

Dancing droplets rock out on space station

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Expedition 31 Flight Engineer Don Pettit of NASA has taught more than half a million internet viewers how microgravity affects scientific principles by using everyday objects on the International Space Station. In the latest video, Pettit takes his demonstrations to the next level by using sound to oscillate water placed on a speaker and letting the droplets fly.

The investigation is part of "Science off the Sphere," a video series featuring experiments of Pettit's own design intended to show scientific possibilities on the frontier of space. NASA and the American Physical Society, or APS, developed a partnership to share the videos with students, educators and science enthusiasts across the globe.

In the short, downloadable videos, Pettit has used knitting needles and [water droplets](#) to examine static electricity, demonstrated capillary flow by creating a zero gravity tea cup, used thin water films to experiment with fluid motion, shared [infrared imagery](#) of Earth and more. Each video includes a physics challenge question to which the online community is invited to respond.

"The physics community is absolutely loving seeing what's going on and loving having a different way of looking at concepts they've spent their lives studying," said Becky Thompson-Flagg, head of public outreach at APS.

APS, the professional society for physicists, shares new "Science off the Sphere" videos on its outreach website, Physics Central. In the latest

episode, Pettit's water droplets dance to music by Texas rock band ZZ Top. Video of the demonstration will air in the video file on NASA Television at 12 p.m. CDT today.

"Science off the Sphere" is a successor to Pettit's science demonstrations performed during his stay on the space station during Expedition 6 in 2002 and 2003 and during the STS-126 [space shuttle mission](#).

Pettit launched to the space station to join the Expedition 30 crew on Dec. 23, 2011, with Russian [Flight Engineer](#) Oleg Kononenko and [European Space Agency](#) Flight Engineer Andre Kuipers. The crew will be joined by NASA's Joseph Acaba and Russian cosmonauts Gennady Padalka and Sergei Revin as part of Expedition 31, who are scheduled to launch on May 14. Pettit, Kuipers and Kononenko will remain on the station until July.

More information: To view Pettit's science demonstrations performed during his current mission, visit: www.physicscentral.com/sots
To view Pettit's science experiments performed during Expedition 6, visit: go.nasa.gov/spacechronicles

Provided by JPL/NASA

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