

OFFICIAL AGREEMENT FOR STUDIES ON THE NEUTRALIZATION OF DENSE ELECTRON BEAMS

This document is the official agreement between CERN (European Organization for Nuclear Research) in Geneva, JINR (Joint Institute for Nuclear Research) in Dubna, and INP (Budker Institute for Nuclear Physics) in Novosibirsk, concerning the studies and experiments on techniques aiming to neutralize dense electron beams to be used on the CERN-LEAR cooler and on the JINR-K-4 cooler project to produce very cooled dense ion beams.

The tests and experiments will be made on "test benches" actually operational at CERN and JINR, and on the coolers themselves.

The studies to be performed in the frame of this collaboration may involve Russian experts from some other Russian laboratories by mutual agreement between all the laboratories concerned, and by addendum to this agreement.

1. PROGRAMME OF STUDIES, EXCHANGE OF EXPERTS

The programme of studies and of experiments is set up by all the experts involved in this collaboration. Each laboratory will cover the expenses for the experiments made in situ; however, the delivery of some hardware items is foreseen between the laboratories.

The annual budget will not exceed:

- For CERN: an equivalent of 7 man-month subsistence dedicated to the visit of Russian experts to CERN, and kCHF 20.- for the delivery of some components and/or for funding some students preparing a doctoral thesis in this field.
- For JINR and INP: an equivalent of 3 man-month subsistence dedicated to the visit of CERN experts.

2. OBLIGATIONS OF THE LABORATORIES INVOLVED

CERN

- Participates in the studies and experiments on the test benches and electron coolers,
- Covers the subsistence of the visiting Russian experts in Geneva, including health insurance,
- Pays for the travel expenses of the CERN specialists between Geneva and Moscow.

JINR and INP

- Participate in the studies and experiments on the test benches and electron coolers,
- Cover the subsistence and travel expenses of the CERN experts in Russia,
- Pay for the travel expenses of the Russian experts between their home station and Geneva,
- Provide some hardware components to CERN.

CERN, JINR and INP

- The laboratories agree that the papers related to this collaboration must be submitted to the Coordinators (see Chapter 3) prior to any publication.

3. COORDINATION OF THE COLLABORATION

There are two Coordinators:

For CERN: Dr. Jacques BOSSER
For JINR and INP: Prof. Igor MESHKOV

4. DURATION OF THE COLLABORATION

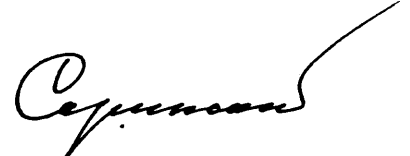
The collaboration will start on January 1, 1994 for a period of two years with the possibility of an extension for a further period of two years. It can be cancelled at any time by CERN or JINR or INP with no obligations.



L. Montanet
CERN



V. Kadyshevsky
JINR



A. Skrinsky
INP