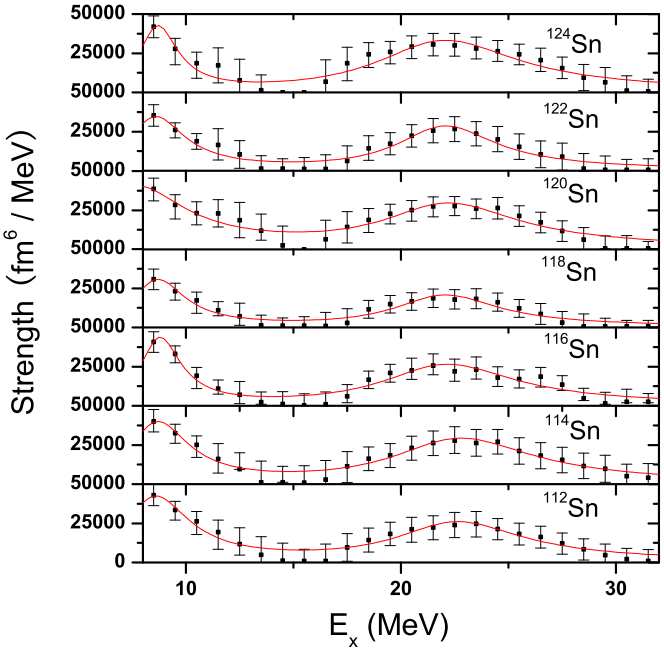

FIG. 12: (Color online) HEOR strength distributions obtained for the Sn isotopes in the present experiment. Error bars represent the uncertainties from fitting the angular distributions in the MDA procedure. The solid lines show Lorentzian fits to the data.

with a two-Lorentzian function and the fitting parameters for the LE- and HE-components are presented in Tables V and VI, respectively. It may be noted that because of the "spurious" strength at the higher excitation energies mentioned previously, the numbers for the extracted EWSR are significantly larger than 100% in some cases.

The strength distributions of the ISGQR are shown in Fig. 11. These too were fitted with a Lorentzian function to determine the centroid energies and the widths. The fit parameters are presented in Table VII.

The L=3 strength distributions (Fig. 12) show an enhanced strength at $E_x < 10$ MeV. This part is, most likely, from the low-energy octupole resonance (LEOR). The LEOR represents the $1\hbar\omega$ component of the L=3 strength and has been reported in a number of nuclei previously [63, 64]. The strength distributions were, therefore, fitted with a two-Lorentzian function to determine the centroid energy of HEOR (the high-excitation-energy component). The extracted HEOR peak-energies are presented in Table VIII.