Rainer Weiss

Born:

September 29, 1932. Berlin, Germany
USA Citizen

Present Position:

Professor of Physics, Emeritus
Massachusetts Institute of Technology

Education:

1955-B.S.	Massachusetts Institute of Technology
1962-Ph.D.	Massachusetts Institute of Technology

Positions:

1960-1961	Instructor of Physics, Tufts University
1961-1962	Assistant Professor of Physics, Tufts University
1962-1964	Research Associate in Physics, Princeton University
1964-1967	Assistant Professor of Physics, M.I.T.
1967-1973	Associate Professor of Physics, M.I.T.
1973-2001	Professor of Physics, M.I.T.
2001-	Adjunct Professor of Physics, L.S.U
2001-	Professor of Physics,Emeritus, M.I.T.

Research:

Experimental Atomic Physics, Atomic Clocks, Laser Physics,
Experimental Gravitation, Millimeter and Sub - millimeter
Astronomy, Cosmic Background Measurements,

Major Projects:

Atomic Clock development,
Balloon program to measure Cosmic Background Radiation,
Science Working Group Chairman, COBE satellite program,
Laser Interferometer Gravitational - Wave Observatory (LIGO)

Professional Societies:

American Association for the Advancement of Science (Fellow)
American Physical Society (Fellow)
American Astronomical Society
New York Academy of Sciences
American Academy of Arts and Sciences (Fellow)
National Academy of Sciences (Member)
Sigma Xi

Honors:

MIT, Baker Award for Excellence in Teaching (1968)
NASA, Achievement Award (Monolithic Bolometers) (1983)
NASA/GSFC, Group Achievement Award (COBE) (1990)
NASA, Exceptional Scientific Achievement Medal (COBE) (1991)

NASA, Group Achievement Medal (COBE) (1991)
National Space Club, Science Award (COBE Team) (1994)
John Simon Guggenheim Memorial Foundation Fellowship (2000)
Medaille de l'ADION Observatoire de Nice (2003)
Gruber Cosmology Prize as part of COBE Team (2006)
Einstein Prize of the American Physical Society (2007)

Professional Service:

NASA Physical Science Committee, 1970 - 1974
National Academy Summer Study on Outer Planet Exploration, 1972
NASA Management Operations Working Group for Shuttle Astronomy, 1973 - 1976
NASA Management Operations Working Group for Airborne Astronomy, 1973 - 1986
Chairman, NASA Panel on Experimental Relativity and Gravitation, 1974 -1976
NCAR Scientific Ballooning Advisory Panel, 1971 - 1978
Chairman, NCAR Scientific Ballooning Advisory Panel, 1974 - 1978
Members' Representative to NCAR from M.I.T., 1974 - 1982
Chairman, NSF Subcommittee on Gravitational Physics, 1978
NASA SSSC Committee, 1979 - 1982
NASA Infrared Detector Panel, 1978
NASA Space and Earth Science Advisory Committee, 1982
National Academy Space Science Board, 1983 - 1986
Panel Chairman, Fundamental Physics and Chemistry, National Academy Summer Study, Major Directions for Space Research 1995-2015, 1984-86
Coordinator, NSF Panel on Interferometric Observatories for Gravitational Waves 1986
Panel for the Joint Institute of Laboratory Astrophysics, Board on Assessment of NBS Programs, National Academy of Sciences, 1985 -
Program Initiation Group on Gravitation, Cosmology, and Cosmic Ray Physics, NRC Committee, D.Schramm, Chairman 1992
Chairman, High Energy Physics Laboratory Visiting Committee (Stanford) 1991,1994

National Research Council, Committee on Astronomy and Astrophysics, Task Group on Space Astronomy and Astrophysics, 1996

NASA Gravity Probe-B External Independent Readiness Review Team, 1997 -

Spokesperson for the LIGO Scientific Collaboration 1997 - 2003

Chair, American Physical Society Topical Group on Gravitation 1999 - 2000

National Research Council, Astronomy and Astrophysics Survey, Panel on Particle and Gravitational-Wave Astrophysics 1999 - 2000

NASA Small Explorers (SMEX) and Missions of Opportunity Science Review Panel 2000, Chair of Panel on Fundamental Physics

NASA Gravity Probe-B Special scientific review panel 2003

NASA LISA Technical Readiness Review Team 2003

NASA Post Einstein Mission review 2003

NASA Goddard LISA Gravitational Wave Visiting Committee (Chair) 2004 - 2005

DOE,NASA,NSF CMB Task Force (Chair) 2004 - 2005
NASA Astrophysics Performance Assessment Committee 2006

Teaching and Academic Administration:

Introduced Purcell "Electricity and Magnetism" into MIT curriculum, developed lectures, lecture demonstrations, student laboratory (1964–1967).

Developed Graduate Course in General Relativity and Cosmology (1968)

Introduced Kerman, Sartori, Morrison, French "Quantum Mechanics" into MIT curriculum, developed lectures, lecture demonstrations, problems (1969 - 1971).

Administered and taught in Junior level Modern Physics teaching laboratory, developed new experiments (1971 - 1978).

Ran a physics "family" in my research laboratory (2 Freshman, 2 Sophomores, 2 Juniors, 2 Seniors coupled to 2 Graduate students) (1970 - 1980)

Academic officer for the undergraduate program in physics (1974 - 1981)

Developed Independent Activities Course in the Physics of the Piano (1983)

Televised problem solving sessions for large Freshman Mechanics and Electricity and Magnetism Courses (1984)

Taught sections as needed by the department in various undergraduate courses (1985 - 1990)

Research supervisor: 10 PhD degrees, 4 Masters degrees, 26 Undergraduate (thesis) degrees (1964 - 1990).