ESS Availability and Reliability Approach

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Reliability and availability are key metrics for achieving the scientific vision of the ESS. The approach taken to analyze and to improve these metrics in order to achieve the goals is described in this contribution.

The methodology used to obtain the requirements considers not only the availability and reliability figures but also the specific needs extracted from users expectations from the neutron source in order to succeed in their experiments. A top-down requirements allocation is being developed at the same time that bottom-up reliability and availability analyses is being performed. The experiments expected at ESS and their needs in terms of neutron beam performance (reliability, availability and quality) are described as well as the tools used to analyze it. Moreover, the consequences of these analyses in the design phase are discussed.