

in IMS Infrasound Array Geometry Tools

A well planned array geometry is fundamental in the construction of state-of-the-art infrasound arrays. The International Monitoring Division (IMS) has made a concerted effort to create new and improved tools to use, when designing and planning the construction of a new and existing IMS network infrasound station. When using the tool, the following is considered: Number of array elements, array area, minimum distance between elements, irregular placement and omnidirectionality. The loss of individual elements is also taken into account, while still minding all initial requirements. The projection of array geometries onto geographical coordinates allows IMS engineers to not only plan ahead, but to also use these tools in the field and make adjustments on the fly. Though designed for initial array planning, these tools can also be used when considering the relocation of elements at existing infrasound arrays. The new planning technique has been recently implemented in the design of IS01, Argentina and tested on site with promising results. Moving forward, the focus of these design tools remains the optimization of relevant infrasound detections at IMS stations, while bringing convenience into station design and/or upgrades.

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