

ACCEPTANCE SPEECH
Of
CARL E. WIEMAN
Co-Winner of the 1997 King Faisal
International Prize for Science
(*Physics*)

Your Royal Highness Prince Sultan ibn Abdul Aziz
Your Royal Highnesses,
Your Excellencies,
Distinguished Guests,

It is a great honor for me to receive the King Faisal Prize for Science. I am flattered to join, the very select group of eminent scholars that have received King Faisal Prizes. It is a special pleasure to be able to share this prize with my close friend and colleague, Eric Cornell. Much of the enjoyment in the quest to achieve Bose-Einstein condensation has come from our close interaction, and the success of this quest is in large measure due to his brilliance and good judgment.

In thinking back to the beginnings of this quest, seven years ago, I had no idea it would be so long and difficult, nor did I realize that the results would be so rewarding. The amount of interesting science and recognition that the work has generated, such as this Prize, was quite unanticipated. Our work on BEC has demonstrated how the pursuit of scientific knowledge often follows unusual paths. When we began our research on BEC, it was much like taking a small overgrown path in the woods; it seemed to be going in an interesting direction, but it was very unclear how far or where it might lead. Along this path we discovered a great deal about how atoms behave at very low

temperatures, and some parts of the path were considerably rockier and more difficult to cross than we had expected. However, by the time we reached those spots we were far enough along and had already encountered so many interesting discoveries, we did not want to turn back. So we worked until we discovered new experimental techniques that enabled us to cross these places and move on. And eventually, the path ended up leading to an unexpectedly beautiful destination, the sudden and dramatic appearance of this new form of matter, the Bose-Einstein condensate. The fact that this had never been seen before and does not occur in nature makes it all the more special. It is entirely the product of humankind's search for knowledge.

We could never have completed this journey without the help of many dedicated students and colleagues, both at the University of Colorado and elsewhere. The long hours of work in the lab and the many clever ideas provided by the students and postdoctoral scholars that have worked with us over the years have been particularly important. Without their efforts, this would never have been possible.