The goal of my work was to update a temporary protocol "MNF14" developed in our laboratory. This is solved by the use of the quantum properties of entangled photon by polarization.

For generate these photons is used a system of two successive BBO crystal, cut at the first type of synchronism and rotated relative to each other. Experimentally two photons produced by spontaneous parametric scattering, before recording pass through the polarizers and then fall on the photodetector. For each polarizer chosen one of the 4 position forming two bases, laboratory and diagonal. In the chosen basis measurement lasts a finite time, so that each measured polarization corresponds to a certain time sample. The author did series of out the necessary experiments and wrote software for the analysis of experimental data.

When forming a key, as is usual for the quantum cryptography, subscribers exchange part of the information on the classical channel. Transmits information about the basis in which the photon was registered (laboratory or diagonal) and the corresponding sampling time with zeroed bit of uncertainty, it need for temporary coding. After that, the cryptographic key is generated. The polarization coding is comparison each of the measured four states 0 or 1, and recovery time is uncertain bit.