1. Record Nr. UNINA9911020103903321 Autore Ruppert Natalia A **Titolo** Tectonics and Seismic Structure of Alaska and Northwestern Canada: EarthScope and Beyond Pubbl/distr/stampa Newark:,: John Wiley & Sons, Incorporated,, 2024 ©2025 **ISBN** 9781394195947 139419594X 9781394195930 1394195931 9781394195923 1394195923 Edizione [1st ed.] Descrizione fisica 1 online resource (651 pages) Collana Geophysical Monograph Series; v.290 Altri autori (Persone) JadamecMargarete A FreymuellerJeffrey T Disciplina 551.809798 Soggetti Seismology Geophysics - Research Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Cover -- Title Page -- Copyright -- Contents -- List of Contributors --Nota di contenuto Preface -- Acknowledgments -- About the Companion Website -- Part I An Introduction to the EarthScope Networks -- Chapter 1 EarthScope Networks in Alaska and Northwestern Canada --1.1 INTRODUCTION 1.2 BACKGROUND, GOALS, AND preEarthScope STATUS --1.2.1 Scientific Goals --1.2.2 PreEarthScope Network Status --1.3 PLATE BOUNDARY OBSERVATORY CONSTRUCTION AND OPERATION 1.4 USArray TRANSPORTABLE ARRAY CONSTRUCTION AND 1.5 LONGTERM LEGACY OF EarthScope NETWORKS --**OPERATION --**ACKNOWLEDGMENTS --**AVAILABILITY** 1.6 CONCLUSIONS --STATEMENT --REFERENCES -- Chapter 2 Perspectives on Transportable Array Alaska Background Noise Levels --INTRODUCTION --2.2 DATA --2.3 METHODS --**OBSERVATIONS --**2.4.1 0.2 s Noise --2.4.2 1 s Period Noise 2.4.3 5 s Period Noise --2.4.4 18 s Period Noise

## Sommario/riassunto

New insights into geologic and tectonic processes in Alaska and northwestern Canada The northwest of the North American continent is geologically dynamic and tectonically active. A network of seismic and geodetic instruments deployed across the region as part of the EarthScope project provided data crucial to understanding its geological, tectonic, and seismic processes. Tectonics and Seismic Structure of Alaska and Northwestern Canada: EarthScope and Beyond presents review papers and new scientific studies using EarthScope data to advance understanding of the region's structure, seismic activity, and geodynamic processes. About this volume: \* Describes the infrastructure and capabilities of the EarthScope seismic and geodetic networks \* Draws from a comprehensive set of geophysical data \* Includes field studies, laboratory analyses, and numerical modeling \* Spans processes from the Earth's interior and the lower mantle to the crust and surface \* Covers examples from subduction zones, fault systems, and some of the largest recorded earthquakes Provides scientific explanations for the natural landscapes and ongoing movements shaping the northwest of the North American continent The American Geophysical Union promotes discovery in Earth and space science for the benefit of humanity. Its publications disseminate scientific knowledge and provide resources for researchers, students, and professionals.