

ENTRY NO. CU1 Date  
 Cyclotron Model Cyclone 10/5  
 Institution Austin Repatriation Medical Centre  
 Address Heidelberg, Melbourne, 3084, Australia  
 Tel +61 3 9496 3995 Telex  
 Fax +61 3 9457 6605 E-MAIL htd@austin.unimelb.edu.au  
 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.  
 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**

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

1994  $\mu$ A-hours on target: 4000

**FACILITIES**

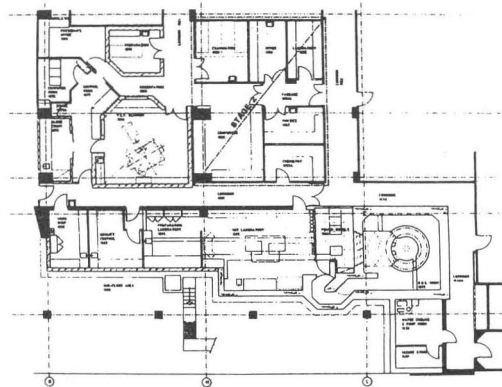
SHIELDED AREA: Fixed: 25 m<sup>2</sup> Moveable: m<sup>2</sup>  
 Target Stations: 4 No. Served At Same Time: 1  
 OTHER FACILITIES: Radiochemistry laboratories, radiopharmacy laboratories, PET scanner (ECAT 951/31R), image processing laboratories.

**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 (<sup>18</sup>F, <sup>15</sup>O, <sup>13</sup>N, <sup>11</sup>C) production. Floor plan of PET Centre including cyclotron and radiochemistry laboratories attached.



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

Entry: CU2 Date: June 1996  
 Machine Name:  
 Cyclotron Model: IBA CYCLONE 30  
 Institution: ANSTO - Radiopharmaceuticals Division  
 Address: P.O.Box M34, Camperdown, 2040, AUSTRALIA  
 Tel: +612 9565 7600  
 Fax: +612 9565 7676 Web: http://www.ansto.gov.au  
 E-mail: dwa@ansto.gov.au  
 In Charge: D. W. Arnott

**HISTORY**

Installation: 9 Apr 1991 First Beam: 9 July 1991  
 Design/Construction by: Ion Beam Applications  
 Funded by: ANSTO / RPAH

**USES**

Isotope Production - PET	15 %
Isotope Production - SPECT	85 %
	%
	%
	%
Total time:	4000 h/year

**CHARACTERISTIC BEAMS**

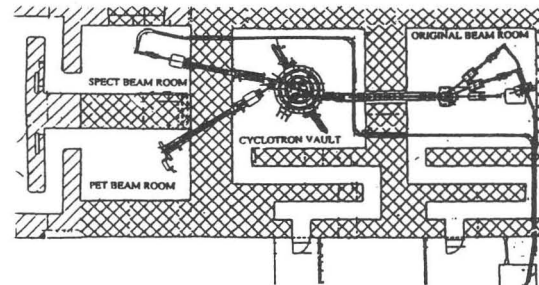
Ions/energy/current:  
 H / 15 - 30MeV / 860uA

**EXPERIMENTAL FACILITIES**

**REFERENCES**

- [1] [2] E.Milo Conard, D.W.Arnott and S.Parcell. '1 mA 30 MeV Beams for Radionuclide Production' Proc. 14th Int. Conf. Cyc. Cape Town 1995, p124

**PLAN VIEW OF FACILITY**



**COMMENTS**