

Public justification (visible to the public if the article is accepted and published):

Dear Ellen Mutter and Nicholas Holschuh,

Thank you for addressing the comments of the referee so carefully. I am happy to recommend your manuscript for publication pending a few technical corrections that I outline below. Your study highlights the importance of radar data analysis and the comprehensive overview and analysis you have performed will undoubtedly be of use to deep ice core projects in the future.

Best,

Nanna B. Karlsson

*Dear Nanna,*

*We are thrilled to have the manuscript recommended for publication and thank you for your detailed and thoughtful review of our work. Below we have responded to the few technical corrections. Thank you again.*

*Ellen and Nick*

Additional private note (visible to authors and reviewers only):

Caption figure 1: Given the order of the maps, it would make more sense if the caption reads: "Surface elevation maps of Greenland (Porter et al., 2018) and Antarctica (Howat et al., 2019)...", i.e. that Greenland is mentioned first.

*Caption text has been reordered accordingly.*

Line 129: "...collected with radar hardware typical of the earth 2000's" Is this a typo? do you mean "early 2000's"?

*Corrected to "early." Thank you for catching this typo.*

Figure 3 caption: "Ice without layer structure can be due clear ice..." Missing a "to"

*Fixed. Thank you!*

Line 277: "the c-axis fabric transition" -> "the c-axis fabric transitions"

*Fixed. Thank you!*

Fig. 3, 4 and 5: I know this is a bit late in the process but I worry that the purple colours used in Figs. 3 and 4, and the green colour used in Fig. 5 is not colourblind-friendly. For the latter, the contrast with the red colour might not be adequate; for the other two figures, I am worried about the contrast between the purples. Could I ask you to please check this (if you haven't already)? For example, using <https://www.color-blindness.com/coblis-color-blindness-simulator/>

Thank you for raising concerns about the visual accessibility of our color schemes. We have reviewed Figures 3, 4 and 5 using Adobe Illustrator's protanopia-type and deuteranopia-type color blindness filters. Based on this review, we believe the purple shades used in Figures 3 and 4 maintain sufficient contrast under both protanopia (red-blind) and deuteranopia (green-blind) filters (see figures below). To enhance contrast in Figure 5, we replaced the red color with a lighter blue. Additionally, in Figure 4, we darkened both the cyan and red shades for better visibility.

Below, we provide side-by-side visualization of the original figures in full RGB, protanopia, and deuteranopia color blindness filters, as well as the updated versions of Figure 4 and 5b. While some overlap remains in Figure 4 between the color hues used for fabric observations and those for layering observations under colorblindness filters, we believe the color scheme remains accessible because these hues are displayed in separate columns.

Figure 3:

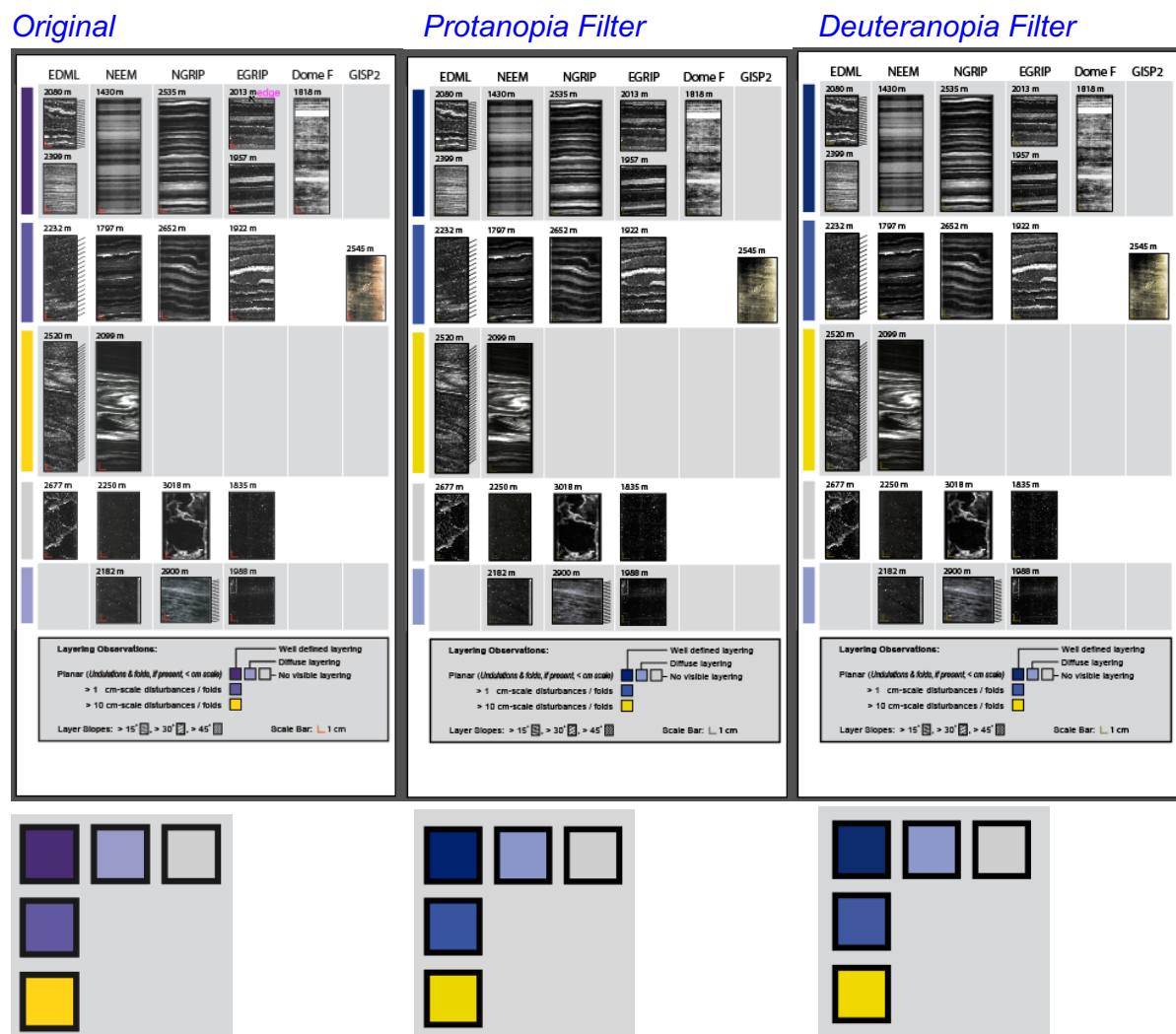
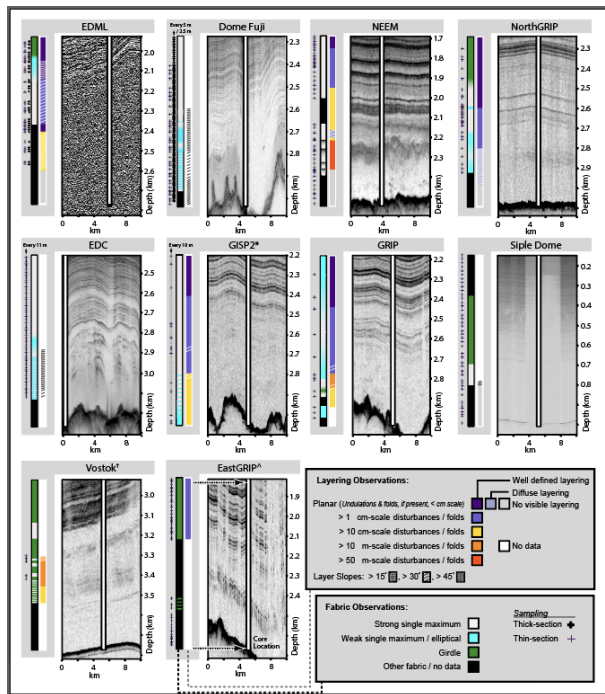


Figure 4:

Original



Updated

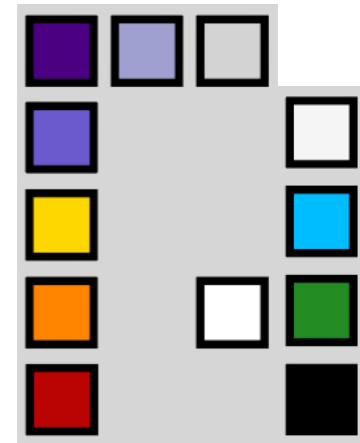
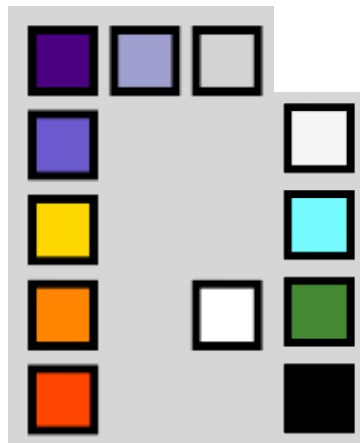
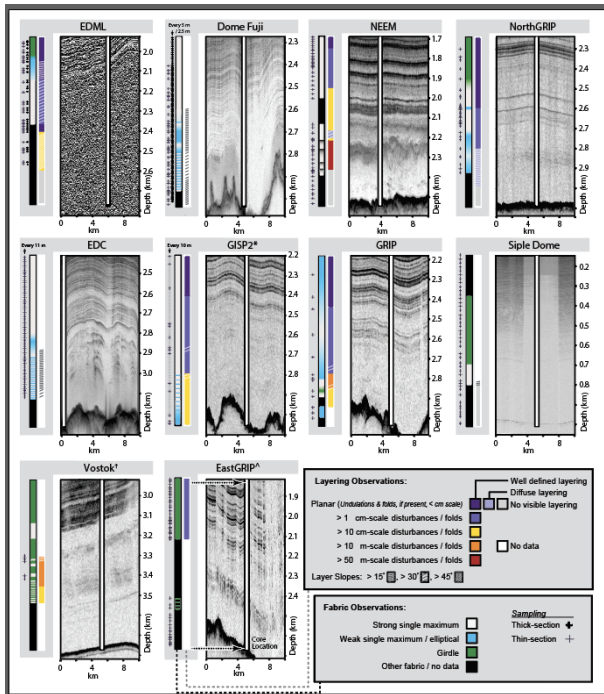
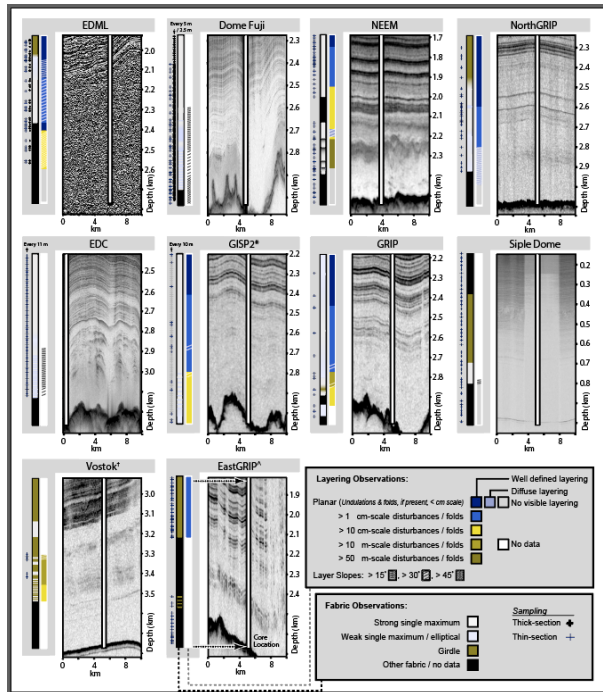


Figure 4 cont.:

Original with Protanopia Filter



Updated with Protanopia Filter

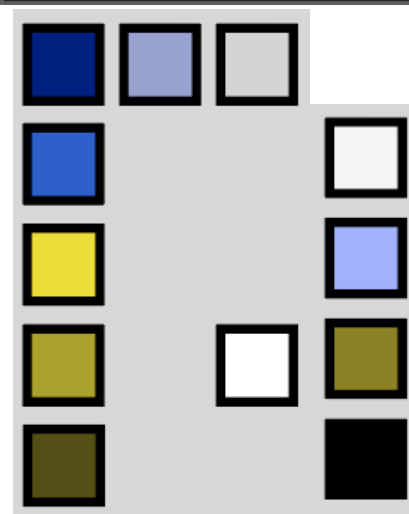
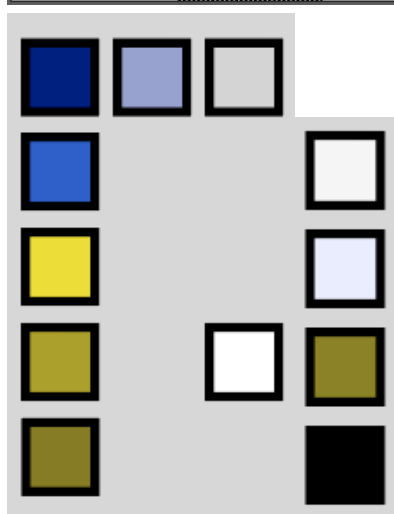
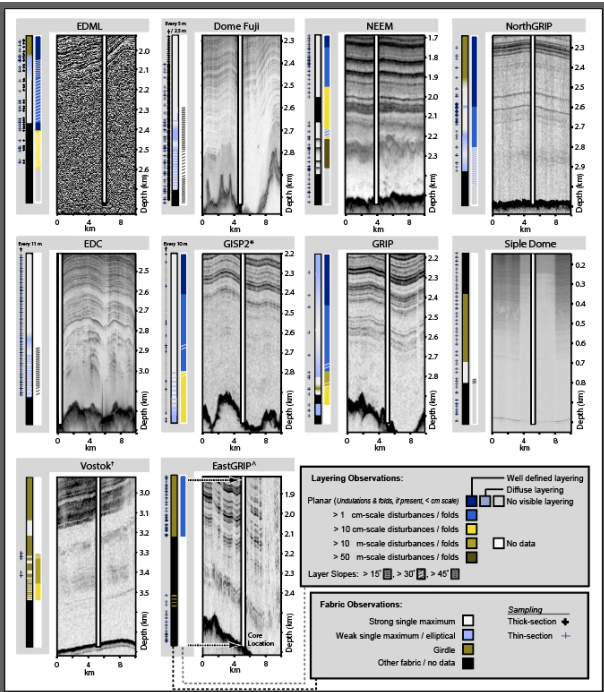
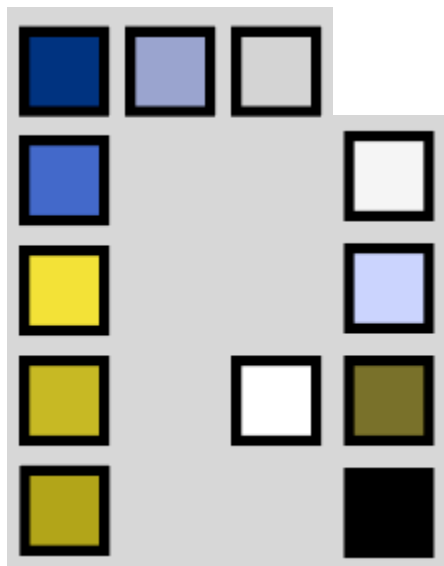
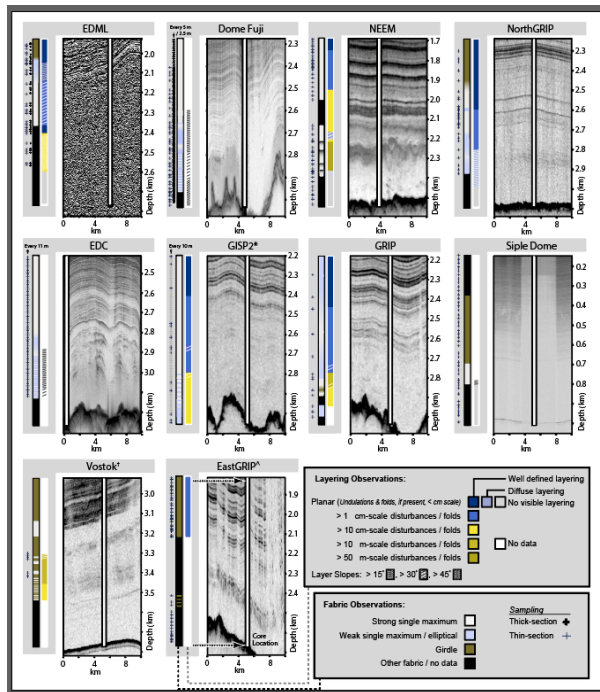


Figure 4 cont.:

Original with Deuteranopia Filter



Updated with Deuteranopia Filter

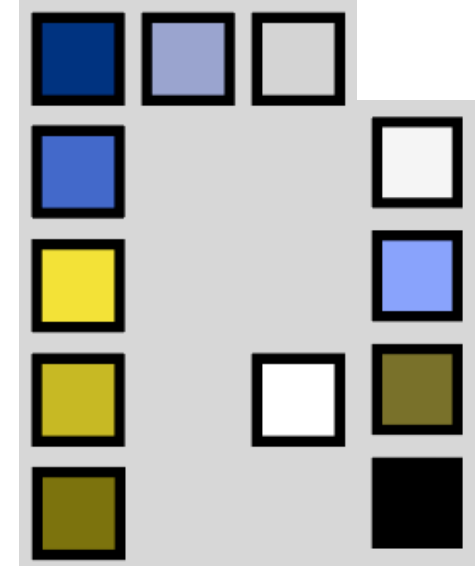
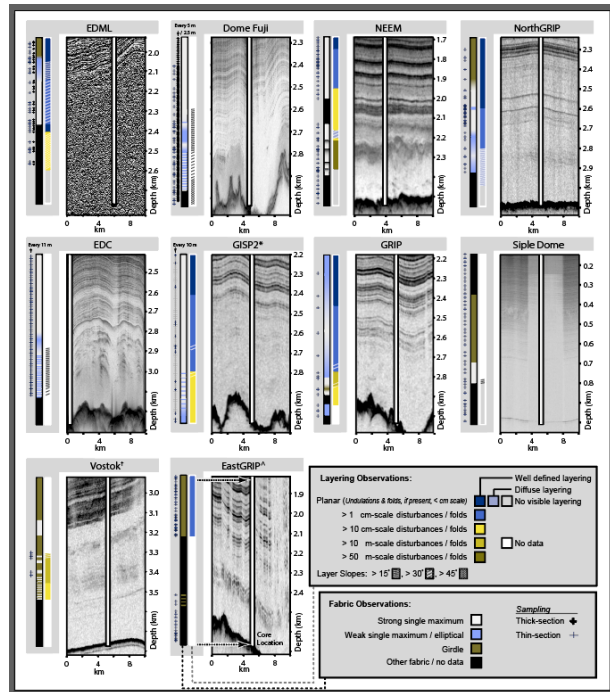
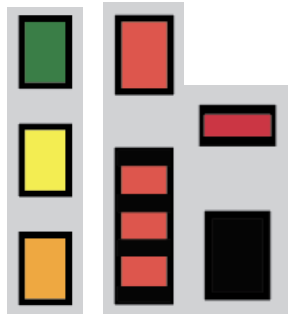
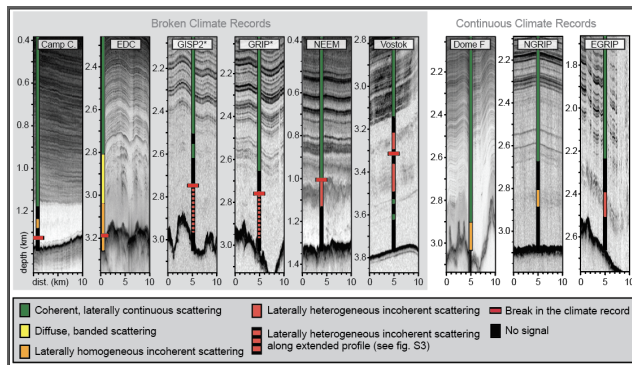


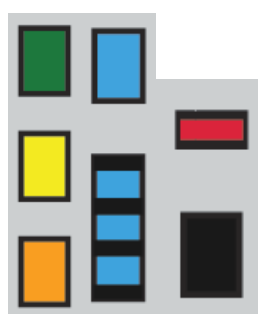
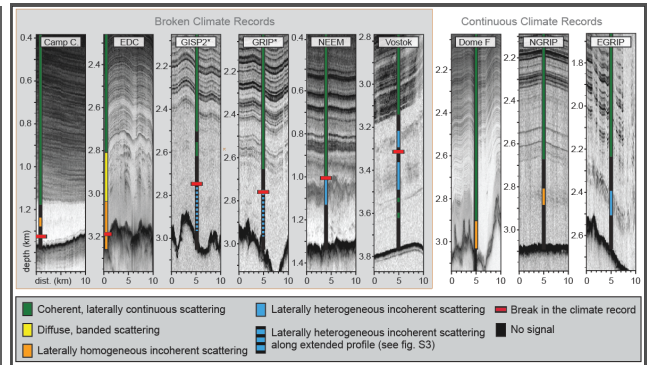
Figure 5b (no adjustments needed for 5a):



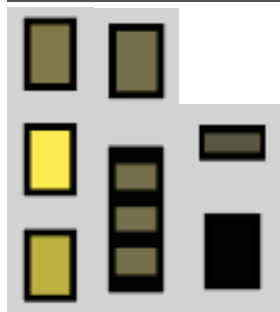
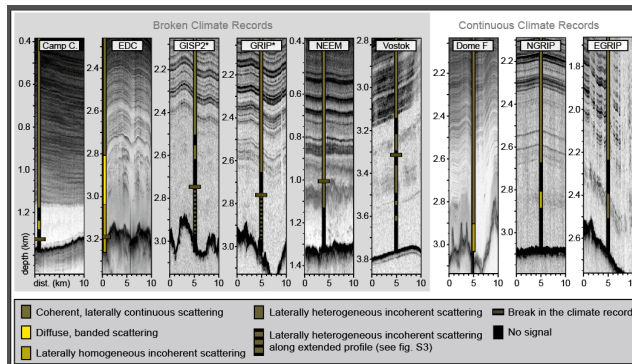
Original



Updated



Original with Protanopia Filter



Updated with Protanopia Filter

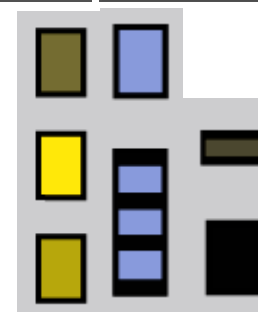
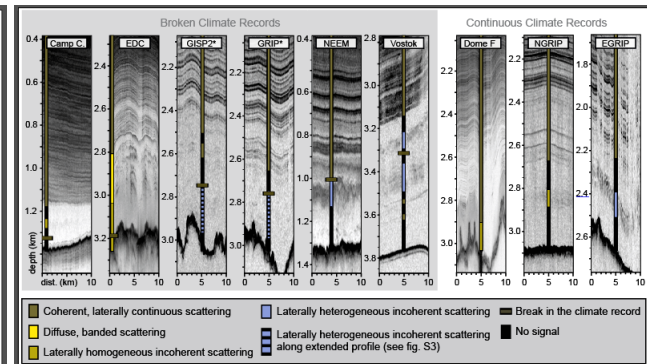


Figure 5b cont.:

Original with Deuteranopia Filter

Updated with Deuteranopia Filter

