

BEDS Qualification Report 01/10/2022

Test files (folders):

- 2021-12-30-Test-(3+30)x4-124min
- 2022-01-03-Test-(3+30)x4-244min + Acoustic
- 2022-01-04-Test-(3+30)x4-484min

Updated manual with file formats (folder):

- BEDS-docs-Elecia

Photos (folder):

- Pictures - 2021-12-30 - BEDS-Qualification

Test description:

- BEDS unit is run on a motion stage with a certain type of motion programmed into Newport Motion Controller ESP-2000;
- Several types of programs include various numbers of events, duration of events, and time between events.
- Then, numbers of events, duration, and times actually recorded by BEDS are compared to the data programmed in the Motion Controller.
- Also, Current Data Logger is recording BEDS 28V supply current from lab power supply, while also continuously displaying results in a real time which helps with measuring system parameters and monitoring behavior.
- Once a particular test is completed, recorded BEDS event files (.EVT), watch files (.WAT), as well SYSLOG.TXT, EVENT.IDX, WATCH.IDX files are downloaded and stored along with Motion Controller Code, Current Data Logger data, and other experiment information.

Result:

- Redesigned BEDS so far works well, detecting hundreds events at the time, and not a single hang is detected.
- 3 sets of experimental data are collected

Outstanding items:

- check BEDS data files output for a content, format, and integrity including magnetic heading (Roberto Gwiazda, Mike McCann)
- Magnetic heading data integration (which is new in this generation BEDS) is of particular interest