

Lessons of the 1980 DUMAND Workshop-Symposium
and
Remarks on DUMAND Meetings for the future.
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(Restricted Circulation)

This note represents my personal reaction to the 1980 meeting and nothing more. It is not intended to point the finger at anyone, to attach blame, or to carry implications of any sort. Its purpose is to review the 1980 Summer Workshop and to draw from it what conclusions seem to be implied for the conduct of future workshops.

In many ways the recently concluded Symposium-Workshop was valuable. It provided an opportunity for busy people to concentrate exclusively on DUMAND for a significant time; it afforded an opportunity for new ideas to be heard, and for colleagues to meet and exchange ideas; and it brought several new and valuable converts into the fold.

Looking back upon it, however, I see some lost opportunities. In particular, the workshop on a new and smaller DUMAND was far too short and too diffuse to allow very much to be accomplished at the workshop in the way of exploring new ideas. That exploration has had to be postponed until afterwards, and necessarily assigned to individuals; that negates the workshop concept, in which mutual interaction is the major aim. The group divided itself into six parts, and a decision was made - probably wisely - that no one should try to join more than one group. Consequently, many desirable interactions never occurred, and some erroneous ideas have been spread that might have been contradicted. These can probably be cleared up eventually, but it will be more difficult than if the workshop had been longer.

I would like to draw the appropriate lessons from this and earlier workshops, concerning future ones. I think one week is an absolute minimum - it was on the short side for the signal-processing workshop - and two weeks, judging by La Jolla, is optimum. I believe the time has passed for general meetings on the technology of DUMAND. We need and must encourage more limited meetings like the February workshop on signal processing. Despite the emphasis at that meeting on the maxi-DUMAND (22,695 modules), the ideas developed there have pointed the way to several independent solutions of the signal - processing problem. A similar workshop on deployment procedures this fall would be equally valuable, provided the sensors can be sufficiently well defined beforehand. (Wilkins' plaintive plea for the physicists to make up their minds about sensors, so that deployment procedures can be better focused, wrings the heart; but I fear that all we can promise him at the moment is to reduce the possibilities to a finite, small number.) It is also clear that no good cost estimates on any model of DUMAND can be made without knowing the interrelation of sensor design and deployment procedures and costs.

I would like to propose that henceforth general DUMAND meetings be more concerned with the physics to be done, or with possible extensions to DUMAND like a combination with an EAS detector such as the Fly's-Eye. The suggestion

of Miyake that we explore the possibility of applying DUMAND to the detection of GeV neutrinos is the sort of thing we would hope for, as is also Cline's idea that we examine the possibility of detecting electron neutrinos. For such purposes our Monte Carlo programs, (especially as now being modified to allow variation of the optical attenuation length) provide excellent tools.

The major value of the astrophysics symposium, it seemed to me, was the opportunity to introduce the DUMAND project to some important astrophysicists in related fields. The connection of the symposium with the Workshop on DUMAND arrays was tenuous at best, and it seems to me that the juxtaposition of the two was, on the whole, not a good thing. If this opinion is shared by others, it would lead to the conclusion that single-purpose meetings (or serial ones, like LaJolla 1978) are probably the best path for the future.

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