VLBI Electronics for Analysts: From the Feed to the Recorder

Brian E. Corey

MIT Haystack Observatory

e-mail: bcorey@haystack.mit.edu

Abstract

This talk will describe how some of the critical electronic components in a VLBI system work, with an emphasis on analog electronics such as mixers, amplifiers, and phase calibrators. The ideal behavior of such devices will be described, as well as what the likely effects on VLBI observables are when a component fails or is used improperly (e.g., when an amplifier is overdriven). The basic principles of operation will be treated, without delving into the underlying semiconductor physics.