ENTRY NO: CU23 Date: 16 Mar 2005 11:57:40 Machine Name: Cyclone-3 Institution: University of Cambridge Address: Wolfson Brain Imaging Centre, Addenbrooke's Hospita Telephone: +44 1223 33 18 20 Fax: +44 1223 33 18 26 Web Address: www.wbic.cam.ac.uk Person in Charge of Cyclotron: Paul Burke/John Clark Person Reporting Information: John Clark E-mail Address: jcc24@wbic.cam.ac.uk History Designed by: IBA **Construction Dates:** First Beam Date: **Characteristic Beams** 10 - 15 (microA) D+ 3 (MeV) Transmission Efficiency (source to extracted beam) Typical (%): **Best** (%): Emittance **Emittance Definition:** Vertical (pi mm mrad): Horizontal (pi mm mrad): Longitudinal (dE/E[%] x RF[deg.]): USES Basic Research (%): **Development** (%): Therapy (%): Isotope Production (%): Other Application (%): Maintenance (%): Beam Tuning (%): Total Time (h/year): TECHNICAL DATA (a)Magnet Type: Kb (MeV): Kf (MeV): Average Field (min./max. T): Number of Sectors: Hill Angular Width (deg.): Spiral (deg.): Pole Diameter (m): Injection Radius (m): **Extraction Radius (m):** Hill Gap (m): Valley Gap (m): Trim Coils Number: x2 Maximum Current (A-turns): Harmonic Coils Number: xNsectorsx2 Maximum Current (A-turns): Main Coils Number: x2 **Total Ampere Turns:** Maximum Current (A): Stored Energy (MJ): **Total Iron Weight (tons):** Total Coil Weight (tons): Power Main Coils (total KW): Trim Coils (total, maximum, KW): Refrigerator (cryogenic, KW): (b)RF Acceleration

Number of Cavities: Dee Angular Width (deg.): Voltage At Injection (peak to ground, KV): At Extraction (peak to ground, KV): Peak (peak to ground, KV): Line Power (max, KW): 10 Phase Stability (deg.): Voltage Stability (%):

(c)Injection Ion Source: Source Bias Voltage (kV): External Injection: Buncher Type: Injection Energy (MeV/n): Component: Injection Efficiency (%): Injector:

(d)Extraction Elements, Characteristic: electrostatic deflector -27kV Typical Efficiency (%): 60 Best Efficiency (%):

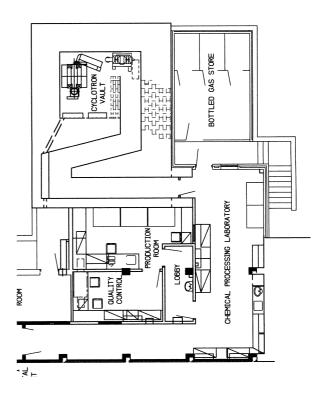
(e)Vacuum Pumps: Achieved Vacuum (Pa): 6 × 10⁻⁵

REFERENCES

EXPERIMENTAL FACILITIES Single target 15-O

COMMENTS

Installation of IBA cyclone 3D is nearing completion



Acceleration Frequency Range (MHz): 29.6 Harmonic Modes: Number of Dees: