Contribution ID: **22** Type: **Poster**

Alignment of the Drift Tube Quadruple and Drift Tube Linac at KOMAC

The 100MeV proton linear accelerator for KOMAC (KOrea Multi-purpose accelerator complex) consists of a 50 keV injector, 3 MeV RFQ (Radio Frequency Quadruple), 20 MeV & 100 MeV DTL (Drift Tube Linac) tanks, a beam dump, and one 20 MeV beamline and five 100 MeV beamlines. Since the operation of the accelerator in 2013, the failure rate in the DTQ (Drift Tube Quadruple) of the DTL tanks among the accelerators has been increasing every year. It takes more than a month to replace on DTQ. If it breaks down, the beam optics arrangement is adjusted, so the temporarily broken DTQ is not used and the accelerator is operated. A defective DTQ will be replaced through the accelerator maintenance period in winter and summer, which have a long maintenance period. However, as the KOMAC accelerator operation period is increasing and the accelerator maintenance period is decreasing, the DTQ maintenance time is also decreasing. Accordingly, various methods are being attempted to shorten the replacement time while maintaining the reliability related to alignment in the DTQ replacement process. In this paper, the contents of the alignment process and improvement related to the maintenance of KOMAC's DTL and DTQ are presented.

*This work was supported by the National Research Foundation of Korea(NRF) grant funded by the Korea government(MIST)(524320-22)

Author: MUNHO, JO (Korea Atomic Energy Research Institute)

Co-author: KIM, Dae-Il

Presenter: MUNHO, JO (Korea Atomic Energy Research Institute)

Track Classification: Survey & Alignment