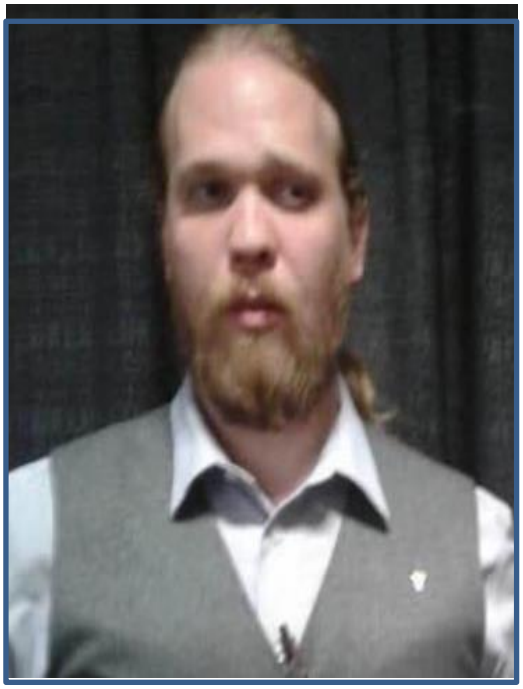
Senior Research Project

Aaron Herring



- **Major:** Physics
- **Minor:** Mathematics

- **Hometown:** Abilene

- **Activities:**
  - Society of Physics students
  - Smelting Metal
  - Brewing Ale and Wine
  - Cooking
  - 3D printing design

- **Career Goal:**

To enter the field of Mechanical Engineering.

Project title:

Testing Roofing Material for use as Passive Dew Water Collection

Supervising faculty member: Dr. Timothy Renfro

Project Abstract:

In testing roofing materials for use in passive water condensers it was discovered that the only way to get any results in an indoor laboratory environment was to apply steam directly to the sample. Several attempts were made to make the steam chamber useful for the experiment but nothing produced any results. Due to the amount of time and money spent building and redesigning the chamber, only R-panel commercial grade steel roofing panels were tested. The results show a natural logarithmic relationship between the amount of steam that came in contact with the sample and the amount of water that was harvested. When a cooling coil was added, the amount of water collected would be double or more than the amount collected without it.