

DESY beam test

目的

実験内容

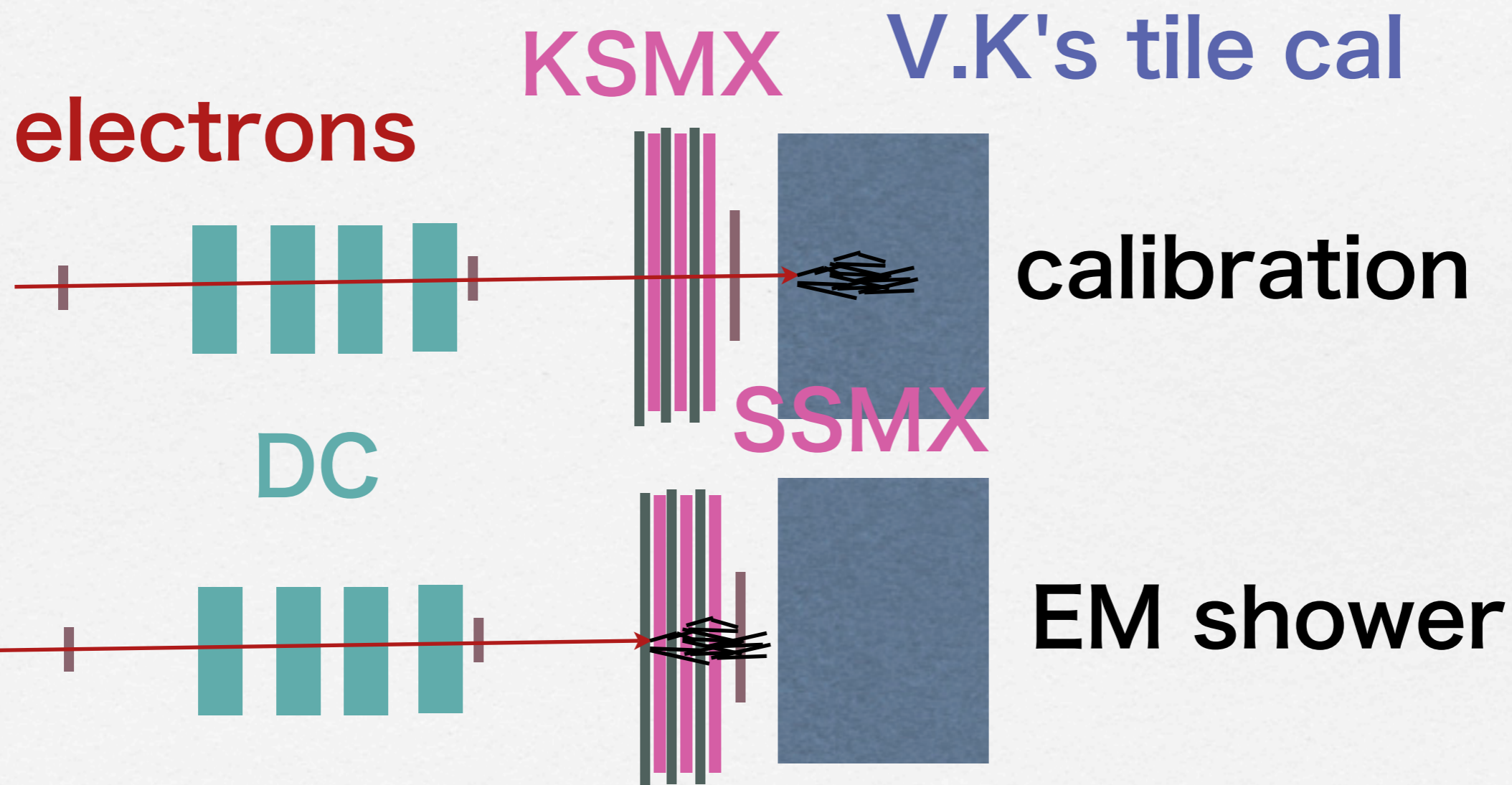
DESY

test items and time

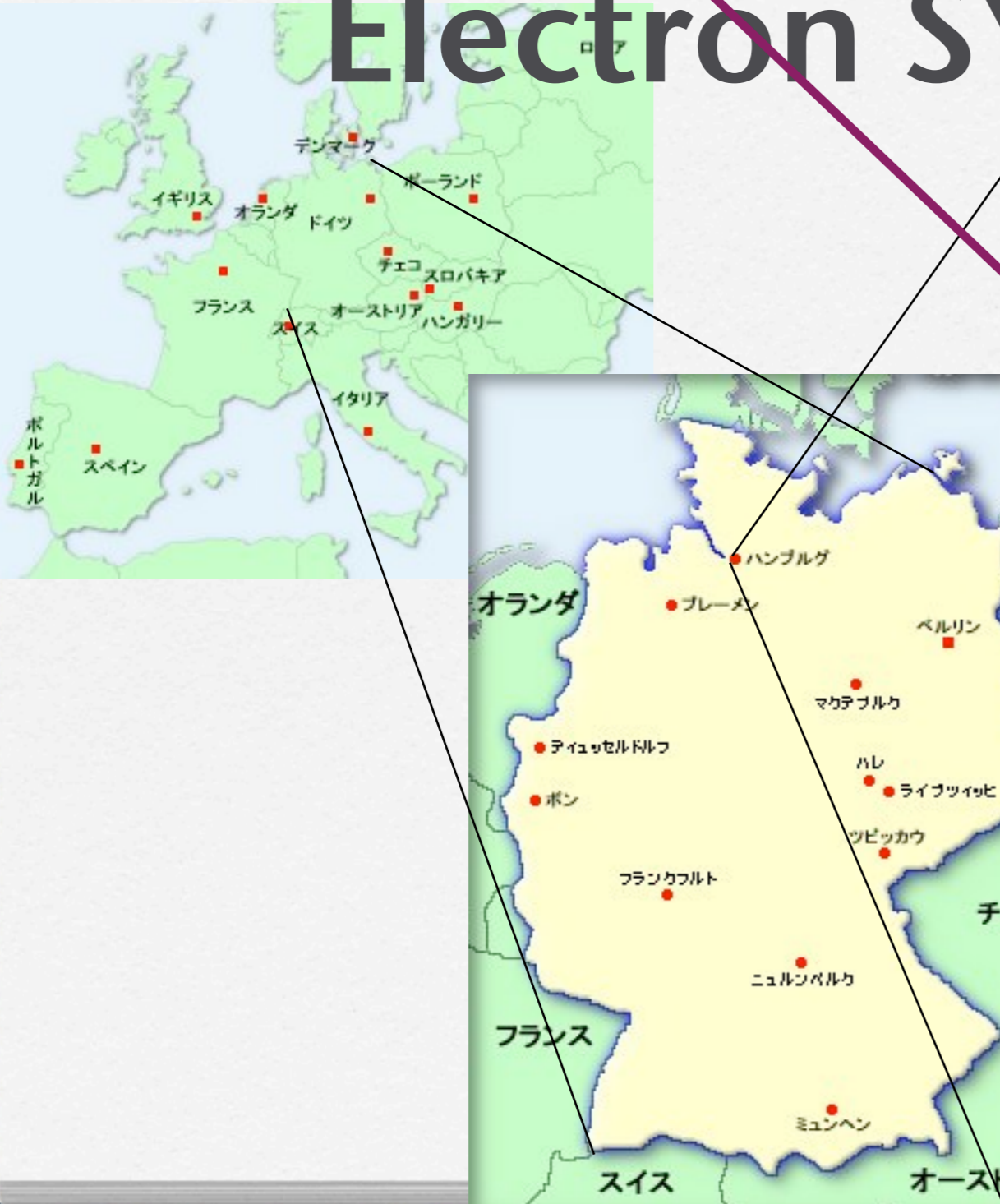
DESY beam test 目的

- ❑ to measure EM shower development
- ❑ to be friend with V. Korbel and his team
- ❑ to train our students

our detector at DESY



DESY (Deutsches Electron SYNchrotron)



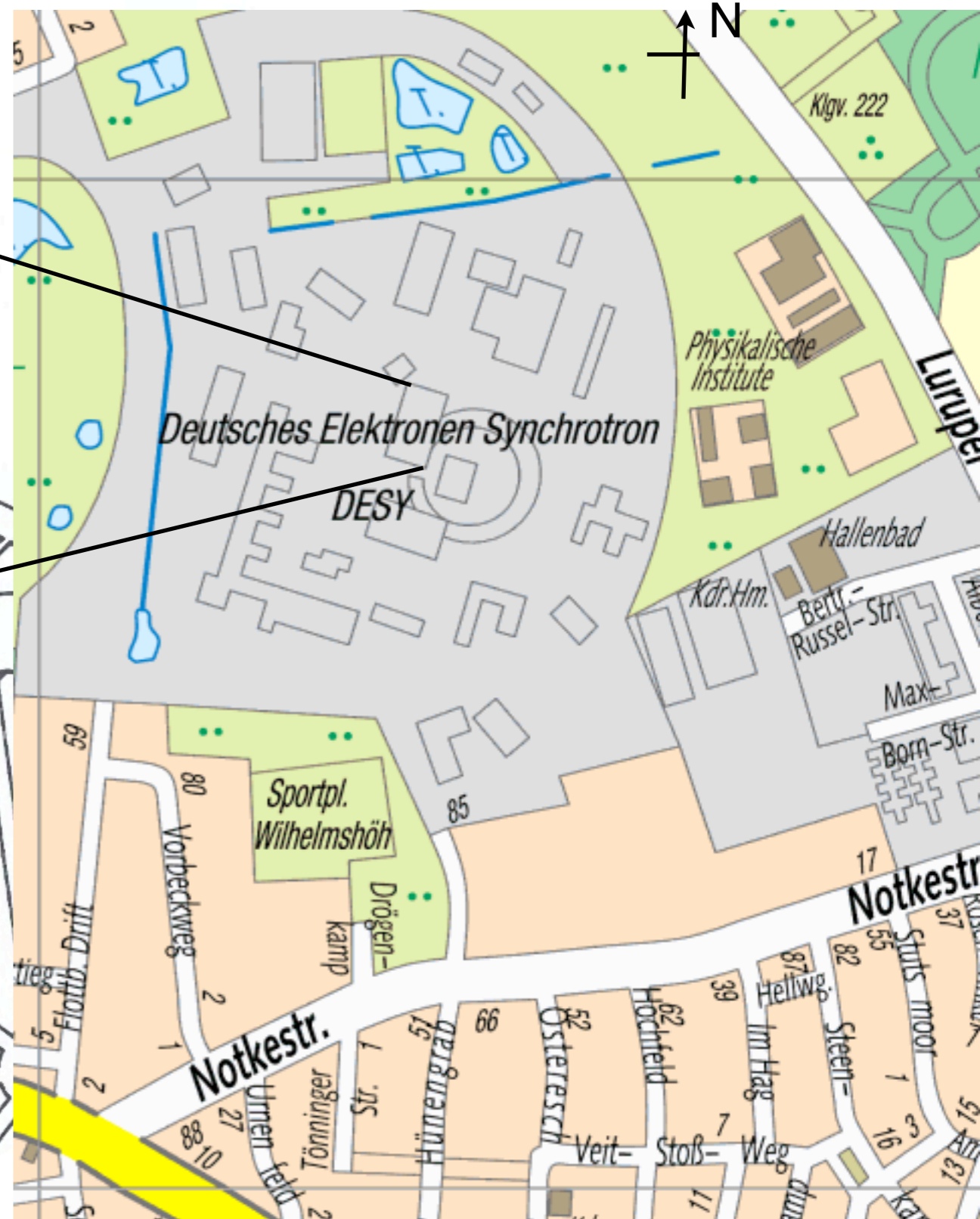


DESY

st 21

Hall 2
(fixed target
experiments)

SER

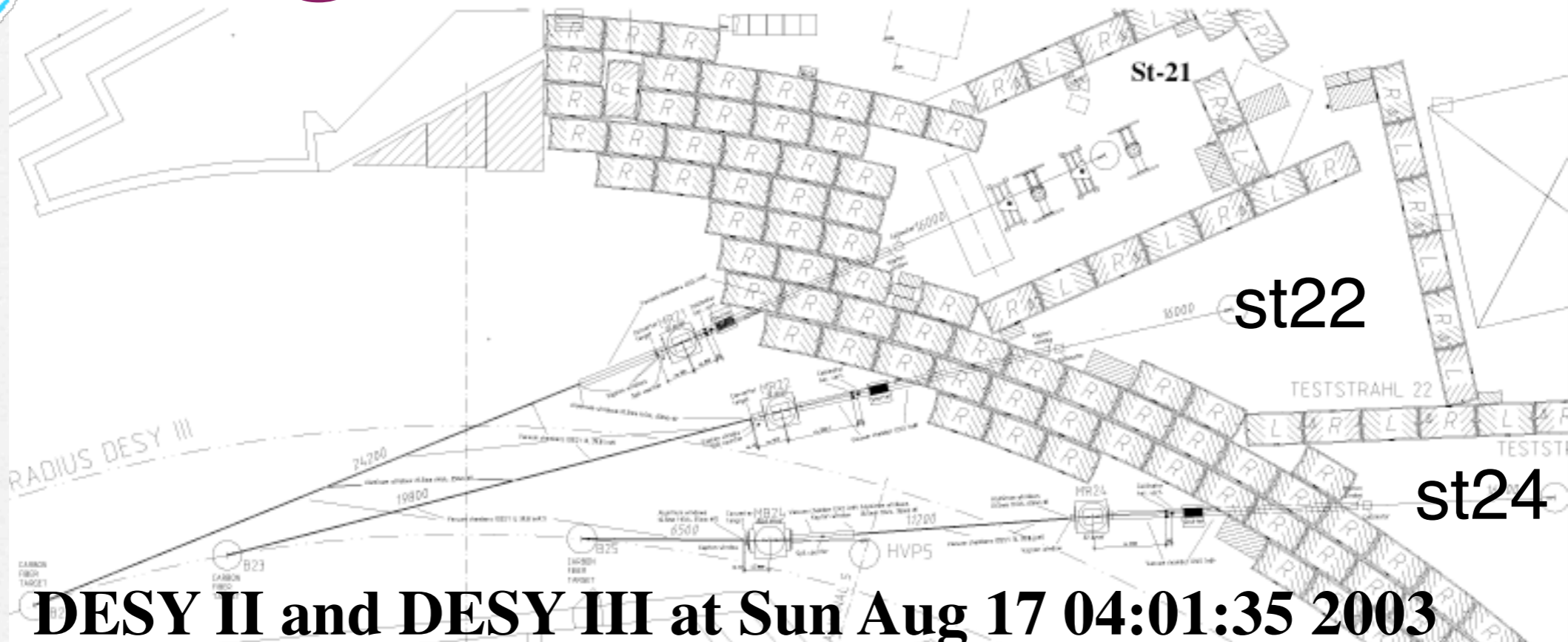




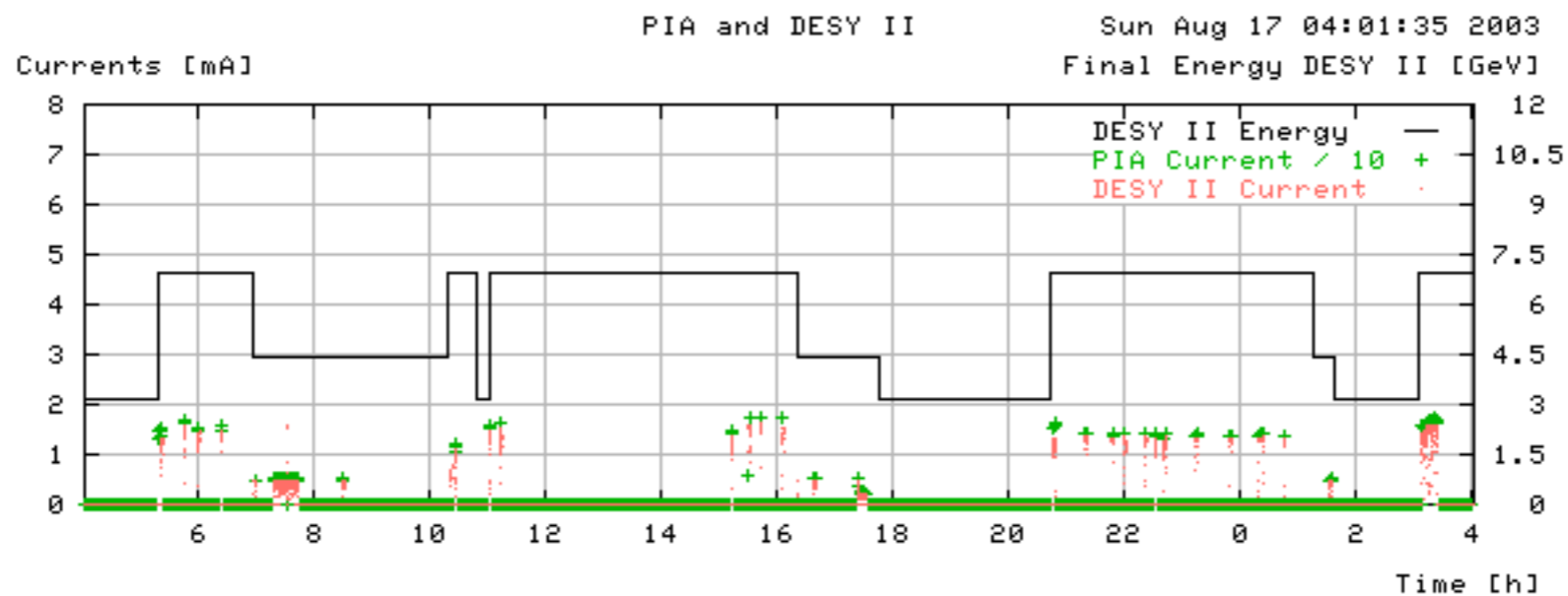
DESY

concrete 1mx2m: labeled "R"

st21

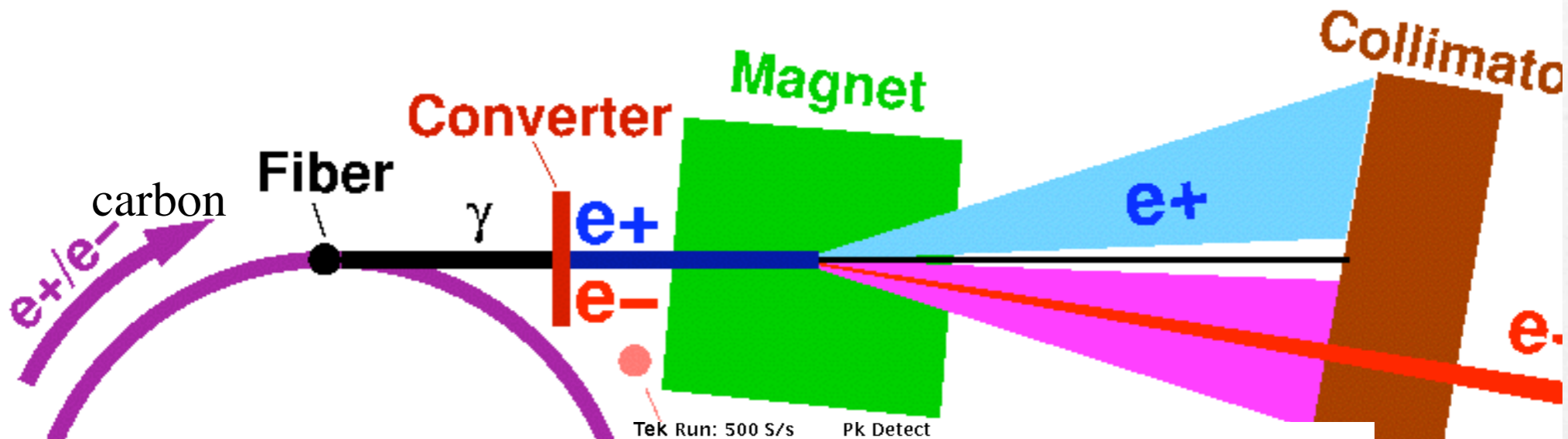


DESY II and DESY III at Sun Aug 17 04:01:35 2003

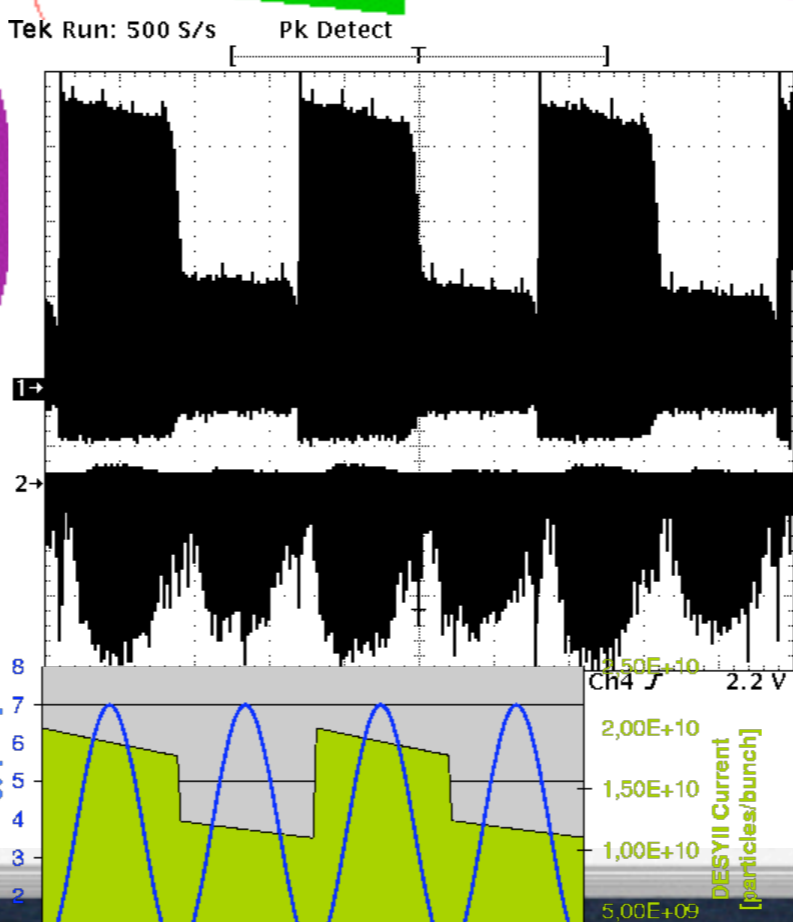




DESY II energies from 1 to 6 GeV and
 up to several **1000 electrons/cm²/s**
<http://desyntwww.desy.de/~testbeam/welcome.html>



DESY II
7GeV



beam current
 spill monitor

9 Dec 1997
 15:24:30

Beam Time estimation

assume 1kHz/cm^2 (1-6GeV) \gg 10HzDAQ

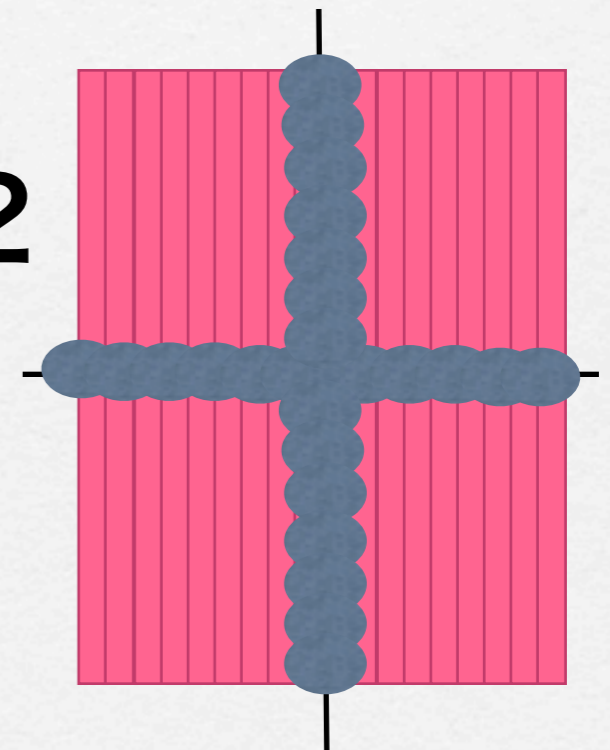
Calibration

10kevents/point=1kev/cm²

1000sec/run

11 points x 2 =22points

7hours(44MB)



(if 10% efficiency then 70h~3days)

50+30w/ev~200B/ev

Beam Time estimation (cont.)

EM shower run/set at the center

100 kev = 3hours

3 hours x 6 energies = 18h (60MB)

Times N set : N ~4

Pb(4)+KSMX+Pb(4)+SSMX

Pb(8)+KSMX+Pb(8)+SSMX

Pb(4)+KSMX+Pb(8)+SSMX

Pb(8)+KSMX+Pb(4)+SSMX

means 4days

Beam Time estimation (cont.)

minimal set (calibration + EM shower)

~1 day (100MB)

Nset=4 then 5days

normally $\times 3 = 15 \text{ days}$ < 3 weeks

installation + set up ~1 week