

plistic statements such as 'During the fireball stage of the Big Bang, the sky was ablaze with light throughout the Universe...'. In fact, the tendency to oversimplify matters together with the conversational style adopted to attract the target audience is at times irritating and misleading. This is especially so in the third part of the book dealing with all the hot topics. The problem of how much to simplify is one that has to be faced by all science popularizers. Generally a good policy is to refrain from trying to tell the whole truth while avoiding all that is false. Still, all in all, it is a good book.

Books such as the ones reviewed here would be ideal prizes for good scholars, winners of competitions, etc. They have the capacity to stir our curiosity, to amaze and enlighten us and are brief and eminently readable. If many dozens of books of this type were available over the whole spectrum of scientific subjects and many students were encouraged to read them we would have far better motivated students than we have at present. And that is finally what counts.

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Gravity and Magnetic Interpretation in Exploration Geophysics. I. V. Radhakrishnamurthy. Memoir 40, Geological Society of India, P. B. 1922, Gavipuram P.O., Bangalore 560 019, India. 1998, 368 pp. Price: Rs 500.

This book fulfills a long standing need of students and geophysicists who require software to model the potential field data acquired by them. The author has made this task easy by providing software required for modelling gravity and magnetic field data on a floppy.

This book primarily deals with the gravity and magnetic methods of geophysical exploration and describes the basic principles and concepts concerning these methods in the first chapter. It

also describes the various corrections and procedure for reduction of field data and provides a software to obtain the magnetic elements according to IGRF 95. However it does not provide the requisite software for corrections and reduction of the field data. Chapter 2 provides a general background for interpretation of gravity and magnetic field data and the necessary processing before modelling them in terms of causative sources. The necessary software for operations like trend surface analysis, continuation of fields, various derivatives of the observed field, etc. are given in this chapter. Fourier coefficients are used for the continuation of fields and derivative maps which can be more efficiently computed using Fourier transform and specially FFT subroutines.

Chapters 3 and 4 deal with the interpretation and the modelling of gravity data. Simple shaped bodies like sphere, cylinder, etc. are first described and then complex 2-D and 3-D bodies using polygonal cross-sections. Similarly, Chapters 5 and 6 deal with the interpretation and the modelling of magnetic data. Some of the simple methods (thumb rules) given in these chapters are useful for quick assessment of field data without the aid of any machine in the field.

The software given in these chapters are self-sufficient implying that initial values for the model are obtained automatically based on the characteristics of the field data and some preliminary computations at the beginning of the exercise. In this regard, there may be some problems while applying them on actual field data specially the inversion schemes which may lead to the results which may be totally different from the geological point-of-view in an area. We faced some problems in this regard while inverting anomalies due to a fault and vertical cylinder using the software given in this book. It might be due to the fact that the geological bodies cannot be truly represented by physical models and therefore interaction with an experienced interpreter for an appropriate model is important. Therefore, it might have been better to have some scope for interpreter to choose initial model as per the geological and other available information from the region.

This book is very well written and will be extremely useful to the earth-scientific community. The weakness however lies in the application to actual field data and demonstration of some of the software to real dataset, which might have not been done probably due to lack of space. Several descriptions and computer programs have been verbatim adopted from Radhakrishnamurthy and Mishra (Radhakrishnamurthy, I. V. and Mishra, D. C., *Interpretation of Gravity and Magnetic Anomalies in Space and Frequency Domains*, Assoc. of Explo. Geophs., Hyderabad, 1989, pp. 1-249) which is not mentioned in the references.

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Geology of Rajasthan. S. Sinha-Roy, G. Malthotra and M. Mohanty. Geological Society of India, Gavipuram P.O., Bangalore 560 019, India. 1998. 278 pp. Price: Rs 250.

The Geological Society of India deserves to be congratulated for bringing out textbooks on the geology of different states of the Indian Union. Quite a few books in this series have already occupied our shelves. *Geology of Rajasthan* is the latest addition to this series. An immediate attraction of the present book is its small size with a moderately low price.

The book under review will satisfy the long-felt need of an integrated account on the geology of Rajasthan under a single cover. The authors seem to have succeeded to a great extent in piecing together the disparate information on the geology into a coherent geological story covering a protracted span of 3,500 m.y. before the present. It may, however, be a matter of debate whether the authors are successful in constraining the descriptions within the bounds of the objectivity. Yes indeed, on several pages we note a liberal fusion of description with interpretation (mostly of the authors!).