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**Tue-Mo-Or9-01 [Invited]: Commissioning completion of the Iseult Whole Body 11.7 T magnet**

*Tuesday, 24 September 2019 10:45 (45 minutes)*

Neurospin is a neuroscience research center located in France at CEA Saclay. The facility is already hosting several MRI magnets and Iseult, an innovative Whole Body 11.7 T MRI system, will be available very soon. The core part of Iseult is an actively shielded NbTi magnet cooled with a superfluid helium bath at 1.8K, that will provide a homogeneous field of 11.7 T within a 90 cm warm bore. The project was launched in 2002, and after 15 years of work and efforts, the magnet successfully reached its nominal field in July 2019. The paper will summarize the project history, from the early design phase to the commissioning tests performed a few weeks ago. The prototyping activities, the magnet manufacturing, as well as the cryogenic and electrical facilities required to operate Iseult will be also described. The last section will cover the magnet commissioning, from the cooling phase to the step-by-step energization up to the nominal current.

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