sPHENIX Container on MacOS

- Jin's guide: https://github.com/sPHENIX-Collaboration/Singularity

- Prepare virtual machine
  - Install Virtualbox (5.2.2) https://www.virtualbox.org/wiki/Downloads
  - Install Vagrant (2.2.2) https://www.vagrantup.com/downloads.html
  - In an empty directory: vagrant init ubuntu/xenial64 (https://app.vagrantup.com/ubuntu/boxes/xenial64)

- Customize the virtual machine
  - In the Vagrantfile add before the "end:"
    - config.ssh.forward_agent = true
    - config.ssh.forward_x11 = true
  - Bring up the virtual machine and log in:
    - vagrant up
    - vagrant ssh
    - [You may need to install xauth ala "sudo apt-get install xauth" for X11 to work]
    - cd /vagrant to get to the filesystem shared with the host machine (lots of space)
  - Build and install Singularity in the virtual machine: https://www.sylabs.io/guides/2.5/user-guide/quick_start.html
    - From "git clone https://github.com/sylabs/singularity.git" to "sudo make install"
    - singularity –version should return 2.5.0…
  - In the virtual machine, download the repository (follow Jin's guide above)
    - git clone git@github.com:sPHENIX-Collaboration/Singularity.git…
  - Enter the container
    - singularity shell -B afs:/afs rhic_sl7_ext.simg
    - source /opt/sphenix/core/bin/sphenix_setup.sh -n
    - root should then be able to start and open the splash screen

Event display

- Set up GL packages on the virtual machine
  - sudo apt-get install libglu1-mesa-dev freeglut3-dev mesa-common-dev
  - sudo apt-get install mesa-utils lets you test with glxgears

- On the host Mac (XQuartz 2.7.11)
  - defaults write org.macosforge.xquartz.X11 enable_iglx -bool true
  - restart XQuartz

- The example macros, including the event display described in the usual place https://github.com/sPHENIX-Collaboration/macros, should work