# Maintenance at the MAX IV Laboratory

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# MAX-lab today



- 3 storage rings
- Circumference 32 m, 90 m & 36 m
- 800 users / year
- about 120 employees



# How it all began, Max I

- Max-lab started around 1973
- Moved to new facilities 1983
- 1987 accelerator / maintenance group: 14 people
- More or less every body worked with maintenance



- first storage ring at Max-lab
- commissioned 1986
- ring energy 0.5 GeV
- circumference 32m
- 7 beamlines in its prime



#### Max II



- **1991 construction Max II started**
- 1995 Max II was inaugurated
- 1995 accelerator / maintenance group grown to 20 people

#### Max II

- among first of the 3<sup>rd</sup> generation sources
- ring energy 1.5 GeV
- commissioned in 1996
- circumference 90m
- 8 beamlines (14 branches)



#### Max III

- A test-bench for novel magnet technology
- 2007 commissioning of Max III
- 2011 three beamlines operational

Max III

- 3<sup>rd</sup> generation light source for UV/IR light
- ring energy 0.7 GeV
- test-bench for novel magnet technology
- commissioned in 2007
- circumference 36m





#### Machine on-call team

- 1998 machine on-call team was formed
- Focus on maintenance of crucial and sensitive parts
- This has led to less down time on the rings



#### **Beamline Maintenance - Max II-III**

- Beamline managers: post-docs → now permanent
- Soon: 3 dedicated technicians
- Smoother normal operation and scheduled maintenance possible





# MAX-lab today



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#### Max IV

2 storage rings
Circumference 96 m & 528 m
2 000 users / year
Approx. 250 employees
In use from 2015
Cost about 3,3 billion euro

FOJABarkitekter SNØHETTA

Para true de la

