

KIC 008881388

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})
008881388-01	OBS	No	70.926840	157.392155	1580.1	17.188	8.4	6.0	0.16	3089	0.62	0.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008881388-01	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_KIC_POS

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

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

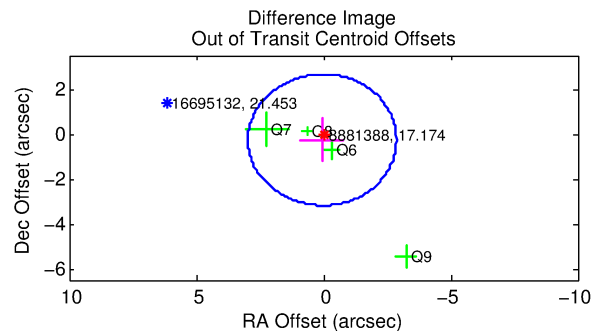
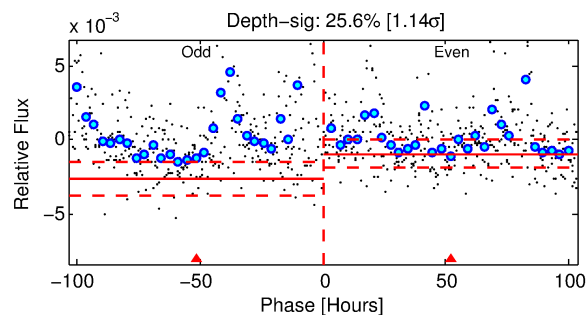
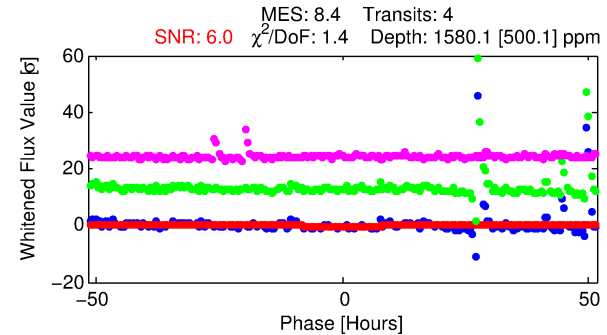
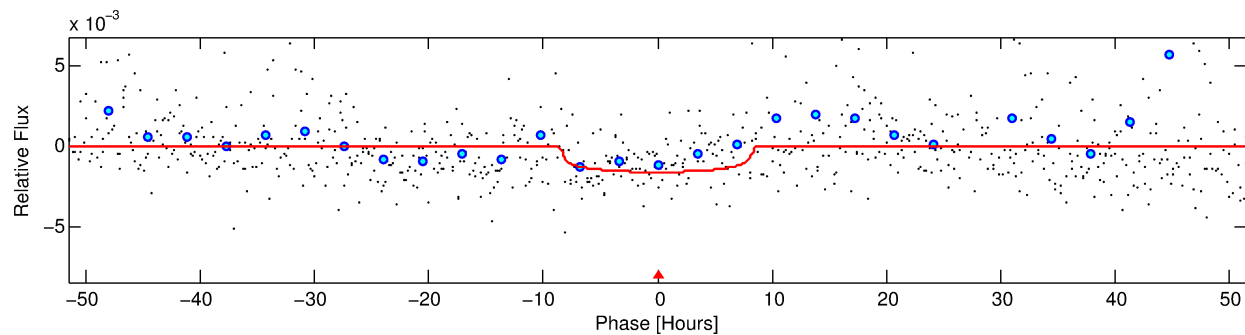
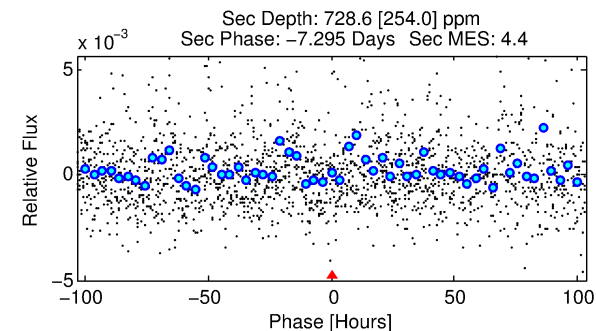
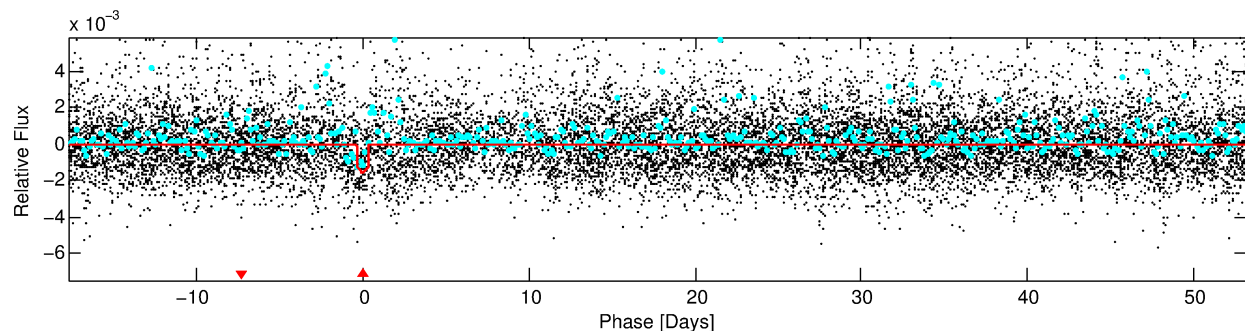
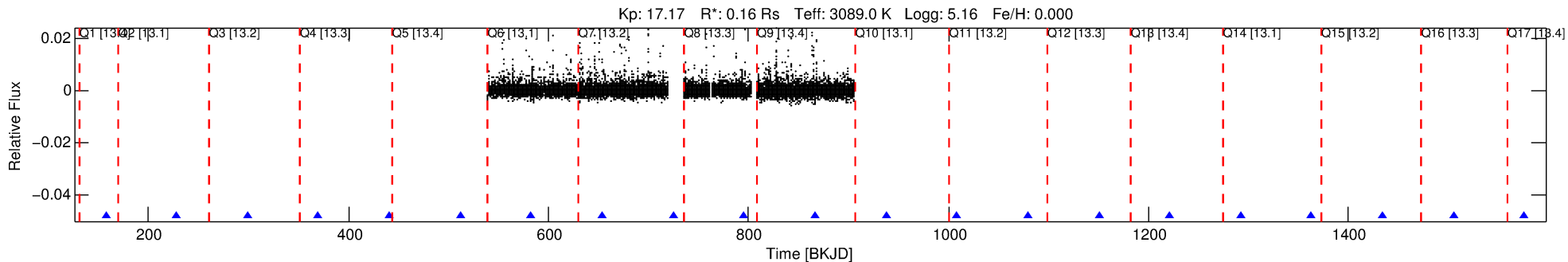
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008881388-01

No Significant Match Found

DV One-Page Summary

KIC: 8881388 Candidate: 1 of 1 Period: 70.927 d



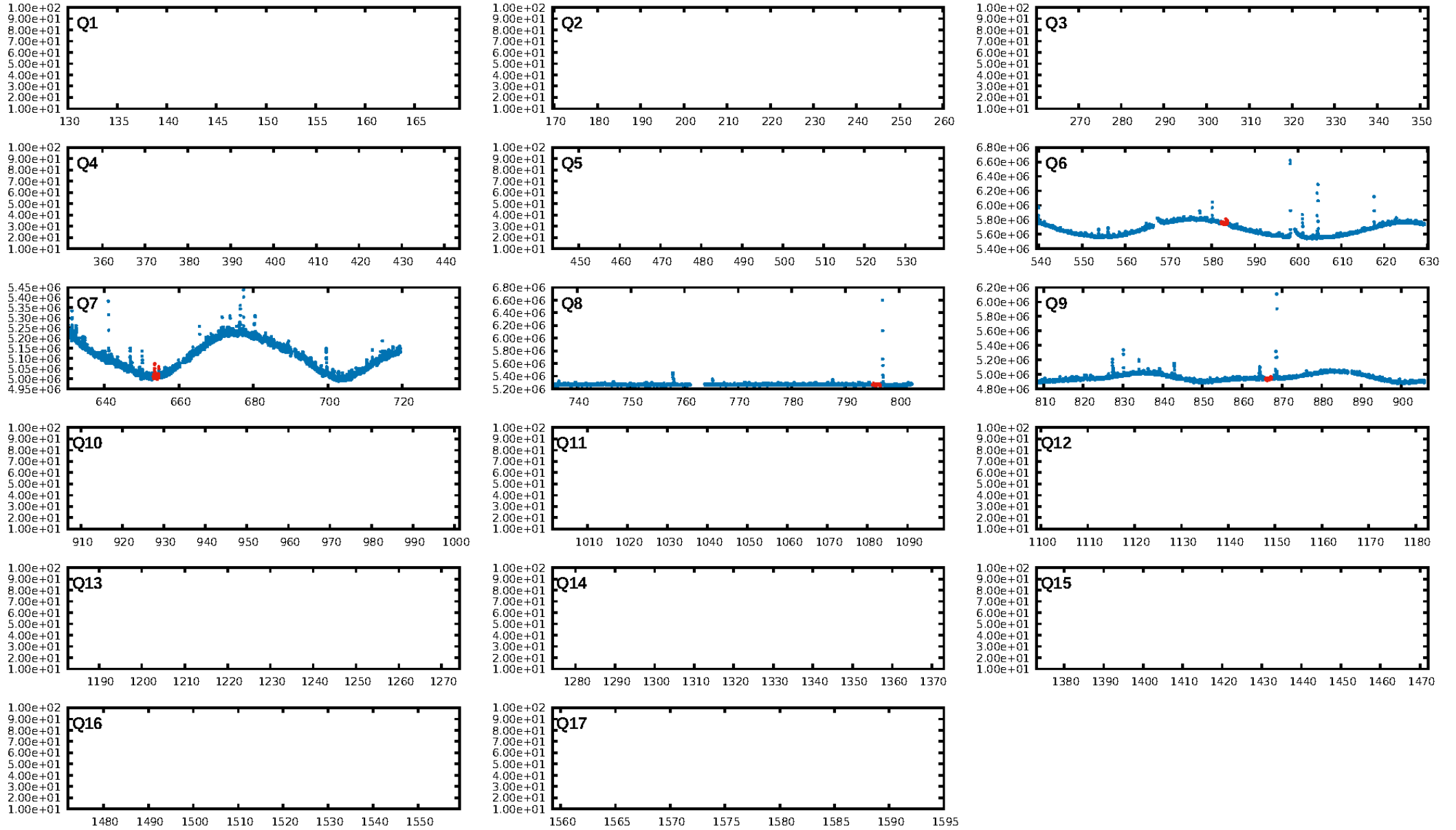
DV Fit Results:

Period = 70.92684 [0.01823] d
Epoch = 157.3922 [0.1446] BKJD
Rp/R* = 0.0359 [0.0401]
a/R* = 32.66 [155.75]
b = 0.02 [310.96]
Seff = 0.07 [0.00]
Teq = 131 [0] K
Rp = 0.62 [0.69] Re
a = 0.1704 [0.0000] AU
Ag = 30325.82 [68467.07] [0.44σ]
Teffp = 2678 [1512] K [1.68σ]

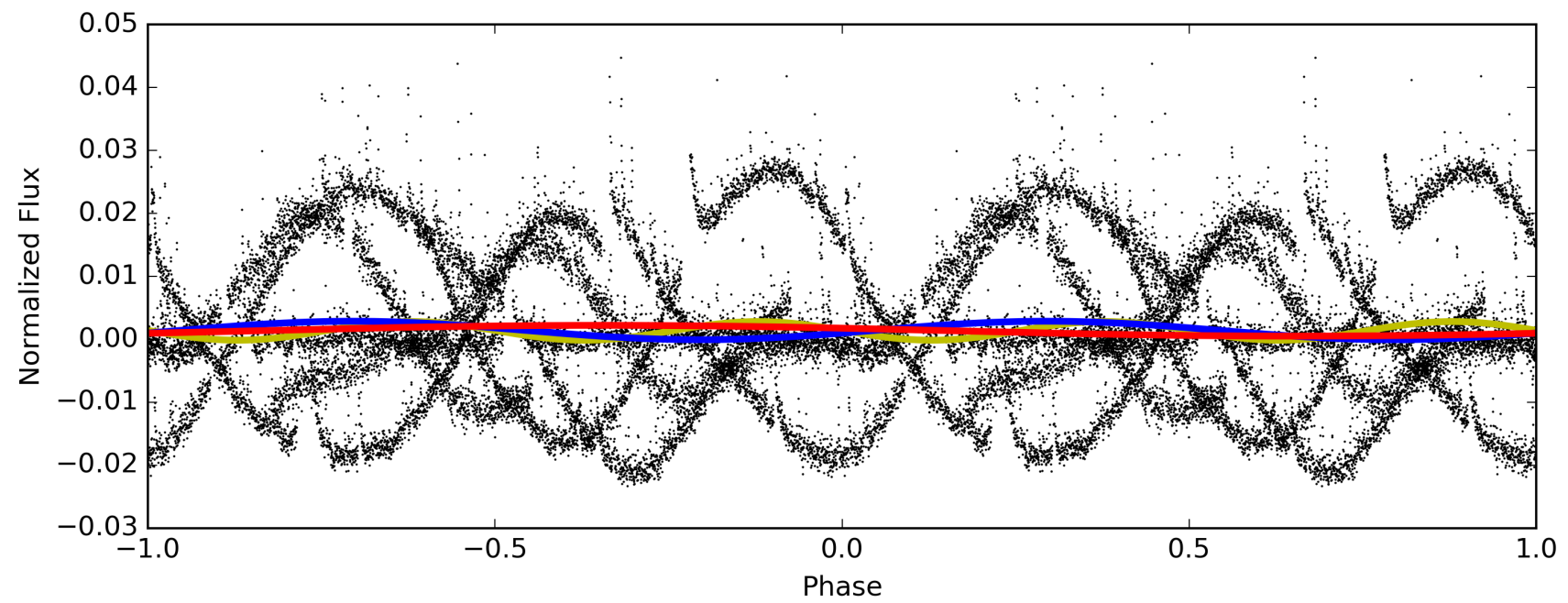
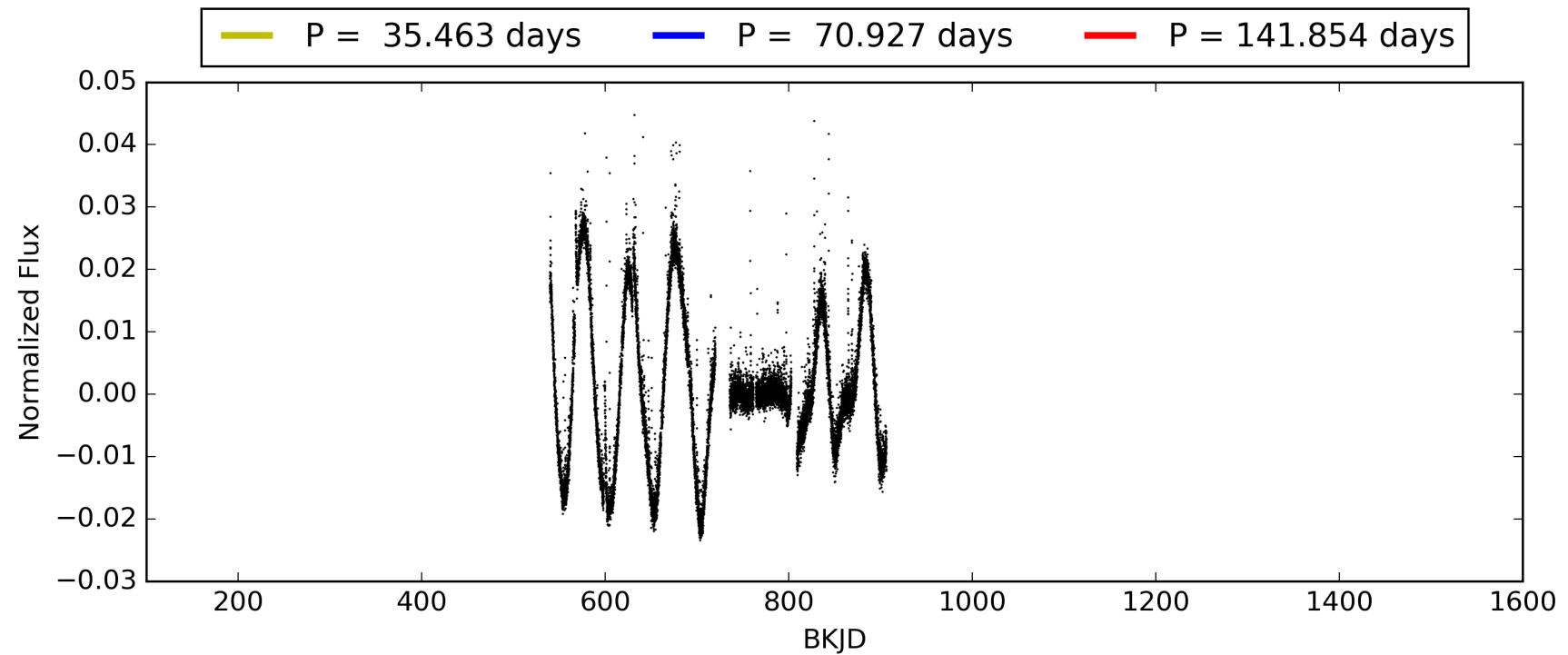
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.61e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.478
Centroid-sig: 4.9%
Centroid-so: 1.428 arcsec [1.51σ]
OotOffset-rm: 0.266 arcsec [0.27σ]
KicOffset-rm: 0.845 arcsec [0.47σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 008881388-01, PDC Light Curves

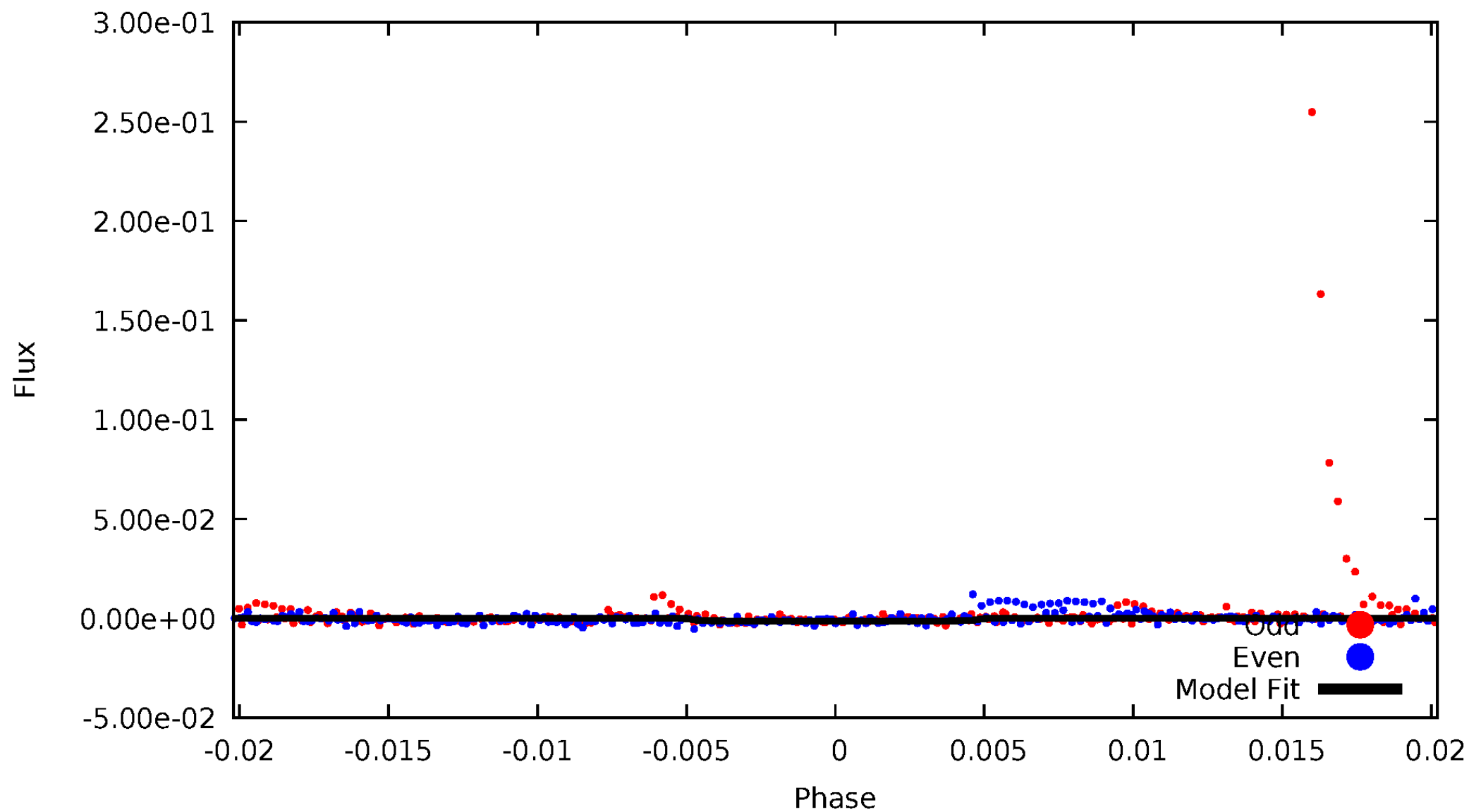


TCE 008881388-01



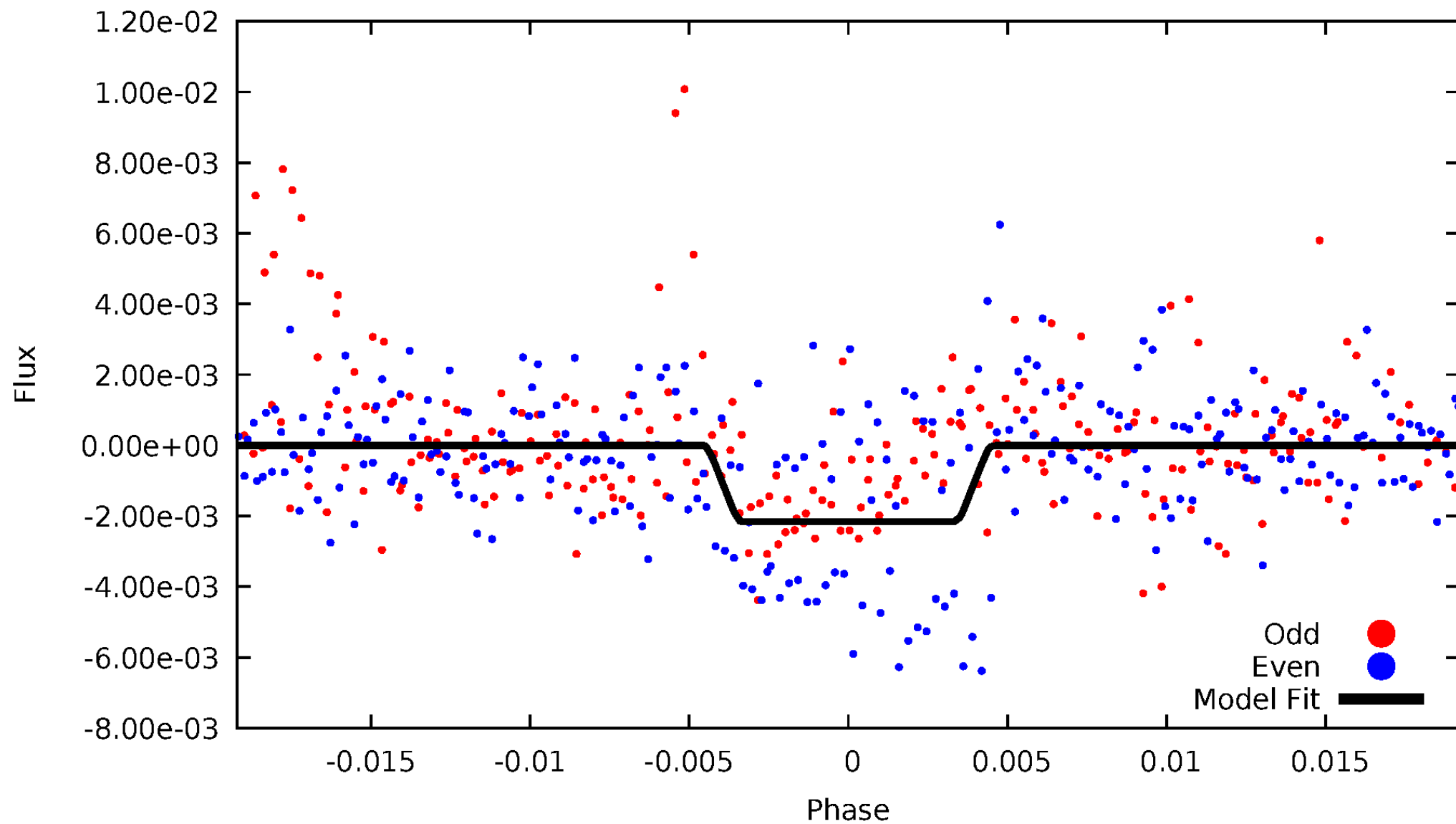
DV Odd/Even

TCE 008881388-01



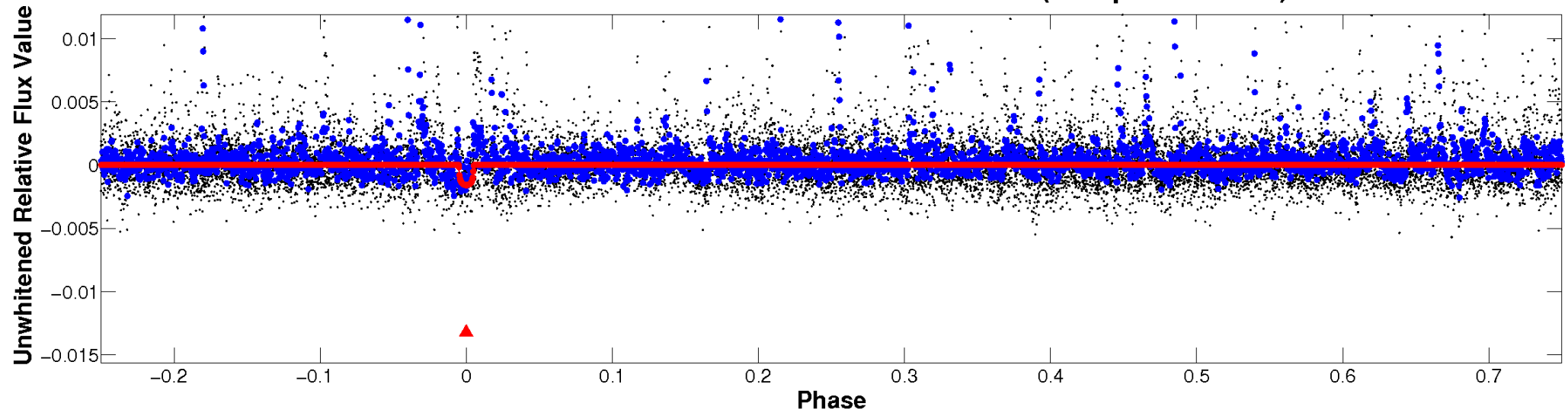
ALT Odd/Even

TCE 008881388-01

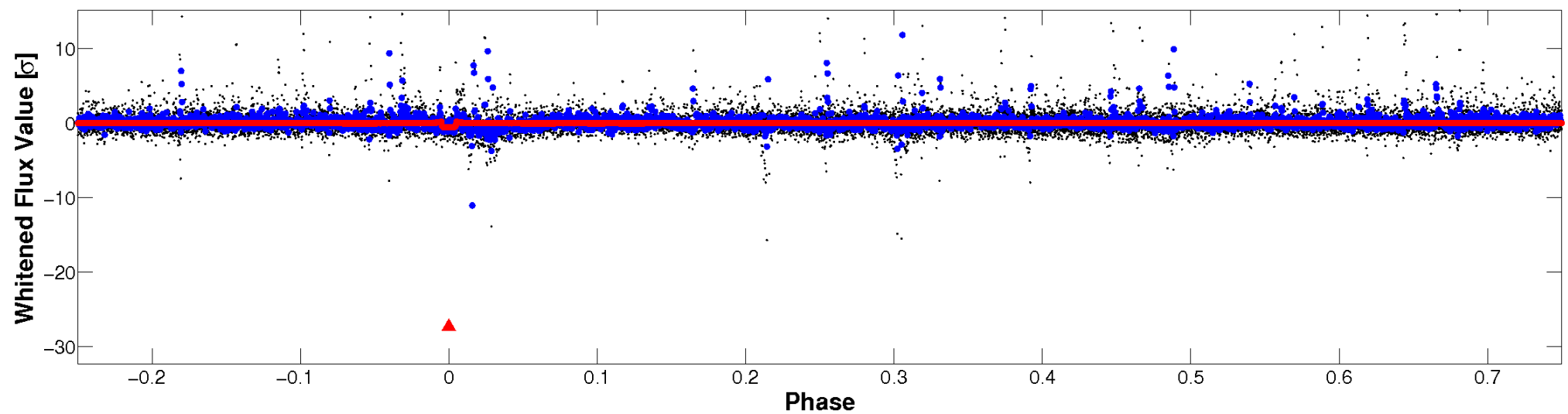


Non-Whitened Vs. Whitened Light Curve

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

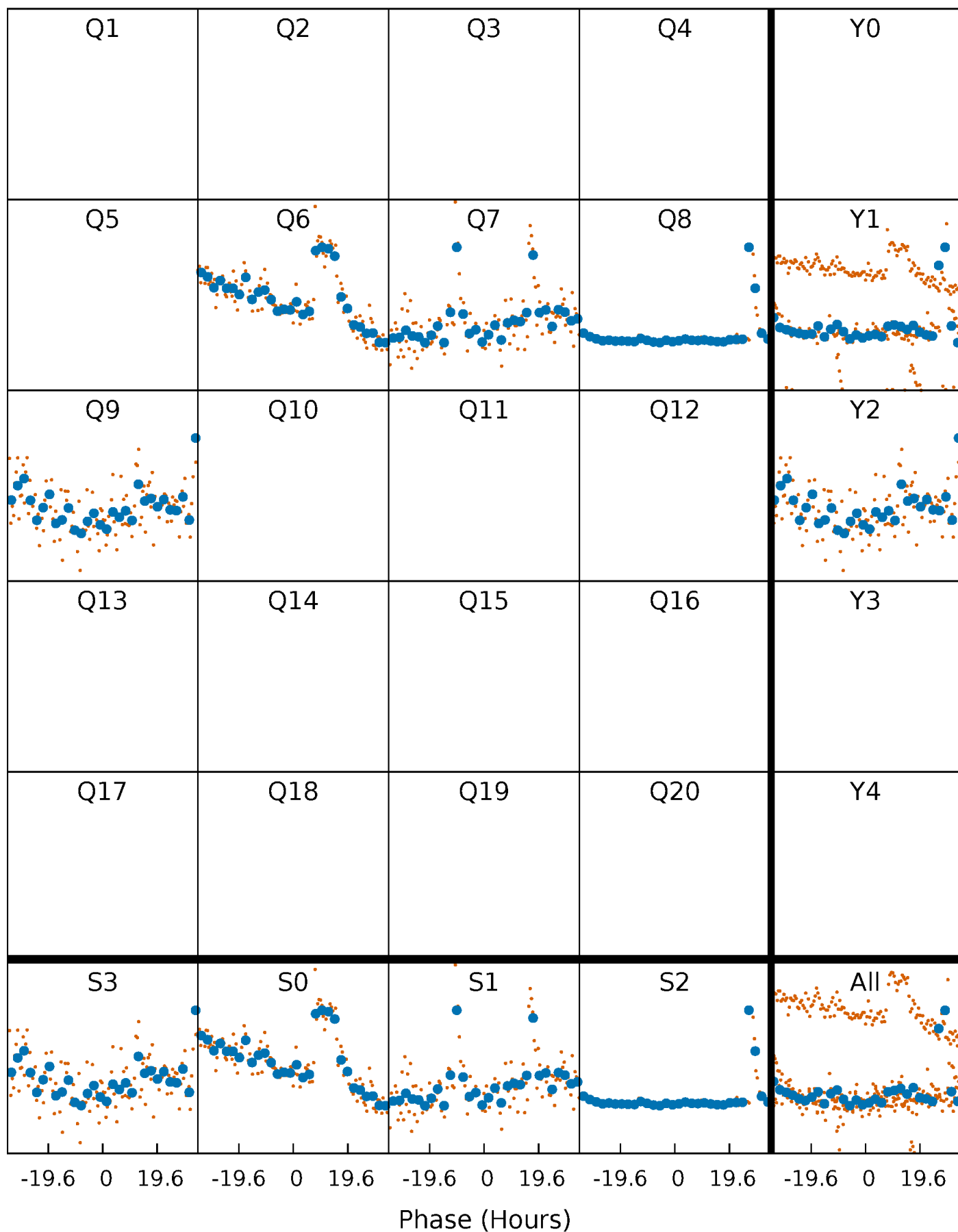


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



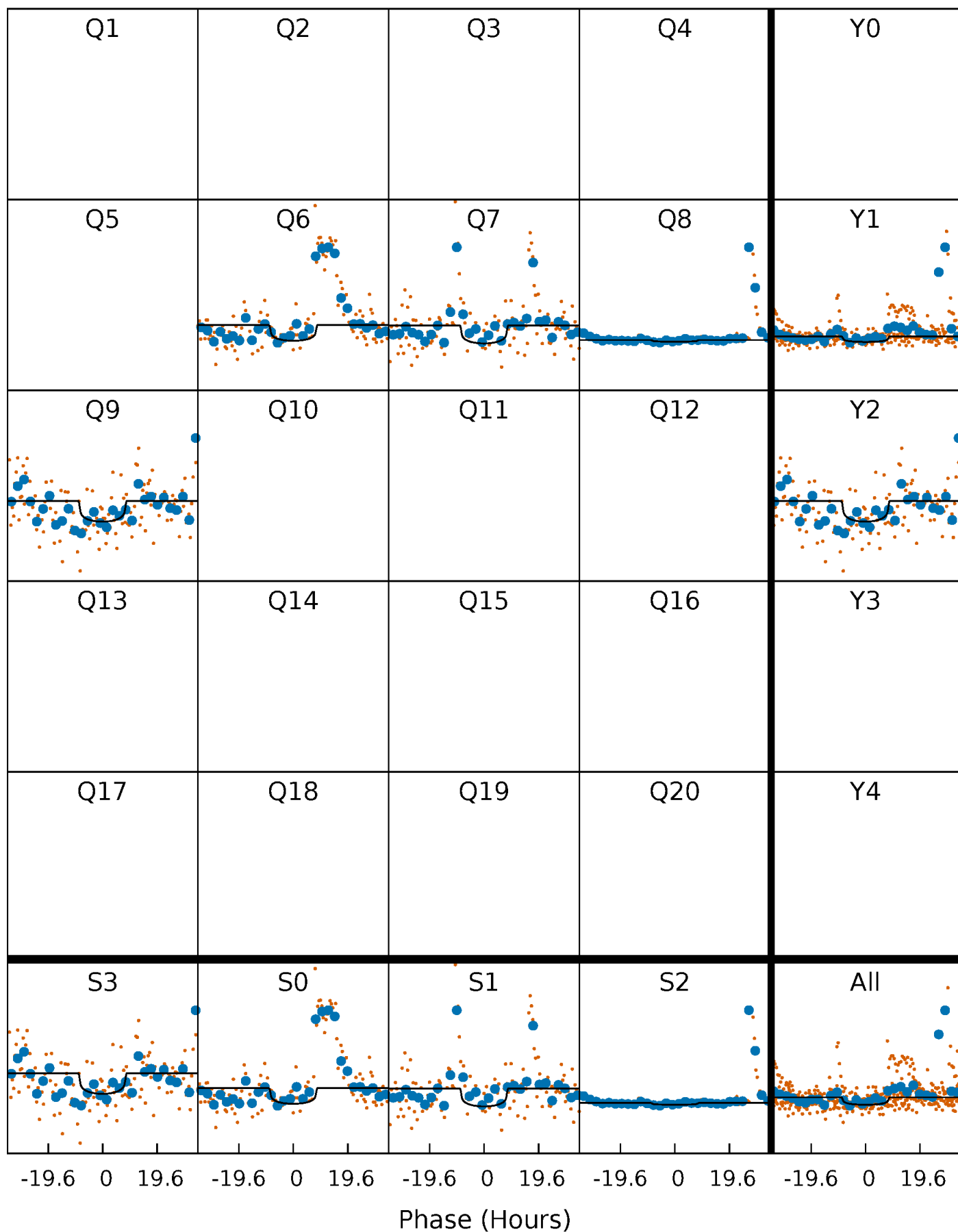
PDC Quarter-Phased Transit Curves

TCE 008881388-01 P= 70.926840 Days $T_0=157.392155$ (BKJD)



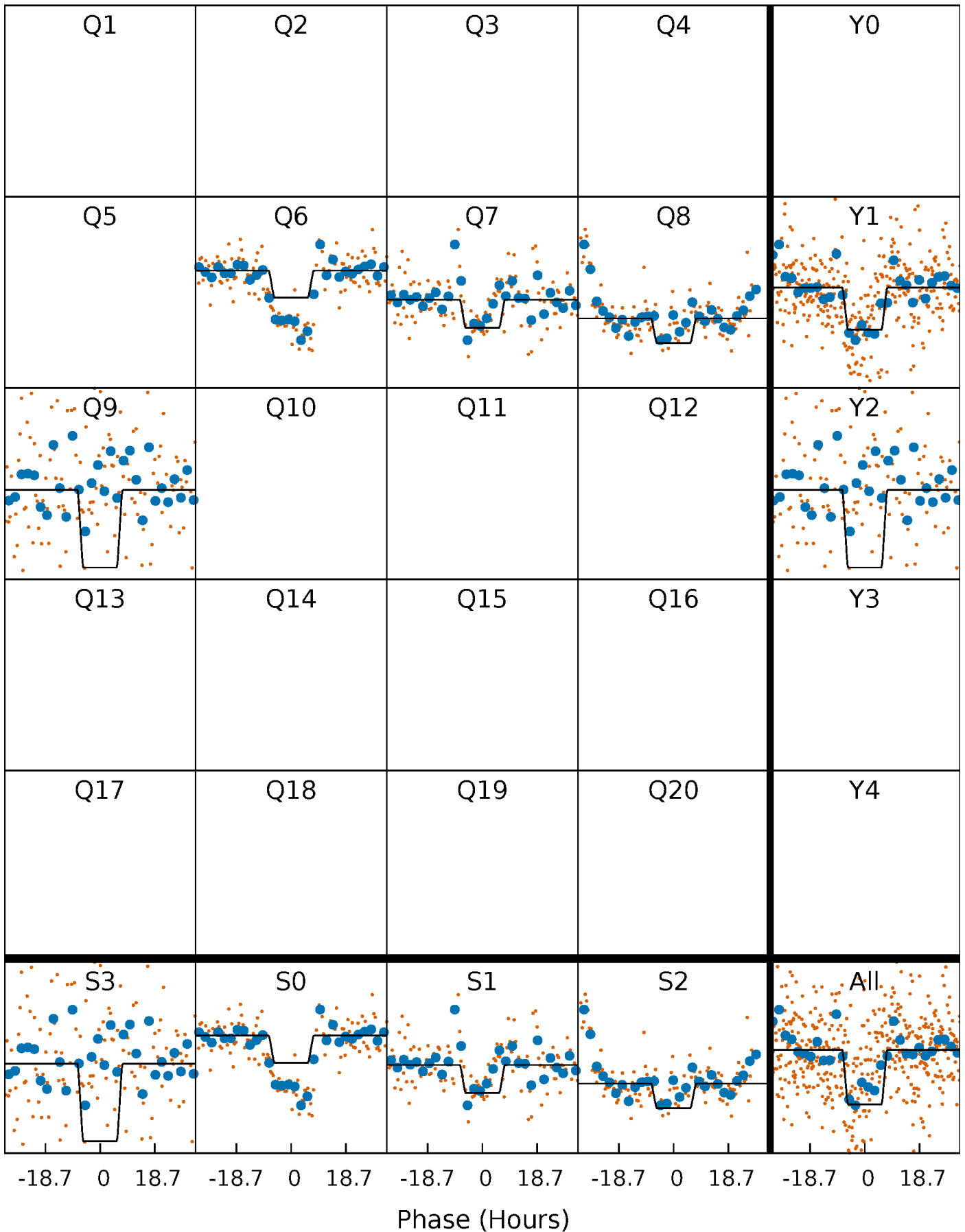
DV Quarter-Phased Transit Curves

TCE 008881388-01 P= 70.926840 Days $T_0=157.392155$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

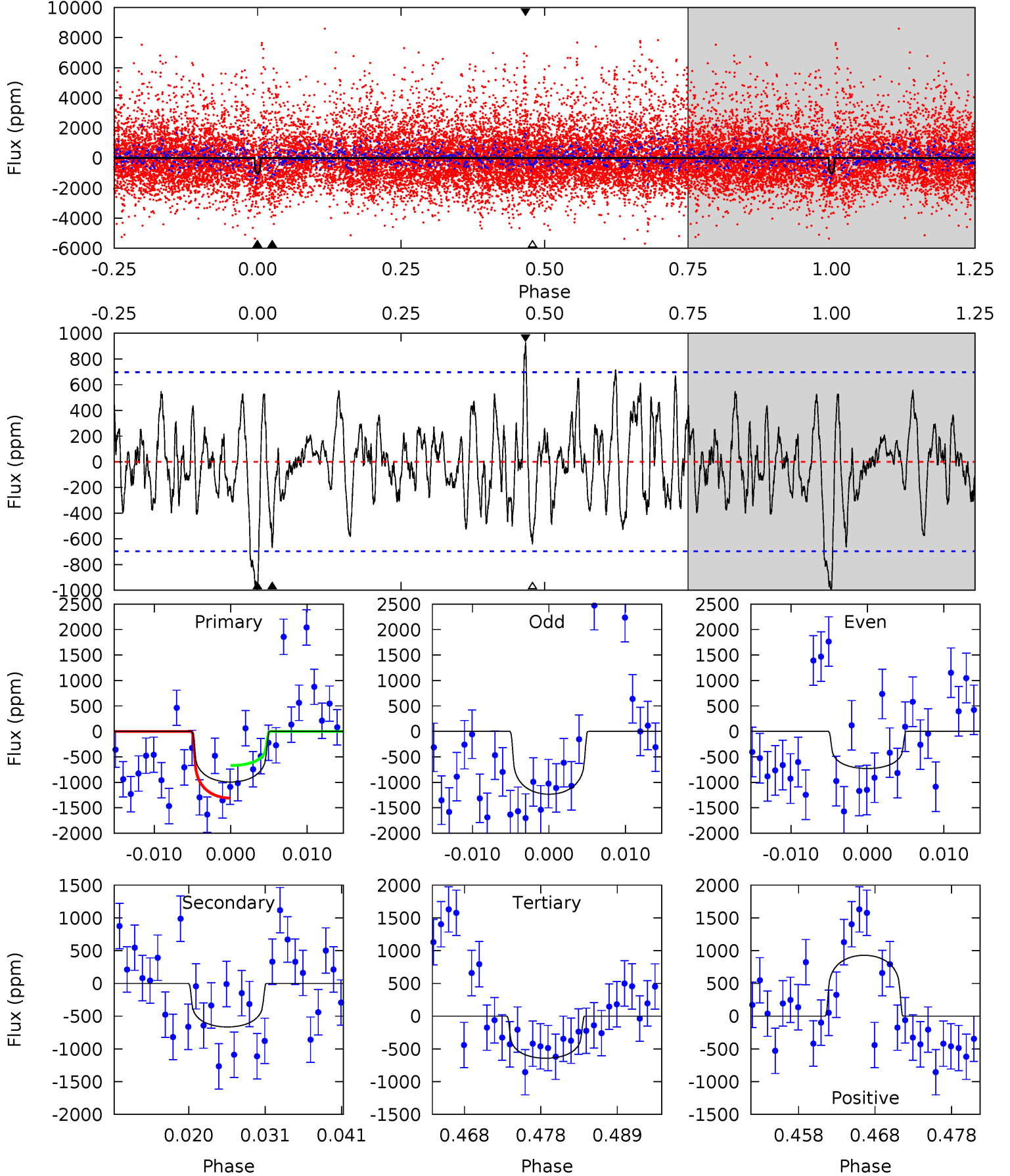
TCE 008881388-01 P= 70.890564 Days $T_0=157.599404$ (BKJD)



DV Model-Shift Uniqueness Test

008881388-01, P = 70.926840 Days, E = 157.392155 Days

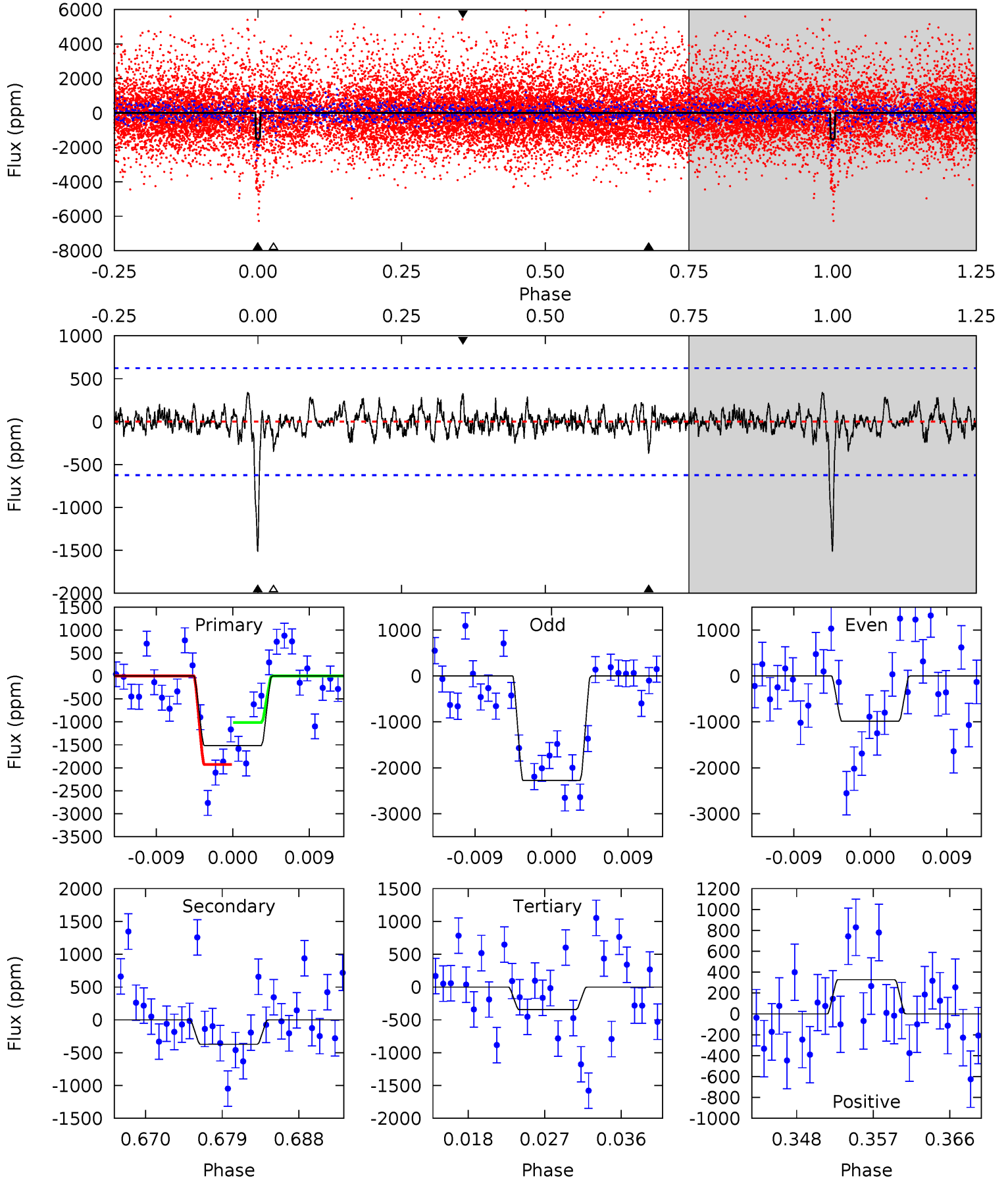
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.17	4.80	4.64	6.70	5.02	2.57	1.87	2.54	0.47	0.17	-1.90	1.67	1.25	0.48	2.33



Alt Model-Shift Uniqueness Test

008881388-01, $P = 70.890564$ Days, $E = 157.599404$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	3.01	2.78	2.66	5.05	2.61	0.80	9.47	9.60	0.23	0.36	5.27	1.63	0.18	3.69



Stellar Parameters For KIC 008881388

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3089^{+1}_{-1}	$5.158^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$0.158^{+1.000}_{-1.000}$	$0.132^{+1.000}_{-1.000}$	$46.710^{+1.000}_{-1.000}$
	+0%/-0%	+19%/-19%	+inf%/-inf%	+633%/-633%	+758%/-758%	+2%/-2%
Source	PHO54	PHO54	PHO54	BTSL		

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

Secondary Eclipse Parameters for KIC 008881388-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-665 ± 139	$0.85^{+0.76}_{-0.53}$	186^{+18}_{-17}	2616^{+800}_{-344}	15252^{+93991}_{-10169}
Alt.	-372 ± 124	$0.93^{+0.87}_{-0.60}$	186^{+17}_{-16}	2401^{+702}_{-338}	7284^{+44527}_{-5244}

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 $A_{obs} \gg 1.0$

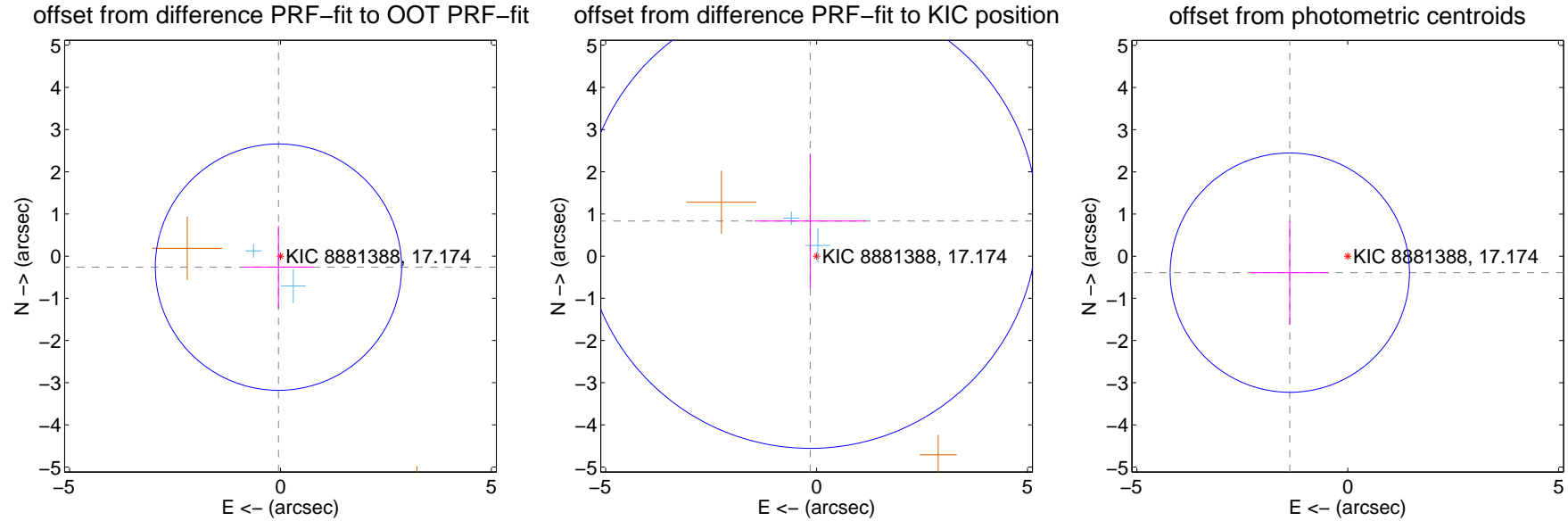
DV Centroid Data

Supplemental centroid analysis for 008881388-01. Kepler magnitude: 17.17. Transit SNR 6.01

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.83 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.266 ± 0.973	0.27	0.048 ± 0.836	-0.261 ± 0.977
PRF-fit source offset from KIC position	0.845 ± 1.796	0.47	0.151 ± 1.316	0.832 ± 1.595
photometric centroid source offset	1.43 ± 0.95	1.51	1.37 ± 0.92	-0.39 ± 1.23

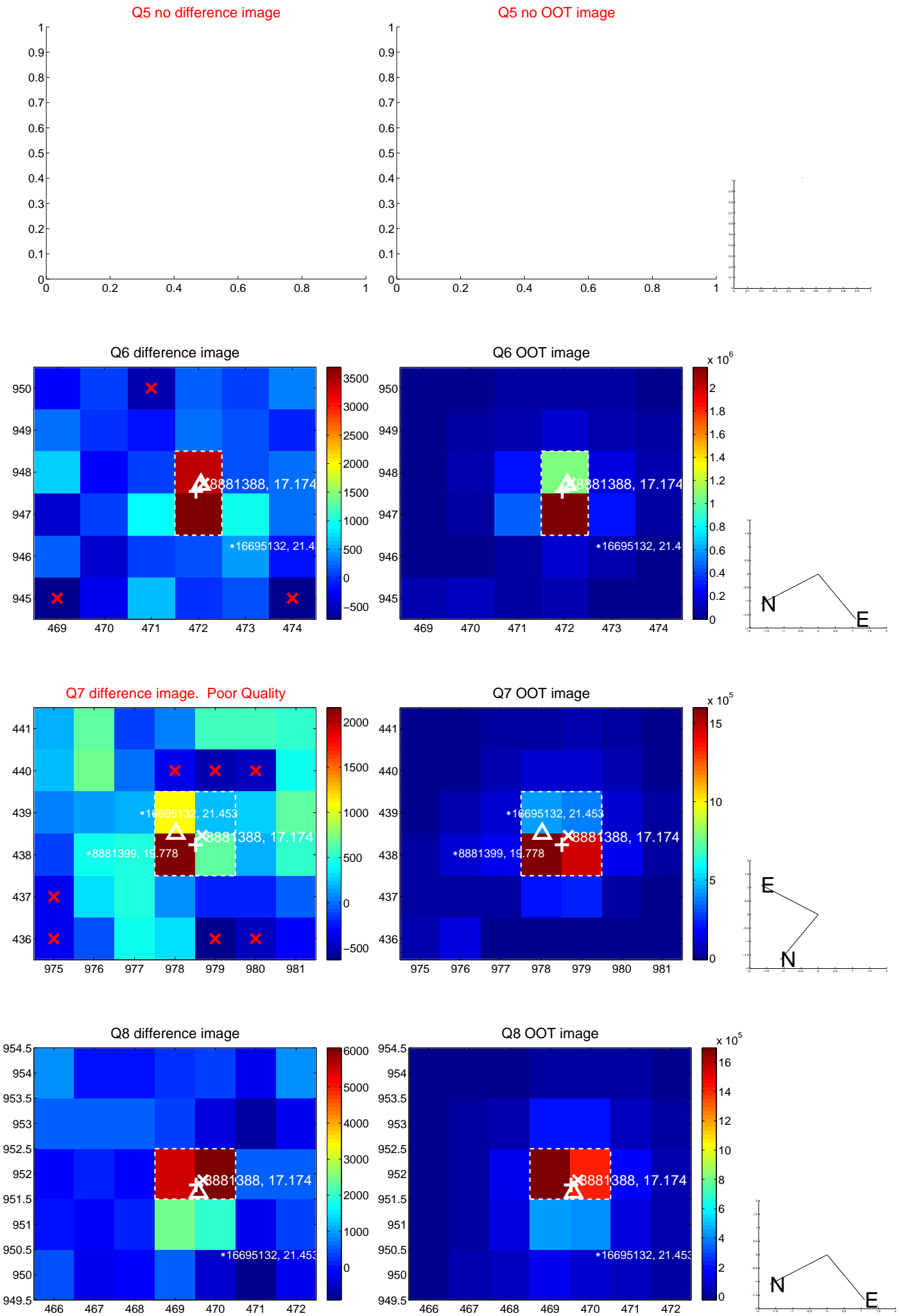


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

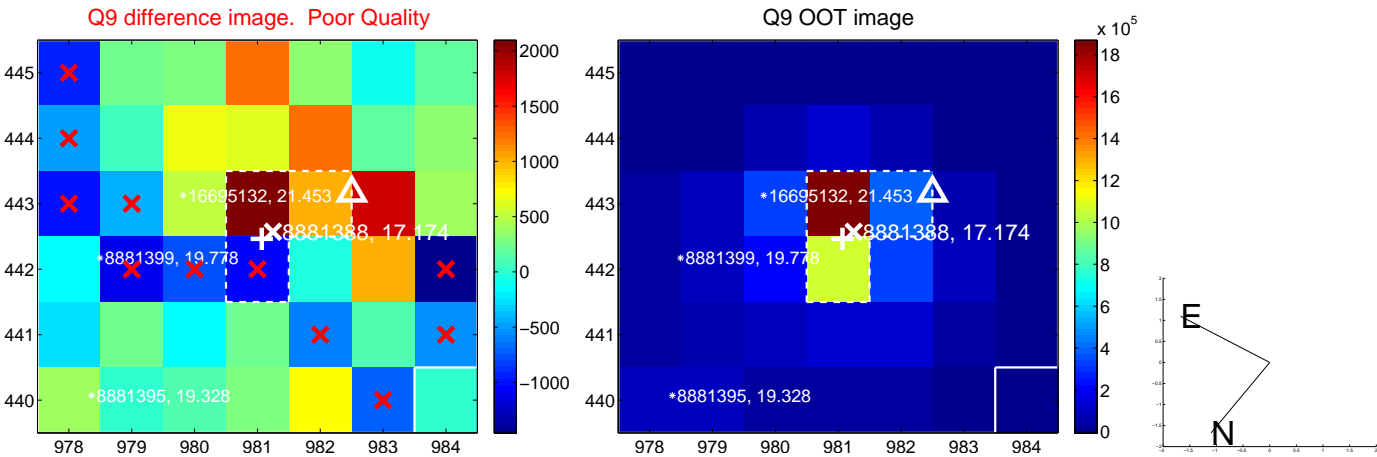
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



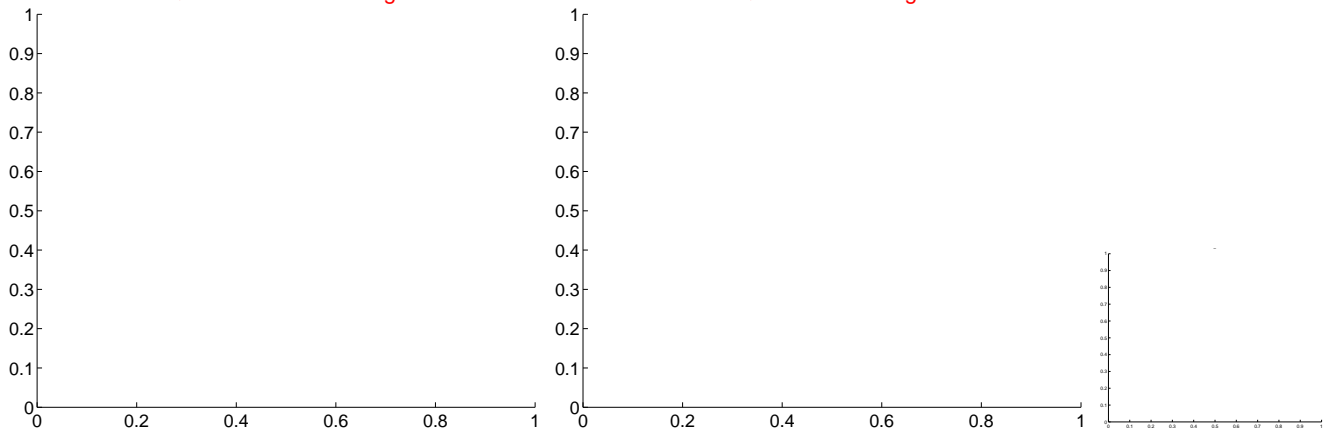
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



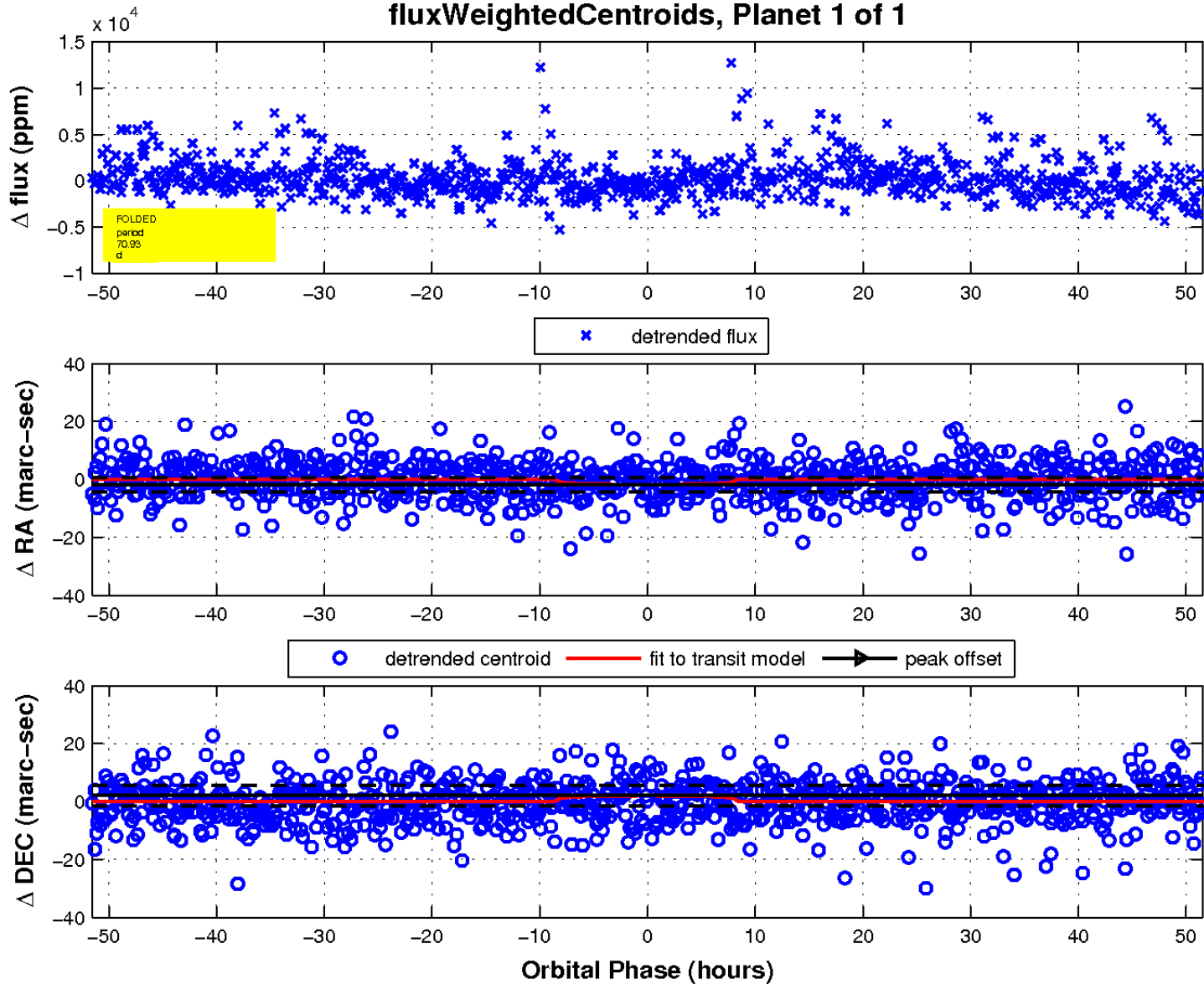
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

