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Model CT Scanner OWEN PAETKAU, ZACHARY PARSONS, MARK PAETKAU, Thompson Rivers University — A computerized tomography (CT) scan is generally formed from a series of X-ray images combined via a computer algorithm into a tomographic (cross-sectional) picture. The CT scan allows the inside of an object, usually a human being, to be examined without invasion. While typically CT scans are made with x-rays, the principles of CT scans may be studied with other rays (waves). In this study a model CT scanner was created using visible laser light and beta radiation and an appropriate detector to scan objects. Intensity readings were analyzed using a simple back-projection algorithm which resulted in an images of the scanned objects. The apparatus makes the study of CT algorithms and principles attainable at the undergraduate level.

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