CERN Colour X-ray Technology Set to Save Lives

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(PhysOrg.com) -- Medical studies are soon to start with the MARS scanner, a revolutionary CT scanner developed by the University of Canterbury, New Zealand. The scanner, which incorporates technology developed at the world's leading particle physics research centre, CERN, was recently shipped to research partners in North America. Today a student from Canterbury arrives in North America to use the scanner to study heart disease. This development puts the technology, known as Medipix, firmly on the path to saving lives.

Using technology developed for the Large Hadron Collider, the Medipix detector has shown to have many more uses than just high-energy physics. The new scanner will be used in research to better understand deadly conditions such as heart disease. This is the first stage in an ongoing collaboration with leading research institutions around the world including CERN, the Czech Technical University, and the universities of Canterbury and Otago.

Dr Michael Campbell, spokesman for the Medipix collaborations, said: "It was requirements of the Large Hadron Collider which led to the development of the technology. The Medipix collaborations have adapted the technology to create new detectors which fundamentally change how x-ray images are taken and used."

Professor Emmanuel Tsesmelis of the CERN Directorate Office said: "CERN is delighted to see that particle detectors developed for high energy physics are finding uses in medical diagnosis. This exciting news is showing the benefits to humanity of research collaborations that cross the oceans."

Professor Rolf Heuer, CERN Director General, said: "Basic science is the ultimate driver of innovation - without it there is no science to apply. This is a great example of that process in action."

The University of Canterbury's MARS (Medipix All Resolution System) scanner promises to revolutionise the medical imaging world with x-ray colour. This advance gives more information for diagnosis and treatment aimed at improving healthcare. The technology moves x-ray imaging from black and white to colour images. The colour information has always been there, but there has never been a way to directly image it. The Medipix chips can separate this colour information opening up significant possibilities for enhanced medical imaging.

Dr Anthony Butler, the lead radiology researcher on the project in New Zealand said; "This cements a valuable research collaboration that will explore the potential of the technology and improve the scanner for use in medicine. It is exciting to be able to take technology developed for high energy physics into biomedical research that could lead to improved healthcare. We are surprising ourselves with new CT images that show disease in a way that has never been seen before."

The MARS-CT ready to be shipped from New Zealand.

Provided by CERN