Analytical techniques for atmospheric measurement

Abstrak

Almost all of the breakthroughs in understanding the atmosphere have been initiated by field observations, using a range of instrumental techniques. Developing or deploying instruments to make further observations demands a thorough understanding of the chemical and spectroscopic principles on which such measurements depend. Written as an authoritative guide to the techniques of instrumental measurement for the atmospheric scientist, research student or undergraduate, Analytical Techniques for Atmospheric Measurement focuses on the instruments used to make real time measurements of atmospheric gas and aerosol composition. Topics covered include how they work, their strengths and weaknesses for a particular task, the platforms on which they have been deployed and how they are calibrated. It explains the fundamental principles upon which the instrumental techniques are based (i.e. what property of a molecule can be exploited to enable its detection), what limits instrumental sensitivity and accuracy, and the information that can be gained from their use--Publisher's blurb.