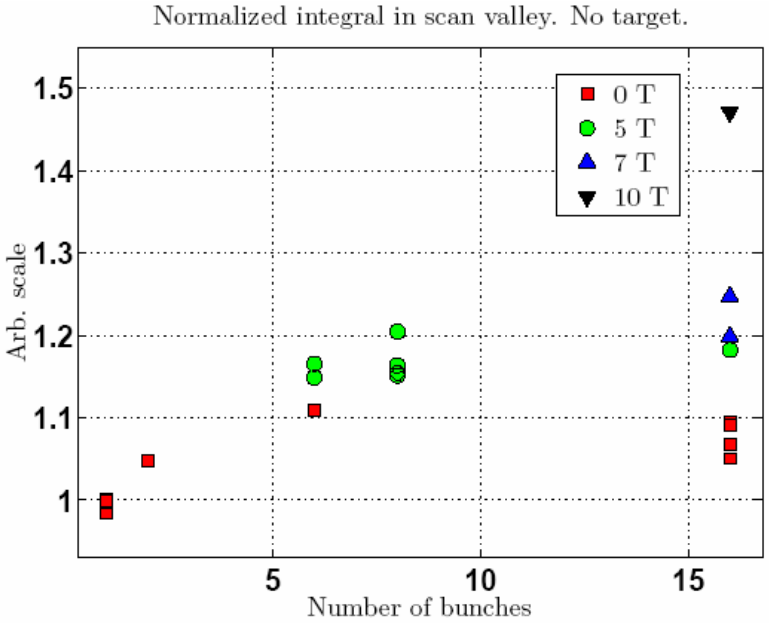
Secondary Particle Data Observations

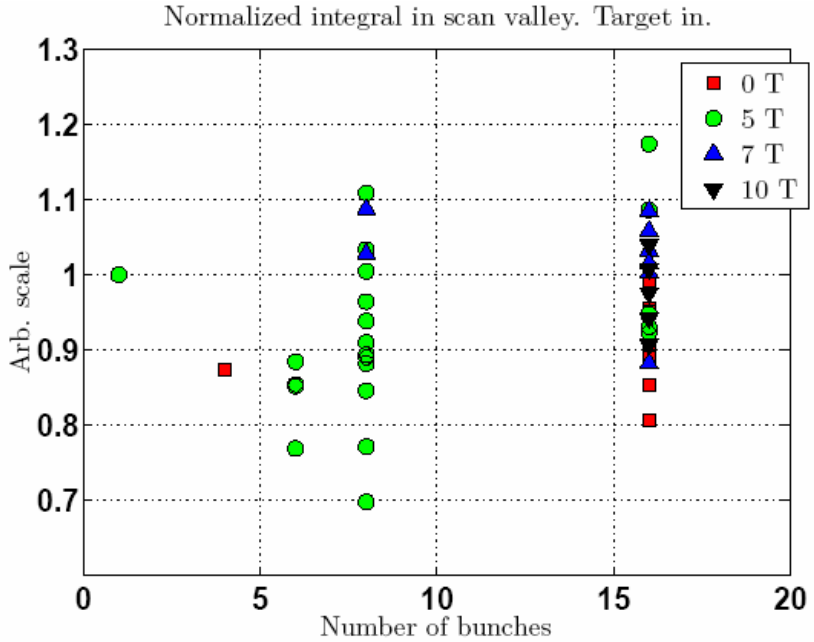
Marcus Palm

CERN

11 Dec. 2007

Signal integral vs. number of bunches



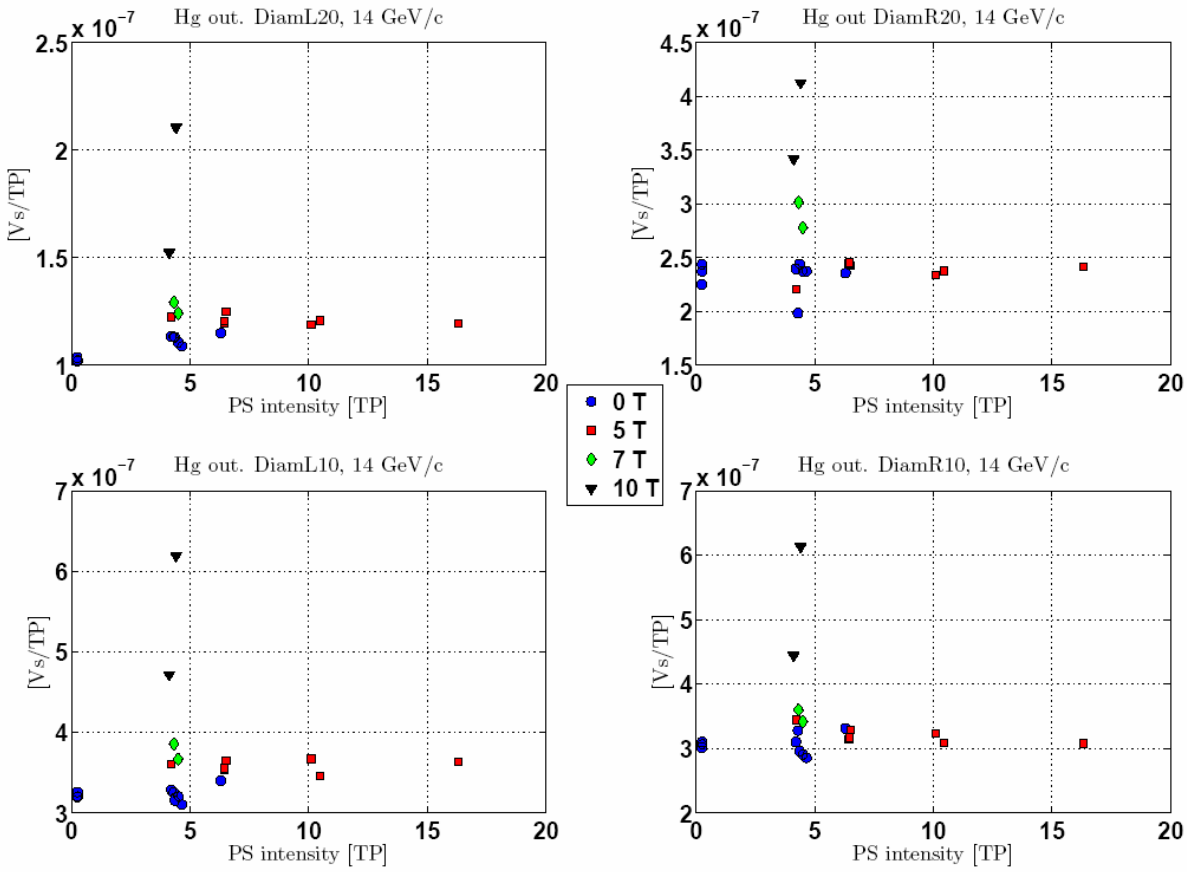


- Plots:
  - Signal/proton vs. number of bunches (normalized to a 1-bunch run)
  - All runs in “scan valley”:
    - Hor pos: [-18, -11]
    - Vert pos: [-8, 0]
  - No probe
  - 14 GeV/c

- Target out: More signal/proton with increasing number of bunches
- Not observed with target in
- (Same conclusions for 24 GeV/c…)

Linearity, target out, 14 GeV/c

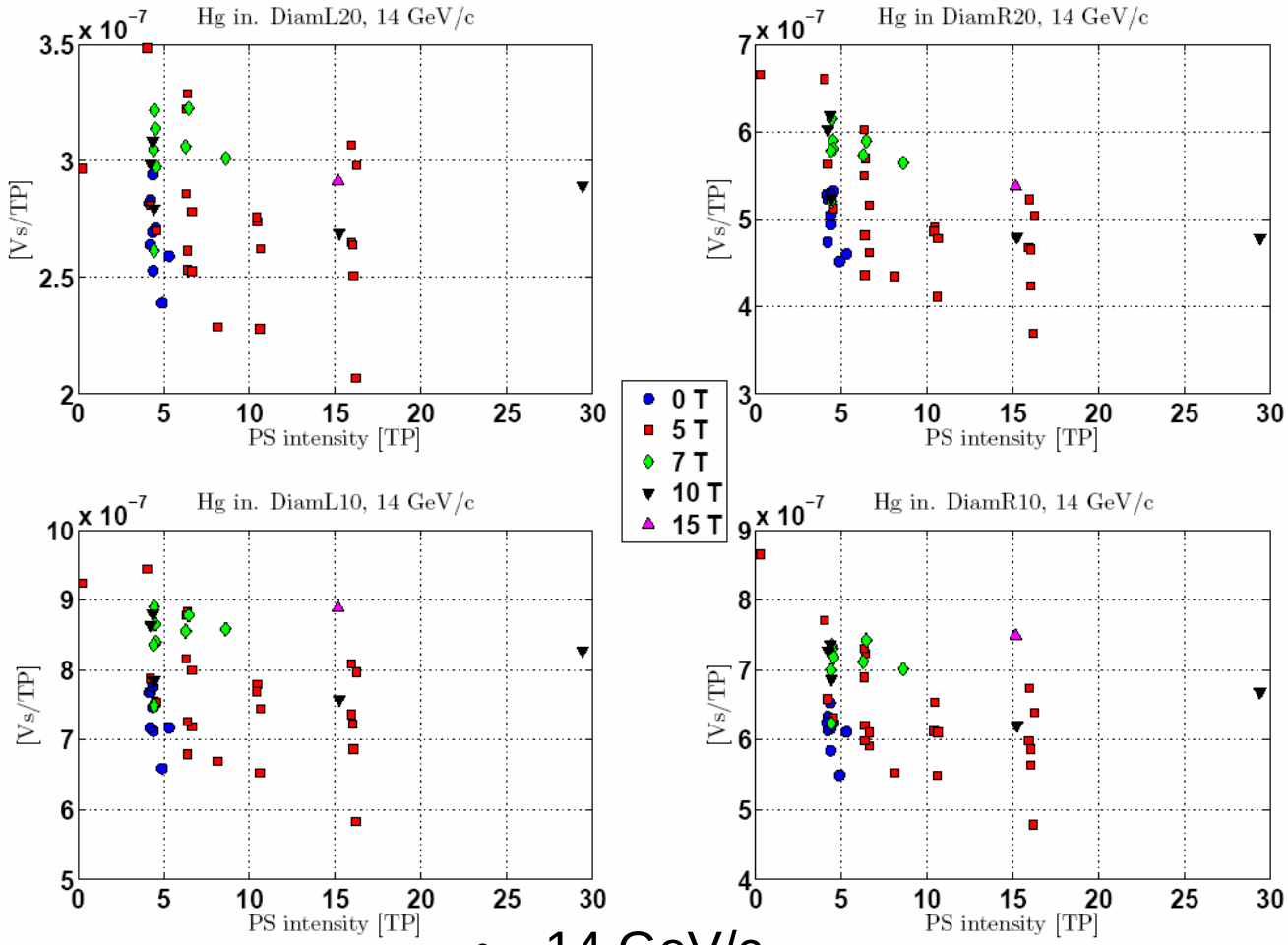
- Plots:
  - Signal/proton vs. beam intensity
  - All runs in “scan valley”:
    - Hor pos: [-18, -11]
    - Vert pos: [-8, 0]
  - No probe
- No major changes from low to high intensity



- 14 GeV/c

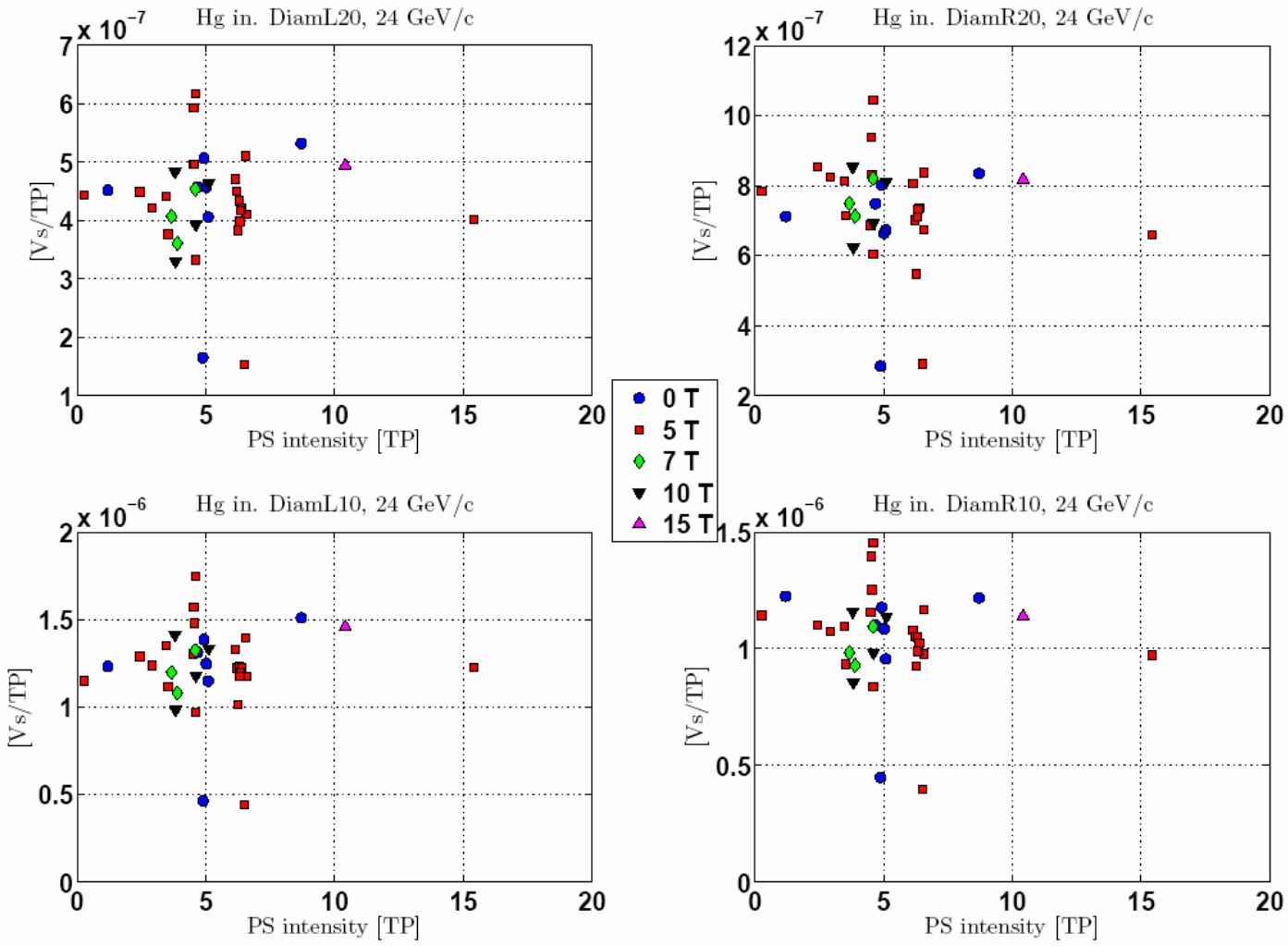
Linearity, target in

- Plots:
  - Integration of total signal vs. beam intensity
  - All runs in “scan valley”:
    - Hor pos: [-18, -11]
    - Vert pos: [-8, 0]
  - No probe
- Decreasing trend



- 14 GeV/c

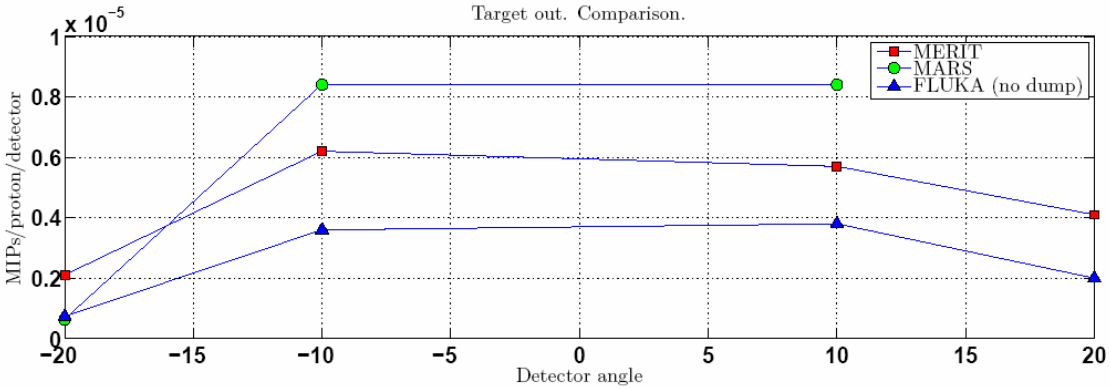
Linearity, target in

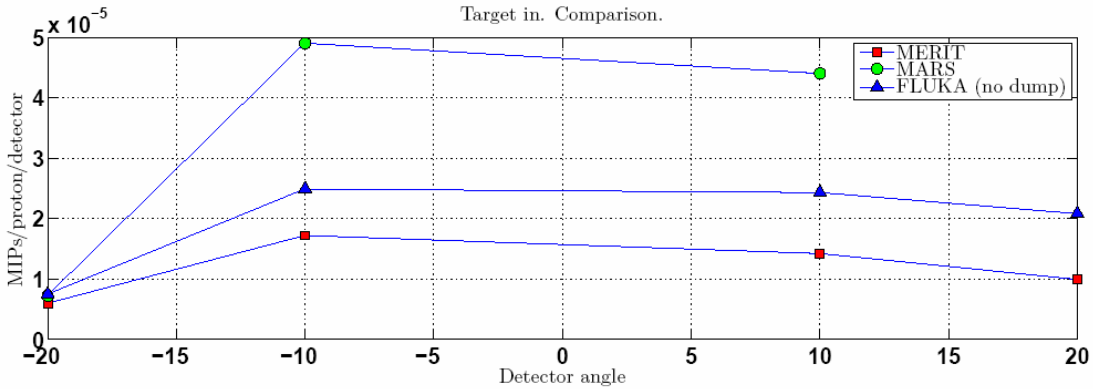


- 24 GeV/c

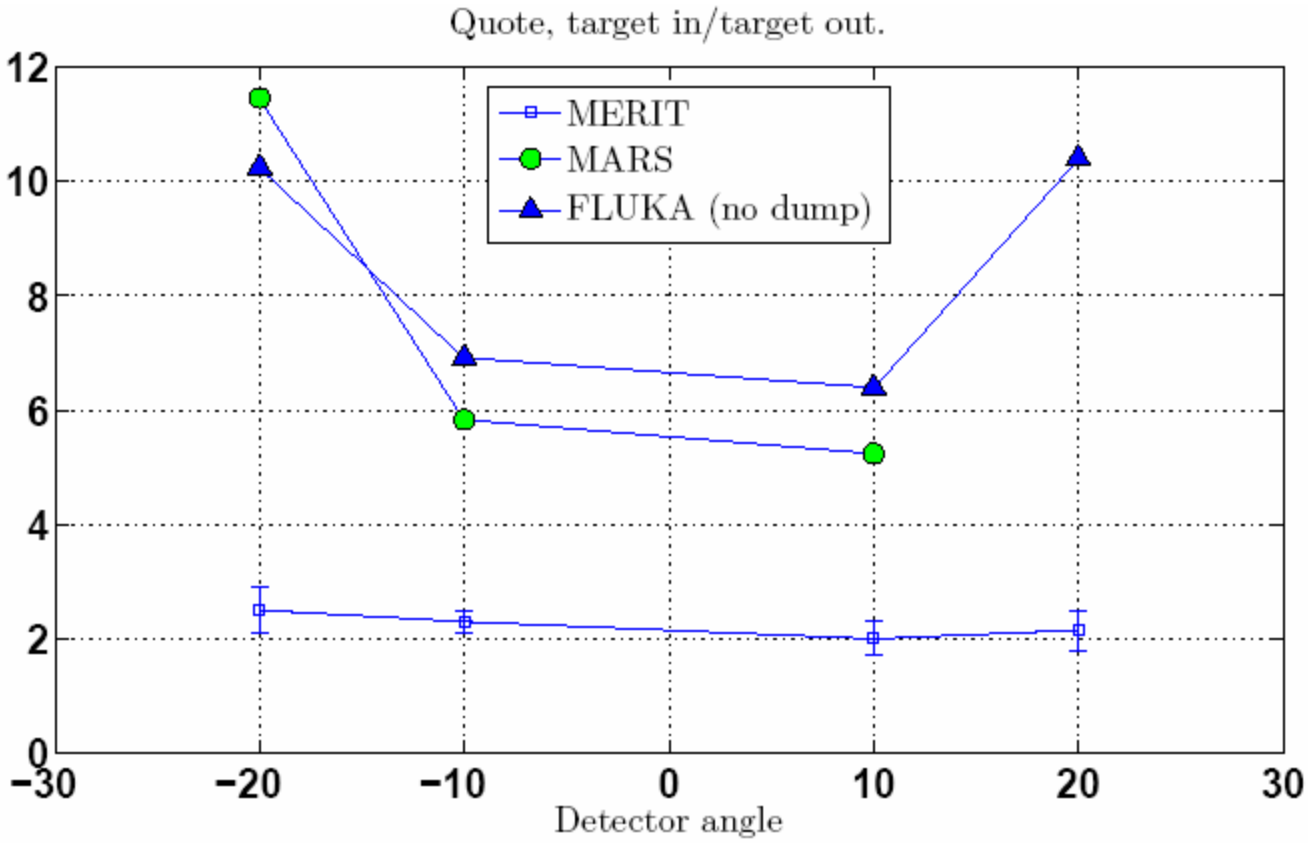
Signal/proton

- No dump in the FLUKA simulations
  - Very good agreement between MARS and FLUKA for the dump-insensitive detector at -20 degrees.
  - MERIT results a bit puzzling…





Target in/target out ratio



Probe/Pump ratio