Introductory Webinar: Use of Solar Induced Fluorescence and LIDAR to Assess Vegetation Change and Vulnerability

March 16, 18, 23, & 25, 2021

11:00-13:00 EDT (English) or 14:00-16:00 EDT (Spanish)

This introductory webinar will cover the fundamentals of Solar Induced Fluorescence (SIF) and LIDAR, their applications, and an overview of different satellite data sources that are openly available. In addition, it will also include a step-by-step guide on how to access, open, and interpret SIF and LIDAR data.

Part 1: LIDAR and its Applications

- This session will cover the fundamentals of LIDAR measurements, the characteristics of different spaceborne LIDAR systems, and examples of application areas related to vegetation studies. It will be followed by a question and answer period.

Part 2: Accessing and Analyzing LIDAR Data for Vegetation Studies

- This session will summarize where different spaceborne LIDAR measurements can be accessed. This will be followed by a demo showing participants how to open, interpret, and analyze LIDAR data for assessments of vegetation structure. The session will end with a question and answer period.

Part 3: Solar Induced Fluorescence and its Applications

- This session will cover the fundamentals of SIF, how it is measured from space, and examples of application areas that this measurement can support. It will be followed by a question and answer period.

Part 4: Accessing and Analyzing SIF Data for Vegetation Studies

- This session will provide an overview of different satellite SIF datasets, their characteristics, and where they can be accessed. It will be followed by a demo with OCO-2 data, showing participants how to open, interpret, and analyze the data to identify vegetation stress. The session will end with a question and answer period.

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