

**LODEWAVE Phase II**  
**(L**O**ng-**D**uration balloon Experiment of gravity **W**AVE over Antarctica)**

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In order to clarify the roles of atmospheric gravity waves in the Antarctic region in driving the general circulation, we planned a super pressure balloon (SPB) observation of atmospheric gravity waves over Antarctica, which is called LODEWAVE (L**O**ng-**D**uration balloon Experiment of gravity **W**AVE over Antarctica). The first campaign observation was carried out at Syowa Station (69°S, 40°E) in Antarctica from January to February 2022 (during JARE63 summer period). Its second phase is planned in austral summer of FY2023 during the 65th Japanese Antarctic Research Expedition (JARE65). In this presentation, we will introduce the purpose of this project, current status of the second campaign, and its future plan.