

CONSIDERATIONS FOR A MARINE DEPLOYMENT OF AMF2

R. M. Reynolds, E. Lewis, and W. Wiscombe

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**Environmental Sciences Department/Atmospheric Sciences Division
Brookhaven National Laboratory**

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ABSTRACT

The ARM Mobile Facilities (AMFs) have been deployed at numerous locations around the world and have contributed many valuable long-term data sets advancing knowledge of clouds, aerosols, and radiation. However, all deployments thus far have been from continental or island sites. As oceans cover roughly 70% of Earth, it is vital that future AMF deployments include marine-based platforms. Such deployments could provide information along transects, and repeated transits could provide climatologies of cloud, aerosol, and radiation properties along these transects. There are a number of issues that must be considered for a successful marine deployment. A major issue is finding a platform for the AMF2 on a ship that traverses the region of scientific interest. It would be advantageous if the ship was a U. S. flagged ship, although there are still many issues that must be dealt with, including location of the AMF2 and associated instrumentation aboard that ship that does not interfere with (or is not interfered with by) other activities of the ship (including loading and unloading cargo, radar interference, etc.) but yet provides access to the containers and instruments, a clear view of the sky and sea and access to clean marine air; balloon launches; ship motion; the corrosive nature of the marine environment; power issues; and so forth. A plan for deployment of AMF2 and associated instruments aboard a cargo ship is presented (Fig. 1), and concerns with this plan, and with marine deployment of AMF2 in general, are discussed.



Fig 1.