studies lab During one of the Sundays, the participants were taken on a field trip, along the Naimtal-Bhimtal stretch, where various important himalayan geological aspects like the MBT, etc can be observed There was also an official visit to the Aryabhatta Research Institute of Observational Sciences (ARIES), located atop the Manora Peak, about 9 kilometres from Naimtal, where the participants were detailed upon the various existing astronomical and astrophysical facilities as well as the range of activities carried out there

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A New Method for Determining the Geometry of Rupture Zone in Areas known to be Seismically Active

Attention of our readers is invited to a paper entitled 'Strong Motion Compatible Source Geometry' authored by S TG Raghu Kanth (rk@ntg ernet m) and R N Iyengar (rm@civil use ernet m) which has appeared in the latest issue of Journal of Geophysical Research (v 113, B04309) which appears to have an important bearing on the identification of source region of earthquake in general and NE Himalaya in paiticular Source determination is usually carried out using travel time methods with the help of teleseismic data The present paper details a method using strong motion accelerograph records available in the near source region The results presented seem to identify with a fair degree of accuracy source region at depth involving severe rupture on a rugged surface The authors outline their model based on instrumental data available from four earthquakes Chi-Chi, Imperial Valley, San Fernando and Uttarakashi The approach and results outlined appear to be of great practical utility in the assessment of natural hazards, since it leads to generation of time histories in the near source region By combining known geological data of active faults with such a source mechanism model engineers can avoid the use of approximate empirical attenuation relations for estimating ground motion parameters at important project sites -*BPR*

Metamorphic History of Granulites and Associated Rocks from Varsha Nadu in Tamil Nadu

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Extended Abstract

Varsha Nadu is part of the 550 Ma Southern Granulite Terrain The area is essentially composed of charnockites, gneisses with abundant meta-sedimentary swathes of pelitic and calc-silicate rocks with late intrusive of alkali gabbros, syenites, granites and carbonatite-alkah gabbro The Kambam fault trending N20°E occurs in between the lofty hill ranges of Kodaikanal, Cardamon, and Varsha Nadu in a way connects them The linear trends are N40°W, N20°E to N60°E They exhibit complex pattern with dome and basin structures Rock types include charnockites, gneisses, pyroxene granulites with abundant meta-sedimentary swathes of pelitic, calc-silicate rocks with late syenite, granite and carbonatite-pyroxemte intrusions Shears traversed at different stages and affected all the lithologies except granites Late N-S shears are seen along broad fold closures and represented by growth of garnets along axial planes The NE linears in the area are offset by the NW shears The dextral displacement of the NW shear probably suggest the re-activation of earlier linears The E-W shears displace the NNE, NE, NW shears The Kambam shear trends N15°E to N20°E in the southern part and N40°E- N50°E in the northern part This might be due to repeated dextral offsetting of the N10°E by E-W shears In southern extremity, it hosts a carbonatite-pyroxemte body The abundant magnetite grains in the carbonatites show crude alignment parallel to N20°E The late E-W and N-S shears, cut across the magnetite grains Number of isoclinal folds with their axial plane trending N10°E, remains parallel to Kambam fault inferring that Kambam fault has formed at an early stage but reactivated at later stage The calc-silicate rocks contain exotic blocks of pyroxemte, quartzo-feldspathic gneisses Since they occur over larger area, they can be termed as melange structures The rafts and detached folds of quartzo-feldspathic gneiss contain high grade metamorphic gneissic fabric

The peak metamorphic temperatures obtained are in the range of 9 6-7 1 Khar, 780-715°C whereas P-T values 6-5 kbar, 731 to 605°C represent decompression The metasediments give P-T values 10 kbar and 950°C representing peak metamorphic conditions