THE ELGINFIELD INFRASOUND ARRAY (ELFO): CONSTRUCTION AND EARLY RESULTS

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The Elginfield Infrasound Array (ELFO) was established in January, 2006. This research array is composed of four elements employing Chaparral 2.5 microphones. The array is situated on wooded terrain surrounding the University of Western Ontario's Elginfield astronomical observatory and is funded by Natural Resources Canada. The triangular array configuration has approximately 500m element spacing, constrained by the size of the available wooded terrain. The primary purpose of the array is to provide acoustic registration of meteors occurring over Southern Ontario as one component of the Southern Ontario Meteor Network (SOMN), a multi-instrumental meteor detection system now in routine operation. The data fusion nature of the SOMN is designed to provide highly constrained metric and energy measurements for individual meteor events to refine numerical modelling of meteoroid ablation and validate analytic treatments of meteor source energies. The design, construction and operation of ELFO will be discussed. Examples of regional detections using ELFO and a noise survey of the site will also be presented.