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DEEP SEISMIC REFLECTION STUDIES OVER THE SOUTHERN GRANULITE TERRAIN, INDIA: SOME PRELIMANRY RESULTS

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An ambitious integrated geophysical /geological study is planned under the international initiative and spirit of **L**ithospheric **E**volution of **G**ondwana East from interdisciplinary **D**eep **S**urveys (LEGENDS). The geophysical components include Deep seismic reflection / refraction / wide angle reflection studies, detailed gravity, Magnetotellric and other studies, supplemented by laboratory measurements of physical properties of the rock specimens collected along the transect. The 270 km long transect traverses the most important tectonic blocks namely, the Madurai Block (MB), Achan Kovil Shear Zone (AKSZ) and the Kerala Kondolite Belt (KKB). It can be treated as logical extension of the Kuppam-Palani coincident seismic reflection/refraction profile, when merged emerges as the longest geotraverse in the region At the time of this report the implementing agency (CSS Project, NGRI) has already completed deep seismic reflection data acquisition from Vattalkundu-Pannaikudi segment of the transect (120 km). Quality Control tests on the data indicate that the data is of very good quality in comparison with the data acquired earlier in the north of the region. The improvement can be attributed to

1) better acquisition procedures
2) higher foldage
3) better near-surface geological features like shallow water table etc. Some of the preliminary results are discussed

Keywords: Deep seismic reflection, LEGENDS, Madurai Block, Achan Kovil Shear Zone, Kuppam-Palani profile