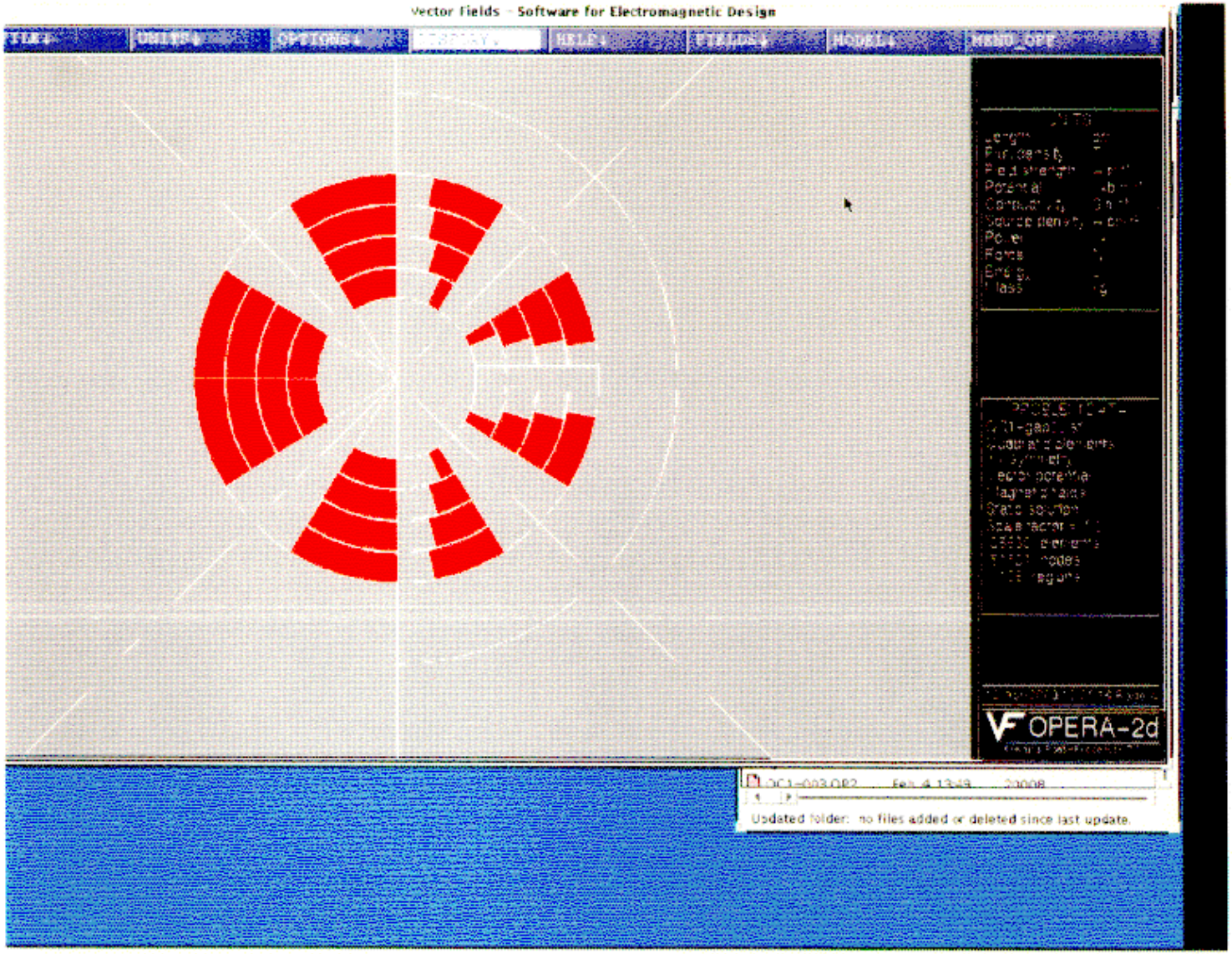
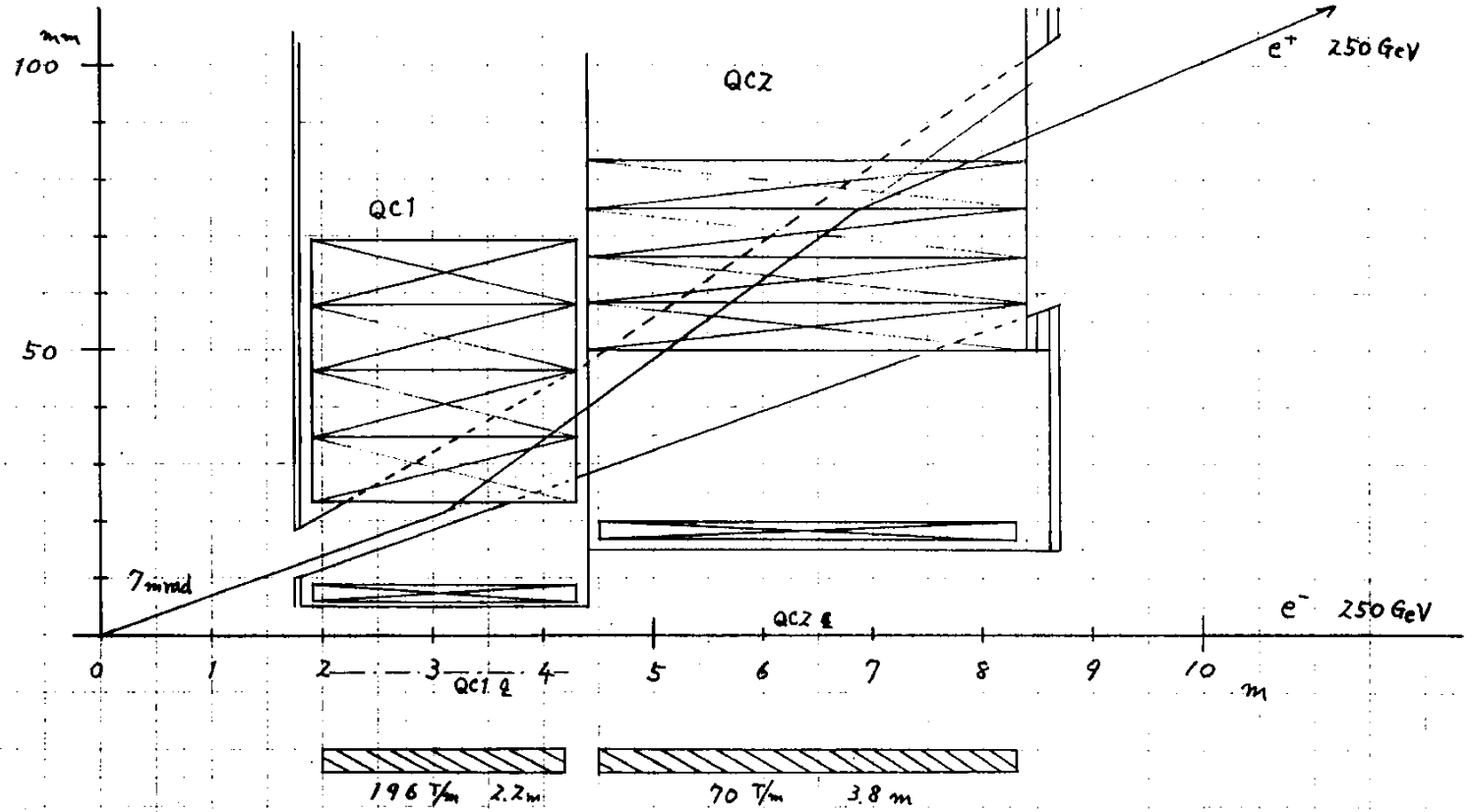
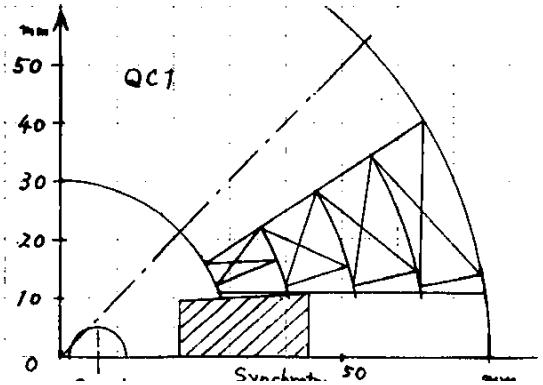
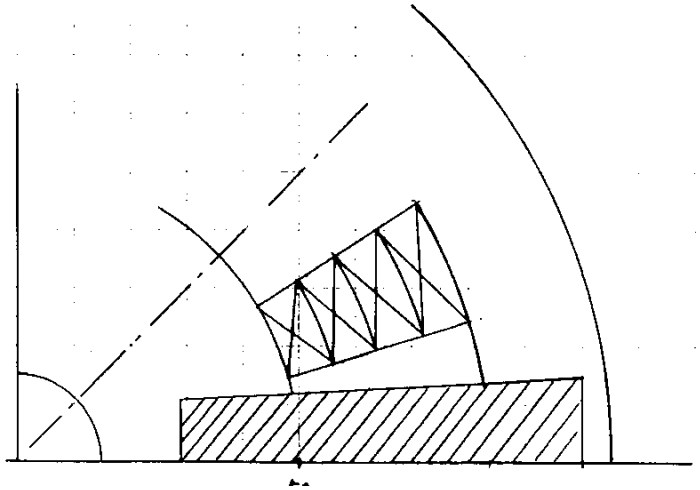

Vector Fields - Software for Electromagnetic Design
FILE
UNITS
OPTIONS
HELP
FIELDS
MODEL
MENU OFF
OPERA-2d
Updated folder: no files added or deleted since last update.

2000/5/7 K.T.



Δz	14mm	37.12	41.40	86.52
θ	7mrad	14.26	14.26	12.22





2000/5/7 K.T

Main Parameters of QC1

Main Coil (asymmetric coil)	
Field gradient (T/m)	181
Peak field (T)	
gap side #2 layer	7.58
non-gap side #2 layer	8.85
Effective length (m)	2.2
Current density (A/mm2)	
gap side coil	400
non-gap side coil	530
Mail coil (4 layer, no grading coil)	
inner radius (mm)	30
outer radius (mm)	76.3
Multipole components @ r=5 mm	
b3 (x 10-4)	311
b4 (x 10-4)	21
b5 (x 10-4)	7.8
Stored energy (kJ)	579

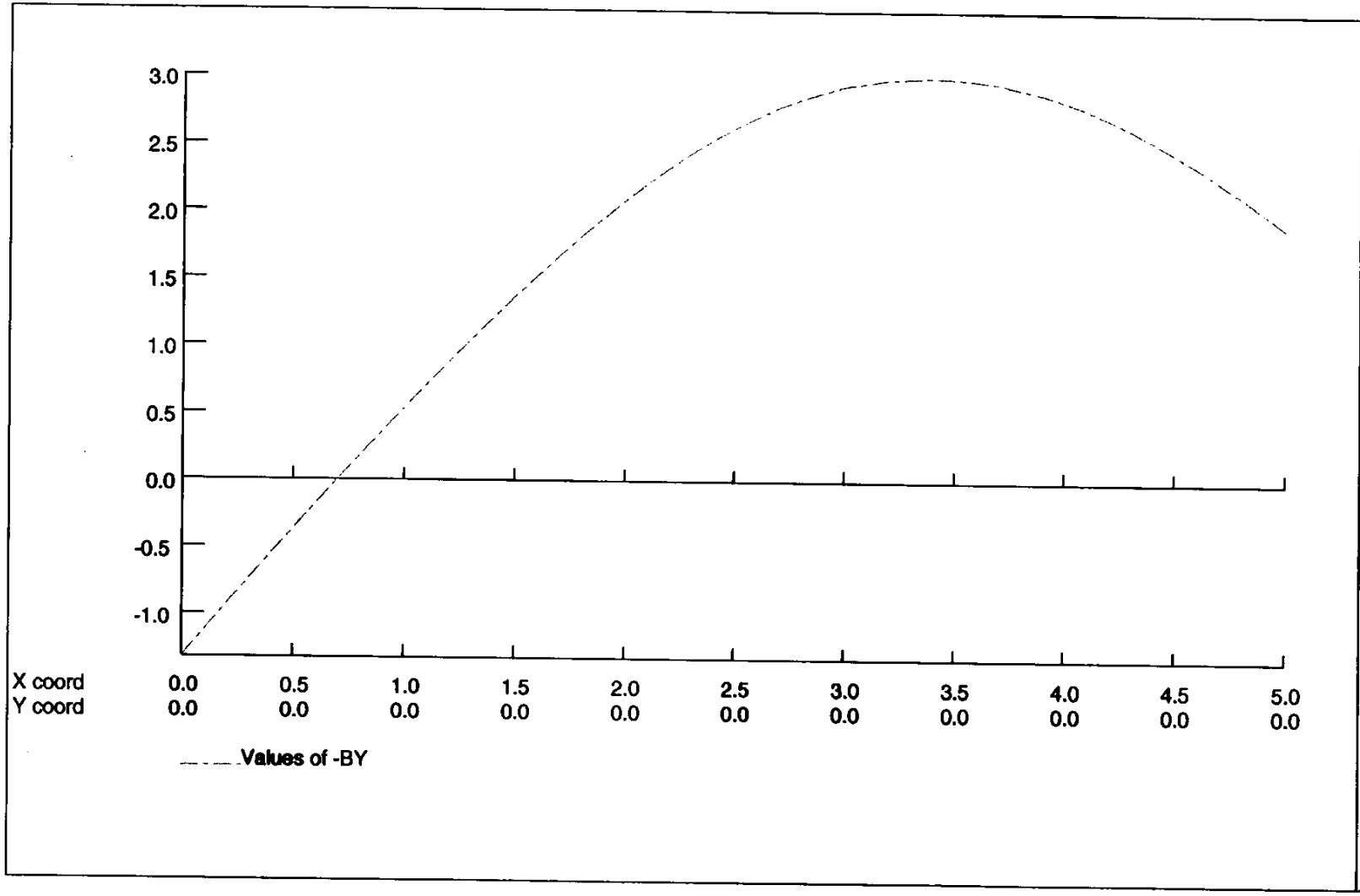
* Coil shape optimization has not been completed yet

Corrector Coil (H-steering, V-steering coil)	
Field (T)	0.1 (0.5 mm)
Coil radius (mm)	5

2000/5/7 K.T.

Main Parameters of QC2

Main Coil	
Field gradient (T/m)	70
Peak field(T)	5.9
Effective length (m)	3.8
Current density (A/mm2)	490
Mail coil (4 layer, no grading coil)	
inner radius (mm)	50
outer radius (mm)	83.5
Multipole components @ r=10 mm	
b6 (x 10-4)	7.8
b10 (x 10-4)	0.0
Stored energy (kJ)	429
Cable width (mm)	8
Corrector Coil (H-steering, V-steering coil)	
Field (T)	0.1 (1.4 mm)
Coil radius (mm)	18

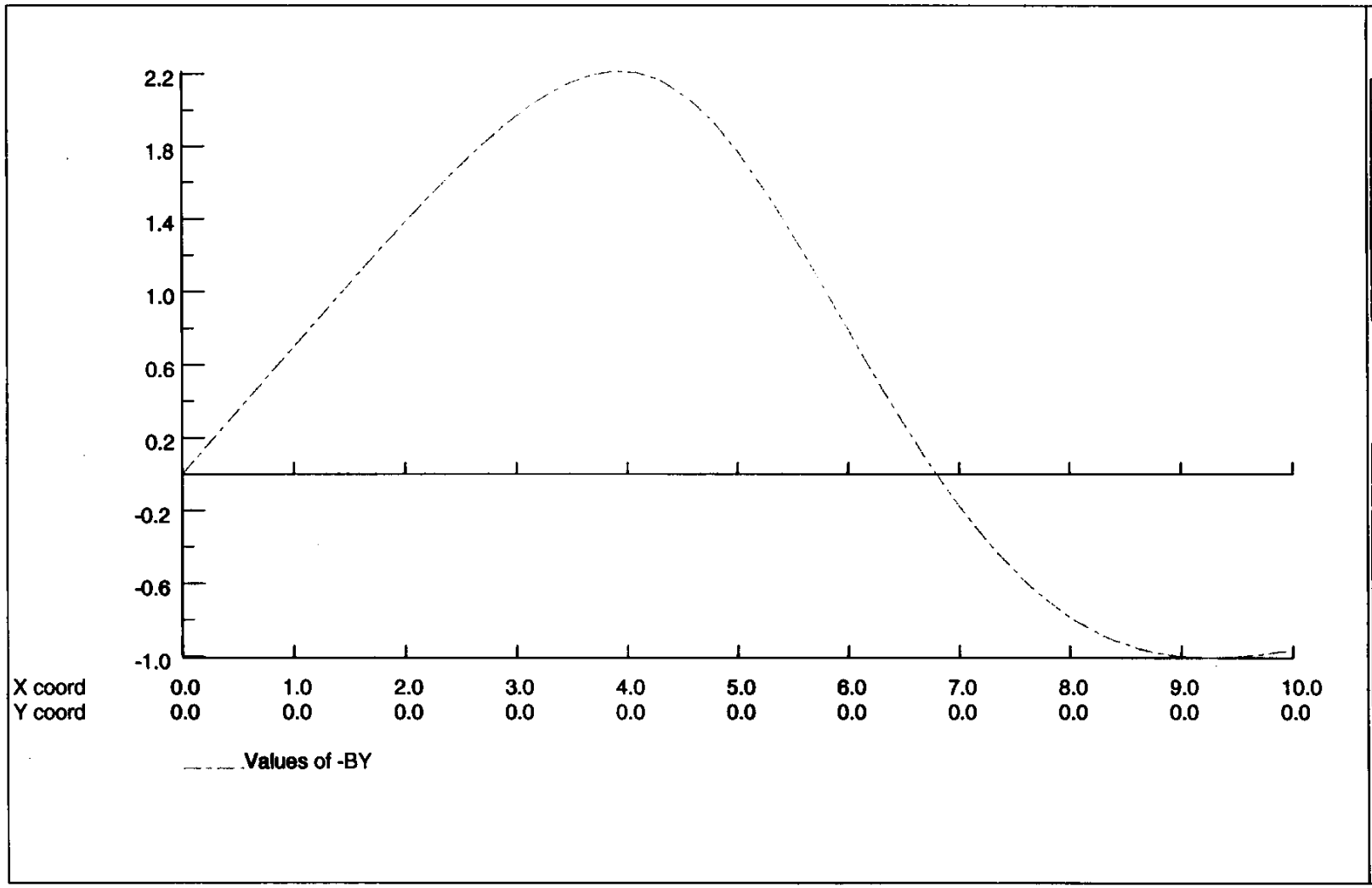


UNITS

Length	: cm
Flux density	: T
Field strength	: A m^{-1}
Potential	: Wb m^{-1}
Conductivity	: S m^{-1}
Source density	: A cm^{-2}
Power	: W
Force	: N
Energy	: J
Mass	: kg

PROBLEM DATA
QC1-gap3L.st
Quadratic elements
XY symmetry
Vector potential
Magnetic fields
Static solution
Scale factor = 1.0
25830 elements
51821 nodes
108 regions

OPERA-2
Pre and Post-Processor 7.1



UNITS

Length	: cm
Flux density	: T
Field strength	: A m^{-1}
Potential	: Wb m^{-1}
Conductivity	: S m^{-1}
Source density	: A cm^{-2}
Power	: W
Force	: N
Energy	: J
Mass	: kg

PROBLEM DATA
QC2-s1.st
Quadratic elements
XY symmetry
Vector potential
Magnetic fields
Static solution
Scale factor = 1.0
3447 elements
7100 nodes
9 regions

OPERA-2
Pre and Post-Processor 7.1