

## James E. Hansen

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### **1-paragraph bio/introduction:**

Dr. James Hansen, formerly Director of the NASA Goddard Institute for Space Studies, is an Adjunct Professor at Columbia University's Earth Institute, where he directs a program in Climate Science, Awareness and Solutions. Dr. Hansen is best known for his testimony on climate change in the 1980s that helped raise awareness of global warming. He is a member of the U.S. National Academy of Sciences and has received numerous awards including the Sophie and Blue Planet Prizes. Dr. Hansen is recognized for speaking truth to power and for outlining actions needed to protect the future of young people and all species on the planet.

### **1-long-paragraph bio:**

Dr. James Hansen, formerly Director of the NASA Goddard Institute for Space Studies, is an Adjunct Professor at Columbia University's Earth Institute, where he directs a program in Climate Science, Awareness and Solutions. He was trained in physics and astronomy in the space science program of Dr. James Van Allen at the University of Iowa. His early research on the clouds of Venus helped identify their composition as sulfuric acid. Since the late 1970s, he has focused his research on Earth's climate, especially human-made climate change. Dr. Hansen is best known for his testimony on climate change to congressional committees in the 1980s that helped raise broad awareness of the global warming issue. He was elected to the National Academy of Sciences in 1995 and was designated by Time Magazine in 2006 as one of the 100 most influential people on Earth. He has received numerous awards including the Carl-Gustaf Rossby and Roger Revelle Research Medals, the Sophie Prize and the Blue Planet Prize. Dr. Hansen is recognized for speaking truth to power, for identifying ineffectual policies as greenwash, and for outlining actions that the public must take to protect the future of young people and other life on our planet.

### **3-paragraph bio:**

Dr. James Hansen, formerly Director of the NASA Goddard Institute for Space Studies, is an Adjunct Professor at Columbia University's Earth Institute, where he directs a program in Climate Science, Awareness and Solutions. He was trained in physics and astronomy in the space science program of Dr. James Van Allen at the University of Iowa, receiving a bachelor's degree with highest distinction in physics and mathematics, master's degree in astronomy, and Ph. D. in physics in 1967. Dr. Hansen was a visiting student, at the Institute of Astrophysics, University of Kyoto and Dept. of Astronomy, Tokyo University, Japan from 1965-1966. He received his Ph.D. in physics from the University of Iowa in 1967. Except for 1969, when he was an NSF post-doctoral scientist at Leiden Observatory under Prof. H.C. van de Hulst, he has spent his post-doctoral career at NASA GISS.

In his early research Dr. Hansen used telescopic observations of Venus to extract detailed information on the physical properties of the cloud and haze particles that veil Venus. Since the mid-1970s, Dr. Hansen has focused on studies and computer simulations of the Earth's climate, for the purpose of understanding the human impact on global climate. He is best known for his testimony on climate change to Congress in the 1980s that helped raise broad awareness of the global warming issue. In recent years Dr. Hansen has drawn attention to the danger of passing climate tipping points, producing irreversible climate impacts that would yield a different planet from the one on which civilization developed. Dr. Hansen disputes the contention, of fossil fuel interests and governments that support them, that it is an almost god-given fact that all fossil fuels must be burned with their combustion products discharged into the atmosphere. Instead Dr. Hansen has outlined steps that are needed to stabilize climate, with a cleaner atmosphere and ocean, and he emphasizes the need for the public to influence government and industry policies.

Dr. Hansen was elected to the National Academy of Sciences in 1995 and, in 2001, received the Heinz Award for environment and the American Geophysical Union's Roger Revelle Medal. Dr. Hansen received the World Wildlife Federation's Conservation Medal from the Duke of Edinburgh in 2006 and was designated by Time Magazine as one of the world's 100 most influential people in 2006. In 2007 Dr. Hansen won the Dan David Prize in the field of Quest for Energy, the Leo Szilard Award of the American Physical Society for Use of Physics for the Benefit of Society, and the American Association for the Advancement of Science Award for Scientific Freedom and Responsibility. In 2008, he won the Common Wealth Award for Distinguished Service in Science and was also awarded both the Ohio State University's Bownocker Medal and the Desert Research Institute's Nevada Medal. In 2009, Dr. Hansen received the American Meteorological Society's Carl-Gustaf Rossby

Research Medal. In 2010 he received the Sophie Prize and the Blue Planet Prize.

**Additional Information:**

[Http://www.columbia.edu/~jeh1/](http://www.columbia.edu/~jeh1/)

<http://www.columbia.edu/~mhs119/>

Photos: [http://www.mediafire.com/folder/8ecel33ccmg8l/Hansen\\_Photos](http://www.mediafire.com/folder/8ecel33ccmg8l/Hansen_Photos)

**Education:**

BA with highest distinction (Physics and Mathematics), University of Iowa, 1963

MS (Astronomy), University of Iowa, 1965

Visiting student, Inst. of Astrophysics, University of Kyoto & Dept. of Astronomy, Tokyo University, Japan, 1965-1966

Ph.D. (Physics), University of Iowa, 1967

**Research Interests:**

Analysis of the causes and consequences of global climate change using the Earth's paleoclimate history, ongoing global observations, and interpretive tools including climate models. Connecting the dots all the way from climate observations to the policies that are needed to stabilize climate and preserve our planet for young people and other species.

**Professional Employment:**

1967-1969 NAS-NRC Resident Research Associate: Goddard Institute for Space Studies (GISS), NY

1969 NSF Postdoctoral Fellow: Leiden Observatory, Netherlands

1969-1972 Research Associate: Columbia University, NY

1972-1981 Staff Member/Space Scientist: Goddard Institute for Space Studies (GISS), Manager of GISS Planetary and Climate Programs

1978-1985 Adjunct Associate Professor: Department of Geological Sciences, Columbia University

1981-2013 Director: NASA Goddard Institute for Space Studies

1985-2013 Adjunct Professor: Earth and Environmental Sciences, Columbia University

2013-present Director: Program on Climate Science, Awareness and Solutions, Columbia University

**Project Experience:**

1971-1974 Co-Principal Investigator AEROPOL Project (airborne terrestrial infrared polarimeter)

1972-1985 Co-Investigator, Voyager Photopolarimeter Experiment

1974-1994 Principal Investigator (1974-8) and subsequently Co-Investigator, Pioneer Venus Orbiter Cloud-Photopolarimeter Experiment

1977-2000 Principal Investigator, Galileo (Jupiter Orbiter) Photopolarimeter Radiometer Experiment

**Teaching Experience:**

Atmospheric Radiation (graduate level): New York Univ., Dept. of Meteorology & Oceanography

Intro. to Planetary Atmospheres & Climate Change: Columbia Univ., Dept. of Geological Sciences

**Awards:**

1977 Goddard Special Achievement Award (Pioneer Venus)

1978 NASA Group Achievement Award (Voyager, Photopolarimeter)

1984 NASA Exceptional Service Medal (Radiative Transfer)

1989 National Wildlife Federation Conservation Achievement Award

1990 NASA Presidential Rank Award of Meritorious Executive

1991 University of Iowa Alumni Achievement Award

1992 American Geophysical Union Fellow

1993 NASA Group Achievement Award (Galileo, Polarimeter/Radiometer)

1996 Elected to National Academy of Sciences

1996 GSFC William Nordberg Achievement Medal

1996 Editors' Citation for Excellence in Refereeing for Geophysical Research Letters

1997 NASA Presidential Rank Award of Meritorious Executive

2000 University of Iowa Alumni Fellow

2000 GISS Best Scientific Publication (peer vote): "Global warming – alternative scenario"

2001 John Heinz Environment Award

2001 Roger Revelle Medal, American Geophysical Union

2004	GISS Best Scientific Publication (peer vote): ‘Soot Climate Forcing’
2005	GISS Best Scientific Publication (peer vote): ‘Earth’s Energy Imbalance’
2006	Duke of Edinburgh Conservation Medal, World Wildlife Fund (WWF)
2006	GISS Best Scientific Publication (peer vote): ‘Global Temperature Change’
2006	<i>Time Magazine</i> designation as one of World's 100 Most Influential People.
2007	Laureate, Dan David Prize for Outstanding Achievements & Impacts in Quest for Energy
2007	Leo Szilard Award, American Physical Society for Outstanding Promotion & Use of Physics for the Benefit of Society
2007	Haagen-Smit Clean Air Award
2008	American Association for the Advancement of Science Award for Scientific Freedom and Responsibility
2008	Nevada Medal, Desert Research Institute
2008	Common Wealth Award for Distinguished Service in Science
2008	Bownocker Medal, Ohio State University
2008	Rachel Carson Award for Integrity in Science, Center for Science in the Public Interest
2009	Carl-Gustaf Rossby Research Medal, American Meteorological Society
2009	Peter Berle Environmental Integrity Award
2010	Sophie Prize for Environmental and Sustainable Development
2010	Blue Planet Prize, Asahi Glass Foundation – shared with Robert Watson
2011	American Association of Physics Teachers Klopsteg Memorial Award for communicating physics to the general public
2011	Edinburgh Medal from City of Edinburgh, Edinburgh Science Festival
2012	Steve Schneider Climate Science Communications Award
2012	<i>Foreign Policy</i> designation as one of its Top 100 Global Thinkers
2013	Ridenhour Courage Prize
2013	NASA Distinguished Service Medal
2014	Center for International Environmental Law’s Frederick R. Anderson Award for Outstanding Contributions to Addressing Climate Change
2014	Walker Prize, Museum of Science, Boston
2017	2017 AAG Honorary Geographer, American Association of Geographers
2017	BBVA Foundation Frontiers of Knowledge Award in Climate Change, Spain – shared with Suki Manabe
2018	Tang Prize in Sustainable Development – shared with Veerabhadran Ramanathan

### **Publications:**

- Hansen, J.E., M. Sato, L. Simons, L.S. Nazarenko, I. Sangha, P. Kharecha, J.C. Zachos, K. von Schuckmann, N.G. Loeb, M.B. Osman, Q. Jin, G. Tselioudis, E. Jeong, A. Lacis, R. Ruedy, G. Russell, J. Cao, J. Li, 2023: [Global warming in the pipeline](#), *Oxford Open Climate Change*, 3, 1, kgad008, <https://doi.org/10.1093/oxfclm/kgad008>
- Li, J., B.E. Carlson, Y.L. Yung *et al.*, 2022: [Scattering and absorbing aerosols in the climate system](#). *Nat Rev Earth Environ* **3**, 363–379, <https://doi.org/10.1038/s43017-022-00296-7>
- Hansen J. [Foreword: uncensored science is crucial for global conservation](#). In: DellaSala DA (ed). *Conservation Science and Advocacy for a Planet in Peril*. Amsterdam: Elsevier, 2021,451 pp.
- von Schuckmann, K., L. Cheng, M.D. Palmer, J. Hansen *et al.*, 2020: [Heat stored in the Earth system: where does the energy go?](#), *Earth System Science Data*, **12**, 2013-2041, doi:10.5195/essd-12-2013-2020.
- Beerling, D.J., E.P. Kantzas, M.R. Lomas, P. Wade, R.M. Eufrazio, P. Renforth, B. Sarkar, M.G. Andrews, R.H. James, C.R. Pearce, J. Mercure, H. Pollitt, P.B. Holden, N.R. Edwards, M. Khanna, L. Koh, S. Quegan, N.F. Pidgeon, I.A. Janssens, J. Hansen, S.A. Banwart, 2020: [Potential for large-scale CO<sub>2</sub> removal via enhanced rock weathering with croplands](#). *Nature*, **583**, 242-248, <https://doi.org/10.1038/s41586-020-2448-9>.
- Rye, C.D., J. Marshall, M. Kelley, G. Russell, L. Nazarenko, Y. Kostov, G.A. Schmidt, J. Hansen, 2020: [Antarctic Glacial Melt as a Driver of Recent Southern Ocean Climate Trends](#). *Geophysical Research Letters*, 47, e2019GL086892. <https://doi.org/10.1029/2019GL086892>
- Miller, D.H., J.E. Hansen, 2019: [Why Fee and Dividend Will Reduce Emissions Faster Than Other Carbon Pricing Policy Options](#), *Response to the Request for Information from the United States House of Representatives Select Committee on the Climate Crisis*.
- Lensen, N.J.L., G.A. Schmidt, J.E. Hansen, M.J. Menne, A. Persin, R. Ruedy, and D. Zyss, 2019: [Improvements in the GISTEMP uncertainty model](#), *J. Geophys. Res. Atmos.*, **124**, no. 12, 6307-6326, 10.1029/2018JD029522.
- Hansen, J., P. Kharecha, 2018: Cost of carbon capture: [Can young people bear the burden?](#) *Joule*, **2**, 1405-1407.

- Beerling, D.J., J.R. Leake, S.P. Long, J.D. Scholes, J. Ton, P.N. Nelson, M. Bird, E. Kantzas, L.L. Taylor, B. Sarkar, M. Kelland, E. DeLucia, I. Kantola, C. Muller, G.H. Rau and J. Hansen, 2018: Farming with crops and rocks to address global climate, food and soil security, *Nature Plants*, **4**, 138-147.
- Hansen, J., M. Sato, P. Kharecha, K. von Schuckmann, D.J. Beerling, J. Cao, S. Marcott, V. Masson-Delmotte, M.J. Prather, E.J. Rohling, J. Shakun, P. Smith, A. Lacis, G. Russell, and R. Ruedy, 2017: [Young people's burden: requirement of negative CO2 emissions](#). *Earth Syst. Dynam.*, **8**, 577-616, doi:10.5194/esd-8-577-2017.
- Cao, J., A. Cohen, J. Hansen, R. Lester, P. Peterson and H. Xu, 2016: China-U.S. cooperation to advance nuclear power. *Science*, **353**, 547-548. doi: 10.1126/science.aaf7131. [Get a PDF from Scholarly Publications page](#)
- Hansen, J., M. Sato, P. Kharecha, K. von Schuckmann, D.J. Beerling, J. Cao, S. Marcott, V. Masson-Delmotte, M.J. Prather, E.J. Rohling, J. Shakun, P. Smith, 2016: [Young people's burden: requirement of negative CO2 emissions](#). *Earth Syst. Dynam. Discuss.*, doi:10.5194/esd-2016-42, Published 4 October 2016.
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- Hansen, J., M. Sato, P. Hearty, R. Ruedy, et al., 2016: [Ice melt, sea level rise and superstorms: evidence from paleoclimate data, climate modeling, and modern observations that 2°C global warming could be dangerous](#) *Atmos. Chem. Phys.*, **16**, 3761-3812. doi:10.5194/acp-16-3761-2016.
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- Kharecha, P.A., and J.E. Hansen, 2013: Response to comment on “[Prevented mortality and greenhouse gas emissions from historical and projected nuclear power](#)”. *Environ. Sci. Technol.*, **47**, 6718-6719, doi:10.1021/es402211m.
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- Kharecha, P.A., and J.E. Hansen, 2013: [Prevented mortality and greenhouse gas emissions from historical and projected nuclear power](#). *Environ. Sci. Technol.*, **47**, 4889-4895, doi:10.1021/es3051197
- Hansen, J., P. P. Kharecha, and M. Sato, 2013: [Climate forcing growth rates: Doubling down on our Faustian bargain](#). *Environ. Res. Lett.*, **8**, 011006, doi:10.1088/1748-9326/8/1/011006.
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