UiO : Department of Physics
University of Oslo

Adams Early Era, HMI, Berlin

Magne Guttormsen
Department of Physics, University of Oslo
Norway

Symposium for Angela and Adam 60th Birthday, Kraków, September 14, 2015

In memory of Karl Hugo Maier
(3. june 1938 – 13. June 2015)

A leading nuclear scientist at HMI, outstanding experimentalist and a great supervisor!

Early 1980th with Adam in Germany
What did we do?

HMI was established 1959 at Wannsee, Berlin in Honor of Lise Meitner and Otto Hahn.
Bürgermeister Willi Brandt.

HMI and BESSY became
Helmholtz Zentrum Berlin (HZB) in 2009.

My stay at ISKP, Bonn and HMI, Berlin (1979-1983)

Collaboration between
Herbert Hübel (Bonn) and Karl Hugo Maier (Berlin)

8 Publications:

H. Hübel et al. Z.Phys. A314, 89 (1983) *Isomeric Transitions in ^{203}Bi and ^{205}Bi*

M. Guttormsen et al., Nucl. Phys. A398, 119 (1983) *The $(vi^2_{13/2})(8^+, 10^+, 12^+)$ Triplets in $^{190\text{-}196}$Hg*

M. Guttormsen et al., NIM 227, 486 (1984) *A Superconducting Electron Spectrometer*

J. Recht et al., Nucl. Phys. A449, 366 (1985) *High-Spin Structure in ^{169}W and ^{179}W*

D.J. Decman et al., Nucl. Phys. A436, 311 (1985) *Decay of the Ground State and the $(29/2)^+$ Isomer in ^{217}Ac and g-Factor Measurements from Perturbed α-Particle Angular Distributions*

A. Maj et al., Z. Phys. A324, 123 (1986) *Observation of Highly Enhanced E3-Transitions in ^{198,200}Po. Evidence for Octupole Instability at $Z \geq 84$ and $N \leq 114$*

K.P. Blume et al., Nucl. Phys. A464, 445 (1987) *High-Spin States in $^{163\text{-}166}$Hf*

A. Maj et al., Nucl. Phys. A509, 413 (1990) *Levels, Lifetimes and g-Factors in ^{198}Po and ^{200}Po*
(Eγ, Iγ, Iγ(θ), Iγ(θ, H, t), γγ(t), I(ce))

The superconducting solenoid

Nuclear Instruments and Methods in Physics Research 227 (1984) 489–498
North-Holland, Amsterdam

A SUPERCONDUCTING ELECTRON SPECTROMETER

M. GUTTORMSEN *, H. HÜBEL, A.v. GRUMBKOW, Y.K. AGARWAL ** and J. RECHT
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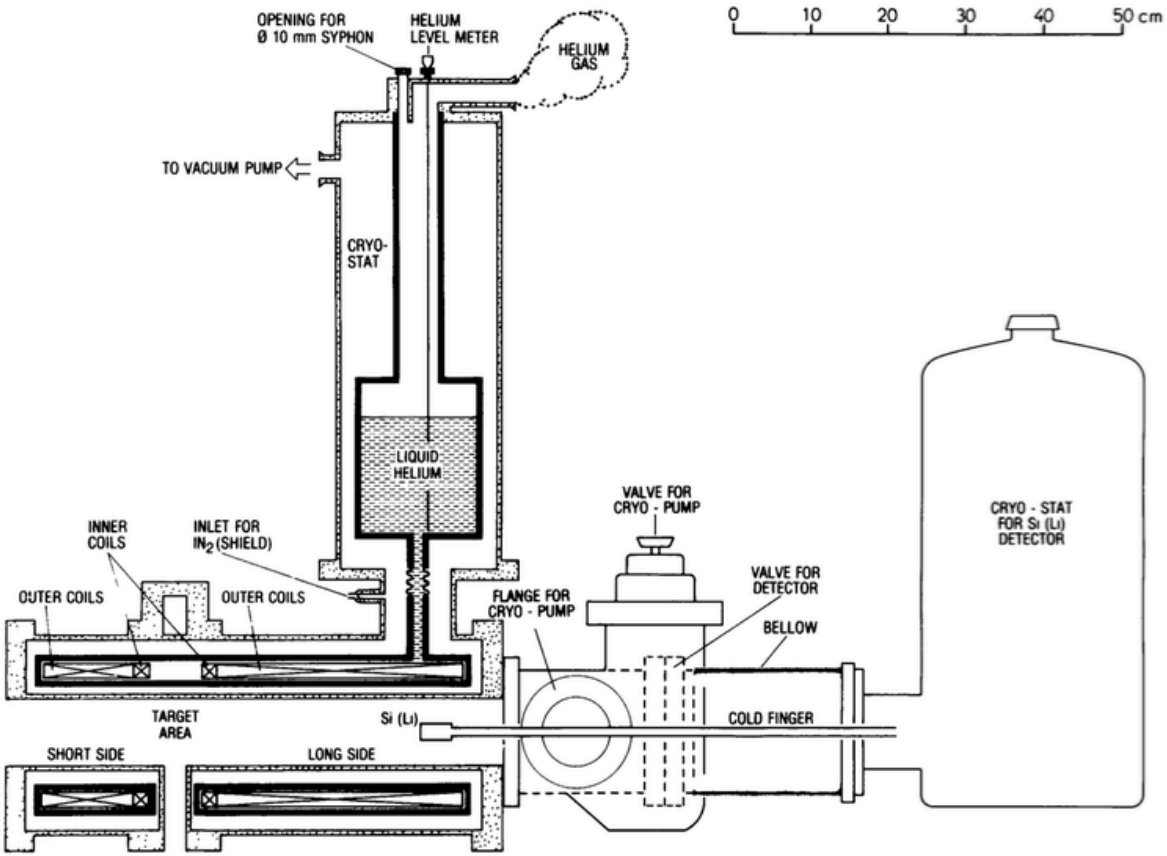
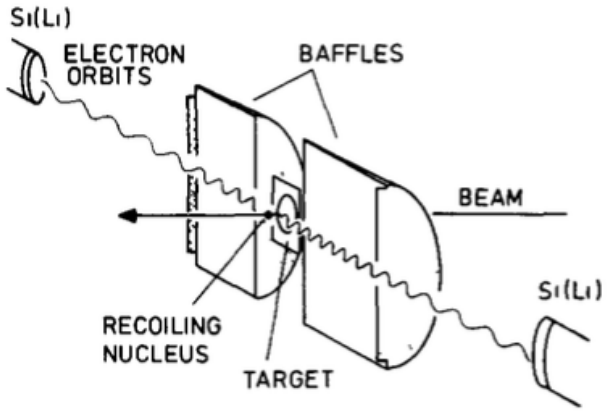
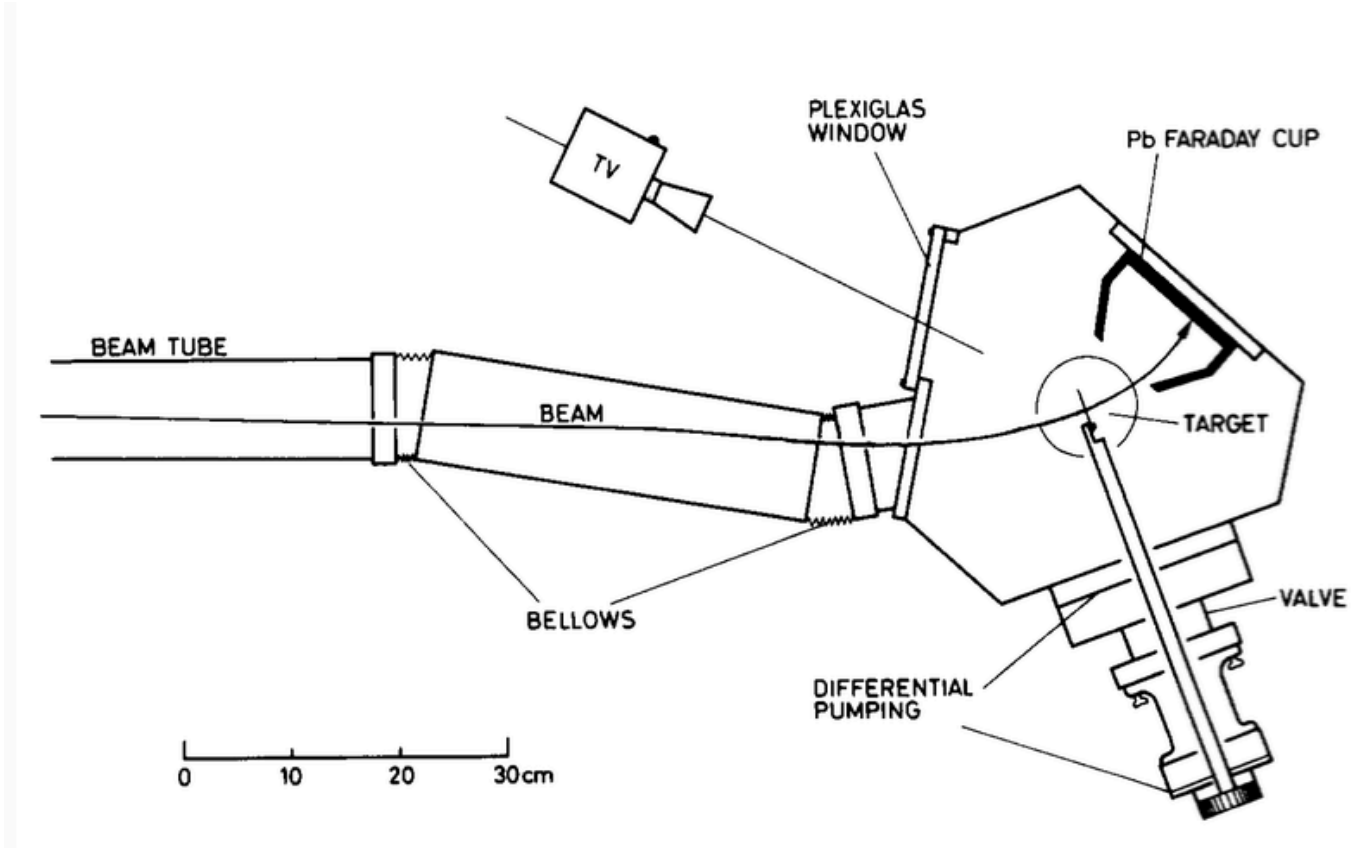
K.H. MAIER, H. KLUGE, A. MAJ +, M. MENNINGEN and N. ROY
Hahn-Meitner Institut für Kernforschung, D-1000 Berlin, West-Germany

Received 19 March 1984 and in revised form 24 April 1984



Experimental set-up





Nuclear Physics A398 (1983) 119–129

Electron spectra

THE $(\nu i^2_{13/2})_{8^+,10^+,12^+}$ TRIPLETS IN $^{190-196}$Hg

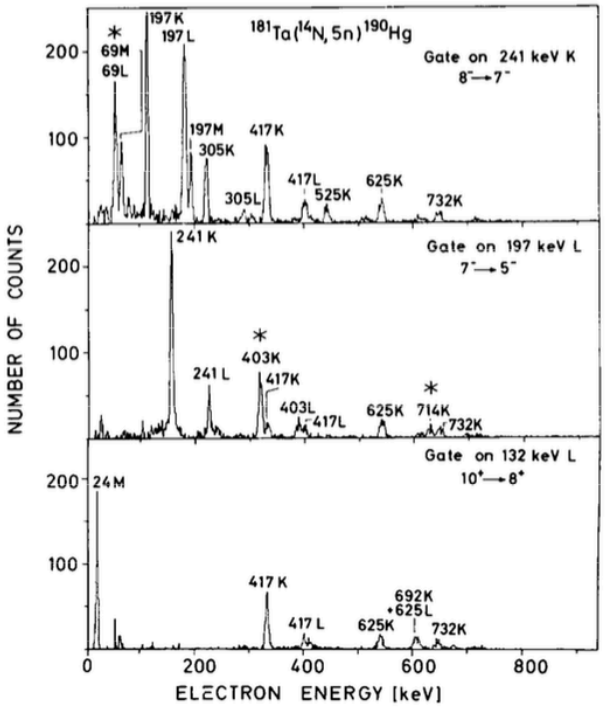
M. GUTTORMSEN, A. VON GRUMBKOW, Y. K. AGARWAL†, K. P. BLUME, K. HARDT, H. HÜBEL, J. RECHT and P. SCHÜLER

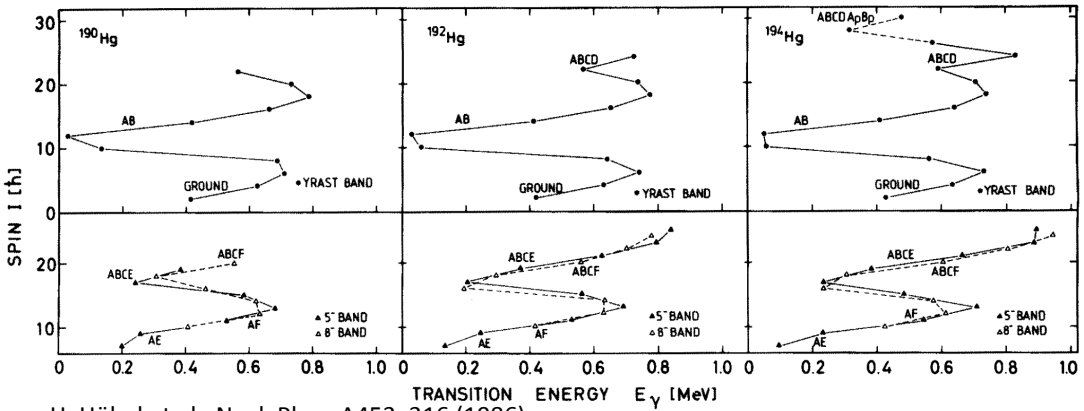
Institut für Strahlen- und Kernphysik, Universität Bonn, D-5300 Bonn, West Germany

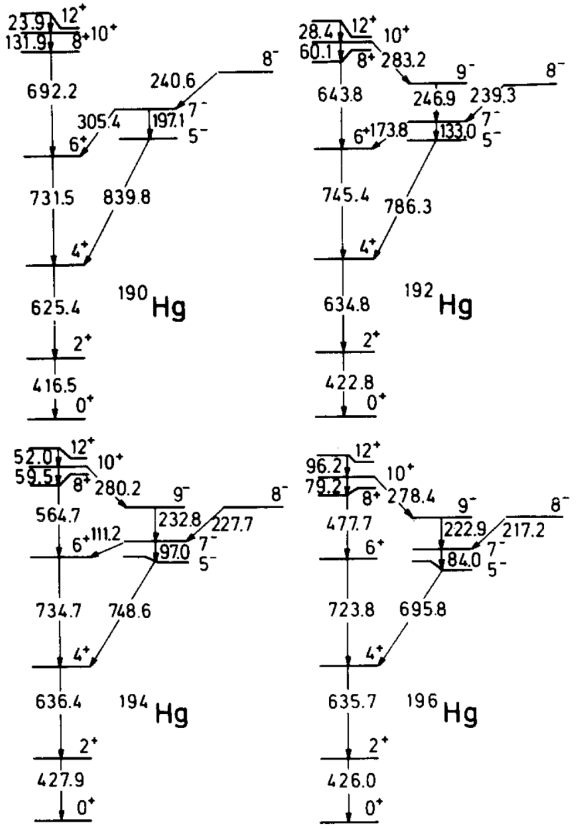
and

H. KLUGE, K. H. MAIER, A. MAJ†† and N. ROY

Hahn-Meitner-Institut für Kernforschung, D-1000 Berlin 39, West Germany



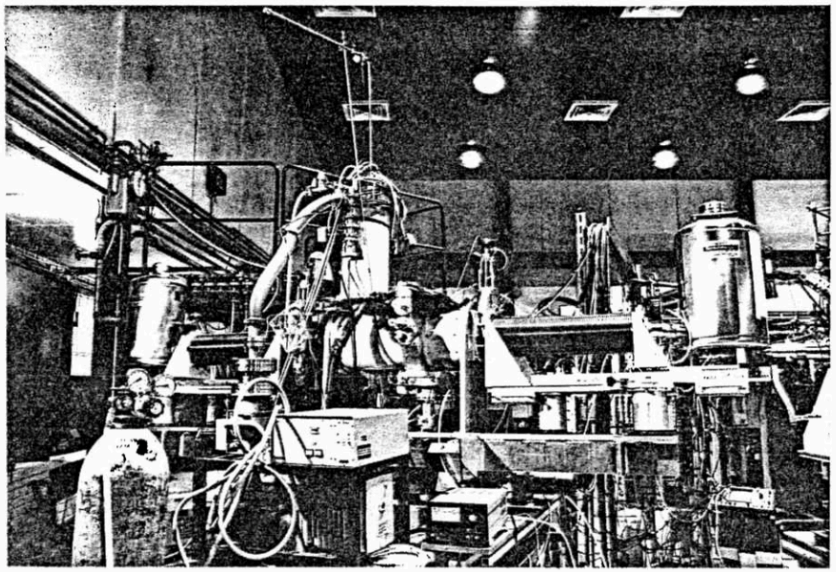




H. Hübel et al., Nucl. Phys. A453, 316 (1986)

The superconducting solenoid installed at HMI

VICKSI INFO 10–82 | hmi



Ansicht des supraleitenden Konversionselektronenspektrometers bei VICKSI

Adams main work at HMI

Nuclear Physics **A509** (1990) 413–428
North-Holland

Experiments on ^{198}Po and ^{200}Po

Experiment	Beam	Target	Experimental conditions
(1) Multi-detector setup: 9 Ge(Li) Multiplicity filter: 8 NaI(Tl)	^{20}Ne 105/111 MeV pulsed (2.5 μs)	^{182,184}W 50 mg/cm^2	Coincidences: Ge ≥ 3, NaI ≥ 3 or Ge ≥ 2, NaI ≥ 5.
(2) Recoil-catcher geometry: 3 Ge(Li)	^{20}Ne 102 MeV pulsed (2.16 μs, 360 ns)	^{182,184}W 1.27 mg/cm^2	Coincidences: Ge ≥ 2 Catcher with central hole
(3) OSIRIS: 6 Ge with BGO AC-shields	^{20}Ne 101 MeV pulsed (360 ns)	^{184}W 1.27 mg/cm^2 ^{208}Pb backing heated (310°C)	Coincidences: Ge ≥ 2, NaI ≥ 1 Prompt "singles": NaI ≥ 1 Delayed "singles": NaI ≥ 0
(4) Ang. distribution: 1 Ge with BGO AC-shield Multiplicity filter: 8 NaI(Tl)	^{20}Ne 107 MeV pulsed (2.2 μs)	^{182,184}W 1.27 mg/cm^2 ^{208}Pb backing heated (300°C)	Singles "Singles": NaI ≥ 1
(5) Conversion electrons: Superconducting solenoid	^{22}Ne 122 MeV pulsed (2.2 μs)	^{183}W 0.5 mg/cm^2	Singles 0.4 mg/cm^2 Al catcher with central hole Dip in the magnetic field profile at target position
(6) g-factors: 2 Ge(Li): ± 135° 2 Ge: 5°, −45°	^{20}Ne 102 MeV pulsed (2.5 μs)	^{182,184}W 1.27 mg/cm^2 ^{208}Pb backing heated (310°C)	Magnetic field strength: 10 kG, 16.7 kG

LEVELS, LIFETIMES AND *g*-FACTORS IN ^{198}Po AND ^{200}Po

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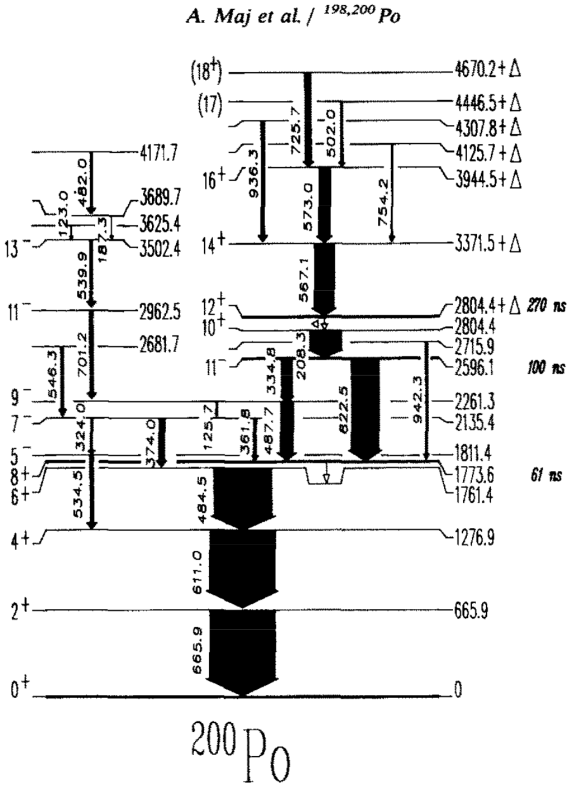

Dear Adam!

I wish you good luck and many promising and fruitful years to come!