



The Ping Pong method

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A photogrammetric method was developed to aid the field scientist to survey objects on location for quantitative measurements in the laboratory. The extra toolset that needs to be taken to the field has been reduced to a minimum and adds only 0.2 kg to a field back assuming that a digital camera is already part of regular field equipment. At the same time precision of the photogrammetric survey is not sacrificed over accuracy. An outcrop wall with a size of approximately 30 m by 20 m was surveyed with the Ping Pong method employing a typical single lens reflex digital camera with fixed focal length and taped down focusing distance. Results were compared to an independent survey performed with a total station. The calculated discrepancy of length measurements between both survey methods was at the order of some mm. This accuracy is deemed sufficient for a field technique. Preparation of the survey in the field and image acquisition will take approximately 15 minutes, pre-analysis of the data and preparation of the data for further analysis in digital photogrammetric workstation software - that is often readily available at universities and research institutions - takes approximately 30 minutes. The method was tested with different digital cameras and several groups of students in the field. A detailed manual for field and pre-analysis work was prepared to aid novice users to get results without studying expert user manuals or textbooks. This method allows field scientists to use their images not only as a permanent record of a field scene, but also for quantification. The method is perfectly suited for work in remote areas and in all cases where bulk and weight of field equipment is a limiting factor.