**Small Group Discussion Questions\_\_\_\_ FYS 178**

29 Sep, 1 Oct 2020 (Wk#8) Society, Technology & Weather

Questions for **Chapter 6** of “Appropriating the Weather…”

[1] What two challenges met Vilhelm before the weather experiment in the summer of 1918 that he wanted to achieve on “a scale hitherto never attempted”? What conditions at the time in Norway made these two challenges exceedingly difficult? What particular weather feature would be the focus of Vihelm’s research team during the “summer experiment”?

[2] What does a meteorologist imply about the winds when they are talking about “convergence”? What about “divergence”? (look these terms up on the *web* and write their definition and *web site* address giving the definitions below).

[3] Find *web* references discussing “extratropical cyclone” or “mid-latitude cyclone” and note {with words and/or drawings} their **temperature structure** at the ground in the “open wave” phase of cyclone development. (look these terms up on the *web* and write their definition and *web site* address providing the information below).

[4] Note {with words and/or drawings} the **wind structure** at the ground of the “extratropical cyclone” or “mid-latitude cyclone” for the “open wave” phase of cyclone development. (write the *web site* address providing the information below).

[5] Note {with words and/or drawings} the **cloud and rain structure** of the “extratropical cyclone” or “mid-latitude cyclone” for the “open wave” phase of cyclone development. (write the *web site* address providing the information below).

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Questions for **Chapter 6** of “Appropriating the Weather…” (cont.)

[6] How did World War I have a positive impact on the developing Norwegian field weather service with regards to a lack of weather observation stations? Make a note of the number of pre-war weather stations in Norway and the number that were in place by the start of the summer weather experiment by June 1918.

[7] What features in the “extratropical cyclone” conceptual model found in Question [4] resemble Jacob’s “lines of convergence”? What are the features known as in today’s model? Did you find any features in the web descriptions of the extratropical (or mid-latitude) cyclone in Question [4] that resemble Jacob’s “lines of divergence”?

[8] How did Jacob’s proposed **temperature structure** in his cyclone model {see Figs. 5, 6, and 7} compare with what you found in Question [3]? What feature in the **wind structure** of his proposed cyclone model is missing between Fig. 6 and Fig. 8? Did this “missing” feature in the wind structure become a permanent part of VB’s research group’s cyclone model or did it ultimately disappear (p. 133, 134)?

[9] How did Jacob’s proposed **cloud/rain structure** in his cyclone model {see Figs. 5, 10, and 11) evolve? How does his proposed structure compare with what you found in Question [5]?

[10] Where in the atmosphere (*at the ground* or *aloft*) were most of the weather observations located during the summer weather experiment? How might this concentration of the weather observations have presented a challenge to someone (Jacob) trying to put together a extratropical cyclone conceptual model? What do we know today about the dimensionality of extratropical cyclones (see p. 134, 135)?