



# Theory Frontier

- Theory is central to DOE programs
- Theory stimulates experiment and enables discoveries
- Theory facilitates interactions and synergy between the Cosmic Frontier, Energy Frontier, and Intensity Frontier.
- Theory is an area of U.S. leadership

**Theory belongs among the other Frontiers  
in DOE structure**

# Let a thousand flowers bloom

One should resist the temptation to evaluate DOE funded theory based on how well it is aligned with the DOE science goals.

*Theorists* benefit from explaining natural phenomena in other areas of physics (such as astrophysics, condensed matter physics, etc.), as well as from pursuing novel ideas in formal mathematics

*Theories* benefit from cross-pollination of ideas

## Make DOE labs an even more exciting place for theorists

DOE Labs can host (and fund) as many theory visitors and theory programs as CERN does. They should continue to promote interactions among theorists, as well as between theorists and experimentalists.

*Maurice Goldhaber, in response to my question about making BNL as friendly to theorists as CERN (where I worked prior to joining UCLA/BNL):*

*"I told the present lab director that we should do something about it: either move Mont Blanc, or allow wine at lunchtime, **whichever is easier.**"*

Fermilab and other DOE labs can play a greater role in fostering theoretical breakthroughs.