Matthew West Southwest Research Institute Oral (Invited Talk)

The middle corona, the region roughly spanning heights from 1.5 to 6 solar radii, encompasses almost all the influential physical transitions and processes that govern the behavior of coronal outflow into the heliosphere. The solar wind, eruptions, and flows pass through the region, and they are shaped by it. Importantly, the region also modulates inflow from above that can drive dynamic changes at lower heights in the inner corona. Consequently, the middle corona is essential for comprehensively connecting the corona to the heliosphere. Nonetheless, because it is challenging to observe, the region has been poorly studied by both major solar remote-sensing and in-situ missions and instruments. In this presentation I will define the middle corona and show its fundamental connection to the heliosphere. I will link structures observed in the region with those anticipated to be observed in PUNCH, discussing some of the challenges we need to overcome to have a unified view of the solar atmosphere from the photosphere out into the heliosphere. Presentation file

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