

Researched and Written by: Capt (N) (Ret'd) M. Braham

Edited by: Julia Beingessner

Introduction: The Doomsday Clock is a symbolic clock face intended to convey how close humanity is to catastrophic destruction - the figurative midnight. In order to gauge the "time" its hosts monitor the means of potential annihilation. First and foremost are nuclear weapons, but they also observe climate-changing technologies and new developments in the life sciences that could inflict irrevocable harm.

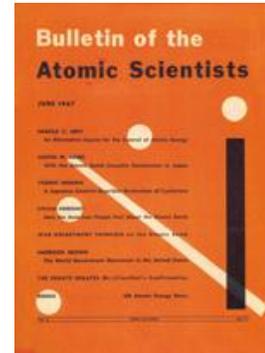


The Doomsday Clock: The Clock has been maintained since 1947 by the board of directors of the *Bulletin of the Atomic Scientists*, at the University of Chicago. The closer the clock is to midnight, the closer the world is estimated to be to global disaster. Since January 14, 2010, the Doomsday Clock stands at six minutes to midnight.

Originally, the analogy represented the threat of global nuclear war. Since 2007, it has also reflected climate-changing technologies and new developments in the life sciences. Anything that may damage the ecosystem is considered dangerous because such things as flooding, destructive storms, drought, and polar ice melt

can cause extensive loss of life and property.

Since its inception, the clock has been depicted on every cover of the *Bulletin of the Atomic Scientists*. Its first representation was in 1947, when magazine co-founder Hyman Goldsmith asked artist Martyl Langsdorf (wife of Manhattan Project research associate Alexander Langsdorf, Jr.) to design a cover for the magazine's June 1947 issue.



Time Changes: In 1947, during the Cold War, the clock was started at seven minutes to midnight and was subsequently advanced or rewound to reflect the state of the world and nuclear war prospects. Setting the clock is relatively arbitrary, and decided by the Directors of the *Bulletin of the Atomic Scientists* based on global affairs. The clock has not always been set and reset as quickly as events occur. For example, the closest nuclear war threat, the Cuban Missile Crisis in 1962, reached crisis, climax, and resolution before the clock could be set to reflect that possible doomsday.

The most recent setting — six minutes to midnight — was on 14 January 2010. Reflecting international events dangerous to humankind, the clock hands have been set nineteen times since its initial start at seven minutes to midnight in 1947.

Annex A presents all of the time changes in tabular form.

References:

1. http://en.wikipedia.org/wiki/Doomsday_Clock
2. <http://www.thebulletin.org/content/doomsday-clock/overview>
3. <http://www.doomsdayclock.org/>
4. <http://www.damninteresting.com/the-doomsday-clock/>
5. <http://www.armageddononline.org/doomsday-clock.html>
6. <http://expertscolumn.com/content/doomsday-clock>
7. <http://ezinearticles.com/?Countdown-to-Midnight---The-Doomsday-Clock&id=2950824>
8. <http://www.cbc.ca/news/background/nuclearweapons/doomsday-clock.html>

ANNEX A

Year	Mins Left	Time	Change	Reason
1947	7	11:53 pm	-	The initial setting of the Doomsday Clock.
1949	3	11:57 pm	-4	The Soviet Union tests its first atomic bomb, officially starting the nuclear arms race.
1953	2	11:58 pm	-1	The United States and the Soviet Union test thermonuclear devices within nine months of one another. (This is the clock's closest approach to midnight since its inception.)
1960	7	11:53 pm	+5	Response to the perception of increased scientific cooperation and public understanding of the dangers of nuclear weapons, as well as political actions taken to avoid "massive retaliation." The United States and Soviet Union cooperate and direct confrontation in regional conflicts such as the 1956 Suez Crisis. Scientists from different countries help establish the Pugwash Conferences on Science and World Affairs and the International Geophysical Year, a series of coordinated, worldwide scientific activities between nations allied with both the United States and Soviet Union, between 1957 and 1958.
1963	12	11:48 pm	+5	The United States and Soviet Union sign the Partial Test Ban Treaty, limiting atmospheric nuclear testing.
1968	7	11:53 pm	-5	The Vietnam War intensifies. Six Day War occurs in 1967. Indo-Pakistani War of 1965 takes place. Worse yet, France and China test nuclear weapons in 1960 and 1964 respectively.
1969	10	11:50 pm	+3	The U.S. Senate ratifies the Nuclear Non-Proliferation Treaty.
1972	12	11:48 pm	+2	The United States and the Soviet Union sign the SALT I (Strategic Arms Limitation Treaty) and the Anti-Ballistic Missile Treaty.
1974	9	11:51 pm	-3	India tests a nuclear device, SALT II talks stall. Both the United States and the Soviet Union modernize MIRVs
1980	7	11:53 pm	-2	Further deadlock in US-Soviet talks. In protest to

				the Soviet-Afghan War, President Carter pulls the United States from the 1980 Summer Olympics in Moscow and considers ways in which US can win nuclear war.
1981	4	11:56 pm	-3	Soviet-Afghan War hardens the US nuclear posture. Ronald Reagan becomes president, scraps further arms control talks with the Soviet Union and argues that the only way to end the Cold War is to win it.
1984	3	11:57 pm	-1	Further escalation of the arms race between the U.S. and the Soviet Union.
1988	6	11:54 pm	+3	The U.S. and the Soviet Union sign a treaty to eliminate intermediate-range nuclear forces, relations improve.
1990	10	11:50 pm	+4	Fall of the Berlin Wall, Cold War nearing an end.
1991	17	11:43 pm	+7	United States and Soviet Union sign the Strategic Arms Reduction Treaty. (This is the clock's earliest setting since its inception.)
1995	14	11:46 pm	-3	Global military spending continues at Cold War levels; concerns about post-Soviet nuclear proliferation of weapons and brainpower.
1998	9	11:51 pm	-5	Both India and Pakistan test nuclear weapons in a tit-for-tat show of aggression; the United States and Russia run into difficulties in further reducing stockpiles.
2002	7	11:53 pm	-2	Little progress on global nuclear disarmament; United States rejects a series of arms control treaties and announces its intentions to withdraw from the Anti-Ballistic Missile Treaty; concerns about the possibility of a nuclear terrorist attack due to the amount of weapon-grade nuclear materials that are unsecured and unaccounted for worldwide.
2007	5	11:55 pm	-2	North Korea's test of a nuclear weapon, Iran's nuclear ambitions, a renewed U.S. emphasis on the military utility of nuclear weapons, the failure to adequately secure nuclear materials, and the continued presence of some 26,000 nuclear weapons in the United States and Russia. Some scientists, assessing the dangers posed to civilization, have added climate change to the prospect of nuclear annihilation as the greatest



THE DOOMSDAY CLOCK

				threats to humankind.
2010	6	11:54 pm	+1	Worldwide cooperation to reduce nuclear arsenals and limit effect of climate change.

Captain (N) (Ret'd) M. Braham, CD



Mike Braham is a graduate of the Royal Military College (1965) and a former naval officer and senior official with DND. He has an abiding interest in military history.