Weekly reports are to be emailed to atbecker@uh.edu by 5:00pm on Tuesdays. The purpose of a weekly report is to: (1) give you text and images for your papers, thesis, and dissertation, (2) document progress, (3) identify if you are stuck or need resources.

Weekly report

1. **My *Goals* from last week**

* Train for the presentations at MARSS
* Go to the MARSS conference
* Work on the sphere positioning

1. **My *Accomplishments* this week**

* I went to the MARSS conference and that was great. I met a lot of people. I gave two presentations and was chair of a session.
* I fixed the papers for IROS.
* I am now working on the calculation of a superconducting coil. I selected an AC superconducting wire from Sumitomo Electrics (http://global-sei.com/super/hts\_e/type\_ac.html) but I am not sure of my choice for the following reasons:
  + Sumitomo is a Japanese company. It would be better to order superconductors from an American company but none manufactures BiSCCO wire.
  + I think the ACT wire will not produce less losses than the normal (H) wire. Indeed, the ACT has a lower critical current density (70 A/mm2) than the H wire (130 A/mm2). Losses are a function of J/Jc. So if we work at J=70 A/mm2 with the ACT wire, we will be at J/Jc=1. With the H wire we would be at J/Jc=0.54.

I am sure that if we compare the losses between the H and ACT wire for the same J/Jc, the ACT wire will produce less losses.

If we compare the losses between the H and ACT wires for the same J, I would not be surprised if the H wire produces less losses.

The ACT wire is twisted so more complicated to build and more expensive. I don’t have enough information from Sumitomo to be 100% sure of that. I will have to contact them.

1. **My *Goals* for next week**

* Order the rest of the material for the magnetic system
* Finish the design of a superconducting coil and send the results to manufacturer
* Work on the magnetic system programing
* I am also thinking and making some research to write a new proposal.

1. **What I need Dr. Becker to do:**

Do you have an idea of a proposal for me to write?