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Memo CP-D/755

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To: Distribution
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Subject: **Detector code SPEC (Large spectrometer system)**
Reference: Memo CP-A/148, CP-C/332

The original idea of the detector code SPEC (Large spectrometer system) is to simplify coding of large and complex detector (spectrometer) systems seen in high-energy or radioactive beam experiments. The code was originally proposed by F. Chukreev to compile fragment production cross sections measured in $^{12}\text{C}+^1\text{H}$ inverse kinematics experiments with the ANOMALON spectrometer in JINR for EXFOR A0660 and A0661 in 2004. Chukreev originally proposed *very complex detector system* for its expansion. Then V. McLane submitted a counter proposal *large spectrometer system*, and it is adopted in the current dictionary.

Recently this code was inappropriately applied to 4π germanium spectrometers or time-of-flight spectrometers in some neutron entries. After discussion with the compiler, I understand that we need additional explanation to avoid misuse of this code by new compilers who do not know above discussion.

I propose the following addition (italicized part) to LEXFOR **Measurement Techniques** and dictionary 22:

For telescopes or spectrometers, the code TELES or the code for the spectrometer may be entered followed by the component detectors.

Examples: (TELES, PROPC, SCIN)
(MAGSP, MWDC, SCIN)

When the spectrometer system is complex and cannot be expressed by a few set of detector codes clearly (e.g., high-energy experiment, radioisotope beam experiment), the code SPEC (large spectrometer system) may be used instead of the set of detector codes.

Dictionary 22 (Detectors)

SPEC Large spectrometer system
for spectrometer which cannot be expressed by a set of detector codes clearly.

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