

Fig 3.1 A. ~~Modifications~~ Conceptual drawings of modification to existing(?) crew station to allow mass determination of crew member. A. Seat unlatched by D<sub>n</sub> and free to move along the axis of the air bearings. B. C. is structure <sup>of the spring system</sup> to provide rigid attachment to the ship proper and also carry the A during normal operation.

3.1 B is a detail, larger than scale, of the mass <sup>measuring</sup> system. E are attachment points of the fixed portions of the air bearings and springs to the structure. The lower ends of the bearings thru which the gas supply, G, passes will also be attached to structure. H is an optical zero crossing detector. I is the hand hold which is the foot board, <sup>and head rest</sup> I<sub>1</sub> will provide points for exertion of tension in the major muscle groups during mass measurement. *not shown is the counter or other timing arrangement.*

Fig. 3.2

Very schematic drawing of device to determine mass of small fixed objects.

Fig. ~~3.2~~ A is partial cutaway showing the spring arrangement and a counter / scale, B.

The optical zero crossing detector, <sup>EFG,</sup> & dual air bearings, D, are shown in 3.2 B. H

is the weighing pan containing a partially being "weighed" (massed?).

filled tube. Air for the bearing will enter via tubes, C.