RECENT DEVELOPMENTS IN
SCIENCE EDUCATION AT ESU

New Science Education Faculty
The Division of Physical Sciences at Emporia State University has added two new faculty with credentials in science education. Ron Keith brings two degrees in physics from the University of Minnesota, and has nearly completed a Ph.D. in science education from the same institution. In addition, he studied astrophysics at Cornell University between degree stints at Minnesota. Ron will direct the programming in the Peterson Planetarium in addition to his other duties.

The other new faculty member is Ken Thompson. Ken obtained two degrees in earth science education from the University of Northern Iowa, and the Ph.D. in science education from Iowa State University. His pre-college teaching included seven years in the Marshalltown (Iowa) Community School District. Ken will have the primary responsibility for science education in the Division of Physical Sciences. Some of you may have an opportunity to work with him in that capacity; he will, for example, oversee the student teaching assignments and visitations of preservice physical science teachers.

Both Ron and Ken will also work with the various faculty members who are largely responsible for activities originating in the ESU Science and Mathematics Education Center. As they "get their feet on the ground" at ESU, expect to see and meet them at various science education meetings and related events.

ESU Becomes a NASA JOVE Institution
ESU was one of sixteen institutions nationally, and the only one from Kansas, to be selected as an additional NASA JOint VEnture (JOVE) institution in the spring of 1991. As such, Kansas joined fifteen other states with a JOVE institution.

The objectives of JOVE are essentially two-fold. Huge quantities of data are being gathered with current space missions concerning the Earth, the near-Earth environment, the solar system, and the universe. This "glut of data" is being disseminated to college and university faculty and students for analysis. ESU professors Jim Aber (earth sciences) and Jorge Ballester (physics) spent the summer of 1991 at the Goddard Space Flight Center working as research associates. Previously, Aber has been involved with international-level research projects concerning glaciatoectonic structures and landforms. His research with Goddard and NASA continues that effort and involves the use of Landsat data for additional mapping.
and analysis of glaciated landscapes in North America and Europe. Aber will be using space data to "look back" at Earth.

Ballester will be looking away from Earth. His research involves the interstellar medium—the stuff between the stars from which planets and stars might form. His research involves modeling of the interstellar "dust" medium using carbon compounds (PAHS—polycyclic aromatic hydrocarbons akin to the "Bucky-balls" or "Fullerenes" that currently are being popularized). He is investigating the possible processes involved with the interaction of these compounds with infrared radiation. IRAS (InfraRed Astronomical Satellite) and COBE (COsmic Background Explorer) satellite data are of interest for his research.

The other objective of NASA JOVE is concerned with "basic" science education—on two levels. The space program has an aura that frequently excites young people. Thus, the intent is to utilize the space sciences as a vehicle to increase science literacy, and to generate interest in science careers to avert projected shortages of science personnel anticipated in the late 1990s (see "The National Context for Science and Mathematics Education in the 1990s," Kansas Science Teacher, 7(2):3-10, April 1991).

Several outreach initiatives are planned in conjunction with the second, dual objectives of science literacy and adequate science personnel. They include a speakers series, additions to the inventory of the Science and Mathematics Education Center, programming in Peterson Planetarium, and summer workshops. Remain alert to the availability of these opportunities during the next three years.

**NSTA Executive Director Visits ESU**

Bill Aldridge, the executive director of the National Science Teachers Association, was the Fall 1991 Jones Distinguished Lecturer at ESU. On October 10 Aldridge addressed students and faculty with "The Saga of Cold Fusion." Aldridge used the chronology of events of research regarding cold fusion to comment critically concerning the nature of "doing" science. Has the "press conference" as an arena for evaluating progress in science replaced the role of "peer review" in the past? That same evening area educators had the opportunity to discuss science education issues informally with Dr Aldridge. On Friday, October 11, Aldridge presented a formal lecture, "Science Education Reform: Its Connections to Research and Development," in which he traced major contemporary developments in science education. ESU was pleased to host this native Kansan who now heads the largest organization of science educators in the United States.
Director of the ESU SMEC

Since the departure of George Davis in the summer of 1990, DeWayne Backhus has served as interim director of the Science and Mathematics Education Center. Plans are underway to fill the director position on a continuing basis. We are optimistic that we soon will be able to announce a new director for the Center who will begin duties in January of 1992.

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and
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