Astronaut Health Monitoring System for Long Term Deep Space Missions

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Modern advances in technology have led to the potential of long-term deep space missions extending beyond what has been done before. With longer space travel for humans, this will require astronauts to be able to monitor their well-being on a constant basis, especially in the event of a medical emergency. With multiple sensors on an astronaut's body that are then connected to an Arduino Mega, we take the measurements of an individual's body temperature. In addition, the Arduino also takes the measurements of the astronaut's surrounding humidity and temperature. In the second remote Arduino, an Arduino Uno is connected to a sensor that collects the individual's heart rate. After all the data that is collected, it is then wirelessly sent to the base Arduino Uno. The data provided by the two remote Arduinos will then be presented live onto several LCD displays that are connected to the base Arduino.

Having this data is crucial in allowing the astronauts to examine for any drastic changes in their vitals and ensuring that their health is not in decline. This is crucial as well since having data samples of how different individuals react to being in space for an extended period of time would help if we ever branched into space colonization.

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