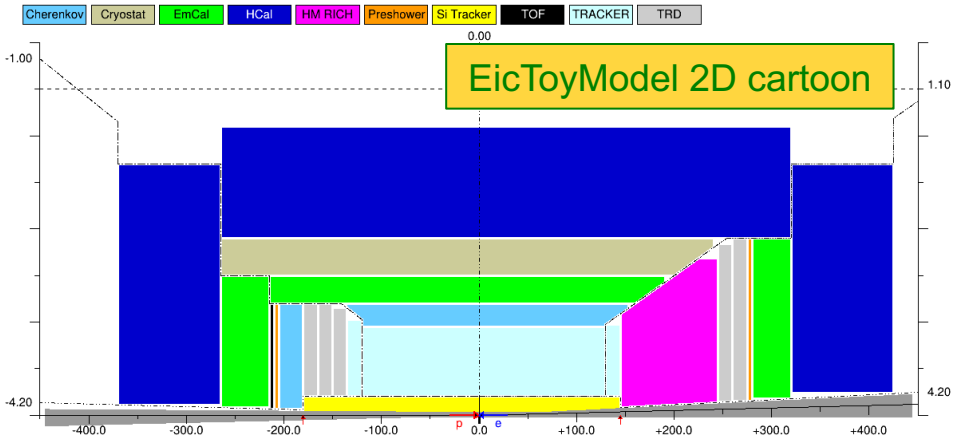
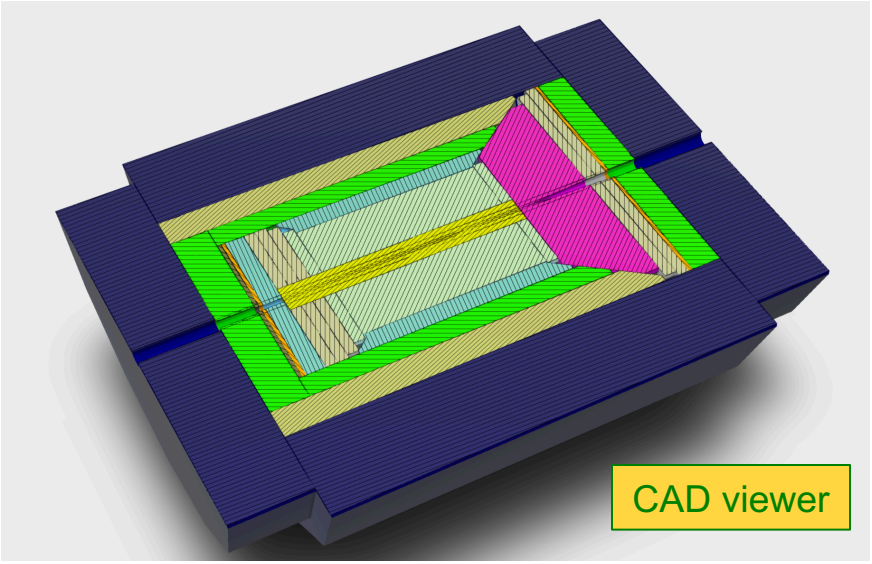
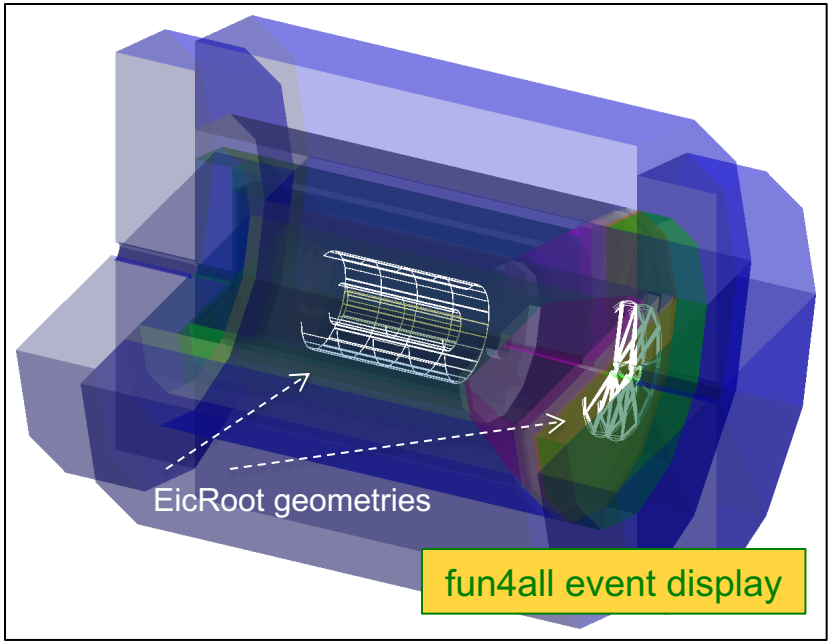
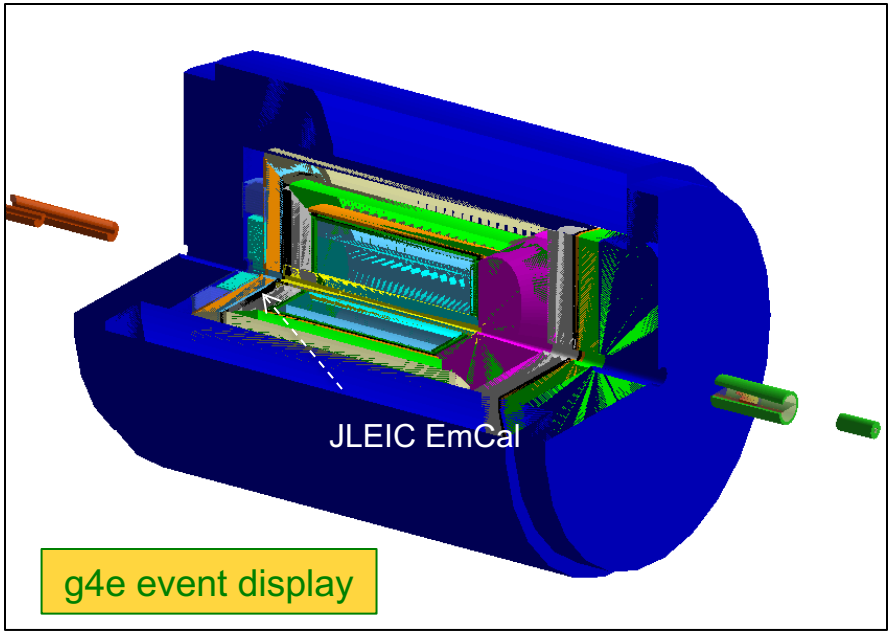
Picture gallery from the Miami meeting

- The same model in all cases









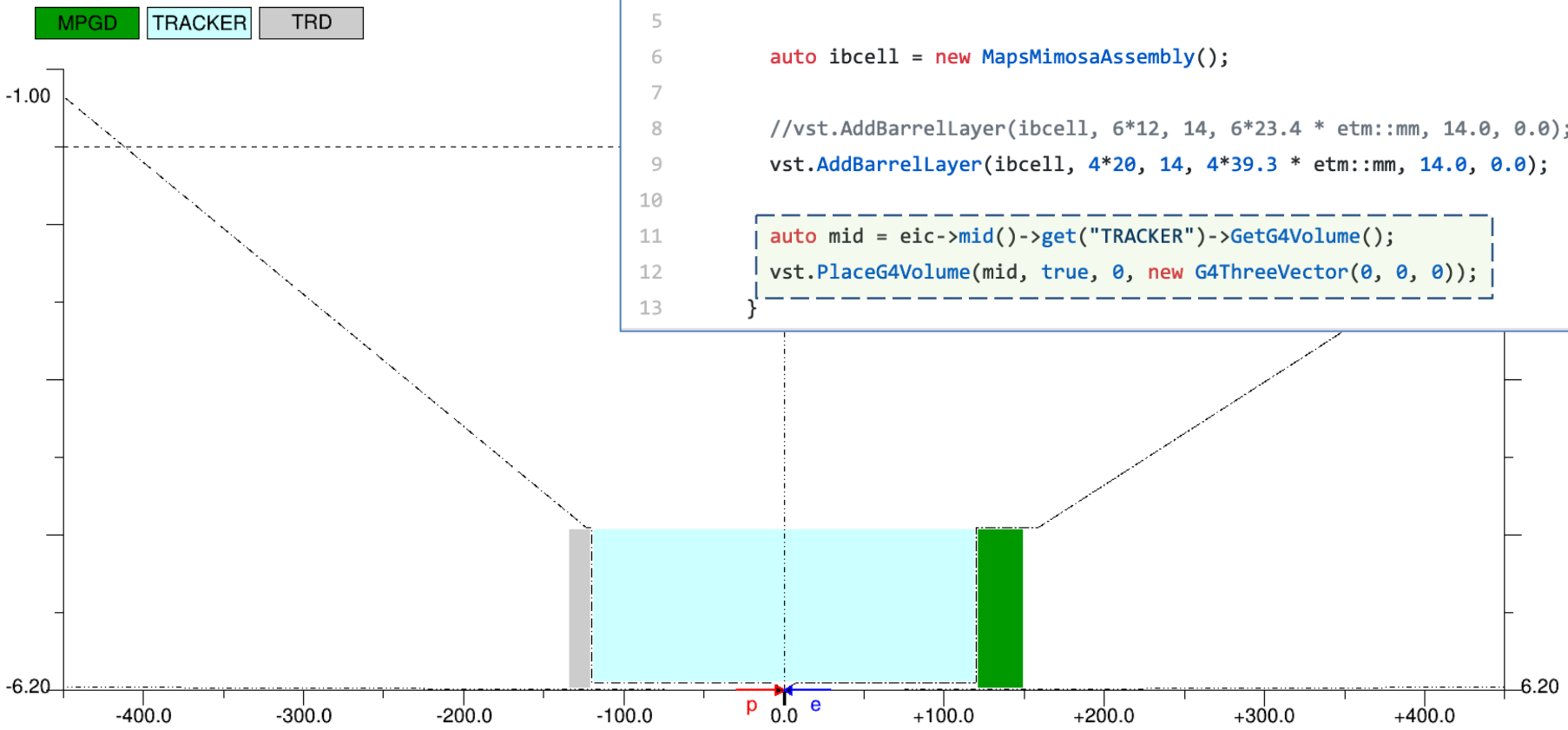
Recent developments

- **Documentation:**
  - Installation / running instructions for Catalina, Centos, Fedora, Ubuntu …
  - … as well as escalate Docker container and fun4all singularity / cvmfs

- **Technical stuff:**
  - Several EicRoot tracker geometries moved to the EicToyModel

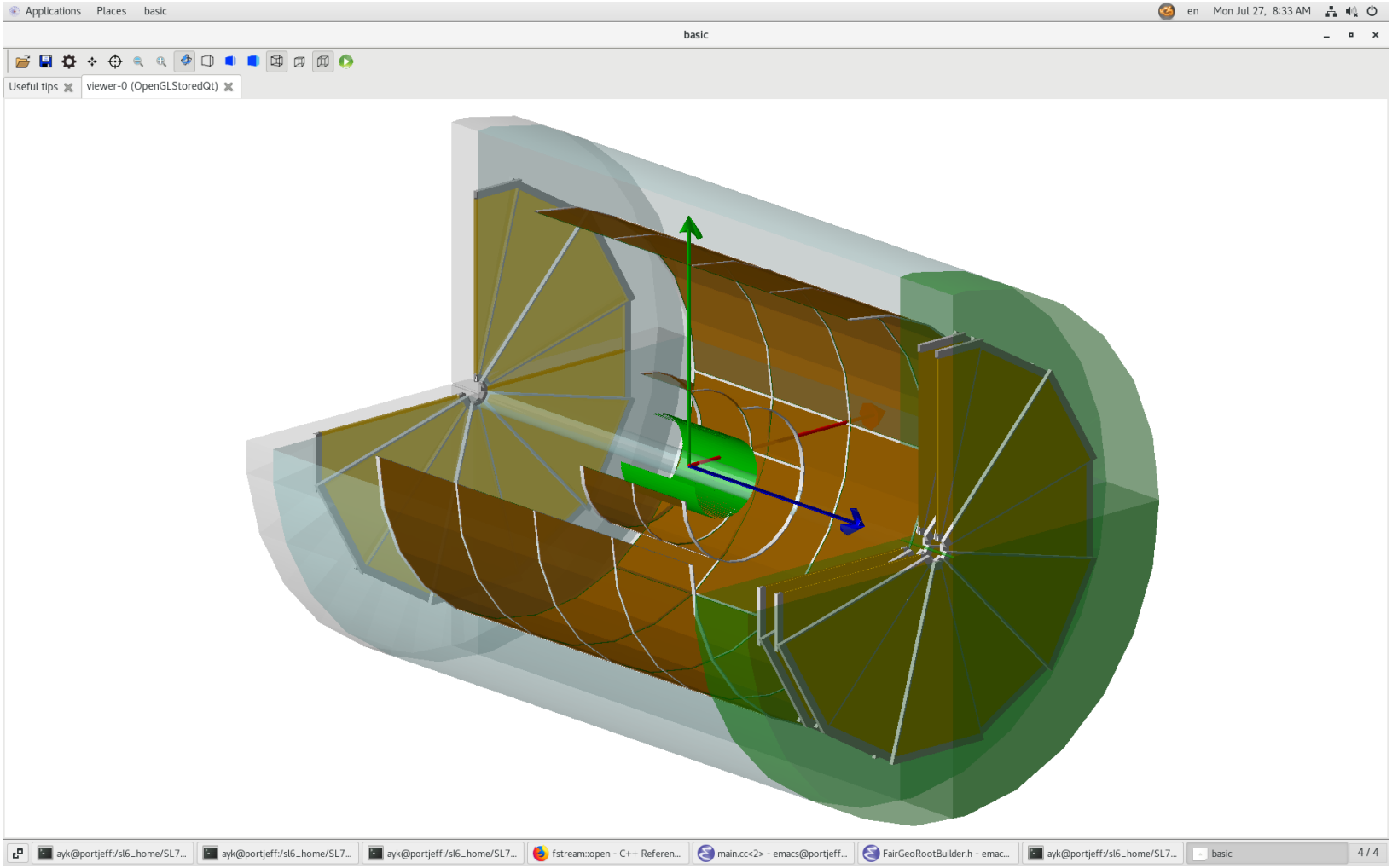
EicRoot sandbox

```
2       {
3         VstGeoParData vst;
4         vst.SetGeometryType(EicGeoParData::SimpleStructure);
5
6         auto ibcell = new MapsMimosaAssembly();
7
8         //vst.AddBarrelLayer(ibcell, 6*12, 14, 6*23.4 * etm::mm, 14.0, 0.0);
9         vst.AddBarrelLayer(ibcell, 4*20, 14, 4*39.3 * etm::mm, 14.0, 0.0);
10
11        auto mid = eic->mid()->get("TRACKER")->GetG4Volume();
12        vst.PlaceG4Volume(mid, true, 0, new G4ThreeVector(0, 0, 0));
13      }
```



- Central and endcap tracker integration volumes
- https://github.com/eic/EicToyModel/tree/master/examples/eicroot

EicRoot sandbox



- The same volumes in G4, populated by MM and GEM trackers

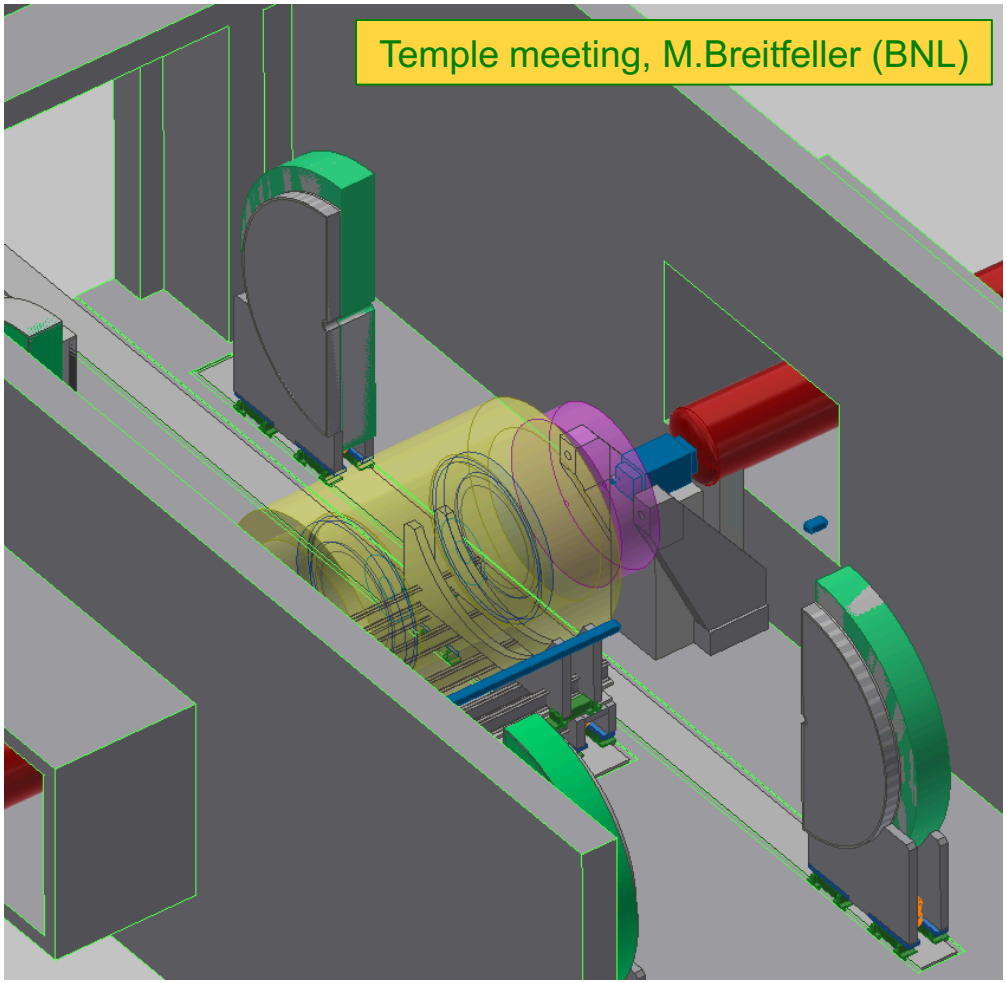
Path forward

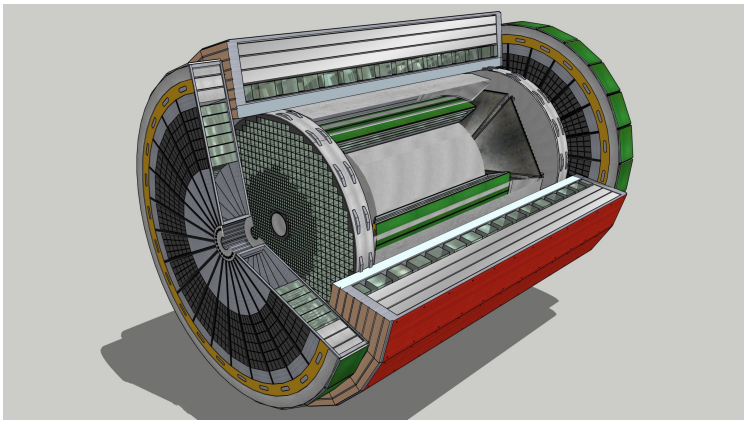
- **Miami EICUG meeting two weeks ago:**
  - A call asking to contribute to the EIC central detector layout discussion …
  - … with a goal of fixing a couple of configurations *by around August 1*

- **Few remaining items on the EicToyModel TODO list:**
  - A working *actual interface* for escalate and fun4all
  - A bit more advanced volume description (as per user feedback)

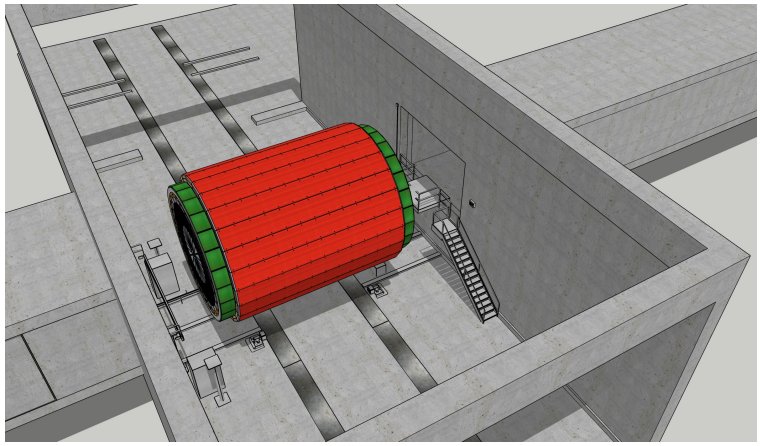
- **Connection to the engineering effort**
  - Services and dead material integration

Engineering effort





Recent renderings from W.Ackers (JLAB)



Engineering design drawings better be in sync with the 2D cartoons and the GEANT detector layouts

Sub-detector system specification request

- Cabling
  - Power, signal, control, other
  - Cable diameter, max bend radius, amount of material
  - Grouping, layout scheme (trays, shafts, other)
  - Other requirements (fragility, noise protection, grounding, etc)
  - Maximum length to a patch panel and to the racks
- Services
  - Gas lines, cooling lines, other
  - Service lines diameter, amount of material
  - Is detector volume pressure sensitive (wire chamber windows, etc)?
  - Other requirements / specs (thermal isolation, flammable gas, etc)
- Anticipated patch panel location, and splitting “philosophy”

- Suggested detector segmentation
  - Azimuthal, radial, other
  - Hierarchy (e.g. tower, block, sector) and associated dead zones
- Support structure
  - Integrated, external, bound to other subsystems, self-supporting
- Mounting (insertion) scheme and interface
- Alignment scheme and associated requirements (marks visibility, etc)

Sub-detector system specification

- Weight per unit
- Unit dimensions, driven by technology (e.g. EmCal tower length, GEM module thickness), preferably broken down into active, frame, readout, integrated support parts
- Maintenance scheme, access needs
- Power line requirements (UPS, clean, utility, other)
- Cooling scheme and requirements (if applicable): air/gas, CW, LCW
  - Provide operating pressures for gas and liquid coolants
- Ambient temperature requirements
- Anything on vibration tolerance, frequency spectrum, etc?

- **Becoming a request to the DWGs**