ENTRY NO. CU1 **Date**

Cyclotron Model Cyclone 10/5

Institution Austin Repatriation Medical Centre

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In Charge: Dr H Tochon-Danguy **Reported by:** Dr G Egan

HISTORY

MILESTONE DATES:

Installation Jan-Aug 1992 **First Beam** July 1992

DESIGN/CONSTRUCTION BY: Ion Beam Applications

COST: Accelerator A$2.6 million **Facility** A$7.6 million

FUNDED BY: Institution, Federal & State Governments, donations.

STATUS

STAFF: Operators 2 **Technicians** 1

BUDGET: Machine A$0.25million **Funded by** State Govt. research grants

TIME DISTRIBUTION: (e.g. basic research, isotope production, maintenance, etc.)

(a) PET isotope production (clinical) 50%

(b) PET isotope production (research) 20%

(c) Radiochemistry research 15%

(d) Maintenance 15%

(e) %

CHARACTERISTIC BEAMS

			Current (part μA)	
	Accelerated Ions	E/A (MeV/u)	Internal	External
(a)	H^-	10 MeV		30μA
(b)	D^-	5 MeV		20μA

1994 μA-hours on target: 4000

FACILITIES

SHIELDED AREA: Fixed: 25 m² Moveable - m²

Target Stations: 4 No. Served At Same Time: 1

OTHER FACILITIES: Radiochemistry laboratories, radiopharmacy laboratories, PET scanner (ECAT 951/31R), image processing laboratories.

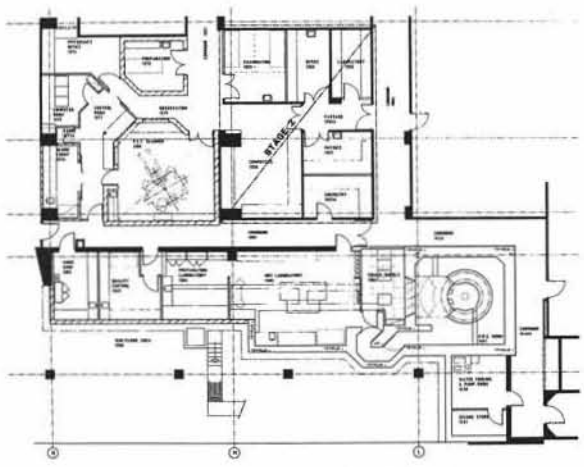
REFERENCES/NOTES

(a) G.F. Egan, H.J. Tochon-Danguy et al, "Production, administration and disposal of PET isotopes",

(b) J. Radiation Protection in Australia 13 (1995).

PLAN VIEW OF FACILITY, COMMENTS

Dedicated PET isotope (^{18}F, ^{15}O, ^{13}N, ^{11}C)production. Floor plan of PET Centre including cyclotron and radiochemistry laboratories attached.



AUSTIN HOSPITAL P.E.T. CENTRE - FLOOR PLAN

ENTRY NO. CU2 **Date** 25 November 1995

Cyclotron Model IBA CYCLONE 30

Institution National Medical Cyclotron

Address PMB 12, Camperdown, NSW 2050, AUSTRALIA

Tel +612 565 7600 **Telex**

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In Charge: C Jamieson **Reported by:** D W Arnott/ B Mukherjee

HISTORY

MILESTONE DATES:

Installation 9.4.91 **First Beam** 9.7.91

DESIGN/CONSTRUCTION BY: Ion Beam Applications

COST: Accelerator AUD 4.3 M **Facility** AUD 20.5 M

FUNDED BY: ANSTO/RPAH

STATUS

STAFF: Operators 4 **Technicians** -

BUDGET: Machine **Funded by** ANSTO

TIME DISTRIBUTION: (e.g. basic research, isotope production, maintenance, etc.)

(a) Isotope Production PET 15 %

(b) Isotope Production SPECT 70 %

(c) Cyclotron Development 10 %

(d) Maintenance 5 %

(e) %

CHARACTERISTIC BEAMS

			Current (part μA)	
	Accelerated Ions	E/A (MeV/u)	Internal	External
(a)	H^-	15 - 30	15 - 860	15 - 860
(b)				

1994 μA-hours on target: 55000 micro Amp hr

FACILITIES

SHIELDED AREA: Fixed: 216 m² Moveable - m²

Target Stations: 8 No. Served At Same Time: 2

OTHER FACILITIES: Trial Neutron Irradiation for Radiation Hardening

Neutron Acivation Analysis

Neutron Dosimetry

REFERENCES/NOTES

(a) B. Mukherjee and DW Arnott, Proc. 13th Cyclo Conf. pp 252 (1992).

PLAN VIEW OF FACILITY, COMMENTS