

Frozen Spin Targets for Nuclear and Particle Physics

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Frozen spin polarized targets are perhaps the most complex and demanding target systems used in nuclear and particle experiments. The scattering sample is polarized in a very high magnetic field and at a sub-kelvin temperature, before being cooled to an even lower, millikelvin temperature for data taking. In some examples, the polarization and data acquisition even occur in different locations. Despite the difficulty of building and operating these devices, they have been successfully utilized at a number of laboratories around the world. The principles, design, advantages, and disadvantages of frozen spin targets will be presented.