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COMPARATIVE ANALYSIS OF THERMOELECTRIC GENERATORS PARAMETERS

Abstract

Other sources of energy in space applications remain unexploited such as heat. Indeed the exchange of heat is considered generally on board spacecraft as hostile, destructive and undesirable, thereby a different means are used to reduce its effect on board spacecraft. Heat being an important source of energy, it remains badly exploited on spacecraft and its applications remain limited. We present in this paper one of the methods used to convert heat energy to electrical energy by using thermoelectric device, the goal becomes therefore to choose a device capable to give a best performances through a comparative analysis between different commercial thermoelectric generator devices to be able subsequently to make a choice of the component to be used for future design. This analysis will allow us thereafter to design a thermoelectric generator as secondary power source for small satellite by exploiting the external thermal properties of the spacecraft on orbit.