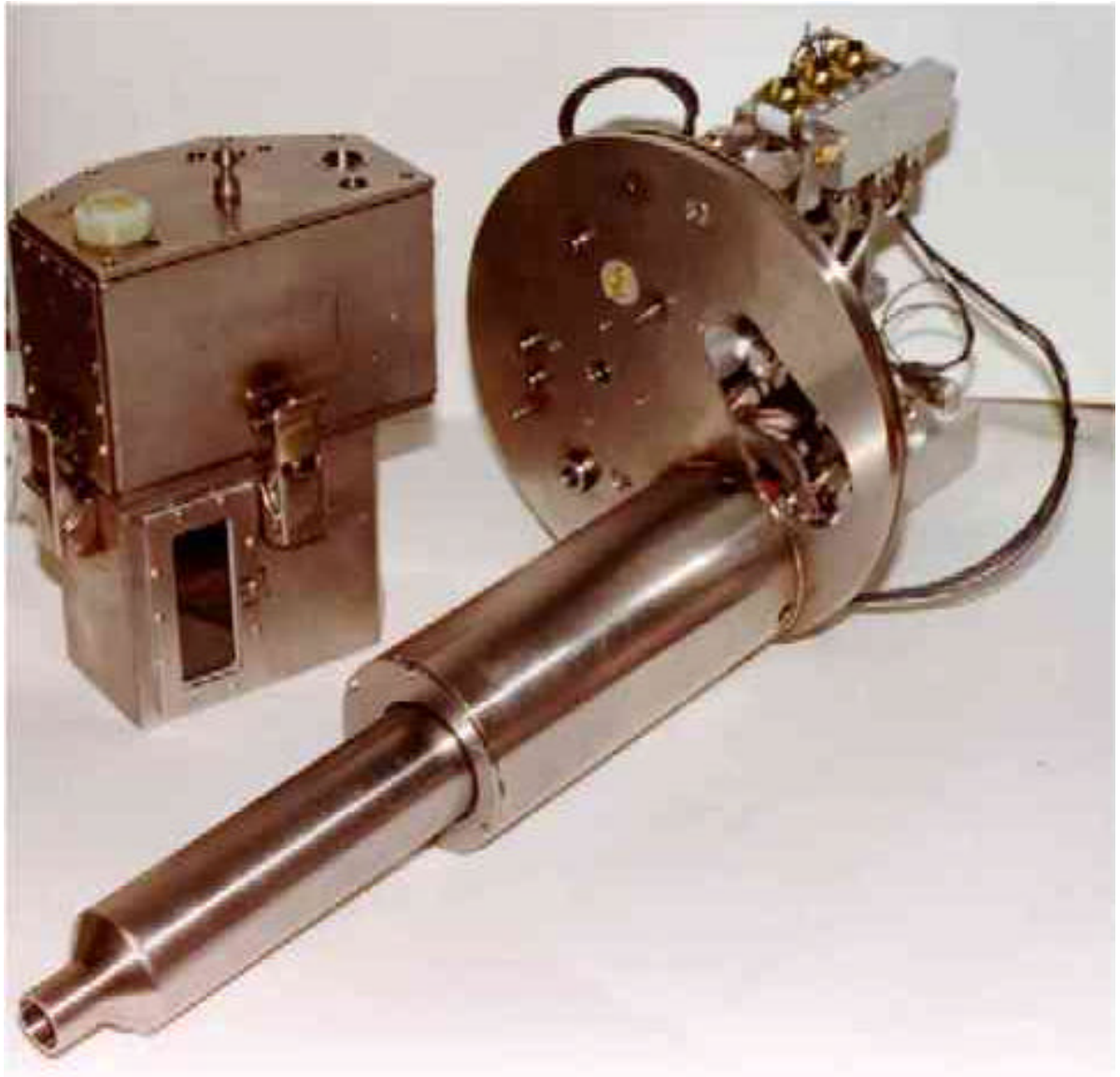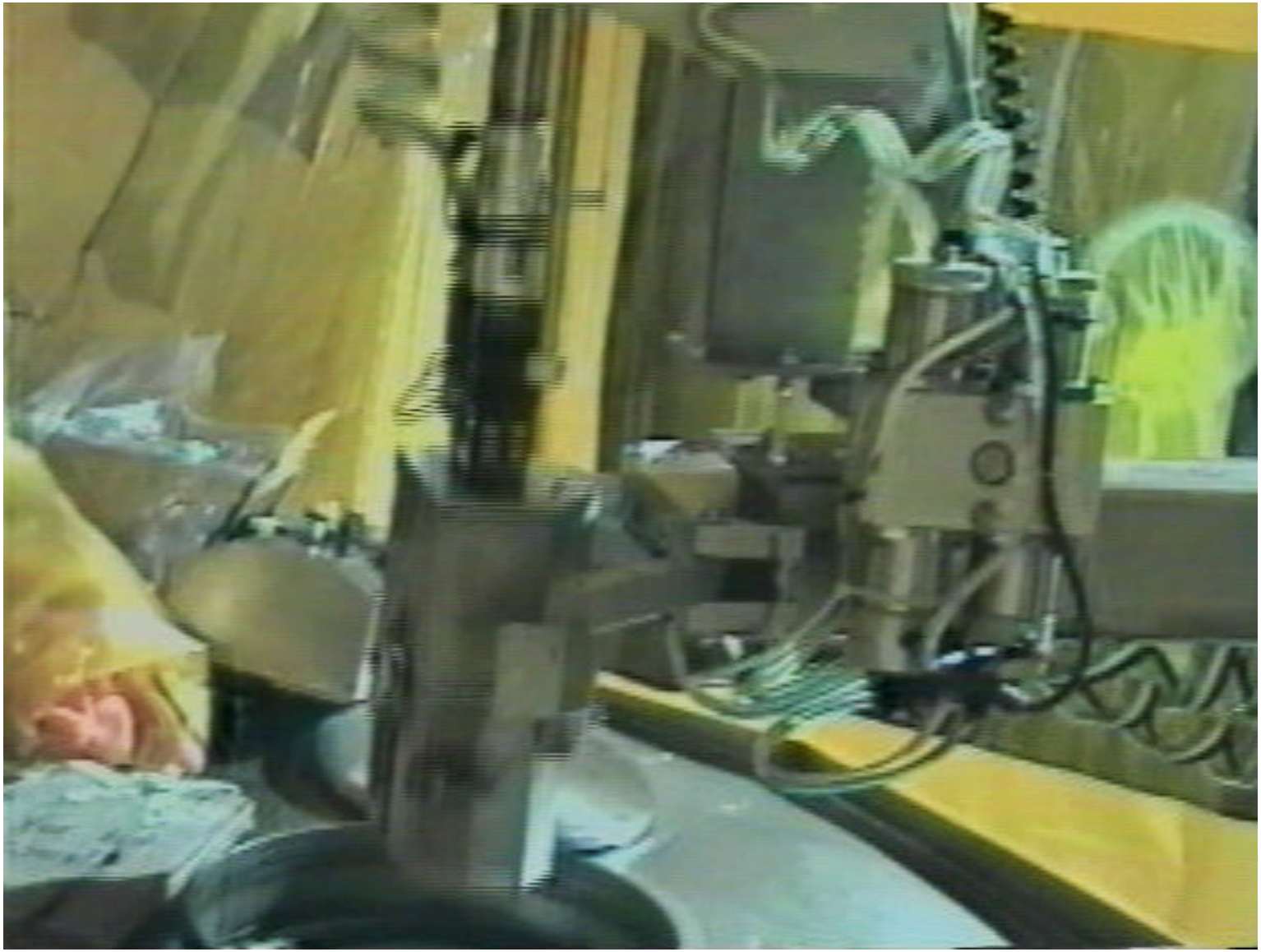SAMPLER
HASV