Editorial

I deem it a privilege to write an editorial for the special volume of the Journal of Indian Geophysical Union (JIGU), guest-edited by three internationally reputed scientists. This publication assumes importance as it has clearly projected the relevance of establishing, maintaining and utilising magnetic observatories in generating quality data that has helped (and continues to help) in solving various problems of interest to specialists researching on magnetic storms, sunspot activity, solar flares, earthquake precursors and many other related problems.

I am happy to notice the significant camaraderie between technical experts, instrument developers and production specialists and scientists with theoretical and application oriented basic science background during the IAGA conference at CSIR-NGRI and post conference structuring of this special volume. They, as a single well knit community, have put at rest the ill-conceived opinion expressed by some sceptics that maintenance of observatories, data generation using routine procedures and analysis of the generated data using established processing algorithms cannot be categorised as part of established scientific research and those associated with these operations can at best be called as technical experts. A peep into the 18 well-articulated and structured manuscripts clearly show the significance of these data generation operations that require focused attention, constantly evolving innovative procedures, bundles of patience and perseverance and capacity to segregate noise from signal to better understand various natural phenomena that have direct impact on our very existence amidst chaotic unknown phenomena involving both the nature and the Man.

We would never have known about the 11 year sunspot maximum and minimum cycles, Plasma bubble and fox clouds, TEC signals prior to a high magnitude earthquakes, dynamics of Aurora lights, magnetic storms impact on communication networks and navigational electronics, Maunder minimum, impact of sunspot activity/ solar flares on climate change but for the impressive volume and length of data generated by committed technical experts cum scientists spanning over centuries.

It is indeed remarkable that contributors have meticulously referred the sequential development of instruments and techniques in the last hundred years and more in building their articles, as they strongly believe that the present day knowledge has evolved from past experiences, successes and failures. The historical development of analogue era and transition to digital era tells us the rich heritage associated with the modernisation of magnetic observatories.

I congratulate the three guest editors and contributors of 18 manuscripts for bringing out a significantly important publication. I thank the editorial team of this special volume, on behalf of JIGU editorial team, for selecting JIGU for publication of this volume.

P.R.Reddy
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