ENTRY NO:CU12
Date: 1 Apr 2005 17:00:00
Machine Name: MC-40
Institution: Daiichi Radioisotope Laboratories, Ltd.
Address: 453-1 Shimo-Okura, Matsuo-machi, Sanbu-gun, Chiba 289-1592 JAPAN
Telephone: +81-479-86-4721
Fax: +81-479-86-5112
Web Address: http://www.drl.co.jp
Person in Charge of Cyclotron: F. Kikuchi
Person Reporting Information: A. Yamamoto
E-mail Address: yasaki@drl.co.jp

History
Designed by: Scanditronix
Construction Dates: 1984
First Beam Date: Nov. 1984
Characteristic Beams
H+ 30MeV 4500W
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 (%): 95
Other Application (%):
Maintenance (%): 5
Beam Tuning (%):
Total Time (h/year): 6000

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:
Maximum Current (A-turns):
Harmonic Coils
Number:
Maximum Current (A-turns):
Main Coils
Number:
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
Frequency Range (MHz):
Harmonic Modes:
Number of Dees:
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):
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:
Typical Efficiency (%):
Best Efficiency (%):

(e)Vacuum
Pumps:
Achieved Vacuum (Pa):

REFERENCES

EXPERIMENTAL FACILITIES

COMMENTS