

Narrow Cook Strait, between both large islands of New Zealand

Sentinel-2 MSI acquired on **10 September 2021** at 22:25:41 UTC
Sentinel-1 CSAR IW acquired on **13 May 2022** from 17:30:41 to 17:31:06 UTC
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Sentinel-1 CSAR IW acquired on **06 June 2022** from 17:30:43 to 17:31:08 UTC

Author(s): Sentinel Vision team, VisioTerra, France - svp@visioterra.fr

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Fig. 1 - S1 (13.05.2022->06.06.2022) - Cook Strait separates the North & South Islands, it connects the Tasman Sea (N-W) with the South Pacific Ocean (S-E).



22 km wide at its narrowest point, Cook Strait is considered one of the most dangerous and unpredictable waters in the world. Its tidal elevation at the ends of the strait are almost exactly out of phase with one another, so on one side is high tide and on the other is low tide.

Fig. 2 - S2 (10.09.2021) - The difference in sea level can drive tidal currents up to 2.5 m/s across the strait. Despite the strong currents, there is almost zero tidal height change in the centre of the strait.



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