François Costard, Director of Research for France's National Center for Scientific Research (CNRS), and Director of the Planetary Geomorphology team at Université Paris Sud 11, is using an Emriver Em2 in his cold room to study surface processes on Mars.

The image at left is showing meander formation in a permafrost. You can see basal erosion due to thermal and mechanical processes.

For this experiment:

1. Meander was artificially created
2. Everything was frozen by water saturation
3. Once everything froze, flow was triggered
4. Thermomechanical bank erosion was observed

The image at left is showing a frozen block that has been eroded by flow created by thermomechanical erosion.

Meander Experiment Video