

ENTRY NO. CM18 Date
 Machine Name MC30 p, fixed Energy
 Manufacturer Scanditronix
 Address Husyborg, S752 29, Uppsala, Sweden
 Tel 46 18 18 0700 Telex
 Fax 46 18 53 7276 EMAIL
 In Charge: Reported by: Jonas Modéer

HISTORY AND STATUS
 DATES: Design 1987 First Machine 1988
 SALES: No. Sold/Operational 1 / 1 Currently Available Y
 COST: Accelerator Facility

MAGNET
 POLE PARAMETERS:
 Diameter 130 cm R_{extract} cm R_{inject} cm
 HILL PARAMETERS: Gap (min) 10 cm B_{max} T
 (@ AT) Gap (max) cm B_{min} T
 VALLEY PARAMETERS: Gap (min) 18 cm B_{max} T
 (@ AT) Gap (max) cm B_{min} T
 AVERAGE FIELD: < B >_{min} 1.4 T < B >_{max} T
 NUMBER OF SECTORS: compact/separated 3 /
 sector angle deg. spiral (max) 50 deg.
 FIELD TRIMMING: Trim Coils 5
 Harmonic Coils 2
 Other 5
 CURRENT: Main Coils 600 Amps Stability 10
 Trim Coils Amps Stability
 Stored Energy (cryogenic) MJ
 WEIGHT: Iron 69,000 kg Conductor
 ION ENERGY: Bending Limit E/A = q²/A² MeV/u
 Focussing Limit E/A = q/A MeV/u

ACCELERATION SYSTEM
 FUNDAMENTAL ACCELERATION:
 Description: Driven System
 No. of Gaps/turn 4 dE/dn(max) 0.1 MeV/q
 Voltage(max) 0.035 MV Harmonic f_{rf}/f_{ion} 1
 Freq MHz Power in(max) MW
 Stability: Phase Voltage

VACUUM SYSTEM
 OPERATING PRESSURE: 10⁻⁵ - 10⁻⁶
 PUMPS: No. and type 2 x 4000 l/sec Diff pump

ION SOURCE(S)

Type	Intensity (mA)	θ (π mm mrad)	ε _n = βγϵ	Ion Species
(a) Hot filament	0.3			p
(b)				

INJECTION SYSTEM
 Efficiency %

EXTRACTION SYSTEM
 Efficiency %

CHARACTERISTIC BEAMS

Accelerated Ions	E/A (MeV/u)	Current(part. μA)	
		Internal	External
(a) P	30	500	
(b)			

EXTRACTED BEAM PROPERTIES:
 For μA of MeV/u ions
 ΔE/E % Δφ °rf
 ε_n = βγϵ x πmm mrad z πmm mrad

REFERENCES/NOTES
 (a)
 (b)

ENTRY NO. CM19 Date
 Machine Name MC 32 NI
 Manufacturer Scanditronix
 Address Husyborg, S752 29, Uppsala, Sweden
 Tel 46 18 18 0700 Telex
 Fax 46 18 18 7276 EMAIL
 In Charge: Reported by: Jonas Modéer

HISTORY AND STATUS
 DATES: Design 90 First Machine 90
 SALES: No. Sold/Operational 2 / 2 Currently Available Y
 COST: Accelerator Facility

MAGNET
 POLE PARAMETERS:
 Diameter 130 cm R_{extract} 47 cm R_{inject} cm
 HILL PARAMETERS: Gap (min) cm B_{max} T
 (@ AT) Gap (max) cm B_{min} T
 VALLEY PARAMETERS: Gap (min) cm B_{max} T
 (@ AT) Gap (max) cm B_{min} T
 AVERAGE FIELD: < B >_{min} 1.59 T < B >_{max} T
 NUMBER OF SECTORS: compact/separated 4 /
 sector angle deg. spiral (max) deg.
 FIELD TRIMMING: Trim Coils 3
 Harmonic Coils 2
 Other
 CURRENT: Main Coils 700 Amps Stability
 Trim Coils Amps Stability
 Stored Energy (cryogenic) MJ
 WEIGHT: Iron Conductor
 ION ENERGY: Bending Limit E/A = q²/A² MeV/u
 Focussing Limit E/A = q/A MeV/u

ACCELERATION SYSTEM
 FUNDAMENTAL ACCELERATION:
 Description:
 No. of Gaps/turn 4 dE/dn(max) 0.1 MeV/q
 Voltage(max) 0.035 MV Harmonic f_{rf}/f_{ion} 1
 Freq 24 MHz Power in(max) 0.05 MW
 Stability: Phase Voltage

VACUUM SYSTEM
 OPERATING PRESSURE: < 10⁻⁶
 PUMPS: No. and type 2 x 4000 l/sec diff pump

ION SOURCE(S)

Type	Intensity (mA)	θ (π mm mrad)	ε _n = βγϵ	Ion Species
(a) PIG	0.1			H ₂ D ⁺
(b)				

INJECTION SYSTEM
 Efficiency %

EXTRACTION SYSTEM
 Stripping foils Efficiency %

CHARACTERISTIC BEAMS

Accelerated Ions	E/A (MeV/u)	Current(part. μA)	
		Internal	External
(a) H ₂	32	60	60
(b) D ₂	16	60	60

EXTRACTED BEAM PROPERTIES:
 For μA of MeV/u ions
 ΔE/E % Δφ °rf
 ε_n = βγϵ x πmm mrad z πmm mrad

REFERENCES/NOTES
 (a)
 (b)