



UNIVERSITY OF  
LIVERPOOL

Institute for Risk  
and Uncertainty



# Samband lektar og bergstyrks í storkubergi

Guðjón Helgi Eggertsson  
Jackie Kendrick  
Yan Lavallée,



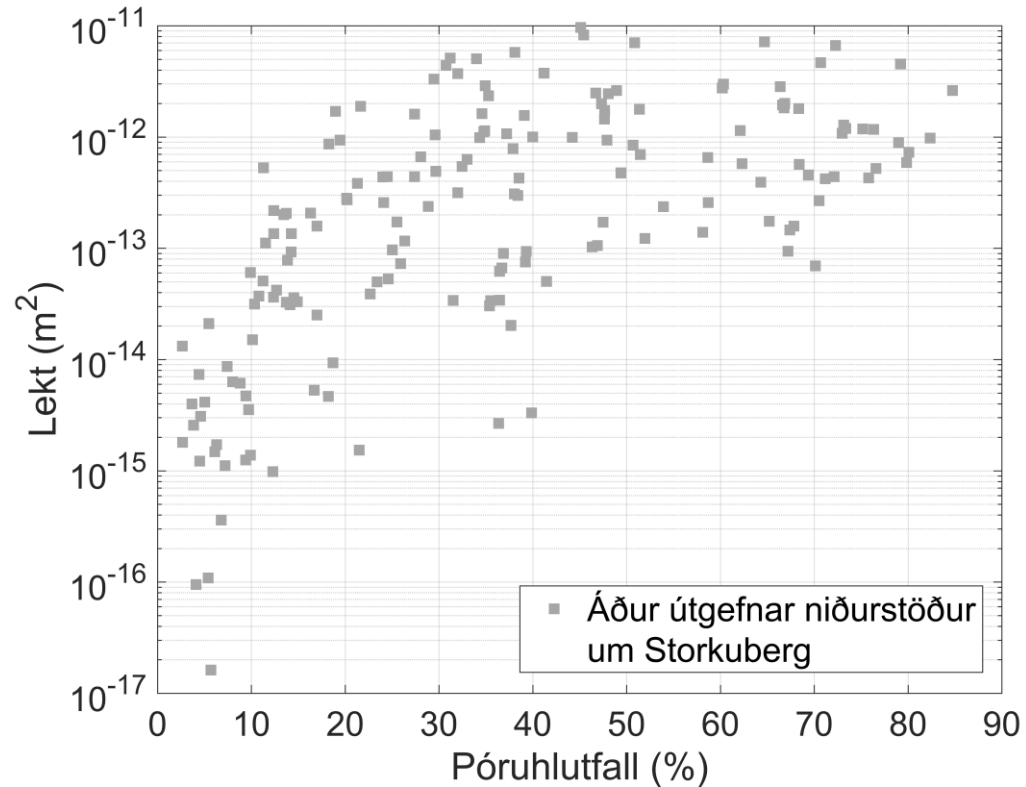
# Prófanir á bergi

- Algent er að prófanir á bergi séu gerðar á rannsóknarstofum.
- Póruhlutfall sýna er oft mælt.
- Pórur eru blöðrur, holur eða sprungur í berginu.
- Sýnt hefur verið frammá samband póruhlutfalls við bæði lekt og bergstyrk.



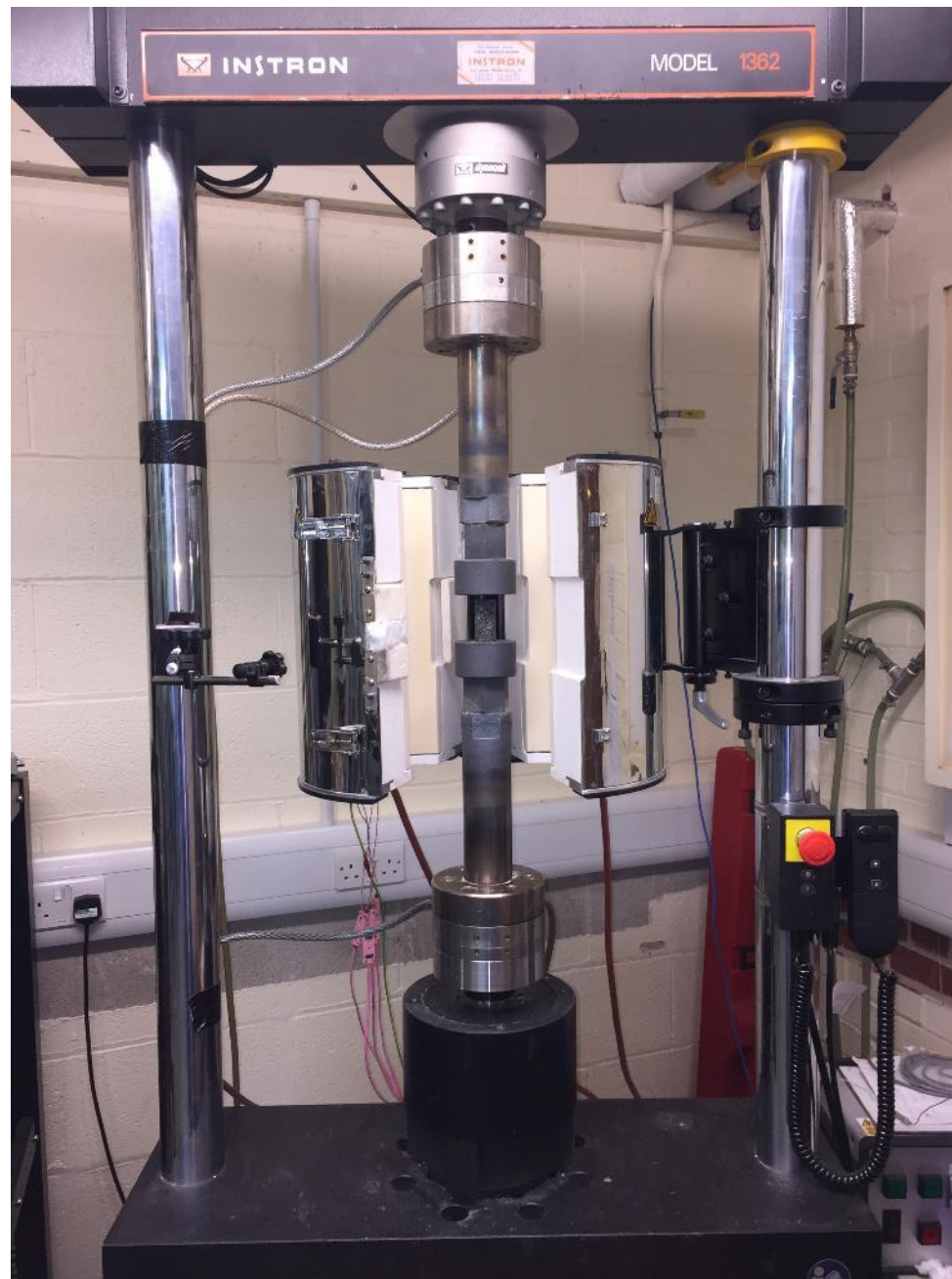
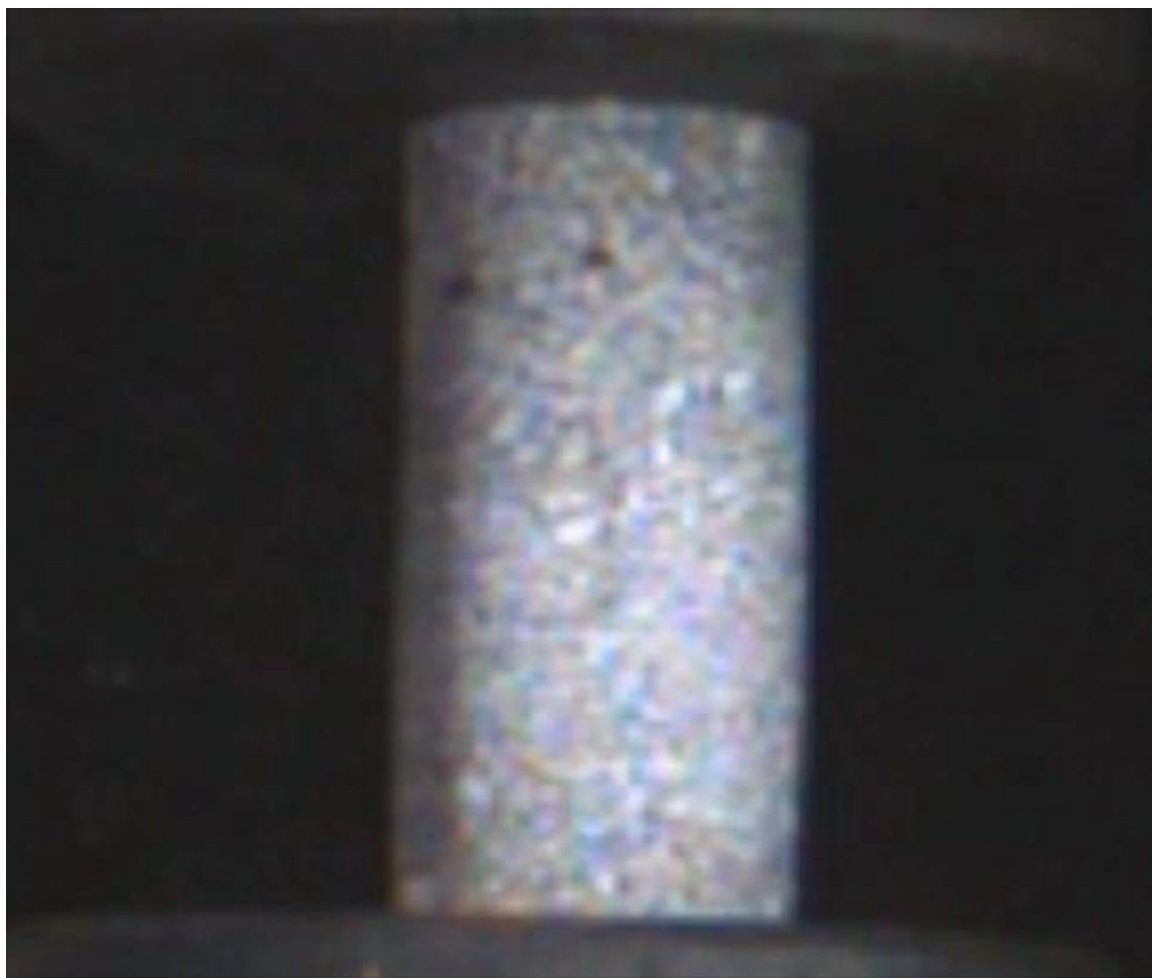
Basalt sýni

# Lekt á mótu póruhlutfalli

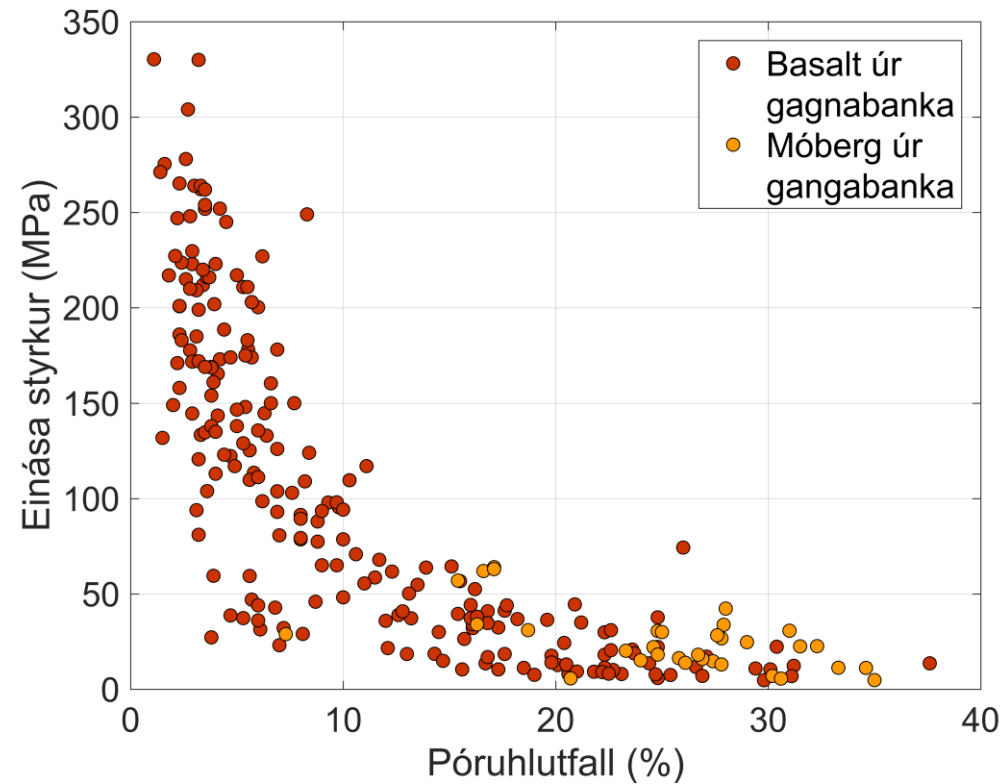


Gögn frá: Eichelberger et al., 1986; Farquharson et al., 2015; Heap et al., 2014a; Heap and Kennedy, 2016; Heap et al., 2014b; Heap et al., 2016; Jouniaux et al., 2000; Kendrick et al., 2016; Kendrick et al., 2013; Klug and Cashman, 1996; Lamur et al., 2017; Mueller et al., 2005; Schaefer et al., 2015

# Einása styrkur prófaður

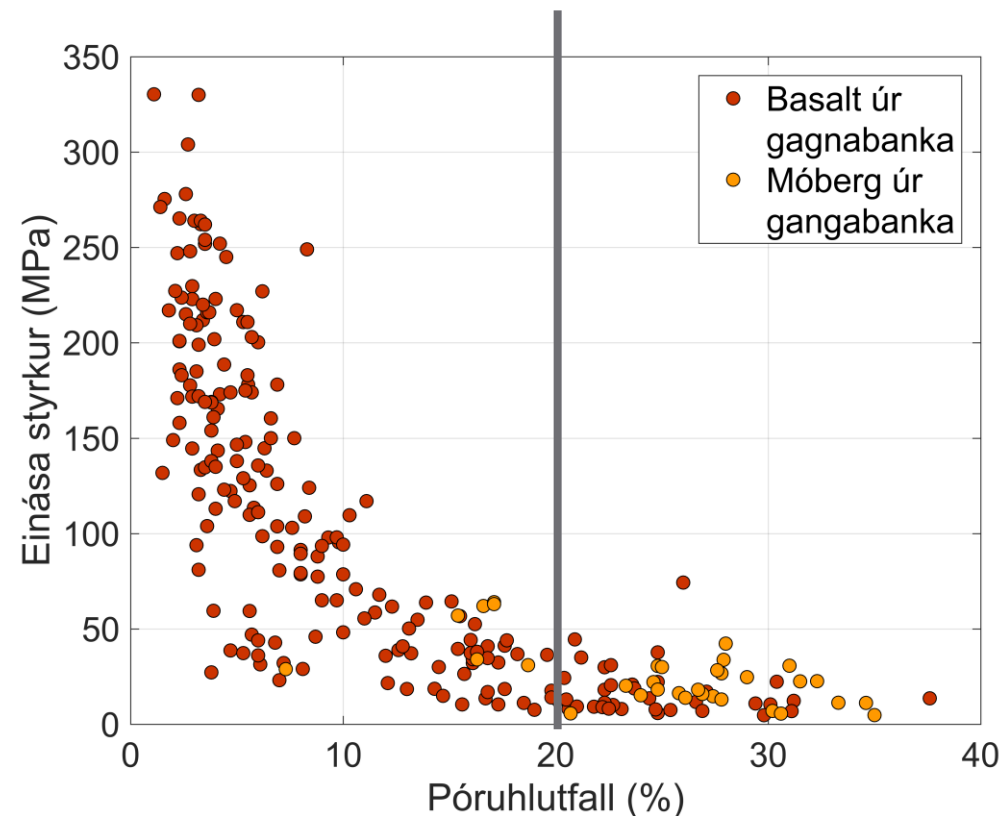
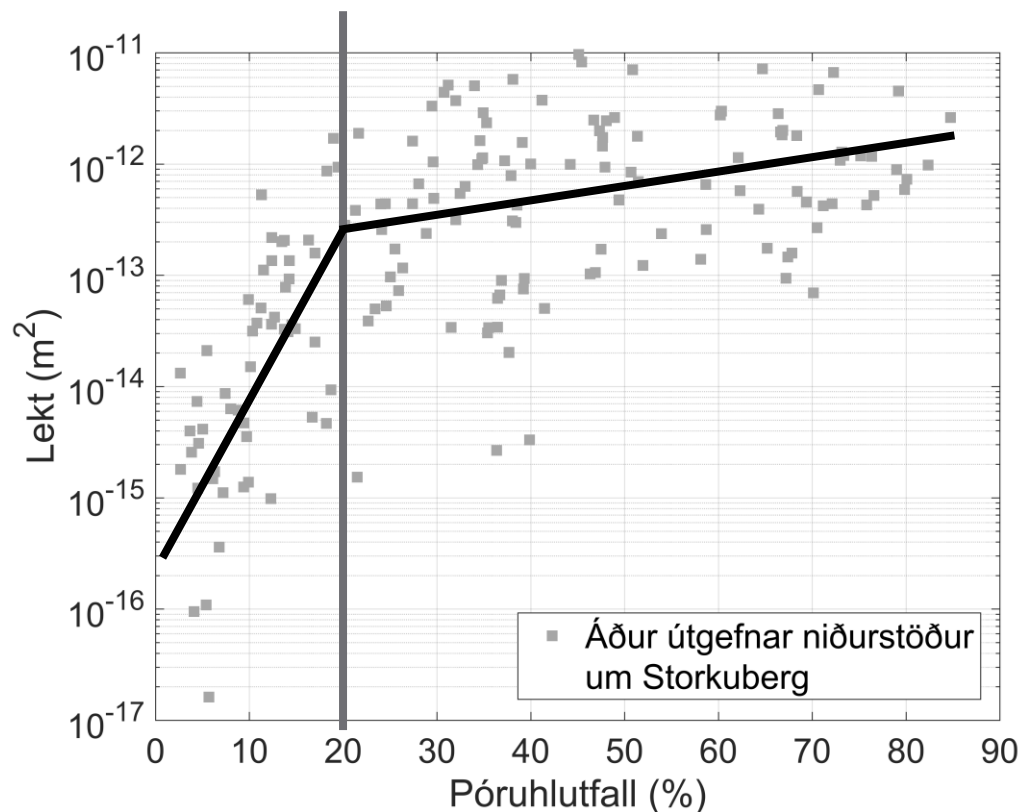


# Eináststyrkur á móti póruhlutfalli



Gögn frá: Loftsson, M. and Steingrímsson, B.Ó., 2010

# Einástastyrkur á móti póruhlutfalli



Gögn frá: Eichelberger et al., 1986; Farquharson et al., 2015; Heap et al., 2014a; Heap and Kennedy, 2016; Heap et al., 2014b; Heap et al., 2016; Jouniaux et al., 2000; Kendrick et al., 2016; Kendrick et al., 2013; Klug and Cashman, 1996; Lamur et al., 2017; Mueller et al., 2005; Schaefer et al., 2015

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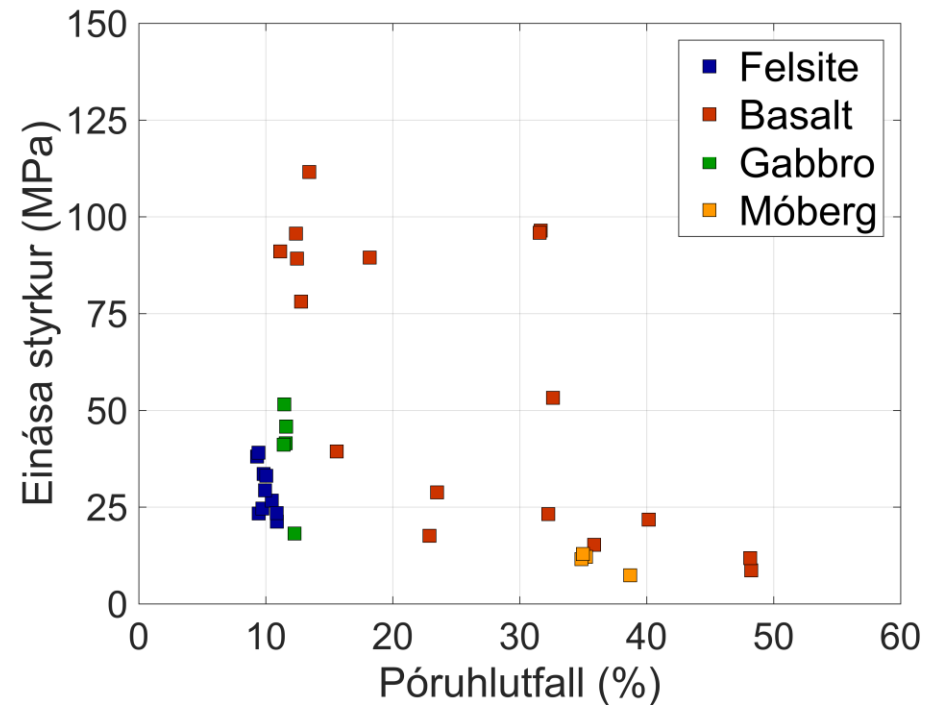
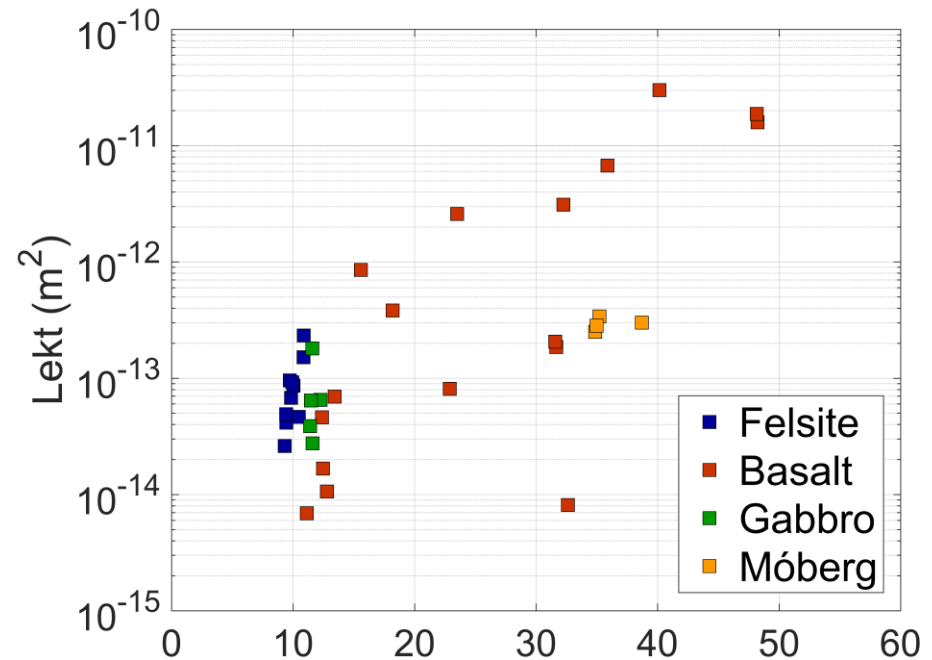
# Prófanir sýna

- 50 sýni

(sívalingar hlutfallið 2:1;  
hæð 50mm og þvermál  
25mm)

- 42 prófanir heppnaðar

- Gögn einnig fengin frá  
útefnu efni.



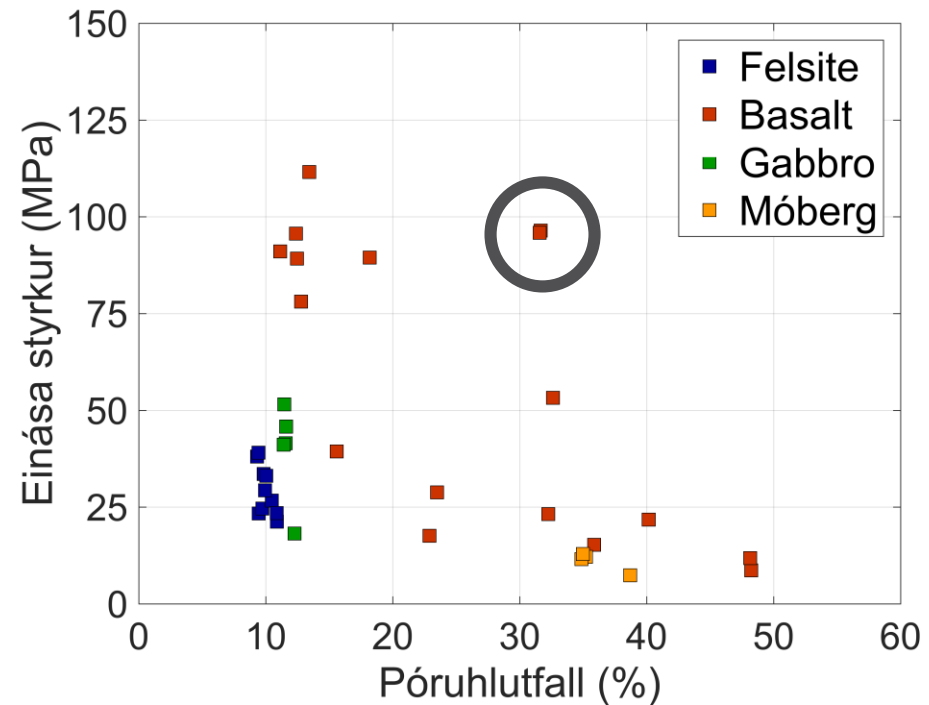
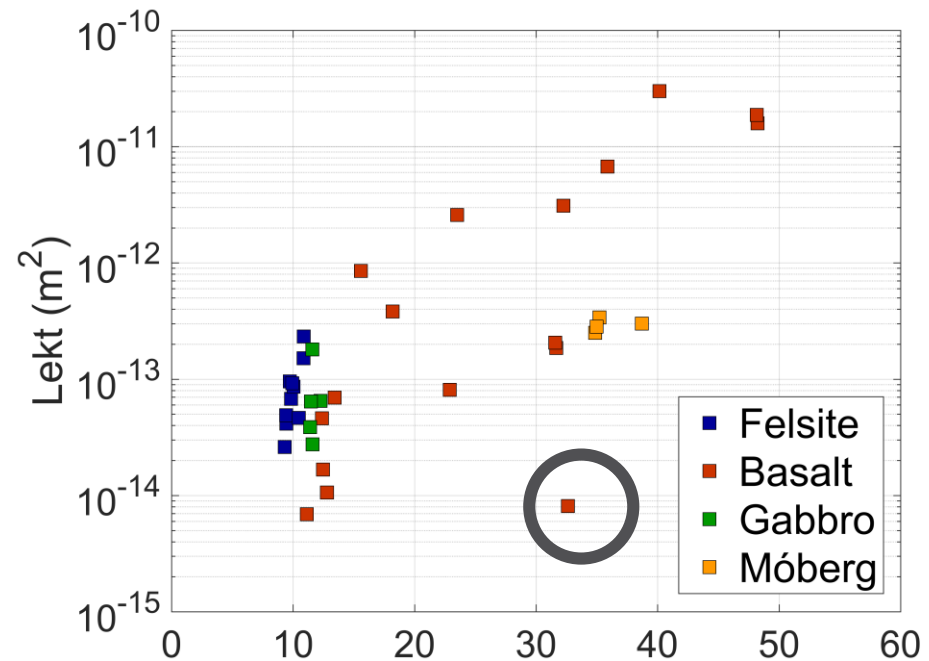
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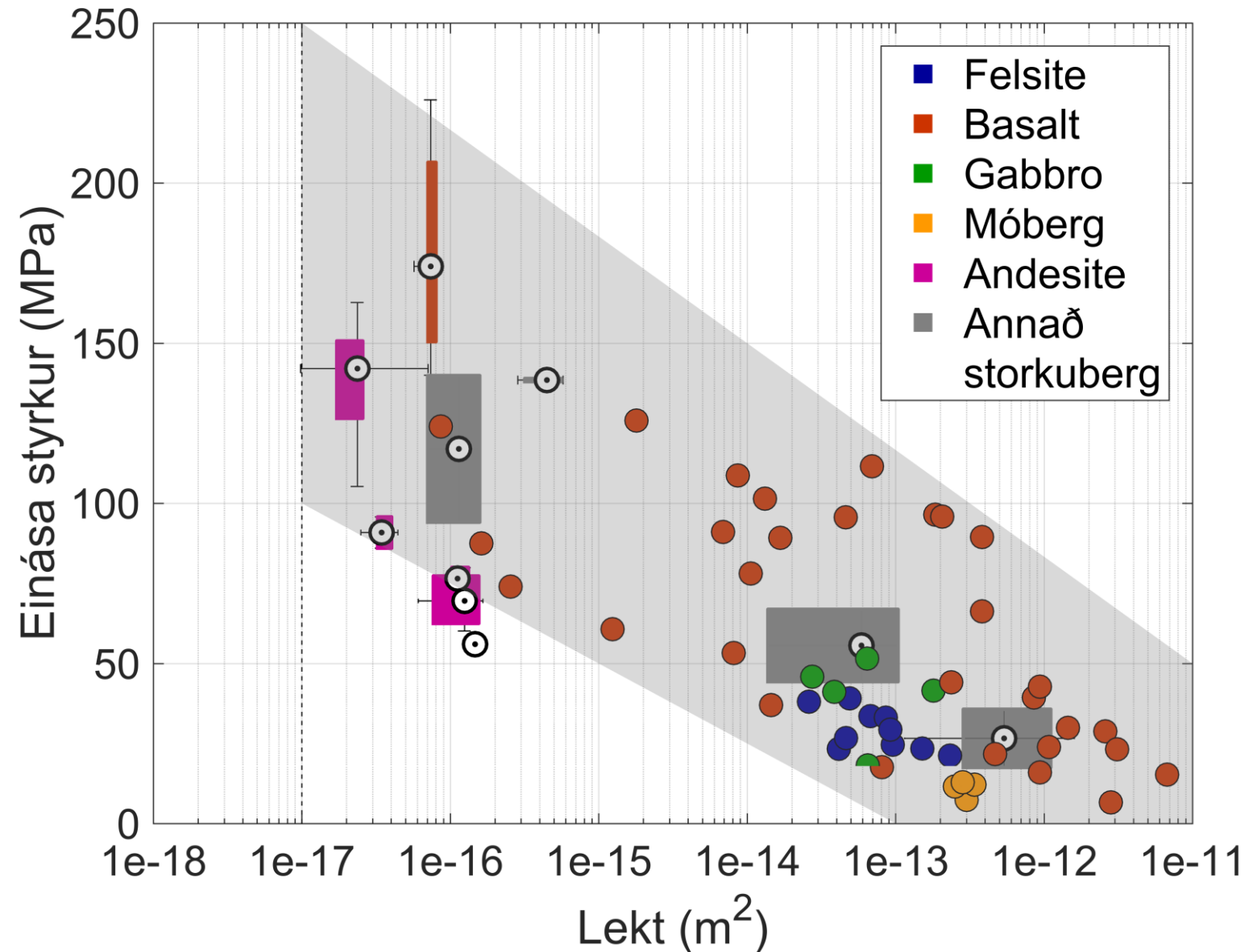
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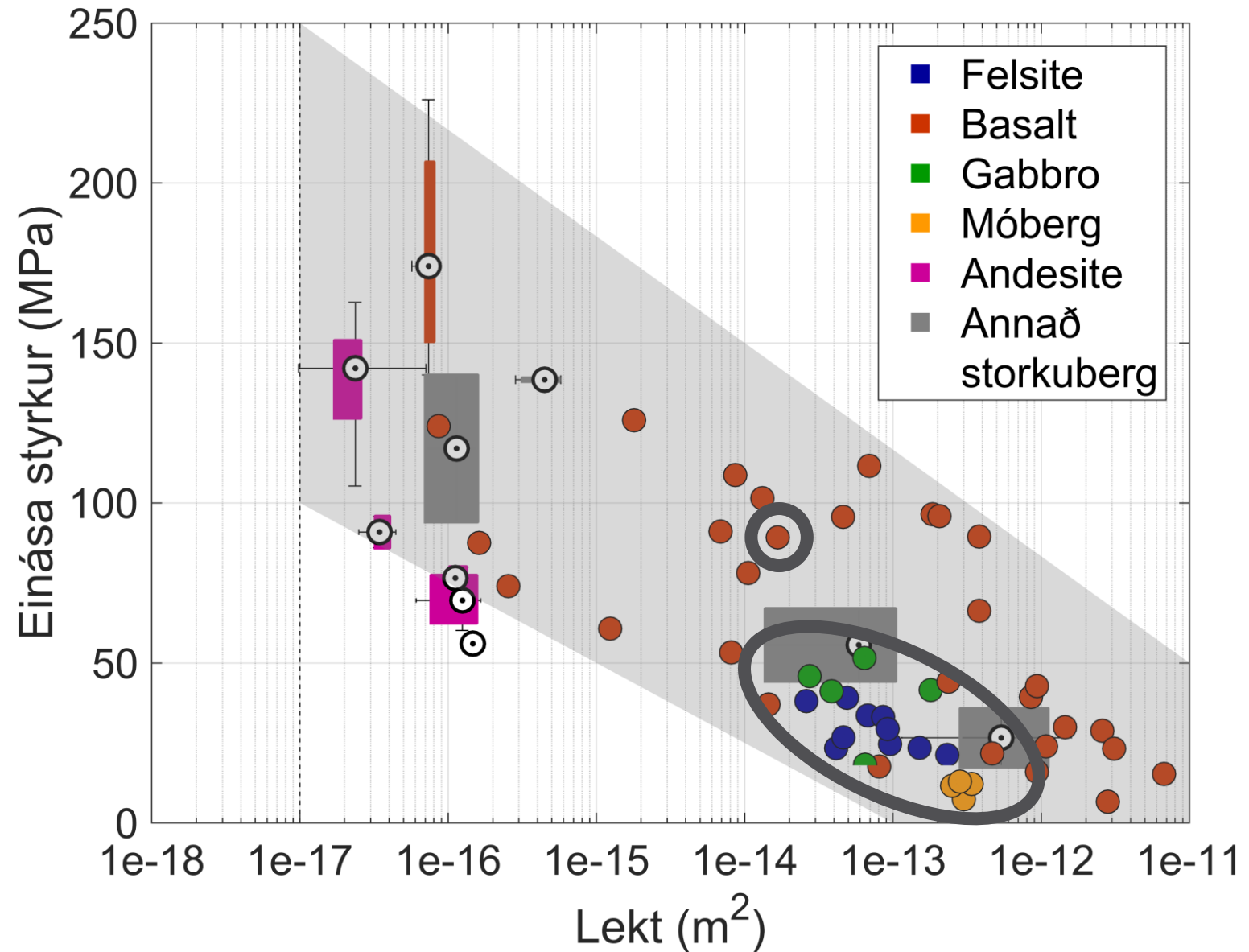


# Er samband milli lektar og bergstyrks?



Viðbótargögn frá: Farquharson et al., 2015; Heap et al., 2015; Heap et al., 2014c; Heap et al., 2016; Jeong et al., 2007; Schaefer et al., 2015; Siratovich et al., 2014.

# Er samband milli lektar og bergstyrks?



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# Hvaða þýðingu gæti þetta haft?

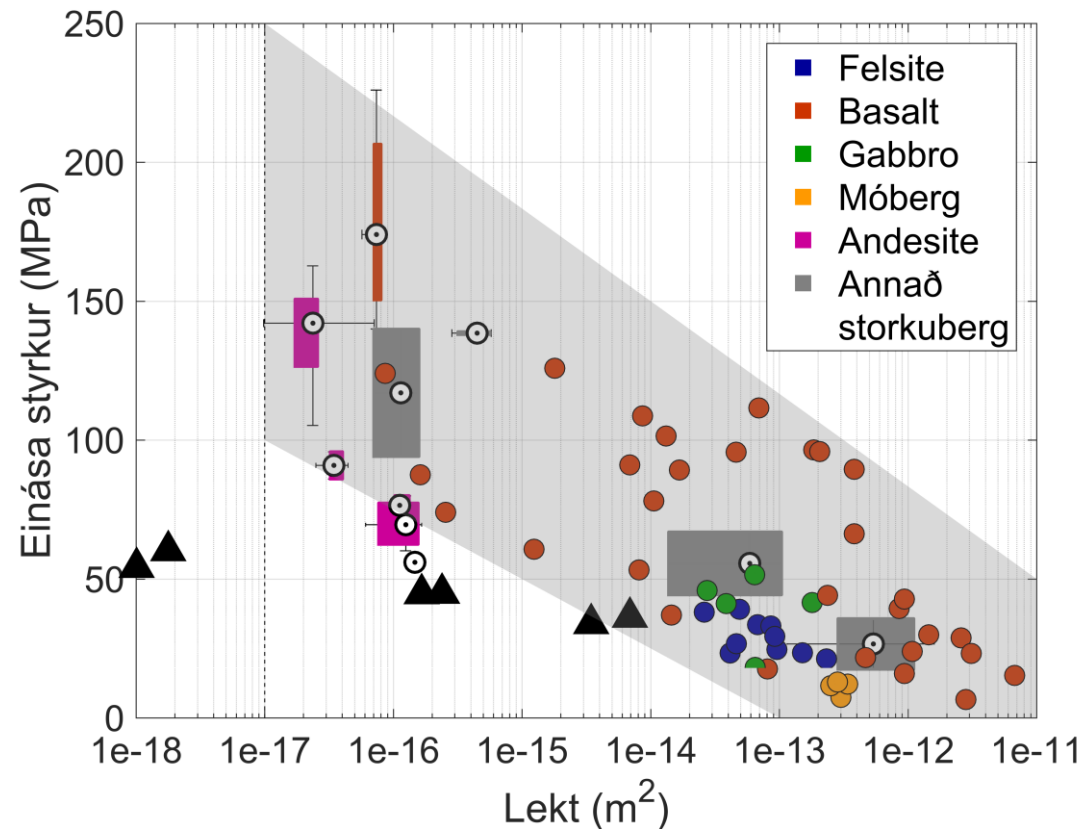
- Handmælar líkt og TinyPerm mæl gæti verið notaður í rannsóknir og undirbúning framkvæmda.



Mynd: Guðjón Helgi Eggertsson

# Hvaða þýðingu gæti þetta haft?

- Handmælar líkt og TinyPerm mælir gæti verið notaður í rannsóknir og undirbúning framkvæmda.
- Gætur slíkt samanband lektar og styrks verið í öðrum efnum? Afhverju/afhverju ekki?



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- Handmælar líkt og TinyPerm mælir gæti verið notaður í rannsóknir og undirbúning framkvæmda.
- Gætur slíkt samanband lektar og styrks verið í öðrum efnum? Afhverju/afhverju ekki?
- “Will it blow or will it flow?”



Mynd: Felix Von-Aulock



Takk kærlega

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Twitter: [@GudjonHelgi](https://twitter.com/GudjonHelgi)

# Heimildir

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