# OAK RIDGE NATIONAL LABORATORY

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# **Electrodynamic Scalar Wave Generation and Detection**

## **Disclosure Number**

201303038

### **Technology Summary**

The invention relates to electromagnetic communications. Provided are: (1) a theoretical basis for the scalar wave on the basis of published theorems; (2) a scalar-wave equation on the basis of the author's earlier work; (3) a device to transmit the scalar wave; (4) analytical predictions for the resultant wave in the plane of the transmitter and along the axis of the transmitter; and (5) a device to detect the scalar wave (receiving antenna) on the basis of the reciprocity theorem.

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