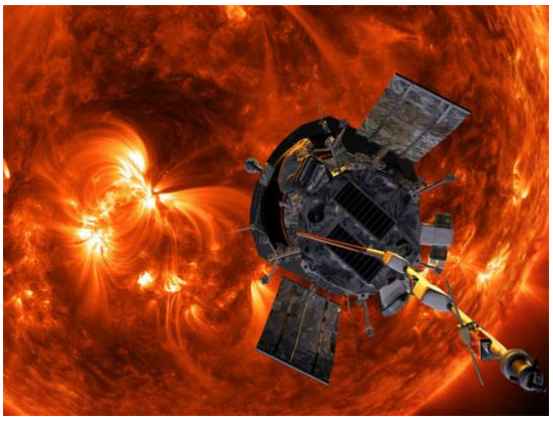
Maturation of PCM-HSD Technology

Summary report



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2 Summary

The objective of the Project Maturation of PCM Technology was to acquire a maturity high enough to support the use of PCM-HSD's in a variety of applications.

The acquired maturity has allowed the transfer of the technology to a Belgian Industry, Sonaca.

It is possible now:

- to detail the design of a PCM-HSD able to fulfill the requirements of a chosen missions;
- to develop PCM-HSD so as it is easily applied on flexible and scalable geometries for spacecrafts, launchers and planetary rovers;
- to manufacture and test PCM-HSD models to verify manufacturing processes and to qualify the technology for Low Earth Orbit ("LEO" orbit), considering radiation resistance, fatigue, burst prevention and PA/QA aspects,
- to be able to predict the thermal performance for a given application.
- to design PCM-HSD with storage energy ranging from 1000 J to 800 000 J.

Furthermore, Additive Manufacturing has been developed for CubeSat and LEO applications and gives an enhanced performance. Low-cost market is therefore a target which is encountered.