

p- RI elastic scattering

Collaboration :



RIKEN



Kyoto University



GSI



KVI

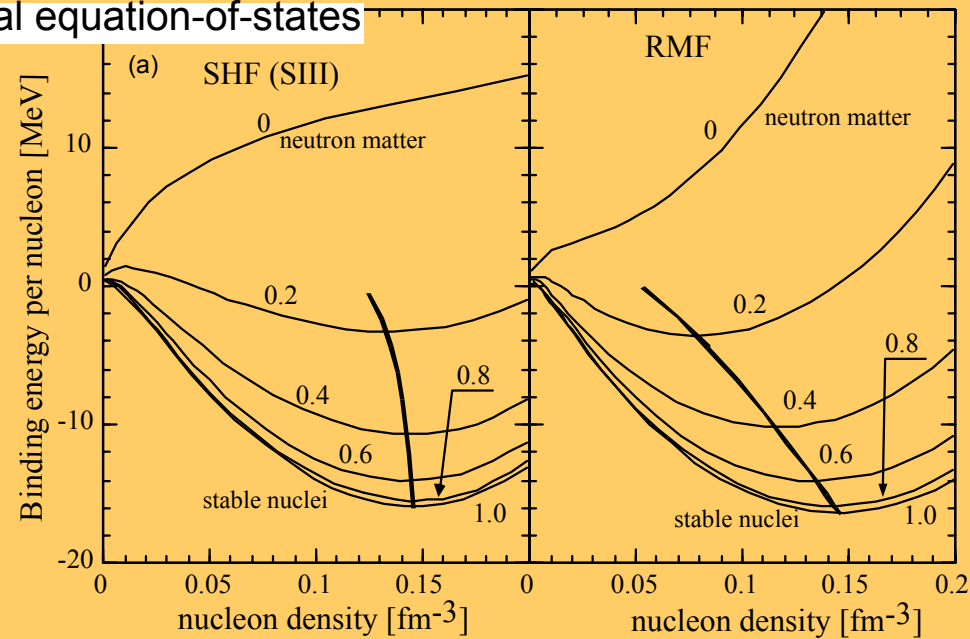
presented by :

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Aim of the experiment

- ◆ Matter density distribution of unstable nuclei
- ◆ Constraint for nuclear equation of state

Two typical equation-of-states



Parameters for the experiment

◆ Primary Beam : ^{86}Kr *Intensity = $10^{10}/\text{spill}$*
Energy $\sim 600A \text{ MeV}$

◆ Primary Target : Be *Thickness = 3 g/cm^2*

Development requested

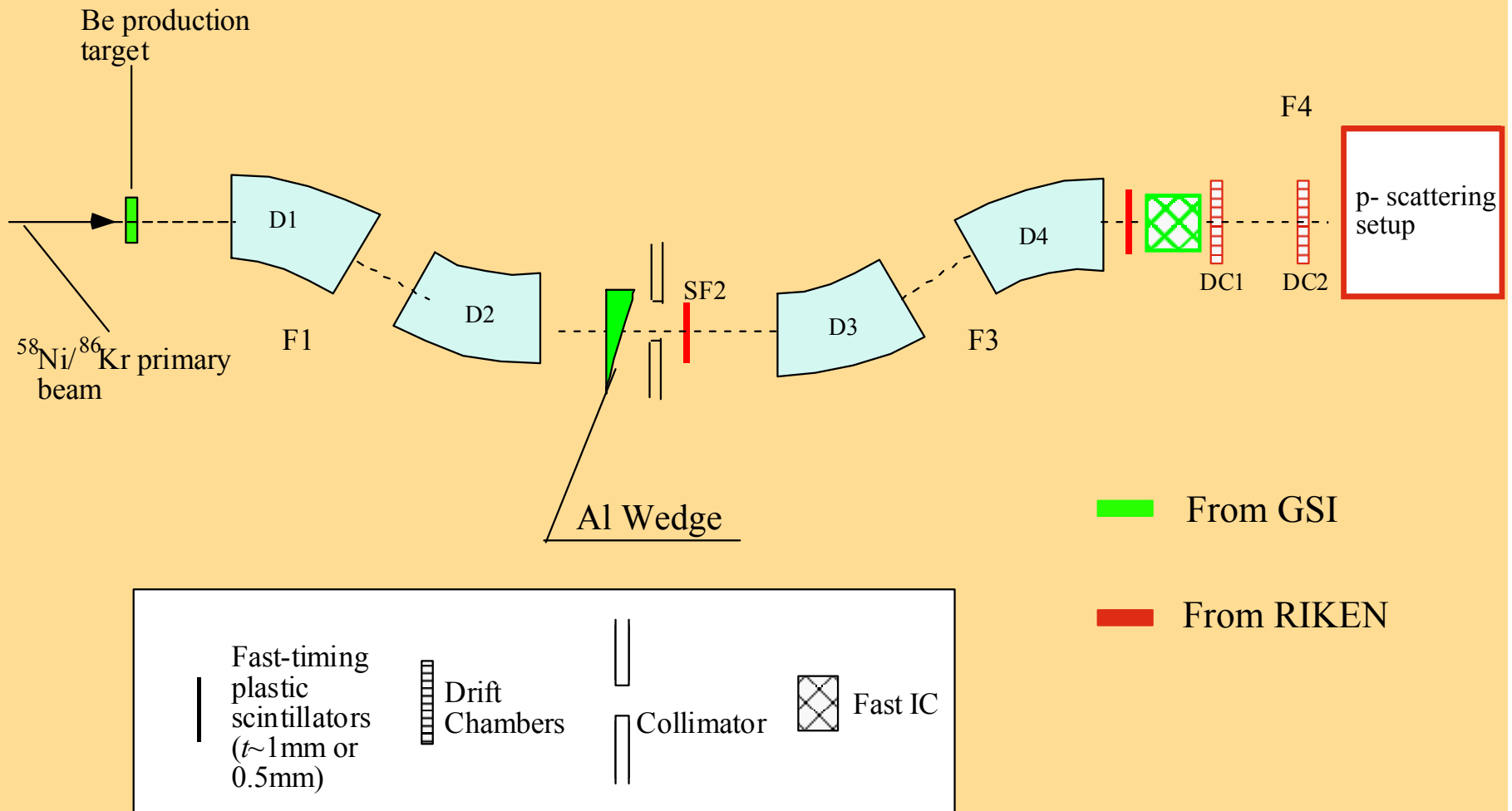
- ^{76}Ge beam with $10^{10}/\text{spill}$
- ^{86}Kr with $10^{11}/\text{spill}$

◆ Secondary Beam : ^{72}Ni *Intensity $\sim 150/\text{spill}$*
Energy @ target $\sim 400A \text{ MeV}$

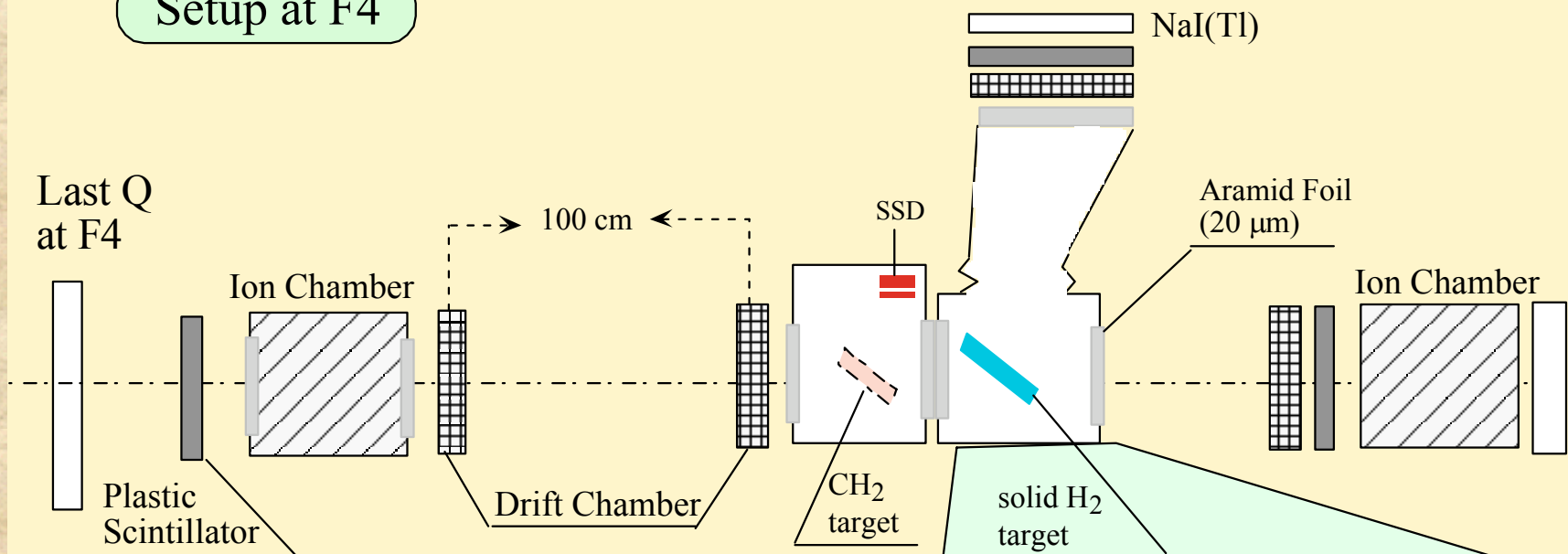
◆ Secondary Target : Solid H_2 *Thickness = 1 mm*

CH_2 *Thickness = $20 \mu\text{g/cm}^2$*

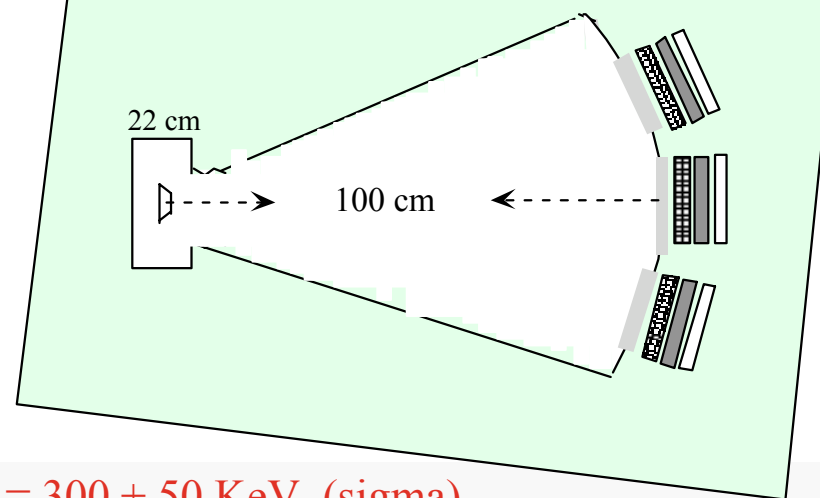
Schematic view of experiment setup at FRS



Setup at F4

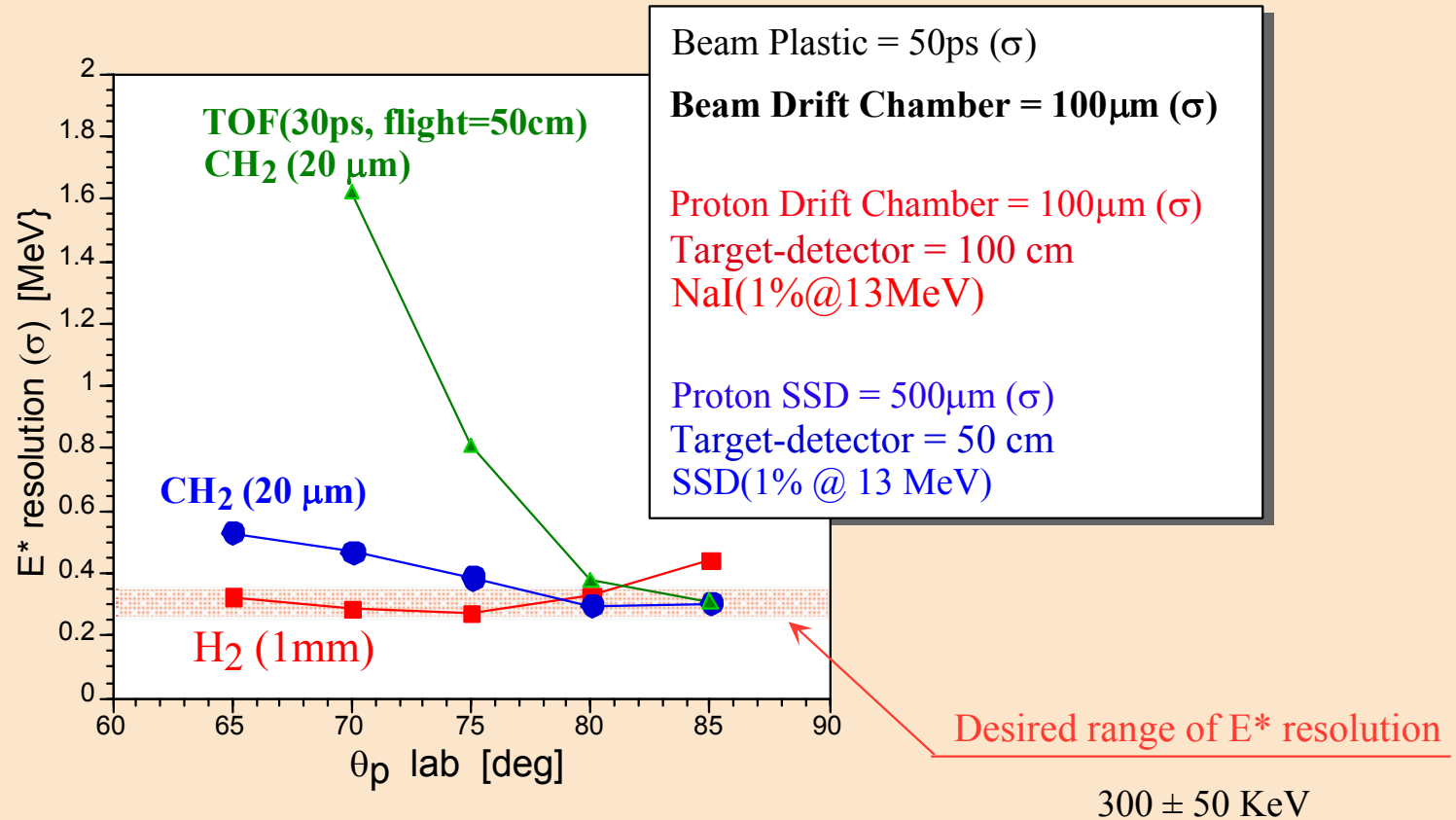


- ◆ Drift Chamber
 - Angle of Protons
 - Angle of Beam
- ◆ NaI(Tl)
 - Energy of protons
- ◆ Plastic
 - Z- id for protons
 - TOF for Beam
- ◆ Ion Chamber
 - Z- id for beam

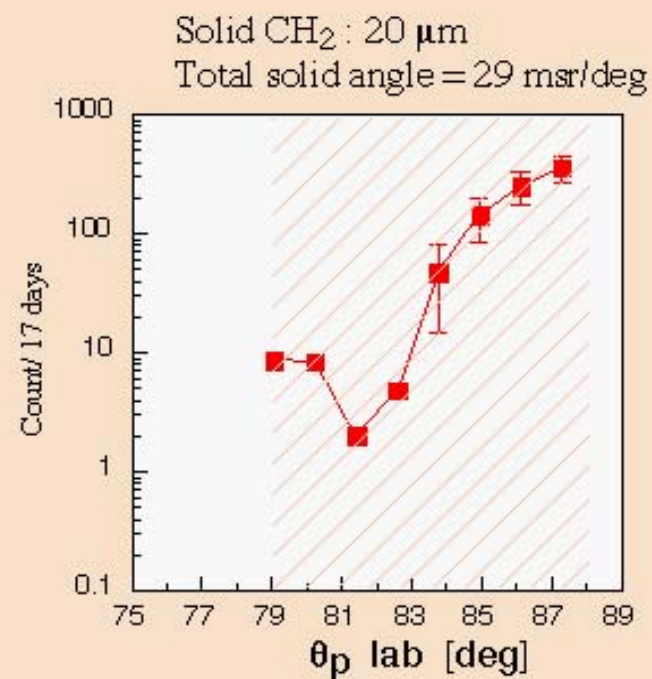
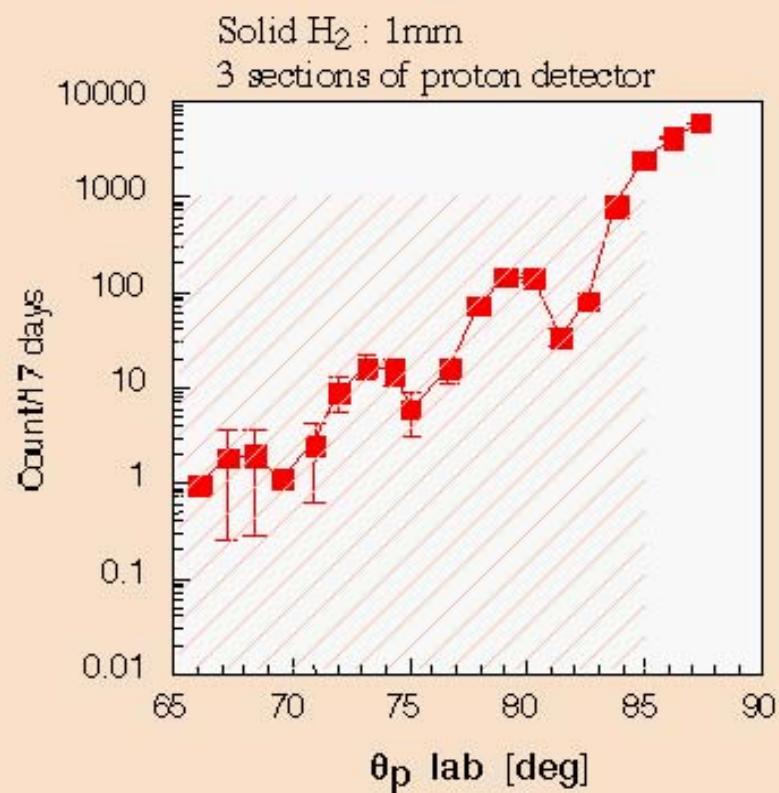


E^* Resolution = 300 ± 50 KeV (sigma)

Choice of detectors and resolution



Expected Statistics



Time Plan

