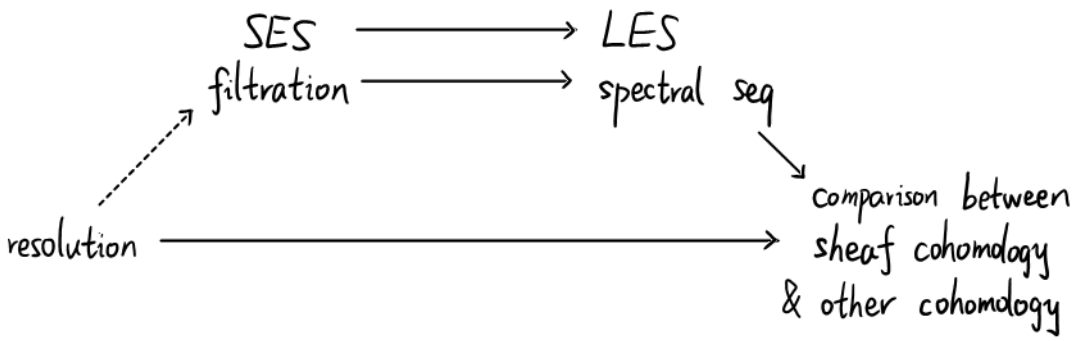
Eine Woche, ein Beispiel

1.28 conormal bundle

slogan:

SES	induces	LES,
filtration	induces	spectral sequence.

To expend a little bit,



Even though "filtration $\Rightarrow$ spectral seq" is the most general statement, people start with "SES $\Rightarrow$ LES" and "acyclic resolution $\Rightarrow$ other coh $\approx$ hyper coh".

Let us leave spectral seq in other people's notes.

Methods to construct SES: { check by stalks; filtration by $H^i(\mathcal{F})$; filtration by $\mathcal{F}^i$

method	spectral seq	LES	cohomology/resolution
check by stalks	... for stratifications	relative coh seq	simplicial/cellular
	Čech-to-derived fctor	MV	Čech
filtration by $H^i(\mathcal{F})$	Grothendieck		
	Leray-Serre	Gysin	Euler class
			Hodge-Tate
Hodge related: filtration by $\mathcal{F}^i$	Hodge-de Rham		de Rham, Hodge-de Rham
			Dolbeault $H^p(X, \Omega^q) = H^{p,q}(X)$
need resolution to get "another" complex	Frölicher		$H^{p,q}(X) \Rightarrow H^{p+q}(X)$ "composition"
			singular
spectral sequences which I don't know	Adams		for stable homotopy gp
	Atiyah-Hirzebruch		for top K-theory
	Bar		for group
	Bockstein		for group homology
	Cartan-Leray		
	Eilenberg-Moore		
	Green		for Koszul cohomology
	⋮		⋮

For more spectral sequences, see:
https://en.wikipedia.org/wiki/Spectral_sequence
https://github.com/CubicBear/SpectralSequences/blob/main/SpecralSequences.pdf

1. open-closed formalism
2. open cover
3. filtration by $H^i(\mathcal{F})$
4. Hodge related filtration