
Sessão Especial: Observação do ciclo global do carbono a partir de plataformas orbitais (*Spaceborne Observation of Global Carbon Cycle*).

Coordenador: Dr. Sassan Saatchi (Jet Propulsion Laboratory, California Institute of Technology)

Global carbon cycle is the underlying force in regulating and changing the Earth's climate. Accurate assessments of anthropogenic carbon dioxide (CO₂) emissions and their redistribution among the atmosphere, ocean, and terrestrial biosphere is important to better understand the global carbon cycle, support the climate policy process, and project future climate change. The current state-of-the-art relies on a combination of limited in situ data and satellite observations along with algorithms and inverse models that are subject to a large uncertainty and a broad scientific interpretation. In recent years, scientific community and the space agencies have developed new observational techniques for measuring different attributes of carbon storage and fluxes in order to reduce the uncertainty in global carbon cycle, improve modeling parameterization and predictions, and support assessments of national and regional level fluxes for climate mitigation policies. These new satellite observations provide significantly improved measurements of carbon stocks and fluxes of terrestrial pools and atmospheric trace gases. This session summarizes the science and measurement techniques of a suite of new observations available in the near future.

Hora	Título das Palestras	Apresentador
09:00	Opening	Dr. Sassan Saatchi (California Institute of Technology)
09:10	OCO2: The Orbiting Carbon Observatory-2, prospects for atmospheric CO ₂ and chlorophyll fluorescence measurements in the tropics.	Dr. Christian Frankenberg (California Institute of Technology)
09:40	BIOMASS: Global Observation Forest Carbon Stocks and Changes.	Dr. Shaun Quegan (University of Sheffield)
10:10	FLEX: The Fluorescence Explorer (FLEX) mission: global mapping of photosynthesis from space.	Dr. Jose Moreno (University of Valencia, Spain)
10:40	SMAP: NASA Soil Moisture Active Passive Mission: Status and Progress on Science Data Products.	Dr. Dara Entekhabi (Massachusetts Institute of Technology, USA)
11:10	CarbonSat: Carbon Monitoring Satellite Science objectives and performance overview.	Dr. Michael Buchwitz (University of Bremen, Germany)
11:40	GEDI: The Global Ecosystem Dynamic Investigation Using Lidar Measurements from Space Station.	Dr. Scott Goetz (University of Maryland, College Park, USA)
12:10	NISAR: Global L-band SAR observation of Forest Disturbance and Recovery	Dr. Sassan Saatchi (California Institute of Technology)