

### Section 3.1

G3A01 (A)

What is the significance of the sunspot number about HF propagation?

- A. Higher sunspot numbers generally indicate a greater probability of good propagation at higher frequencies
- B. Lower sunspot numbers generally indicate greater probability of sporadic E propagation
- C. A zero sunspot number indicates that radio propagation is not possible on any band
- D. A zero sunspot number indicates undisturbed conditions

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G3A03 (C)

Approximately how long does it take the increased ultraviolet and X-ray radiation from solar flares to affect radio propagation on Earth?

- A. 28 days
- B. 1 to 2 hours
- C. 8 minutes
- D. 20 to 40 hours

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G3A05 (D)

What is the solar flux index?

- A. A measure of the highest frequency that is useful for ionospheric propagation between two points on Earth
- B. A count of sunspots that is adjusted for solar emissions
- C. Another name for the American sunspot number
- D. A measure of solar radiation at 10.7 centimeters wavelength

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G3A10 (C)

What causes HF propagation conditions to vary periodically in a roughly 28-day cycle?

- A. Long term oscillations in the upper atmosphere
- B. Cyclic variation in Earth's radiation belts
- C. The sun's rotation on its axis
- D. The position of the moon in its orbit

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G3A11 (D)

How long does it take charged particles from coronal mass ejections to affect radio propagation on Earth?

- A. 28 days
- B. 14 days
- C. 4 to 8 minutes
- D. 20 to 40 hours

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G3A14 (B)

How are radio communications usually affected by the charged particles that reach Earth from solar coronal holes?

- A. HF communications are improved
- B. HF communications are disturbed
- C. VHF/UHF ducting is improved
- D. VHF/UHF ducting is disturbed

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