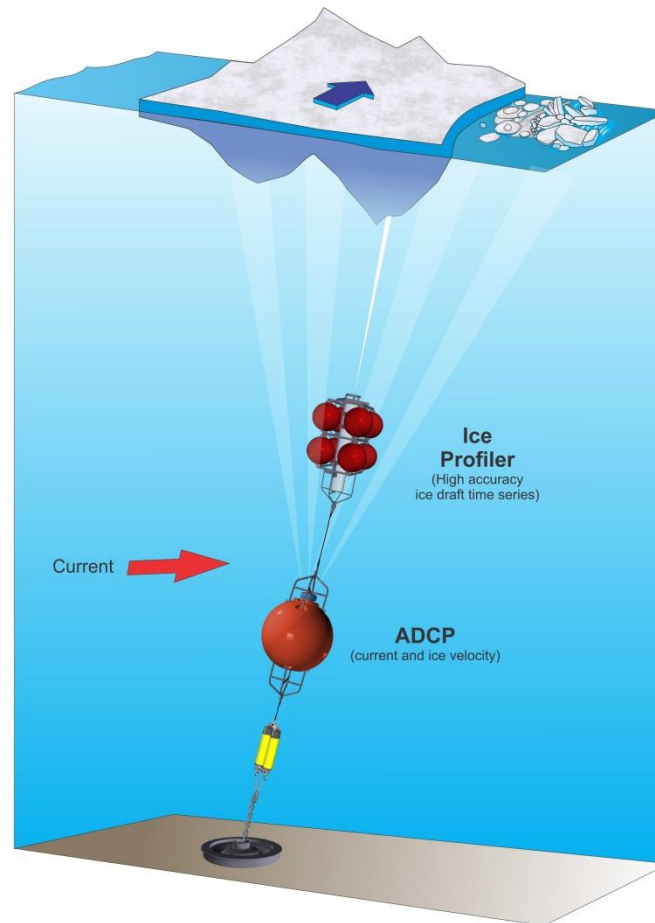


### Ice Profiling Sonar Taut-line Mooring Arrangement



#### Notes:

- The taut line mooring configuration for the IPS may be used at various water depths from shallow (10m) to very deep (+2000m) with the IPS instrument positioned near the surface.
- The instrument depth can be controlled with the length of line between the mooring frame and the anchor; the instrument depth should be set such that the ice cover (and ice bergs) do not come in contact with the instrument and mooring frame. Positioning the instrument too deep will result in a higher power consumption and more null targets (especially at >150m). The pressure sensor range for the IPS instrument should be selected accordingly.
- Careful design of the mooring components ensures minimal IPS instrument tilt (< 5 degrees), reliable mooring operation and high quality data. The depth rating of the flotation, the depth rating of the IPS, the slope of the bottom and the water current speed profile all need to be considered.
- ASL Environmental Sciences offers several different proven “off-the-shelf” mooring solutions including bottom frames.
- Acoustic releases, pingers, buoys, ADCP and other equipment are available from ASL Environmental Sciences on a lease basis.
- To resolve quasi-spatial components of ice velocity and water velocity profiles, it is possible to mount the ADCP instrument below the IPS on the same taut-line mooring if the water depth allows this.