# Article information:

Lithosphere Weakening During Arctic Ocean Opening: Evidence From Effective Elastic Thickness - Lu - 2021 - Geophysical Research Letters - Wiley Online Library  
<https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2021GL094090>

# Article summary:

1. The Arctic Ocean is characterized by two oceanic basins, the Eurasia and the Amerasia Basin, which are separated by the Lomonosov Ridge.

2. Debates on the tectonic reconstruction in the Amerasia Basin center on the nature of its crust and its relation to continental rifting.

3. The effective elastic thickness of the lithosphere can be used to understand the thermo-mechanical structure of the lithosphere and is estimated using lithospheric strength profiles or cross-spectral properties between gravity and bathymetry data.

# Article rating:

Appears well balanced: The article presents the information in a reliable and balanced way, without biases and prejudices. The claims made in the article are well supported and, where applicable, all sides of the argument are given opportunity to present their point of view. The article appears trustworthy and reliable.

# Article analysis:

The article provides a comprehensive overview of the Arctic Ocean's tectonic structure and evolution, as well as an analysis of its effective elastic thickness (EET). The article is well-researched and provides evidence for its claims through references to other studies, such as Gaina et al., 2014; Dick et al., 2003; Nikishin et al., 2019; Grantz et al., 2011; Hadlari et al., 2016; Funck et al., 2011; Jokat, 2003; Bruvoll et al., 2012; Lebedeva-Ivanova et al., 2006; Døssing et al., 2013, 2017; Sorokin et al., 1999; Watts, 2001; Kalnins & Watts, 2009; Watts, 1978; Watts & Burov, 2003; Burov & Diament, 1995; Brown & Phillips, 2000; Tesauro, Kaban & Cloetingh, 2012 ; Jakobsson et al., 2012 ; Andersen et al., 2010 ; Struijk et al., 2018 ; Audet , 2014 ; Kirby & Swain , 2009 ; Forsyth , 1985 ; McKenzie , 2003 . This demonstrates that there is a strong basis for their claims.

The article does not appear to have any biases or one-sided reporting. It presents both sides of arguments equally and explores counterarguments where necessary. There are no unsupported claims or missing points of consideration in this article. All evidence presented is supported by references to other studies and all potential risks are noted where applicable.

In conclusion, this article appears to be reliable and trustworthy with no apparent biases or one-sided reporting present.

# Topics for further research:

* Arctic Ocean tectonic plate boundaries
* Arctic Ocean tectonic plate movements
* Arctic Ocean tectonic plate history
* Arctic Ocean effective elastic thickness
* Arctic Ocean sedimentary basins
* Arctic Ocean seismic activity

# Report location:

<https://www.fullpicture.app/item/6889aee3db1448b46b239a90159bc893>