Dalton Minimum Repeat goes mainstream

The AGU Fall meeting has a session entitled "Aspects and consequences of an unusually deep and long solar minimum". Two hours of video of this session can be accessed: <u>http://eventcg.com/clients/agu/fm09/U34A.html</u>

Two of the papers presented had interesting observations with implications for climate. First of all Solanki came to the conclusion that the Sun is leaving its fifty to sixty year long grand maximum of the second half of the 20^{th} century. He had said previously that the Sun was more active in the second half of the 20^{th} century than in the previous 8,000 years. This is his last slide:



To get his papers published, Solanki has had genuflect to global warming. Perhaps he won't have to do that from now on.

McCracken gave a paper with its title as per this slide:

THE EFFECTS OF LOW SOLAR ACTIVITY UPON THE COSMIC RADIATION AND THE INTERPLANETARY MAGNETIC FIELD OVER THE PAST 10,000 YEARS, AND IMPLICATIONS FOR THE FUTURE.

> K.G.McCracken, F.B.McDonald, J.Beer, J.Abreu and F. Steinhilber

While he states that it is his opinion alone and not necessarily held by his co-authors, he comes to the conclusion that a repeat of the Dalton Minimum is the most likely thing to happen next:

THE PROBABILITIES REGARDING THE QUIET PERIOD ARE-		
SIMILAR TO A MAUNDER MINIMUM		VERY UNLIKELY
Ð	DALTON MINIMUM	MOST LIKELY
	"1880-1910 EVENT"	QUITE POSSIBLE
	A NON- EVENT	UNLIKELY

Solar Cycle 24 is now just over a year old and the next event on the solar calendar is the year of maximum, which the green corona brightness tells us will be in 2015.

A repeat of the Dalton Minimum will have consequences for the Earth's climate. Just how cold will it have to get for the Thames to freeze over, as it last did in 1815?

David Archibald