

Resonance and tidal bores in the Bay of Fundy

Here are some pictures I took of high and low tides at the Bay of Fundy (between New Brunswick and Nova Scotia on the eastern shore of Canada). The Bay of Fundy has the worlds largest tides (up to 50 ft in some places) due to a resonance between the frequency of the tides and the natural frequency of the bay. Water in the bay happens to want to slosh back and forth with the same frequency as the tides. The result is an extremely large change in the water levels between low and high tide.



Here the boats are afloat at high tide but not at low.



Note the water line in the pictures (way above the heads of the people in the pictures).



Because of the large tides when the tide changes from going out to coming in there is a surge of water which goes back up the various rivers and channels that lead into the Bay of Fundy. The pulse of water coming up the channel can be as high as a meter (this one was about 40 cm). The pictures are about 10 seconds apart, the second picture is with a zoom.

