

ENTRY NO. CU27 Date
 Cyclotron Model CV 28, TCC Berkley
 Institution Institut. für Medizinische Strahlenphysik
 Address Hufelandstr. 55, D-45122 Essen
 Tel 0201/723-4173 Telex
 Fax 0201/723-5965 E-MAIL
 In Charge: Prof. Rassow Reported by:

HISTORY

MILESTONE DATES:
 Installation 1975 First Beam Sept. 1975
 DESIGN/CONSTRUCTION BY: TCC Berkley
 COST: Accelerator 0.9 x 10⁶ \$ Facility 1.6 x 10⁶ \$
 FUNDED BY: Land Nordrhein-Westfalen (University)

STATUS

STAFF: Operators 4 Technicians 3
 BUDGET: Machine Funded by
 TIME DISTRIBUTION: (e.g. basic research, isotope production, maintenance, etc.)
 (a) Isotope production 60 %
 (b) Neutron production 25 %
 (c) Maintenance 15 %
 (d) %
 (e) %

CHARACTERISTIC BEAMS

| Accelerated Ions | E/A (MeV/u) | Current (part μ A) | |
|----------------------------|-------------|------------------------|----------|
| | | Internal | External |
| (a) Protons | 2-24 | 300 | 85 |
| (b) Helium-4 ⁺⁺ | 6-28 | 100 | 50 |

1994 μ A-hours on target: 55.000

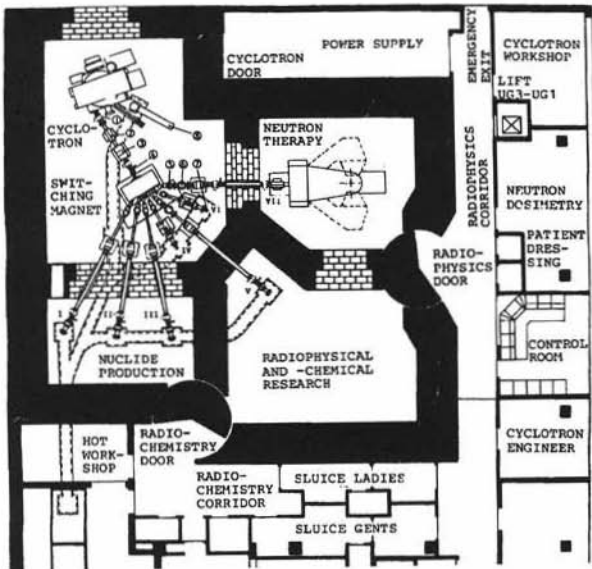
FACILITIES

SHIELDED AREA: Fixed: 138 m² Moveable m²
 Target Stations: 7 No. Served At Same Time: 1
 OTHER FACILITIES: isocentric neutron therapy facility

REFERENCES/NOTES

- (a) Rassow, J. et al. CIRCE-Cyclotron Isocentric Neutron Therapy Facility. In: Third Symposium on Neutron Dosimetry, Munich 1977 EURATOM EUR 5848

PLAN VIEW OF FACILITY, COMMENTS



ENTRY NO. CU28 Date Oct. 10, 1995
 Cyclotron Model MC32NI
 Institution German Cancer Research Center (DKFZ)
 Address D-69120 Heidelberg
 Tel + 6221 422681 Telex 461 562 dkfz d
 Fax + 6221 422572 E-MAIL dkfz1/0000C0339824
 In Charge: Gerd Wolber, Ph.D Reported by: Gerd Wolber

HISTORY

MILESTONE DATES:
 Installation April-June 1991 First Beam June/July 1991
 DESIGN/CONSTRUCTION BY: SCANDITRONIX AB, Sweden
 COST: Accelerator 4.8 MDM Facility
 FUNDED BY: DKFZ Budget (90% Federal Government, 10% State Govt.)

STATUS

STAFF: Operators Technicians 5
 BUDGET: Machine 150 KDM Funded by DKFZ Budget
 TIME DISTRIBUTION: (e.g. basic research, isotope production, maintenance, etc.)
 (a) radioisotope production for nuclear med./PET 70 %
 (b) basic research (radiation biology) 10 %
 (c) fast neutron dosimetry 10 %
 (d) maintenance 5 %
 (e) others (activations/irradiations for external users) 5 %

CHARACTERISTIC BEAMS

| Accelerated Ions | E/A (MeV/u) | Current (part μ A) | |
|--------------------|-------------|------------------------|----------|
| | | Internal | External |
| (a) H ⁻ | 32 | >100 | 80 |
| (b) D ⁻ | 8 | >100 | 80 |

1994 μ A-hours on target: 11200

FACILITIES

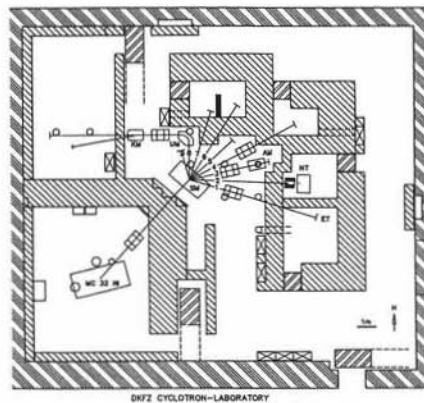
SHIELDED AREA: Fixed: 23,65x20,35 m² Moveable m²
 Target Stations: 8 No. Served At Same Time: 1
 OTHER FACILITIES: Radiochemistry: Automated
 Radioisotope Processing/Labeling
 SPECT, PET (2x)

REFERENCES/NOTES

- (a) Sicherheitsbericht für das Zyklotron MC32NI
- (b) (DKFZ 1992, Internal Report)

PLAN VIEW OF FACILITY, COMMENTS

Scanditronix MC32NI was the first negative ion cyclotron to accelerate also D⁻.



Assignment of the targets:

- 1 Experimental Target (2-5 targets on changer)
- 2 Fast neutron targets
- 3 ¹³O from ¹⁴N (d,n)
- 4 ¹⁸F from ²⁰Ne (d, α) (two identical targets)
- 5 ¹¹C from ¹⁴N(p, α)
- 6 ⁸¹Rb from ⁸²Kr(p, 2n) and ⁷⁸Br from ⁷⁸Kr(p, α)
- 7 ¹⁸F from H₂¹⁸O(p, n) (two identical targets)
- 8a activation of machine parts for wear measurements
- 8b free for misc. experiments
- 9 ¹³N from H₂¹⁸O(p, α)