## Thoughts on the Arctic Passage

## By Gary Sharp, Scientific Director, Center for Climate/Ocean Resources Study

Some Days are like <u>this</u>. Ya just cannot believe the Cant. Particularly if you are not asking the right questions - something so many simply never learn to do and - a quick review of what we do know about the Arctic would be tough. -

But - I was fortunate enough to have been given a long in-depth introduction to the subject over several years by Joseph Fletcher - whose Team that set up the first Ice Island Observation system - known as T-3 - or Fletcher's Ice Station – He also gave me a VHS tape of the black/white movies that his 'camera-man' (and 3rd member) of the Team. He and his crews had been flying back and forth over the Arctic and North Pacific/Aleutians for a long while - war causes lots of odd opportunities. -

Joe turned 87 this year - and is alive and living in Sequim Washington and his family are well aware of his roles - many - such as <u>this story</u>, or <u>this</u> or <u>this</u> -

After leaving the Air Force in 1963 after 20 years- he went on to become Rand Corporation's Polar Science Wizard, then Director of NSF Polar Programs - where he became immersed in Internationalization of these studies -and then he moved on to become Director of the US Ocean and Atmosphere Laboratory System, out of Boulder Colorado - where he initiated the Comprehensive Ocean-Atmosphere Data set (<u>COADS</u>) - as a follow-on to <u>Mathew Fontaine Maury</u>'s initial 1850s efforts - and on it went until he retired in 1993.

We had met during my own efforts to get System science applied in the NOAA Fisheries Monitoring/Management process - and Joe and I were in total agreement about this startup statement in his COADS History – 'We all learn at an early age that the first and most essential step in answering a question is to understand what the question is—and then, all too often we see that obvious principle violated."

Meanwhile, we were able to develop a great friendship - and I linked him up with Roger Y. Anderson - whose 1990 six months' Visiting Scientist term here in Monterey bay - was where I was first introduced to the Solar Influences on El Niño Frequency Cycles over the last several centuries - which are indeed the major influence on global ocean temperature patterns - and thus the patterns of many regional warm/cool patterns - all described in my FAO Tech Report 452.

Where all this is brought together - with the Russian ACI/-LOD linkages made by Klyashtorin and colleagues -

It turned out that on a short jaunt to Washington state - I went to Sequim to see Joe - and told him about my (2002) ongoing exposure to the Russian work while Leonid K was here on a Visiting Scientist stay that I arranged – and I shared some of his (1998, 2001) recent works - and boy, was I surprised when Joe took me down stairs to his 'library'

collection - and we searched for - and eventually found - a box full of Russian reference material/books on Climate Science - a book edited by AA Girs - Joe's Russian counterpart in the mid 1950-70 era – and a translation of a Russian series by Joe's secretary at Rand Corporation - He gave me both books - !!!

Joe pointed out several times to me in his B/W movies that there were seasons of nearshore ice-free situations - and others when skis or overflights were the only way in or out. Unfortunately - not enough years of observations - or guys with the right questions out there. Between 1956 and 1989 there were 33 passages. They are listed in the book Northwest Passage by Edward Struzik published in 1991. One was by K. Horie aboard the Japanese sloop Mermaid, who made an east to west passage in 1981-83. Another was by W. De Roos in a 42 foot ketch named Williwaw, who made the first single handed Passage in 1977 when the Northern Hemisphere was rather cold. Then, of course, there were all those US and Russian submarines cruising under the polar ice in the late 1950-90 Cold War period – that would occasionally find a hole – and pop up for a look-see.