

KIC 006776555

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})
006776555-01	OBS	5327.01	5.433615	136.710159	1461.0	1.071	12.4	17.0	0.57	3694	2.69	21.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006776555-01	OBS	PC	1.00	0	0	0	0	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.

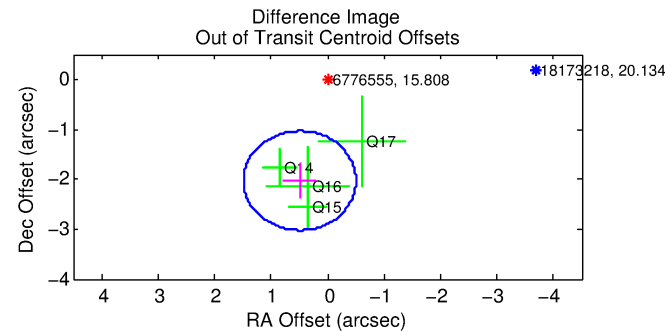
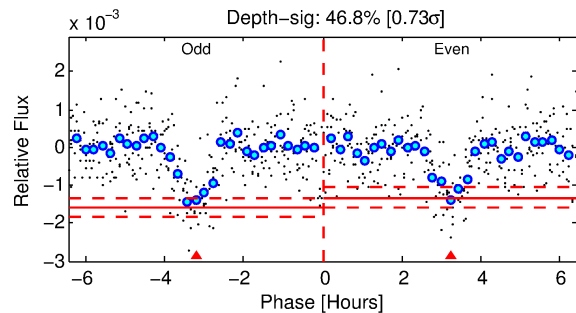
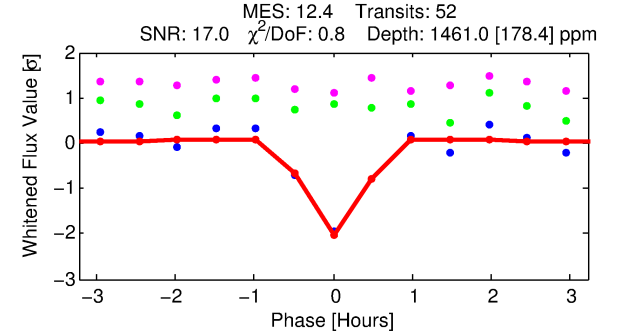
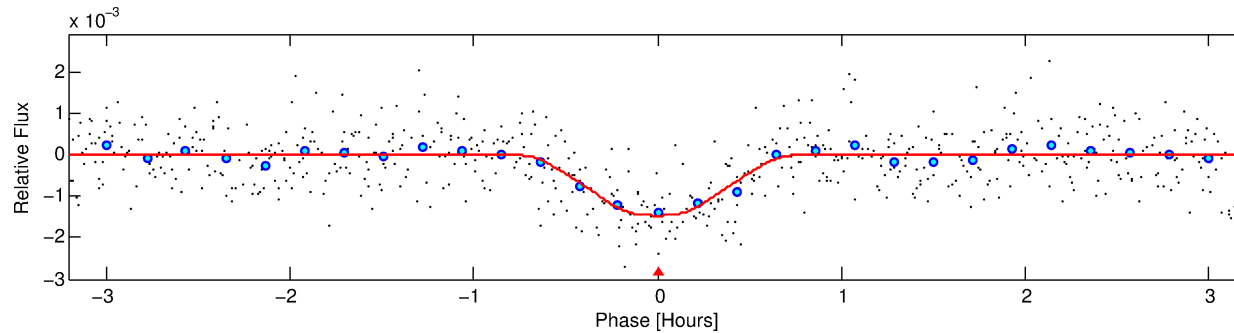
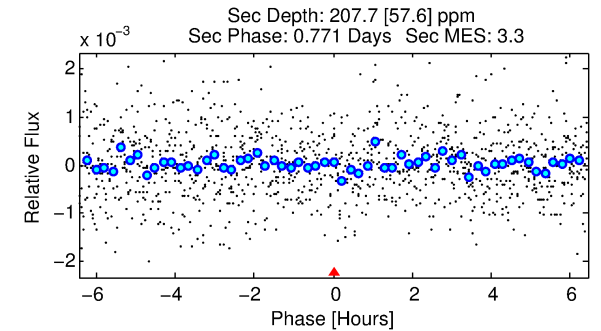
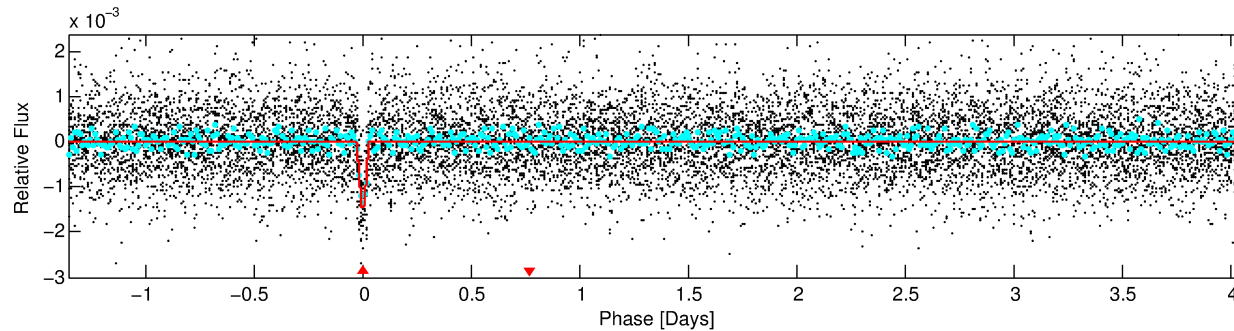
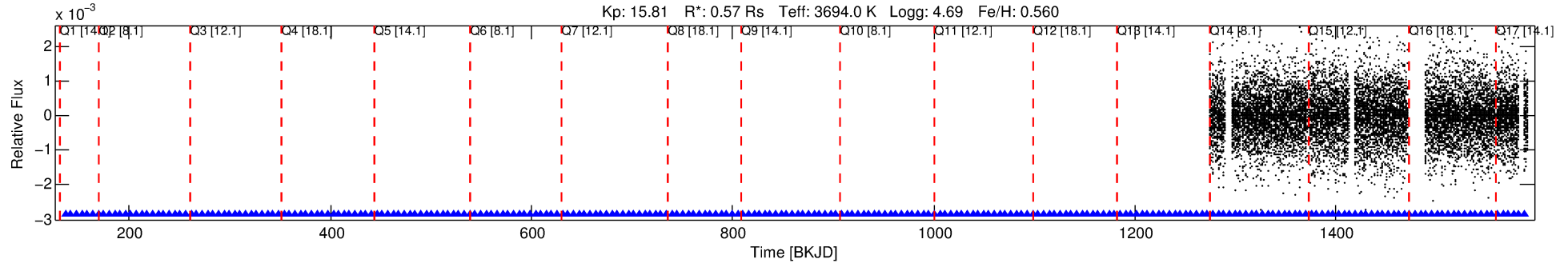
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006776555-01

No Significant Match Found

DV One-Page Summary

KIC: 6776555 Candidate: 1 of 1 Period: 5.434 d
KOI: K05327.01 Corr: 0.830



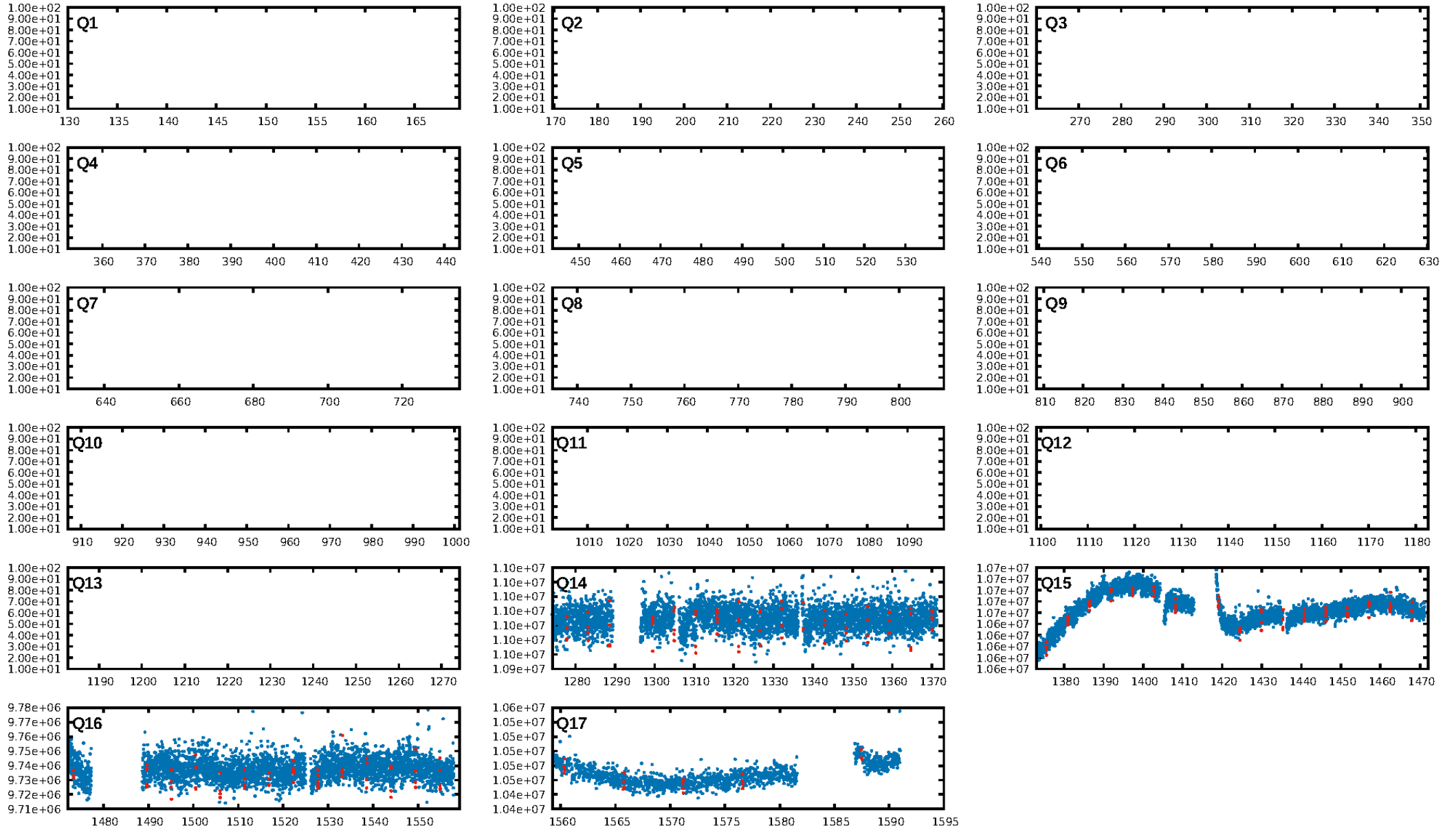
DV Fit Results:

Period = 5.43361 [0.00001] d
Epoch = 136.7102 [0.0015] BKJD
Rp/R* = 0.0435 [0.0163]
a/R* = 20.55 [26.36]
b = 0.90 [0.29]
Seff = 21.31 [4.60]
Teq = 548 [30] K
Rp = 2.69 [1.07] Re
a = 0.0501 [0.0053] AU
Ag = 39.68 [32.17] [1.20σ]
Teffp = 2126 [432] K [3.64σ]

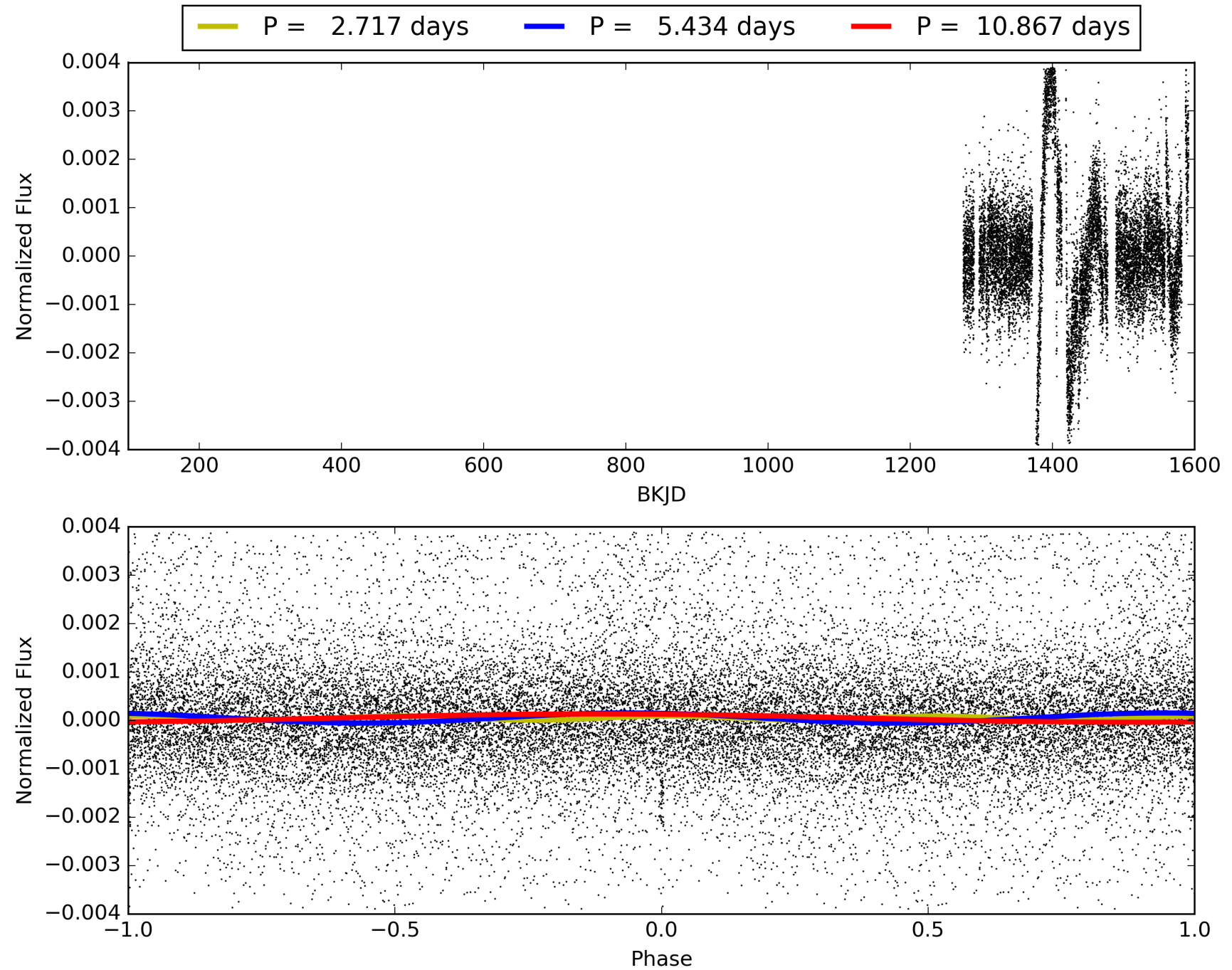
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.08e-34
RollingBand-fgt: 1.00 [47/47]
GhostDiagnostic-chr: 2.578
Centroid-sig: 0.0%
Centroid-so: 0.878 arcsec [2.72σ]
OotOffset-rm: 2.090 arcsec [6.30σ]
KicOffset-rm: 0.204 arcsec [0.61σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 006776555-01, PDC Light Curves

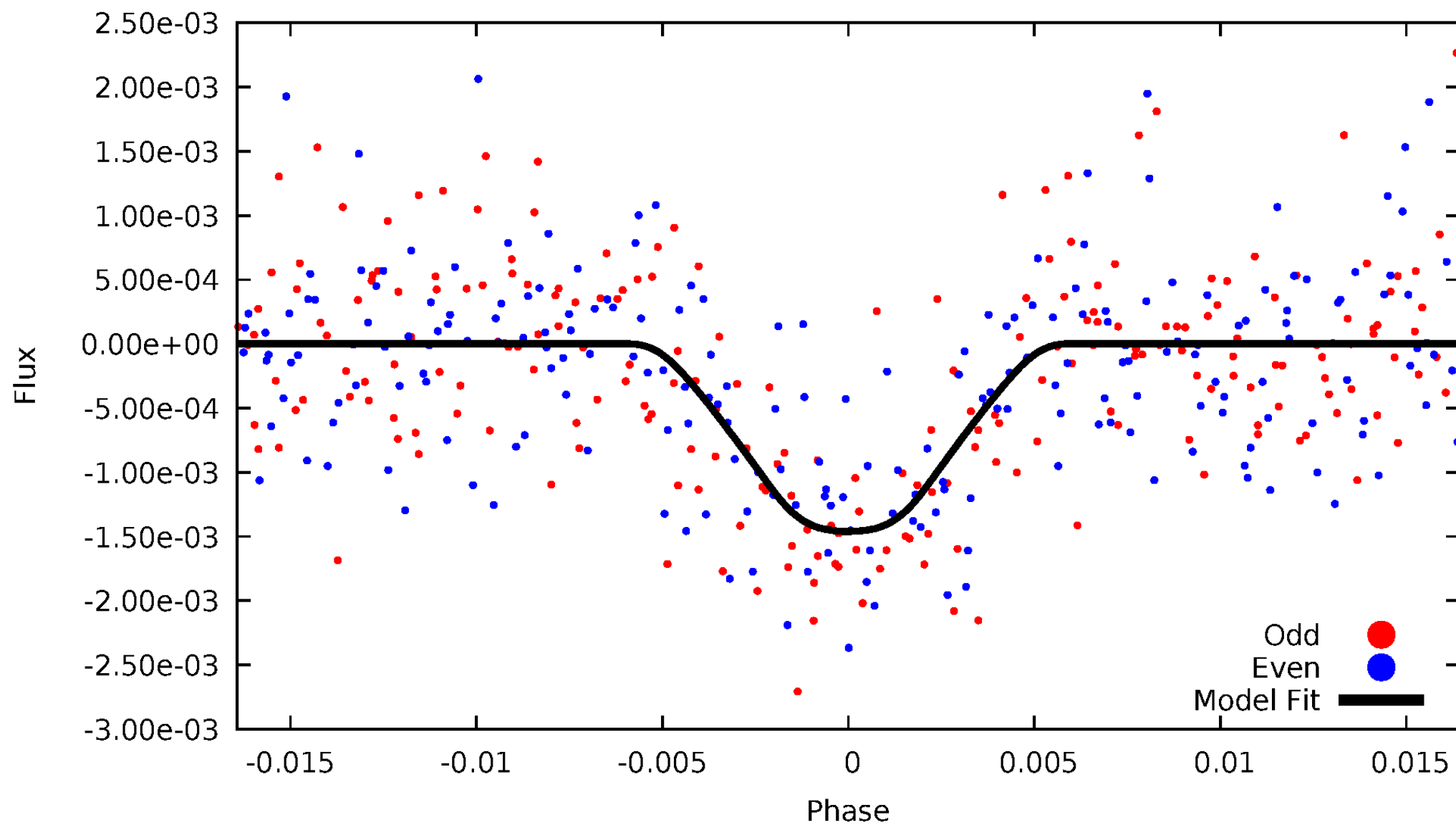


TCE 006776555-01



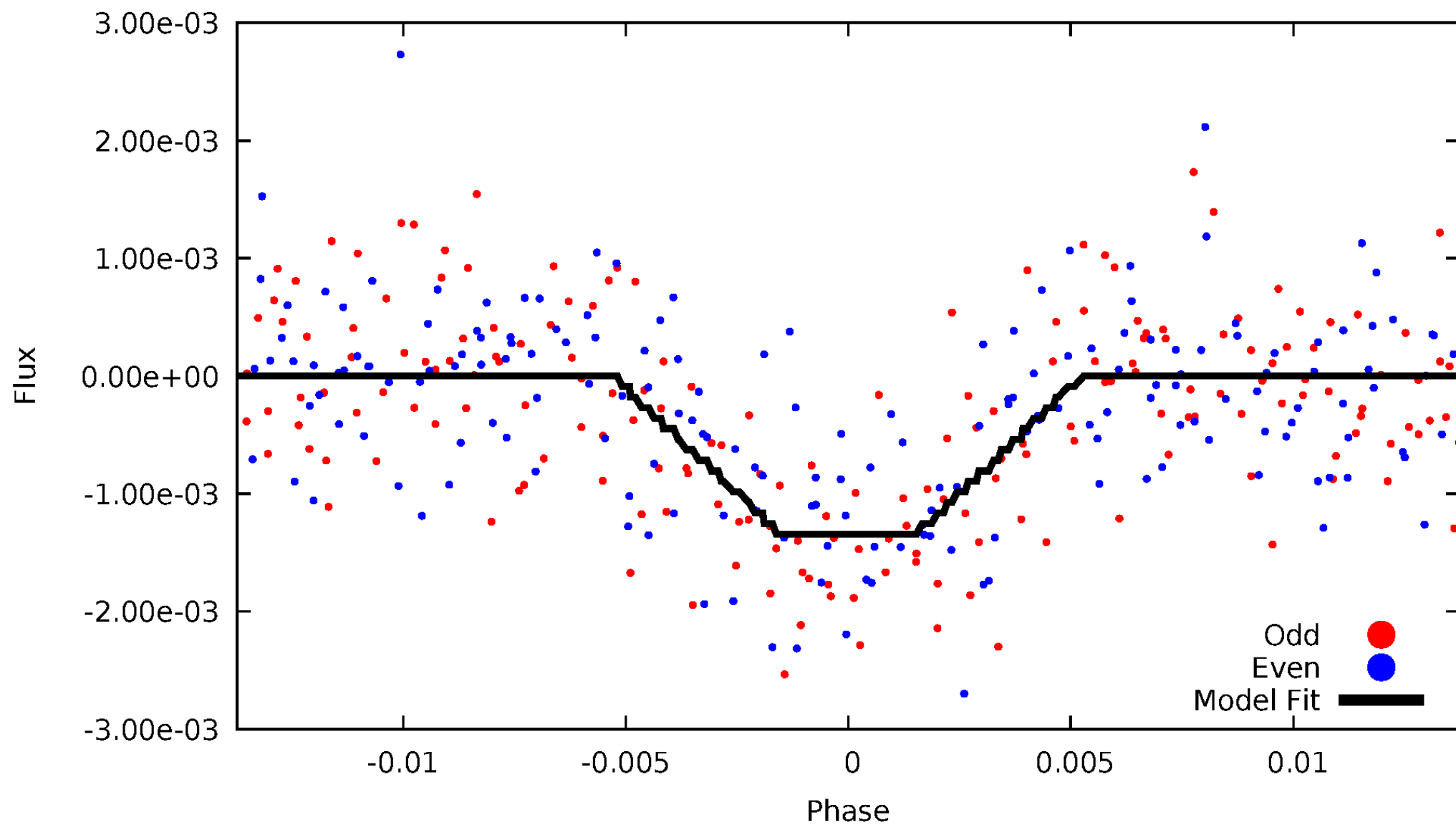
DV Odd/Even

TCE 006776555-01



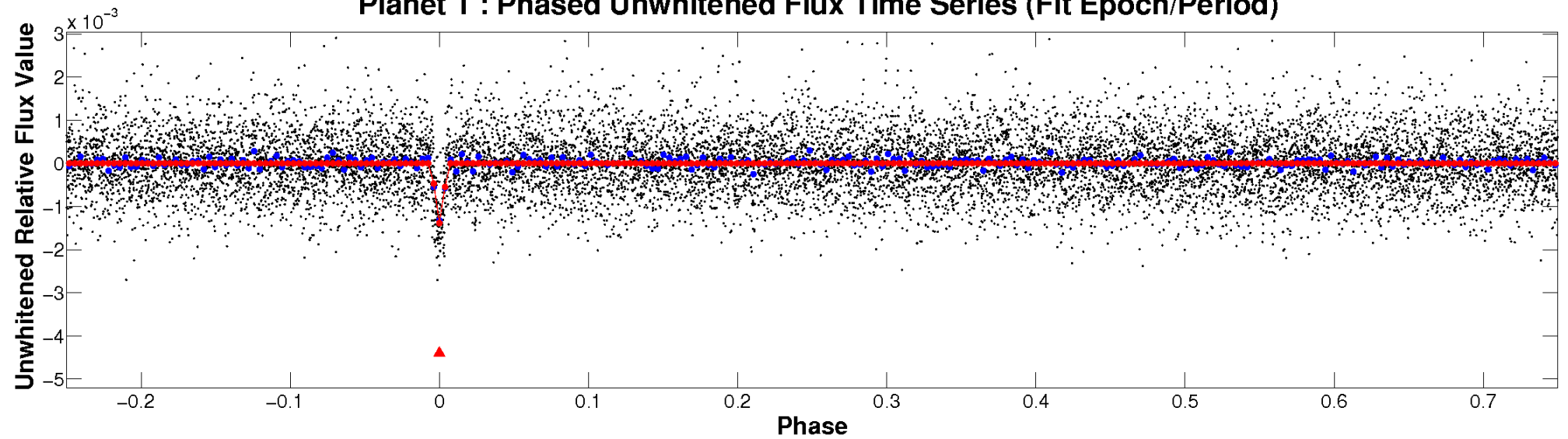
ALT Odd/Even

TCE 006776555-01

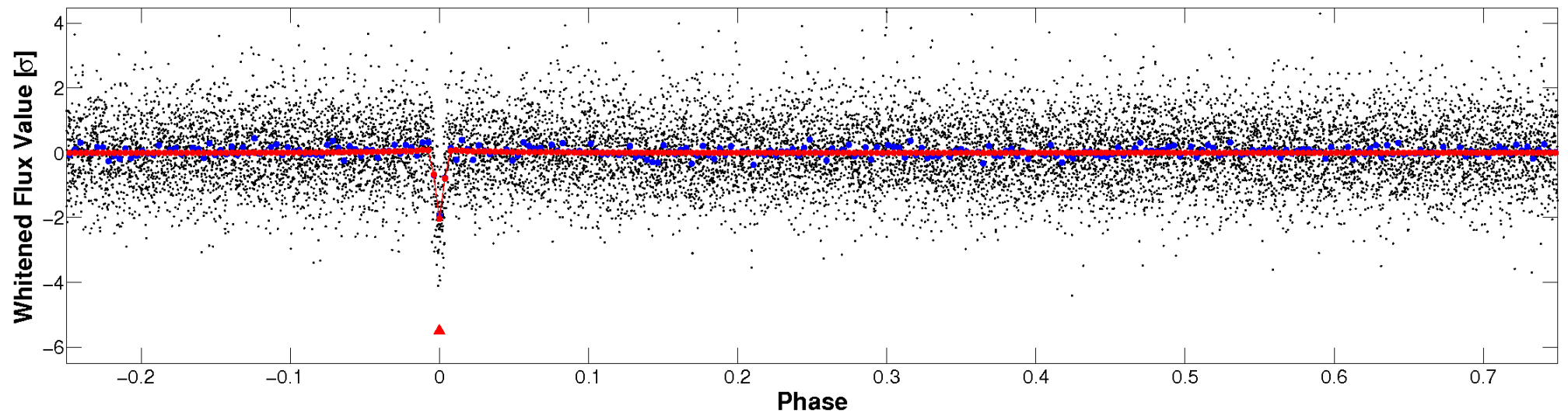


Non-Whitened Vs. Whitened Light Curve

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

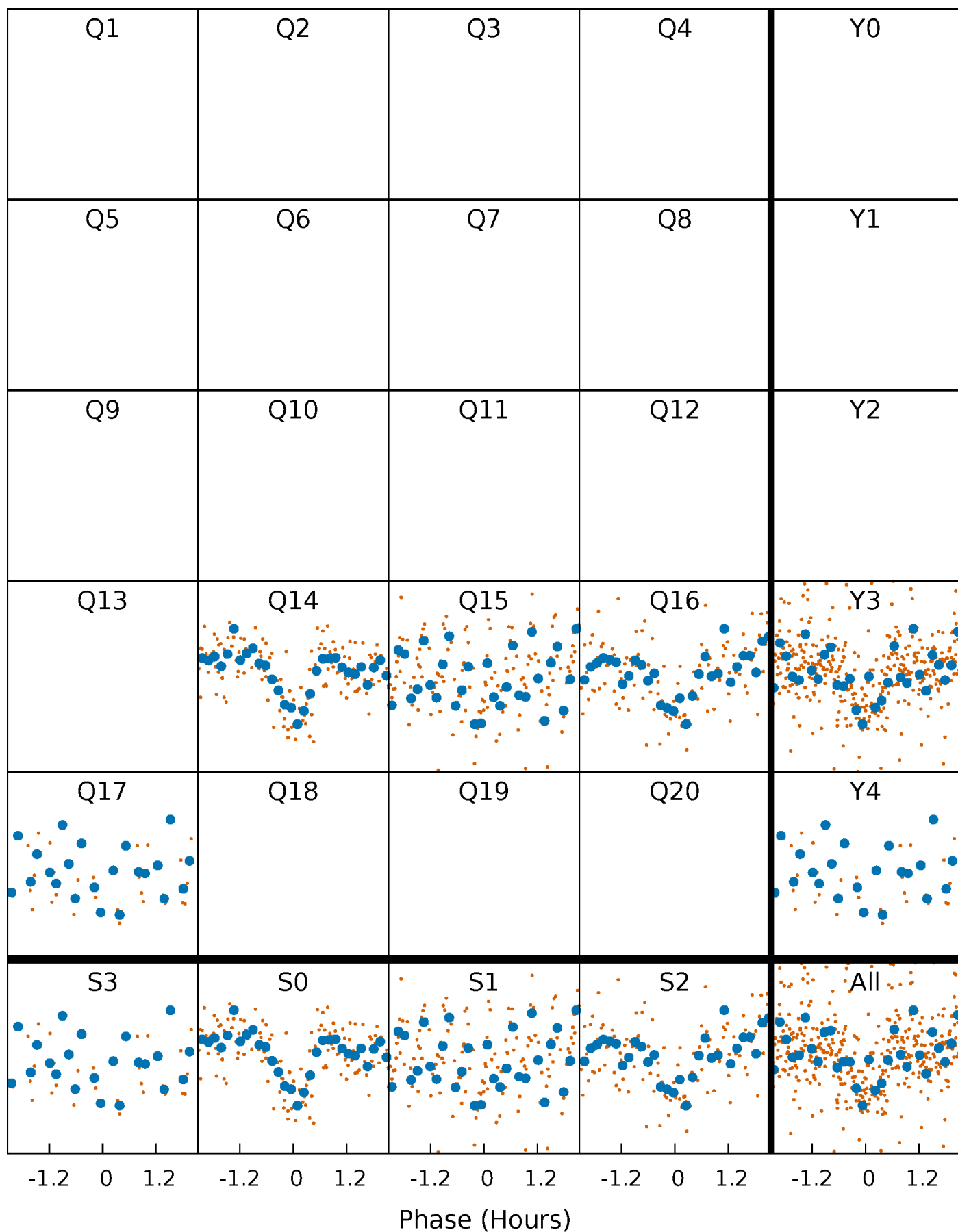


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



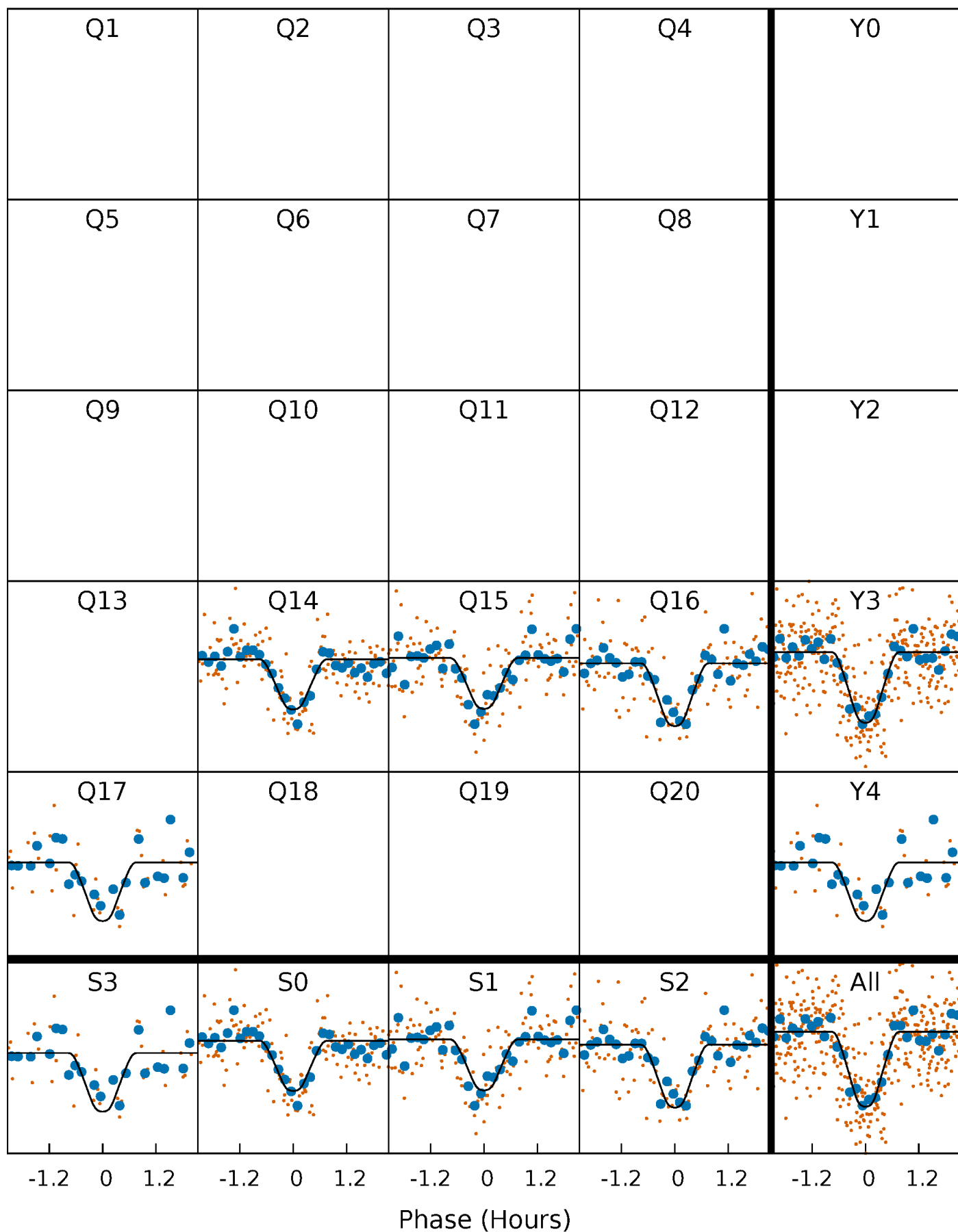
PDC Quarter-Phased Transit Curves

TCE 006776555-01 P= 5.433615 Days $T_0=136.710159$ (BKJD)



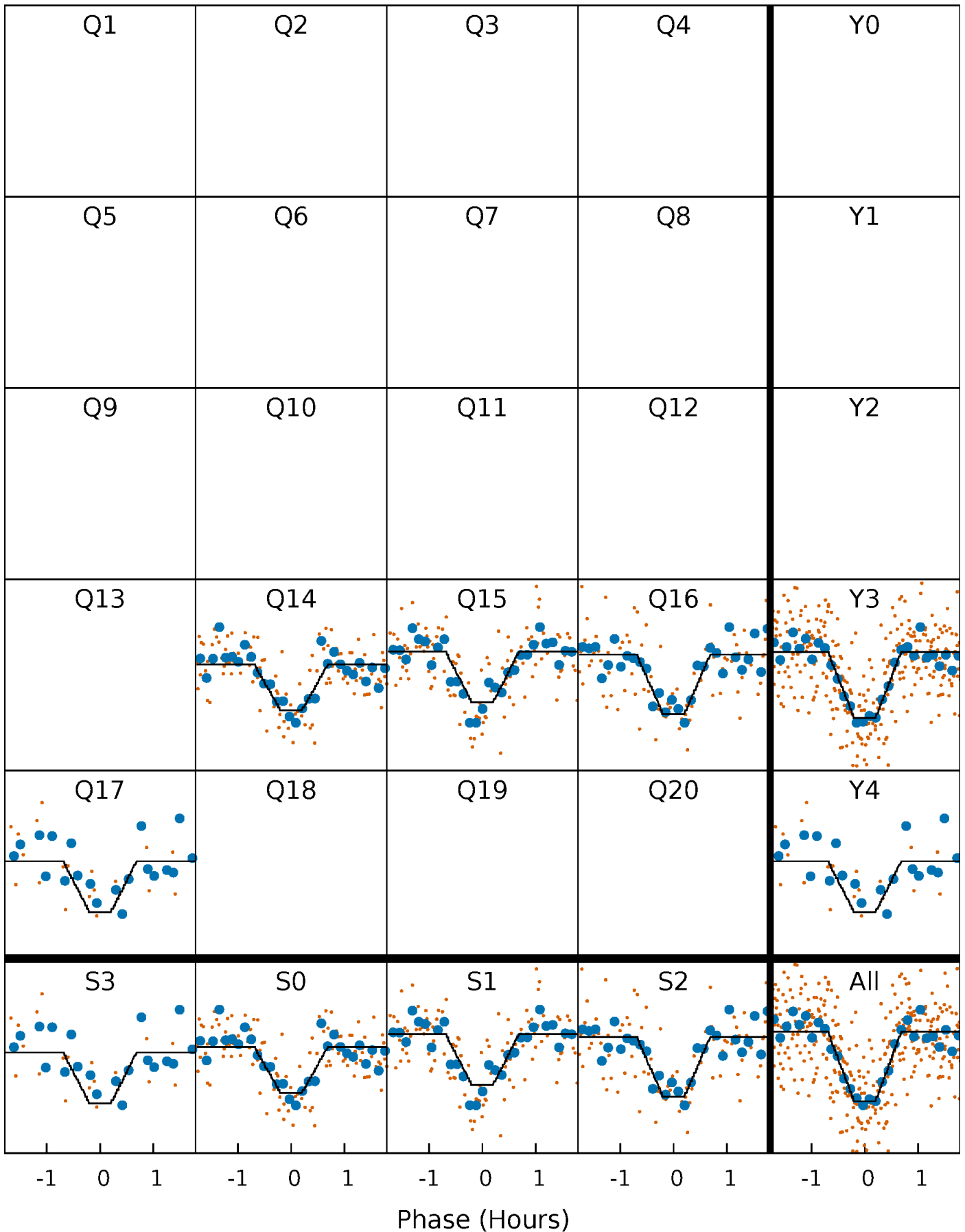
DV Quarter-Phased Transit Curves

TCE 006776555-01 P= 5.433615 Days $T_0=136.710159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

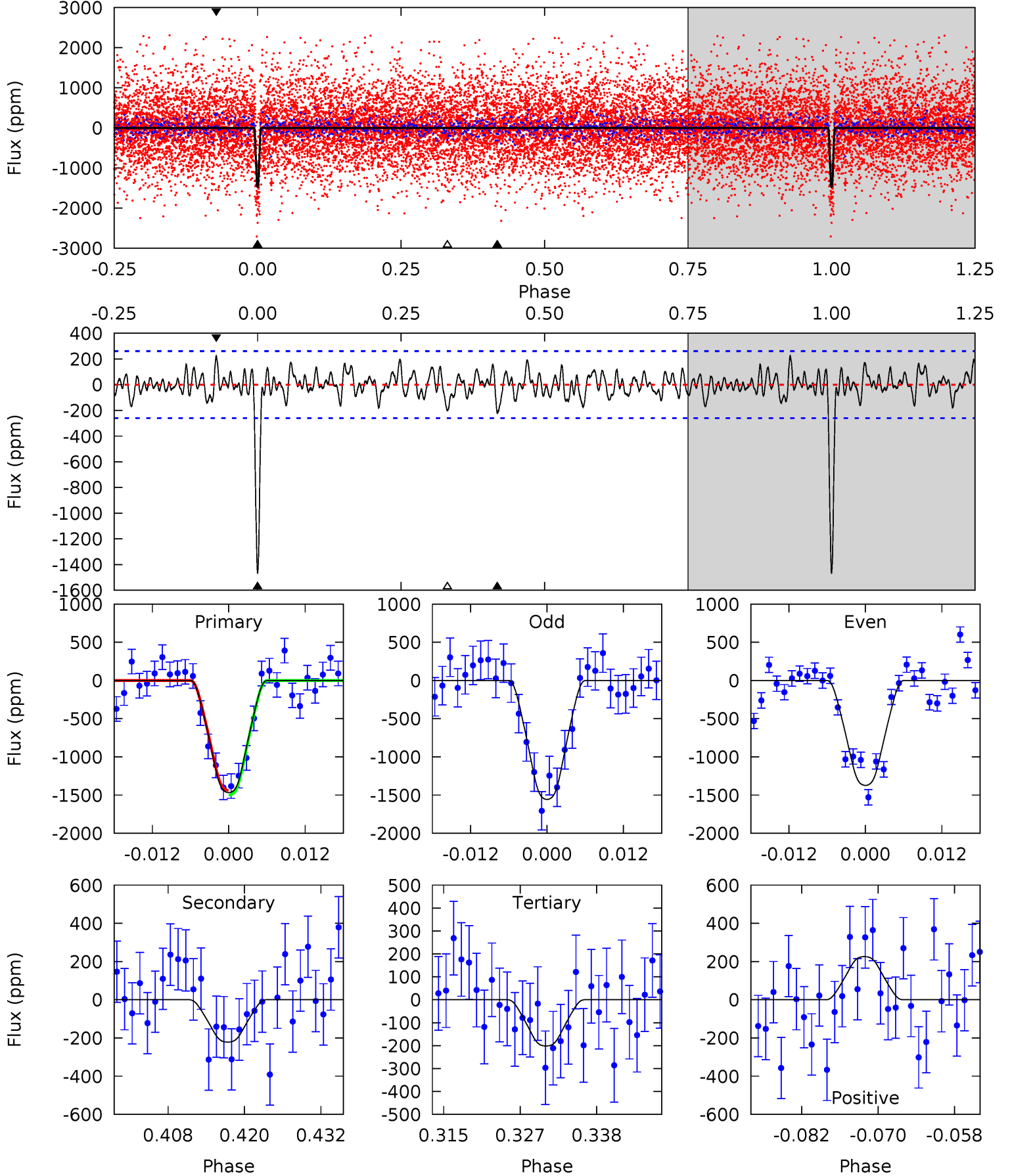
TCE 006776555-01 P= 5.433601 Days $T_0=136.713894$ (BKJD)



DV Model-Shift Uniqueness Test

006776555-01, P = 5.433615 Days, E = 136.710159 Days

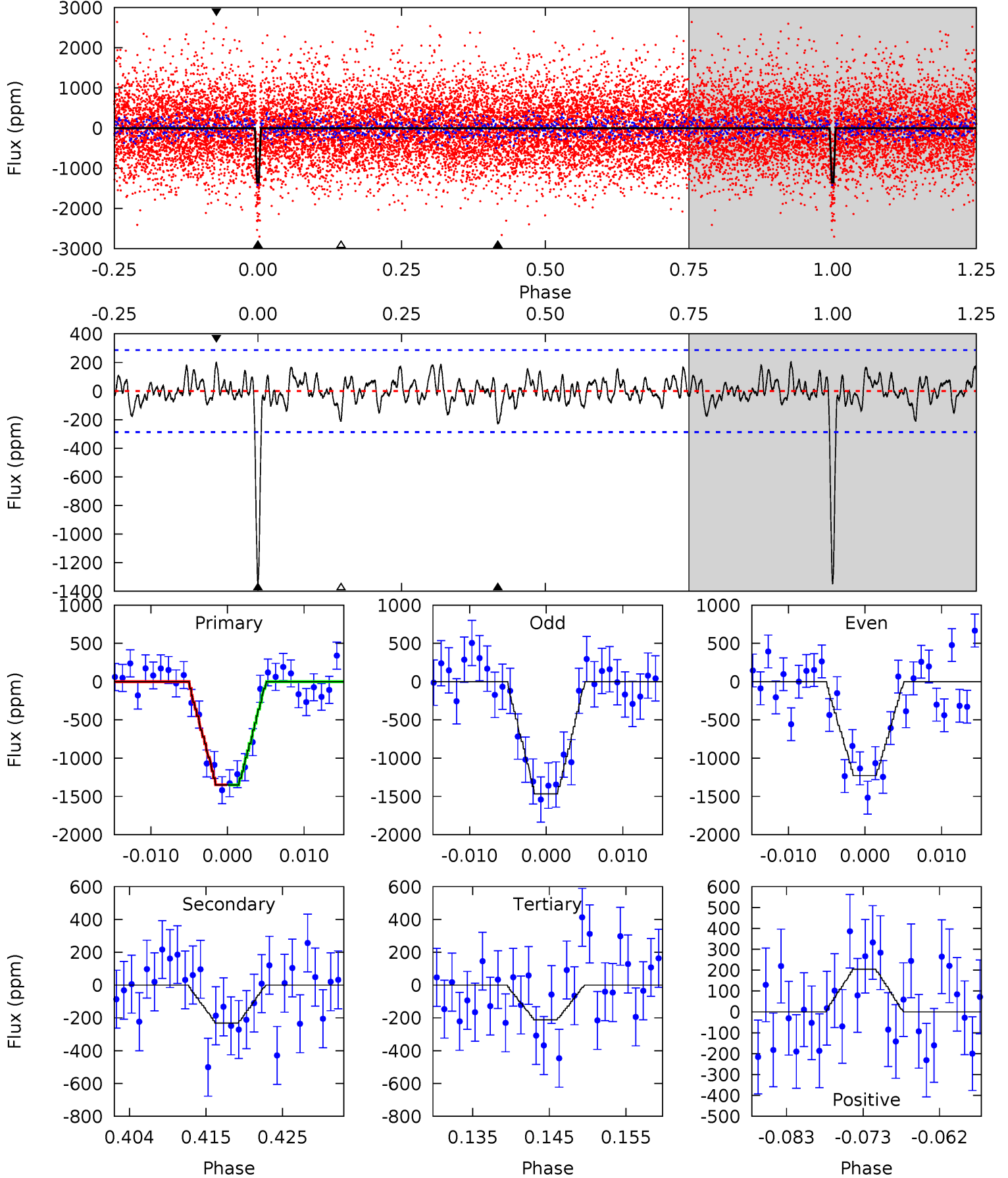
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.1	4.25	3.87	4.33	5.00	2.52	1.39	24.3	23.8	0.38	-0.08	1.78	0.95	0.13	0.61



Alt Model-Shift Uniqueness Test

006776555-01, P = 5.433601 Days, E = 136.713894 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	4.06	3.72	3.58	5.02	2.56	1.20	19.9	20.1	0.34	0.48	2.09	1.00	0.13	0.01



Stellar Parameters For KIC 006776555

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3694^{+117}_{-147}	$4.686^{+0.075}_{-0.020}$	$0.560^{+0.050}_{-0.300}$	$0.566^{+0.033}_{-0.076}$	$0.567^{+0.036}_{-0.067}$	$4.400^{+1.720}_{-0.431}$
	+3%/-4%	+2%/-0%	+9%/-54%	+6%/-13%	+6%/-12%	+39%/-10%
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 006776555-01 / KOI 5327.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-222 ± 52	$2.66^{+0.91}_{-0.95}$	755^{+28}_{-31}	2681^{+362}_{-225}	44^{+63}_{-21}
Alt.	-232 ± 57	$2.17^{+1.05}_{-0.93}$	755^{+30}_{-35}	2838^{+534}_{-281}	67^{+147}_{-38}

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

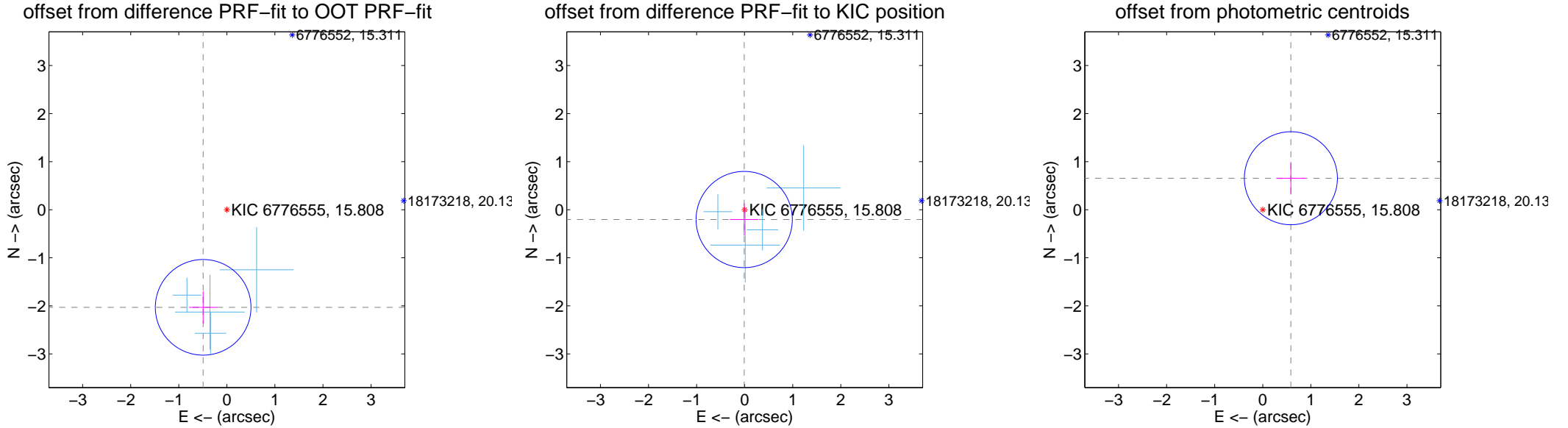
DV Centroid Data

Supplemental centroid analysis for 006776555-01. Kepler magnitude: 15.81. Transit SNR 16.98

There are 4 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.81 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.090 ± 0.332	6.30	0.493 ± 0.294	-2.031 ± 0.334
PRF-fit source offset from KIC position	0.204 ± 0.334	0.61	0.010 ± 0.294	-0.204 ± 0.334
photometric centroid source offset	0.88 ± 0.32	2.72	-0.58 ± 0.30	0.66 ± 0.34



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.



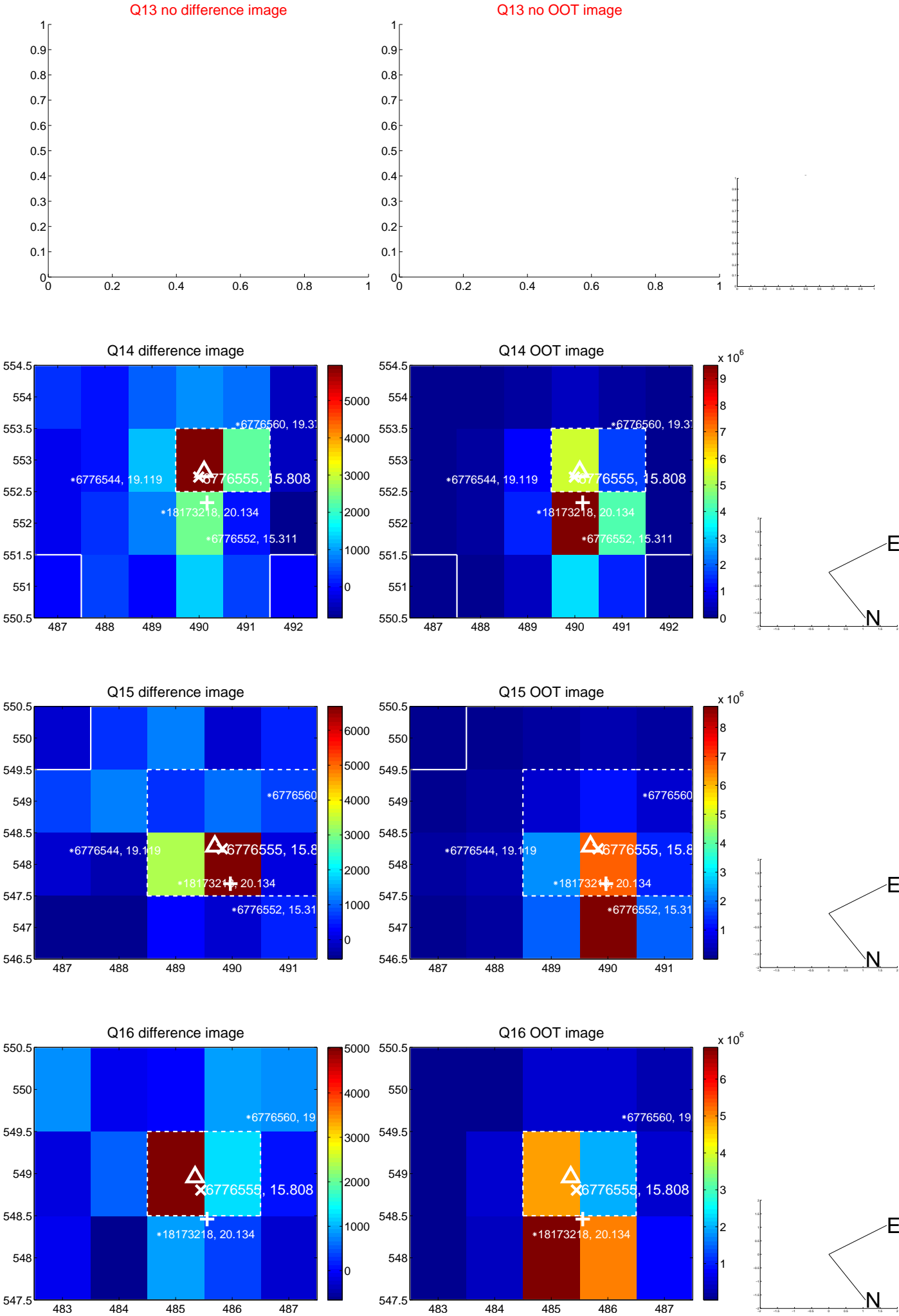
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

