and $F_\cdot(N)$ for M and N, and consider the double complex

$$(E_\cdot(M) \otimes F_\cdot(N),\ \partial_M \otimes 1 \pm 1 \otimes \partial_N).$$

Recall from Chapter 3 that there are two spectral sequences with

$$'E_1 = H_*(E_\cdot(M) \otimes_\sigma F_\cdot(N),\ 1 \otimes \partial_N),$$
$$''E_1 = H_*(E_\cdot(M) \otimes_\sigma F_\cdot(N),\ \partial_M \otimes 1),$$

both of which abut to the hypercohomology

$$H_*(E_\cdot(M) \otimes_\sigma F_\cdot(N),\ \partial_M \otimes 1 \pm 1 \otimes \partial_N).$$

Let $K_{p,q} = E_p \otimes F_q$. $K_n = \bigoplus_{p+q=n} E_p \otimes F_q$.

$$E_\cdot(M) : E_m \to E_{m-1} \to \cdots \to E_0 \to \underset{E_{-1}}{\overset{\parallel}{M}} \to \underset{E_{-2}}{\overset{\parallel}{0}}$$

$$F_\cdot(N) : F_\ell \to F_{\ell-1} \to \cdots \to F_0 \to \underset{F_{-1}}{\overset{\parallel}{N}} \to \underset{F_{-2}}{\overset{\parallel}{0}},$$

Filtrations

$$'F_p K_{p+q} = \sum_{\substack{p'+q=p+q \\ p' \le p}} K_{p',q} = K_{p,q} \oplus K_{p-1,q+1} \oplus \cdots \oplus K_{0,p+q}$$
$$\oplus K_{-1,p+q+1} \oplus K_{-2,p+q+2} = E_p \otimes F_q \oplus E_{p-1} \otimes F_{q+1} \oplus \cdots \oplus E_0 \otimes F_{p+q} \oplus E_{-1} \otimes F_{p+q+1} \oplus E_{-2} \otimes F_{p+q+2}$$

$$''F_q K_{p+q} = \sum_{\substack{p+q'=p+q \\ q' \le q}} K_{p,q'} = K_{p,q} \oplus K_{p+1,q-1} \oplus \cdots K_{p+q,0} \oplus K_{p+q+1,-1}$$
$$= E_p \otimes F_q \oplus E_{p+1} \otimes F_{q-1} \oplus \cdots \oplus E_{p+q} \otimes F_0 \oplus E_{p+q+1} \otimes F_{-1}$$

See P 324 Rotman An introduction To Homological Algebra