



The SWIM-family of miniature ion mass analyzers

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The Solar Wind Monitor (SWIM), one of the sensors of the Sub-keV Atom Reflecting Analyzer (SARA) on board of the Indian Chandrayaan-1 mission to the Moon, is the ancestor of a line of miniature ion mass analyzers for space plasma studies. Instruments derived from it include the Miniature Ion Precipitation Analyser (MIPA) on ESA's Bepi Colombo mission to Mercury, DIM on the Russian Phobos-Grunt mission to Mars, Yinghuo Plasma Package Ion sensor (YPPi) built for the Chinese Yinghuo-1 spacecraft for Mars and the Prisma Ion Analyzer (PRIMA) on the Swedish technology mission PRISMA. We review and compare performance and fields of application of the instruments in this family and give an outlook on further developments.