

Japan Charged-Particle Nuclear Reaction Data Group

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Memo CP-E/013

Date: December 3, 2002
To: Distribution
From: OTUKA Naohiko and KATO Kiyoshi
Subject: Azimuthal correlation of emitted particles in coincidence with heavy fragments

We are compiling an experiment which measures azimuthal correlations between emitted light charged particles in coincidence with heavy fragments in $^{84}\text{Kr}+^{27}\text{Al}$ collisions at 10.6 MeV/nucleon. (W.Q. Shen et al., Phys. Rev. C56 (1997) 1996). The polar angle range of two light charged particles (ANG1-MIN, ANG1-MAX, ANG2-MIN and ANG2-MAX) and the polar angle for one heavy fragment (ANG-3) are fixed, and the azimuthal angle between the two light charged particles (ANG-4) is used as an independent variable. We propose to add the following new data heading and quantity codes to Dictionary 24 and 36:

Dictionary 24 (Data headings)

ANG1-MIN	Lower Limit of 1st Angle, definition given in BIB
ANG1-MAX	Upper Limit of 1st Angle, definition given in BIB
ANG2-MIN	Lower Limit of 2nd Angle, definition given in BIB
ANG2-MAX	Upper Limit of 2nd Angle, definition given in BIB

Dictionary 36 (Quantities)

, DA/CRL, P/P/FF	NO	Angular correlation protons/protons/fission products
, DA/CRL, P/A/FF	NO	Angular correlation protons/alphas/fission products
, DA/CRL, A/A/FF	NO	Angular correlation alphas/alphas/fission products

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Sample of coded entry with proposed new code (E1711.006):

W.Q. Shen et al., Phys. Rev. C56 (1997) 1996

SUBENT	E1711006	20021004				E171100600001
BIB	5	11				E171100600002
REACTION	(36-KR-84(13-AL-27,2P+F)MASS,,DA/CRL,P/P/FF)					E171100600003
PART-DET	fission fragment					E171100600004
	(P)					E171100600005
EN-SEC	ANG1 is polar angle between beam and proton 1					E171100600006
	ANG2 is polar angle between beam and proton 2					E171100600007
	ANG3 is polar angle between beam and fission fragment					E171100600008
	ANG4 is azimuthal angle between two protons					E171100600009
COMMENT	MASS-MIN: minimum mass number of coincident fragment					E171100600010
	MASS-MAX: maximum mass number of coincident fragment					E171100600011
STATUS	(CURVE)Data scanned from Fig.2(left), p1998 in					E171100600012
	reference					E171100600013
ENDBIB	11	0				E171100600014
COMMON	5	3				E171100600015
ANG1-MIN	ANG1-MAX	ANG2-MIN	ANG2-MAX	ANG3		E171100600016
ADEG	ADEG	ADEG	ADEG	ADEG		E171100600017
10.0	160.0	10.0	160.0	10.0		E171100600018
ENDCOMMON	3	0				E171100600019
DATA	4	8				E171100600020
MASS-MIN	MASS-MAX	ANG4	DATA			E171100600021
NO-DIM	NO-DIM	ADEG	ARB-UNITS			E171100600022
20.0	40.0	2.955E+01	1.916E+02			E171100600023
20.0	40.0	4.928E+01	1.794E+02			E171100600024
20.0	40.0	7.324E+01	1.823E+02			E171100600025

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