
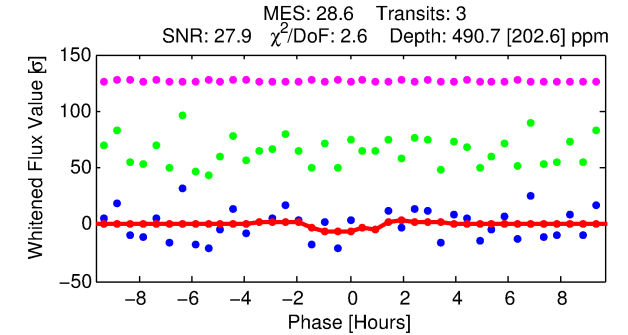
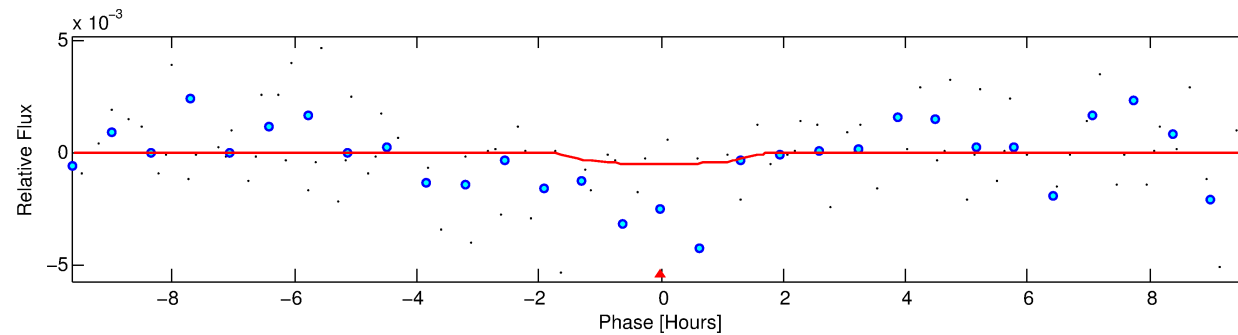
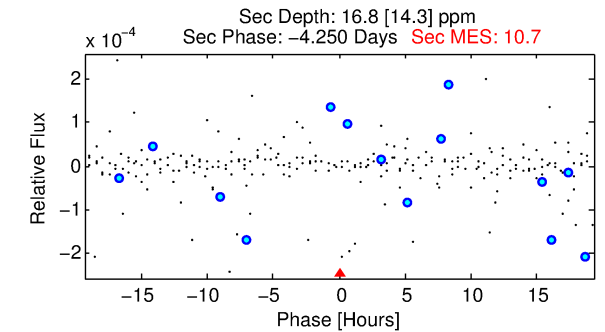
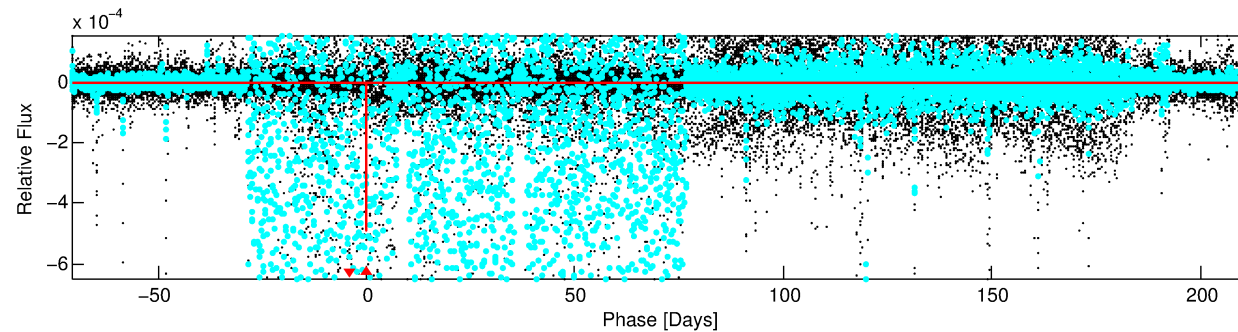
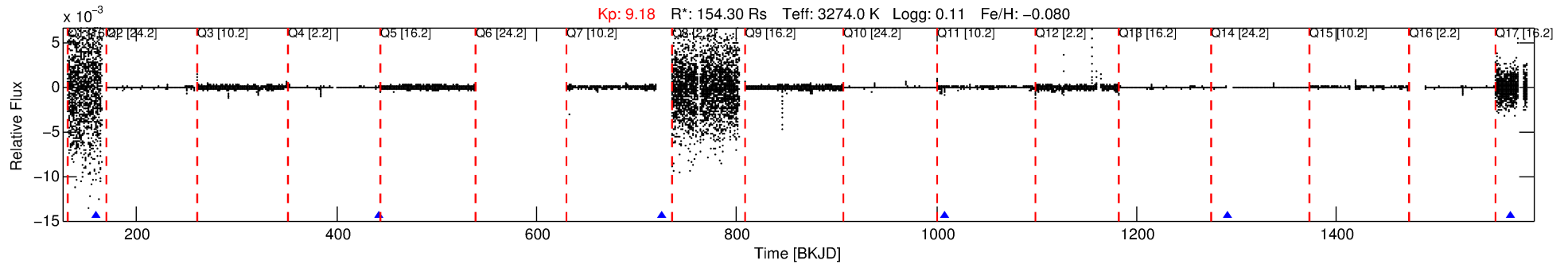
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011706231-01

No Significant Match Found

DV One-Page Summary

KIC: 11706231 Candidate: 1 of 1 Period: 282.803 d



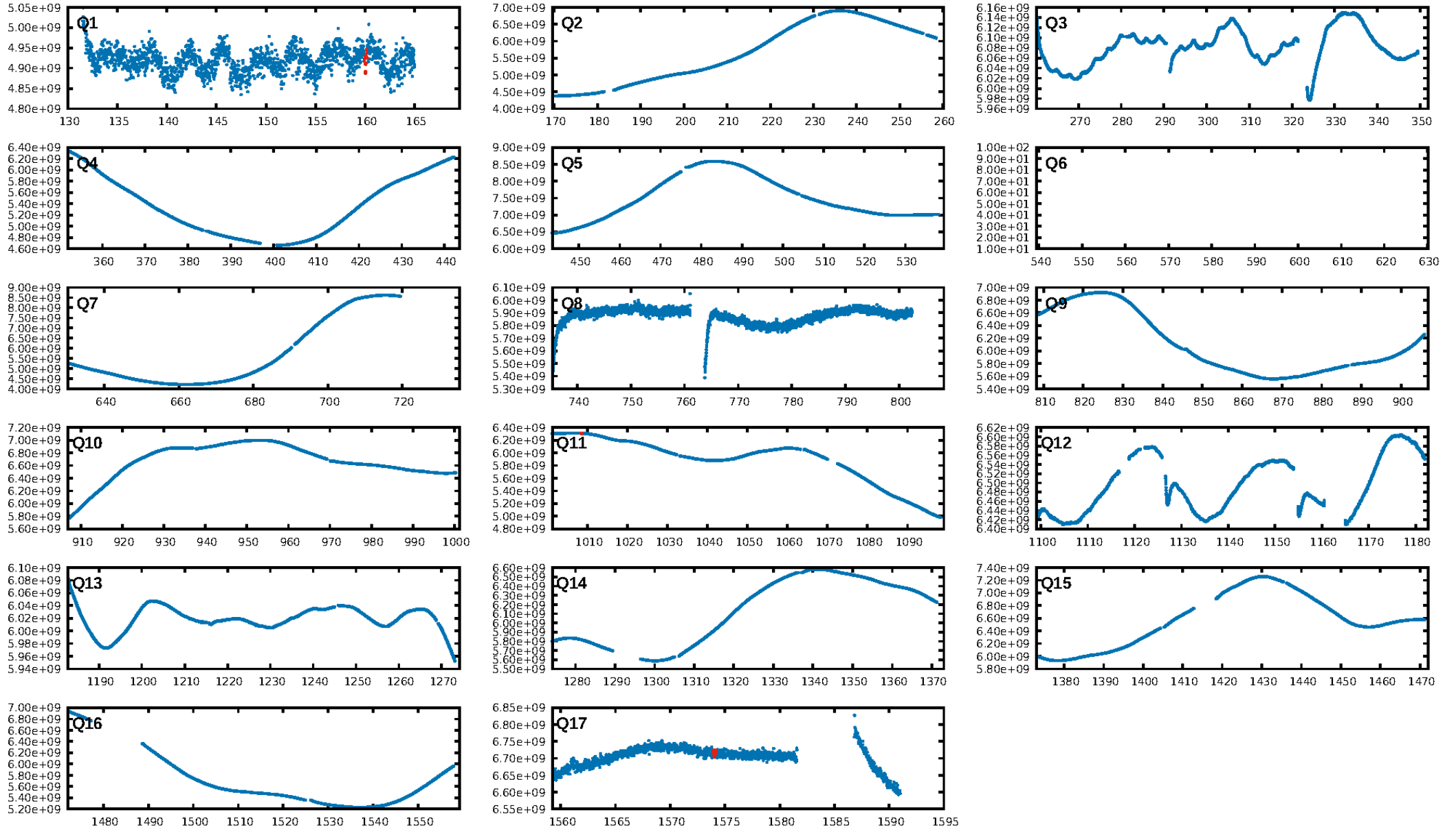
DV Fit Results:

Period = 282.80251 [0.01056] d
Epoch = 160.0450 [0.0428] BKJD
Rp/R* = 0.0233 [0.0679]
a/R* = 428.59 [3192.95]
b = 0.80 [3.52]
Seff = 3207.26 [1130.45]
Teff = 1919 [169] K
Rp = 393.11 [1145.75] Re
a = 0.8742 [0.1672] AU
Ag = 0.05 [0.27] [-3.55σ]
Teffp = 1372 [2017] K [-0.27σ]

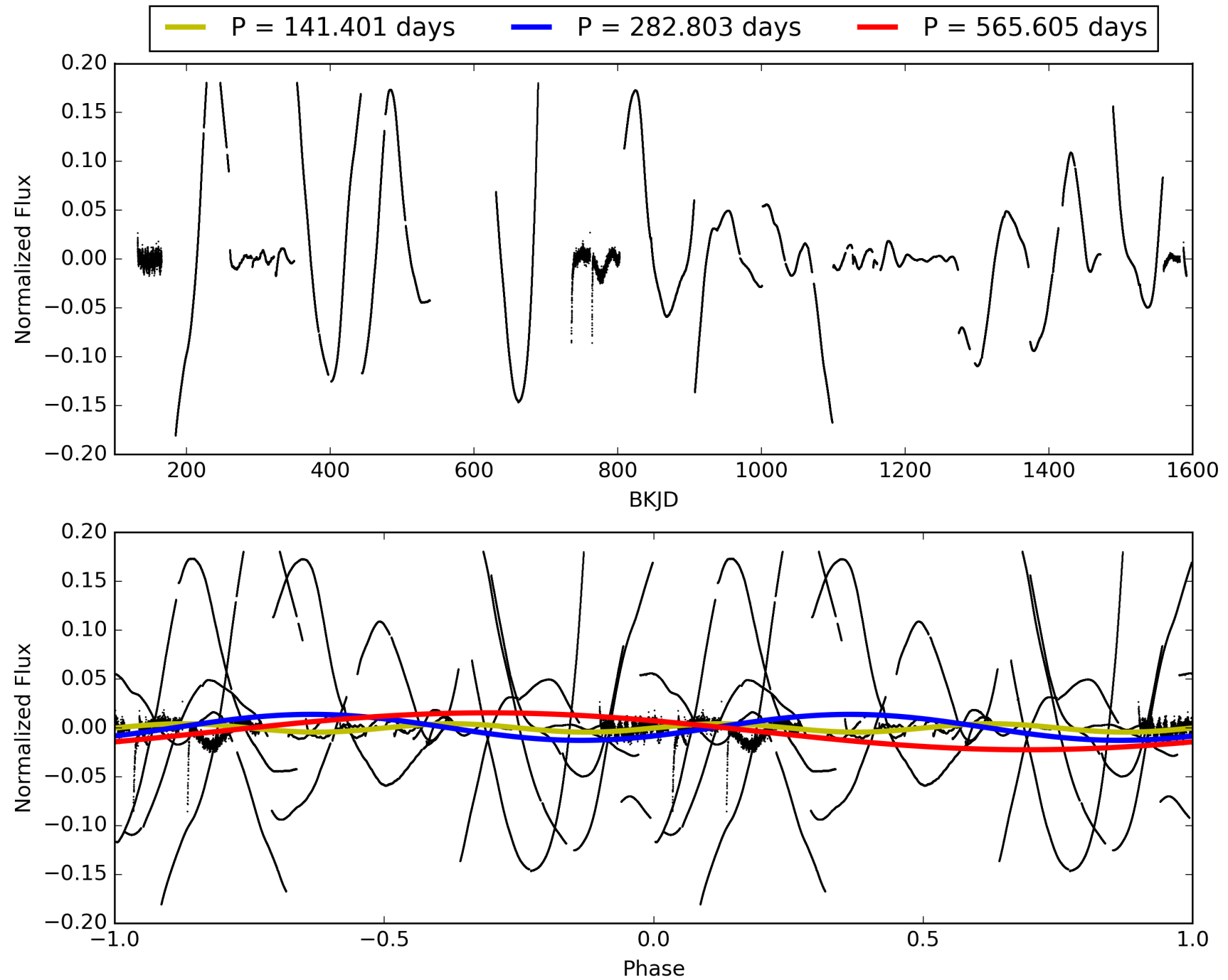
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.8%
ModelChiSquareGof-sig: 23.8%
Bootstrap-pfa: 1.97e-05
RollingBand-fgt: 1.00 [1/1]
GhostDiagnostic-chr: N/A
Centroid-sig: 50.9%
Centroid-so: 0.654 arcsec [0.78σ]
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 [2/2]

TCE 011706231-01, PDC Light Curves

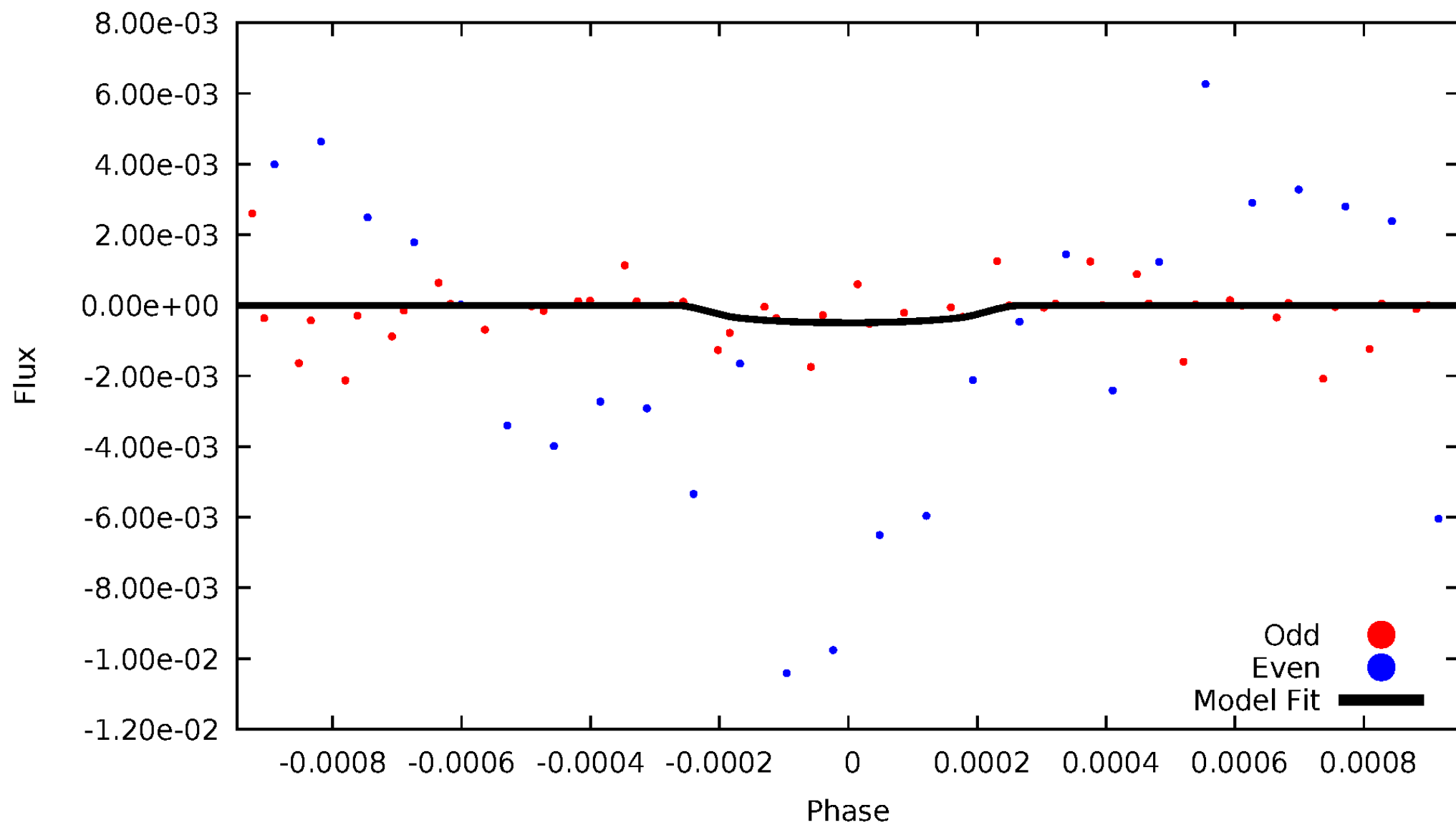


TCE 011706231-01



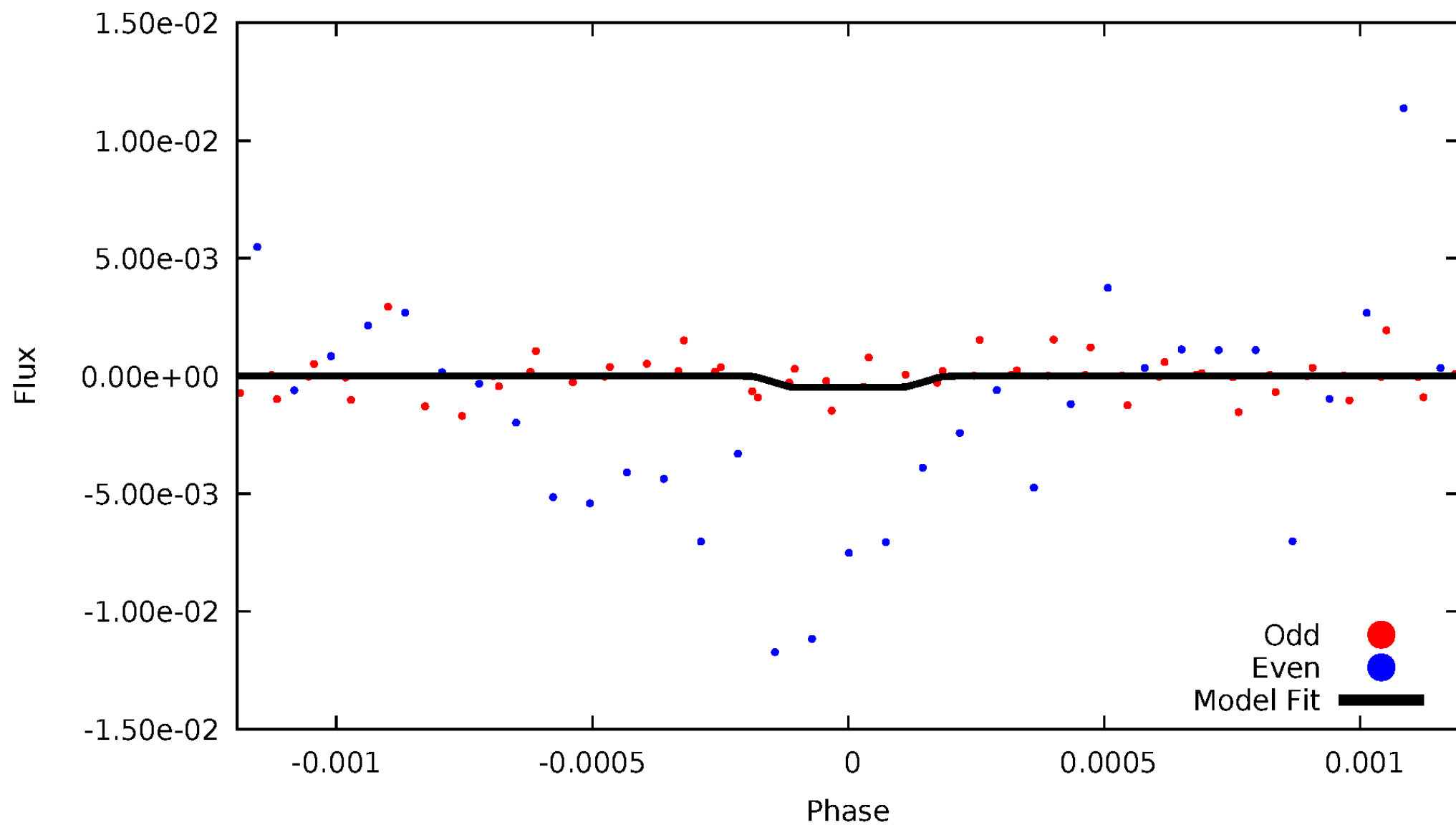
DV Odd/Even

TCE 011706231-01



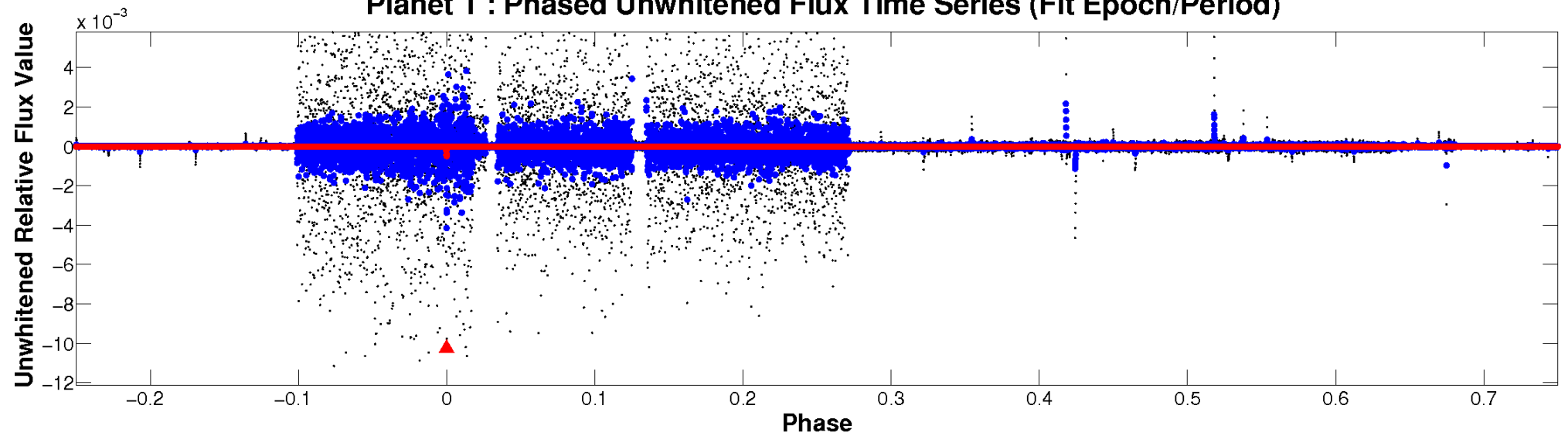
ALT Odd/Even

TCE 011706231-01

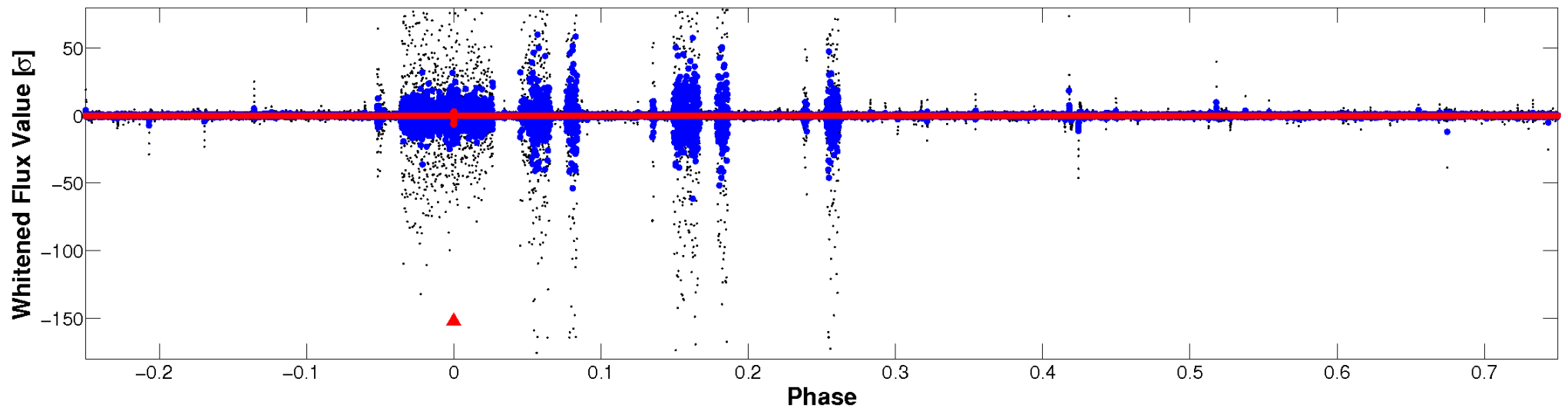


Non-Whitened Vs. Whitened Light Curve

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

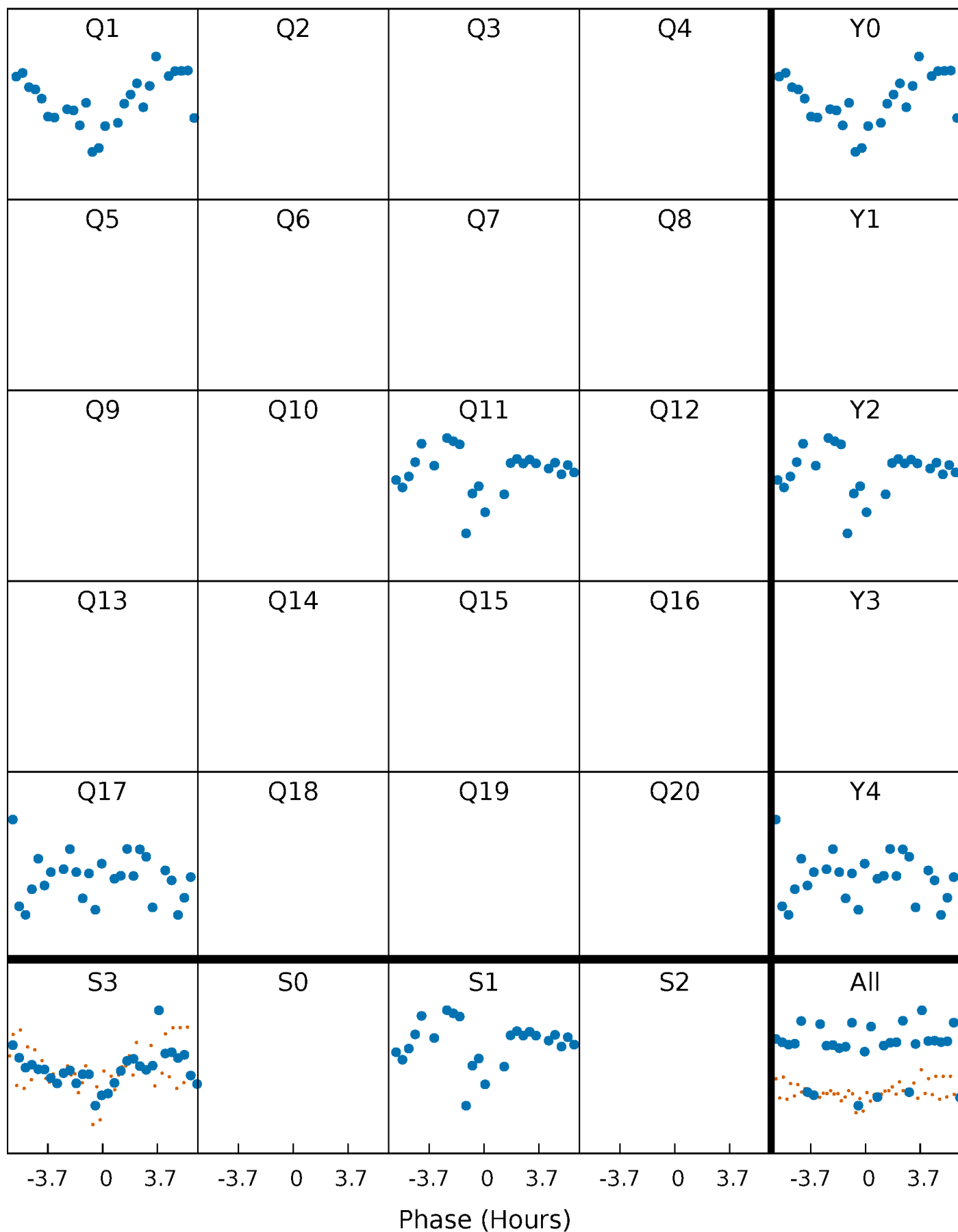


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



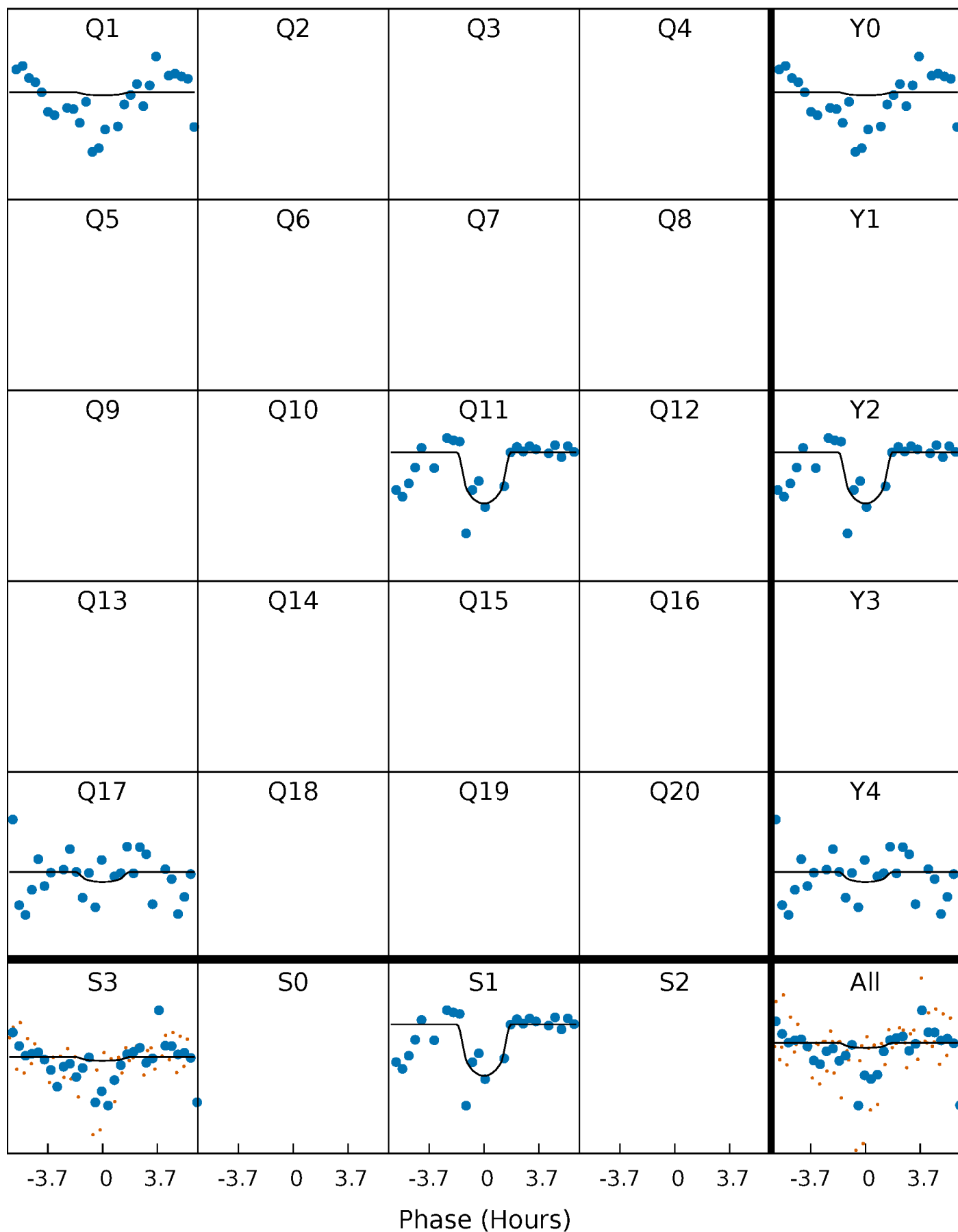
PDC Quarter-Phased Transit Curves

TCE 011706231-01 P=282.802515 Days $T_0=160.044952$ (BKJD)



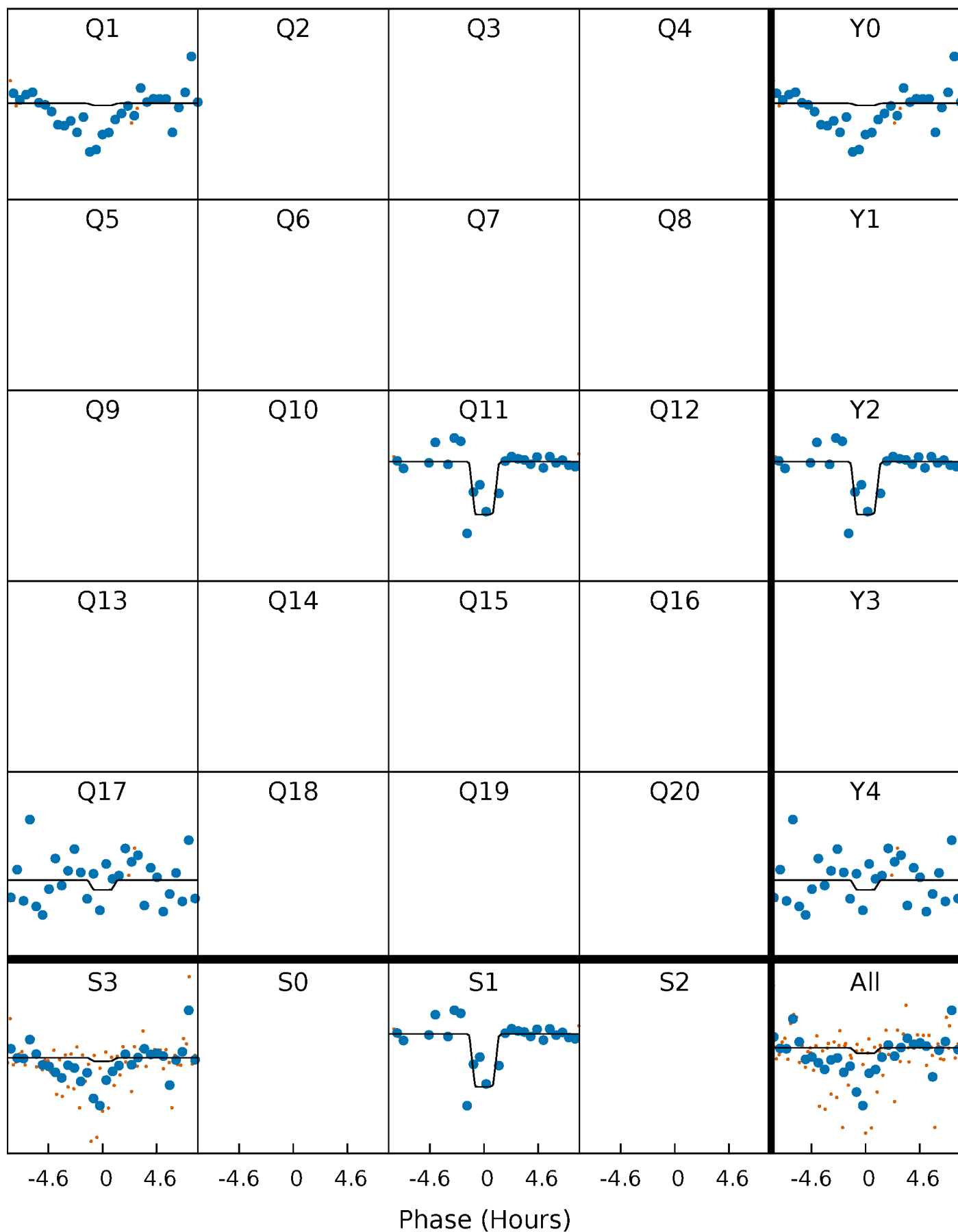
DV Quarter-Phased Transit Curves

TCE 011706231-01 P=282.802515 Days $T_0=160.044952$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

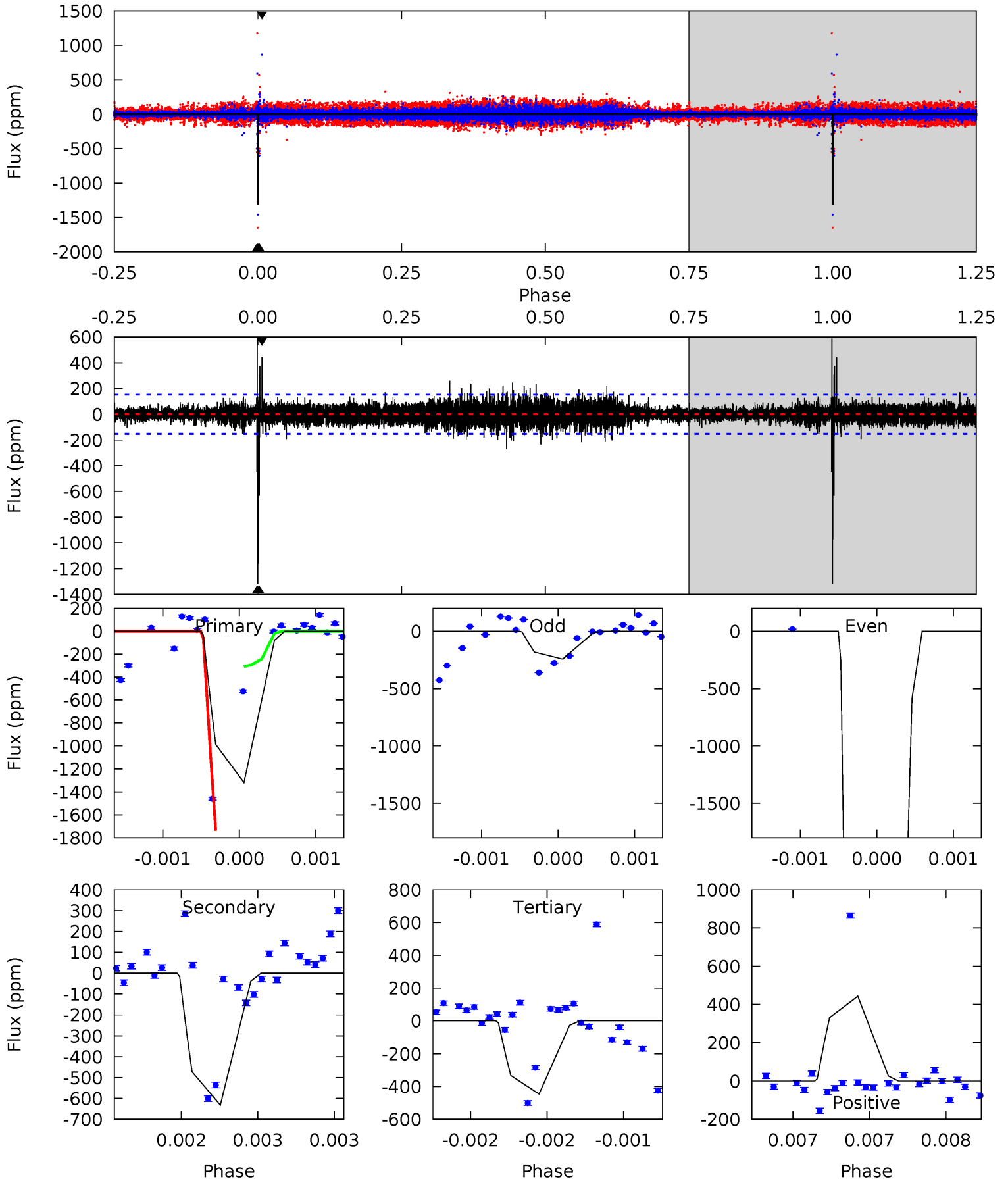
TCE 011706231-01 P=282.798366 Days $T_0=160.058450$ (BKJD)



DV Model-Shift Uniqueness Test

011706231-01, P = 282.802515 Days, E = 160.044952 Days

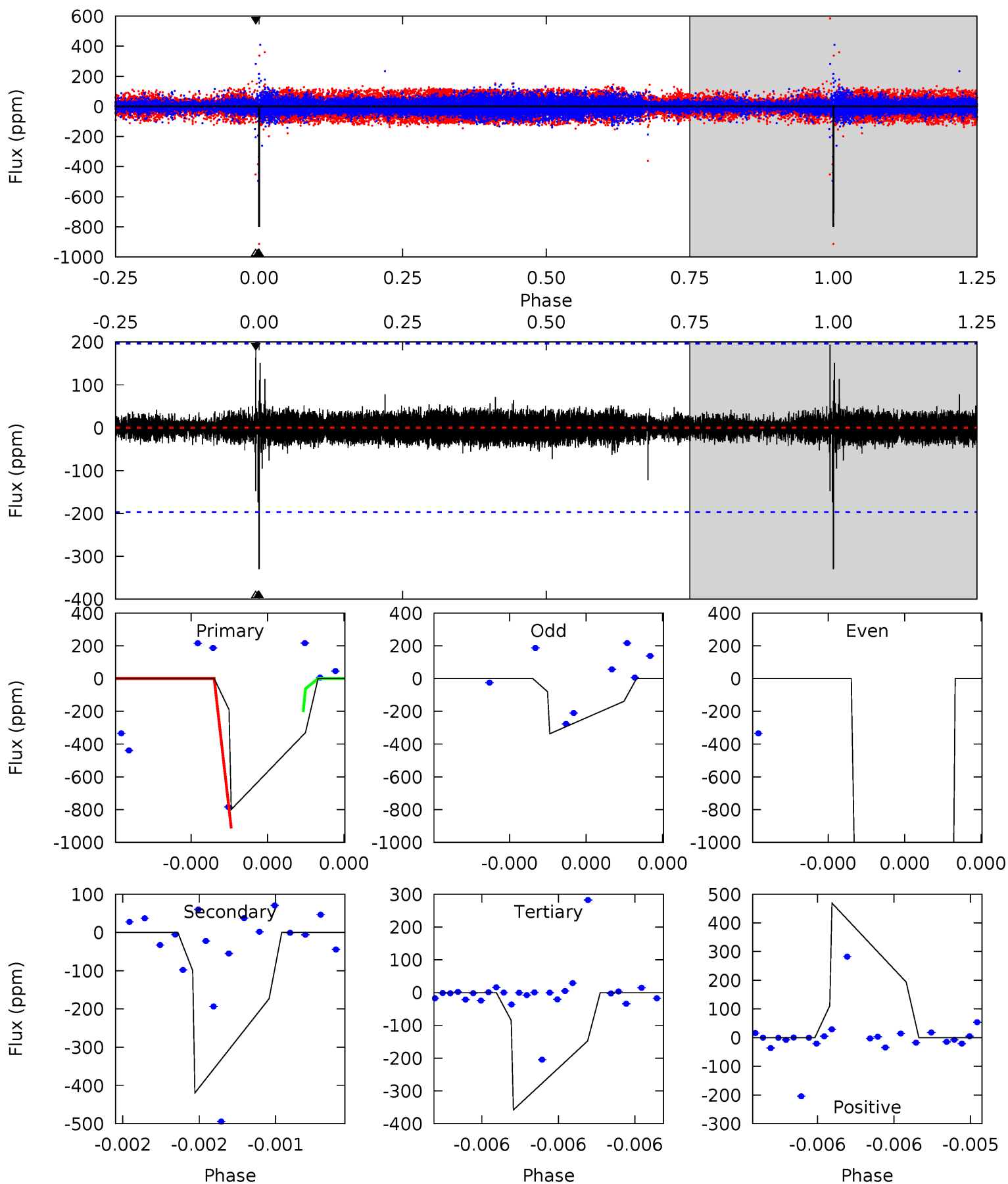
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.2	23.1	16.3	16.2	5.56	3.46	1.44	31.9	32.0	6.80	6.89	40.7	5.64	0.31	0



Alt Model-Shift Uniqueness Test

011706231-01, P = 282.798366 Days, E = 160.058450 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.44	4.95	4.23	5.54	5.62	3.56	0.37	5.21	3.90	0.73	-0.58	70.6	9.74	0.37	0



Stellar Parameters For KIC 011706231

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3274^{+117}_{-78}	$0.108^{+0.195}_{-0.052}$	$-0.080^{+0.250}_{-0.150}$	$154.296^{+7.354}_{-27.576}$	$1.114^{+0.207}_{-0.128}$	$0.000^{+0.000}_{-0.000}$
	+4%/-2%	+181%/-48%	+312%/-188%	+5%/-18%	+19%/-11%	+93%/-14%
Source	KIC0	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 011706231-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-632 ± 27	$900.36^{+881.25}_{-634.20}$	2641^{+118}_{-135}	2048^{+1714}_{-4556}	$0.341^{+3.672}_{-0.255}$
Alt.	-173 ± 35	$904.64^{+822.93}_{-600.78}$	2646^{+106}_{-139}	-2461^{+5228}_{-145}	$0.088^{+0.691}_{-0.065}$

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

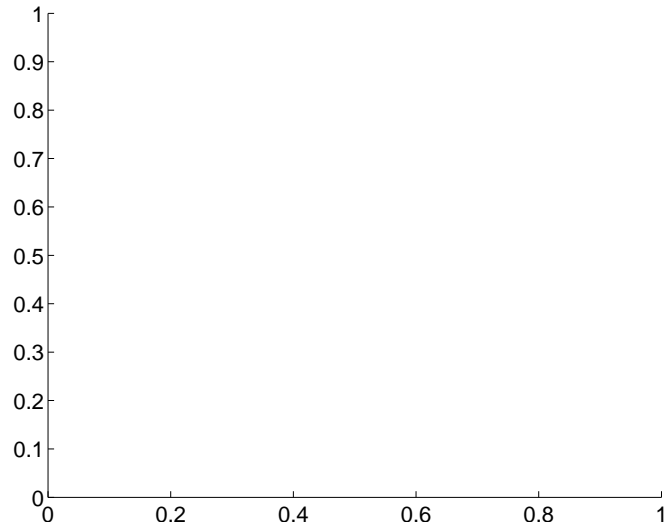
Supplemental centroid analysis for 011706231-01. **Kepler magnitude: 9.18.** Transit SNR 27.94

There are 0 quarters with good PRF difference image offsets

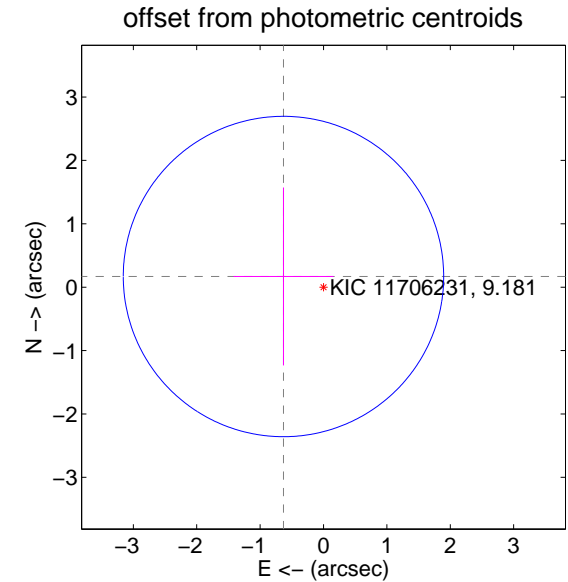
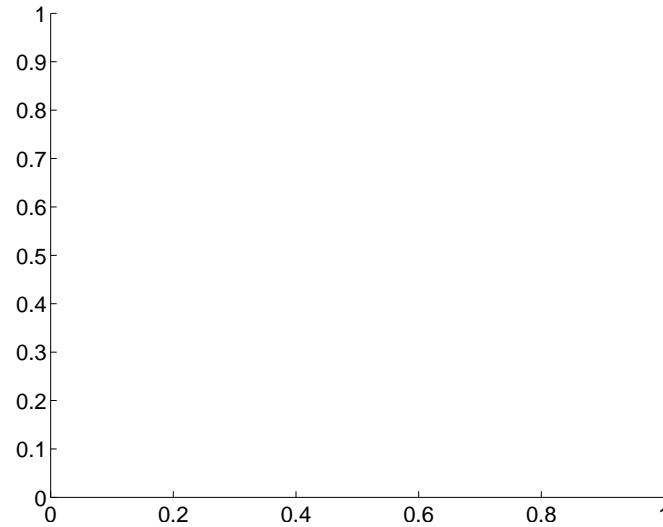
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	0.65 ± 0.84	0.78	0.63 ± 0.79	0.17 ± 1.40

There is no PRF-fit offset from OOT-fit

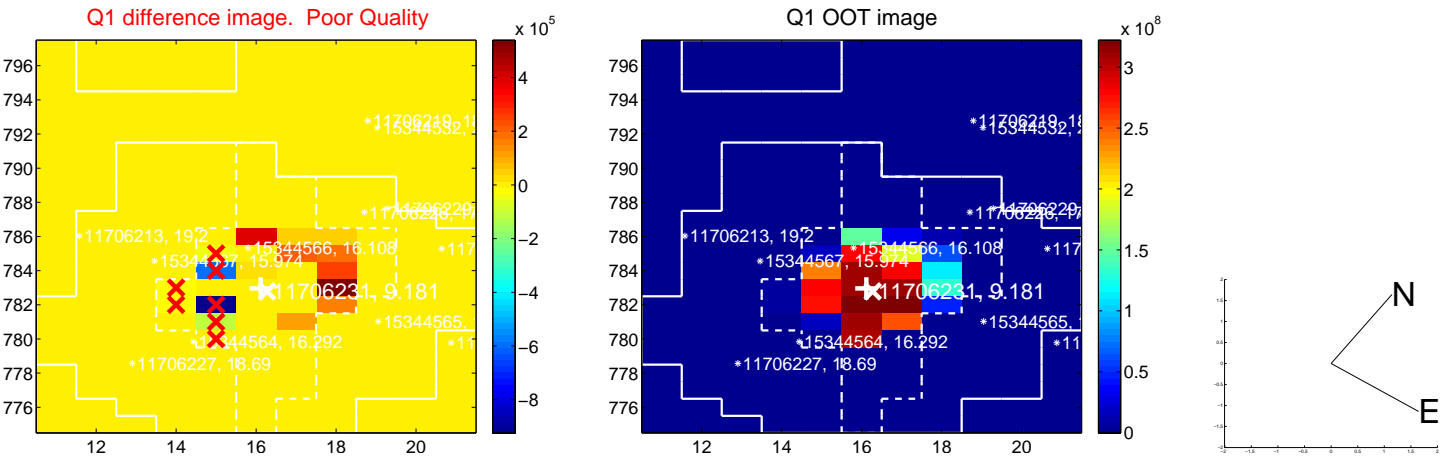


There is no PRF-fit offset from KIC



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.



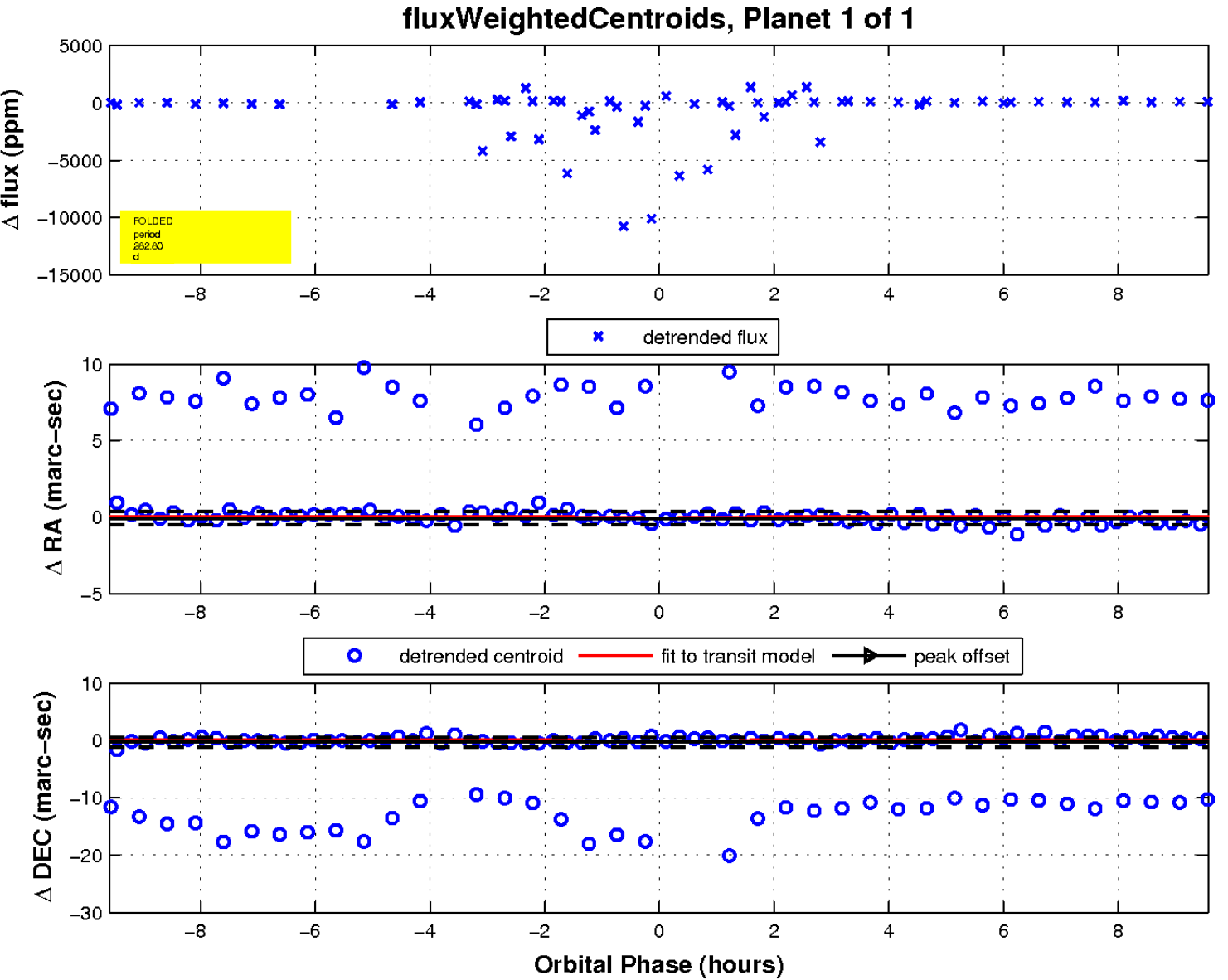
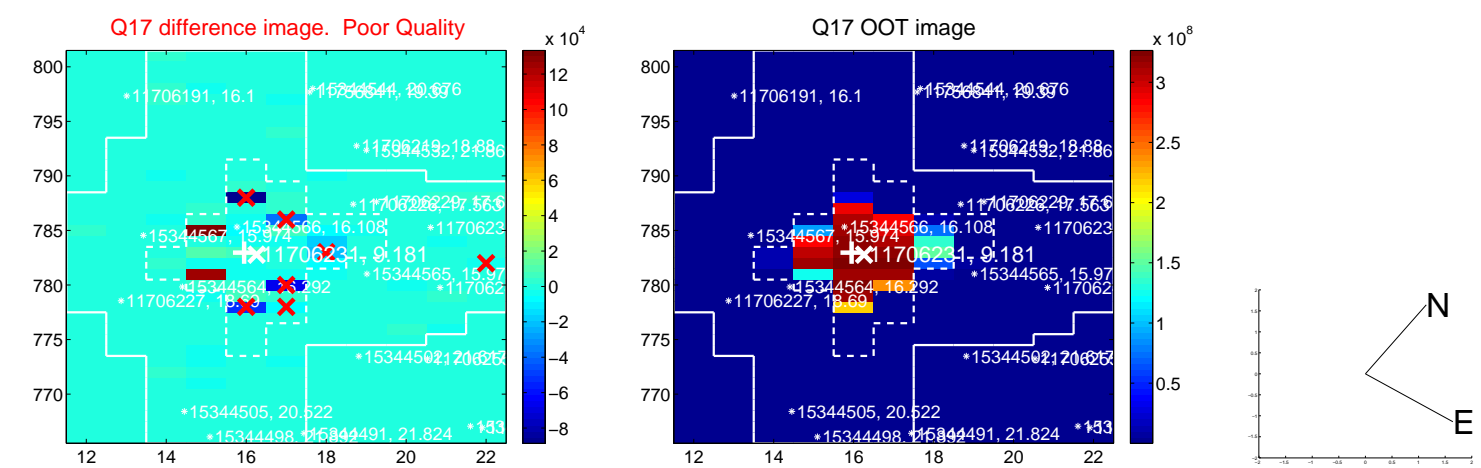
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

