

## Bob Simmons

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**From:** Lawrence E. Dudek  
**Sent:** Thursday, March 17, 2011 3:16 PM  
**To:** NSTX Center Stack Upgrade Team  
**Subject:** Notes from the 3/16 Project Meeting  
**Attachments:** Calc\_Status\_031611AM-RTS.xlsx; ATT4761892.htm

**Follow Up Flag:** Follow up  
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### **Notes from 3/16/2011 Meeting:**

#### **Calc Spreadsheet**

Updated spreadsheet attached. Calc#30 may be able to be eliminated if enough detail is included in Han's outer TF leg calculation.

#### **Update on (Zhang) (see VGs)**

Outer leg analysis was updated to more realistically reflect the actual design. The coils are well restricted now because the tie bars are much stronger compared to the previous spring arrangement. This will result in lower stress in the outer legs but higher loads in the clevis connection. Stress in the umbrella is much lower than before, less than 16 ksi. Stress in the VV is less than 15 ksi. The splice tabs between the dome ribs and VV are also acceptable. Coil bond shear stress is higher but within allowable at 2.3 ksi. Clevis weld stresses are also acceptable at 16.5ksi.

#### **Update on the PF4/5 Support analysis (Titus) (see VGs)**

The analysis of the PF4/5 supports was updated. The weld stresses to the VV are acceptable with the addition of a visual weld inspection .

#### **Thermal Modeling of the OH Coaxial Bus (Mardenfeld) (see VGs)**

The OH coaxial busswork has been modeled to asses the current density and temperature rise. The temperatures look acceptable and ratchet up to approximately 76 C without any application of cooling.

**Viewgraphs will be posted by B. Simmons at:**

[http://nstx-upgrade.pppl.gov/Project\\_Meetings/CenterStackUpgrade/index\\_Meetings.htm](http://nstx-upgrade.pppl.gov/Project_Meetings/CenterStackUpgrade/index_Meetings.htm)