Our last day of operations was a mix of some frustrations but ultimate success.

The morning and much of the afternoon was dedicated to engineering with trying to solve the problem of finicky thrusters. The bursting hose problem of yesterday was solved early, but unfortunately, dealing with the problematic thrusters took much of the day while the barge remained at beachside for the tests. However, by the end of the day SIR was flying in the nearshore waters as it had done in the first two days.

Figure 1: Image by Reed Scherer of SIR going through its underwater transformation.

So we end the operations here celebrating that the SIR has been successfully tested in its engineering operations. There were no electrical, structural or communication failures and all but the thrusters have performed exceptionally in the range of mechanical operations. The power that the SIR has for maneuverability exceeds all expectations and thus it has shown that it can easily haul out 2km of umbilical as it roves under the Ross Ice Shelf. It looks like the thruster problem has been solved, but DOER plans on running further tests on the thrusters back in their shop. The problem is not the new design of the impellers that were created by DOER especially for SIR, but it is in components from other suppliers. It is disappointing that we did not get as much of the science done for the California Geological Survey as we had hoped, but engineering-wise this SIR testing can be counted as a great success.