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NASA Earth Exchange Global Daily Downscaled Projections (NEX-GDDP-CMIP6)

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The NASA Earth Exchange Global Daily Downscaled Projections CMIP6 archive (NEX-GDDP-CMIP6) contains daily climate projections of nine variables derived from thirty-five CMIP6 GCMs and four SSP scenarios (SSP2-4.5, SSP5-8.5, SSP1-2.6 and SSP3-7.0) for the period 2015-2100. Each of these climate projections was downscaled to a spatial resolution of 0.25 degrees x 0.25 degrees using the daily version of the BCSO statistical downscaling method. The purpose of this archive is to provide a set of global, high-resolution, bias-corrected climate change projections that can be used to evaluate climate change impacts on processes that are sensitive to finer-scale climate gradients and the effects of local topography on climate conditions. In this session, we will provide an overview of the methodology, as well as the details of its execution on the NASA Advanced Supercomputing (NAS) facility. In addition, we will discuss the various considerations, assumptions, and limitations of the downscaled data. Lastly, we will illustrate the various modes of accessing the archive, including examples using the NASA Regional Climate Model Evaluation System (RCMES) and cloud computing resources.