

RAMMER Project: First observations of the High Speed Camera Network to Monitor and Study Lightning

A.C Saraiva, O. Pinto Jr, M. Ferreira, G. Zepka, M.F. Saba

INPE, National Institute of Space Research,
S.J. Campos, São Paulo, 12227-010, Brazil

ABSTRACT: This work presents the development and some applications of a network of high speed cameras for observation and study of lightning flashes. RAMMER network is composed by four high-speed cameras. They are capable to record high resolution videos up to 1632 x 1200 pixels at 1000 frames per second. This resolution can however be altered in order to increase the time resolution by diminishing the spatial resolution, and vice-versa. A robust system is in development to ensure the safe operation of the cameras in adverse weather conditions and the recording of a number of lightning flashes per storm that will be higher than the values reported to date. The triggering system is based in optical and electromagnetic sensors which allow the camera to work without the presence of an operator. In this first campaign some preliminary tests were performed. Also, the logistics for a simultaneous observation of the same thunderstorms and the first results of this campaign will be presented.

*Correspondence to:

Antonio Carlos Varela Saraiva, Geophysics Division, National Institute of Space Research , S.J. Campos, SP, 12227-010, Brazil. Email: acvsaraiva@gmail.com