

NASA selects eight physical science research proposals

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NASA's Physical Science Research Program will fund eight proposals to help investigate how complex fluids and macromolecules behave in microgravity. The investigations will be conducted aboard the International Space Station.

These studies will result in new basic knowledge that provides a foundation on which other NASA researchers and engineers can build approaches to problems confronting [human exploration](#) of space or that translate into new tools or applications on Earth. The proposals were in response to the research announcement "Research Opportunities in Complex Fluids and Macromolecular Biophysics."

The selected proposals are from eight institutions in six states and will receive a total of about \$5.9 million during a five-year period. Selected experiments will begin immediately.

Four proposals will investigate colloidal systems. Colloids are composed of microscopic particles of one substance suspended in another substance, typically microscopic solid particles suspended in a liquid medium. This research will help scientists understand the interaction, manipulation and assembly of colloidal systems. Applications of this research include areas such as liquid crystals, paints and petrochemicals.

The remaining four selected proposals will investigate [biological macromolecules](#), such as proteins. This research will aid scientists in determining the mechanisms relating heat and mass transport, formation,

growth of the solid phase and the molecular structure of a number of biological macromolecules. Understanding the structure of these macromolecules may help researchers gain insight into [neurodegenerative diseases](#) and may lead to development of new pharmaceuticals.

The Physical Science Research Program is managed by the Space Life and Physical Sciences Division in NASA's Human Exploration and Operations Mission Directorate at the agency's Headquarters in Washington.

More information: [go.nasa.gov/145Oetm](https://www.nasa.gov/145Oetm)

Provided by NASA

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