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ESTABLISHING A CULTURE OF DRINKING IN SPACE: REALIZING A BEER EXPERIENCE IN SPACE EQUIVALENT TO THAT ON EARTH

Abstract

As space travel transitions from exploration to tourism, humanity is entering an era where people will reside in space. In this new age, it is essential not only to establish survival infrastructure but also to develop technologies, services, and cultures that enable a comfortable and fulfilling lifestyle in space. Enhancing food and beverage experiences is a crucial part of this effort. However, research on alcohol consumption in microgravity remains largely unexplored, and the "culture of drinking in space" has yet to be established. ASTRAX is working to develop and commercialize beer that can be consumed in space, aiming to provide the first commercial space drinking service in the private space travel era. The goal is not just to make drinking alcohol in space safe but to replicate the experience of enjoying an ice-cold beer from a mug, just like on Earth. This challenge extends beyond technological development and is directly connected to establishing a new lifestyle in future space societies. In microgravity, the movement of liquids, the balance of carbonation, and the mouthfeel of beer differ significantly from those on Earth. However, the social and cultural significance of drinking remains unchanged. The act of toasting in space could become a new form of communication in future space societies. Additionally, it is essential to explore how alcohol consumption contributes to psychological well-being during long-term space missions. Furthermore, by exploring unique drinking styles that can only exist in space, this research could lead to the development of not only beer but also a broader range of space beverage technologies, services, and cultures—including wine, cocktails, and soft drinks. This study will examine the cultural and technical challenges of drinking in space and consider how drinking services and culture may take root in future space societies. As private space travel advances, the act of enjoying beverages will become an essential aspect of space hospitality. Through this research, we aim to establish a new lifestyle in space and bridge the culinary and beverage cultures between Earth and space.