Community instrumentation needs for airborne research: the HIAPER experience

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Development of HIAPER was done under a special program of the National Science Foundation. Aircraft acquisition, modification, infrastructure installation and instrumentation were elements of the overall program. All too often facility construction programs are initiated but the requisite instrumentation is not adequately funded. The HIAPER project included funding for start-up instrumentation. While the funded instrumentation is only a first step in a long instrument development process it represented an opportunity to apply innovative technologies: small, low power consumption, and, where appropriate, use of telescience. Wing pods allow for quick instrument change outs and for sharing of instruments between agencies and our international partners. This paper will discuss the instrumentation process and the types of instruments developed through the project funding.