

## FIBERED SYMPLECTIC COHOMOLOGY AND THE LERAY–SERRE SPECTRAL SEQUENCE

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We define symplectic cohomology groups  $FH_{[a,b]}^*(E)$ ,  $-\infty \leq a < b \leq \infty$  for a class of symplectic fibrations  $F \hookrightarrow E \rightarrow B$  with closed symplectic base and convex at infinity fiber. The crucial geometric assumption on the fibration is a negativity property reminiscent of negative curvature in complex vector bundles. When  $B$  is symplectically aspherical, we construct a spectral sequence of Leray–Serre type converging to  $FH_{[a,b]}^*(E)$ , and we use it to prove new cases of the Weinstein conjecture.

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### 1. Introduction

This paper investigates the behavior of symplectic cohomology in a fibered context. The foundational papers on symplectic (co)homology are [6, 11, 31], and recent developments are presented in [29]. The symplectic fibrations  $F \hookrightarrow E \xrightarrow{\pi} B$  that we consider have a closed symplectic base  $(B, \beta)$ , a fiber with contact type boundary and possess a coupling form  $\Omega$ . In this