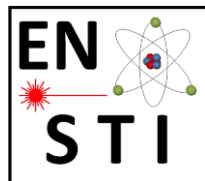




CERN-MEDICIS Commissioning for 2017 – what's new ?

Thierry Stora – ISCC 6th Nov 2017

Acknowledgements : S. Marzari, A. P. Bernardes, K. Kershaw, R. Catherall, S. Prodon



Update from Last ISCC

Starting-up:

Stable commissioning in September → 1st stable beam... this week ?

Start with low isotope activities irradiated at CERN and at ILL (169Er) in October/November. → ILL next year, still aiming at 44Sc/155Tb from CERN

Meeting soon to clarify Collab budget + start-up → updated MoU to be circulated after comments of director in charge of medical applications

More detailed planning

MEDICIS Operation and Commissioning

Plans - 6th Oct 2017 - T. Stora	Calendar								
	43	44	45	46	47	48	49	50	51
V2.0									
Equipment									
Front-End									
gas system for plasma source									
Magnet	--> 43/44	magnet + p conv comm. (interlocks F End) Turel/M. Dumas							
Diffusion chamber									
Diagnostics box	Michel the ?								
Collection point		collection box installation (Stefano)							
Peripheral and bunker shielding									installation (Keith/DIB)
Transfer trolley									
Shielded Fume hood with intro/exit chambers									
Radiochemistry module									
Buffer area - module/liquid waste storage									
Robot commissioning					com (15 days) into YETs (RCS/Kuka Trajectory)				
Radioactive shipping									
Interlocks									
cabling			Collection box connect. (Stefano/Christophe)						
water circuit			Water comm (Hassane) 30oct						
Front-End PLC	simul interlock	Fend PLC comm(with simul inter	Fend PLC comm(with simul interlock Vac)						
Power converters		reception (HSE) + p conv comm (J	reception (HSE) + p conv comm (Julien)						
PPS		PPS on// op/expert access -->>>							
Vacuum systems									
sector pumping									
vacuum control					Full Vac +exhaust+contro	Full Vac +exhaust+contro	Full Vac comm (Abel/Jose/Alex sinturel)		
vacuum collection point									
Gas storage tanks & control									
Control program									
user interface		Program test (with p conv) Cedric							
Separator Commissioning with stable									
Test target prod (Isolde geometry, high density)									
subsystems									
beam commissioning			stable beam commissioning (Pascal et al.)	stable beam commissioning (Pascal et al.)					
Separator Commissioning with radioactive									
target irradiation							Ti-VD5	Ta-W	
target coupling									
beam separation&shipping							Sc44 (Pascal et al)	Tb155 (Pascal et al)	
Protons to ISOLDE HRS								4th Dec : End protons@Isolde	
neutrons at ILL (for 169Er production)									
Isotope Production at MEDICIS									
target prod									
target irradiation									
beam separation&shipping									
	EN-DSO)								
	to, Dimenzioni	civil engineering (Stefano, Dimenzione)		connect bld179 Ana, Hassane, Ninin :access class A -->>>>					
Visit - Consultant RP						nettoyage+visit consultant	visit media 28Nov	stefano/nhat tan	

Some concrete steps

- It seems we past the visit of the authorities (4th October) with 2 minor comments (still waiting for comments on safety file) + presentation to CSAP Safety Committee + DSO tests done
- Hardware permit to be signed today (Laboratory is connected, Class A homologation 21-23 Nov). Facility permit expected end Nov (yet commissioning gas exhaust/storage)
- Beam line is installed - collection box not connected yet, shielding and shielded fume hood during YETS



CERN-MEDICIS HARDWARE PERMIT* (Sectors S1, S2, S3**)		ZONE : CERN-MEDICIS
Please note any exceptions or additional remarks as comment with your signature in EDMS.		
Person and Group for signature		
1 - Shutdown works complete: The Machine Coordinator attests that : - All shutdown works have ended - No unnecessary Removable, combustible or waste material has been left in the facility		
SOLDE Technical Coordinator or deputy:		
Group: EN-STI		
2 - Access system Functionality: - The access system for the machine is fully operational. All safety and control functions are operational. - Any non-conformity, bypass or strap of EAS must be properly reported, as a comment associated to the EDMS signature. - The "electronic signature" of the control software (if applicable) of the access system will also be referred in the EDMS comment.		
Access system responsible person or authorized person:		
Group: BR-ICS-4C		
3 - Patrol: The area is patrolled according to EN-STI patrol procedures (EDMS 182593), and inside primary area for sector 6 (EDMS 1374247). The patrol procedures are archived in EDMS and their number is reported as a comment associated to the CERN-MEDICIS Hardware Permit. This patrol includes checking the cleanliness and tidiness of the areas, the integrity of access barriers, and ventilation doors, but first of all the absence of any person in the zone.		
EN CERN-MEDICIS operator or authorized person:		
Group: EN-STI		
4 - Ventilation operational: The ventilation of sector S1, S2, S3 is operational. The following checks have been performed by EN-CV: - Nominal under pressure values checked for room 175(B-40), 031, 4-431, 4-431, 4-027 (EDMS 1841393) - Ventilation alarm tested and operational (No bypass or strap)		
Ventilation responsible person or authorized person:		
Group: EN-CV		
5 - EN-DSO tests: The purpose of the DSO tests is to validate the correct operation of the safety functions of the access system and of all the 'EIS'. The DSO tests are done according to procedure EDMS 1841398 (Chapters 7 and 8).		
DSO, RSD or safety:		
Group: EN-HOO		
6 - Radiation protection: The RP responsible person attests that: - Radiation monitoring system (measurements, alarm functions and alarm transmission) is operational		
HSE-RP/AS Section Leader or authorized person:		
Group: HSE-RP		
7 - Final Authorisation for CERN-MEDICIS Hardware Permit At this point the MEDICIS facility is operational to start hardware test. The EN-STI group leader accepts the MEDICIS facility for hardware test within the range of the restrictions that have been made in writing.		
EN-STI Group Leader or deputy:		
Group: EN-STI		
CERN-MEDICIS Hardware Permit suspension by any qualified person Reason for suspension (including possible reference documents) will be mentioned by the requestor, when changing the status to "Cancelled", as a comment on EDMS.	CERN-MEDICIS Hardware Permit reactivation. Actions undertaken to resume the safe situation will be given as a comment to the new version (n.v. to n.v.+1) of the EDMS CERN-MEDICIS Hardware Permit. The reactivation will be approved by the Requestor of the suspension and the final approver of the CERN-MEDICIS Hardware Permit.	CERN-MEDICIS Hardware Permit cancellation. The reason for cancellation (during the run or at the end of the run) will be given as a comment when changing the status of the CERN-MEDICIS Hardware permit to "Cancelled" in EDMS. The new CERN-MEDICIS Hardware Permit will be created in EDMS as follows: n.v.+1.

*CERN-MEDICIS operational for hardware commissioning with stable beam

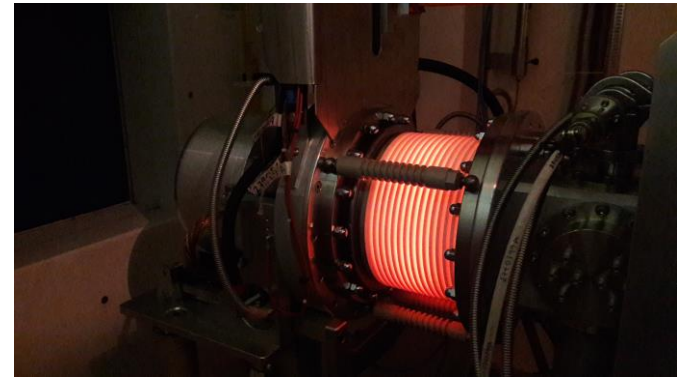
EDMS 16998874.7

**S1, S2, S3 defined in EDMS 1324042

EDMS 1863593 v.2017 status Shutdown works access ventilation access Restricted
MEDICIS_Hardware_Permit_V7.pdf modified 2017-10-25 15:25

Some – more - concrete steps

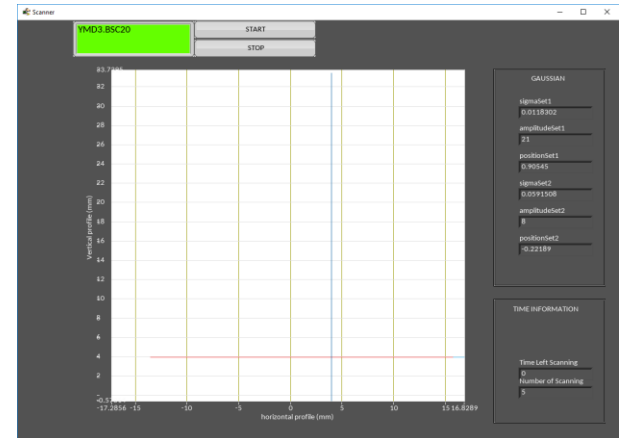
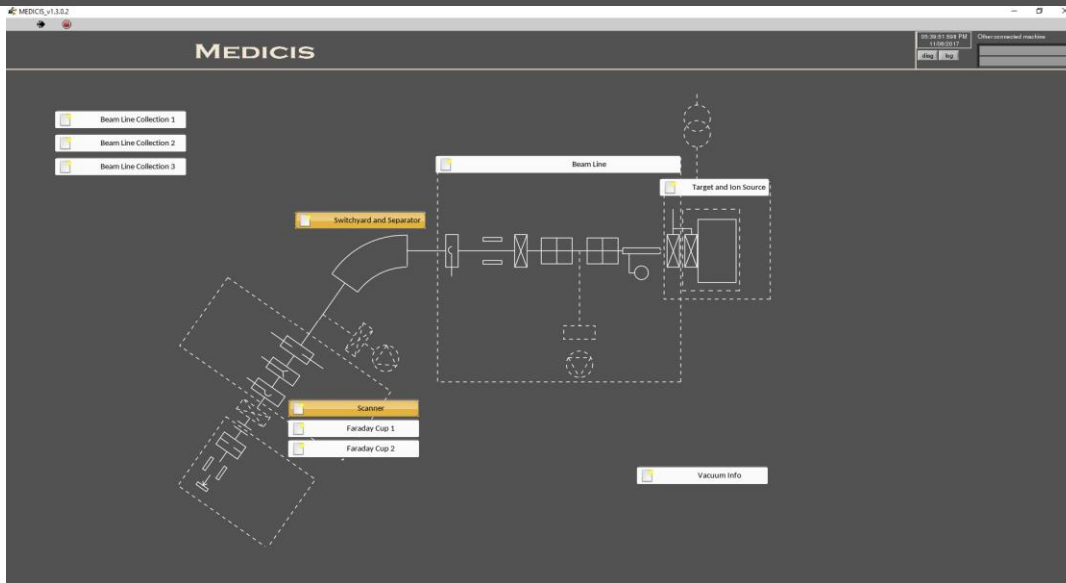
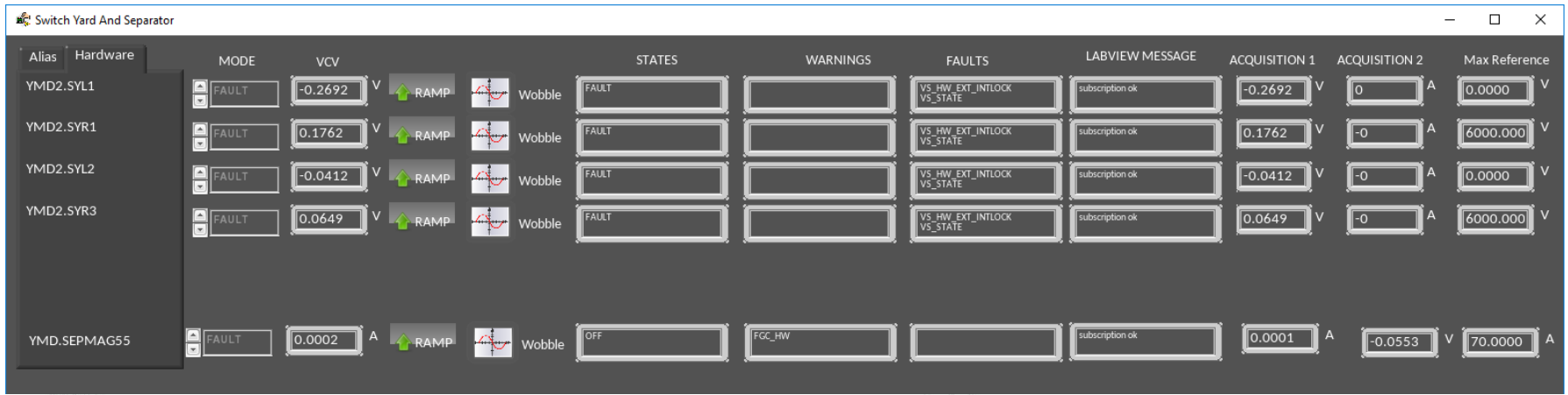
On 31st October, we had vacuum in the beamline + heating of the target :
5kW and 1050A (beyond what is nominal at Isolde)



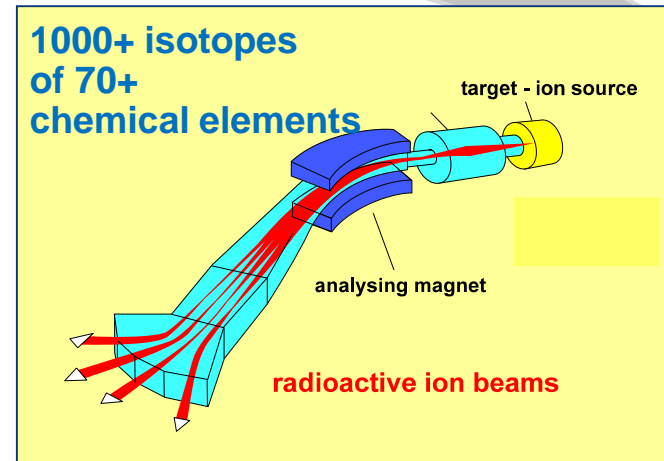
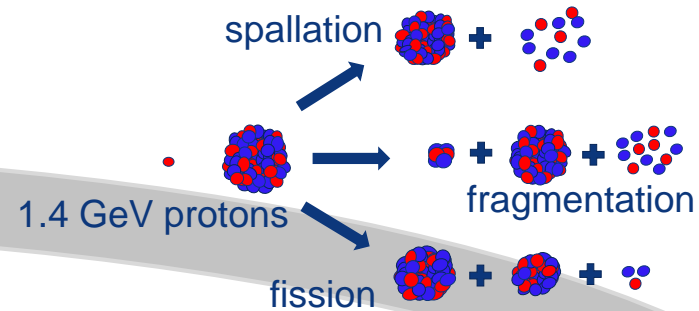
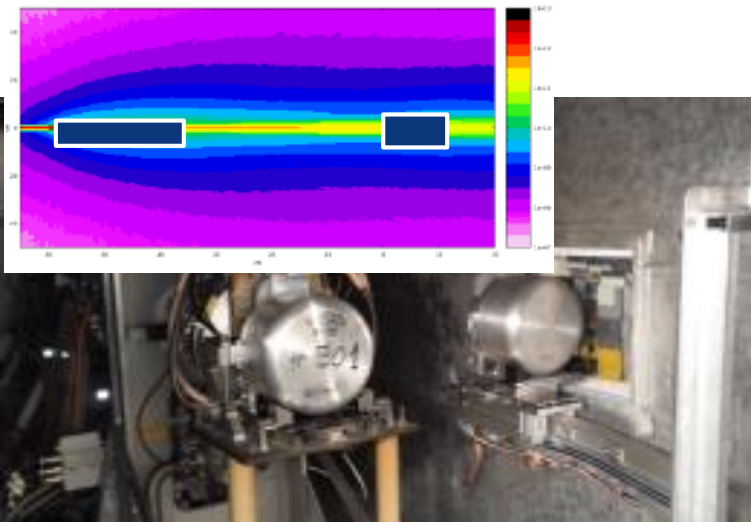
The beamline has been pumped down

The Isolde-MEDICIS elogbook has been created

High level labview control application – under commissioning

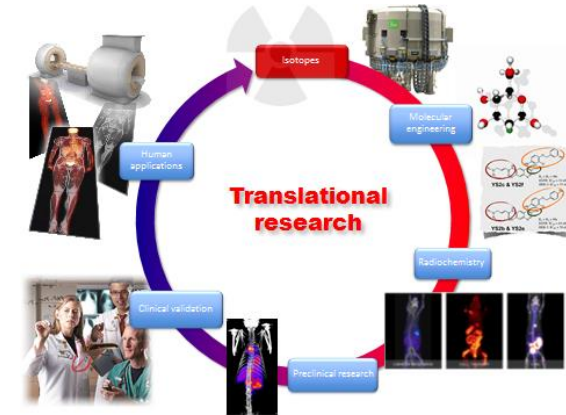


Preparing for the full cycle



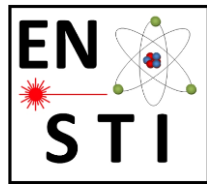
1st MEDICIS Collaboration board – tentative 2017

- Dr. Forni (Clin. Carouge, Geneve)
- Prof. Morel, Prof. Buehler, Prof. Ratib* (HCUGE, Geneve)
- Prof. R. Jolivet (CERN/UNIGE, Geneve)
- Prof. D. Hanahan (ISREC, EPFL, Lausanne)
- Prof. J. Prior (CHUV, Lausanne)
- Prof M. Huysse, prof. P. van Duppen, prof. T. Cocolios (KUL, Univ. Leuven)
- Prof. S. Lahiri (SINP, Kolkata)
- Prof. A. Goncalves, Prof. A. Raucho (CT2N, Lisbon)
- Prof. F. Haddad (ARRONAX)
- Dr. F. Bruchertseifer, Dr. A. Morgenstern (JRC-ITU, Karlsruhe)
- Prof. S. Judge, Prof P. Regan, (National Physical Laboratory, Surrey)
- Dr. N. Vd Meulen, Dr. C. Mueller (Paul Scherrer Institut, Villingen)
- Dr. U. Koester (ILL, Grenoble)
- Prof. Siem (Univ. Oslo)
- Prof. Wendt (Univ. Mainz)
- FABIS (if grant)
- European Ass. Nucl. Medicine
- ISOLDE GL (ex-officio)



"Noah, tell me again who's your project sponsor?"





Thank you