Cartan theorem A

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Let $\mathcal{O}_z$ denote the ring of germs of holomorphic functions at z

Theorem (Cartan). *Suppose $\mathcal{F}$ is a coherent analytic sheaf on a Stein manifold M. For every $z \in M$, the the stalk $\mathcal{F}_z$ is generated as an $\mathcal{O}_z$ module by the germs at z of the `http://planetmath.org/Sheaf`sections $\Gamma(M, \mathcal{F})$.*

Philosophically, this theorem says that there is good supply of of a coherent analytic sheaf on a Stein manifold.

References

[1] Lars Hörmander. , North-Holland Publishing Company, New York, New York, 1973.

[2] Steven G. Krantz. , AMS Chelsea Publishing, Providence, Rhode Island, 1992.