

Development of Deuteron Polarimeter at Internal Target Station of Nuclotron

K. Suda¹, T. Uesaka¹, V.P. Ladygin², Y. Maeda¹, P.K. Kurilkin², Yu.V. Gurchin², A.Yu. Isupov², K. Itoh³, M. Janek^{2,4}, J.T. Karachuk^{2,5}, T. Kawabata¹, A.N. Khrenov², A.S. Kiselev², V.A. Kizka², J. Kliman^{2,6}, V.A. Krasnov², A.N. Livanov², A.I. Malakov², V. Matoucek⁶, M. Morhac⁶, S.M. Piyadin², S.G. Reznikov², S. Sakaguchi¹, H. Sakai^{1,7}, Y. Sasamoto¹, K. Sekiguchi⁸, I. Turzo⁶, and T.A Vasiliev²

¹*Center for Nuclear Study, University of Tokyo, Bunkyo, Tokyo 113-0033, Japan*

²*Joint Institute for Nuclear Research, 141980 Dubna, Moscow region, Russia*

³*Department of Physics, Saitama University, Saitama 338-8570, Japan*

⁴*P.J.Safarik University, 041 80 Kosice, Slovakia*

⁵*Advanced Research Institute for Electrical Engineering, 313 Splaiul Unirii, Bucharest, Romania*

⁶*Institute of Physics Slovak Academy of Sciences, 84511 Bratislava, Slovakia*

⁷*Department of Physics, University of Tokyo, Bunkyo, Tokyo 113-0033, Japan*

⁸*RIKEN (The Institute for Physical and Chemical Research), Wako, Saitama 351-0198 Japan*

Spin physics programs with GeV-energy polarized deuteron beams are proposed at JINR in Russia and RIBF in Japan. In the investigations, an established measurement of deuteron polarizations is required to deduce values of polarization observables reliably. We have constructed a high-energy beam polarimeter based on the d - p elastic scattering at backward angles at Internal Target Station of Nuclotron at JINR. Calibration measurement of the analyzing powers A_y , A_{yy} , and A_{xx} with polarized deuteron beams at 0.88 and 2.0 GeV was performed. The results of the calibration measurement will be presented.