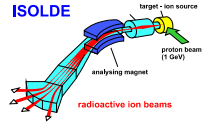


ISOLDE technical report

Mats Lindroos on behalf of the
ISOLDE team



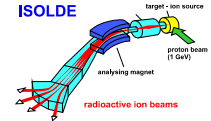
Outline



- REX status
- Progress of shutdown work
- Operation in 2005



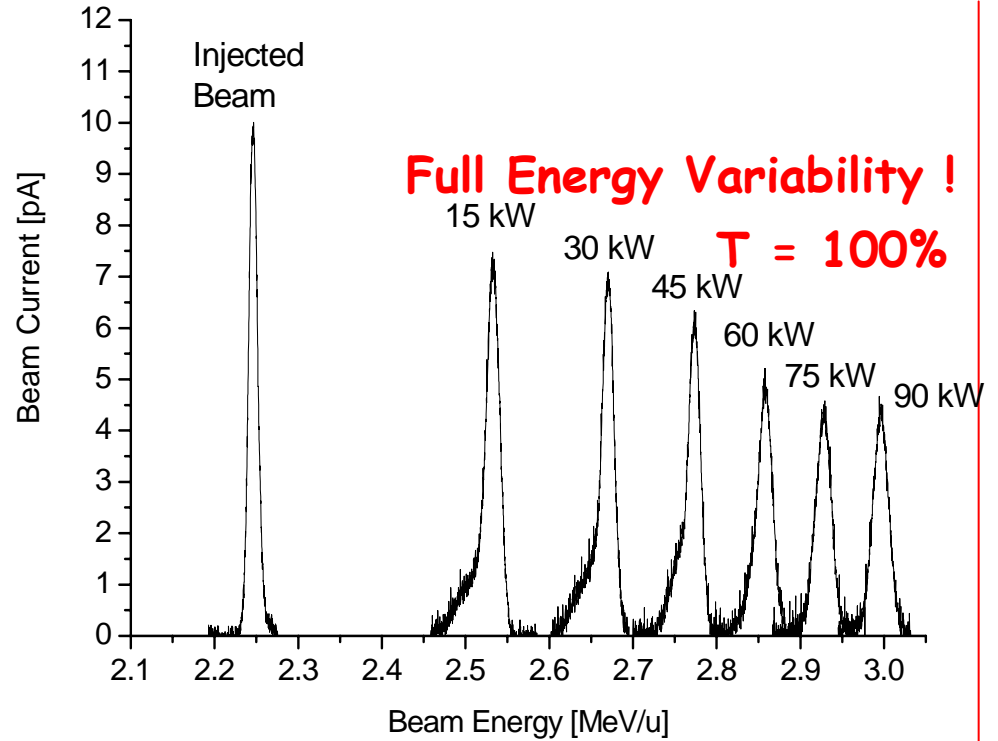
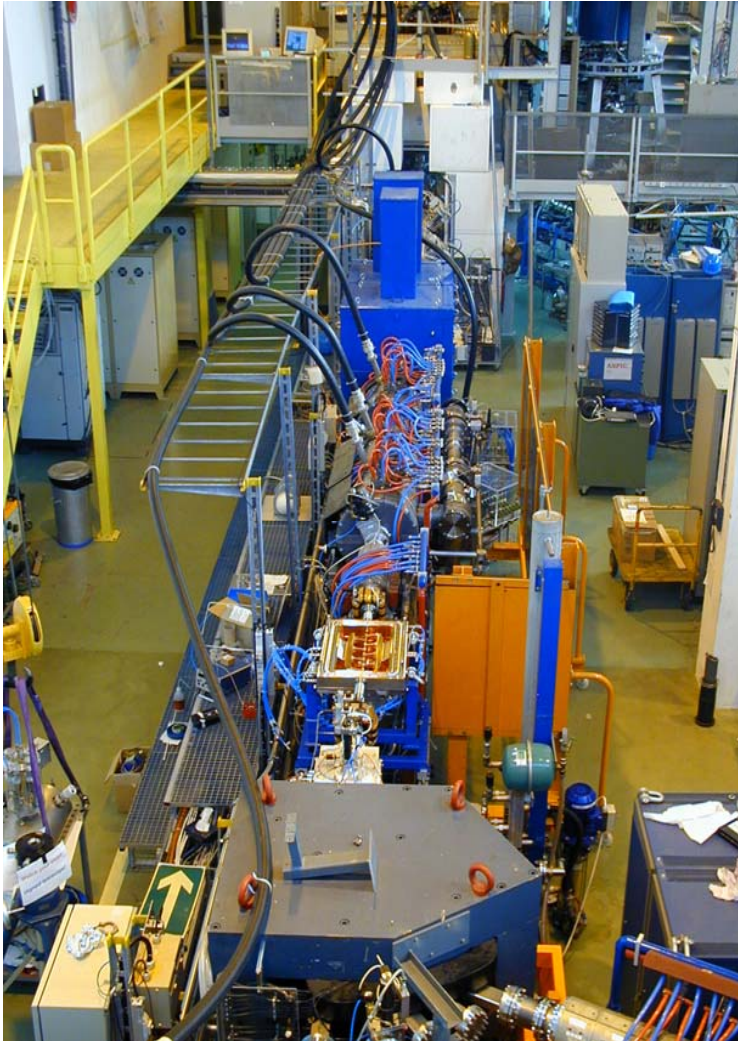
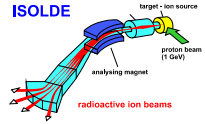
REX low energy stage in 2004



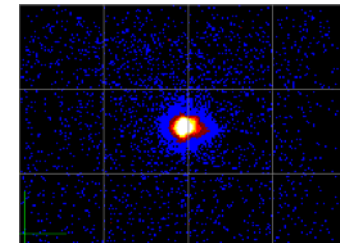
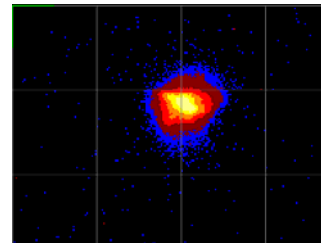
Element	Charge	A/q	Breeding time (ms)	Comments
^{9,11} Li	2, 3+	4.5, 3.0	5-8	Without/with stripper foil Ne and Ar buffer gases
²⁴⁻²⁹ Na	7,8+	3.43 - 4.14	15	
^{28,30,31,32} Mg	9,7,8,9+	3.11-4.29	14-18	
⁸⁸ Kr	21+	4.19	38	
^{74,76,78} Zn	20,20,21+	3.62 - 3.71	38 (2003) 78 (2004)	
^{122,124,126} Cd	30,30,31+	4.06 - 4.13	148	
¹⁵⁶ Eu	30+	5.2	38	Only RFQ 300 keV/u
¹⁵³ Sm	27,28+	5.46-5.67	30	Only RFQ 300 keV/u
⁷⁰ Se	17+	4.12	33	Molecular sideband
¹⁷ F	5+	3.4	8	With stripper foil
¹¹⁰ Sn	27+	4.07	98	
¹⁴⁸ Pm	30+	4.93	38?	Only RFQ 300 keV/u



REX linac

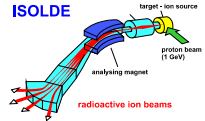


2.2 MeV/u **3 MeV/u, 2BL**





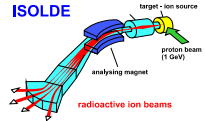
REX integration



- Activity under the responsibility of the ISOLDE technical coordinator
- Weekly meetings with key staff with minutes
 - Problems requiring action by technical coordinator
 - Notes on latest run: problems, lessons learnt etc.
 - Budget follow-up
 - Future planning



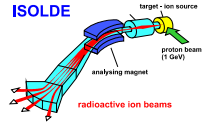
Status



- Linac and RF amplifier
 - AB-RF, working very well and well integrated
- Low energy stage
 - AB-ABP, fantastic results in 2004!
 - Lack of technical support
- Vacuum system
 - AT-VAC, good work but heavy additional load for small section
- Power supplies
 - AB-PO, working very well and well integrated
 - First stage of migration to AB standards in 2005 (low level power control)
- Beam instrumentation
 - First contacts with BDI group in 2004
- Control system
 - AB-CO, working very well. First stage of migration planned for 2005 run



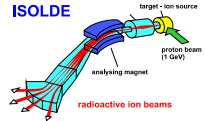
Good news



- 100 Hz operation of Linac possibly starting in July/August (introduced for ^{11}Li , but maybe also interesting for MB people)
- A principle problem was identified in the RF-Cavity of 200 MHz system, so we expect much more stable operation after the cavity is modified
- At 3 MeV/u the max. A/q is still 3.5, no change compared to last year
- LORASR calculations by O. Kester shows that the beam spot can be improved in miniball
- EBIS LN system repaired and magnetic field re-aligned
- New support person from AB-CO industrial support contract for PC (XP) control system
- Project associate from Russia arrives in spring 2005 to work on REX instrumentation



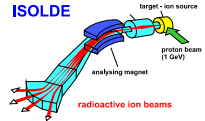
Setting up time at REX



- Major problem with peak need of staff during setting-up and running at REX
- Proposed actions:
 - Form minimal supervisor team for 2005
 - Study long term solution involving OP group
 - Schedule setting-up time as MD time to avoid Users feeling that physics beam-time is "lost" and permit legal working hours to be respected (safety!)



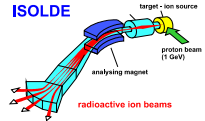
Progress of shutdown work



- Maintenance of ventilation and cooling water completed
- Mistral beam line reconfiguration completed
- Misalignment for MISTRAL and Tags understood, new steering quad to be created
- Quad added for HRS beam line to improve transmission
- CA0.FC90 faraday cup removed, holder can be obstacle for "right-hand" beam lines.
- Extension will be completed in time, protecting wall to be removed in April



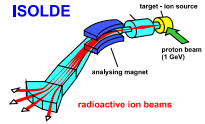
ATB activities



- Class A lab will be completed in time for 2005 run
- Tests of FE6 started, ready as spare for 2005 run
- RFQ cooler grant received from UK
 - Assembly at off-tests to be completed in 2005
 - Installation in 2005-2006 shutdown if off-line tests are satisfactory
- Preparation of proposal for new pump-lasers to replace aging CV lasers under preparation in Sweden



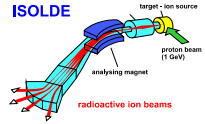
Operation in 2005



- EIC on duty in ISOLDE control room 9:30-11:30 during all runs.
 - Please, make sure to be present in the control room during this period to establish work plan for the day!
- New visible indication of EIC on duty (including telephone numbers)



ISOLDE experimental area support



- Retirements coinciding with SL/PS merging left ISOLDE experimental area without support (covered as part of booster, PS transfer lines ,...)
 - Work package for ISOLDE experimental area support
 - Decision on which group to manage it
 - Support includes technical support for REX