

ENTRY NO: C-10
Machine Name: SSC1
Date: 5/31/01 10:31:47 AM
Institution: GANIL
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HISTORY

Designed By: in house
Construction Dates: 1976-1982
First Beam Date: nov 82

CHARACTERISTIC BEAMS

ions	/ energy(MeV/N)	/current(pps)	/power(w)
C12	13.7	2 10+13	500
U238	5.5	5 10+10	<1

transmission efficiency(source to extract beam)

typical: 9% - **best:** 98%

tranverse emittance

emittance definition: 90%

vertical: 7π mm mrad

horizontal: 7π mm mrad

longitudinal: $0.2 \cdot 4(\Delta) E/E$ %xdeg RF

USES

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

TECHNICAL DATA

a)magnet: **type:** separated sectors

Kb: 380MeV/A **Kf:** 380MeV/A

average field (min/max): 0.95/0.39 T

number of magnet sectors: 4

hill angular width: 52hill angular width

spiral (max): deg

pole parameters

diameter: 6 m

injection radius: 0.81 m

extraction radius: 3 m

hill gap: 0.01m **valley gap:** m

trim coils

-number: 13x2

-current(max): A-turns

harmonic coils

-number: 1xNsectorsx2

-current(max): A-turns

main coils

number: 4x2

total ampere-turns: A-turns

current: A

stored energy: MJ

weight - iron: 1700t **coils:** 14t

power

main coils (total): 950 kW

trim coils (total max): 140 kW

refrigerator (cryogenic): kW

b)RF

acceleration

frequency range: 7 -13.45MHz

harmonic modes: 5

number of dees: 2

number of cavities:

dee angular width: 34degrees

voltage

at injection: 160kV(peak to ground, max)

at extraction: kV(peak to ground, max)

peak: kV(peak to ground, max)

line power(max): 100kW

stability

phase: 0.1 deg

voltage: 0.01%

injection

c)ion source:

external injection: radial

components: 4 mag. chan.,1 inflector

source bias voltage: kV

injection energy: 1MeV/N

buncher: harmonic 1

injection efficiency: 100%

d)injector: C01 or C02

e)extraction

1 electrostatic deflector 4 magnetic channels

efficiency

typical: 90%

best: 98%

f)vacuum

pumps: 8 cryopumps and 4 turopumps

achieved vacuum: 6 10-6Pa

REFERENCES

EXPERIMENTAL FACILITIES

9 experiment rooms 2 of them provided with time sharing

Medium Energy room (SME)

COMMENTS