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New possibilities of photon echo: Determination of ground and excited states g-factors applying a weak magnetic field pulse

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Abstract

© Published under licence by IOP Publishing Ltd. We have measured the magnetic parameters of a paramagnetic ion in the ground and excited states by controlling the relative phases of excited dipoles with pulse of a weak magnetic field. Er^{3+} in two crystals LuLiF_4 and YLiF_4 has been used as a paramagnetic ion. The second matrix was used for control. Optical transition is ${}^4I_{15/2} \rightarrow {}^4F_{9/2}$.

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