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Tue-Mo-Po2.07-08 [48]: Development and construction of an actively shielded zero boil-off 7T/700 bore magnet.

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Since UHF MRI offer the possibility to study in a deeper way the brain functionality, these kind of magnets are becoming essential in neuroscience research. ASG is involved in this sector with an active shielded, zero boil-off 7T/700 bore magnet. The magnet with stringent dimensional parameters has been designed and developed by ASG superconductors team for Magnex MS Inc., in order to fulfil all the main characteristics but with a special address to respect the overall system height, length and weight. A magnetic configuration, observing all the required parameters, has been developed through the use of a dedicated software. Since one of the most important requirement is the zero boil-off, a deepened thermal study has been implemented. The magnet design phase is terminated and we expect to finish the manufacturing and testing phases within October 2019.

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