One-Year Operation of KOMAC Proton Linac

H. S. Kim[#], H. J. Kwon, K. T. Seol, D. I. Kim, Y. G. Song, S. K. Park, Y. S. Cho

KOMAC, KAERI, Gyeungju, 780-904, Korea

a corresponding author: E-mail kimhs@kaeri.re.kr

A proton accelerator at Korea Multi-purpose Accelerator Complex (KOMAC) is a 100-MeV, 20-mA high intensity linac. Along with two beam lines and target rooms, it is under the user service run from July, 2013. The linac is composed of a proton injector based on a microwave ion source, a 3-MeV RFQ with a four-vane type and 100-MeV conventional DTL. KOMAC may host 10 beam lines and 10 target rooms for each beam line, though two of them are currently under operation. During its first operation period, there have been several unexpected events including the utility failures, IGBT blasting in the modulator for the klystron and a vacuum failure in the high power RF coupler. The maximum average beam power was 1 kW last year operation and it will be increased up to 10 kW this year. We report the one-year operation results and experiences in this presentation.

This work has been supported by MSIP (Ministry of Science, ICT and Future Planning).