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## Extraction of level density of $2+$ states in $^{208}\text{Pb}$ and $^{120}\text{Sn}$ nuclei from high energy-resolution (p,p') experiments

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The level density of  $2+$  states in  $^{208}\text{Pb}$  and  $^{120}\text{Sn}$  nuclei have been extracted in the energy region of the isoscalar giant quadrupole resonance (ISGQR) from a fluctuation analysis of high-energy-resolution (p,p') data taken at incident energies of 200 MeV at the K600 magnetic spectrometer of iThemba LABS, South Africa. The shape of the background was determined from the discrete wavelet transform of the spectra using a Discrete Wavelet Transform (DWT) function normalized at the lowest particle separation threshold. The experimental results are compared with the available phenomenological and microscopic models. This forms part of important quantities used as inputs to the nuclear astrophysical calculations.

### Attendance Type

In-person

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