

Future Solutions to Earthly Problems

My Report on Visiting
Boston from April 11-13
including attending the
Space Futures Symposium
at Boston University

By: David Battel

Prologue-1: Visit to Harvard-Smithsonian Center for Astrophysics

We arrived early at 2:00 Arizona time on Wednesday morning and after a few hours of sleeping we went to the Harvard-Smithsonian Center for Astrophysics to meet Dr. Steve Murray. Dr. Murray is the Chief Scientist for the Chandra X-Ray Observatory. This satellite is named after a famous scientist named Subrahmanyan Chandrasekhar. Unfortunately, that is quite a mouthful, so they called the spacecraft Chandra. It is a huge radio telescope. I also had a chance to meet Dr. Harvey Tananbaum who is the Director of the Observatory and also is a member of the National Academies Space Studies Board with my dad.



Prologue-2: Visit to Harvard University

I also had a chance to meet Professor James Anderson who is in the Dept of Chemistry at Harvard University. He is one of the world's greatest experts on CO₂ emissions and global warming. He explained some of the important issues. Those issues include that the earth absorbs 4000 zeta joules (4,000,000,000,000,000,000,000,000 joules) of energy. Some of it bounces off the ice. CO₂ emissions act as a blanket and keeps the heat in, melting the ice. This is the main cause of the greenhouse affect, A.K.A. Global Warming. Do you know that the sea will rise enough to cover Bangladesh and most of the costal cities in the world if the icecaps and Greenland melt? This is a likely scenario in the next fifty years.



Prologue-3: Visit to MIT Center for Space Research

I met Dr. Robert Goeke who is the chief engineer at the MIT-CSR. Dr. Murray also came over to visit along with Dr. Kathy Flanagan who made the special X-ray filters for the Chandra instruments. They gave me a miniature version of the gratings on Chandra. They also let me sit at the Chandra Chief Scientist control console and showed me the entire control center for the observatory.



My Impressions of the Symposium and My Favorite Topic

The conference started off with a presentation by the President of India, His Excellency Dr. Abdul Kalam, who discussed his plan for developing India through technology including space. Then Lord Martin Rees, from Astronomer Royal and Master of Trinity College, spoke. After listening to the entire conference, I decided the talk on Extraterrestrial Life was the most interesting. Did you know that there are three possible categories of E.T.s? They are Prokaryotes (primitive E.T.s), Eukaryotes (advanced), and ETIs (intelligent).

Meeting Professor Supriya Chakrabarti

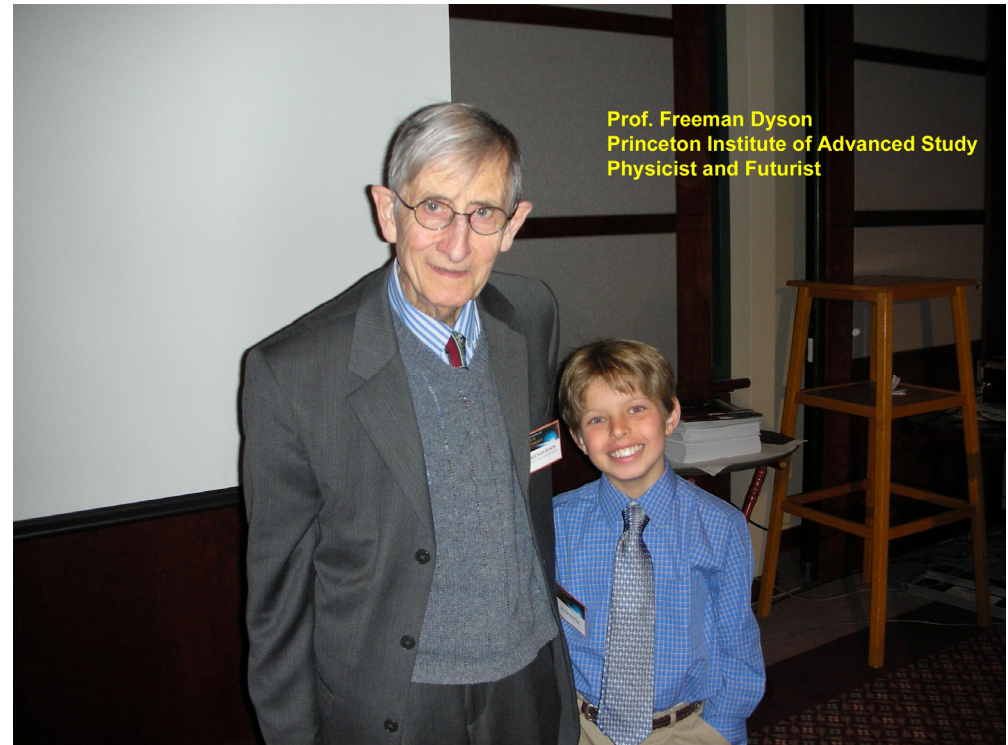
Professor Chakrabarti is the person who invited me to the symposium. He has known my Dad for many years going back to their years together at Berkeley.

I was the youngest person at the meeting and probably will be the only attendee not retired when the next meeting is held in 2057!



Meeting Professor Freeman Dyson

Professor Dyson was nice to me and took time to talk to me about the future of space. When I looked up Professor Dyson on Google I found 771,000 references to him! It was an honor to meet him and listen to him since he is one of the most famous Physicists, Cosmologists and Futurists in the world. His talk was on the marketing of space.



Meeting Dr. John Mather and Lord Martin Rees

Dr. Mather won the Nobel Prize for Physics this year for his work on the COBE spacecraft which measured the effects of the Big Bang.

Lord Rees is actually a Knight of the British Empire officially titled "Lord Rees of Ludlow" since he is a Member of the House of Lords. He is a Professor at Cambridge University and is also Her Majesty's Astronomer Royal. His talk on the history and future of Mankind and its activities in space was the keynote address for the symposium.



Meeting Apollo Astronauts Dr. Jack Schmitt and Dr. Rusty Schweickart

Dr. Schmitt would like to about going back to the moon and mining it resources including Helium 3. Helium 3 comes from the solar wind and gets buried in the surface of the moon. It is a valuable source for fusion power.



Meeting Jesuit Father William Stoeger

Father Stoeger is also a well known Cosmologist who gave an interesting talk on the quest for Extra-Terrestrial life. He is the only person in the Extraterrestrial Life category to talk about Extraterrestrial Life! He was very interested in our school as he is one of the directors of Brophy.



Meeting Ms. Susan Eisenhower

Ms. Eisenhower is the granddaughter of President Eisenhower and is married to Dr. Roald Sagdeev, the former head of the Soviet Union Space Agency. She is a consultant on space and on economics and the President of the Eisenhower Institute. She told many interesting stories about her Grandfather.



Susan Eisenhower
Granddaughter President Eisenhower
The Eisenhower Institute
Featured Speaker

Meeting and Dinner with Dr. Sergei Khrushchev



Dr. Sergei Khrushchev
Son of Nikita Khrushchev
Thomas J. Watson Institute
for International Studies
Featured Speaker



Dinner with
Prof. Chakrabarti and
Dr. Khrushchev

Dr. Khrushchev is the son of Nikita Khrushchev. He worked as an engineer for the Soviet space program in the 1950's and 1960's and now lives in the United States. His discussions on his father and the past fifty years in space were interesting since he knew all of the key people including Yuri Gagarin who was the first man in space. The final part of the conference was a dinner party. I got to sit with Professor Chakrabarti and Dr. Khrushchev. It was really fun to be part of this important meeting. We looked at the past fifty years and ahead to the next fifty years.

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