## **African Nuclear Physics Conference 2021**

## AFRICAN NUCLEAR PHYSICS CONFERENCE (ANPC2021)





Contribution ID: 190 Type: Invited Talk

## Advances in <sup>211</sup>At production at Texas A&M University

Thursday, 23 September 2021 14:00 (30 minutes)

Alpha emitting radionuclides with medically relevant half-lives are interesting for treatment of tumors and other diseases because they deposit large amounts of energy close to the location of the radioisotope. Researchers at the Cyclotron Institute at Texas A&M University are developing a program to produce <sup>211</sup>At, an alpha emitter with a 7.2 h half-life. The properties of <sup>211</sup>At make it a great candidate for targeted alpha therapy for cancer due to its short half-life and decay mechanism. Astatine-211 has now been produced multiple times and novel chemistry has been developed for the separation of the At from the Bi target. Innovations to improve the safety and reliability of this process have been enacted.

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Session Classification: Session 10

Track Classification: Applied Nuclear Physics