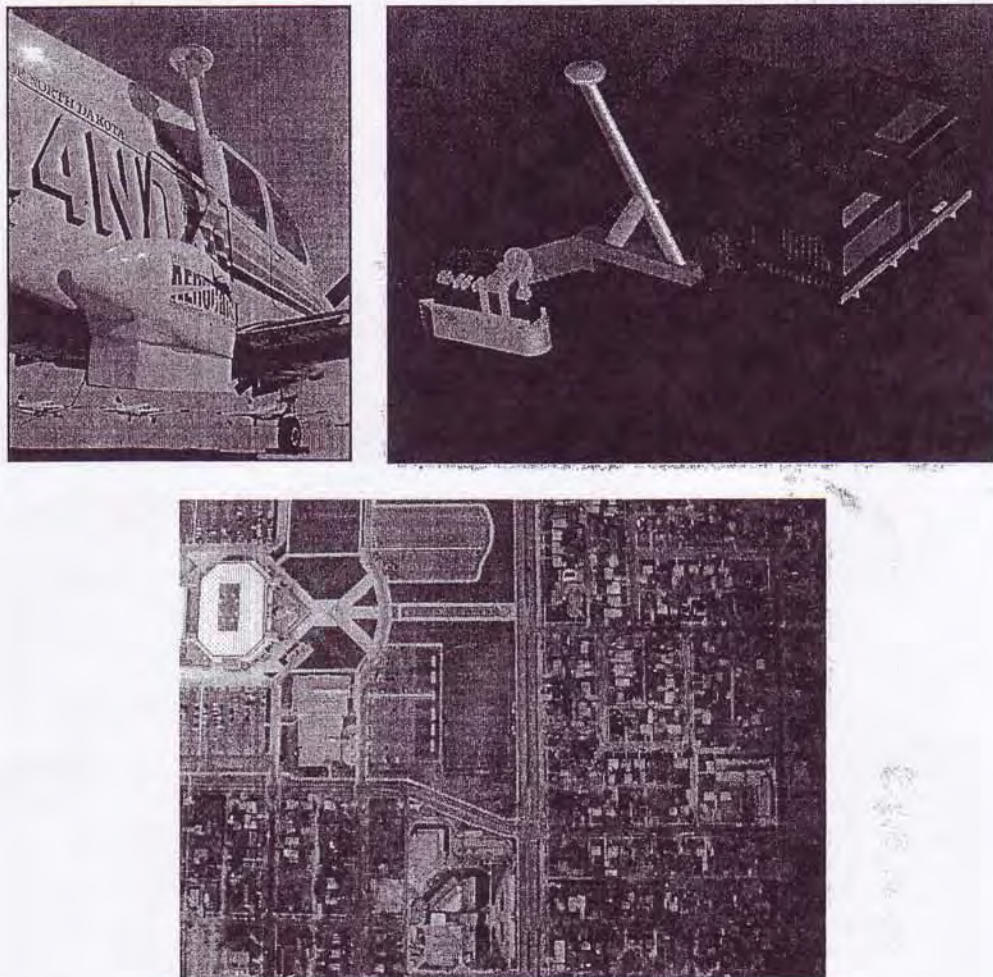


## Airborne Environmental Research Observational Camera (AEROCam)

The AEROCam mission is to capture multispectral images for precision farming, ranching, and forestry applications in the Upper Midwest, with requested image maps delivered to end-users via the Internet after postprocessing (i.e., georectification, mosaicking, pseudocolor generation, and normalized difference vegetation index map generation). This digital camera is designed for flight by UND Aviation manned aircraft. Although the three bands currently used include red, green, and near infrared, blue and thermal infrared bands would also be useful in the future. This project has been a partnership between the Departments of Electrical and Mechanical Engineering and the Northern Great Plains Center for People and the Environment at the University of North Dakota.



*Top Left:* AEROCam multispectral camera installed in a UND Aviation single-engine airplane. *Top Right:* CAD representation of the payload structure installed in the airplane luggage bay, with camera pod, GPS antenna, and computer/avionics racks highlighted. *Bottom:* AEROCam-captured image of the UND campus, with red, green, and near infrared bands shown in pseudocolor.