

KIC 008288404

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})
008288404-01	OBS	5498.01	519.802431	462.624858	77053.7	14.933	1383.5	1325.7	1.03	5310	41.34	0.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008288404-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

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.

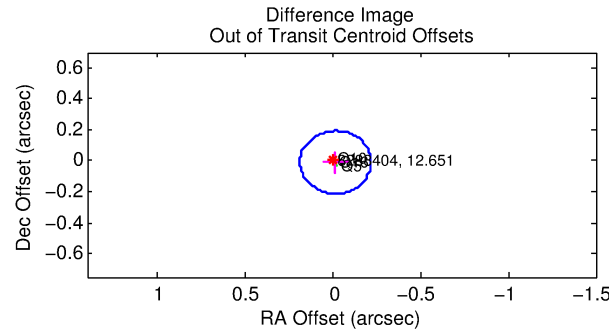
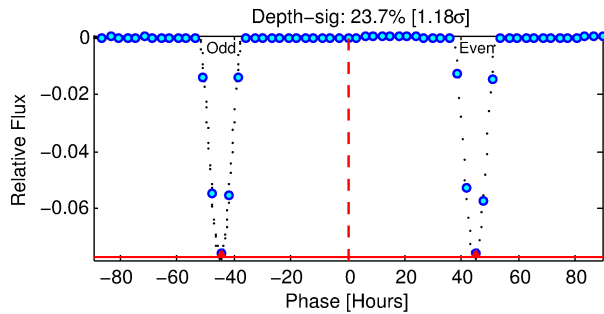
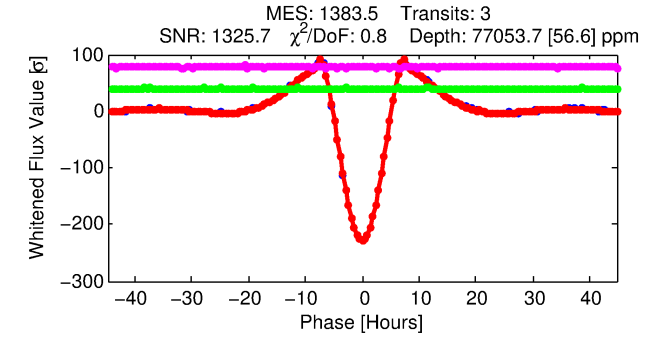
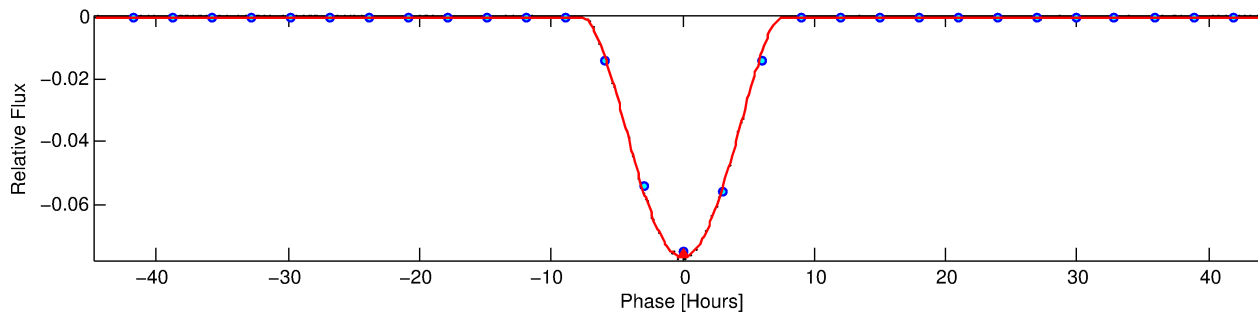
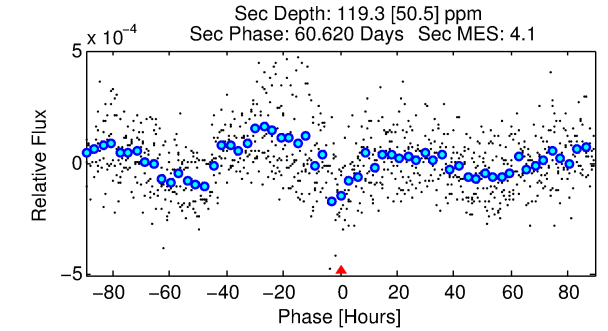
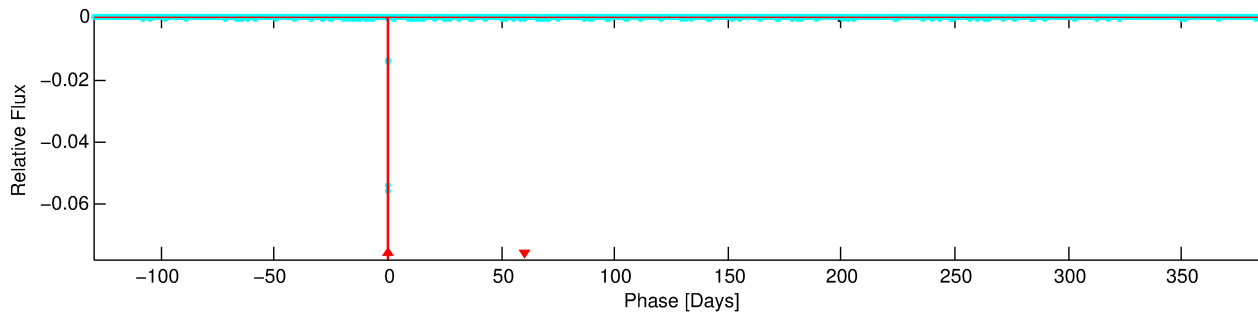
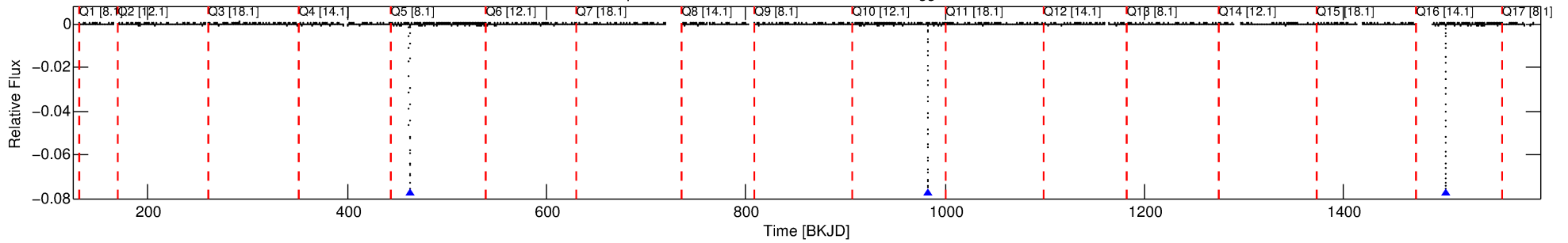
Ephemeris Match Information For 008288404-01

No Significant Match Found

DV One-Page Summary

KIC: 8288404 Candidate: 1 of 1 Period: 519.802 d
KOI: K05498.01 Corr: 0.993

Kp: 12.65 R*: 1.03 Rs Teff: 5310.0 K Logg: 4.36 Fe/H: 0.240



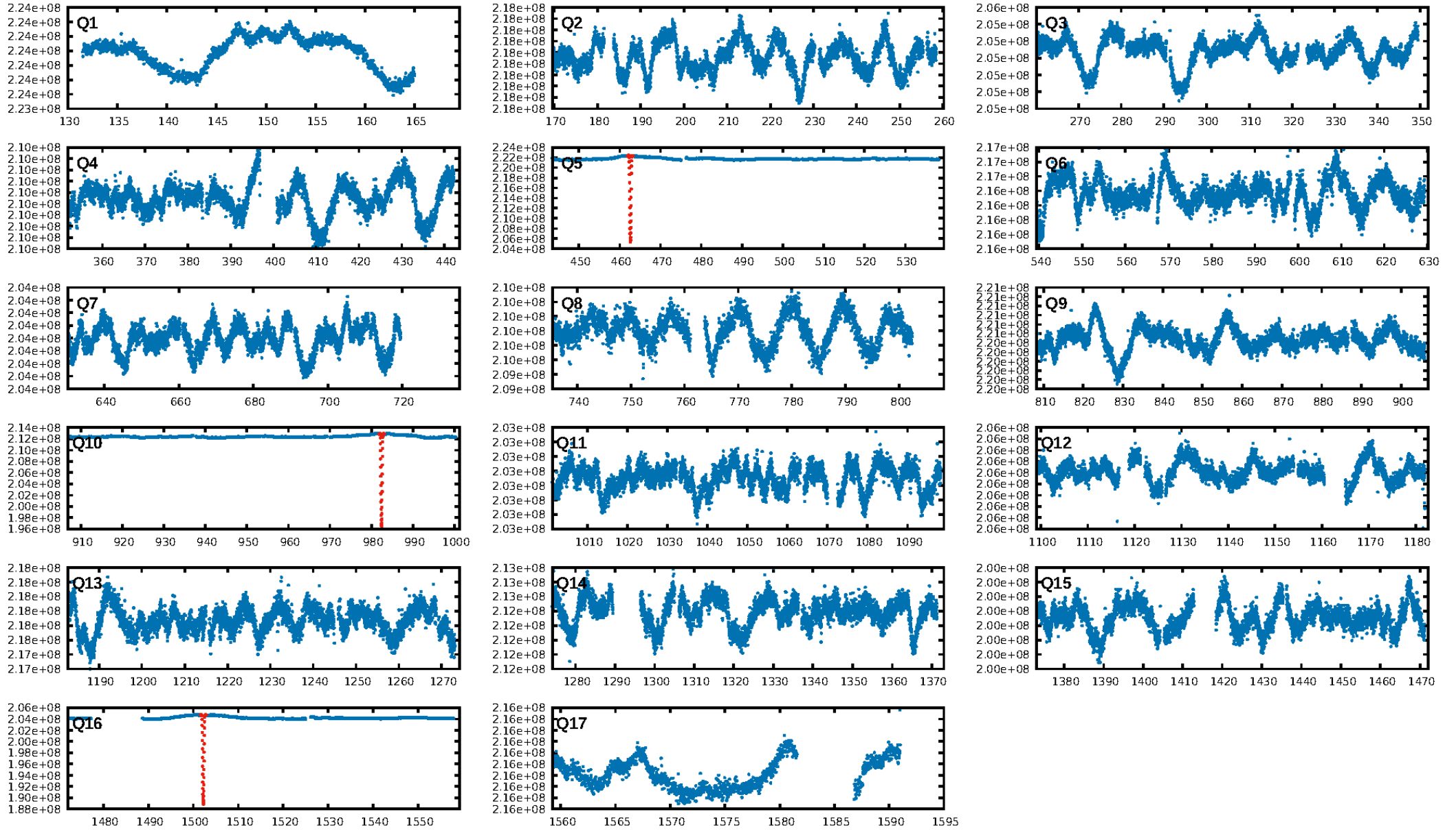
DV Fit Results:

Period = 519.80243 [0.00013] d
Epoch = 462.6249 [0.0002] BKJD
Rp/R* = 0.3678 [0.0105]
a/R* = 273.61 [0.21]
b = 0.90 [0.02]
Seff = 0.51 [0.14]
Teq = 216 [15] K
Rp = 41.34 [7.12] Re
a = 1.2119 [0.1984] AU
Ag = 56.39 [28.26] [1.96σ]
Teffp = 915 [99] K [6.99σ]

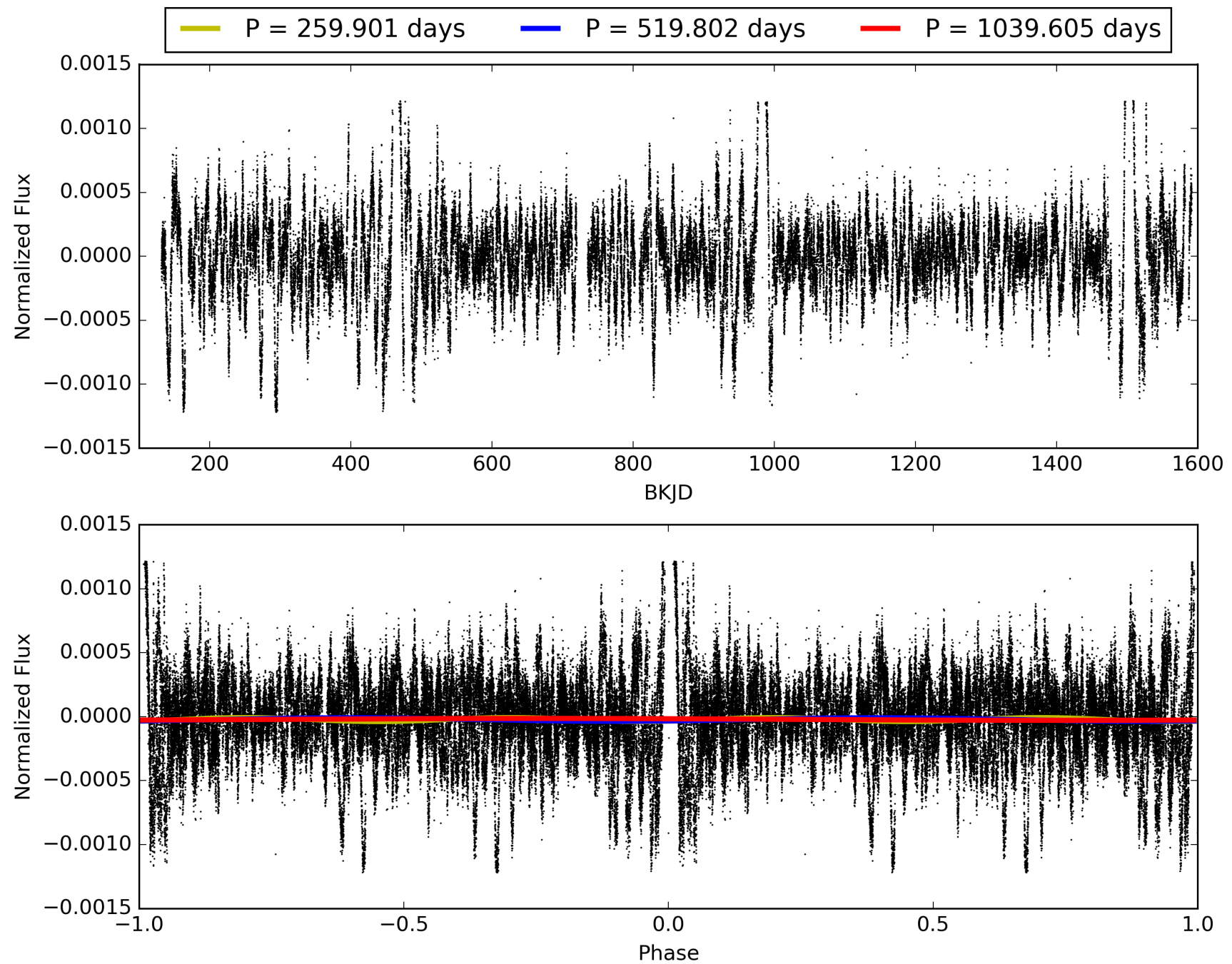
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 8.206
Centroid-sig: 0.0%
Centroid-so: 0.097 arcsec [30.53σ]
OotOffset-rm: 0.018 arcsec [0.27σ]
KicOffset-rm: 0.150 arcsec [2.12σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008288404-01, PDC Light Curves

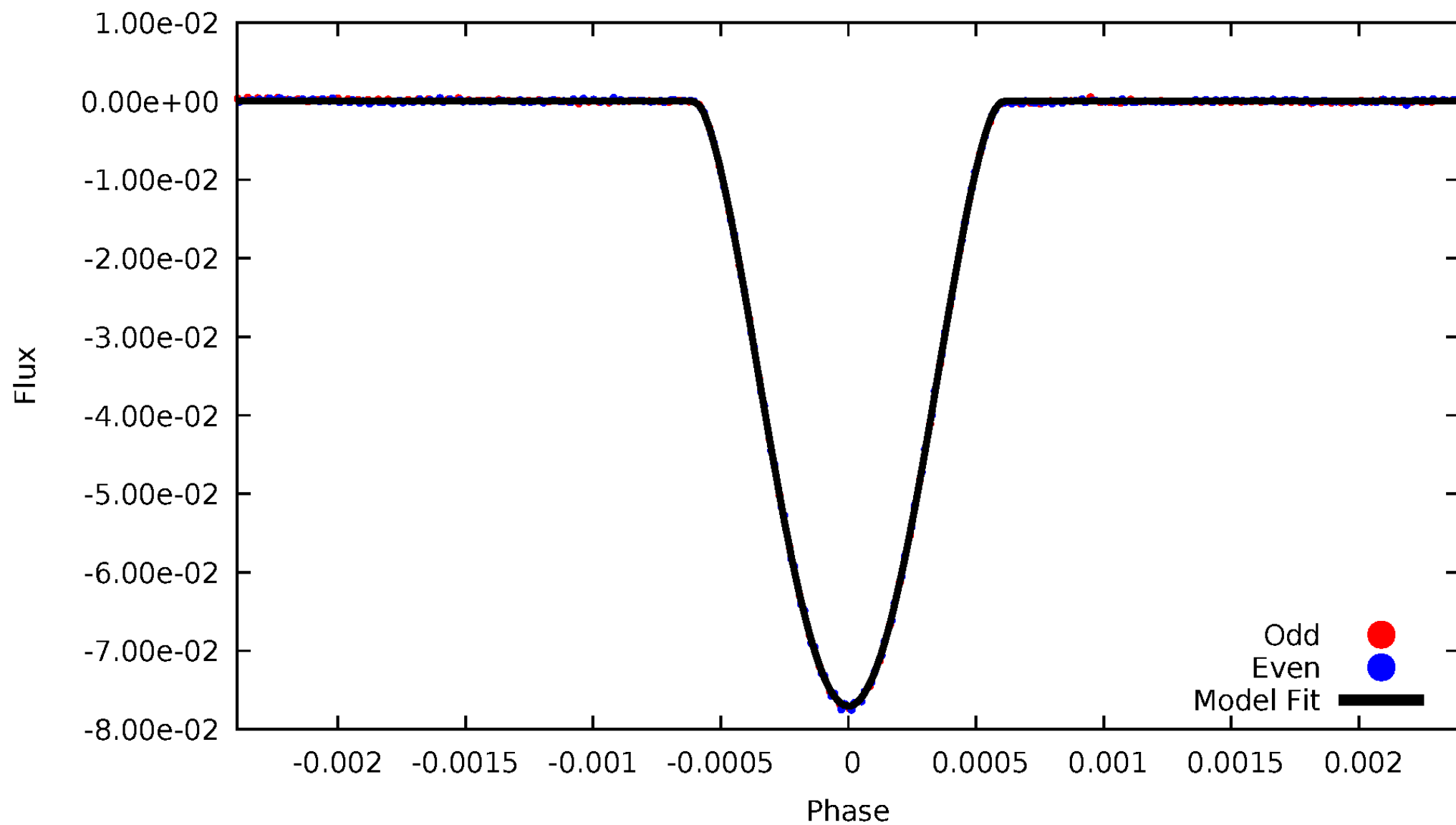


TCE 008288404-01



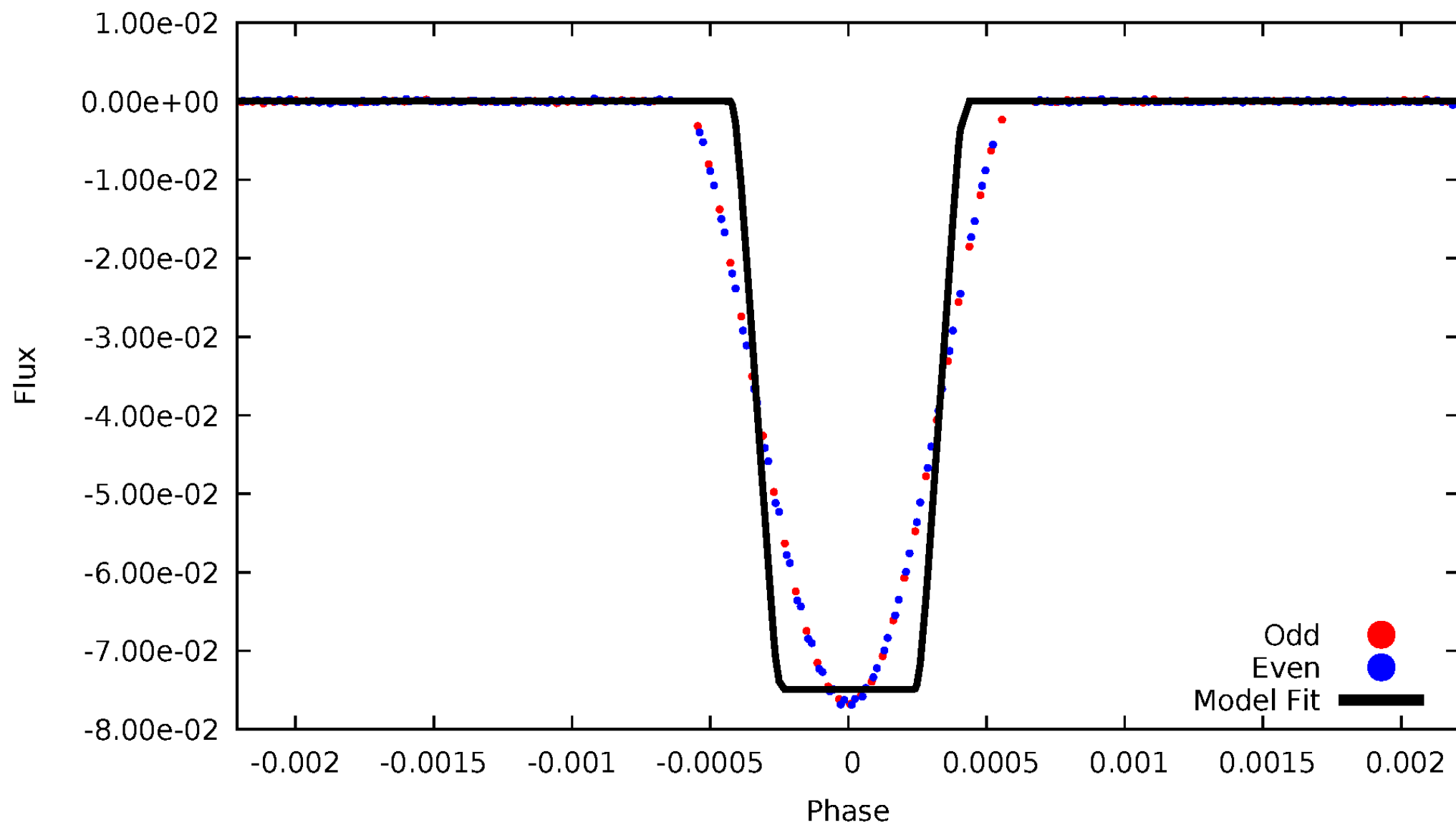
DV Odd/Even

TCE 008288404-01



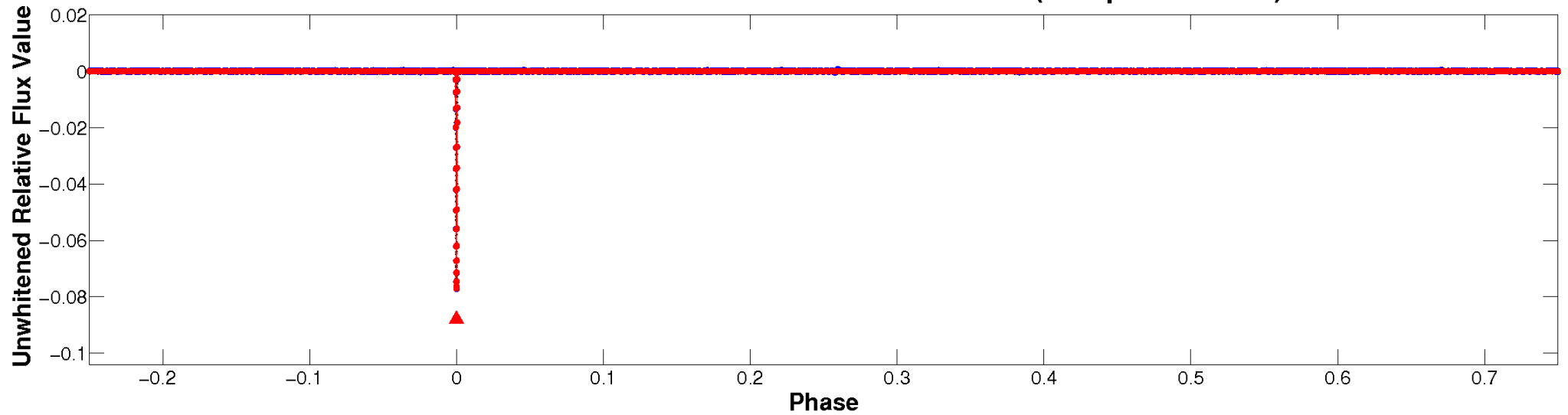
ALT Odd/Even

TCE 008288404-01

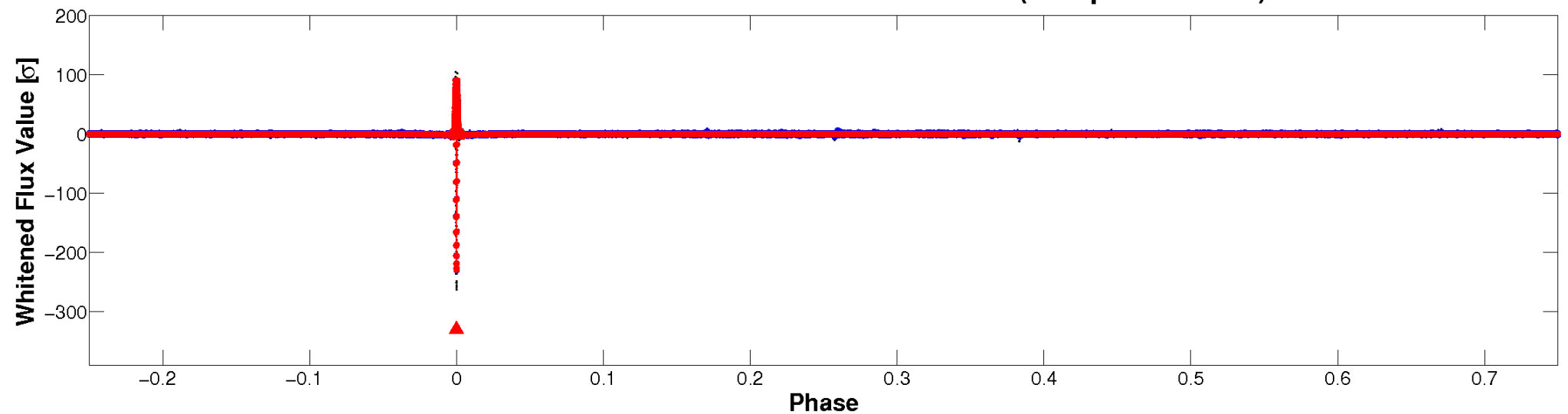


Non-Whitened Vs. Whitened Light Curve

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

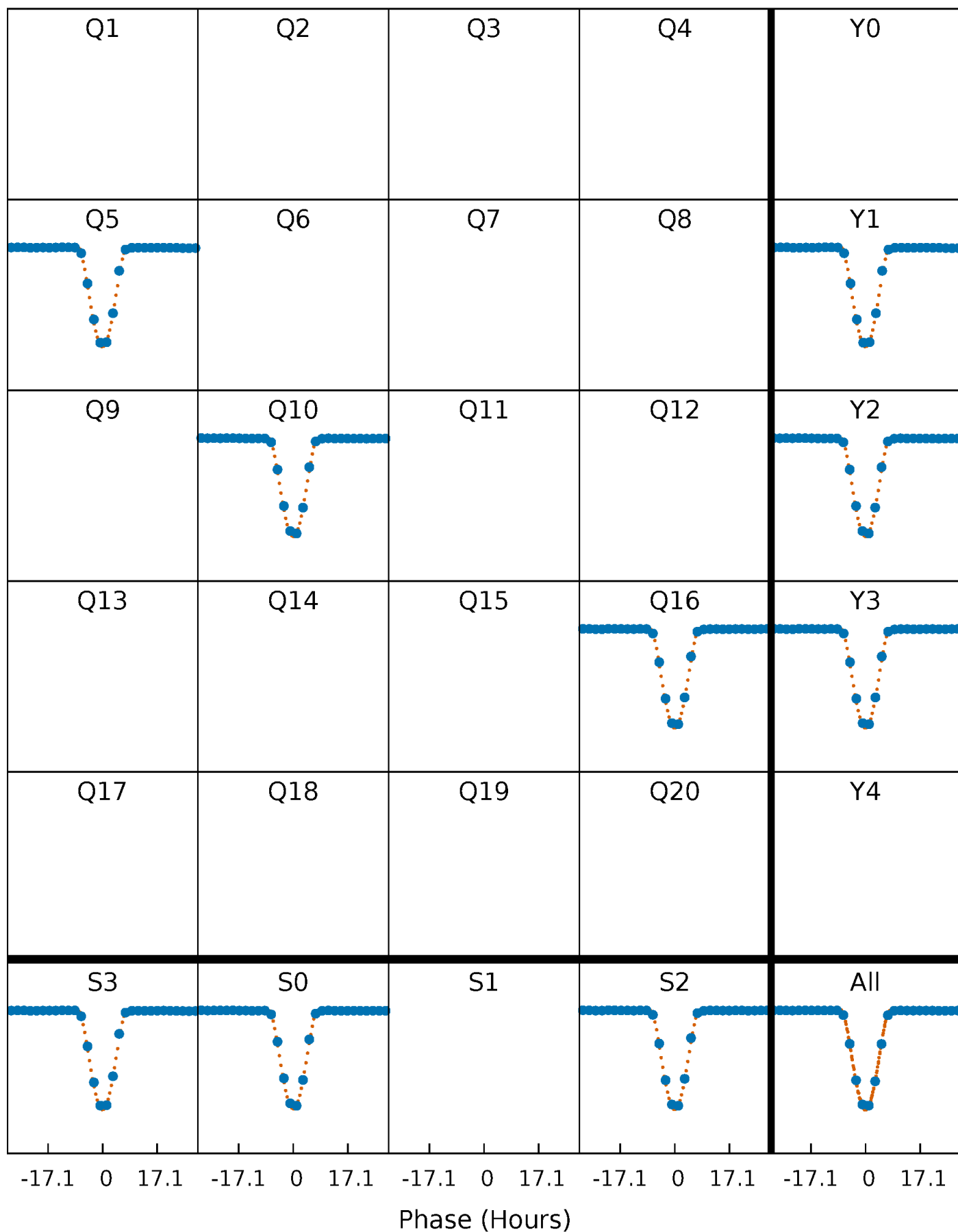


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



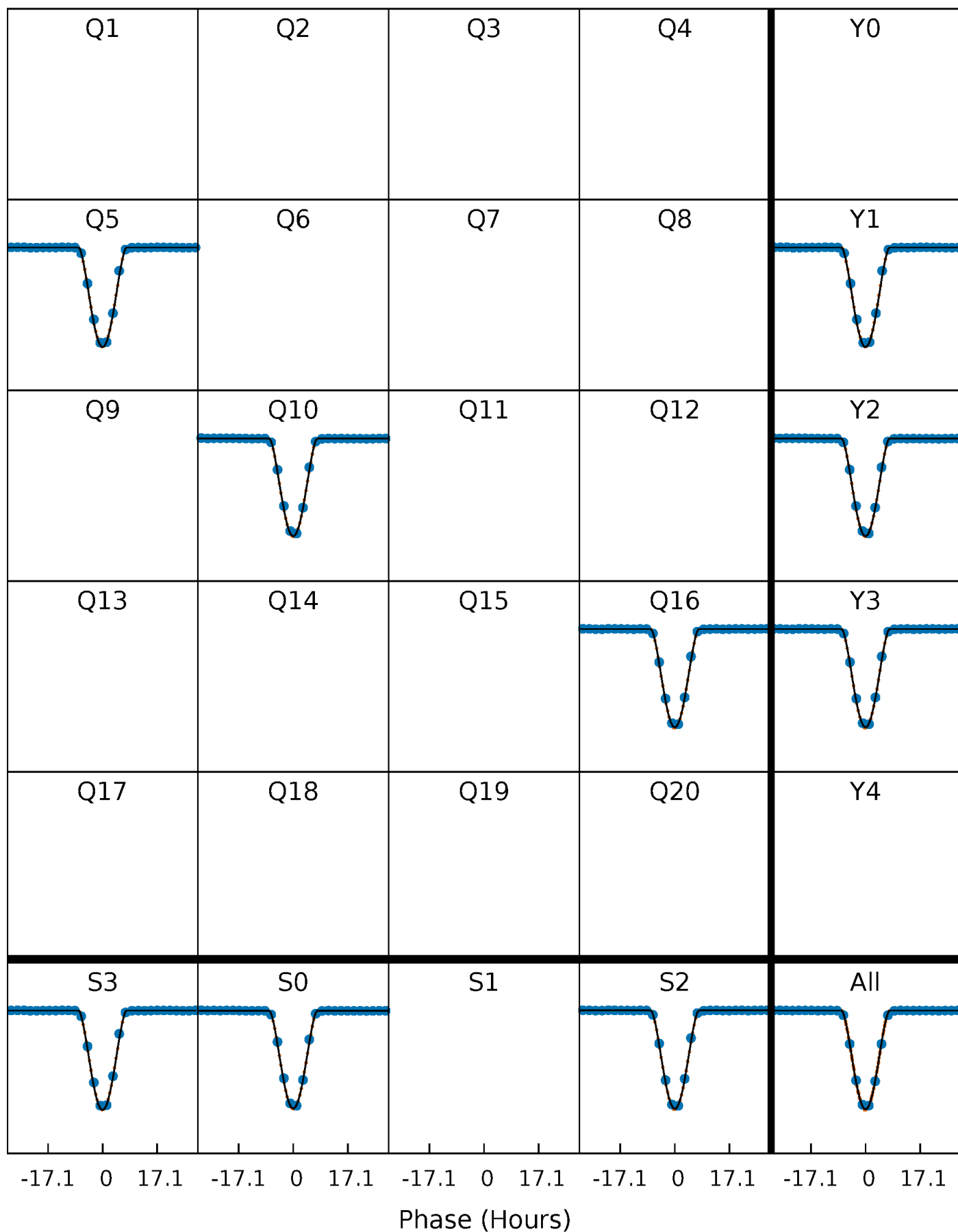
PDC Quarter-Phased Transit Curves

TCE 008288404-01 P=519.802431 Days $T_0=462.624858$ (BKJD)



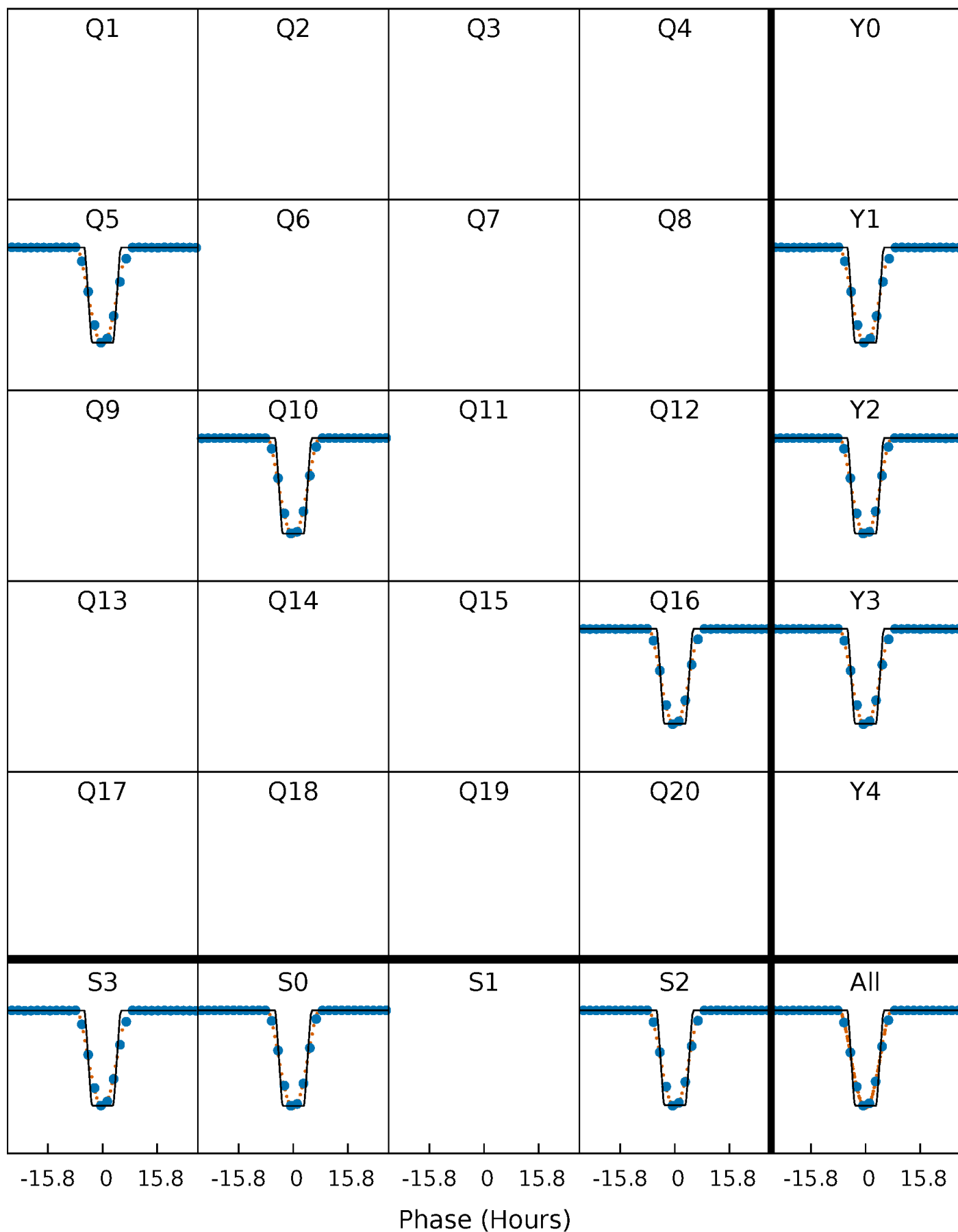
DV Quarter-Phased Transit Curves

TCE 008288404-01 P=519.802431 Days $T_0=462.624858$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

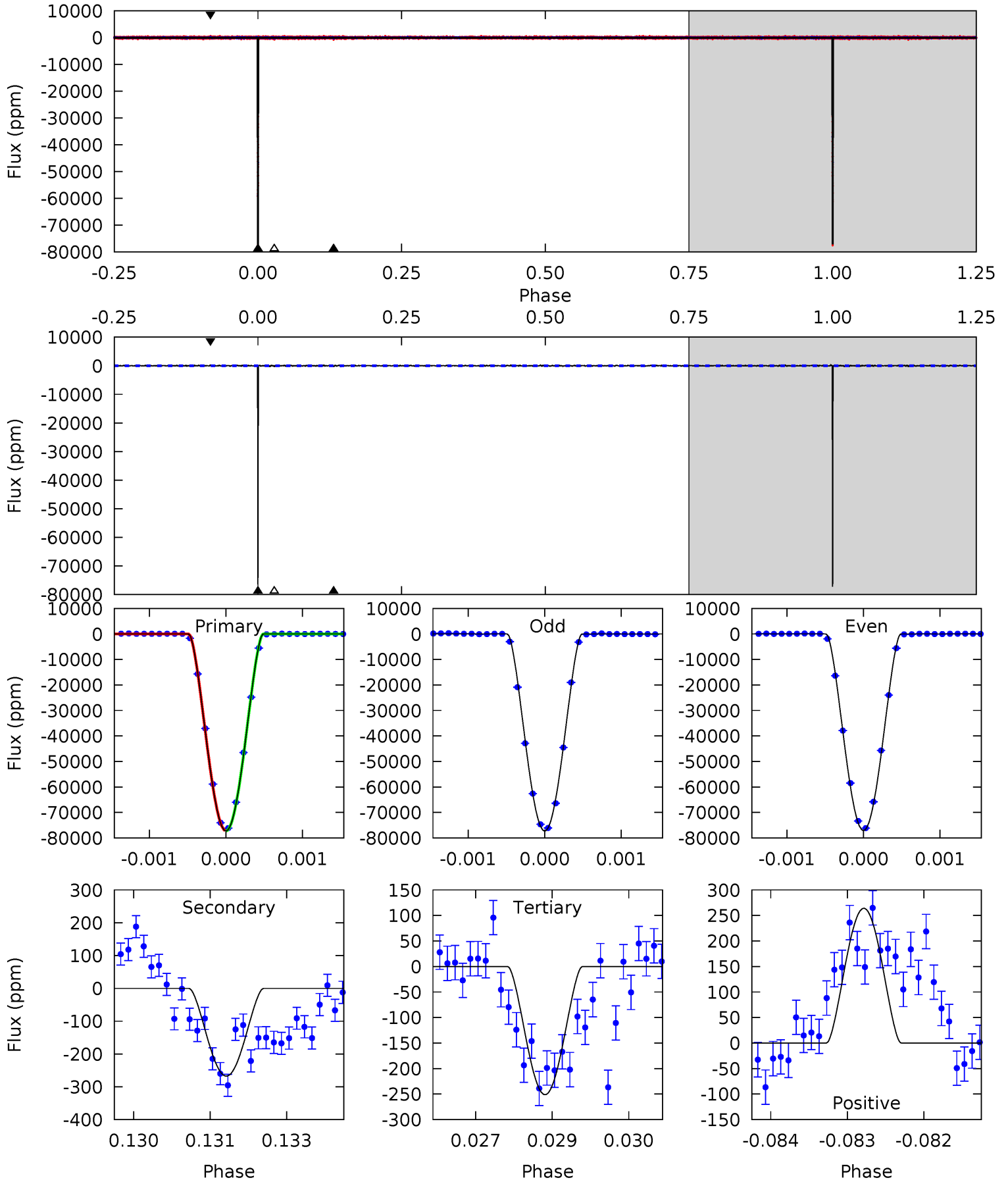
TCE 008288404-01 P=519.802522 Days $T_0=462.624692$ (BKJD)



DV Model-Shift Uniqueness Test

008288404-01, P = 519.802431 Days, E = 462.624858 Days

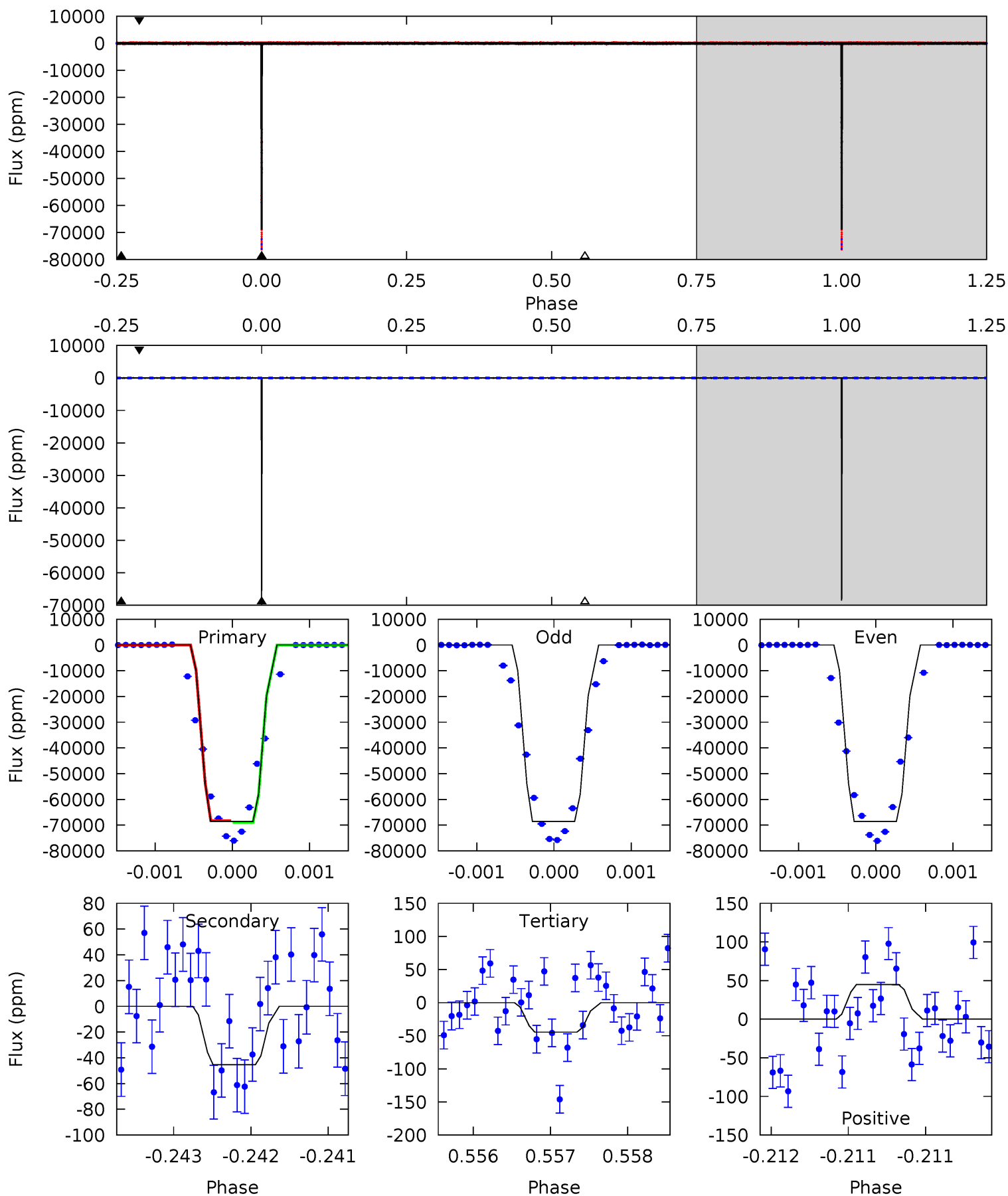
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5502	19.1	17.9	18.8	5.41	3.23	4.75	5484	5483	1.17	0.25	6.59	1.00	0.00	4.05



Alt Model-Shift Uniqueness Test

008288404-01, P = 519.802522 Days, E = 462.624692 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5128	3.40	3.33	3.36	5.49	3.34	3.93	5125	5125	0.07	0.04	1.44	1.00	0.00	26.4



Stellar Parameters For KIC 008288404

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5310^{+87}_{-71}	$4.356^{+0.154}_{-0.140}$	$0.240^{+0.150}_{-0.150}$	$1.030^{+0.175}_{-0.159}$	$0.879^{+0.065}_{-0.032}$	$1.133^{+0.784}_{-0.428}$
	+2%/-1%	+4%/-3%	+62%/-62%	+17%/-15%	+7%/-4%	+69%/-38%
Source	SPE90	FLK73	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008288404-01 / KOI 5498.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-268 ± 14	$41.52^{+4.64}_{-4.06}$	303^{+15}_{-16}	2093^{+23}_{-24}	126^{+30}_{-24}
Alt.	-45 ± 13	$30.85^{+3.37}_{-3.19}$	301^{+17}_{-14}	1860^{+51}_{-65}	40^{+14}_{-13}

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 $A_{obs} \gg 1.0$

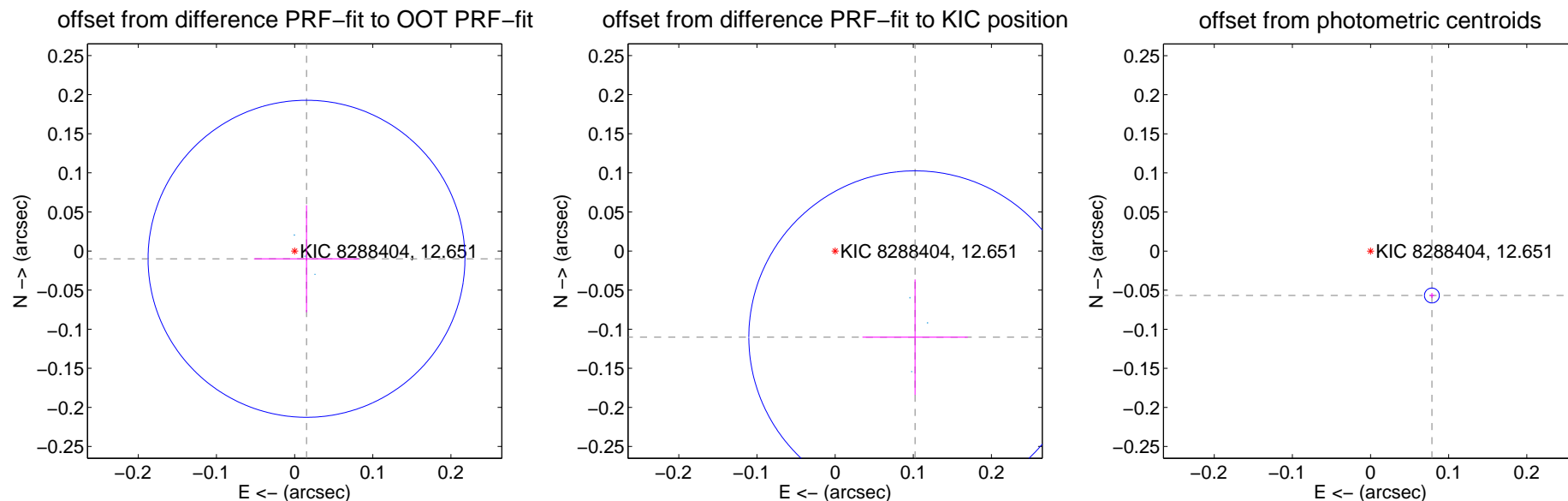
DV Centroid Data

Supplemental centroid analysis for 008288404-01. Kepler magnitude: 12.65. Transit SNR 1325.73

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.018 ± 0.068	0.27	-0.015 ± 0.067	-0.010 ± 0.068
PRF-fit source offset from KIC position	0.150 ± 0.071	2.12	-0.102 ± 0.067	-0.110 ± 0.074
photometric centroid source offset	0.10 ± 0.00	30.53	-0.08 ± 0.00	-0.06 ± 0.00

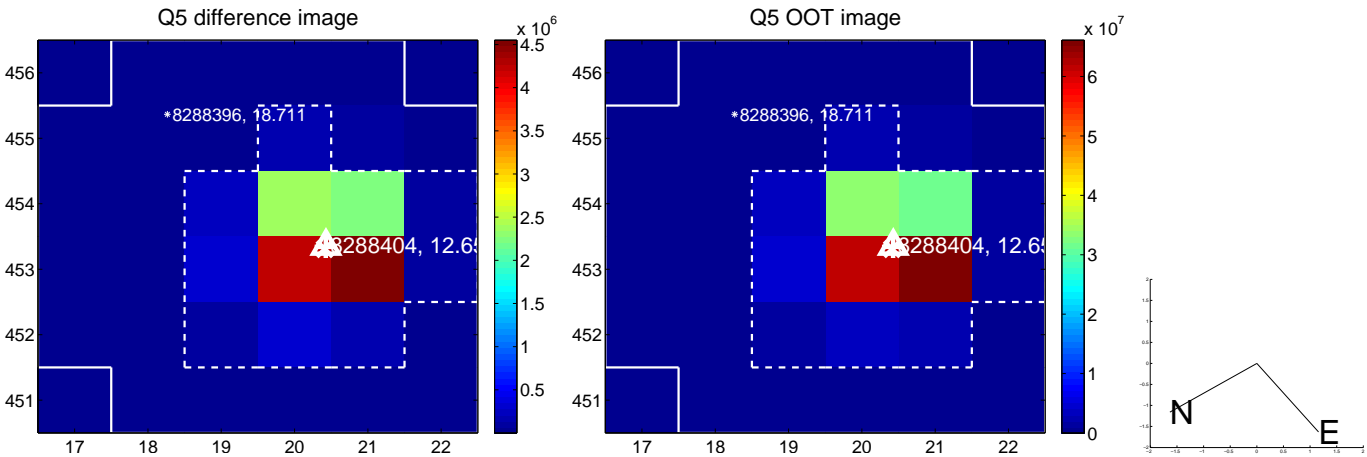


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

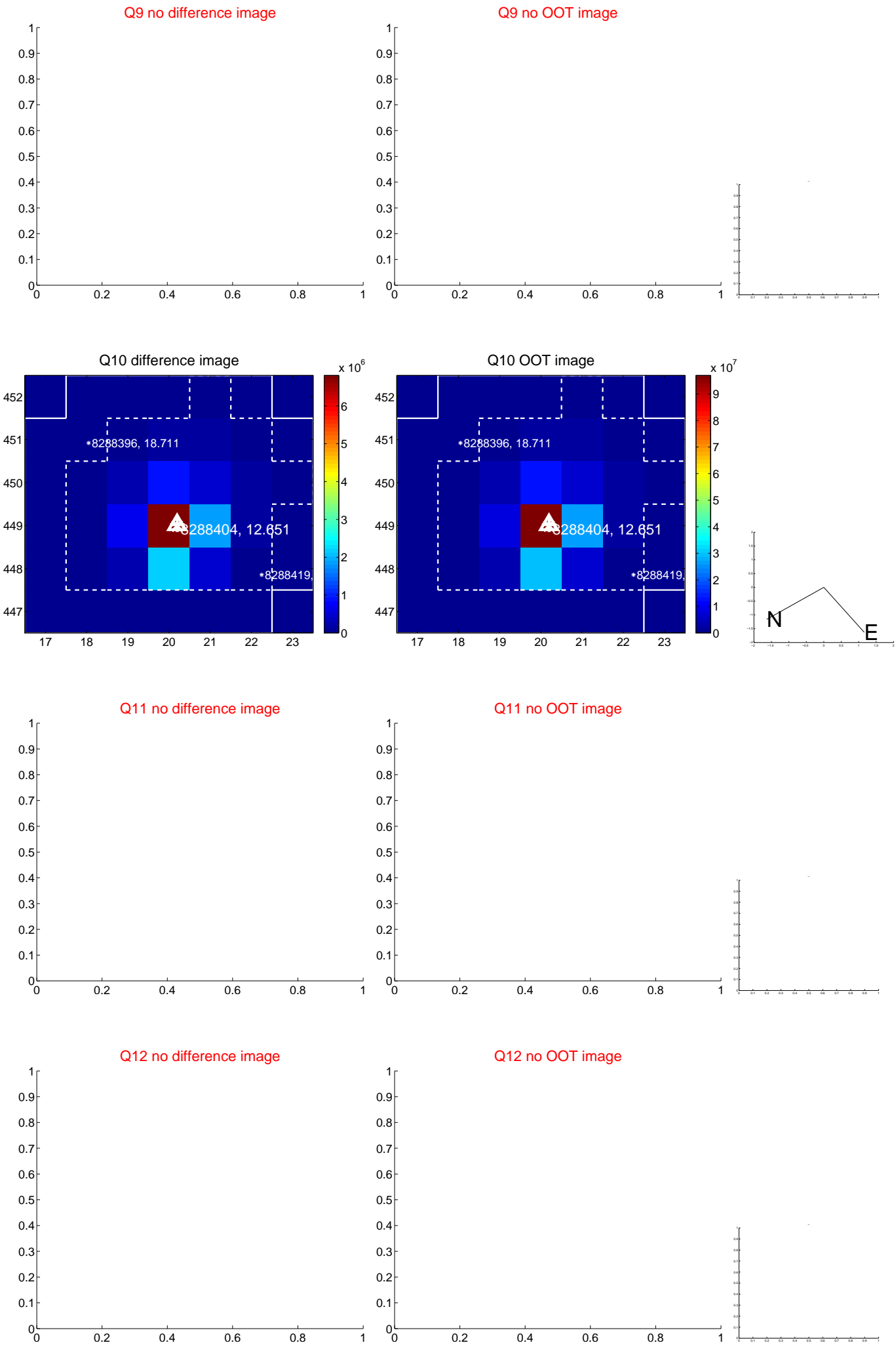
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



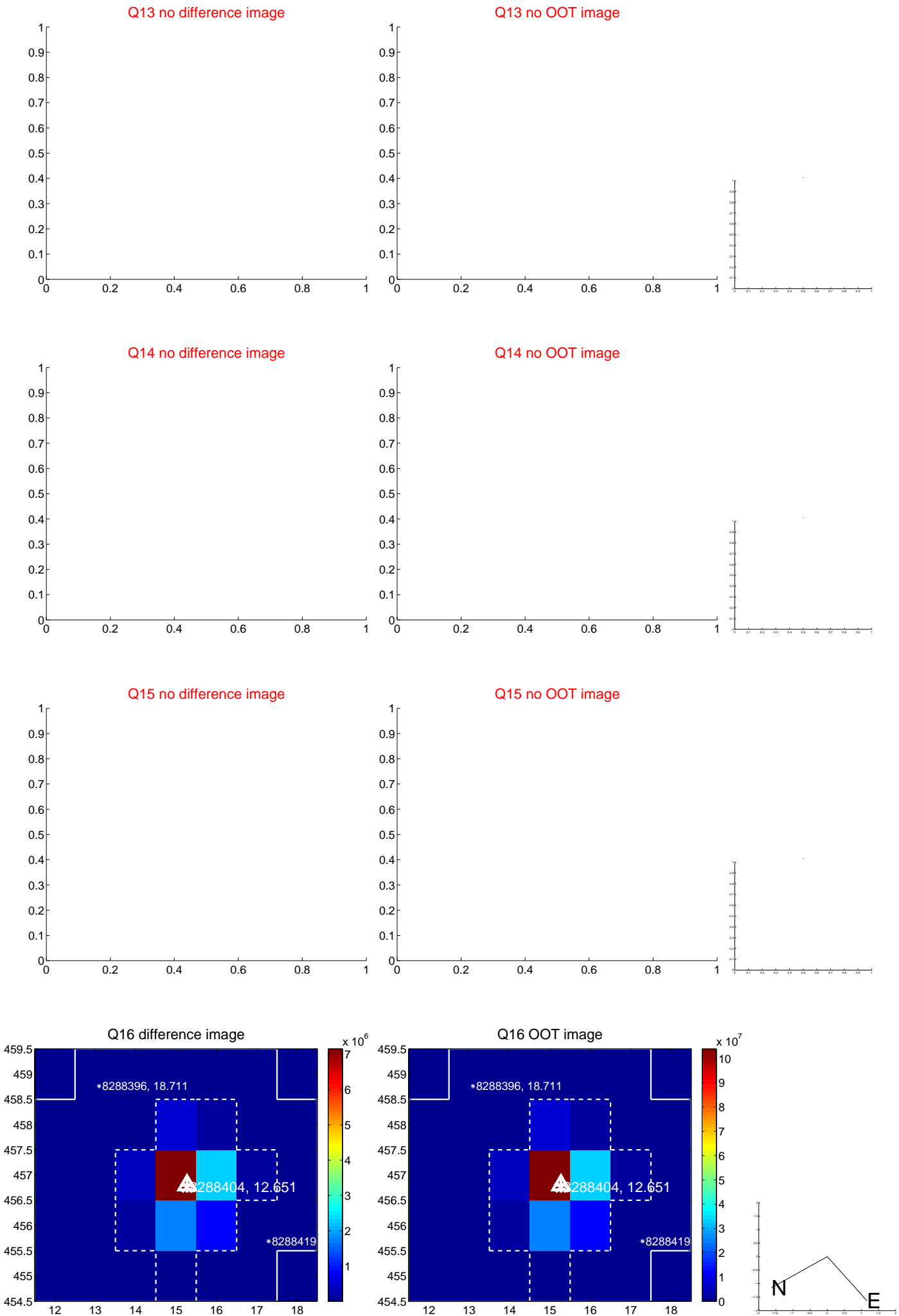
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



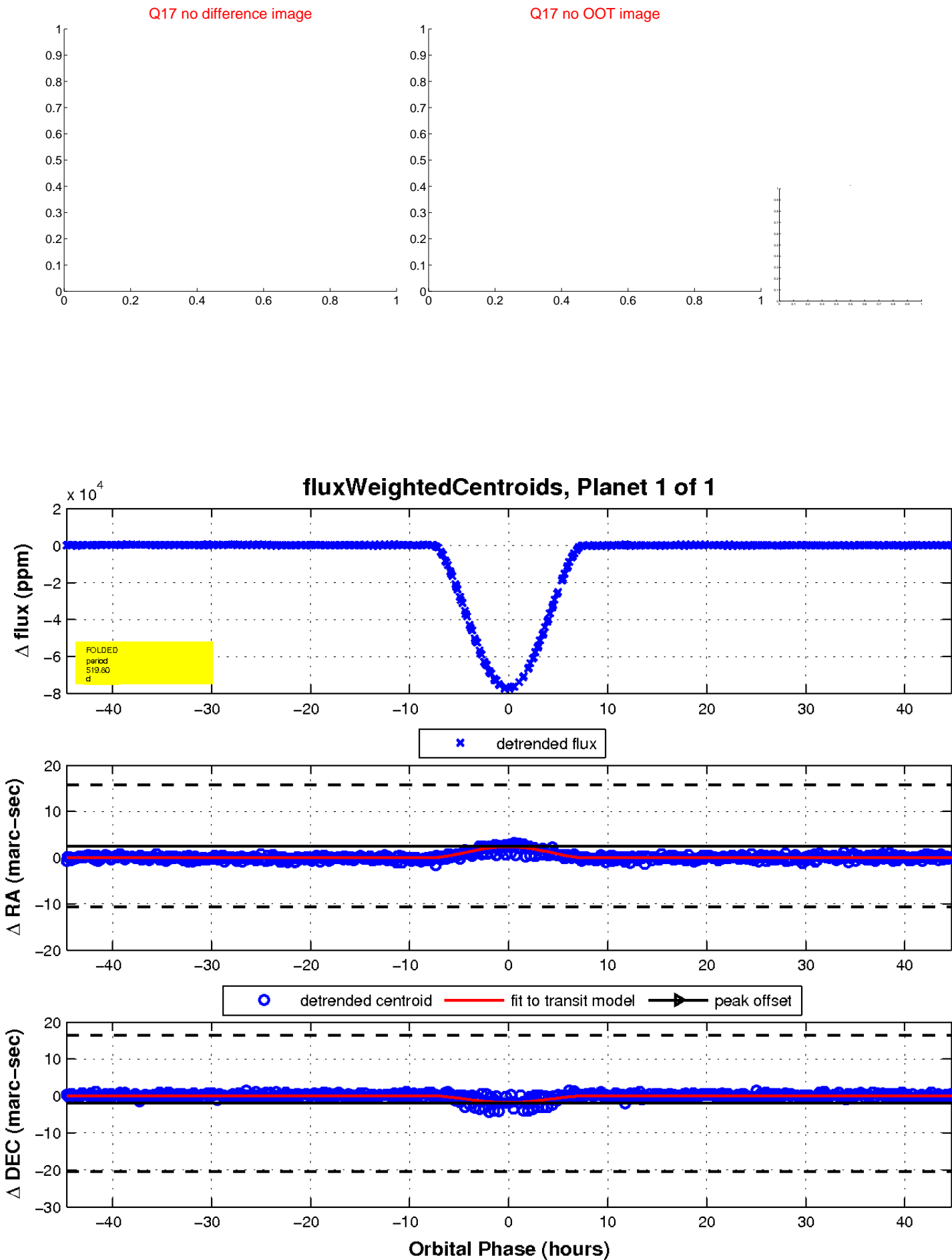
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

