Flywheel Meeting Minutes	January 25th, 2017

IRIC 105 Conference Rm. 3:30pm

Moderator: Andrew Jones

Minutes Taker: Matt Phillips

Present: Andrew Jones, David Arnett, Shea Morrison, Dr. Herb Hess, Nick Bachus, Cooper Atkinson, Justin Pettingill, Dr. Feng Li, Brian Cartwright, Matt Phillips, Kyle Petersen

Late: N/A

Absent: N/A

Updates from Teams

- Stator Design Team Updates
 - o Electrical team
 - Matt is working on the mathematical connection between the winding function and induced torque on the rotor.
 - Shea is working on putting the equations into Simulink
 - Mechanical team
 - Kyle in the process of figuring out shaft displacements and shaft diameter output from model. Trying to figure out connection between torque and diameter
 - Cooper and Nick are working on ANSYS and heat transfer model
- Controls team
 - Andrew is looking in Ramus' thesis on how the MCU's are connected to the power electronics. Looking into power/current demands and signal communication types between the two.
 - Brian developed a main loop for the drive bearing (pseudo code)
 - Ian used pseudo code for the stabilizing bearing
- Updates from Mentors (Dr. Hess, David, Justin)
 - David
 - Got an email from Renshaw about the shipment of the encoder (3 days to a week shipping time).
 - Justin
 - Working with Kade on putting the encoder together
 - Been collecting data and writing his thesis also!
 - Hess
 - Dr. Xing sent the details out yesterday
 - ANSYS details will be available in about three days
 - No funding will be necessary from our team
 - There is an open house next week (Tuesday the 31st). Media sessions on Monday and Thursday (Regional News).

• <u>Tuesday Meeting Updates</u>

- For the team, still working on safety things to be able to work in the IRIC lab space. Expect an online safety "quiz" in the next couple weeks.
- Updates from Senior Design (Dr. Feng Li)
 - Detailed design review next week.

• Other Updates

• Electrical and Mechanical design reviews will be separate.

• Next meeting review (W/O January 09, 2017)

Moderator: Matt Phillips

Minutes Taker: Cooper Atkinson

• <u>Adjourn</u>