Outcome of discussion in group 3 ("Synthesis and Mechanisms of AMOC")

1. Assess our ability to detect climate variability and changes related to AMOC, for such quantities as transports and storage of heat and freshwater/salinity, air-sea fluxes, SSH, SST, and sea ice.

2. What are the accuracies required to detect changes in climatologically important quantities (e.g., heat & freshwater content) for interannual to decadal time scales)?

3. Evaluate the benefit of enhancement in full-depth temperature and salinity measurements (e.g., full-depth Argo) to improving the estimates of climatically important quantities and the initialization of decadal prediction.

4. Enhance the efforts for synthesis, fingerprint detection, and mechanism studies.

5. Develop and apply advanced modeling/estimation tools to address the above issues.

6. Emphasize the important role of satellite observations; assess the risks of losing these observations; identify future need.