

# Investigation of electron density profile in the lower ionosphere by the Alaska Student Rocket experiment

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The Alaska Student Rocket Program (ASRP) is to provide science data in the ionosphere while validating the performance of student-designed subsystems from the University of Alaska Fairbanks, Tokai University and Toyama Prefectural University. The mission of ASRP includes development of standardized payload subsystems and manuals that facilitate increasingly complex future payloads and the maximum transfer of corporate knowledge to future student participants. Additionally, the mission will provide opportunities for students to design, implement, and test innovative systems through hands-on experience and collaboration between disciplines, universities and practicing aerospace engineers and scientists. We perform the rocket experiment using SRP-4 rocket made by ASRP, which the science objective of experiment is to study the electron density profile in the D-region of the ionosphere at high latitudes.