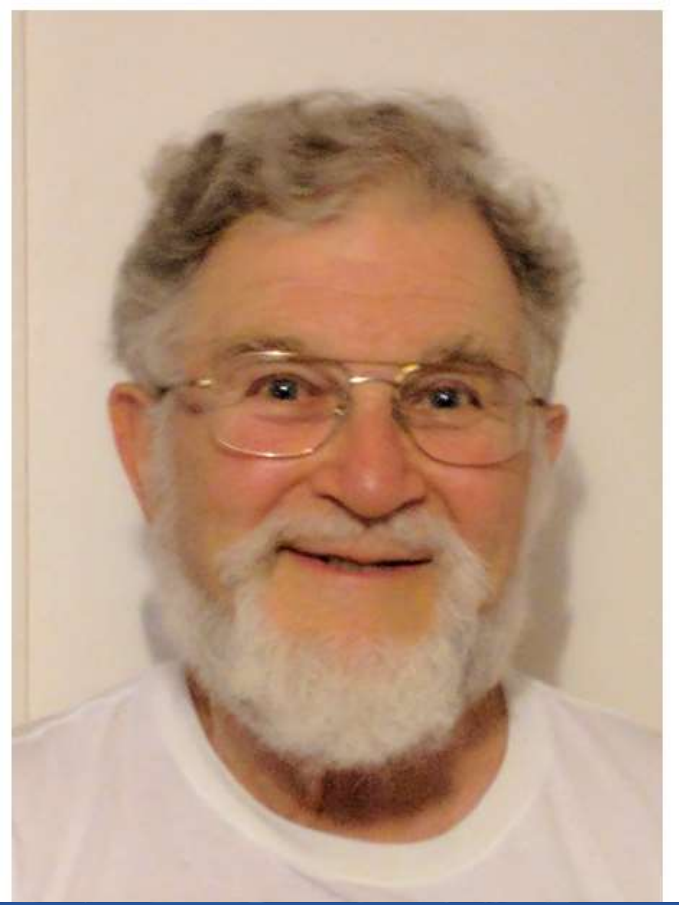
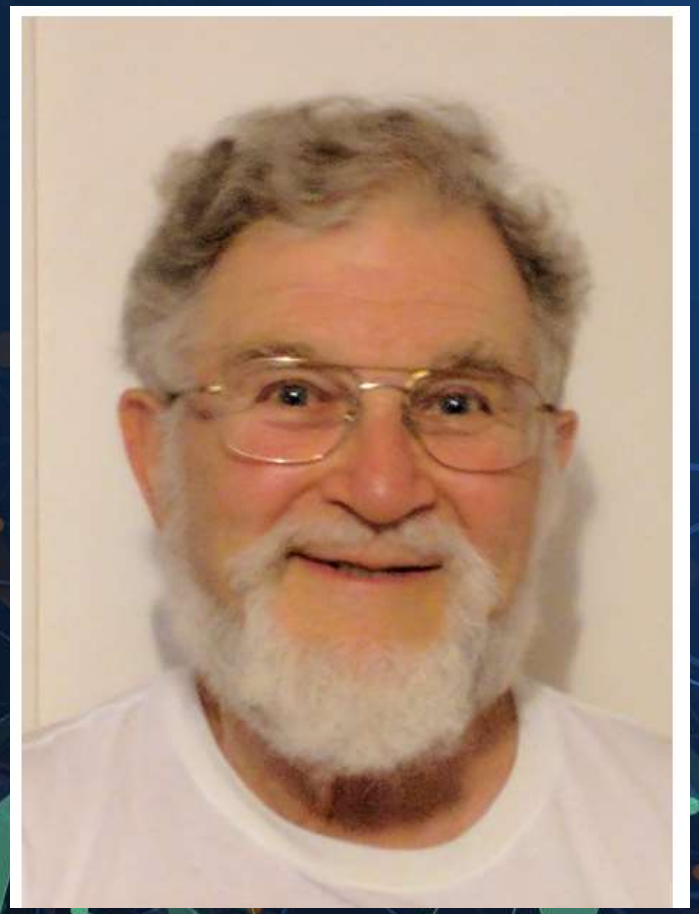
Mike Moldover (19 Jul 1940- 8 Aug 2025)

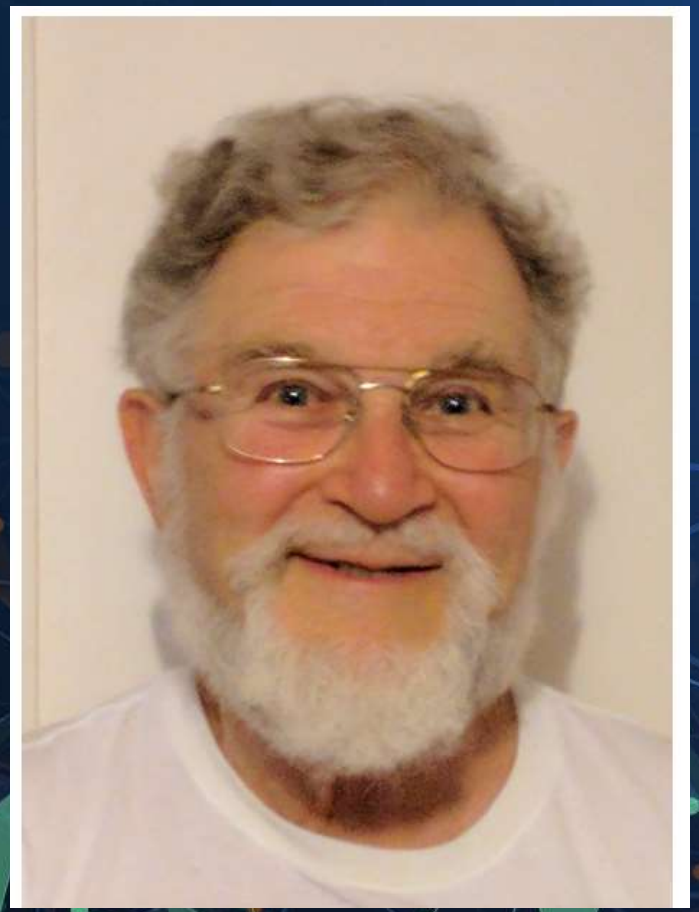


- Born in New York City
- Bronx High School of Science (9 graduates have won Nobel science prizes, more than some countries!)
- Rensselaer Polytechnic Institute BS 1961
- Stanford University PhD 1966
- University of Minnesota Assist Prof 1966- 1972
- NIST 1972- 2022 (nearly 200 papers)

Mike Moldover (19 Jul 1940- 8 Aug 2025)

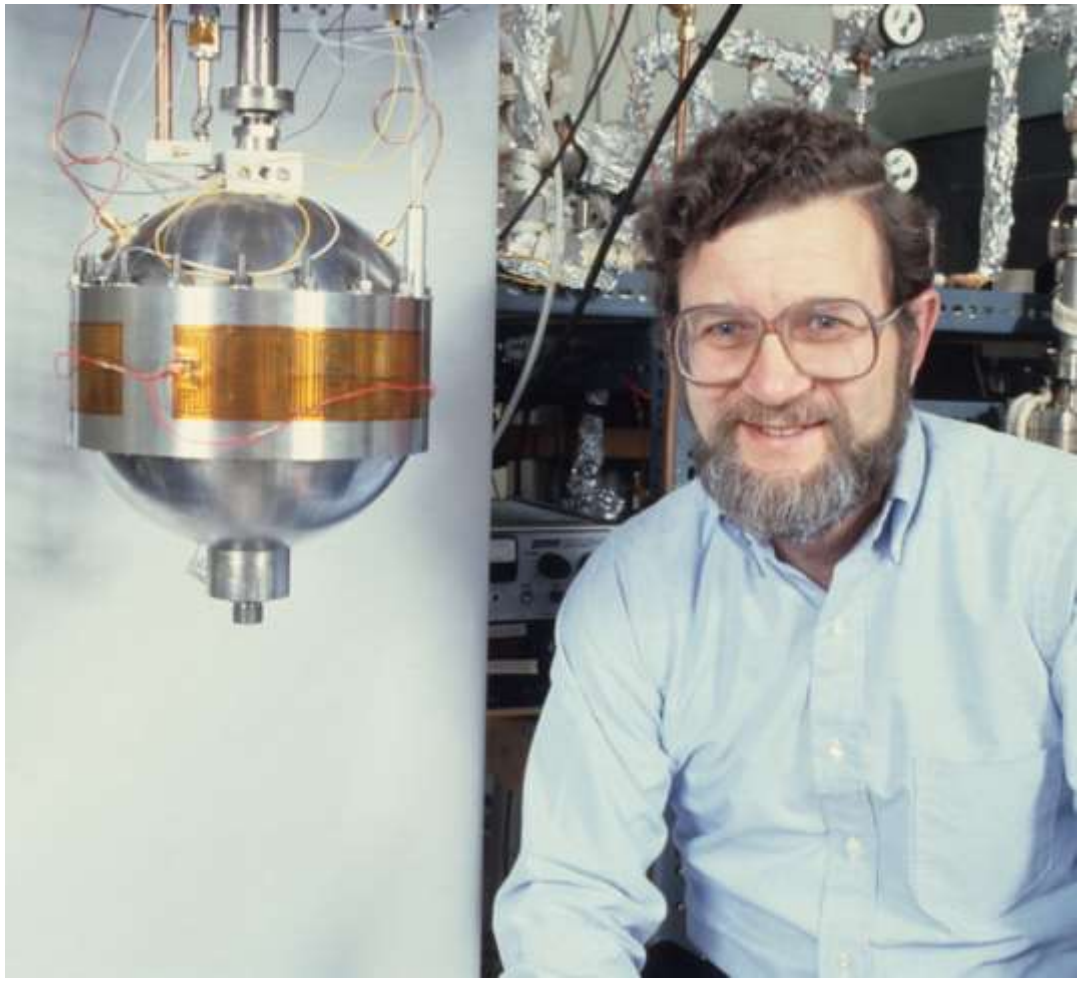


Had two cats named
Kelvin and Joule



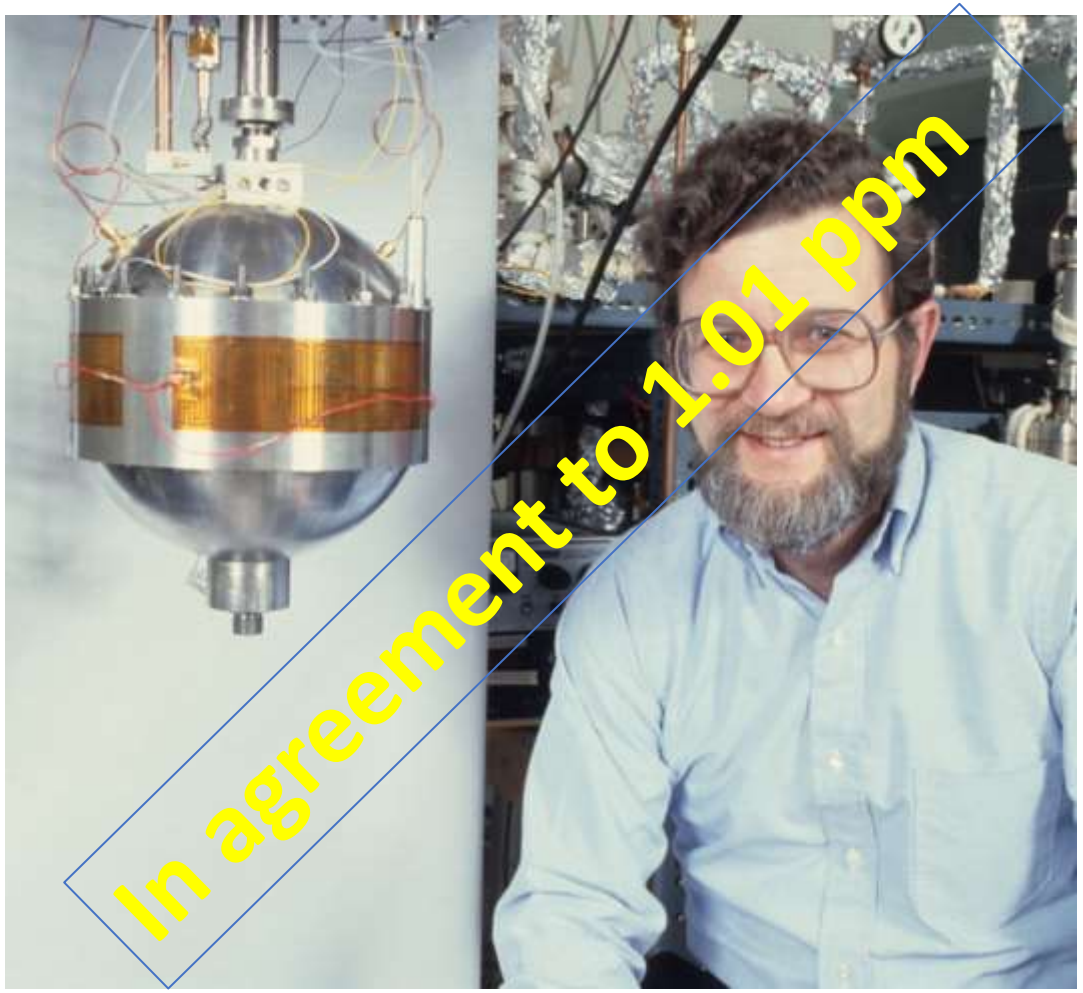
- Stratton Award for Research Excellence (NIST 1988)
- The Presidential Rank Award (US Office of Personnel Management 2009)
- The Touloukian Award (American Society of Mechanical Engineers 2012)
- Department of Commerce Awards (Bronze 1980 Silver 1982, 2011; Gold 1987)
- NIST Fellow
- Fellow of the Acoustical Society of America
- Fellow of the American Physical Society

NIST 1988 measurements



"....., we are willing to bet our own money at even odds that our reported value (of R) is correct to 5 parts in 10^6, and if by any chance our value is shown to be in error by more than 10 parts in 10^6, we are prepared to eat the apparatus, drink the mercury, and breathe the argon!"

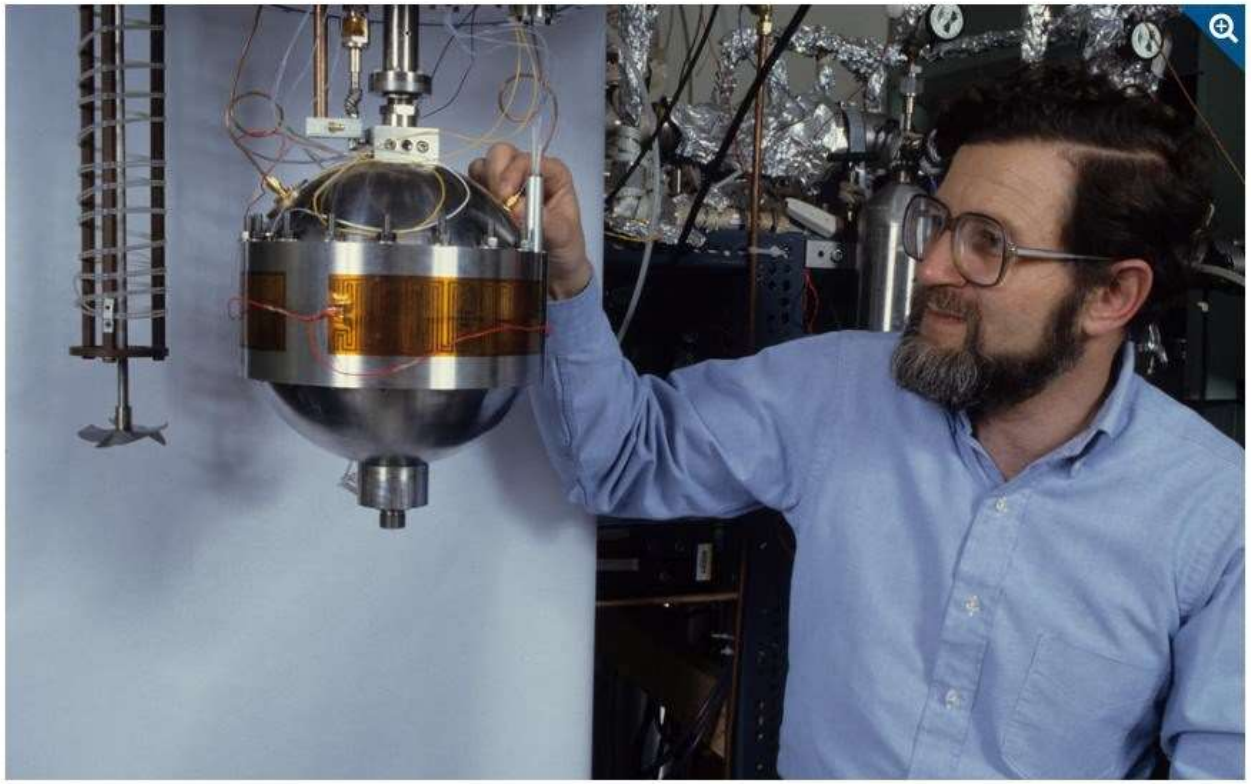
NIST 1988 measurements



SI defined (2019)	R = 8.314 462 618 J mol^{-1} K^{-1} exact
Moldover *et al* (1988)	R = 8.314 471(14) J mol^{-1} K^{-1}
Difference	DR/R = 1.01 ppm

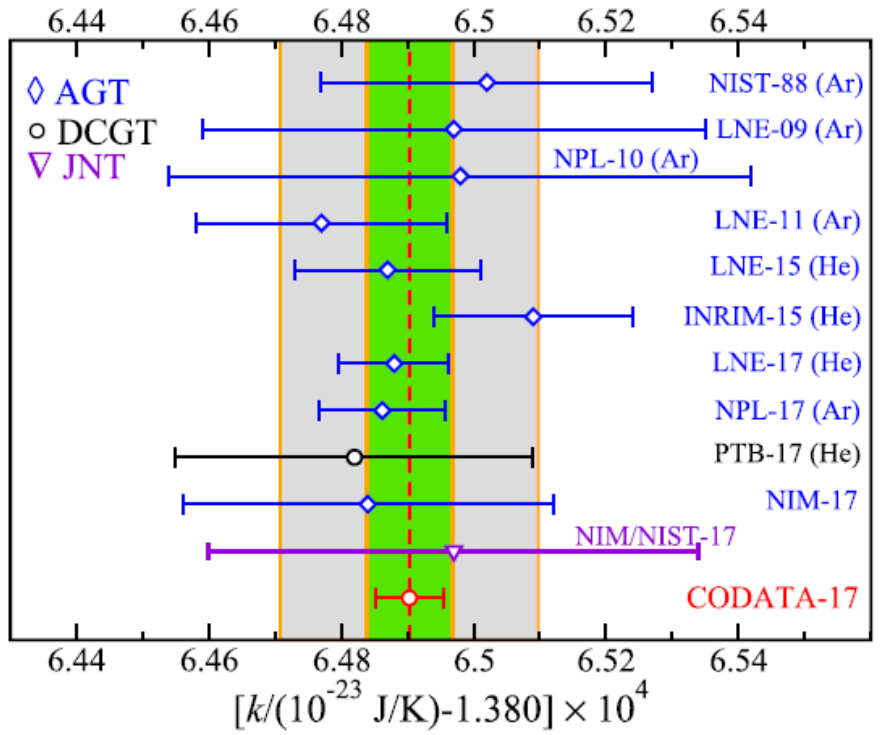
k	1.380649	J/K	1.00E-23
N_A	6.02214076	mol-1	1.00E+23
R(SI)	8.314462618	J/mol-K	
R(Calc)	8.314462618	J/mol-K	
R(NBS88)	8.314471	J/mol-K	
R(NBS88) - R(SI)	8.382E-06	J/mol-K	
{R(NBS88) - R(SI) }/R(SI)	1.00812E-06		

2019 SI redefinition



Michael Moldover and an acoustic resonator he and his colleagues developed for making some of the world's most accurate measurements of the Boltzmann constant

The CODATA 2017 special adjustment



1.380 649 03(51) × 10^{-23} J K^{-1} u_r=3.7 × 10^{-7}

Sharing ideas

He supported people, he solved problems quickly, and he cared about doing things correctly. I was lucky to meet him, and he changed my life.

International Temperature Symposium 8 (2002)

“A day in the library will save you a week in the lab.”

International Temperature Symposium 9 (2012)

“You should not be worried that somebody would steal your scientific work or ideas, the real worry is that anybody would ever care about them.”

Mike as a manager

If you enjoy 80 % of your job then you have a fantastic job!

When you think you made a good guess of the time needed to accomplish something, mutiply it by a factor of Pi and you will come much closer to a realistic estimate.

Forbidden City, China October 2008

Mike and Laura visiting the Forbidden City with Hong Lin in October 2008

We really appreciate your kind help and teaching when we were in US. You are the best scientist we have ever met. May all the abundant blessings be yours. **You are also like our family and we love you.**