



## Mystery of Night Shining Clouds - Another Global Warming Change?

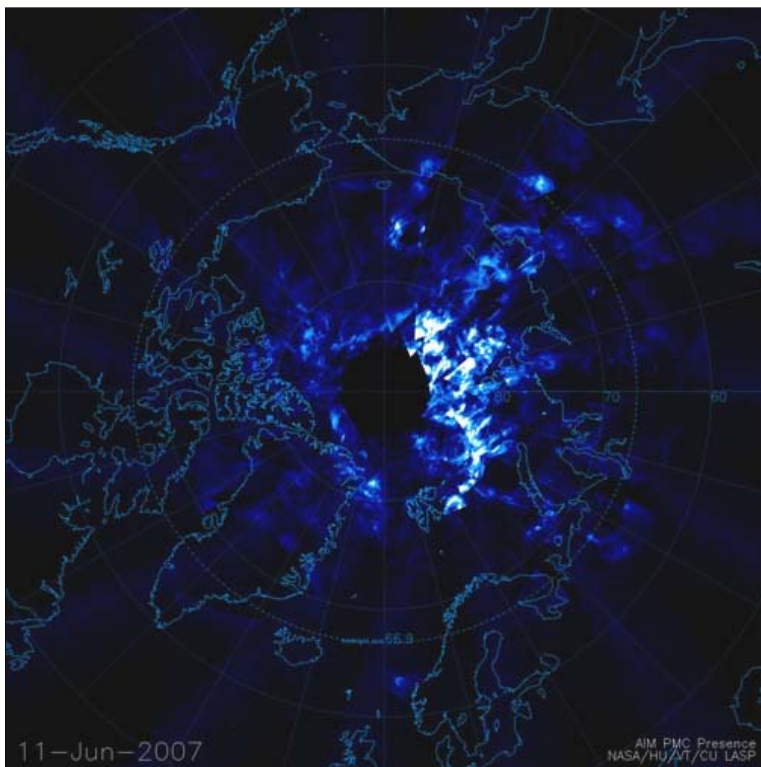
© 2007 by Linda Moulton Howe

*It is clear that these clouds are changing, a sign that a part of our  
atmosphere is changing and we do not understand how, why or what it means."*

- James Russell, III, Principal Investigator,  
AIM Satellite, Hampton University, Hampton, Va.



This AIM satellite image taken on June 15, 2007, in Budapest, Hungary, shows one of the first ground sightings of noctilucent clouds in the 2007 season. Image © 2007 by Veres Viktor.



The NASA Aeronomy of Ice in the Mesosphere ( AIM) satellite has captured the first occurrence in the 2007 summer of mysterious shiny polar clouds called "noctilucent clouds" that form 50 miles above Earth's surface.

AIM satellite image courtesy NASA.

Earthfiles, news category.

**July 11, 2007 NASA Goddard Space Flight Center, Maryland** - "The first observations of these 'night-shining' clouds by the satellite, AIM, which means Aeronomy of Ice in the Mesosphere, occurred above 70 degrees north latitude on May 25, 2007. People on the ground began seeing the clouds on June 6, 2007, over Northern Europe. AIM is the first satellite mission dedicated to the study of these unusual clouds.

These mystifying clouds are called Polar Mesospheric Clouds, or PMCs, when they are viewed from space and referred to as 'night-shining' clouds or Noctilucent Clouds, when viewed by observers on Earth. The clouds form in an upper layer of the Earth's atmosphere called the mesosphere during the Northern Hemisphere's summer season which began in mid-May and extends through the end of August. The mysterious night shining clouds are being seen by AIM's instruments more frequently as the season progresses. They are also seen in the high latitudes of the Southern Hemisphere during the summer months.

Very little is known about how these clouds form over the poles, why they are being seen more frequently and at lower latitudes than ever before, or why they have been growing brighter. AIM will observe two complete cloud seasons over both poles, documenting an entire life cycle of the shiny clouds for the first time.

'It is clear that these clouds are changing, a sign that a part of our atmosphere is changing and we do not understand how, why or what it means,' stated AIM principal investigator James Russell III of Hampton University, Hampton, Va. 'These observations suggest a connection with global change in the lower atmosphere and could represent an early warning that our Earth environment is being changed.'

## Are Increasing Noctilucent Clouds A Consequence of Global Warming?

"AIM is providing scientists with information about how many of these clouds there are around the world and how different they are including the sizes and shapes of the tiny particles that make them up. Scientists believe that the shining clouds form at high latitudes early in the season and then move to lower latitudes as time progresses. The AIM science team is studying this new data to understand why these clouds form and vary, and if they may be related to global change.

Once the summer season ends in the Northern Hemisphere around mid- to late August, the Southern Hemisphere spring season starts about three months later in the period around mid- to late November. AIM will then be watching for shining clouds in the Southern Hemisphere from November through mid-March when that season ends. "

NASA's AIM satellite is managed at Goddard Space Flight Center, Greenbelt, Maryland, and the AIM Project Data Center is located at Hampton University, Hampton, Virginia.

---

For further information about global warming and Earth's environmental changes, please see the news reports below in the **Earthfiles Archive**:

- 06/28/2007 — Hackenberg Apiary, Pennsylvania - 75-80% Honey Bee Loss in 2007. What Happens If Colony Collapse Disorder Returns?
- 06/21/2007 — Large Lake in Southern Chile Has Disappeared
- 06/01/2007 — Is Earth Close to Dangerous Tipping Point in Global Warming?
- 05/29/2007 — Deadly VHS Fish Virus Has Spread to Lake Michigan
- 05/18/2007 — Antarctica: Unprecedented Western Ice Melt and CO<sub>2</sub>-Saturated Southern Ocean
- 05/04/2007 — Environmental Emergency Updates: Part 1 - Spreading Honey Bee Disappearances - Nosema ceranae Not the Answer?
- 04/12/2007 — First 2007 Crop Pattern in United States
- 03/17/2007 — Honey Bee Disappearances Continue: Could Pesticides Play A Role?
- 02/23/2007 — Scientists Hope "Amphibian Arks" Can Save Frogs and Toads
- 02/23/2007 — Part 1: Earth Life Threats - Alarming Disappearance of Honey Bees
- 02/23/2007 — Part 2: Earth Life Threats - "Noah's Ark" for World's Seeds
- 02/02/2007 — Updated: New U. N. Global Climate Change Report: Earth Could Warm Up 3.2 to 11.52 Degrees Fahrenheit by 2100
- 01/13/2007 — Confusing Sun: Will Solar Cycle 24 Be Most Intense On Record?
- 01/10/2007 — 2006: USA's Warmest Year On Record

- 12/16/2006 — Updated: Unprecedented Die-Off of 2,500 Mallard Ducks in Idaho
- 12/07/2006 — Earth Headed for Warmest Period in 55 Million Years?
- 11/09/2006 — Outer Space Sunshade to Cool Earth in Global Warming?
- 09/09/2006 — Methane - Another Threat in Global Warming
- 08/23/2006 — Solar Cycle 24 - Headed for Intense X Flares by 2010-2012?
- 08/19/2006 — Repair of Earth's Ozone Layer Has Slowed
- 07/18/2006 — 2006 - Hottest Year So Far in U. S. History
- 06/24/2006 — "High Confidence" Earth Is Warmest in 400 Years - Maybe Even 2,000 Years
- 04/08/2006 — Recent Caribbean Coral Reef Die-Off Biggest Ever Seen
- 03/17/2006 — Planet Earth's Ice Melt
- 02/20/2006 — Mysterious Deaths of Whales in Mexico
- 11/18/2005 — Is the Sun Heating Up?
- 10/07/2005 — Warmer Sea Surfaces and Increased Wind Power Are Making Hurricanes Stronger
- 09/29/2005 — 2005 Arctic Summer Ice Melt - Largest On Record
- 09/23/2005 — Phenomenon of "Instant" Hurricanes in 2005
- 09/23/2005 — 9 X-Class Solar Flares Between September 7 - 19, 2005.
- 08/26/2005 — What Is Killing Amphibians Around the World?
- 08/18/2005 — Unusual Summer Swarm of Arkansas Copperheads
- 08/05/2005 — Scientists Puzzled by "Bizarre" Pacific Coast Die-offs in 2005
- 05/11/2005 — Greenland Sea Cold Water Re-Cycling Has Nearly Stopped. Britain Expected to Become Cooler.
- 05/07/2005 — Did Milky Way Gas and Dust Turn Earth Into Icy Snowball Four Times?
- 02/26/2005 — Collapse of Societies: From Easter Island to Iraq - to Western World?
- 02/03/2005 — Kyoto Protocol Goes Into Effect February 16, 2005. British Scientists Warn Global Temperatures Could Climb Higher Than Earlier Estimates.
- 01/22/2005 — From U. S. to Arctic - A Sea Change in the Weather
- 12/31/2004 — Abrupt Climate Change Occurred Worldwide 5,200 Years Ago
- 11/02/2004 — North Pole Summers Without Ice?
- 10/15/2004 — Ever-Increasing Carbon Dioxide Build-Up in Atmosphere Since 1958
- 09/17/2004 — Cat 4 and 5 Hurricanes Charley, Frances and Ivan in Four Weeks -Unprecedented in American Recorded Weather History
- 08/27/2004 — Global Warming Impact On Birds - More Extinctions Expected
- 08/14/2004 — Oceans Are Absorbing A Lot of Greenhouse CO2. As Chemistry Changes, What Happens to Sea Life?
- 08/01/2004 — Sixth Straight Year Hundreds of Birds Die at Roestler Lake, North Dakota.
- 06/25/2004 — Wild 2, An Amazing Comet
- 02/27/2004 — Abrupt Climate Change: Scenario from A Pentagon-Commissioned Report
- 02/23/2004 — Is There Liquid Water on Martian Surface?
- 01/02/2004 — Earth's Speeded Rotation Puzzles Scientists
- 11/29/2003 — Glaciers Are Melting Around the World So Fast That Water Supplies Could Be Threatened
- 10/29/2003 — Fifth Intense Solar X-Flare - What's Happening On the Sun?
- 05/30/2003 — Scientists Surprised by Common House Fly Fossils in Antarctica
- 12/14/2002 — Arctic Rivers' Fresh Water Flows Could Change Atlantic Ocean Current
- 11/14/2002 — What Happened 12,000 Years Ago That Killed So Many Animals?
- 10/21/2002 — Mt. Kilimanjaro's Ice Cap Is Melting Fast
- 08/27/2002 — August 2002: Severe to Moderate Drought in 37 States
- 07/20/2002 — Extinctions of Earth Life Are Accelerating Rapidly
- 06/04/2002 — EPA Admits Humans Burning Fossil Fuels A Big Factor in Global Warming
- 03/30/2002 — Drought Worsens in United States
- 03/21/2002 — Antarctic Peninsula Is Melting - And So Is Arctic Ice
- 02/13/2002 — January 2002 Warmest On Record For Whole World
- 01/30/2002 — Latest Satellite Data Shows Surprisingly Thicker Ross Ice Shelf in Antarctica
- 01/05/2002 — Global Warming Update - Could Increasing CO2 Gas Be Transformed Into Limestone?
- 12/22/2001 — Scientists Warn That Climate and Earth Life Can Change Rapidly
- 06/09/2001 — Environmental Updates and Colt Mutilated in Leitchfield, Kentucky
- 05/25/2001 — Federal GAO Report Does Not Rule Out Cell Phone Dangers
- 04/18/2001 — April Environmental Updates
- 03/24/2001 — Alps Permafrost Melting
- 03/21/2001 — Earth Hasn't Been This Warm Since the Pliocene 3 Million Years Ago
- 03/04/2001 — Disappearing Glaciers - Evidence of A Rapidly Warming Earth
- 02/25/2001 — Environmental Updates
- 02/18/2001 — Environmental Updates and Mysterious Deaths of 2000 Atlantic Brant Geese
- 02/07/2001 — 94% Decline In Aleutian Islands Sea Otter Population
- 01/28/2001 — U. N. Global Warming Forecast: Up to 10.5 Degrees F. Hotter At End of 21st Century
- 01/07/2001 — Dinosaur-Killing Asteroid Punched 22 Miles Through Earth's Entire Crust
- 11/26/2000 — Environmental Updates
- 10/30/2000 — Science, Environment and Medical Updates
- 09/10/2000 — Largest-Ever Antarctic Ozone Hole
- 09/10/2000 — Arctic Ice Melt Threatens Polar Bears
- 07/09/2000 — The "Cell from Hell" Is Back in North Carolina Estuaries
- 07/02/2000 — Brown Tide Devastating Long Island's Great South Bay Shellfish
- 06/17/2000 — Spring 2000 - Hottest On Record in U. S.
- 05/07/2000 — Serious Drought in the Great Lakes
- 04/20/2000 — Severe Arctic Ozone Loss and Deep Ocean Warming
- 03/12/2000 — Environmental Updates and Mysterious Fires Near Scott, Arkansas
- 01/13/2000 — Computer Projections About Earth Weather 2000-2100
- 01/09/2000 — Global Warming Alert from NOAA and U.K.
- 12/25/1999 — Y2K Nuclear Concern and Global Warming Update
- 09/26/1999 — Could Ancient Microbes in Polar Ice Cause Epidemics?
- 07/25/1999 — Maryland Fish Kills; Global Warming; and Warm Oceans and Disease
- 06/04/1999 — Global Warming Linked to Increasingly Warmer, Wetter Winters in Europe and Western North America
- 05/05/1999 — Two Antarctic Ice Shelves Almost Gone
- 02/28/1999 — Chickadee Beak Deformities in Alaska

---

## Websites:

Wikipedia: [http://en.wikipedia.org/wiki/Noctilucent\\_clouds](http://en.wikipedia.org/wiki/Noctilucent_clouds)

.....

**Credits**

**Copyright © 1999 - 2009 by Linda Moulton Howe.  
All Rights Reserved.  
[www.earthfiles.com](http://www.earthfiles.com)  
[earthfiles@earthfiles.com](mailto:earthfiles@earthfiles.com)**

Republication and dissemination of the contents of this  
screen or any part of this website are expressly  
prohibited without prior Earthfiles.com written consent.

**[Privacy Policy](#) | [Terms & Conditions](#)  
[Refund Policy](#)**

**Copyright © 1999 - 2009, [Earthfiles.com](http://Earthfiles.com) / [DigitalEyeCandy.ca](http://DigitalEyeCandy.ca)  
All rights reserved.**