

**To:** N. Jennings (Vice Provost, Research and Enterprise)

4<sup>th</sup> May 2021

**From:** K. Long (Director, Centre for the Clinical Application of Particles)

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## **Centre for the Clinical Application of Partices; activity report February 2021**

Two highlights of the progress being made in the development of the Centre's programme over the period from April 2021 are:

- LhARA, the Laser-hybrid Accelerator for Radiobiological Applications, has been adopted as the transformative vision for the "Ion Therapy Research Facility" (ITRF).
  - LhARA and the ITRF have been proposed to the STFC as part of the STFC's Strategy, Planning, and Communications (SPC) Directorate's Visions Process. LhARA will be reviewed by an SPC Visions Panel on 6<sup>th</sup> May 2021.
- A paper summarising the results of a test-beam exposure of the prototype Gabor (electron-plasma) lens has been accepted for publication in the journal Applied Sciences (see arXiv:2104.05637).
  - The Gabor lens is at the heart of the LhARA ion-beam capture system. The paper presents the aberrations observed in test-beam data and interprets them in terms of plasma instabilities.