

Black Canyon Astronomical Society (BCAS)

Monthly Meeting Minutes

Tuesday January 11, 2022

6:00 to 7:30 p.m.

Joint meeting with WCAS and BCAS online hybrid in person and video meeting using Zoom video conferencing service

Minutes prepared by Val Szwarc- co-secretary

Note: **BCAS Business Topics:** Business was not covered in this video conference.

Attendance was noted as a total of 68 attendees with 26 BCAS members, under 20 separate logins. No BCAS members attended the in-person meeting on the CMU campus.

Minutes Summary:

President Nancy McGuire of WCAS opened the meeting welcoming members and guests and introduced the guest speaker, Dr. Catherine Whiting. Val Szwarc, BCAS co-Secretary mentioned that the Colorado IDA Chapter elected a new chairperson, Aaron Watson from Paonia, who is a BCAS member.

Program Presentation and Summary:

Dr. Whiting presented an interesting overview of Black Holes and General Relativity, which predicts the existence of Black Holes.

Some of the key and interesting facts that were discussed included:

- As a reference the escape velocity from the earth is approximately 25K mph.
- Due to the intense gravity, the escape velocity from Black Holes is greater than the speed of light
- The event horizon around a Black Hole is the boundary around a black hole that light cannot escape
- As a demonstration of gravity's equal influence on objects of different mass, a feather and hammer would fall at the same rate in a perfect vacuum
- General Relativity predicted gravity waves and gravitational lensing
- It is believed that all galaxies have super massive Black Holes at their center of rotation.
- General Relativity breaks down at quantum scales
- If mass of a star is greater than 8 times that of the Sun it has the potential to collapse into a Black Hole.

Nancy wrapped up the meeting, thanked all that attended the hybrid format, and she adjourned the meeting at approximately 7:30pm.