

Sun-Earth Day Highlights (1-23-08)

Polar Gateways Arctic Circle Sunrise 2008

Barrow, Alaska, January 23-29, 2008

[Troy Cline]

"We shall not cease from Exploration. And the end of all our exploring will be to arrive where we started, and to know the place for the first time. (T.S. Eliot)

My name is Troy Cline and welcome to another Sun-Earth Day Highlights podcast. In our last episode we heard from Dr. John Cooper who talked about the Polar Gateways Arctic Circle Sunrise conference in Barrow, Alaska that convened on January 23rd, 2008. In this episode we'll hear Dr. Cooper call the conference to order just hours before Polar Sunrise! We will then hear from members of the Barrow community who spoke on the importance of science to the people of the North Slope. And finally we'll hear the reactions of the brave few who endured Arctic temperatures with wind chills of -20 degrees Fahrenheit. Their goal was to see the long awaited moment when the sun would finally peak over the southern horizon for the first time in 84 days.

As a reminder, don't forget to visit the Sun-Earth Day podcast page to see the incredible images taken during this cold yet enlightening experience.

So let's get started with a welcome from the conference chairperson, John Cooper, followed by an invocation in the Inupiat language by Dr. Kenneth Toovak, a respected elder of the Barrow community.

[John Cooper]

I'm the conference chairman. My name is John Cooper from NASA Goddard Space Flight Center. We have invited some guests from the community of Barrow here, who are our hosts for this conference. We are meeting in the Barrow Research Facility, a former naval arctic research lab. I am a former navy officer, I probably wouldn't have liked to have been stationed here at first, but I'm very happy to be here now; to see what life is like for those folks here. Obviously a very important place for many reasons, during the cold war, for environmental science, which is actually the most important thing by experiencing that now with the changing temperatures... to actually understand why they are warmer than they have been in the past. The sea ice is changing. We have presentations that will discuss that change with the Earth scientists from Goddard which comes on Friday. So this is really a focal point not only geographically but scientifically and environmentally. This is the gateway to the future. I'd like to invite Mr. Ken Toovak a member of the community here in Barrow to deliver an invocation in the Inupiat language, his own language.

[Kenneth Toovak]

Good morning. Going to be a sad day this morning due to the weather. But we are all wide awake after the snow storm. I've gone through the people before and worked with the people here at Point Barrow. So I don't think I have met you before this morning but, my name is Kenneth Toovak, born in Barrow. I'm only 84 years old and I am always glad to come out whenever I'm called to do the invocation. I understand that prayer is the best tool that we have today. So I am going to have a word of prayer in my language, so let's all stand and have a word of prayer. **"Prayer in the Inupiat Language"**

Amen

[Troy Cline]

Dr. Cooper then introduced Richard Glenn, the Board President of the Barrow Arctic Science Consortium or BASC. He will tell us more about this program and why scientific research is so important to the people of the North Slope.

[Richard K. Glenn]

Good morning everyone and welcome to Barrow, I'm dressed here in Barrow in an equivalent of a suit jacket, which is our dress clothing rigor here... so it has the advantage in the cold... for whatever reason I have to walk home from here, I'll be a lot warmer than if I wore my Sears suit jacket. So it has a dual purpose. This is a great opportunity for all of us. In a few hours you open up the windows here off to my left... you'll see the sun making its creep above the horizon which is a beautiful sight when the weather lets us see it, and yesterday we had a hint of it around one o'clock. That's the way of life in January. The sun comes up above the horizon the next day; it comes up a little to the left and goes down a little to the right and that sketch above the horizon just keeps getting longer and longer higher and higher, January through February, March and so on. By the end of April, beginning of a May, instead of just coming up it is making a nearly circular path all around and then by the time August comes around it starts to dip to the horizon off to the northwest. It's a wonderful progression to watch. I'm glad you are here to watch just part of it. I'm the president of the Barrow Arctic Science Consortium. It's a non-profit gathering of like minded people that is also represented by the major institutions of our community who are working together to put our community with researchers that has started for many years and there is no better example of that then the person who just led us in the invocation. I'm here to transition after him, maybe because we go to the same barber shop, but Kenneth is also my wife's great uncle, my wife's grandmother and Kenneth were brother and sister and he is also a great role model for me. My mother was born and raised here. She married a man who came to work on the radar station that circle polar north, Greenland, Canada and across Alaska's North Slope. This issue of putting our community together with researchers has deep personal meaning for me as well. And it has become my way of life. I've studied geology, ice, sea ice, thermofrosts, and many of the Arctic processes related to natural science, for my personal study. And I have many researches in many disciplines as we started this organization called BASC. There was a awhile

before it was named BASC when it was named the Barrow Technical Services and it was a for profit technical firm and I was called the principle and I had a staff on 1 and in the summer I had a staff of 10 and in spring it would taper off and I would wait around like the Maytag man for more researchers to cover. We decided in short order that we should turn this into a non-profit organization. We decided that we should convince the federal government that they had a role to play in supporting research here on a year round bases. Many of our organizations like our village corporation in our burrow and our local college and people scattered throughout the village were supporting researchers often at their own expense. So this coincided with a huge upwelling of Arctic research global change research and the rest is history. So in addition to studying things related to the Sun, in addition to the international Heliophysical year, this is a good place polar processes in general. On the south side of this building is more than 7,000 acres set aside by our village corporation specifically for environmental research and its set aside because it has been a place of research for many years. And the so the time series of the native has been gathered there and can be gathered there in the future years is important for the study of Arctic change. And if you put your back to the land and you look out this way you find the Chukchi Sea, a wild Arctic Ocean, would be variable to sea ice distribution the type that we read about in the papers, we see them here live on them here. We have to understand the here or we cannot survive here. If you look a little to the northeast you see the Beaufort Sea and the Beaufort Sea and Chukchi Sea meet a Point Barrow which is where the polar bear homes and the polar bears were feasting on whale bones at the beginning of our slide show. That was not one whale carcass that was many over a whole season of whaling on boats the Arctic continent representing an attractive community for bears. Point Barrow is an important place. It is where the 2 oceans meet and so it's great for animals. That is why our people are here. There are seals there year round, marine mammals, water fowl fish in abundance and it is also an important geographic place. If you were to go out in a boat at this location there is a standing wave there where the 2 oceans meet. It is usually an important ocean geographic wave circulation. And you'll watch it sway to east and to the west depending on whatever system is dominating it at the time. So if you look all around us you will see oceans, ice, tundra, estuary environment, lakes, rivers, beautiful opportunities for studying the nature of the Arctic system. As we all know it is in change. And the people who live here and have lived here for generations have a hallmark of traditional knowledge, that knowledge of their environment. And that means the knowledge of a changing environment. Our culture is about to change. Seasons change and some winters are colder then others and in addition we are on this regional change, this trend of change. And rather then find ourselves falling through thin ice or suffering from a calamity because of the drama associated with climate change. Our job is to prevail as citizens is to understand and adjust to the change that's what we do every year that's what we do every day when we have to survive in this wild and unpredictable environment. So we have a few rules to live by. One of them is to know where you are to know what you are in to know changes you're in. Not just how is it

now but what was it like last week and how was it the week before—how was it the year before. And this takes a lot of effort it's a life long exercise and the chances are you will be learning from somebody who is learning himself or herself. And so this issue of traditional knowledge is a gift but it is very hard to put your hands around, and I'm not interested in trying putting a box around traditional knowledge and giving it to somebody else. If a person is interested in gathering traditional knowledge step right in with us, because we are all here learning it ourselves. And so this is a great place to study the Arctic environment and I welcome you all here. There is some of our history captured in a book, and there's a book available for each of you in the back of the room. It is entitled "50 Years Below". When we created the Barrow Arctic Science Consortium this was our first authorization from the National Science Foundation, to do something with the Barrow Arctic Science Consortium was to host this conference which catalogued the many ways that our people and visiting researchers have a valuable and productive relationship. It's good for us, it's good for the researchers, and it's good for the research community in general, and since we have this legacy we have the obligation to carry it forward. I am grateful for Kenneth Toovak to show us how to do it with grace and for people like Glenn Sheehan who run the BASC on a daily basis. And who by themselves dedicated to this project in order to get out the needed research. Welcome I'm glad you are here I hope the best for your gathering and I hope to see you more over the next few days.

[Troy Cline]

We were also treated to comments from George Olemaun, the Special Assistant to the Mayor for the North Slope Borough. He was born and raised in Barrow and grew up in a traditional Inupiat family. He's also a whaler, a hunter and now one of the community leaders. Mr. Olemaun emphasized the importance of science and education for the students of Barrow.

[George Olemaun]

BARC researchers creates an educational opportunity to interact with students interested in science as a career. That's why we appreciate it when visiting scientists take the time and trouble to go to our schools and discuss their work with the students. So I'm really glad to see that you have a community outreach component in your program.

[Troy Cline]

Just a few hours later, the grand moment had arrived and the sun made its first brief appearance over the horizon at 1:06PM Alaskan Standard Time, for the first time in 84 days! To capture the moment, I tagged along with a small group of people who decided to brave the cold Arctic temperatures long enough to greet the sun. Needless to say their 'bundled-up' reactions were brief but heart felt. Let's listen in!

You can see images of the Polar Sunrise in the Sun-Earth Day podcast gallery.

In upcoming podcasts we'll take you on a brief excursion to one of the historical spots in Barrow, Brower's Café. And remember that in just a few weeks you'll be able to access a special webpage on the Sun-Earth Day website complete with science video clips and images taken directly from the Polar Gateways conference.

I hope you enjoyed this edition of Sun-Earth Day Highlights. We are very interested in hearing your questions and comments about the Sun-Earth Day podcasts. If you have something to say, send an email to sunearthdaypodcast@mail630.gsfc.nasa.gov .

For all other details about the Sun-Earth Day program including information about our past SED themes be sure to visit our website at sunearthday.nasa.gov.

While there, don't forget to register in order to receive Sun-Earth Day updates!