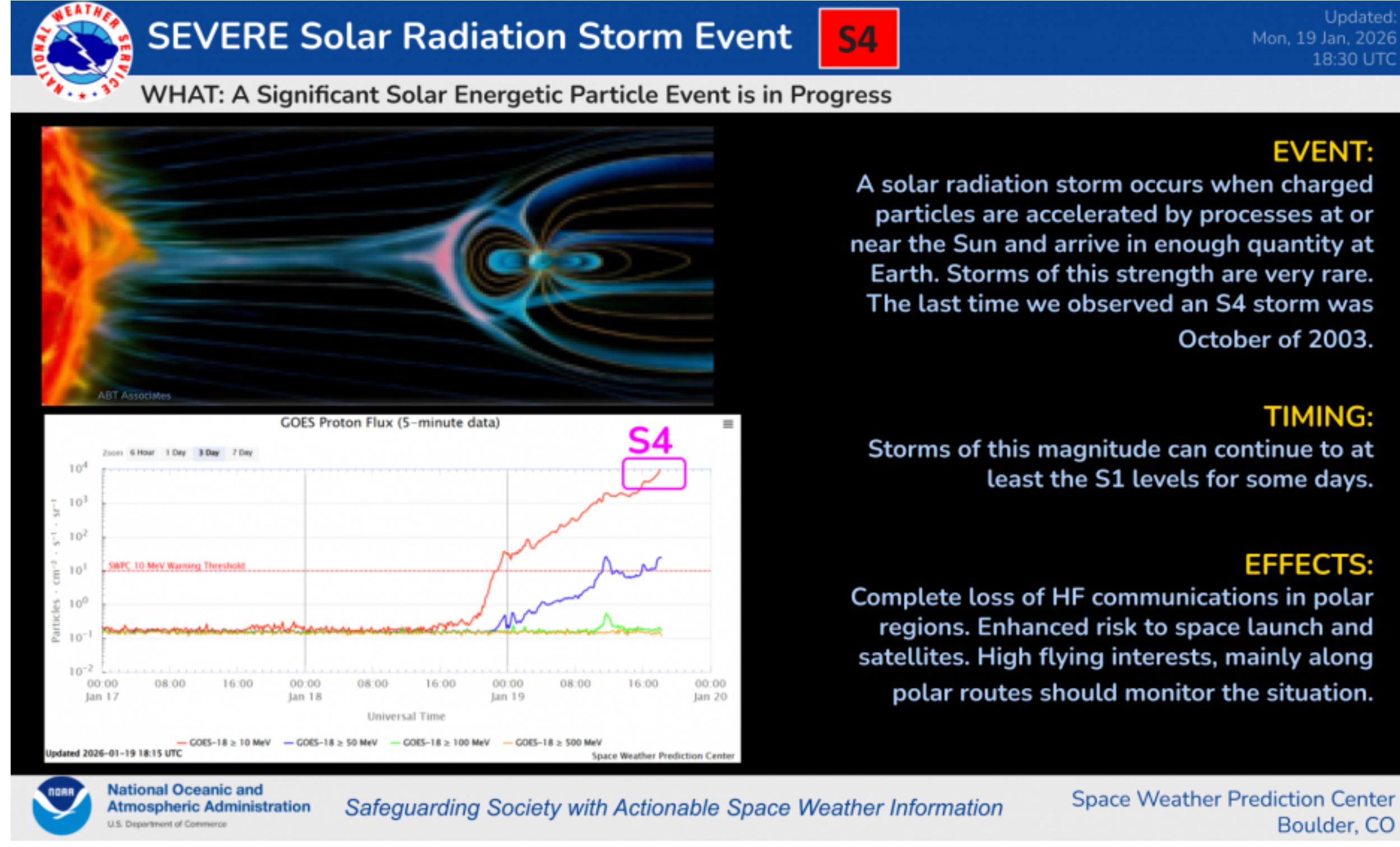


## S4 (SEVERE) SOLAR RADIATION STORM IN PROGRESS, JANUARY 19TH, 2026



## S4 (SEVERE) SOLAR RADIATION STORM IN PROGRESS, JANUARY 19TH, 2026

published: Monday, January 19, 2026 18:54 UTC

An S4 (Severe) solar radiation storm is in progress.

- NOAA's GOES-19 satellite measurements show the ongoing solar radiation storm has intensified to Severe (S4) on the NOAA Space Weather Scales, and it is **still increasing**.
- A Severe (S4) radiation storm is a rare event and exceeds the intensity during the October 2003 "Halloween" space weather storms.
- Potential Impacts:
  - Increased radiation exposure risk for astronauts and flights on polar routes.
  - Enhanced risk to satellites, especially those in geostationary orbit, and space launch systems.
  - Loss of over-the-horizon high-frequency communications in polar regions.
- SWPC has notified airlines, FAA, NASA, FEMA, NERC, and other stakeholders to support preparedness actions as conditions evolve.

This significant level has not been observed since October, 2003. Potential effects are mainly restricted to aviation polar routes, high frequency (HF) radio communications in polar regions,



National Oceanic and Atmospheric Administration  
National Weather Service  
National Centers for Environmental Prediction  
Space Weather Prediction Center  
325 Broadway, Boulder CO 80305

Disclaimer  
Privacy Policy  
About NOAA's National Weather Service  
Careers in Weather

### HOME

### ABOUT SPACE WEATHER

- Impacts
- Electric Power Transmission
- GPS Systems
- HF Radio Communications
- Satellite Communications
- Satellite Drag
- Partners and Stakeholders
- Commercial Service Providers
- Federal Agencies
- International Organizations
- International Service Providers
- Space Weather Research
- Phenomena
- Aurora
- Coronal Holes
- Coronal Mass Ejections
- Earth's Magnetosphere
- F10.7 cm Radio Emissions
- Galactic Cosmic Rays
- Geomagnetic Storms
- Ionosphere
- Ionospheric Scintillation
- Radiation Belts
- Solar EUV Irradiance
- Solar Flares (Radio Blackouts)
- Solar Radiation Storm
- Solar Wind
- Sunspots/Solar Cycle
- Total Electron Content
- Additional Info
- NOAA Space Weather Scales
- Customer Needs & Requirements Study

### PRODUCTS AND DATA

- Forecasts
- 27-Day Outlook of 10.7 cm Radio Flux and Geomagnetic Indices
- 3-Day Forecast
- 3-Day Geomagnetic Forecast
- Forecast Discussion
- Predicted Sunspot Numbers and Radio Flux
- Report and Forecast of Solar and Geophysical Activity
- Solar Cycle Progression
- Space Weather Advisory Outlook
- USAF 45-Day Ap and F10.7cm Flux Forecast
- Weekly Highlights and 27-Day Forecast
- Reports
- Forecast Verification
- Geoalert - Alerts, Analysis and Forecast Codes
- Geophysical Alert
- Solar and Geophysical Event Reports
- Models
- Aurora - 30 Minute Forecast
- CTIPE Total Electron Content Forecast
- D Region Absorption Predictions (D-RAP)
- Geoelectric Field Models (US Canada 1D & 3D EMTF CONUS)
- Geospace Geomagnetic Activity Plot
- Geospace Ground Magnetic Perturbation Maps
- Geospace Magnetosphere Movies
- GloTEC
- Relativistic Electron Forecast Model
- SEAESRT
- STORM Time Empirical Ionospheric Correction
- WSA-Enlil Solar Wind Prediction
- WAM-IPE
- Observations
- Boulder Magnetometer
- Coronagraph
- GOES Electron Flux
- GOES Magnetometer
- GOES Proton Flux
- GOES Solar Ultraviolet Imager (SUVI)
- GOES X-ray Flux
- LASCO Coronagraph
- Planetary K-index
- Real Time Solar Wind
- Satellite Environment
- Solar Synoptic Map
- Space Weather Overview
- Station K and A Indices
- Summaries
- Solar & Geophysical Activity Summary
- Solar Region Summary
- Summary of Space Weather Observations
- Alerts, Watches and Warnings
- Alerts, Watches and Warnings
- Notifications Timeline
- Experimental
- ACE Real-Time Solar Wind
- Aurora Viewline for Tonight and Tomorrow Night
- International Civil Aviation Organization (ICAO) Space Weather Advisory
- Solar Terrestrial Relations Observatory (STEREO)
- Data Access

### DASHBOARDS

- Aurora
- Aviation
- Electric Power
- Emergency Management
- Global Positioning System
- Radio
- Satellites
- Space Weather Enthusiasts Dashboard

### MEDIA AND RESOURCES

- Education and Outreach
- Glossary
- News Archive
- Newsroom

### TESTBED

### SUBSCRIBE

### WORKSHOP

### FEEDBACK