

## **Spatially resolved characterization of Xe ion irradiated LiF crystals using static field gradient NMR**

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Spatially resolved  $^{19}\text{F}$  and  $^7\text{Li}$  nuclear magnetic resonance (NMR) spin-lattice relaxation rates have been measured in LiF crystals irradiated with 1.44 GeV Xe ions at fluences from  $10^{10}$  to  $10^{12}$  ions  $\text{cm}^{-2}$ . In addition, the F-centre concentration has been measured by optical absorption spectroscopy and the concentration of paramagnetic centres by electron paramagnetic resonance (EPR). Within the ion range, the relaxation rate turns out to increase linearly with the concentration of paramagnetic centres but super-linearly with the F-centre concentration. Beyond the ion range, the relaxation rate is still significantly enhanced compared to non-irradiated LiF.