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## **Study of the active disturbance rejection control for the low level radio frequency system at the Taiwan photon source**

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The purpose of a Low Level Radio Frequency (LLRF) system is to control the amplitude and phase of the accelerating field in the cavity. To improve the RF field stability and to decrease the noisy sideband such as few kHz sideband from RF transmitter, a study for the application of active disturbance rejection control (ADRC) is ongoing. ADRC algorithm is based on an extended state observer, which can estimate the total disturbance acting on the system and then to cancelled them. The simulation results of the ADRC controller for the Taiwan Photon Source RF system will be reported in this paper.

### **Funding Agency**

### **Footnotes**

### **I have read and accept the Privacy Policy Statement**

Yes

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