## JOURNAL CLUB

## Hall Physics in Magnetic Reconnection

by

Antonius Otto Geophysical Institute, UAF

## ABSTRACT

The Hall effect plays a role in many technical applications and it is important for the electrical currents in the ionosphere. In recent years it has become apparent that Hall physics is an important aspect for magnetic reconnection. In particular the Geospace Environmental Modeling (GEM) Magnetic Reconnection Challenge provided new insight into the role of Hall physics for reconnection. For a particular initial configuration it appears that the magnetic reconnection rate is determined by the inclusion of Hall physics. If this were applicable in general those results would resolve the magnetic reconnection problem. I will revisit the research of recent years and include new results to address the role of Hall physics in magnetic reconnection.

Friday, February 22 Globe Room 3:45 pm