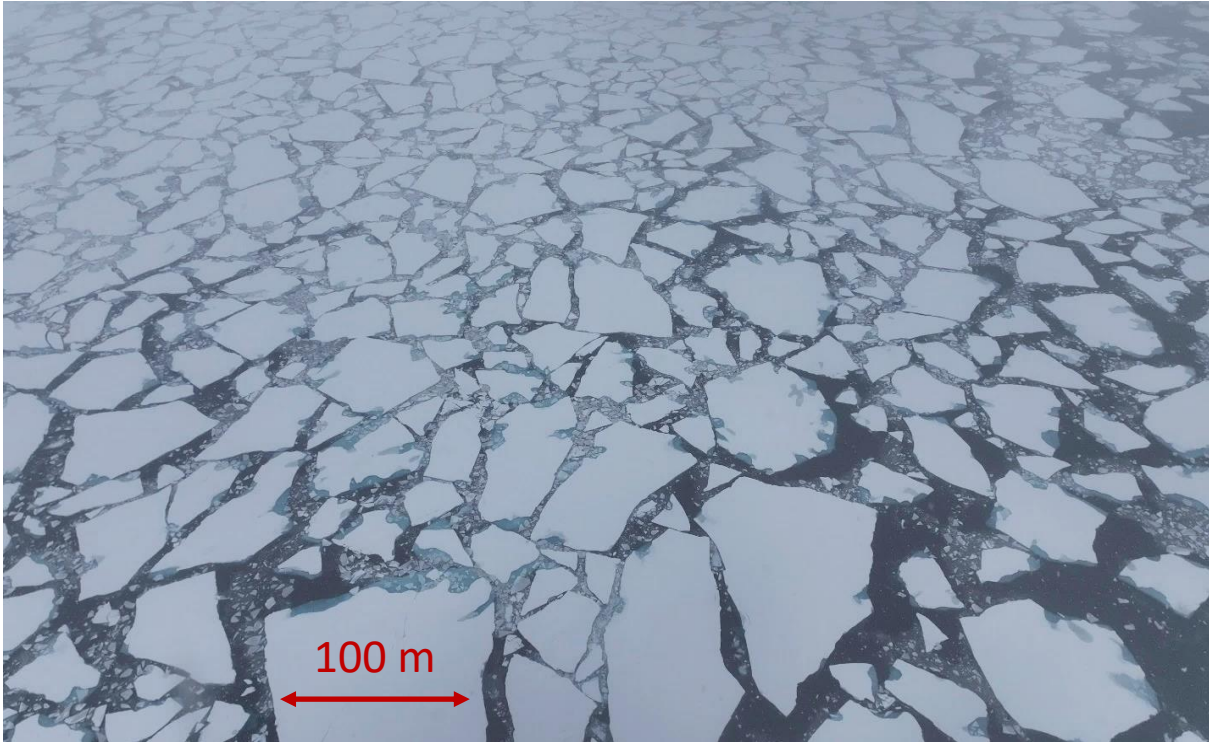


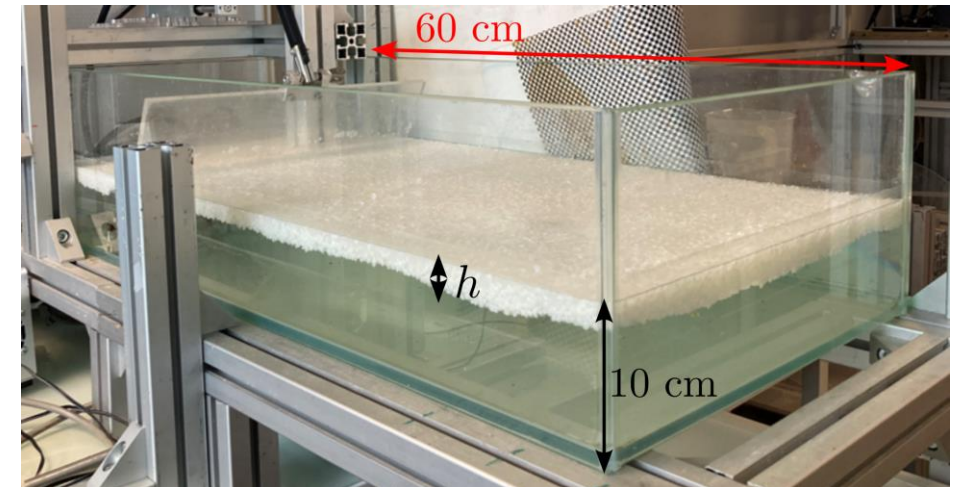
Surface waves attenuation by fragmented sea ice

Sébastien Kuchly¹, Aurore Billant¹, Dany Dumont², Antonin Eddi¹, Stéphane Perrard¹



Aerial picture of a Marginal Ice Zone, Nares Strait, Arctic Region, September 2024

What is the effective attenuation of surface waves in fragmented sea ice ?

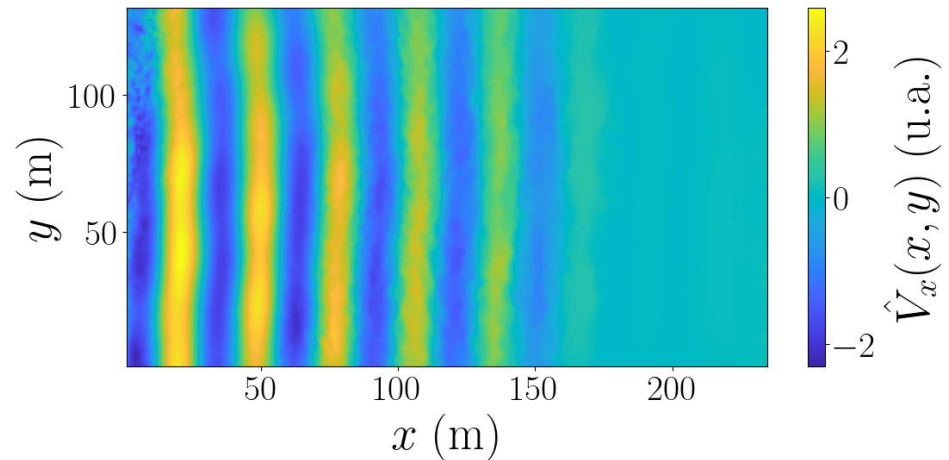
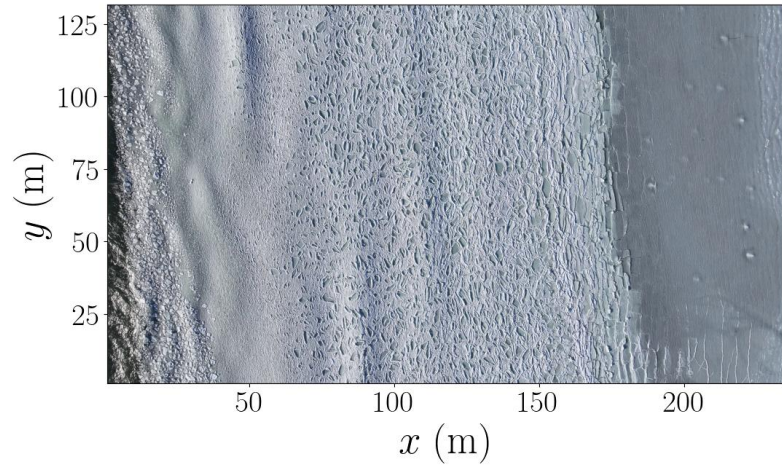


Lab experiment : waves attenuation by a layer of polyethylene beads

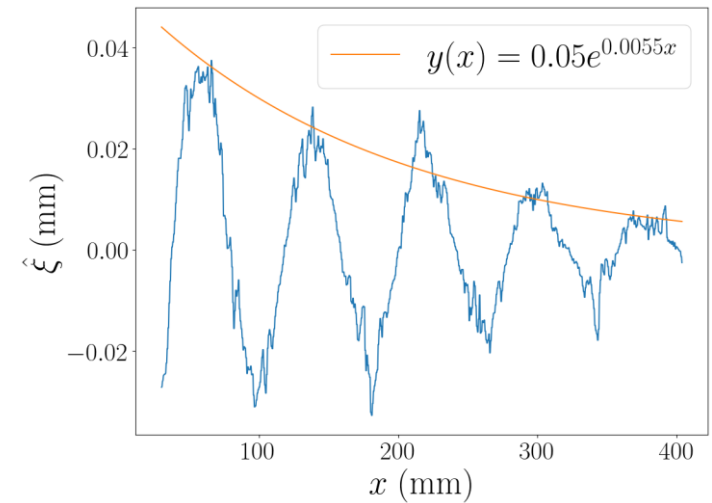
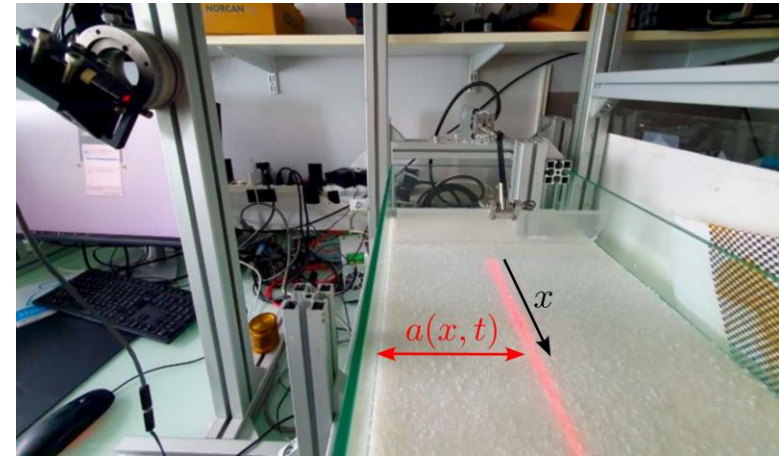
¹Laboratoire de Physique et Mécanique des Milieux Hétérogènes, PMMH, ESPCI Paris

²Institut des Sciences de la Mer de Rimouski, ISMER, UQAR

Field measurements and laboratory analog experiment



Wave field, filtered at $f = 0,212$ Hz



Height field, filtered at $f = 4,0$ Hz, $h = 5,0$ mm