

# AGCAM AGRICULTURAL CAMERA

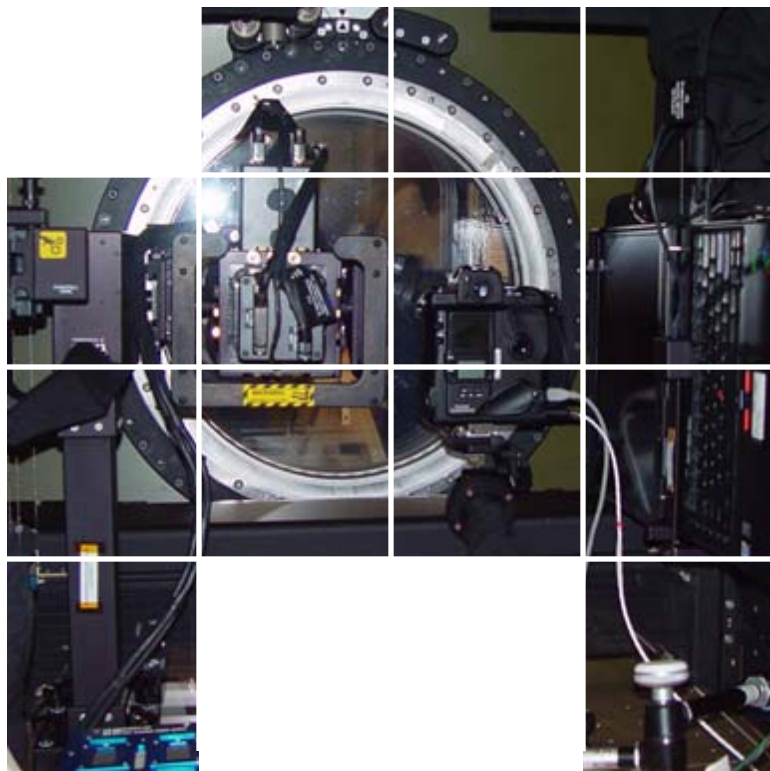
## STUDENT-BUILT HERITAGE

The University of North Dakota will soon have its first scientific instrument in space. The Agricultural Camera (AgCam) will be installed aboard the International Space Station (ISS) 400 kilometers (about 250 miles) above earth. Designed, created, integrated and operated by the students and faculty at the University of North Dakota, the AgCam project began in 2001. And since its inception, 51 students across eight disciplines have worked on AgCam, including 14 Master's theses.

## SENSOR OPERATION

The multi-spectral, Earth-observing camera will be delivered by Space Shuttle Endeavour on mission STS-126, and be operational for three years beginning as early as May of 2009. AgCam will relay high resolution images of Earth in almost real-time for use in agricultural and geological applications at the request of farmers, ranchers, foresters, natural resource managers, and tribal officials in the Upper Midwest Region and across the globe.

AgCam will collect imagery composed of two separate bands, red and near infra-red, which is invisible to the human eye. These two bands can be combined in ways that show the overall health of the vegetation captured.



*...onboard the International Space Station...*

## SCIENCE OPERATIONS CENTER

The student-run Science Operations Center (SOC) at the University of North Dakota will become operational in the coming months. Student operators will receive AgCam imagery requests from end-users and will convert these requests into specific sets of commands for AgCam. Through coordination with NASA, these commands will be uplinked to AgCam, which will then take images over these specific areas of the Earth. Resultant imagery data will be sent down from the ISS and eventually transferred to UND for processing and quick delivery to image requestors.

For more information on AgCam or being an end user, see us on the web:  
<http://www.umac.org/agcam>

