



Contribution ID: 2274 Contribution code: MOPM043

Type: **Poster Presentation**

## **Microwave instability threshold from coherent wiggler radiation impedance in storage rings**

*Monday, 8 May 2023 16:30 (2 hours)*

Numerical simulations of the beam dynamics with the Coherent Wiggle Radiation (CWR) impedance for the preliminary EIC back-up ring cooler parameters and positive and negative momentum compaction are discussed in detail. We show the microwave instability threshold dependence on low-frequency CWR impedance in free space and for parallel plates. The numerically simulated results performed by the Vlasov-Fokker Planck solver and the ELEGANT code have been compared with a new analytical approach to cross-check the microwave instability threshold.

### **Funding Agency**

### **Footnotes**

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

Yes

**Primary author:** BLEDNKYKH, Alexei (Brookhaven National Laboratory (BNL))

**Co-authors:** ZHOU, Demin (High Energy Accelerator Research Organization); BLASKIEWICZ, Michael (Brookhaven National Laboratory); LINDBERG, Ryan (Argonne National Laboratory)

**Presenter:** LINDBERG, Ryan (Argonne National Laboratory)

**Session Classification:** Monday Poster Session

**Track Classification:** MC2: Photon Sources and Electron Accelerators: MC2.A24: Accelerators and Storage Rings, Other