From: R 204

Memo no: CERN/ISRC/69-3 ADD.2

INSTALLATION OF EQUIPMENT TO CALIBRATE THE MAGNET IN R 204 WITH COSMIC RAYS.

The aim of experiment R 204 is to search for muons of high transverse momentum as evidence for the existence of the Intermediate Boson, or massive virtual photons. To this end it is essential that the momentum resolution of the magnetized steel plate-optical spark chamber assembly is well understood in the momentum range 1.5 - 20.GeV/c.

The best way to determine the momentum resolution is to independently measure the momentum of particles satisfying the normal trigger of the equipment. To do this we would like to instal a conventional magnet spectrometer using sonic spark chambers located above the existing equipment on the Wide Angle Spectrometer (experiment R 203). The apparatus has been carefully designed not to interfere with any other experiments in intersection 2, and has the agreement of experiment R 203. The experimental support group and the ISR coordinator have been consulted.

The spectrometer would use part of the cosmic ray background to calibrate the muon detector magnet-spark chamber assembly, and would be used for cosmic ray measurements both with and without beams in the ISR.

We would like to instal this equipment as soon as possible, so that it can be thoroughly tested, and some data taken before the end of the ISR shut-down.

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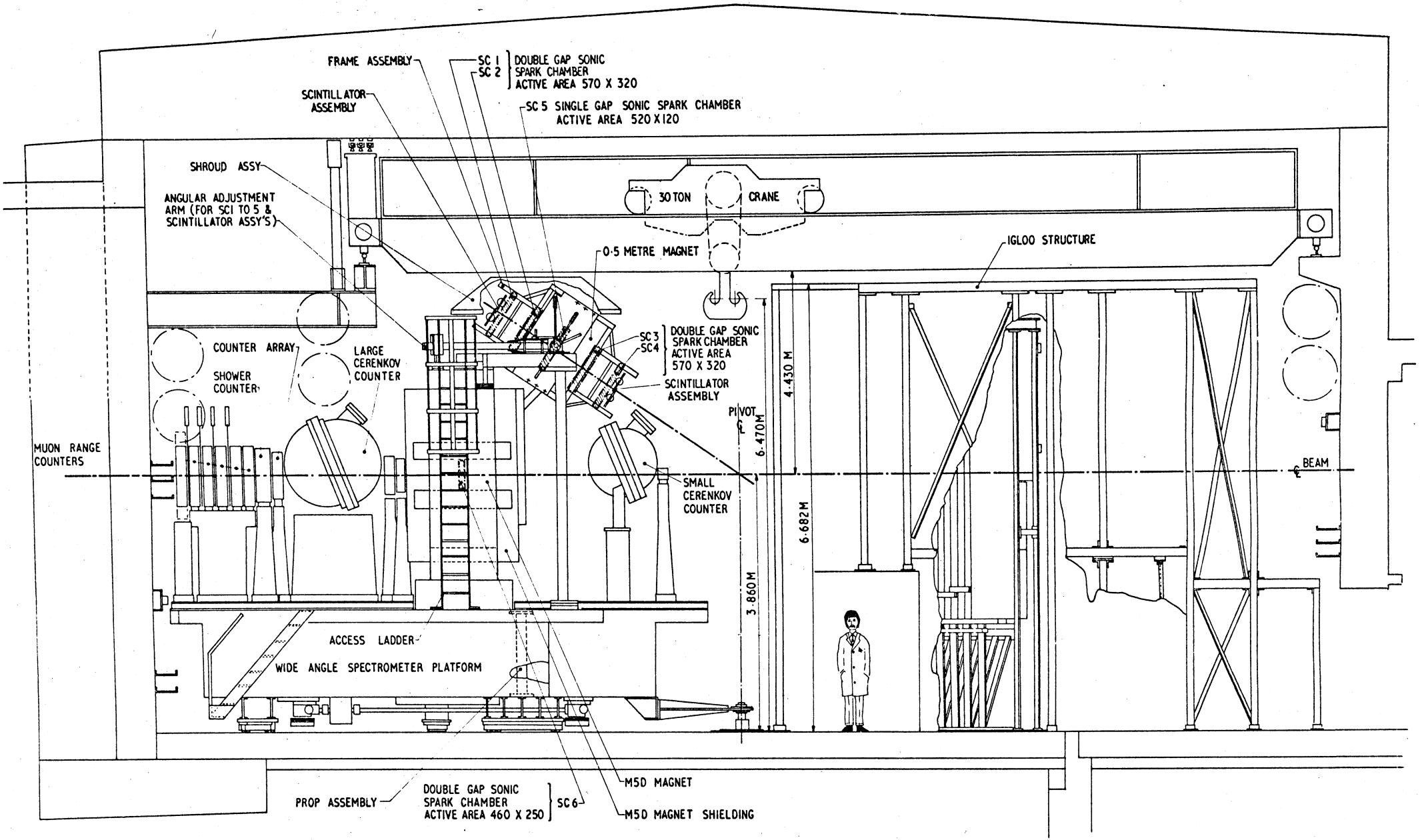

LAYOUT OF MUON EXPERIMENT (ISR)