

1146-94-257

Peter J Curry*, peter.j.curry@navy.mil, and **Laura Tolliver**. *Underwater Channel Modeling with Spiral Acoustic Waves. Preliminary Report*. Preliminary report.

Spiral acoustic waves have been introduced recently as a wave that transmits orbital angular momentum which may contain encoded information. In 2011, this form of wave was used to build an underwater navigation beacon by using the phase of a received signal. Our research seeks to investigate the application of spiral acoustic waves in an underwater communication system. This research highlights the difficulties posed by modeling the physics of Spiral Acoustic Waves, and discusses their incorporation with the challenging underwater models that are used. (Received January 24, 2019)