

# Holocene Deglaciation History of the Juneau Icefield, Southeastern Alaska, Using Cosmogenic $^{10}\text{Be}$

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Modern observations show that mass loss rates from Alaskan glaciers in response to Arctic warming are among the fastest in the world. Though modern observations are critical for assessing recent and ongoing ice loss, geological reconstructions of glacier sensitivity to past warming provide a complementary, longer-term view of glacier sensitivity to climate variability. The Juneau Icefield (JIF), located in southeastern Alaska and British Columbia, is one of the best monitored glacier systems in the world, having been studied by the Juneau Icefield Research Program (JIRP) since 1946. Yet, there are few chronologies documenting its response to paleoclimatic changes. Here, we present a cosmogenic  $^{10}\text{Be}$  chronology from 23 bedrock surfaces and erratic boulders collected in collaboration with JIRP. We collected samples in elevation transects from five nunataks located near the JIF divide that hold information about the former thickness and thinning rate of JIF. Sample elevations range from ~0–150 m above the ice surface. Preliminary results ( $n = 8$ ) from four nunataks yield ages that span the Holocene, ranging from ~11.5–1 ka. We will use our chronology to assess changes in JIF in response to climate fluctuations from the Late Glacial through the Holocene. This work will ultimately extend the record of JIF change beyond the historical record, giving a longer-term view of JIF sensitivity to climate.