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Memo CP-E/017

Date: February 3, 2003
To: Distribution
From: OTUKA Naohiko and KATŌ Kiyoshi
Subject: Reply to CP-C/313, 314, 315 and
NNDC's comments on PRELIM.E021, CP-E/013, 016

thank you very much for Vicki's carefully checking and giving useful comments and suggestions to help our compilations of PRELIM.E021. The following is reply for them:

1. Longitudinal momentum LP (CP-C/313)

We are satisfied with Vicki's proposals CP-C/313 1)-3).

2. Elementary particle production cross sections (PRELIM.E021.E1706, E1711, CP-C/314)

The preliminary E021 includes elementary particle production cross sections for anti-proton (in E1706) and positive kaon (in E1717). CP-C/314 proposes the following compilation for them:

```
REACTION   (6-C-0(D,X)1-AP-1,,DA/DP)                    E170600600003
REACTION   (6-C-0(KN,X)0-KP-0,,DA/DP)                   E171700200003
```

The expression for anti-proton looks good, while we prefer to use `1-KP-0,` where we suggest *Z* would be the absolute value of electric charge. We also propose that *A* denotes absolute value of baryon number (this with the example of CP-C/314). We hope to have more discussion for K^+. We withdraw E1717 from final TRANS.E021 and wait a conclusion of High Energy Working Group).

3. Angular range codes: ANG1-MIN, ANG1-MAX... (PRELIM.E021.E1711, CP-E/013)

Vicki proposed to treat these angular ranges as additional information on 16 December. In the present paper (W.Q.Shen et al., Phys.Rev.C**56**(1997)1996, compiled as E1711 in PRELIM.E021),

1) Two polar angular ranges for two protons, 10 deg<θ<160 deg, would rise from the limitation of measurement technique, which cannot cover most forward and backward direction;

2) The authors would not expect that this theta range affects current experimental azimuthal angular correlations.

So we conclude that these polar angular ranges can be treated as additional information. We also withdraw CP-E/013 which proposed new codes `ANG1-MIN, ANG1-MAX, ANG2-MIN` and `ANG2-MAX`.

4. Beam from projectile fragment separator: PRJFS (PRELIM.E021.E1721, CP-E/016)

In CP-E/016, we proposed new codes PRJFS (Secondary beam from projectile fragment separator) which is used in E1721 of PRELIM.E021. Vicki's counterproposal is PRJFS2. The last 2 probably expresses "secondary". It seems to be good. But now the length of code in Dict.18 (Facility) is limited to be less than 5. So now I propose to use PRJFS again if there is no other proposal.

5. Reaction field particle considered (PRELIM.E021.E1748)

We support Vicki's proposal for the expression of correlated particles in SF7. The following is a coding example for PRELIM.E021.E1748.020 using the proposal:
(DA/DA/DE,A/T/A-T or DA/DA/DE,T/A/T-A ?)

```
SUBENT        E1748020   20021202                                  E174802000001
BIB                 7         23                                  E174802000002
REACTION   (30-ZN-64(3-LI-7,T+A)30-ZN-64,,DA/DA/DE,A/T/A-T)       E174802000003
           DATA: triple differential cross section with respect   E174802000004
                 to kinetic energy and angle for relative motion  E174802000005
                 between alpha and triton, and angle for motion   E174802000006
                 of the center of mass of the 7Li(=alpha+triton)  E174802000007
                 system                                           E174802000008
PART-DET   (A)                                                    E174802000009
           (T)                                                    E174802000010
…
EN-SEC     (E,T/A)kinetic energy for relative motion between      E174802000017
                  alpha and triton, positive (negative) energies  E174802000018
                  correspond to the branch where velocity of      E174802000019
                  alpha is larger (smaller) than that of triton   E174802000020
           ANG1 is polar angle between beam and alpha             E174802000021
           ANG2 is polar angle between beam and triton            E174802000022
```

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