Welcoming Address

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Ladies and Gentlemen:

It is a great pleasure for me to be here today for the opening of this international astronomy meeting on "Variable Stars: New Frontiers." On behalf of the Federal Administration, I welcome you to Sion and wish you a very successful meeting.

Astronomy has always been a part of our culture; it is a powerful expression of mankind's curiosity and desire to better understand the vast and unknown space around our blue planet. Faced with the beauty of the night sky, human beings have always asked the same fundamental questions: Where does the Universe come from? Where does it go? Are we alone in the Universe?

To answer these questions, human beings have developed more complex and sophisticated earth-based instruments, and for the last thirty years, space instruments as well. Today, the realization of most of these powerful facilities is only possible through a truly international collaboration.

For Switzerland it became clear that building large telescopes or developing competitive satellites was beyond our own financial capabilities. This is why we have chosen to commit ourselves, with conviction, to international cooperation. This is the only way for Switzerland to be involved in high technology development and to be on the front lines of science. Now, because of the increasing size and scope of programs, the need to combine intellectual and financial resources is becoming more pressing for every country.

The European Space Agency (ESA) and the European Southern Observatory (of which Switzerland is a full member) are two models of scientific, technological, and political cooperation on an international scale which often go beyond Europe. For example, space activity is now a worldwide collaboration with NASA, the National Space Development Agency of Japan (NASDA), and the Russian Space Agency. At ESA, Switzerland is a strong supporter and defender of the Science program, which is considered the backbone of the Agency, and Swiss scientists and industries have taken an active part in activities, listed below, which have been and are indeed still successful:

• The breathtaking performance of Giotto in its momentous encounter with Halley's Comet in 1986 and its fly-by of Grigg-Skjellerup in 1992 will remain highlights in the history of space exploration.

• HIPPARCOS brings the greatest step forward in star measurement since Tycho Brahe. The results are as revolutionary as Tycho Brahe's in their impact on our knowledge of the cosmos.

• IUE has served the astronomical community for over eighteen years.

• ISO is providing astronomers with a unique facility of extreme sensitivity in the infrared, and exciting results are being obtained on all astronomical scales.

• The HST has already changed our ideas about the evolution of planetary systems, stars, and galaxies. It has peered billions of light-years back into space, taking images of the most distant galaxies ever seen.

In the coming years, ESA will launch an X-ray space telescope, XMM, and a gamma-ray observatory, INTEGRAL, whose data center at Ecogia, near the Geneva Observatory, is the responsibility of Swiss scientists from Geneva Observatory. We will probably also have a far-infrared telescope combined with an imager of the cosmic microwave background. Now ESA is looking into the possibility of becoming involved in developing a new instrument for the HST for 2005, and in NASA's upcoming Next Generation Space Telescope.

All of these space instruments will provide a beautiful complement to major ground-based facilities such as the ESO Very Large Telescope, one of our most ambitious astronomical projects, which will be able to observe parts of the Universe which are beyond the capabilities of present-day telescopes.

While it is not possible to predict which discoveries will be made with these instruments, it is certain that they will open new windows and make important contributions to our knowledge of the Universe.

Relying heavily on the most advanced technology, all these projects represent an enormous challenge to scientists, engineers, and industry. If science derives benefits from front-line technology, in return it also strongly stimulates new developments.

Swiss participation in international research organizations such as ESO and ESA means formation and research positions in research institutes, and employment in high-tech industries. We are convinced that our country should not in any case be disconnected from high-level research and technology. This is, therefore, an investment for the future, for the benefit of our society, which is made through our participation in international research organizations.

Ladies and gentlemen, you are the specialists, you have the necessary expertise and knowledge to work with those instruments, and you also have the responsibility to ensure that the science and knowledge attained therewith does not remain in the closed circles of the academic world, but becomes available to the public and contributes to its education.

I wish you all success over the next several days. Thank you for your attention.