



London | 11 months ago

New sonar detects concealed underwater objects

Friday, 19 November 2010 | <http://www.nerve.in/news:253500354394> | channel: Europe

ACOUSTIC NERVE

"They compared the ability of TWIPS and standard sonar to discern the seabed in Southampton Water, which handles seven percent of Britain's entire seaborne trade. The seabed in this area varies in depth between 10 and 20 metres."

London, Nov 19 - Scientists have developed a new kind of underwater sonar that can detect objects like reefs and wrecks through bubble clouds that blind conventional sonar.

Just as ultrasound is used in medical imaging, conventional sonar 'sees' with sound. It uses differences between emitted sound pulses and their echoes to detect and identify targets.

These include submerged structures such as reefs and wrecks, and objects, including submarines and fish shoals.

Standard sonar does not cope well with bubble clouds resulting from breaking waves or other causes, which scatter sound and clutter the sonar image, according to a statement of the Institute of Sound and Vibration Research, UK.

Timothy Leighton from the Institute of Sound, who led the research, said: 'Better detection and classification of targets in bubbly waters are key goals of shallow-water sonar.'

Leighton and his colleagues have developed a new sonar concept called twin inverted pulse sonar -. It uses trains of twinned pairs of sound. They set out to see whether TWIPS would work in practice.

Using a large testing tank, they showed experimentally that TWIPS outperformed standard sonar at detecting a small steel disc under bubbly conditions resembling those found under oceanic breaking waves.

Encouraged by their findings, they next conducted trials at sea aboard the University of Southampton's coastal research vessel the RV Bill Conway.

They compared the ability of TWIPS and standard sonar to discern the seabed in Southampton Water, which handles seven percent of Britain's entire seaborne trade. The seabed in this area varies in depth between 10 and 20 metres.

'TWIPS outperformed standard sonar in the wake of large vessels such as passenger ferries,' said co-author Justin Dix of the School of Ocean and Earth Science - based at the National Oceanography Centre, Southampton.

Send

Be
the

Add a comment...

Comment

Facebook social plugin

Read more on:

- ▶ [LONDON](#) (70777 views)
- ▶ [GOA](#) (41391 views)
- ▶ [SCIENTISTS](#) (9411 views)
- ▶ [ULTRASOUND](#) (4118 views)
- ▶ [BRITAIN](#) (5061 views)
- ▶ [SUBMARINE](#) (3517 views)
- ▶ [10](#) (5901 views)
- ▶ [OCEANOGRAPHY](#) (1722 views)
- ▶ [EARTH](#) (3451 views)
- ▶ [REEFS](#) (1200 views)
- ▶ [SOUTHAMPTON](#) (1201 views)
- ▶ [BMA](#) (1171 views)
- ▶ [TIMOTHY](#) (971 views)
- ▶ [UNDERWATER](#) (881 views)
- ▶ [NATIONAL OCEANOGRAPHY CENTRE](#) (423 views)
- ▶ [HOA](#) (901 views)

PERMALINK<http://www.nerve.in/news:253500354394>

You can quote the permanent link above for a direct link to the story. We do not archive or expire our news stories.

STORY OPTIONS

 Email this story to a friend

 XML feed for Europe

LONDON Nerve

- ▶ [Miranda Kerr pampers herself - 35 minutes ago](#)
- ▶ [Pregnant Jessica Simpson's crazy cravings - 1 hour ago](#)
- ▶ [No maternity wear for stylish Garner - 2 hours ago](#)
- ▶ [Carey sheds baby weight - 3 hours ago](#)
- ▶ [Alber Elbaz to release book - 3 hours ago](#)
- ▶ [Winehouse's 'Back To Black' dress on auction - 6 hours ago](#)
- ▶ [Fergie not quitting Black Eyed Peas - 6 hours ago](#)
- ▶ [Shining bright light into ear banishes winter blues - 8 hours ago](#)
- ▶ ['Coal to become top fuel by 2035' - 11 hours ago](#)
- ▶ [Butt appeals against 30-month jail sentence - 11 hours ago](#)
- ▶ [See all latest headlines from London](#)

COPYRIGHTS INFORMATION

All rights reserved for news content. Reproduction, storage or redistribution of Nerve content and articles in any medium is strictly prohibited.

Contact Nerve Staff for any feedback, corrections and omissions in news stories.