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**Free Public Lecture: 5.45 pm Tuesday September 13<sup>th</sup>, Lecture  
Hall L, Adelaide Convention Centre**

## **Hadron Beam Therapy**

Dr Cynthia Keppel

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### **Abstract**

The treatment of childhood cancer presents many special challenges. Where radiation therapy is required it is important to minimize damage to healthy tissue while destroying the tumour. In many cases the use of proton or carbon ion beams is far superior to traditional radiation therapy, in particular in a range of cancers where precision treatment delivery is critical.

This presentation, which will be aimed at the general public, will provide an overview of this remarkable new therapy. While not yet available in Australia, it has been used in many countries for a number of years with impressive results.

### **Dr Keppel**

is ideally suited to present this overview. While currently a leading scientist engaged in fundamental research at the US Department of Energy's Thomas Jefferson National Accelerator Facility (JLab), Dr Keppel has been deeply involved in the development of medical applications of nuclear physics.

Dr Keppel founded the HU Center for Advanced Medical Instrumentation (CAMI) where researchers concentrate on technology development for nuclear medicine, radiation therapy and other medical applications. Her work at CAMI resulted in seven awarded and six pending patents. Dr Keppel also served as the scientific and technical director of the Hampton University Proton Therapy Institute and continues in a consultative role for this center as Senior Executive Director, while also having assisted in the development of eight other centers in the United States and Great Britain. Additionally, she established and co-directed the HU joint medical physics program with the Eastern Virginia Medical School, the first medical physics program in Virginia and the only one at a historically black college.

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