

Stella: The facility for low background techniques at LNGS

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Particle physics experiments searching for rare events such as neutrino interactions, neutrinoless double beta decay and dark matter, have to fight against background of different origin. Besides building the experiments in a deep underground site, it is extremely important to shield against environmental backgrounds and to minimise the intrinsic radioactive contaminations of the experimental setup by carefully selecting radiopure materials. This is the main motivation for a facility for low background techniques at LNGS, the underground laboratory of INFN in Italy. In this talk we describe the main background sources that affect particle experiments in a deep underground site and the material screening techniques and other low background activities carried out at LNGS, outlining the present status and possible future improvements.

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