

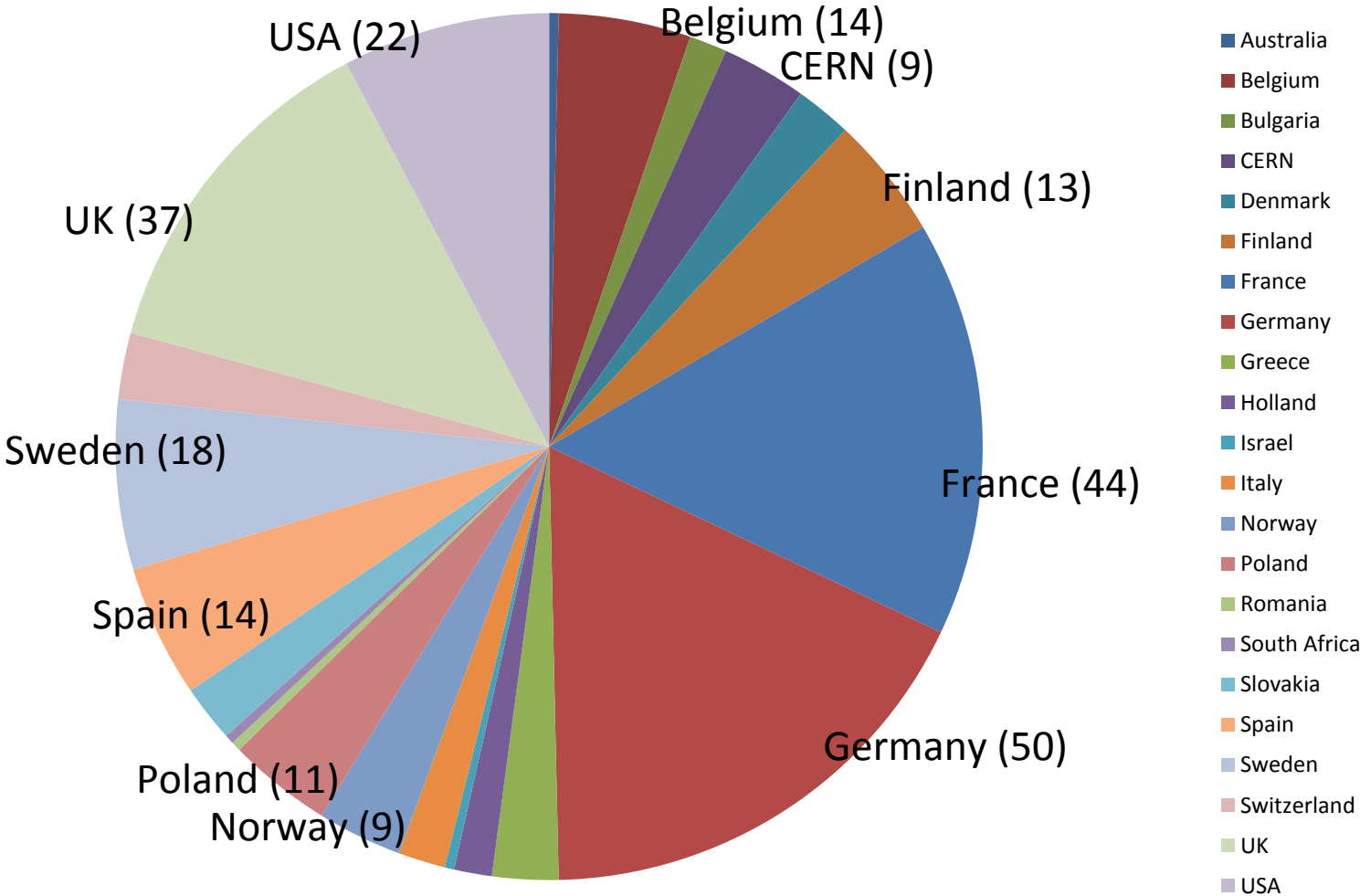
Summary of LOIs to INTC (24 June 2010)

Call for Letters of Intent

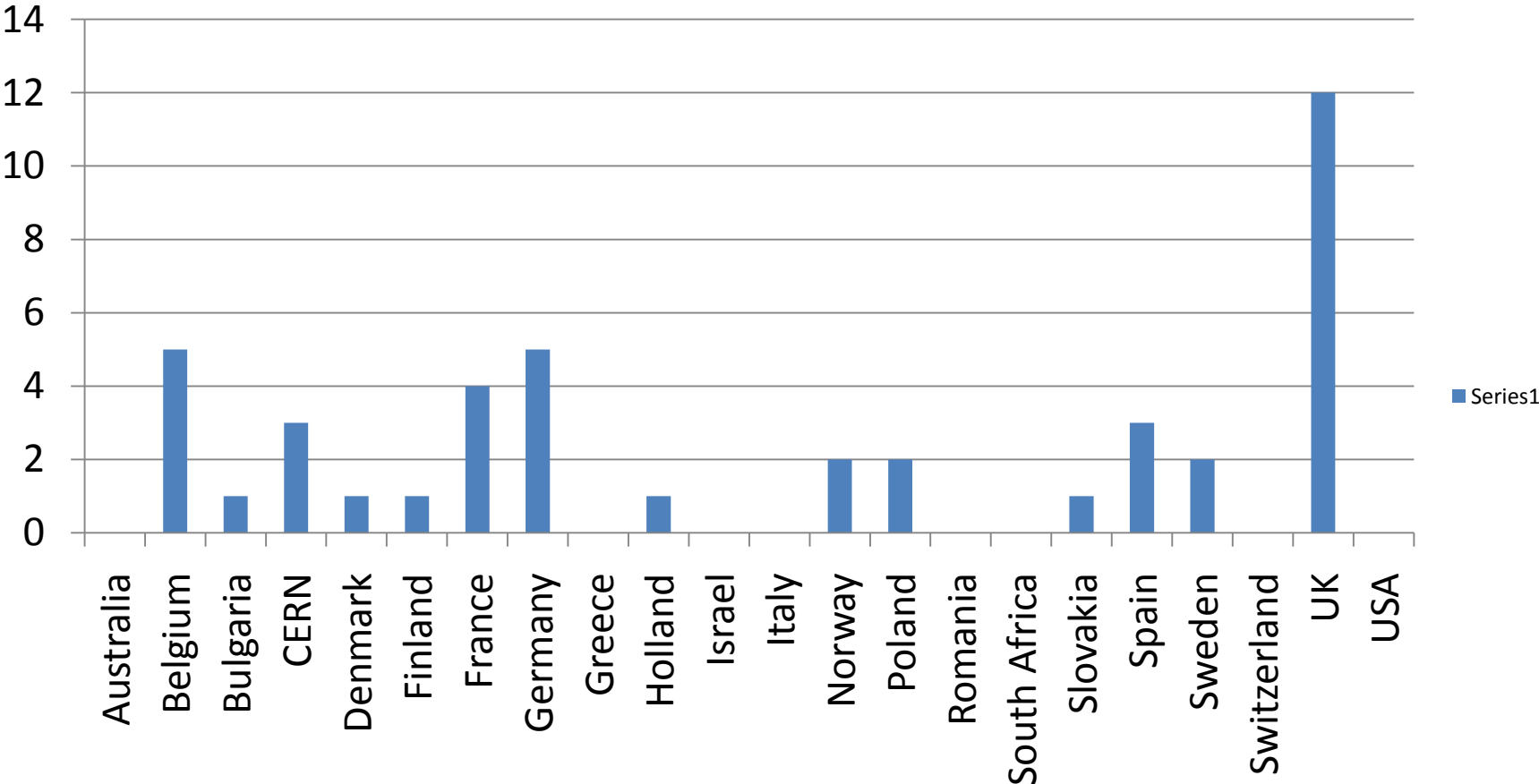
(deadline May 21)

- 34 Letters submitted
- 284 Participants from 76 Laboratories in 22 Countries
- 30 LOIs make use of the Energy and Intensity increases; 4 of the intensity upgrade only
- Major mechanisms are Coulex (13) and transfer(16); elastic scattering(3); fission(2)
- (3) letters concern masses and moments; (4) astrophysics and (5) major new instrumentation
- Major subjects: Nuclear shapes ; Shell evolution; Halo properties; Nuclear astrophysics

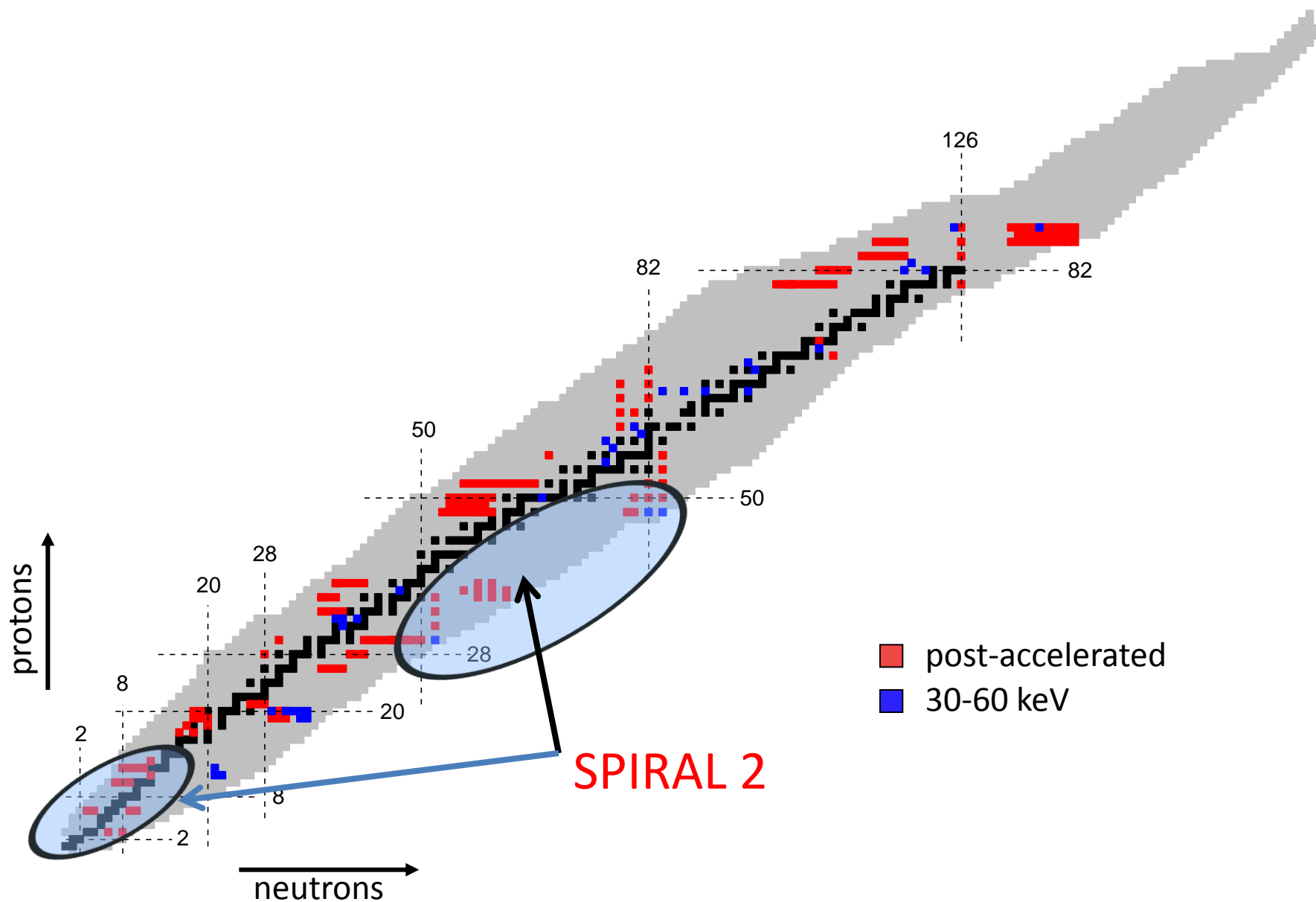
LOI participants by Country



LOI Spokespersons by Country



Radioactive isotopes requested in HIE-ISOLDE Letters of Intent



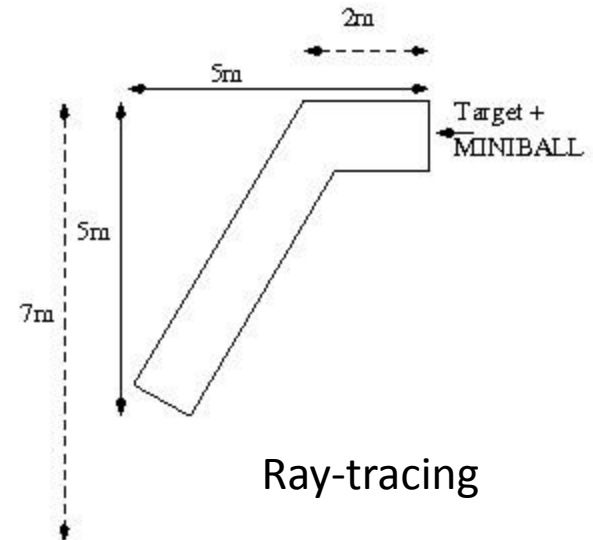
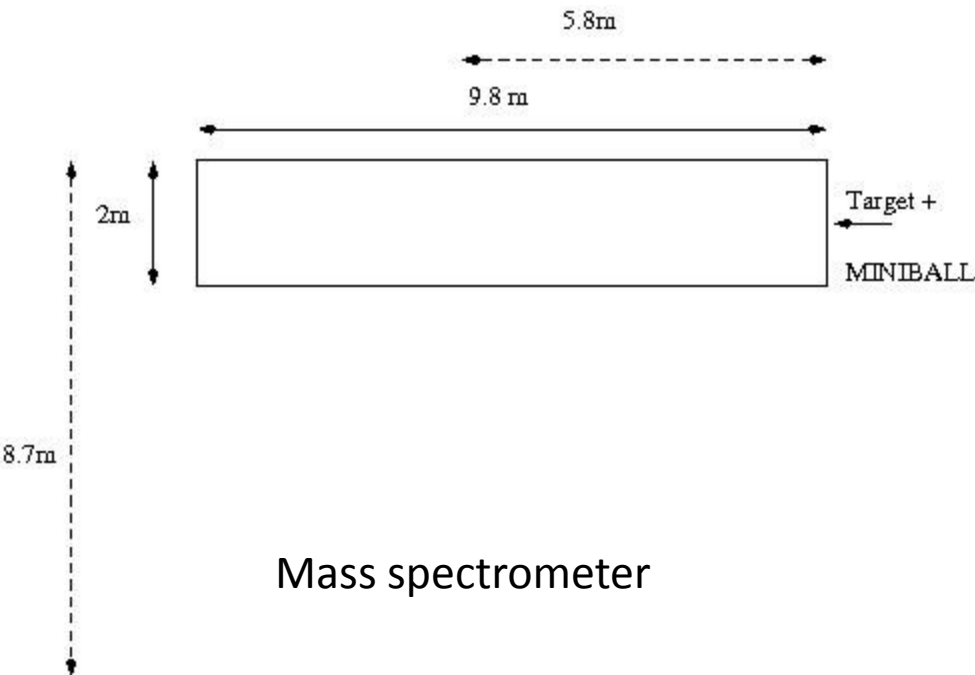
Main Instrument : Miniball (+ TREX)

- Requested by 18 LOIs
- Beam energy : 5A MeV for COULEX, 10A MeV for transfer
- Beam spot < 3mm
- Slow extraction – long beam pulses
- 9 LOIs need or would benefit from coupling with spectrometer.

Spectrometer

Two possible types: Mass separator (EMMA type) or ray-tracing (PRISMA-VAMOS type)
No LOI gives any decisive choice.

Requirements : EMMA – beam spot < 2mm
 PRISMA – beam spot < 3mm
 Dt < 1ns
 Bunched beam with period 100ns



Other new equipment

- **ACTAR**

- Space 1.5m x 1.5m
- Spread beam pulses
- Low energies for astrophysics: $<0.7A$ MeV

- **PARIS**

- Coupled to T-Rex or Gaspard
- Space to be specified
- Good beam timing and 100ns bunch period??

Other new equipment (2)

- **Gaspard**

- Compact; in coincidence with Miniball + spectro or with Paris
- Beam spot size= 1mm !
- Sub ns timing; 100ns bunch period

- **Helios**

- 7 m X 4m
- $Dt < 1\text{ns}$; 100ns bunch period

Other experiments

- Neutron detection : TOF 2 meters. DT = 1ns and bunch period 100 ns
- MoT trap : 10m² + 15m² laser table (low energy area)
- Actinide beams : 2m flight path; up to 10**9 pps
- I 124 needs Tilted foil holder between 200 keV and 1 MeV/A
- *I 103 mentions Miniball + Bragg counter*
- *I 116 mentions PARIS coupled to TOF spectrometer.*

Summary

- Spectrometer is important – There should be a working group set up and space reserved
- Timing properties are crucial for many experiments: neutrons, PARIS, GASPARD, Helios... $DT < 1$ ns on target; Buncher/chopper necessary
- Beam spot size < 3 mm and better.
- HELIOS and neutron detection require space.
- Energy resolution and precision never mentioned
- Storage ring