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4616V4 Tetrode and Klystron RF Resources for CSNS LINAC

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At present, the infrastructure of China Spallation Neutron Source (CSNS) project is finished in Dongguan city, Guangdong province of south China. Now the system debugging is under way. CSNS accelerator consists of an H- linac and a proton rapid cycling synchrotron. The 324MHz RF linac is designed with beam energy of 81MeV and a peak current of 30mA, which mainly includes one RF Quadrupole (RFQ) accelerator and four Drift Tube Linac (DTL) accelerators. Each DTL accelerator is driven by a klystron RF source. The RFQ is driven by a 4616V4 tetrode RF source, which is used by the accelerator for the first time at 324MHz. Now, one of the four klystron RF sources has been operated stably over one year and the 4616V4 tetrode RF source has been operated steadily over two years for the beam debugging. In this paper, a description of R&D activities of the two types of RF source will be briefly presented.

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