Computational details

Computational technique	BEM, Burton & Miller technique, collocation, discontinuous linear elements, GMRes solver
Computed results	Sound pressure level at six locations, cf. Figs. 1–6 Radiated sound power in [1]
Programming details	Akusta, non–commercial Fortran90 code
Code accessibility	Possible on request and under certain conditions (at S. Marburg)
Processing details	
Computational complexity	
Notes	
References	
Contributing institute	LRT4–Institute of Mechanics Universität der Bundeswehr Werner–Heisenberg–Weg 39 D–85579 Neubiberg Germany

References

[1] S. Marburg. The Burton and Miller method: Unlocking another mystery of its coupling parameter. *Journal of Computational Acoustics*, page 20 pages, 2015. (under review).

Solution

Receiver location point P_1: $(x, y, z) = (-0.3, 0.3, 0.0)m$, sound pressure level in Figure 1
Receiver location point P_2: $(x, y, z) = (0.2, -0.3, 0.4)m$, sound pressure level in Figure 2
Receiver location point P_3: $(x, y, z) = (0.0, 0.0, -0.3)m$, sound pressure level in Figure 3
Receiver location point P_4: $(x, y, z) = (0.5, 1.6, 0.8)m$, sound pressure level in Figure 4
Receiver location point P_5: $(x, y, z) = (0.6, 0.5, 0.8)m$, sound pressure level in Figure 5
Receiver location point P_6: $(x, y, z) = (2.0, 0.5, 0.8)m$, sound pressure level in Figure 6

Additional Figures

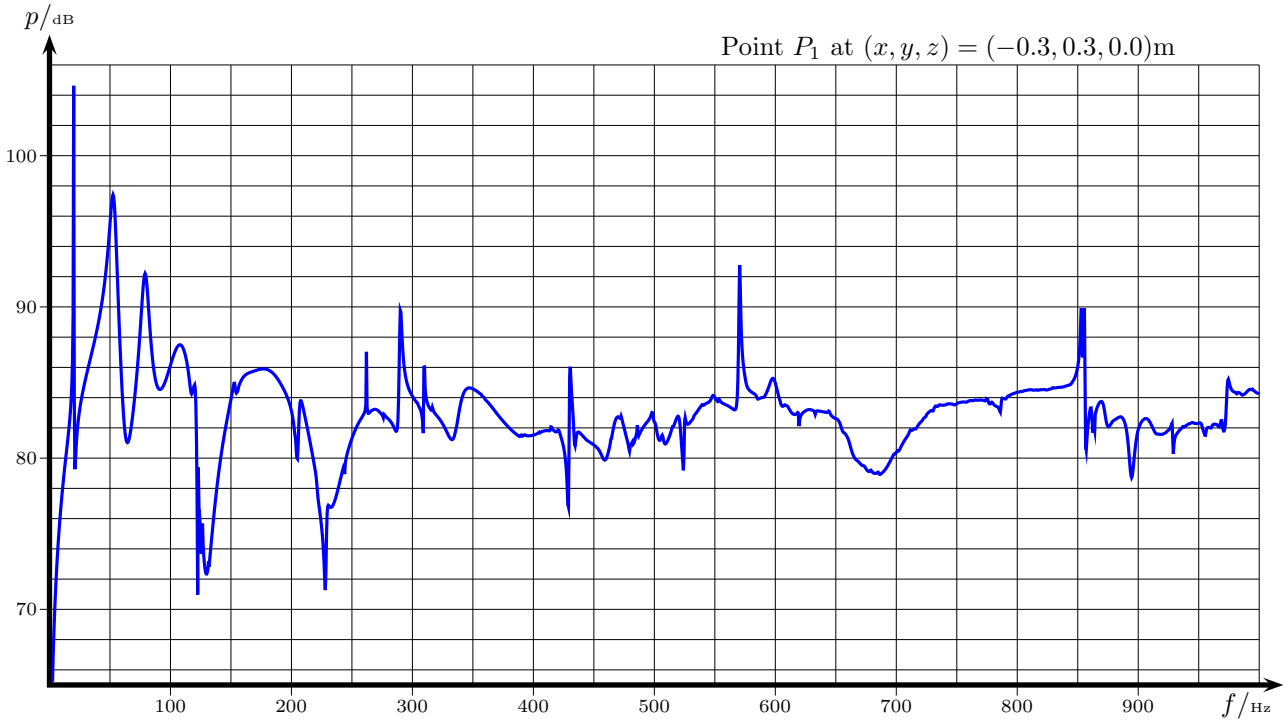

Figure 1: Sound pressure level at point $(-0.3, 0.3, 0.0)m$ in frequency range up to 1 kHz.

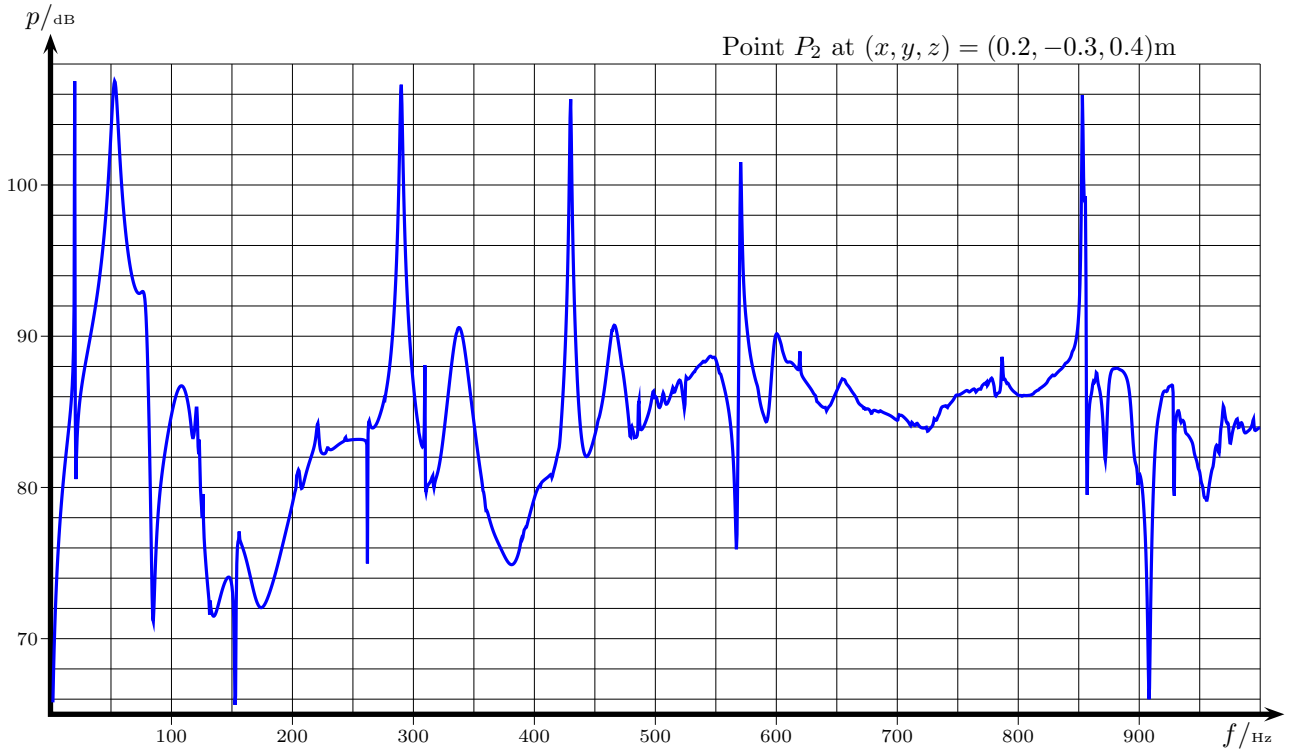

Figure 2: Sound pressure level at point $(0.2, -0.3, 0.4)m$ in frequency range up to 1 kHz.

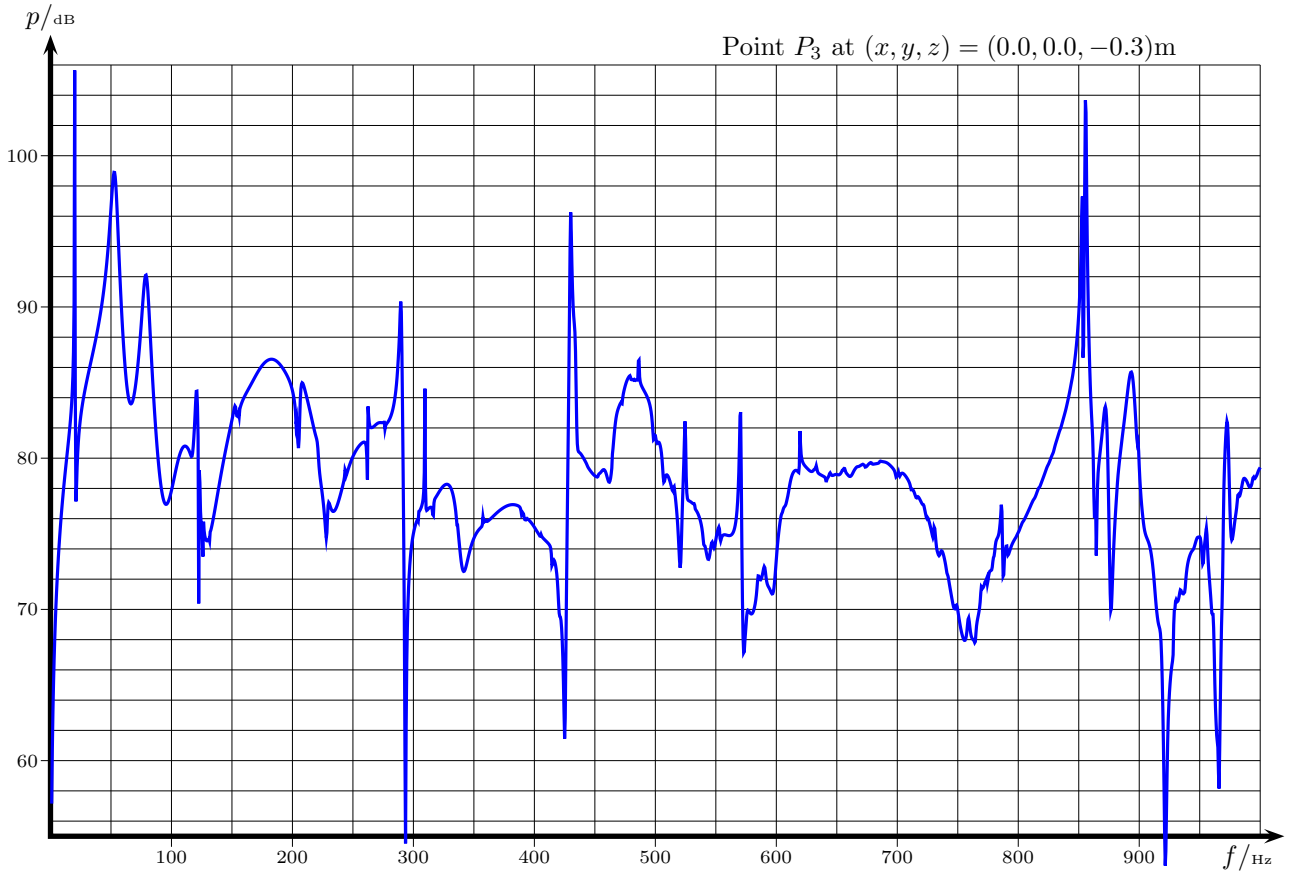

Figure 3: Sound pressure level at point $(0.0, 0.0, -0.3)m$ in frequency range up to 1 kHz.

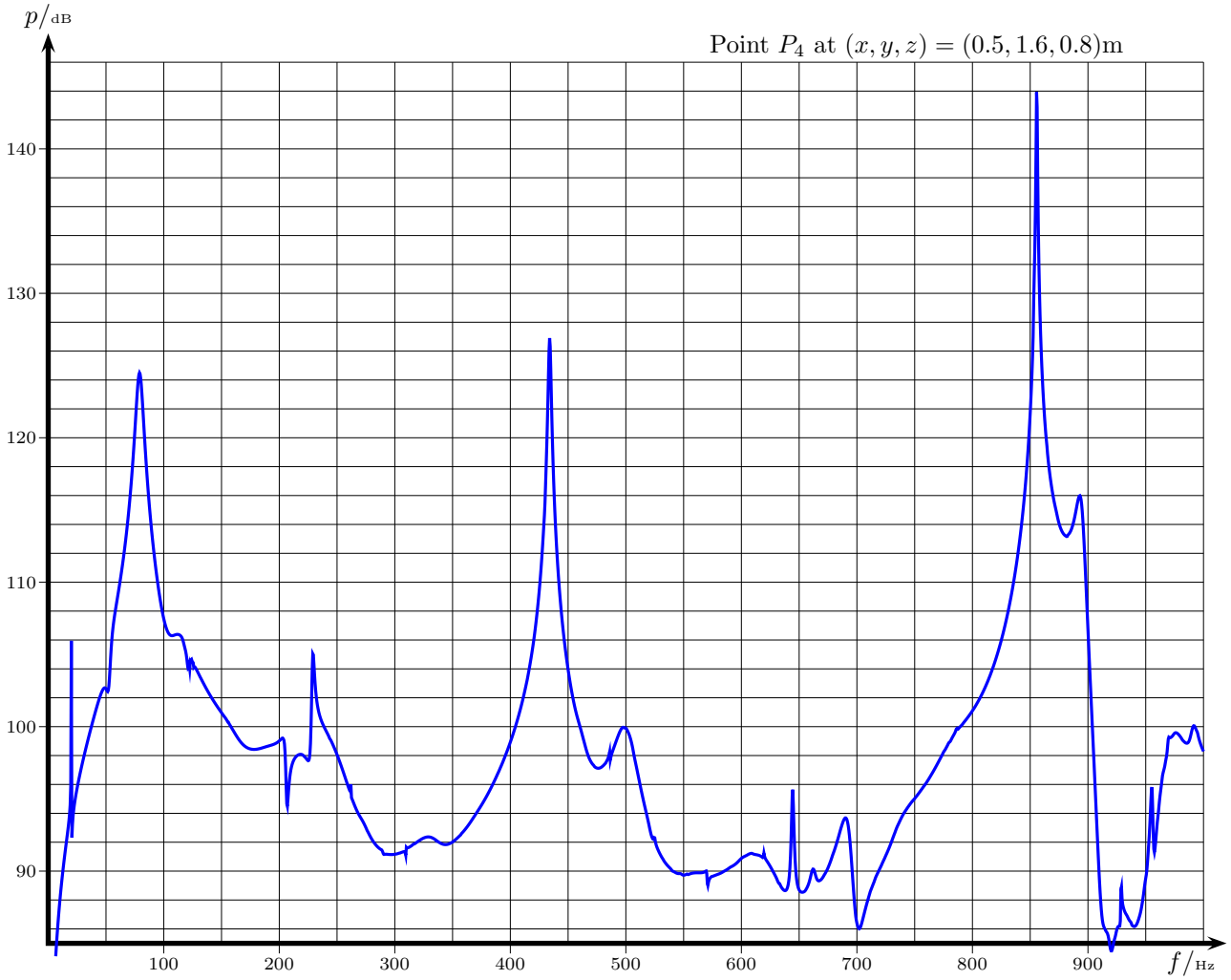

Figure 4: Sound pressure level at point $(0.5, 1.6, 0.8)m$ in frequency range up to 1 kHz.

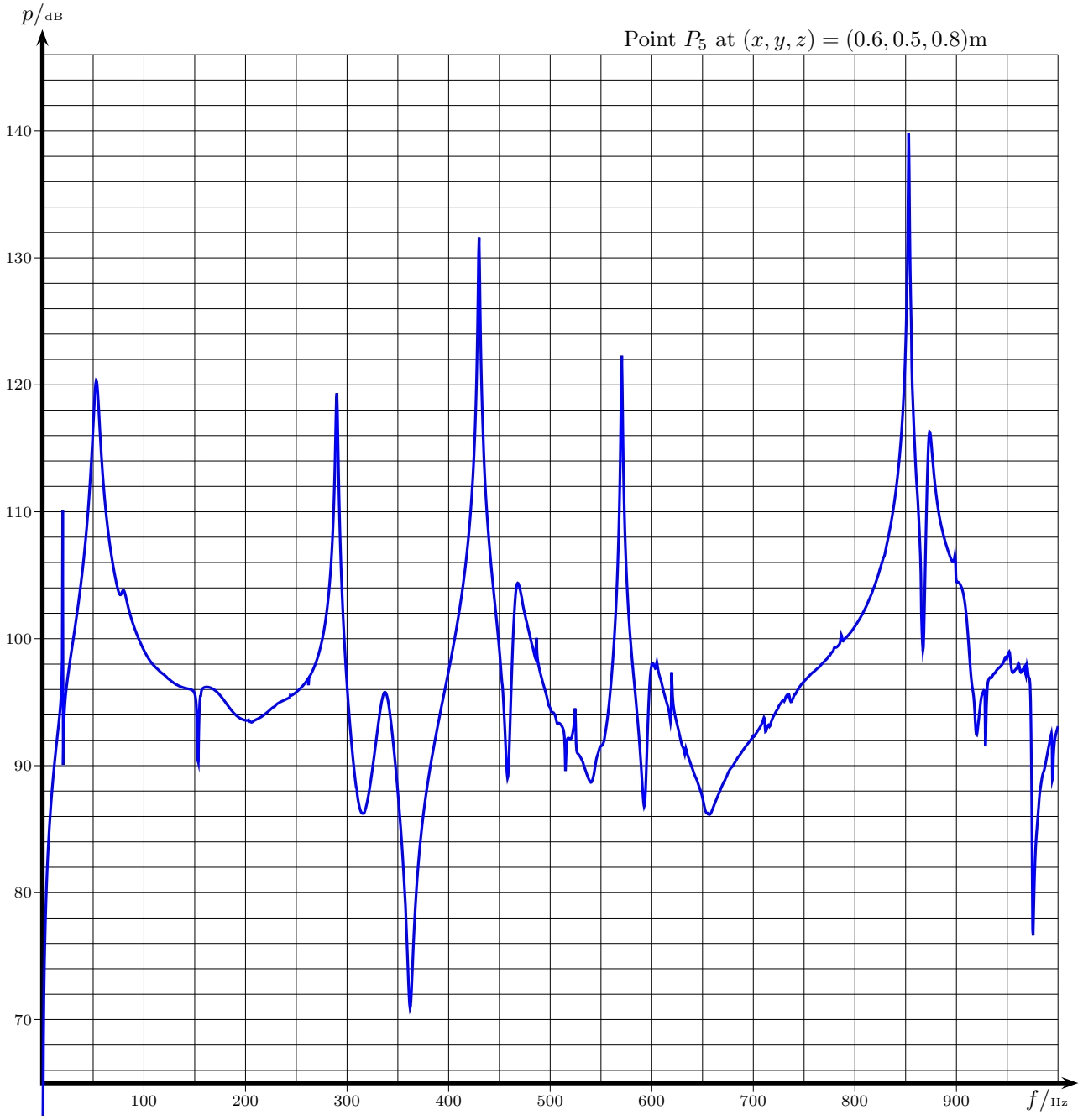

Figure 5: Sound pressure level at point $(0.6, 0.5, 0.8)m$ in frequency range up to 1 kHz.

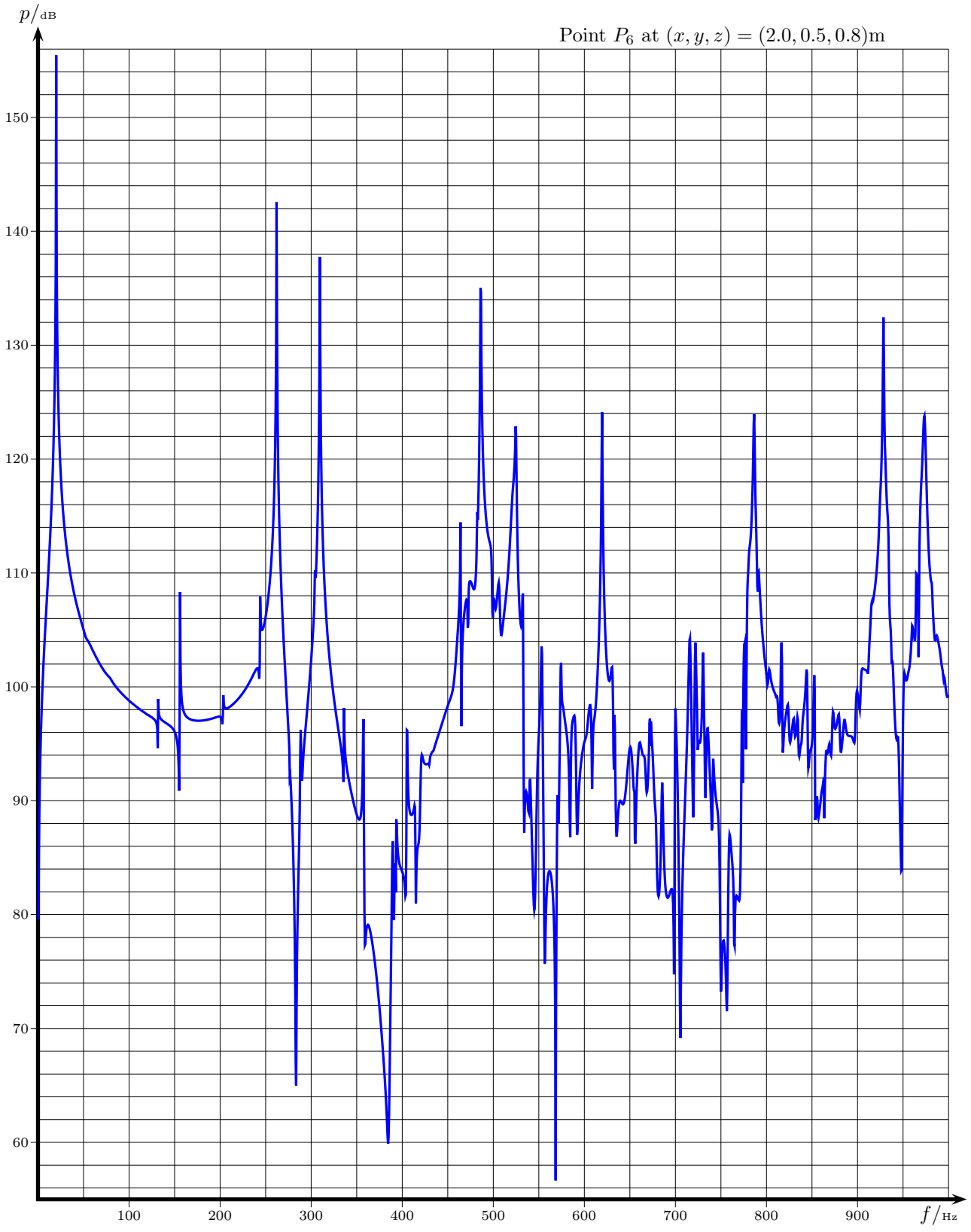

Figure 6: Sound pressure level at point $(2.0, 0.5, 0.8)m$ in frequency range up to 1 kHz.