ENTRY NO: CM-1
Machine Name: Cyclone 14+
Date: 9/7/01 11:22:26 AM
Institution: Ion Beam Applications
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HISTORY
Designed By: IBA
Construction Dates: 1996
First Beam Date: 1997
CHARACTERISTIC BEAMS

ions	/ **energy**(MeV/N)/**curre**nt(pps)/**powe**r(w)		
p	14	5.e15	14 k

transmision efficiency(source to extract beam)
typical: NA% - **best:** NA%
tranverse emmitance
emmitance definition:
vertical: π mm mrad
horizontal: π mm mrad
longitudinal: (Δ) E/E)%xdeg RF

USES
basic research: % **therapy:** %
development: % **isotope production:** 100%
other: % **maintenance:** %
beam tuning: % **Total Time:** h/year

TECHNICAL DATA
a)magnet: **type:** compact
Kb: 18MeV/A **Kf:** 18MeV/A
average field (min/max): 1.15 T
number of magnet sectors: 4
hill angular width: 56hill angular width
spiral (max): 0 deg
pole parameters
diameter: 1.08 m
injection radius: 0 m
extraction radius: NA m
hill gap: 0.03m **valley gap:** 0.65m
trim coils
-number: 0x2
-current(max): NA A-turns
harmonic coils
-number: 0xNsectorsx2
-current(max): NA A-turns
main coils
number: 1x2
total ampere-turns: 86400 A-turns
current: 120 A
stored energy: MJ
weight - iron: 34t coils: 2t
power
main coils (total): <10 kW
trim coils (total max): kW
refrigerator (cryogenic): kW
b)RF
acceleration
frequency range: 83MHz
harmonic modes: 4
number of dees: 2
number of cavities: 2
dee angular width: 30degrees
voltage
at injection: 45kV(peak to ground, max)
at extraction: kV(peak to ground, max)
peak: 45kV(peak to ground, max)
line power(max): <25kW
stability
phase: deg
voltage: 5.e-3%
injection
c)ion source: PIG
external injection: NA
components:
source bias voltage: kV
injection energy: MeV/N
buncher:
injection efficiency: %
d)injector: NA
e)extraction
NA
efficiency
typical: %
best: %
f)vacuum
pumps: Oil diffusion
achieved vacuum: 2.e-3Pa
REFERENCES

EXPERIMENTAL FACILITIES

COMMENTS