

KIC 007882360

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})
007882360-01	OBS	7853.01	364.146608	376.410050	500.7	15.617	7.5	7.4	0.95	6039	2.29	1.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007882360-01	OBS	FP	0.00	0	0	1	0	CENT_FEW_DIFFS—HALO_GHOST

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

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

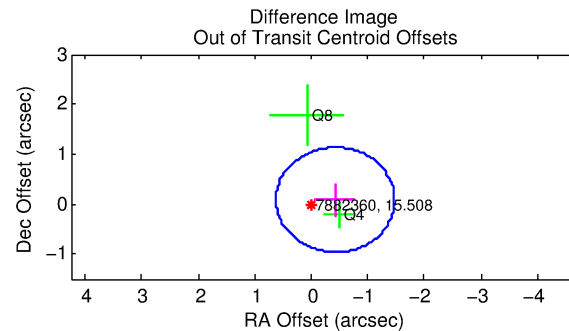
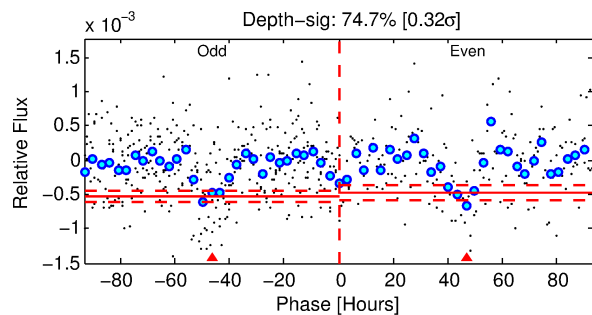
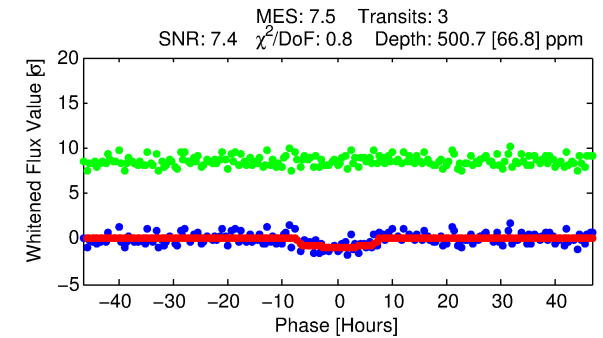
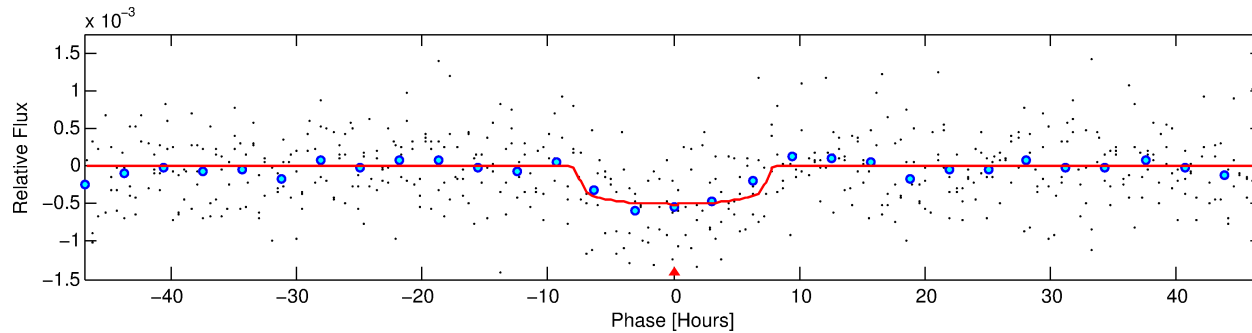
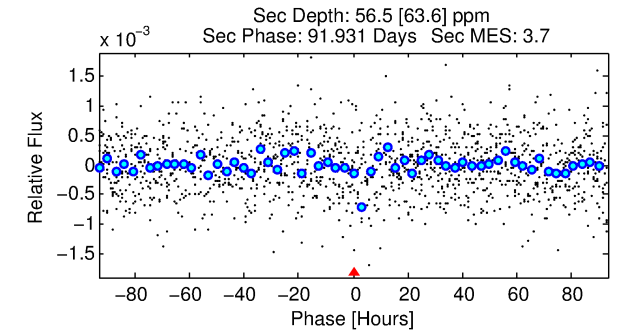
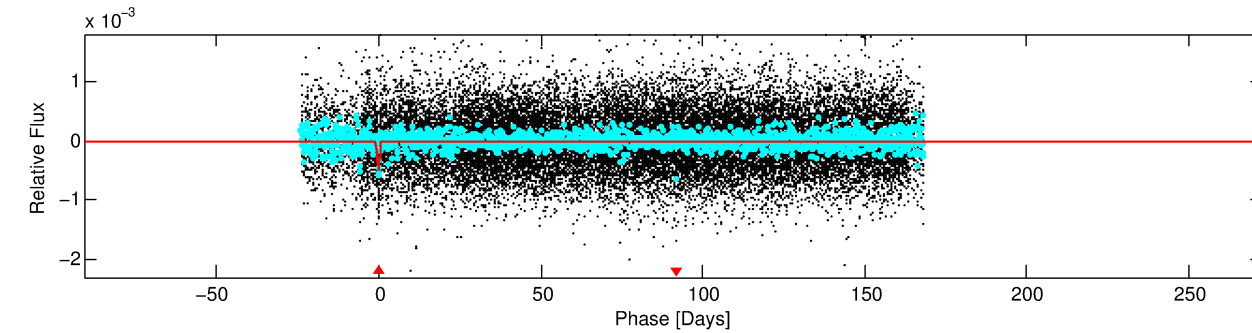
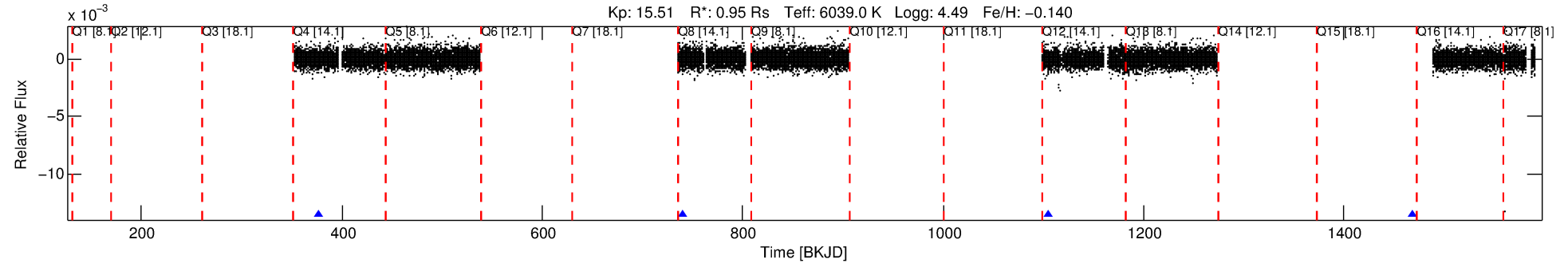
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007882360-01

No Significant Match Found

DV One-Page Summary

KIC: 7882360 Candidate: 1 of 1 Period: 364.147 d



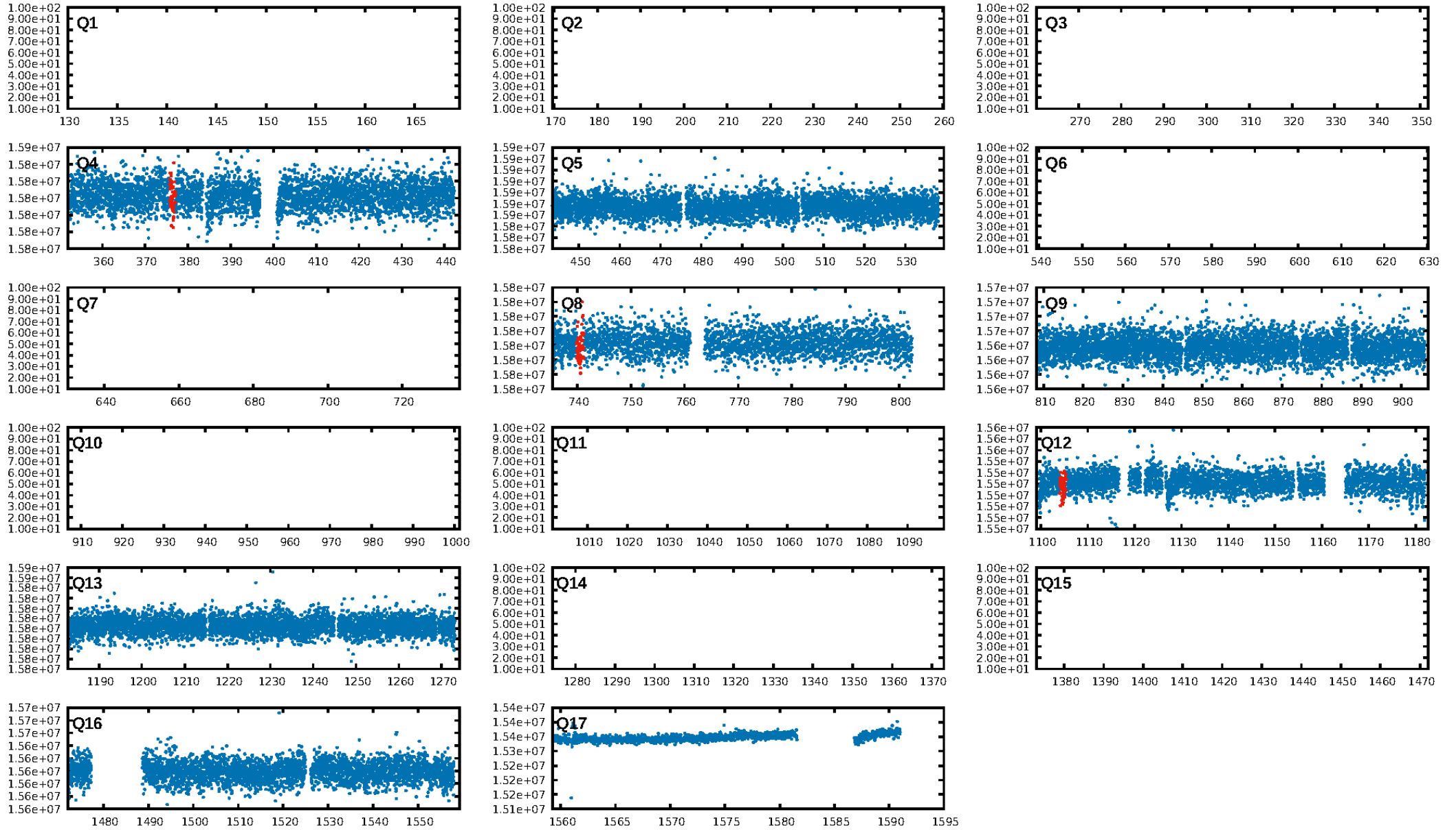
DV Fit Results:

Period = 364.14661 [0.01767] d
Epoch = 376.4100 [0.0229] BKJD
Rp/R* = 0.0220 [0.0078]
a/R* = 129.23 [221.51]
b = 0.72 [1.15]
Seff = 1.06 [0.46]
Teq = 259 [28] K
Rp = 2.29 [1.12] Re
a = 1.0069 [0.2809] AU
Ag = 6027.98 [8383.25] [0.72σ]
Teffp = 3527 [1182] K [2.76σ]

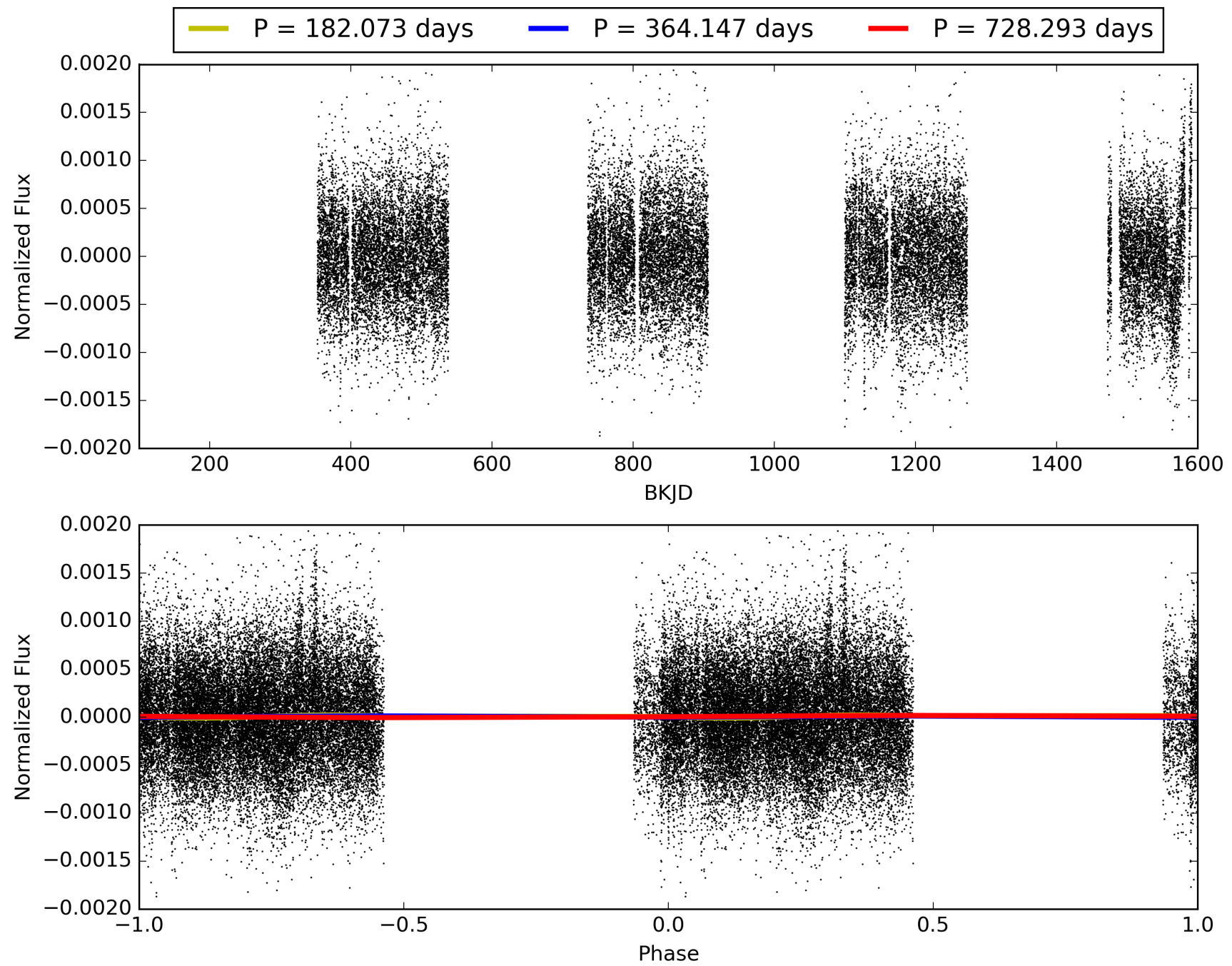
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 49.9%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 8.07e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.1454
Centroid-sig: 0.9%
Centroid-so: 2.981 arcsec [5.01σ]
OotOffset-rm: 0.432 arcsec [1.23σ]
KicOffset-rm: 1.570 arcsec [1.86σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007882360-01, PDC Light Curves

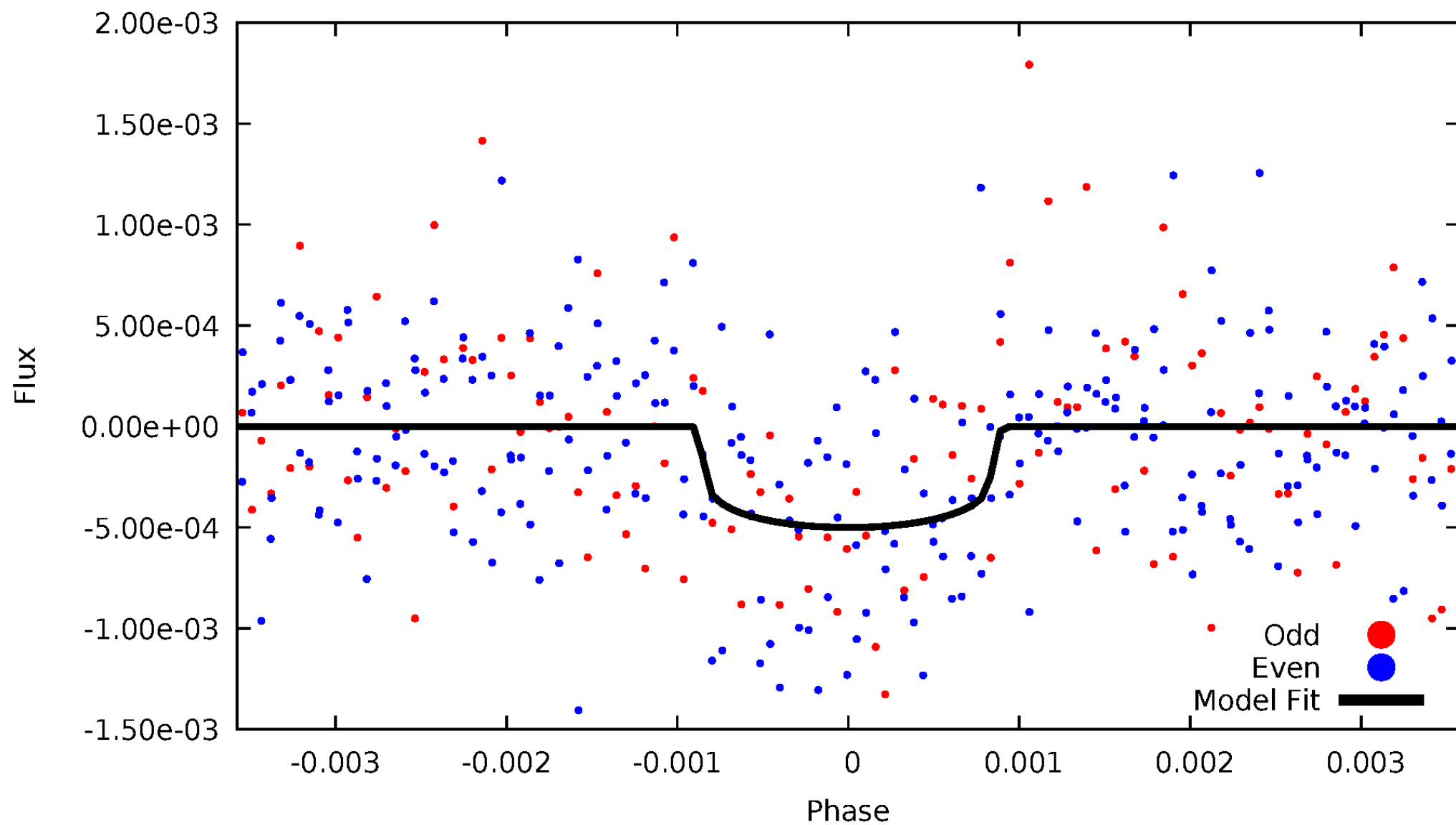


TCE 007882360-01



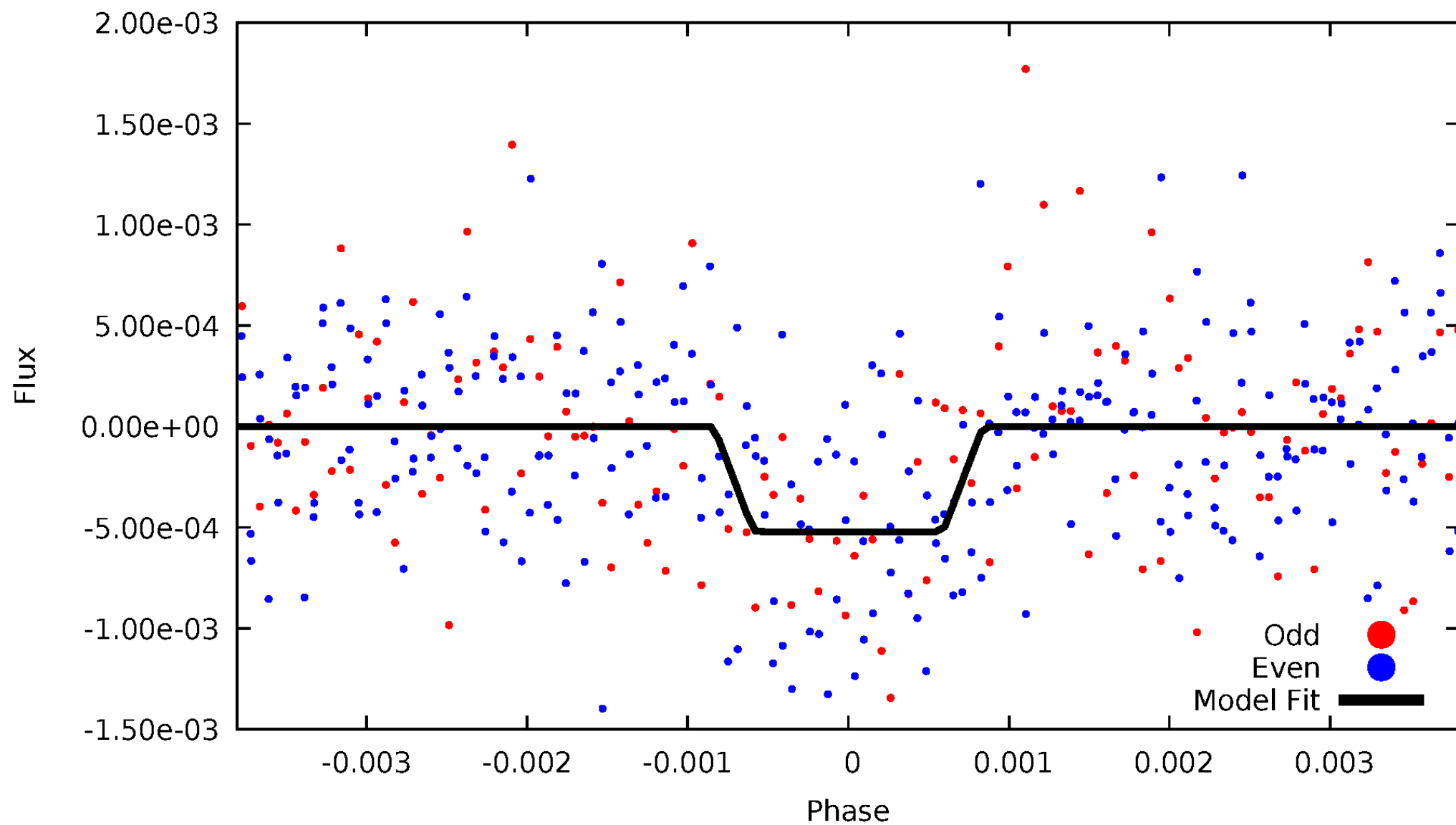
DV Odd/Even

TCE 007882360-01



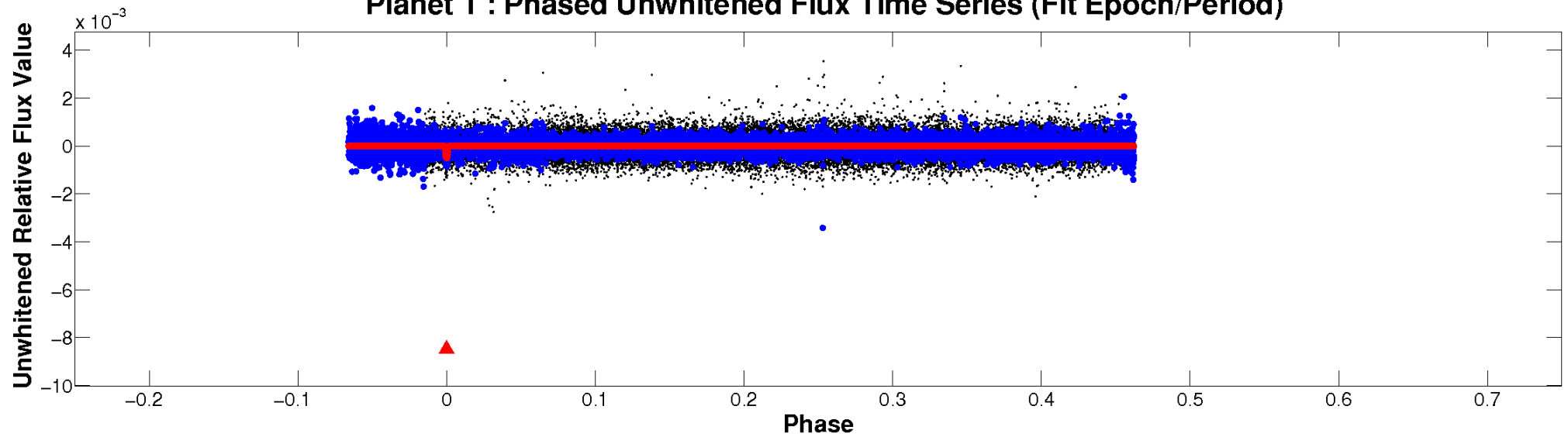
ALT Odd/Even

TCE 007882360-01

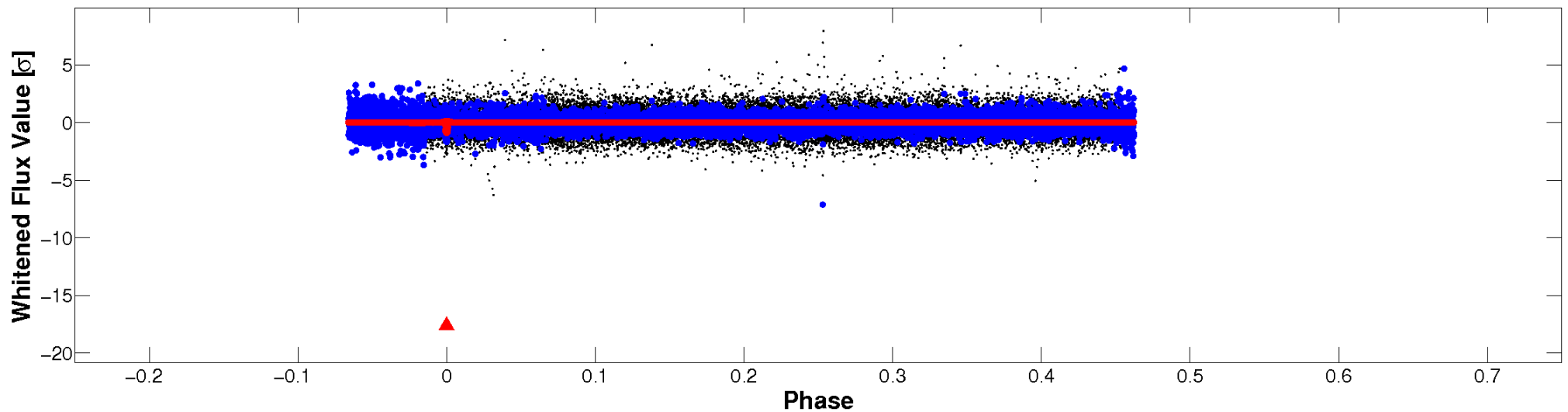


Non-Whitened Vs. Whitened Light Curve

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



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



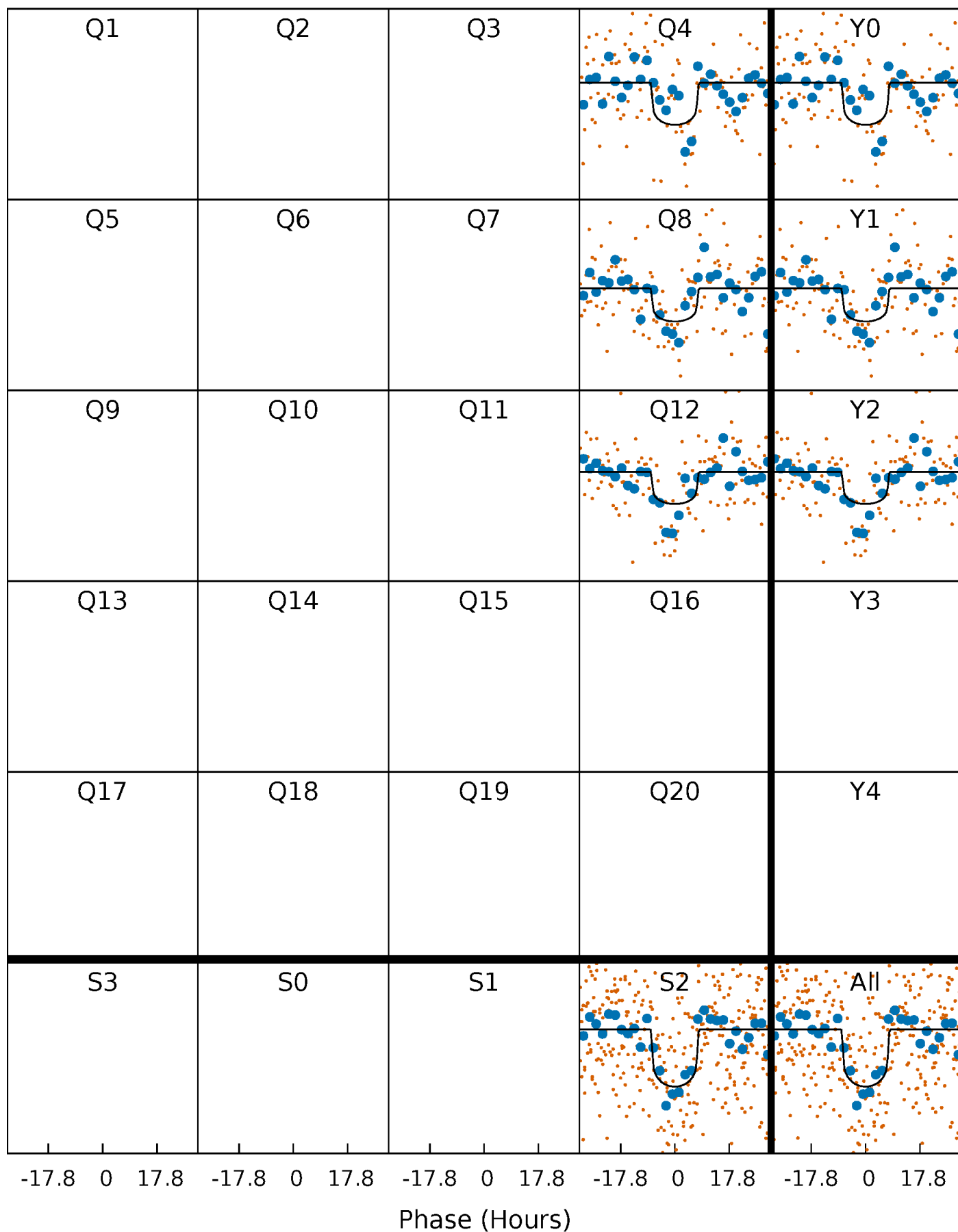
PDC Quarter-Phased Transit Curves

TCE 007882360-01 P=364.146608 Days $T_0=376.410050$ (BKJD)



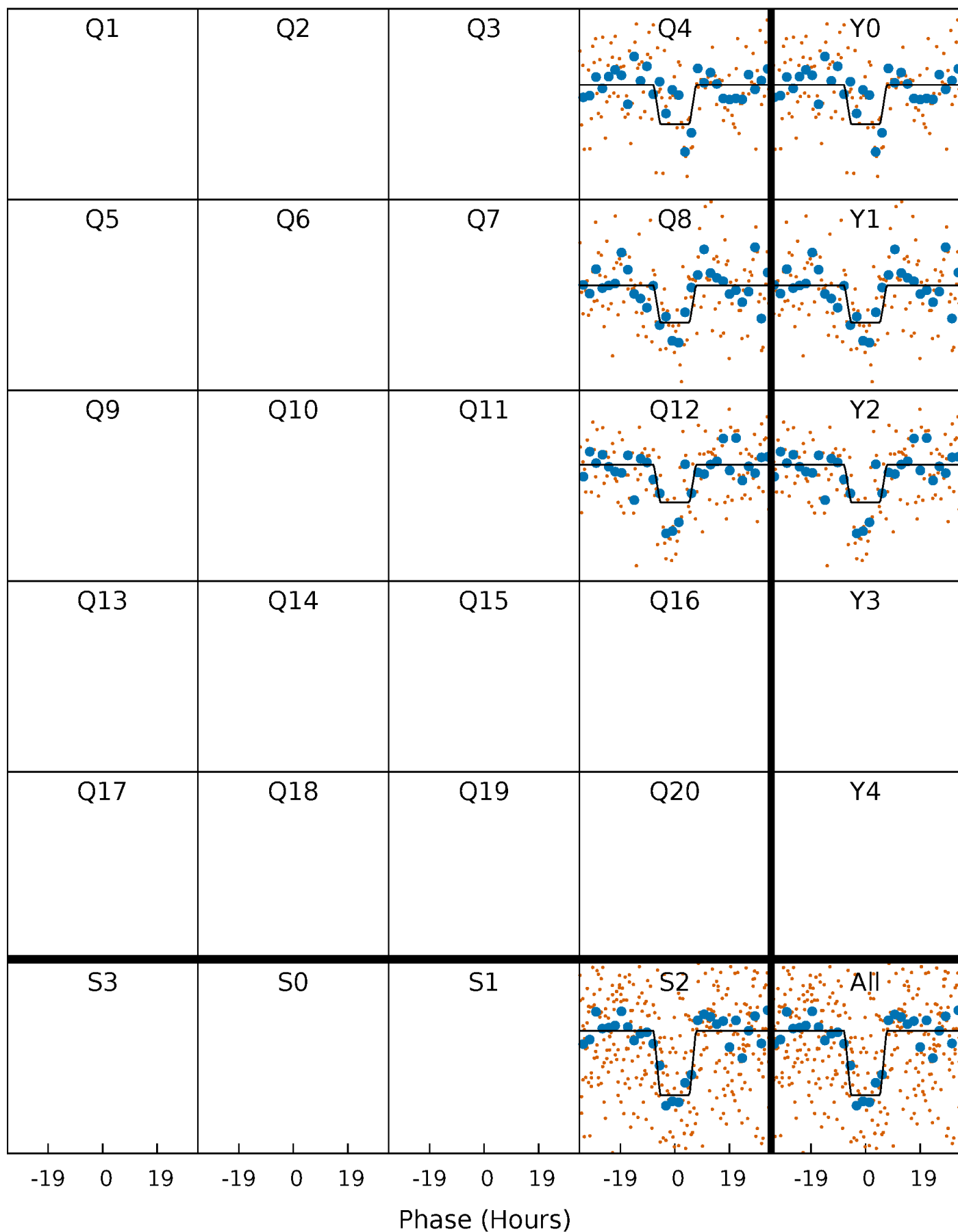
DV Quarter-Phased Transit Curves

TCE 007882360-01 P=364.146608 Days $T_0=376.410050$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

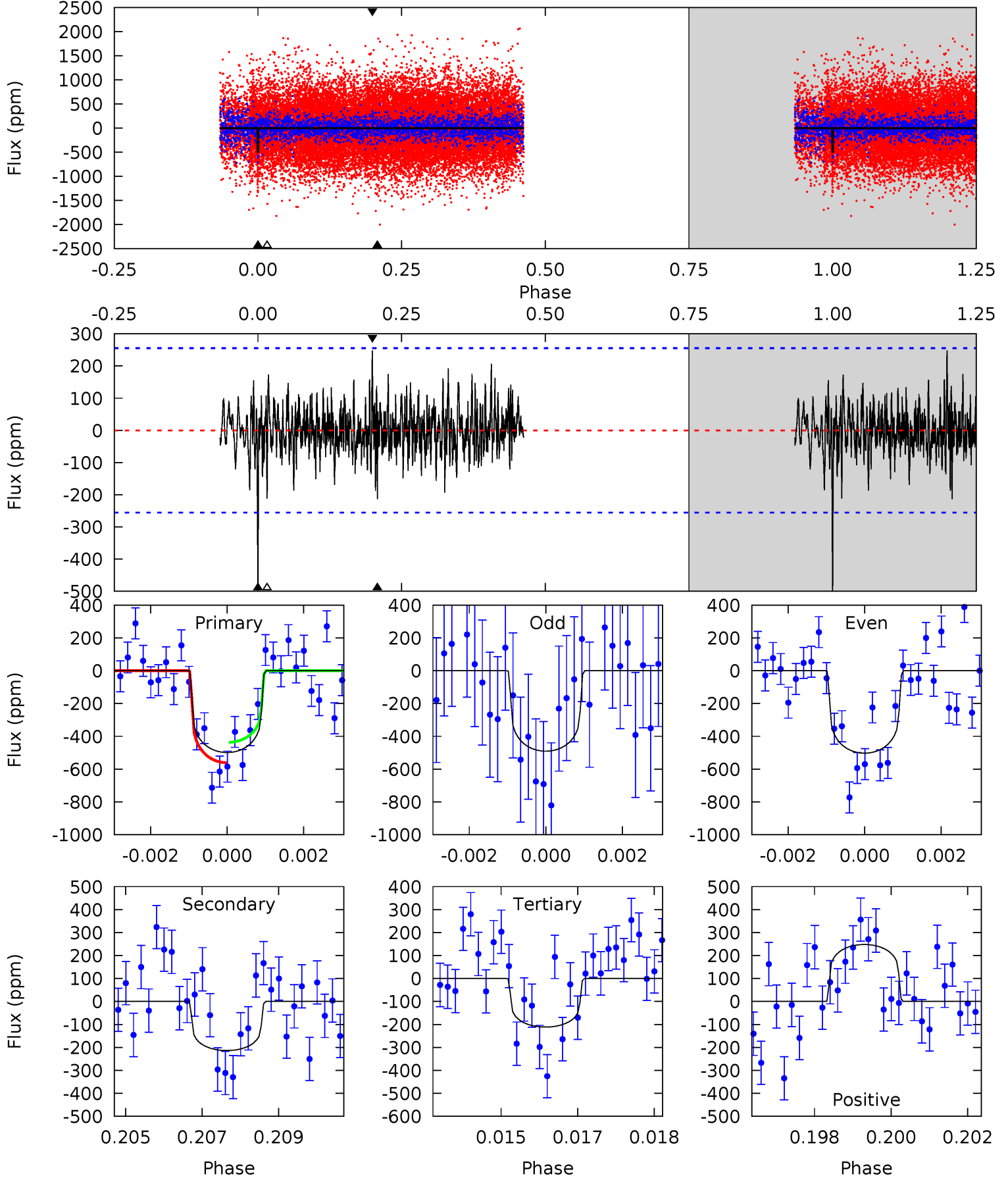
TCE 007882360-01 P=364.146473 Days $T_0=376.392885$ (BKJD)



DV Model-Shift Uniqueness Test

007882360-01, P = 364.146608 Days, E = 12.263442 Days

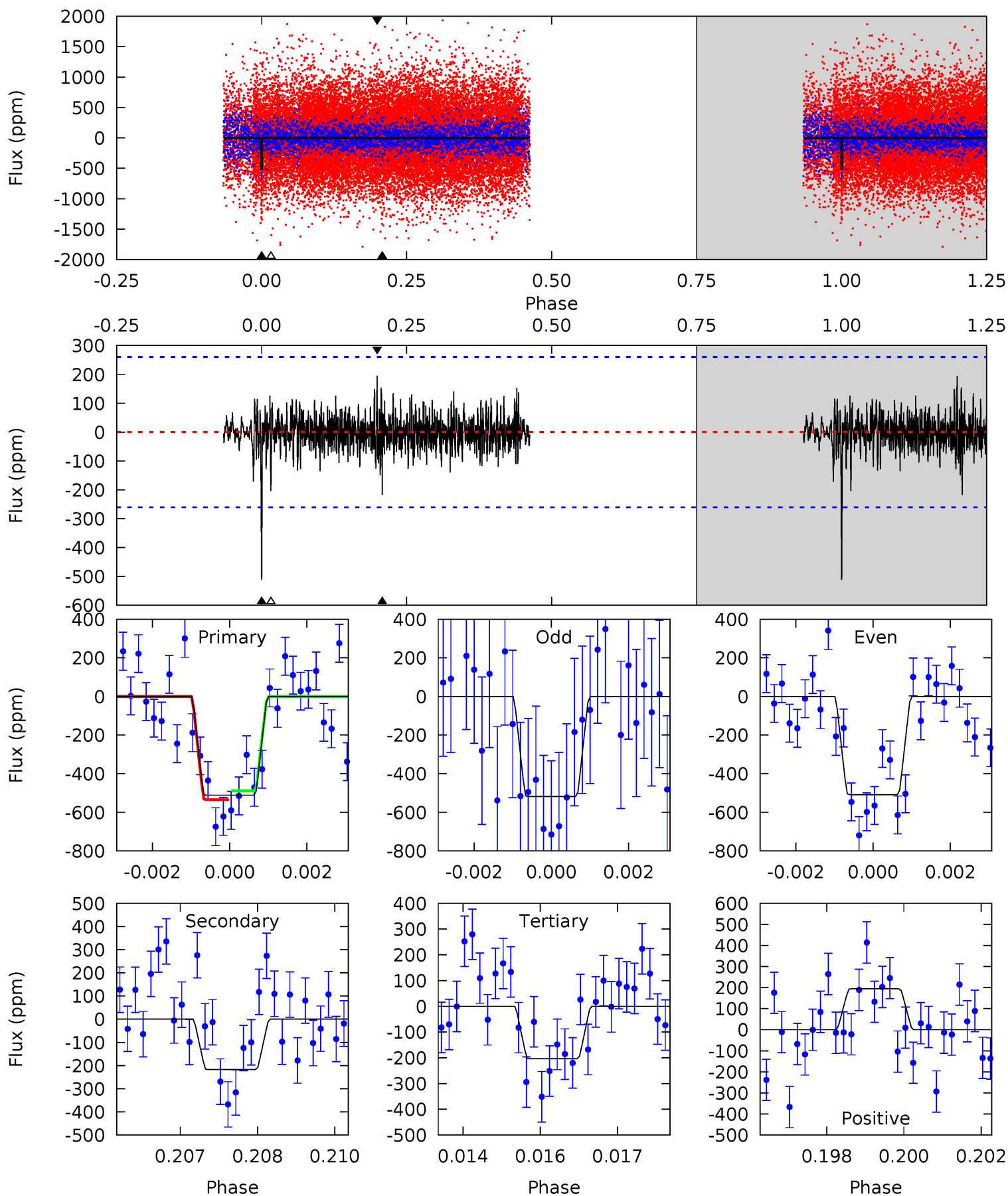
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	4.47	4.42	5.18	5.34	3.11	1.28	6.01	5.24	0.05	-0.71	0.12	1.01	0.33	1.31



Alt Model-Shift Uniqueness Test

007882360-01, $P = 364.146473$ Days, $E = 12.246412$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	4.46	4.18	3.99	5.35	3.13	0.98	6.33	6.52	0.28	0.47	0.09	0.98	0.28	0.48



Stellar Parameters For KIC 007882360

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6039^{+189}_{-231}	$4.493^{+0.054}_{-0.216}$	$-0.140^{+0.300}_{-0.300}$	$0.951^{+0.320}_{-0.107}$	$1.027^{+0.141}_{-0.141}$	$1.685^{+0.485}_{-0.935}$
	+3%/-4%	+1%/-5%	+214%/-214%	+34%/-11%	+14%/-14%	+29%/-55%
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 007882360-01 / KOI 7853.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-214 ± 48	$2.34^{+0.98}_{-0.85}$	370^{+29}_{-19}	5009^{+1292}_{-641}	20892^{+33721}_{-10994}
Alt.	-217 ± 49	$2.44^{+1.02}_{-0.82}$	370^{+31}_{-20}	4964^{+1097}_{-651}	19463^{+26145}_{-10420}

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

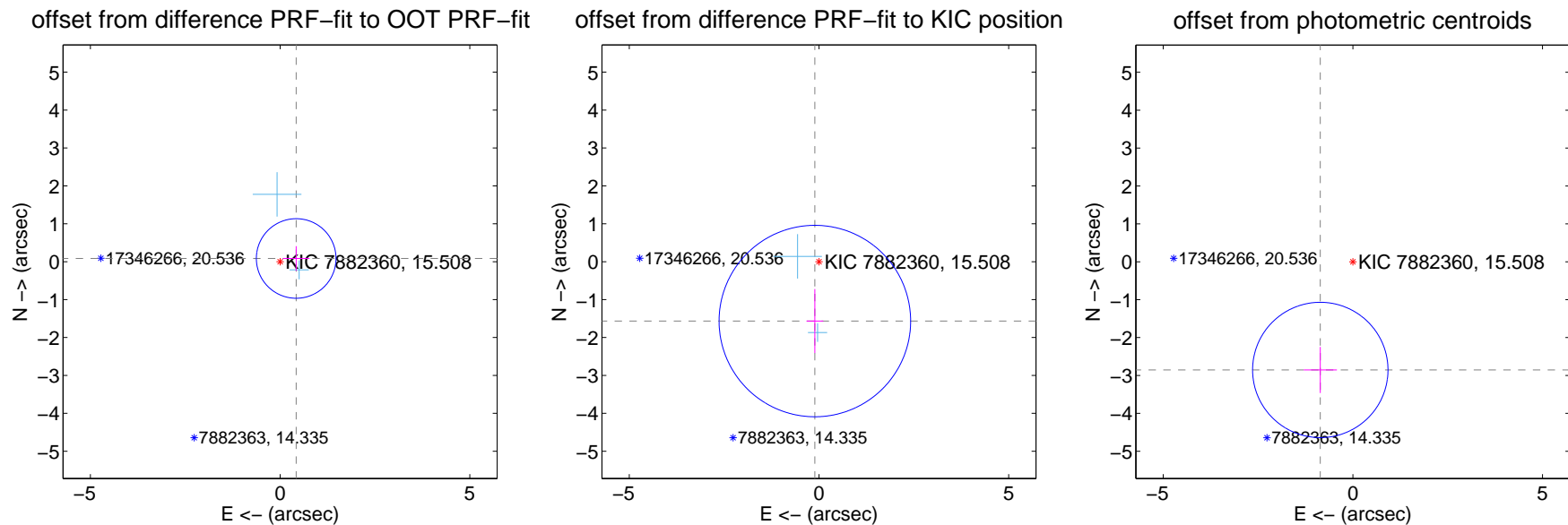
DV Centroid Data

Supplemental centroid analysis for 007882360-01. Kepler magnitude: 15.51. Transit SNR 7.44

There are 2 quarters with good PRF difference image offsets

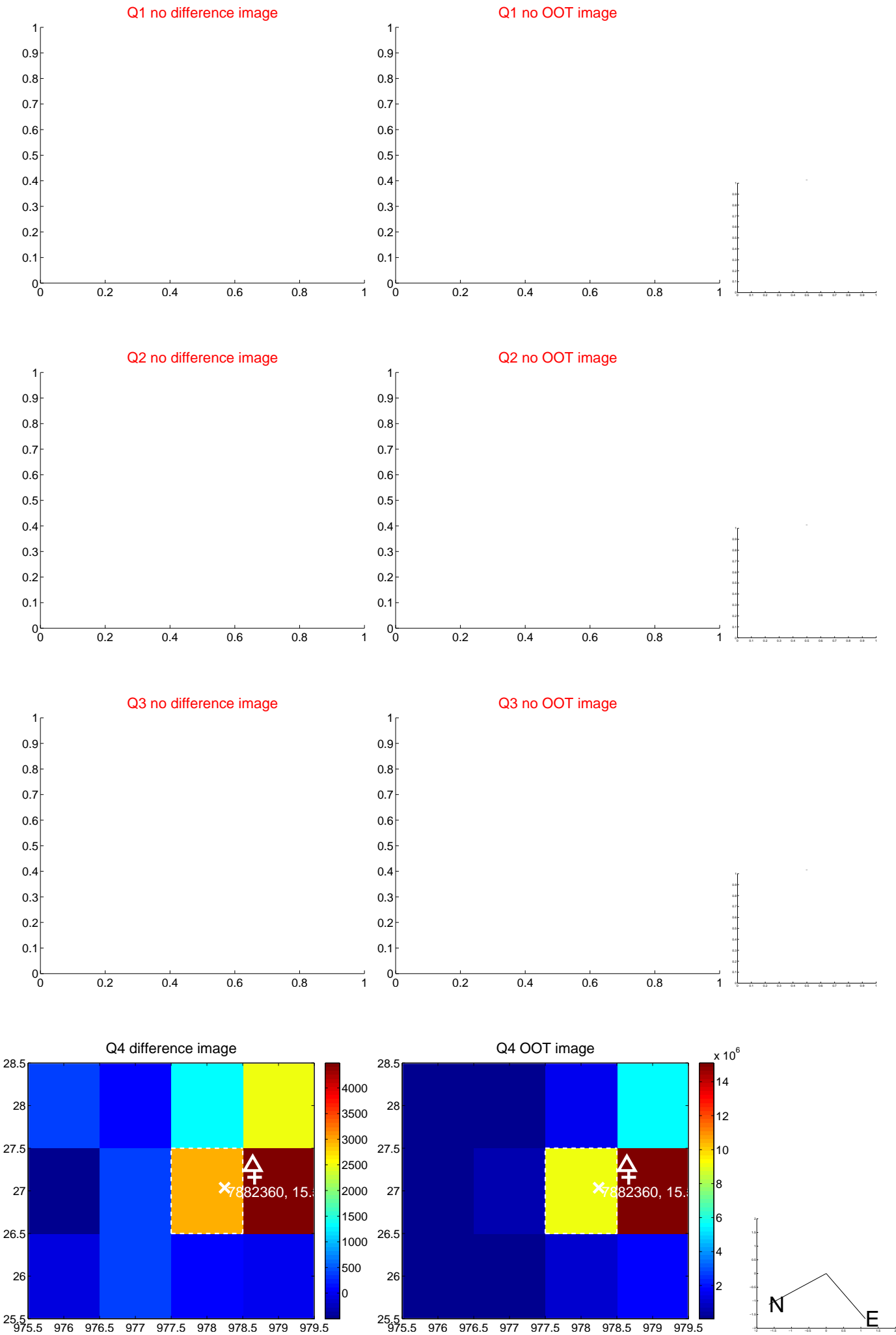
The direct PRF centroid is offset from the target star catalog position by about 1.71 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.432 ± 0.350	1.23	-0.424 ± 0.351	0.085 ± 0.325
PRF-fit source offset from KIC position	1.570 ± 0.842	1.86	0.109 ± 0.220	-1.566 ± 0.844
photometric centroid source offset	2.98 ± 0.60	5.01	0.86 ± 0.44	-2.85 ± 0.61



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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

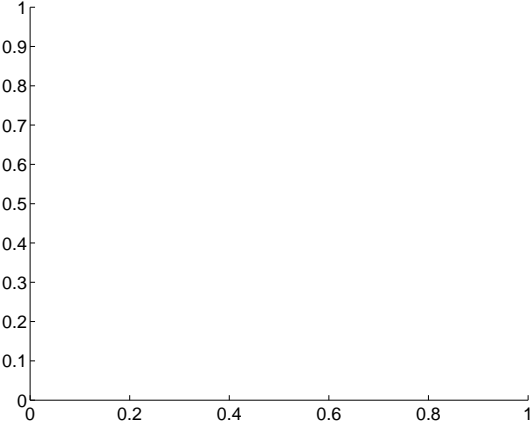
Q5 no difference image



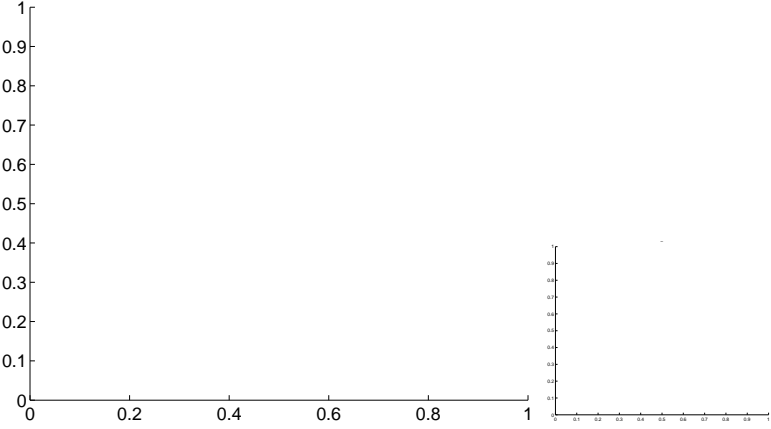
Q5 no OOT image



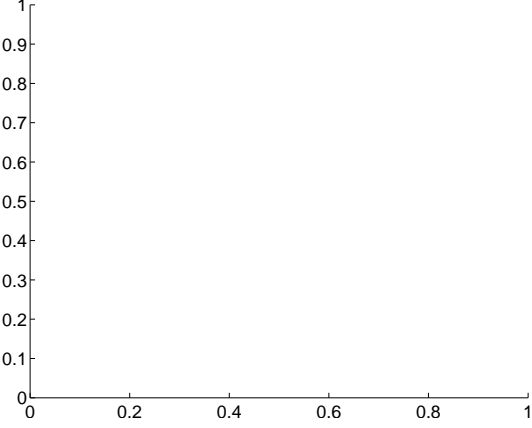
Q6 no difference image



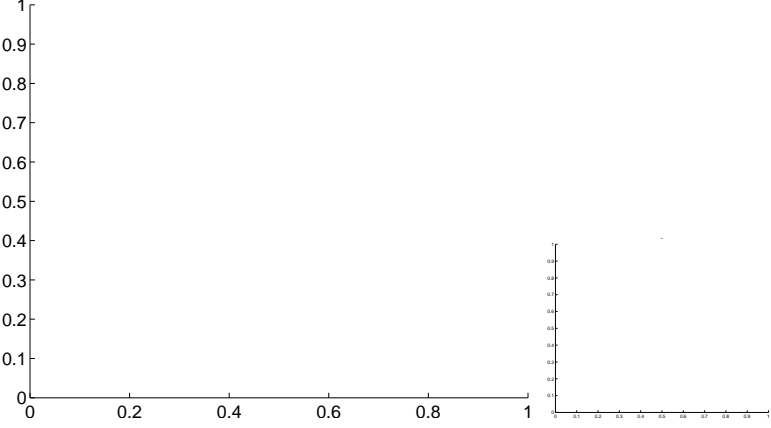
Q6 no OOT image



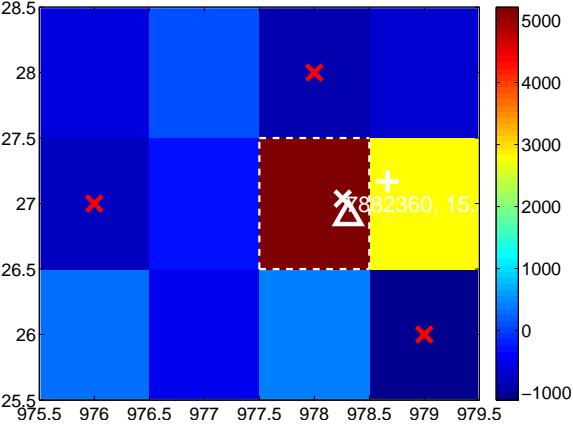
Q7 no difference image



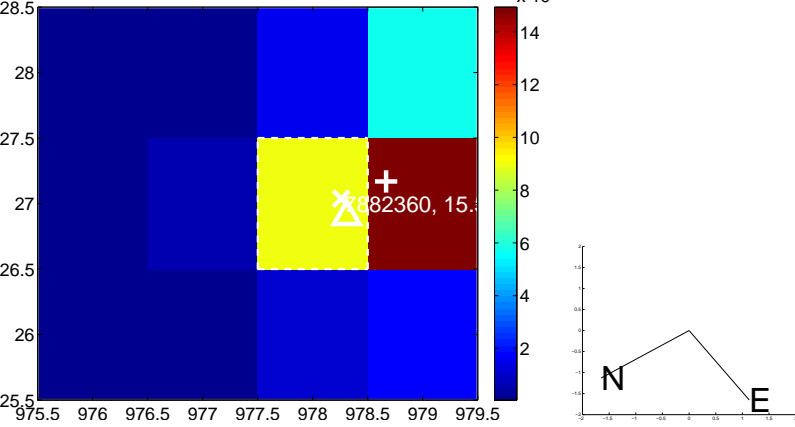
Q7 no OOT image



Q8 difference image



Q8 OOT image



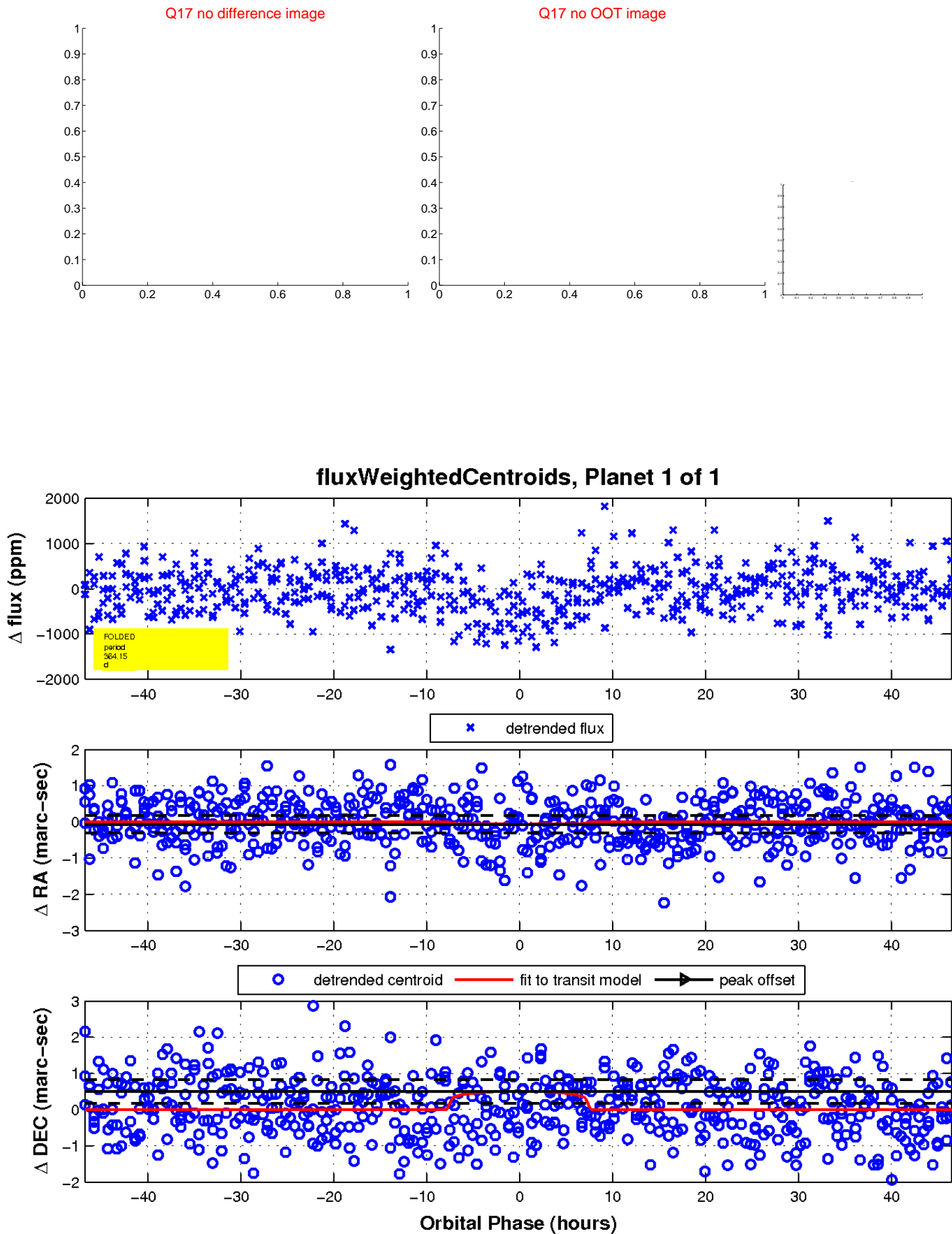
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

