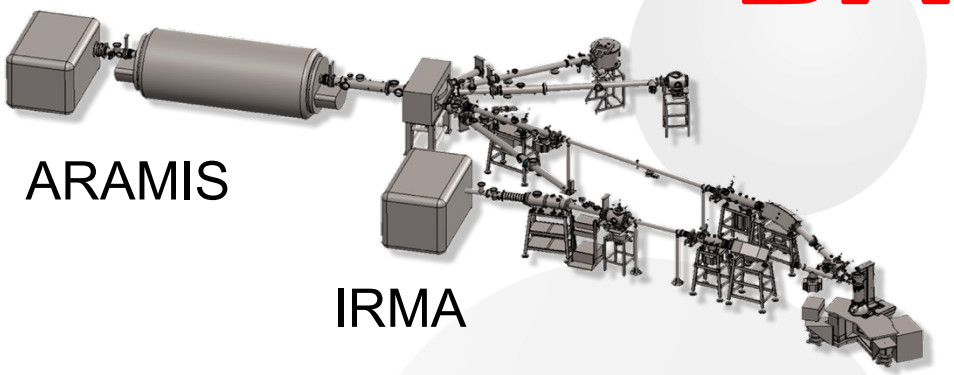
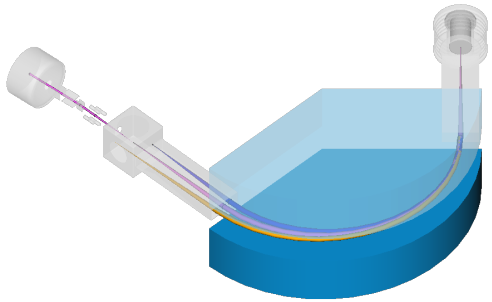
Accélérateurs MOSAIC

BAT 108



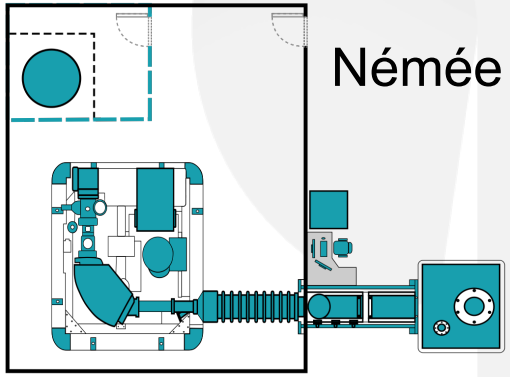
ARAMIS

IRMA



Sidonie

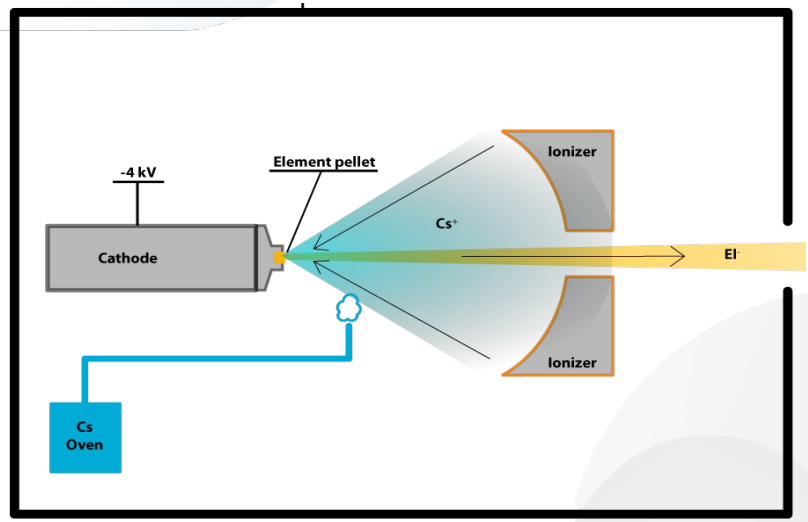
BAT 201



Némée

Isabelle

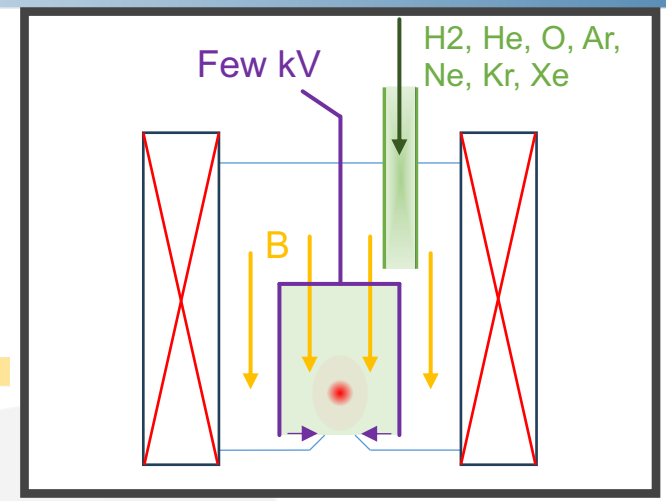
Ion sources



Source of Negative Ions by Cesium Sputttering

- around 40 elements available
- 10-20 µA

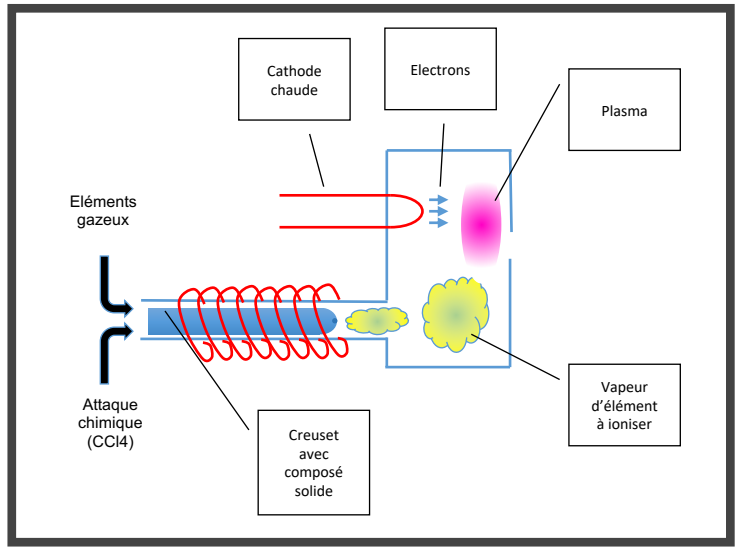
ARAMIS



Penning Ion Source

- gaseous elements
-1+, 2+
- →100 µA

ARAMIS



Bernas-Nier ion source

- all elements potentially availlable
- 1+, 2+, 3+
- → few mA

IRMA, Sidonie, Némée

JANNuS-Orsay

ARAMIS | Positive Ion Source

Penning Ion Source
H, He, N, O, Ne, Ar, Kr, Xe
120keV (diatomic) < E < 3.6MeV (2+)

2MV

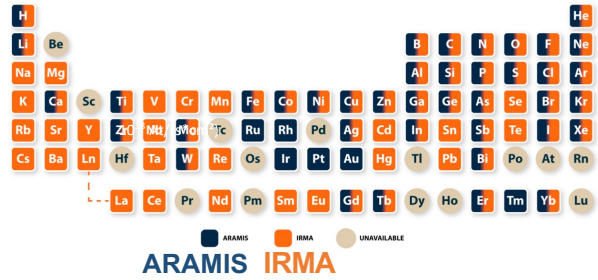
ARAMIS | Negative Ion Source

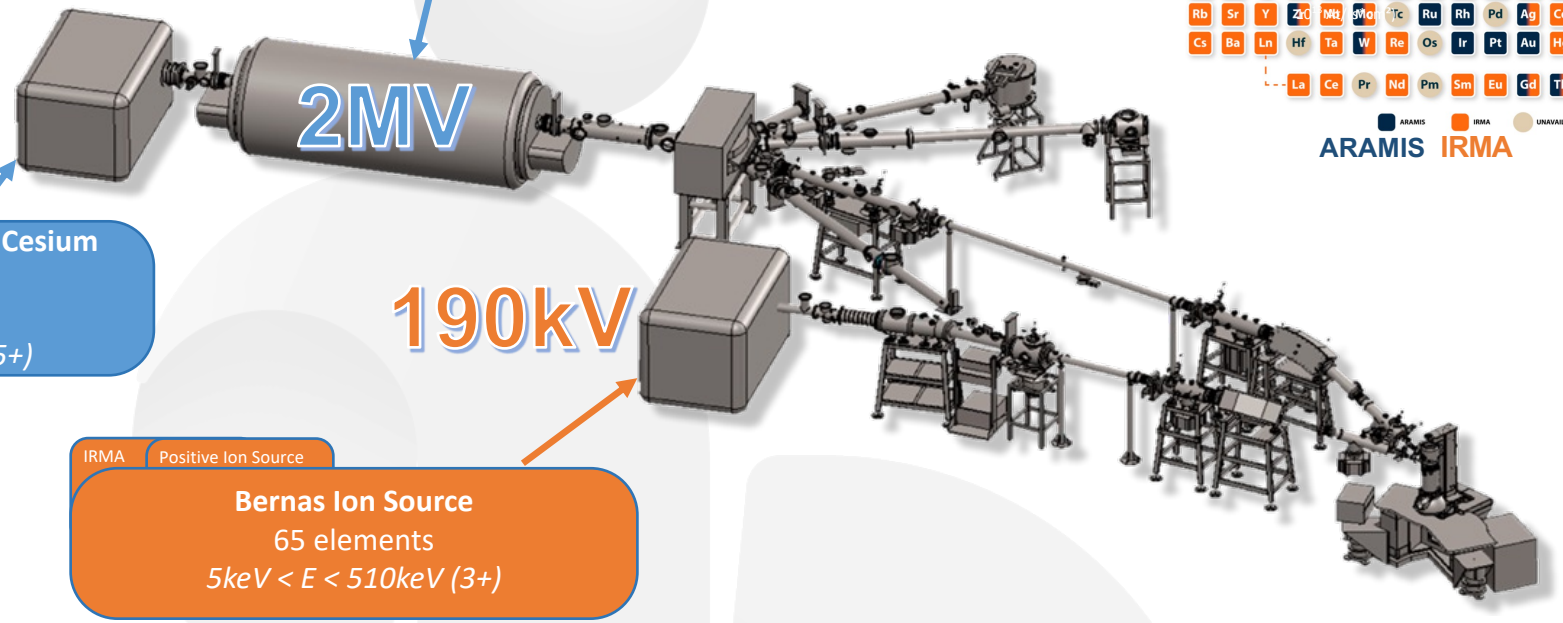
Source of Negative Ions by Cesium Sputtering (SNICS)
39 elements
600keV < E < 11MeV (5+)

190kV

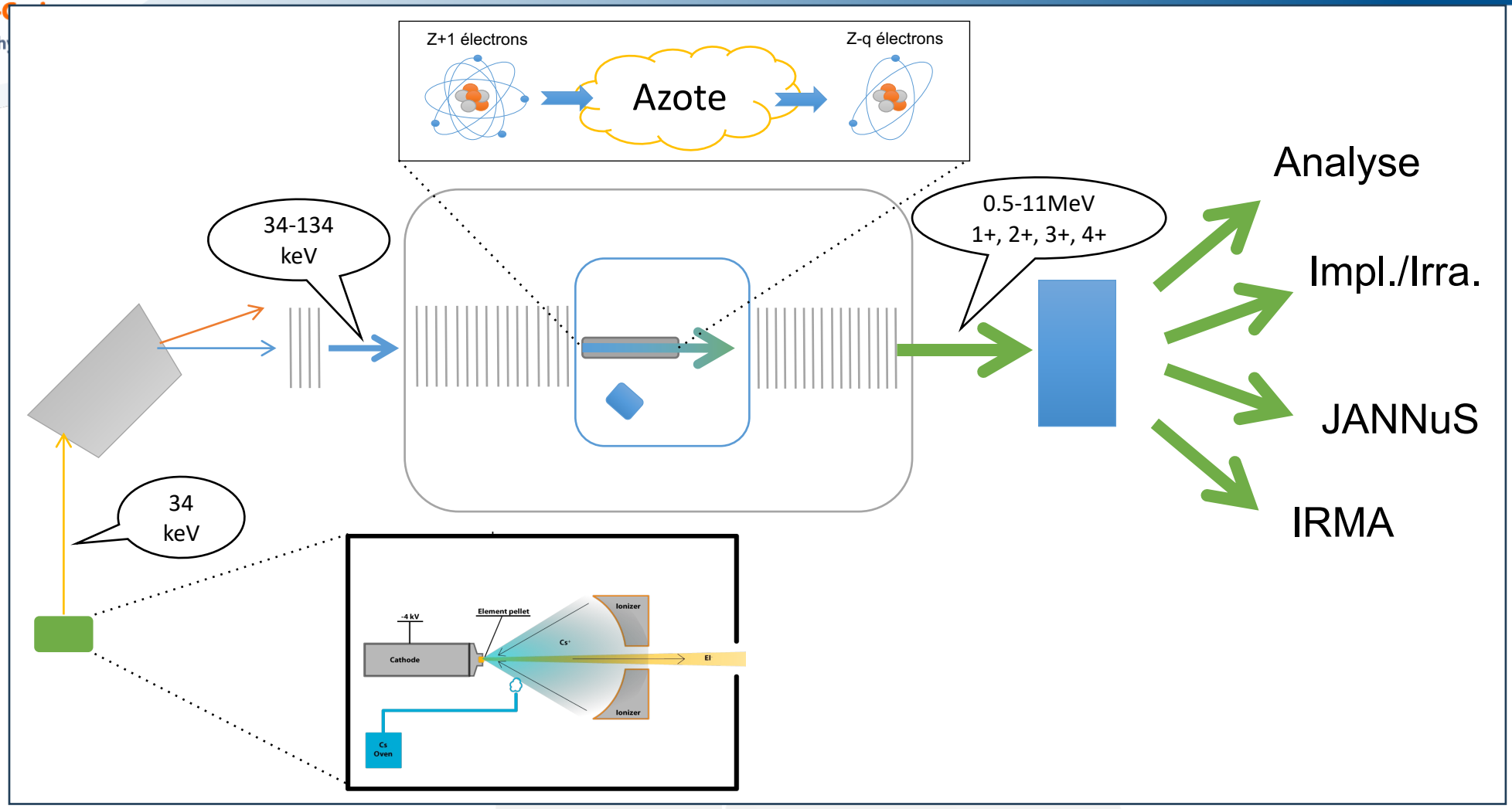
IRMA | Positive Ion Source

Bernas Ion Source
65 elements
5keV < E < 510keV (3+)

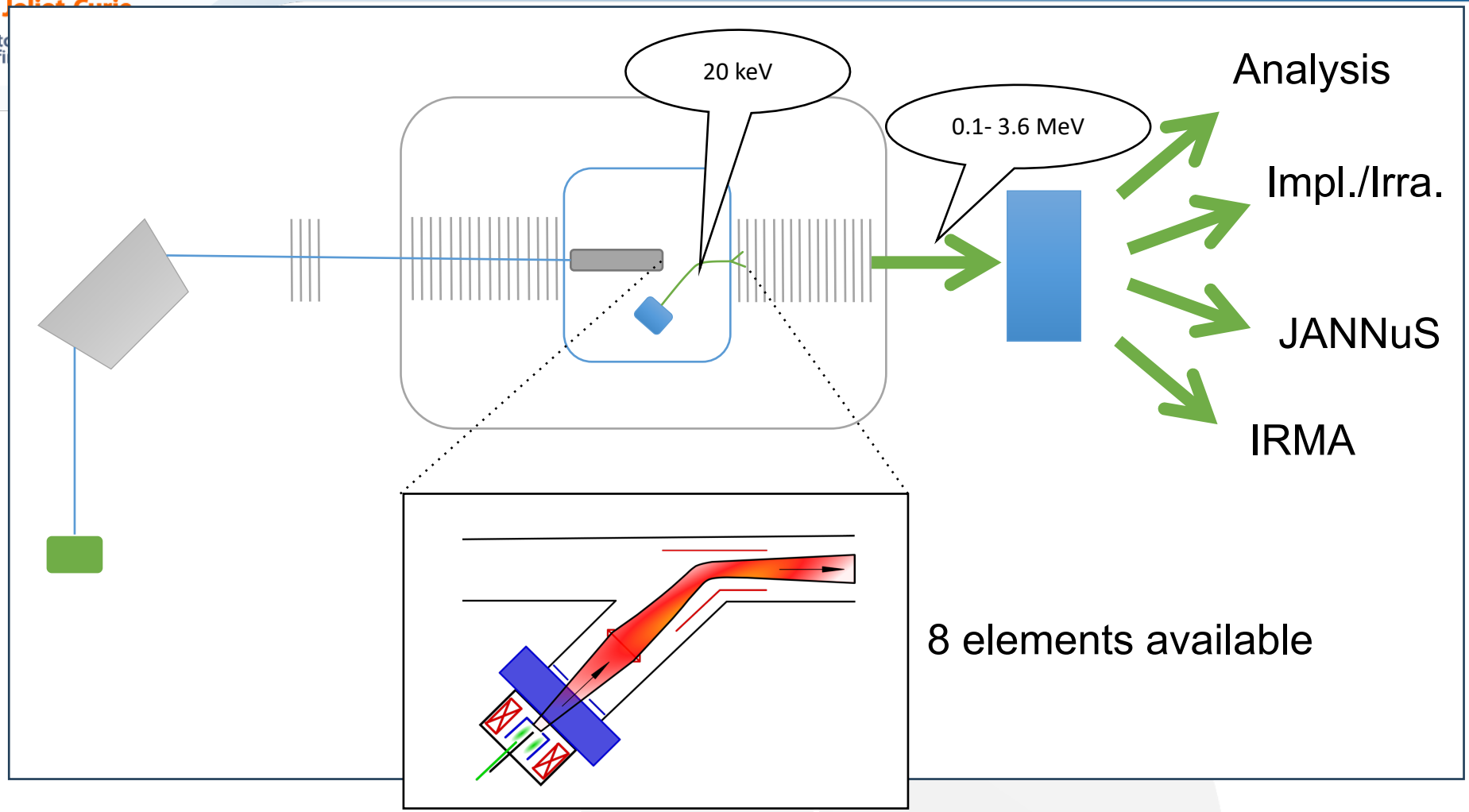


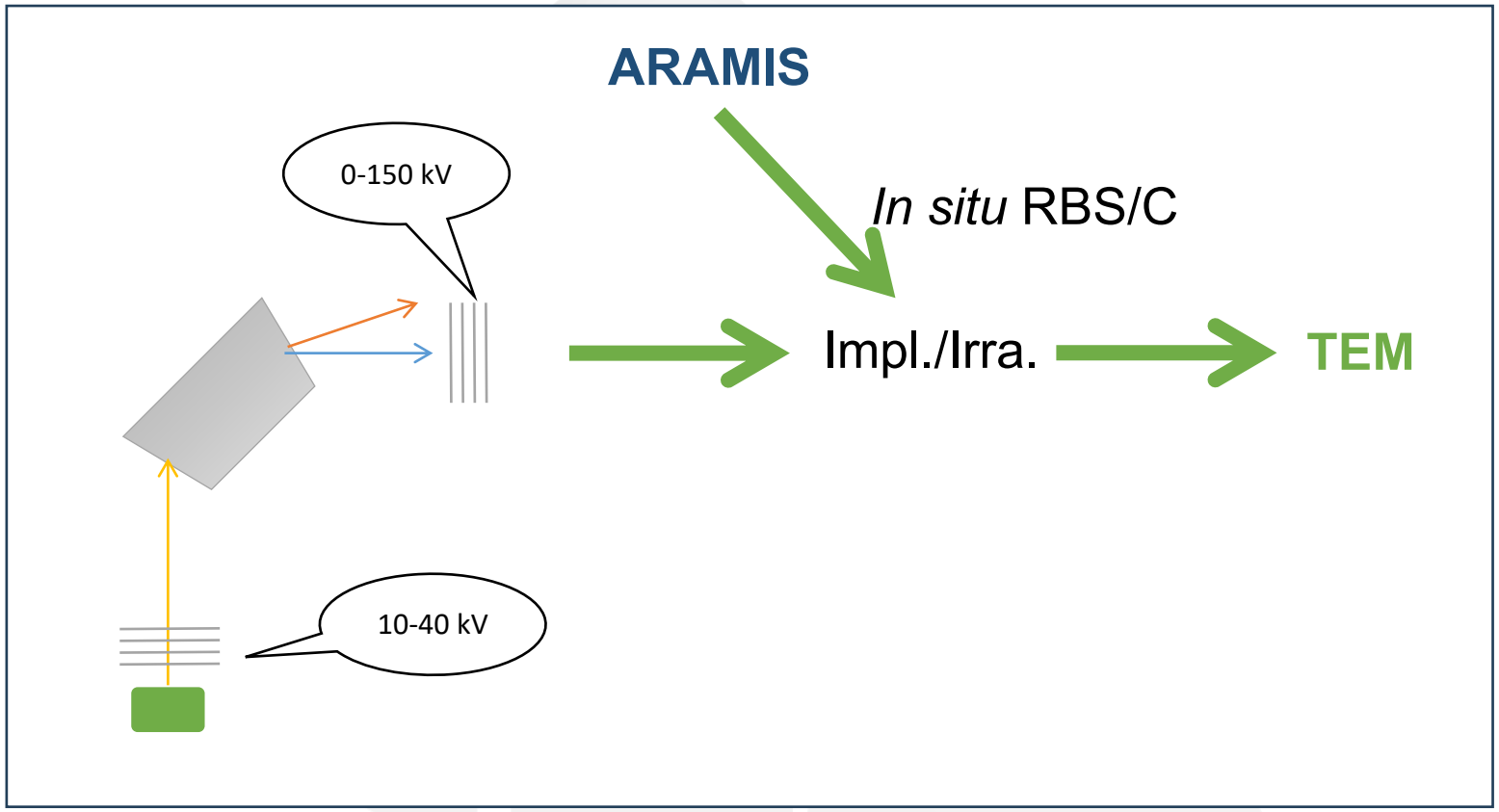


ARAMIS Mode Tandem

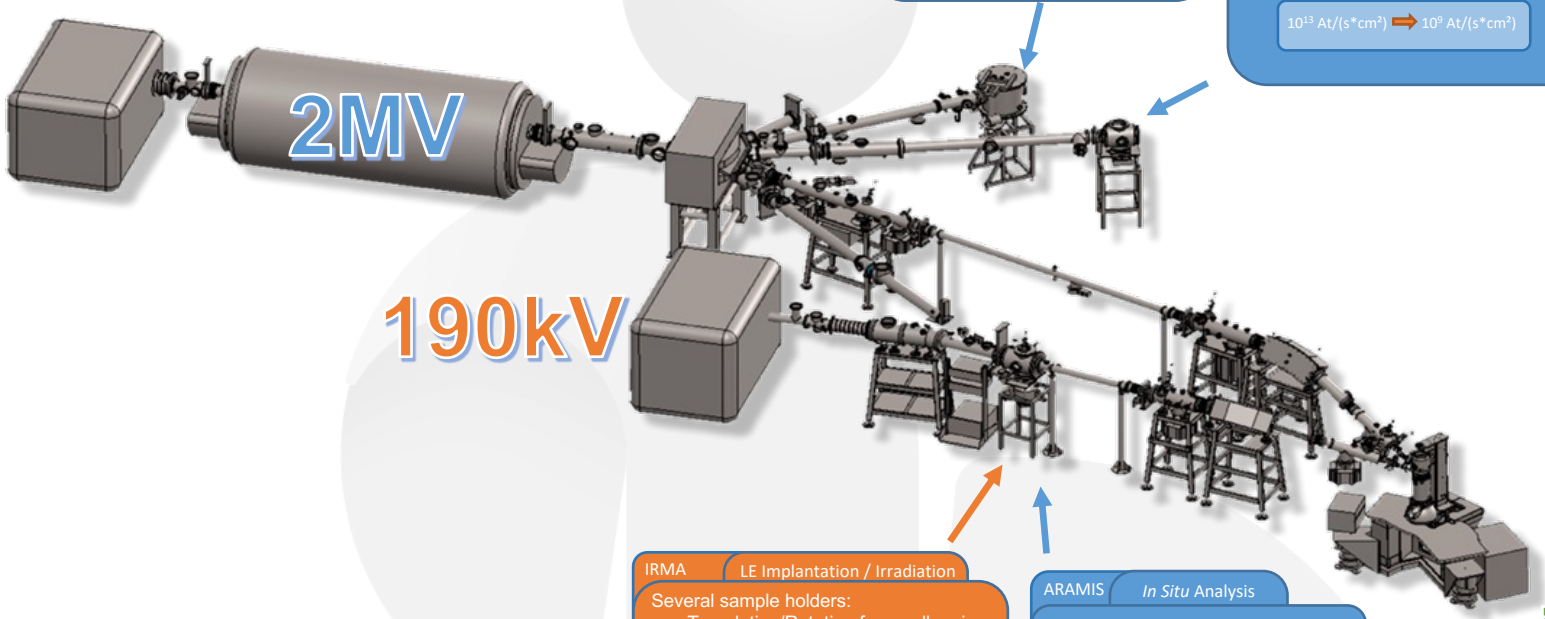


ARAMIS Mode Van de Graaff




ARAMIS
0-150 kV
In situ RBS/C
Impl./Irra.
TEM
10-40 kV

JANNuS-Orsay



ARAMIS — Ion Beam Analysis

Goniometer 2T / 2R
- RBS/C
- ERDA
- PIXE
- PIGE

Multisamples holders

ARAMIS — HE Implantation / Irradiation

Several sample holders:
- Translating/Rotating for small series
- Airlock holders for large series
- Heating holders, up to 1000°C
- Liquid nitrogen holder

10^{13} At/(s*cm²) ⇒ 10^{9} At/(s*cm²)

IRMA — LE Implantation / Irradiation

Several sample holders:
- Translating/Rotating for small series
- Airlock holders for large series
- Heating holders, up to 1000°C
- Liquid nitrogen holder

10^{14} At/(s*cm²) ⇒ 10^{9} At/(s*cm²)

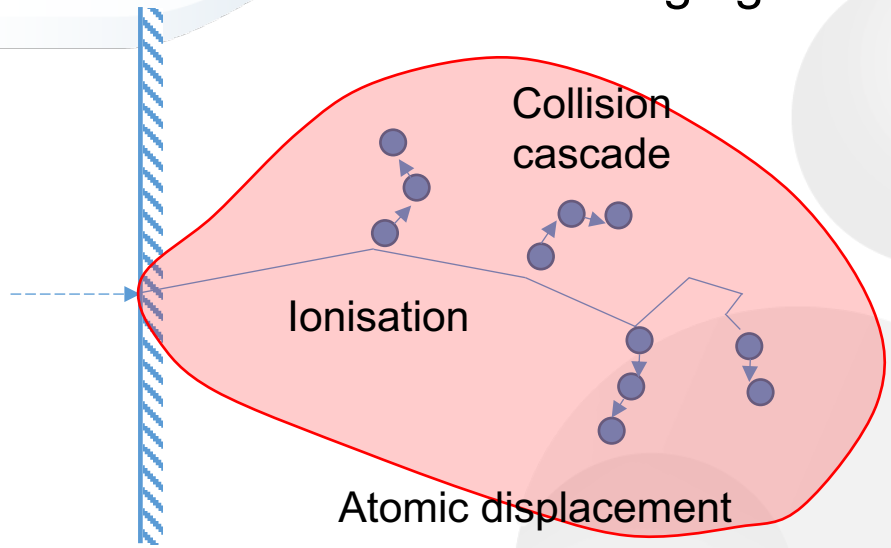
ARAMIS — *In Situ* Analysis

In situ RBS/C analysis with a heating 2 rotations Goniometer, during low energy irradiation or implantation

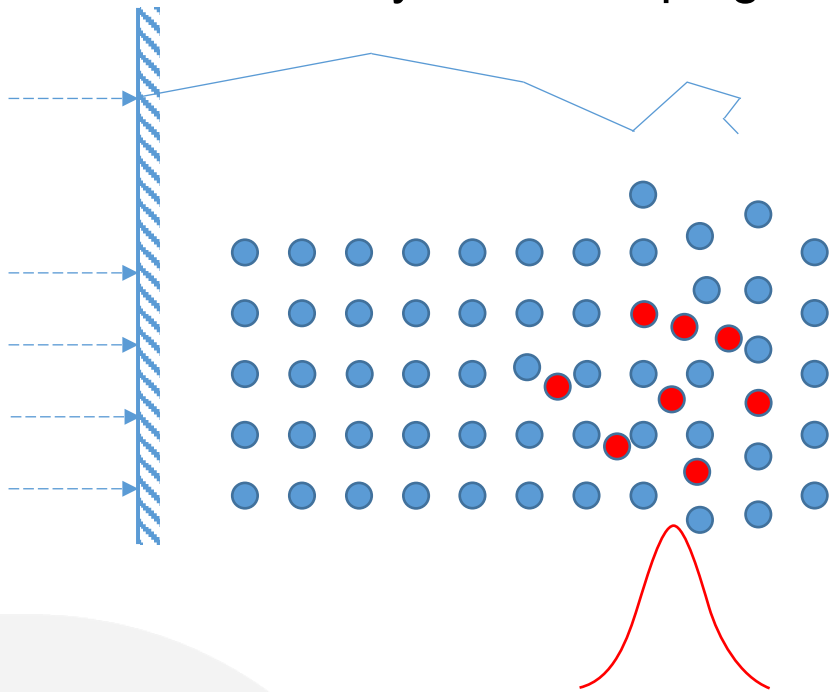
TEM ⇒ **Cédric**

Irradiation/Implantation

Material damaging

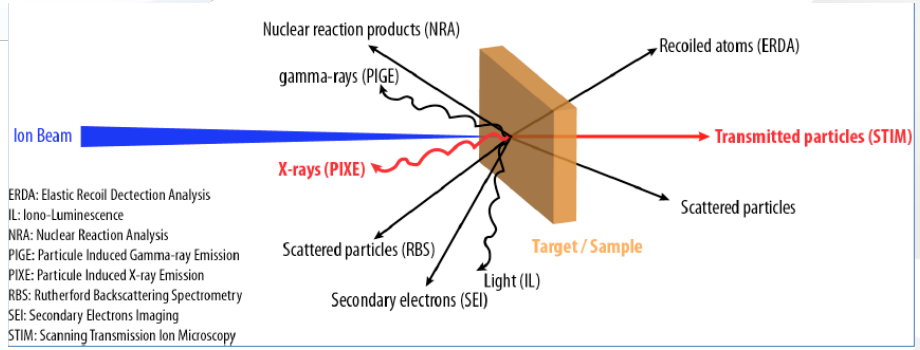


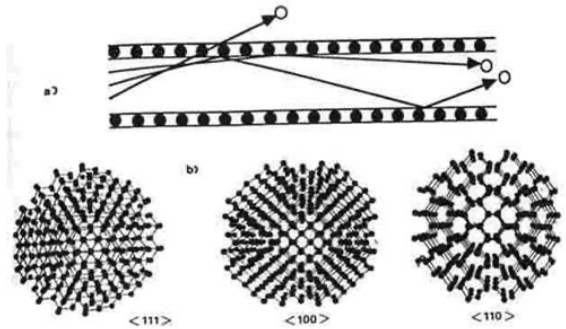
Material synthesis/doping



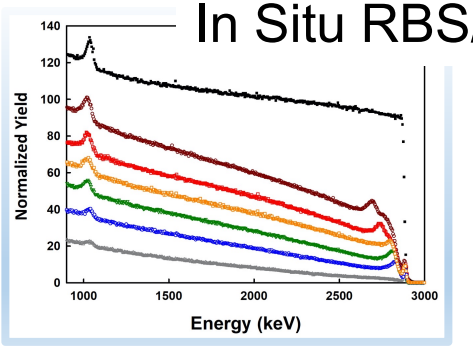
TODAY: L. LEFORT*(14h20)* , A. DARTOIS*(14h20)*, F. GARRIDO *(17h10)*
TOMORROW: S. SENGUPTA *(9h20)*, D. RAVELOSONA *(10h00)*, M. TUPIN *(10h20)*, S. JUBLOT-LECLERC *(11h30)*, G. DA ROLD *(11h50)*, T. ALLARD *(12h10)*

Ion Beam Analysis

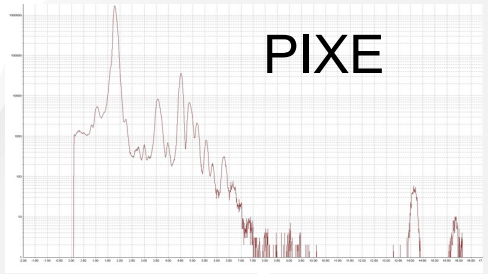




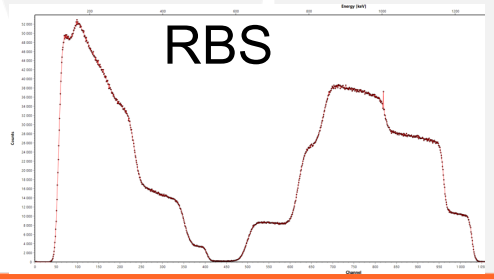
In Situ RBS/C



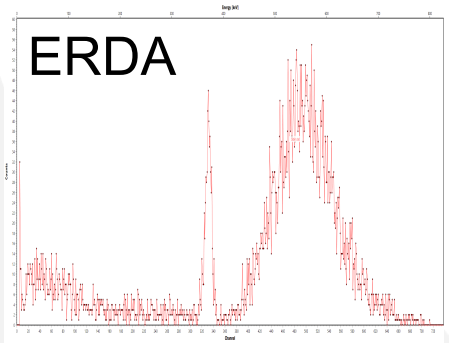
PIXE



RBS



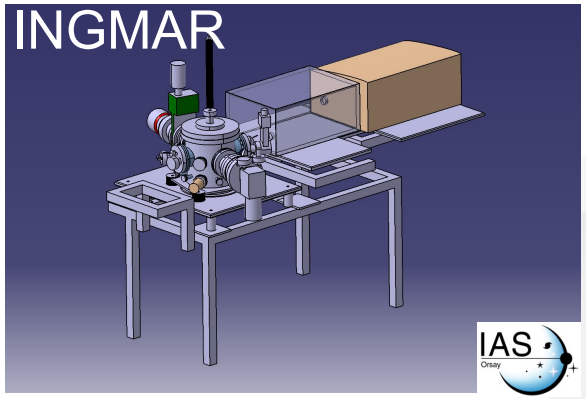
ERDA



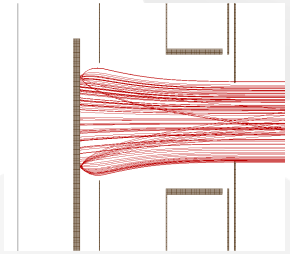
TODAY: F. GARRIDO *(17h10)*

Implantation or deposit with high isotopic purity beams

In Situ infrared spectroscopy



C. LANTZ *(tomorrow 12h30)*

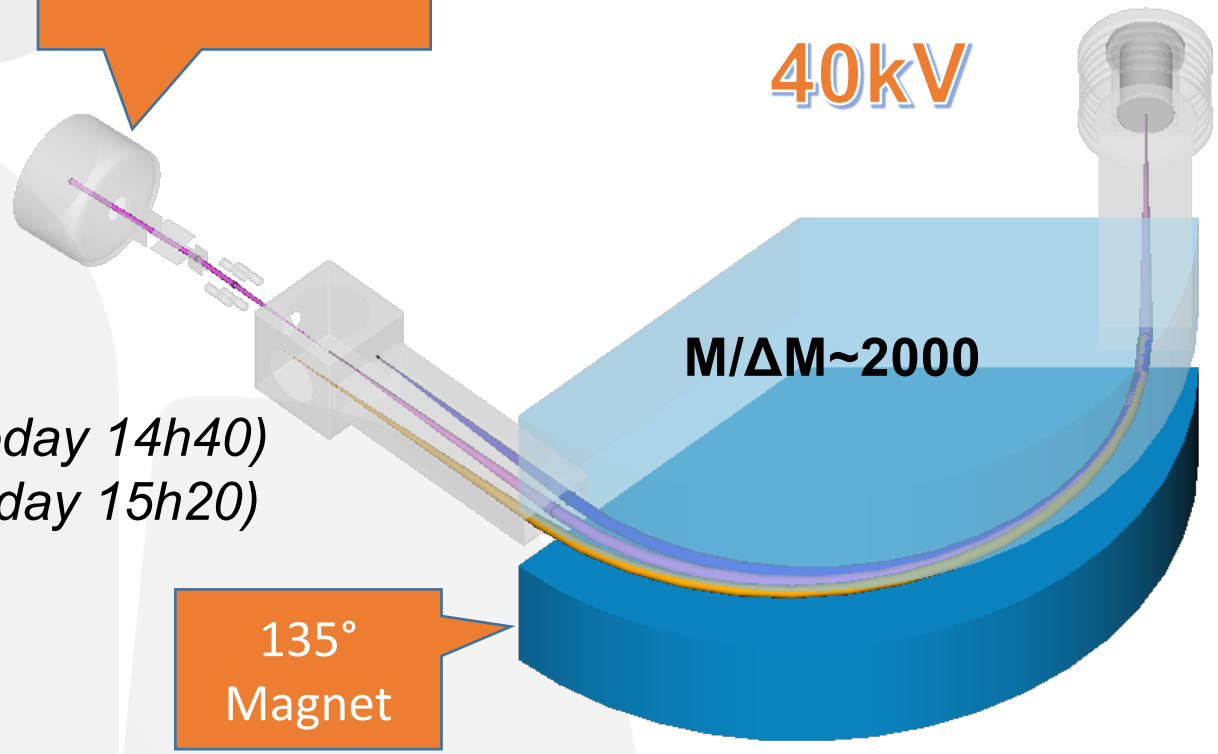


Deceleration → 100eV

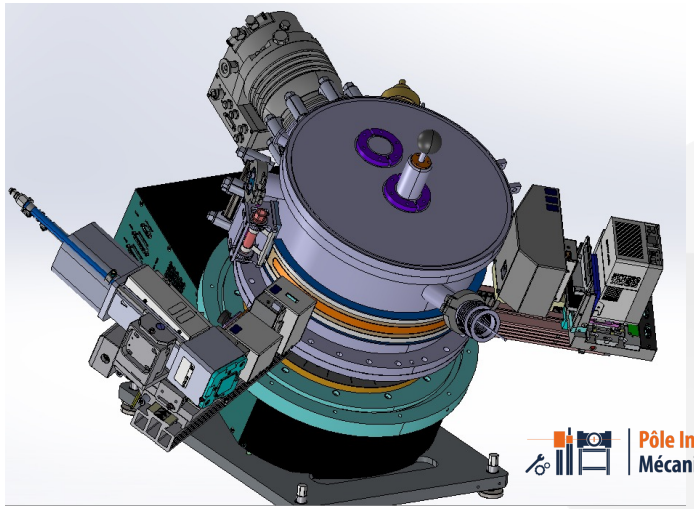
M. POTTIER *(today 14h40)*
C.O. BACRI *(today 15h20)*

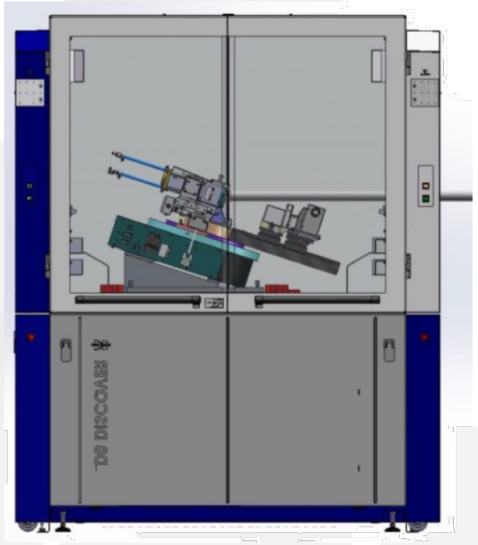
SIDONIE | Positive Ion Source

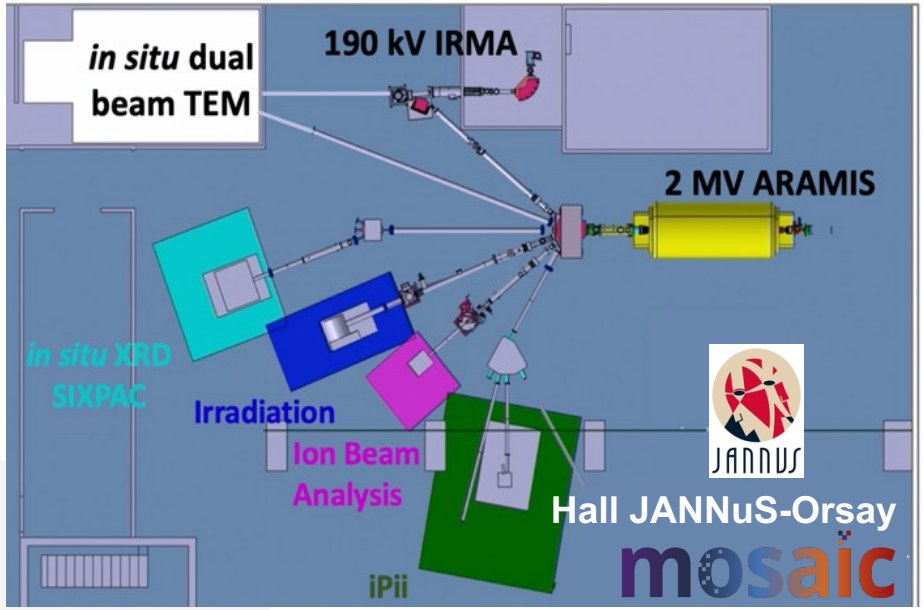
Bernas Ion Source
65 elements
10keV < E < 40keV



Setup for *In situ* X-ray diffraction couPled to an ion ACcelerator







Moving of the 400kV Implanter from Lyon