# Article information:

Deep seismic structure of the northeastern South China Sea: Origin of a high‐velocity layer in the lower crust - Wan - 2017 - Journal of Geophysical Research: Solid Earth - Wiley Online Library
<https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2016JB013481>

# Article summary:

1. A 2-D seismic tomographic image of the crustal structure along the OBS2012 profile was created to delineate the Moho morphology and magmatic features of the northeastern South China Sea margin.

2. The Dongsha Rise is characterized by a ~4–7 km thick high-velocity layer (HVL) in the lower crust, while a ~2–3 km thick HVL is imaged in the lower crust across the continent-ocean transition (COT).

3. The HVL underlying the COT is likely extension related, while it is arc related beneath the Dongsha Rise.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article “Deep Seismic Structure of the Northeastern South China Sea: Origin of a High‐Velocity Layer in the Lower Crust” by Wan (2017) provides an overview of seismic tomography and its application to understanding magmatic features in this region. The article presents a comprehensive analysis of data from various sources, including seismic surveys, magnetic anomaly zones, geochemical characteristics, and volcanoes. The authors draw conclusions about the origin of a high-velocity layer (HVL) in both continental shelf/slope and continent-ocean transition (COT), which are consistent with previous studies but also provide new insights into rifting processes in this area.

The article appears to be reliable and trustworthy overall; however, there are some potential biases that should be noted. For example, there is no discussion of possible counterarguments or alternative explanations for their findings; instead, they focus solely on supporting their own conclusions. Additionally, there is no mention of any risks associated with their research or any potential limitations that could affect their results. Furthermore, although they cite several sources throughout their paper, they do not provide any evidence for some of their claims or explore other points of view that may contradict theirs. Finally, it should be noted that some parts of this article may appear promotional due to its focus on supporting only one side of an argument without considering other perspectives or evidence that could challenge it.

In conclusion, this article provides an interesting overview and analysis of seismic tomography and its application to understanding magmatic features in this region; however, readers should be aware that there are potential biases present which could affect its reliability and trustworthiness.

# Topics for further research:

* Seismic tomography applications
* Magmatic features in South China Sea
* Rifting processes in South China Sea
* Counterarguments to seismic tomography
* Limitations of seismic tomography
* Alternative explanations for magmatic features

# Report location:

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