

KIC 003001885

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})
003001885-01	OBS	2540.01	2.675975	133.704726	430.4	2.970	15.6	16.4	0.80	4732	2.87	235.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003001885-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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.

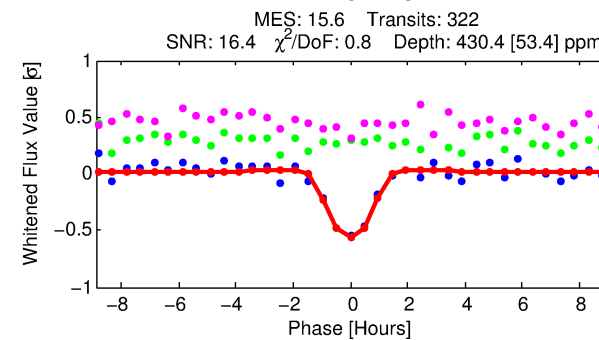
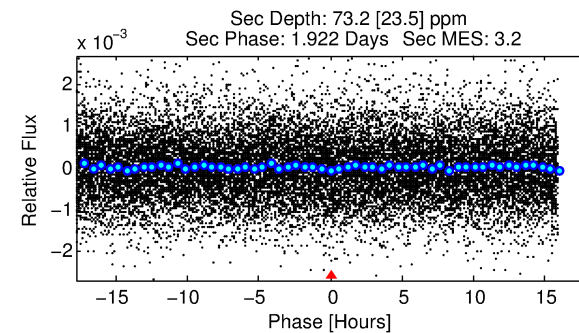
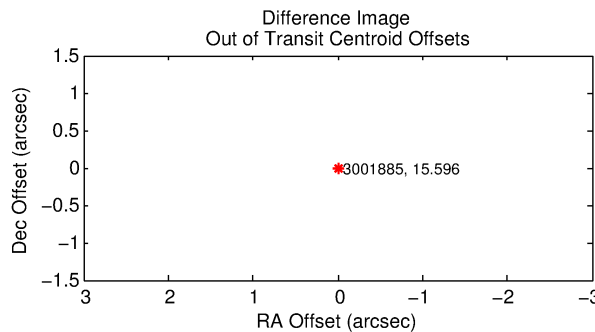
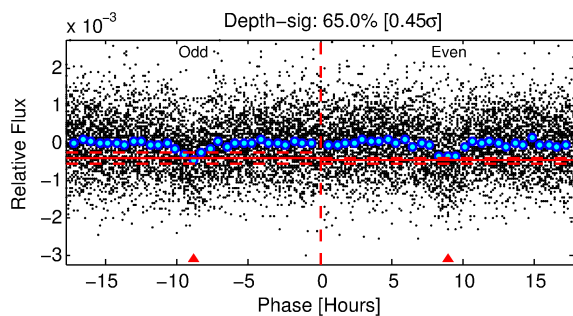
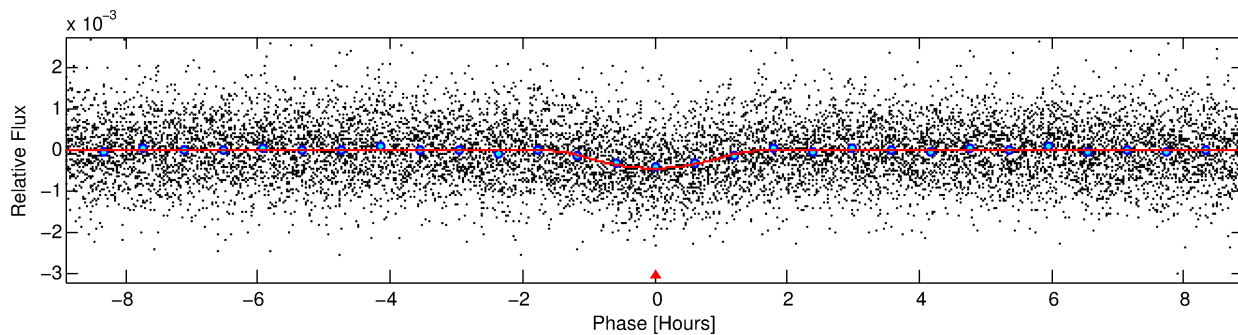
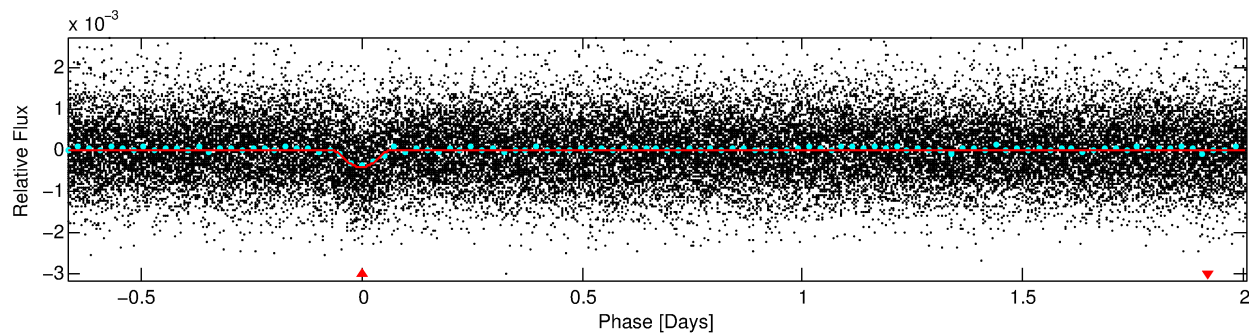
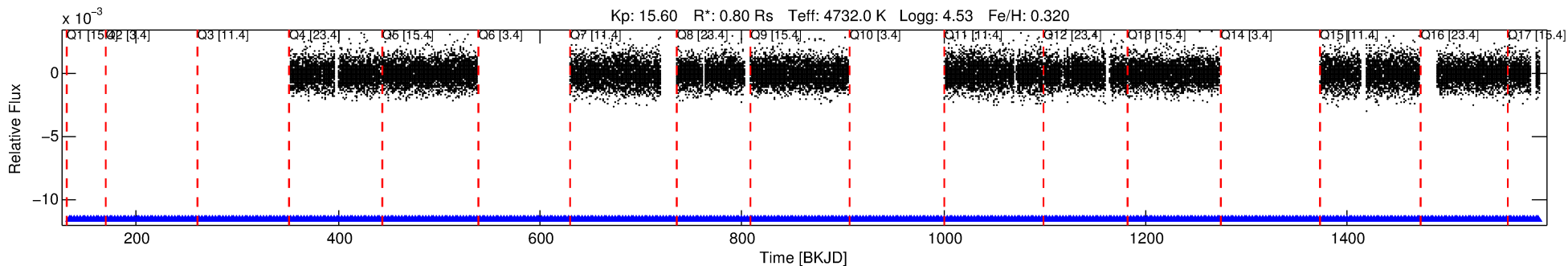
Ephemeris Match Information For 003001885-01

No Significant Match Found

DV One-Page Summary

KIC: 3001885 Candidate: 1 of 1 Period: 2.676 d
KOI: K02540.01 Corr: 0.946

Kp: 15.60 R*: 0.80 Rs Teff: 4732.0 K Logg: 4.53 Fe/H: 0.320



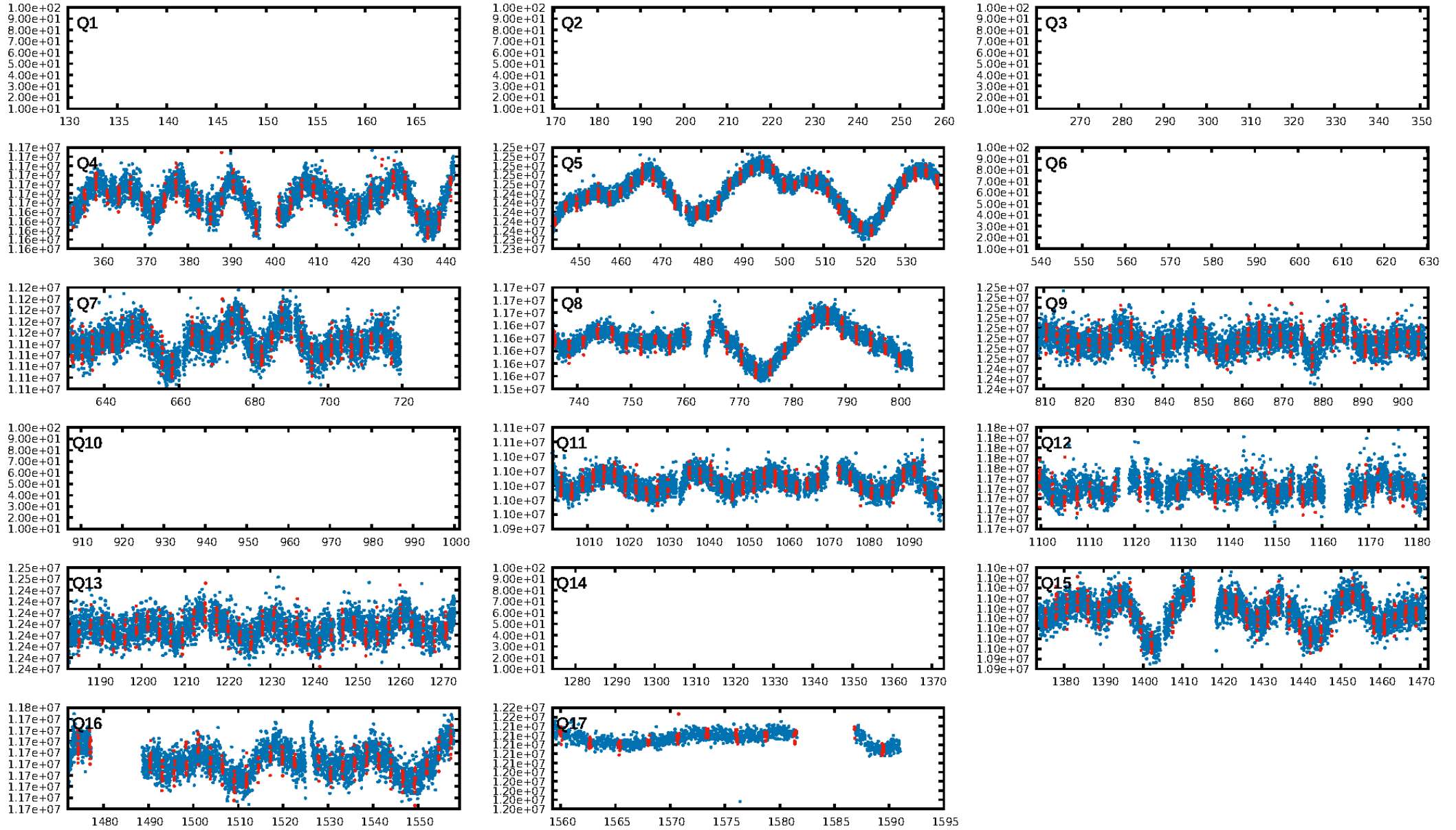
DV Fit Results:

Period = 2.67598 [0.00001] d
Epoch = 133.7047 [0.0034] BKJD
Rp/R* = 0.0331 [0.0390]
a/R* = 2.32 [0.80]
b = 0.99 [0.07]
Seff = 235.15 [45.39]
Teq = 999 [48] K
Rp = 2.87 [3.40] Re
a = 0.0347 [0.0030] AU
Ag = 5.89 [14.03] [0.35σ]
Teffp = 2405 [1433] K [0.98σ]

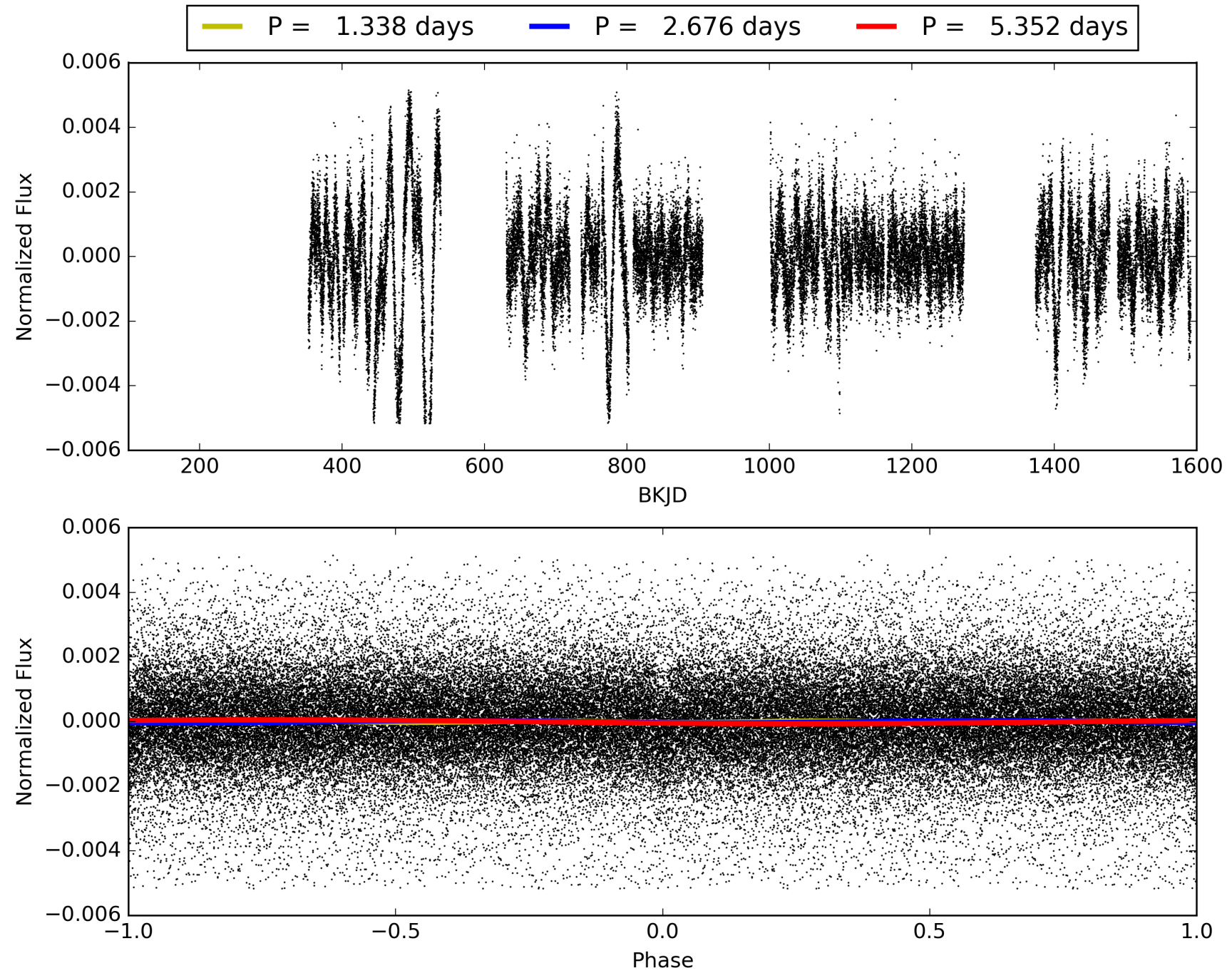
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.40e-54
RollingBand-fgt: 1.00 [312/312]
GhostDiagnostic-chr: -0.06533
Centroid-sig: 0.0%
Centroid-so: 3.475 arcsec [8.20σ]
OotOffset-rm: N/A
KicOffset-rm: 9.474 arcsec [128.11σ]
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/4/4 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [11/11]

TCE 003001885-01, PDC Light Curves

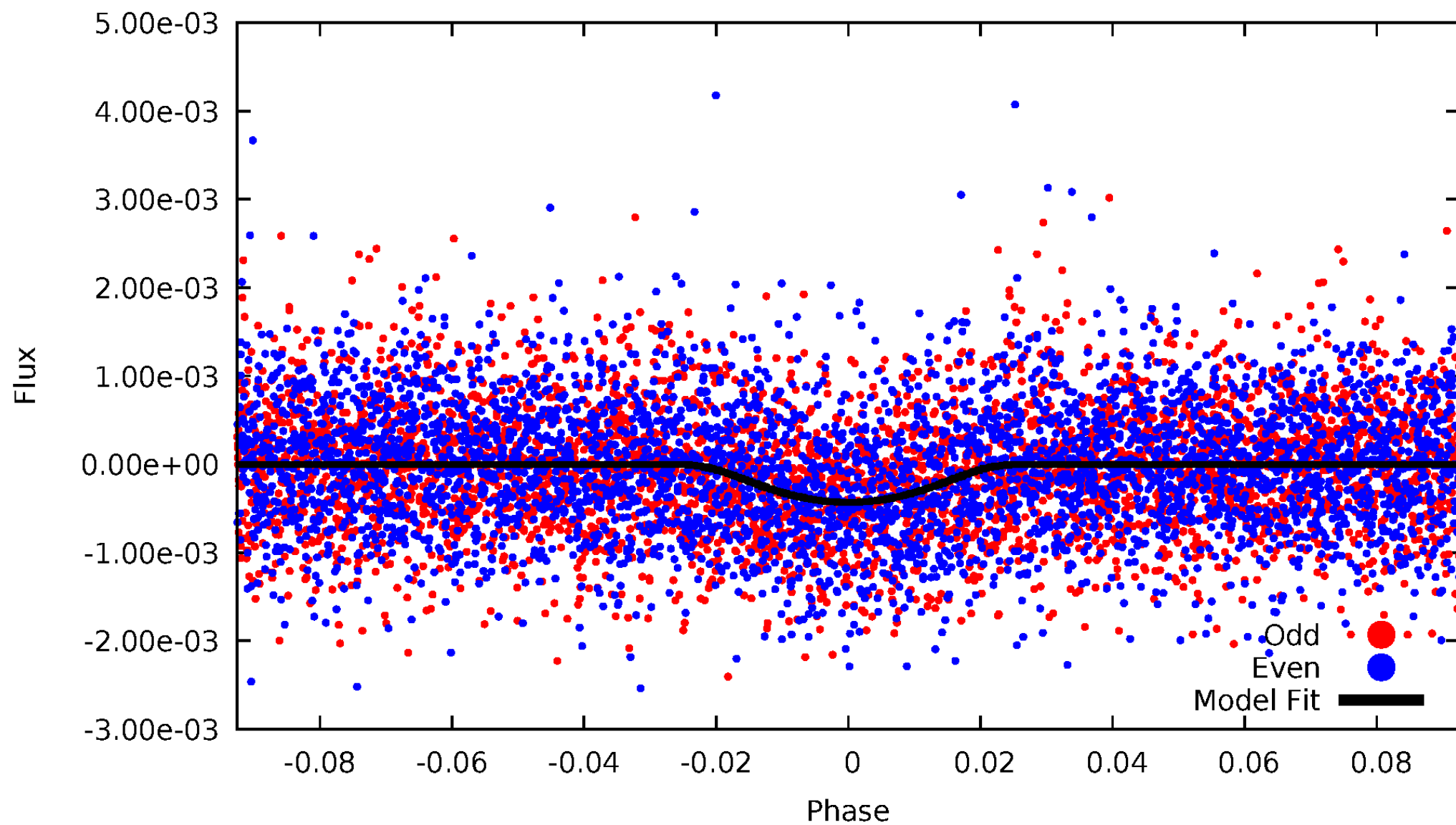


TCE 003001885-01



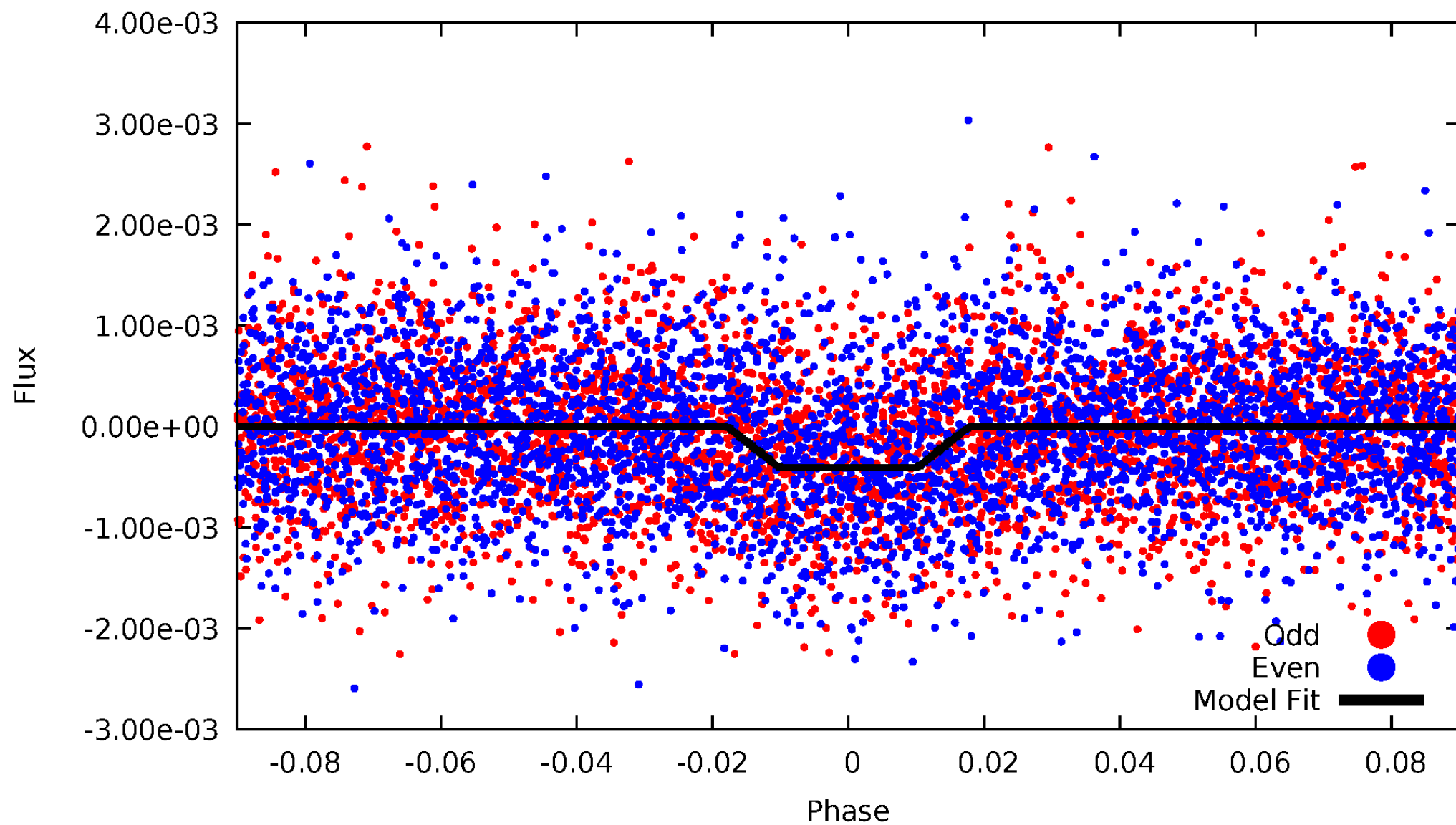
DV Odd/Even

TCE 003001885-01



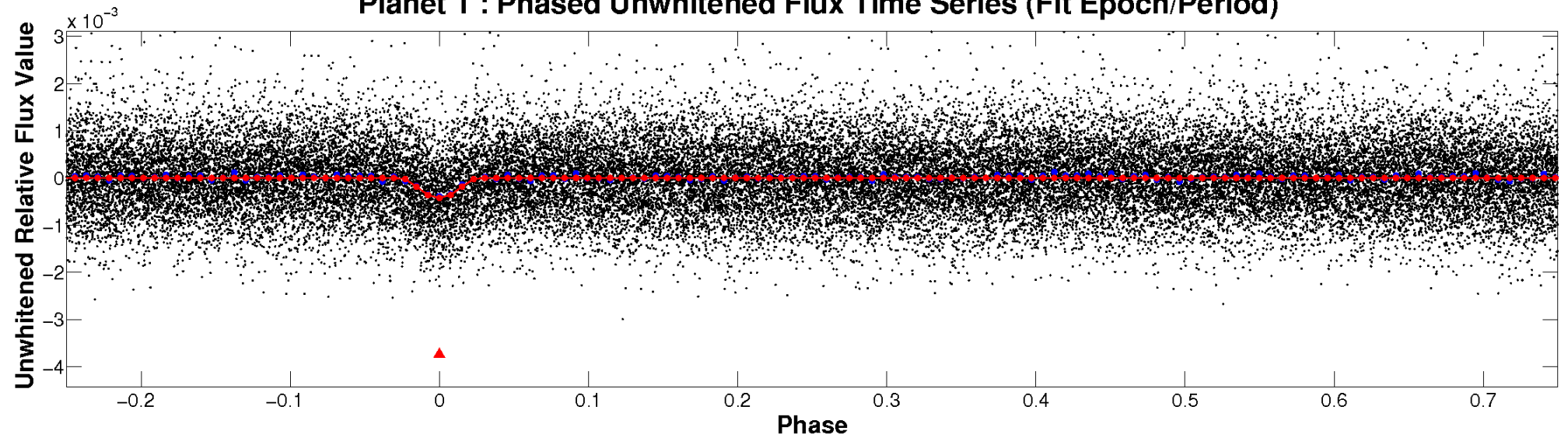
ALT Odd/Even

TCE 003001885-01

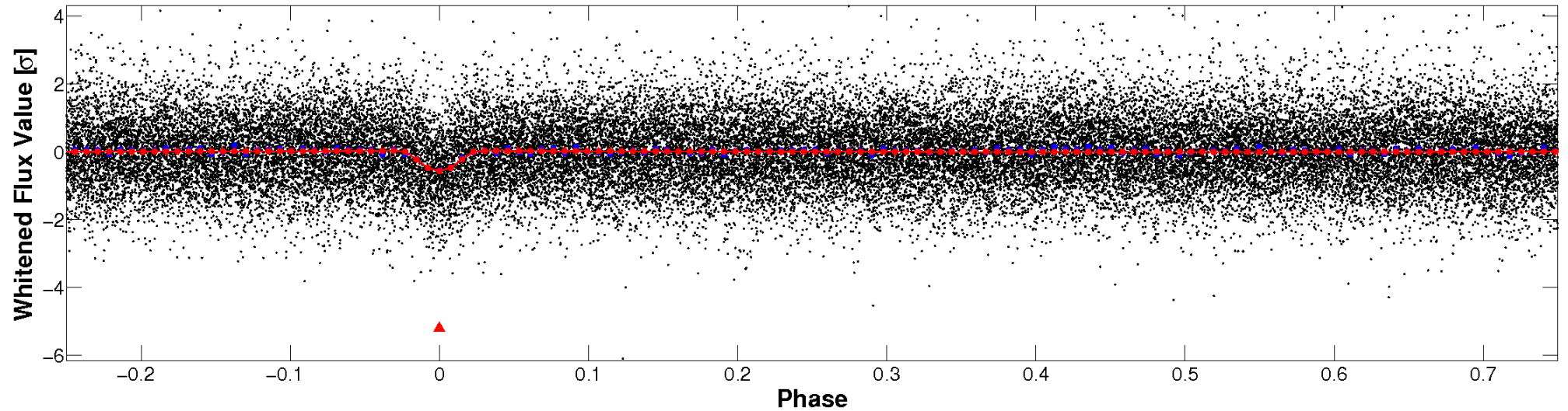


Non-Whitened Vs. Whitened Light Curve

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

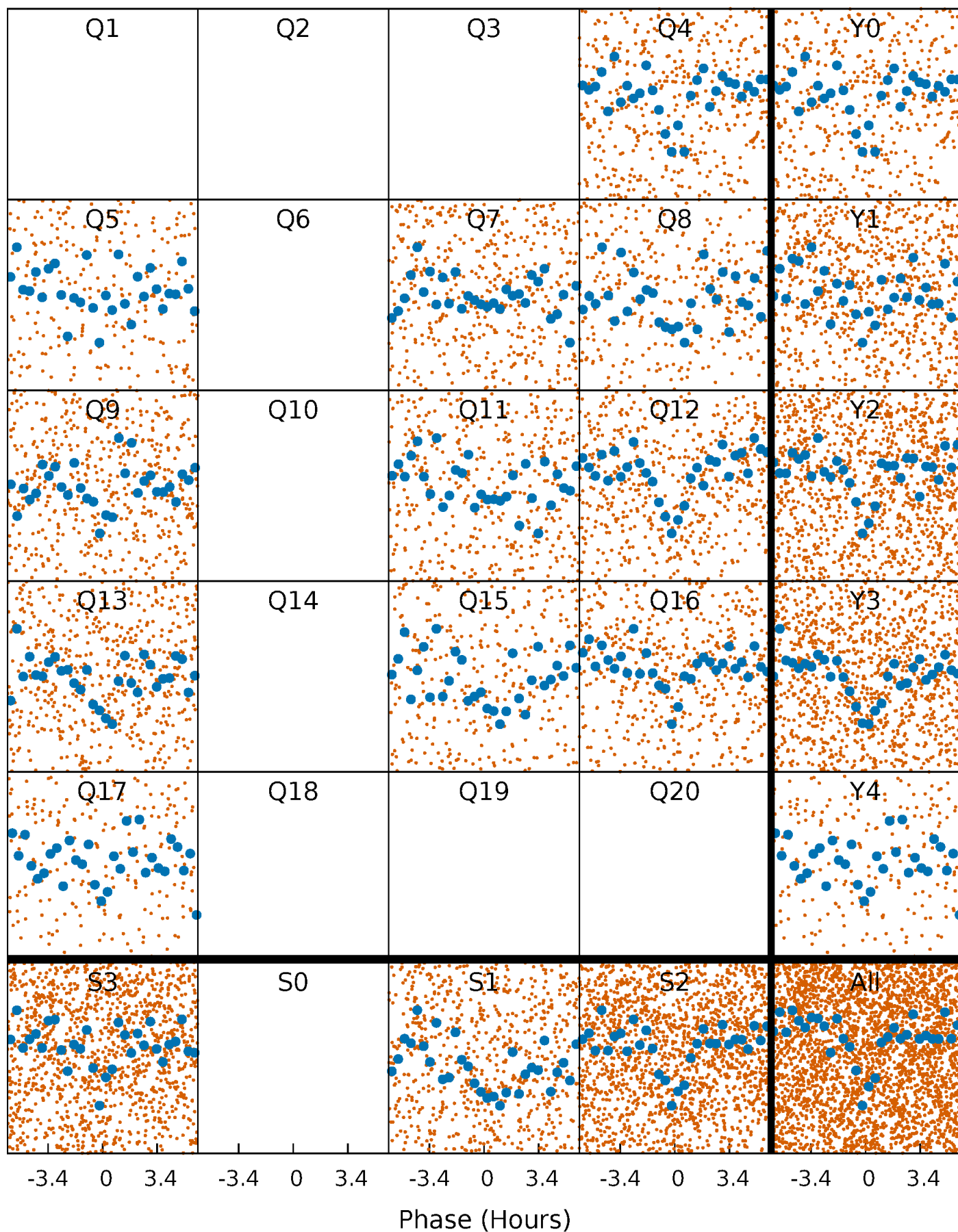


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



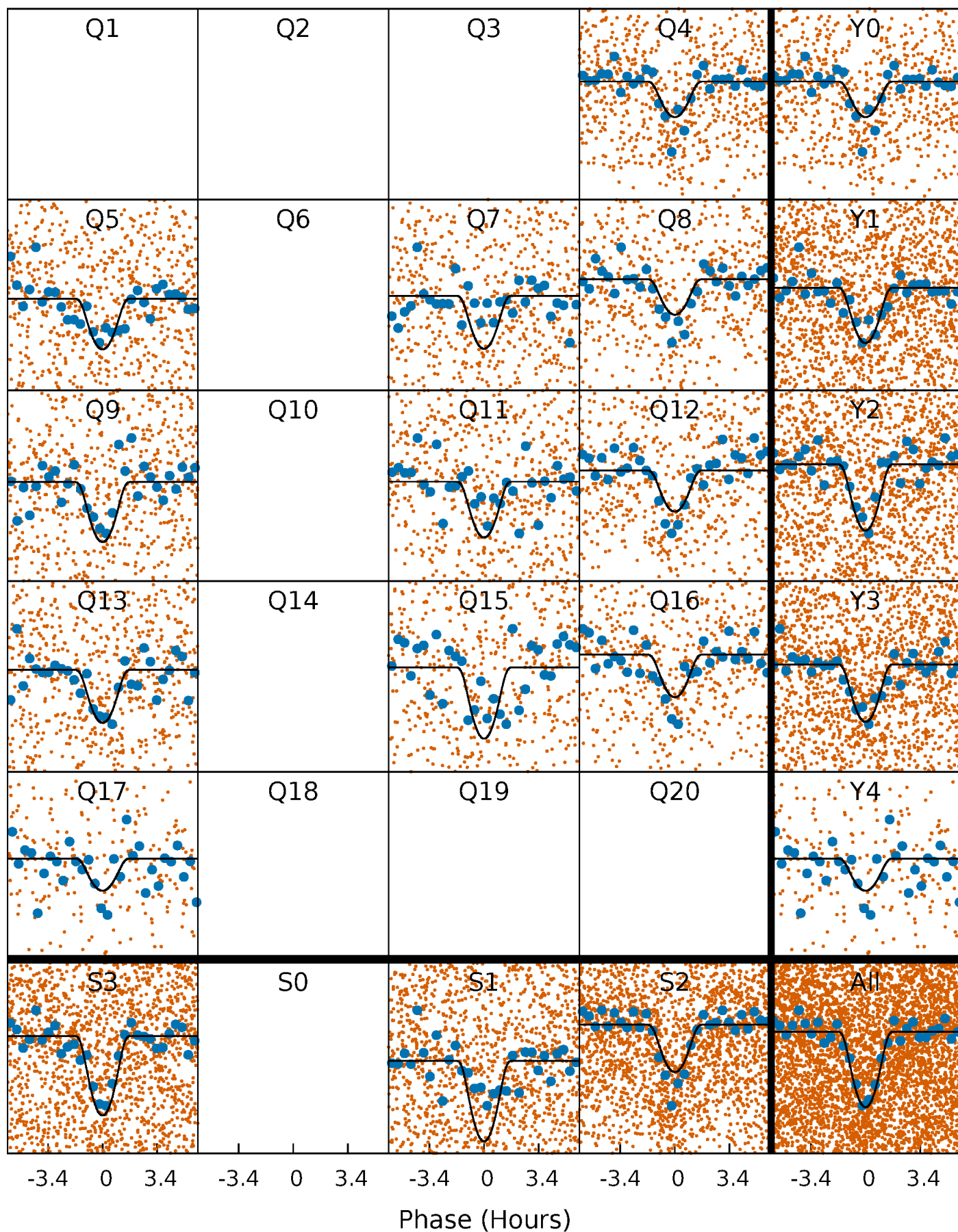
PDC Quarter-Phased Transit Curves

TCE 003001885-01 P= 2.675975 Days $T_0=133.704725$ (BKJD)



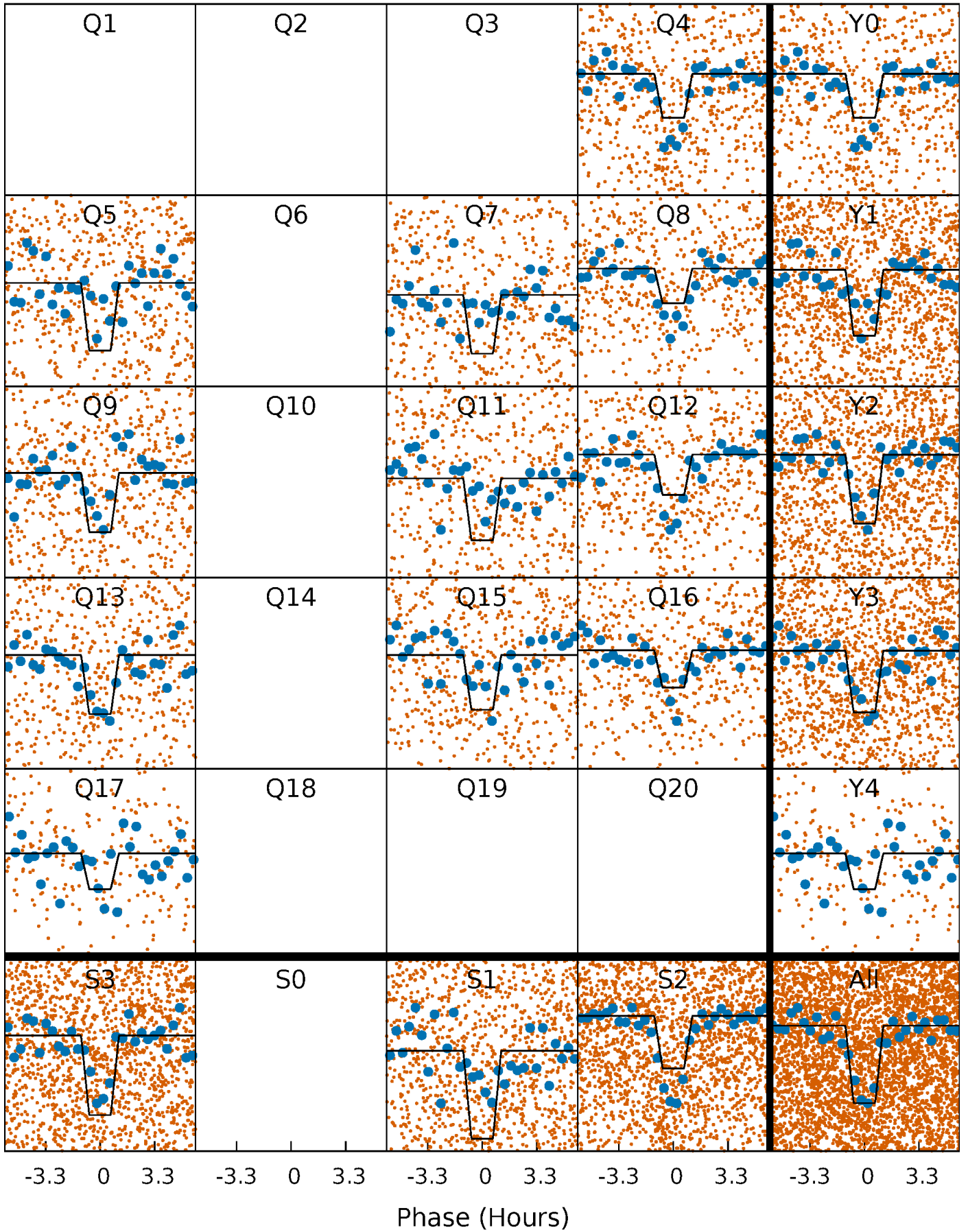
DV Quarter-Phased Transit Curves

TCE 003001885-01 P= 2.675975 Days $T_0=133.704725$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

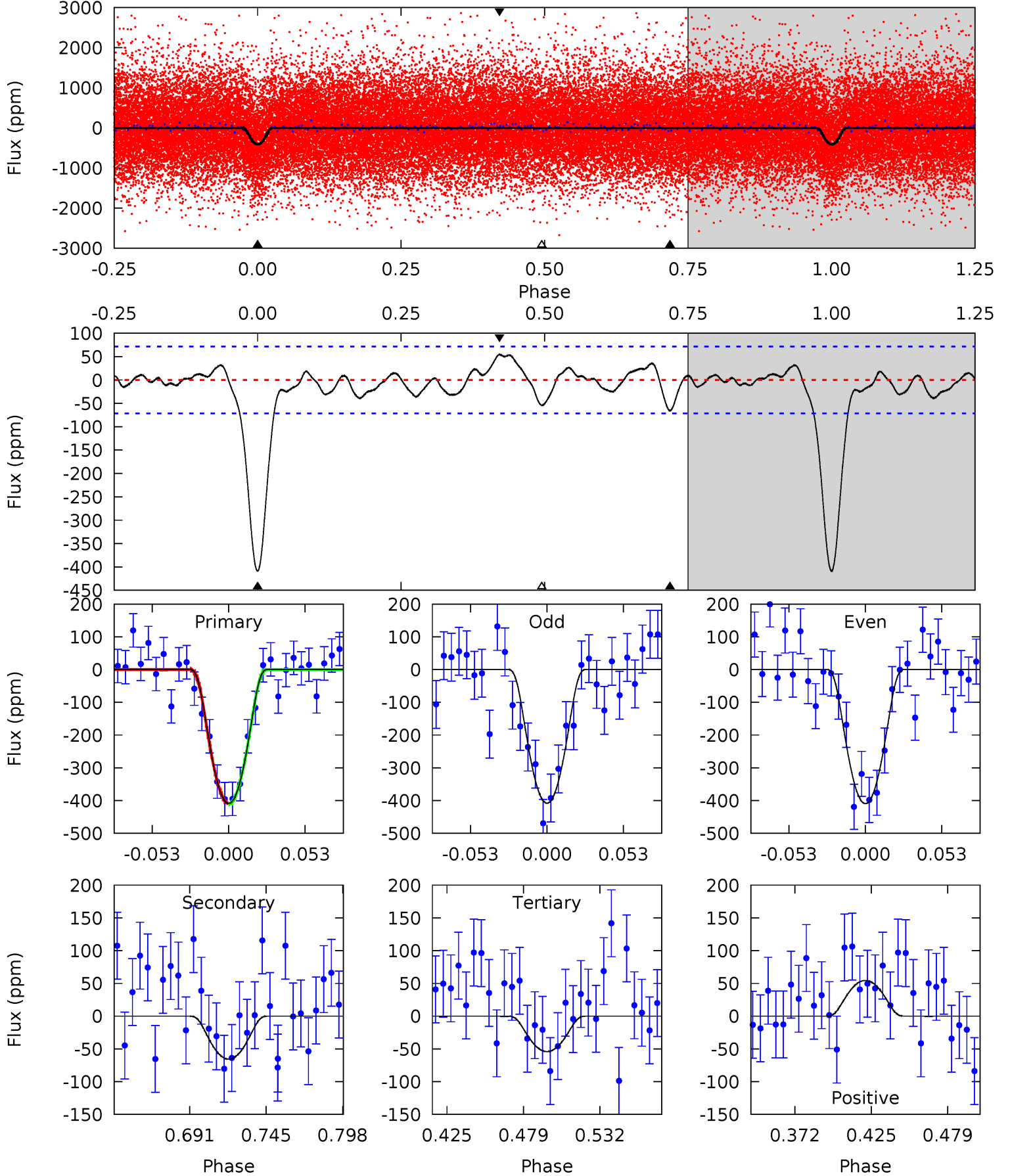
TCE 003001885-01 P= 2.675955 Days $T_0=133.710505$ (BKJD)



DV Model-Shift Uniqueness Test

003001885-01, P = 2.675975 Days, E = 133.704725 Days

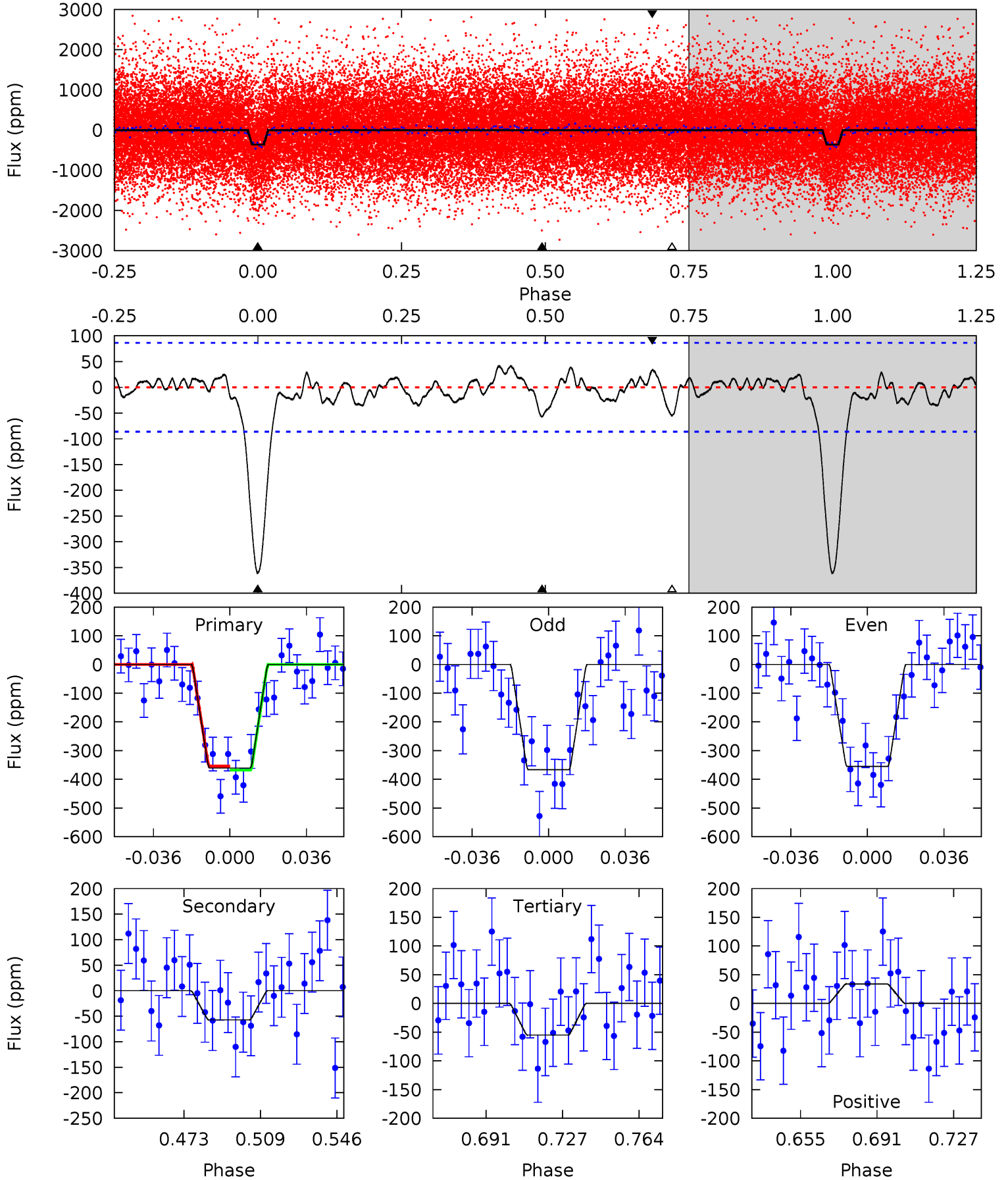
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	4.31	3.55	3.58	4.70	1.93	1.43	23.3	23.3	0.76	0.73	0.05	0.97	0.12	0.03



Alt Model-Shift Uniqueness Test

003001885-01, P = 2.675955 Days, E = 133.710505 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.0	3.16	3.05	1.88	4.77	2.09	1.03	16.9	18.1	0.11	1.28	0.33	1.00	0.10	0.38



Stellar Parameters For KIC 003001885

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4732^{+170}_{-170}	$4.530^{+0.072}_{-0.036}$	$0.320^{+0.150}_{-0.300}$	$0.795^{+0.043}_{-0.079}$	$0.780^{+0.050}_{-0.055}$	$2.189^{+0.624}_{-0.258}$
	+4%/-4%	+2%/-1%	+47%/-94%	+5%/-10%	+6%/-7%	+29%/-12%
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 003001885-01 / KOI 2540.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-66 ± 15	$3.69^{+3.19}_{-2.23}$	1386^{+58}_{-57}	2691^{+977}_{-437}	$3.015^{+19.771}_{-2.086}$
Alt.	-57 ± 18	$2.94^{+2.75}_{-1.89}$	1390^{+59}_{-54}	2825^{+1170}_{-511}	$4.154^{+30.490}_{-3.091}$

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 $A_{obs} \gg 1.0$

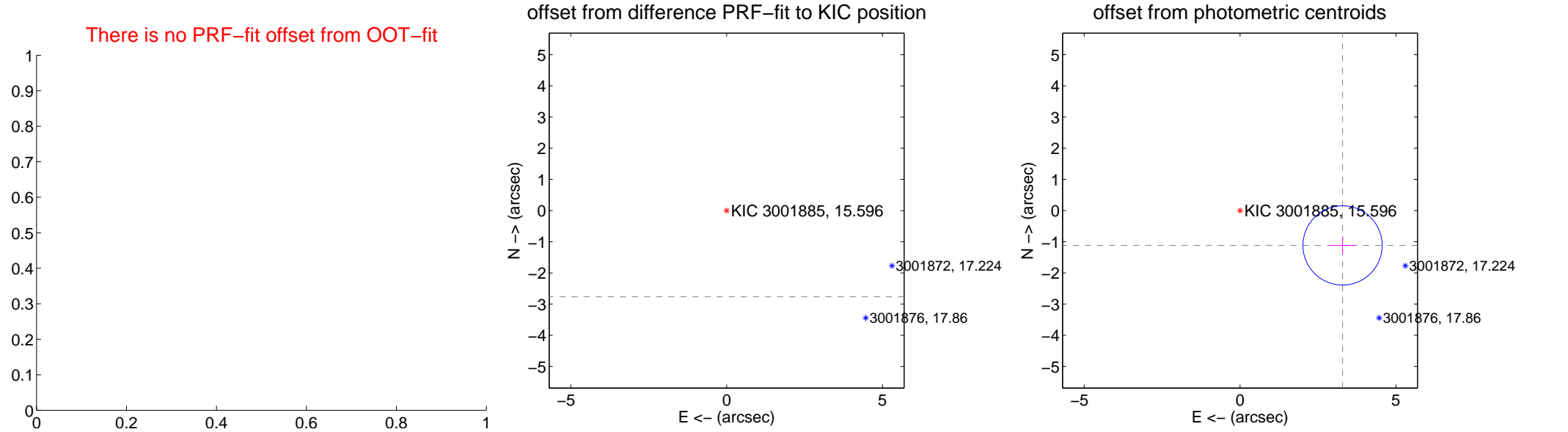
DV Centroid Data

Supplemental centroid analysis for 003001885-01. Kepler magnitude: 15.60. Transit SNR 16.42

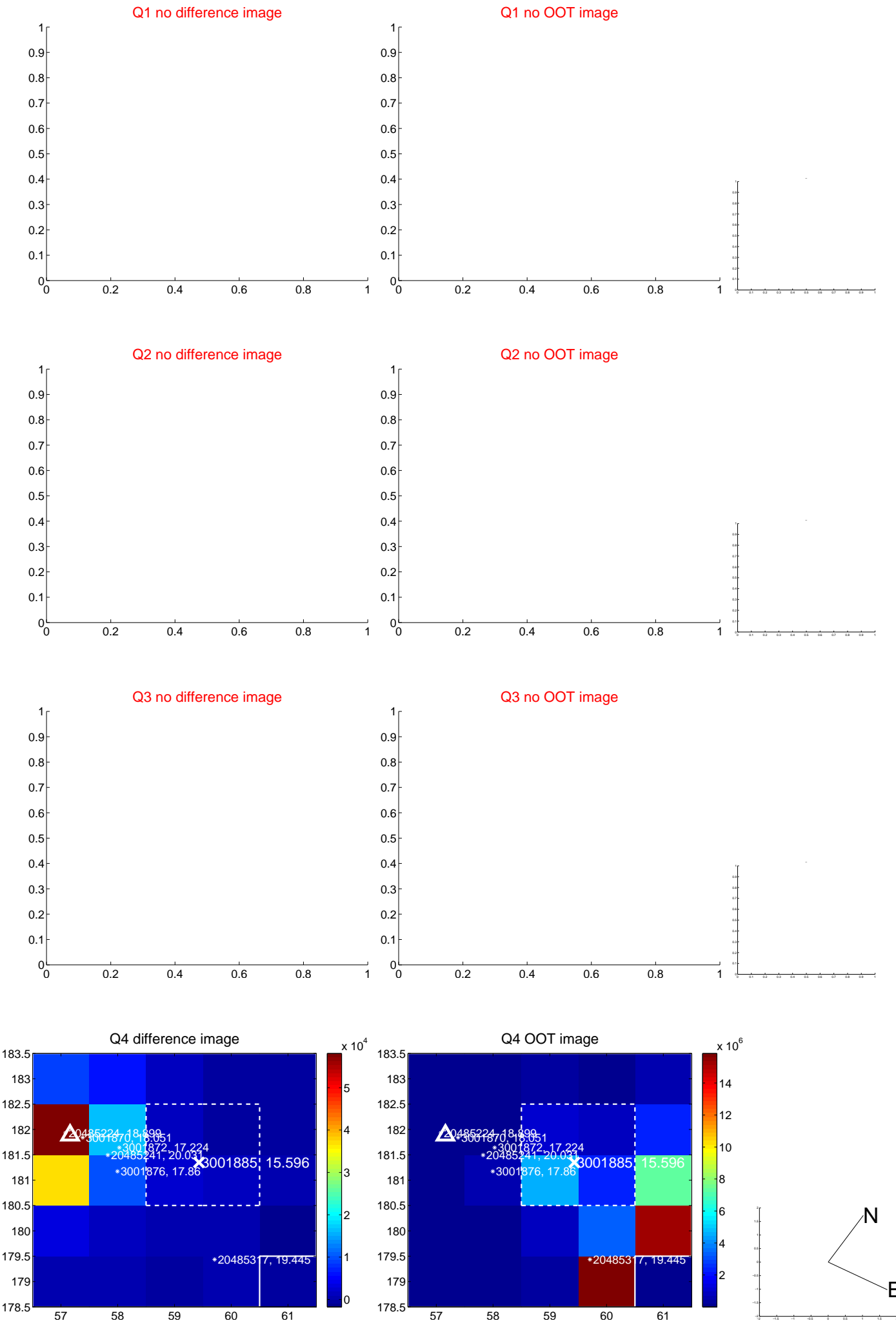
There are 8 quarters with good PRF difference image offsets

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

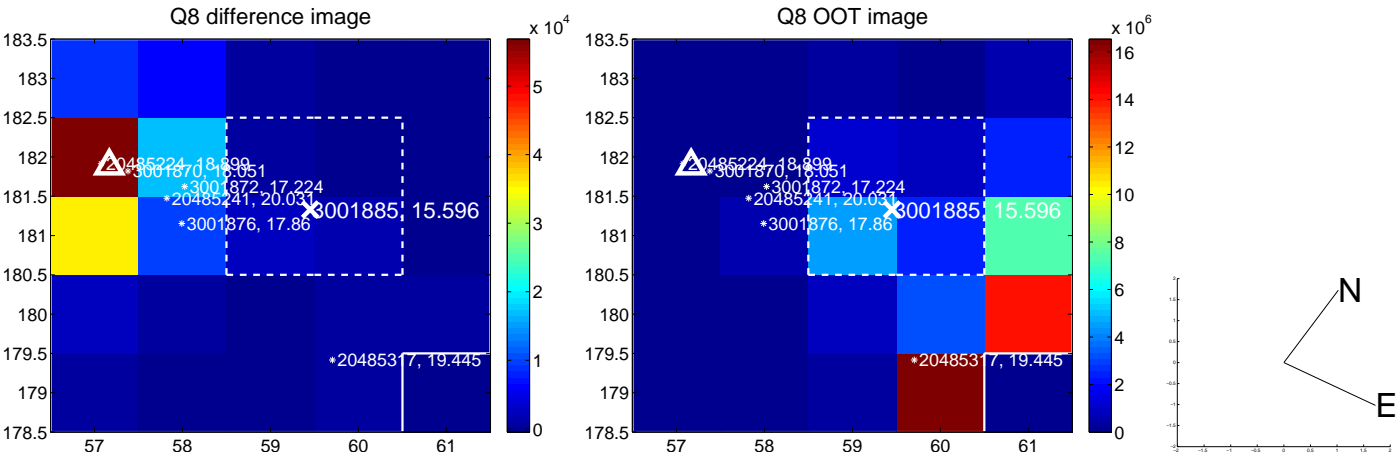
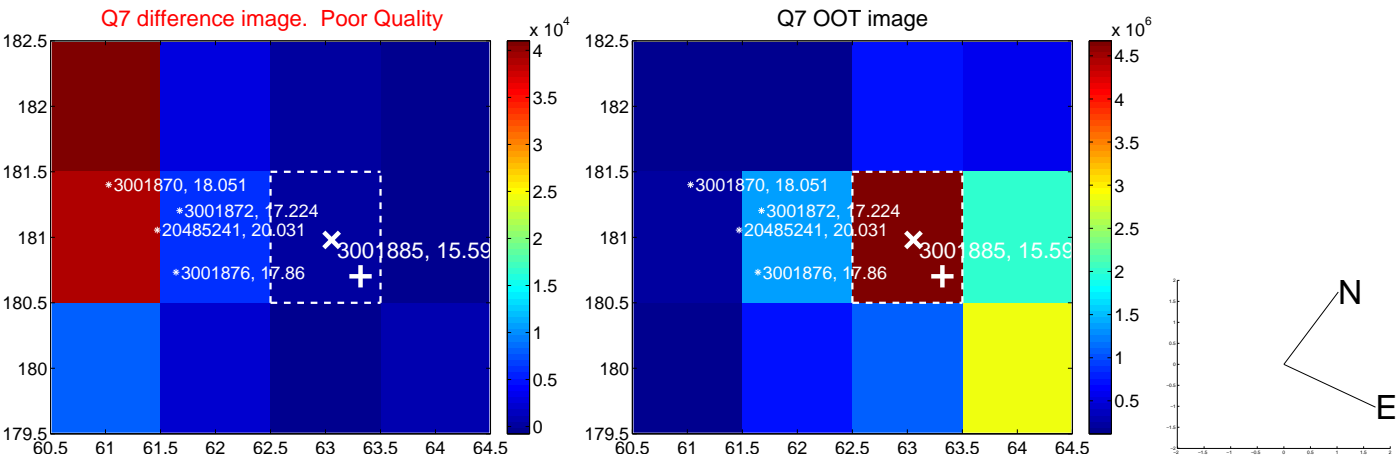
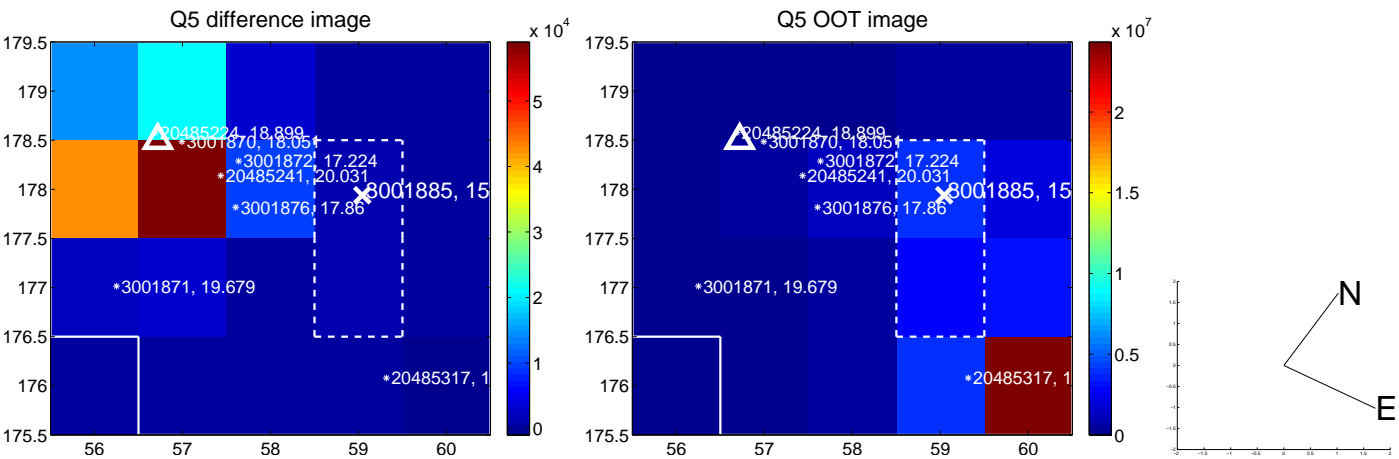
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	9.474 ± 0.074	128.11	-9.061 ± 0.074	-2.767 ± 0.068
photometric centroid source offset	3.47 ± 0.42	8.20	-3.29 ± 0.44	-1.12 ± 0.29



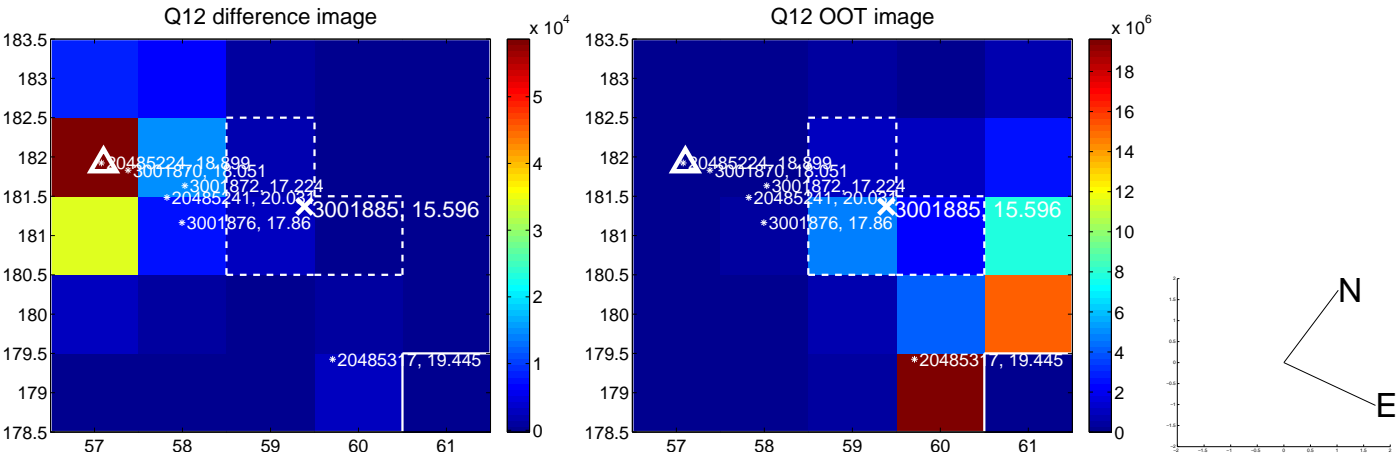
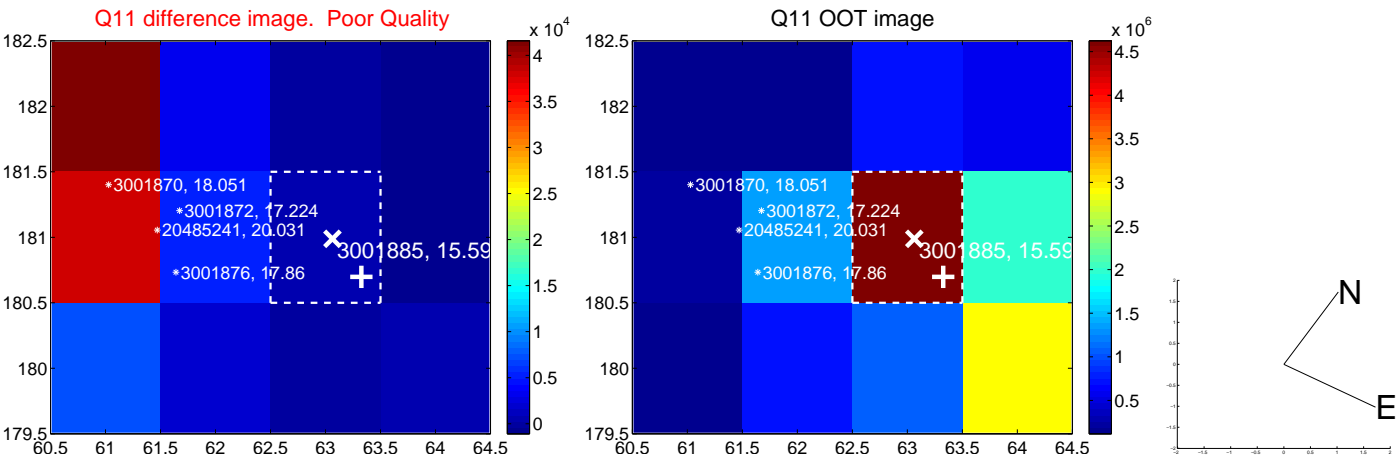
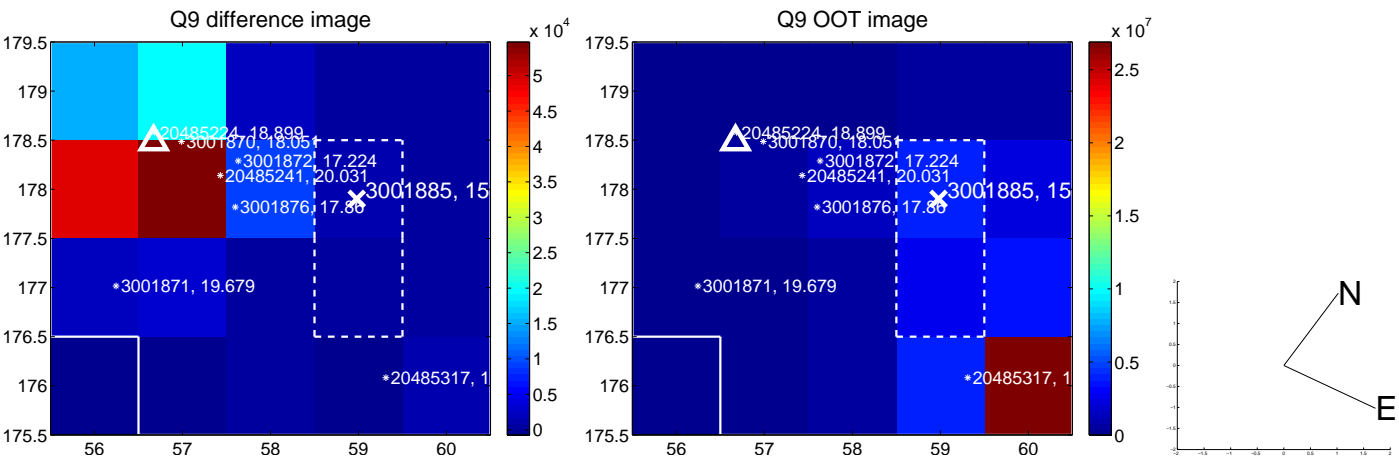
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



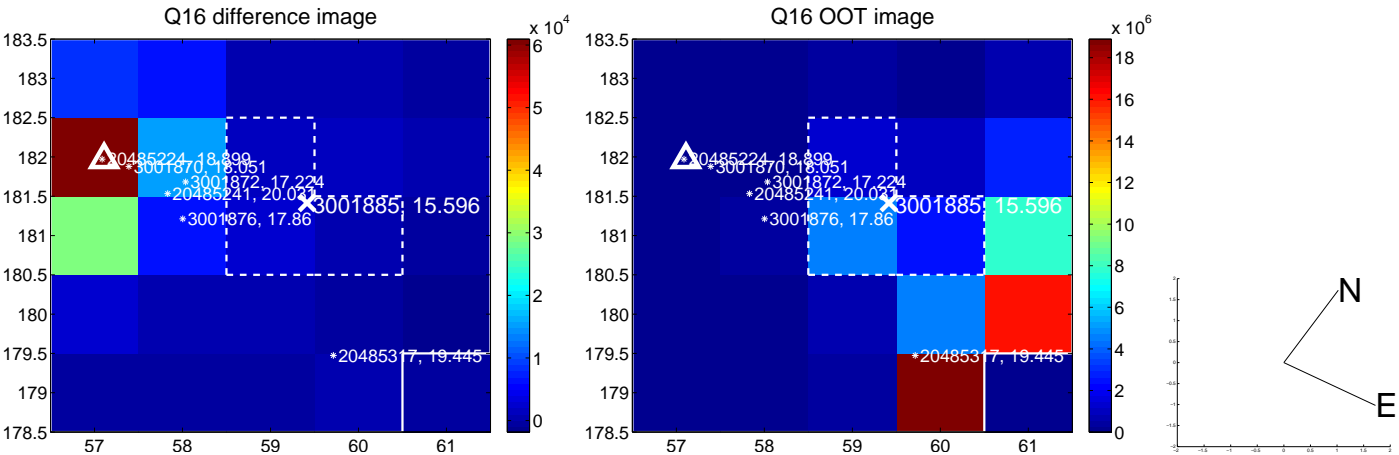
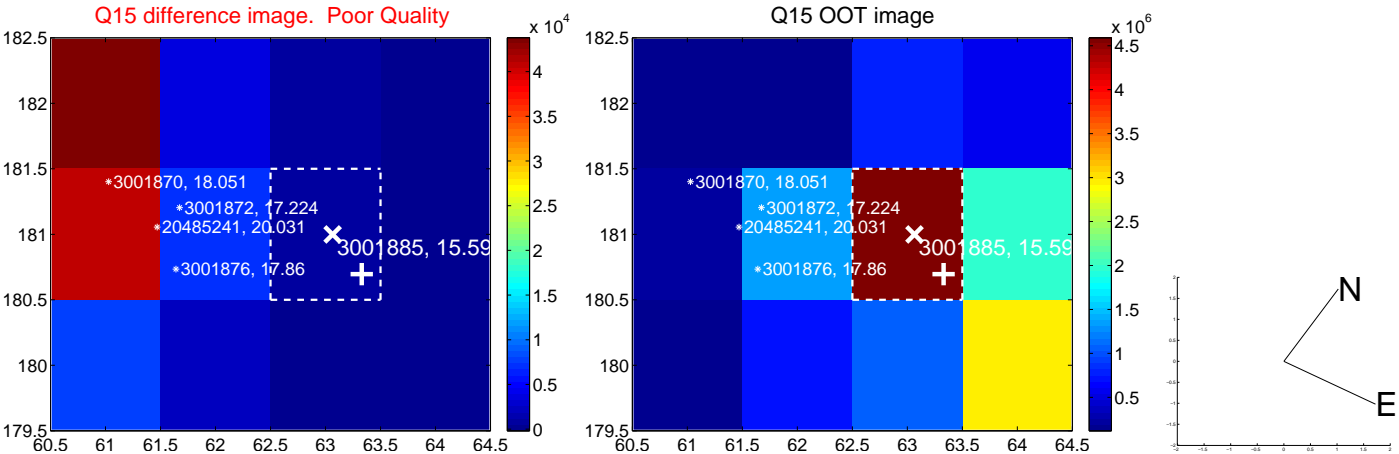
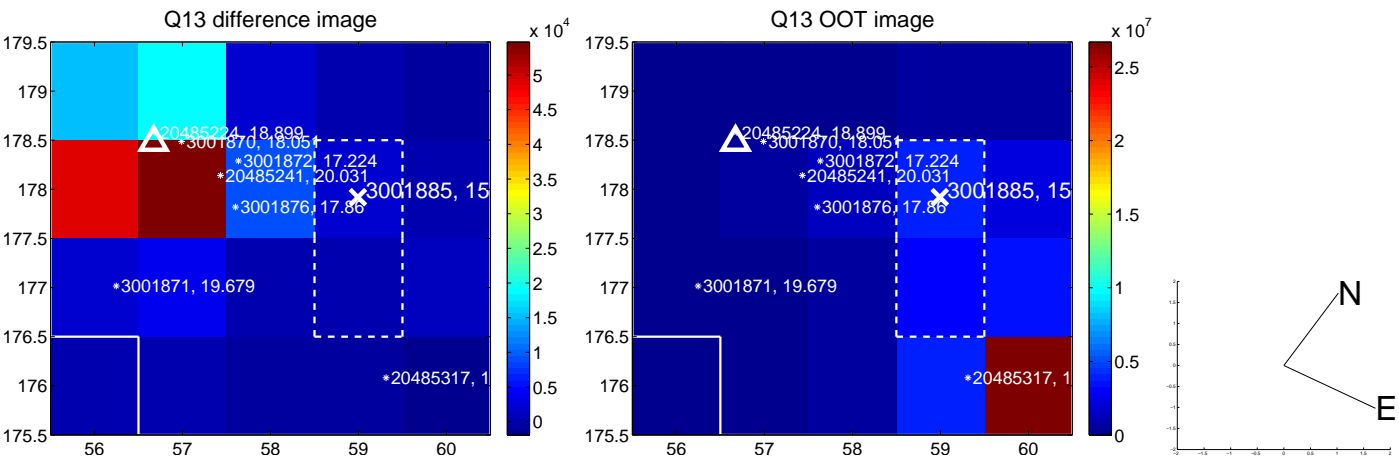
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



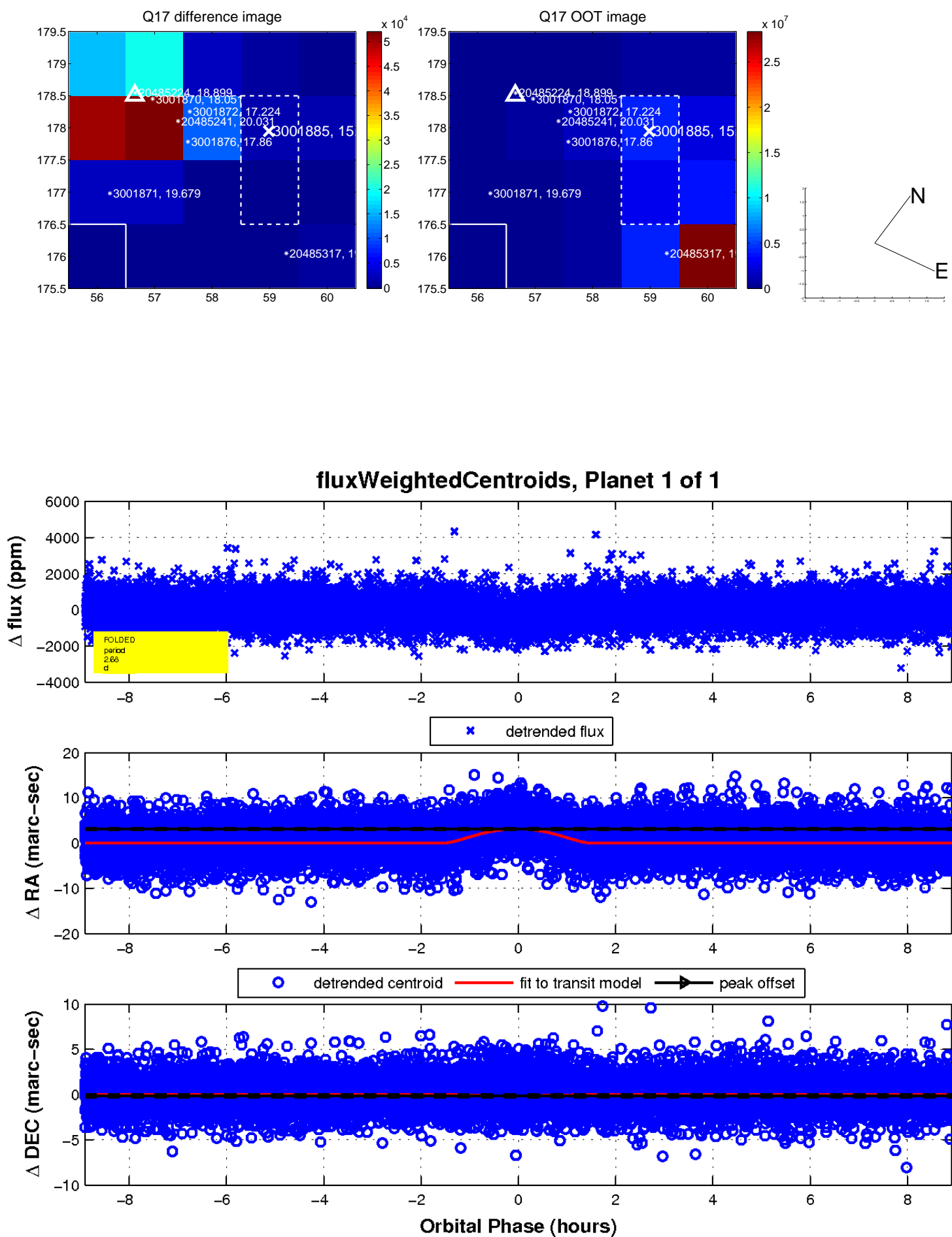
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

