

Towards a South African Underground Laboratory

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Over the past two years there has been discussion among South African physicists about the possibility of establishing a deep underground physics laboratory to study, amongst others, double beta decay, geoneutrinos, reactor neutrinos and dark matter. As a step towards a full proposal for such a laboratory a number of smaller programmes are currently being performed to investigate feasibility of the Huguenot Tunnel in the Du Toitskloof Mountains near Paarl (Western Cape, South Africa) as a possible sight for the South African Underground Laboratory facility. The programme includes measurements of radon in air (using electret ion chambers and alpha spectroscopy), background gamma-ray measurements (inside/outside) the tunnel using scintillator (inorganic) detectors, cosmic ray measurements using organic scintillators and radiometric analyses of representative rock samples.

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