

Reference: Kuroshio Path south of Japan

The path of the Kuroshio along the south coast of Japan has been divided into three stable paths: the large-meander (LM), the offshore non-large-meander (oNLM), and the nearshore non-large-meander (nNLM) (Kawabe, 1985). The typical large-meander that persisted over long periods of one year or more appeared prior to the 1990s, but since the 1990s the path has destabilized into three alternating paths of short duration. When the Kuroshio meanders south, it has a large impact on the fishing and oceanographic conditions, such as causing the fishing grounds to shift southwards. Further, when the Kuroshio nears the southern coast of Japan, it has a huge affect on the oceanographic conditions along the coast, causing sudden rises in sea temperature and tide levels.

The large-meander of the Kuroshio is generated from the small-meander (the trigger meander) of the Kuroshio off the south-eastern coast of Kyushu that propagates eastward, amplifying east of the Kii Peninsula. Observations and developments in modeling research from recent years suggest that eddies with diameters of 200-400 km (ocean mesoscale eddies) influence the variations in the Kuroshio path by affecting the trigger meander.

