

in the Noise Levels of the Indian Ocean and their Relationship to Shipping Patterns

Tuesday, 20 June 2023 09:02 (1 minute)

Long term observations using hydrophones installed by the CTBTO in the Indian Ocean, suggest that noise levels increased from 2002 to around 2012. Since then they have been decreasing. While the increase in noise levels was related to growth in ship traffic, the reasons for the decrease are not known. This paper investigates the reasons for the decrease in two steps. The first step builds an acoustic model that uses shipping densities from the Automatic Identification System (AIS) for several years to simulate ship positions in the Indian Ocean. The ship positions are then used to model the low frequency noise levels due to cargo and tanker traffic. The second step further incorporates other inputs in the model, such as potential changes in ship velocities, and observations of long term oceanographic changes to investigate the drift in noise levels. Preliminary results suggest that a potential decrease in ship speeds is the reason for the reduction in noise levels.

E-mail

cptarun@gmail.com

Promotional text

The cause of a reduction in noise levels in the Indian Ocean

Oral preference format

in-person

Primary author: CHANDRAYADULA, Tarun (Indian Institute of Technology Madras)

Presenter: CHANDRAYADULA, Tarun (Indian Institute of Technology Madras)

Session Classification: Lightning talks: P1.3, P1.4, P5.2

Track Classification: Theme 1. The Earth as a Complex System: T1.3 The Oceans and their Properties