



PHOTO: MPI FOR PLASMA PHYSICS / JAN HOSAN

DOUBLE TAKE

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Trapped in a magnetic cage: to obtain energy using nuclear fusion in the future, researchers contain plasma at more than 100 million degrees Celsius using magnetic fields, so that the mixtures of charged particles float contact-free in ring-shaped vacuum vessels. The photo on the left gives a glimpse into such a vessel – the Asdex Upgrade experiment in Garching near Munich. The image on the right shows the computer simulation of a plasma in cross-section, just as it would float in Asdex Upgrade. The red areas represent instabilities around the edge. These eruptions, known as Edge Localized Modes (ELMs), can damage the vacuum vessel. However, findings from simulations and experiments are making it increasingly possible to suppress the ELMs.

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