FIG. 15: Cross-section of the p(^{3}He,t)X reaction at $T_{^3He}$=2 GeV, $\theta = 0.25°$ in insert (a) and θ= 1.6° in insert (b) [26]. The small empty circles (blue) describe the theoretical calculation (see text) [26]. Above this calculation the baryonic structures allow to fit the experimental data. The total spectrum is also shown (red curve).

FIG. 16: (Color online) Cross-section of the p(^{3}He,t)X reaction at $T_{^3He}$=2 GeV, $\theta = 2.7°$ in insert (a) and θ= 4° in insert (b) [26]. The small empty circles (blue) describe the theoretical calculation (see text) [26]. Above this calculation the baryonic structures allow to fit the experimental data. The total spectrum (red curve) is also shown.

FIG. 17: (Color online). Cross-section of the d(^{3}He,t)X reaction at $T_{^3He}$=2 GeV, $\theta = 0.25°$ in insert (a) and θ= 1.6° in insert (b) [26]. The small empty circles describe the theoretical calculation (see text) [26]. Above this calculation the baryonic structures allow to fit the experimental data.

contribution and the final state interaction (Δ-N interaction and Δ N → NN process). The result of this calculation is taken as background, namely we fit the difference between data and the calculation with the function summing the gaussians corresponding to the narrow structures. Fig. 17 shows the results at $\theta = 0.25°$ in insert (a) and $\theta = 1.6°$ in insert (b). Fig. 18 shows the corresponding results for $\theta = 2.7°$ in insert (a) and $\theta = 4°$ in insert (b). Whereas the H(^{3}He,t)X reaction allows to excite only isospin I=3/2 final states, the d(^{3}He,t)X reaction allows to excite just as well I=3/2 as I=1/2 final states. The comparison between both reactions shows that, although the reaction on a proton target is favoured versus the reaction on a neutron target by a factor of three due to isospin couplings, the narrow baryonic structures are better excited on the deuterium target. We deduce as above that isospin I=1/2 is favoured for the low mass baryonic structures.

The global fits, after the introduction of the narrow structures in Fig. 17(a), 17(b), 18(a), and 18(b), are very good. Table 2 shows the related quantitative information.

FIG. 18: (Color online.) Same caption as in Fig. 17, for $\theta = 2.7°$ in insert (a) and $\theta = 4°$ in insert (b) [26].