

**ICANS XX,**  
**20th meeting on Collaboration of Advanced Neutron Sources**  
March 4 – 9, 2012  
Bariloche, Argentina

## **Engineering design concept for a moderator/reflector system for ESS**

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### **Abstract**

The moderator and reflector system for the planned 5 MW spallation neutron source ESS will suffer from high heat load and radiation damage. Beside the question of cool ability, the frequent exchange needs due to accumulated radiation damage is one of the major challenges for the design of this component. This paper will discuss the recent progress of work in Juelich on this moderator/reflector system design. Pros and cons of different design concepts and their effect on the design of the shielding monolith will be shown. Material issues for the components facing the target will be discussed.