

KIC 008106996

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})
008106996-01	OBS	No	508.188943	480.203724	551.6	13.001	7.5	7.3	1.00	6136	2.47	0.81

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008106996-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_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.

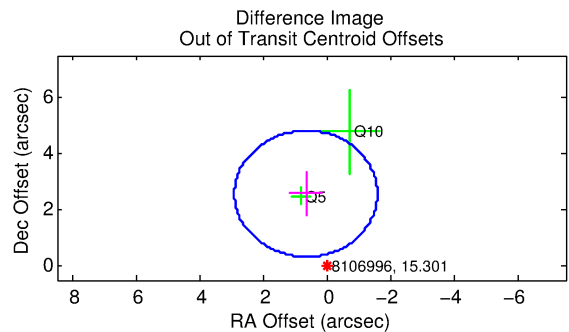
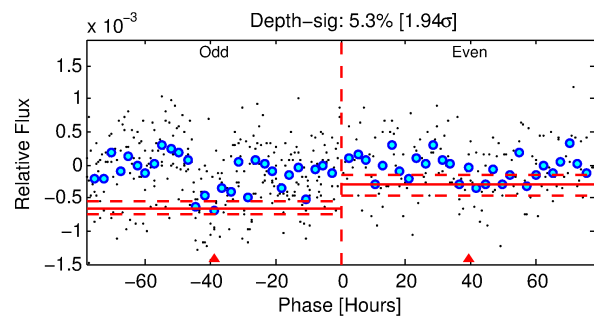
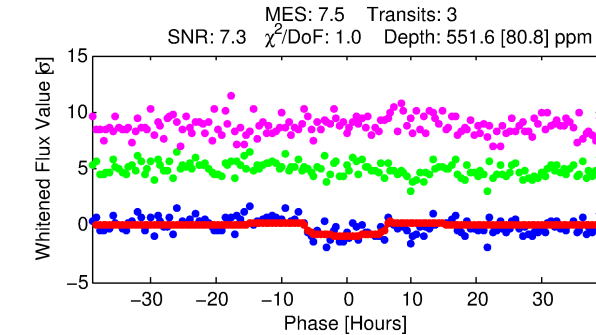
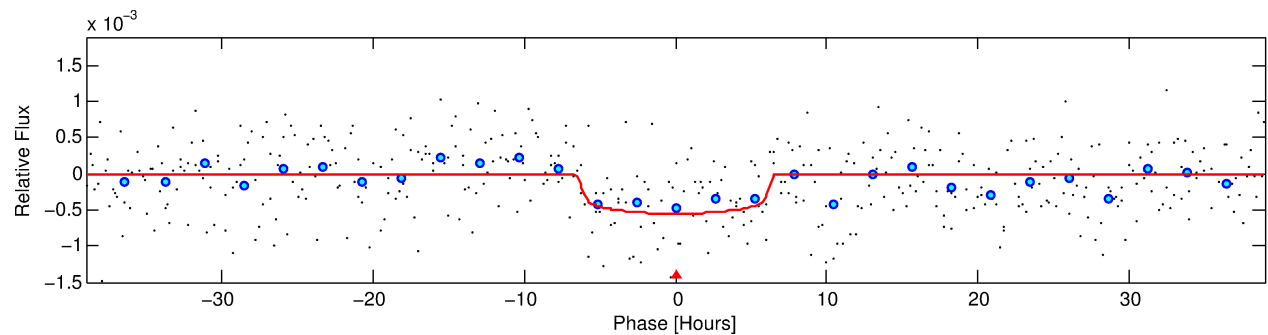
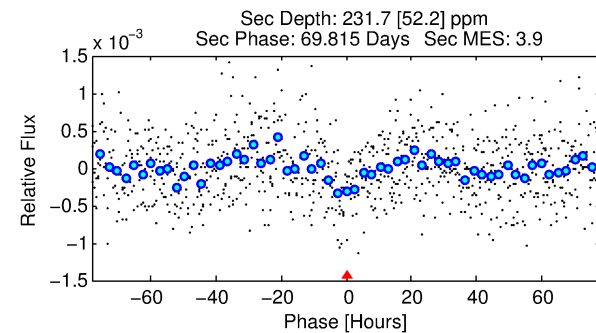
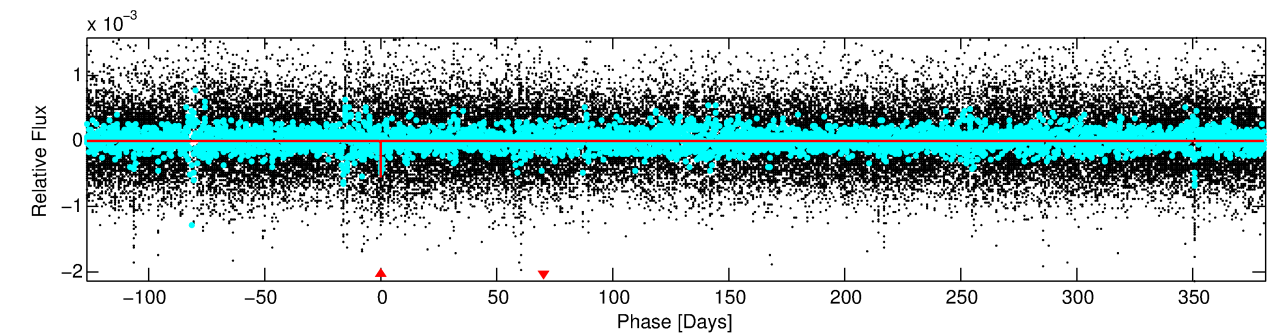
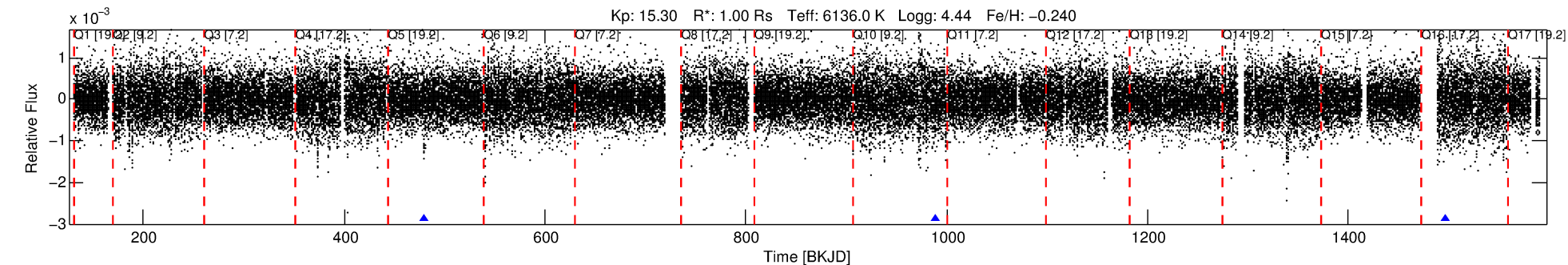
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008106996-01

No Significant Match Found

DV One-Page Summary

KIC: 8106996 Candidate: 1 of 1 Period: 508.189 d



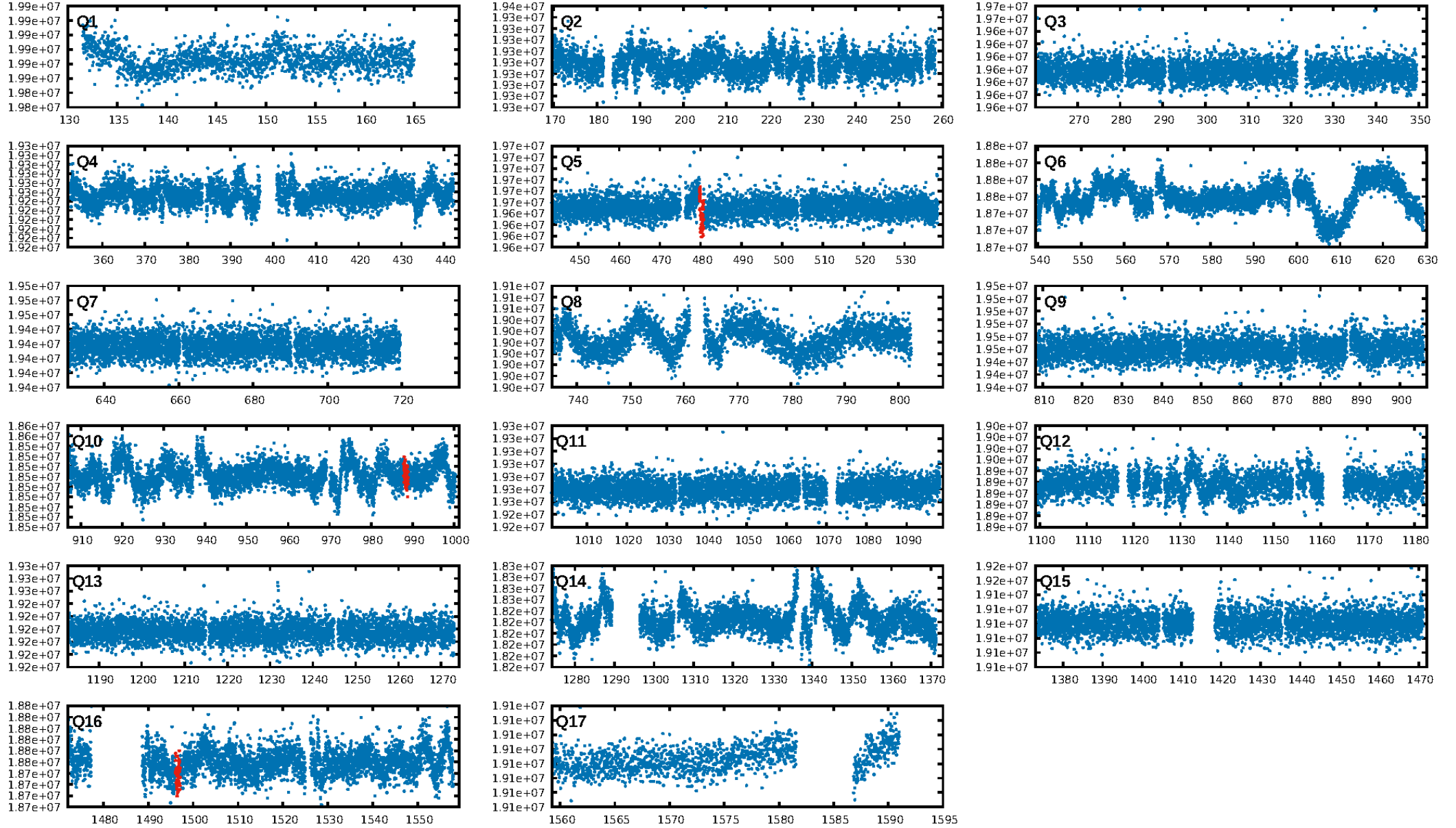
DV Fit Results:

Period = 508.18894 [0.01555] d
Epoch = 480.2037 [0.0184] BKJD
Rp/R* = 0.0227 [0.0106]
a/R* = 234.76 [542.21]
b = 0.65 [2.03]
Seff = 0.81 [0.32]
Teq = 242 [24] K
Rp = 2.47 [1.38] Re
a = 1.2471 [0.3216] AU
Ag = 32429.90 [33336.71] [0.97 σ]
Teffp = 5019 [1214] K [3.93 σ]

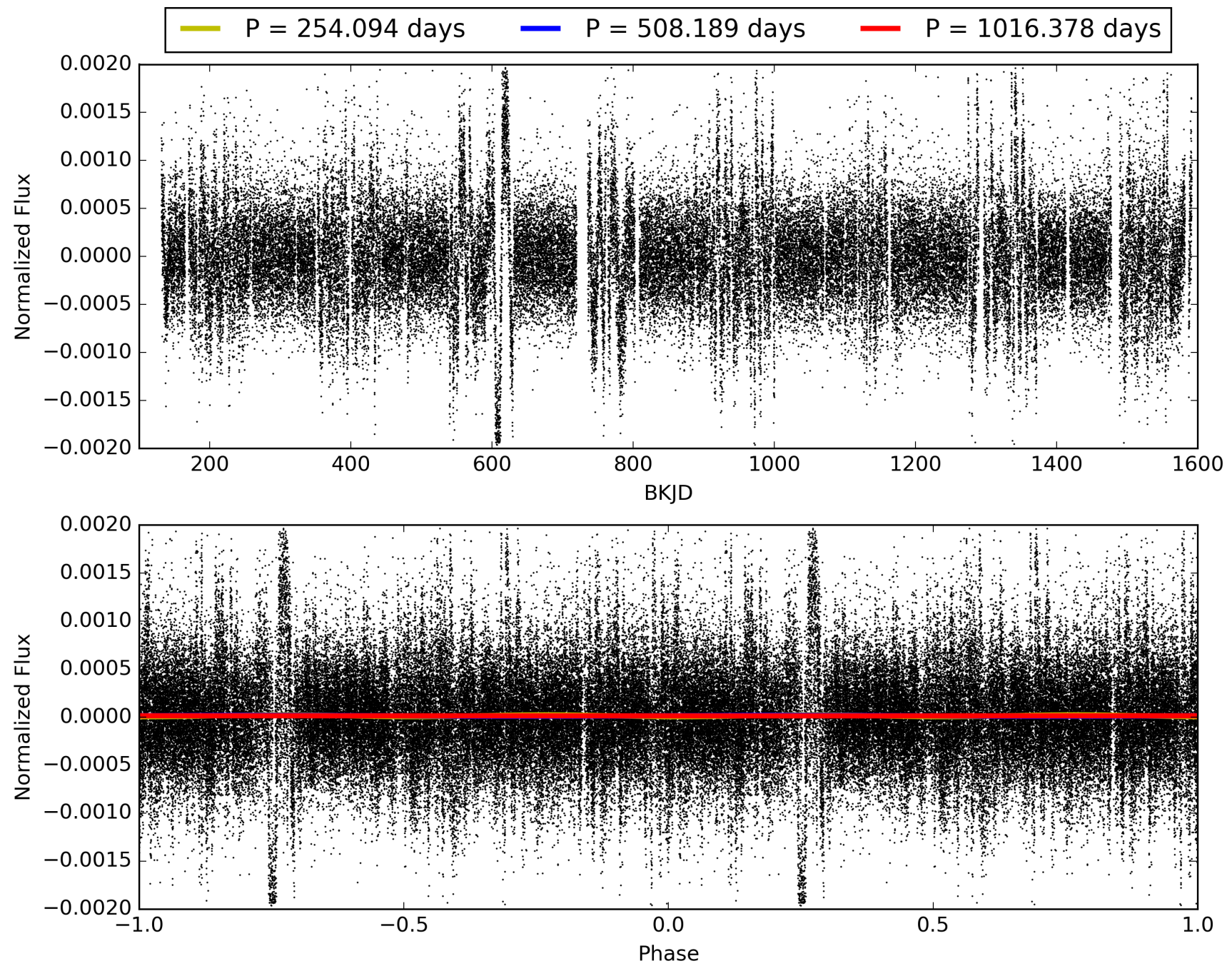
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.1%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 7.47e-08
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.244
Centroid-sig: 35.2%
Centroid-so: 1.737 arcsec [0.75 σ]
OotOffset-rm: 2.655 arcsec [3.55 σ]
KicOffset-rm: 2.639 arcsec [3.52 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008106996-01, PDC Light Curves

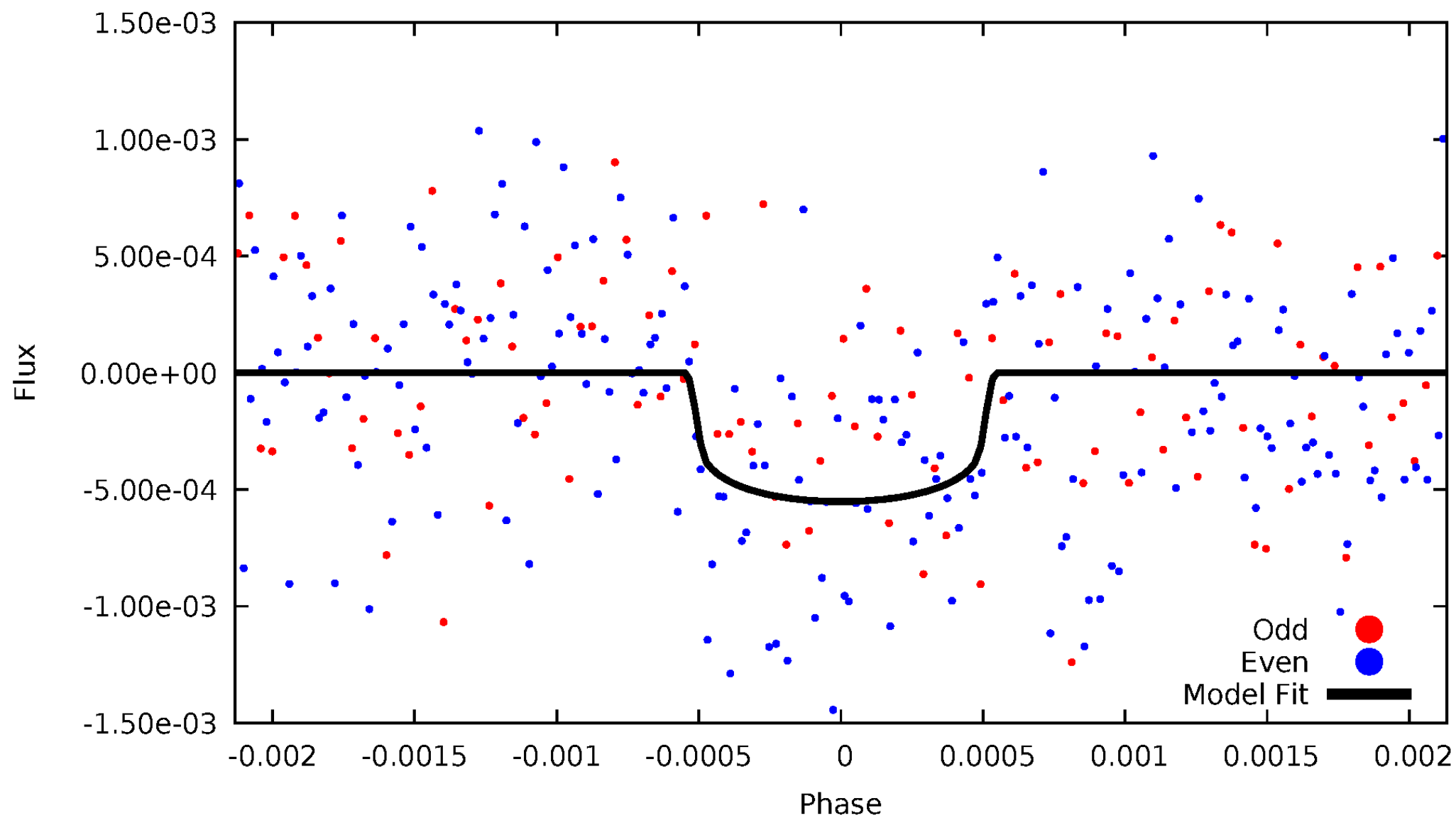


TCE 008106996-01



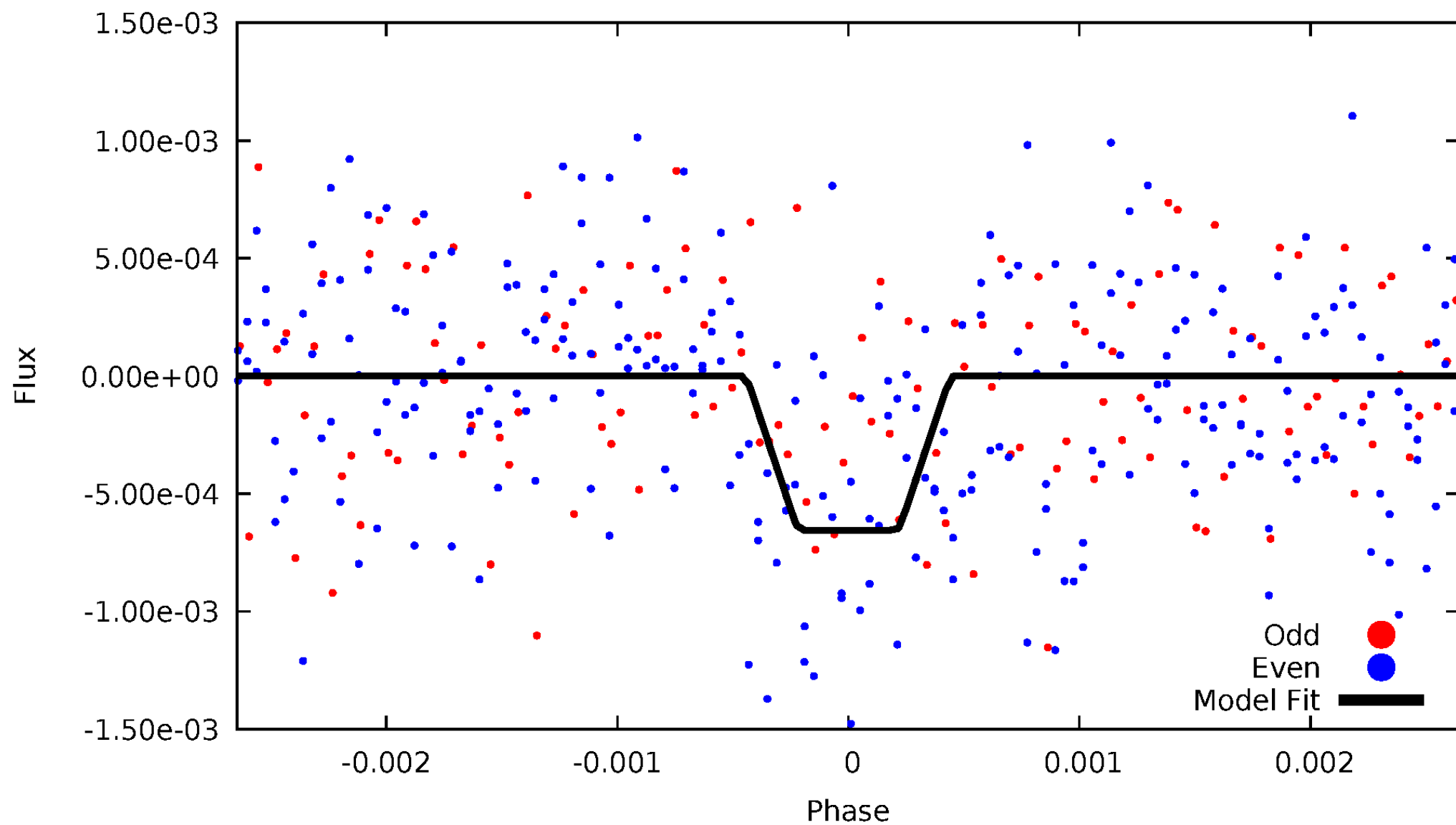
DV Odd/Even

TCE 008106996-01



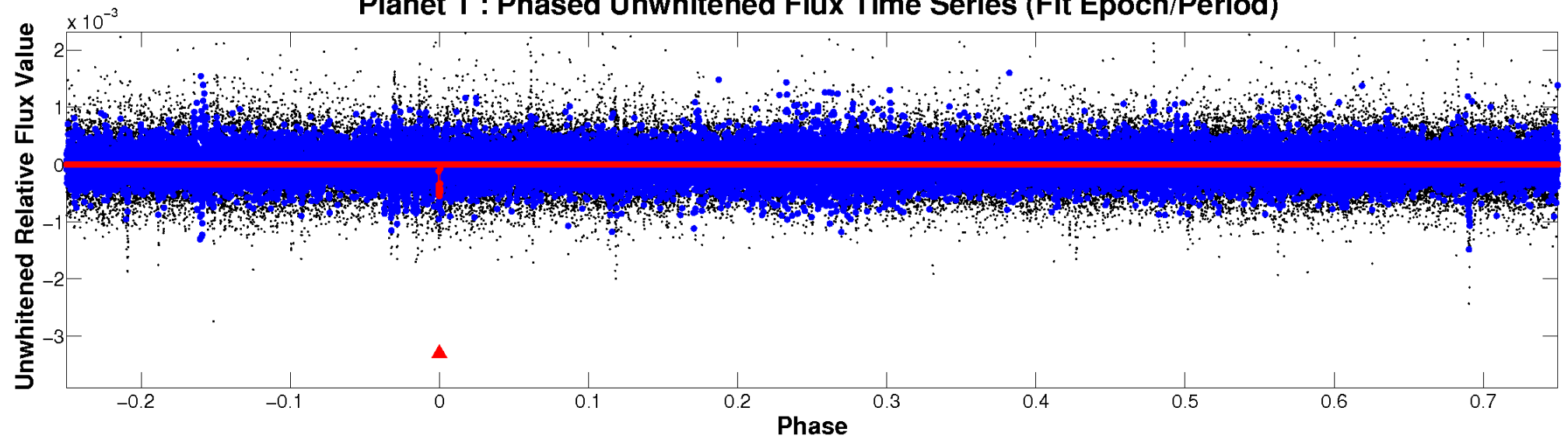
ALT Odd/Even

TCE 008106996-01

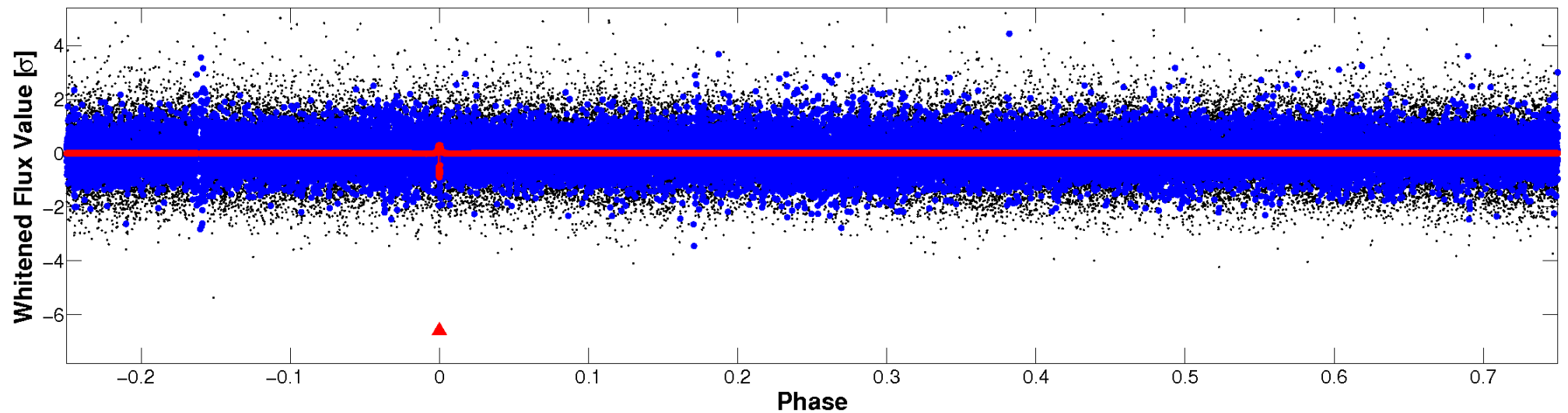


Non-Whitened Vs. Whitened Light Curve

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

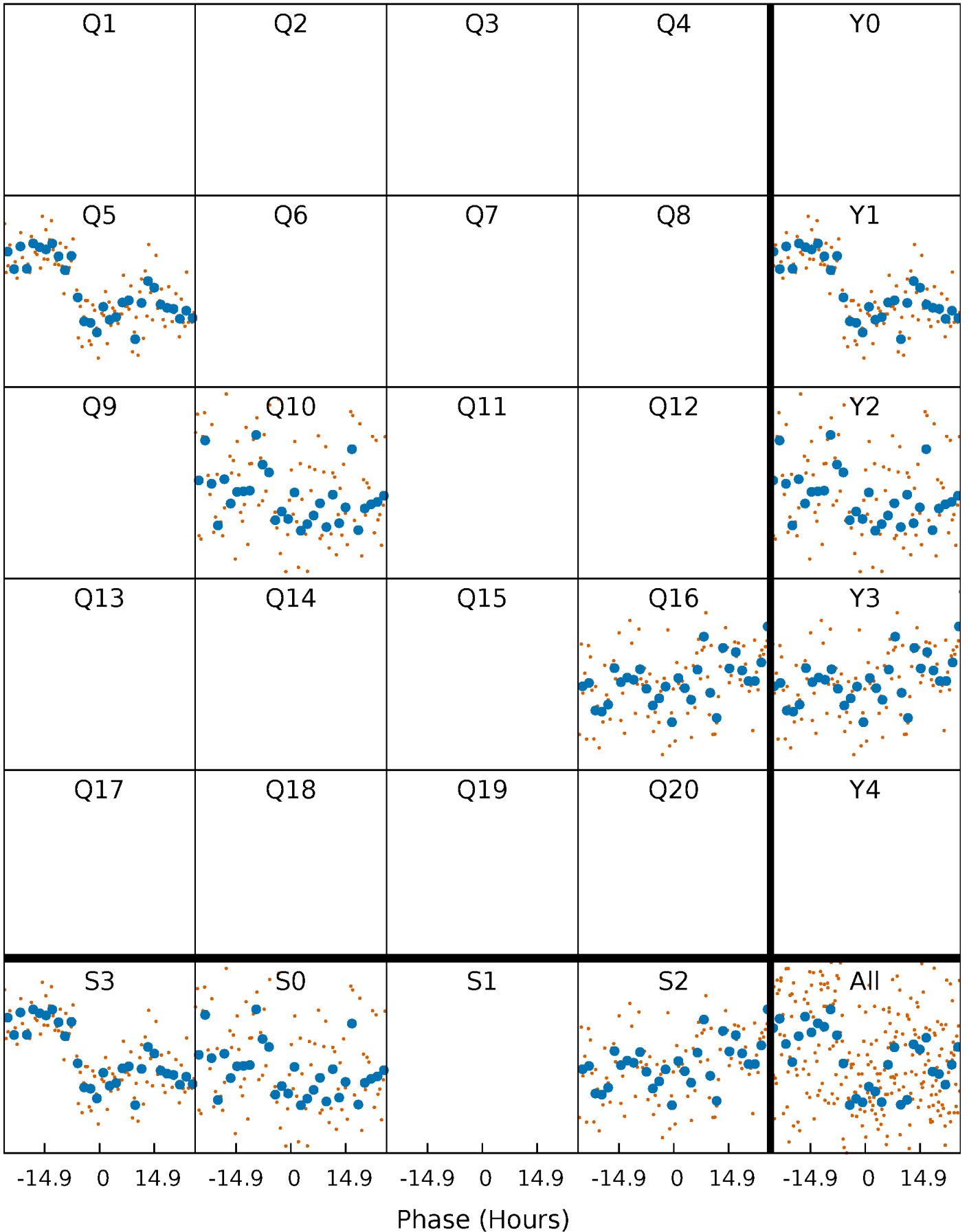


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008106996-01 $P=508.188943$ Days $T_0=480.203724$ (BKJD)



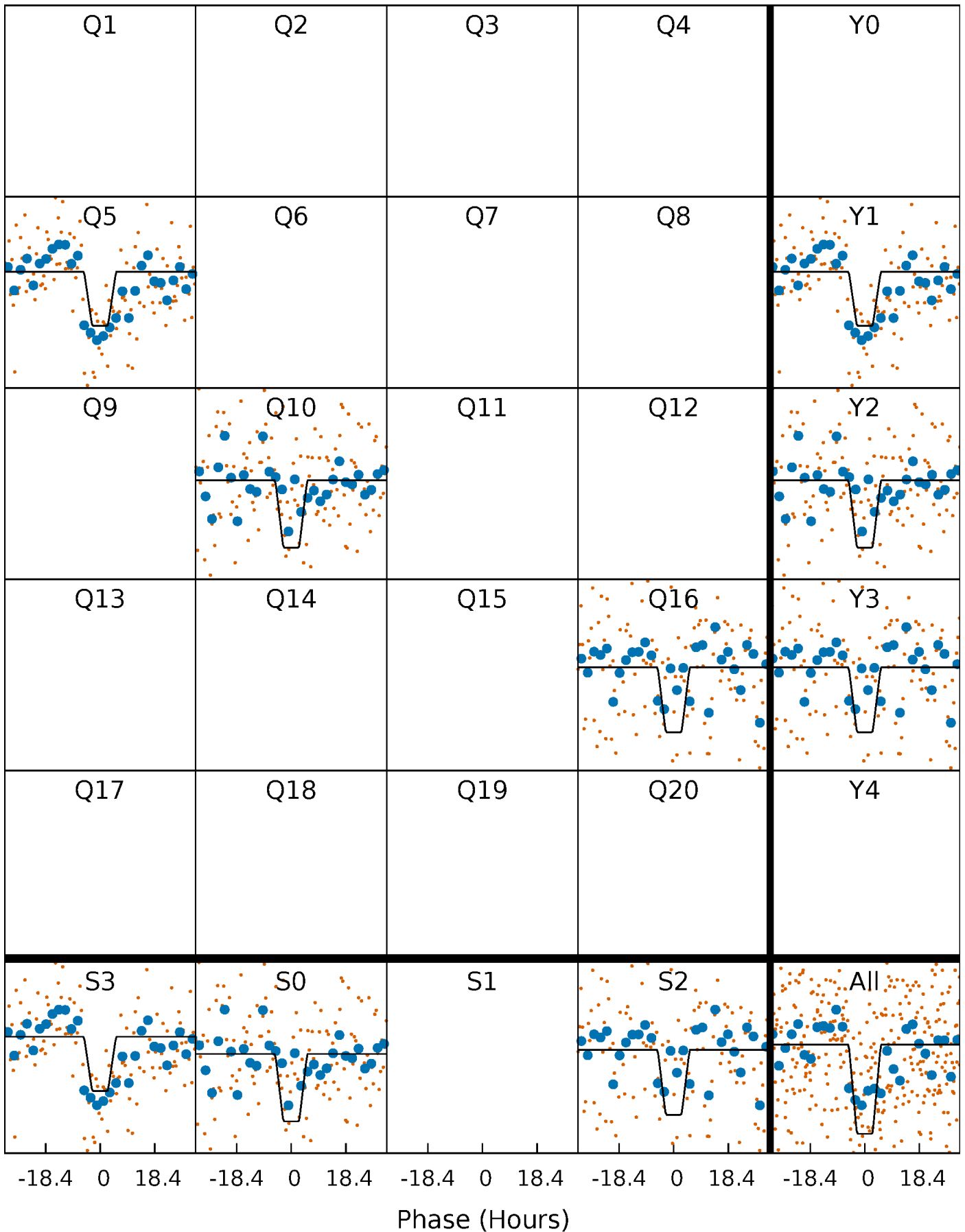
DV Quarter-Phased Transit Curves

TCE 008106996-01 P=508.188943 Days $T_0=480.203724$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

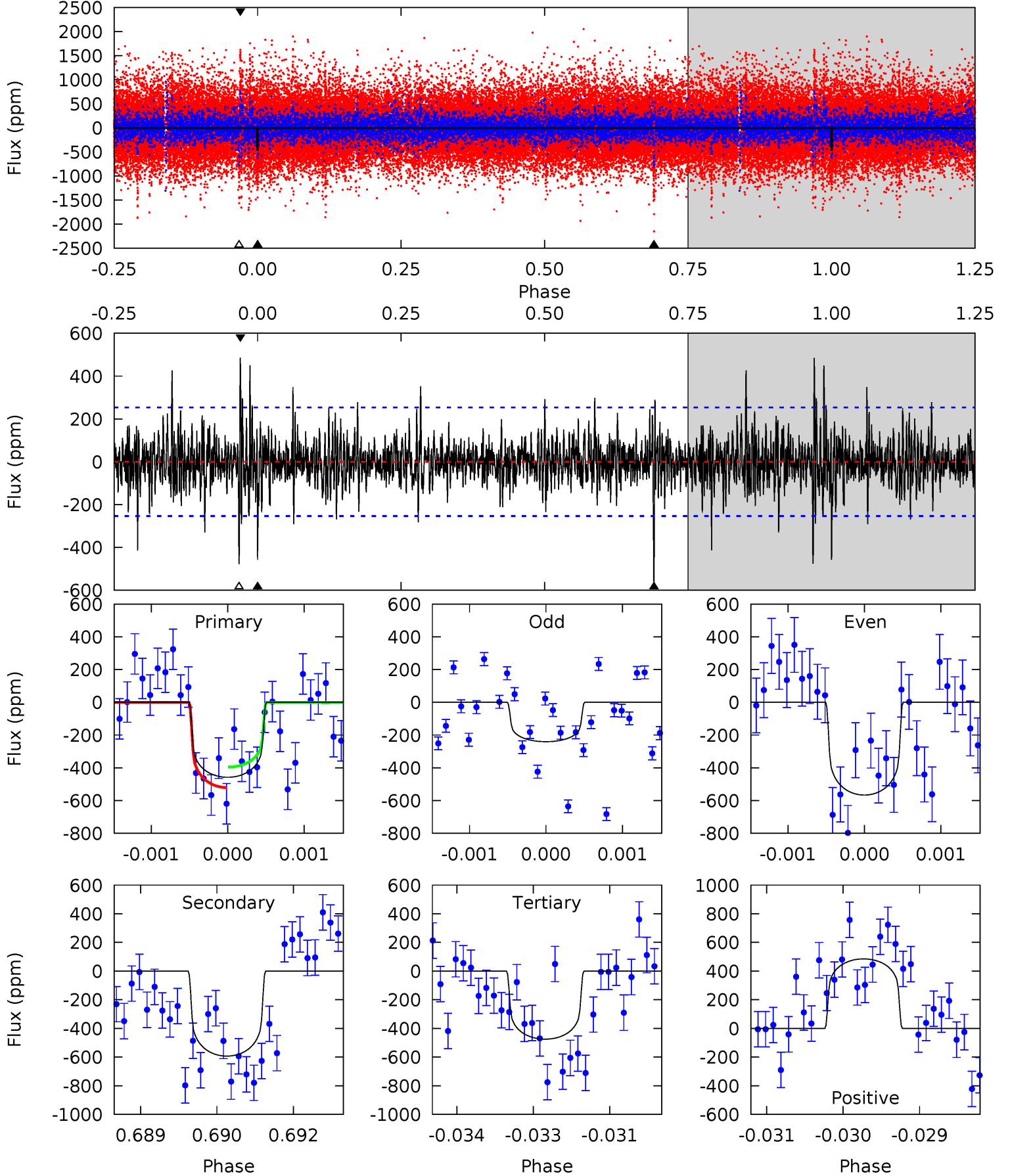
TCE 008106996-01 P=508.182637 Days $T_0=480.184422$ (BKJD)



DV Model-Shift Uniqueness Test

008106996-01, P = 508.188943 Days, E = 480.203724 Days

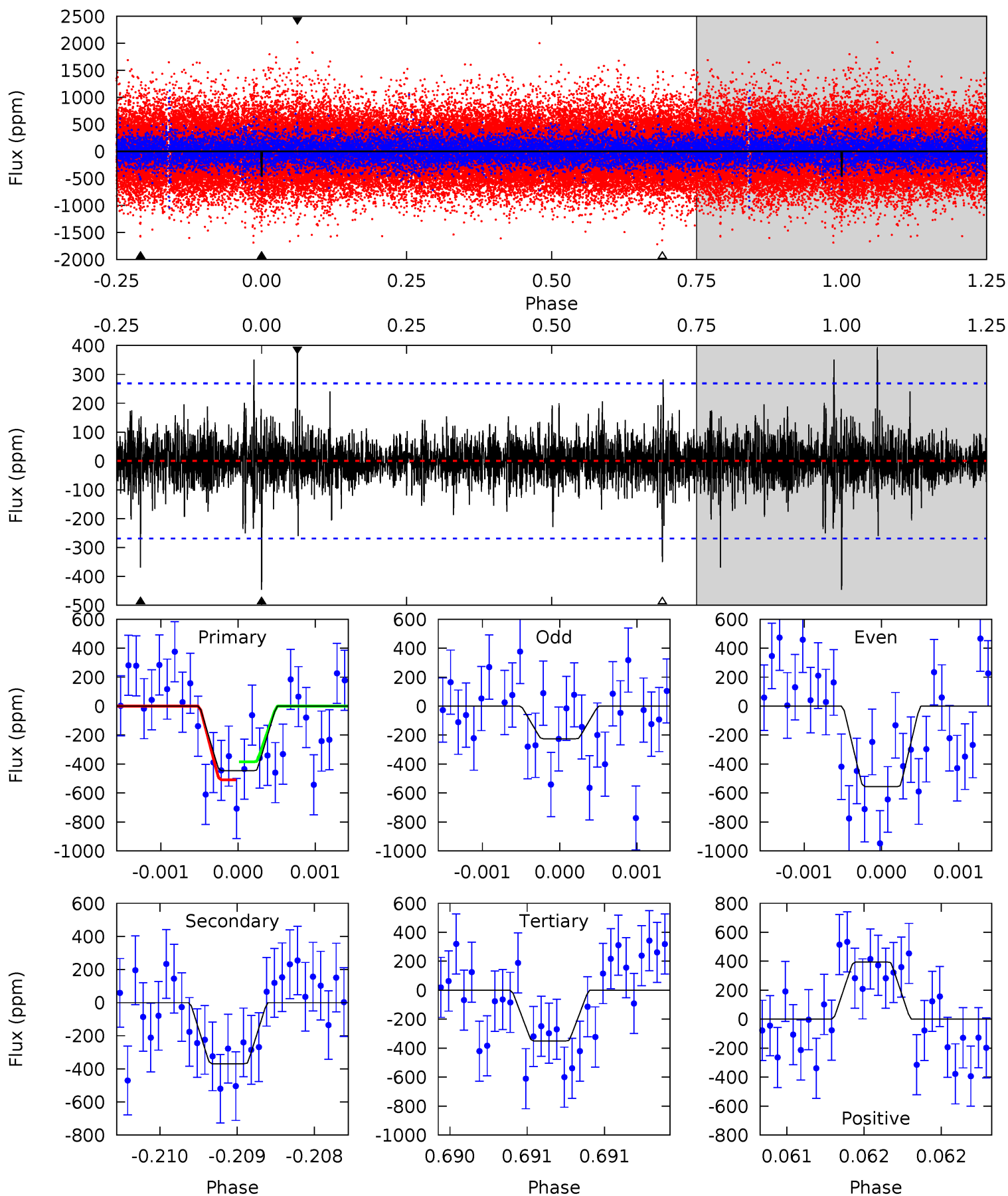
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.82	12.7	10.2	10.4	5.44	3.27	1.82	-0.36	-0.58	2.54	2.32	3.32	1.24	0.45	1.35



Alt Model-Shift Uniqueness Test

008106996-01, P = 508.182637 Days, E = 480.184422 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.10	7.52	7.14	8.05	5.47	3.32	1.21	1.95	1.05	0.38	-0.52	3.19	1.92	0.47	1.27



Stellar Parameters For KIC 008106996

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6136^{+191}_{-213}	$4.442^{+0.072}_{-0.203}$	$-0.240^{+0.300}_{-0.300}$	$0.996^{+0.307}_{-0.110}$	$0.998^{+0.141}_{-0.116}$	$1.422^{+0.530}_{-0.786}$
	+3%/-3%	+2%/-5%	+125%/-125%	+31%/-11%	+14%/-12%	+37%/-55%
Source	PHO1	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 008106996-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-593 ± 47	$2.59^{+1.30}_{-1.24}$	343^{+25}_{-18}	6327^{+3099}_{-1098}	$74917^{+197437}_{-41402}$
Alt.	-369 ± 49	$2.90^{+1.23}_{-1.22}$	343^{+26}_{-18}	5374^{+1601}_{-783}	37800^{+70627}_{-19808}

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 $A_{obs} \gg 1.0$

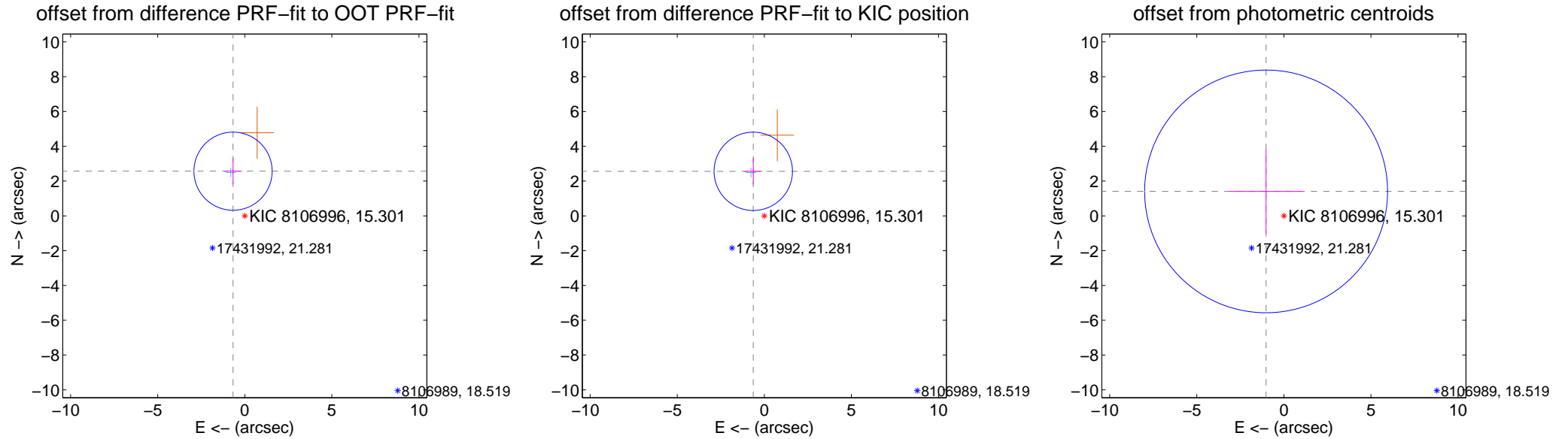
DV Centroid Data

Supplemental centroid analysis for 008106996-01. Kepler magnitude: 15.30. Transit SNR 7.34

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.655 \pm 0.749	3.55	0.674 \pm 0.506	2.568 \pm 0.763
PRF-fit source offset from KIC position	2.639 \pm 0.750	3.52	0.635 \pm 0.506	2.561 \pm 0.763
photometric centroid source offset	1.74 \pm 2.33	0.75	1.02 \pm 2.13	1.41 \pm 2.42

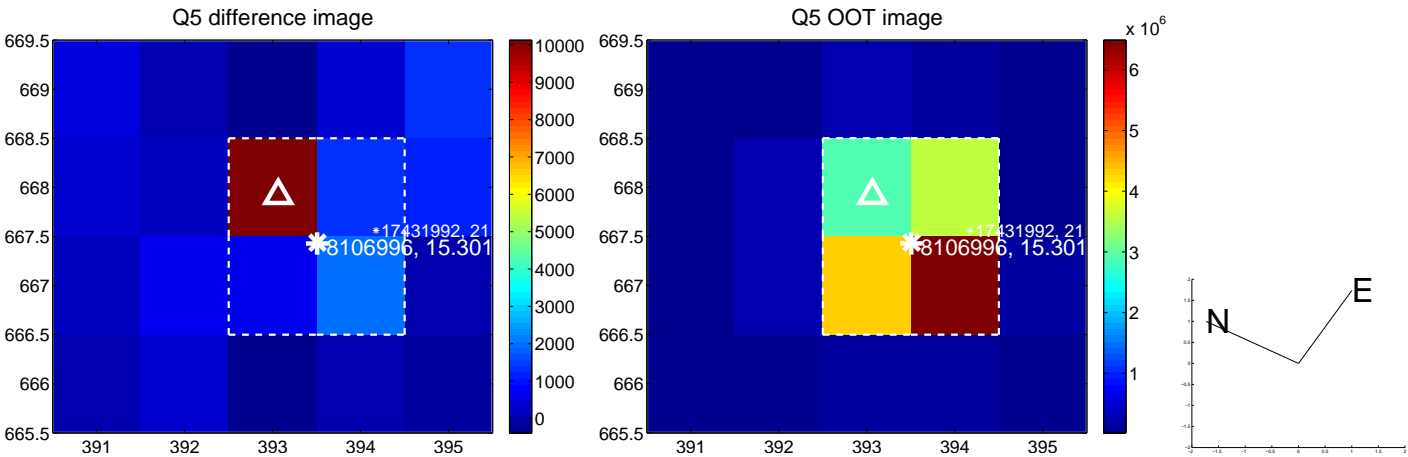


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

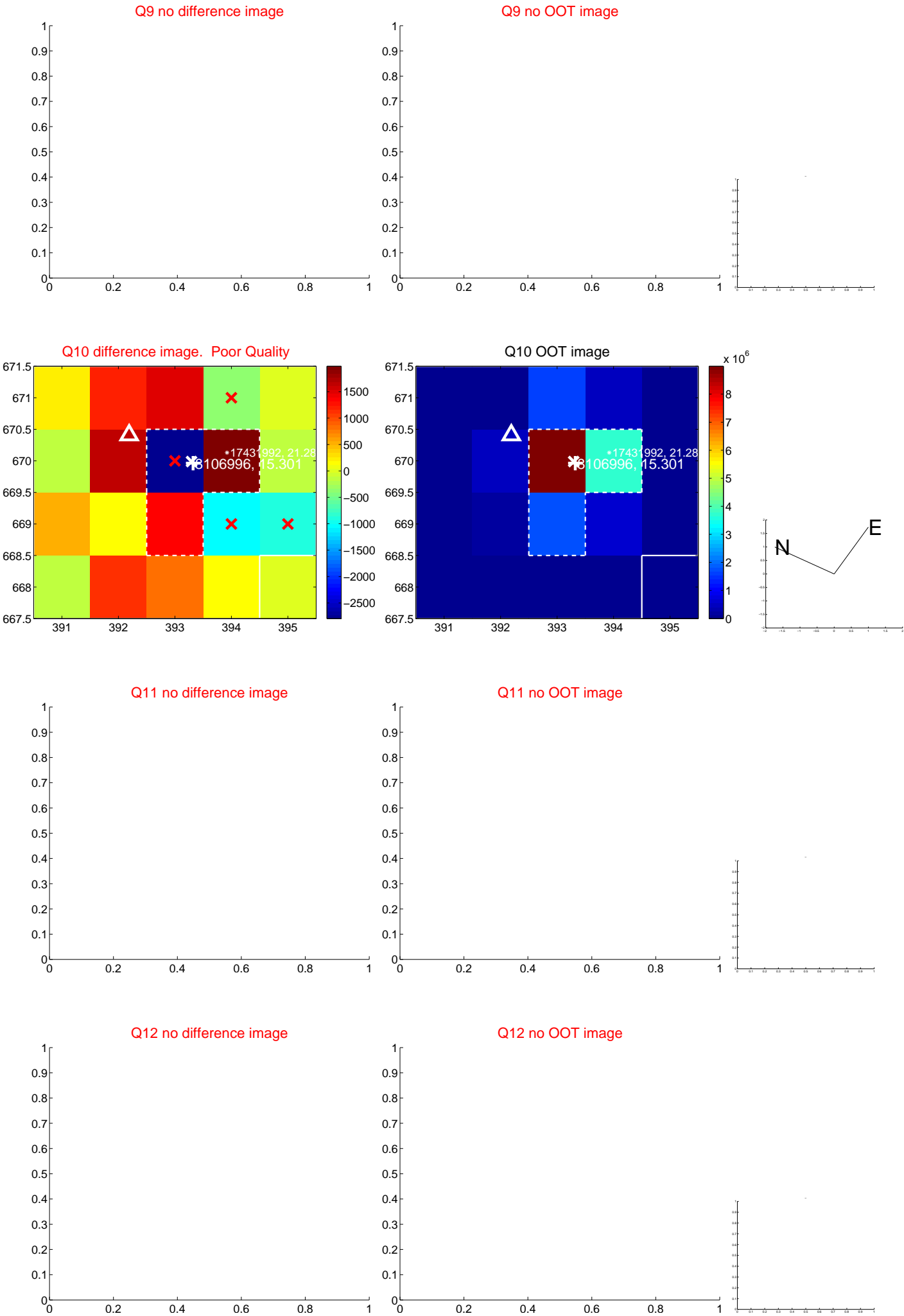
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



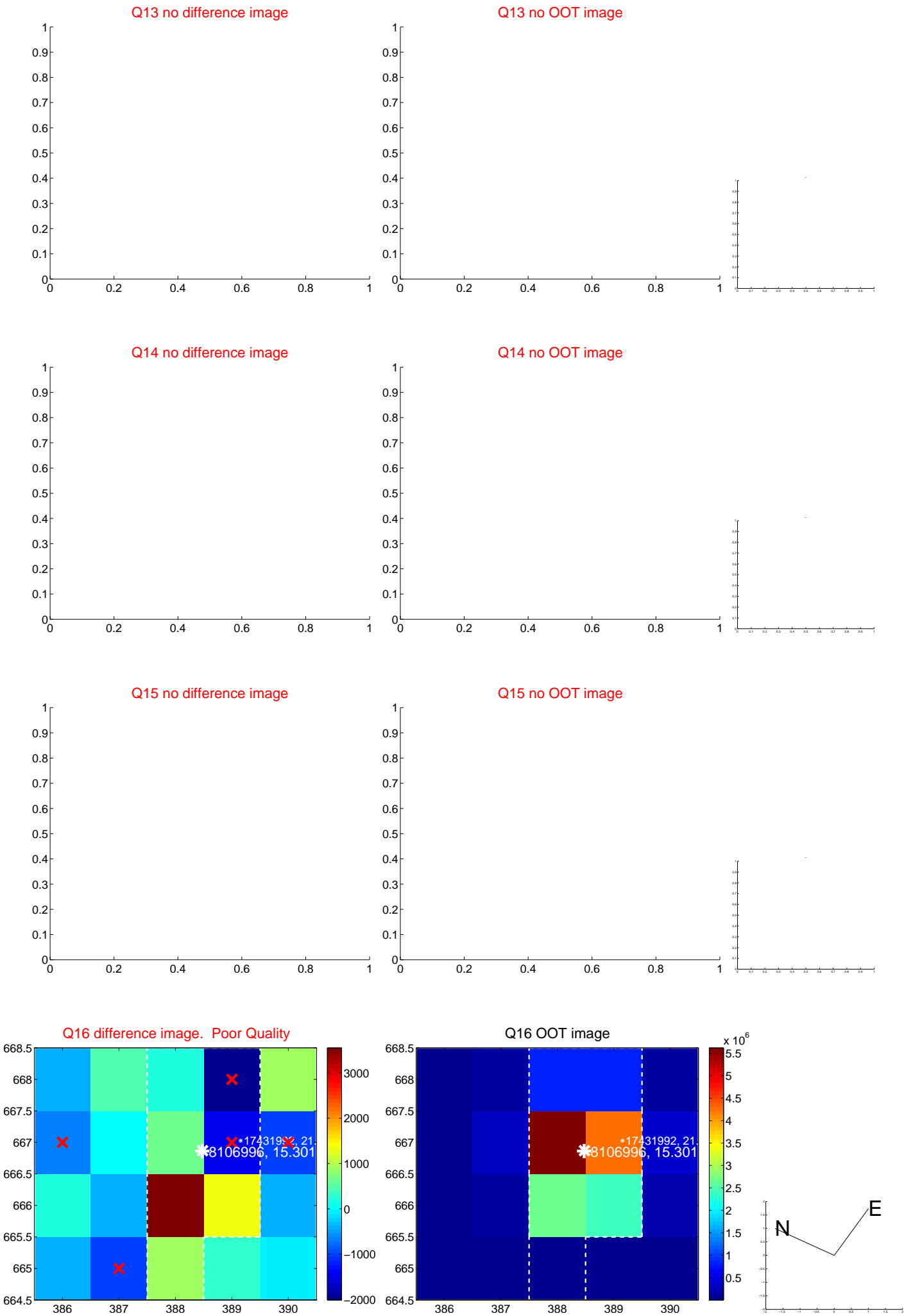
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



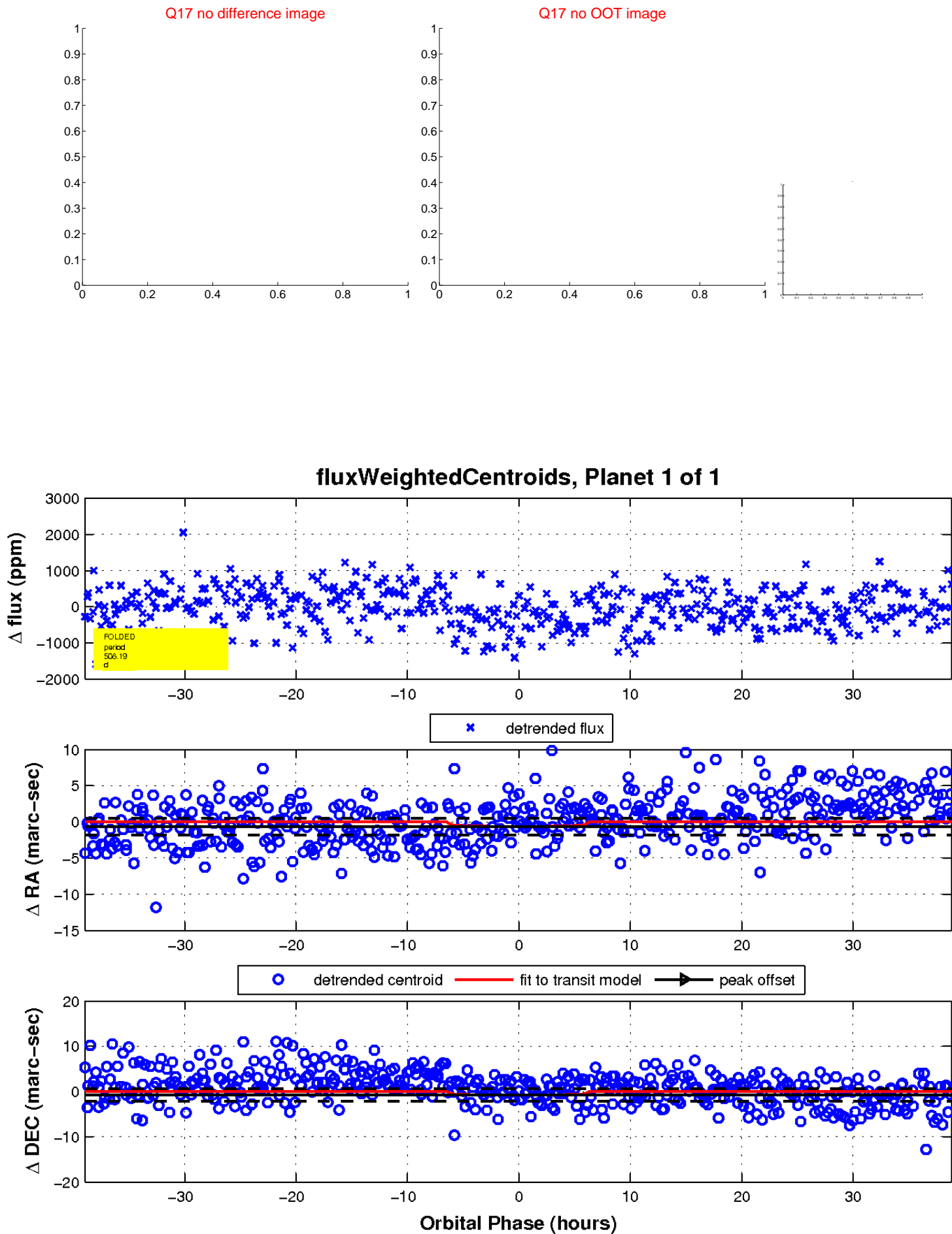
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

