

Black Canyon Astronomical Society (BCAS)

Monthly Meeting Minutes
Thursday February 25, 2021

7:00 p.m.

Online BCAS video meeting using BLUEJEANS video conferencing service

Submitted by Sara Ungrodt- co-secretary

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

32 connections and 38 individuals. 41 people pre-registered for Ken's talk.

Minutes Summary:

President Bryan Cashion opened meeting. Welcoming members and possible new members. Noted how to send in dues.

Program Topics:

Current astronomical news: Bryan showed video of Perseverance Mars rover landing.

Presentation:

Topic: Osiris-REx Mission to asteroid Bennu, by Ken Edmundson. Giving his presentation via video from Flagstaff, Arizona.

Review of his presentation to BCAS Club in 2016.

Mapping challenges.

Left Astro Geology Center in 2019 to do private consulting.

Osiris REX- Bennu Mission led by U of Arizona-Tucson.

Review of various missions, flybys and the like.

Bennu discovered Sept 1999. 2004 proposed astrosample return mission.

Bennu name decided in 2013 via a contest. Bennu means Gray heron.

Discussed history of discovery and planning missions.

Choosing Bennu- narrow down asteroids in a pyramid of criteria from 500,000 to ONE.

Talked about sizes of asteroids etc.

Roc Saxum widest feature on Bennu.

Review of the instrumentation.

Maps-mosaics from images: Photogrammetry.

Greek Mythology names and their stories were used.

Choosing sample site- #1 criteria was Safety

Amazing photogrammetry.

Citizen scientist Bennu volunteer mappers- counting boulder rocks, particles in photos.

TAG head can hold 2 kilograms of regolith sample.

Proposal to do extended mission after Osiris-REx returns to earth.

Sept 2023 return capsule will return to earth in Utah desert west of SLCity

Asteroidmission.org - further research sites.

Showed landing and sample collection video with dramatic music.

Ken asked if there were questions.

Gina- how to determine which asteroids were carbon rich- Ken doesn't know. Not his area of expertise.

Nancy- surface material compromised by radiation vs. digging down. He does not know. Sample should tell the story

Nancy- when capsule returns to earth- crash landing or gently land. Yes, a parachute is used.

Dave – Future missions considered? - Ken doesn't know- only extended Osiris-REx

Val- Spectral filters- composition of rocks examined? Yes, Mapcam color mosaic used for composition analysis. Bennu – blue. Ryugu – red.

Pete- How do you determine north south east and west? Bennu has retrograde rotation

Art- 2 asteroids similar shape- Ryugu- shapes are similar. Same parent body??

This meeting was recorded by BlueJeans and Bryan will post a link. Cloud based recording. Recording stopped 8:23

March 25, 2021 7:00pm video mtg.

Val – will present his notes from 2020 IDA annual meeting.

Meeting adjourned at 8:25 p.m.