News of EBS machine, including timing modes

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The European Synchrotron Radiation Facility - Extremely Brilliant Source (EBS) is a facility upgrade bringing its scientific users a first-of-a-kind, low-emittance, high-energy synchrotron light source and new, cutting-edge beamlines.

On December 2018, after 30 years of operation, the beam stopped for a 12 month-month shutdown to dismantle the storage ring and install of a new and revolutionary X-ray source. On December 2019, the first beam was stored and accumulated in the storage ring, allowing starting vacuum conditioning and tuning. Beam was delivered to the beamlines on March 2020 for commissioning. On 25 August 2020, user program restarted with beam parameters very close to nominal values. From July 2020, delivery was mostly done in 7/8+1filling pattern, to allow the nuclear resonance beamline ID18 to work

With the new storage ring concept, allowing for an increase in brilliance and coherence by a factor of, the time structure filling modes are preserved. Nevertheless, due to difficulties with ceramic vacuum chambers, the delivery in 16 bunch time and associated filling patterns is today limited in beam current. New beam modes were developed in order to allow beam delivery for ID18 whereas not penalizing the other beamlines. This technical issue should be solved by the end of 2021. Reliability and stability of the beam is already very good.