

# P-ONE, Pacific Ocean Neutrino Explorer

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In 2018, astrophysicists found the first compelling evidence for a link between high energy cosmic neutrinos and one of the most extreme astrophysical objects, a blazar. This observation was the result of an extensive campaign by the world's largest neutrinos telescope - IceCube at the South Pole - opening a new window to view the universe. The time is now apt to guide the rapidly evolving field of multimessenger astronomy towards dramatic improvements in the sensitivity of the instruments.

A collaboration of Ocean Networks Canada (ONC), the University of Victoria, Canada, the University of Alberta, Canada, the Physics Department of Simon Fraser University, Canada, and the Technical University of Munich (TUM), Germany, is currently exploring possibilities for a future neutrino telescope located in the northern Pacific. 300 kilometers westerly of Victoria, the Cascadia Basin is a promising position for a cubic scale detector with a depth of 2600 meter. In June 2018, the collaboration deployed a first pathfinder experiment (STRAW) which is monitoring the optical conditions at the Cascadian Basin since then. Since the deployment of STRAW-b in September 2020, a 500 meter long string with ten modules, is testing hardware and strategies for the planned first 10-string array called the Pacific Ocean Neutrino Explorer (P-ONE).

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**Presenter:** DANNINGER, Matthias (Simon Fraser University (CA))

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