

The Second Asia-Pacific Conference on Luminescence and Electron Spin Resonance Dating – *Vishwas S. Kale (University of Pune, Pune)*

The Second Asia-Pacific conference on Luminescence and Electron Spin Resonance (ESR) Dating (APLED-2) was held at the Physical Research Laboratory (PRL), Ahmedabad from November 12-15, 2009. Professor A. K. Singhvi was the conference convener. The main objective of the 4-day conference organized by the Luminescence Laboratory, PRL, Ahmedabad, was to discuss the current research in the

methodological aspects, the physics and applications of luminescence and ESR to geological and archeological dating, with special reference to the Asia-Pacific Region.

The conference was inaugurated by Dr. C. M. Sunta, former Director, Atomic Energy Regulatory Board, Mumbai – a pioneer in the use of luminescence in dosimetry. The inaugural keynote address

was delivered by Professor A. G. Wintle of Cambridge University, UK, one of the leading scientists in the field of luminescence dating. Over 100 scientists from 15 countries attend the conference. Some prominent workers in the field of luminescence and ESR dating present during the meeting included – Andrew Murray (Aarhus University, Denmark), D. W. G. Sears (University of Arkansas),

R. Grun (Australian National University, also the Chief Editor, Quaternary Geochronology), I. K. Baileff (University of Durham, UK and Chief Editor, Radiation Measurements), A. A. Bluszcz (University of Gliwice, Poland and member of the editorial board of Geochronometria), K.W. Glennie (University of Aberdeen), S.H. Li (University of Hong Kong), L. Zhou (Peking University), S. Toyoda (Okayama University of Science), Geoff Duller (University of Wales), M. Jain (Riso National Laboratory), I. Liritzis (University of Thessaloniki, Greece), M. D. Sastry (Gemological Institute of India), P. Srivastava (WIHG) and B.C. Bhatt (BARC).

An important aspect of this meeting was its interdisciplinarity and people dealing with physics interacted with those in archeology, geology, geomorphology, sedimentology and meteoritics. A total of 93 papers were presented and a well-edited abstract volume was made available to all the participants via email a week before the conference. About 45 papers (including 16 invited talks) were presented in nine technical sessions spread over three days, and the rest were offered as posters. The sessions dealt with methodological research, dating of surfaces, provenance studies, new instruments, basic physics of luminescence of quartz and feldspars and application of luminescence and ESR dating to archaeo-

logy and geology in areas ranging from the dating of past climates to tectonics. A special session on 'luminescence of meteorites and application to outer space' was also organized. In this session a detailed presentation on the European Space Agency supported proposal to send an OSL/TL Reader to Mars was made. Another noteworthy presentation was on the Indian automated TL/OSL Reader being developed jointly by BARC and PRL. Other papers were on the use of luminescence in sediment provenance using spectral and ESR methods, use of luminescence in sediment budget studies, OSL dating of sand dunes and sediments in Arabia, Middle East and the Thar Desert. Important results in archaeology were the new OSL dates on Indian microliths extending to over 50 ka, and upper palaeolithic industry extending to over 80 ka. These results suggest that the microlithic technology began almost at 50,000 years or even earlier in India. This has important ramification on the southern dispersal hypothesis. Other important results were efforts to date the Toba Ash in the Son Valley and the dating of the arrival of Man in the Australia and the suggestion of extinction of modern fauna thereafter. Besides the oral and poster presentations, three special invited evening lectures were also organized during the 3-day academic meeting. These spanned interesting themes – on the physics of colour in diamonds

by Dr. M.D. Sastry of the Gemological Institute of India, luminescence dosimetry in India during the past five decades by B. C. Bhatt of BARC and the "Perspectives on Earth Science Research" by Shailesh Nayak, Secretary, Ministry of Earth Sciences, Government of India. The participants visited the Institute of Seismological Research (ISR) at Gandhinagar on the third and final day of the meeting. During the concluding session it was decided to bring out a proceeding volume of the papers presented in the conference and to hold the next meeting of APLED at Okayama University of Science, Japan. The proceedings will be published as special issues of International Journals.

A post-conference field excursion to four fluvial-aeolian sites on the Mahi River was organized by Navin Juyal (PRL), Alpa Sridhar and Prof. L.S. Chamyal of the M. S. University of Baroda. These tracked the sediments in the Mahi basin from the hills to the gulf and presented a record of river spanning the past ~150,000 years.

Overall, the Indian presentation in the meeting indicated that optical dating has taken firm roots with over ten state-of-the-art laboratories in the country. With new ideas and latest instrumentation it will be now up to the geoscientists to challenge them with exciting new problems of scientific and societal import.