

## The Improvement of CSNS Linac RF System Operation Stability

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The CSNS proton linear accelerator (Linac) delivers 81MeV proton beam to RCS ring. The Linac is comprised of H<sup>-</sup> ion source, RFQ, two Buncher cavities (MEBT), four DTL accelerators and one Debuncher cavity (LRBT). Three 25kW solid state amplifiers supply RF power to two Buncher cavities and one Debuncher cavity, respectively. The RFQ and four DTL accelerators are powered by five sets of klystron power sources. The fault rate of CSNS Linac RF system is correspondingly higher than other accelerator systems. The faults are mainly from five klystron power sources, including the klystron discharge, crowbar malfunction, etc. Some downtime is also from LLRF control system. This report will present the types of the faults and the improvement methods.

**Primary author:** MU ZHENCHENG (高能所)

**Co-authors:** Mr WANG, Bo (CSNS); Mrs RONG, Linyan (CSNS); Mr WAN, Maliang (CSNS); Mr ZHOU, Wenzhong (CSNS); Mr XIE, Zhexin (CSNS); 刘美飞 (高能所)

**Presenter:** MU ZHENCHENG (高能所)

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