

## **Appendix A-Station History**

At the University of Ilorin, a pilot radiation measuring station was established in 1992. At that time, only the total global, PAR global, and the downward longwave radiation were monitored and integrated over a three-minute interval. Preceding this activity, sun photometer observations were made for several years.

In 1995 the station was expanded to include additional measurements of radiation components and some conventional meteorological observations, at one-minute intervals. The following observations were added: total direct radiation, PAR diffuse, air temperature, relative humidity, wetness, and barometric pressure.

Further expansion occurred in April 1998 under support of NASA, in the framework of EOS Validation objectives. A multi-channel tracking sun photometer of the CIMEL type was deployed with satellite communication and data transfer capability. A new, high-tech active solar tracker, a new tipping bucket rain gauge, and a direct PAR sensor, have also been installed. The above instruments are connected to a CR10 data logger, and under normal condition, do not require any alterations in their set-up. In case of detected abnormal performance, the instruments may be initialized and re-programmed using a PC. To meet such needs, a high speed PC was provided to the Ilorin station. Shortly, after the April 1998 set-up, problems were encountered with the data logger.

In October 1998, at the completion of a new laboratory, the station was reconfigured, and CR10 data logger was replaced. A new wind speed and wind direction sensors were also added.

The station has reached a level of development and instrument complexity that requires organization regulated by a strict protocol, which utilizes the resources of the Physics Department, and addresses special problems unique to this station.