D16 The PNC-CAT ID beamlines

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The PNC-CAT is a consortium of Pacific Northwest institutions formed to instrument a sector (20) at the APS. Research is planned in a variety of areas, with an emphasis on environmentally based problems. The insertion device beamline is based on the APS undulator A, and will be optimized for producing microbeams as well as for applications requiring energy scanning capabilities. This paper describes the basic layout and some special features of the beamline. Two experimental stations are planned: one general purpose and one dedicated to MBE and surface science problems. Both tapered capillaries and Kirkpatrick-Baez optics will be used for producing microbeams, and a large optical bench is planned for the main station to allow for easy accommodation of new optics developments. Design calculations and initial capillary tests indicate that flux densities exceeding 10¹¹ photons/sec/micron² should be achievable. All major components are under construction or in procurement, and initial operation is planned for late 1996.