A Student's Guide to Data and Error Analysis

All students taking laboratory courses within the physical sciences and engineering will benefit from this book, whilst researchers will find it an invaluable reference. This concise, practical guide brings the reader up to speed on the proper handling and presentation of scientific data and its inaccuracies. It covers all the vital topics with practical guidelines, computer programs (in Python), and recipes for handling experimental errors and reporting experimental data. In addition to the essentials, it also provides further background material for advanced readers who want to understand how the methods work. Plenty of examples, exercises, and solutions are provided to aid and test understanding, whilst useful data, tables, and formulas are compiled in a handy section for easy reference.

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To my wife and daughters