

ENTRY NO: CU-23
Machine Name: GE PETtrace
Date: 5/29/01 11:57:40 AM
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HISTORY

Designed By: Scanditronix/GE (Stig Lindback)
Construction Dates: delivered aug 1995 prior to building
completion
First Beam Date: Oct 1995

CHARACTERISTIC BEAMS

ions	/ energy(MeV/N)	/current(pps)	/power(w)
H+	16	100microA	
D+	8.5	40microA	

transmission efficiency(source to extract beam)

typical: % - **best:** %

tranverse emittance

emittance definition:

vertical: π mm mrad

horizontal: π mm mrad

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

USES

basic research: %

therapy: %

development: 5%

isotope production: 90%

other: %

maintenance: 15%

beam tuning: %

Total Time: h/year

TECHNICAL DATA

a)magnet: type:

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

average field (min/max): T

number of magnet sectors:

hill angular width: hill angular width

spiral (max): deg

pole parameters

diameter: m

injection radius: m

extraction radius: m

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

trim coils

-number: x2

-current(max): A-turns

harmonic coils

-number: xNsectorsx2

-current(max): A-turns

main coils

number: x2

total ampere-turns: A-turns

current: A

stored energy: MJ

weight - iron: t **coils:** t

power

main coils (total): kW

trim coils (total max): kW

refrigerator (cryogenic): kW

b)RF

acceleration

frequency range: MHz

harmonic modes:

number of dees:

number of cavities:

dee angular width: degrees

voltage

at injection: kV(peak to ground, max)

at extraction: kV(peak to ground, max)

peak: kV(peak to ground, max)

line power(max): kW

stability

phase: deg

voltage: %

injection

c)ion source:

external injection:

components:

source bias voltage: kV

injection energy: MeV/N

buncher:

injection efficiency: %

d)injector:

e)extraction

dual beam possible using twin stripper assemblies

efficiency

typical: %

best: %

f)vacuum

pumps:

achieved vacuum: Pa

REFERENCES

EXPERIMENTAL FACILITIES

6 target positions for PET radionuclides 11-C, 18-F 15-O and 13N. Solid target station in design development for eg 64-Cu

COMMENTS