

Search is on for 'golden spike' signaling start of Anthropocene

August 23 2016, by Bob Yirka



A composite image of the Western hemisphere of the Earth. Credit: NASA

(Phys.org)—A working group of planetary scientists is set to formally address the 35th International Geological Congress this month on the issue of whether to declare that the Earth has entered a new geological epoch—the Anthropocene. If an agreement is reached that will likely set off a search for a "golden spike" to serve as the official start date. If all goes according to plan, there could be a formal declaration by the International Union of Geological Sciences as soon as two years from now.

Earth scientists have been arguing for several years that a variety of human activities have altered the planet to such an extent that we have entered a new epoch—one that likely started sometime in the mid-20th century. They point to the rise in [global temperatures](#) that has occurred during a period when the planet's natural cycle would have given us cooler temperatures, the huge number of extinctions of plants and animals and the massive amounts of [nitrogen fertilizers](#) and pesticide components that have made their way to the oceans of the world. There is also so much plastic now that reminders of it will remain in rock formations for thousands if not millions of years—and there are also radioactive particles in soil across the globe from the nuclear testing that was conducted in the 1950s. The name for the new epoch has been credited to Paul Crutzen, who used the term a decade and a half ago to describe the scale of human changes to our planet—"anthropo" for "man" and "cene" for "new."

Declaring the planet to be in a new epoch would put an end to the Holocene, an epoch that began with the ending of the last major ice age approximately 10,000 years ago.

Clive Hamilton of Charles Sturt University has published a column piece in the journal *Nature* outlining the issues to be discussed at the meeting, one of which will focus on the search for a "golden spike." The scientific community will need to find and agree on a tipping point before an

official declaration can be made—some have suggested a date to signify the start of the industrial revolution, others have noted that the date of the first atomic test might be more appropriate.

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