

Maybe we misunderstood the filtration $F^p H^*(K^*)$.

$$\begin{array}{ccccc} K^{q-1} & \longrightarrow & K^q & \longrightarrow & K^{q+1} \longrightarrow \dots \\ \cup & & \cup & & \cup \\ F^p K^{q-1} & \longrightarrow & F^p K^q & \longrightarrow & F^p K^{q+1} \end{array}$$

$$F^p H^q(K^*) \equiv \frac{\{a \in F^p K^q : da=0\}}{d(K^{q-1})} \text{ is acceptable.}$$

If we use this definition,

$$\frac{F^p H^{p+q}(K^*)}{F^{p+1} H^{p+q}(K^*)} = \left(\frac{\{a \in F^p K^{p+q} : da=0\}}{d(K^{p+q-1})} \right) / \left(\frac{\{a \in F^{p+1} K^{p+q} : da=0\}}{d(K^{p+q-1})} \right)$$

$$= \frac{\{a \in F^p K^{p+q} : da=0\} + dK^{p+q-1}}{\{a \in F^{p+1} K^{p+q} : da=0\} + dK^{p+q-1}}$$

$\downarrow h$

$$\frac{\{a \in F^p : da=0\} + dK^{p+q-1} + F^{p+1} K^{p+q}}{dK^{p+q-1} + F^{p+1} K^{p+q}}$$

\Rightarrow Clearly h is well-defined and onto.

Suppose $h[a] = 0$.

$$\Rightarrow a = dl + x, \quad l \in K^{p+q-1}, \quad x \in F^{p+1} K^{p+q}$$

$$\Rightarrow [dl] = 0, \quad x = a - dl \in F^{p+1} K^{p+q} \text{ and } dx = da - ddl = 0 \Rightarrow x \in \{a \in F^{p+1} : da=0\}$$

$$\Rightarrow [x] = 0 \Rightarrow [a] = 0 \Rightarrow h \text{ is one to one}$$

$$\Rightarrow h \text{ is isomorphic} \Rightarrow \text{This implies that } F^p H^{p+q}(K^*) / F^{p+1} H^{p+q}(K^*) \cong \{a \in F^p K^{p+q} : da=0\} /$$