

Randomization restriction example

Stat 566
4-21-15

Experiment: Oxide growth on silicon wafers ①

A: temperature

B: gas

C: time

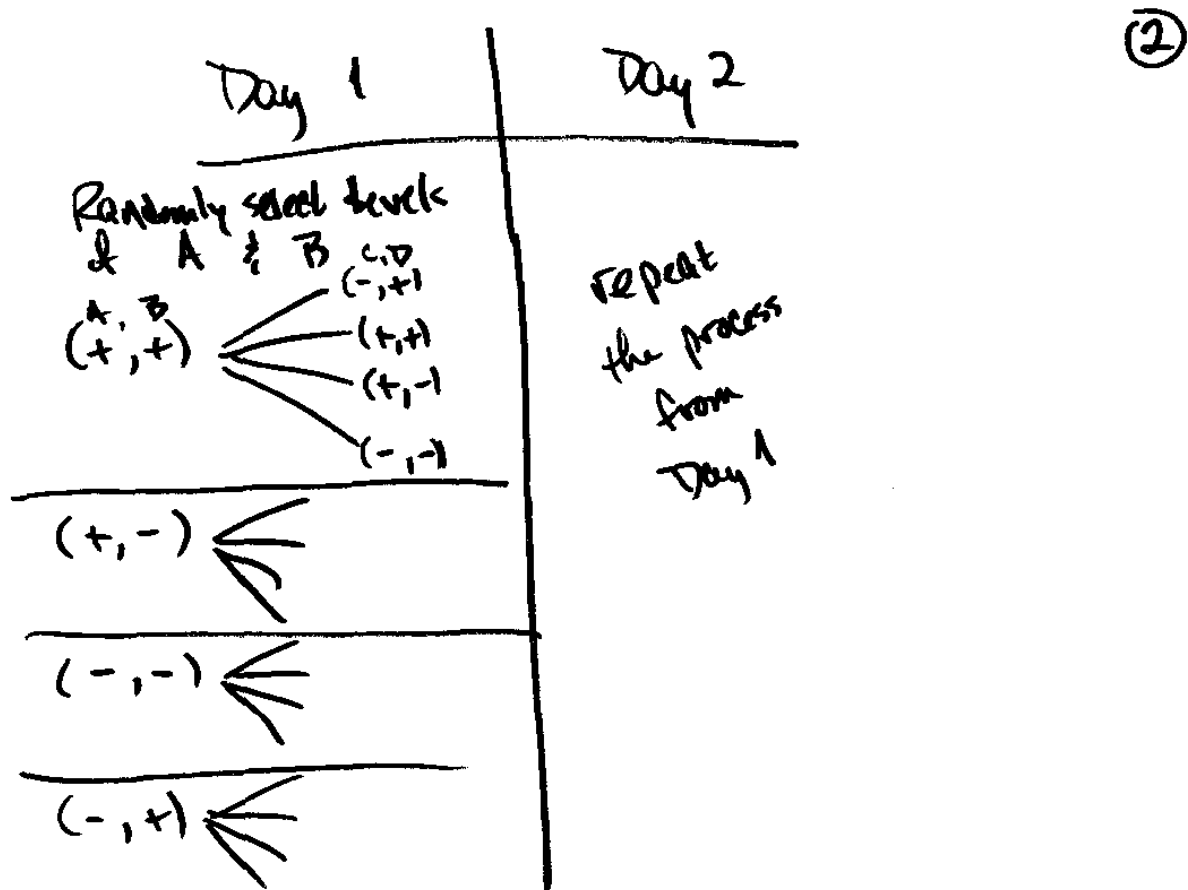
D: wafer position
in furnace

Each factor has 2 levels,
all fixed

2 replicates

⇒ 32 runs

Restrictions: Can only do 16 runs per day,
so they do one entire replicate of the
experiment on each day.



③

We know that Day and any interactions with Day will fail to have F tests, because the denom. would be MSE but $df_e = 0$.

[illegible]

Source	df
Blocks (Days)	1
A	1
B	1
AB	1
RA	1
RB	1
CAB	1
C	
D	
CD	
+ all others	
error	0
	<hr/> 31 total

Let R stand for "Day" (5)

whole plot

Sub plot