How the solar wind dynamo affects the two polar regions differently

Jone Peter Reistad (jone.reistad@ift.uib.no)¹, Nikolai Østgaard¹, Kjellmar Oksavik¹ Department of Physics and Technology, University of Bergen, Norway

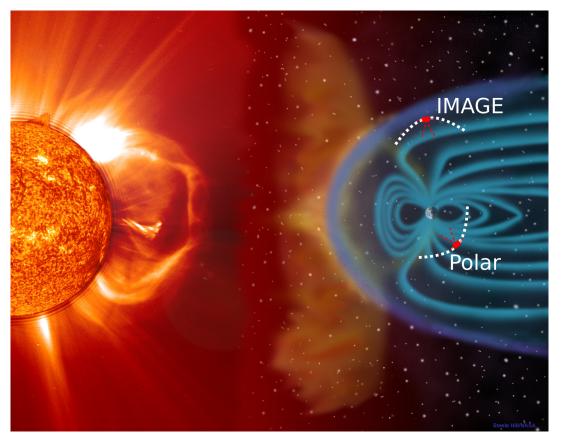
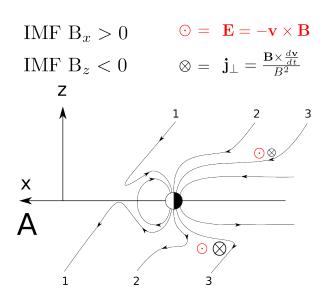
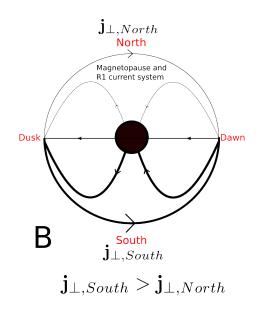




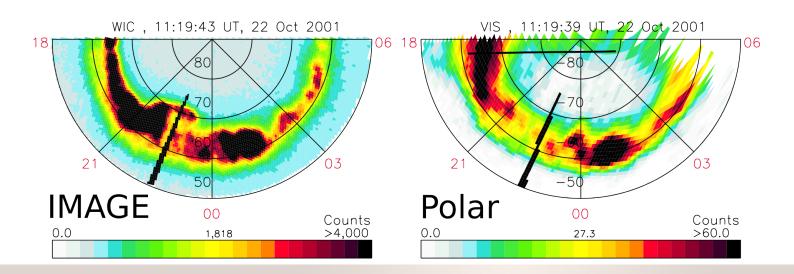
Image credit: Steele Hill/NASA

Solar wind dynamo - concept





An example





Conclusion

- \rightarrow The two hemispheres respond differently to solar wind input when IMF as a significant B_x component during B_z negative
- → The observed differences are consistent with theory
- → Solar wind dynamo induced currents are most likely to affect Northern Hemisphere during IMF B_x negative conditions
- → Opposite in Southern Hemsiphere
- → Result relevant for models

