

THE NEXT SCIENTIFIC PROGRAM OF SCOSTEP

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**On behalf of the Next Scientific Definition Team*

PreSTo: Variability and Predictability of the Solar-Terrestrial Coupling

SCOSTEP: THE NEXT SCIENTIFIC PROGRAM (NSP)

- SCOSTEP promotes solar-terrestrial physics globally
- Provides framework for international scientific cooperation
- Past Programs: CAWSES, VarSITI...
- Next Scientific Program will cover the 2019-2022
- NSP Text at: https://1drv.ms/f/s!Akpx0yeihiGHoRrANb2Zkla_f-Gm

NSP PROGRAM DEFINITION COMMITTEE

SCOSTEP constituted the following committee to formulate the NSP

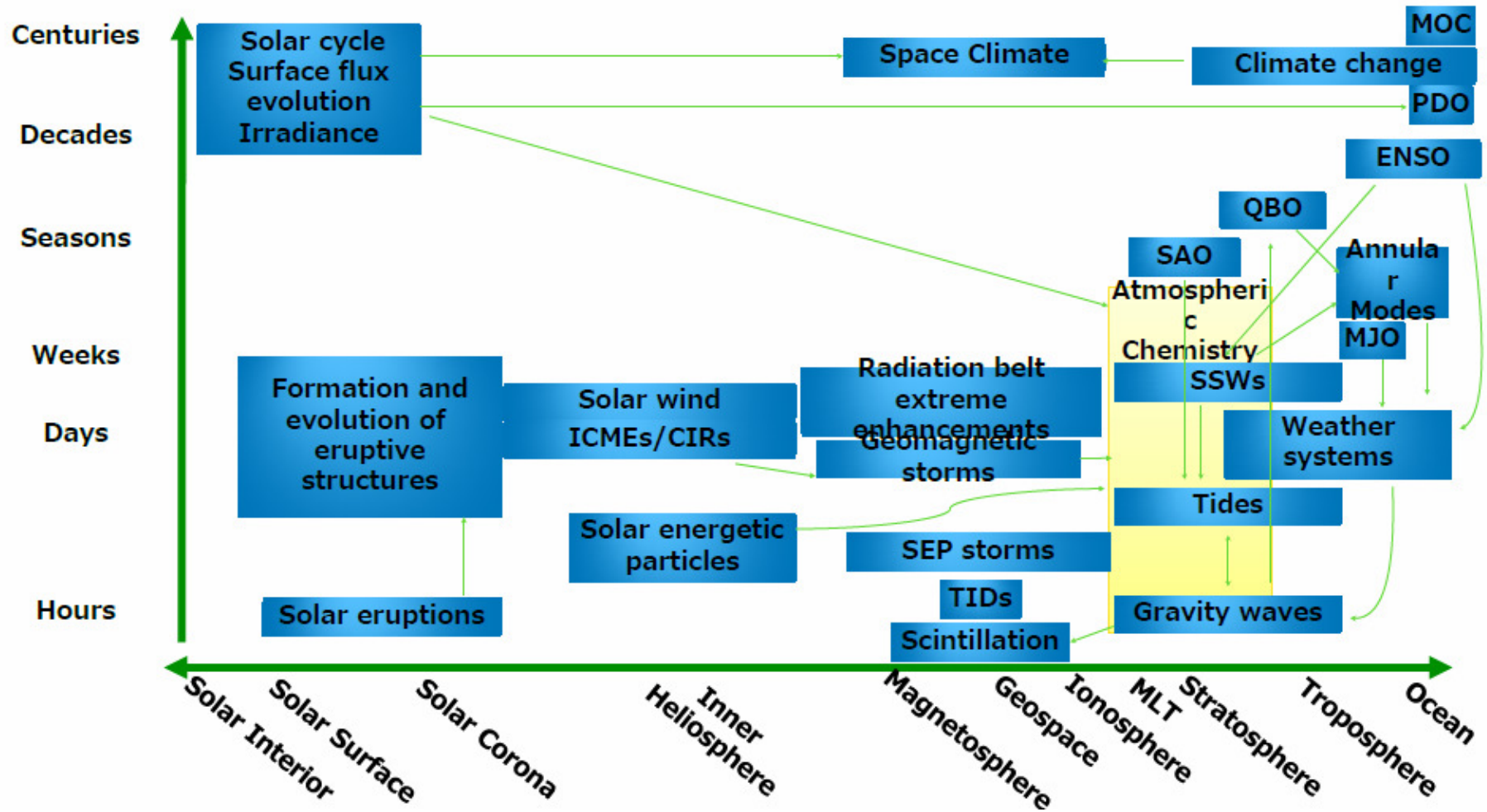
- Ioannis A. Daglis, Chair (University of Athens and National Observatory of Athens, Greece; iadaglis@phys.uoa.gr)
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PreSTo: AIMS, SCOPE AND GOALS

PreSTO will address predictability of 1) space weather on timescales from seconds to days and months, including processes at the Sun, in the heliosphere and in the Earth's magnetosphere, ionosphere and atmosphere, 2) sub-seasonal to decadal and centennial variability of the Sun-Earth system, with a special focus on climate impacts and a link to the World Climate Research Program (WCRP) Grand Challenge Near-Term Climate Predictions as well as the IPCC.

A major motivation for the NSP is the desire to conduct fundamental research that has the promise to advance predictive capability with societal implications.

PreSTo OVERVIEW



FOCUS: SPACE WEATHER IMPACTS

- Predict occurrence of flares and CMEs
- Predict properties of flares and CMEs and their arrival times
- Explore solar wind magnetospheric coupling and variability
- Understand and predict geospace radiation environment

FOCUS: SOLAR ACTIVITY CLIMATE CONNECTIONS

- Understand and Predict solar activity
- Influence of long-term solar activity on space weather and climate
- Centennial-scale variability of the Sun-Earth-Climate system
- Understand multi-scale vertical coupling (atmosphere-space weather)
- Bridge gap between weather and climate (sub-cycle variations)

UNDERLYING MOTIVATION

- Significantly impact understanding of Sun-Earth-System coupling
- Explore multi-scale physics across hours to centuries
- Functional goal – PREDICT

HOW TO STRUCTURE YOUR FEEDBACK

For your feedback to be useful, follow these guidelines

- First READ the NSP text!
- Identify whether any important broad themes missing
- Identify if any element within already proposed themes missing
- Focus on broadly interconnected (and not personal) research themes
- Explain why your point is important in the larger SCOSTEP context
- Be short and focused (your feedback will be read by experts)
- Don't talk of techniques, instead talk of the RESEARCH QUESTION
- Good feedback = FIT within PreSTo SCHEME (be good!)

PROVIDING FEEDBACK TO THE NSP

- Refer to NSP text at:
https://1drv.ms/f/s!Akpx0yeihiGHoRrANb2Zkla_f-Gm
- Email feedback to Ioannis Daglis: iadaglis@phys.uoa.gr
- Deadline: 31 July, 2018
- Opportunities for discussion and feedback to NSP:
 - 10th Sozopol Workshop, Primorsko, Bulgaria, 4-8 June, 2018
 - 14th Quadrennial STP Symposium, Toronto, Canada, 9-13 July, 2018
 - 42nd COSPAR General Assembly, Pasadena, USA, 14-22 July, 2018
- YOU are our community and we seek your ACTIVE INVOLVEMENT