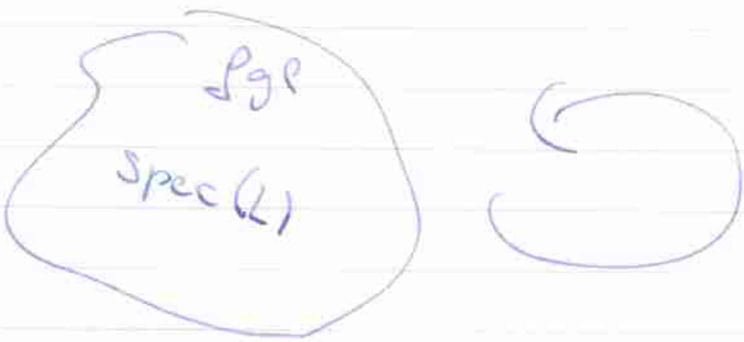
Morava & chromatic picture where all this is from
It came from trying to understand E_2 of ANSS
What is that? H^* of some sheaves on moduli stack of formal gps & isoms
What does that stack look like?



Change of coeff

rather simple stack: affine scheme / gp scheme (X / G)
Interested in the equivariant cohom of this (X/G).
If I want to understand $H_G(X)$
try to break X up into the orbits of the gp action, build Sp Sec from cohom of orbits
$\Rightarrow H_G(X)$.
Each of these orbits is G/H
$\rightsquigarrow \cong H_H(pt)$

do this for moduli stack of formal gps you find that you are doing exactly the Lubin Tate story

$(\ )_{(p)}$ - subspace def by $p=0$ & complement

$\frac{1}{p}$ fgps$/\mathbb{Q}$ all isom

$\Rightarrow$ only one orbit when we remove $p=0$, which ~~stab gp~~ G/H

H = autom $\mathbb{G}_a$.

Now lets look at the thing we removed: we reduced mod p & there is v_1. If we invert v_1, all the groups are isom & H = Morava stabiliser gp

(...)

If you really want to set up that spectral sequence, you need the E_n - def thingies to come in gave beautiful picture with all different periodicities, v_n's & people wanted to make this

more geometric
Ravenel conjectures
E_n, want stabiliser gp
to actually act on this

Morava's annals paper
Ravenel green

---

toy example, $k\left(\ \right)^{\ell}$ - matrices, X = space of
$k < \ell$

$G = GL(k) \times GL(\ell)$

two matrices are in same orbit $\Leftrightarrow$
they have same rank

$\Rightarrow$ the orbit of max rank is big open
subset $\det \neq 0$

then there are the ones of rk $k-1$

---

reason for going to ∞'s
looking at $H^*(E_{n*}$ with mor. stab gp)
$= E_2$-term of S.S. $\Rightarrow$
~~$K(n)$-local~~ $\pi_* L_{K(n)} S^0$

E_n — E_2 ANSS

~~EO~~

alg. chrom. sp. sec. — geom. chrom. spec. sec.

$$\begin{array}{ccc}
\bigoplus_n H^*(S_n ; G_{n*}) & \Longrightarrow & \bigoplus_n \pi_* L_{K(n)} S^0 \\
\Downarrow & & \Downarrow \\
\mathrm{Ext}_{MU_*MU}(MU_*, MU_*) & \Longrightarrow & \pi_* S^0
\end{array}$$

EO : ~~seperate out~~ wanted to separate out the part where the finite subgroups come in (they give you stuff in large cohomological dimension)

can compute everything about them, but they retain some non-trivial info.

try R versus RO to compute