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The BepiColombo ISA accelerometer: new error budget and calibration strategies

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The ESA BepiColombo mission, for the exploration of planet Mercury, has been rescheduled for launch in 2014 with a redesigned two–satellite configuration. Among the main scientific objectives of this mission are the gravimetry and rotation of Mercury and tests of Einstein's theory of general relativity, to which the ISA (Italian Spring Accelerometer) instrument on–board the MPO (Mercury Planetary Orbiter) spacecraft will give a fundamental contribution by providing a continuous measurement of the non–gravitational accelerations acting on the spacecraft itself. Following a recent redefinition of the Radio Science procedure, in which the equations of motion are formulated with respect to the accelerometer reference point, the error budget for the instrument has been updated. This will be discussed, together with the calibration strategies which are being developed for the various mission phases.