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LINAC Accelerators - Design for Reliability

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Empresarios Agrupados (EA) has been contributing to different EU funded projects regarding the reliability of high-power particle accelerators. Previous projects are the Eurotrans/Max project and studies currently continue with the activities for the Myrte project. For the Myrte project the reliability of the Myrrha Linac is taken into account from the early design stage, using relevant data from existing machines (SNS LINAC) and machines presently being commissioned (CERN LINAC4).

This paper will briefly present the SNS Risk Spectrum model developed as a tool for reliability modelling of the Myrrha Linac concept design and the main results & conclusions of reliability analysis performed using the two models (during FP7 MAX project). As a second topic it will present the reliability modelling and the reliability run of LINAC4 (CERN), with the objective to extend conclusions & formulate recommendations to Myrrha Linac case: compiling Reliability Database (failure data), modelling tools/models and optimization proposals (preliminary).

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