NCAR | ATMOSPHERIC CHEMISTRY OBSERVATIONS & MODELING

ACOM Seminar

All About Waves: Stratosphere-troposphere Coupling in the Southern Hemisphere

Martin Jucker
University of New South Wales

Date: Monday, October 31st, 2022, 3:30pm – 4:30pm, in FL2-1022

Livestream: https://operations.ucar.edu/live-acom

ABSTRACT

While based on the same physics, stratosphere-troposphere coupling is different in the Southern Hemisphere (SH) compared to the Northern Hemisphere (NH). The polar vortex is much stronger, and that makes all the difference: it is all but impossible for waves smaller than wavenumber-1 to propagate into the stratosphere; the isolated vortex results in considerable ozone loss; Sudden Stratospheric Warmings (SSWs) are almost impossible; the polar vortex forms earlier and breaks down later. So, is the southern stratosphere boring? Not at all! I will show some of the interesting things which still happen, and that the stratosphere — even in the absence of SSWs — still has a strong influence on surface weather and climate. And of course, it's all about waves.

For more information please contact Shaun Bush, sbush@ucar.edu, phone 303-497-8060.
The National Center for Atmospheric Research is operated by the University Corporation for Atmospheric Research under the sponsorship of the National Science Foundation