

experiments to be 25 dB per decade or proportional to $\omega^{-2,5}$. For higher frequencies, the power spectrum decreases with frequency as $\omega^{-1,5}$ or 15 dB per decade as shown by Fitzpatrick and Strasberg [4].

A schematic drawing of the bubble spectrum is shown in Fig. 2a.

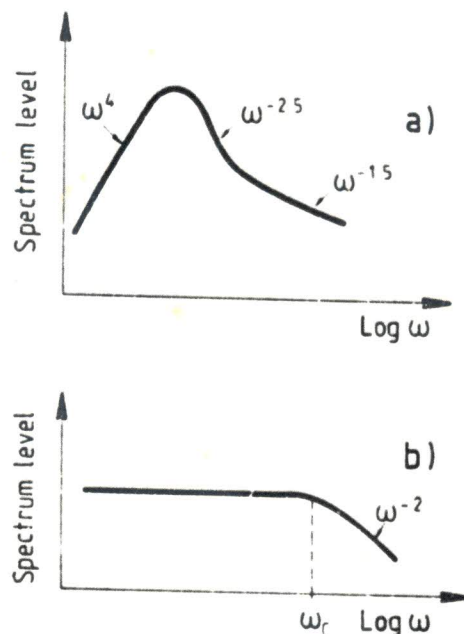


Fig. 2: a) Energy spectrum from a bubble.
b) Shock wave spectrum.

Fig. 2b shows a shock wave spectrum which is constant up to the collapse frequency ω_c which is proportional to the inverse of the collapse time T_c , and then decreases as ω^{-2} . The shock wave is assumed to describe the sound emitted from the bubble collapse.

A general noise spectrum from a cavitation bubble may be found by combining the two spectra. Considering the statistics