

Real time treatment control in protontherapy using prompt gamma imaging

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Because of the increased precision of proton treatments over conventional radio therapy, there are lowered margins. Lowered margins require higher accuracy of the treatment, hence the need for dose control using treatment monitoring. A collimated photon camera prototype will be used to capture a prompt gamma signal, a natural byproduct of the proton treatment. Significant improvements in speed and accuracy in the correlation between proton and prompt gamma signals are the topic of the PhD.