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COVER Motions involved in double rotation, a means to obtain sharp nuclear magnetic resonance (NMR) spectra for quadrupolar nuclei in solid materials. The sample is contained in the inner (orange) cylinder, which rotates ~7000 times per second around an axis inclined at 30.6° to the axis of the outer (blue) cylinder. The outer cylinder, which has a diameter of ~1 centimeter, rotates ~1000 times per second around an axis inclined at 54.7° to the magnetic field. See page 71. [Computer-generated image courtesy of Lawrence Berkeley Laboratory]

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