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The HBS Project for a High Brilliance neutron Source

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We will report on the progress of the HBS project for scalable compact accelerator driven high brilliance neutron sources, optimized for neutron scattering on small samples and realizable at reasonable costs. As more and more older research reactors are being permanently shut down, such sources can support a new network of small to medium size facilities for user recruitment, user training, method development, specialized experiments and sheer capacity, which is essential to underpin the flagship facilities of ILL and ESS. The sources are based on particle induced reactions and can range from university neutron laboratory scale to full fledged user facilities highly competitive to present day medium sized facilities. Starting from the science case, we will outline the basic setup of such HBS type sources, discuss the technical realization and present the expected instrument performances.

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