USTUR Offers Unique Educational Opportunities

The U.S. Transuranium and Uranium Registries (USTUR) will provide research fellowships for two doctoral students enrolled in Idaho State University's Health (ISU's) Physics Program (http://www.physics.isu.edu/health-physics/hp.html). This collaboration will allow students to participate in USTUR's specialized research in internal dosimetry, and will complement ISU's doctorial program in Engineering and Applied Science (with emphasis on Health Physics). USTUR is also expanding its research collaborations to include the University of Florida's Advanced Laboratory for Radiation Dose Studies (ALRADS). Initial efforts include USTUR's hosting a 3-month DOE Practicum Fellowship for a University of Florida doctorial student, Ms. Deanna Hasenauer, to spend this summer at USTUR working on a special study - see http://www.betaustur.org/voxel/index.html. In this study, she will apply the voxel modeling techniques developed by ALRADS to USTUR's data to develop 3-dimensional voxel mathematical models, or virtual phantoms, from CT-scans of the head, thorax, leg and arm of USTUR's anthropomorphic Bone Phantom infused with americium-241. Analysis of CT-scan images of individual bones will also enable USTUR to actually measure the volume fractions of cortical and trabecular bones. These activities illustrate the increased utility of USTUR research and its value to DOE in ensuring that best-available techniques and software for radiation dosimetry are employed across the complex.