Venera-D: Russian mission for complex investigation of Venus

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Russian Federal Space program for 2006-2015 includes a mission “Venera-D” for complex investigation of Venus. It is planned to be launched around 2016, by rocket Soyuz-2. According to preliminary investigation in Babakin Center mass of 1900 kg may be delivered to Venus. This mass may include orbiter, balloon(s), lander(s) with long living station on the surface of Venus. Scientific goals: investigation of structure, composition and dynamics of the atmosphere, structure and chemical composition of the clouds and nature of the hazes, investigation of the composition and properties of the surface, search for the volcanic activity, interaction between atmosphere and the surface, search for the electric and acoustic activity in the atmosphere, search for seismic activity, investigations of ionosphere and magnetosphere. A conception of the mission is under development now: new elements, like balloons, flying at different levels in the atmosphere may be down to 10 km altitude with landing and working on the surface, and descend module with long living station on the surface are considered. With existing electronics working at around 300C and corresponding insulation the life of station on the surface may be provided for a month

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