



# Space Weather & GPS Policy Study

American Meteorological Society  
Policy Program  
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## BACKGROUND

The AMS Policy Program is conducting policy research leading to recommendations that will increase the reliability and accuracy of the Global Positioning System (GPS), and thereby the Global Navigation Satellite System (GNSS), through more effective use of space weather forecasts and information.

The following questions are designed to better understand a) the impact that space weather has on GPS technologies, services, and policies; b) to what extent an improved understanding and usage of space weather information will have on GPS technologies, services, and policies; and c) strategies and plans to effectively respond to space weather information. We welcome your responses to the questions below. Please direct questions and feedback to Dr. Genene Fisher, [fisher@ametsoc.org](mailto:fisher@ametsoc.org), 919-461-3960.

## DISCUSSION QUESTIONS

### GPS Information & Services

- 1) Does GNSS provide time, navigation to support your operations or business?
- 2) If GPS was not available, what backups do you have in place?
- 3) Have you experienced GPS outages? If so, do you have data and impacts information? What actions were/are being taken to build resilience for the future?

### Space Weather Information & Services

- 4) How important are considerations of space weather to the design and development of GPS technologies & services? What about to the integrity of satellite hardware?
- 5) With respect to space weather, what technical, observational, and modeling capabilities are needed to improve decision making?
- 6) How well is space weather information communicated and what improvements are needed?
- 7) How does your company/organization decide when to use a forecast/alert to modify the operations?

### Policy Issues

- 8) What are the key policy issues in promoting effective application of space weather information to GPS technology, usage, or services?
- 9) What policies, regulations, or standards are needed to ensure space weather information is integrated into your operations and the GPS/GNSS system?
- 10) What are the major coordination issues (e.g., public-private, international, national)?

### Economic Costs

- 11) To what extent would an improved understanding of space weather lower GPS technology design and development costs? What does space weather imply in terms of tradeoffs?
- 12) Has your organization developed any estimates of the economic costs of space weather impacts (e.g., loss/disruption in your operations or service)?

**Who else should we be talking to?**