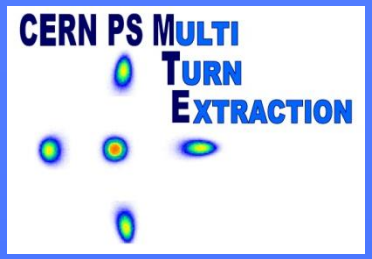

Dummy septum in SS15 of PS ring in LS1

M. Giovannozzi

Dummy septum in SS15: generalities

- Impact on losses studied by RP
- Allows concentrating losses in a well-shielded location (should this require reviewing the planned shielding increase on SEH16?)
- In principle, it provides a reduction acceptable for RP (factor of 10).
- Improvement of the radiation released outside the tunnel due to the corridor in front of the tunnel
- Linac3 radiation field to be revised
- Consequences:
  - Re-location of hardware (DHZ15, gamma-jump quadrupole)
  - Definition of layout and hardware parameters

Original proposal by Brennan

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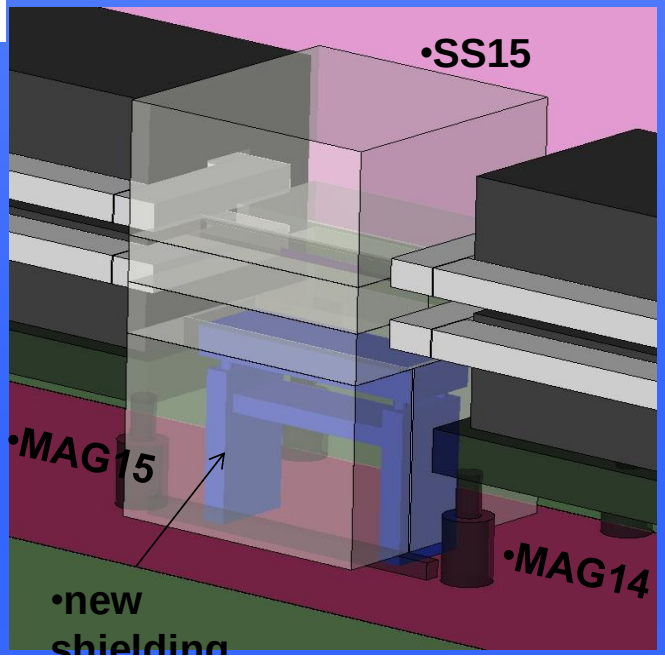
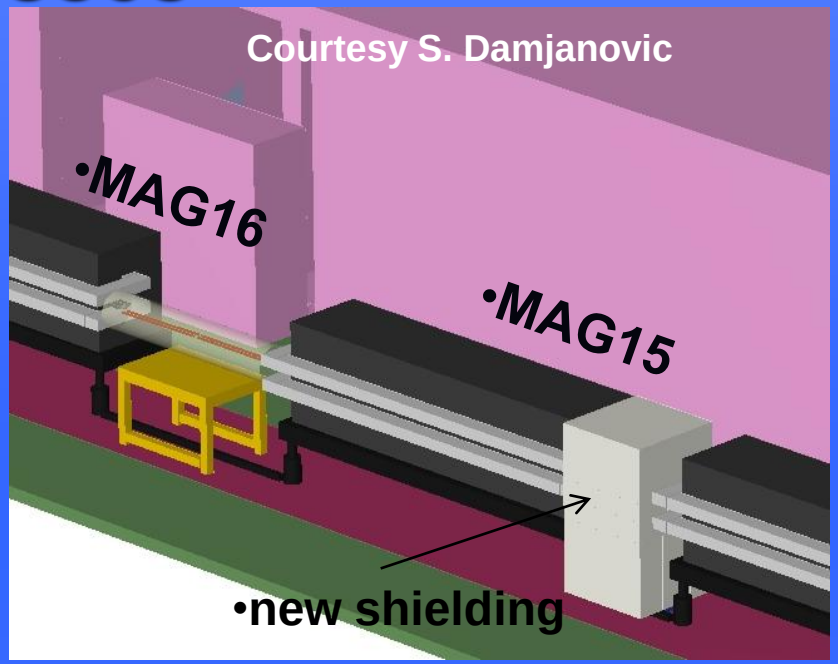
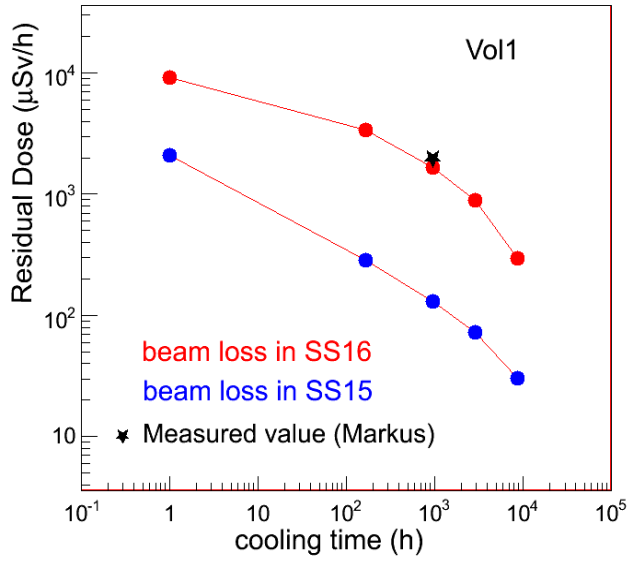
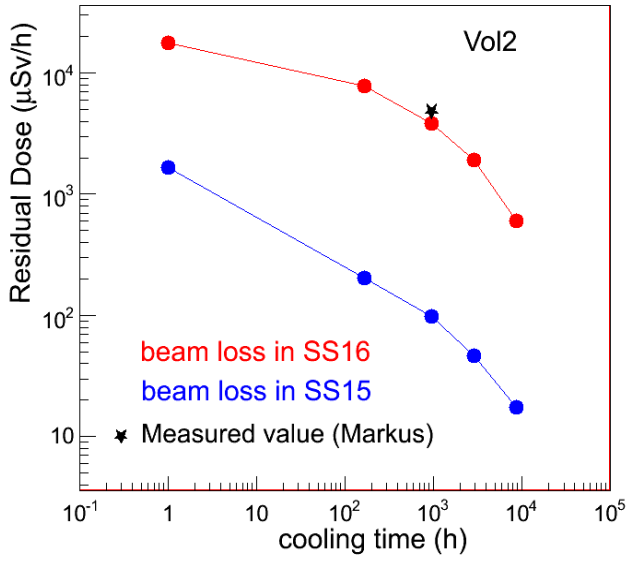
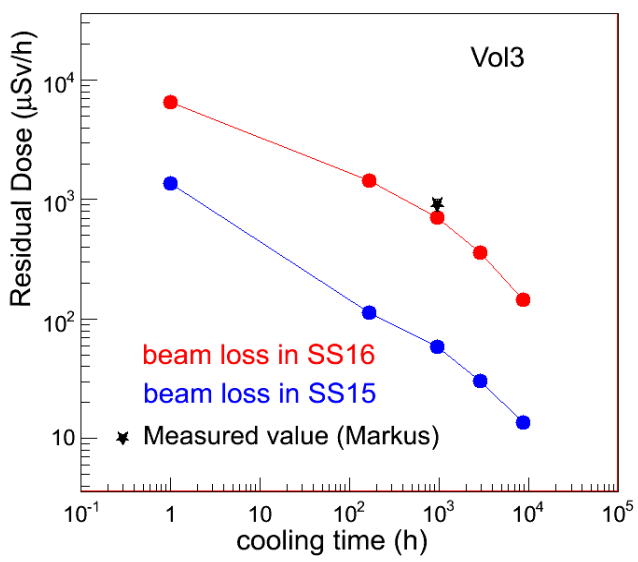
Dummy septum in SS15: impact on losses











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Dummy septum in SS15: present and future layout

Present SS15 layout

Present SS47 layout

Present SS48 layout

Internal dumps in SS47 and 48 might be used as an example for future configuration of SS15

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Points to discuss/activities

- Finalisation of
  - Concrete shielding (RP)
    - Material (e.g., reinforced concrete)
    - Dimensions
  - Dummy septum blade (RP)
    - Material
    - Dimensions (e.g., thinner blade will be easier to accommodate in terms of transverse beam occupancy).
  - Mechanical design of dummy septum (ABT)
  - Beam studies (ABP)
  - SS layout
    - Feasibility (M Poehler already gave green light for static)
    - Availability of material
    - Support (e.g., table - internal targets - vs concrete blocks)
    - Drawings

These items have implication on budget request.

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Timeline

- Installation in LS1
- Finalise choices for preparing drawings and orders: to be defined today
- Beam results to confirm choices: March/April 2012
- First iterations on SS15 layout: to be defined today
- Rough budget estimate: now