
Abstract
Since January 2012 the Superconducting 1.3 GHz CW Linac ELBE is equipped and in permanent operation with four 20 kW Solid State Amplifier Blocks (SSPA). The project and the design of the new RF system have been described in the papers [1] and [2]. The experience gained within the first two years of operation is encouraging.

ELBE RF- SYSTEM WITH SSPA
The replacement of the klystrons by SSPA is illustrated in Fig. 1. 20 kW SSPA modules are used per cavity and one SSPA is used to operate the SRF photo gun. The RF related activities before the upgrade project are described in the papers [2] and [3]. Fig. 2 shows the new SSPA gallery at ELBE. In general the ELBE operation is now much smoother than with klystrons used before.

LOSS TRANSISTORS
In 2012 we lost 5 of 576 RF power transistors and replaced them during the shutdown in December 2012. Due to high redundancy the performance of the RF system was not affected. In 2013/2014 no transistors failed so far.

REFERENCES