Documentation concerning magnetic stay fields from Nuclear Magnetic Resonance (NMR) instruments at Department of Chemistry University of Oslo

The room directly beneath the DRX 500 MHz magnet (closed storage part of Ø 242 – without any room identification) is closed for regular access due to the high magnetic field present under this unshielded magnet. The rooms (Ø 236 and Ø 242) to the left and right of this room (when facing towards the Physics building) have a stay field above 5 Gauss close to the windows and close to the walls to the prohibited room higher than 1.8-2.0 meter from the floor. Room Ø 242 (phone room) is having higher than 5 Gauss in parts of the room. Under the 200 MHz, 300 MHz, and under one of the two shielded 600 MHz magnets it was not possible to measure any enhanced magnetic levels (200 MHz, 300 MHZ and 500 MHz stay fields were measured in 1994/1995 directly after installation of these three NMR instruments with a handheld device borrowed from Biophysics section of the Department of Physics at UiO. A similar measurement was performed under the first installed shielded 600 MHz instrument (AV600) when it was installed in 2003. No measurable enhanced field was measured, probably due to the active shielding of magnet, thick floor/ceiling between the floor levels and massive iron reinforcement in the concrete in the floor dissipating the magnetic fields. No measurements have been performed under the second shielded 600 MHz (AVII600) instrument (installed 2005) and the shielded 400 MHz (AVII400) instrument (installed in 2010).