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Development of a step motor system for TPS Linac RF system

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The linear accelerators of the Taiwan Photon Source has been fully operating for more than 10 years. Considering components' aging issues and a shortage of supply chain due to phase-out parts, an alternative solution for these components with the same functionality must be prepared in case of need in order to ensure the TPS Linac's smooth operation. In this report, a new 6-axis step motor controller is built. This controlling system could be used in TPS Linac's radio frequency (RF) power distribution system and RF phase adjustment. Moreover, this new established system can replace the original one and it can be used as spare components. This report introduces in detail of this controlling system, including motor's selection, step motor controller and its controlling software.

Footnotes

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