

NEWS

From GEORGIA TECH'S ENGINEERING EXPERIMENT STATION

Atlanta Georgia 30332

CONTACT: Mark Hodges/Ray Moore
(404) 894-3444

RADAR COULD HELP PROTECT
MINERS FROM BLACK LUNG

For Immediate Release

April 10, 1981

Radar technology developed for military uses may help to protect American miners from black lung disease.

Researchers at Georgia Tech and the National Aeronautics and Space Administration (NASA) have built a prototype radar sensor designed to make remote control of coal mining operations possible.

"The aim of the research is to remove miners from areas where coal dust is heavy and to do it without impairing the efficiency of mining," said Dennis J. Kozakoff, project director at Georgia Tech's Engineering Experiment Station (EES).

If used commercially, these radar sensing devices would be installed on mechanical shearers which remove sections of coal in mine shafts and transport them out of mines on conveyor belts. At present, human operators must walk along side these shearers to position the digger for proper cuts.

The Tech-NASA radar unit would electronically measure the distance between the cutter and the ceiling of a shaft, making it possible for an operator to control this equipment at a remote location hundreds of yards from the excavation site.

Tech has built four prototypes, using radar developed by NASA at its Marshall Space Center in Huntsville, Alabama. Engineers in Tech's Electromagnetics Laboratory developed the unit's antenna and a special lens which focuses the radar beam on targets several feet from the apparatus. Georgia Tech packaged the radar, antenna and lens into an explosion-proof box.

No decision has been made yet to release the radar sensor design for commercial development. However, tests undertaken recently at the Marshall Space Center were promising enough that Georgia Tech has received a contract to built five new prototypes with modification for improved performance.

(More)

--2--

NASA is the agency in charge of the coal mining radar program, and is using funds made available by the Department of Energy. Georgia Tech is working as a subcontractor in the program through Foster-Miller Associates, a Massachusetts engineering firm which is handling mining tests of the radar for NASA.

####