MEMO CP-A/156

27-July-2004

To: **Distribution**
From: **F.E. Chukreev**
Subject**: Scope of data compilation (See Memos CP-C/336, CP-D/385, CP-A/151, CP-E/043, CP-C/343)**

What will be lost, if the EXFOR scope will be limited by the scope, which has been proposed in CP-C/343?

Let us see first proposal:

- **"Incident charged particles from A=l-12, and excluding "fundamental" particles (pions, kaons, antiprotons, *etc.)."***

If particles with A>12 will be excluded, then

1.1 We must refuse to help users, which use a little accelerators for material investigations, because heavy ions (Si, S, O *etc*.) are needed for Rutherford backscattering method. INDC took our attention for the problem, constantly.

1.2 We must stop all compilations of the papers, where interactions radioactive nuclei have been investigated, because the experiments use "inverse" geometry. The investigations are very important to solve physical and astrophysical problems. The majority of experimental data, which were measured in "inverse" geometry must not be compiled too.

1.3 We must stop all compilations of the papers, where fission of exotic fissioning systems were investigated. But we heard constantly, that physics of fission is most important problem.

1.4 I would like to support JCPRG opinion (see item 3 of CP-E-043). Our experience show, that numerical data are available short time only after publication and the data will be lost if good experiments with "fundamental" particles will not be compiled. CAJAD compiled "fundamental" particles data, when the data are presented in the paper together with 'non-fundamental" particles.

Let us see second proposal:

- **"Incident-projectile energies up to 1 GeV."**

The limit on incident-projectile energies is not suitable. If a limit is needed, then EN-CM must be limited. For example, PR/C,53,347,1996 contains data for interaction of neon-20 (beam energy – 6680 Mev) with hydrogen target. The data are same as 10-Ne-20(p, data for proton energy 334 MeV (Coulomb barrier is negligible for similar energies).

Technical question for proposed limitation:

CP-C/343 contains proposal:

"Any center that wishes to compile the data outside the scope agreed upon should make a proposal and request a new area code. The scope of these areas must also be defined.

The following area codes are now free: I, J, K, U, W, X, Y.”

The proposal is *ad hoc* proposal. Today JCPRG and CAJAD can use I and J codes for identification data outside the scope agreed. But tomorrow somebody will refuse to include in his data collection, for example, tensor polarization data. The “somebody” has the right! Then the seven identification codes will be exhausted very quickly.

Therefore our proposal to use N3 field of SUBENTRY (or N3 of BIB record) is more suitable. For example, **A** in 34 column will designate that EN-CM is larger than 1 GeV. **B** in the column will designate, that EN-CM is larger than 10 GeV *etc*. 35-th column may be used, for example, to distinguish integral and differential data; 36-th column may be used for mass numbers of beam and target *etc*.

Obviously, our proposal requests additional responsibility from compilers.

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