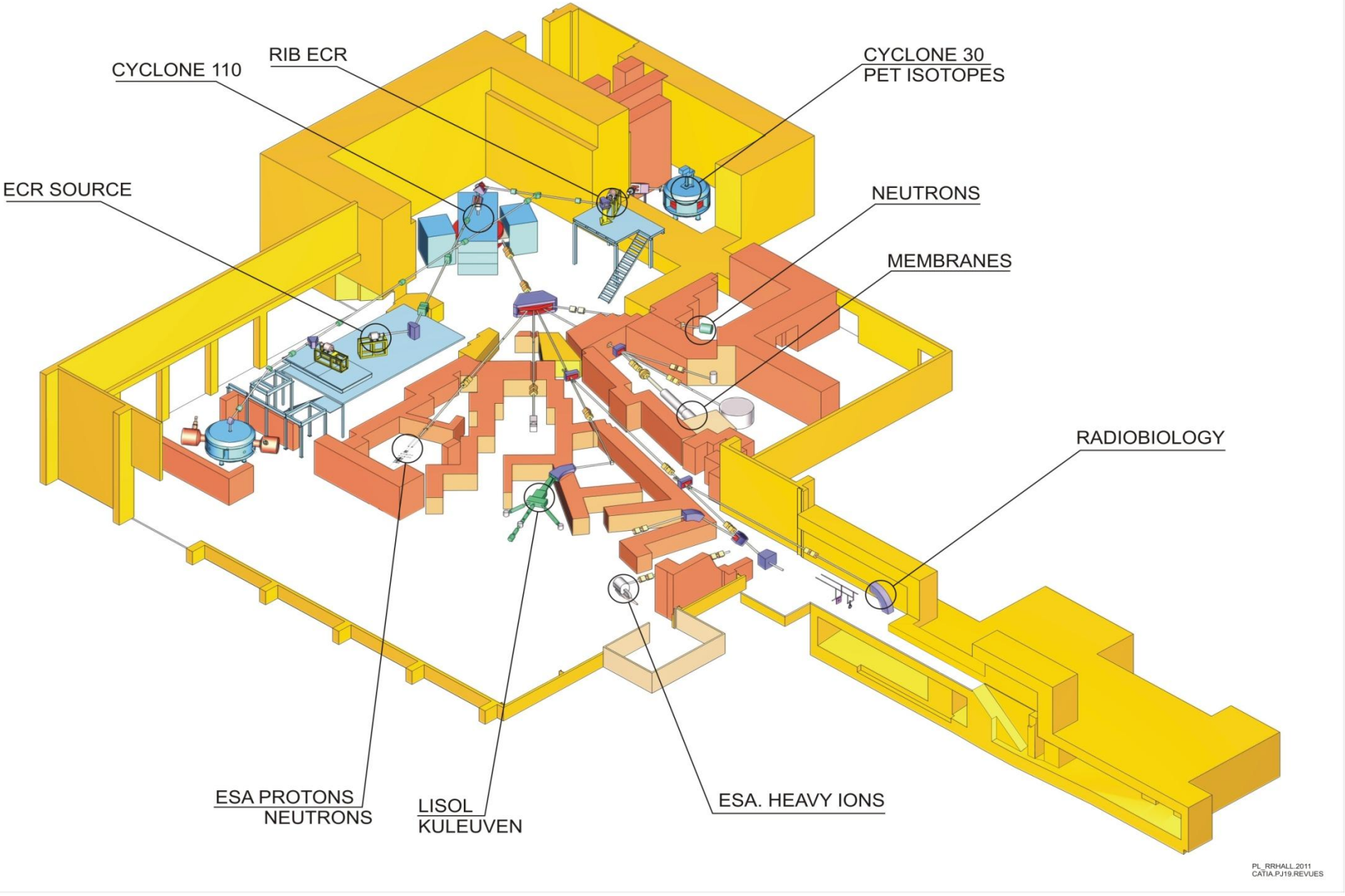
UCL Irradiation Test Facility
Status Report

Marc Loiselet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Heavy Ion Facility (HIF)

What has been done:

-improvement of the beam quality control

-new frame system for heavier test boards

Under development: new ion source for heavier beam

Under study: new sweeping magnet for broader beam

Heavy Ion Facility (HIF)

Improvement of the beam quality control

Now included in the beam preparation:

- -systematic measurement of the beam energy,
- -control with the SEU monitor: fluence and beam uniformity (new SEU monitor)

- -written procedures,
- -training of the operators,
- -quality control documents (logs),
- -quality improvement feedback (reporting)

Heavy Ion Facility (HIF)

- Development of a new ion source to produce beam with higher penetration depth:

  Xe with a range of about 80µm

-status: installed on a test bench

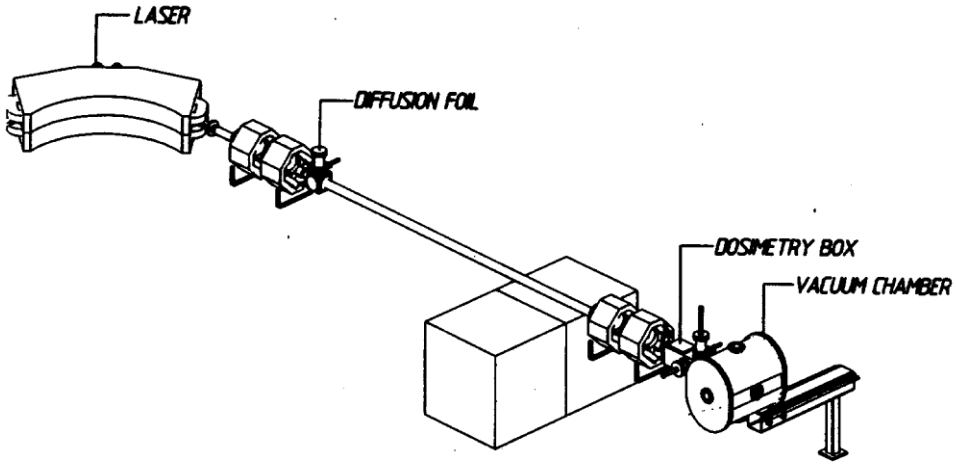
-goal: connected to the accelerator in January 2014

ion	E [MeV]	LET [MeV/mg/cm^2]	Range [µm]
N	60	3,3	65
Ne	78	6,4	45
Ar	151	15,8	42
Kr	305	40,4	42
Xe	420	67,8	40

ion	E [MeV]	LET [MeV/mg/cm^2]	Range [µm]
C	133	1,1	292
Ne	240	3	216
Ar	369	10,2	117
Ni	577	20,4	100
Kr	747	32,6	91


Attention
Champ magnétique

Heavy Ion Facility (HIF)

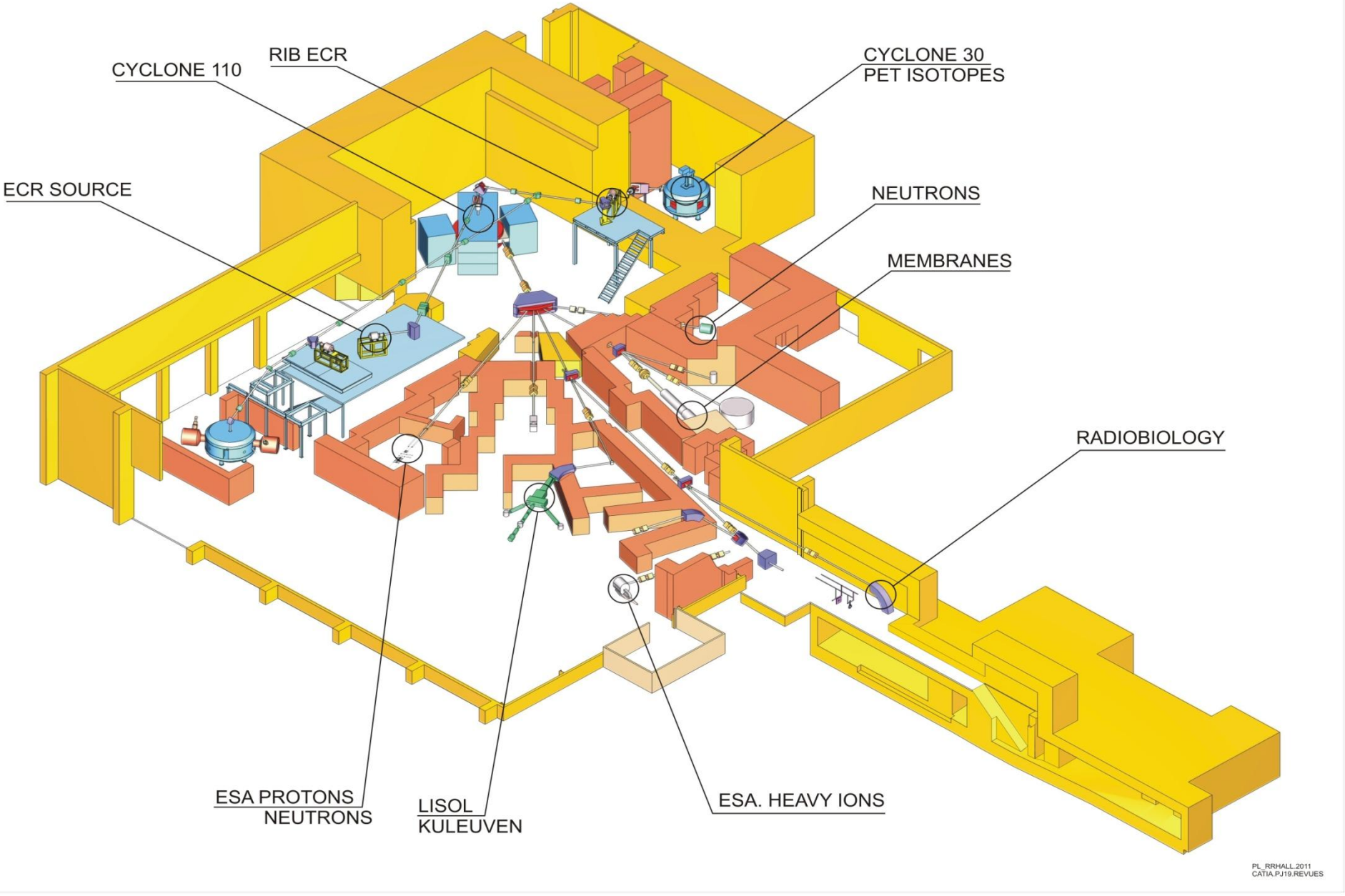


- Under design: new sweeping magnet:

  -to enlarge the beam size to 4cm in diameter

  (presently : 2cm in diameter by the use of a diffusion foil, induces an energy loss)

  -beam tuning more easy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