PRODUCTION OF NARROW BARYON AND DIBARYON STATES IN pd INTERACTION

L.V. Fil'kov*, V.L. Kashevarov*, E.S. Konobeevski†, M.V. Mordovskoy†, S.I. Potashev†, V.A. Simonov† and V.M. Skorkin†

*Lebedev Physical Institute, Moscow, Russia; e-mail: filkov@sci.lebedev.ru
†Institute for Nuclear Research, Moscow, Russia; e-mail: konobeev@sci.lebedev.ru

The analysis of experimental data, obtained at the Proton Linear Accelerator of INR [1,2], with the aim of search for narrow states in the $pd \to pX$, $pd \to ppX_1$, and $pd \to dX_2$ reactions is carried out. Narrow structures with masses 1904 ± 2, 1926 ± 2 and 1942 ± 2 MeV have been observed in the missing mass M_X spectra. In the missing mass M_{X_1} spectra, the peaks at $M_{X_1} = 966 \pm 2$, 986 ± 2, and 1003 ± 2 MeV have been found. A possible interpretation of "exotic low mass states" with the baryon numbers B=1 and B=2 observed in the mass spectra is suggested.

1. L.V.Fil'kov, V.L. Kashevarov, E.S.Konobeevski *et al.*, Phys. Rev. C**61**, (2000), 044004.
2. L.V.Fil'kov, V.L. Kashevarov, E.S.Konobeevski et al., Eur. Phys. J. A**12**, (2001), 369.