DA5/324-0

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Date: March 26, 1982

From: V. McLane VM

Subject: Energy Resolution

In the past all energy resolutions as given by the author have been coded under the data heading 'EN-RSL'. In some cases the values given represent the full-width at half maximum (FWHM), in some cases half-width at half maximum (± 1/2 FWHM). (There may also have been other representations.)

With the introduction of the new error formats, we are now better able to specify errors. In this spirit, and keeping to the tradition of coding the data as given by the author, we propose the addition of 2 new data headings to be added to Dictionary 24.

EN-RSL-FW Incident-particle energy resolution (FWHM)
EN-RSL-HW Incident-particle energy resolution (± 1/2 FWHM)

Data given under the old heading (EN-RSL) would be unspecified (as with DATA-ERR)

A revised LEXFOR entry for Resolution in attached.

Sol Pearlstein

dah

Attachment:

d/f:10.3:7.2.1.

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82/04/08

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Resolution

The word resolution can describe:

either the energy spread or channel width (or a combination) of the incident particle
or the angular or energy spread of the outgoing particle(s).

Incident-particle Energy Resolution

The energy resolution describes the distribution curve of the energy spread. It is usually defined as full-width at half-maximun (FWHM), but may be given in other representations. The shape and definition of the resolution function should be given in free text under INC-SPECT, if known.

The resolution is coded using the following data headings:

EN-RSL-FW	Incident-particle energy resolution (FWHM)
EN-RSL-HW	Incident-particle energy resolution (+1/2 FWHM)
EN-RSL	Incident-particle energy resolution (unspecified)

The energy resolution can be given in energy units, in percent, or in units of a reciprocal velocity (e.g., nsec/m).

Outgoing-particle Energy or Angular Resolution

The following data headings are used:

E-RSL	energy resolution of outgoing particles or gammas
ANG-RSL	angular resolution

Note: The terms resolution and error are often misused in the literature. Distinguish, where possible. See Errors.