

## **ADVANCED BRAZILIAN SYSTEM TO PROVIDE MICROGRAVITY ENVIRONMENT FOR RESEARCH, DEVELOPMENT AND TESTING**

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**Abstract:** This work presents the system composed by the sounding rocket VSB 30 licensed to the company Avibras and its payload Suborbital Microgravity Platform, SMP, developed with the company Orbital Engenharia. This system allows the technological innovation in many different industries by providing access to environment in microgravity for research, development, and testing. Defense pharmaceutical, aeronautical, and electronics are examples of industries beneficiaries of research and development in microgravity environment. Microgravity research deals those phenomena that become relevant in low gravity environments. Results has the potential for breakthroughs that can not only improve life on Earth, but also allow the continuity of the space exploration. Microgravity provides an important environment for both basic and applied research in many different areas such as physics, biology, upper atmosphere, medicines, and materials. The system composed of the VSB 30 suborbital rocket and the Suborbital Microgravity Platform is a national product born in government institutes and now being marketed by Brazilian industries on a global scale.