ENTRY NO: C33
Date: 3 Feb 2005 18:21:18
Machine Name: IC-100
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History
Designed by: FLNR JINR
Construction Dates: under reconstruction
First Beam Date:
Characteristic Beams
ions / energy(MeV/N)/current(pps)/power(w)
84Kr15+ 1.24 2*10E12 525
84Kr10+ 0.5 3*10E12 210
Transmission Efficiency (source to extracted beam)
Typical (%): 25
Best (%):
Emittance
Emittance Definition:
Vertical (pi mm mrad): 25
Horizontal (pi mm mrad): 25
Longitudinal (dE/E[%] x RF[deg.]): 2%
USES
Basic Research (%):
Development (%):
Therapy (%):
Isotope Production (%):
Other Application (%):
Maintenance (%):
Beam Tuning (%):
Total Time (h/year):

TECHNICAL DATA
(a)Magnet
Type: compact
Kb (MeV):
Kf (MeV):
Average Field (min./max. T): 1.92
Number of Sectors: 4
Hill Angular Width (deg.): 56
Spiral (deg.): 0
Pole Diameter (m): 1.05
Injection Radius (m): 0.019
Extraction Radius (m): 0.47
Hill Gap (m): 0.02
Valley Gap (m): 0.11
Trim Coils
Number: x2
Maximum Current (A-turns):
Harmonic Coils
Number: xNsectorsx2
Maximum Current (A-turns):
Main Coils
Number: 1x2
Total Ampere Turns: 145000
Maximum Current (A): 575
Stored Energy (MJ):
Total Iron Weight (tons): 43
Total Coil Weight (tons):
Power
Main Coils (total KW): 94
Trim Coils (total, maximum, KW):
Refrigerator (cryogenic, KW):

(b)RF
Acceleration
Frequency Range (MHz): 21
Harmonic Modes: 4;6
Number of Dees: 2
Number of Cavities: 2
Dee Angular Width (deg.):34
Voltage
At Injection (peak to ground, KV): 12 - 15
At Extraction (peak to ground, KV): 35 - 50
Peak (peak to ground, KV): 50
Line Power (max, KW): 30
Phase Stability (deg.):
Voltage Stability (%):

(c)Injection
Ion Source: ECR DECRIS
Source Bias Voltage (kV):
External Injection: axial
Buncher Type: sine
Injection Energy (MeV/n):
Component: Solenoids
Injection Efficiency (%): 25
Injector:

(d)Extraction
Elements, Characteristic: Deflector Magnetic channels efficiency
Typical Efficiency (%): 60
Best Efficiency (%):

(e)Vacuum
Pumps: Turbopumps
Achieved Vacuum (Pa): 6.7*10-5

REFERENCES

EXPERIMENTAL FACILITIES

COMMENTS