The papers generated at the session on "Engineering and Research Applications" are as follows:

Digital Simulation of Active Air Defense Systems—R. P. RICH,

Statistical Calculations in Product-Development Research—E. B. GASSER,

Progress in Computer Application to Electrical Machine and System Design—E. L. HARDER,

How Lazy Can You Get?—A. L. SAMUEL,

The Solution of Certain Problems Occurring in the Study of Fluid Flow—L. U. ALBERS,

A Dual-Use Digital Computer for Dynamic System Analysis—E. H. CLAMONS & R. D. ADAMS,

The Status of Automatic Programming for Scientific Problems—R. W. BEMER, Panel Discussion.

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35[S].—VAL J. ASHBY & HENRY C. CATRON, *Tables of Nuclear Reaction Q Values*, UCRL-5419, Lawrence Radiation Laboratory, University of California, Livermore, California, 1959, 330 p., 28 cm. Price $5.00. Available from the Office of Technical Services, Department of Commerce, Washington 25, D. C.

Tables of nuclear reaction Q values have been calculated from nuclide masses, when possible, for those 42 reactions involving γ, n, p, d, t, He^3, or He^4 as either incident or product particle for about 650 target nuclides. Approximately 8000 Q values are tabulated.

AUTHORS' SUMMARY

36[S, T].—JAMES MILLER, JOHN M. GERHAUSER & F. A. MATSEN, *Quantum Chemistry Integrals and Tables*, University of Texas Press, Austin, Texas, 1959, 1224 p., 26 cm. Price $15.00.

One of the major difficulties in making quantum-mechanical calculations of the properties of atoms and molecules is the evaluation of the large number of difficult integrals which appear. This volume contains tables for the evaluation of the one- and two-center $1s$, $2s$, and $2p_\sigma$ integrals involved in energy and dipole moment calculations. No $2p\pi$ integrals are included. The tables are based on the usual Slater-type atomic orbitals. Molecular integrals are not tabulated directly, but rather auxiliary functions (A, B, G, and W in the usual Kotani notation). Some computation is therefore still necessary to arrive at a desired molecular integral, but it is within the reach of a desk calculator.

The tables were computed on an IBM 650 and reproduced by a photo-offset process to avoid introduction of errors. They appear quite clear and legible. The short textual parts of the book contain formulas as well as recommended interpolation procedures and their expected accuracy—a most welcome feature. Over 90 per cent of the pages are devoted to the difficult W functions.

The present tables naturally invite comparison with previous tables of molecular integrals, particularly those by Kotani, Amemiya, Ishiguro, and Kimura