PROBLEM TITLE
Tracking Stress in Special Warfare

BACKGROUND
At Joint Base San Antonio-Lackland, TX, enlisted Airmen train to become Special Warfare operators. In October 2018, in order to meet the demand for these Special Warfare operators and improve retention rates, Air Force officials established the Special Warfare Training Wing. The mission of the newly established wing is to select, train, equip and mentor Battlefield Airmen to conduct global combat operations and in particular, the wing will focus on improving human performance.

At the moment, the Human Performance Support Group within the Special Warfare Training Wing utilizes several devices and methods to monitor the stress of a Special Warfare candidate. Stress on the central and peripheral nervous system can be measured in various ways, including in the form of social/psycho, nutrition, exercise, academic, and various other stressors. It is commonly understood that too much stress over time and/or too much stress at one time can lead to the "breaking" of an individual in the form of a visible injury (broken bone) or non-visual injury (mental illness). However, the Human Performance Support Group is currently struggling to create an all-encompassing picture of the stress impacting special operations candidates as the devices used to monitor stress are separate pieces of equipment and are typically not water resistant.

CHALLENGE
Develop a tool for the Human Performance Support Group to more efficiently track and monitor stress of a Special Warfare candidate in order to determine how hard to push them during training.

OPERATIONAL CONSTRAINTS
- Able to use API to pull data into a database, monitors HR, HRV, DC Potential, Sleep, and any other variants to measure stress on the body.
- Must be able to withstand extreme temperatures and fluids
- Current methods/tools: AI, Omega Wave, Zephyr, Fatigue Science, Gravity Drop

PROBLEM SPONSOR
Tyler Christiansen, Human Performance Director, Special Warfare Training Wing, U.S. Air Force (tyler.christiansen.3@us.af.mil)

PROBLEM SPONSOR LOCATION
Lackland Air Force Base

SENIOR LEADER
CMSgt Joshua Smith, Superintendent, 350 Battlefield Airmen Training Squadron, U.S. Air Force
(joshua.smith.14@us.af.mil)