Several years ago, a group at the Weizmann Institute\(^1\) had shown that it was possible to measure detailed information on some nuclear wave functions by the study of pp'\(\gamma\) angular correlations via analogue resonances. Encouraged by the success of the method a new project had been started\(^2\). The aim was the study of

![Proton coincidence spectrum on the 5/2\(^+\) g.s. analogue resonance](image)

Fig. 1. Proton coincidence spectrum on the 5/2\(^+\) g.s. analogue resonance
nuclear wave functions of low lying states in the mass 90 region. The motivation for this work, some experimental results and discussion of the interpretation difficulties will be reported here together with some preliminary results of analyses and its implications.

The motivation for this work can be illustrated with the aid of figure 1. A proton spectrum in coincidence with $2^+ \to 0^+$ gamma rays from the $^{94\text{Mo}}(p,p'\gamma)$ reaction is shown. The incoming proton energy is adjusted to excite the analogue resonance of the $5/2^+$ ground state of $^{95\text{Mo}}$. The $2^+$, $4^+$, $2^+$ and $(4^+)$ first excited states of $^{94\text{Mo}}$ have been investigated.

![Graph showing excitation functions of the pp'\gamma angular correlation through the $2^+ \ (0.871\text{ MeV})$ state of $^{94\text{Mo}}$, in the vicinity of the $5/2^+$ g.s. analogue.](image)

Fig. 2. Excitation functions of the pp'\gamma angular correlation through the $2^+ \ (0.871\text{ MeV})$ state of $^{94\text{Mo}}$, in the vicinity of the $5/2^+$ g.s. analogue.