

PTTI DISTINGUISHED SERVICE AWARD

**Presented to
Dr. Robert F. C. Vessot
Harvard Smithsonian Observatory**

**by
Joseph D. White
U.S. Naval Research Laboratory**

Good morning. Now on to happier things. One of the nicer duties of being the Chairman of the Executive Committee is that I get to give out the PTTI Award every year. And it is one of the nice things that you really do get to do.

This year's award goes to Bob Vessot. I promised to tell you how I came to meet Bob. When I first started working at NRL a good many years ago, my boss was giving me the guided tour of the lab and taking me around. We found this big gray box sitting in the middle of the floor in one of the labs and he said, "This is a hydrogen maser. It's a wonderful thing, but it needs to have a physicist chained to it to make it work." And then he looked at me. And that's how I got into the hydrogen maser business, and that is how I got to know Bob.

And it turned out that Bob and his group out at SAO, Marty Levine, Don Gravlin, Ed Madison, Dick Nichols, some of the others, really did know how to make good hydrogen masers. And over the next few years, those guys succeeded in making a maser that not only would run in Boston – which the original one only did – but it would run in Washington and it would run there without my being chained to it. So I was very pleased to do it; they did a really nice job.

Bob has done so many things in physics and masers that it is hard to list all of them. But I think probably the one thing that he did that I will remember the most is that he made hydrogen masers into reliable frequency standards. It was not something that sat in the middle of the floor that was temperamental, but it was something that could actually be used. He did an excellent job of that.

We have three of them at NRL – actually we have four; that original one is still up in Bob's lab, and it still gets used for experiments and things like that. But I have three others that are over 20 years old, and all three of them are still running.

Let me give you a little bit of Bob's biography here, and I have got pages of it, but we will hit the high points. He got his B.A., M.S., and Ph.D. degrees from the McGill University in Montreal, Canada. The job we know him best for here is being at the Smithsonian Astrophysical Observatory. He has been there since 1969, but we can go a little further back than that. After graduating from college, Bob served 4 years in the Royal Canadian Air Force as a flying officer. He then became a staff member at the Massachusetts Institute of Technology. From 1960 to 1969 – another very important job – he was in the Maser Research and Development Group at Varian Associates, which later became a division of Hewlett-Packard in Beverly,

Massachusetts. Also in that time, he served as a member of the Board of Directors and a vice president of FTS back in the 1970s.

Bob has also had numerous awards. I will just go over a couple of them here. I have also got a whole list of all the panels he has been on; there have been a lot of them. In 1978, his group received the Group Achievement Award from NASA, and Bob received the Medal for Exceptional Scientific Achievement from NASA. And I will just read the description on that: It is "For his outstanding achievement in advancing our knowledge of the equivalence principle to the flight of a hydrogen maser clock and gravity probe from Wallops Island on June 18, 1976." In 1993, Bob was appointed as a Fellow of the APS. In 1993, he also received the Rabi Award from the Frequency Control Symposium.

I am very pleased to announce this year's Distinguished PTTI Service Award goes to Bob Vessot. Bob?

Congratulations. Let me open this up for you if I can. We gave you something big so that you have to carry home on the airplane and get through security, but it is a lovely thing.

BOB VESSOT: Oh, my word. What a joy! It looks like something that belongs on my boat! Thank you very much.

I would just like to say a few words as an antique clockmaker and to recognize the joy and the honor of being given this award. I look back, and I see the people with whom I have worked and worked for and with: Dr. Winkler, Jim Barnes, Professor Leschiutta who I have had the pleasure of knowing for a long time; I have met and worked a little bit with Professor Guinot; I am a very good friend of Jacques Vanier – in fact, it was I who brought him into the United States to work a long time ago. And I had the privilege and the pleasure of working with Len Cutler, and still do. And with Roger Easton, who I will never forget as one of the most influential people in this construction of the maser that you just heard about from Joe.

So I am a privileged individual, and I am also very lucky to have worked with people in my group that you just heard mentioned. And this has been a very, very fortunate existence for me. God willing, I hope to continue and to keep going in my lab at the Observatory, where I have been given the privilege of having my own office.

So with that, I thank you all very, very much. Again, this is a great honor, and I thank you all for this privilege.