PRESS RELEASE

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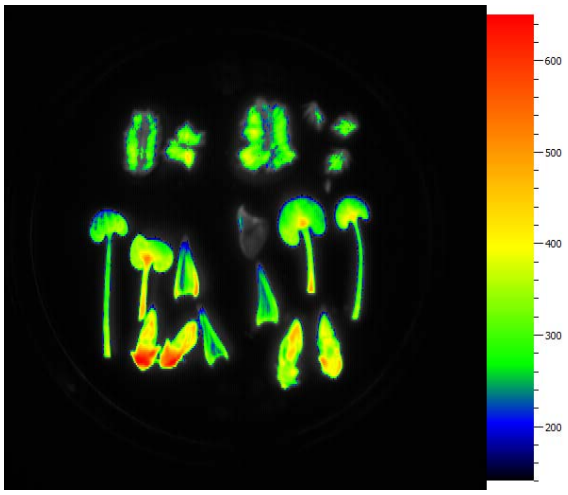
Idea for future ISS exploitation

The idea *Variable chlorophyll fluorescence kinetics as a tool for non-invasive method for monitoring physiological performance of primary producers in LSS* was submitted as response to ESA announcement *Call for Ideas: ISS for Exploration*.
Methods using variable chlorophyll fluorescence kinetics are commonly used for monitoring of physiological status of plants on the Earth, but no such measurements have been performed in spaceflight conditions. During the spaceflight, the plants are subjected to various stresses, especially microgravity and cosmic radiation that could negatively affect their physiological status and these changes as well as possible adaptation/acclimatization processes could be tracked by fluorescence methods. If ground and flight tests prove that fluorescence data are reliable and fast indicator they could be used for monitoring of physiological status of primary producers in the life support systems. The data will be used not only for system regulation but also as early warning.
The idea is being evaluated by ESA now and the results should be posted in June 2011.

Figure: Fluorescence image of carnivorous plants. Author: J. Kvíderová



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