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BEAM LOSS DUE TO G10 TARGETING

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AGS DIVISION TECHNICAL NOTE
No. 113

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Introduction

A measurement of the losses on the slow beam extraction equipment indicates a doubling of these losses, and thus induced residual radiation in this equipment when about 30% of the circulating beam is targeted on G10.

G10 Induced Losses on Extraction Equipment

A LM was also installed in the G10 area. The beam was increased on G10, and the loss in the slow extraction area (Σ LM)* was noted. The data are plotted on Fig. 1. Up to $\sim 15\%$ on G10 the loss on the extraction equipment is independent of beam on G10. For higher levels on G10 the losses increase dramatically. A doubling of the losses was measured at $\approx 30\%$ of the beam on G10. Unfortunately, the AGS failed before a calibration of the G10 LM was made. A calibration was inferred by comparing to the G10 telescope and an old calibration of ≈ 1100 counts on the telescope per 10^{12} protons on G10.

*Described in AGS Technical Note 112

Distribution

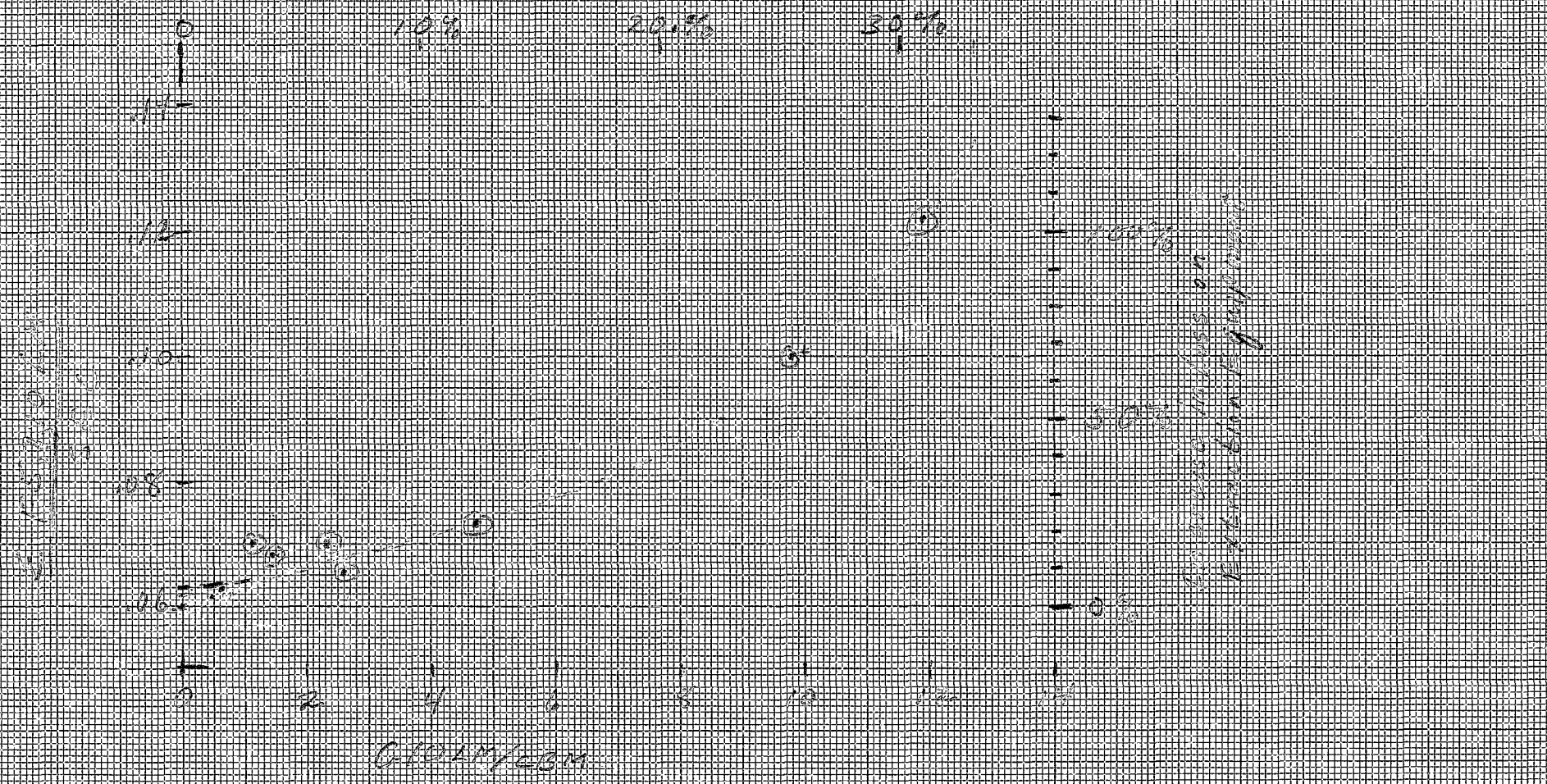
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EP&S, AGS S&P

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Fig. 1

Approximate Percent of Internal Beam on 0.70



0.625/cm

Extension of Equipment