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## QFuego-Patagonia: a comprehensive glacier-related dataset for Patagonia and Tierra del Fuego, South America

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Patagonia and Tierra del Fuego (Fuego-Patagonia 45°S to 56°S) comprise large ice fields known as Northern Patagonia Icefield (NPI) and Southern Patagonia Icefield (SPI), as well as other significant glacierized areas such as the Cordillera Darwin (CD), the Isla Santa Inés, Hoste, and hundreds of smaller glaciers. In total, this ice coverage adds up to an approximate area of 22,000 km<sup>2</sup>, accounting for about 80% of South America's total.

Throughout the 20th century, much of the knowledge about these glaciers was based on in-situ measurements and data extracted from emerging remote sensing techniques. These efforts were primarily undertaken by scientists from Argentina, Chile, Germany, the United States, France, Japan, and the United Kingdom, as well as the ongoing contributions of government institutions in Chile and Argentina.

Due to increased access to new and more precise satellites, optical and radar sensors, geophysical methods, meteorological instruments, and the sophistication of numerical models in the present century, knowledge about glaciers in Patagonia has significantly expanded. In recent decades, there have been regular updates on changes in area, elevation, surface speeds, determination of thickness in more locations, etc. In this work, we present a comprehensive dataset of the glaciers of Patagonia and Tierra del Fuego (QFuego-Patagonia) consolidated in a Geographic Information System (GIS), which will be made available to the community. This database includes elevation changes, GPR measurements, subglacial topography modeling, as well as time series of surface velocities, among others, which serve as the basis for modeling and projecting the future of Patagonian glaciers. We also announce the new QFuego-Patagonia web portal, where some of the data presented here will be available to the scientific community (<https://qfuego-patagonia.org/>).

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