

ELISA – the world’s first (?!) electrostatic storage ring

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I will give a description of my personal involvement in the conception, development and first years of operation of the ELISA electrostatic storage ring. The realization of such an electrostatic storage ring might in retrospect seem trivial, but at the time many concerns arose.

I believe the success was due to the availability of the right resources and experience at the right time including:

1. The construction and operation of the MAGNETIC dual purpose ion AND electron storage ring ASTRID
2. Knowledge, experience and design tools for storage rings
3. Experiments with atomic and molecular ions in ASTRID
4. Experience with electrostatic elements
5. Mature technical design and workshops

Some “pre-historic” developments will be presented, as will some of the early physics results at ELISA. I will not give an overview of the field, but mention some of the little and bigger “sister” rings and “cousin” traps.