ENTRY No. CU40

NAME OF MACHINE . Model 370 (Sumitomo-CGRMeV) DATE .... June 14, 1989
INSTITUTION . Chiba Medical School Hospital
ADDRESS .... 1-8-1 Inohana Chiba City, Chiba 280, Japan
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IN CHARGE . S. Vematsu ..... REPORTED BY .. Y... Itoh

HISTORY AND STATUS
DESIGN, date ..... Model tests .....
ENG DESIGN, date .....
CONSTRUCTION, date ..... 1985 .....
FIRST BEAM, date (or goal) ... Sept. 1985 .....
MAJOR ALTERATIONS .....
.....
COST, ACCELERATOR .....
COST, FACILITY, total .....
FUNDED BY .....

ACCELERATOR STAFF, OPERATION AND DEVELOPMENT
SCIENTISTS ..... ENGINEERS .....
TECHNICIANS .... 2 ..... CRAFTS .....
GRAD STUDENTS involved during year .....
OPERATED BY ..... Research staff or ..... Operators
OPERATION ..... 30 ... hr/wk, On target .... 9 ..... hr/wk
TIME DISTR. in house ..... %, Outside ..... %
BUDGET, op & dev .....
FUNDED BY .....

RESEARCH STAFF, not included above
USERS, in house ..... 8 ..... outside .....
GRAD STUDENTS involved during year .....
RESEARCH BUDGET, In house .....
FUNDED BY .....

MAGNET
POLE FACE, diameter (compact) . 88 cm, R extraction .. 37 cm
R injection ..... cm
GAP, min .... 7 .... cm, Field ..... kG
max .. 12 .... cm, Field ..... kG } at 1.66×10^5 Ampere turns
AVERAGE FIELD at R ext ..... 17.7 ..... kG
B max/ <B> .....
NUMBER OF SECTORS { compact ... 4 .. / separated ..... } Spiral, max .. deg
SECTOR ANGLE (SSC) ..... deg
TRIMMING COILS .. Harmonic ... 4 pairs .....
..... Circular ... 4 pairs .....
CONDUCTOR, material and type .. Copper Hollow .....
STORED ENERGY (cryogenic) ..... MJ
POWER : main coils . 78 ... max, kW ; current stability ..... 2×10^{-6}
trimming coils .. 3 ... max, kW ; current stability .....
WEIGHT : Fe .... 16 ..... tons ; coils .... 1 ..... tons
COOLING system ... Demineralized Water .....
ION ENERGY (bending limit) E/A = ... q^2/a^2 MeV/amu
(focusing limit) E/A = ... q^2/a^2 MeV/amu

ACCELERATION SYSTEM
DEES, number ..... 1 ..... ; angle ..... 180 ..... deg
BEAM APERTURE .. 1.8 ..... cm ; DC Bias ..... kV
TUNED by, coarse ..... fine .....
RF ..... 25 ..... to ..... 40 ..... mHz, stable ± .....
Orb F .. 25 ..... to ..... 13.3 ..... mHz
HARMONICS, RF/Orb F, used ... 1, 3 .....
DEE - Gnd, max . 40 .. kV, min gap .... 1.2 ..... cm
STABILITY, (pk-pk noise)/(pk RF volt) ... 1×10^{-3} .....
ENERGY GAIN, max .... 80 ..... kV/turn
RF PHASE, stable to ± ..... deg
RF POWER input, max .... 25 ..... kW
FREQUENCY MODULATION, rate ..... /s
modulator, type .....
beam pulse, width .....

VACUUM SYSTEM
OPERATING PRESSURE .. 4×10^{-5} ..... Torr ~~static~~ linear
PUMPS, No, Type, Size 1 Diffusion pump 1300 l/sec .....
.....
.....

ION SOURCES
..... Livingstone-Jones type .....

INJECTION SYSTEM
.....
EXTRACTION SYSTEM
Electrostatic deflector and magnetic channel (static) ..
FACILITIES FOR RESEARCH
SHIELDED AREA, fixed ... 41 ..... m² ; movable ..... m²
TARGET STATIONS .. 1 ..... in ..... rooms
STATIONS served at same time, max .....
MAG SPECTROGRAPH, type .....
COMPUTER model .....
OTHER FACILITIES .....
.....
.....

CHARACTERISTIC BEAMS

PARTICLE	ENERGY (MeV) Goal	Achieved	CURRENT (pμA) Internal	External
.... P	.....	.... 18	.....	.... 50 .....
.... d	.....	.... 10	.....	.... 50 .....
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....
SECONDARY				(part/s)
.....	.....	.....	.....	.....
.....	.....	.....	.....	.....

BEAM PROPERTIES

MEASURED	CONDITIONS
PULSE WIDTH ..... RF deg	pμ A of .... MeV ... ions
PHASE EXC, max ... RF deg	pμ A of .... MeV ... ions
EXTRACT eff ..... %	..... pμ A of .... MeV ... ions
RESOL ΔE/E ..... %	..... pμ A of .... MeV ... ions

EMITTANCE
(π mm. mrad) { ... axial / .... rad } ..... pμA of ..... MeV ... Ions

OPERATING PROGRAMS, time distribution
BASIC NUCLEAR PHYSICS .. SOLID STATES PHYSICS ....
BIOMEDICAL APPLICAT. 100% ISOTOPE PRODUCTIONS ....
.....
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REFERENCES/NOTES

PLAN VIEW OF FACILITY, NOTEWORTHY FEATURES, COMMENTS