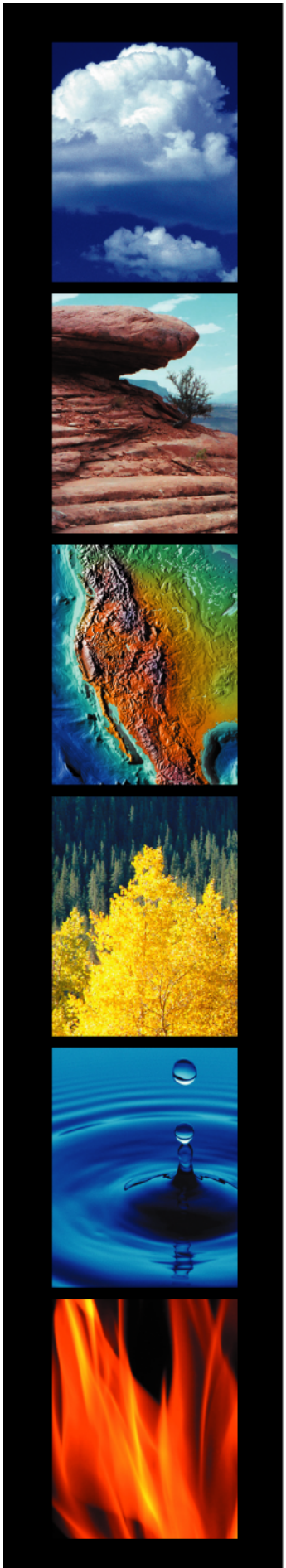

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Frontiers in Geoscience Colloquium

Monday, June 20, 2016
3:00pm – 4:00pm
Physics Auditorium (TA-3, Bldg 215)

Tapping the Earths Heat: Geothermal Energy Now and Tomorrow

Professor Joseph Moore

University of Utah

Geothermal heat provides sustainable energy for electricity generation and a range of heating applications. Worldwide use of geothermal energy has increased steadily over the past few decades, and today, 24 countries generate electricity from geothermal energy and 78 countries use geothermal energy for direct uses. There is compelling evidence that the geothermal resource base is enormous and virtually inexhaustible. In a recent assessment, the US Geological Survey concluded that 9,000 MWe could be produced from naturally occurring geothermal systems in the western United States and that another 500,000 MWe could be generated by creating Enhanced Geothermal System (EGS) reservoirs in regions characterized by high temperature, but low permeability, rock formations. EGS reservoir creation utilizes hydraulic and thermal stimulation to develop adequate fracture networks for efficient heat transfer to a circulating working fluid. This presentation will discuss the factors that create natural geothermal systems and current efforts to develop EGS reservoirs.

Host: Lianjie Huang, EES-17, 5-1108