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Erratum: "On the interaction of Tollmien-Schlichting waves with a wall-embedded Helmholtz resonator" [Phys. Fluids 35, 034104 (2023)]

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This erratum provides corrections to our previously published manuscript.[1] We have identified a systematic error in our plotting that resulted in the wrong phases being indicated on Figs. 5 and 8. Here are the updated figures and captions. Note that the main conclusions of the work are not affected by this inconsistency.

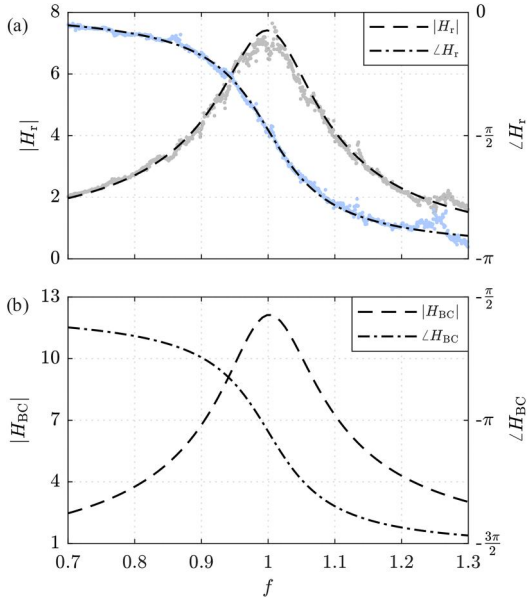


FIG. 5. (a) Complex frequency response function (H_r) of the Helmholtz resonator, determined as the ratio between the pressure at the throat ($x = y = 0$) and the pressure at the center of the lowest cavity wall. Data points correspond to microphone measurements, whereas lines correspond to simulations. (b) Complex transfer function (H_{BC}) of the wall boundary conditions that model the resonator, determined as the ratio between velocity and pressure at the throat ($x = y = 0$).

Regarding Fig. 8(a), a further clarification must be made. Here, the boundary condition complex transfer function is defined as the average velocity over the average pressure along the orifice, i.e., $\langle H_{BC} \rangle = \langle v \rangle / \langle p \rangle$. Therefore, the following sentence in Sec. IV B of the original manuscript is no longer applicable: "*Note that H_{BC} is hereby normalized by its maximum value for comparative reasons.*"

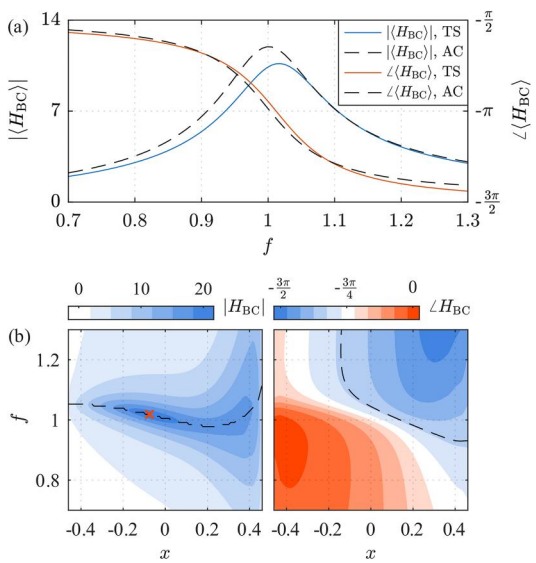


FIG. 8. Complex transfer function (H_{BC}) determined as the ratio between velocity and pressure obtained with LNS. (a) Comparison of $\langle H_{BC} \rangle$ averaged along the orifice between excitation of the resonator acoustically [see Fig. 5(b)] or with the TS-wave. (b) Amplitude and phase of H_{BC} along the orifice ($y = 0$) for excitation with TS-waves. Dashed lines signify maximum amplitude and $-\pi$ phase along the streamwise direction. The red mark indicates the maximum of $|H_{BC}|$.

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REFERENCE

[1]T. Michelis, C. de Koning, and M. Kotsonis, "On the interaction of Tollmien-Schlichting waves with a wall-embedded Helmholtz resonator," Phys. Fluids **35**, 034104 (2023).

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