

Cape Cod Astronomical Society - Minutes of the June 4, 2015 meeting

Attendance: 12 members; 4 visitors

The meeting was held at the Dennis-Yarmouth High School Library.

Tonight's speaker: Mike Hunter, CCAS member and former President.

Prior to Mike's presentation, the following was discussed:

- Gail Smith lost her father, Mr. William O. Smith. Arrangements are being handled by Morris, O'Conner & Blute. (Ed. Three folks from CCAS participated in the funeral.)
- Americorp members are scheduled to attend Star Party / Solar Observation session, arranged by Charlie Burke, on June 22, and volunteers are needed. (Since canceled Americorp.)
- Next star party June 20 (last 1st QTR Moon Saurday event this season. {Ed. A special Star Party celebrating the Summer Solstice was held Monday evening, June 22.})
- Starting July 9, weekly Thursday star parties begin; each event starts at 8:30pm.
- Bernie, Joel and Mike tightened a loose gear on the 16 inch telescope.

Title of Mike's presentation:

No Theory of Everything
Why String Theory
Lots of Inflation

Any system developed with inductive methods is either incomplete or has one inconsistency. (Anyone studying science will never get it all right). Thus, there is no theory of everything and we will never learn it.

Einstein, since the 1920s until his death, tried to combine his general theory of relativity (speed of light constant; $E=MC^2$; single force is gravity) and the standard model of particle physics (Bohr and Planck: deals with atoms and smaller).

Godel's Theorem: In any formal system sufficient for number theory (arithmetic) there exists a true proposition which is unprovable within the system (all math is incomplete). Stephen Hawking agrees.

Why super string theory...provides a way out of the incompatibility of combining general relativity with the standard model of particle physics. Implies at least 11 dimensions.

Lots of inflation – why this concept has been added to the Big Bang theory:

- Universe is bigger than standard model predicted
- Observations show universe to be flat
- Universe is homogeneous
- Universe is isotropic
- Inflation could explain a non-uniform cosmic density

Inflation theory predicts that inflation continues; each instance of inflation results in a new universe; this results in an infinite number of universes.

The meeting was adjourned at 9:25 PM.

Our next meeting is July 2, 2015. Our speaker will be Alicia Soderberg, Harvard Smithsonian Center of Astrophysics.

Respectfully submitted,
Gus Romano, CCAS Secretary