Nils-Axel Morner, J Earth Sci Clim Change 2016, 7:9(Suppl)
http://dx.doi.org/10.4172/2157-7617.C1.026

World Conference on

Climate Change

October 24-26, 2016 Valencia, Spain

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Causes and effects of climate change

Climate is constantly changing and there is nothing new or unusual in the recorded changes over the last decades and centuries. The long-term ice age cycles are forced by the changes in the earth–sun relation. The yearly cycle is a function of the tilt of the spin-axis. The daily cycle is a function of Earth's rotation. The decadal, centennial and millennial changes in climate have a more uncertain origin. The more we learn, the more obvious it becomes that they are forced (at least predominantly) by solar variability and its changes in emission of luminosity and solar wind. Having established this, we can be reasonably sure that we are facing a new Grand Solar Minimum to culminate at around 2030-2040. This implies that the period of global warming is more or less over. We think this represents "reality" because it is backed up by available observational facts. The hypothesis of an anthropogenic global warming (AGW) driven by the post-industrial and especial post-world-war 2 increase in atmospheric CO2 content tells a quite different story. This idea is founded on models; not observations, hence it represents "virtual reality". There are 102 AGW-models of present-to-future changes in temperature. They all rise up to a level in year 2100 of +2.7 ±0.7 °C. Global observational records from Earth's surface stations as well as satellite and balloon records from the troposphere give no such trend, however; with little or no rise since 2003. In true science, observations overrule models. Sea level change is another central issue. On a global scale, sea level has changed over the last 300 years in the order of ±1.0 mm/yr (10 cm in 100 yrs). Today, the variability ranges between ±0.0 and +1.0 mm/yr. Other claims are not anchored in proper observational facts.

Biography

Nils-Axel Morner obtained his PhD in Quaternary Geology at Stockholm University in 1969. He was Head of a personal institute at Stockholm University and the Swedish National Council on Paleogeophysics & Geodynamics (P&G) from 1991 up to his retirement in 2005. He has written many hundreds of research papers and several books. He is a global traveler and has undertaking field studies in 59 different countries. Several students have taken their Doctoral degree at the P&G institute, which became an international centre for global sea level change, paleoclimate, paleoseismics, neotectonics, paleomagnetism, Earth rotation, planetary-solar terrestrial interaction, etc. He was President of the INQUA Neotectonics Commission (1981-1989) and President of the INQUA Commission on sea level changes and Coastal Dynamics (1999-2003). In 2008, he was awarded the Golden Condrite of Merit (from Algarve University) for his irreverence and contribution to our understanding of sea level change.

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