

$$\text{and } 'F_{p+q+2} K_{p+q+1} = K_{p+q+1}, \quad 'F_{p+q+2} H_{p+q} = H_{p+q}.$$

$$\frac{H_{p+q}}{'F_{p+q+1} H_{p+q}} = \frac{'F_{p+q+2} H_{p+q}}{'F_{p+q+1} H_{p+q}} = 'E_{p+q+2, -2}^{\infty} = 0$$

$$\Rightarrow H_{p+q} = 'F_{p+q+1} H_{p+q}, \quad \frac{'F_{p+q+1} H_{p+q}}{'F_{p+q} H_{p+q}} = 'E_{p+q+1, -1}^{\infty} = 0.$$

$$\Rightarrow 'F_{p+q+1} H_{p+q} = 'F_{p+q} H_{p+q} \Rightarrow H_{p+q} = \dots = 'F_0 H_{p+q} = 'F_{-1} H_{p+q}.$$

$$\frac{'F_{-1} H_{p+q}}{'F_{-2} H_{p+q}} = 'E_{-1, p+q+1}^{\infty} = \dots = 'E_{-1, p+q+1}^1 \quad \text{since } 'F_{-2} H_{p+q} = 0.$$

$$\begin{array}{ccc} 'E_{0, p+q+1}' & \longrightarrow & 'E_{-1, p+q+1}' \xrightarrow{d^1} 'E_{-2, p+q+2-1}' \\ \parallel & & \parallel \\ 0 & & 0 \end{array}$$

$$'E_{-1, p+q+1}' = 'E_{-1, p+q+1}^2 \dots = 'E_{-1, p+q+1}^{\infty}.$$

$$\Rightarrow 'E_{-1, p+q+1}' = H_{p+q+1} (E_{-1} \otimes F.(N), 1 \otimes \partial_N) = H_{p+q+1} (M \otimes F.(N), 1 \otimes \partial_N) \Rightarrow H_{p+q} = H_{p+q+1} (M \otimes F.(N), 1 \otimes \partial_N).$$

Similarly, since " $F_{p+q+2} K_{p+q} = K_{p+q}$ ", " $F_{p+q+2} K_{p+q+1} = K_{p+q+1}$ ", and " $F_{p+q+2} K_{p+q-1} = K_{p+q-1}$ ", " $F_{p+q+2} H_{p+q} = H_{p+q}$ ".

$$\frac{H_{p+q}}{"F_{p+q+1} H_{p+q}} = \frac{"F_{p+q+2} H_{p+q}}{"F_{p+q+1} H_{p+q}} = "E_{p+q+2, -2}^{\infty} = 0$$

$$\Rightarrow H_{p+q} = \dots = "F_0 H_{p+q} = "F_{-1} H_{p+q}$$

$$\frac{"F_{-1} H_{p+q}}{"F_{-2} H_{p+q}} = "E_{-1, p+q+1}^{\infty} = \dots = "E_{-1, p+q+1}^1 = H_{p+q+1} (E.(M) \otimes N, \partial_M \otimes 1).$$

$$\text{Thus } H_{p+q} = H_{p+q+1} (E.(M) \otimes N, \partial_M \otimes 1) = \text{Tor}_{p+q+1}^{\theta}(M, N) = H_{p+q+1} (M \otimes$$