MEMORANDUM

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To/A: Professor L. FOA
From/De: Hans H. GUTBROD (Spokesman WA80)
Subject/: Sulphur run in Sept./Oct. 1987
Concerne

We request the scheduled ion run to be done with Sulphur ions if the new GSI source can provide it.

We have observed with the 60 and 200 GeV/nucleon oxygen ions a strong increase in $E_T$ as a function of target mass. By increasing the projectile mass by a factor of 2 we anticipate quite a change in the energy density reached.

We have further observed the mean $p_T$ of the photons observed in Saphir to increase when going from proton induced reactions to oxygen induced reactions. Furthermore, an increase has been observed as a function of transverse energy in the reaction. We are already beyond the limits imposed by Hagedorn. A Sulphur beam will undoubtedly lead to higher transverse energy production as well as higher mean $p_T$ per $\pi^0$.

We request again two energies, 60 and 200 GeV/nucleon, since this change proved already extremely useful to sort out theoretical predictions of, for example, pion radiation phenomena.