

KIC 005481426

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})
005481426-01	OBS	3772.01	2.384015	133.457158	204829.3	3.589	298.1	152.5	1.00	5780	77.38	819.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005481426-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_KIC_POS

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.

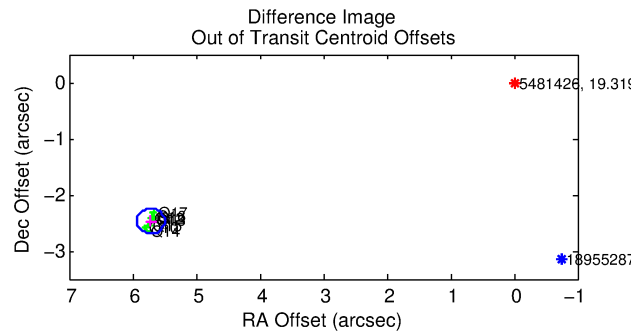
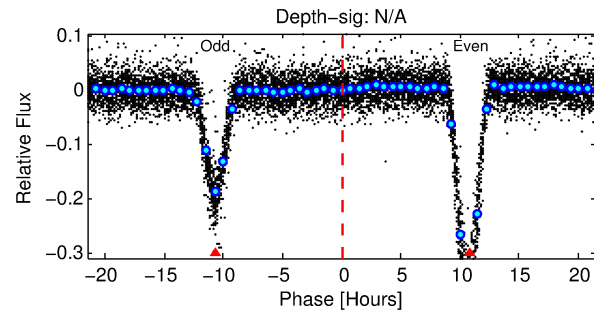
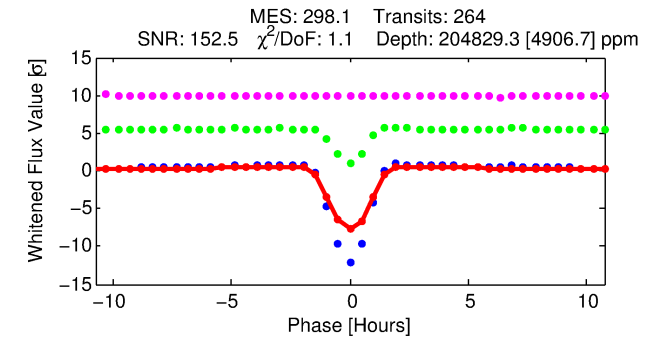
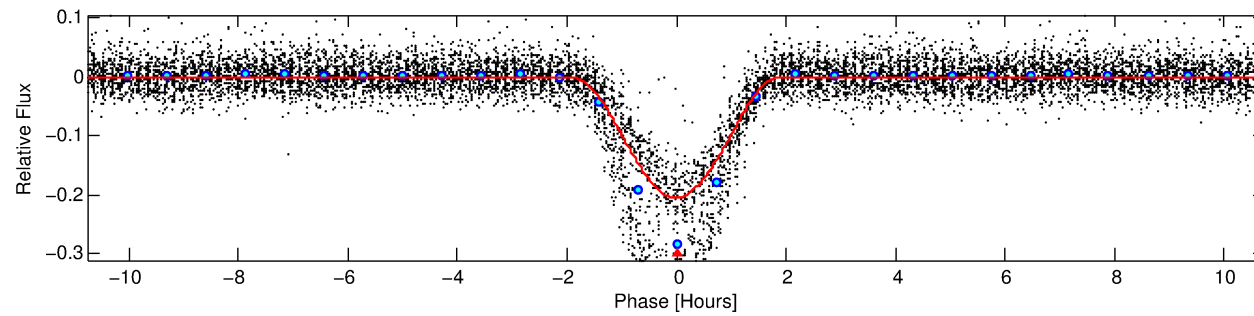
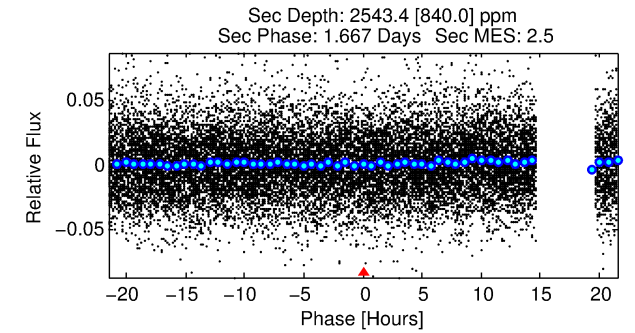
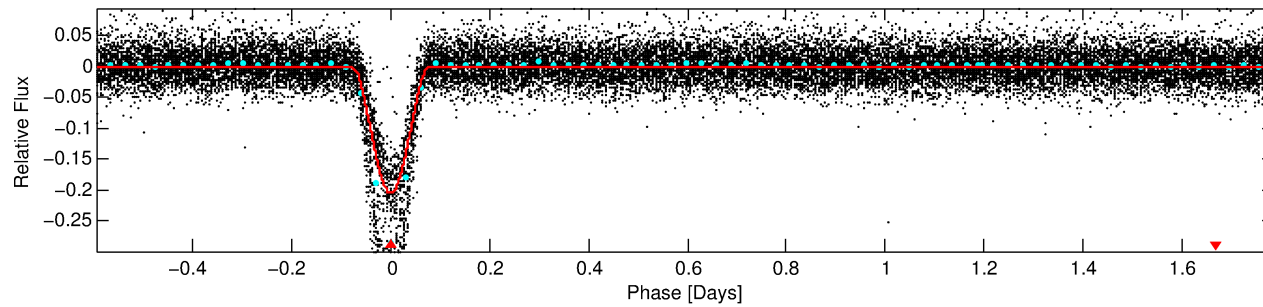
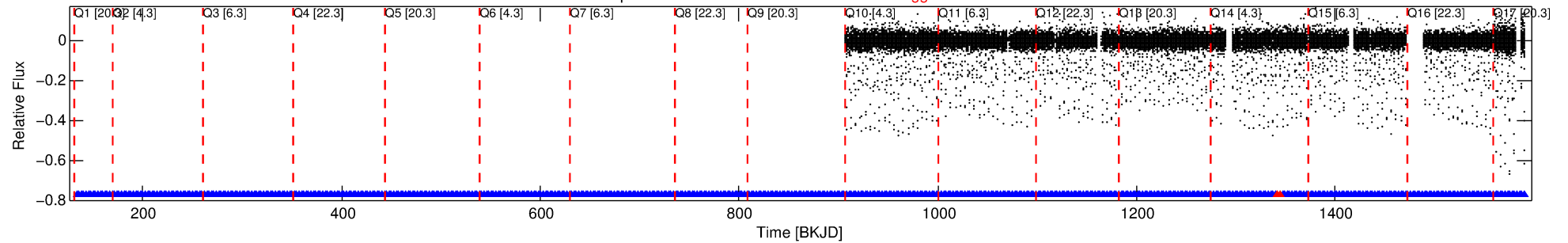
Ephemeris Match Information For 005481426-01

No Significant Match Found

DV One-Page Summary

KIC: 5481426 Candidate: 1 of 1 Period: 2.384 d
KOI: K03772.01 Corr: 0.940

Kp: 19.32 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



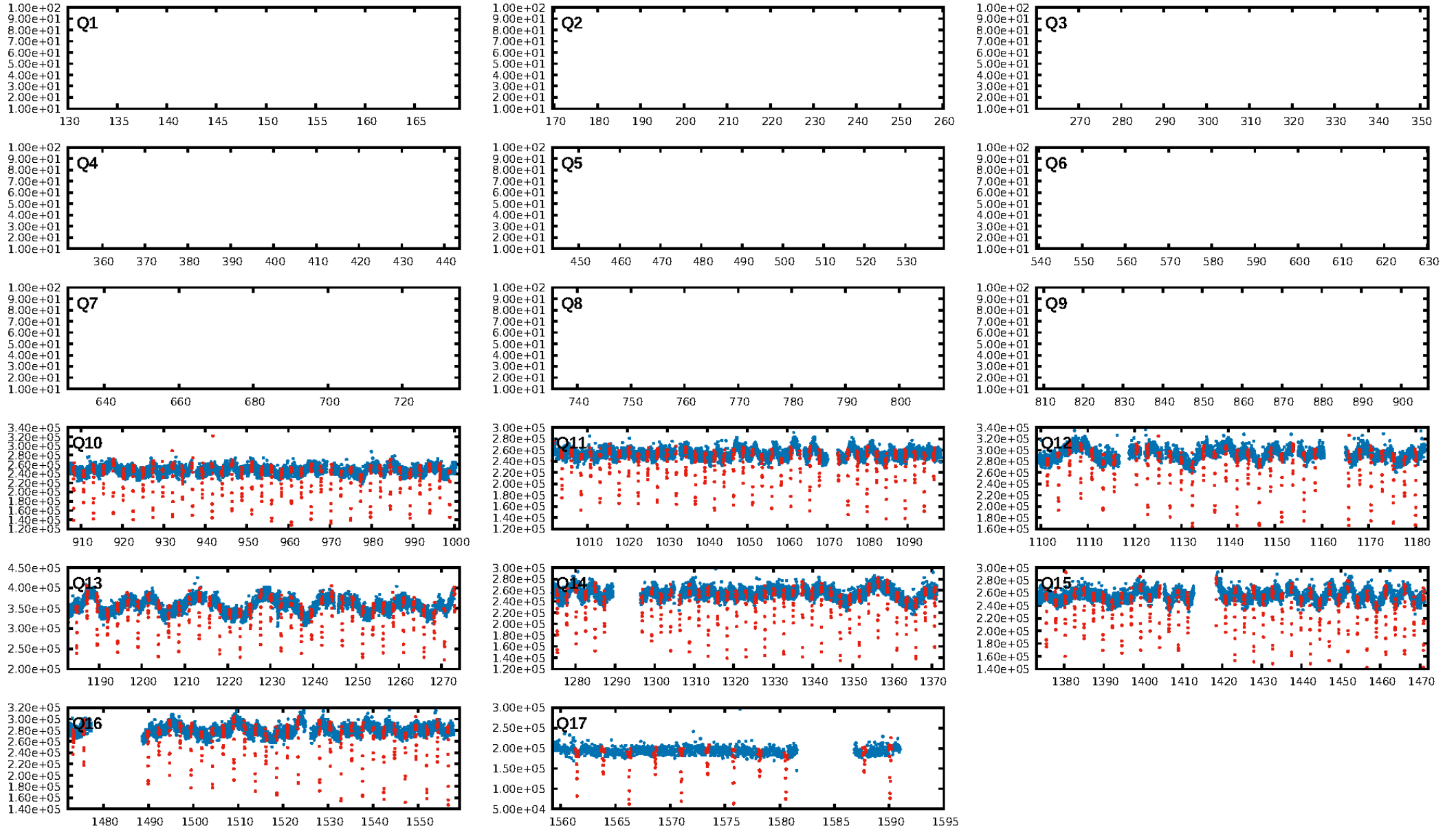
DV Fit Results:

Period = 2.38401 [0.00000] d
Epoch = 133.4572 [0.0004] BKJD
Rp/R* = 0.7091 [0.2827]
a/R* = 7.15 [0.62]
b = 1.00 [0.34]
Seff = 819.46 [0.00]
Teq = 1364 [0] K
Rp = 77.38 [30.84] Re
a = 0.0349 [0.0000] AU
Ag = 0.29 [0.25] [-2.90σ]
Teffp = 1541 [333] K [0.53σ]

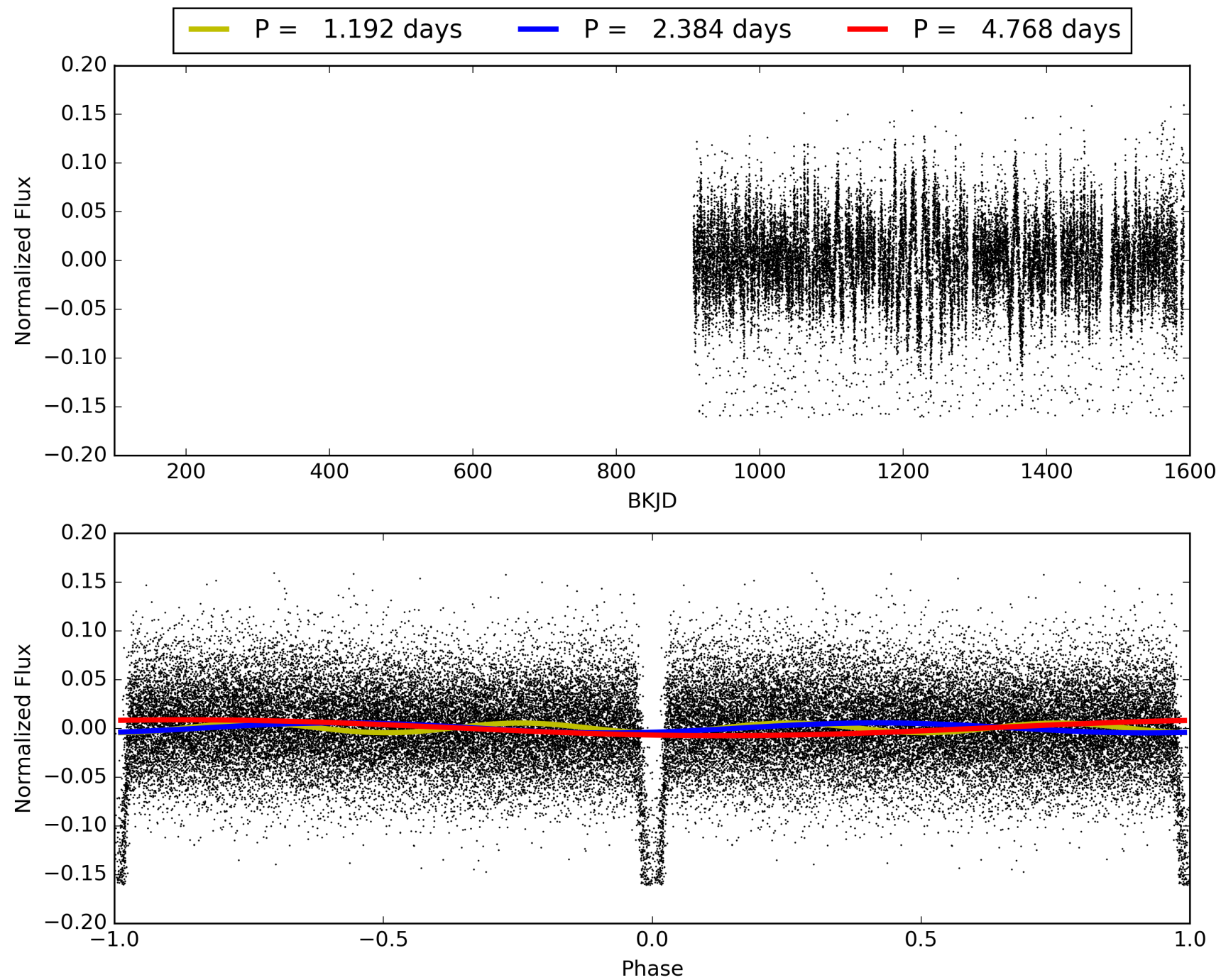
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [251/253]
GhostDiagnostic-chr: 3.646
Centroid-sig: 0.0%
Centroid-so: 2.616 arcsec [831.43σ]
OotOffset-rm: 6.222 arcsec [84.59σ]
KicOffset-rm: 0.462 arcsec [6.64σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

TCE 005481426-01, PDC Light Curves

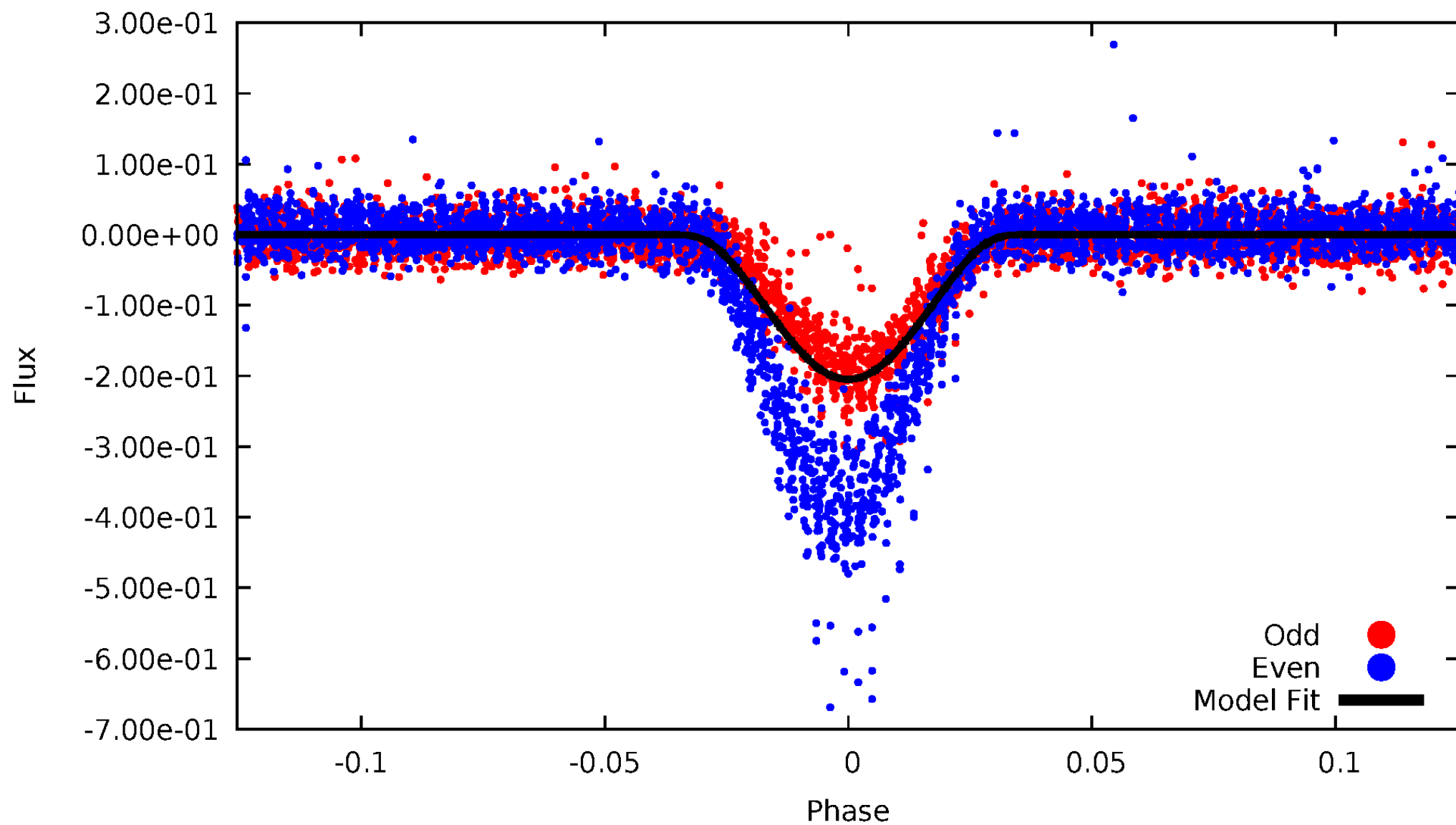


TCE 005481426-01



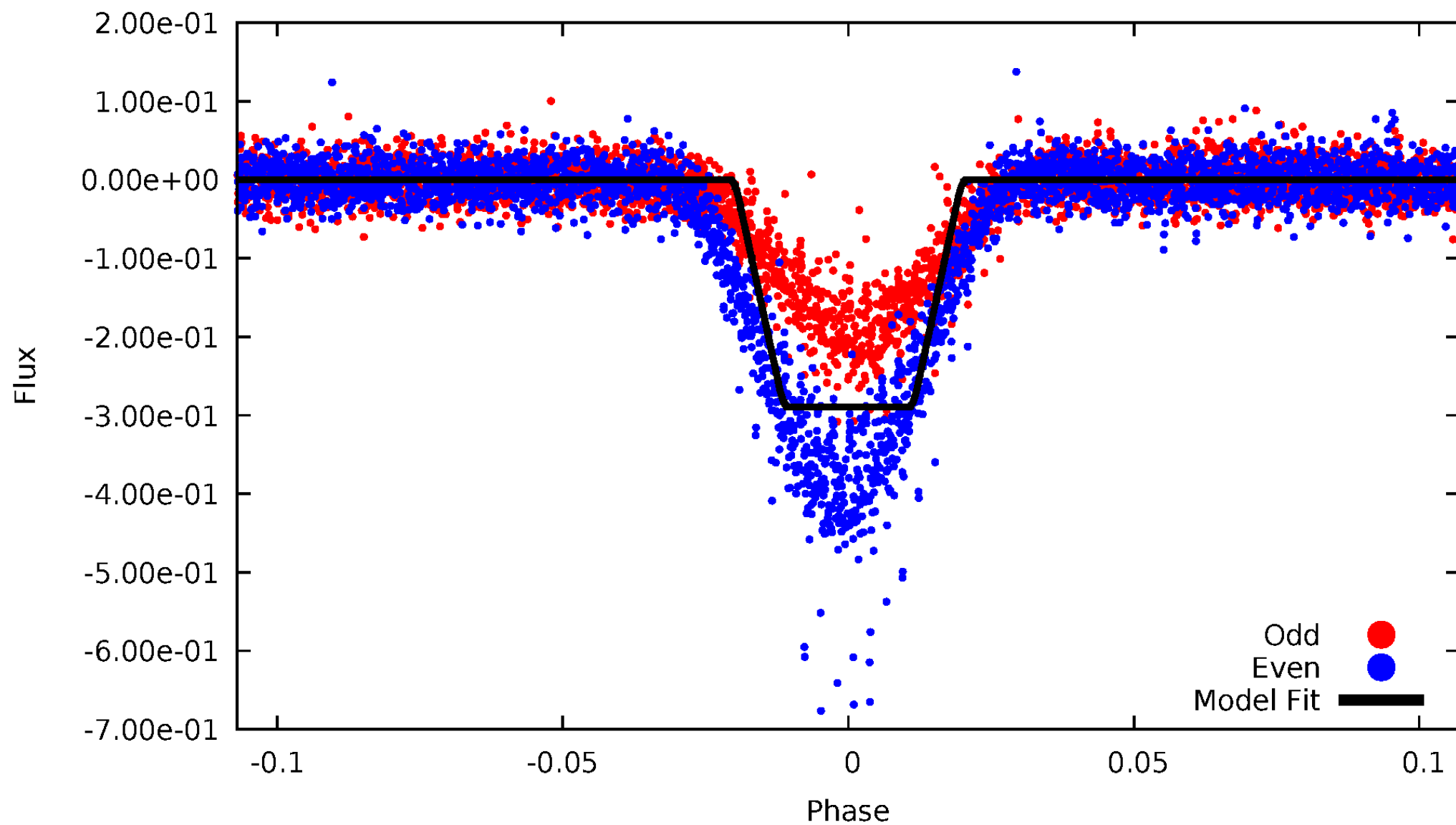
DV Odd/Even

TCE 005481426-01



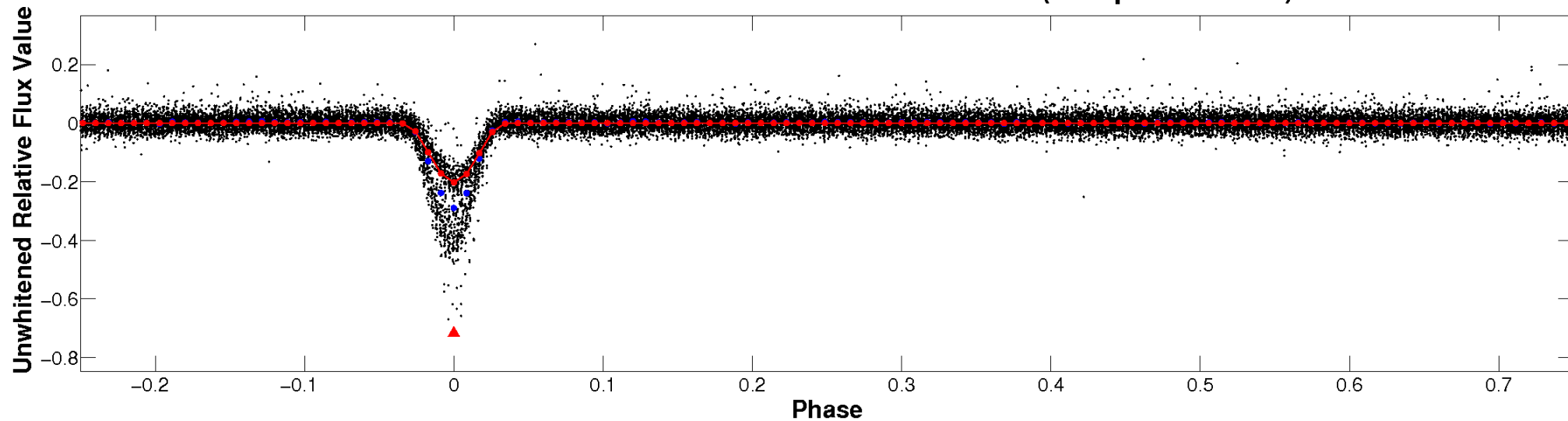
ALT Odd/Even

TCE 005481426-01

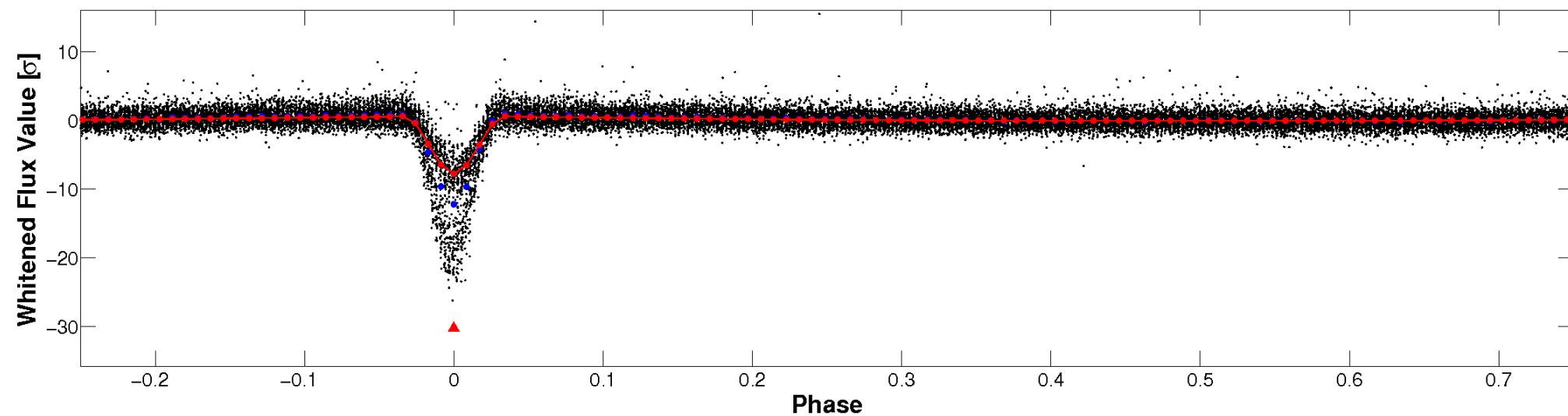


Non-Whitened Vs. Whitened Light Curve

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

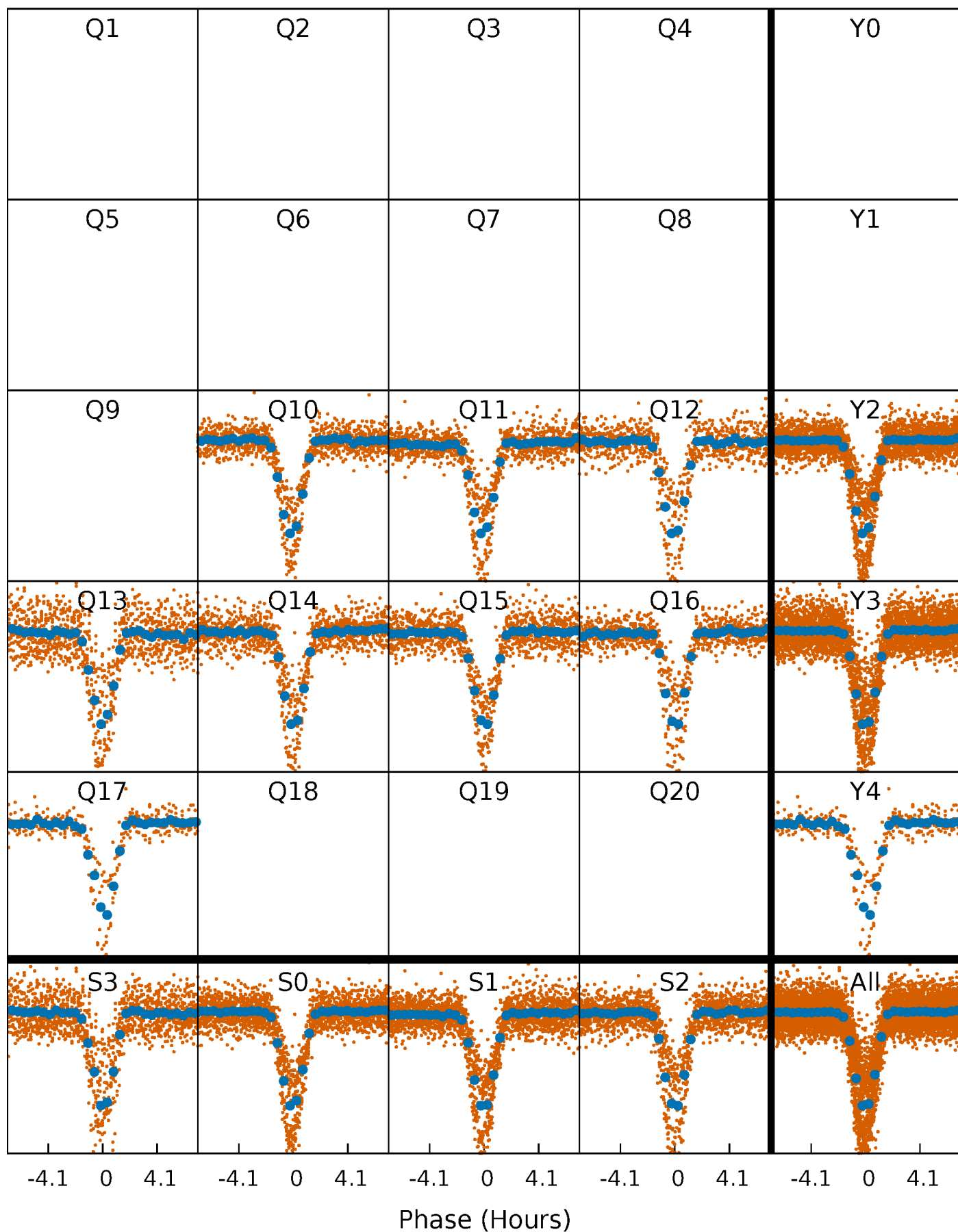


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



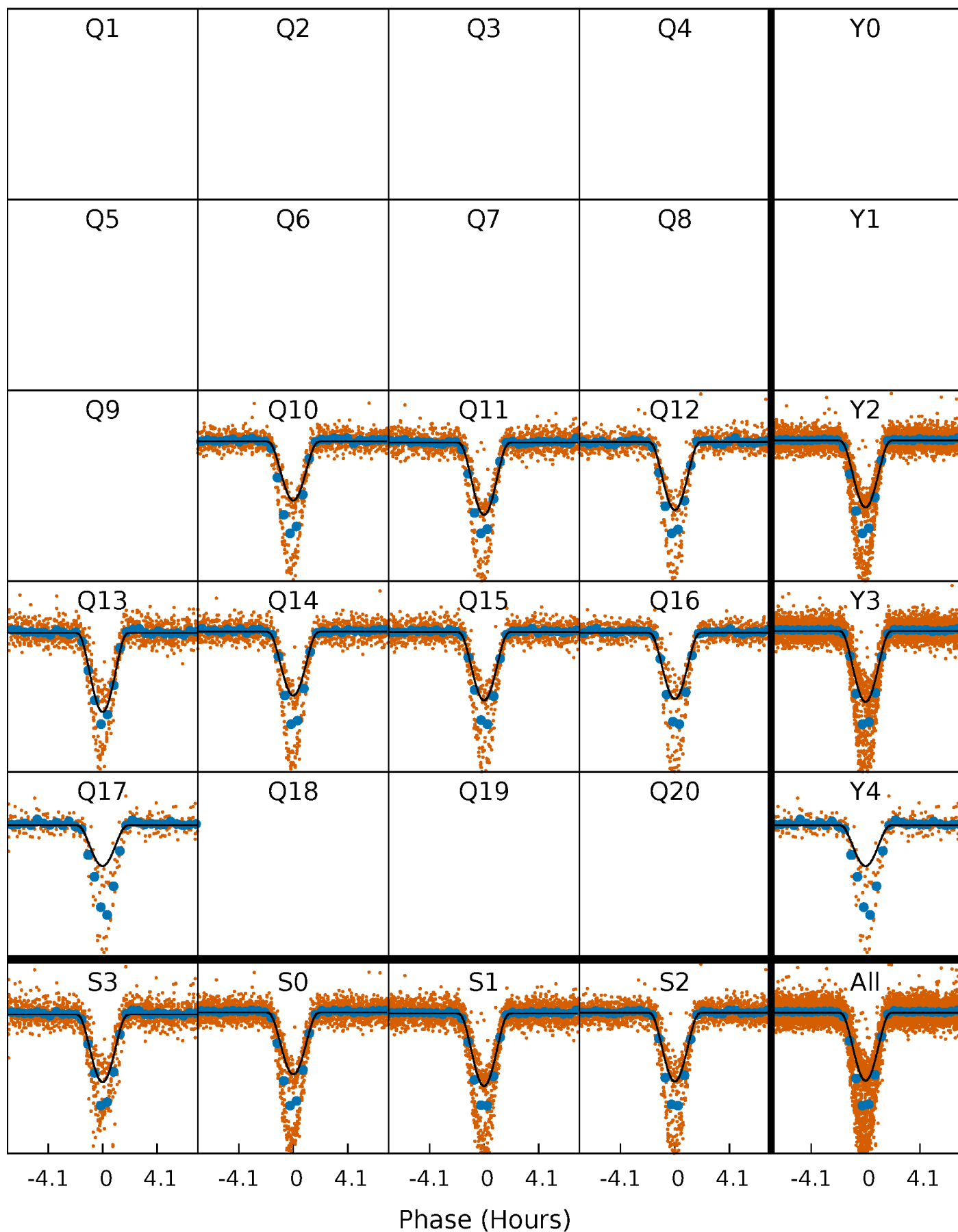
PDC Quarter-Phased Transit Curves

TCE 005481426-01 P= 2.384015 Days $T_0=133.457158$ (BKJD)



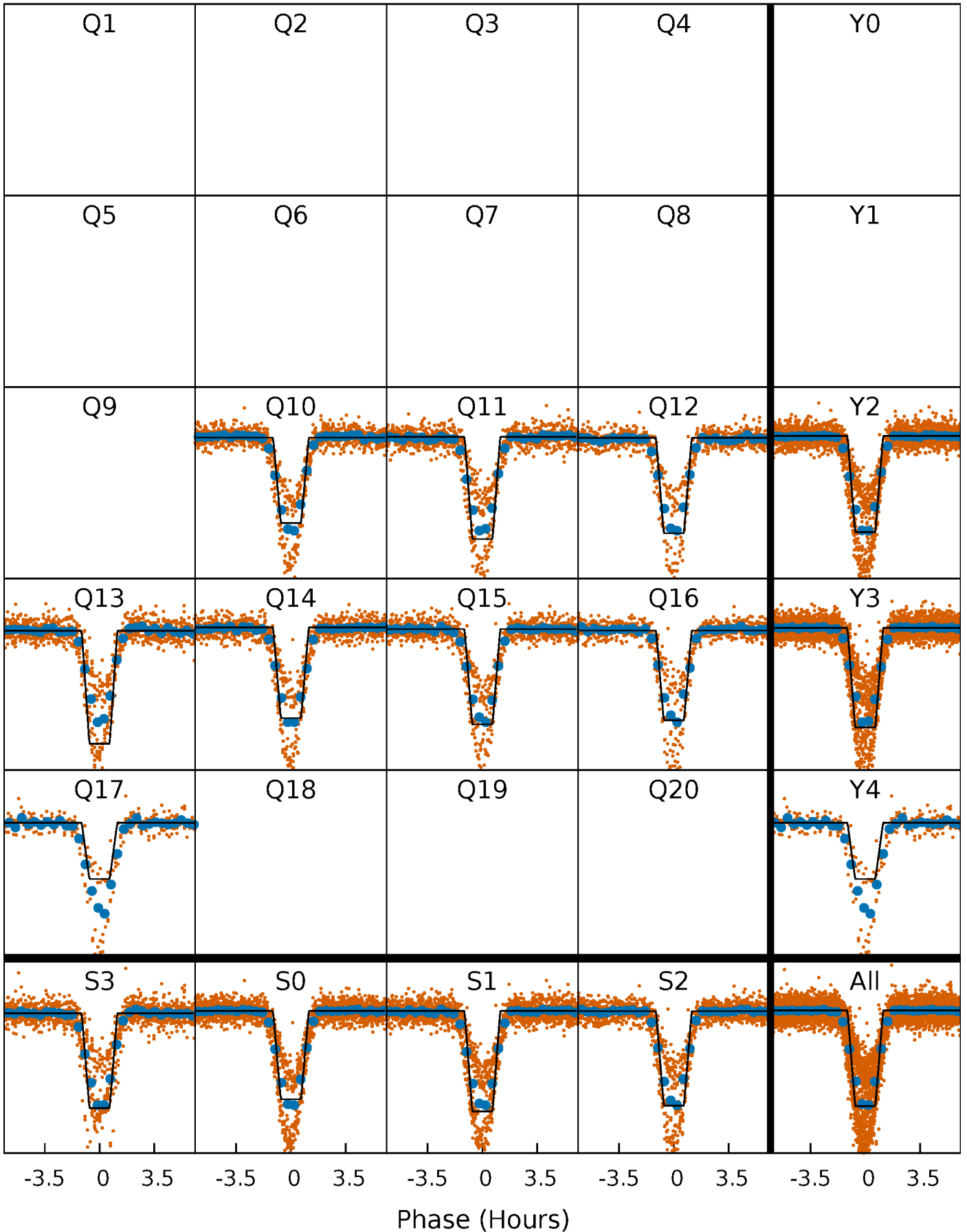
DV Quarter-Phased Transit Curves

TCE 005481426-01 P= 2.384015 Days $T_0=133.457158$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

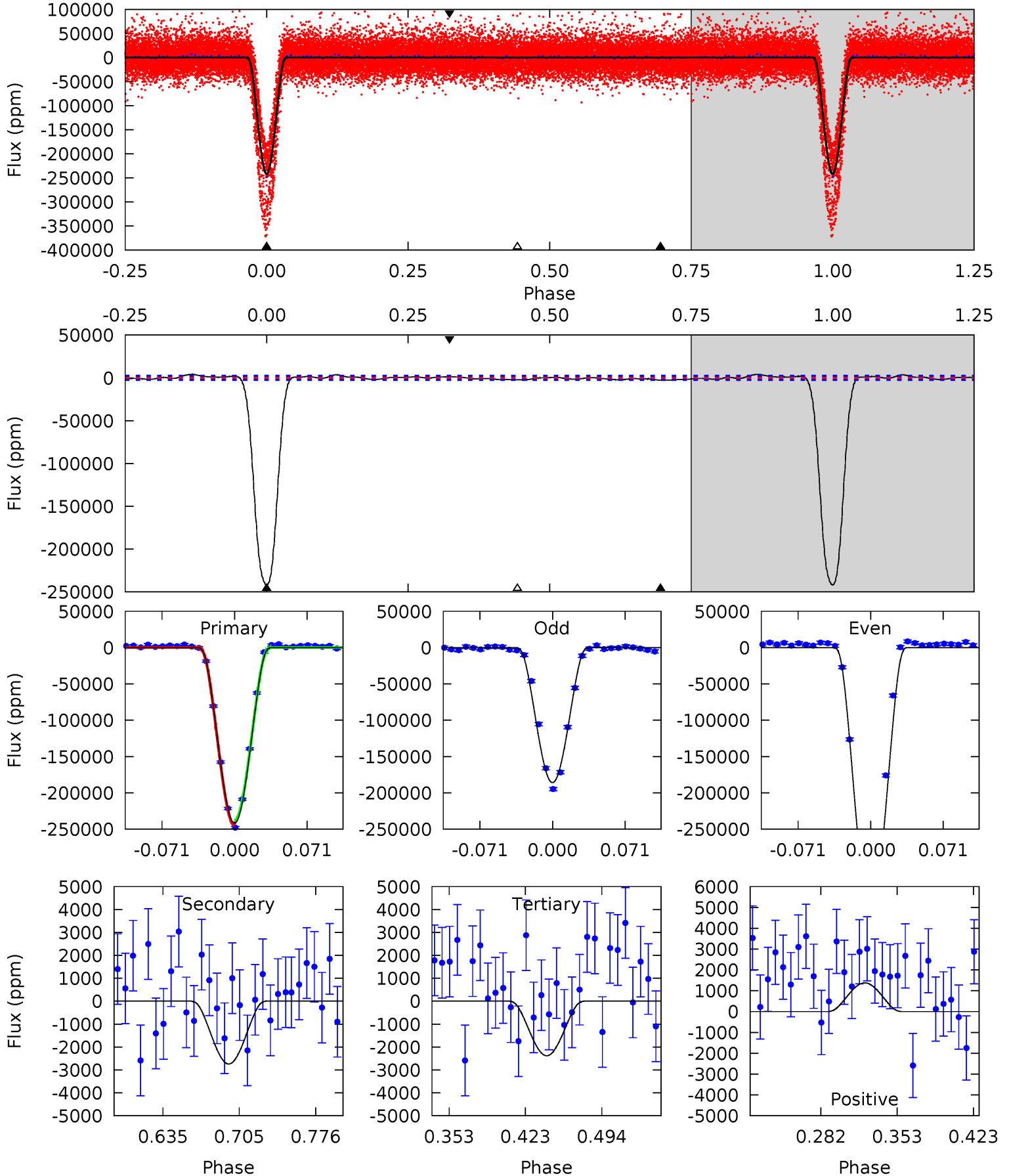
TCE 005481426-01 P= 2.384041 Days $T_0=133.443787$ (BKJD)



DV Model-Shift Uniqueness Test

005481426-01, P = 2.384015 Days, E = 133.457158 Days

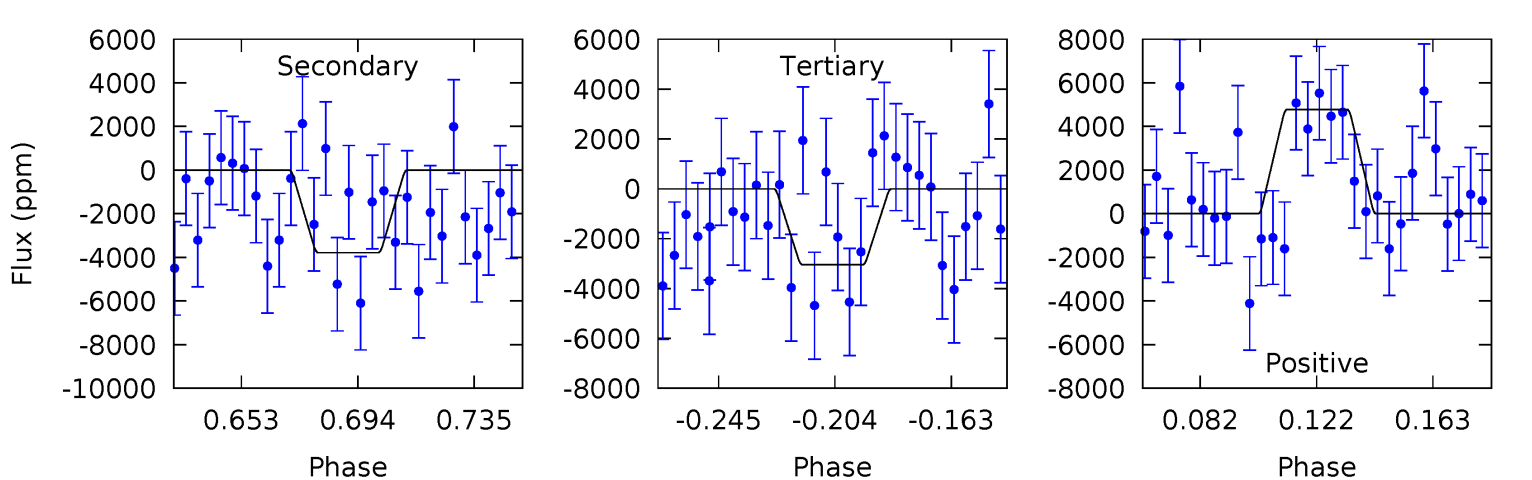
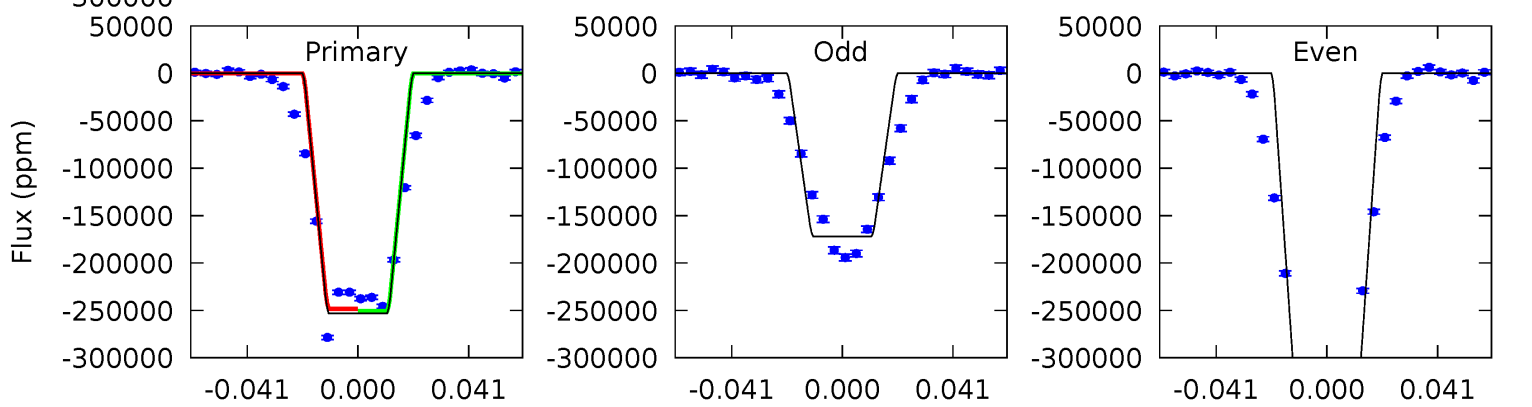
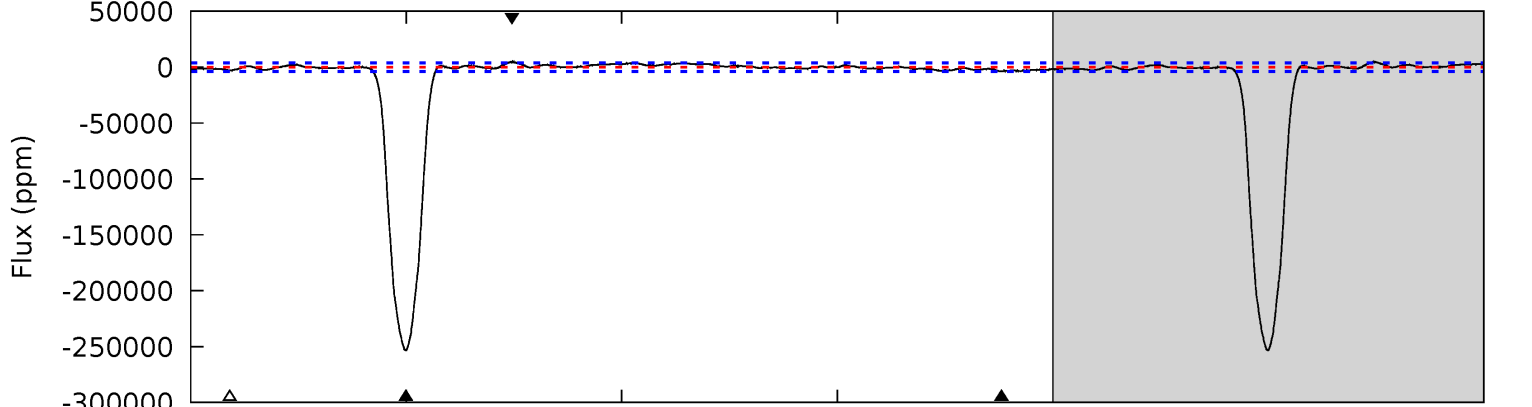
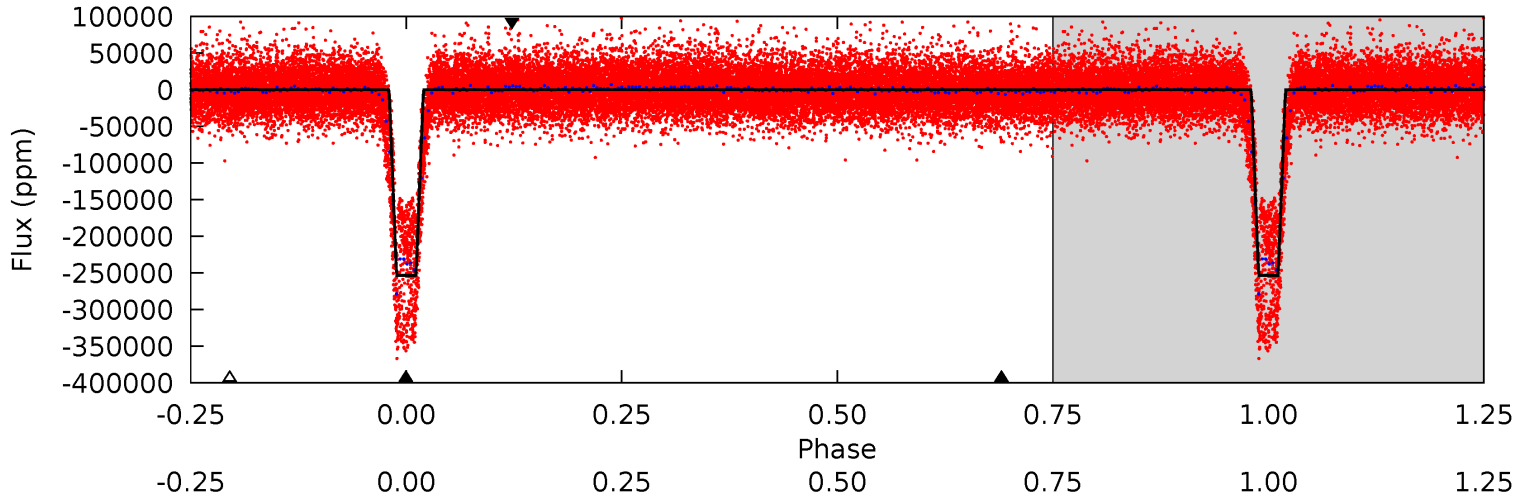
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
440.8	4.99	4.34	2.51	4.64	1.81	2.60	436.4	438.3	0.65	2.48	177.6	1.00	0.02	0



Alt Model-Shift Uniqueness Test

005481426-01, P = 2.384041 Days, E = 133.443787 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
312.8	4.67	3.76	5.90	4.75	2.05	2.05	309.0	306.9	0.91	-1.22	130.5	1.03	0.02	1.56



Stellar Parameters For KIC 005481426

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 005481426-01 / KOI 3772.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2740 ± 549	$77.48^{+28.23}_{-29.92}$	1912^{+92}_{-96}	1688^{+922}_{-3933}	$0.310^{+0.502}_{-0.153}$
Alt.	-3784 ± 810	$59.91^{+33.01}_{-27.16}$	1908^{+84}_{-94}	2528^{+589}_{-4371}	$0.717^{+1.540}_{-0.439}$

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 $A_{obs} \gg 1.0$

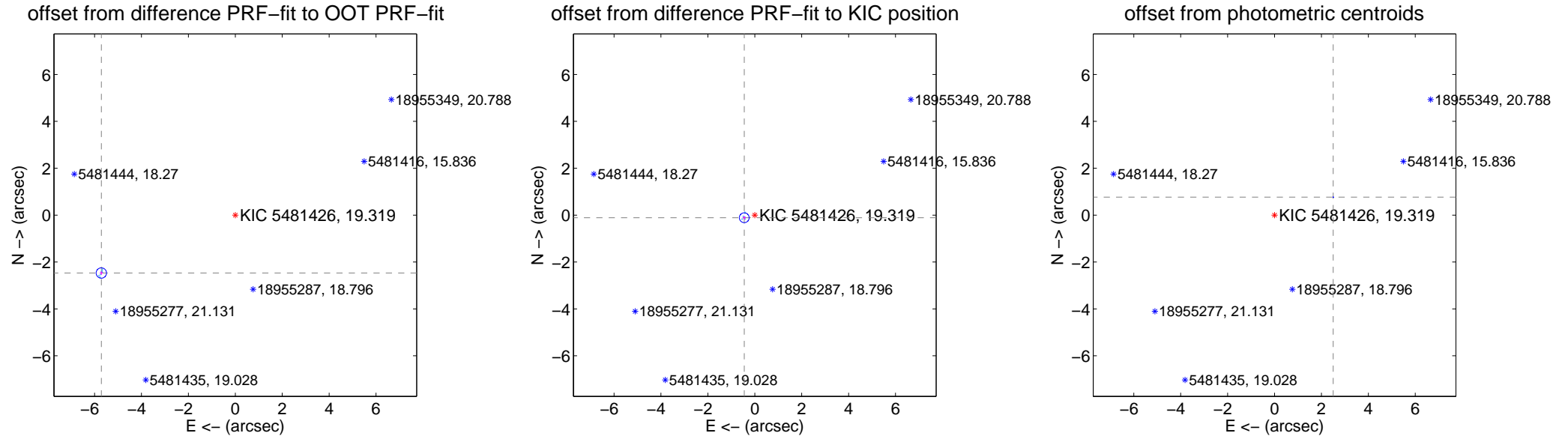
DV Centroid Data

Supplemental centroid analysis for 005481426-01. Kepler magnitude: 19.32. Transit SNR 152.45

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.79 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	6.222 \pm 0.074	84.59	5.711 \pm 0.069	-2.469 \pm 0.078
PRF-fit source offset from KIC position	0.462 \pm 0.070	6.64	0.449 \pm 0.069	-0.111 \pm 0.073
photometric centroid source offset	2.62 \pm 0.00	831.43	-2.50 \pm 0.00	0.77 \pm 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.

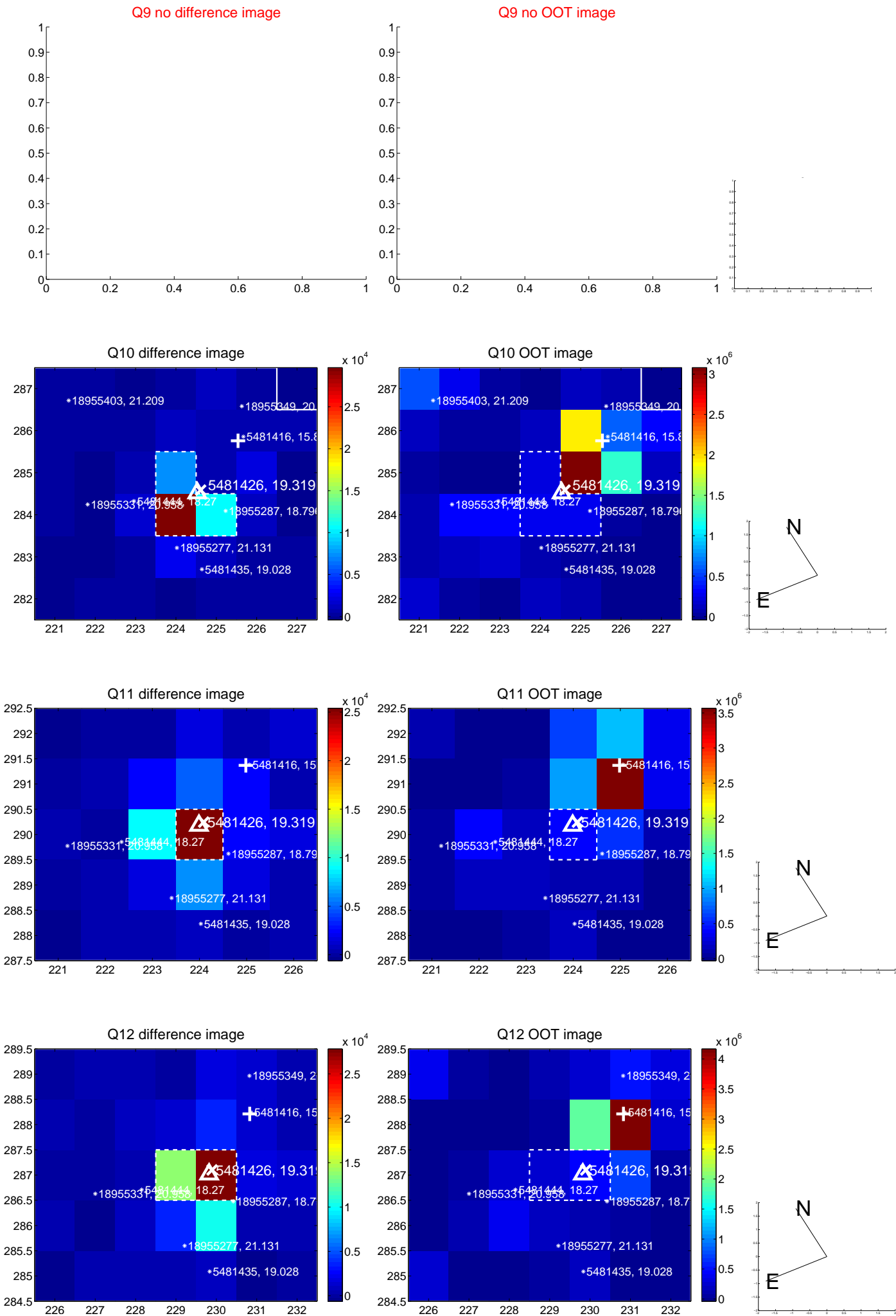
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



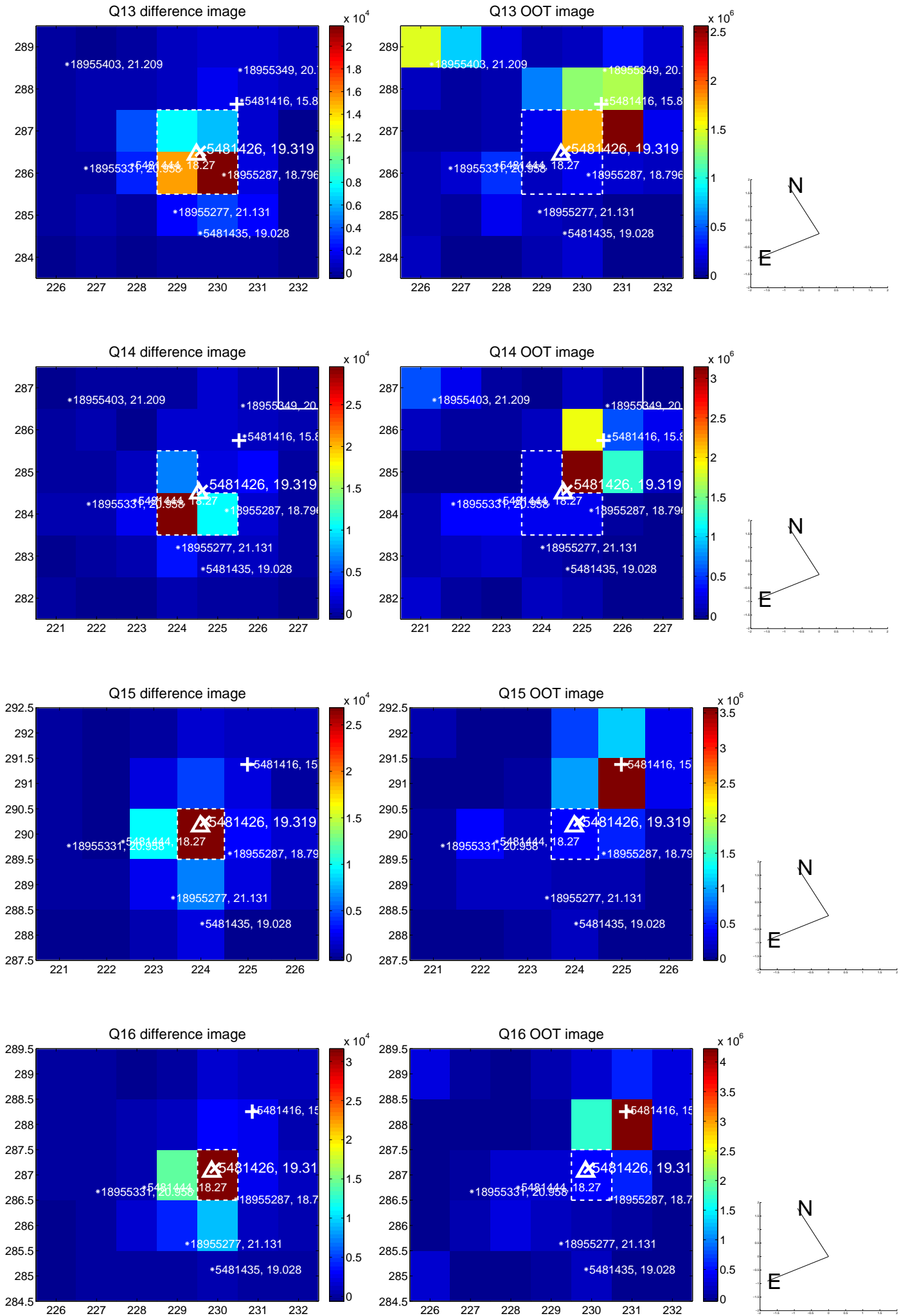
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



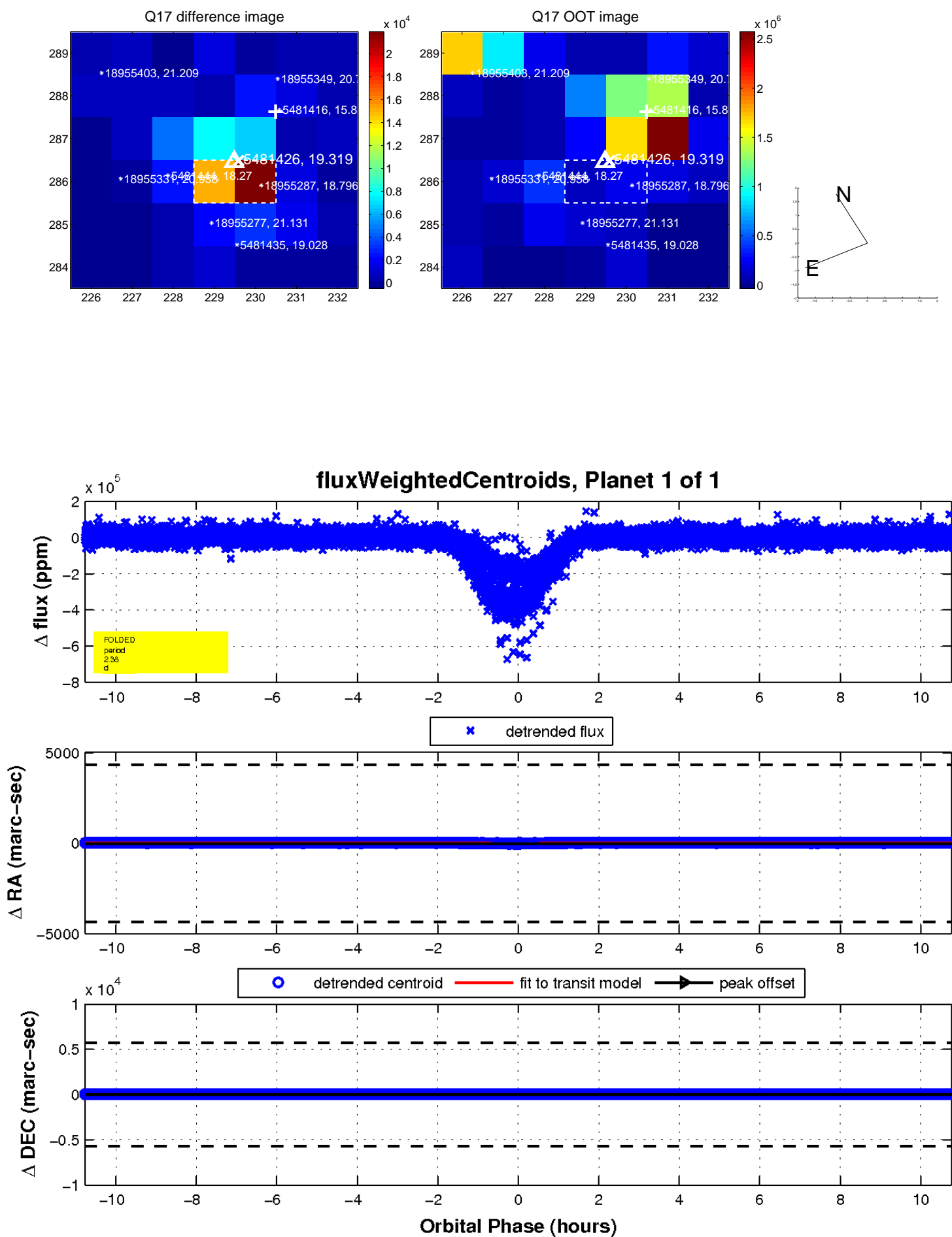
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

