Apollo 11 implementation of trigonometric functions

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March 1969

This code was submitted by Margaret H. Hamilton[1] (Programming Leader Apollo Guidance and Navigation) in March 1969 and was used to evaluate trigonometric functions essential for navigation on both the Command Module and Lunar Lander that first landed humans on the Moon.

```
33  # SINGLE PRECISION SINE AND COSINE
34
35                COUNT*  $$/INTER
36  SPCOS         AD      HALF          # ARGUMENTS SCALED AT PI
37  SPSIN         TS      TEMK
38                TCF     SPT
39                CS      TEMK
40  SPT           DOUBLE
41                TS      TEMK
42                TCF     POLLEY
43                XCH     TEMK
44                INDEX   TEMK
45                AD      LIMITS
46                COM
47                AD      TEMK
48                TS      TEMK
49                TCF     POLLEY
50                TCF     ARG90
51  POLLEY        EXTEND
52                MP      TEMK
53                TS      SQ
54                EXTEND
55                MP      C5/2
56                AD      C3/2
57                EXTEND
58                MP      SQ
59                AD      C1/2
60                EXTEND
61                MP      TEMK
62                DDOUBL
63                TS      TEMK
64                TC      Q
65  ARG90         INDEX   A
66                CS      LIMITS
67                TC      Q             # RESULT SCALED AT 1.
```

[1] Code is available at https://github.com/chrislgarry/Apollo-11/blob/27e2acf88a6345e2b1064c8b006a154363937050/Luminary099/SINGLE_PRECISION_SUBROUTINES.agc