#### Progress in CIELO on Resonance Evaluations: <sup>16</sup>O, <sup>56</sup>Fe, <sup>235</sup>U, <sup>238</sup>U, and <sup>239</sup>Pu



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## 16O

•Fit low energy, zero temperature scattering cross section to 3.765 b as suggested by Plompen and Kopecky for agreement with coherent scattering length;

• Fit high value of  $(n,\alpha)$  cross section;

•Generate resonance parameters for low and high  $(n,\alpha)$  cross section;

•Investigate lower total cross section issue for E < 3 MeV for the new RPI total cross section measurements;

## <sup>56</sup>Fe

- Issue with RPI capture cross section above 900 keV;
- URR formalism for 2-4 MeV?
- Good representation of capture data up 900 keV;
- Angular data well fitted up to 1 MeV
- Continue work to improve angular representation of RPI elastic and inelastic data above 1 MeV;





- Perform further work to fit standard recommended values;
- URR? New fission data?
- Perform further benchmark testing;
- Temperature effects?
- Na-void reactivity of BFS and FCA (with the help of our Japanese colleagues);
- Impact of PFNS and nubar ?



### **Presentation Objectives**

<sup>238</sup>U

- Finalize RRR including GELINA capture and transmission data;
- Unresolved Resonance Region (finished);
- Is the new RRR limit 10 keV or 20 keV? 20 keV
- Perform additional benchmark testing;
- Provide a testing file (Trkov and Sirakov);



### **Presentation Objectives**

<sup>239</sup>Pu

# • Impact of new LANL capture measurements in the the energy range above 200 eV;

