LUNA: low-flying UAV-based forest monitoring system

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The LUNA project is aiming to develop an information system for precision forestry and, in particular, the monitoring of eucalypt plantations that is first and foremost based on multi-spectral imagery acquired using low-flying uav’s. The presentation will focus on the first phase of image acquisition, processing and analysis for a series of pot experiments addressing main threats for early-stage eucalypt plantations in Portugal, i.e. acute, chronic and cyclic hydric stress, nutrient stress, fungal infections and insect plague attacks. The imaging results will be compared with spectroscopic measurements as well as with eco-physiological and plant morphological measurements. Furthermore, the presentation will show initial results of the project’s second phase, comprising field tests in existing eucalypt plantations in north-central Portugal.