Japan Geoscience Union Meeting 2011

(May 22-27 2011 at Makuhari, Chiba, Japan)

©2011. Japan Geoscience Union. All Rights Reserved.



MIS024-09 Room:301B Time:May 25 16:30-16:45

The climate prediction; 21 Century is the entrance of global cooling?

Shigenori Maruyama^{1*}

¹Tokyo Institute of Technology

The 21Century is the most difficult time for the survival of human being through the history since its birth. Limitation of fossil fuel resource, food supply, together with anomalous population increases of human being and domestic animals to disappear forests; all of these suggest the destroy of the sustainable society of human being. In addition, the climate change, particularly the global cooling if it happens, would give a critical damage for the world.

Based on the past climate change through the last 3000 years (isotope, pollen, sea-level change, and written records of climate and related things), the 4-5 time periods of turning point from global warming to cooling are summarized as follows. They are characterized by the large temperature fluctuation in a year, i.e., hotter summer and colder winter) and increased rain or ice falls. To interpret these changes, a model is proposed. Heat stocked during the global warming period in the ocean supplies more steams into atmosphere which is cooled down by the cooling from the top through the outer forcing by the decreased solar activity and increased cosmic rays to accelerate cloud formation. The temperature curve does not synchronize with humidity which delays several tens of years from temperature.