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## Motion control systems for insertion devices in Diamond-II

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Diamond light source has been operating since 2007, and currently has 26 motion-controlled insertion devices that produce synchrotron light for the majority of the 36 beamlines in operation. The Diamond-II upgrade will reduce the emittance, increase the energy of the electron beam, increase the number of straights available, and includes the delivery of three flagship beamlines.

As a part of delivering Diamond-II we plan to build and procure 12 new insertion devices of which 10 will be motion-controlled using in-house designed and built control systems. We also plan to upgrade three control systems to manage obsolescence and enable software upgrades. This paper describes the various generations of motion control systems present, and outlines the upgrade plans, controls challenges, and special requirements.

### Footnotes

### Funding Agency

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