

# CERN-MEDICIS

MEDical Isotopes Collected from ISolde

## 2024 program

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On behalf of the MEDICIS local dream-team, collaboration and all contributors

6 Dec 2023

11th Collaboration Board



# CERN-MEDICIS – Yearly technical stop 2024

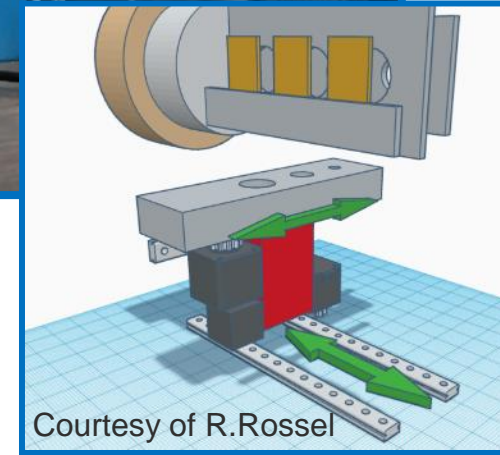
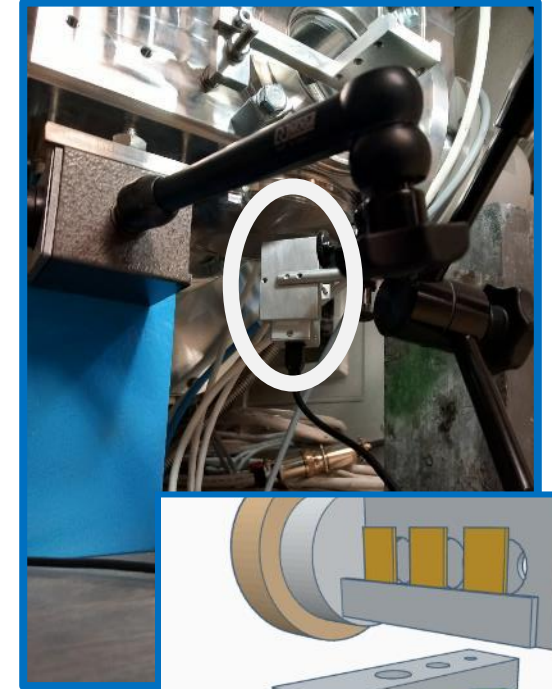
Starting from 15<sup>th</sup> of December 2023 till end of March 2024

## Next week:

- Faraday Cup fix (stuck since a few weeks in the out position)
- Broken/non-usuable target evacuation to the Radioactive Waste Treatment Center
- MEDICIS and robot in safe mode for plan electrical cut on 16<sup>th</sup> and 17<sup>th</sup> of December

## From January 2024:





- Yearly maintenance of the controls, hardware & Labview updates;
- Yearly ventilation checks;
- Electrical work in the building – including HP Ge connection to the UPS (Uninterruptible Power Supply)
- Yearly electrical inspection;
- Calibration and installation of a 2<sup>nd</sup> Kromek GR-1 detector below the collection chamber to compensate from saturation of the 1<sup>st</sup> GR-1 for high activities (>200 MBq) + collimator system development;
- MELISSA annual laser beam path check;



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## till end of March 2024

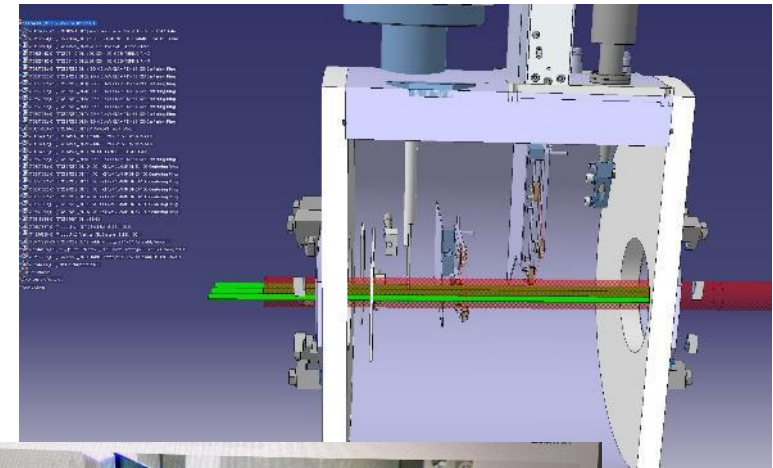
- Front-End yearly inspection: extraction electrode, inspection with endoscope, insulator cleaning, water cooling pipe fixe etc.
- Inspection and calibration of the gas system;
- Robot trajectory checks, rail conveyer system yearly checks, upgrade of the (never-had-to-be-used) rescue shuttle to use it as a rail cleaning system, HRS irradiation point checks;
- When a target is isolated on the decay-point, no access to the area is possible (even if the decay-point is fully shielded)
  - Went through some safety/RP checks to make a change request → approved
  - The decay-point to be implemented as a “safe-point” for our access system
  - Additional safety measures: a camera to be installed + a mirror.

 2938413 v.1.0 | MCS-G-EC-0003 v.1.0 ● Under Implementation 🔒 Restricted access  
**MEDICIS S2 DECAY POINT DECLARED AS SAFE POSITION** by CHARLOTTE DUCHEMIN   
 

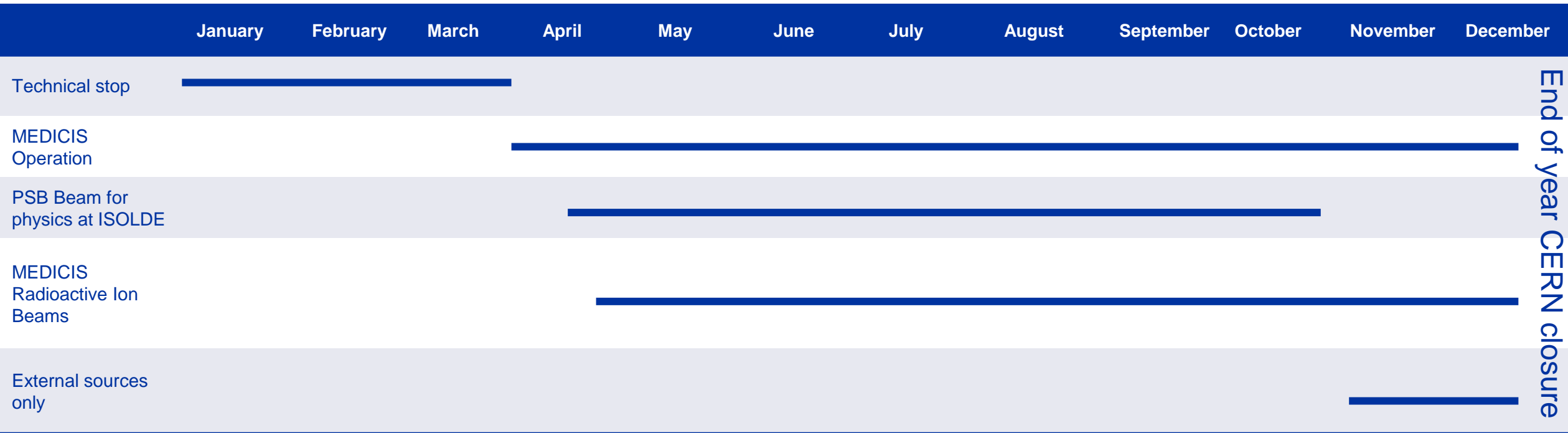
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Starting from 15<sup>th</sup> of December 2023 till end of March 2024

- Installation of the new generation of scanner (the current MEDICIS scanner is the old short range version not maintained anymore) – which requires changes to our diagnostics box to be able to contain the new scanner, the faraday cut and the slits system.
- New targets to be built – most of our targets used this year can be re-used:
  - For Sm-153 external source loading;
  - Ta rolls for Tb, Tm, Ba/Cs radionuclides;
  - ThC target for Ra-224, Ra/Ac-225;
- Departmental Safety Officer (DSO) visits for re-start
- Access system yearly maintenance
- Beam position checks with gafchromic films
- Radiation Protection detectors maintenance and verification
- Final Safety tests for re-start (currently plan for Thursday 28<sup>th</sup> of March morning)
  - Followed by 2 to 3 weeks of stable beam tests












# CERN-MEDICIS – Yearly technical stop 2024



- Always a period of 2 to 3 weeks of stable beam tests before starting with radioactive ions beams
- External sources will be used all along the year (especially for Sm-153) + exclusively from end of October (stop of protons at ISOLDE)
- Planning will be based on ISOLDE schedule as soon as released (March 2024)
  - Considering already approved projects + PRISMAP User Projects
- + new MEDICIS projects will be presented and proposed to the board members → Planning of the year to be adapted accordingly

# CERN-MEDICIS – in the program in 2024

- Continuous demand of Ra/Ac-225 (both PRISMAP and MEDICIS)  
- Ra-224 deliveries (x2 to 3) for PRISMAP User (Call 4) 
- Tb-155 delivery (x2) for PRISMAP User (Call 4) – to CHUV 
- Ba-128 project still ongoing 
- Tm-165 (PRISMAP) and Tm-167 (PSI) deliveries  
- Sm-153 - once a month as targeted pace with bi-monthly deliveries towards the end of the year 
  - Deliveries schedule with SCK CEN will be organized as soon as schedule is release on their side (beginning of 2024).
- Sc-44/46/47 project still ongoing 

# A BIG THANKS TO ALL THE PEOPLE, GROUPS, SERVICES, INSTITUTES, COLLABORATION ... INVOLVED IN MEDICIS!



## THANK YOU FOR YOUR ATTENTION !



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