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## Active dose delivery system with a unique beam scanning device

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The active Beam Delivery System (BDS) designed for the new proton therapy project, called AMIDERHA has a new kind of beam scanning system. The AMIDERHA project, furthermore, considers new solutions in proton therapy for cancer treatments: the accelerator used is a LINAC, which can deliver a proton beam with a variable energy between 70 and 150 MeV and the use of gantry is replaced by a movable patient positioning system. In the active BDS of AMIDERHA, a pencil beam scanning system with a relatively long Source to Axis Distance (SAD) can be used. In this contribution, the using a unique new device capable of both horizontal and vertical beam scanning for the AMIDERHA will be presented. Furthermore, a preliminary design with beam trajectories simulation will be shown and discussed.

### Biography

Vincenzo Variale has got the degree in physics at the Bari university in the 1982. He is a researcher of Istituto di Fisica Nucleare (INFN) – Bari From 1986. From 1984 to 1992 has attended the CERN accelerator schools. In the INFN, He has been responsible at local and national level of many experiments on particle accelerator physics and Ion sources. He has published more than 90 papers on peer reviewed journals and on conference proceedings.

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