

Computer Simulation of Power Systems

Programming Strategies and Practical Examples

**...just the color figures for those who got the B&W
printed book...**

by D. James Benton

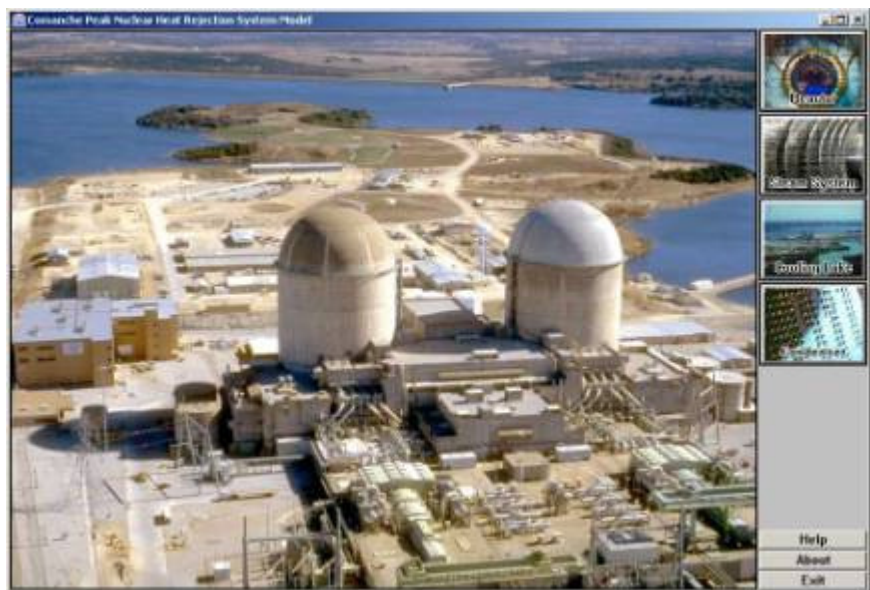
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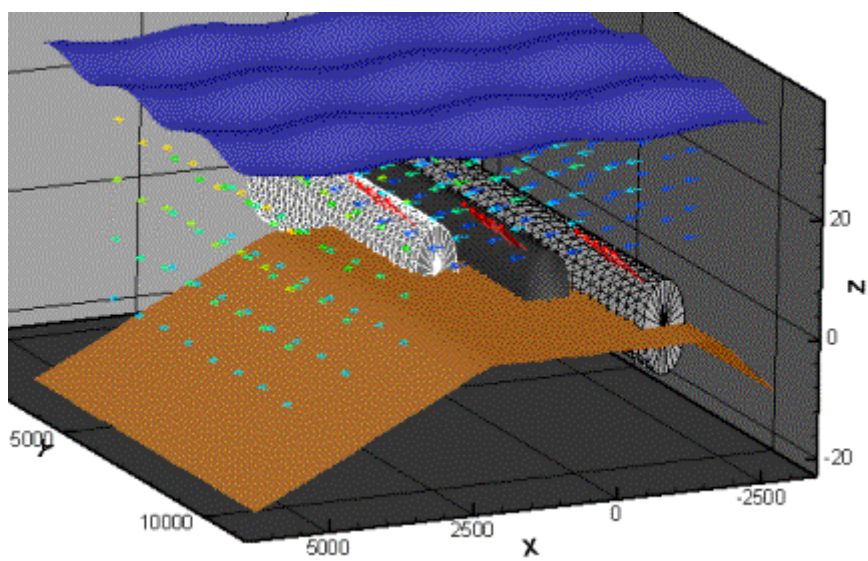
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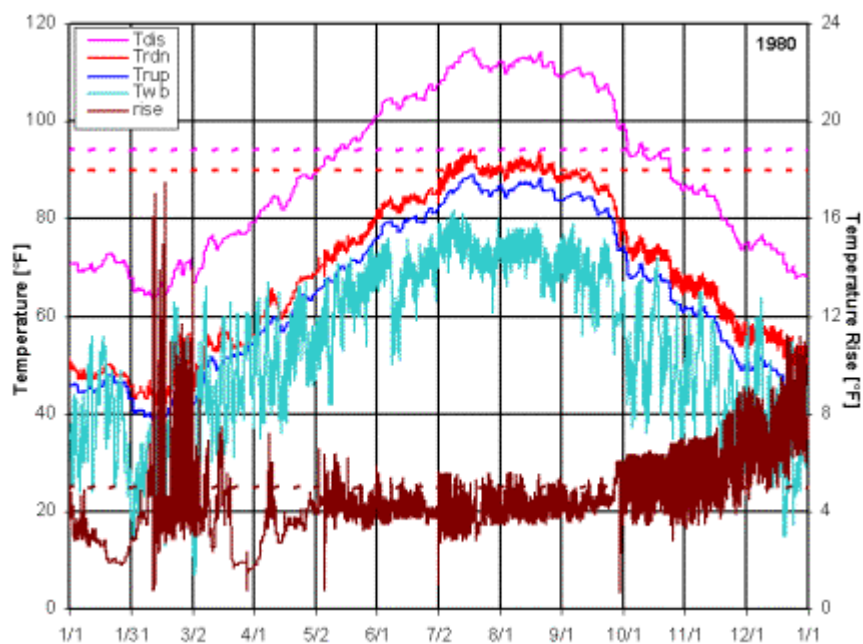
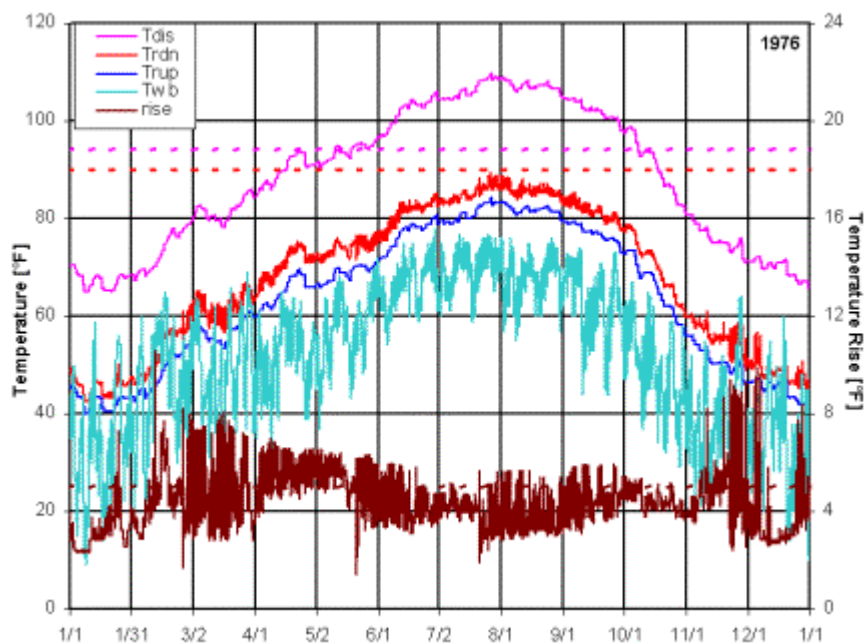
There are many texts and examples devoted to computer simulation of a single process or component. This text focuses on entire systems. From the earliest days of my career, I have developed computer simulations of various sorts. Many of these have been time sequence based; that is, modeling the response of a system to changes over time. Most often, the source of change has been the environment or weather-related. In this book we explore how to build models, acquire, structure, and extend weather data, perform, and analyze the results of complex simulations. We consider rivers and lakes, hydroelectric, conventional and combined cycle power generation, nuclear and, solar plants. All of the examples are based on actual systems and all of the software is available free online.

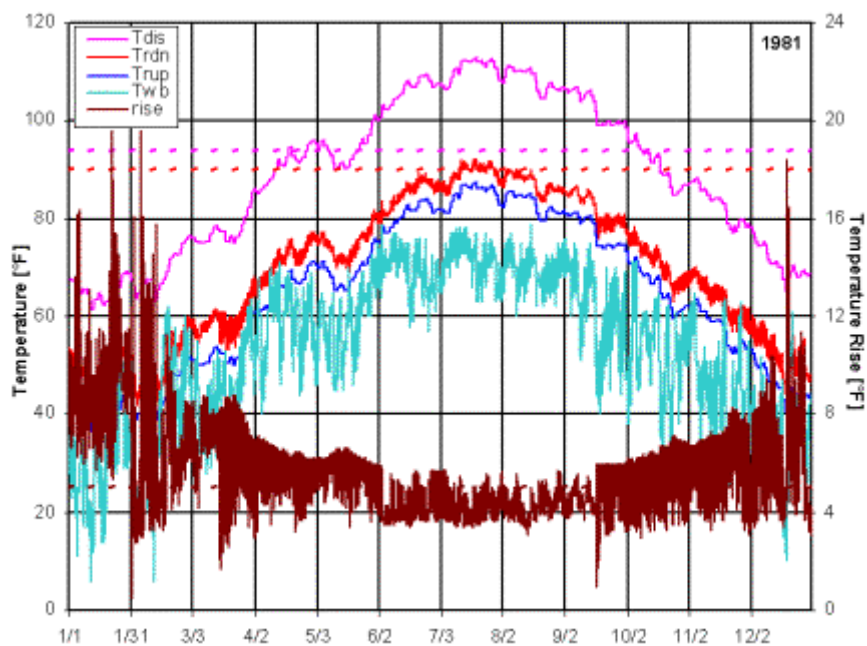
*All of the examples contained in this book,
(as well as a lot of free programs) are available at...*

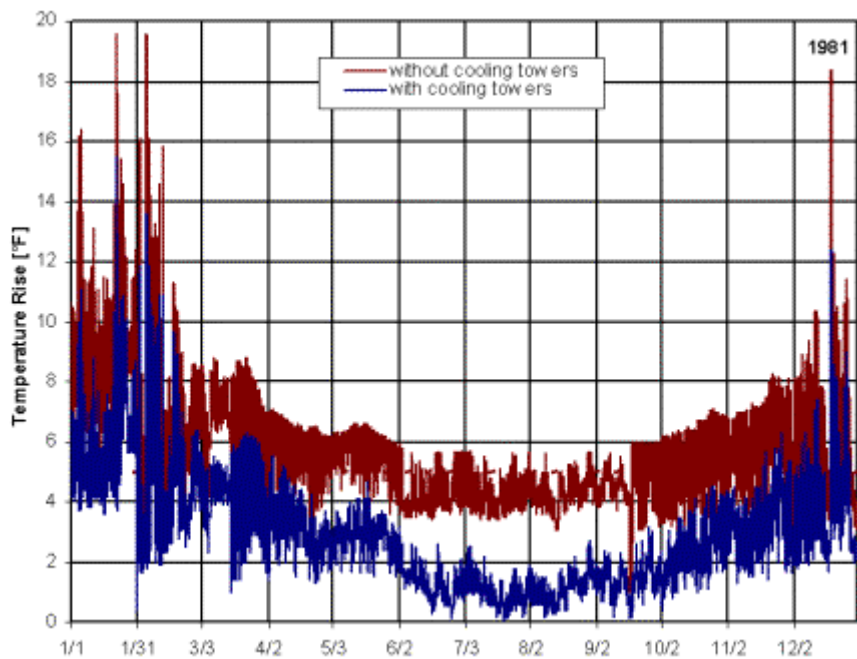
<http://www.dudleybenton.altervista.org/software/index.html>

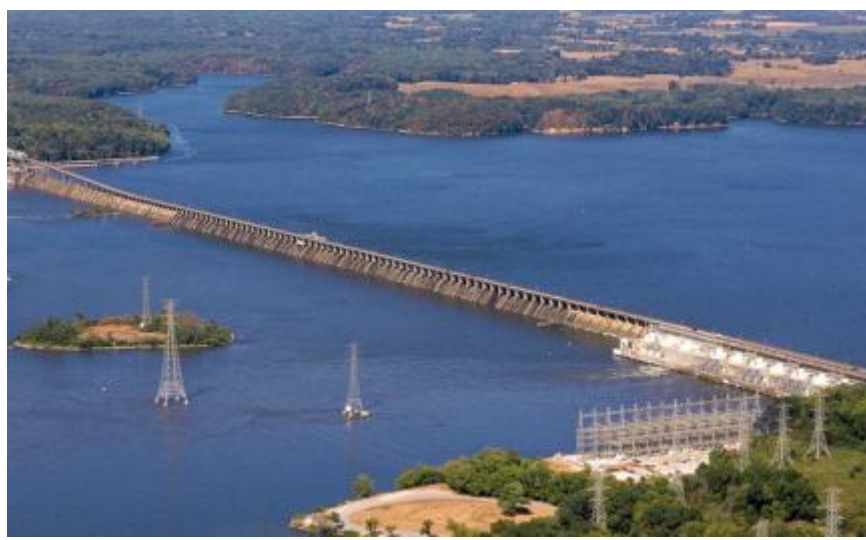
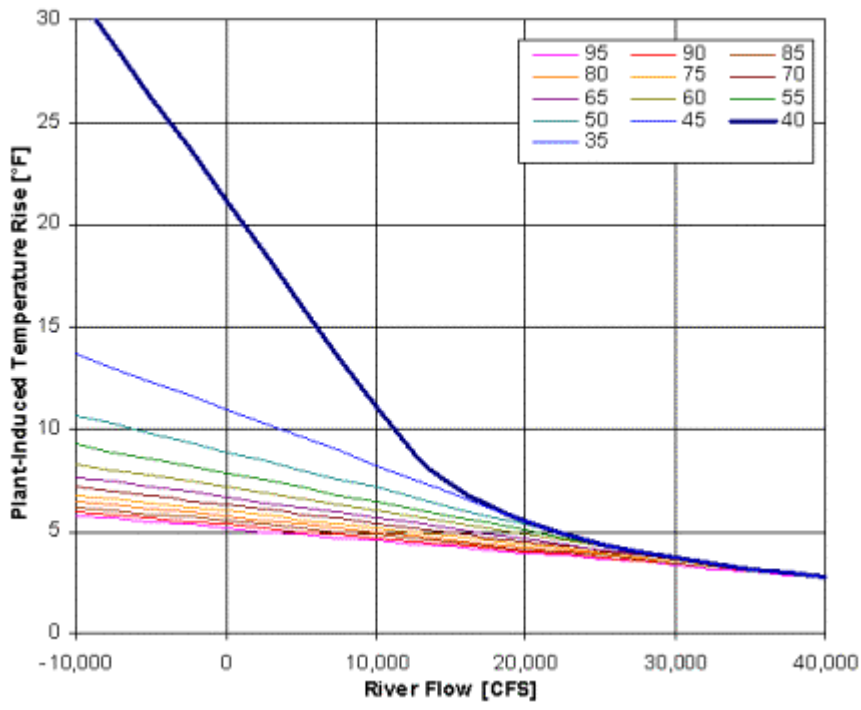


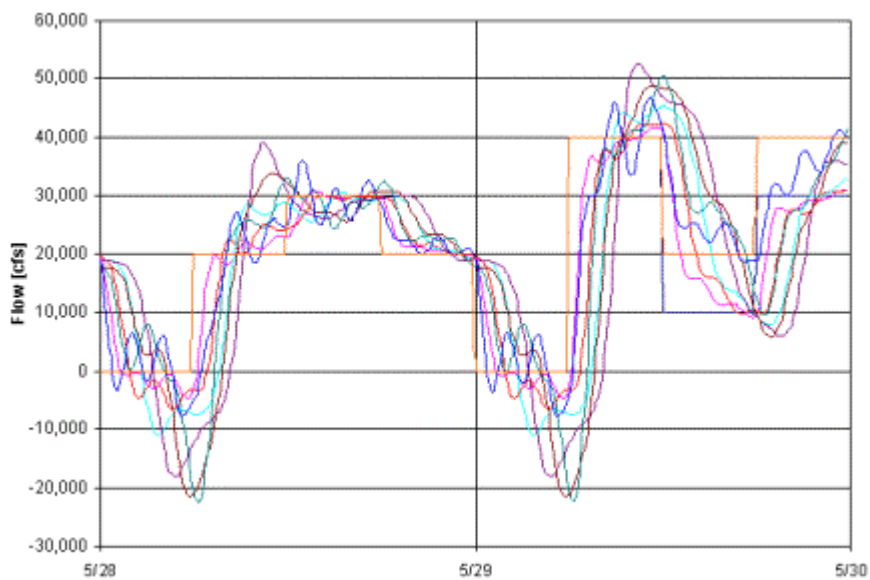
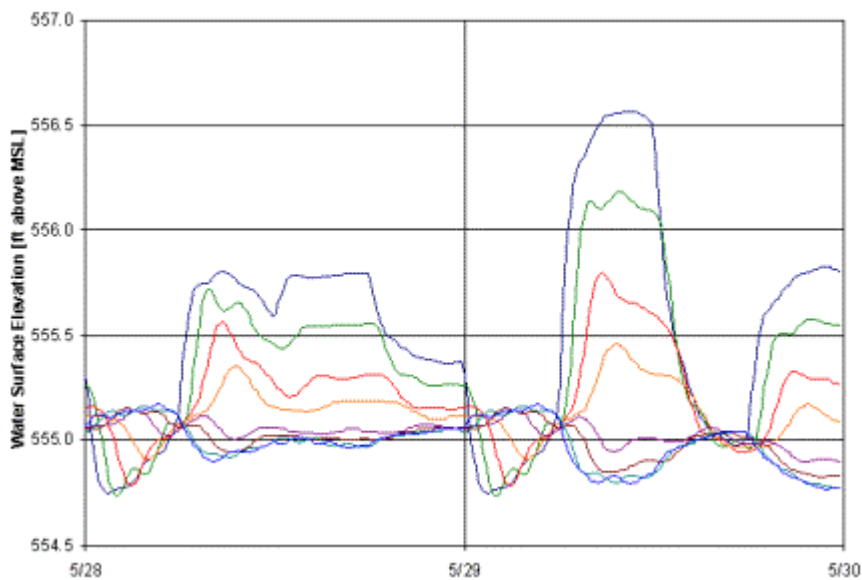


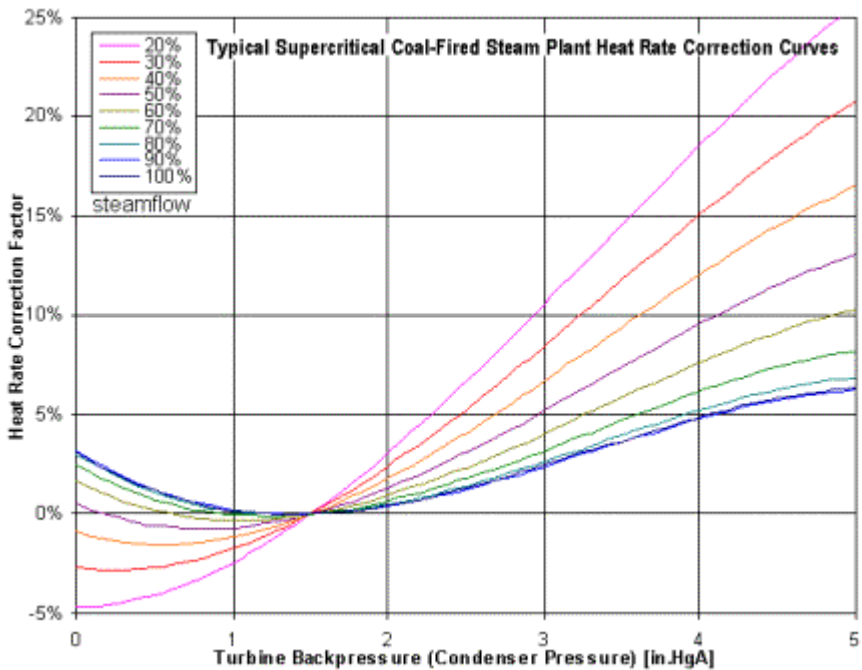


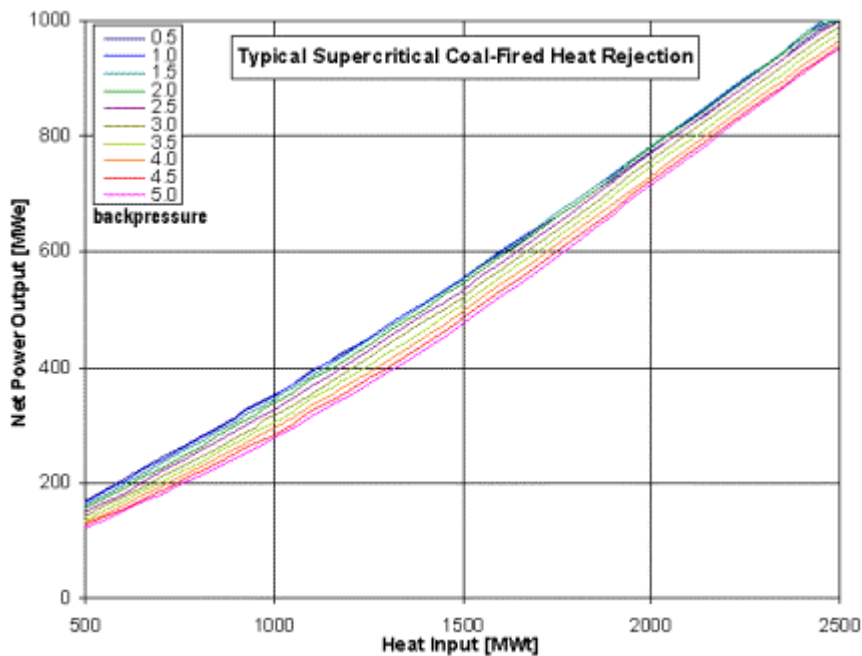




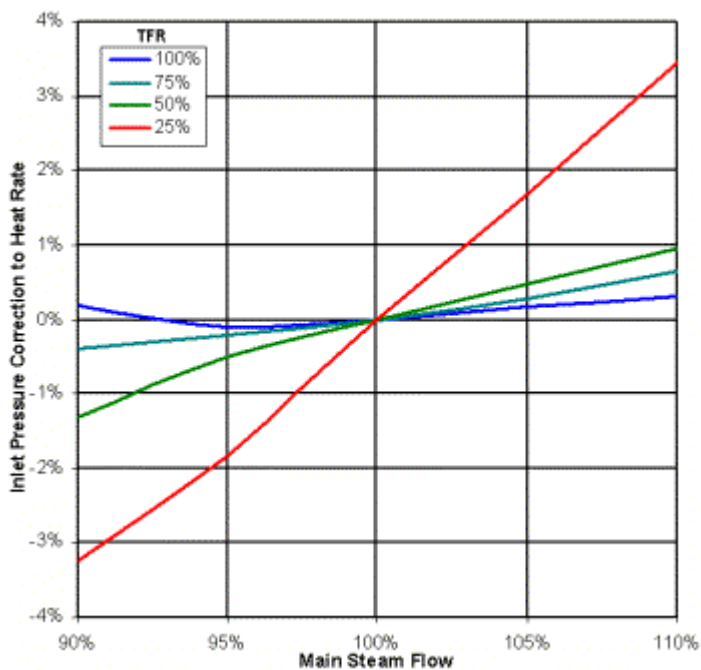
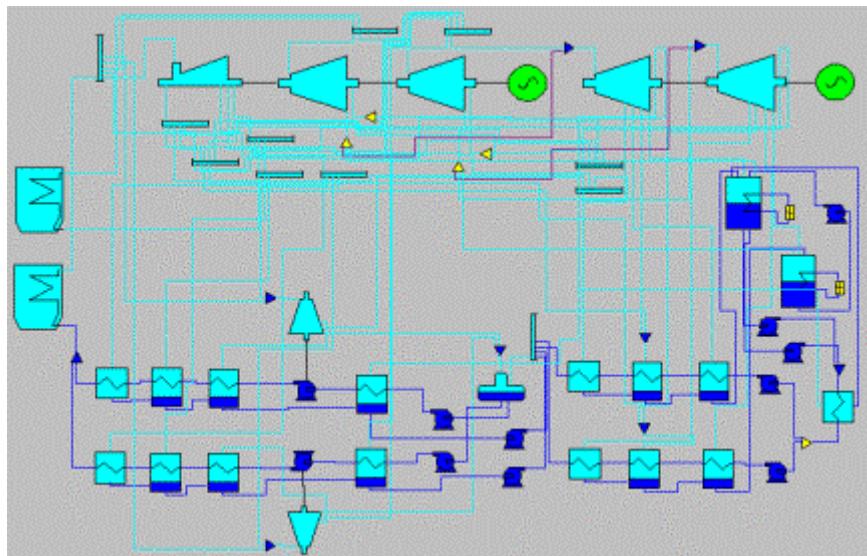


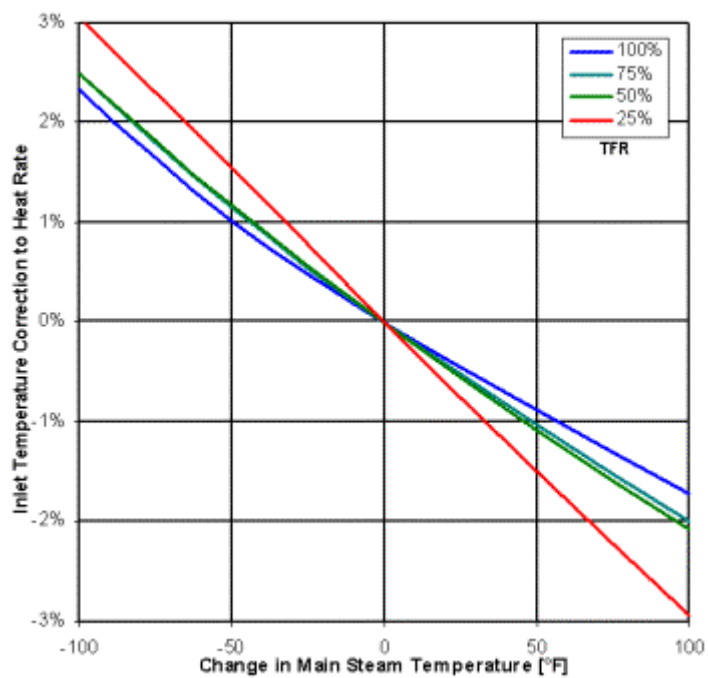


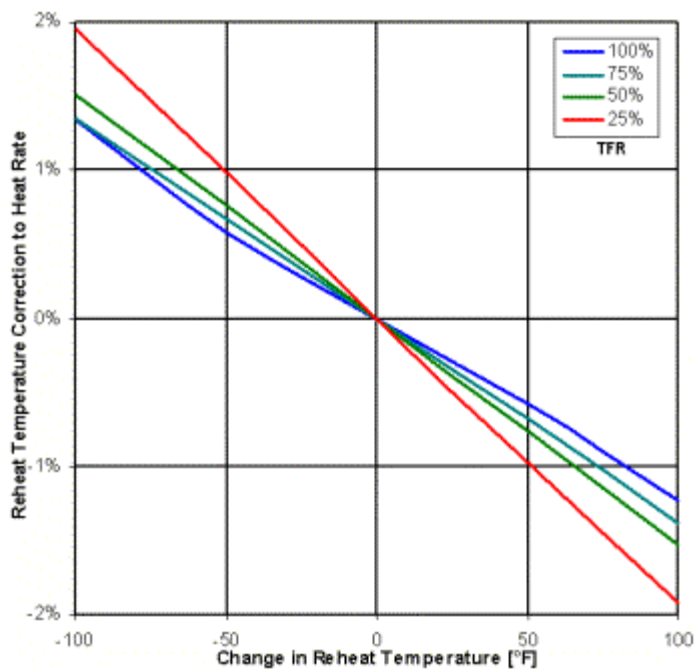


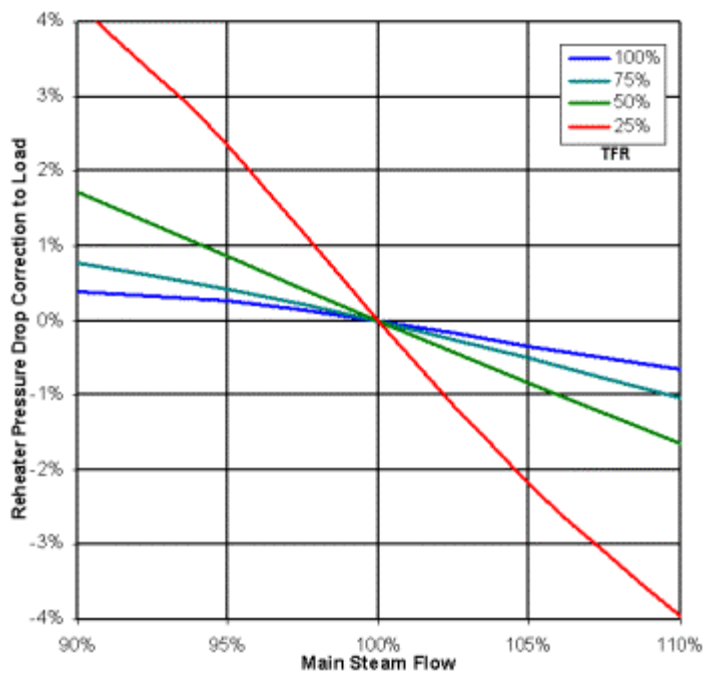


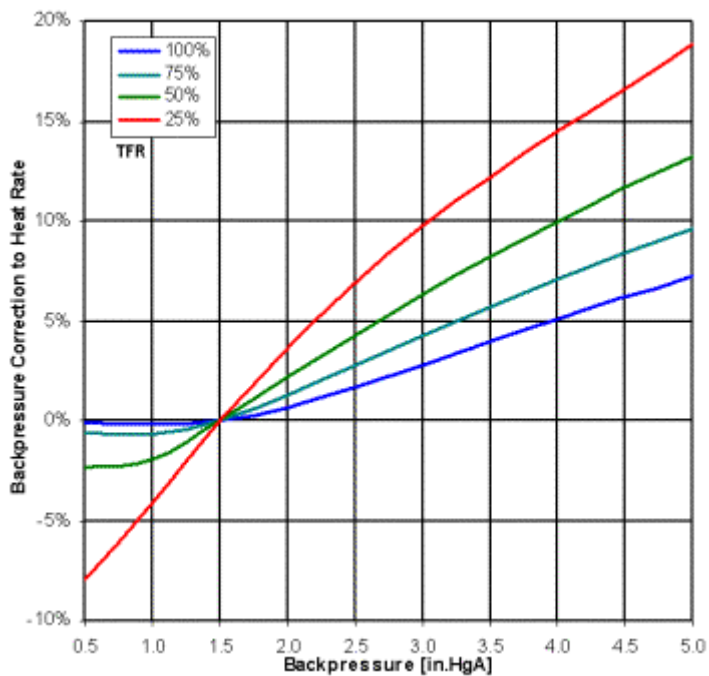


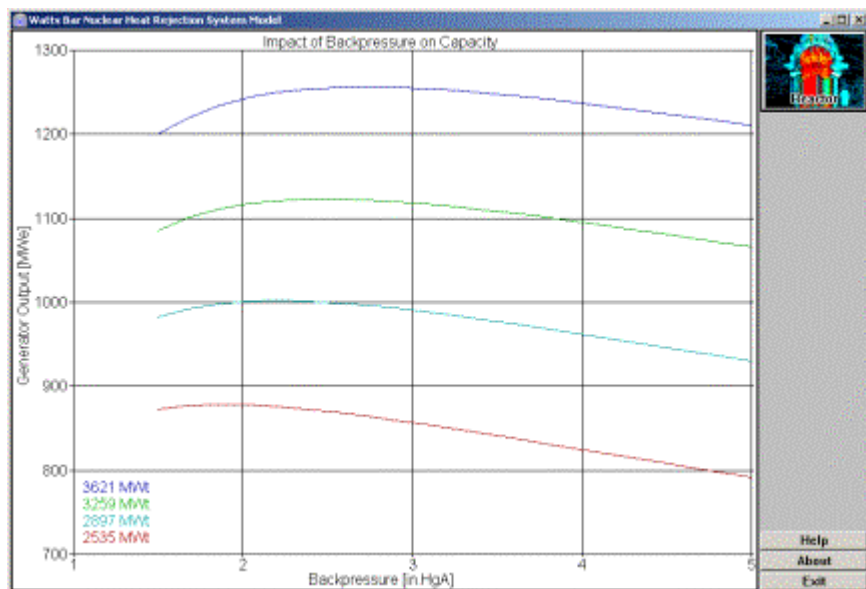


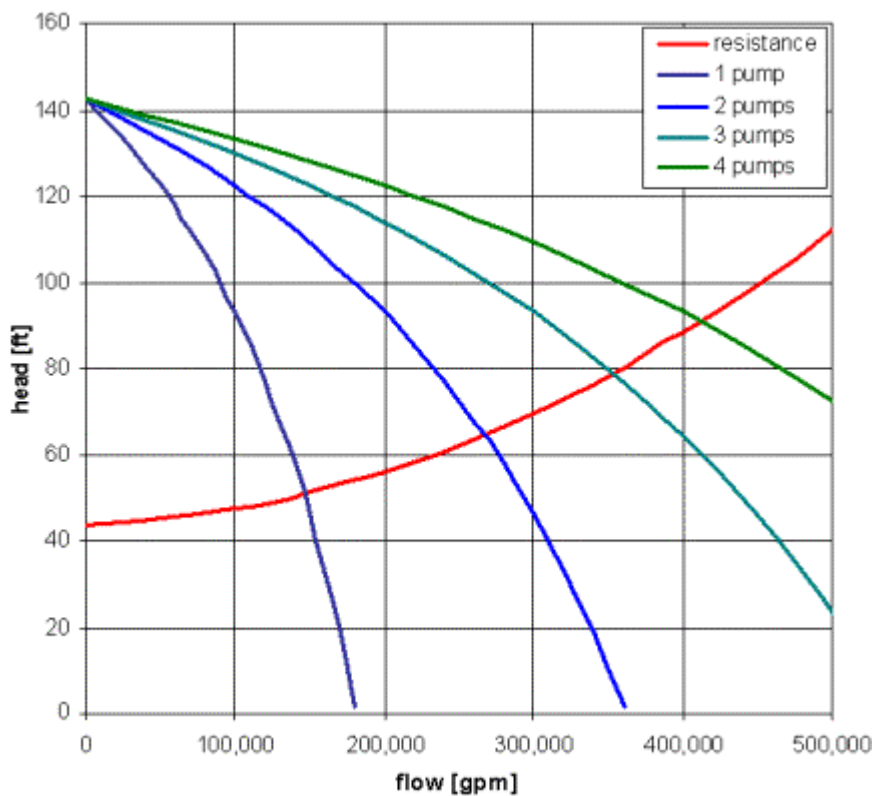


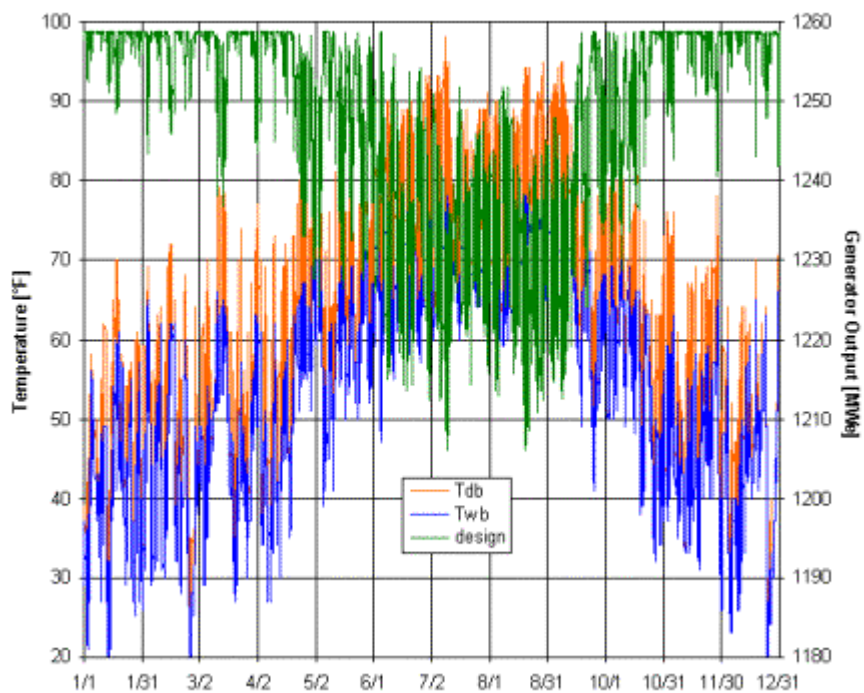


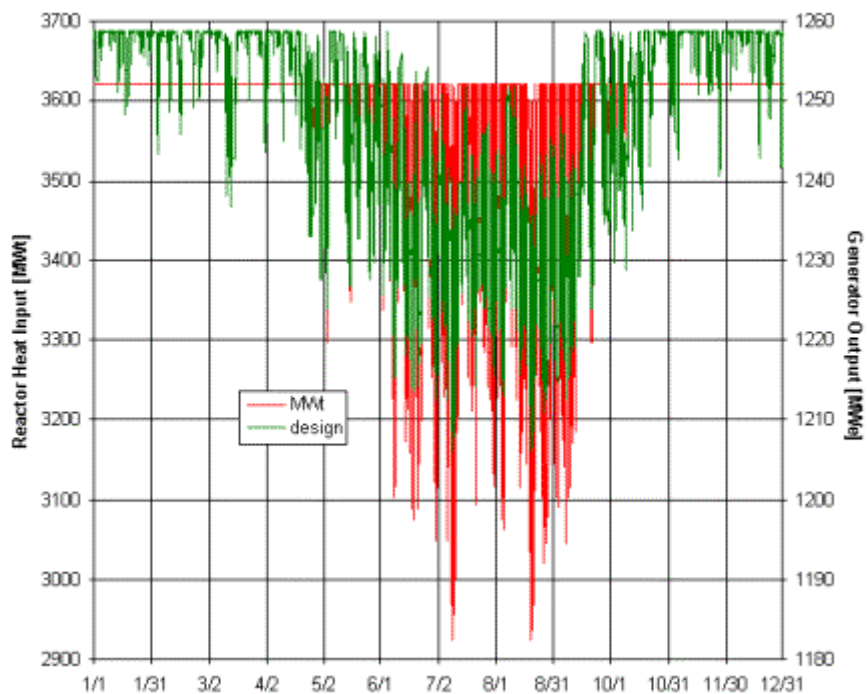


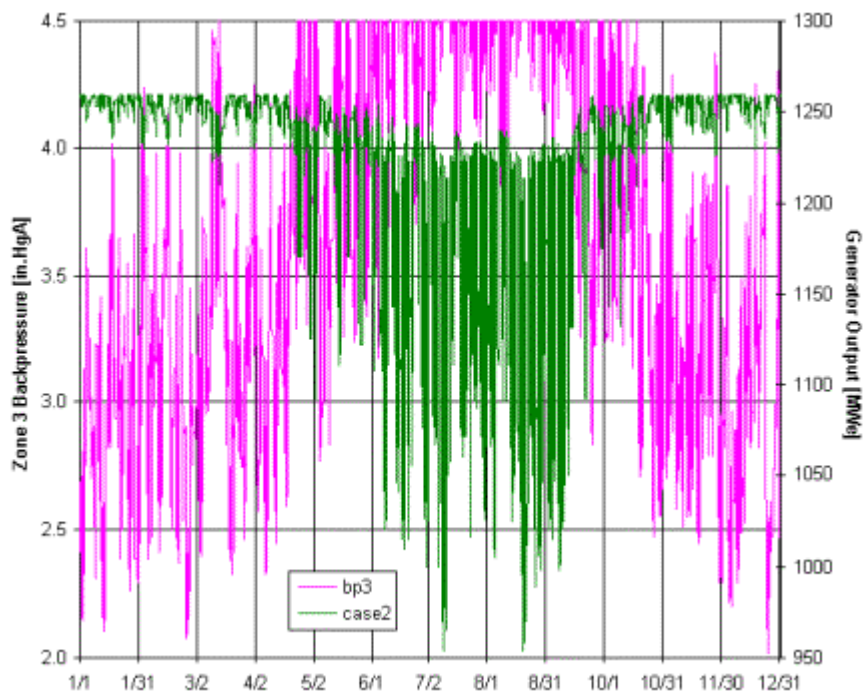


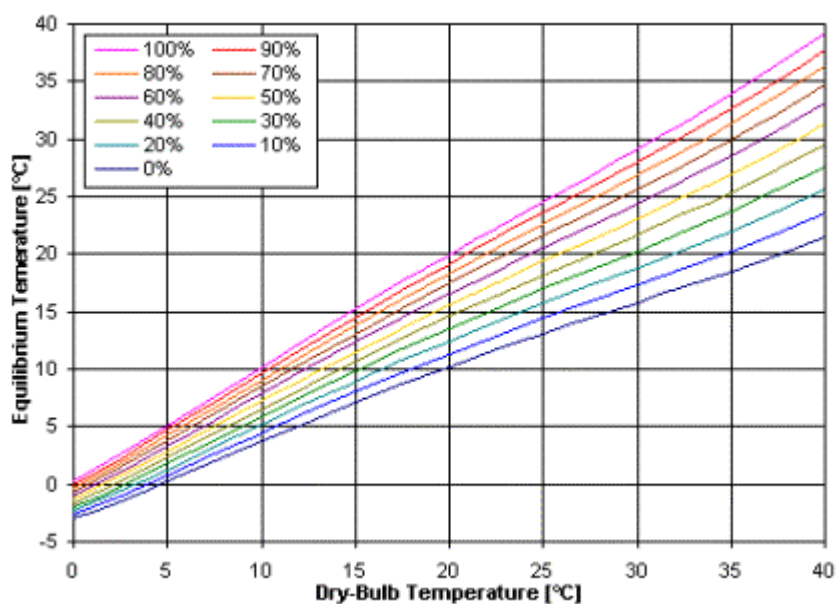
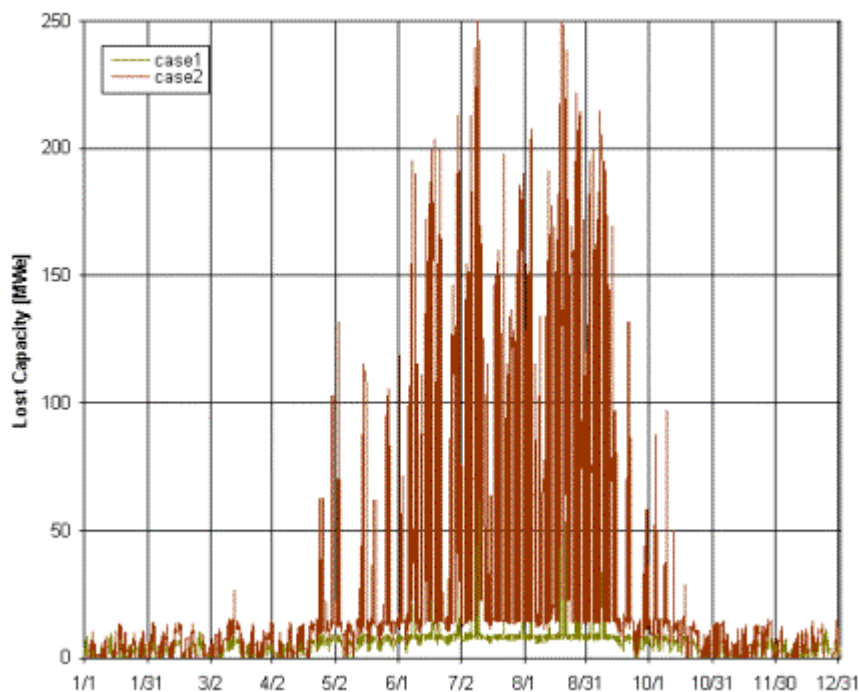


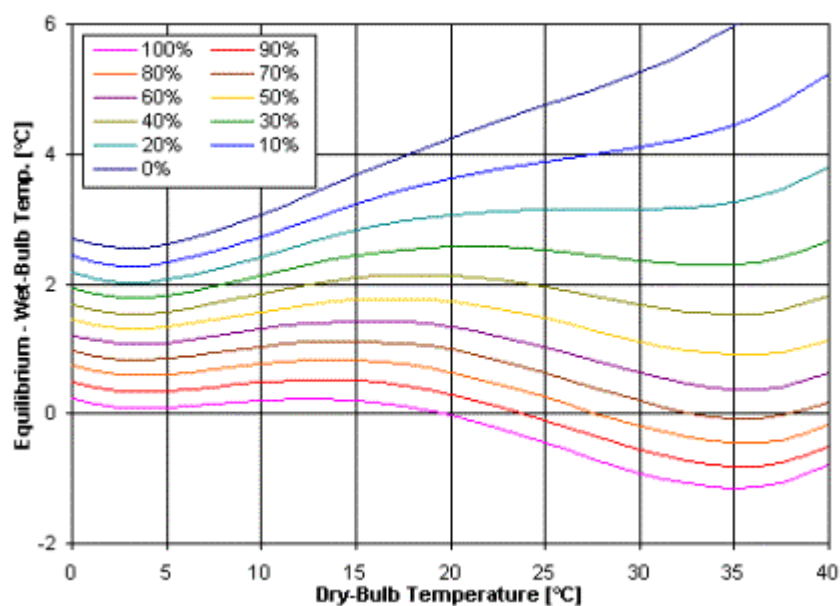






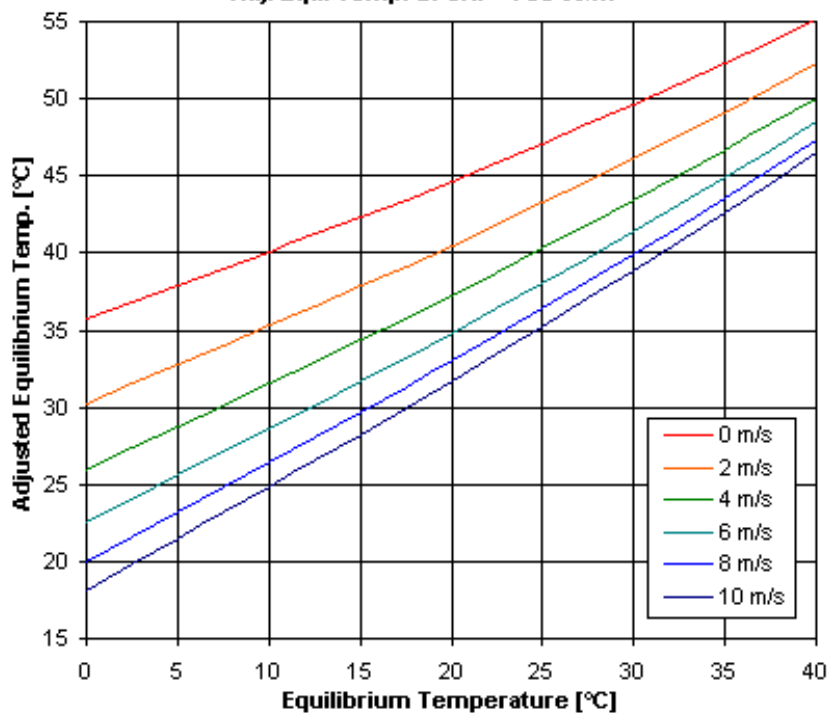


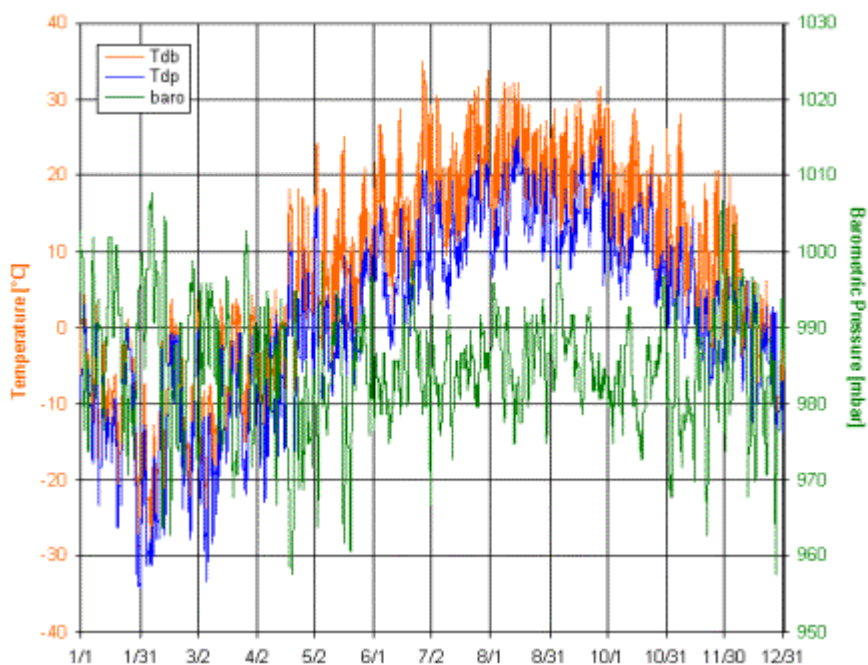
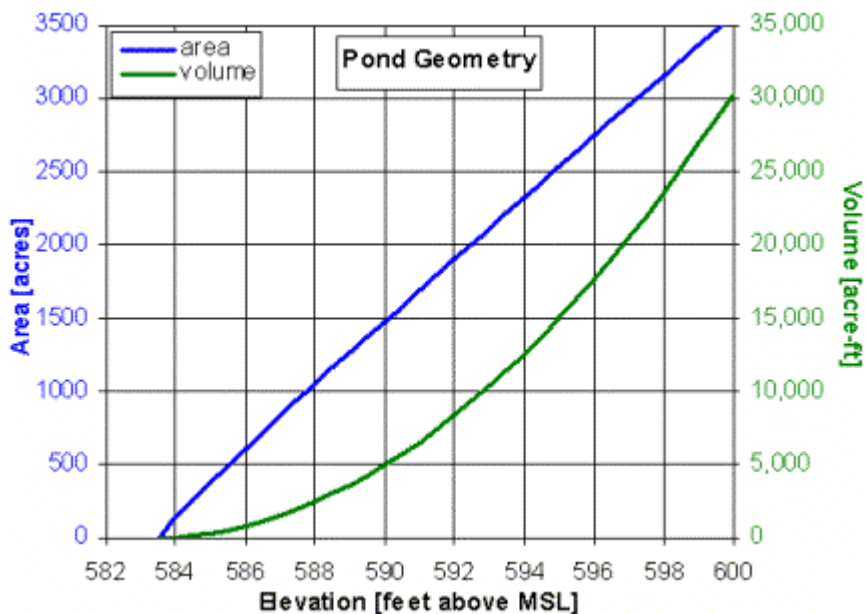


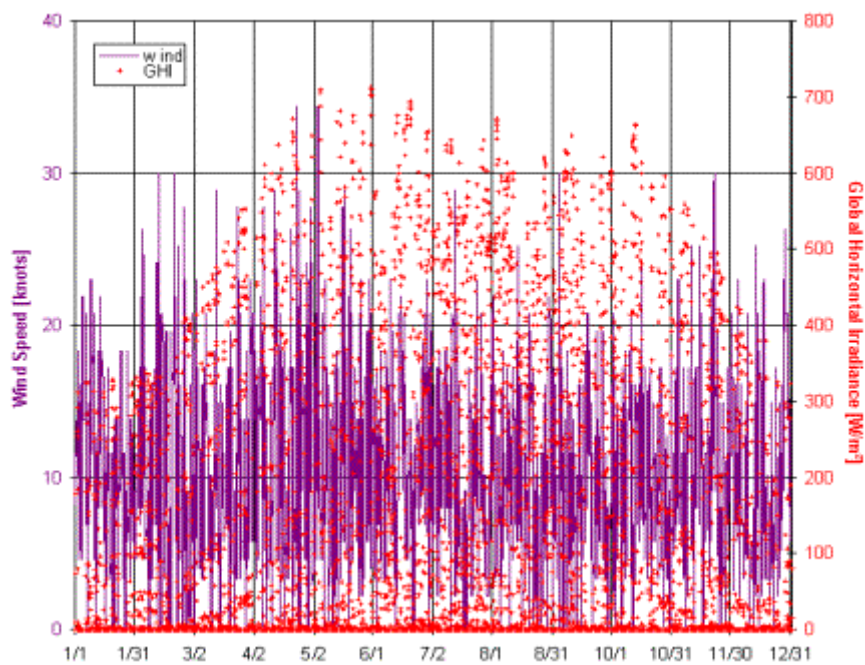


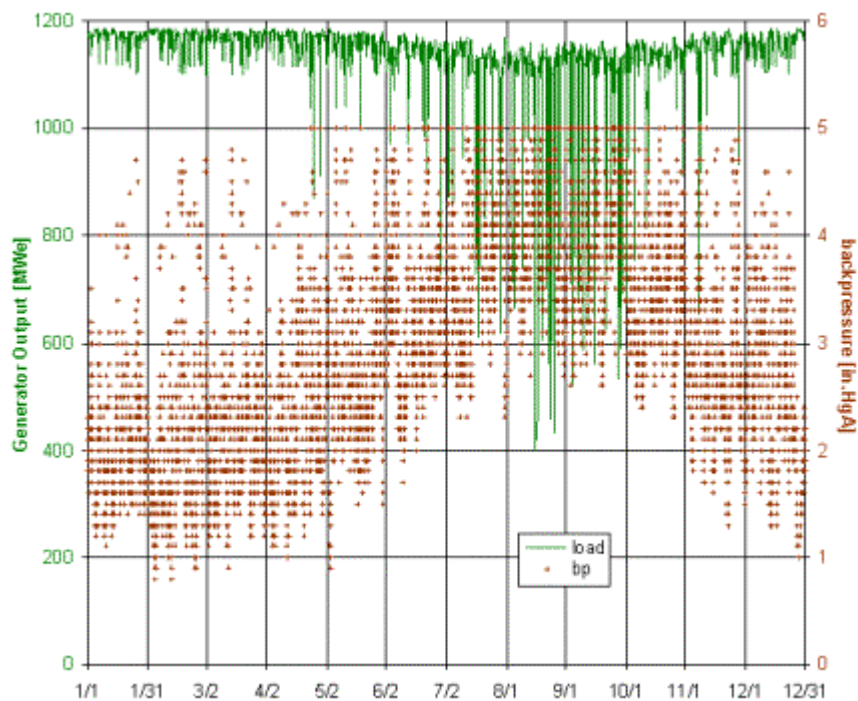
Wind and Solar

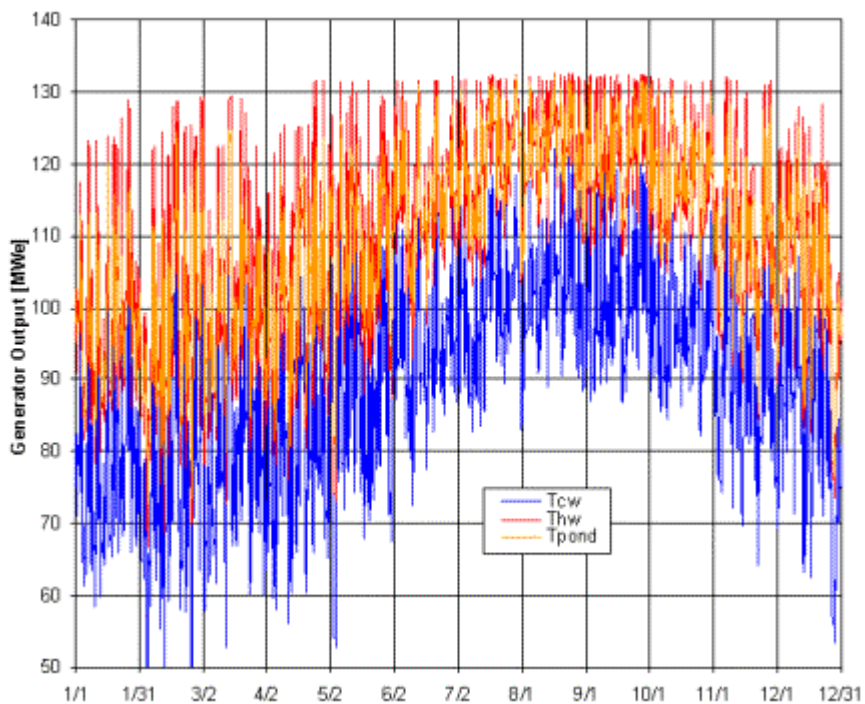
Adj. Equ. Temp. at GHI = 750 W/m²





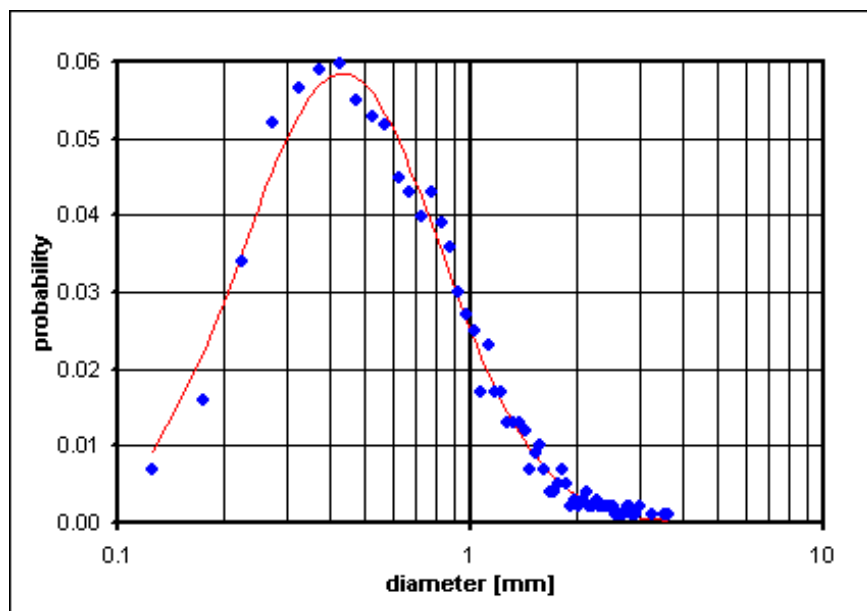
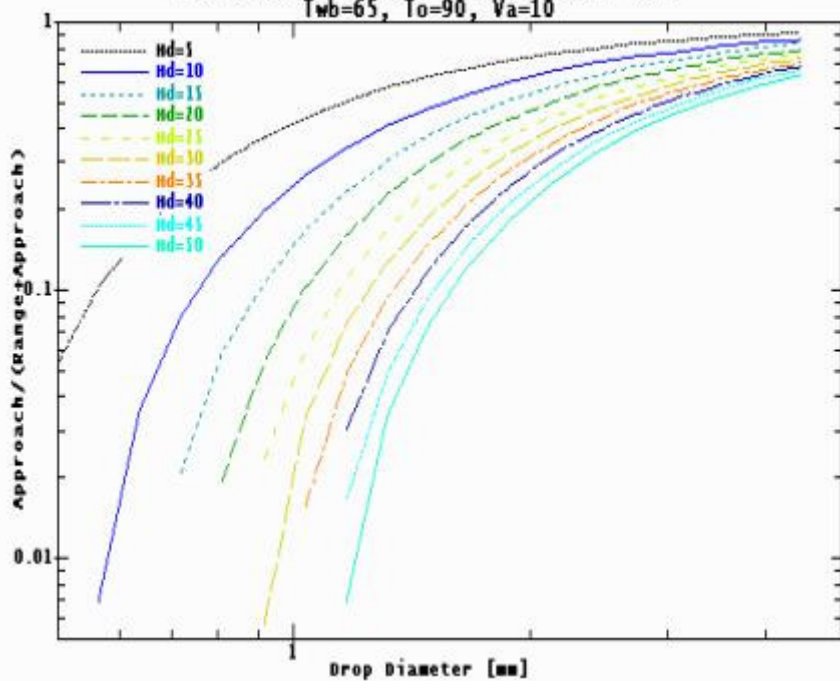


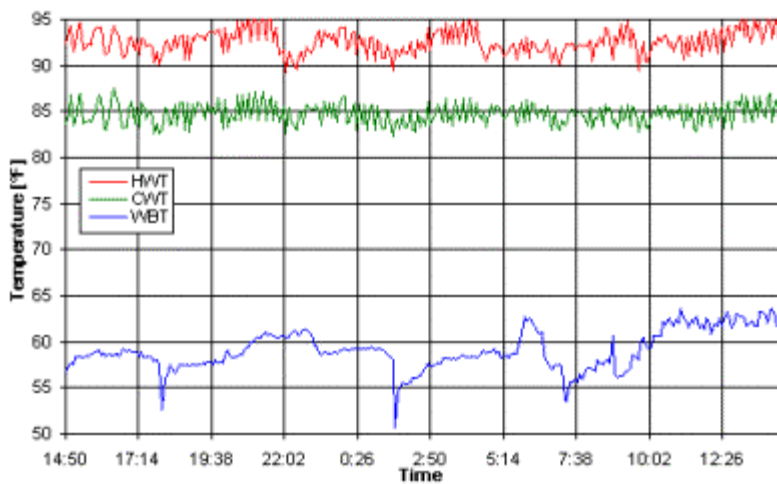
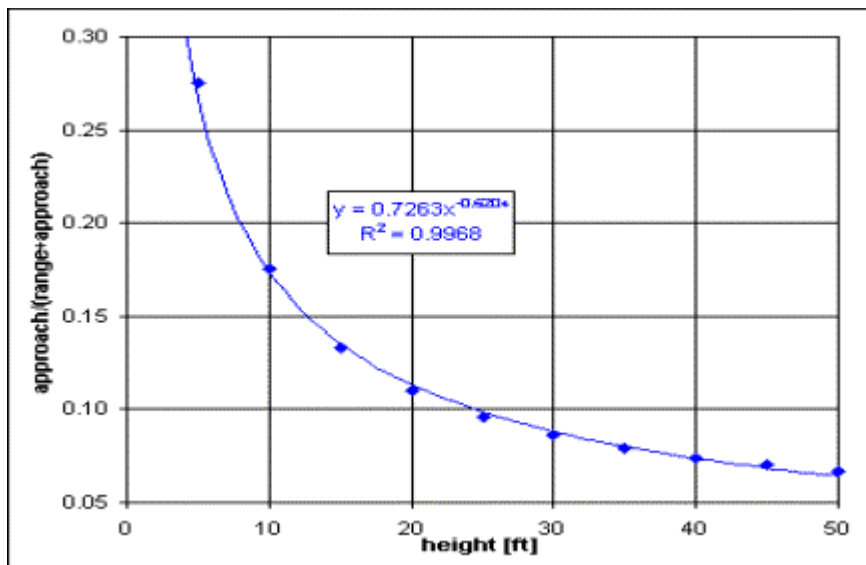


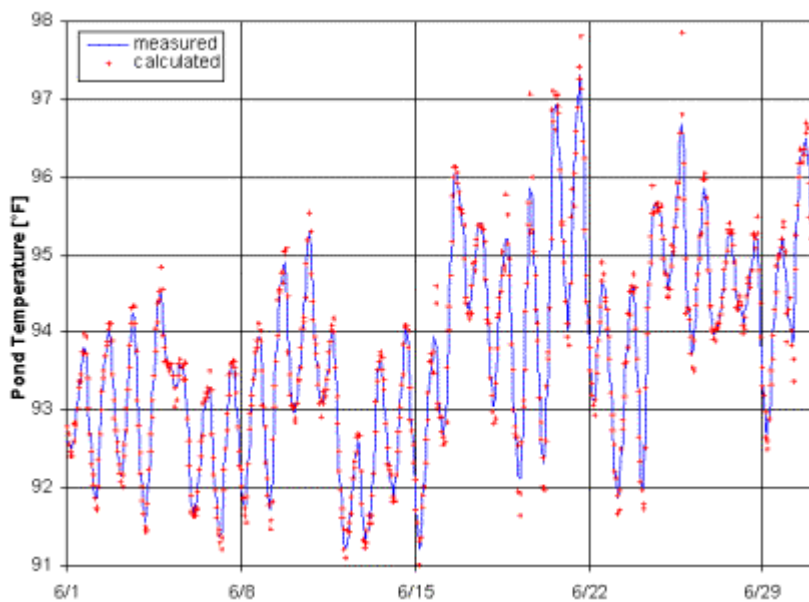
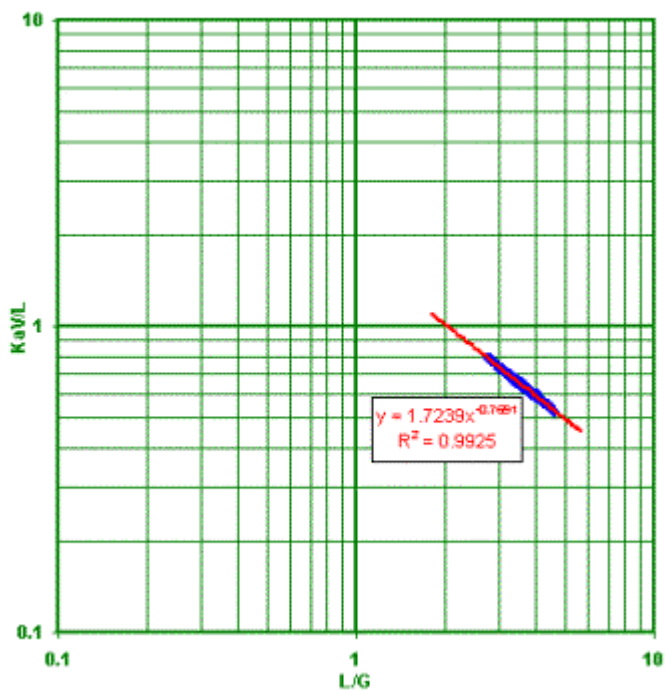


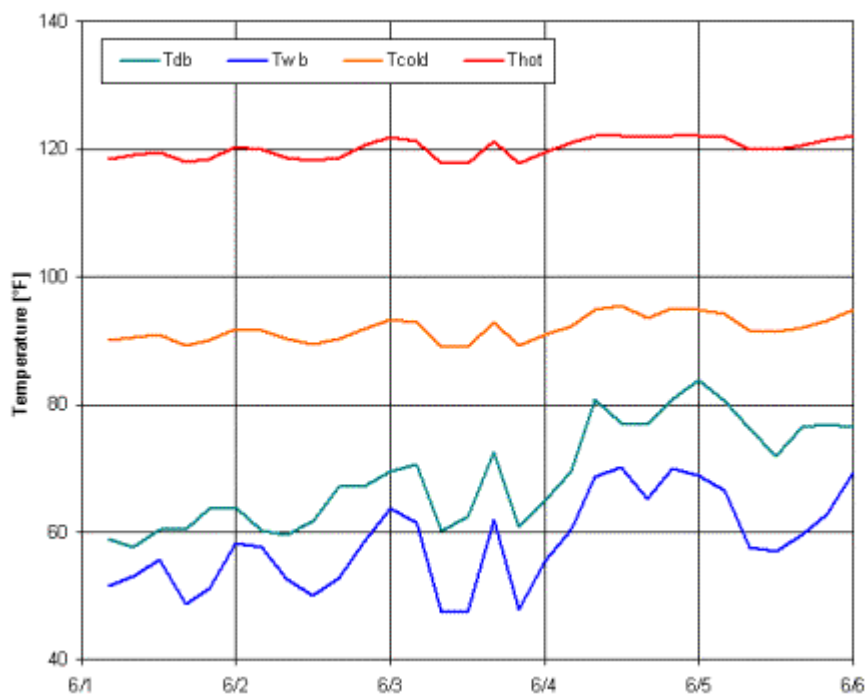
HEAT AND MASS TRANSFER FOR A SINGLE DROP

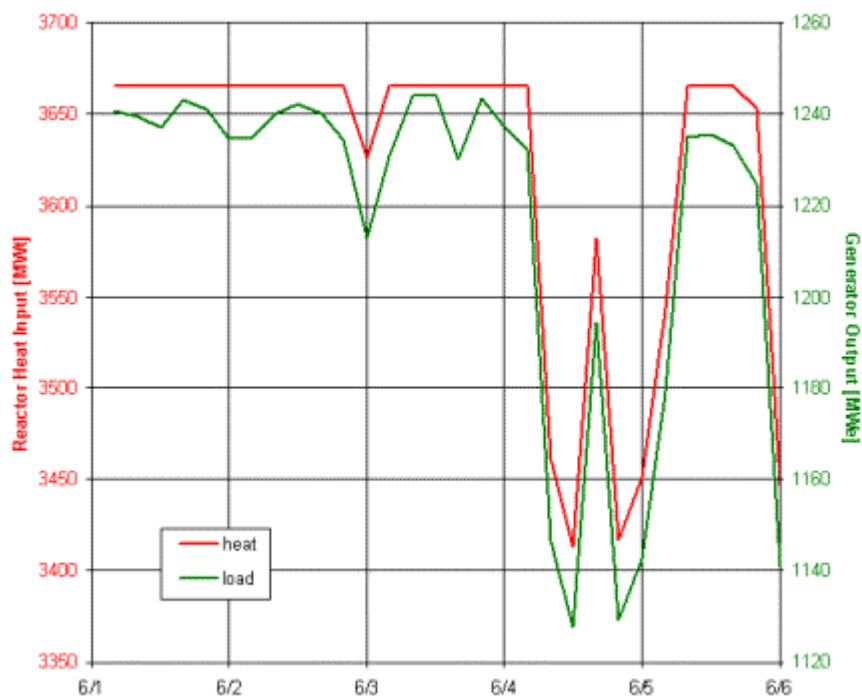
$T_{wb}=65, T_o=90, V_a=10$

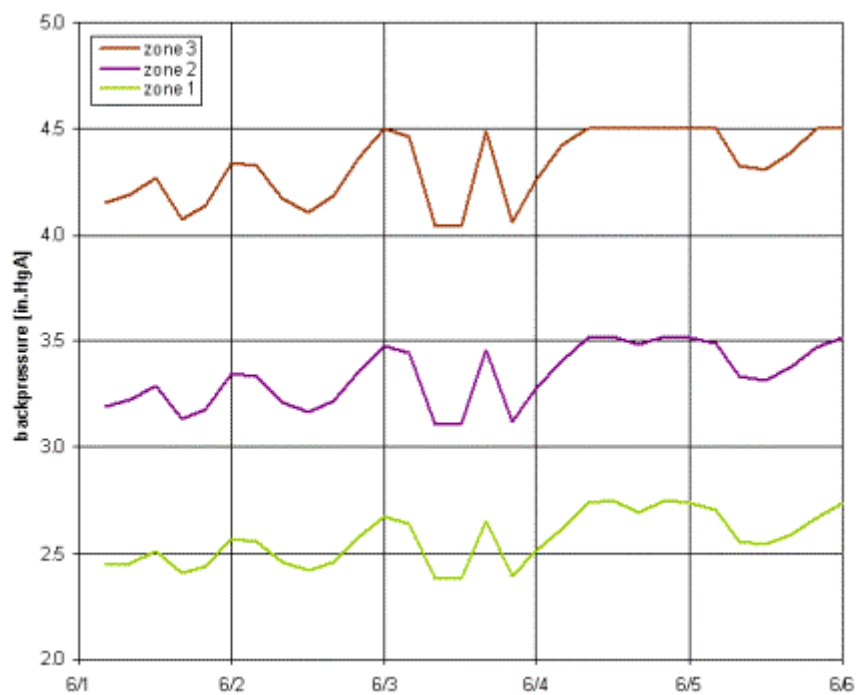




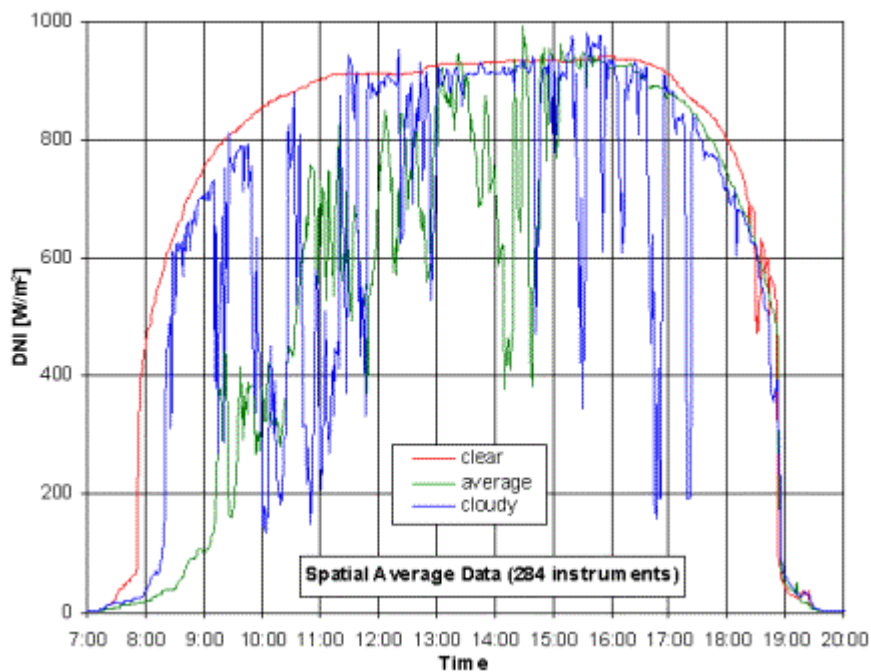


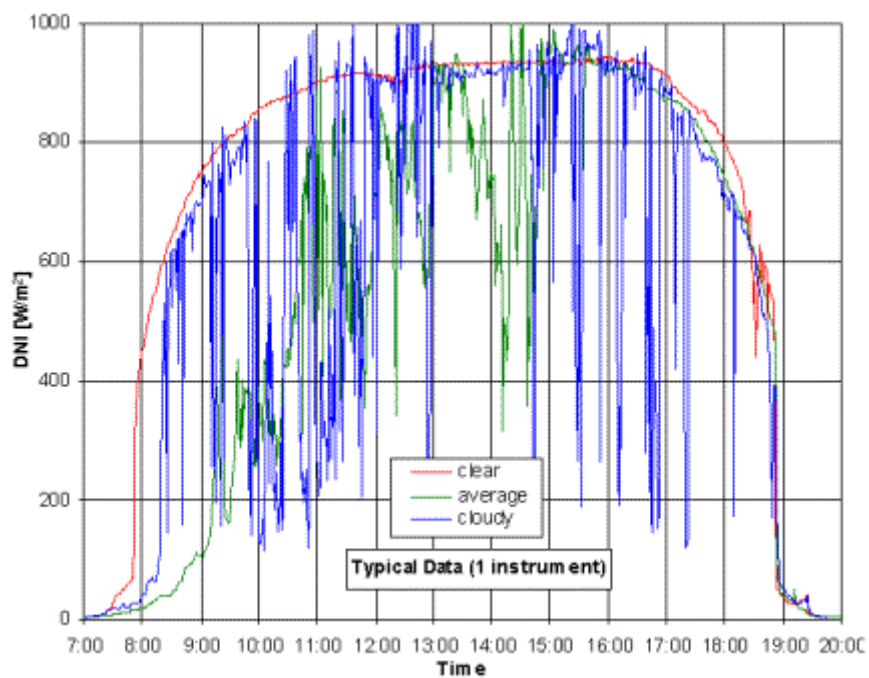


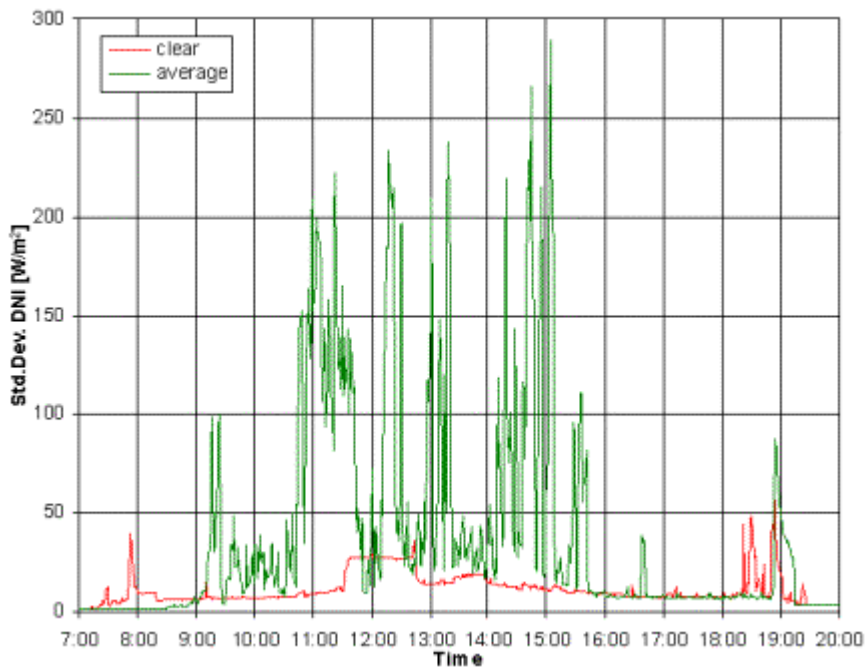


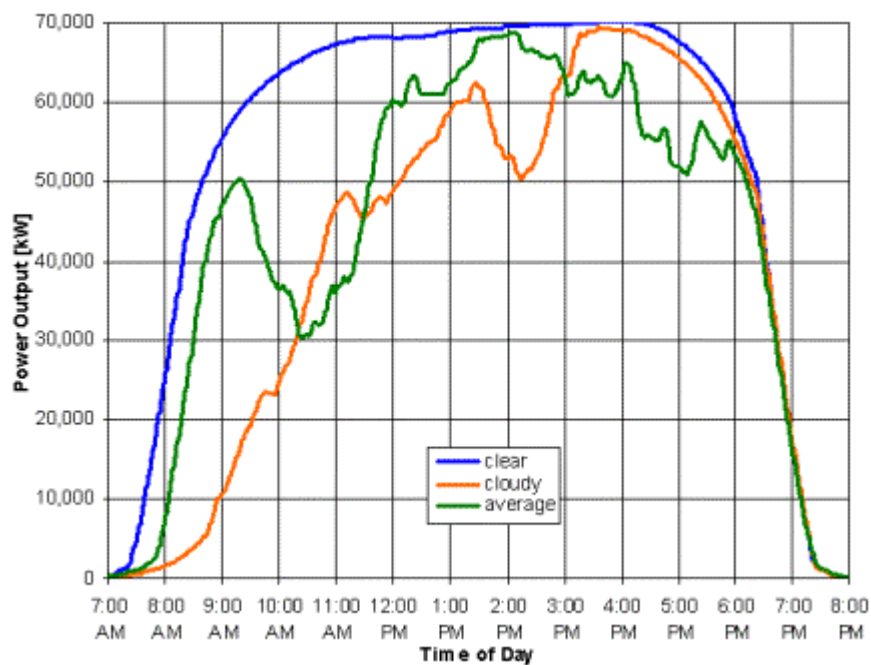


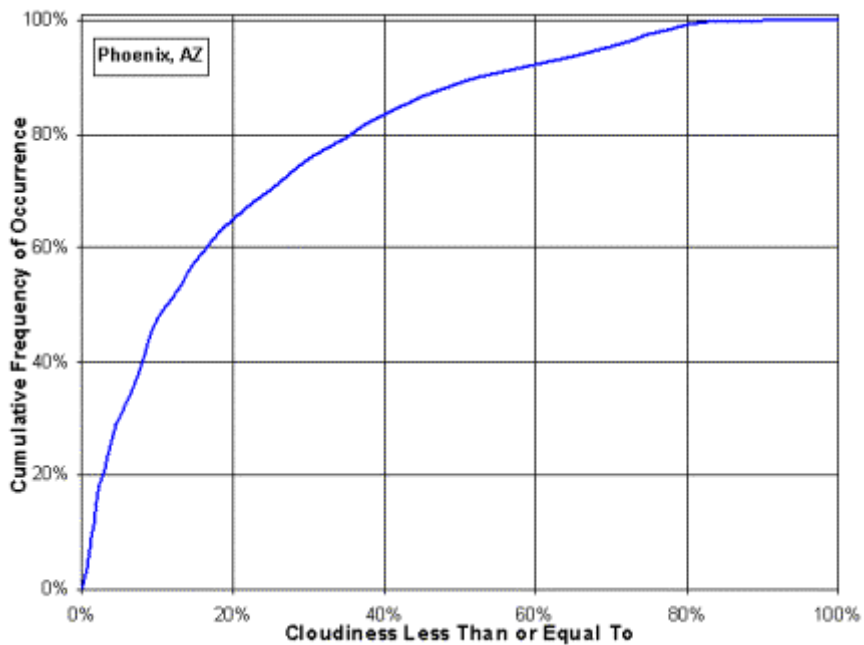
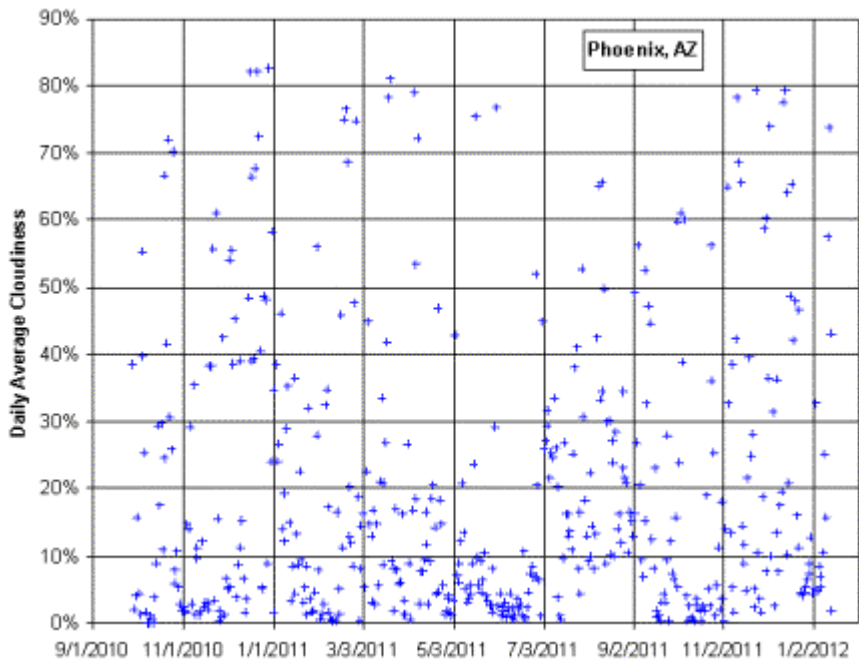


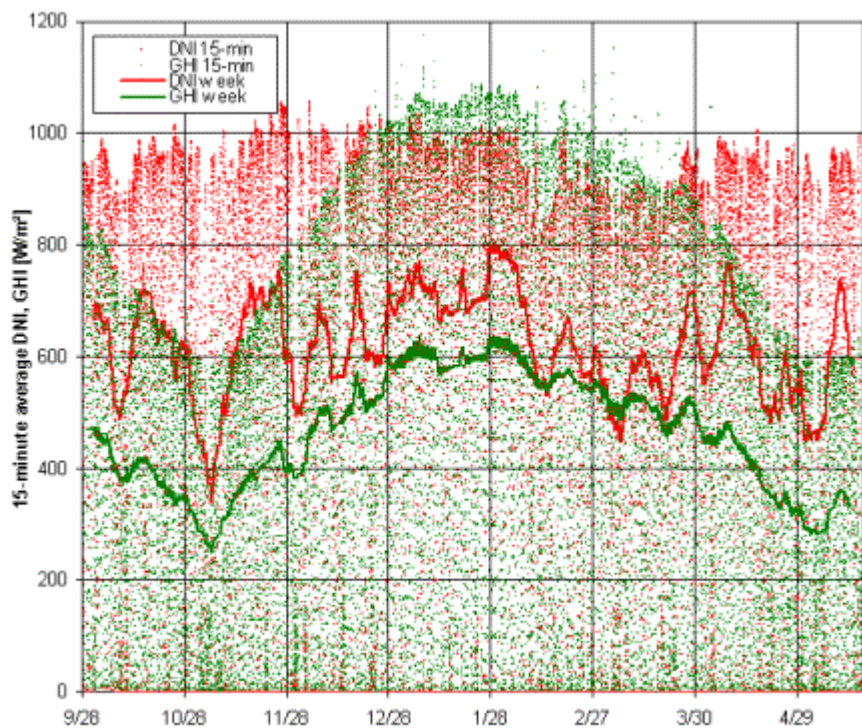


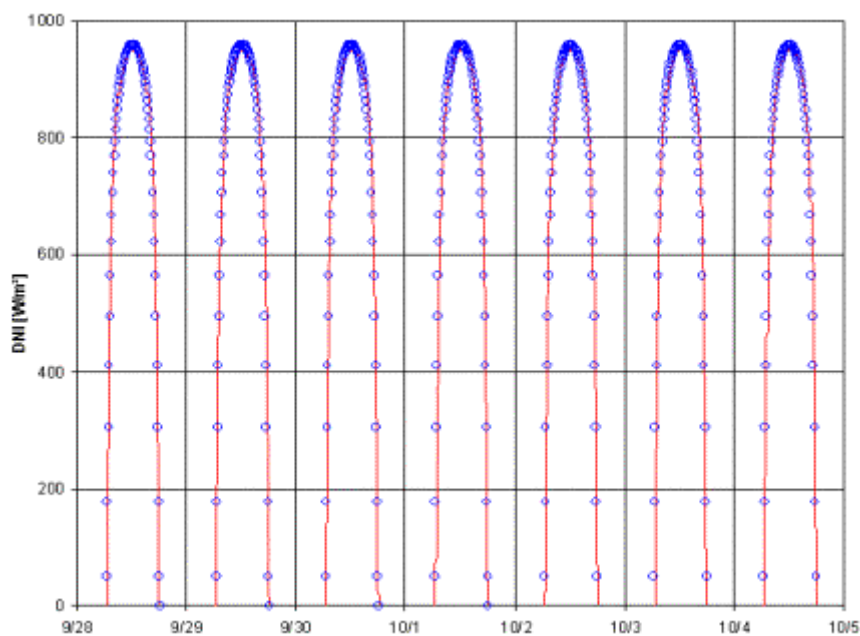
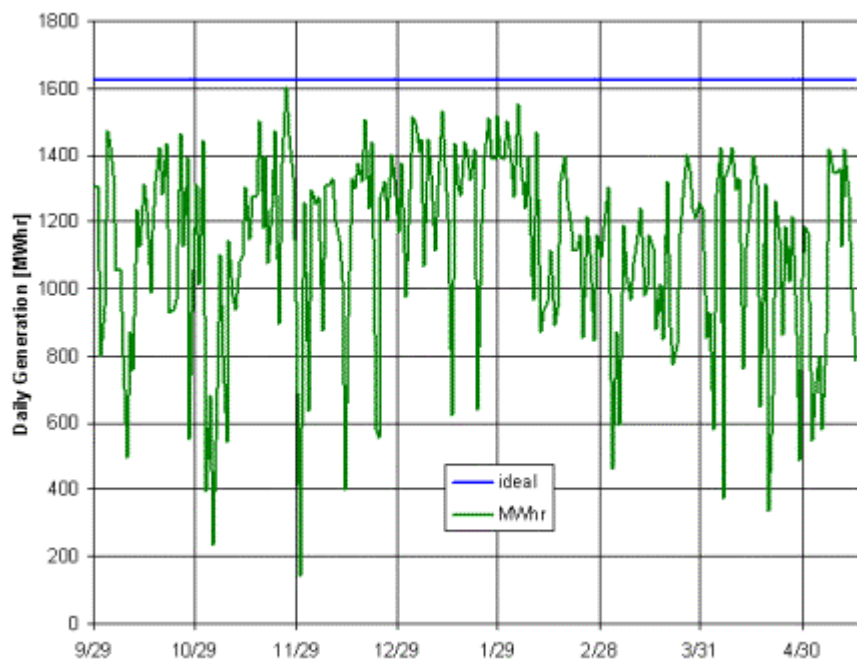


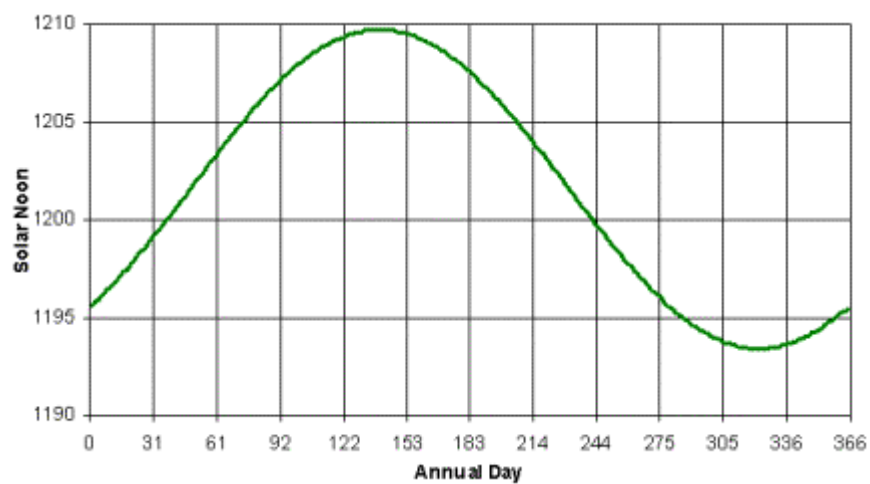
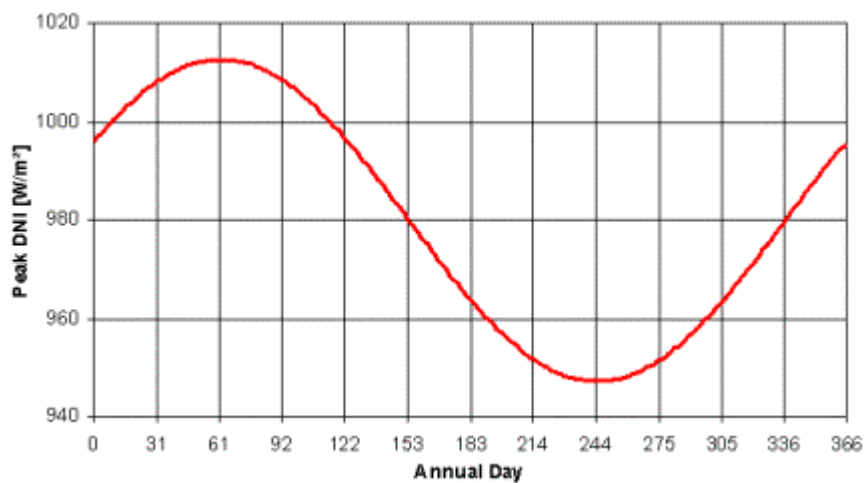


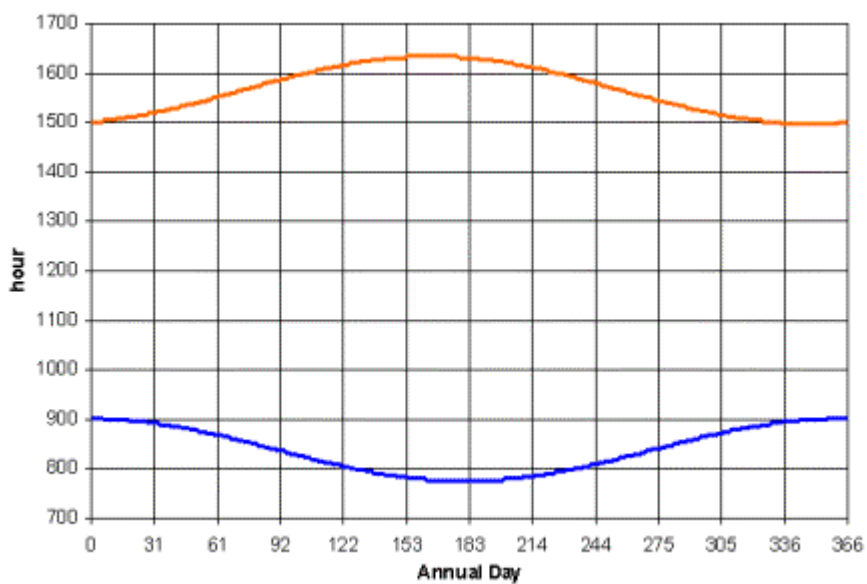


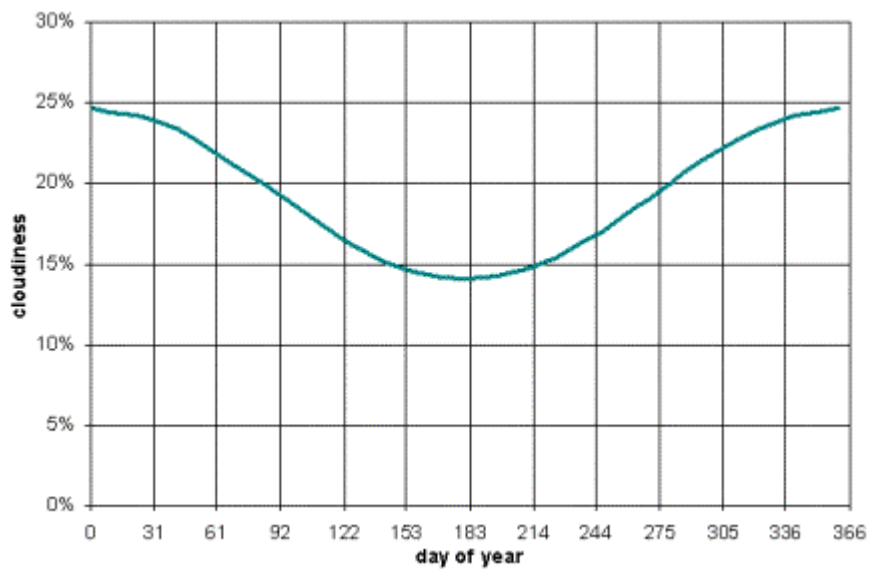


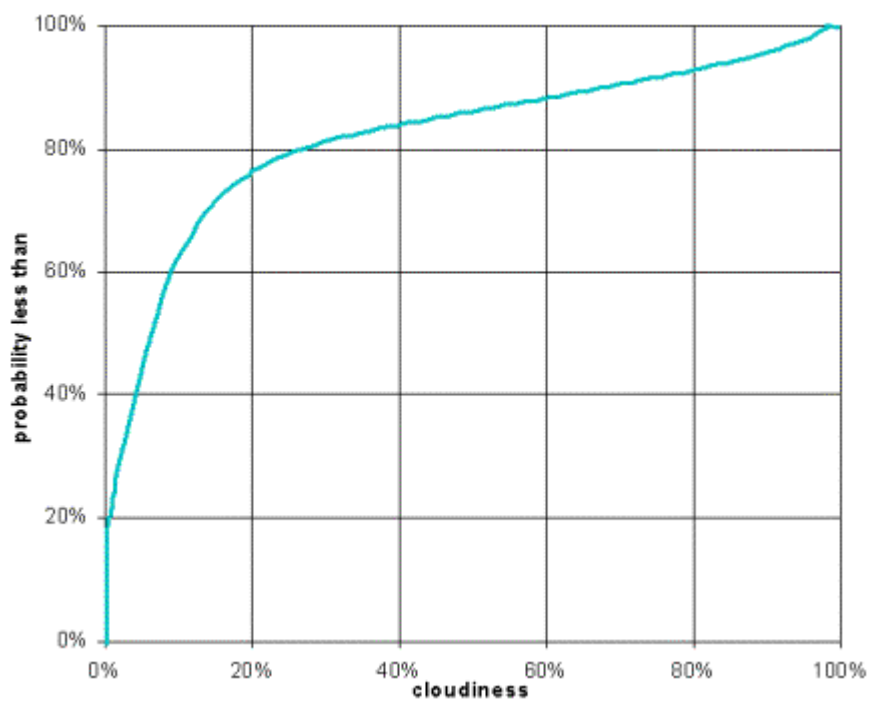


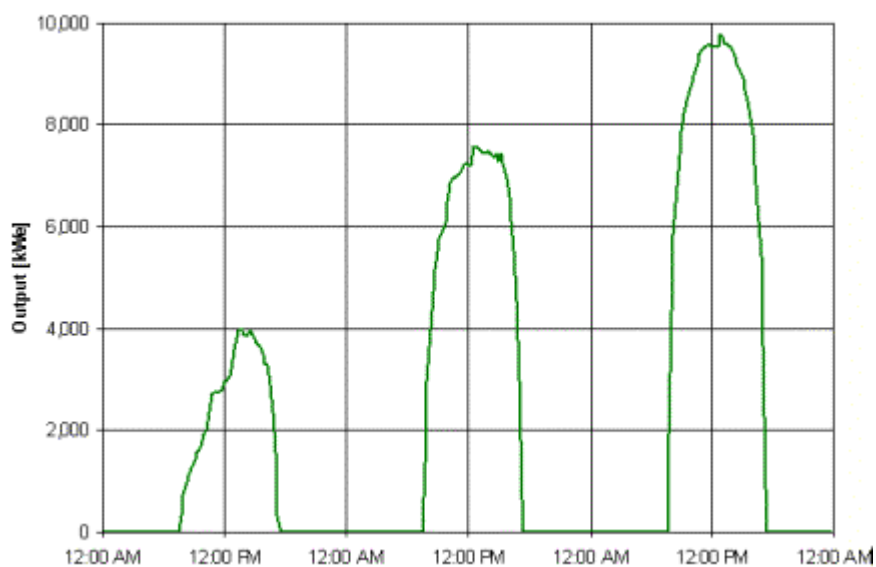
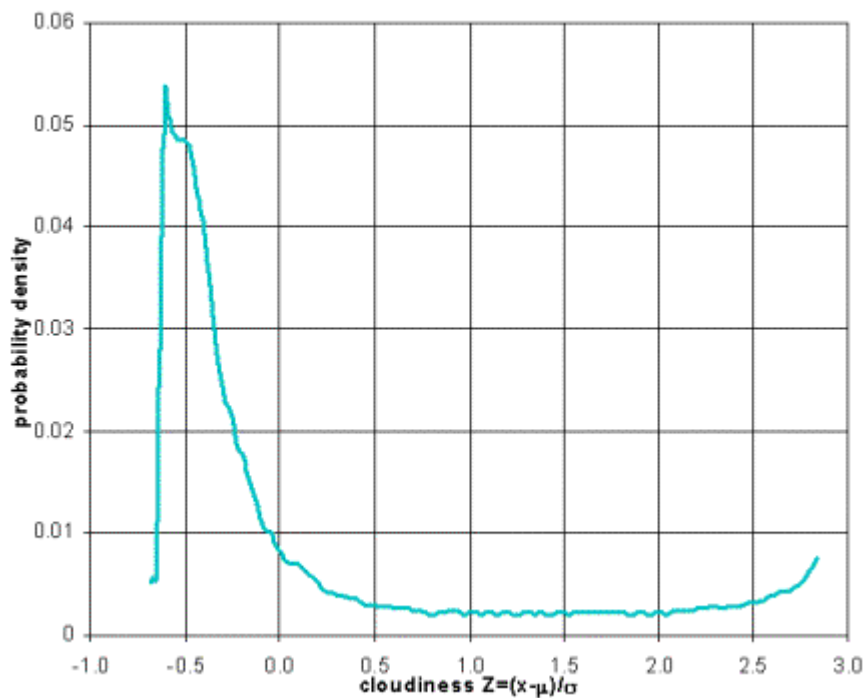


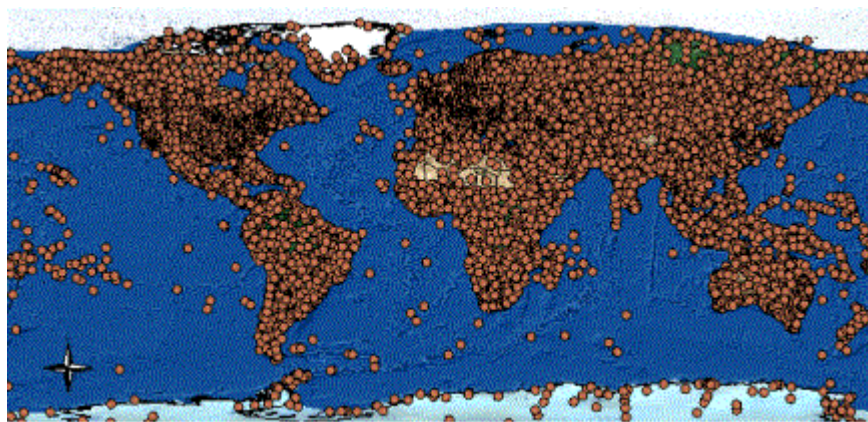






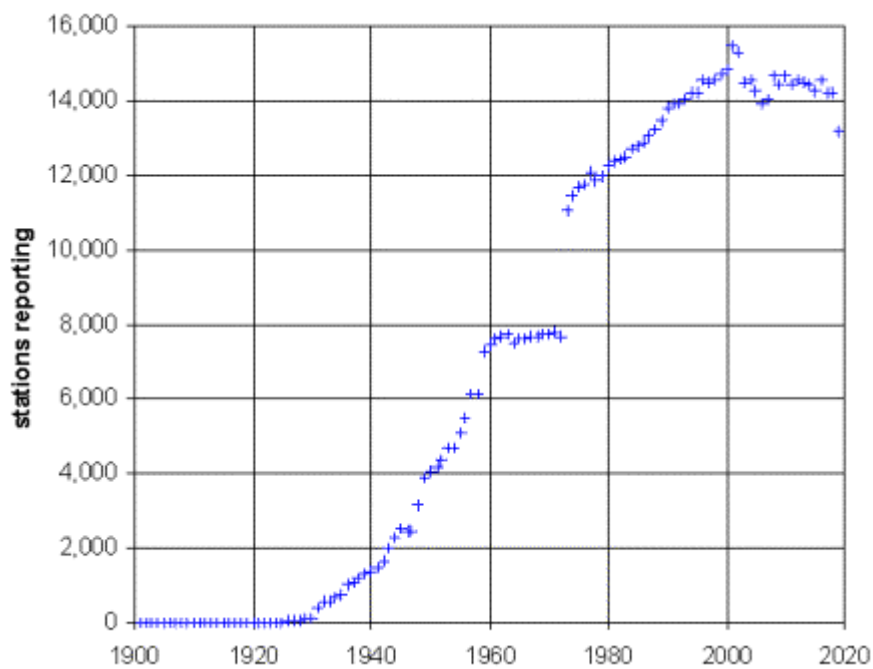


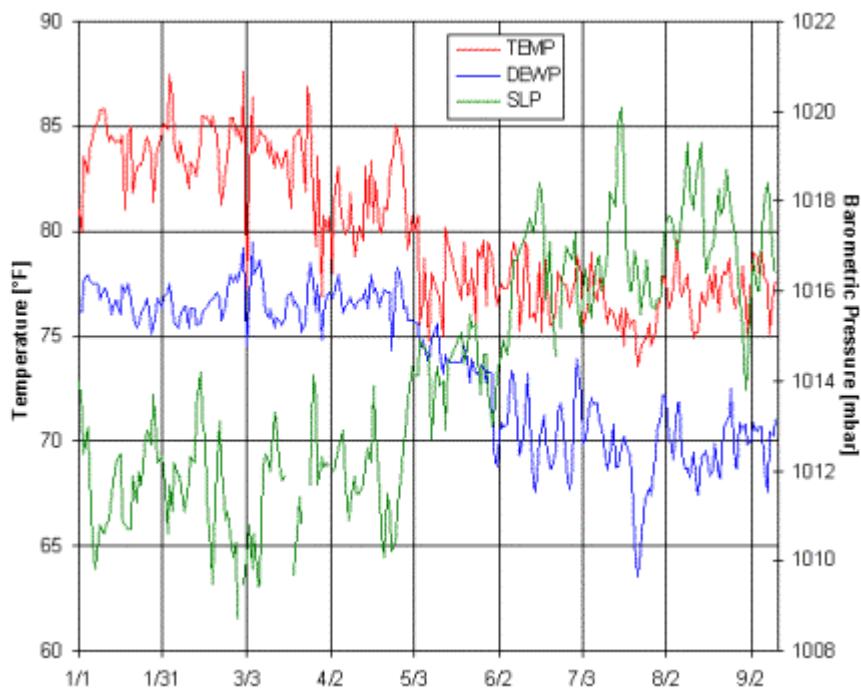


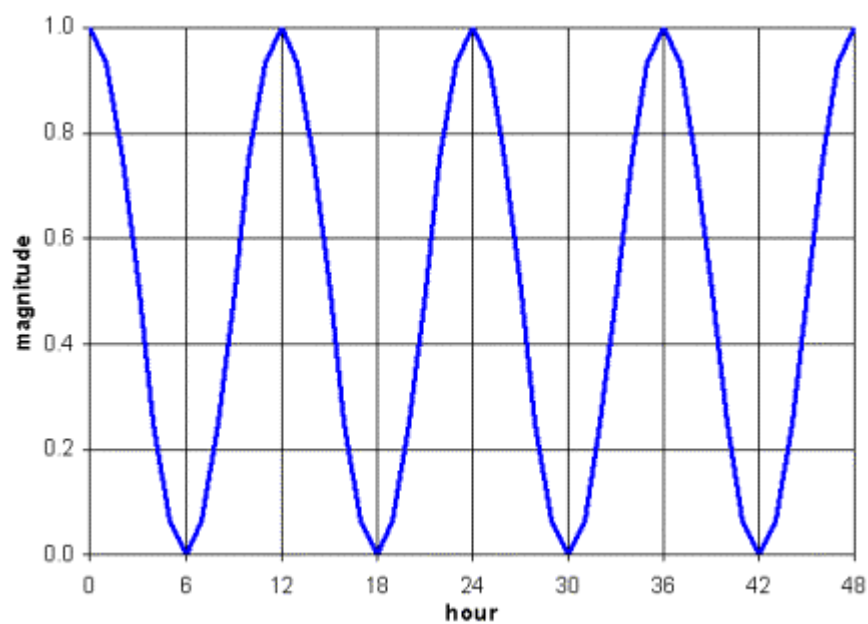
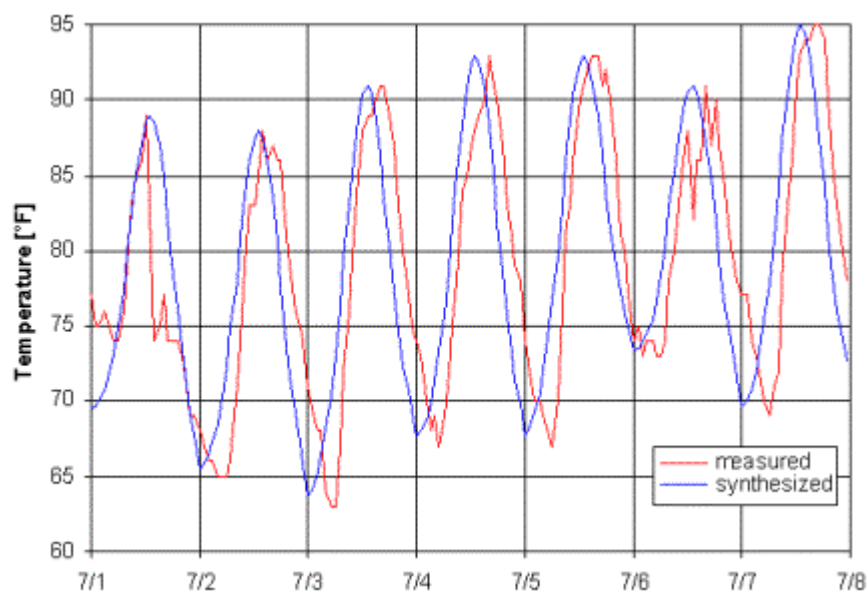


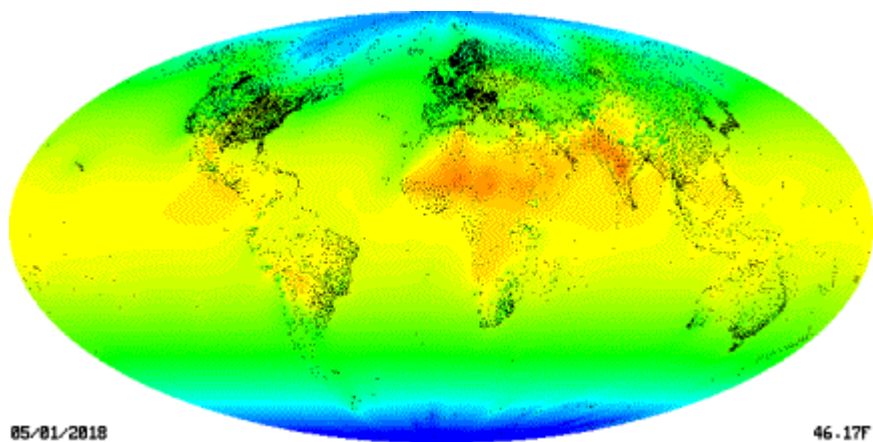
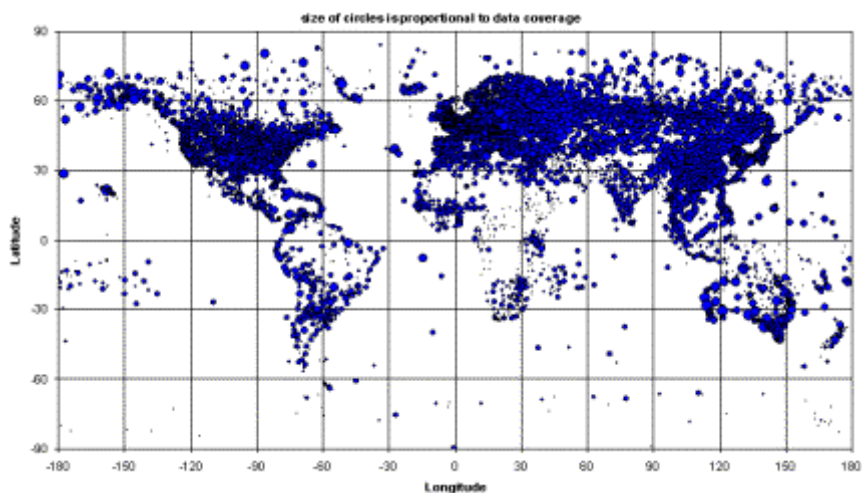
Map generated by NOAA's National Climatic Data Center, 2007

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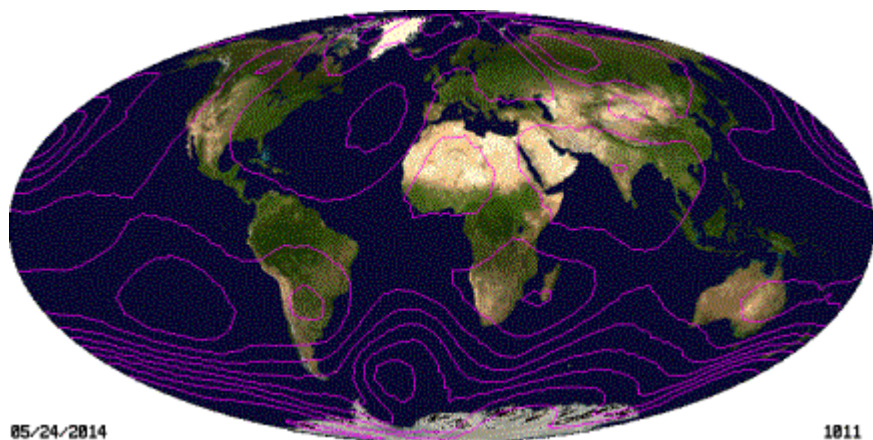
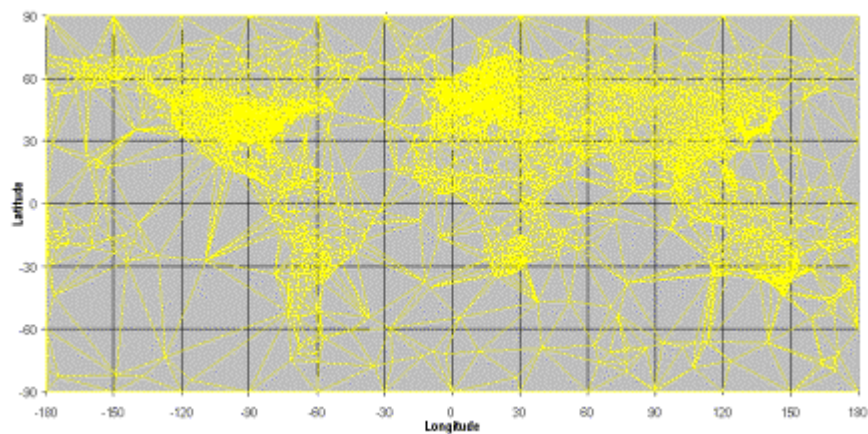






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