

Surface ion sources for negative halogen beams

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Halogen ion beams can be produced either positively or negatively charged, depending on the employed ion source. At CERN-ISOLDE, although positively charged fluorine and astatine can be produced from a hot plasma ion source, they are often contaminated by isobars and molecular sidebands. This has generated a request from the scientific community for fluorine and astatine negative ion beams free of contaminants. Here we report our tests on the development of new surface ion sources suitable for the production of negative halogen beams