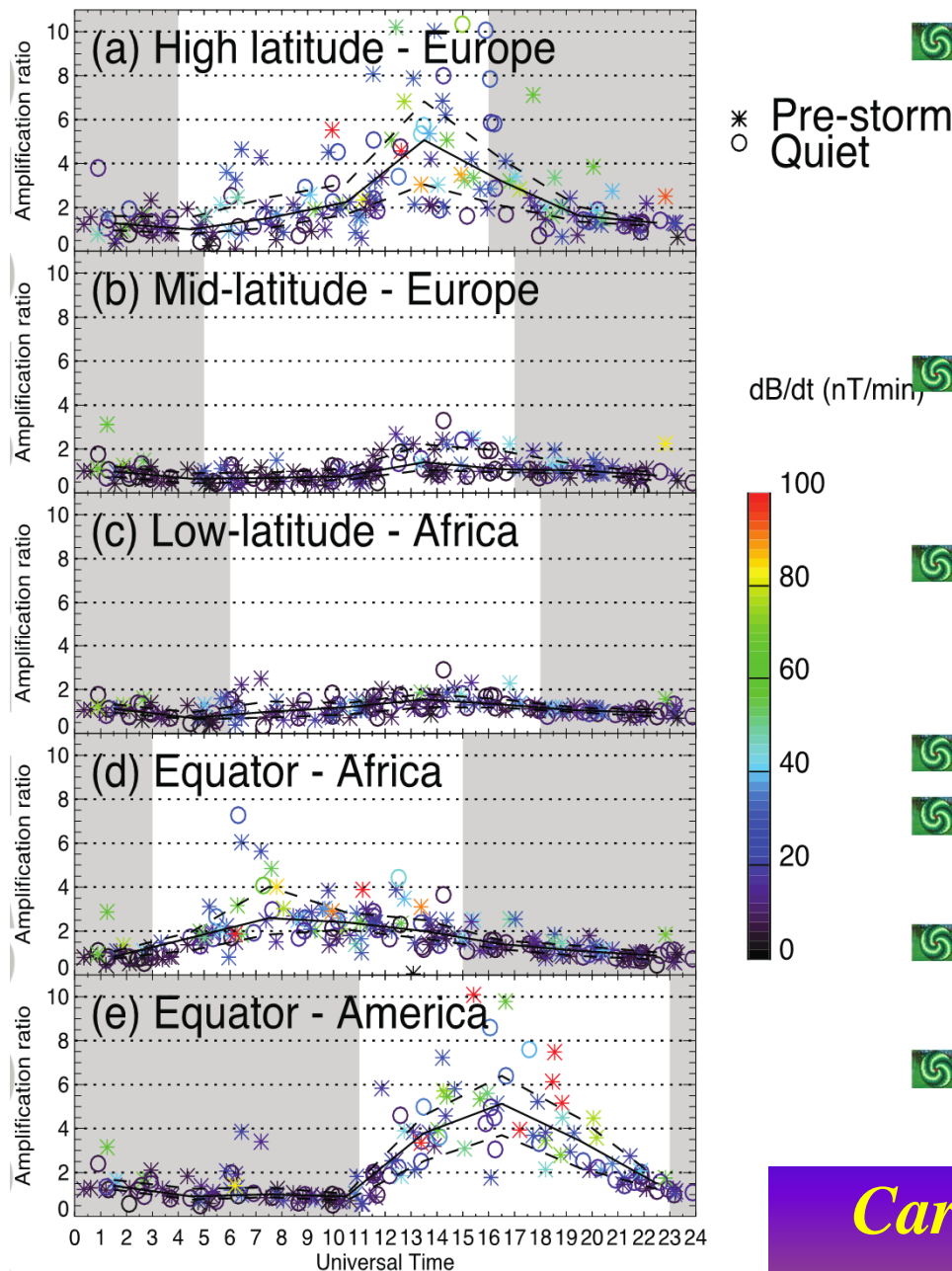


Recent Investigations of GIC Currents at the Equator

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Recent investigations of GIC currents at the equator



Amplification of ionospheric current due to GIC responding to the arrival of interplanetary shocks (abrupt pressure increases in solar wind) – Pre-storm and quiet times

High latitude region response is well known – caused by auroral electric current system

Recently, we demonstrated that such impacts are also stronger in the equatorial regions

– Stronger at noon. Weaker at night

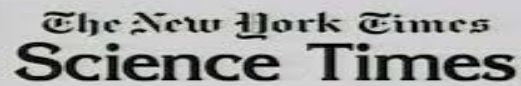
– Corresponds to well known variations of the equatorial anomaly

- Equatorial electrojet is amplifying GIC during Interplanetary shock

- Power grids can be affected even at quiet times

Carter, Yizengaw, et al, GRL, 2015

Media Coverage about the new investigation



The New York Times
Science Times

Odd Space Weather Leads To Electrical 'Bermuda Triangle'



NATURE WORLD NEWS

Space Weather and Earth: Equator Power-Grid Effects



Space Weather Creates Electrical 'Bermuda Triangles'



Jet of Electric Current Boosts Space Weather at Equator



Boston College Scientists Uncover Equator's Vulnerability To Space Weather



How Space Weather Effects Extend To the Equatorial Regions