



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.