Crossing the Disciplinary Boundaries of Physics (Bohr-100 Centennial Celebrations)

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A 'guessing science'? Physics, physicists, and modern meteorology

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Despite the interest of natural philosophers-turned-physicists in the physical nature of the atmosphere and the development of instruments to measure it since at least the 16th century, physicists were often not overly enamored of meteorology as a topic of serious merit. Thus, in the US, meteorology was relegated to geography departments and physicists like Theodore von Kármán felt compelled to malign it as a 'guessing science.'One might think that physicists had divorced themselves from the atmosphere early on, but that was not the case on the theoretical side –just on the prediction side. Norwegian physicist-turned-meteorologist Vilhelm Bjerknes and his Bergen School of Meteorology brought those two strands together in the early 20th century, but those efforts didn't mean that physics was fully integrated into 'everyday meteorology'until much later. What made the leap possible? Big data, big computers, big models…and big money.

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