



Contribution ID: 112

Type: **Parallel Session (Contributed Oral) talk**

## The AISHa Source for the CNAO Facility

*Monday 20 September 2021 08:05 (20 minutes)*

AISHa is an ECR ion source operating at INFN-LNS designed taking into account the typical requirements of hospital facilities, where the key issues are the source reliability optimization and fast maintenance operations together with low ripple, high stability and high reproducibility of the beams produced.

In the framework of the IRPT and INSpIRIT projects and in collaboration with CNAO, further upgrades are underway to produce high intensity beams of Oxygen, Helium and Lithium, new candidates for their better lateral dose distribution compared to protons and lower biological efficacy compared to Carbon ions.

In particular the AISHa source will be equipped with a dedicated oven which will expand the potential of CNAO in the research field, with a longer-term goal of introducing into clinical practice new ionic species more effective for tumours treatment, and in industrial sector due to the capability of producing metal beams of interest in the aerospace field.

### **E-mail for contact person**

ornella.leonardi@lns.infn.it

### **Funding Information**

INSpIRIT projects is funded by Lombardia Government program PO FESR 2014-2020

**Primary authors:** CELONA, Luigi; LEONARDI, Ornella (INFN - National Institute for Nuclear Physics); CASTRO, Giuseppe (INFN); CHINES, Francesco (INFN –Laboratori Nazionali del Sud, Catania, Italy); MASSARA, Antonio (INFN –Laboratori Nazionali del Sud, Catania, Italy); Mr PASSARELLO, Santi (INFN-LNS); GAMMINO, Santo; PULLIA, Marco Giuseppe (Fondazione CNAO (IT)); Mr FALBO, Luciano (CNAO); FILIPPO, Russo (CNAO); Mr RICCARDO, Monferrato; Mr STEFANO, Sironi (CNAO); Mr COSTANZO, Giacomo (CNAO); Mr MAUGERI, Claudio (CNAO); VERCESI, Valerio (INFN); LANZA, Agostino (Pavia University and INFN (IT)); KOURKOUMELI-CHARALAMPIDI, Athina (Pavia University and INFN (IT))

**Presenter:** CELONA, Luigi

**Track Classification:** Production of highly charged ion beams