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# Measuring gravito-magnetic effects by multi ring-laser gyroscope

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We propose an under-ground experiment to detect the general relativistic effects due to the curvature of space-time around the Earth (de Sitter effect) and to the rotation of the planet (dragging of the inertial frames or Lense-Thirring effect). It is based on the comparison between the IERS value of the Earth rotation vector and corresponding measurements obtained by a tri-axial laser detector of rotation. The proposed detector consists of six large ring-lasers arranged along three orthogonal axes. In about two years of data taking, the $1\%$ sensitivity required for the measurement of the Lense-Thirring drag can be reached with square rings of $6\ m$ side, assuming a shot noise limited sensitivity ($20prad/s/\sqrt{Hz}$). The multi-gyros system, composed of rings whose planes are perpendicular to one or the other of three orthogonal axes, can be built in several ways. The key points of the apparatus and possible locations will be discussed.