

Experimental report : Magnon dynamics in stuffed $\text{Tb}_2\text{Ir}_2\text{O}_7$ (HC -4908)

In this RIXS experiment we successfully probed the magnon dynamics in stuffed $\text{Tb}_{2+x}\text{Ir}_{2-x}\text{O}_7$ ($x = 0.3$) by probing the dispersion spectra along high-symmetry directions of the Brillouin zone.

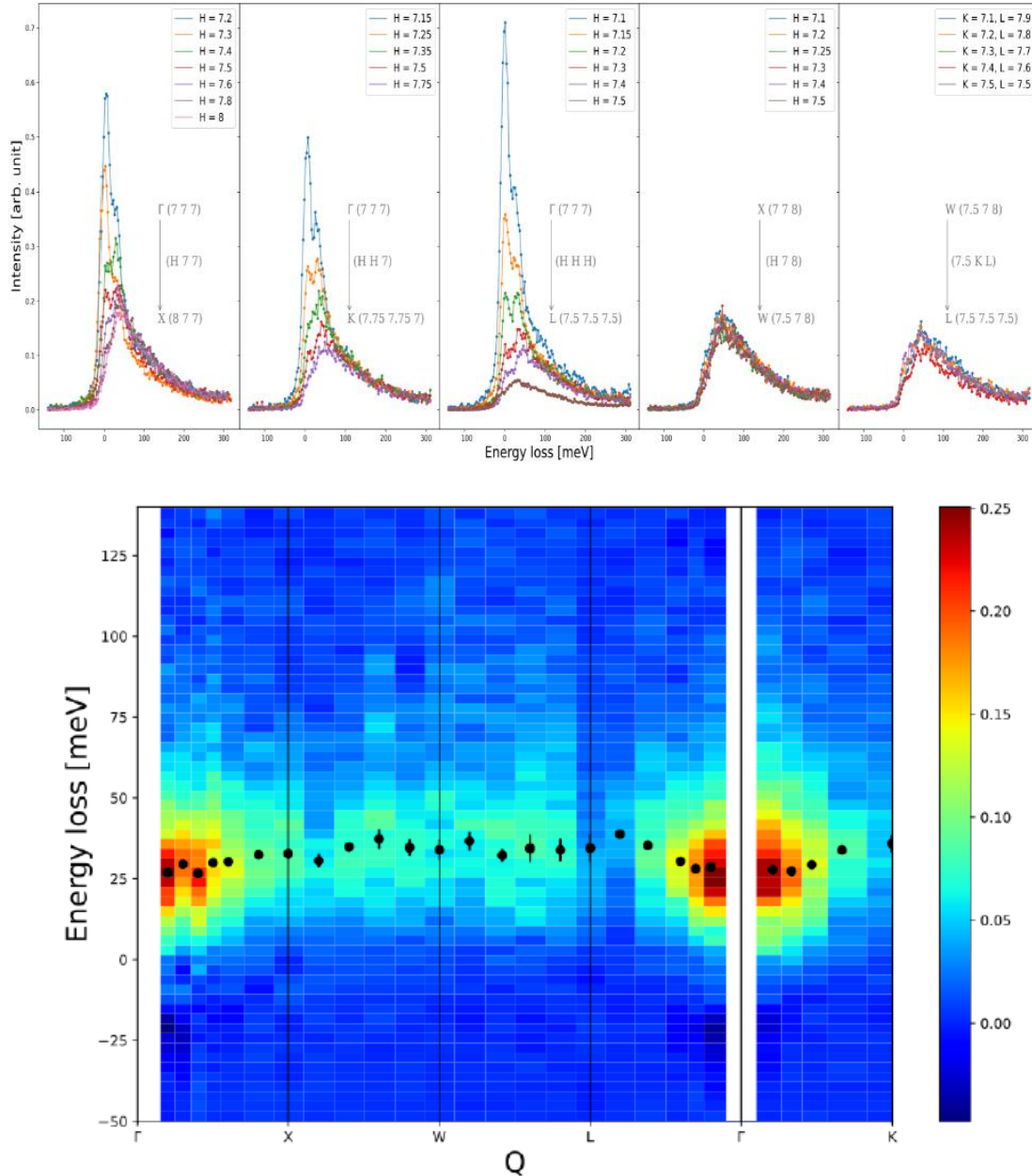


Fig. 1 : Spectra probed along the different high-symmetry directions of the BZ.

This set of data coupled to spinwave and RPA calculations will allow to extract precisely the different magnetic interactions (symmetric and DM) and to unveil the energy scale of electronic correlations in this class of materials that is still under debate. This study sheds light onto pyrochlore iridates that are potential materials to realize magnetic Weyl semi-metallic states.