



Bandwidth Justification

FRN: 0021252267

Form 442 File Number: 0084-EX-ST-2012

Reid Crowe

Center for Remote Sensing of Ice Sheets (CRISIS)

University of Kansas, Lawrence, Kansas

16 February 2012

For emissions radiated north of Alaska:

The bandwidth is required to collect the measurements with the necessary resolution and accuracy to meet the science requirements of the mission. A range resolution of 5 cm is required to measure the thickness of snow cover. This requirement translates to a 6 GHz bandwidth for the sensor. Reducing the bandwidth would compromise the science objectives.

For emissions over the Atlantic Ocean:

The purpose for operating in this area is to test the equipment as it would be operated over the Arctic Ocean and Greenland. This requires that each system is operated at its full bandwidth. By operating at the full bandwidth of the system, problems can be identified without compromising the science objectives.