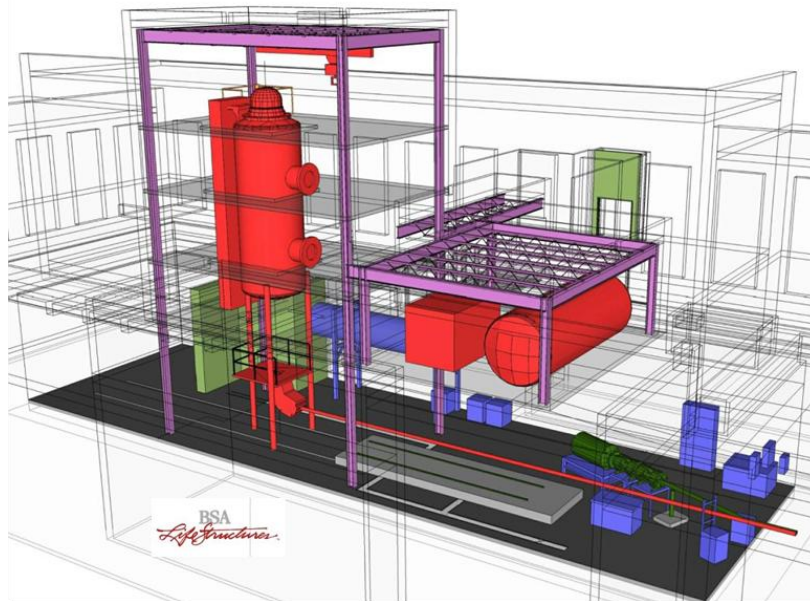


## Preparation for a New 5MV Accelerator at Notre Dame

The new 5 MV accelerator to be installed at the Nuclear Science Laboratory at the University of Notre Dame represents a major equipment upgrade. The accelerator will provide high intensity heavy ion beams for experiments at the St. George recoil separator, but it will also increase the intensities for proton and alpha beams. The accelerator will be built by NEC (National Electrostatic Corporation) and will be delivered by December 2011. In addition to purchasing the accelerator, a new building to house the vertical machine must be constructed. The spatially intricate area of the laboratory requires careful planning. A milestone in this plan has been reached in that the definitive location of the building has been fixed, and there is a conceptual design for it. A 3D view of the implantation of the new building inside the Nieuwland Science Hall building is shown in the figure below, it is provided by BSA Life Structures, the engineering company in charge of designing the new building as well as supervising its construction. A short animation is also provided.

Recently NEC and BSA Life Structures met with the members of the laboratory. The development of the two main parts of this project (i.e. building and accelerator) must be highly synchronized. That meeting demonstrated the desire of all to quickly move forward while allowing the NSL scientists to maximize their experimental time in a with minimal disturbance to the laboratory.

The project is funded through the NSL MRI program with additional Notre Dame funding for the new accelerator building.



Drawing of the proposed installation of the new accelerator in the existing facilities of the NSL.

In blue the existing laboratory installation, in purple, the structure of the new building. In red the new accelerator, its infrastructure and new beam line.