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Title  
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Impact of cold ions on magnetic reconnection: reconnection rate and energy budget analysis

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Speaker  
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Abstract  
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The magnetosphere is a place where plasma from different sources mixes. Without thermalization, each of these plasma populations conserve their own temperature, resulting into a multi-temperature plasma. In such a plasma, each subpopulation has its own characteristic scales, which can be very different depending on the temperatures. In this presentation, we will develop the impact of such a plasma on a multi-scale process: the magnetic reconnection. Using mainly numerical simulations, I will discuss the impact of cold ions on several aspects of magnetic reconnection: signatures, reconnection rate, energy conversion, etc. We will see how and where cold ions impacts magnetic reconnection, and reciprocally.