13. Other Programming and Operating Information or Restrictions: The program is compiled by XFAM 4E and listed by editor XMUM MARK 3A.

14. Material Available: A source deck, sample problem, and operating instructions are available from the authors.

15. *Acknowledgment*: This paper is based on work performed under State Committee for Nuclear Energy Contract 134/7 (1970).

16. *References*:

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APEL

1. Name of Code: APEL.

2. Computer for Which Program is Designed: ICL-1905.

3. Nature of Physical Problem Solved: APEL solves the time-independent neutron transport approximation for spatially dependent neutron flux distribution in a spherical geometry. The code provides critical parameters (flux distribution, critical mass, reaction rates, initial breeding ratio) for given volume fractions of the fast system.

4. Method of Solution: SNG.

5. Restrictions on the Complexity of the Problem: 50 spatial points, 16 energy groups, 5 angular directions, 5 nuclides, 3 zones of heterogeneity.

6. Typical Running Time: 30 min.

7. Unusual Features of the Program: Number of spatial points used in a zone is proportional to its thickness.

8. Related and Auxiliary Programs: The macroscopic multigroup cross sections are computed in the code itself; therefore, no relation with auxiliary program is required.

9. Status: In Use.

10. Machine Requirements: 28K words core and no peripheral storage device are required.

11. Programming Language Used: FORTRAN-1900.

12. Operating System or Monitor Under Which Program is Executed: Supervisor and, in particular, George 2.

13. Other Programming and Operating Information or Restrictions: The program is compiled by XFAM 4E and listed by editor XMUM MARK 3A.

14. Material Available: A source deck, sample problem, and operating instructions are available from the authors.

15. *Acknowledgment*: This paper is based on work performed under State Committee for Nuclear Energy Contract 134/7 (1970).

16. *References*:

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