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with Arun Tiwari

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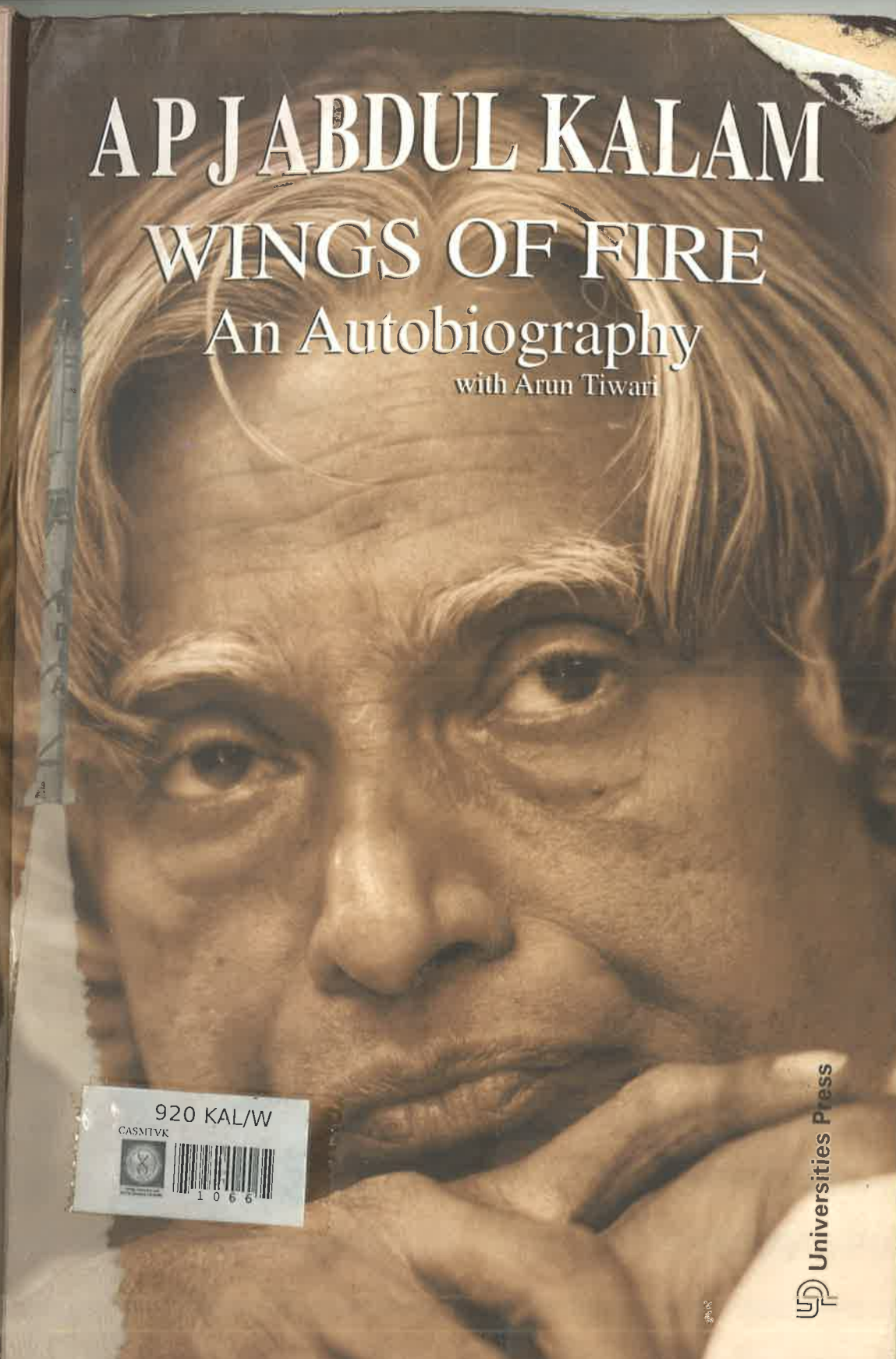
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WINGS OF FIRE

An Autobiography
with Arun Tiwari



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An Autobiography



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AVUL PAKIR JAINULABDEEN ABDUL KALAM has come to personally represent to many of his countrymen the best aspects of Indian life. Born in 1931, the son of a little educated boatowner in Rameswaram, Tamil Nadu, he had an unparalleled career as a defence scientist, culminating in the highest civilian award of India, the Bharat Ratna. As chief of the country's defence research and development programme, Kalam demonstrated the great potential for dynamism and innovation that existed in seemingly moribund research establishments. This is the story of Kalam's own rise from obscurity and his personal and professional struggles, as well as the story of *Agni*, *Prithvi*, *Akash*, *Trishul* and *Nag*—missiles that have become household names in India and that have raised the nation to the level of a missile power of international reckoning.

At the same time as he has helped create India's awesome weaponry, Kalam has maintained the ascetic rigour of his personal life, working 18 hours a day and practising the veena. With characteristic modesty, Kalam ascribes the greatness of his achievements to the influence of his teachers and mentors. He describes the struggles of his boyhood and youth, bringing alive everyday life in a small town in South India and the inspirational role of educators. He describes the role of visionary Indian scientists, such as Dr Vikram Sarabhai, and of the creation of a coordinated network of research institutions. This is also the saga of independent India's struggle for technological self sufficiency and defensive autonomy—a story as much about politics, domestic and international, as it is about science.

Arun Tiwari worked under Dr A P J Abdul Kalam for over a decade in the Defence Research and Development Laboratory (DRDL), Hyderabad. He is currently Director, Cardiovascular Technology Institute, Hyderabad, where he is pursuing Dr Kalam's vision of developing cost-effective medical devices using indigenous defence technology.

Dr Kalam was until recently Professor of Technology and Societal Transformation, Anna University, Chennai. On 25 July, 2002 he was sworn in as the eleventh President of India.

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WINGS OF FIRE

An Autobiography

A P J Abdul Kalam with Arun Tiwari



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