<u>Memo 4C-3/79</u>

To: Distribution   8 May 1973

From: C.L. Dunford

I.   Agenda for Ninth Four Center Meeting, 4-8 June 1973,
     Moscow (attached)

II. N.D.S. Proposal on Common Statistics for Consideration at
     the Four Center Meeting (attached)   ACTION 4

III. CODATA Compendium of Data Centers

     The CODATA office in Frankfurt has been dissolved
     so all action on the Four Center contribution is
     suspended.   ACTION 21

<u>Distribution:</u>   Clearance: J.J. Schmidt

  V. Manokhin, CJD (5)
     (Agenda in Russian and 1 English)
  F. Fröhner, CCDN (5)
  S. Pearlstein, NNCSC (5)
  All NDS

Proposed Agenda Ninth Four-Centre Meeting

4-8 June, Moscow

I. Organization and Announcements

   a) Introductory remarks
   b) Election of chairman and secretaries
   c) Adoption of the agenda
   d) Review of actions and recommendations from 8th Four-Centre Meeting

II. Center Activities

   a) Progress reports from the four Centres
   b) Data request profile report from each Centre
   c) EXFOR compilation activities
       1) New data
       2) Conversion of old data

III. Policies and Coordination of Four-Centre Activities

   a) Recommendations to the Centres from external bodies
   b) Improvements in operation of the Four-Centre Networks
   c) Proposals for common service statistics
   d) Exchange of information on services to customers
   e) Compilation of fission neutron spectra, fission product yields, and gamma ray spectra
   f) Future developments

IV. EXFOR

   a) Implementation of decisions of 8th Four-Centre Meeting
   b) Contents of data tapes exchanged since last meeting
   c) Proposed changes to Dictionaries, EXFOR or LEXFOR
   d) Plans for EXFOR transmission of older data
   e) Development and implementation of programmes associated with the data files

V. <u>CINDA</u>

    a) Coverage of present CINDA

    b) Implementation of new CINDA system and its function
       as EXFOR index

    c) Customer services

VI. <u>WRENDA</u>

    a) Final WRENDA formats for exchange

    b) Coordination and responsibilities for annual WRENDA publication

VII. <u>Evaluated Data</u>

VIII. <u>Other business</u>

IX. <u>Conclusion</u>

    a) Summary, recommendations and actions

    b) Next meeting

Proposed Statistical Information on NDS Operations

I.   INTRODUCTION

The following proposal has formed the basis for discussions within the Nuclear Data Section for the kind of statistics which we will keep in the future. Therefore you will note references to the Data Request and Data Distribution Logs. However, it is felt that the contents of this internal proposal would form a basis for discussion on Common Statistics at the Ninth Four Center Meeting.

The objective of keeping operational statistics is to help answer the following questions.

1)   How is NDS serving its customers ?
2)   How is NDS operating within the Four-Center Network ?

The statistical reports should be prepared as far as possible from computerized data files to minimize the effort of preparation. We visualize that the Data Request and Data Distribution Logs (as kept by NDS) should be able to provide most of the raw data at the present time with the remainder coming from the new EXFOR Compilation Control sheets used within NDS.

II.   SOME DEFINITIONS

A common "report period" must be defined, particularly for joint statistics from the Four Data Centers. This will permit more meaning-ful intercomparisons. Additionally one can analyze trends more easily.

A "request communication" will consist of any letter, telephone call, cable or any other single communication mode which initiates a center-customer or center-center service action.

Each "request communication" will consist of one or more "information request units". The following would constitute a single unit for experimental or evaluated data requests.

1. Any single combination or range of the variables
   Z,A,Q,energy

2. a data file (evaluated, defined by Z,A) or data set
   (e.g. EXFOR sub-entry)

3. data from a given reference (e.g. EXFOR entry)

4. All data from a given LAB.

For bibliographic requests, Z,A,Q and energy range constitute
a unit and for documents, each single document is a request unit, but
several documents may constitute a unit if they relate to a single
data information request unit.

Each "information request unit" would be represented by an entry
in the Request Log all connected to a single "request communication".

III. REQUEST STATISTICS

A. The number of "request communications" can be used to give a
   breakdown

   1) By country
   2) By number of individuals.

   All other request statistics should be reported in "information
   request units".

B. These request units should be broken down in the following way

   1) Experimental Data
      Evaluated Data
      Bibliographic (CINDA)
      Document

   2) Research Institutions
      Educational Institutions
      Production Organizations
      Administrative Organizations
      Data Centers

   Two dimensional
   table

The remaining statistics should be reported for customer-center communications only.

C. The request units for evaluated data should be broken down into file types i.e. UKNDL, ENDF, KEDAK, etc.

D. Request units should be broken into

1) Closed requests
   Filled
   Partially filled
   Unfilled

2) Open requests
   Standing
   Partially filled
   Unfilled

E. Some analysis of unfilled and partially filled requests is needed. (Why)

IV. DATA DISTRIBUTION STATISTICS

A. We should report the average number of data sets or files and data points distributed per information request unit for experimental and evaluated data sent to customers in service area.

B. For data distributed to customers in our service area (the Data Distribution Log) one should give the number of data points and the number of data sets for experimental and evaluated data separately. Also one needs the number of CINDA lines and the number of documents distributed.

C. Data distributed should be reported by Z and split into experimental data sets and evaluated data files, except for U and Pu which should be reported by Z and A. Trends should be stated verbally below the table as for example important Z,A and/or Q.

V.   FOUR CENTER OPERATIONS

A. The requests from center to center should be broken into types
    as categorized in III.B.1.

B. EXFOR transmissions should be analyzed as presently done by
    CCDN. Supply separately for <u>NEW</u> and <u>REVISED</u> transmissions !

     1) Number of works
     2) Number of subworks
     3) Number of system records
     4) Number of bibliographic records
     5) Number of common records
     6) Number of data records

C. Completion rate of inter-center requests

(Why are some unfilled ?)

VI.   EXFOR COMPILATION STATISTICS

A. The NDS EXFOR compilation statistics will operate on a data
    pool consisting of the following information.

     1) EXFOR Accession number
     2) New or revised compilation
     3) Compiler name (code)
     4) Reference-type (code)
     5) Date of "publication" of compilable data
     6) Date NDS becomes aware of data
     7) Date numerical data requested from author
     8) Date numerical data available at NDS
     9) Date compilation begins
    10) Date compilation complete
    11) Date compilation entered into LIMBO
    12) Date of transmission to other centers
    13) Number of "check" passes before entrance to LIMBO

B. This information can be analyzed to give

   1) The average time between any pair of events recorded in items A5 - A12 above.

   2) Averages can be broken into NEW or REVISED compilations.

   3) Time between "publication" and awareness (A5 and A6) can be separated by reference type.

   4) Time between compilation completion and entry to LIMBO (A10 - A11) can be related to the number of passes in the check sequence.

   5) It will be possible to identify "troublesome" compilations by accession number and compiler. "Troublesome" can be defined as those compilations containing step time(s) far from average.

   6) Percent step completion within given time between any 2 pairs.

C. By date of "publication" of compilable data we mean for conferences, the date of the conference; for books, reports and journals, the date of publication; and for private communication, the date of transmittal of cover letter.

   If there is no need to request numerical data from the author then items A7 and A8 may be left blank.

D. From the incomplete EXFOR Compilation Control Forms we can get

   1) Number of possible works
   2)   "   of compilations awaiting data from authors
   3)   "   in compilation
   4)   "   in checking
   5)   "   awaiting transmission