WISC LIBRARY

File # 2.01.06

Operation — Arctangent Polynomial Approximation

$\theta = \tan^{-1} r$

ATP

Use

a) Calling Linkage

L : 100 8 (L+2) 3ff 35f,

L + 1: 000 5 000 000 (ATP;1)

L + 2: 000 0 (r) (θ) (β)

b) Adaptation Link Word

L + 2: 01d 1W[014 β

c) Storage

j = 29 words

k = 20 orders

9 constants

5 opstos: 357 to 35b

Requirements and Performance

a) Method of operation floating point, polynomial approximation "Approximations for Digital Computers" Rand p 137

b) Additional routines required none

c) Range and form of variable $-\infty < x < \infty$

d) Accuracy Error not greater than $\pm 4 \times 10^{-8}$

e) Performance time .9 sec

REMARKS

RESULT HAS SIGN OF PRINCIPAL VALUE OF θ