



CENTER FOR GRAVITATIONAL WAVE ASTRONOMY  
A NASA UNIVERSITY RESEARCH CENTER  
THE UNIVERSITY OF TEXAS AT BROWNSVILLE

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## PRESS RELEASE

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### **NSF supports the development of an astronomical observatory in the northwestern mountains of Argentina**

The National Science Foundation (NSF) has awarded the UTB Center for Gravitational Wave Astronomy a grant titled: *"USA-Argentina collaboration: developing an astronomical site for Multimessenger astronomy in Cerro Macón, Argentina"*. The NSF Office of International Science and Engineering made this award under a funding opportunity called "Catalyzing new international collaborations".

The goal of this project is to establish a partnership between American and Argentine astronomers to build and operate an astronomical facility in Cordon Macon, a mountain located in the Atacama highlands of Northwestern Argentina. The Atacama plateau is the driest place in the world, making it ideal for astronomical observations. This facility would be dedicated to observe and study astronomical phenomena like explosions of massive stars and the collision of pairs of neutron stars (very compact, old and distant stars). These rare cataclysmic collisions are most likely associated with the emission of very energetic particles called gamma ray bursts and could well be the origin of the production of heavy elements found only in small amounts on earth like gold. The radioactive glow of these explosions could be detected as what astronomers have called a "kilonova" and also be a source of gravitational waves (ripples in the fabric of space caused by these collisions) that could travel far away and be detected on earth with very powerful lasers detectors like the LIGO observatories.

Observatories like these could be helpful to make simultaneous observations of these events with different instruments and confirm gravitational wave detections.

The grant will pay for travel to Argentina by scientists and students from The University of Texas at Brownsville and Texas A&M University, the American institutions partnering in this collaboration with Argentine astronomers.

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