

Fig. 5 Comparison of  $p$ - $x$  diagrams for exhaust and intake for small and large RPM;  $x=2$ ,  $y=2$ .

engine. Pressure, temperature, and density variations also are obtained. An example is given in Fig. 5, which illustrates the pressure at  $x=2$  and  $y=2$  as a function of piston location for the intake and exhaust strokes, comparing high and low rpm.

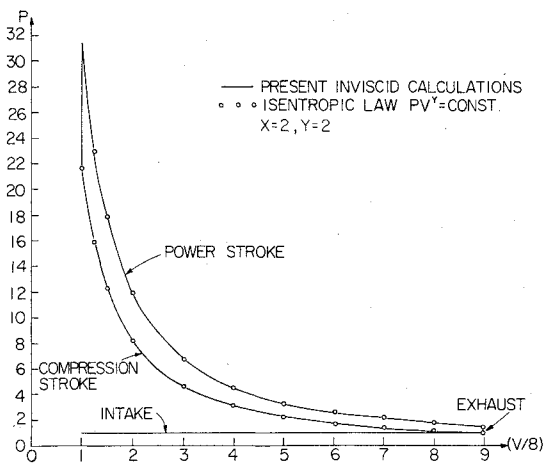


Fig. 6 Indicator diagram: 600 rpm.

Also, Fig. 6 shows an indicator diagram comparing the present 2-D calculation with the ideal Otto cycle.

### References

- <sup>1</sup>Griffin, M.D., Anderson, J.D., Jr., and Diwaker, R., "Navier-Stokes Solutions of the Flowfield in an Internal Combustion Engine," AIAA Paper 76-403. Also, *AIAA Journal*, Vol. 14, Dec. 1976, pp. 1665-1666.
- <sup>2</sup>MacCormack, R.W., "The Effect of Viscosity in Hypervelocity Impact Cratering," AIAA Paper 69-354, Cincinnati, Ohio, 1969.

## Announcement: 1976 Author and Subject Index

The indexes of the four AIAA archive journals (*AIAA Journal*, *Journal of Spacecraft and Rockets*, *Journal of Aircraft*, and *Journal of Hydronautics*) will be combined and mailed separately early in 1977. In addition, papers appearing in volumes of the *Progress in Astronautics and Aeronautics* book series published in 1976 will be included. Librarians will receive one copy of the index for each subscription which they have. Any AIAA member who subscribes to one or more Journals will receive one index. Additional copies may be purchased by anyone, at \$10 per copy, from the Circulation Department, AIAA, Room 730, 1290 Avenue of the Americas, New York, New York 10019. **Remittance must accompany the order.**

Ruth F. Bryans  
Director, Scientific Publications