

$$\coprod_{i \in I} (P_i \oplus Q_i) \longrightarrow \coprod_{i \in I} P_i$$

$$\downarrow$$

$$\downarrow$$

$$0 \longrightarrow \ker \pi \cap \varinjlim^{fil} (P_\bullet \oplus Q_\bullet) \hookrightarrow \varinjlim^{fil} (P_\bullet \oplus Q_\bullet) \twoheadrightarrow \varinjlim^{fil} P_\bullet \longrightarrow 0$$

$$\downarrow$$

$$\downarrow$$

$$\parallel$$

$$0 \longrightarrow \ker \pi \hookrightarrow P \twoheadrightarrow F \longrightarrow 0$$