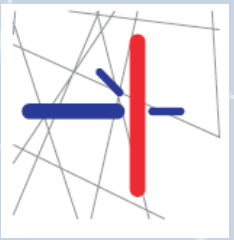
C A N A M

Center of Accelerators and Nuclear Analytical Methods



Meeting of Scientific Advisory Committee 2015

Center of Accelerators and Nuclear Analytical Methods

canam.ujf.cas.cz

Laboratory of Cyclotron and Fast Neutron Generators (LC & FNG)

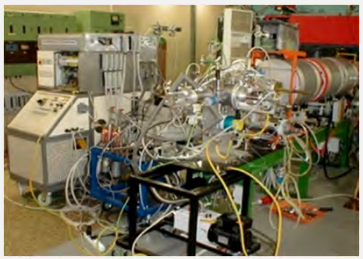
Operating the isochronus cyclotron U-120M

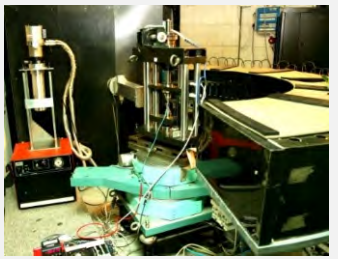
Laboratory of Tandetron (LT)

Operating an accelerator Tandetron 4130 MC

Neutron Physics Laboratory (NPL)

Providing facilities at the reactor LVR-15





NPI major Czech institution in nuclear physics field

~ 275 employees (216 FTE) **~ 80 scientists (57 FTE)** **~ 30 PhD students**

22 postdocs

annual budget 182.5 mil CZK (6.6 MEUR)
(50% CAS, 50% targeted support)

CANAM - (FTE relates only to infrastructure)

~ 91 persons (48 FTE) **~ 30 scientists (10 FTE)** **~ 7 PhD students**

4 postdocs

annual budget 57.7 mil CZK (2.1 MEUR)
(31% CAS, 69% targeted support)

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evaluation of NPI CAS is ongoing for 2010 – 2014 period

operation and administration of research infrastructures is concerned

- **physics panel**
- **chemistry panel**

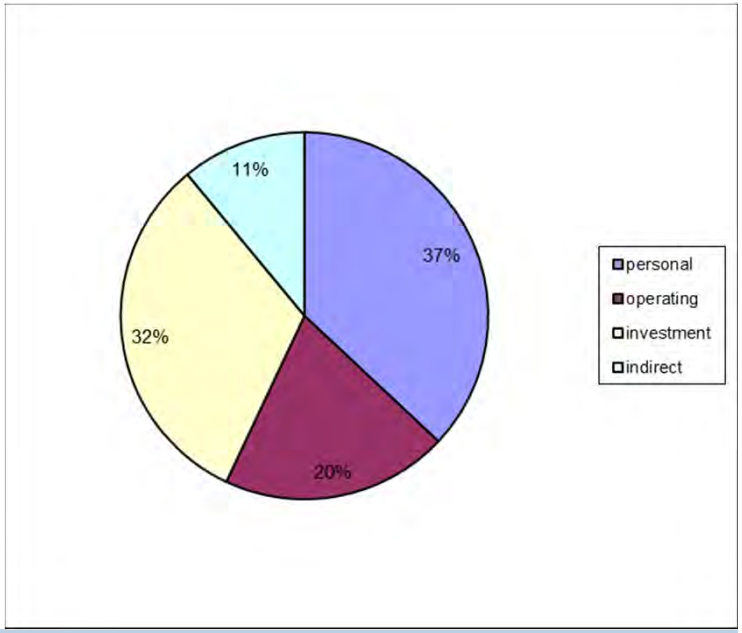
MEYS Program
Projects of the large infrastructures for R&D

33 projects financed / approved by the Czech Government

CANAM financed from 2012

Finances for CANAM 2015

	kCZK	(k€)
MEYS	40 000	(1 480)
NPI+ASCR	17 740	(660)
Total	57 740	(2 140)



MEYS performed a comprehensive evaluation of research infrastructures of the Czech Republic

International Evaluation Committee + Scientific Boards for research areas

evaluation carried out in 2 stages

stage 1 **Form A focused on general criteria**

stage 2 **Form B detailed data (60 pages + 29 annexes) - 3 expert reviewers**
Form C user questionnaire - 5 institutions addressed

interview with the Scientific Board for research area

stage 1 119 proposals submitted
58 passed successfully

stage 2 A1 Highest priority ≈ 27 % – 17 RIs
A2 High priority ≈ 39 % – 25 RIs
A3 Medium priority ≈ 13 % – 8 RIs
A4 Low priority ≈ 13 % – 8 RIs

42 RIs graded A1 and A2:
Social Sciences and Humanities – 6
Environmental Sciences – 5
Physical Sciences – 17
Energy – 5
Biomedicine – 7
ICT / e-Infrastructures – 2

CANAM graded A2

recommended to be financed for 2016 – 2022 period

- operational costs funded by the MEYS
- investment costs - European Structural and Investment Funds

SAC: A strategic plan 2017-2022 is timely needed

self-reflection on the existing capabilities

the most important ion and neutron sources and accompanied techniques in the CR
importance for - basic nuclear physics research
- application techniques and methods of nuclear physics
uniqueness
multidisciplinarity - 22 scientific disciplines in 2014

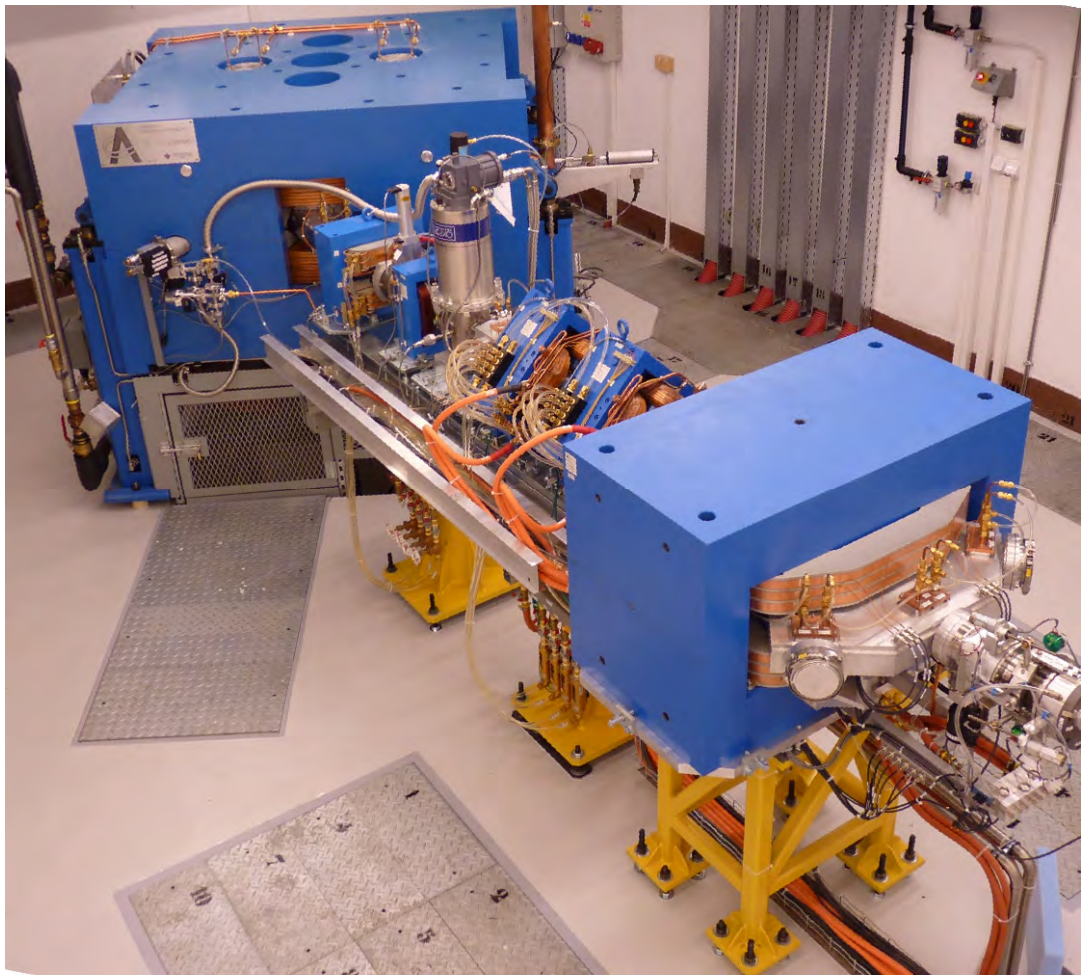
potential future capabilities

- **the purchase of the new TR24 cyclotron**

CANAM: 2013 – 2015 UPGRADE

Cyclotron TR24

investment 220 mil. CZK (8 MEUR)
CAS, MEYS, NPI



evaluation of current and future stakeholder's requirements -

CAS Strategy AV21 - directly in 3 research programs

National priorities for oriented research, experimental development and innovations' - in 4 priority areas

SWOT analysis

implementation plan

uniqueness

combination of three CANAM laboratories
some of the techniques - high power fast neutron generators
- medium ion (C,N,O,Si) ion microbeam
- neutron depth profiling
- high-resolution neutron diffraction experiments

European networks

European Consortium on Nuclear Data
European Nuclear Science and Applications Research
European Research Infrastructures for Nuclear Data Applications
Integrated Infrastructure Initiative for Neutron Scattering and Muon Spectroscopy

Users

Czech users (from 36 institutions)
foreign groups and researchers (from 119 institutions)

Recommendations of SAC – 2013 MARKETING, OUTREACH

marketing

40 presentations

outreach

popular presentations and publications
open days

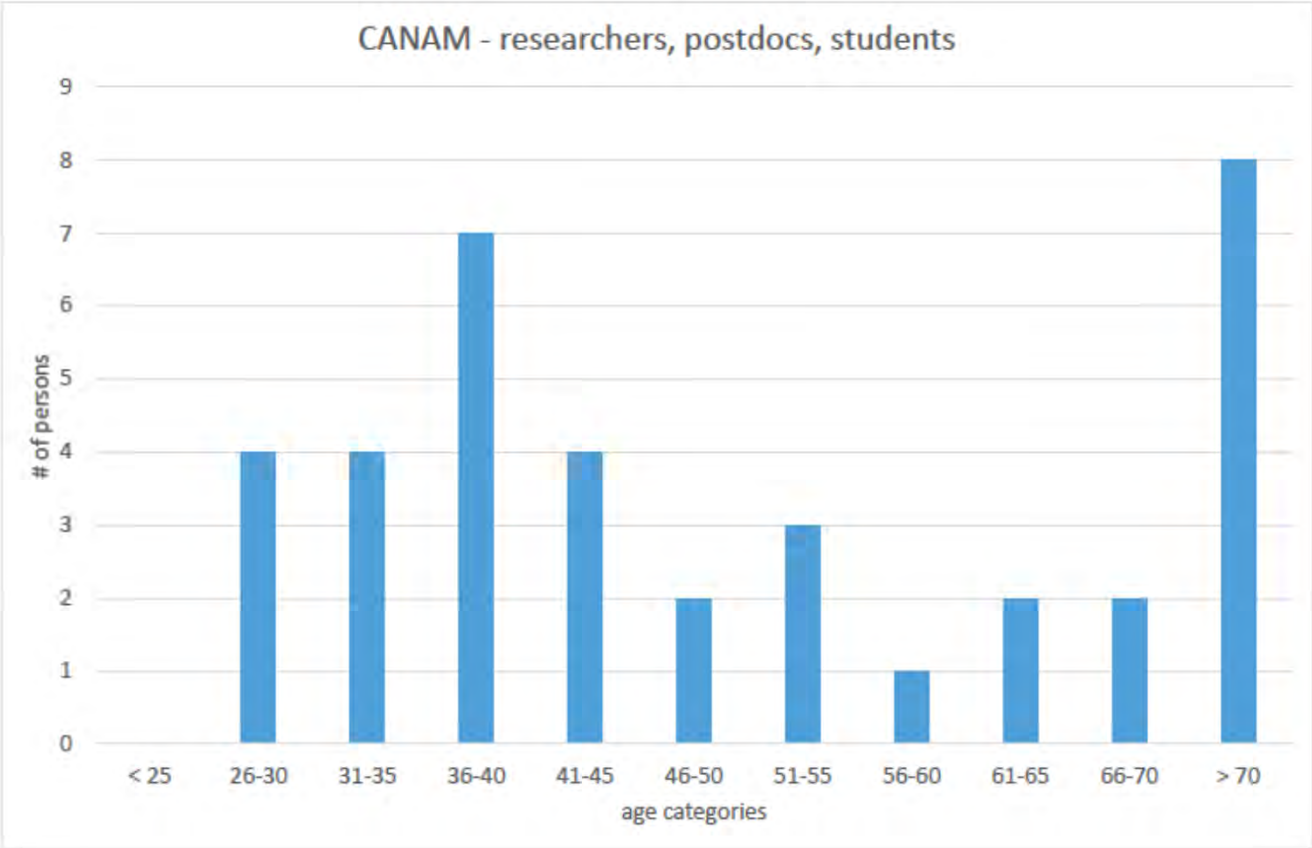
proportion of its own research and research made in cooperation with external users

own research – up to 45% of the distributed beamtime
open access – at least 40% of the distributed beamtime
commercial users -max. 15 %

own strategic research

research of the CANAM scientific staff

age structure



criteria for evaluation of the proposals

two independent referees

proposals graded from A+ to D (from 10 to 1)

>8 → the beam time is allocated preferentially

4-8 → the beam time allocation is done by IR

2-4 → the beam time allocation is done by a coordinator of the laboratory

< 2 → the proposal is refused

feedback

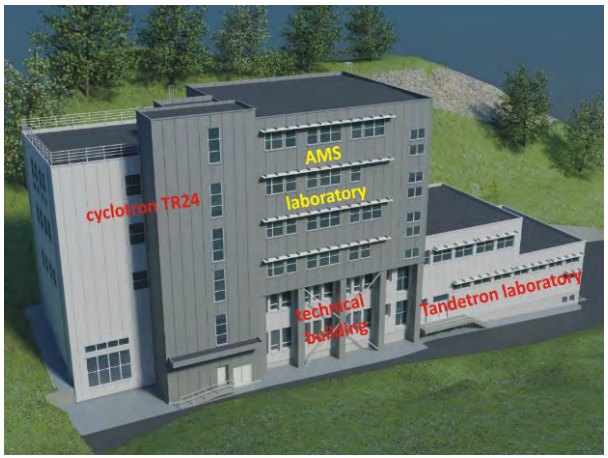
users asked for feedback, not much response

TR24 cyclotron

- **implementation of a new ion beam line with external chopping system**
- **high-power neutron targets**
- **high-power targets for production of novel radionuclides**

positron lifetime spectroscopy, high resolution mass spectrometry, and neutron imaging

- **Accelerator Mass Spectrometry (AMS) using the 1 MV accelerator planned**
- **presently AMS not available in the CR**
- **extend capabilities for low level determination of long-lived radionuclides**



EU SF project, est. budget 200 mil. CZK (7.3 MEUR)

- successfully passed evaluation
- infrastructure recognition and support for 2016 - 2022
- important financial aspects
- developments - TR-24, AMS
- impact on scientific research and collaboration
- responsibilities and commitments
- significant role of Scientific Expert Panels and Scientific Advisory Committee

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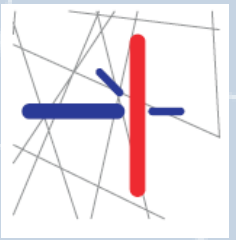

Thank you for your attention

Presented by Jan Dobeš
main coordinator of the CANAM project