PROGRAM TITLE: RADIAL ERROR SUBROUTINE (RELOCATABLE)

PROGRAM CLASSIFICATION: Subroutine

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PURPOSE: Because of the many instances in which programs
                           call for the radial error of given variates,
                           a subroutine has been written for this purpose.

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1. **PURPOSE**

1.1 Because of the many instances in which programs call for the radial error of given variates, a subroutine has been written for this purpose.

2. **METHOD**

2.1 The radial error of two variates is the square root of the sum of the squares, or

$$\text{radial error} = \sqrt{X^2 + Y^2}$$

3. **RESTRICTIONS**

3.1 The variates in memory must be in floating point form.

3.2 When relocating the subroutine, the last digit must be a zero, i.e., LXXX0.0.

4. **USAGE**

4.1 The calling sequence for this subroutine is:

```
        '  SIR                 Where L(X) is the location of
        '  TRA      ( )        one set of values, L(Y) is the
 - - - -'- - - - - - - -       location of the second set of
        '  PZE      L(X)       values,  L(P) is the location
  + 1   '  PZE      L(P)       the radial error is to be stored,
        '                      and (N) is the number of values
 - - - -'- - - - - - - -       of (X).
        '  PZE      L(Y)
  + 2   '  PZE      (N)
 - - - -'- - - - - - - -
        '  normal return
```

4.2 To relocate this subroutine, set L7730. Enter the new location in the address portion of the second half (+0000000+00XXX00), then press "start".

5. **CODING INFORMATION**

5.1

Location	Function
0000 - 0037	Subroutine
3777 - 4037	Relocator Matrix
7730 - 7754	Relocator