1116-46-901 **Sofya S Masharipova*** (`sofya.masharipova@ashford.edu`), Ashford University, College HHSS, 400 N. Bluff Blvd, Clinton, IA 52732, and **Shukhrat M Usmanov** (`shukhrat.usmanov@ashford.edu`), Ashford University, College HHSS, 400 N. Bluff Blvd, Clinton, IA. *Positive cones, positive linear functionals and classification of algebras of operators on Pontryagin Π_1 space.* Preliminary report.

It is well known that in Pontryagin Π_1 space with an indefinite metrics all weakly closed algebras of bounded operators can be classified by 6 classes (models): types 0, I, II_a, II_b, III_a, III_b, accordingly to work of V. S. Shulman (Mat. Sbornik, 1972, 89, No 2). In this work we study positive operators on different classes of such algebras. The cones of positive operators are described. Also, we define positive linear functionals on such algebras. We study some important conditions, such as normality and trace property, for positive functionals, and define finite and semi-finite traces. It allows us to introduce finite, semi-finite and properly infinite algebras of operators on Pontryagin Π_1 space. (Received September 15, 2015)