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# Operational experience of high-power RF at Diamond Light Source

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Diamond Light Source is a synchrotron light source facility that has been providing beam for users since January 2007. Diamond consists of a 3 GeV storage ring powered by two 300 kW amplifiers each containing four IOTs, a full energy booster also driven by an IOT-based amplifier and a 100 MeV linac using pulsed klystrons. RF performance and reliability are reviewed for all three accelerators and current operating and conditioning procedures are presented. Efforts to minimise the RF-related disturbance of user beam are detailed and plans for possible future upgrades are presented, including an upgrade of beam current towards an ultimate goal of 500 mA from the present 300 mA and the introduction of a third superconducting cavity to the storage ring.

**Primary author:** CHRISTOU, Chris (D)

**Co-authors:** Mr WATKINS, Alun (Diamond Light Source); Dr GU, Pengda (Diamond Light Source); Mr PANDE, Shivaji (Diamond Light Source)

**Presenters:** Mr WATKINS, Alun (Diamond Light Source); CHRISTOU, Chris (D); Dr GU, Pengda (Diamond Light Source)

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