

### Professor Clint Sprott

Born in Memphis, Tennessee in 1942, Clint Sprott developed an interest in physics early in his childhood. He went on to earn a B.S. at the Massachusetts Institute of Technology in 1964 and a Ph.D. in physics at the University of Wisconsin in 1969. He spent 1970-1972 at the Oak Ridge National Laboratory in Tennessee. Then in 1973 he returned to the University of Wisconsin – Madison to become Professor of Physics. His research is in plasma physics and chaos, and he is currently working on complex nonlinear dynamical systems.

In an effort to share with the public his lifelong interest and enthusiasm for physics, Professor Sprott has presented “The Wonders of Physics” since 1984.

### Acknowledgements

Thanks to all who helped put this program together.

A special thanks to the following:

Terry Craney	Cassie Narf	Mike Randall
Brandon Duerst	Steve Narf	Jim Reardon
Emily Ehlerding	Paul Nonn	Dale Schutte
Norman Gilliland	Ryan Norval	Akire Trestrail
Tara Keenan	Steve Oliva	Peter Weix
Jim Latimer	Kimberly Palladino	Michael Winokur
Jim Morin		Bill Zimmerman

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***Thanks for Coming!***

**THE WONDERS OF PHYSICS  
2018**

**With  
Professor  
Clint  
Sprott**

**University of  
Wisconsin -  
Madison**

**35th  
Anniversary  
Celebration!**

2103 Chamberlin Hall, 1150 University Avenue, Madison, WI

## 35<sup>th</sup> Anniversary Celebration

In celebration of the 100<sup>th</sup> anniversary of the first-ever radio broadcast here at UW-Madison, the Wonders of Physics crew is producing their own radio variety hour with you as the studio audience! Make sure to vote for your favorite demonstrations throughout the show with your applause.

### PROGRAM

**Prologue (Peter Weix, Norman Gilliland, Clint Sprott)**

**Motion (Mike Randall):**

- Paper airplane
- Magdeburg hemispheres
- Hovercraft
- Bernoulli ball levitation
- Toilet paper gun

**Heat (Terry Craney):**

- Boiling water in a paper cup
- Non-burning handkerchief
- Fire tornado
- Freezing by evaporation
- Exploding balloons\*

**Sound (Emily Ehlerding):**

- Breathing helium and sulfur hexafluoride
- Flame pipe
- Hoot tubes\*
- Breaking a beaker with sound\*

**Electricity (Michael Winokur):**

- Charge forces on a plastic stick
- Jacob's ladder
- Tesla coil and Faraday cage\*
- Plasma in microwave
- Exploding foil\*

**Magnetism (Ryan Norval):**

- Levitated ball
- Ring launcher
- Induction heating
- Magnetic guillotine

**Light (Kimberly Palladino):**

- Prism & CD diffraction
- 3D holograms
- Fluorescence
- Laser popping balloons
- IR camera

**Epilogue (Peter Weix, Clint Sprott):**

- Liquid Nitrogen Cloud

*\*Please note that these demonstrations will produce a loud and/or sudden sound.*

Coordinator:	Peter Weix
Visuals & Sound Effects:	Steve Narf
Lighting:	Bill Zimmerman
Theme Music:	Jim Latimer & Frank Ferriano

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**Thank you!**