

KIC 003228725

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})
003228725-01	OBS	No	526.704912	490.207454	2129.2	7.069	9.7	5.4	0.54	4076	3.10	0.07

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003228725-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—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.

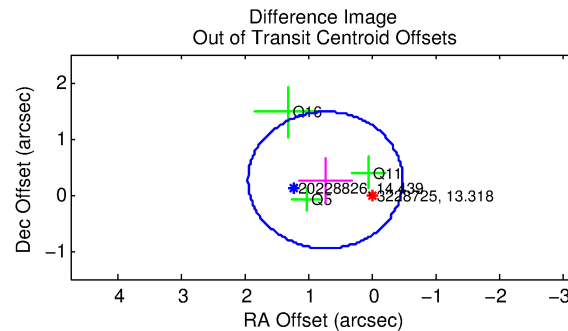
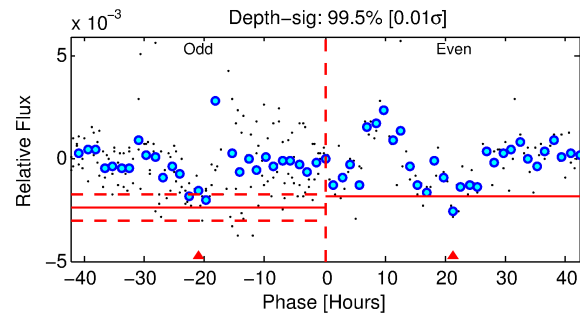
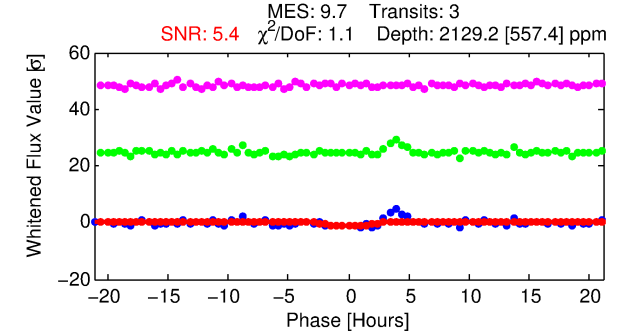
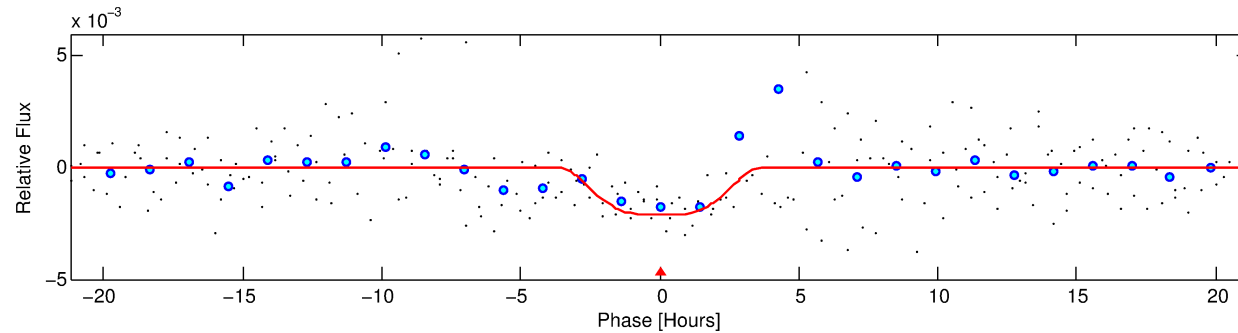
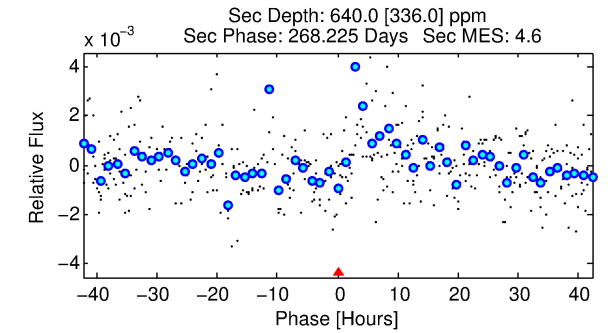
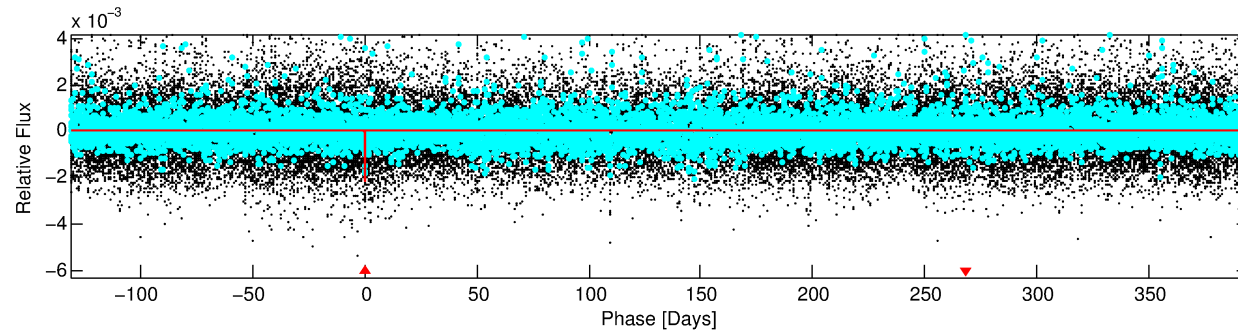
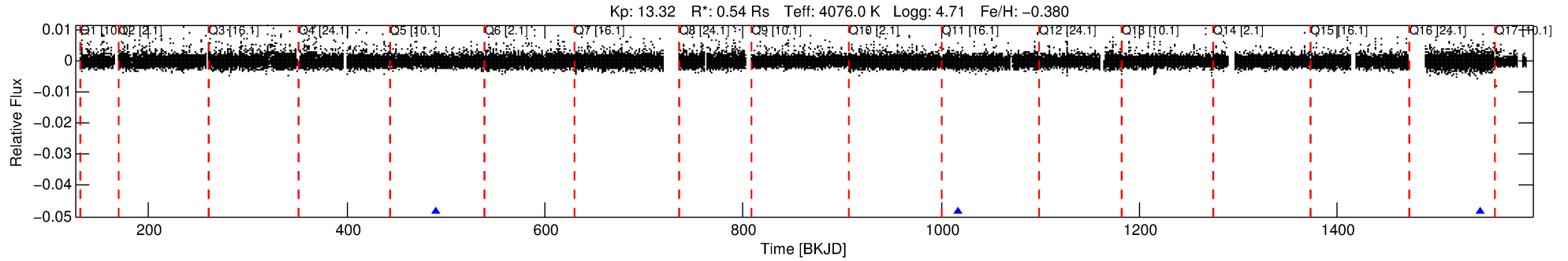
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003228725-01

No Significant Match Found

DV One-Page Summary

KIC: 3228725 Candidate: 1 of 1 Period: 526.705 d



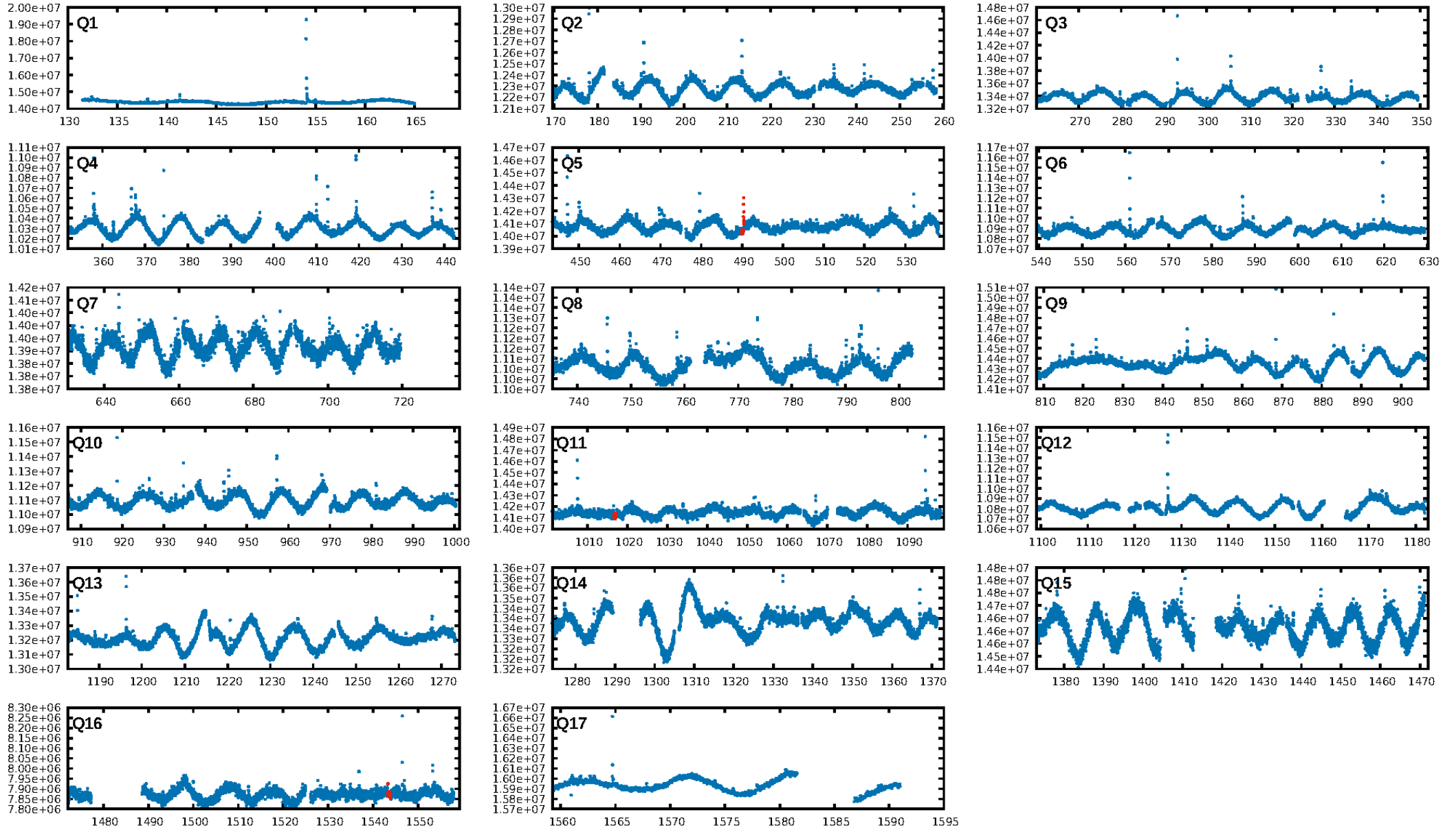
DV Fit Results:

Period = 526.70491 [0.01867] d
Epoch = 490.2075 [0.0213] BKJD
Rp/R* = 0.0526 [0.0099]
a/R* = 277.36 [96.62]
b = 0.93 [0.06]
Seff = 0.07 [0.01]
Teq = 129 [7] K
Rp = 3.10 [0.72] Re
a = 1.0463 [0.1095] AU
Ag = 40051.46 [26503.36] [1.51σ]
Teffp = 2825 [470] K [5.74σ]

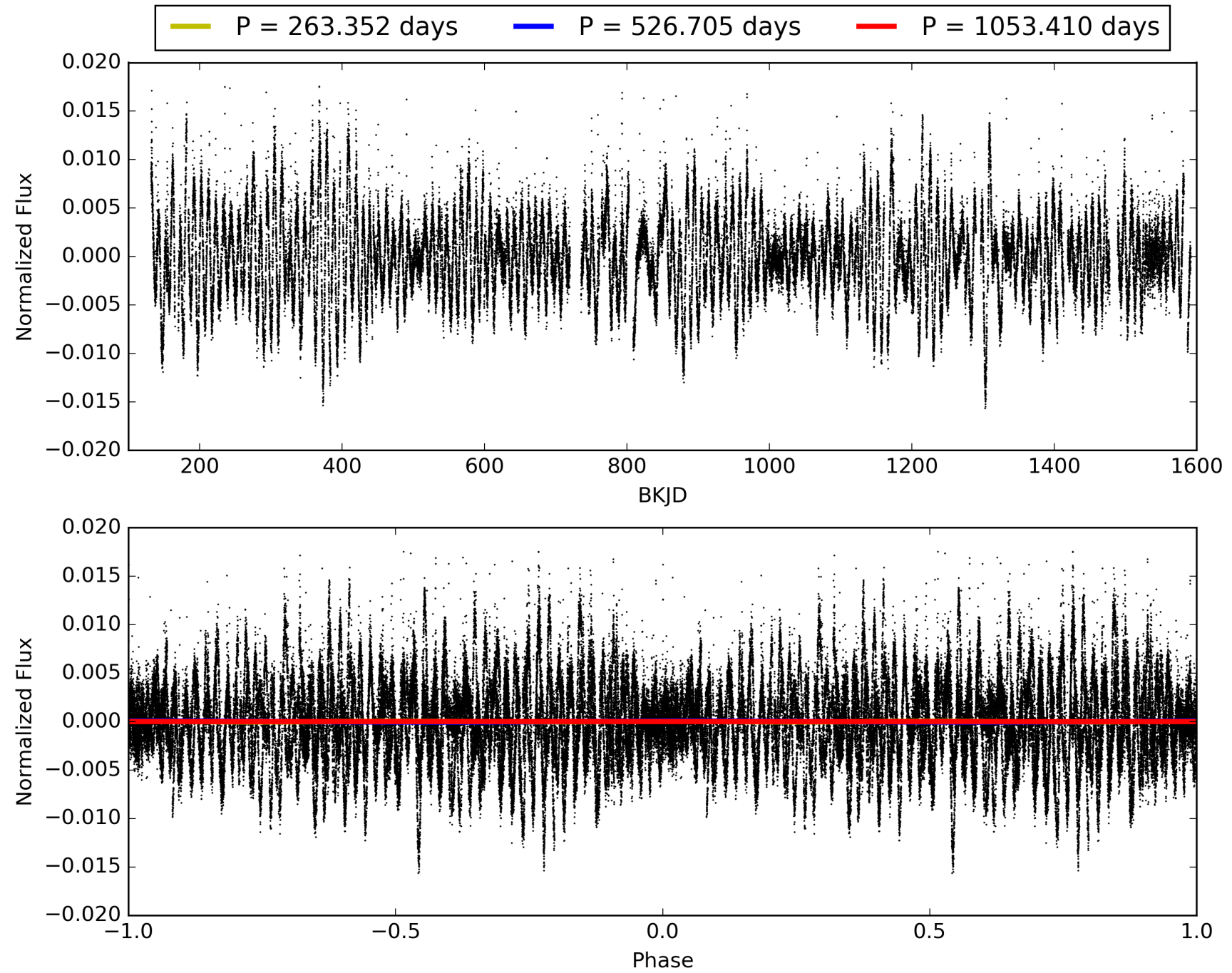
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.9%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: 3.44e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 12.75
Centroid-sig: 27.3%
Centroid-so: 3.417 arcsec [5.13σ]
OotOffset-rm: 0.784 arcsec [1.93σ]
KicOffset-rm: 7.775 arcsec [12.43σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 003228725-01, PDC Light Curves

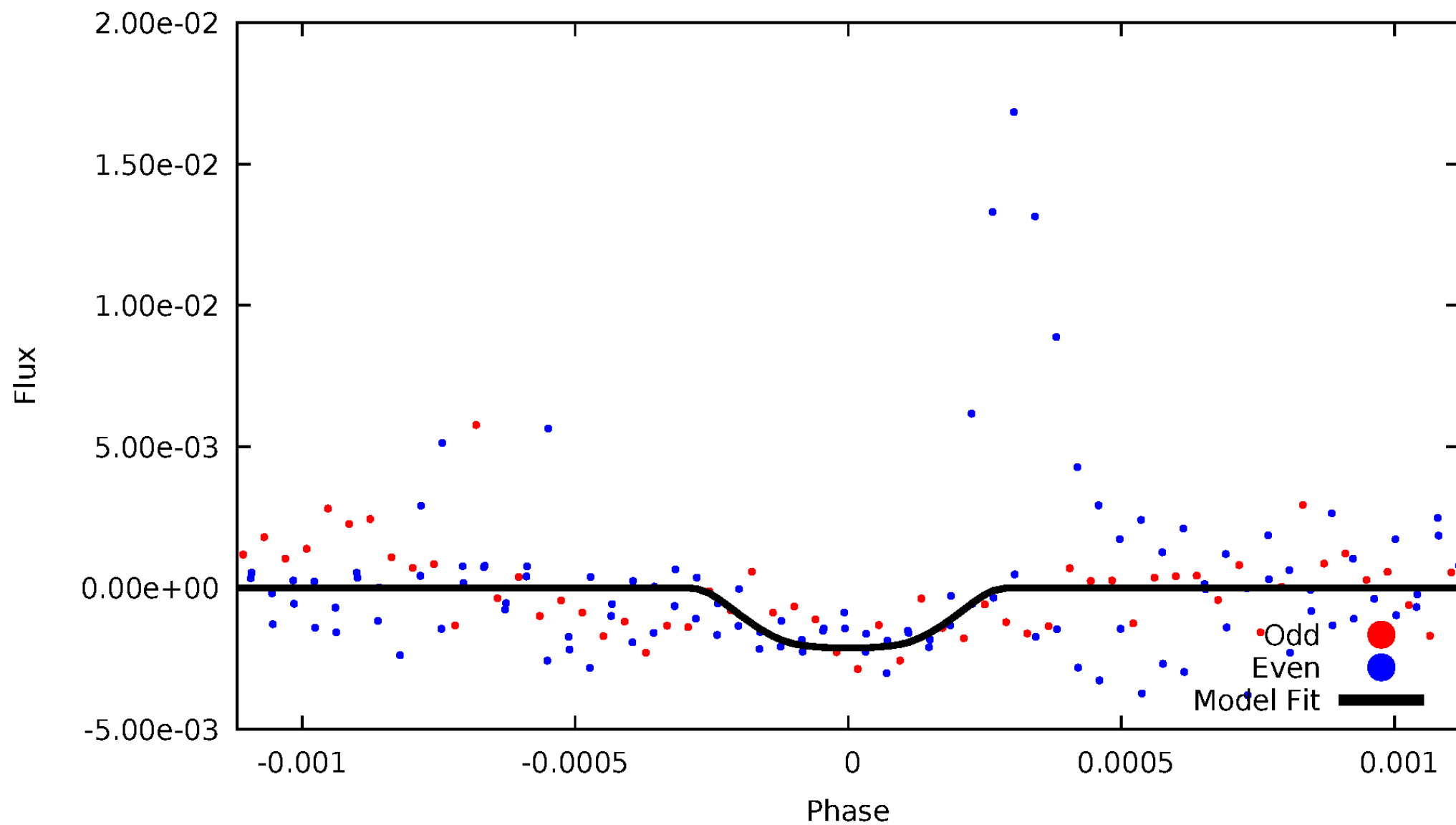


TCE 003228725-01



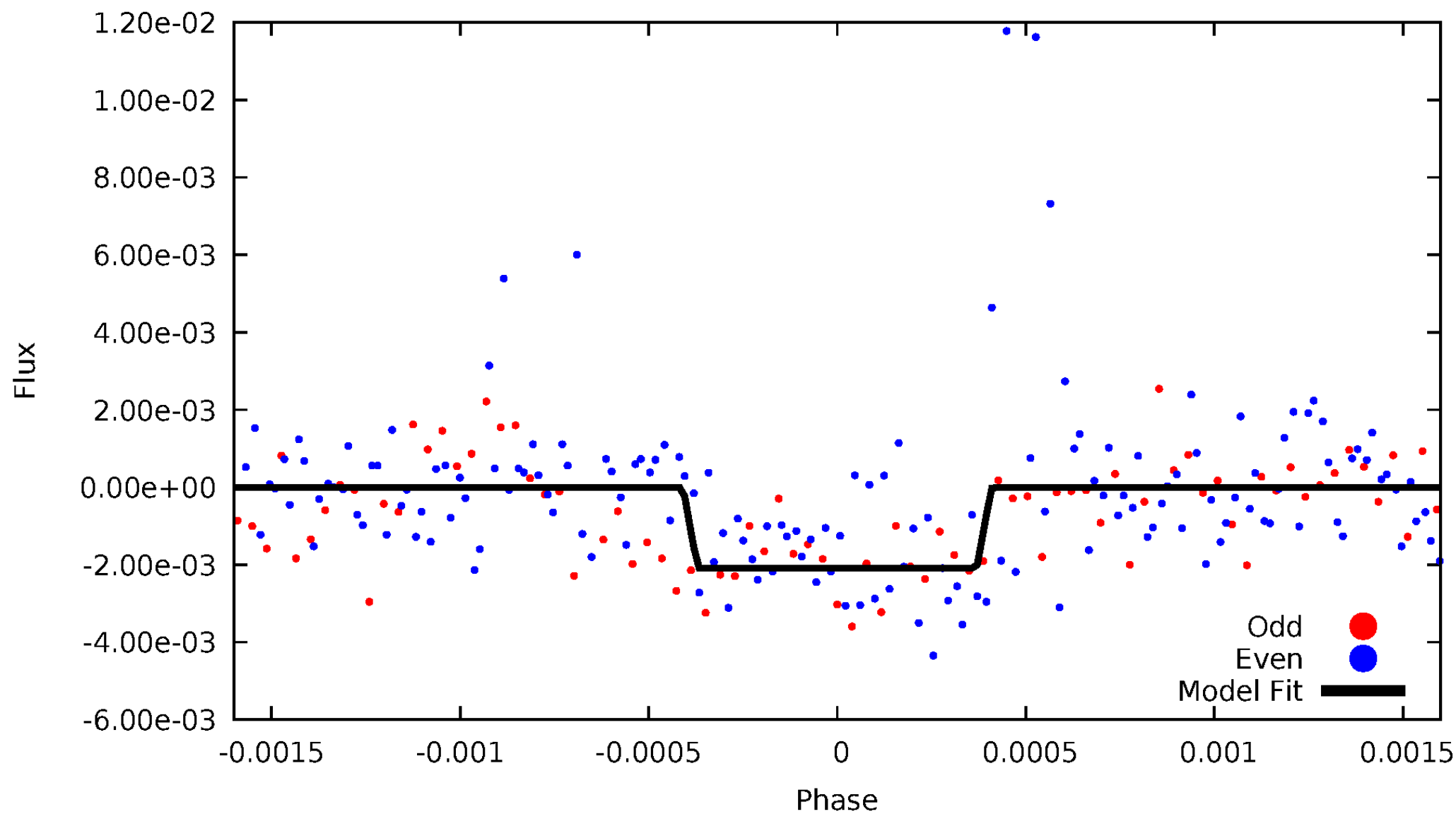
DV Odd/Even

TCE 003228725-01



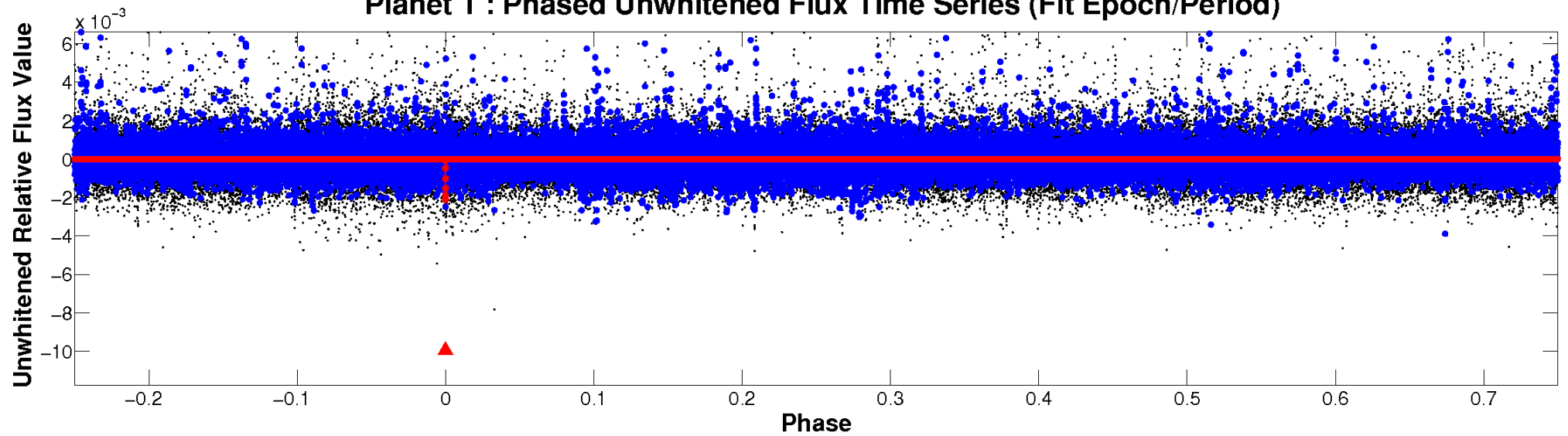
ALT Odd/Even

TCE 003228725-01

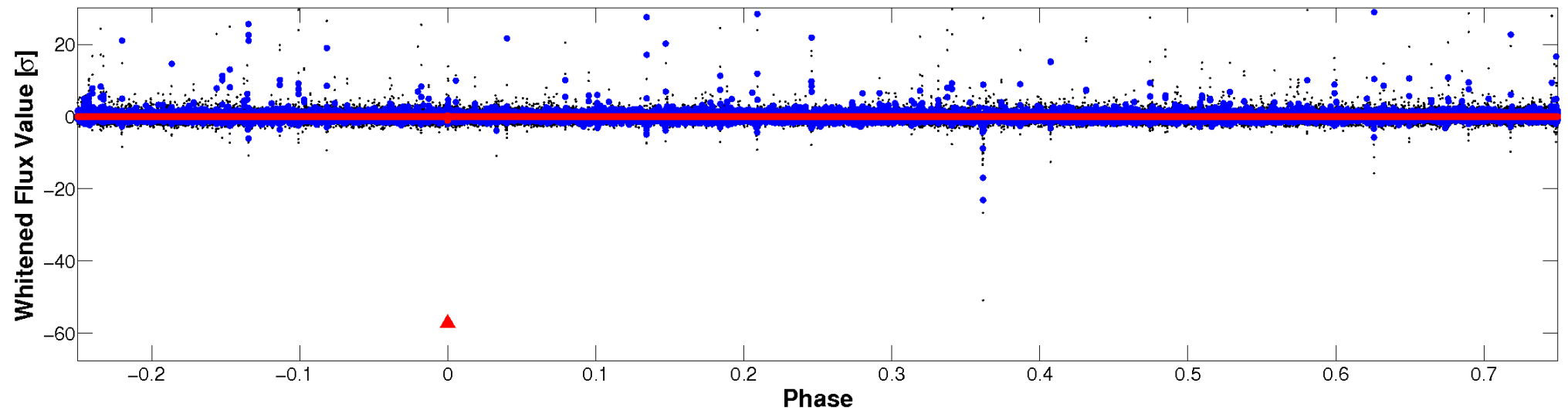


Non-Whitened Vs. Whitened Light Curve

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

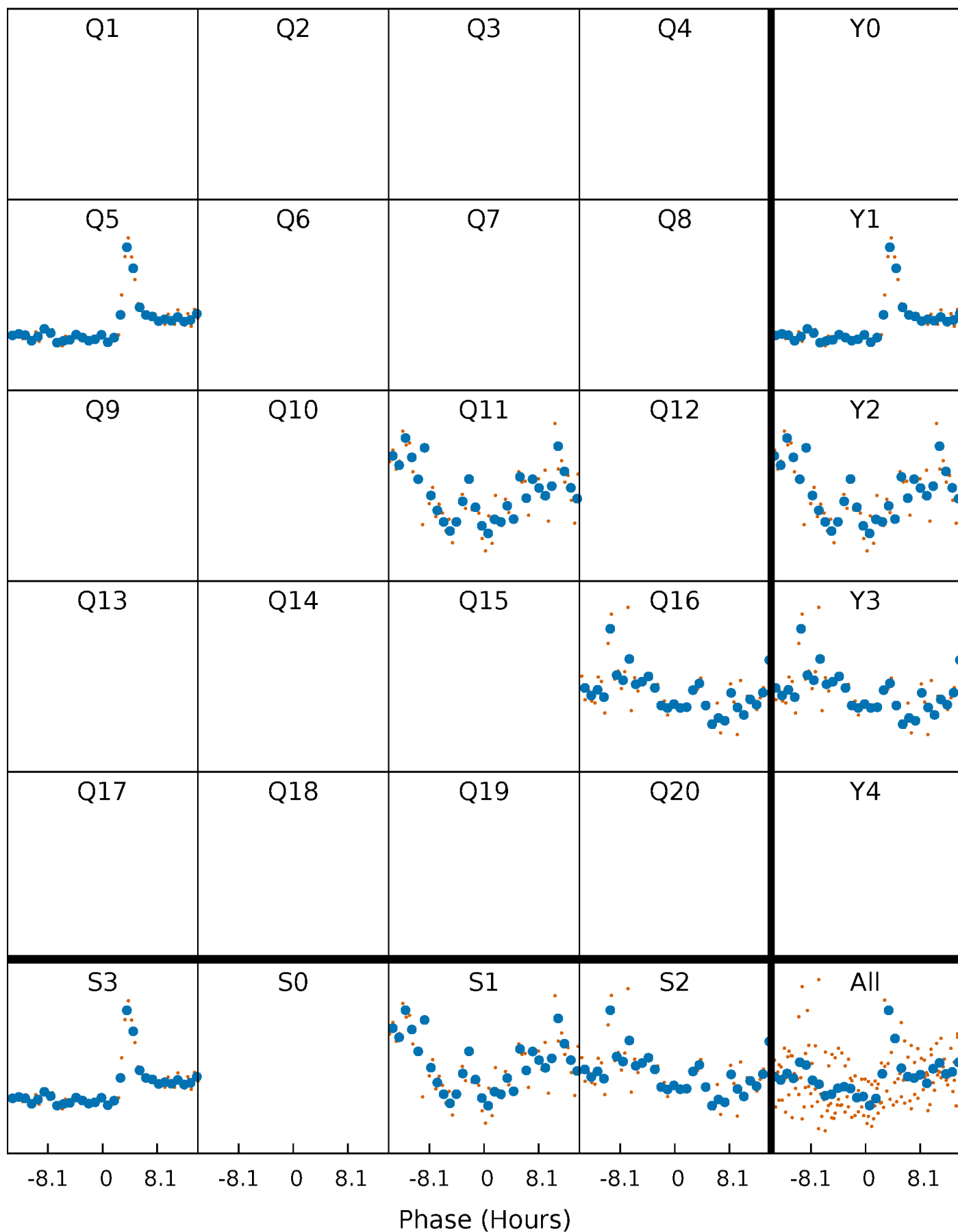


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



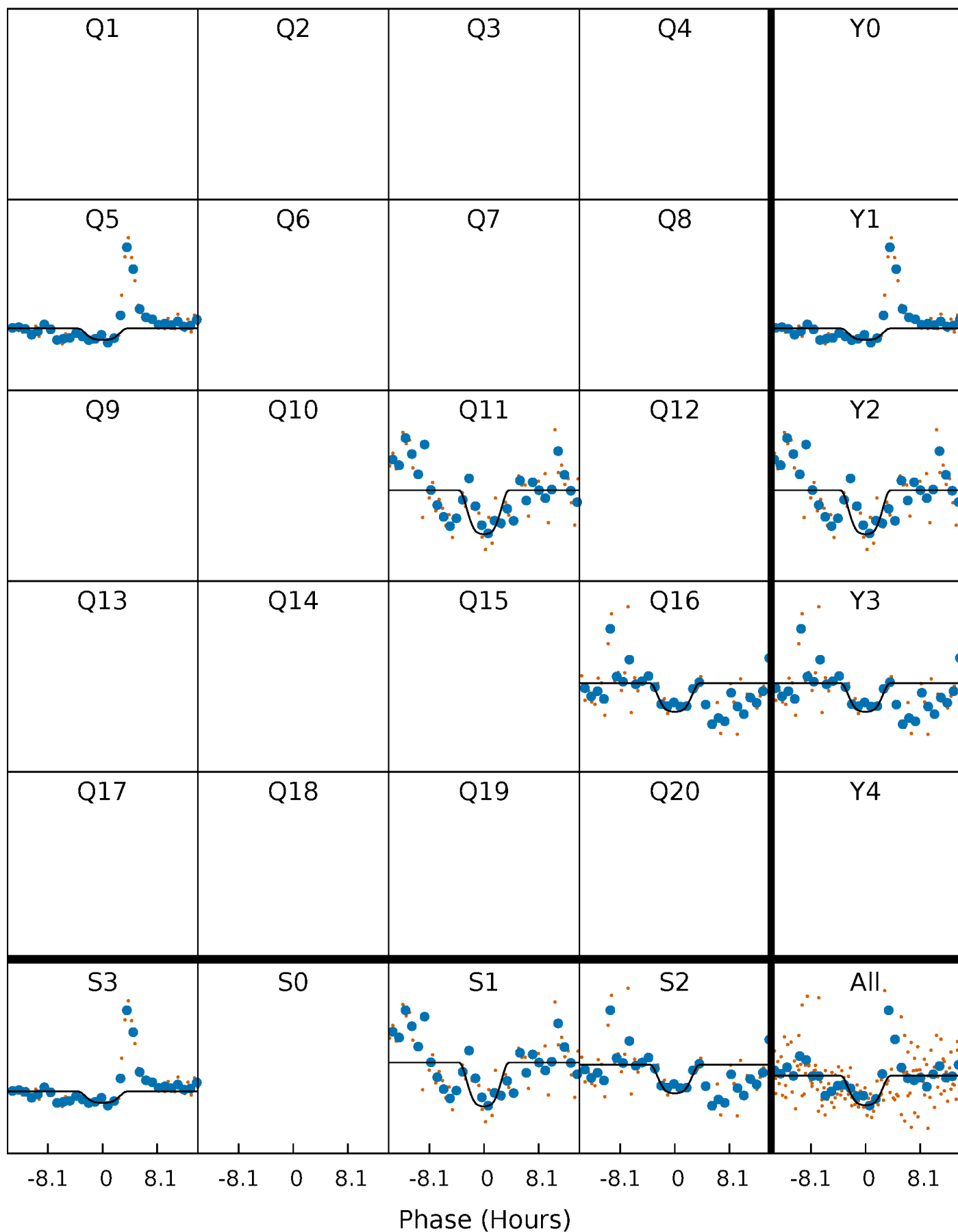
PDC Quarter-Phased Transit Curves

TCE 003228725-01 P=526.704912 Days $T_0=490.207454$ (BKJD)



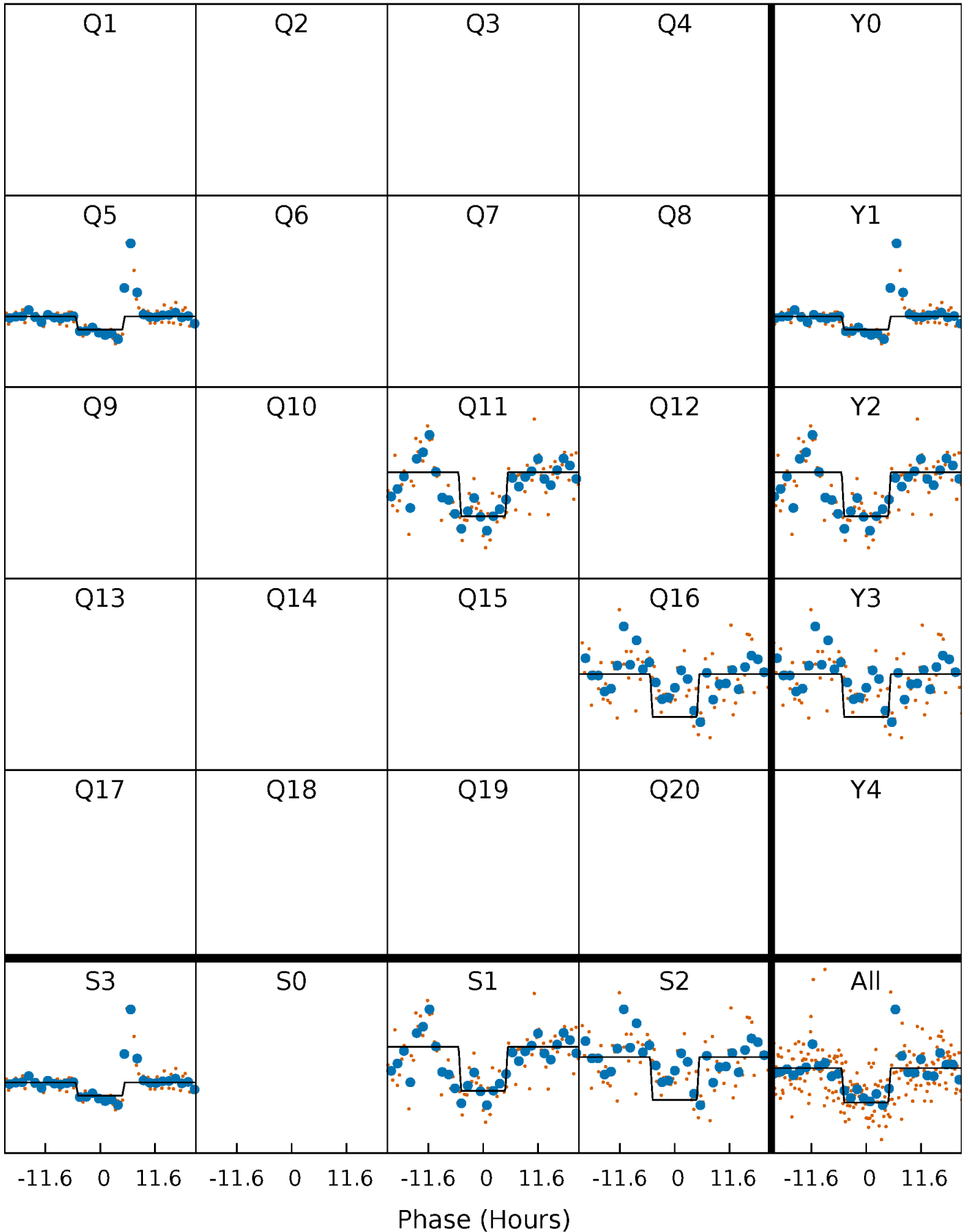
DV Quarter-Phased Transit Curves

TCE 003228725-01 P=526.704912 Days $T_0=490.207454$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

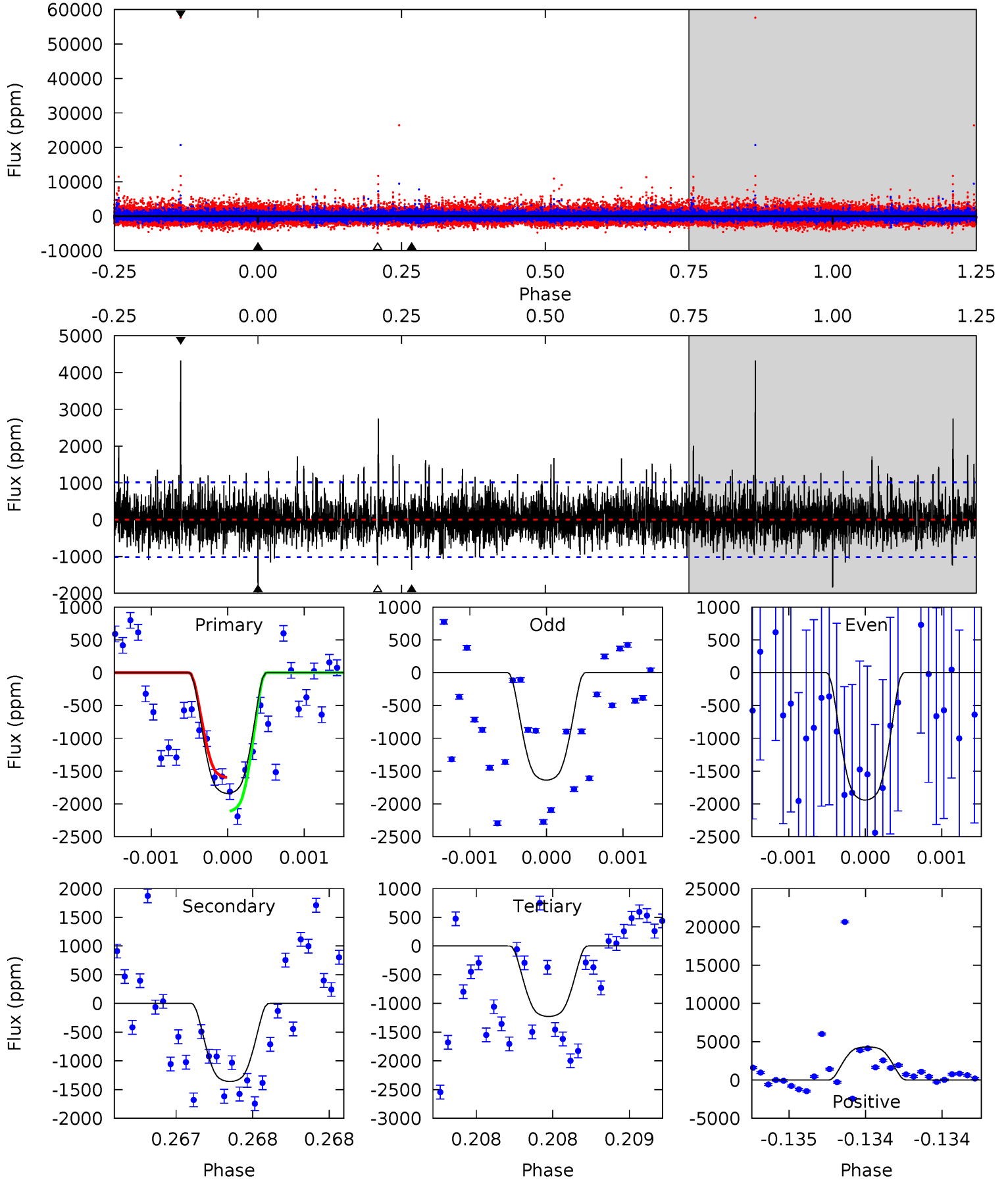
TCE 003228725-01 P=526.790799 Days $T_0=490.110096$ (BKJD)



DV Model-Shift Uniqueness Test

003228725-01, P = 526.704912 Days, E = 490.207454 Days

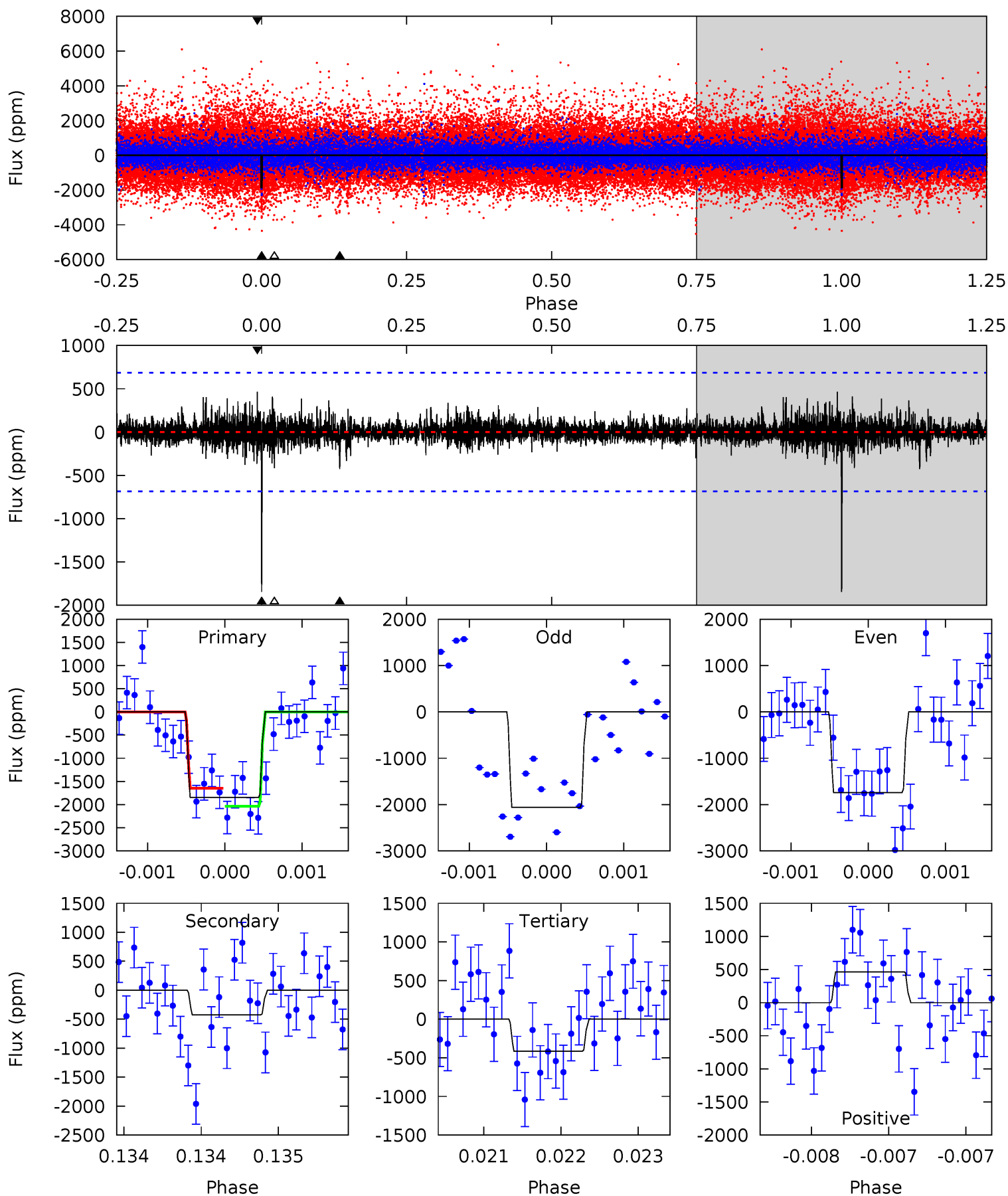
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	7.41	6.69	23.6	5.55	3.44	2.13	3.35	-13.6	0.72	-16.2	0.68	1.01	0.70	1.41



Alt Model-Shift Uniqueness Test

003228725-01, P = 526.790799 Days, E = 490.110096 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	3.41	3.32	3.74	5.49	3.35	0.65	11.5	11.1	0.09	-0.32	1.21	0.89	0.20	1.57



Stellar Parameters For KIC 003228725

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4076^{+130}_{-159}	$4.714^{+0.072}_{-0.044}$	$-0.380^{+0.300}_{-0.300}$	$0.540^{+0.053}_{-0.072}$	$0.549^{+0.056}_{-0.069}$	$4.928^{+1.800}_{-0.857}$
	+3%/-4%	+2%/-1%	+79%/-79%	+10%/-13%	+10%/-13%	+37%/-17%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 003228725-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1359 ± 183	$3.05^{+0.64}_{-0.57}$	180^{+7}_{-9}	3609^{+283}_{-249}	88038^{+47452}_{-28276}
Alt.	-426 ± 125	$2.67^{+0.64}_{-0.63}$	179^{+8}_{-9}	3135^{+302}_{-257}	34866^{+28591}_{-14513}

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

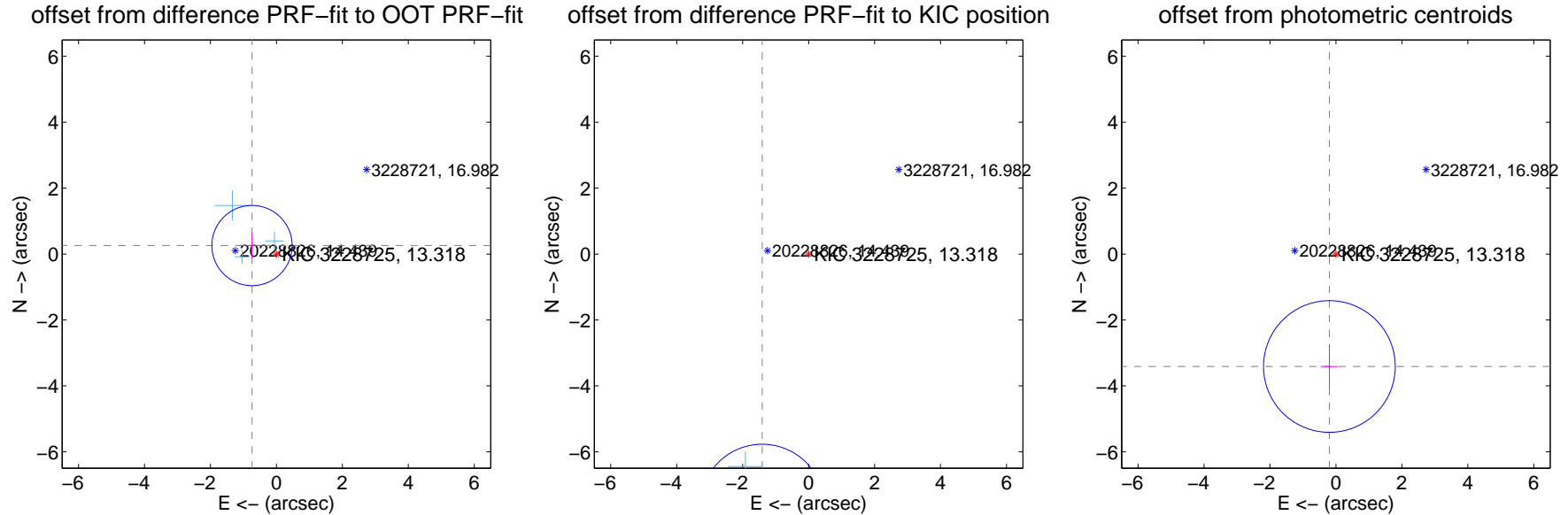
DV Centroid Data

Supplemental centroid analysis for 003228725-01. Kepler magnitude: 13.32. Transit SNR 5.41

There are 3 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 7.94 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.784 ± 0.406	1.93	0.741 ± 0.407	0.259 ± 0.393
PRF-fit source offset from KIC position	7.775 ± 0.626	12.43	1.406 ± 0.414	-7.647 ± 0.632
photometric centroid source offset	3.42 ± 0.67	5.13	0.20 ± 0.26	-3.41 ± 0.67

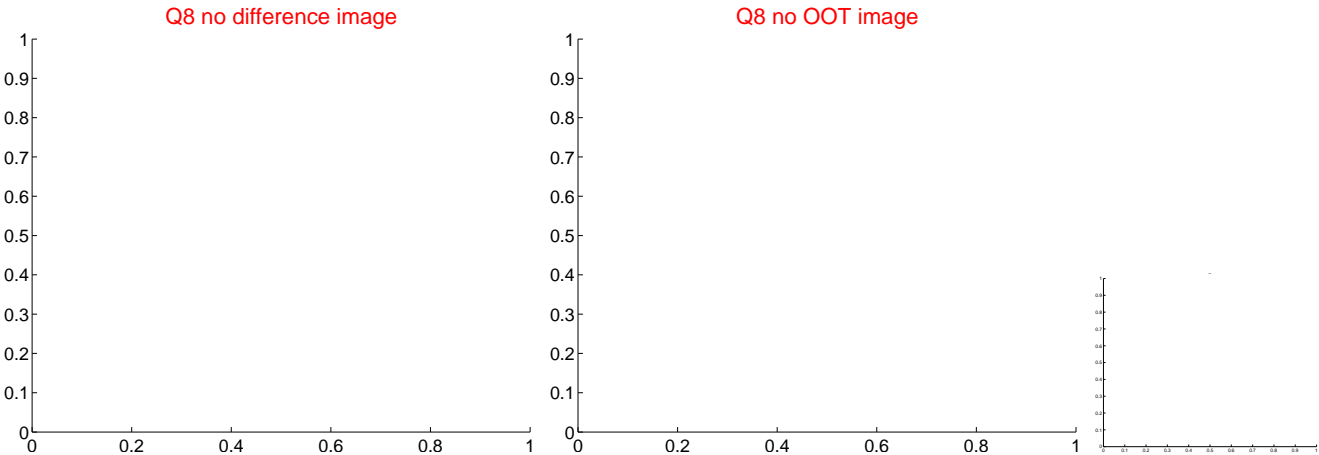
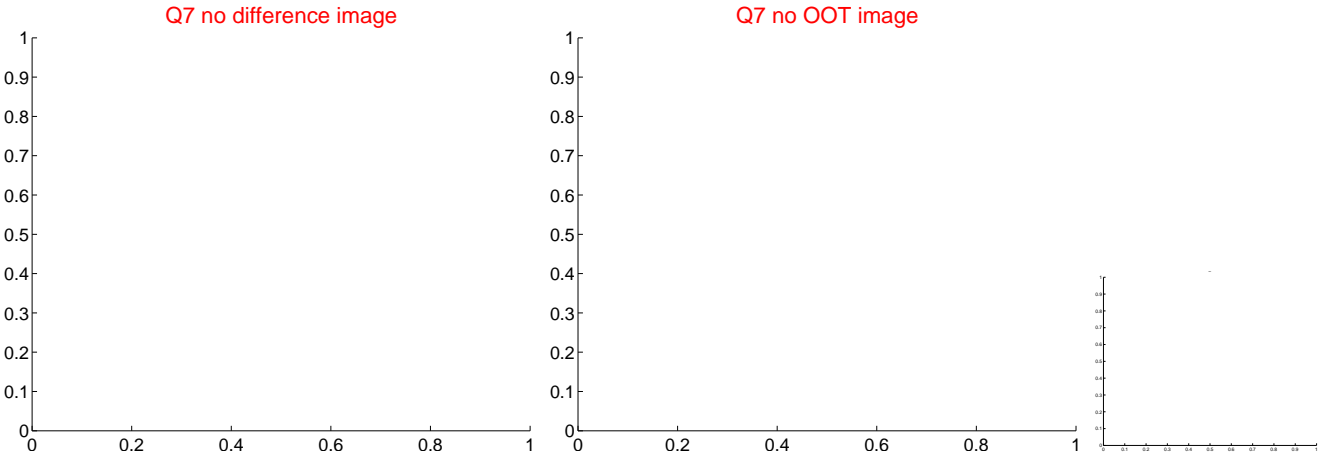
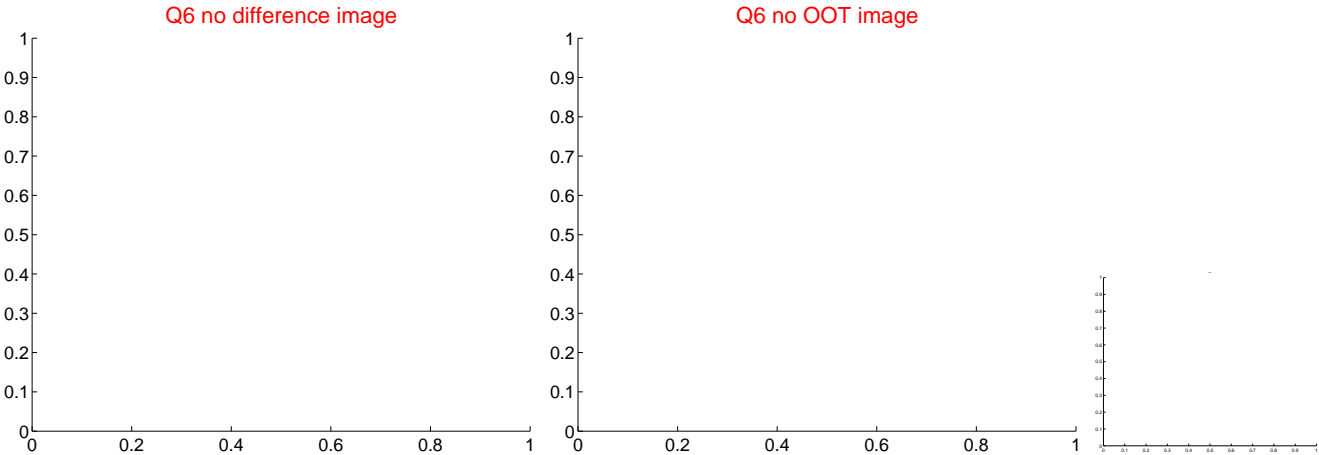
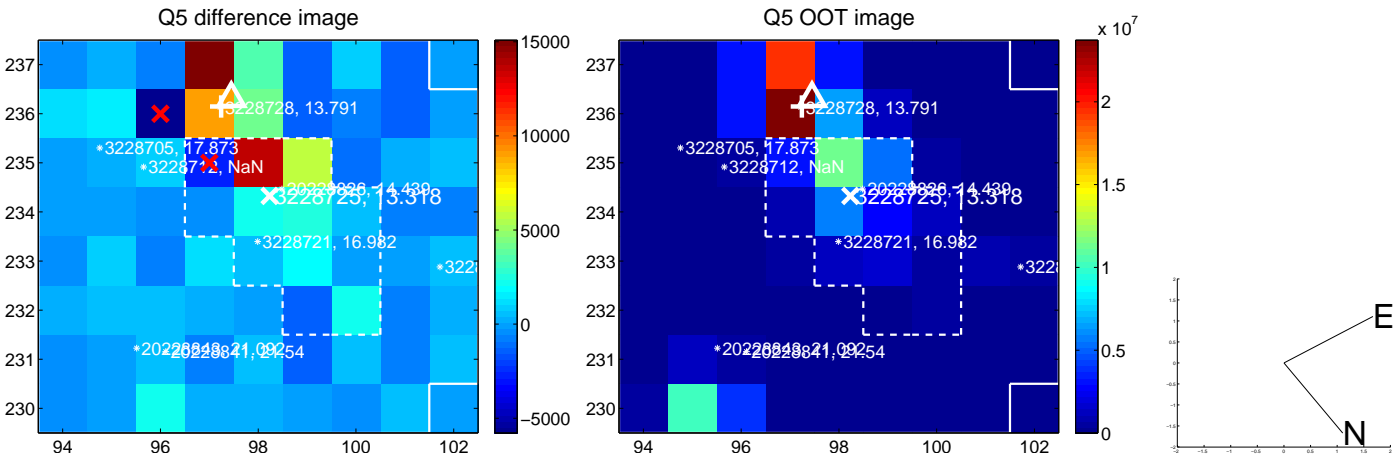


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

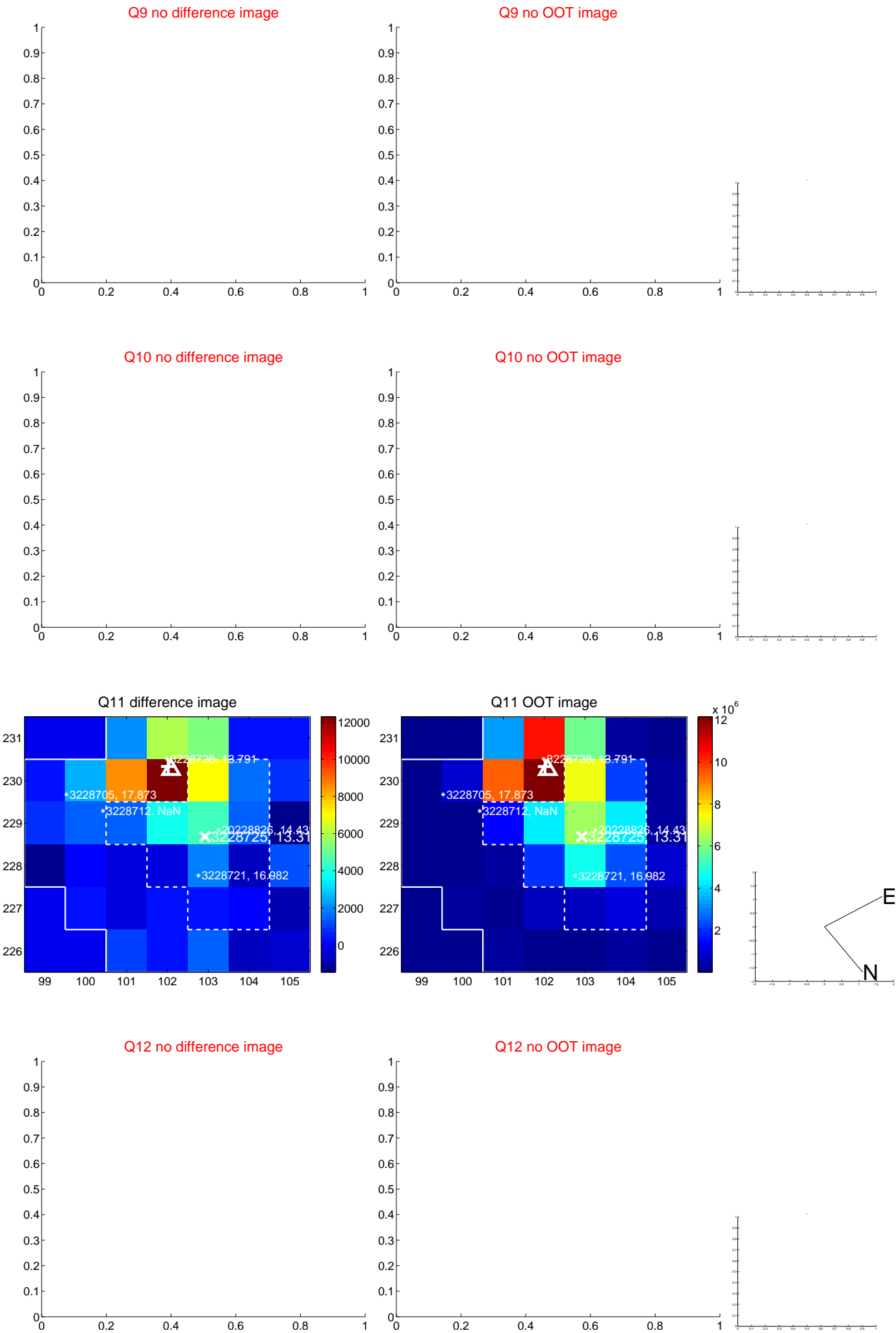
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



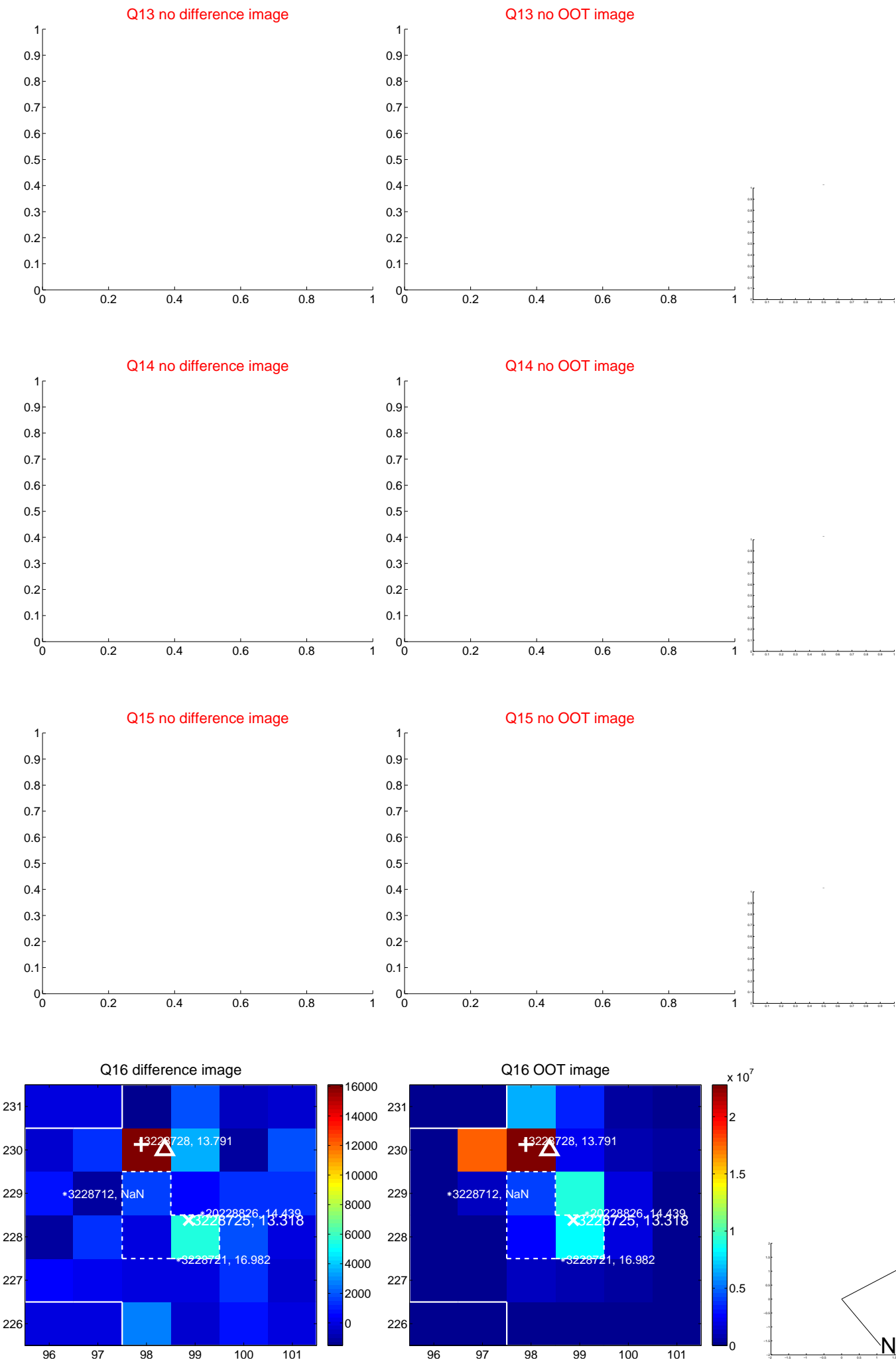
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



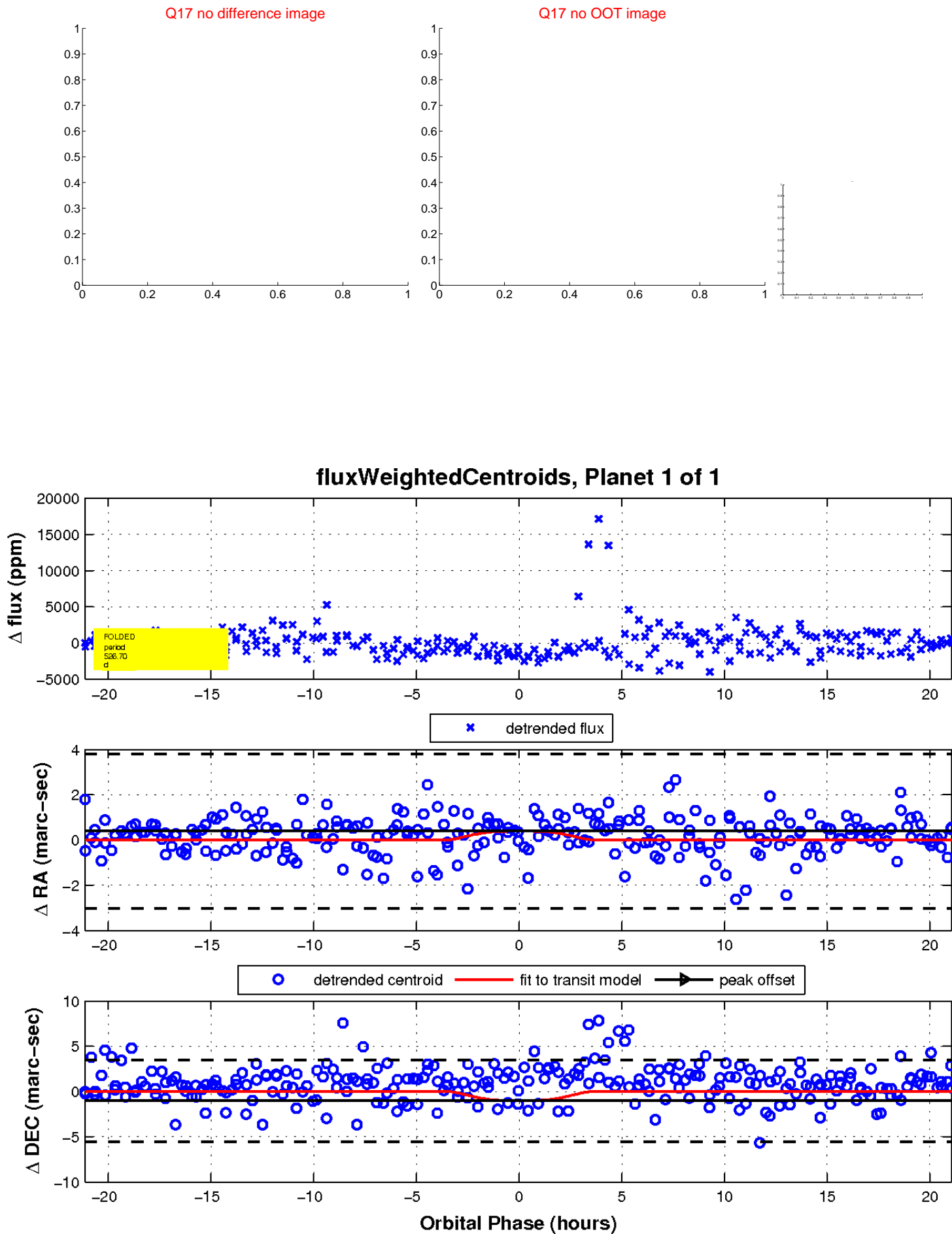
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

