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Solar observations with the Nancay Radioheliograph in support of the Solar Orbiter and Parker Solar Probe missions

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The Nancay Radioheliograph is dedicated to imaging the solar corona at decimetre-to-metre wavelengths. The imaged structures are the quiet corona, through thermal bremsstrahlung, and bright collective emissions due to electrons accelerated in quiescent, flaring and eruptive active regions. After more than five years of interruption for an instrument upgrade, solar observations were resumed in November 2020. This contribution will give a brief overview of the technical changes and present observations at eight frequencies of solar activity since November 2020. During the perihelion passages of Parker Solar Probe in January and April 2021 several radio events produced by electron beams (type III bursts) were observed, where the radio imaging provides insight into the coronal regions that guide particles to the interplanetary space. We will illustrate these observations with an attempt to reconstruct the 3D structure of the propagation paths. We will furthermore address more complex radio sources associated with coronal mass ejections and solar energetic particle events.

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