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Control systems and operation of a 200 TW laser system for laser-plasma acceleration

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Within the LAOLA Collaboration, the University of Hamburg and DESY work closely together to combine university research in the field of laser-plasma acceleration with the expertise of a large and well-established accelerator facility. We present in this talk a summary of hardware, software, and operation based changes to the 200 TW ANGUS laser system to increase ease of operation and stability. After a brief introduction of the laser, we concentrate on the components that rely heavily on the DESY in-house control system architecture and software, and show recent statistics for both laser operation and long-term stability. These improvements to the laser system will greatly help the operation of LUX and REGAE, the two dedicated experiments in Hamburg which study laser-plasma acceleration.

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