

KIC 004060287

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})
004060287-01	OBS	No	270.624274	373.341968	1248.7	5.213	8.0	9.0	0.84	5497	3.21	0.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004060287-01	OBS	FP	0.04	1	0	0	0	MOD_NONUNIQ_ALT—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.

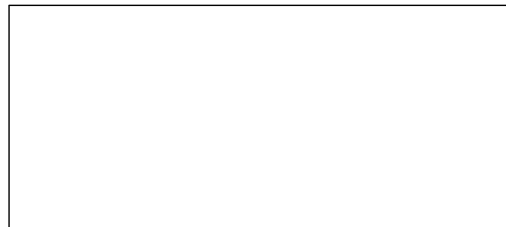
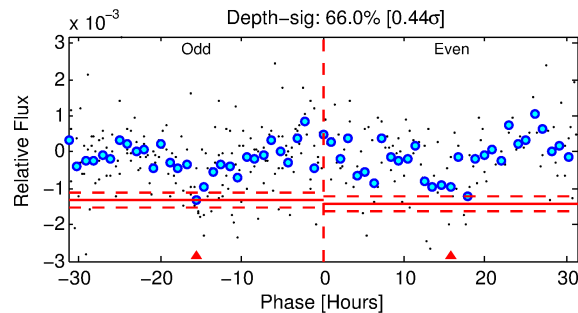
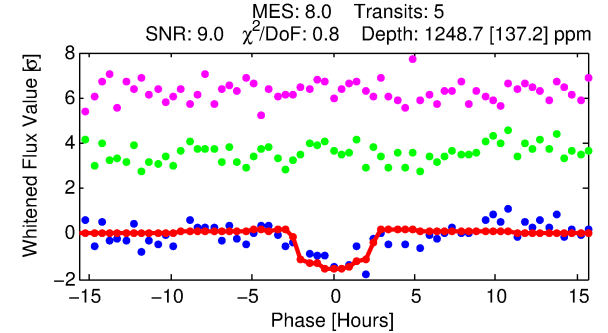
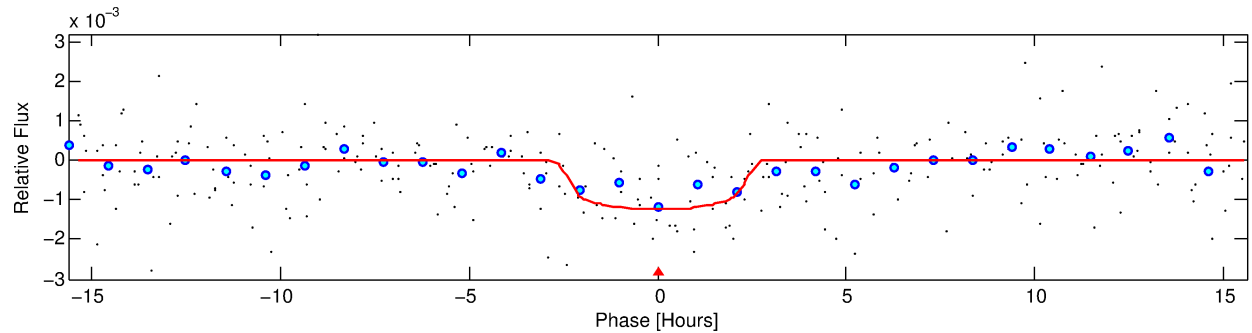
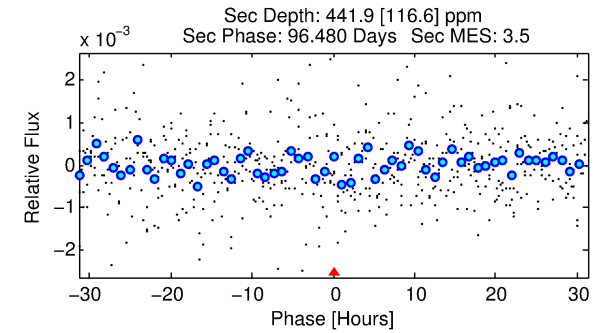
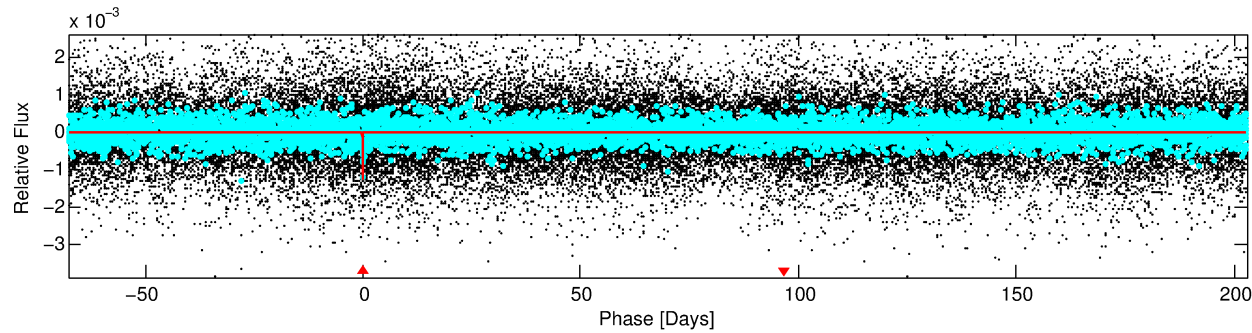
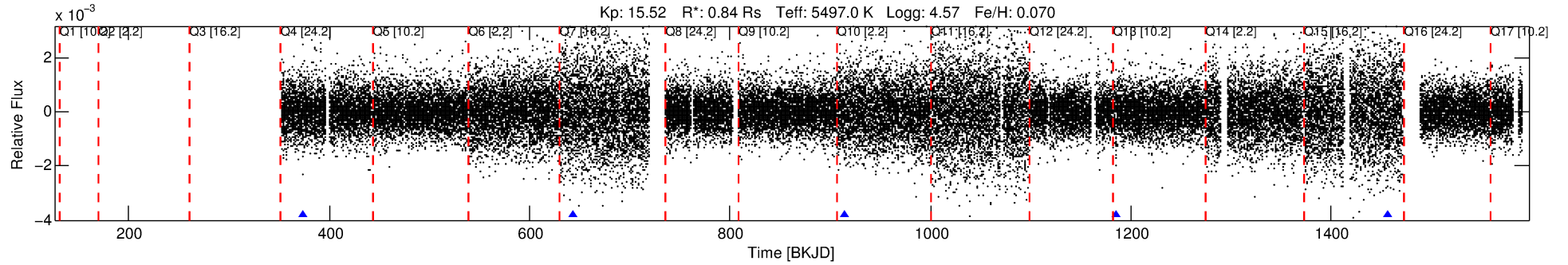
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004060287-01

No Significant Match Found

DV One-Page Summary

KIC: 4060287 Candidate: 1 of 1 Period: 270.624 d



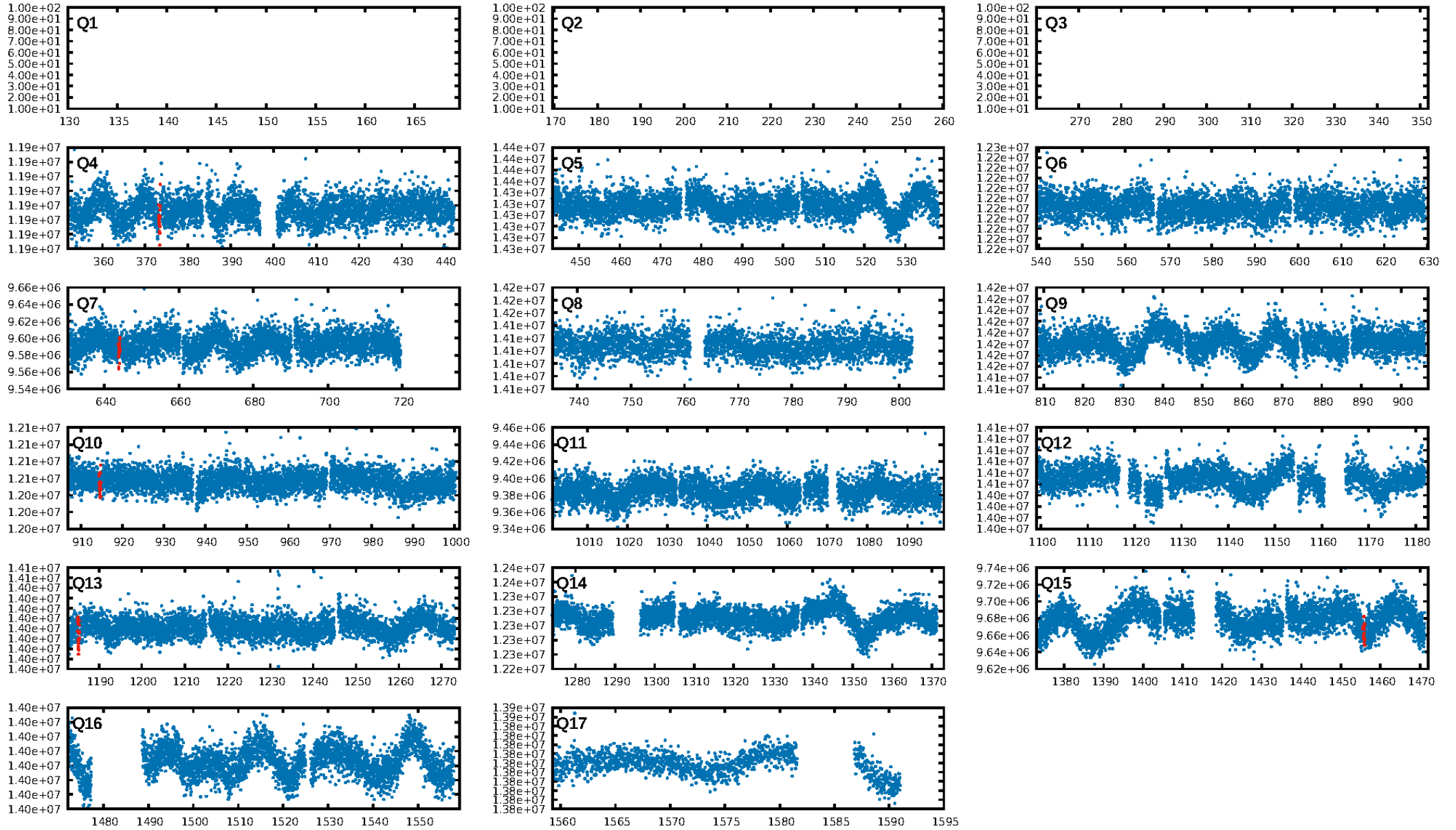
DV Fit Results:

Period = 270.62427 [0.00422] d
Epoch = 373.3420 [0.0096] BKJD
Rp/R* = 0.0351 [0.0268]
a/R* = 286.34 [866.25]
b = 0.74 [1.87]
Seff = 0.89 [0.27]
Teq = 247 [19] K
Rp = 3.21 [2.54] Re
a = 0.8062 [0.1458] AU
Ag = 15302.65 [24080.04] [0.64σ]
Teffp = 4254 [1655] K [2.42σ]

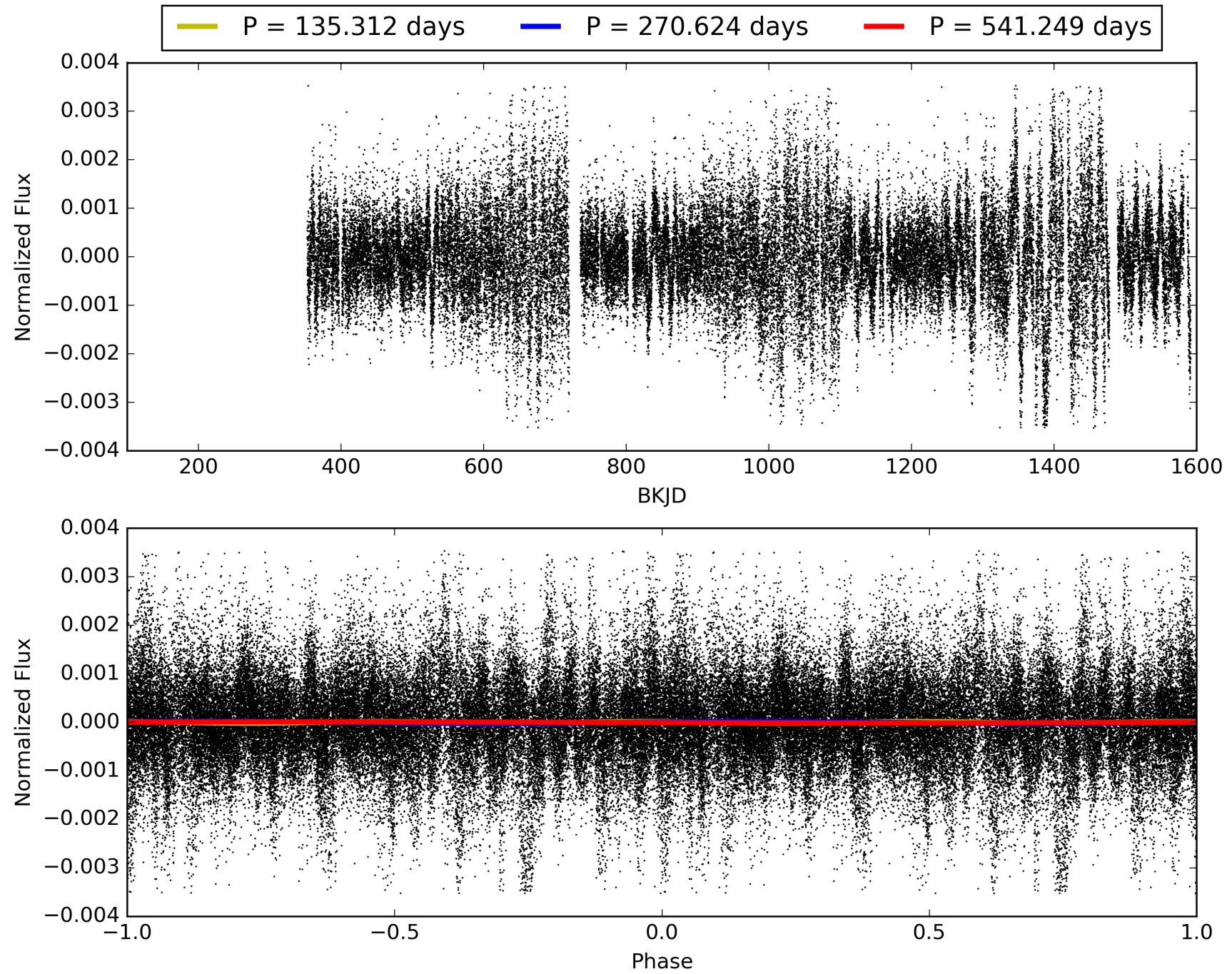
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 6.49e-18
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 3.065
Centroid-sig: 0.1%
Centroid-so: 2.614 arcsec [4.25σ]
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 004060287-01, PDC Light Curves

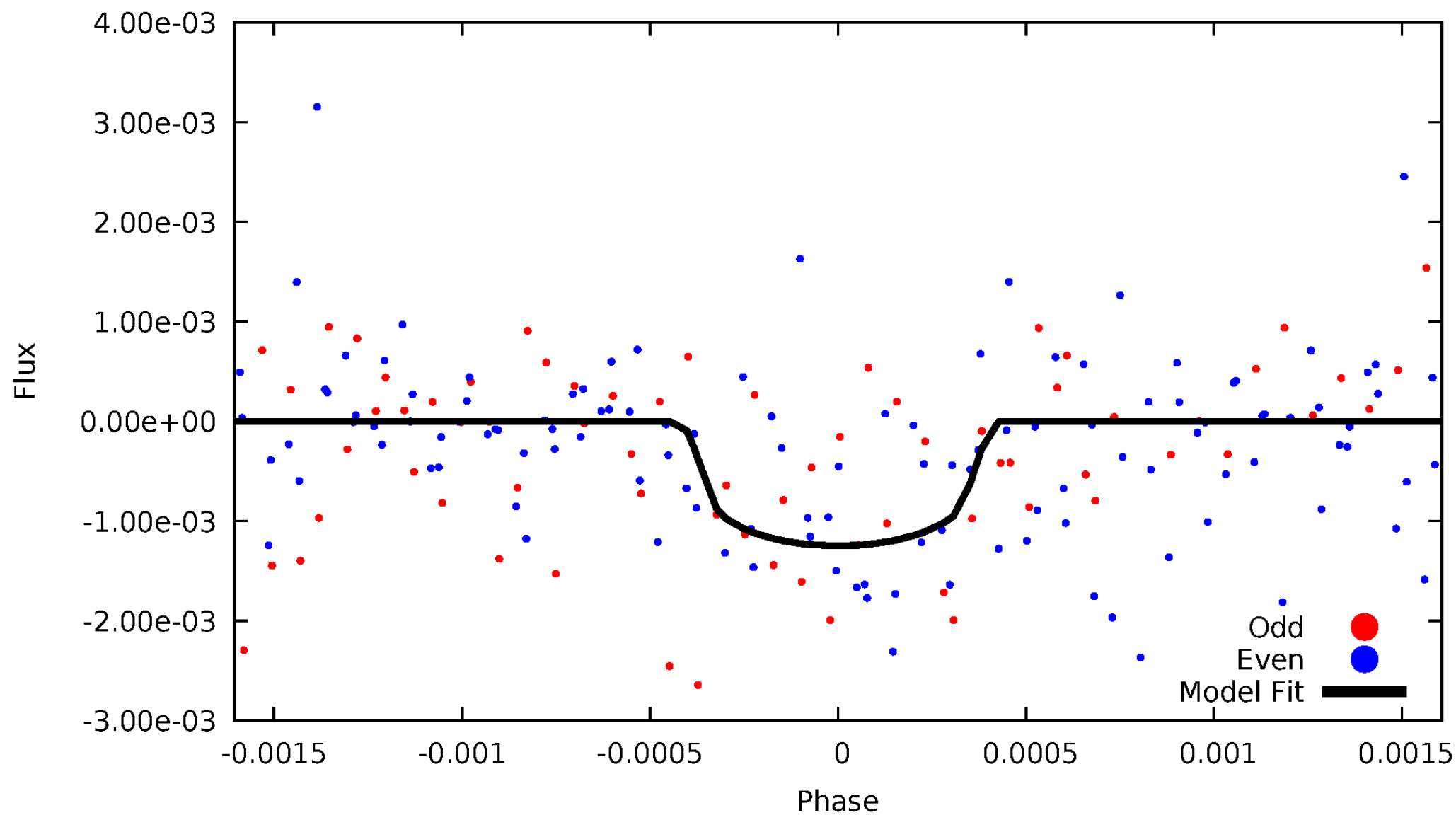


TCE 004060287-01



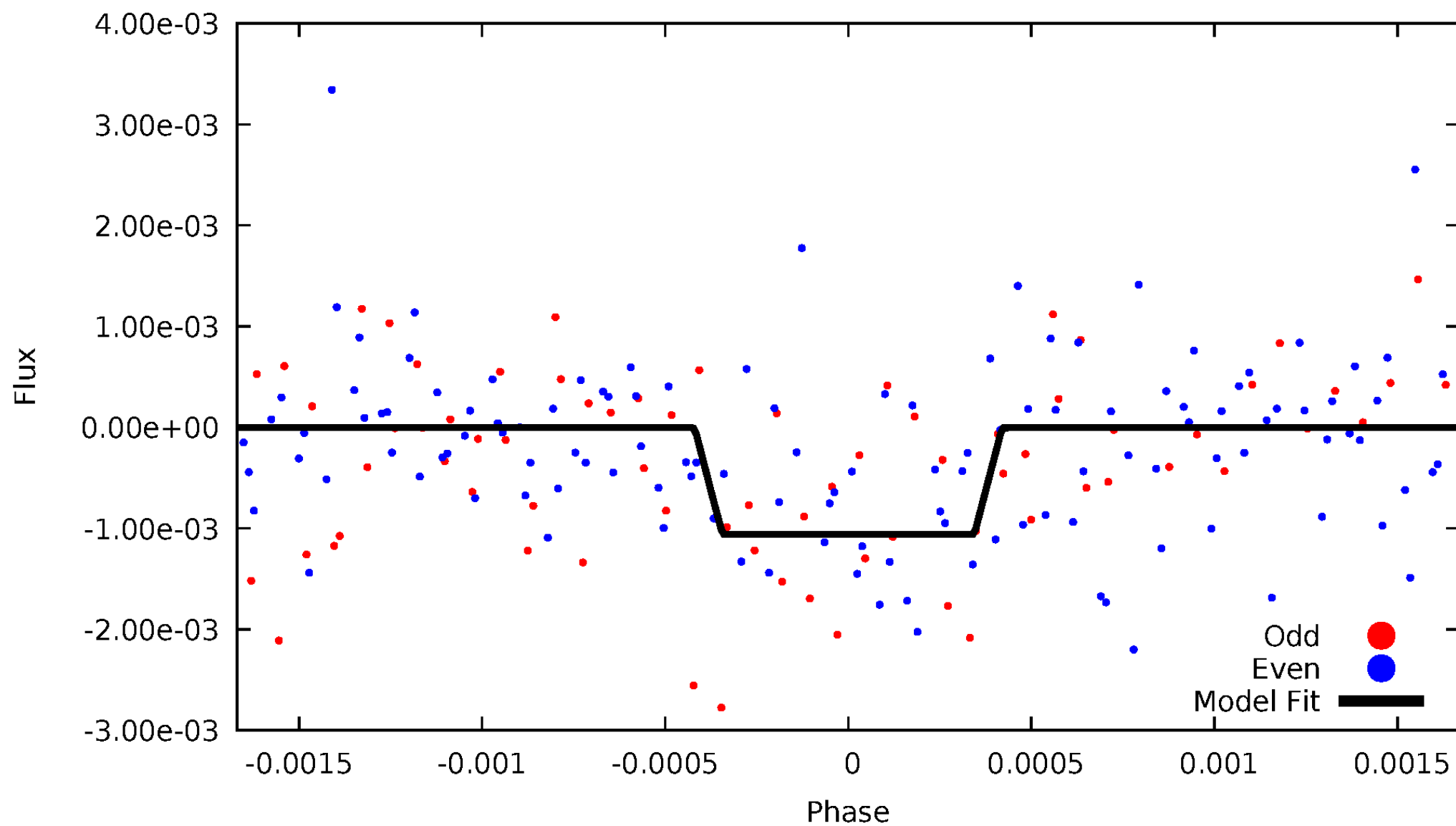
DV Odd/Even

TCE 004060287-01



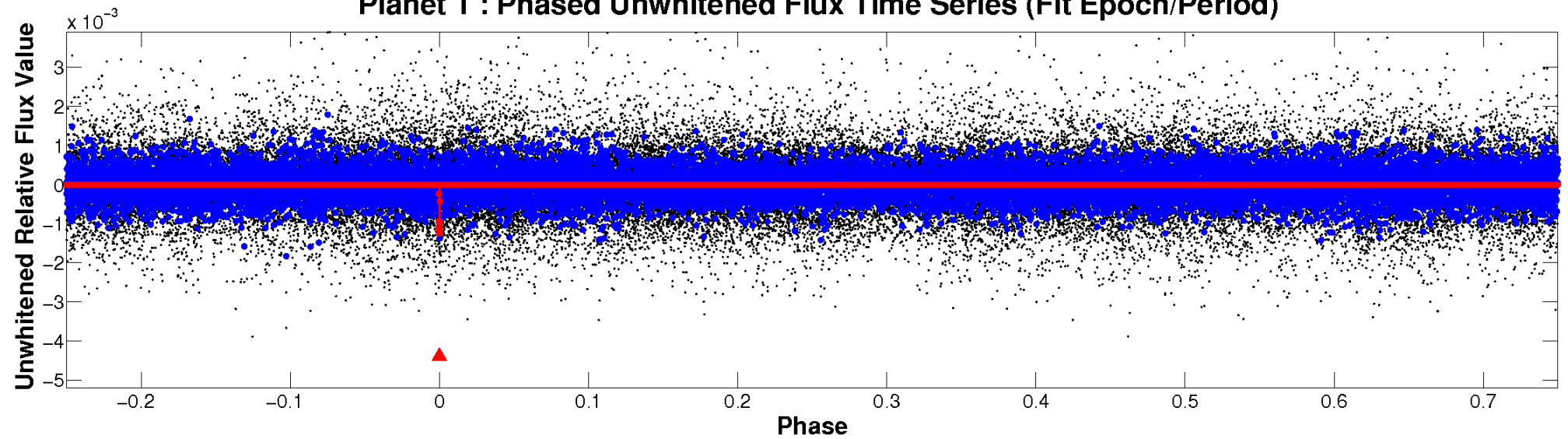
ALT Odd/Even

TCE 004060287-01

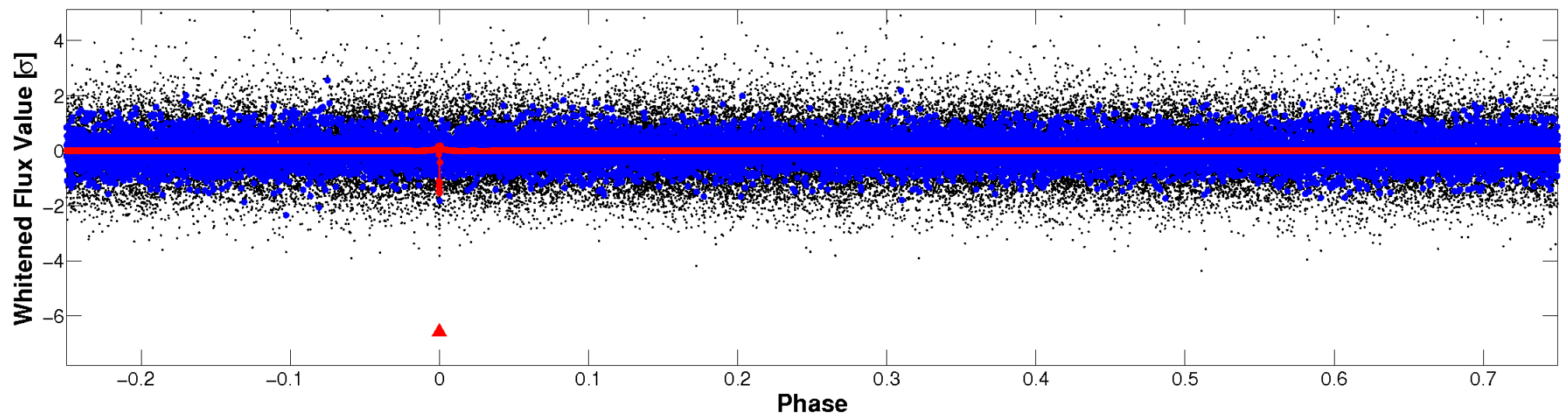


Non-Whitened Vs. Whitened Light Curve

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

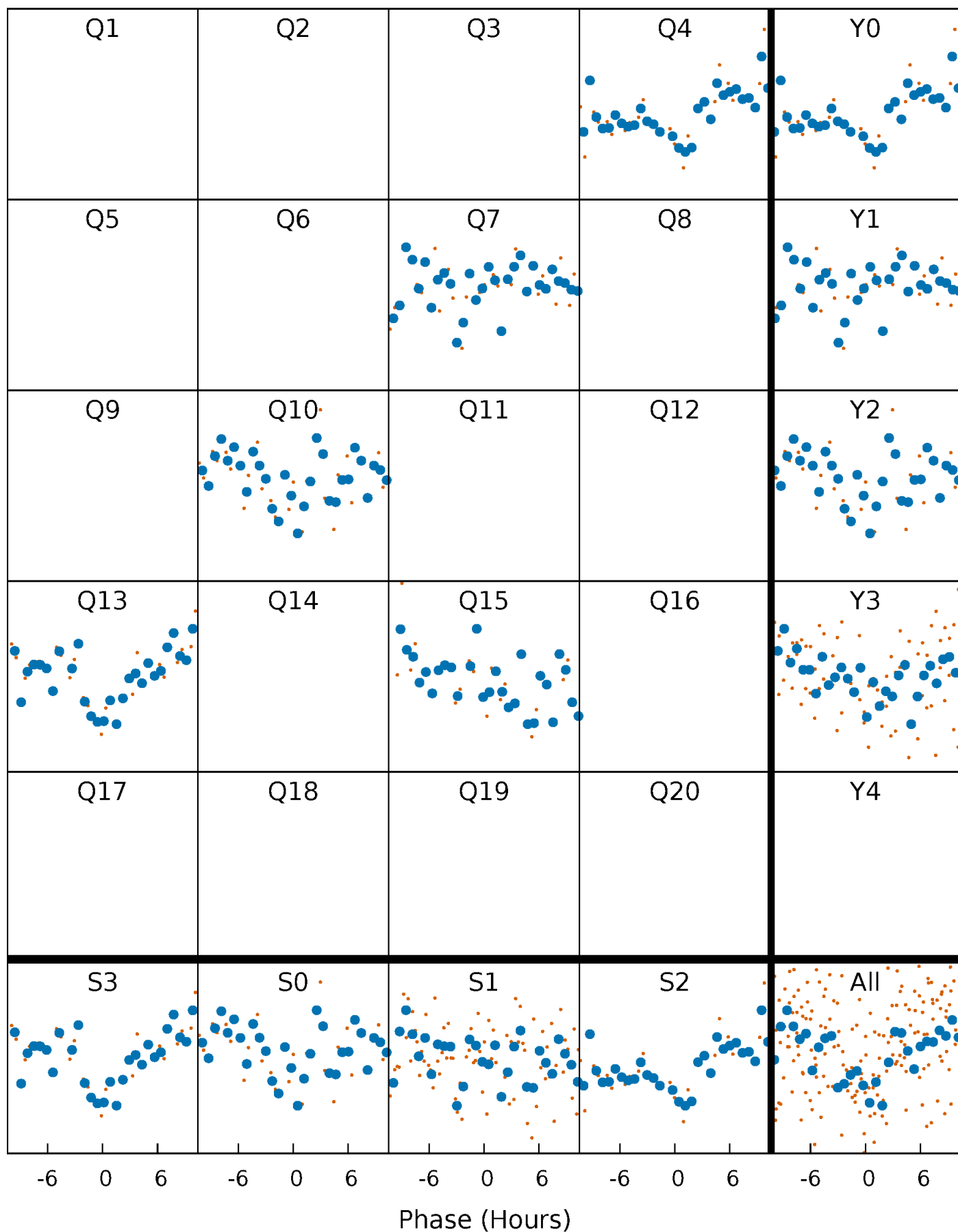


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



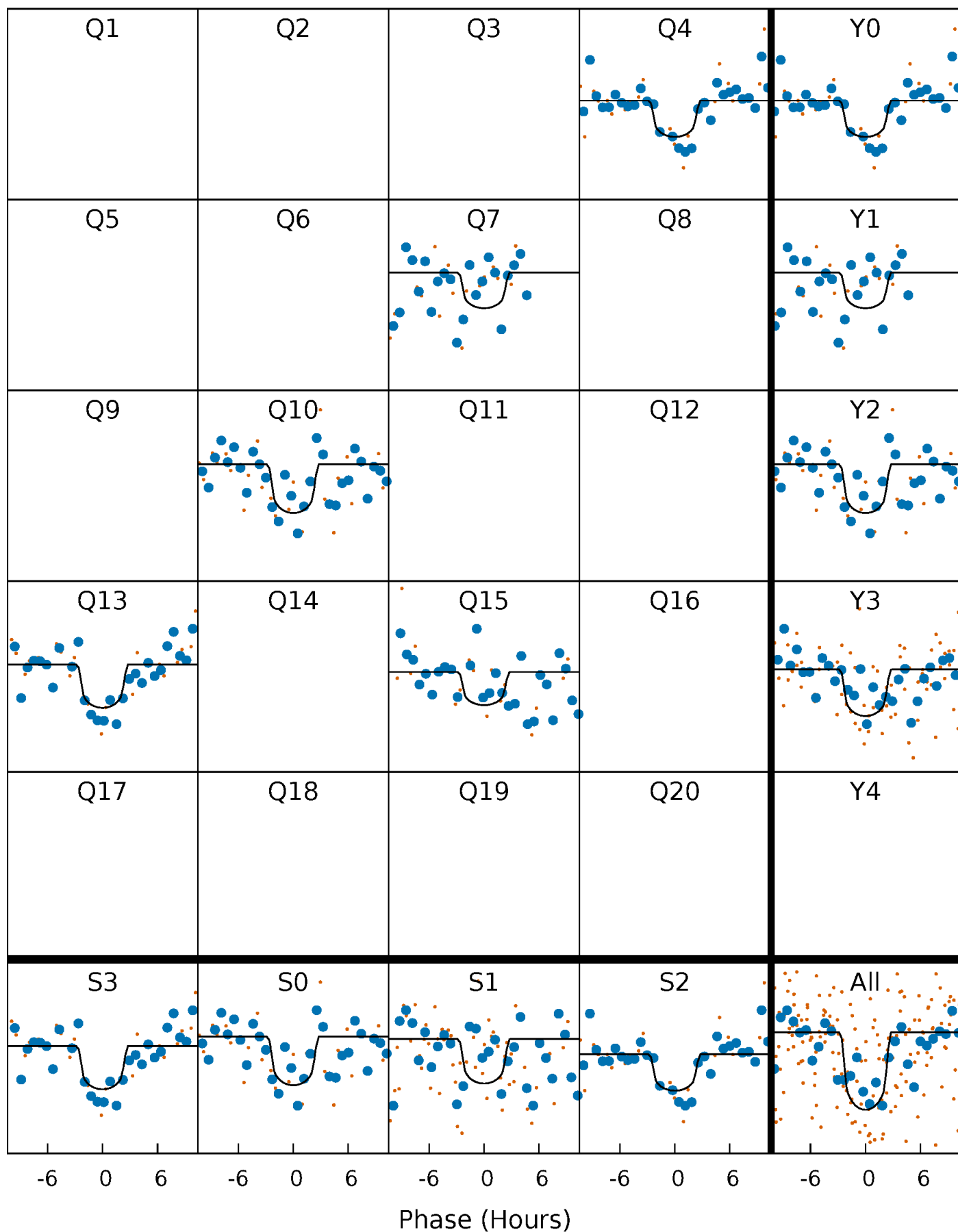
PDC Quarter-Phased Transit Curves

TCE 004060287-01 P=270.624274 Days $T_0=373.341968$ (BKJD)



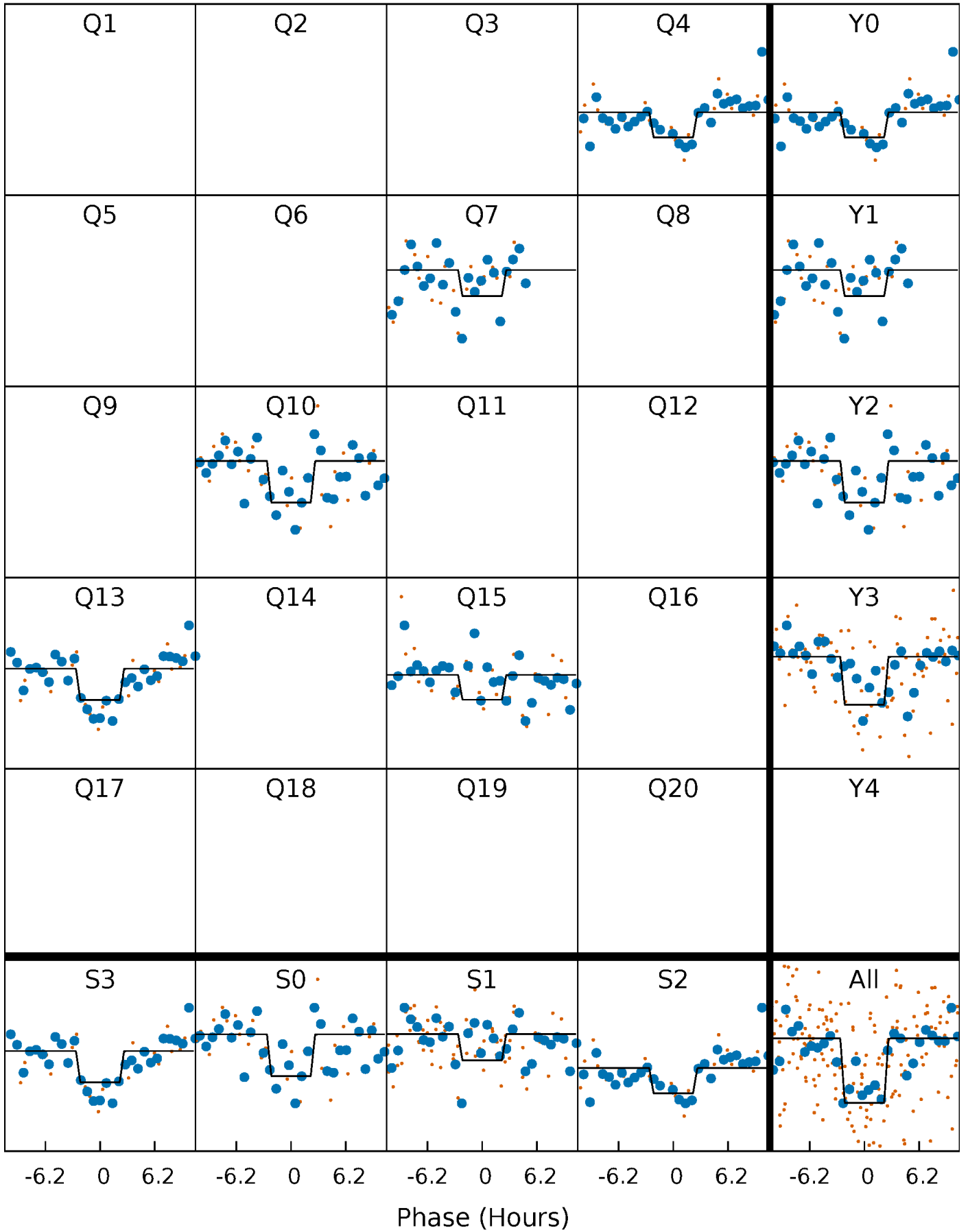
DV Quarter-Phased Transit Curves

TCE 004060287-01 $P=270.624274$ Days $T_0=373.341968$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

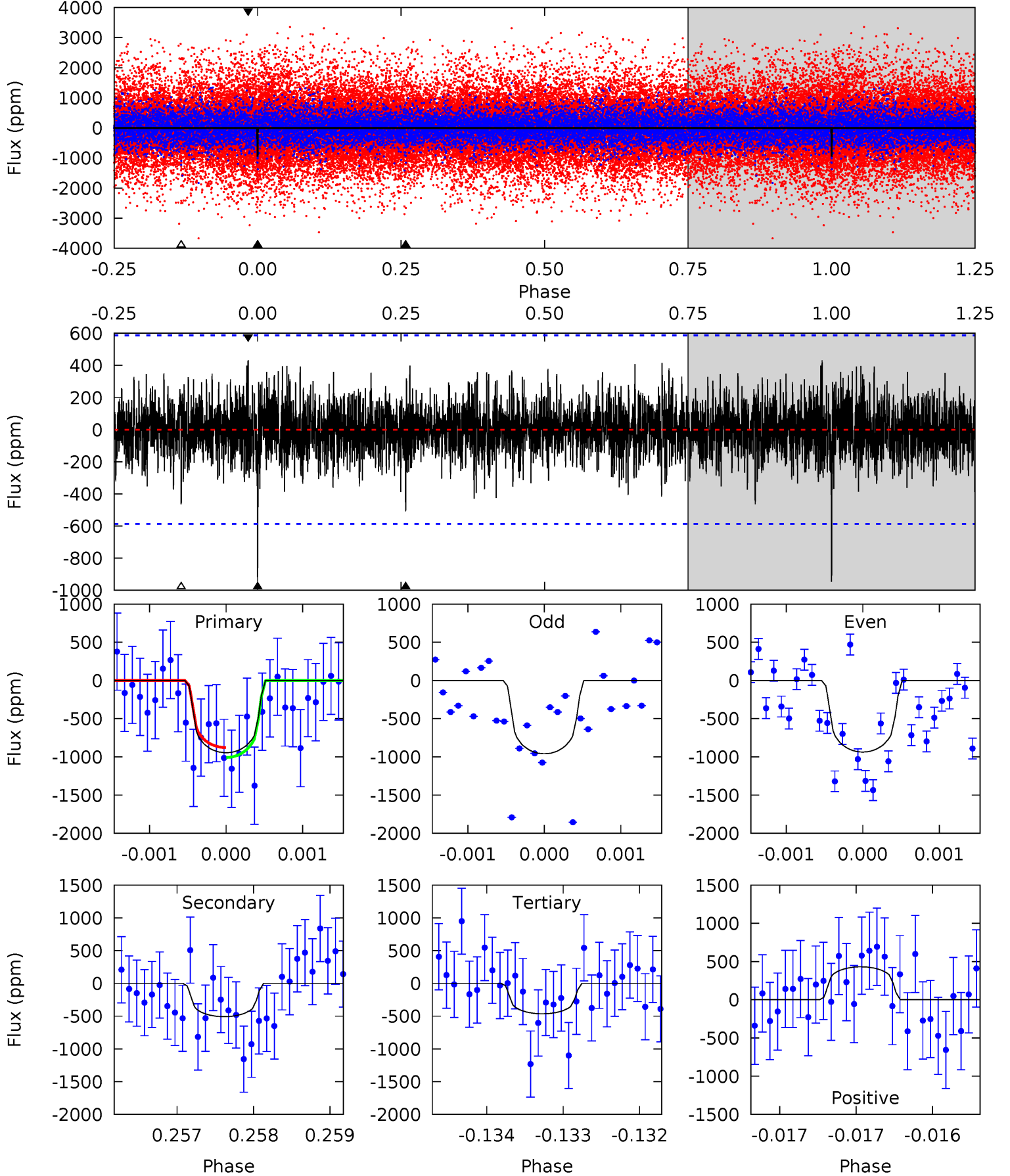
TCE 004060287-01 P=270.628880 Days $T_0=373.330463$ (BKJD)



DV Model-Shift Uniqueness Test

004060287-01, $P = 270.624274$ Days, $E = 102.717694$ Days

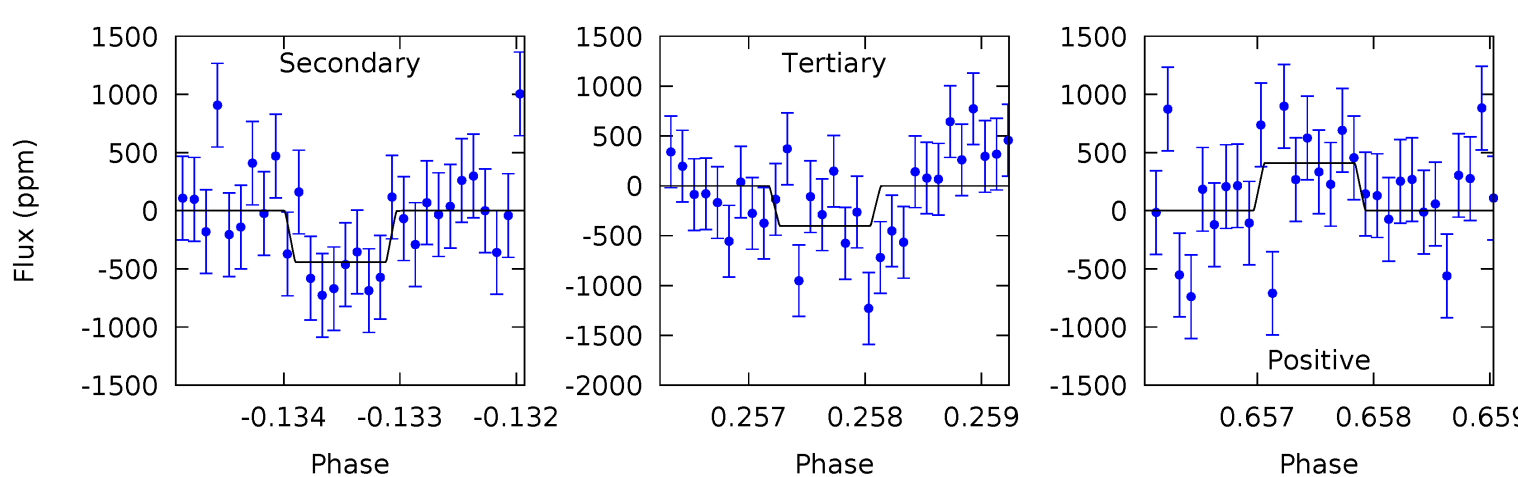
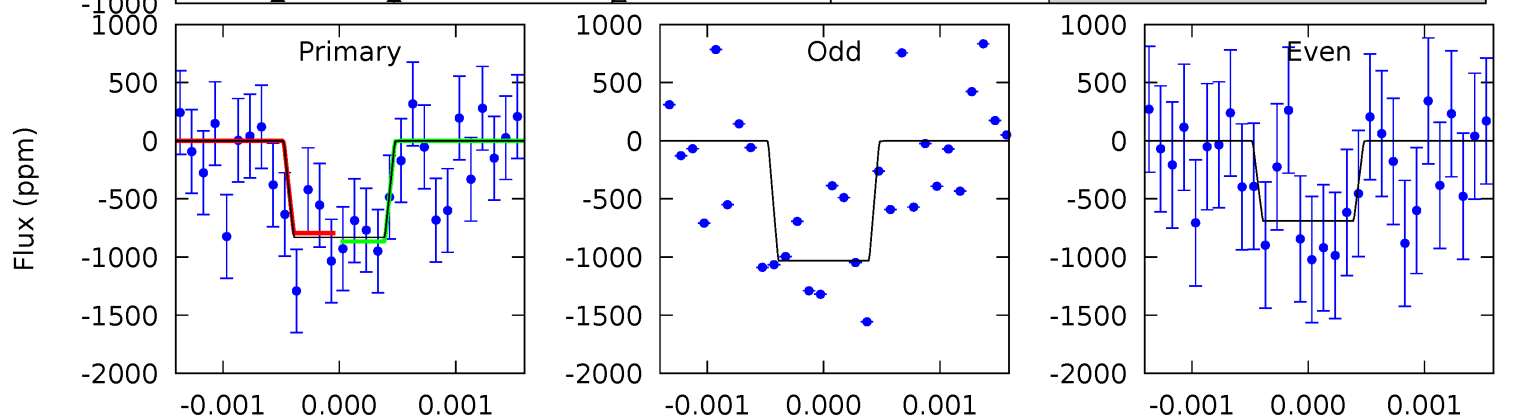
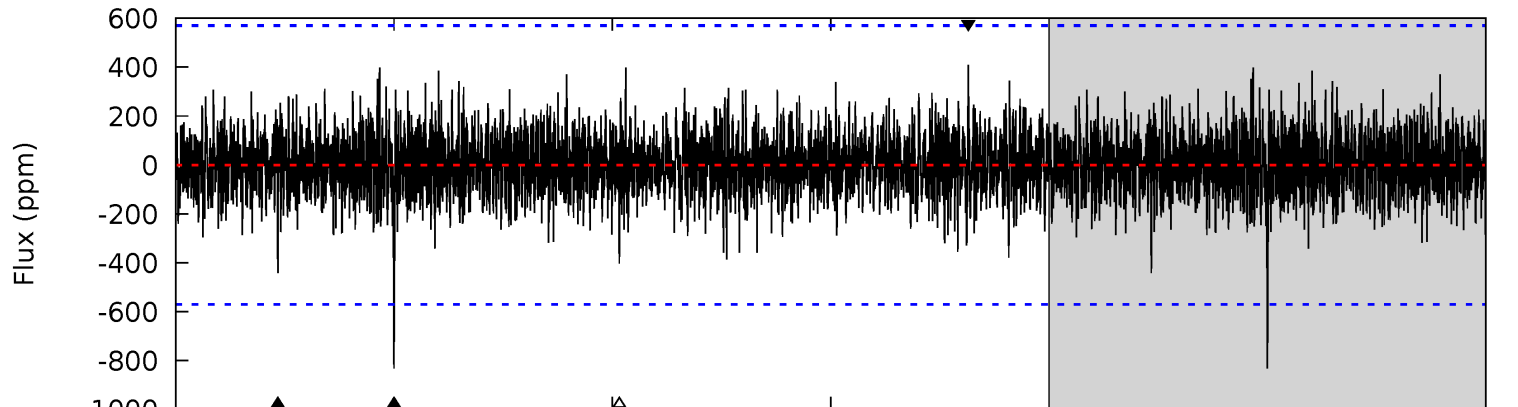
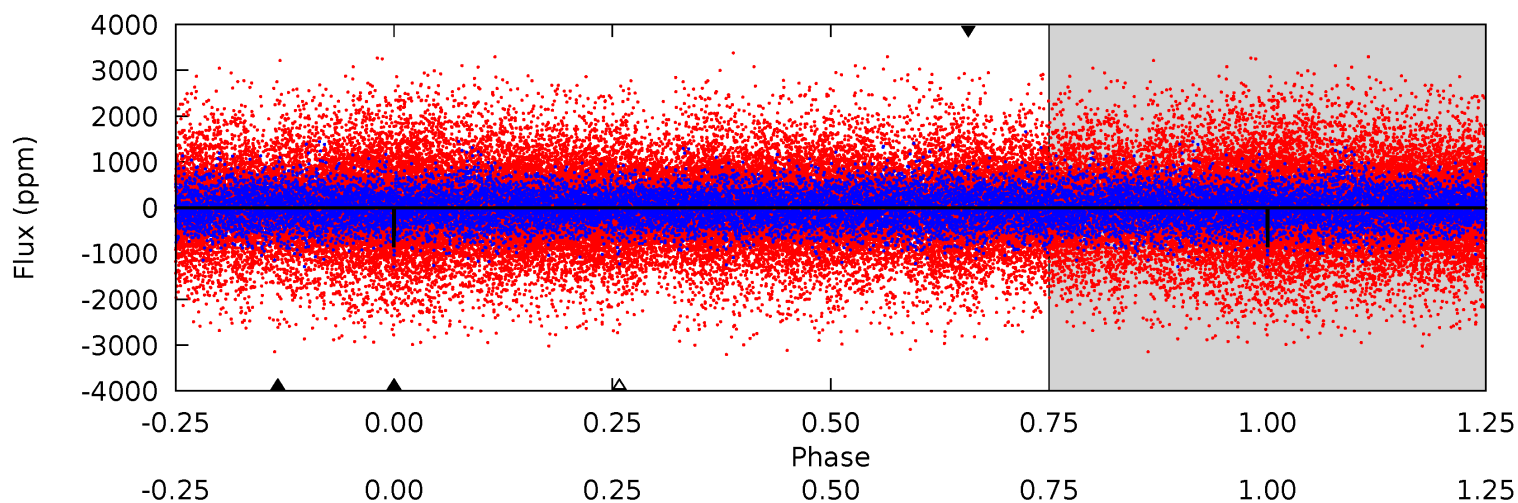
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.84	4.75	4.34	4.03	5.48	3.34	1.17	4.50	4.81	0.41	0.72	0.10	0.90	0.31	0.61



Alt Model-Shift Uniqueness Test

004060287-01, P = 270.628880 Days, E = 102.701583 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.99	4.24	3.88	3.94	5.47	3.33	1.01	4.11	4.05	0.36	0.30	1.62	0.88	0.33	0.33



Stellar Parameters For KIC 004060287

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5497^{+172}_{-191}	$4.570^{+0.027}_{-0.153}$	$0.070^{+0.250}_{-0.300}$	$0.839^{+0.173}_{-0.074}$	$0.952^{+0.074}_{-0.110}$	$2.272^{+0.339}_{-0.972}$
	+3%/-3%	+1%/-3%	+357%/-429%	+21%/-9%	+8%/-12%	+15%/-43%
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 004060287-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-508 ± 107	$3.57^{+2.51}_{-2.15}$	354^{+19}_{-16}	4427^{+2287}_{-770}	13906^{+75745}_{-9252}
Alt.	-441 ± 104	$3.23^{+2.48}_{-2.11}$	353^{+20}_{-15}	4456^{+2852}_{-801}	$14162^{+103508}_{-9613}$

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

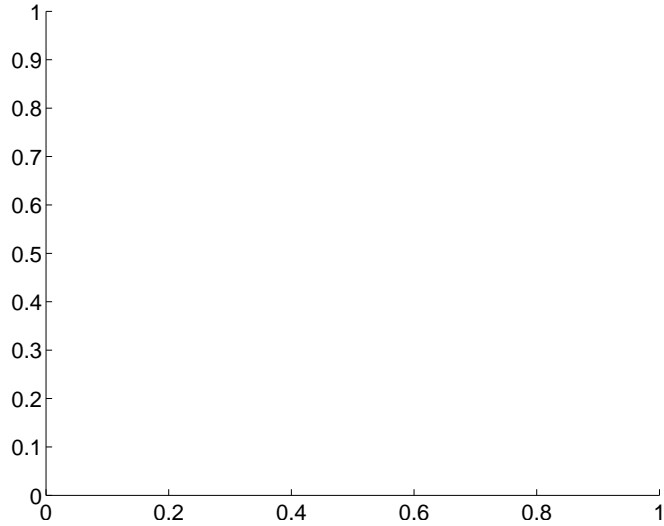
Supplemental centroid analysis for 004060287-01. Kepler magnitude: 15.53. Transit SNR 8.95

There are 0 quarters with good PRF difference image offsets

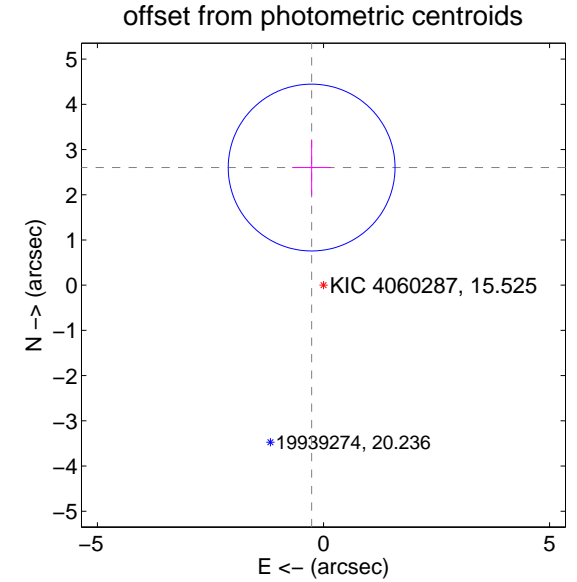
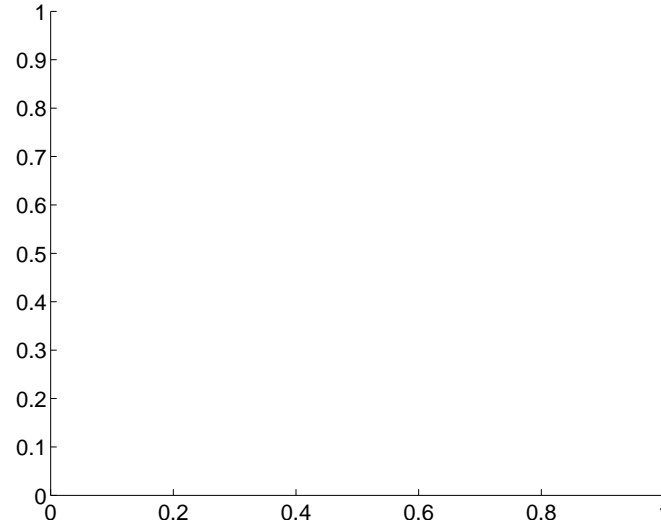
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	2.61 ± 0.61	4.25	0.26 ± 0.43	2.60 ± 0.62

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

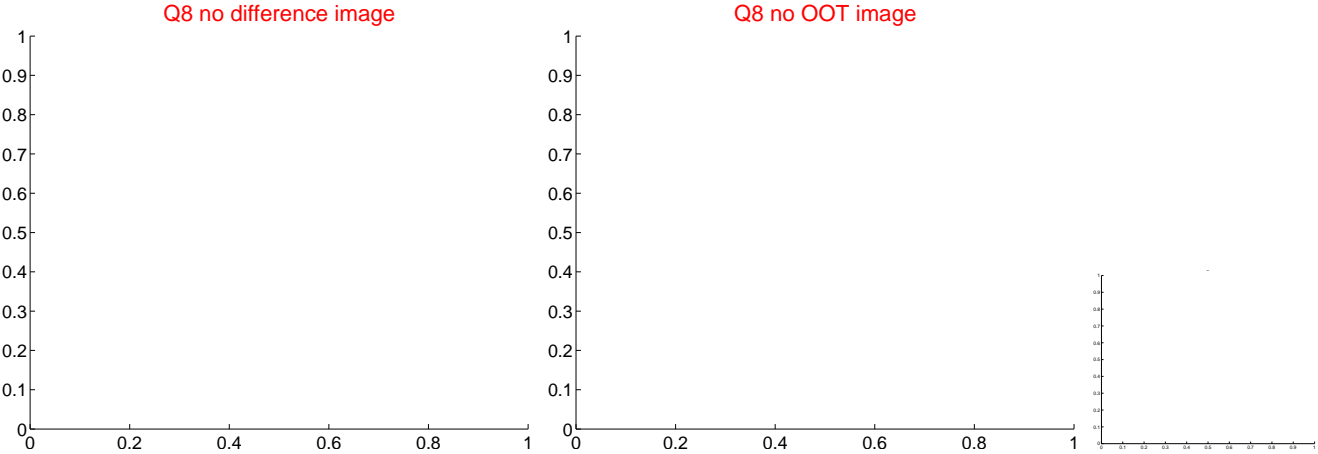


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

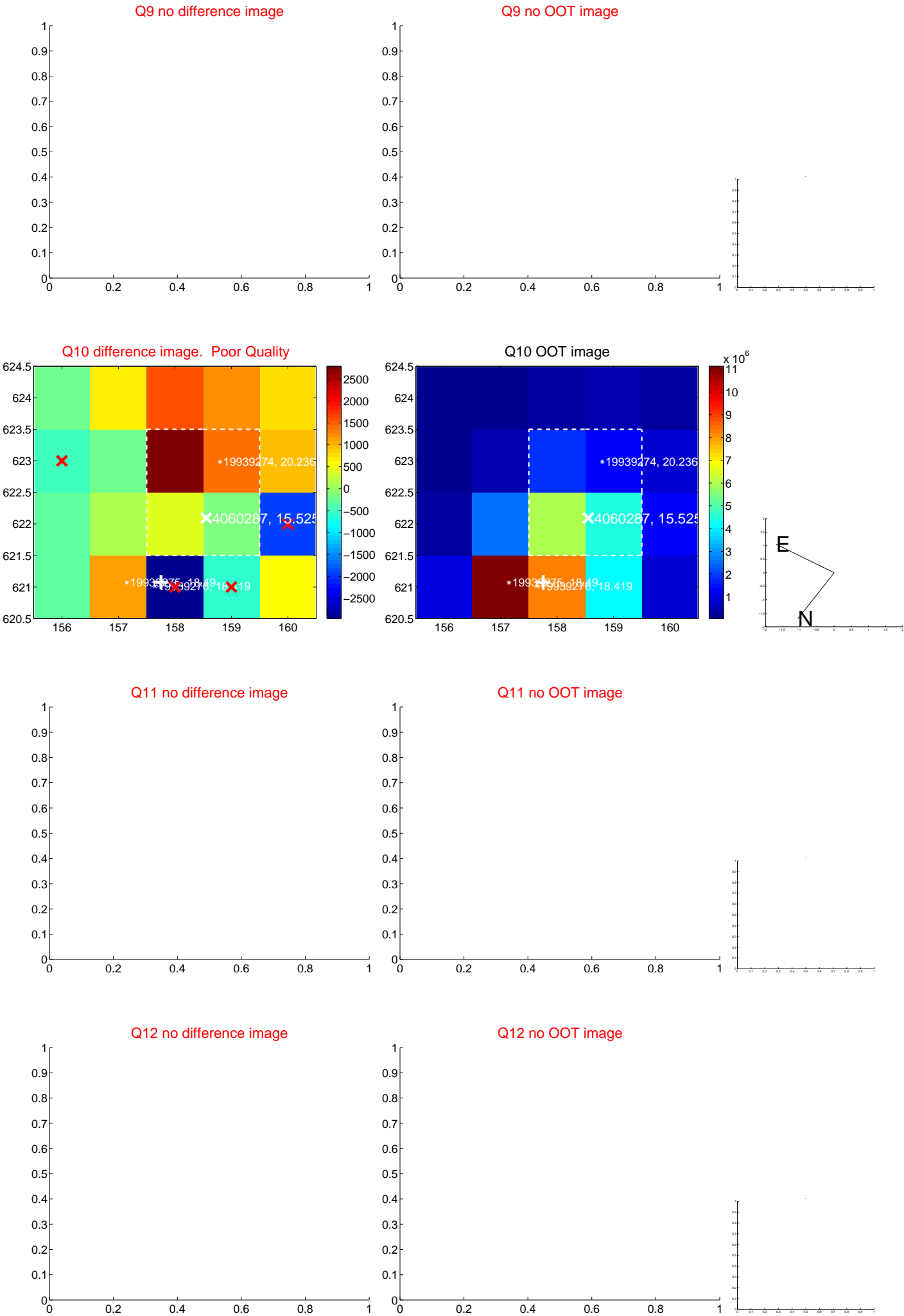
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



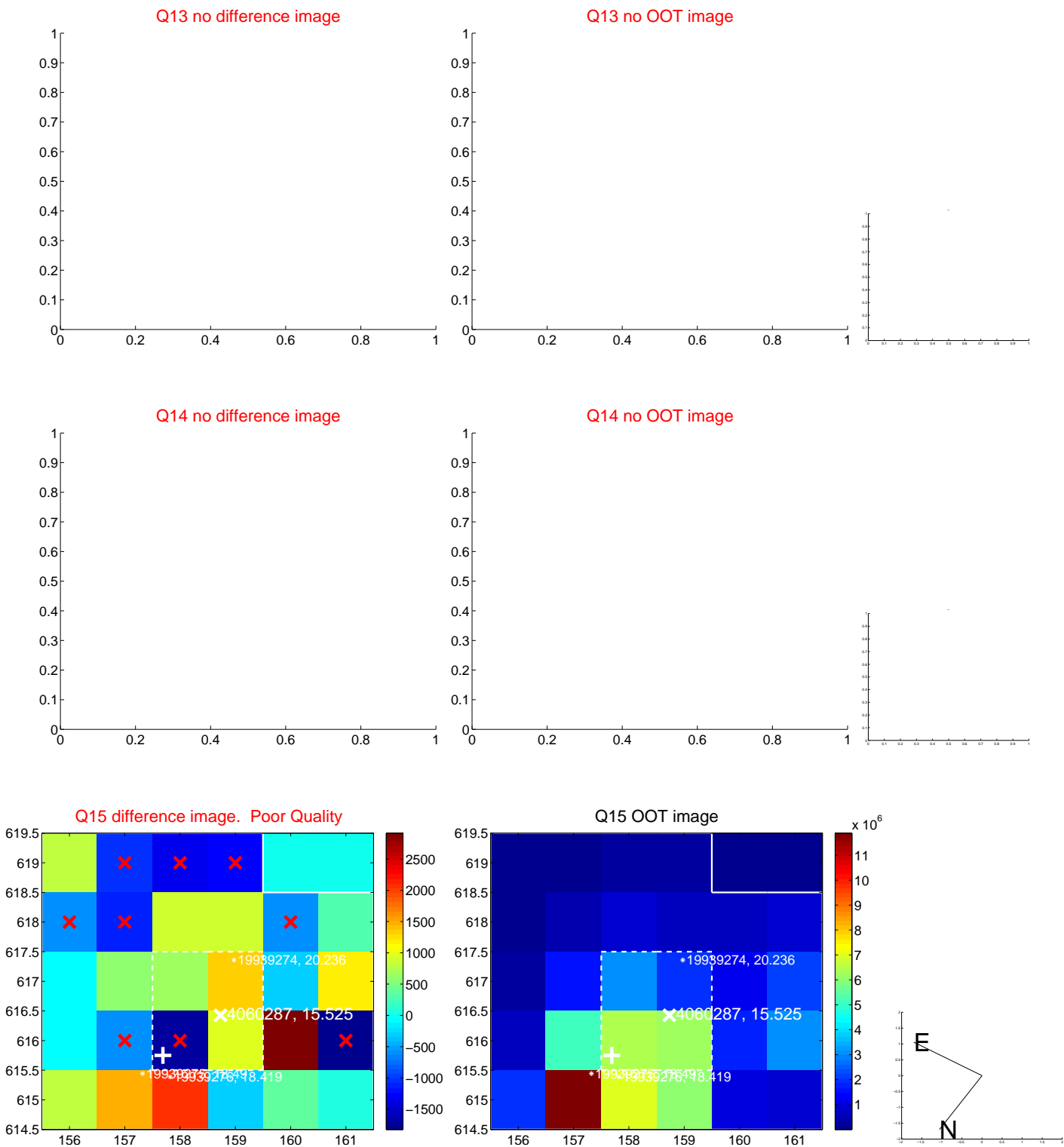
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



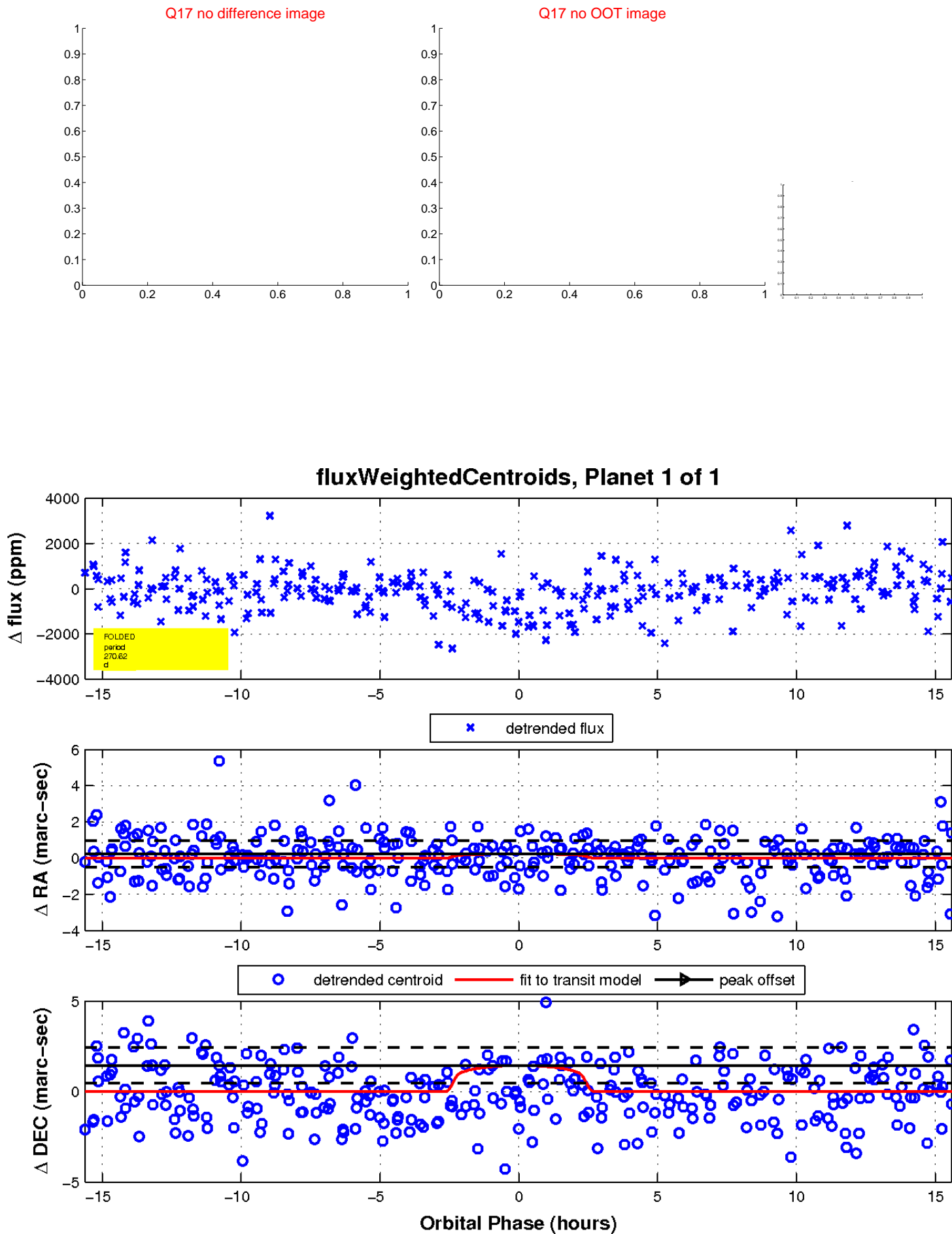
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

