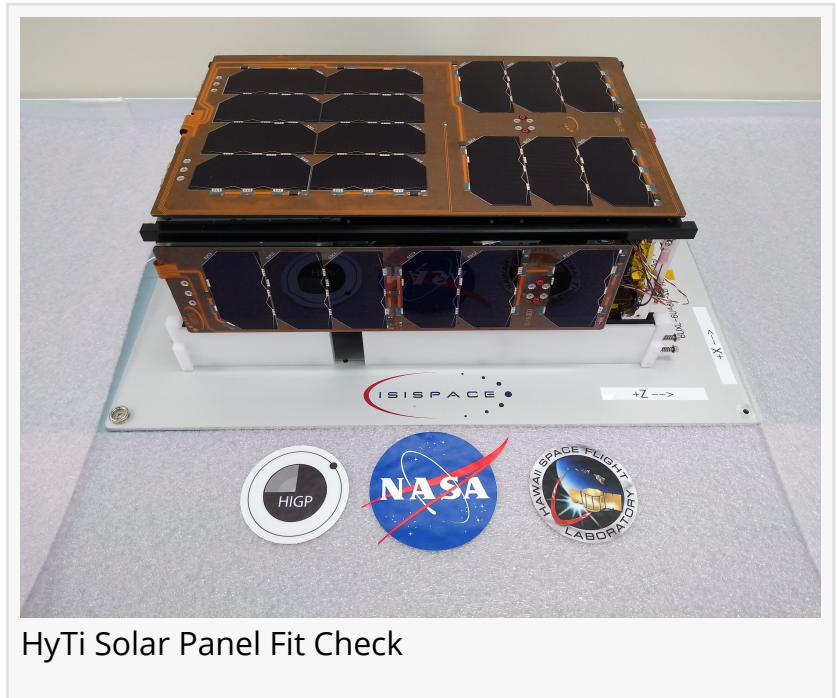


WEST COAST SOLUTIONS AND CREARE SELECTED FOR HYTI-2 MISSION

The West Coast Solutions -Creare Team was selected by the Hawaii Space Flight Laboratory to play a critical role in the development of the HyTI-2 imager.

HUNTINGTON BEACH, CA, USA, January 10, 2023 /EINPresswire.com/ -- The West Coast Solutions (WCS) -Creare Team was selected by the Hawaii Space Flight Laboratory (HSFL) to play a critical role in the HyTI-2 payload as part of the upcoming ACMEs satellite mission. The ACMEs mission is funded by the NASA InVEST program, which validates new technologies in space prior to use in future Earth Science missions. The HyTI-2 payload will simultaneously validate two new technologies, each representing an important advance in satellite remote sensing capability for Earth science.



The first technology is called Active Thermal Architecture (ATA), which will overcome the difficulty of maintaining a longer cryocooler duty cycle in the warm LEO orbit by using a miniature pumped fluid loop to remove waste heat via a radiator. The second new technology is the second generation Hyperspectral Thermal Imager (HyTI), which captures both high spectral and spatial long-wave infrared images using a spatially modulated interferometric imaging technique. The three main areas where the HyTI imager will be useful are: studying the gases emitted during a volcanic eruption, supporting precision agriculture, and better understanding evaporative transport mechanisms.

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Miguel Nunes

As with the original HyTI mission, WCS will serve as the lead for Cryocooler Systems Engineering

on the HyTI-2 Team. In this role, they will provide critical subject matter expertise on all aspects of cryocooler integration, including exported vibration mitigation, thermal management, and electromagnetic interference mitigation. In addition, WCS will again work in partnership with Creare LLC to deliver the Creare Micro Cryocooler Control Electronics for Tactical Space (MCCE-TS) as well as the Creare/WCS Cryocooler Active Ripple Filter (CARF) electronics. The MCCE-TS product brings a lower cost and more compact controller to the space cryocooler market. The CARF electronics filter out EMI generated by the cryocooler that would otherwise impact the data signal.

“We chose West Coast Solutions again for HyTI-2 because of the amazing experience we had working with them on HyTI-1. As far as we know, WCS and Creare are the only companies that can provide this combination of control electronics, EMI filtering, and cryocooler integration support. It is important to emphasize that we needed a combination of the cryocooler control system and the active ripple filter system because of the electrical sensitivity on the rest of the spacecraft bus. WCS and Creare have been great to work with, and we look forward to continuing this longstanding and successful collaboration.” said Miguel Nunes, the Deputy Director of the Hawaii Space Flight Laboratory, as well as the Co-Investigator and Systems Engineer for the HyTI mission.

Creare is an innovative technology and product development company of 170 people located in Hanover, NH. For almost 60 years, Creare's world-class engineers and staff have collaborated to solve problems and bring ideas from the drawing board to high-performance products for critical applications. Their efforts have resulted in new companies that dominate their market segment to solutions that have enabled the exploration of space and efficient manufacture of critical defense systems. The current work leverages the expertise of Creare and WCS's space cryocooler and electronics business areas to provide a solution that meets new space customer needs.

WCS is a multidisciplinary team of experienced aerospace and defense professionals committed to solving technical problems concerning cryogenics, space electronics, and expeditionary power. Their extensive body of work includes many successful Department of Defense, space, civil research, and commercial programs. The company is 7 years old and serves its customers from their recently expanded facility in Huntington Beach, CA. The new WCS Space Hardware Manufacturing Lab, to be commissioned in February 2023, will be used to support HyTI-2.

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