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Critical factors in the design of sensitive high resolution nuclear magnetic resonance spectrometers

ERRATUM

The printer regrets that many copies of Proceedings A 1636 did not contain plates 1 and 2. To ensure that all incomplete copies may be rectified the plates are included, loose, in every copy of the present issue, no. 1638. Subscribers are asked to be good enough where necessary to attach them between pages 120 and 121 of no. 1636.

spectrometer and describe a versatile instrument which combines performance, in resolution and signal to noise ratio, comparable with the best that has so far been achieved, with relative simplicity and reliability.

An n.m.r. spectrometer consists of a number of sections, which can be considered as follows:

The polarizing magnetic field B_0 , which, for most purposes, should have the highest possible value and an absolute homogeneity and time stability over the sample of the order of 10^{-8} T.

A source of radio frequencies, stable with respect to B_0 , which can give phase coherent pulses at known times.