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Towards a Portable Gravimeter ANDREW CHEW, DSO National Laboratories, MARAL SAHELGOZIN, J.S. RAAJ VELLORE WINFRIED, LI YUAN LEY, MINGLI YONG, Nanyang Technological University, YUAN LIANG LIM, DSO National Laboratories, RAINER DUMKE, Nanyang Technological University — In recent years, there has been increased interest in the use of atom interferometers to measure gravity with high precision and accuracy. Such a atom gravimeter can be used to measuring fundamental constants such as Newton's G and in practical applications such as geodesy and prospecting. Most atom gravimeters are designed for operation in the laboratory and not for transportation to various different environments. We present here the preliminary results of our portable atom gravimeter. Our gravimeter employs two different atomic species, namely Rb-87 and Cs-133. The use of two different species of atoms allows us increase the output bandwidth as we can make nearly simultaneous measurements of two different atomic species. This portable gravimeter will thus allow us to transport the gravimeter to a variety of environments and allow us to make measurements of gravity in situ.

Andrew Chew
DSO National Laboratories

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