

Appendix A

Experimental Test Runs

A.1 Case 1: BIS system with reverse circulation at night (the check-valve was forced open throughout the test).

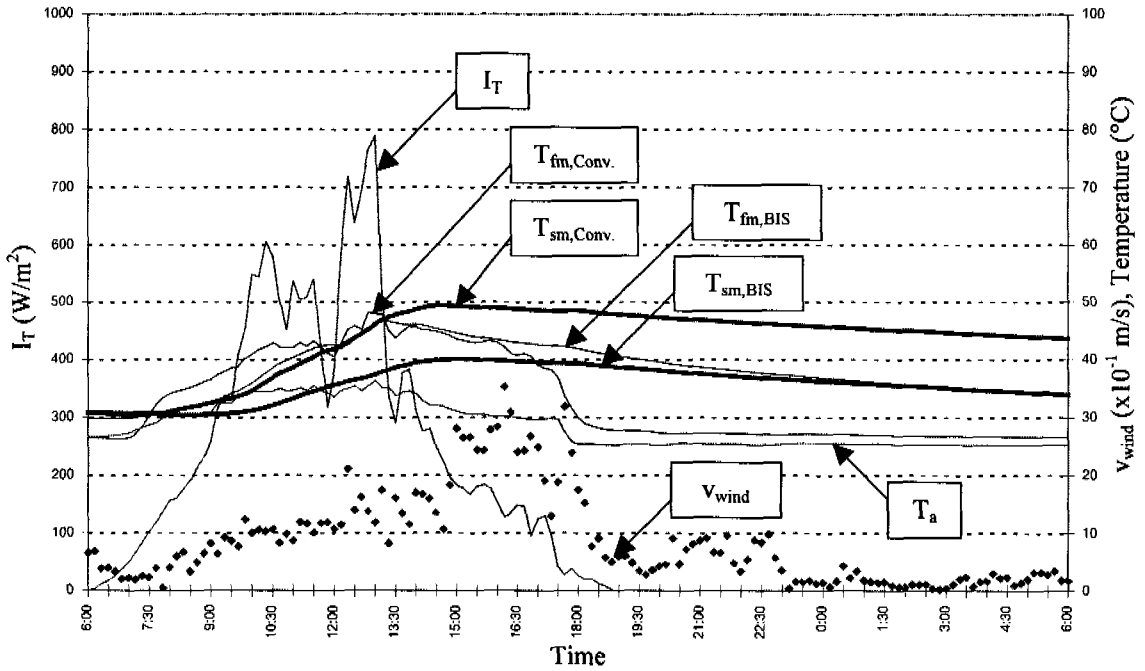


Fig. A1 Experimental data recorded on 17/7/2002

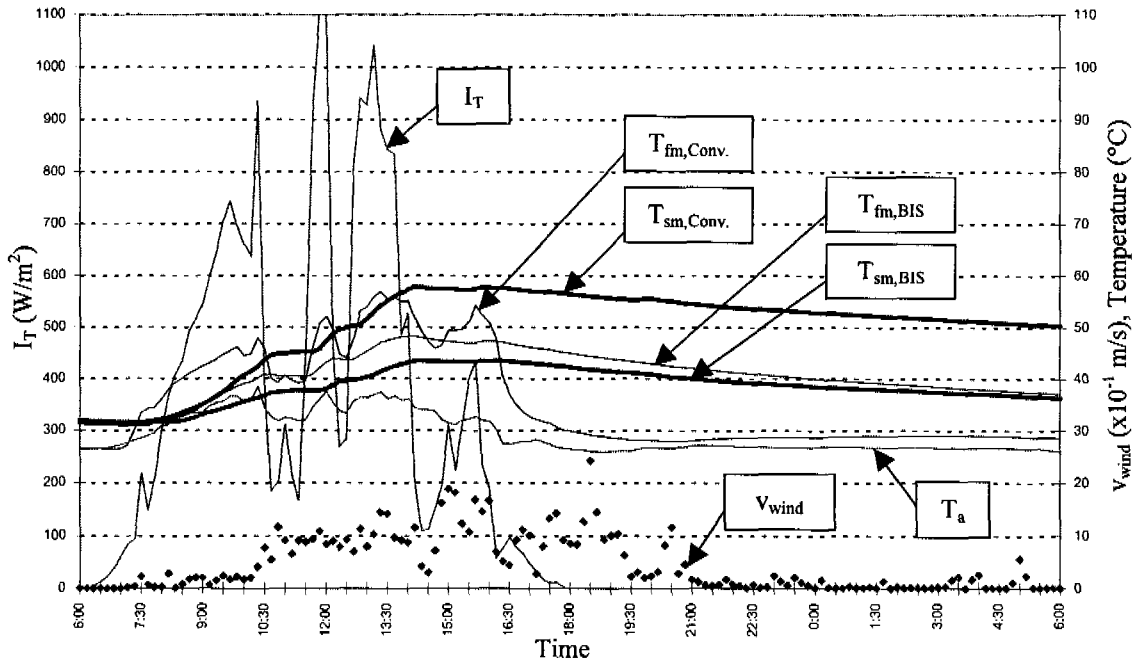


Fig. A2 Experimental data recorded on 5/10/2002

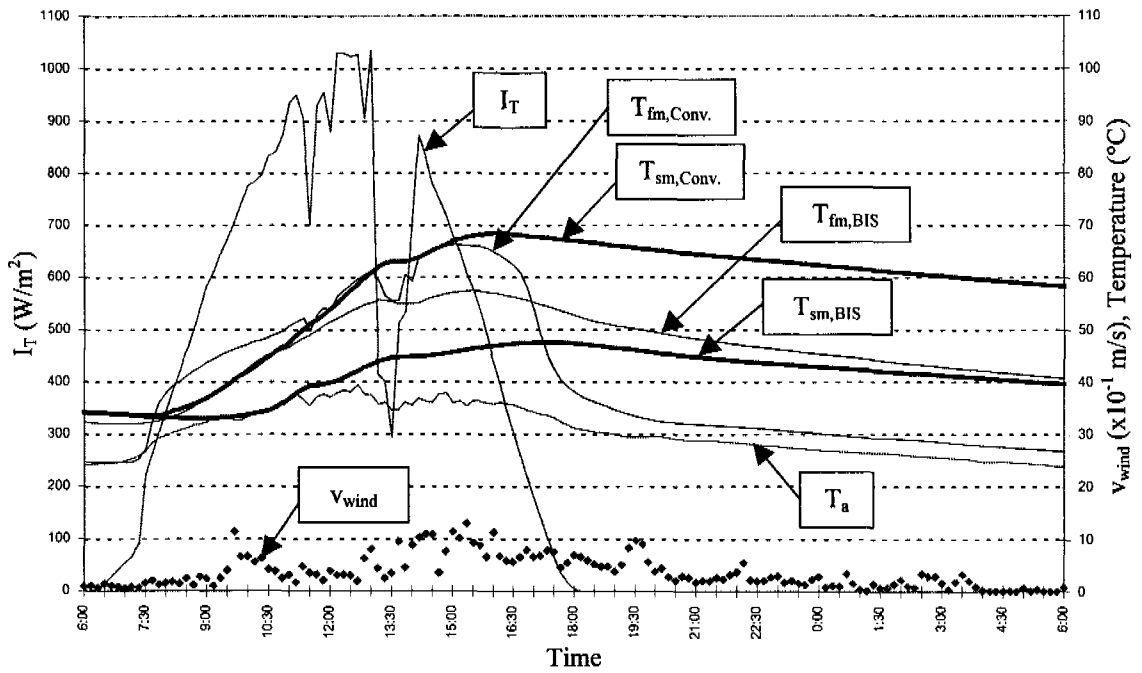


Fig. A3 Experimental data recorded on 13/10/2002

A.2 Case 2: BIS system with check-valve operated freely throughout the test.

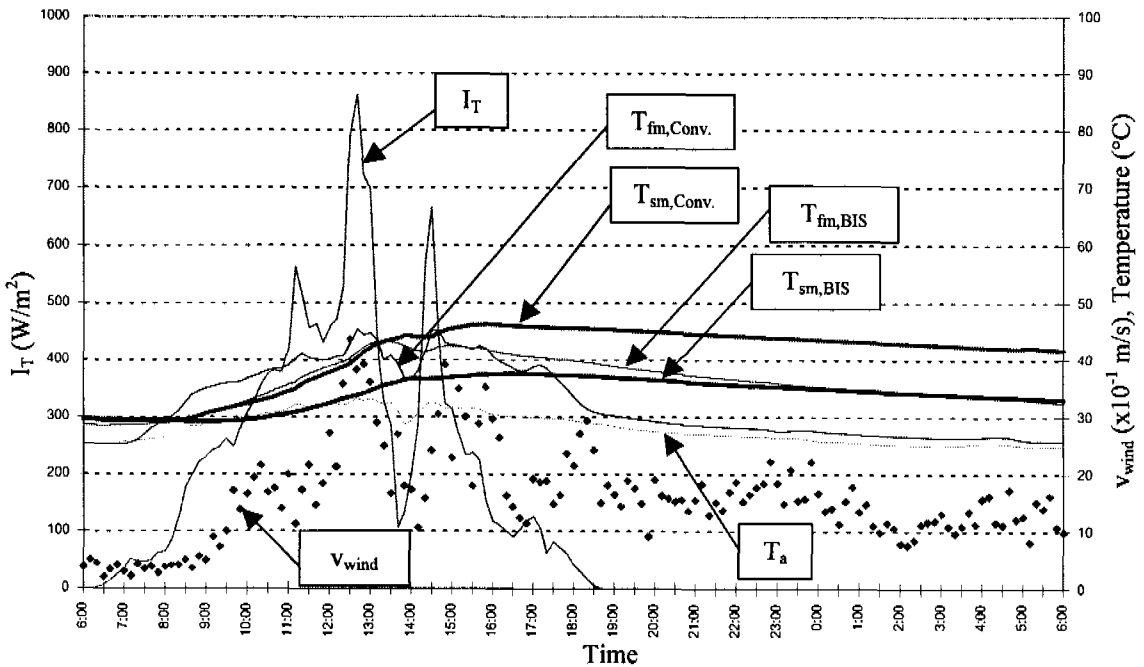


Fig. A4 Experimental data recorded on 17/8/2002

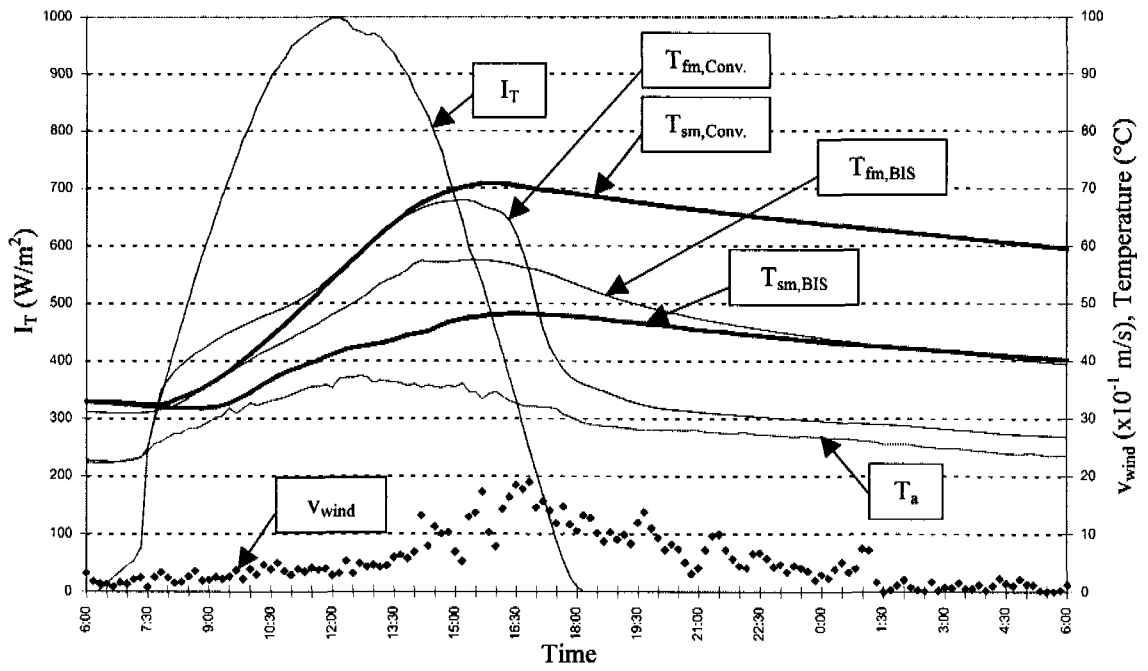


Fig. A5 Experimental data recorded on 11/10/2002

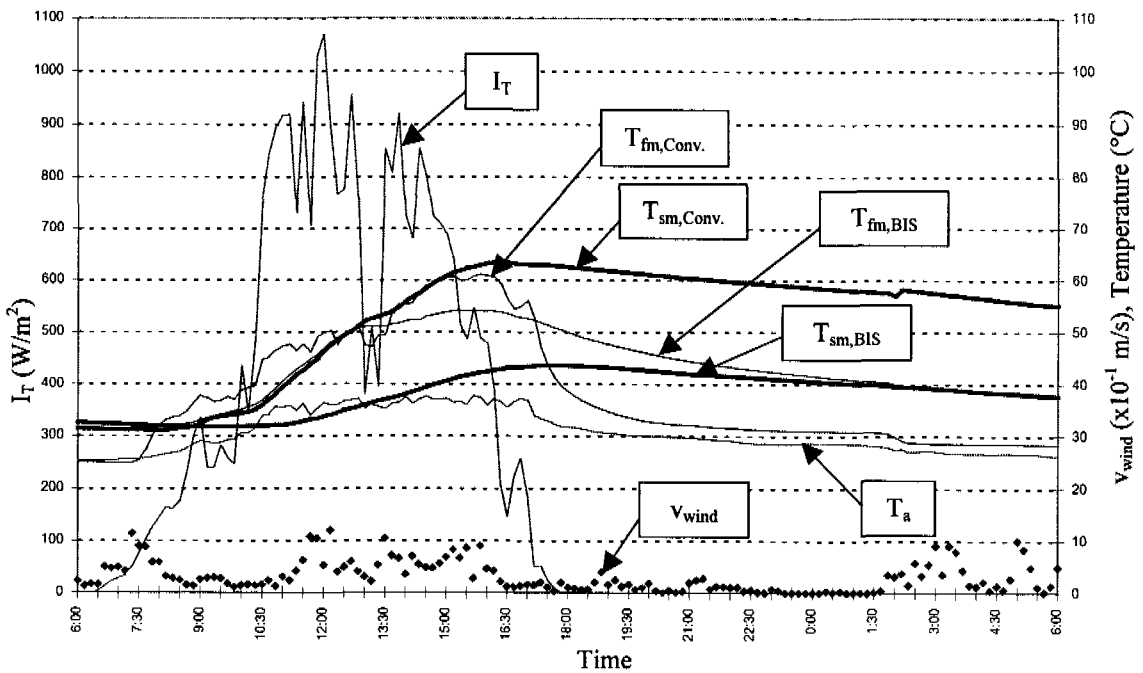


Fig. A6 Experimental data recorded on 13/11/2002

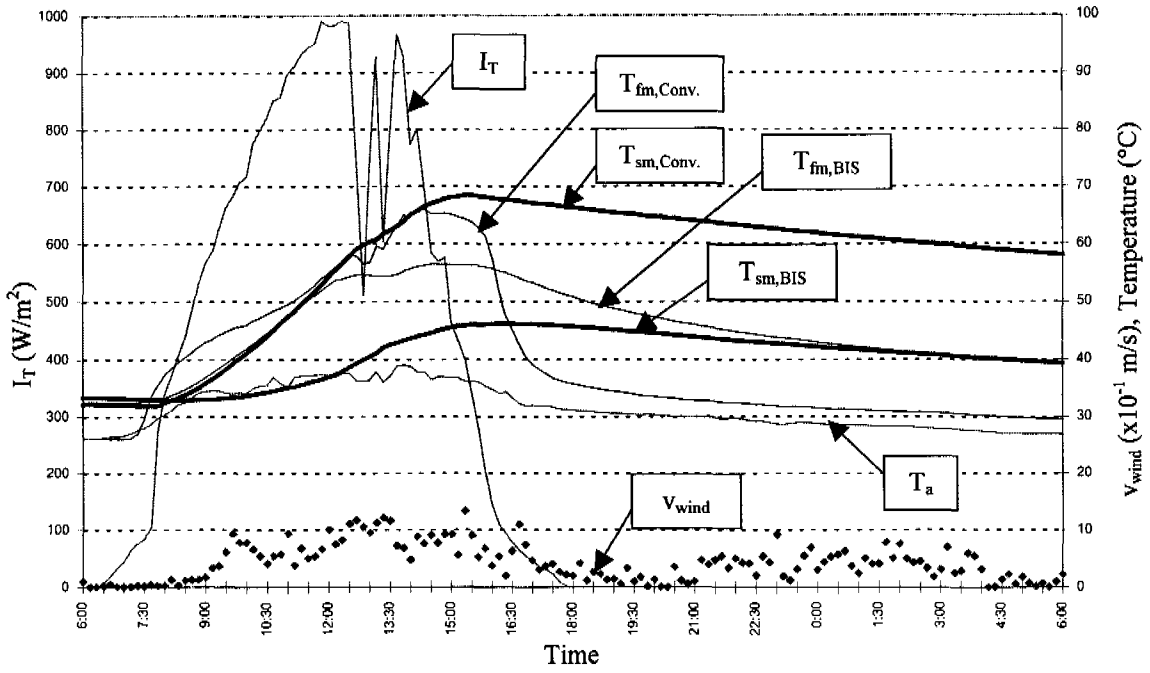


Fig. A7 Experimental data recorded on 15/11/2002

A.3 Case 3: BIS system with no reverse circulation at night (the check-valve operated freely during the day but was forced close at night).

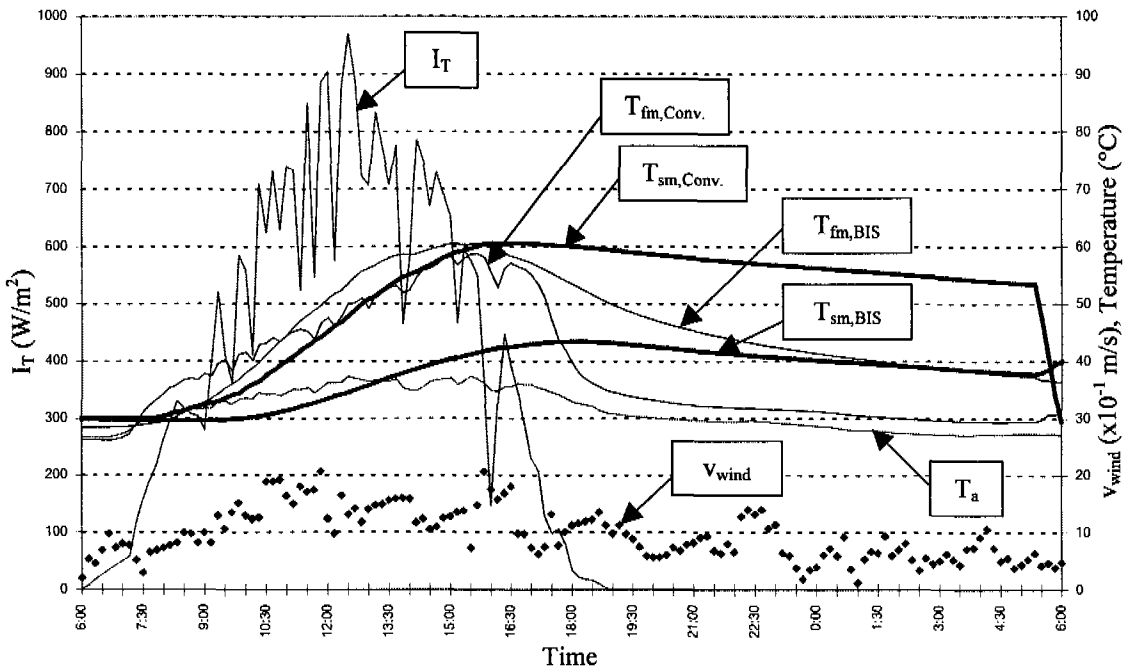


Fig. A8 Experimental data recorded on 12/7/2002