

Список основных научных трудов и изобретений

Ю.А. Плиса

1. Yu. A. Plis et al. Research and Development of the Polarized Deuteron Source for the Van de Graaff Accelerator. PEPAN Letters. **16** (2019) 256-263.
2. B.B. Абрамов,..., Ю.А. Плис и др. Концептуальный проект эксперимента СПАСЧАРМ. PEPAN. **54** (2023) 6-189.
3. I.V. Gapienko, ..., Yu.A. Plis, Yu.A. Usov. Research and Development of the Polarized Deuteron Source for the Electrostatic Accelerator. Preprint JINR E13-2023-12, 2023, PEPAN Letters. **20** (2023) 1409-1418.

Некоторые ранние работы

1. V.V. Abramov, ... , Yu.A. Plis, et al., Analyzing power in the reaction  $pp\uparrow \rightarrow \pi^0 X$  in the polarized target fragmentation at an energy of 50 GeV. Physics of Atomic Nucl. **77** (2014) 595-601.
2. V.V, Fimushkin, ..., Yu.A. Plis, Yu. V. Prokofichev, Transition of polarized ions through the system of ring permanent magnets; Proc. of 16<sup>th</sup> Workshop on High Energy Spin Physics (DSPIN-15) J. Phys. Conf. Ser. **678** (2016) no.1, 012003.
3. G.M. Gurevich, ..., Yu.A. Plis et al., On the feasibility of using an extracted polarized antiproton beam of the HESR with a solid polarized target. XVI Intern. Workshop on Polarized Sources, Targets and Polarimetry, Bohum. Germany. PoS (PSTP2015) 043.
4. V.V. Fimushkin, ..., Yu.A. Plis et al. Sources of polarized ions and polarized beams of the NUCLOTRON. XVII Intern. Workshop on Polarized Sources, Targets and Polarimetry, 16-20 October 2017, Kaist, South Korea. PoS (PSTP2017) 019.
5. V.V. Fimushkin,..., Yu. A. Plis, et al. The SPI source of polarized ions for the NUCLOTRON. SPIN 2018 – 23<sup>rd</sup> Intern. Spin Physics Symp. 10-14 September 2018, Ferrara, Italy, pp.31-36.
6. Yu.A. Plis, G.M. Gurevich, Yu.A. Usov, Polarized deuteron source for Van de Graaff accelerator. SPIN 2018 – 23<sup>rd</sup> Intern. Spin Physics Symp. 10-14 September 2018, Ferrara, Italy, pp. 265-273.
7. V.V. Abramov, ... Yu.A. Plis et al., Preparation of the new polarization experiment SPASCHARM at IHEP. J. Phys. Conf. Ser. **295** (2011) 012018.
8. V.V. Mochalov, ... Yu.A. Plis et al. Measurement of the single-spin asymmetry in the reaction  $\pi^- d \uparrow \rightarrow \pi^0 X$  in the beam-fragmentation region at 40 GeV and  $p(T)$  of up to 2 GeV/c. Phys. Atom. Nucl. **73** (2010) 2017-2021; «Ядерная физика» **73** (2010) 2072-2076.
9. Yu.A. Plis, Yu. V. Prokofichev. A study of polarized metastable helium-3 atomic beam production. DSPIN-09 (2010) 419-422.

10. V.V. Mochalov, ... Yu.A. Plis et al. The completion of single-spin asymmetry measurements at the PROZA setup. *DSPIN-09* (2010) 250-255.
11. V.V. Abramov, ... Yu.A. Plis et al. The first stage of polarization program SPASCHARM at the accelerator U-70 of IHEP. *DSPIN-09* (2010) 274-281.
12. A.N. Fedorov, I.V. Gapienko, Yu.A. Plis. Polarized ion production via passage through a nickel foil. *DSPIN-11* (2012) 385-388.
13. Yu.A. Plis et al. A study of polarized metastable  ${}^3\text{He}$  beam production. *Polarized Sources, Targets and Polarimetry. Proc. of 13<sup>th</sup> Int. Workshop. Ferrara, Italy, 2009*, pp. 265-273.
14. V.V. Fimushkin, ... Yu.A. Plis et al. The new source of polarized ions for the JINR Accelerator Complex. *Polarized Sources, Targets and Polarimetry. Proc. of 13<sup>th</sup> Int. Workshop. Ferrara, Italy, 2009*, pp. 31-36.
15. Yu.A. Plis et al. A proposal of polarized  ${}^3\text{He}^{++}$  ion source for NUCLOTRON-M. *Relativistic Nuclear Physics and Quantum Chromodynamics, v. II. (2008) Proc. of the XIX Int. Baldin Seminar on High Energy Physics Problems.* pp. 3-8.
16. I. V. Gapienko, Yu.A. Plis. Density matrix in technique of polarized ion sources. *SPIN2012. Dubna. Phys. Part. Nucl. **45*** (2014) part. 1.
17. I.V. Gapienko, Yu.A. Plis. Optimization of polarized ion source parameters with the density matrix. *ASI2013. Prague. Not published.*
18. I.M. Sitnik, ... Yu.A. Plis. Precessing deuteron polarization. *Письма в ЭЧАЯ. 2002. №2[111] 22-27*
19. V.I. Sharov, ... Yu.A. Plis et al. Measurements of the np total cross section difference  $\Delta\sigma_L$  at 1.59, 1.79 and 2.20 GeV. *Eur. Phys. J. **C13*** (2000) 255-265.
20. А.Н. Васильев, ... Ю.А. Плис и др. Поиск односпиновой асимметрии инклузивного рождения  $\pi^0$  – мезонов в центральной области при энергии протонного пучка 70 ГэВ (сотрудничество ПРОЗА-М). *Ядерная физика. **67*** (2004) 1512-1519
21. N.S. Borisov, ... Yu.A. Plis et al. Experimental research of the NN scattering with polarized particles at the VdG accelerator of Charles University. Project “NN interactions”. *Письма в ЭЧАЯ. 2002. №4[113] 86-94.*
22. M. Tanaka, Yu.A. Plis et al. Polarized  ${}^3\text{He}^{2+}$  ion source based on spin-exchange collisions between  ${}^3\text{He}^+$  ion and polarized Rb atoms. *NIM A **537*** (2005) 501-509.
23. M. Tanaka, N. Shimakura, Yu.A. Plis. Production of polarized  ${}^3\text{He}^{2+}$  ion by ECR ionizer. *NIM. A **524*** (2004) 46-59.
24. M. Tanaka, ... Yu.A. Plis et al. Production of a nuclearly polarized  ${}^3\text{He}^+$  beam by multiple electron capture and stripping collisions. *Phys. Rev. A **60*** (1999) R3354-3357.
25. Л.Л. Немёнов, Ю.А. Плис и др. Применение углеродной плёнки для генерации вторичных частиц на протонных синхротронах. *ПТЭ. №3* (1980) 41.

26. Ю.А. Плис, Л.М. Сороко. Поляриметр пучка медленных протонов с использованием лэмбовского сдвига. ПТЭ. №3 (1977) 46.
27. N.S. Borisov,... Yu.A. Plis et al. Target with a frozen nuclear polarization for experiments at low energies. NIM. A **345** (1994) 421.
28. F. Lehar,... Yu.A. Plis et al. The movable polarized target as a basic equipment for high energy spin physics experiments at the JINR-Dubna accelerator complex. NIM. A **356** (1995) 58.
29. J. Broz,... Yu.A. Plis et al. Measurement of spin dependent total cross-section difference in neutron-proton scattering at 16 MeV. Z. Phys. A **354** (1996) 401-408.
30. B.P. Adiasevich, ... Yu.A. Plis et al. Measurement of the total cross section difference  $\Delta\sigma_L$  in np transmission at 1.19, 2.49 and 3.65 GeV. Z. Phys. C **71** (1996) 65.
31. А.А. Белушкина, ... Ю.А. Плис и др. Криогенный источник поляризованных атомов водорода идейтерия. ПТЭ. №6 (1976) 31-34.
32. Ю.А. Плис, Л.М. Сороко. Современное состояние физики и техники получения пучков поляризованных ионов. УФН. **107** (1972) 281-319.

#### Изобретения

1. Способ получения пучка поляризованных ионов. Авт. свид. №312398. 1970.
2. Способ получения пучка поляризованных ионов. Авт. свид. №316420. 1970.
3. Диссоциатор газа. Авт. свид. №425378. 1971.

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