

became the now well-known 72-inch; later, when it was moved to Stanford, it became the 82-inch chamber.

We now needed a special appropriation from the AEC, and after thinking about it for a few hours, the commissioners voted us 2.5 million dollars of the 1955 variety, or 10 million 1985 dollars. It couldn't have taken them very long, since I first briefed them one morning, and that same evening at a cocktail party, John Von Neumann told me that he and his four other Commissioners had given my proposal their stamp of approval. They didn't bother to ask for any peer review — that dismal procedure hadn't yet been invented! (I've now heard that it had been invented earlier, but I'd never heard of it at that time.) I didn't use much of the time in my presentation to remind them that the largest operating liquid hydrogen bubble chamber anywhere in the world was our 4-inch device.

Ernest Lawrence, from whom I learned how to make such a large extrapolation, thought I was sticking my neck out a bit too far, and one of my greatest disappointments is that he died a few months before the 72-inch chamber showed its first tracks. But I did have the pleasure of giving him some escorted tours of the bubble chamber and its new building, as the construction proceeded. Someone asked me why it took longer to build the building than it did to design and make the bubble chamber operational. My reply was that people had been putting up buildings for thousands of years, so there were long shelves of regulations that had to be met, but bubble chambers were too new to be so encumbered. In fact, the laboratory's safety department, that one might have thought would get involved in such a potentially dangerous project, left us totally alone, as we did our own tests on hydrogen safety.

The 72-inch chamber was a major engineering effort, and we assembled a very strong design team, under the leadership of Paul Hernandez, and an equally strong operational group under the direction of my closest associate, J. Donald Gow. We decided to test several novel features of the 72-inch design in a smaller 15-inch chamber. One new feature was the single window design, which increased the safety and more importantly the strength of the magnetic