

# **Rapid PIXE Imaging for the Geosciences Using the MAIA Detector Array**

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Minor and trace element mapping using PIXE has been widely used throughout the geosciences community. However, the need to image complex mineral assemblages with low self similar fractal indices has seen a major shift towards the use of synchrotron based SXRF microprobes where beam fluxes coupled with pixelated x-ray detector arrays such as the MAIA system developed by Brookhaven National Lab(BNL) and CSIRO lead to orders of magnitude higher data collection rates. These higher rates effectively translate into image areas many times that practical with PIXE. To meet this challenge and provide imaging of key e-tech elements not easily caught by SXRF such as Ag, Te, Pd and In for example, CSIRO has re-designed its Nuclear Microprobe (NMP) to cater for a MAIA installation. In this paper we discuss the upgrade and illustrate what we believe will be key advantages of the soon to be installed MAIA array.