

ON THE APOLLO COMPUTER

ELEMENT TYPE	T_i , SECONDS PER ELEMENT
<u>ONE-DIMENSIONAL ELEMENTS</u>	
RØD, TUBE	0.17
BAR	0.40
BEAM	0.50
<u>TRIANGULAR ELEMENTS</u>	
TRIA3	0.40
TRIA6	4.10
<u>QUADRILATERAL ELEMENTS</u>	
QUAD4	0.84
SHEAR PANEL	0.54
QUAD8	10.50
<u>SOLID ELEMENTS</u>	
PENTA (6 NODES)	1.30
PENTA (15 NODES)	7.50
HEXA (8 NODES)	2.30
HEXA (20 NODES)	20.80
HEX20	24.70
<u>AXISYMMETRIC SOLIDS</u>	
TRIARG	1.00
TRIA6	2.40
TRAPRG	2.00

CPU TIME FOR REAL DOUBLE PRECISION OPERATIONS

ON THE APOLLO COMPUTER

TIMING PARAMETERS, 10^{-6} SECONDS			
M	P_s	P	P_i
53.	50.	65.	210.

M = ARITHMETIC TIME FOR MULTIPLY/ADD LOOP.

P_s = PACK OR UNPACK ONE TERM IN A STRING OF NONZERO MATRIX TERMS.

P = PACK OR UNPACK ONE ELEMENT IN A COLUMN OF A MATRIX.

P_i = PACK OR UNPACK ONE NONZERO TERM IN A COLUMN OF A MATRIX.

CPU TIME FOR COMPLEX DOUBLE PRECISION OPERATIONS

ON THE APOLLO COMPUTER

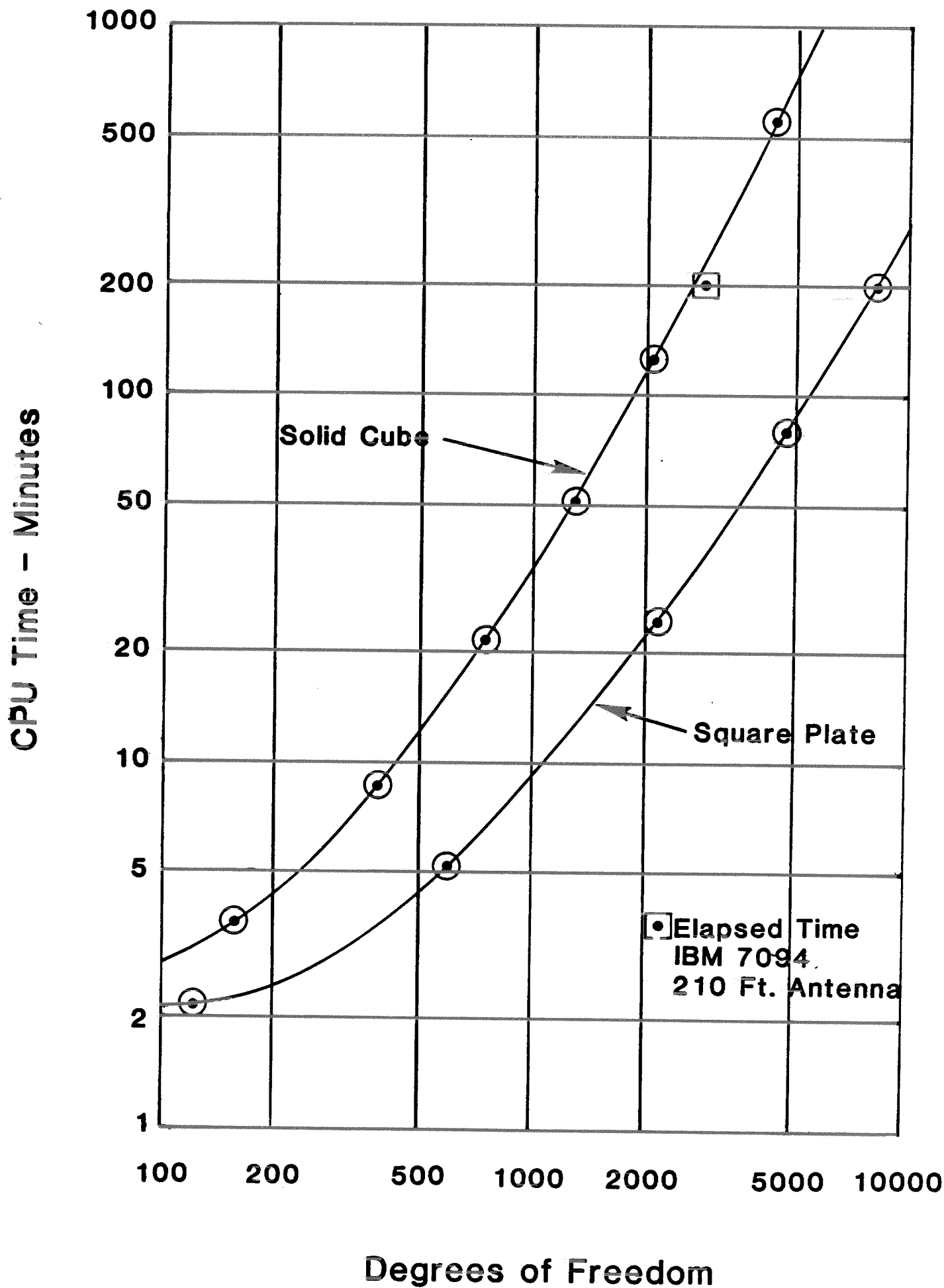
TIMING PARAMETERS, 10^{-6} SECONDS			
M	P_s	P	P_i
230.	60.	80.	220.

M = ARITHMETIC TIME FOR MULTIPLY/ADD LOOP.

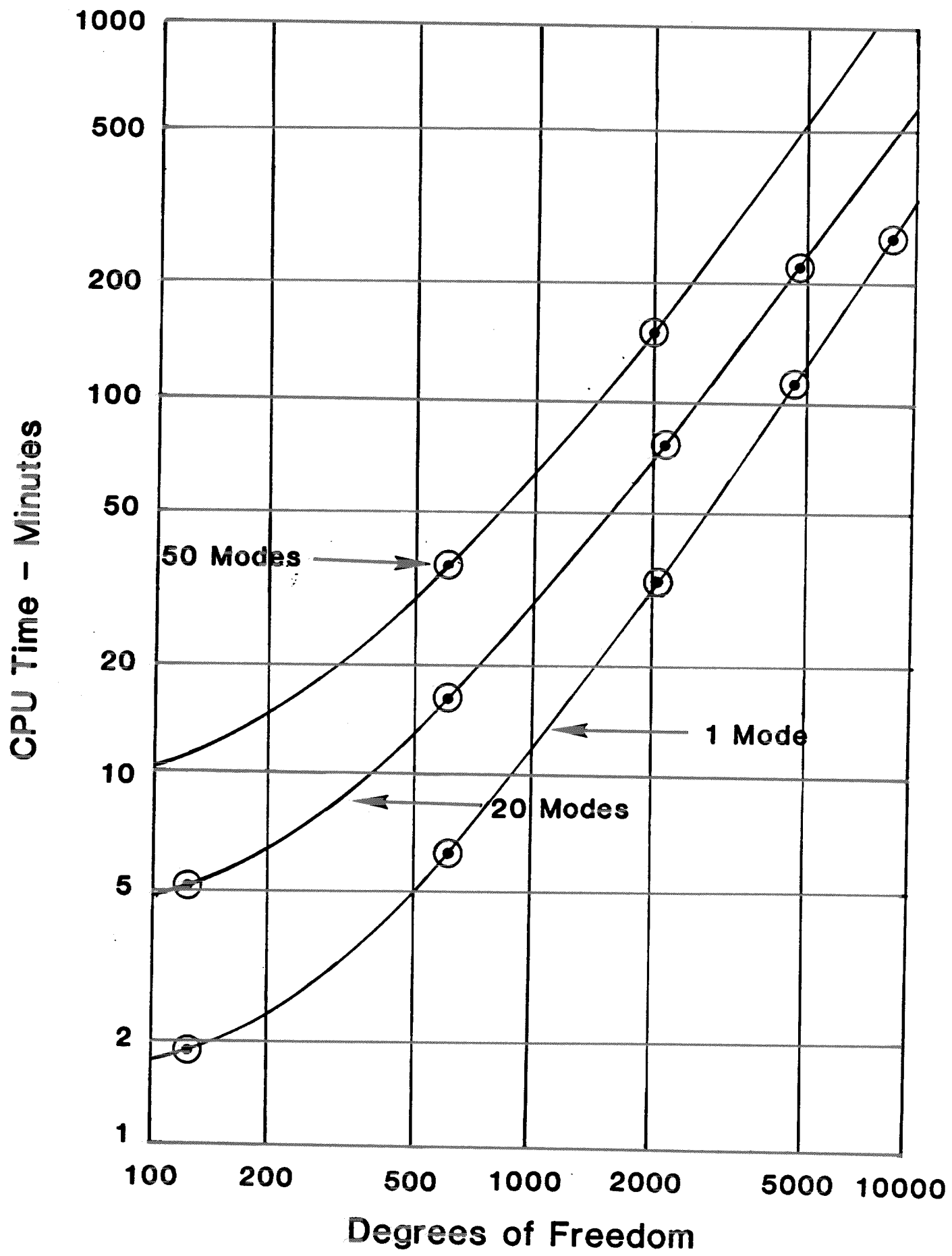
P_s = PACK OR UNPACK ONE TERM IN A STRING OF NONZERO MATRIX TERMS.

P = PACK OR UNPACK ONE ELEMENT IN A COLUMN OF A MATRIX.

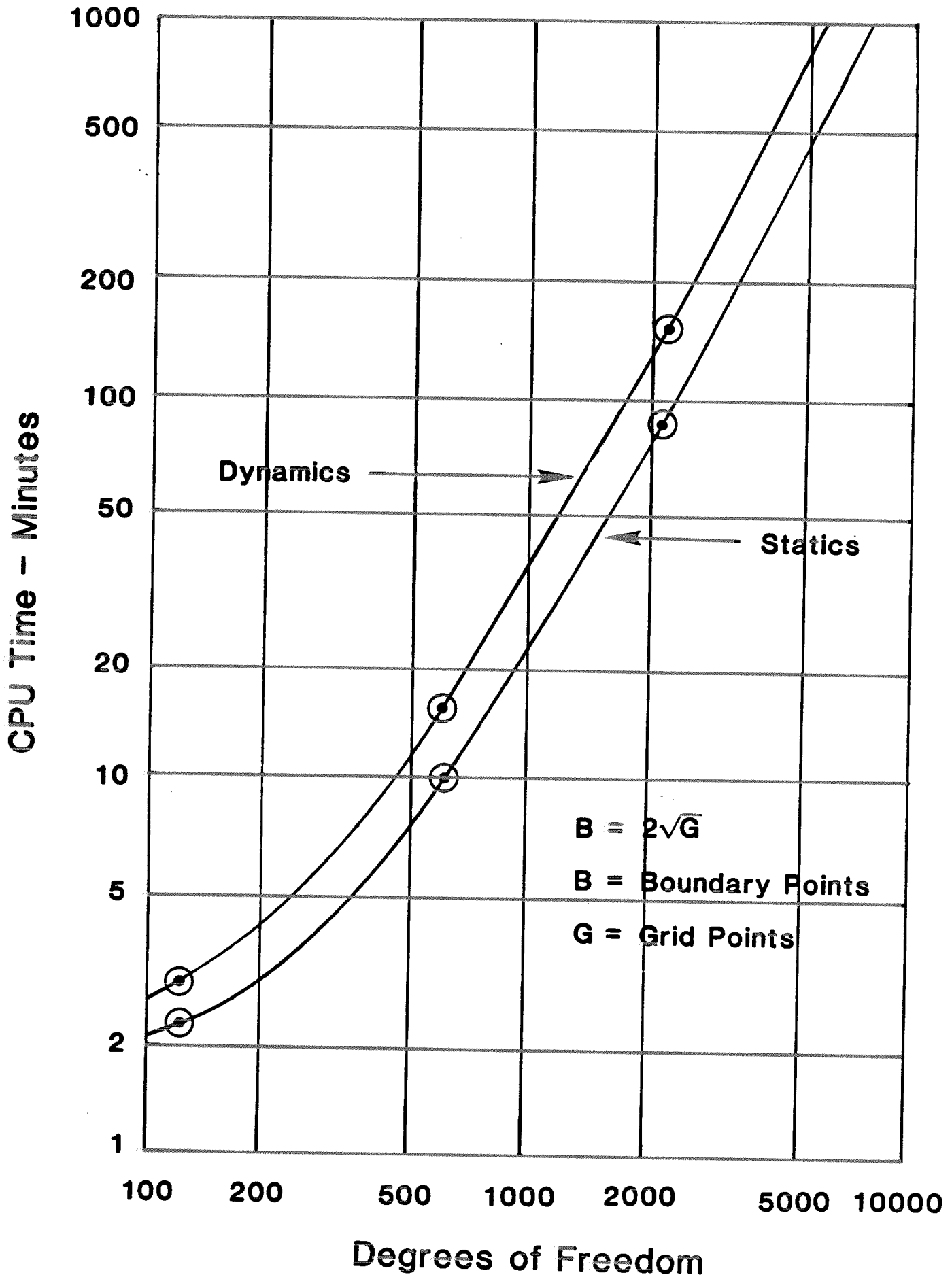
P_i = PACK OR UNPACK ONE NONZERO TERM IN A COLUMN OF A MATRIX.



SQUARE PLATE



SQUARE PLATE



SQUARE PLATE

