

Space Science Seminar
Tuesday, 2020 February 18
10:30 a.m.
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Coronal Structure, Dynamics, and Heating

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Host: Dr. Sabrina Savage
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The corona of the Sun shows fine structure down to the smallest scales we managed to observe so far. Based on theory one could expect the actual conversion of magnetic into thermal energy to operate on scales down to meters or less, far beyond the reach of instrumentation in the foreseeable future. Still, the combination of highest-resolution observations with MHD modelling can provide insight into how coronal structures form, and how they evolve. This talk will concentrate on loops in active regions and how they are energised through the changing magnetic field in the photosphere. 3D-MHD models with slow driving like in the field-line braiding picture provide an understanding of the large-scale structure of an active region, high-resolution EUV observations put further constraints on the braiding model, 2D-reconnection models give insight into the formation of small-scale UV bursts, to give a few examples. The intimate combination of modelling and observations does provide valuable insight into the structure and dynamics of the corona.

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