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Analysis of $\pi^- \pi^- \pi^+$ COMPASS data: role of $a_1(1260)$ meson and Deck process.

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The mass-dependent analysis of $\pi^- \pi^- \pi^+$ COMPASS data on the proton target is discussed. The analysis is based on the currently worlds largest data set of 46 000 000 events, which allows us to divide the data into 100 mass bins and 11 intervals of momentum transfer squared t' . The fit model includes Breit-Wigner amplitudes which are describing resonant contributions while flexible-shaped background terms account for non-resonating processes. The $a_1(1260)$ resonance is observed in $J^{PC} M^\epsilon = 1^{++} 0^+ \rho\pi S$ -wave, which contributes about 30

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