

EGU23-3654, updated on 19 Apr 2024

<https://doi.org/10.5194/egusphere-egu23-3654>

EGU General Assembly 2023

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Highlights of the ACCLIP Campaign 2022: Operations and Science

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The Asian summer monsoon Chemical and Climate Impacts Project (ACCLIP) is a large airborne field campaign conducted over the Western Pacific in summer 2022. The campaign deployed two research aircraft, the NCAR Gulfstream V (GV) and the NASA WB-57, both with extensive payload of chemistry and microphysics measurements for trace gas and aerosol content to investigate the Asian monsoon convective outflow at the UTLS levels. The campaign also included ground-based balloon soundings and extensive collaborative measurements in the region. Based from Osan, Republic of Korea, a total of 29 research flights were conducted covering the vertical range of 300 ft above sea level to ~70 hPa over a large domain of western Pacific (15°N-43°N, 125°E-155°). These measurements provide novel information on the role of Asian summer monsoon in altering atmospheric composition, serving as a distinct linkage between the weather and the climate through its impact on ozone chemistry and aerosol radiative effect. Observational highlights and initial indications of post campaign data analysis and modeling will be presented in this overview.