similar to the one encountered in the lemma in the discussion concerning the intrinsic form of local duality in Section 3 above. Recall that $\mathrm{Ext}^*(M; \mathcal{O}_Z, \Omega^n)$ is the hypercohomology of the complex of sheaves

$$\underline{\mathrm{Hom}}_{\mathcal{O}}(\mathcal{O}, \Omega^n) \longrightarrow \underline{\mathrm{Hom}}_{\mathcal{O}}(\Omega^1, \Omega^n) \longrightarrow \cdots .$$

For the commutative diagram, see P688 & P690.

Using the identifications provided by the commutative diagram, we write this complex of sheaves as Ω^{n-}. Thus

$$\mathrm{Ext}^*(M; \mathcal{O}_Z, \Omega^n) \cong \mathbb{H}^*(M, \Omega^{n-}).$$

$$\begin{array}{cccccc}
\mathrm{Hom}(\ ,\Omega)\colon & \underline{\mathrm{Hom}}_{\mathcal{O}}(\mathcal{O}, \Omega^n) & \longrightarrow & \underline{\mathrm{Hom}}_{\mathcal{O}}(\Omega^1, \Omega^n) & \longrightarrow & \cdots \\
 & \downarrow & & \downarrow & & \\
\Omega^{-n}\ : & \Omega^n & \longrightarrow & \Omega^{n-1} & \longrightarrow & \cdots
\end{array}$$

$$\Rightarrow \quad \mathrm{Ext}^*(M; \mathcal{O}_Z, \Omega^n) = \mathbb{H}^*(M, \mathrm{Hom}(E.(\mathcal{O}), \Omega^n)) \cong \mathbb{H}^*(M, \Omega^{n-})$$

We note that the differential used to calculate the hypercohomology on the right is $\delta \pm \iota(v)$, where δ is the Čech coboundary mapping.

Now, according to the general discussion of hypercohomology there are two spectral sequences $\{''E_r\}$ and $\{'E_r\}$ abutting to $\mathbb{H}^*(M, \Omega^{n-})$. One of them has