SPECTROSCOPIC ENGINEERING IN THE SUBMILLIMETER

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The field of high-resolution spectroscopy, as represented by the community that supports this meeting, has continued to grow and prosper, in no small part because the field has continued to evolve. Much of this evolution could fall under the rubric, Spectroscopic Engineering. This is especially true in the submillimeter where spectroscopists have taken on much broader roles in fields that have grown out of submillimeter spectroscopy. With specific examples from spectroscopic remote and point sensing, astronomy and atmospheric science, imaging, and process control, opportunities and paths forward for will be considered. Emphasis will be placed on the underlying physics that drives the optimization of applications. Since this is Columbus, at least one complex Hamiltonian will be shown. We will also discuss: What are the opportunities for young people entering the field and how might they be optimized? Is spectroscopy as a tool, less noble than spectroscopy as a science? Is what we do really physics (or even chemistry)? Where does what we do fit into the structure of academia, government, and industry?