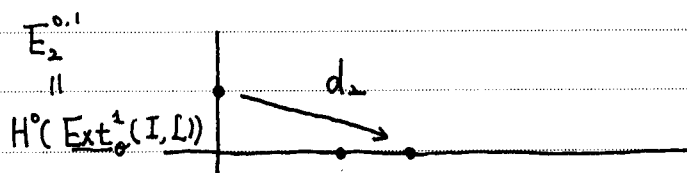


The first approximation to understanding (\*\*) is to look into the spectral sequence relating local and global Ext's.

Using that  $E_2^{p,q} = H^p(S, \underline{\text{Ext}}_0^q(I, L))$ , the picture of  $E_2$  is



$$E_2^{2,0} = H^2(\underline{\text{Ext}}_0^0(I, L)) \cong H^2(L)$$

where the isomorphism results from

$$\left\{ \begin{array}{l} 0 \rightarrow I \rightarrow \mathcal{O} \rightarrow \mathcal{O}_Z \rightarrow 0, \text{ and} \\ \underline{\text{Ext}}_0^0(\mathcal{O}_Z, L) = 0 \\ \Rightarrow L \cong \underline{\text{Ext}}_0^0(\mathcal{O}, L) \cong \underline{\text{Ext}}_0^0(I, L), \end{array} \right.$$

using the exact sequence of  $\underline{\text{Ext}}$ .

$$\Gamma \quad E_2^{2,0} = H^2(S, \underline{\text{Ext}}_0^0(I, L)).$$

From  $0 \rightarrow I \rightarrow \mathcal{O} \rightarrow \mathcal{O}_Z \rightarrow 0$ , we have

$$0 \rightarrow \underline{\text{Ext}}^0(\mathcal{O}_Z, L) \rightarrow \underline{\text{Ext}}^0(\mathcal{O}, L) \rightarrow \underline{\text{Ext}}^0(I, L)$$

$$\rightarrow \underline{\text{Ext}}^1(\mathcal{O}_Z, L), \text{ since } \underline{\text{Ext}}^0(\mathcal{O}_Z, L)_p \cong \underline{\text{Ext}}^0(\mathcal{O}_{Z,p}, L_p)$$