ACKNOWLEDGEMENTS

I express, with a deep sense of gratitude, my indebtedness to Prof. Satya Prakash who guided me throughout the course of the present work. His everlasting enthusiasm, unassuming and forthright nature, and inspiring outlook is gratefully acknowledged. It is, indeed, a great pleasure and privilege to have worked with him.

Constant encouragement and interest shown by Prof. B.H. Subbaraya has been invaluable to me. I am grateful to him.

Prof. D. Lal, the Director and Prof. S.P. Pandya, the Dy. Director, have always shown keen interest and given due encouragement throughout. I am grateful to them.

The author has been greatly benefitted by the discussions with Prof. P.K. Kaw. His suggestions are greatly appreciated and acknowledged.

I have been benefitted by the healthy discussions with Mr. T.R. Rao and the members of the Solar and Planetary Physics Group. I thank, heartily, Prof. R. Raghavarao, Prof. R.V. Bhonsle, Dr. S.P. Gupta, Dr. P. Muralikrishna and Mr. Shyamlal for such discussions.

My special thanks are due to Mr. Surendra Pal and
Ms. Veena Prakash for the help in analysing the data. Thanks are also due to Dr. K. S. Rao for his assistance in computer programming.

Messrs R. C. Shah, J. T. Vinchhi, K. S. Modh, Y. B. Acharya, R. N. Misra, S. K. Banerjee, A. K. Goyal, K. S. Patel, R. I. Patel, V. K. Parmar and Ms. Anjana Shah have been very helpful in designing and fabricating the payloads. I sincerely thank them all for their efficient work.

My sincere thanks are due to Mr. V. Sudhakar, Range Manager, Thumba Equatorial Rocket Launching Station, and the members of the Integration Lab. for working tirelessly for the success of the rocket flights.

My friends have always been very kind and helping to me. My special thanks are due to Mahesh and Ashwin for the affection shown by them towards me.

Members of Prof. Satya Prakash family and of Dr. M. Misra (Saurashtra University, Rajkot) have been very kind and affectionate to me. I express my sincerest and heartiest thanks to all of them.

My family is my biggest moral support. I am grateful to my family members for their loving, passionate and warm hearted feelings towards me and also for putting up with my temperament.
Neena came into my life at the fag end of the present work. Her silent approval of me is greatly appreciated.

There are many more who have directly, or indirectly, inspired for and greatly contributed to the completion of this work. I recall them all and thank sincerely for their efforts.

Mr. M. Arvindnath needs a special mention for typing the thesis very efficiently from the handwritten manuscript. I thank him very much for the excellent job. Mr. T. T. Chacko has also assisted me during the course of the work by typing the research publications. I am thankful to him.

Thanks are also due to the P.R.L computing centre and library personnel for their helpful nature.

Ahmedabad 380 009

Rajesh Pandey

( Rajesh Pandey )