

GV's notes from the meeting held in Everett on August 20, 1998.

This impromptu meeting was held after the full ICE group meeting on the previous day. The ICE NUCLEATION working group (**IN-WG**) was formed at that gathering. For details about that meeting see <http://cooper.ucar.edu/ICE>

Participation: Present were: Marcia Baker, Al Cooper, Andy Heymsfield, Harry Ochs, Dave Rogers and Gabor Vali. Additionally, interest to join in the work of the IN sub-group was expressed by Roy Rasmussen and Ray Shaw. Yet others are likely and are encouraged to join.

Scope of work: The scope of the IN-WG activities was agreed upon to include both homogeneous and heterogeneous nucleation, and to approach these problems from the perspectives of laboratory experiments, cloud observations, theory and modeling. Goal is to generate ideas and to formulate plans that will be included in the ICE prospectus or proposal.

Strategy: In view of the recognition that the full array of atmospheric ice nucleation questions will not be resolved even within the projected five or ten years of the ICE initiative, the *fundamental strategy* that was seen attractive was to aim for one 'small victory' while maintaining a broad attack on the full range of problems. 'Small victory' was thought of as successfully making the ice nucleus to ice crystal link in one simple cloud type.

The most likely candidate for the 'simple' cloud type is the wave cloud. By looking at both continental and maritime wave clouds (say, Colorado Rockies and Olympic Peninsula) a range of cloud parameters can be reached. In addition, the west coast clouds might at times be influenced by incursions of Asian dust, giving a chance to explore that dimension of the problem. (The role of dust as IN connects with questions of global variability, anthropogenic impacts and others.) In series of wave clouds, the preconditioning or formation of IN by evaporation can be examined.

In the category of broad attack, prominence was given in the discussions to laboratory experiments on mechanisms and to field studies on the origins and composition of IN. Mechanisms of particular interest are deposition below and above saturation with respect to water for various aerosols, and the possibilities of IN generation or conditioning by evaporation and within clouds. Naturally, instrumentation to measure IN remains a high priority need.

Other items:

It was seen desirable to establish contacts with groups outside the US who are working on atmospheric ice nucleation.

While there was no time to discuss in detail, we reminded ourselves of the need to think about education activities and to search for ways to expand the circle of researchers addressing atmospheric ice nucleation problems.

END OF NOTES