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Titolo	Nonlinear gravitodynamics [[electronic resource]] : the Lense-Thirring effect : a documentary introduction to current research / / editors, Remo Ruffini, Costantino Sigismondi
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Altri autori (Persone)	RuffiniRemo SigismondiCostantino
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PROBE B EXPERIMENT: OPTIMAL ESTIMATION AND FILTERING; THE GRAVITOMAGNETIC FIELD AND ITS MEASUREMENT WITH THE LAGEOS SATELLITES
LENSE-THIRRING PRECESSION DETERMINATION FROM LASER RANGING TO ARTIFICIAL SATELLITESON GRAVITOMAGNETIC AND ROTATIONAL ANALOGUE OF THE HALL EFFECT: A POSSIBILITY TO DETECT LENSE-THIRRING FIELD OF EARTH; DETERMINATION OF THE PPN PARAMETER y THROUGH GEODETIC VLBI; QUANTUM TESTS OF LENSE-THIRRING TYPE EFFECTS; RELATIVISTIC PERIASTRON AND NODAL PRECESSION AND QUASI-PERIODIC OSCILLATIONS FROM LOW MASS X-RAY BINARIES; ON GRAVITOMAGNETIC PRECESSION AND QPO IN BLACK HOLE CANDIDATES; MILLISECOND PHENOMENA IN ACCRETING NEUTRON STARS - AN UPDATE
VARIABILITY OF BLACK-HOLE BINARY SOURCES, AND LENSE-THIRRING ORBITAL PRECESSION MAGNETOSPHERES AROUND ROTATING BLACK HOLES; LENSE-THIRRING EFFECT IN THE SUPERFLUID INSIDE NEUTRON STARS; GENERAL RELATIVISTIC CALCULATIONS OF PRECESSION AROUND RAPIDLY ROTATING NEUTRON STARS; RELATIVISTIC DISKOSEISMOLOGY: C-MODES AND THE LENSE-THIRRING EFFECT; GENERATION AND EVOLUTION OF MAGNETIC FIELDS IN THE GRAVITOMAGNETIC FIELD OF A KERR BLACK HOLE; LENSE-THIRRING PRECESSION OF ACCRETION DISKS AND QUASI-PERIODIC OSCILLATIONS IN X-RAY BINARIES PROPOSAL FOR A SATELLITE TEST OF THE CORIOLIS PREDICTION OF GENERAL RELATIVITY*MOTION OF A GYROSCOPE ACCORDING TO EINSTEIN'S THEORY OF GRAVITATION*; DETERMINATION OF THE GEOMETRY OF THE PSR B1913+16 SYSTEM BY GEODETIC PRECESSION

Sommario/riassunto

This book gives a detailed, up-to-date account of the Lense-Thirring effect and its implications for physics and astrophysics. Starting from a profound intuition of Lense and Thirringin 1918, based on a simple solution to the linearized Einstein field equations, this has emerged in the past four decades as a phenomenon of extraordinary importance in cosmology, radio jets in quasars, and the physics of neutron stars and black holes, besides leading to some of the most sophisticated experiments ever performed in the space surrounding our planet.