

History of the Hungary–JINR relations

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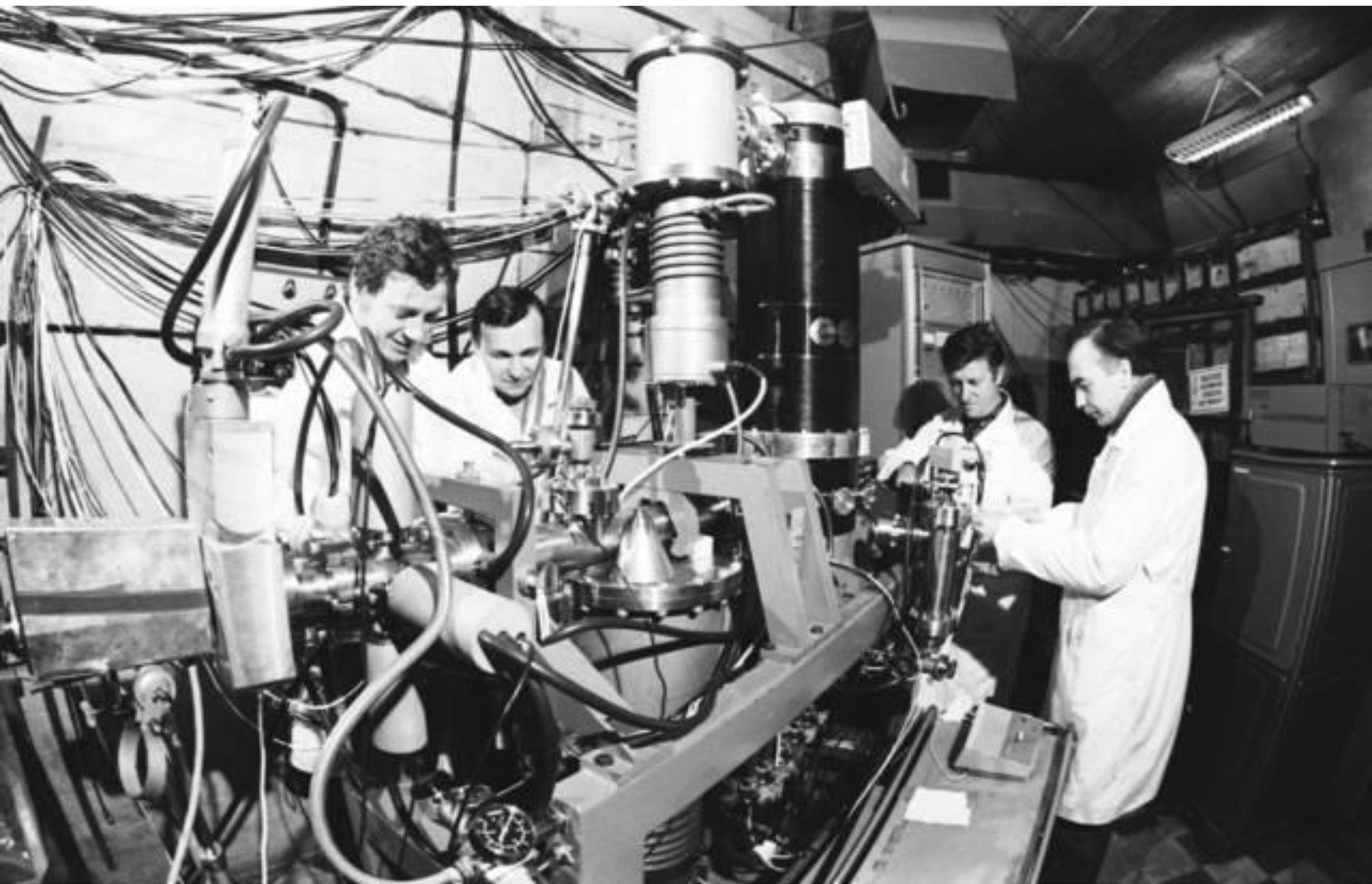


1956–1992



1956–1992

- 1964: The JINR–CERN agreement opens access to CERN for Hungarian scientists.
- The sixties and the early seventies: Hungarian scientists in Dubna mainly concentrate on high-energy particle physics.
- Late sixties to the eighties: condensed-matter physics (mainly based on neutron scattering and interaction of swift heavy ions with materials) plays an increasing role in Hungarian JINR activities.



1956-1992



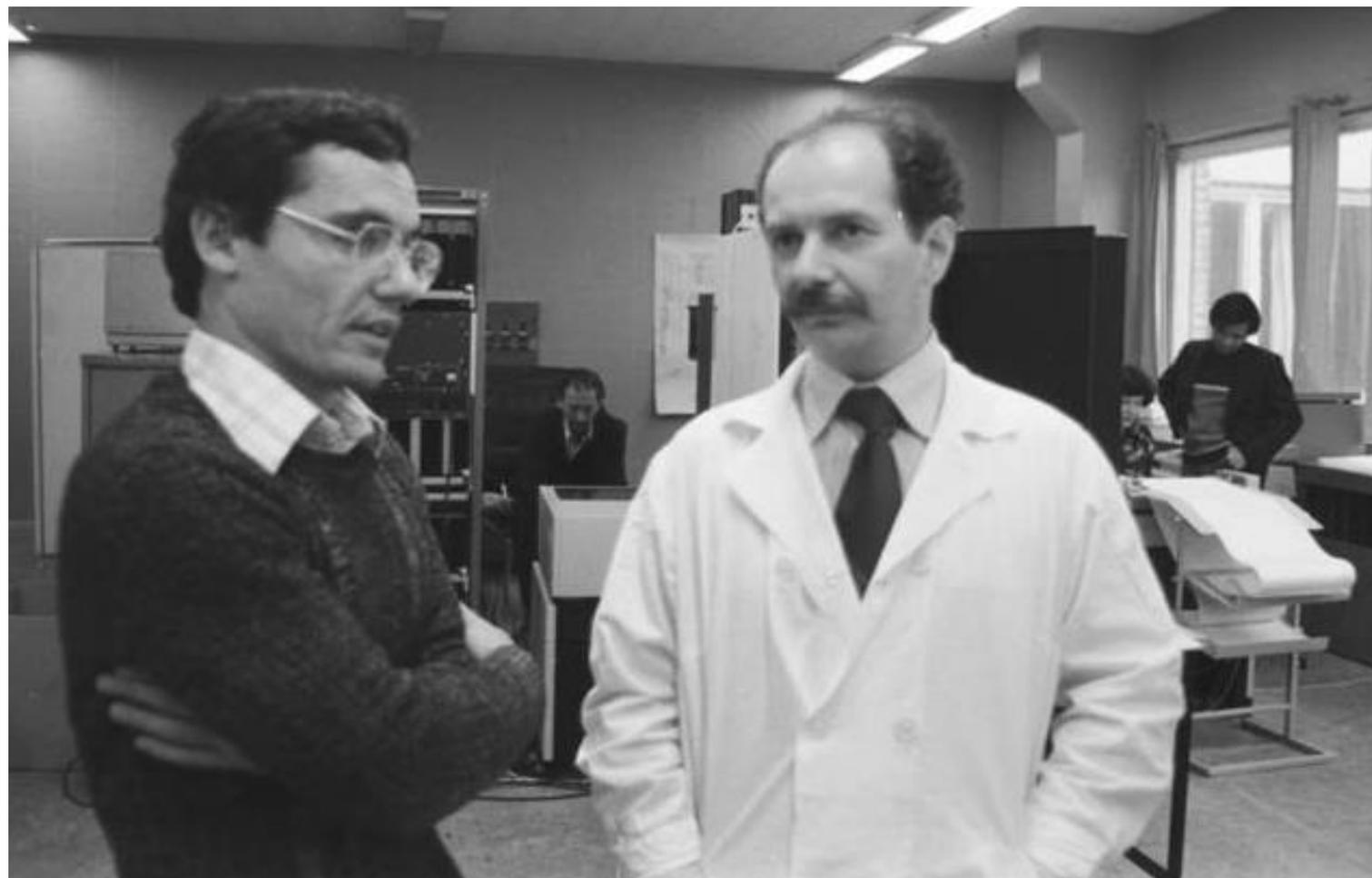
1956-1992



1956-1992



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1956–1992

- 1992: The Hungarian Government decides to terminate Hungary's membership in JINR thereby ending Hungary's relations to JINR at a governmental level.
- The Government entrusts the Hungarian Academy of Sciences to conclude a non-governmental bilateral agreement with JINR and allocates 150.000 \$ to the cooperation.

1993–2010

- 1993: HAS–JINR bilateral agreement is concluded for three years.
 - Hungarian contribution: 150.000 \$/year.
 - The Hungarian membership is replaced by an observer status in the Committee of Plenipotentiaries.
 - The agreement is supervised by a Common Coordination Committee of two members.
 - Hungary focuses on neutron scattering, swift heavy-ion implantation and theory.

1993–2010

- 1996: Prolongation of the agreement until 1998.
- 1999: Prolongation of the agreement until 2001.
- Features of the period 1993–2001:
 - Old topics, formal grant system.
 - Due to inflation, contribution gradually decreases to 90.000 \$/year.

1993-2008

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1993–2010

- Real grant system supervised by the Dubna Committee of the Section of Physics of HAS.
 - New topics have been started:
 - heavy-ion implantation: ion-track analysis;
 - neutron scattering: magnetic thin films, ferrofluids, fullerenes, education and training;
 - theory: thermodynamics of the quark-gluon plasma.
 - Young people join the collaboration both at JINR and in Hungary.

1993–2010

- 2004: Successful JINR–HAS seminar in Budapest with 48 participants. Recommendation of the Dubna Committee endorsed by the Physics Section:
 - Slight increase of the contribution to 74.000 €/year.
 - Prolongation of the agreement for an indefinite time.
 - 42.550 €/year transferred to JINR,
 - 31.450 €/year for JINR–HAS mobility.

1993–2010

- 2005–2008:
 - 7 projects including about 40 Hungarian scientists from 7 different HAS and university groups, another 40 scientists being indirectly involved.
 - Common experimental activities at JINR, in Hungary and at other research infrastructures.
- 2008: new Dubna Committee belonging directly to the HAS Secretary General.

1993–2010

- 2008: Successful JINR Days in Budapest with more than 100 participants jointly organized by the Hungarian Academy of Sciences, the National Office for Research and Development and JINR.
- 2010: Lacking appropriate funding, the Hungarian Academy of Sciences is no longer able to financially support the cooperation of Hungarian scientists with various foreign research infrastructures including JINR.

2011–2018

- 2011: New initiative from governmental bodies in Hungary: find a new scheme for the Hungary–JINR scientific cooperation in frames of a broader economic and technological programme with Russia.
- 2012: A search campaign for Hungarian SMEs that may contribute with their products to constructing and developing JINR facilities.
- 28 September 2012: exhibition and round-table discussion with Hungarian SMEs in Dubna supported by the National Innovation Office.

2011–2018

- Lacking financial support, the scientific collaboration gradually decreases and in some fields (e.g. swift heavy ion implantation) has been practically discontinued.
- A low-level collaboration occasionally financed from third-party projects in neutron scattering still exists (common research in small-angle neutron scattering, common development of a neutron reflectometer at the Budapest Neutron Center, etc.).

2011–2018

- Hungarian companies (Mirrotron Ltd., Technoorg – Linda Ltd., etc.) deliver scientific instruments to JINR on a commercial basis (in some years in a volume of 100 k€ or more). Also further Hungarian companies (e.g. National Instruments Hungary Ltd.) expressed interest in delivering instruments to JINR.
- 2016: JINR Day at the Russian Cultural Center in Budapest with about 40 participants including students.

2011–2018

- New collaboration, mainly in theoretical physics, is emerging in connection with the NICA project (Wigner RCP).
- Atomki expressed potential interest in collaboration with JINR in various fields including theoretical nuclear physics, detector development, synthesis of superheavy elements, condensed/matter physics, materials sciences, radiobiology and environmental sciences.
- 2017: participants from Wigner RCP and Atomki at JINR training courses.

How to start a new era?

- The grant system supporting the collaboration of Hungarian and JINR scientists should be restored in Hungary.
- JINR grants should be opened for Hungarian student and young scientists.
- Associate membership of Hungary to JINR should be contracted at governmental level.
- Major part of the Hungarian membership fee should be brought up in form of in-kind contributions.

Thank you for your attention!