

# After Dark



Updates from the Great Basin National Park Foundation & the Great Basin Observatory

## Two successful years of Great Basin Observatory operation

Summer, 2018

In August, the Great Basin Observatory (GBO) celebrated two years of successful operation. The Great Basin National Park Foundation (GBNPF) commemorated the Anniversary with a weekend of events at Great Basin National Park (GBNP).

Five hundred people had contact with Foundation staff and volunteers during five events, which included a Star Train ride, GBO scientist Astronomy Talk, fundraising, education, and cake! The Foundation held a successful raffle with items generously donated by REI, Patagonia and the Nevada Northern Railway, to raise monies for purchasing needed Search and Rescue equipment for the Park. The events were a success in large part because of over 200 volunteer hours of dedication.

Nichole Andler, Chief of Interpretation at GBNP, said of the event, "Our partners at the universities and Great Basin National Park Foundation are enriching the

experiences of Park visitors, educators, and youth by creating access to the Observatory and the GBO web portal."

James Woolsey, GBNP's new superintendent, commented, "The National Park Service is fortunate to have such an outstanding partner in the GBNPF." He went on to explain, "The GBO works within the astronomy theme at Great Basin NP. The Park is promoting visitor education of dark nights skies and the universe through regular astronomy programming and our annual Astronomy Festival. The GBO allows us to push this effort into another dimension, by allowing university researchers and our visitors to peek deep into the universe. This project would not have been possible without the volunteer efforts and funds raised by the Great Basin National Park Foundation."



Left, Visitors, Rangers and the Foundation join in singing Happy Birthday to the GBO before eating cake. Right, GBNP's new Superintendent, James Woolsey, his wife, Elizabeth and GBNPF Chair Mike Niggli eat GBO Birthday cake.

## Recent GBO images



Lagoon Nebula (left) Paul Gardner

Hamburger Galaxy (right) Paul Gardner and Steve Cooper

## GBO receives Birthday Gift from Concordia University

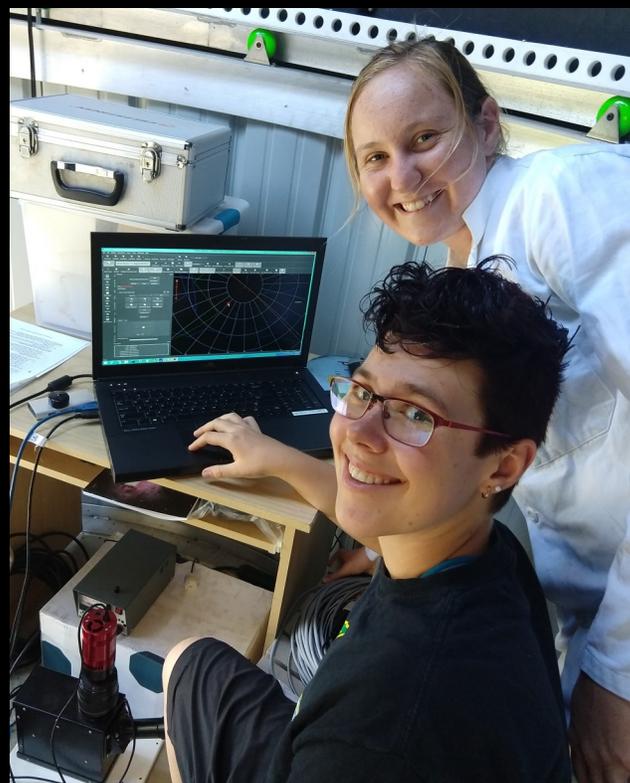
In July 2018, the GBO received a significant gift, just in time for its 2nd birthday, the long-term loan of a Shelyak eShel astronomical spectrograph from Concordia University (CU).

The eShel spectrograph at the GBO is now fully operational in the remote, robotic mode due to the arduous task of positioning and aligning done by Concordia students, faculty, and staff.

John Kenney, professor at CU explains, "Every atom and every molecule, whether located on Earth or many light years away, displays unique spectral characteristics. Atomic and molecular spectra are characterized by a series of bands corresponding to light absorption or light emission at specific wavelengths. Unique spectral characteristics become the equivalent of fingerprints, allowing the determination of the identity, composition, and structure of the atoms and molecules analyzed."

Astronomical spectroscopy is one of the most useful and powerful tools for astronomical discovery. The spectrograph greatly increases the capabilities and opportunities afforded by the GBO.

Thank you Concordia University!



Students Mackenzie Graham (top) and Ruth Larson (below) help with eShel spectrograph configuration

