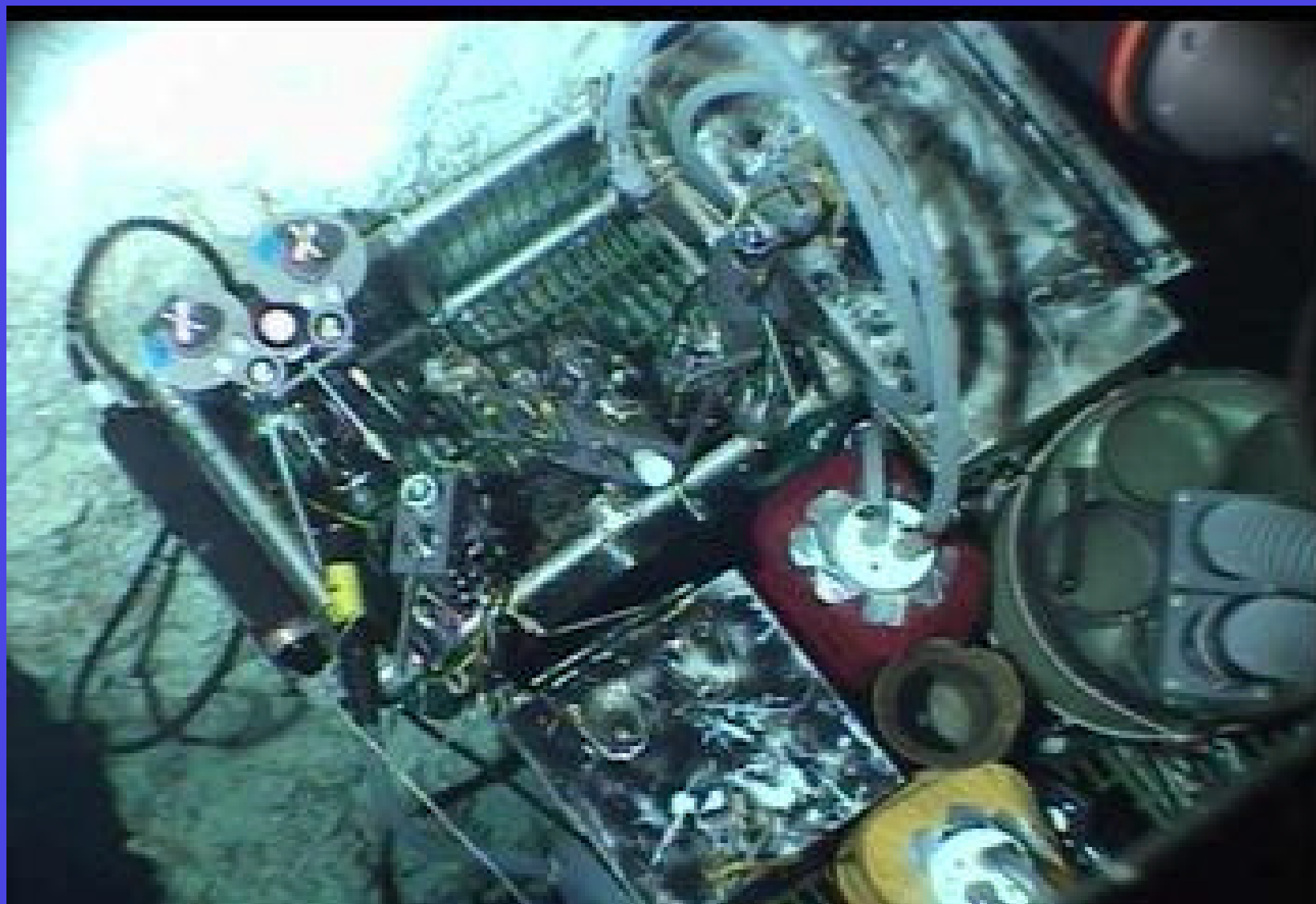


## **General Description of Oceanographic Suction Samplers and Needed Characteristics for a New Type of Multi-chamber Sampler for Multidisciplinary Research**

Oceanographic 'slurp' samplers consist of several key components. The primary components are:

- 1) an electrical or hydraulic pump system that provides suction flow to drive the system,
- 2) an outlet hose that connects the pump or hydraulic power system to a collection chamber,
- 3) a collection chamber that contains a mesh filter, the size of which can be changed depending on material to be sampled, mounted at the outlet opening, and
- 4) a handle-mounted inlet hose that leads from a collection chamber to the material to be collected





## **Proposed New Multi-chamber Suction Sampler for ROV Jason2 and Alvin** ***System Description***

The suction sampler proposed will be designed for use on both Alvin and ROV Jason 2. Slight differences in vehicle operating procedures will distinguish how each suction sampler will be used but each sampler will be interchangeable between the two vehicles. We are proposing that two systems be built. Each vehicle conducts multidisciplinary science operations throughout the year and often during individual cruises, hence each vehicle requires this capability.

The suction sampler will have five acrylic sample containers in which biological samples can be collected. Each sample container will be individually sealed from ambient contamination before, during and after the dive. The 5 sample containers will be encased in a polyethylene plastic, insulating cartridge. This insulating cartridge will allow all five sample containers to be switched out as an assembly and also help maintain the samples at desirable temperatures during vehicle recovery.

