## APR15-2015-030001

Abstract for an Invited Paper for the APR15 Meeting of the American Physical Society

## Exploring the Universe: Lessons for Life on Earth

DAVID GRINSPOON, Senior Scientist, Planetary Science Institute

When it comes to life in the universe we, as yet, have almost no perspective. One of the values in exploring the universe with an eye out for biological activity is that it forces us to challenge our largely untested assumptions about life and planetary evolution. In this spirit, I will briefly discuss three questions: (1) Are Venus and Mars failed biospheres? (2) Can a planet be alive? (3) Can a planet be aware?