

$$\begin{array}{ccccccc} \cdots & \longrightarrow & H_i(\mathbf{R}^n) & \longrightarrow & H_i(\mathbf{R}^n \setminus \{\mathbf{0}\}) & \longrightarrow & H_i(\mathbf{R}^n, \mathbf{R}^n \setminus \{\mathbf{0}\}) \longrightarrow \\ & & & & & & \searrow \\ & & & & & & \\ & & & & & & \nearrow \\ & & & & & & \\ & \longleftarrow & H_{i-1}(\mathbf{R}^n) & \longleftarrow & H_{i-1}(\mathbf{R}^n \setminus \{\mathbf{0}\}) & \longleftarrow & H_{i-1}(\mathbf{R}^n, \mathbf{R}^n \setminus \{\mathbf{0}\}) \longleftarrow \cdots \end{array}$$