



NSF Campus Cyberinfrastructure PI and
Cybersecurity Innovation for Cyberinfrastructure PI Workshop
October 3-4 | Albuquerque, New Mexico

NSF Program: CC

Award Number: 1541353

Program Area: Instrument

PI: Michael Zink

Project Title: High Bandwidth Network Connectivity for Remote Sensing Research

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Quad Chart for:

*CC*DNI Instrument: High-bandwidth Network Connectivity for Remote Sensing*

Challenge:

- High-bandwidth links for remote sensing required
- Only wireless link to tower that hosts remote sensing equipment
- More flexible signal processing through transmission of analog data over fiber



Scientific Impact or Broader Impact:

- Enables technologies like bi-static sensing and cloud-base signal processing
- Potential to improve weather detection, modeling, and forecast
- Share data with atmospheric scientists

Solution(s):

- Install fiber that links tower to core campus network
- Install Radio over Fiber equipment at tower and campus data center
- Enable low latency transmission to UMass exoGENI compute cloud for parallel signal processing

Metadata tag:

- *Network Infrastructure*
- *Cloud Computing*
- *Emergency Management*
- *Meteorology*
- *Multuser*
- *Multifunction*
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