ACKNOWLEDGEMENTS

I am deeply indebted to my thesis advisors Professors Praful D. Bhavsar and N.W. Nerurkar for their guidance, invaluable advice and continued interest during all phases of this work.

I am very grateful to Professor Vikram A. Sarabhai for his sympathetic and understanding attitude as well as for the encouragement he gave me.

I remember with gratitude late Mr. Dinesh Bhadra for his help in testing the earlier versions of the telemetering systems and for the assistance during my first trip to Hyderabad for balloon flights in 1966. Mr. Vijay Jakkli developed the sub-carrier oscillators as well as built the ground-based discriminator systems which were used in later flights. The technical assistance provided by him and by Messrs H.S. Vekaria and J.K. Dave is highly appreciated.

The cooperation of the computing center under Mr. S.R. Thakore, especially of Mr. G.G. Rathod for his help in the preparation of various programs, is gratefully acknowledged. I am very thankful to Mr. J.G. Vora for his computational assistance and for the excellent drafting of diagrams many of which were done at short notice.