

THE SUBMISSION, IN SUPPORT OF THE THESIS, OF THE PUBLISHED PAPERS ON THE WORK PREVIOUSLY DONE BY A CRITICAL SURVEY OF FACTS AND RELATIONS BETWEEN THE FACTS DISCOVERED BY OTHERS.

- 1) Study on the Structure Functions of Electrons and the Energy flow in the Soft component of cosmic ray extensive air showers - D.K. Basak, B. Bhattacharyya and N. Choudhuri, *Il Nuovo Cimento* 130 (1990), 677.
- 2) Low-Energy Kneez in Extensive Air Showers (EAS), D K Basak, H Choudhuri, S Sarkar, B Bhattacharyya and B Ghosh - *Il Nuovo Cimento* 101 (1987) 159
- 3) The Energy Flow in the Soft component of EAS in size range 10^4 - 10^6 Bhaskar Bhattacharyya and Himadri Choudhuri - *ICRC, Moscow*, 5, 437.
- 4) Prospects of study of Kneez in Extensive air showers, B Bhattacharyya D K Basak and N Choudhuri, *ICRC, Bangalore*, EA, 66
- 5) Primary Composition of Cosmic Rays from EAS Measurements, S K Sarkar, N Mukherjee, H Roy, B Bhattacharyya, N Chakraborty and H Choudhuri, *ICRC, Moscow*, 5, 456.

In addition the contribution of the candidate includes

the development of the computer program for

- i. The fitting of the shower data into different structure functions and comparison among them.
- ii. The error analysis including a map of the χ^2 - hypersurface.
- iii. The energy flow in the soft component of the EAS.

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