

Project of absolute measuring instrument of power on the basis of high-temperature superconducting thermometer for soft X-ray radiation.

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The present report considers the design and main attainable parameters of an absolute radiometer with electrical substitution of power on the base of high-temperature superconducting film bolometer cooled by the liquid nitrogen. This radiometer will be created in the framework of the ISTC project #2920 in the Vavilov State Optical Institute (St. Petersburg, Russia). As is planned, this

instrument will be used as the reference detector on the "Soft X-ray metrology" station at the VEPP-3 storage ring in of the Siberian Synchrotron Radiation Center (Budker Institute of Nuclear Physics, Novosibirsk, Russia) for measurements of the soft X-ray photon flux with power circa 1mW with an accuracy of 1%.

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