Earthquake Magnitude vs. Space Weather Variables

Zane van Campfort and Roman Avery 07/12/21

Variables used:

- R Sunspot Number
- ap Geomagnetic Activity Index
- \bullet f10.7 Measure of 10.7cm radiation emitted from Sun
- AE Auroral Geomagnetic Activity Index
- AU Upper boundary of recorded geomagnetic activity
- PCN Polar Geomagnetic Activity Index
- Proton flux (energy >2MeV)
- Proton flux (energy >10MeV)
- Proton flux (energy >30MeV)

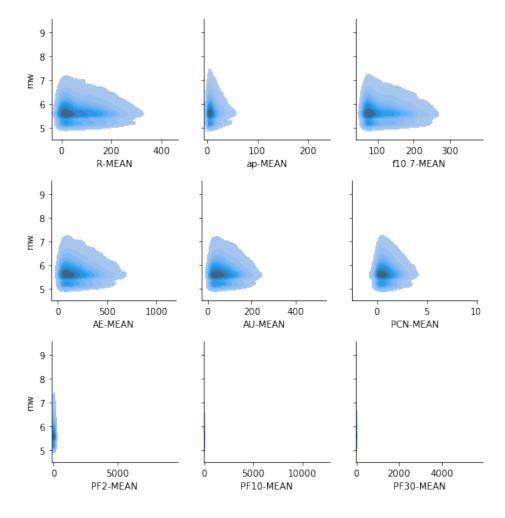


Figure 1: Variable Mean Density Plots

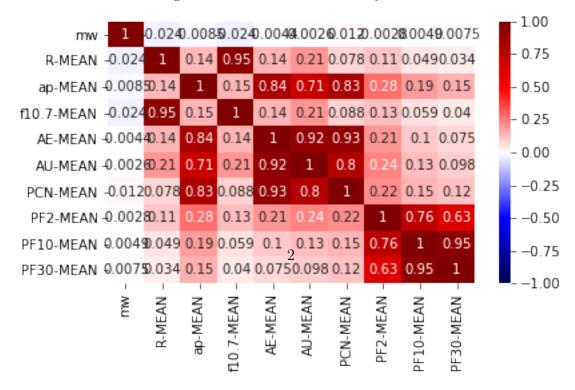


Figure 2: Variable Mean Correlation Matrix

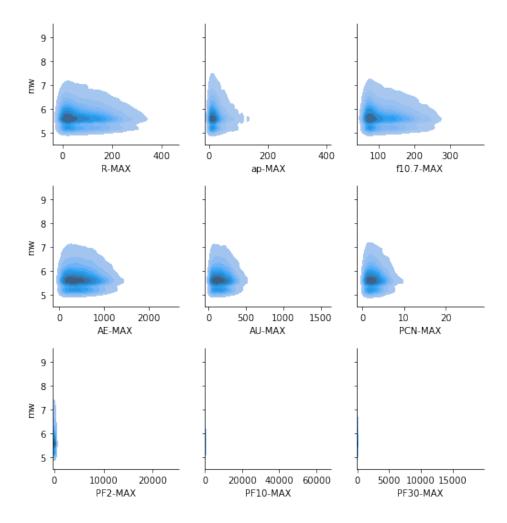


Figure 3: Variable Maximum Density Plots

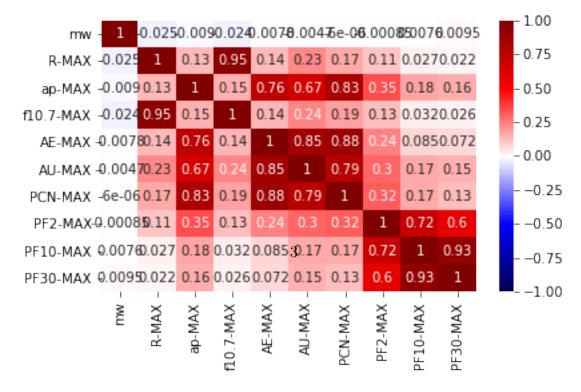


Figure 4: Variable Maximum Correlation Matrix

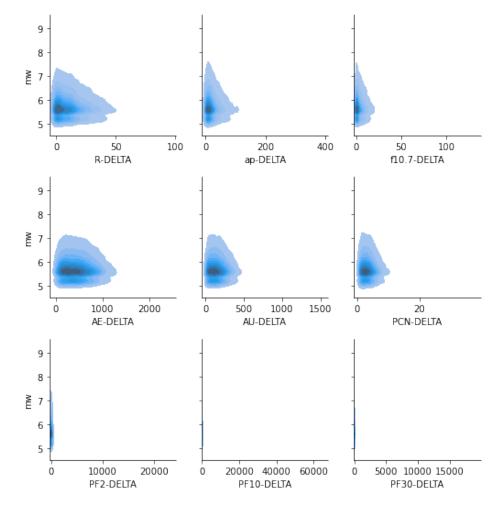


Figure 5: Variable Delta Density Plots

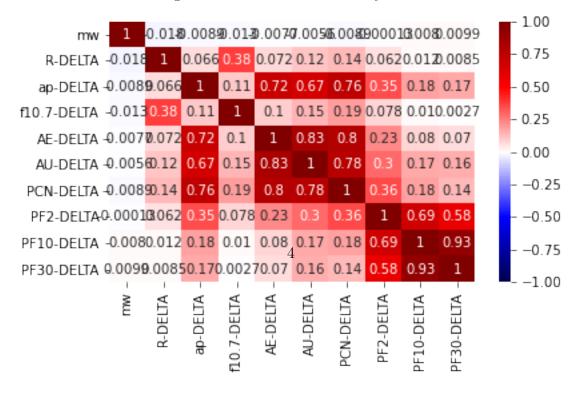


Figure 6: Variable Delta Correlation Matrix

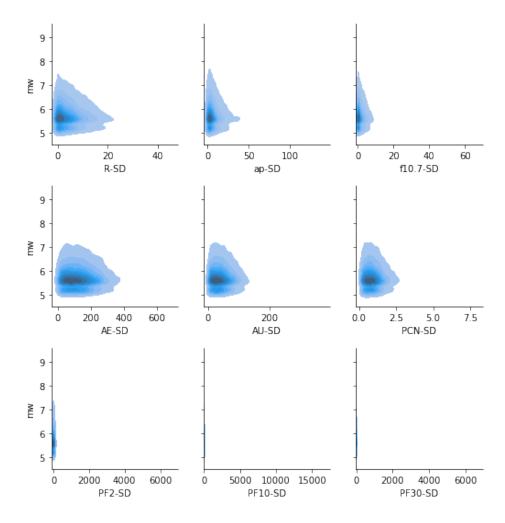


Figure 7: Variable Std. Dev. Density Plots

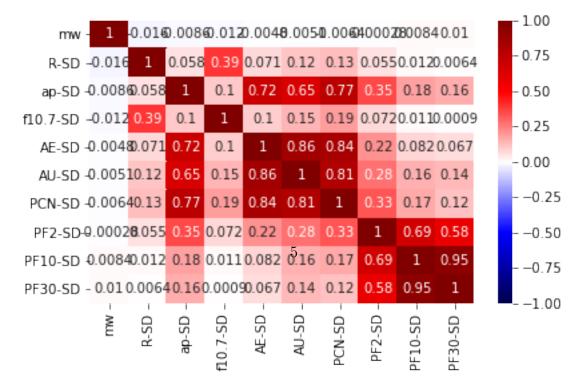


Figure 8: Variable Std. Dev. Correlation Matrix