

ENTRY NO:CU20

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Machine Name: Oslo Cyclotron Laboratory

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History

Designed by: Scanditronix

Construction Dates: 1978

First Beam Date: 1979

Characteristic Beams

proton 2-35 MeV 100uA

Deuteron 4-18 MeV 100uA

3He 6-47 MeV 50 uA

4He 8-35MeV 50uA

Transmission Efficiency (source to extracted beam)

Typical (%): 50

Best (%):

Emittance

Emittance Definition:

Vertical (pi mm mrad):

Horizontal (pi mm mrad):

Longitudinal (dE/E[%] x RF[deg.]):

USES

Basic Research (%): 50

Development (%): 10

Therapy (%):

Isotope Production (%): 20

Other Application (%): 5

Maintenance (%): 15

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:

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: Internal 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