DISCUSSION :

The general result obtained so far indicates that there is a close similarity between the two types of events.

For example :-

(1) The mean excitation energy for both the types of events is found to be same (420 Mev).

(2) From the charge distribution it is found that the masses of both the SPHFS and prefission nuclei vary from 40 - 70.

(3) From the range distribution, the mean range of fission fragments are found to 9 microns where for SPHFS it is nearly 5 microns. Considering fission to be symmetric, we may infer that the range spectrum of pre-fission nuclei, had there been no further splitting, would have been similar to that of SPHFS.

(4) The angular distribution of both the types of events are anisotropic. Ofcourse SPHFS show more peaking in forward direction ($F/B = 2.5 \pm 0.15$ than that of fission bisectors ($F/B = 1.3 \pm 0.08$).

Any anisotropy of this kind indicates contribution from cascade stage, hence there is contribution of this stage to both the processes and the contribution is more for SPHFS.

Thus it may be argued that both the processes may be alternative ways of de-excitation of the excited residual nuclei.

Further, it may also be noted that in our present study, with k^- interactions, the frequency of fission obtained (0.008) is about eight times lower than that obtained by Baker and Katcoff[14] (0.06) from a study of 2 Gev/c protons interactions. This low frequency, as compared to proton interaction, may be explained by the fact that the rate of production of the SPHFS in k^- interaction is about ten times high. Thus, short range spallation hyperfragment compete with the fission process, hence, there is decrease in the frequency observed.

PLATE - 2

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