

DSG-Ansys R&D Meeting Minutes

Date: May 12, 2022

Time: 14:00 to 15:00

Attendees: Aaron Brown, Pablo Campero, Brian Eng, Tyler Lemon, and Marc McMullen

1. NPS thermal analysis

Aaron Brown, Pablo Campero, and Marc McMullen

1. Modified simplified model geometry
 - Added crystal block and combined with surrounding air volume
 - For each of the four heat exchanger fans, adding blades and enclosure volume
 - Noticed that blades imported from provided NX-12 model do not have the expected shape, blades are flat and will not operate properly in the Ansys simulation
 - Marc will investigate and provide the actual model for the fans
2. Imported simplified model to Ansys Fluent
 - Implemented Turbulent Flow analysis (Model SST-K-omega)
 - Added material specifications for crystals
 - Set internal heat generation for electronic volume
 - Configured fan with Frame Motion option with 100 rev/min