

Status report for Helium bag and Gauss meter installation for D5

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☆ Helium bag design and arrangement

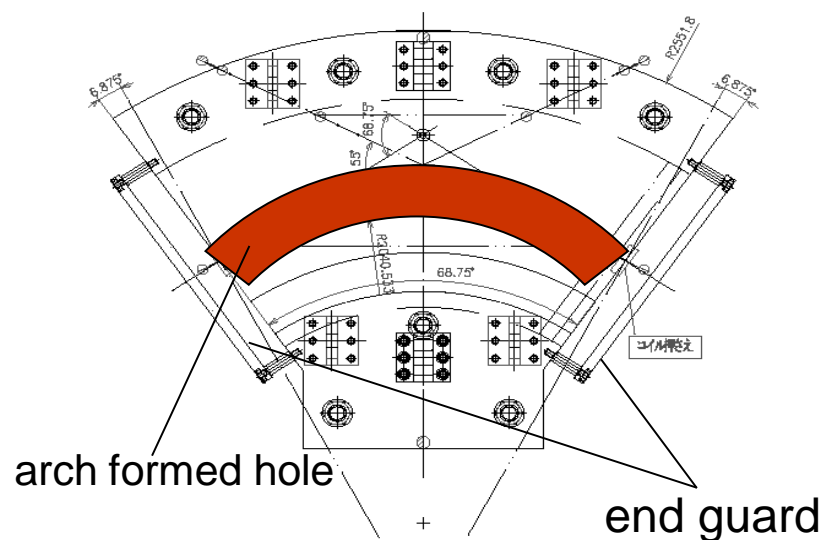


Fig.1 the design of D5 magnet

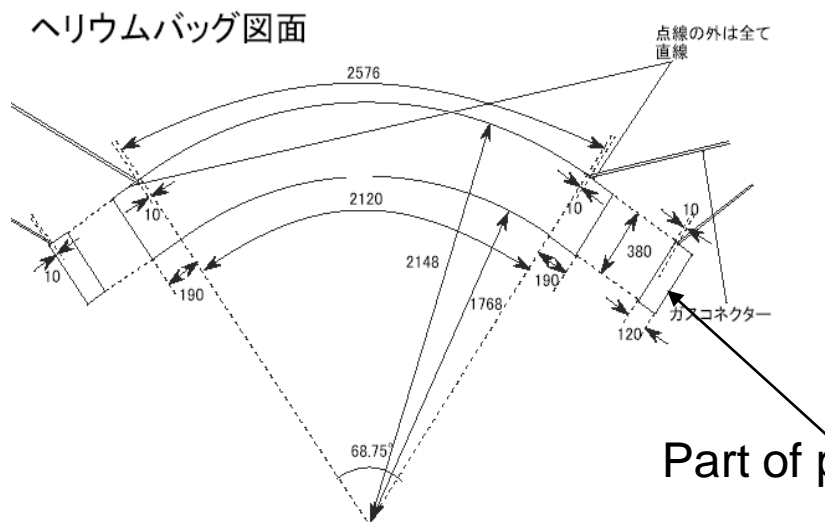
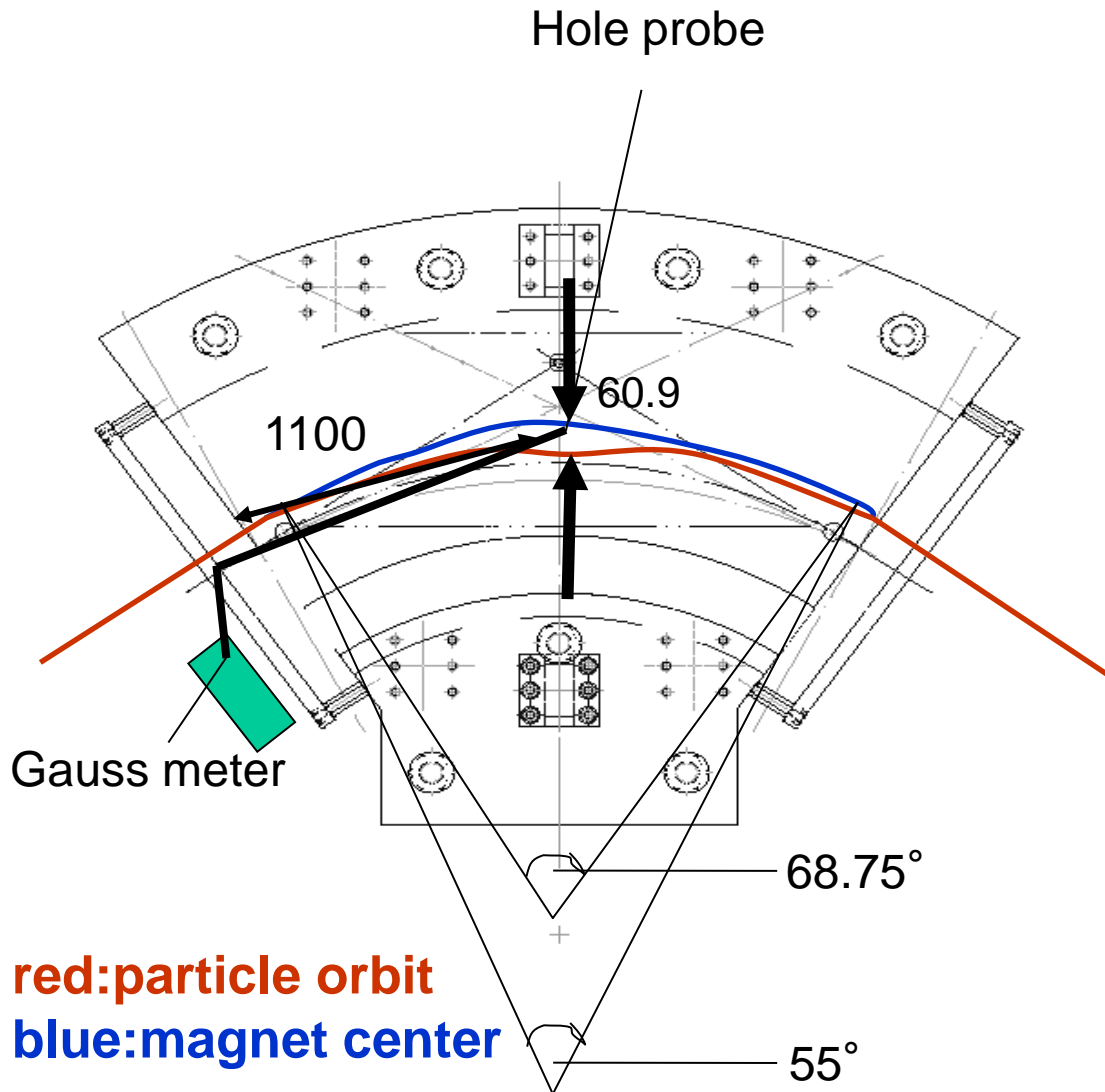


Fig.2 the design of Helium bag

- Helium bag is designed for reducing multiple scattering in D5 magnet.
- D5 magnet have arch formed hole. The hole size is 380 × 120.
- Helium bag is designed through the magnet's hole.
- The bag's thickness is 38μm about the part of passing particles . (the other part is all 50μm)
- The bag is made using Mylar.
- gas connector is connected sinflex tube (called 64)
- The bag is manufacturing now and delivered September 24th or 25th.

☆ The arrangement plan about Gauss meter



- In D5 magnet, magnet's center and particle's orbit center is different (~60.9mm)
- The center of magnet is ~1100mm from end-guard and Gauss meter's tube is ~2000mm.
- we put hole probe on the magnet center
- I designed Gauss meter and hole probe holder.

red:particle orbit
blue:magnet center

Fig 3.difference of center in D5 magnet

☆ the design of hole probe holder

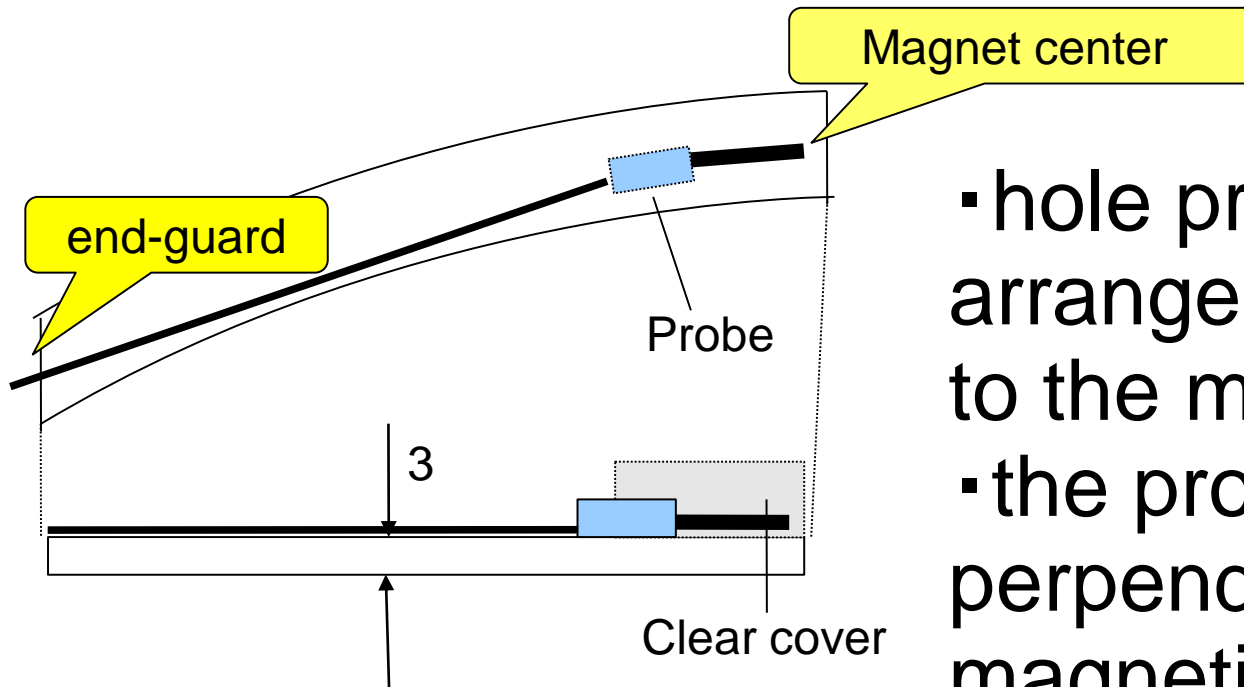


Fig.4 the design of hole probe holder

- hole probe holder will be arranged, from the end-guard to the magnet center
- the probe has to be fixed perpendicularly to the magnetic field
- clear cover is designed to protect probe's head from the helium bag's pressure

☆ the design of Gauss meter holder

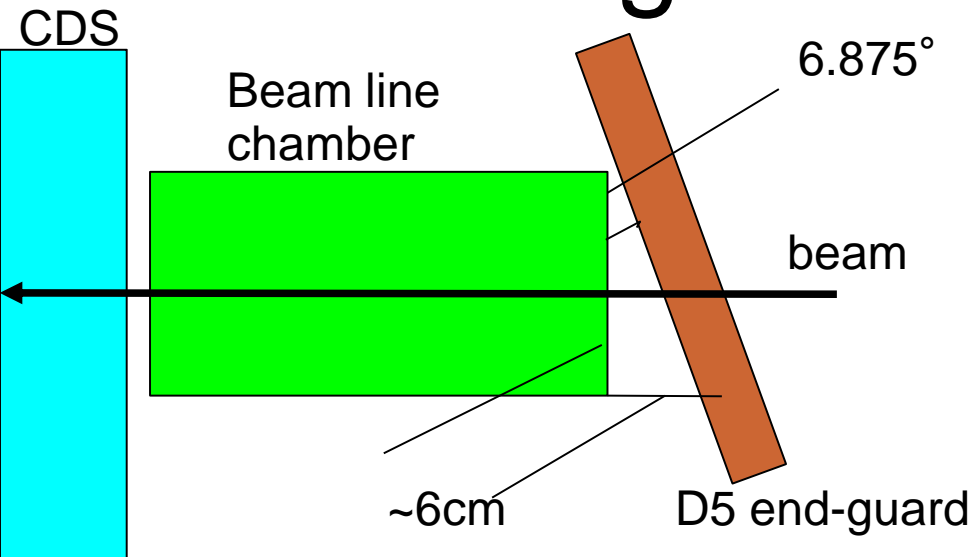


Fig5. The arrangement plan chamber and CDC

- There is a limited space to install the Gauss meter holder between D5 end-guard and Beam-line chamber.

- aluminum plate (the thickness is ~1cm) is necessary for attaching the Gauss meter holder

- we need request support for tapped holes to fix aluminum plate on D5 magnet

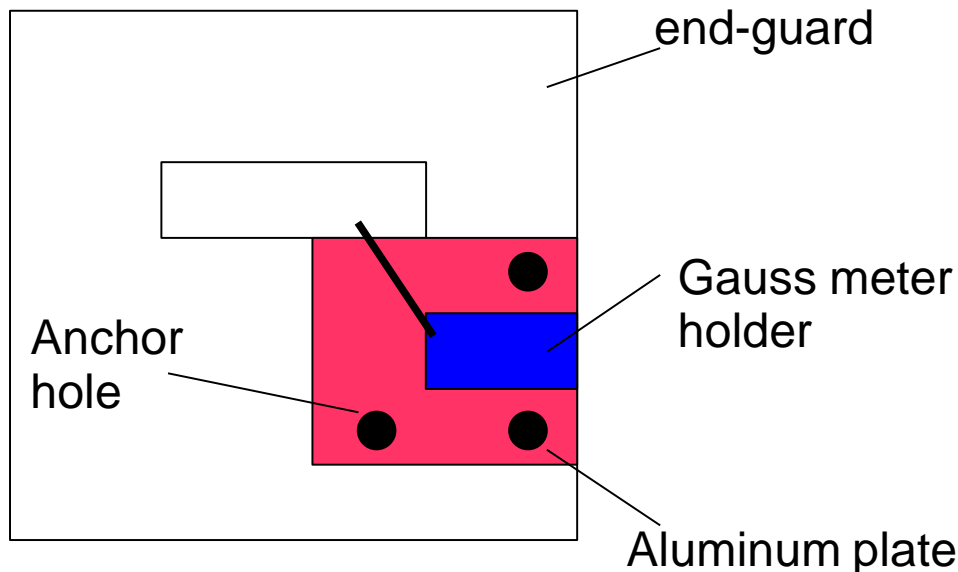


Fig 6.the arrangement plan of Gauss meter holder

☆time table

- Range stack holder → installed **already**
- Helium bag → delivered by **September 24th or 25th**
- Hole probe holder and Gauss meter holder → manufacturing now, delivered until **September 28th** and installed around **September 30th**