Stream Characterization Using HydroLab© Datasondes

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Grab Sampling

Benefits

- Ease
- Variety of Parameters
- Precision

Concerns

- Sampling Regime
- Cost and Time

HydroLabs

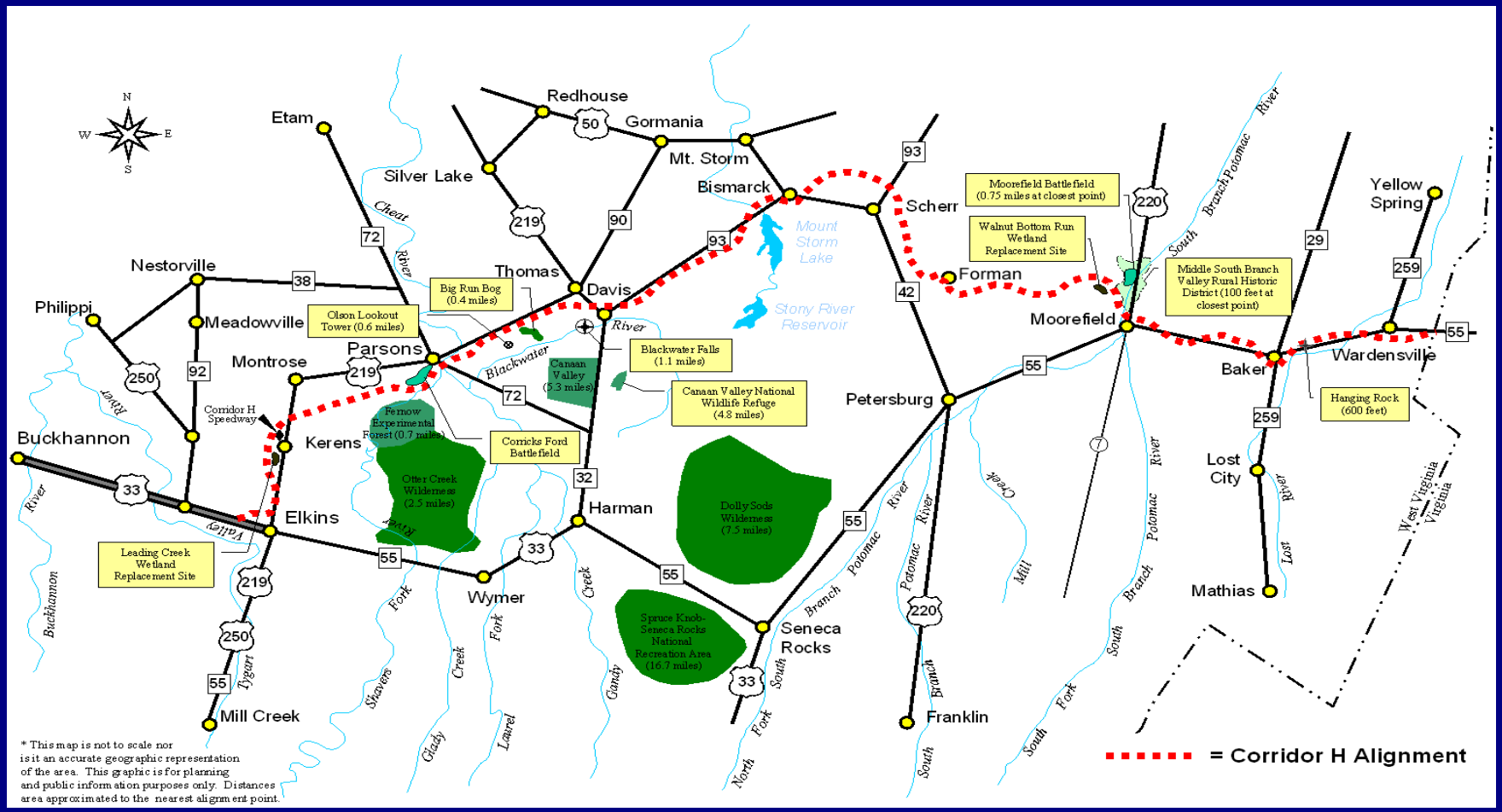
Benefits

- Ease
- Relatively Inexpensive
- Data Rich

Concerns

- Limited Number of Parameters
- Data Rich

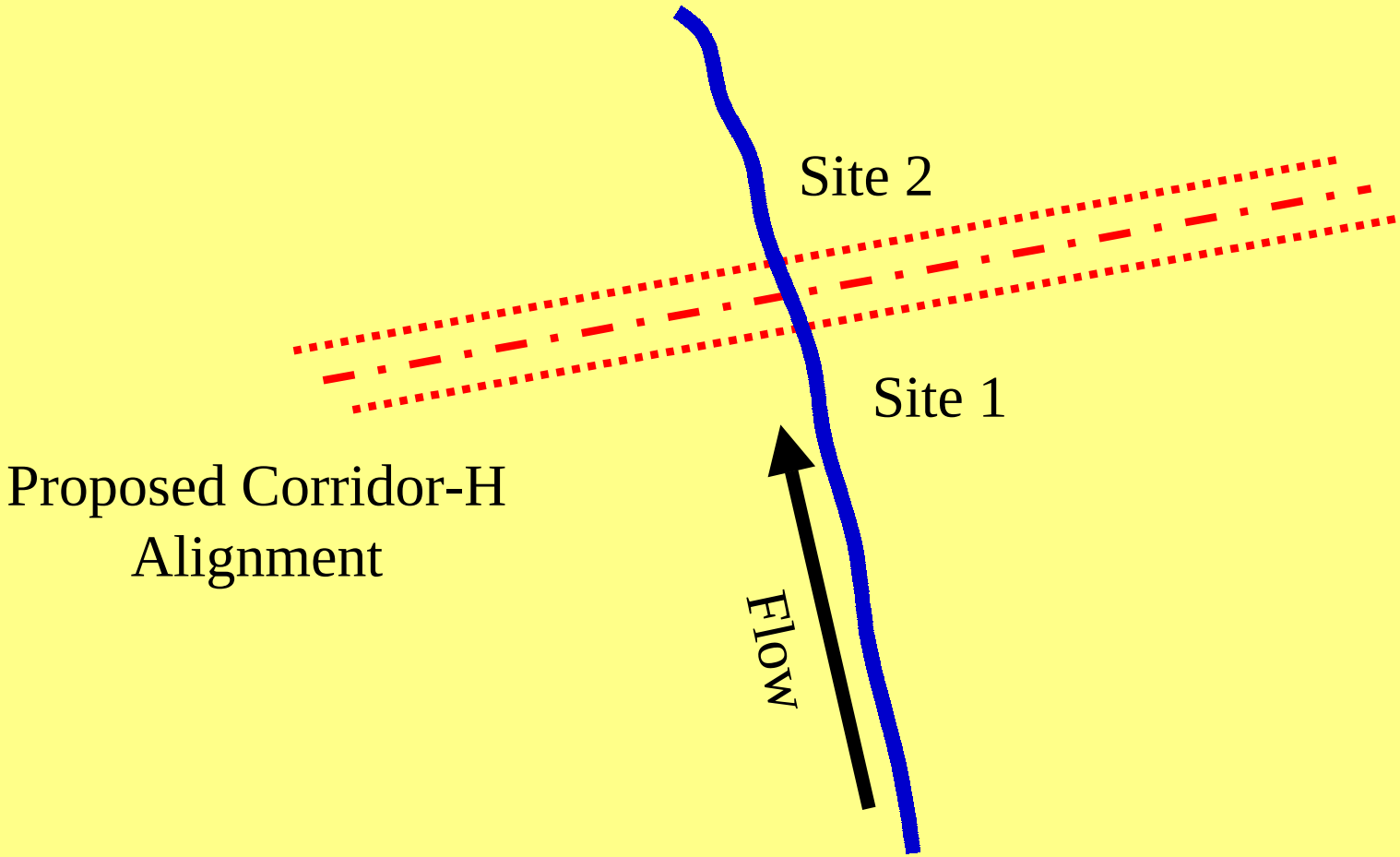
General Location of Stream Monitoring

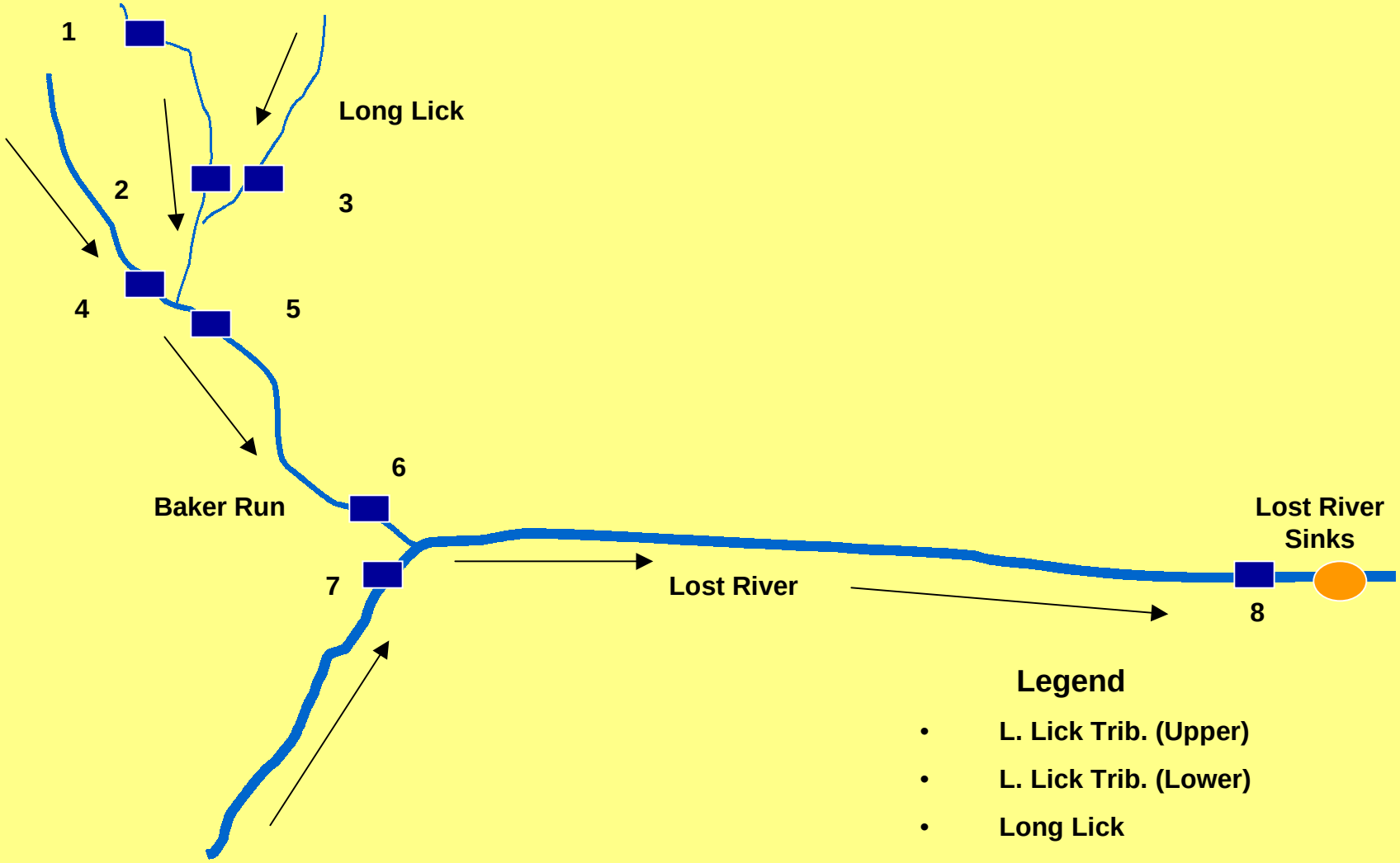


Experimental Design

- Perpendicular
- Cumulative

Perpendicular Design





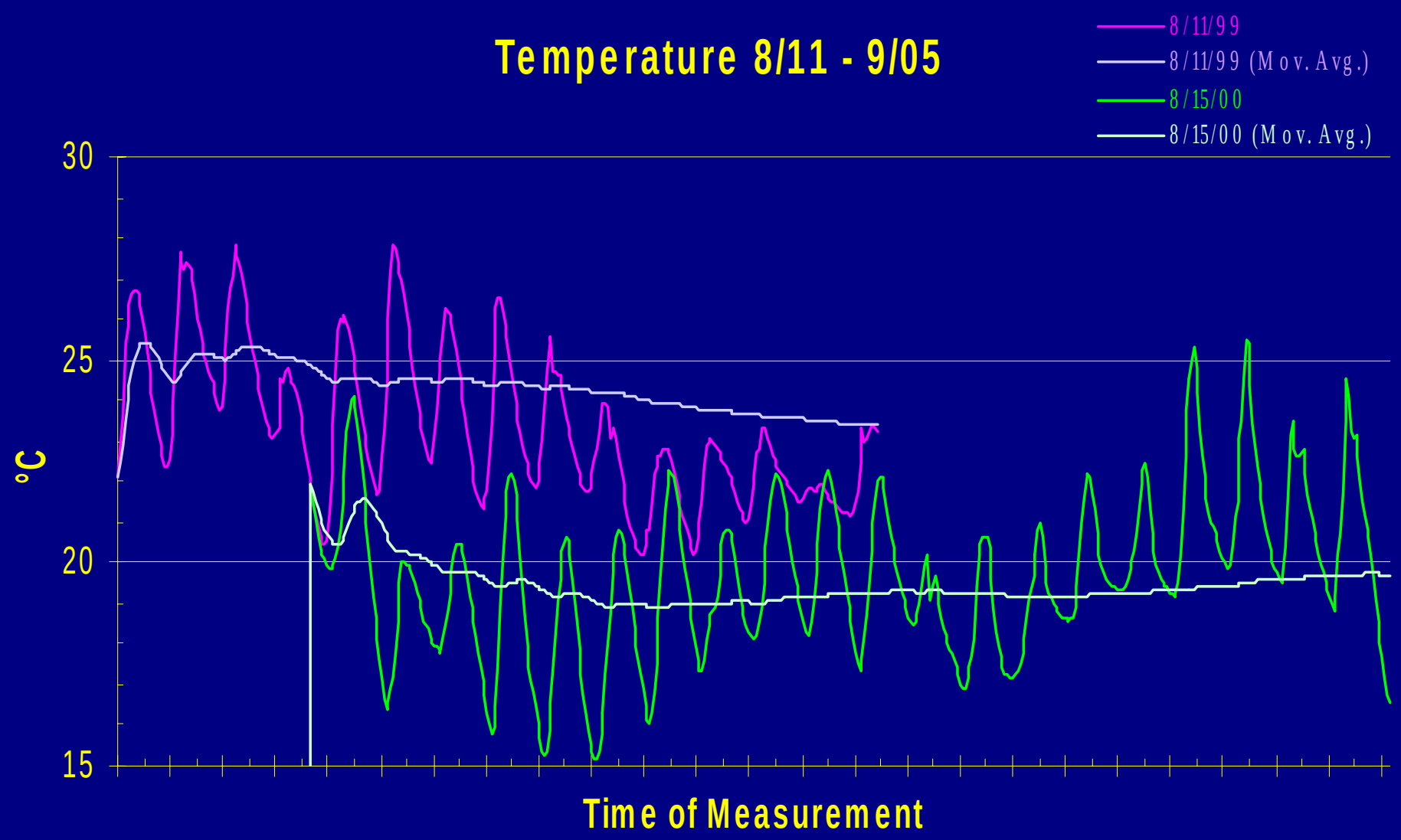
Legend

- L. Lick Trib. (Upper)
- L. Lick Trib. (Lower)
- Long Lick
- Baker Upper
- Baker/Long L. Conflu.
- Baker Lower
- Lost Upper
- Lost Lower

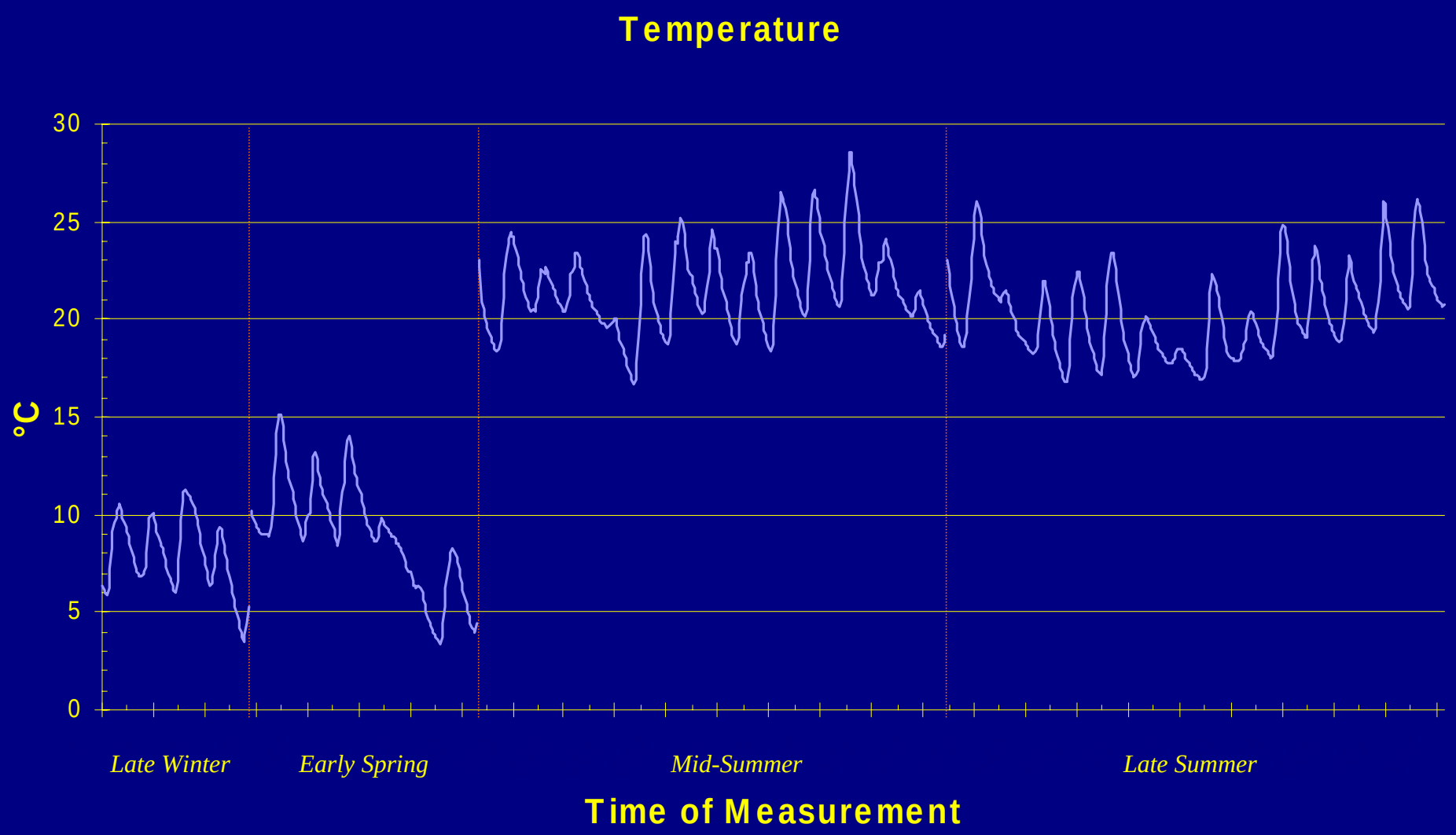
Parameter Variability

- Yearly
- Seasonal
- Daily

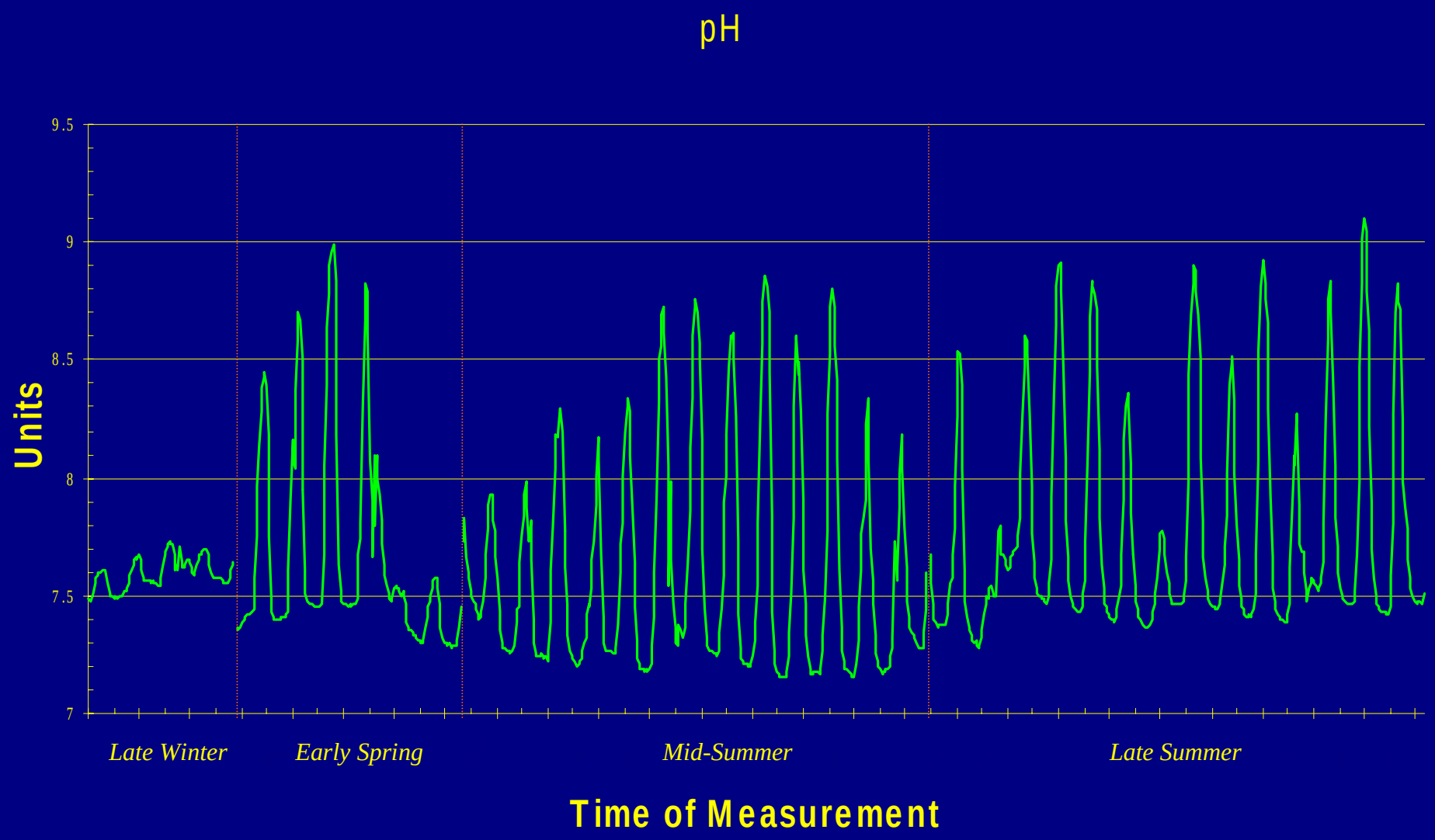
Yearly Variability



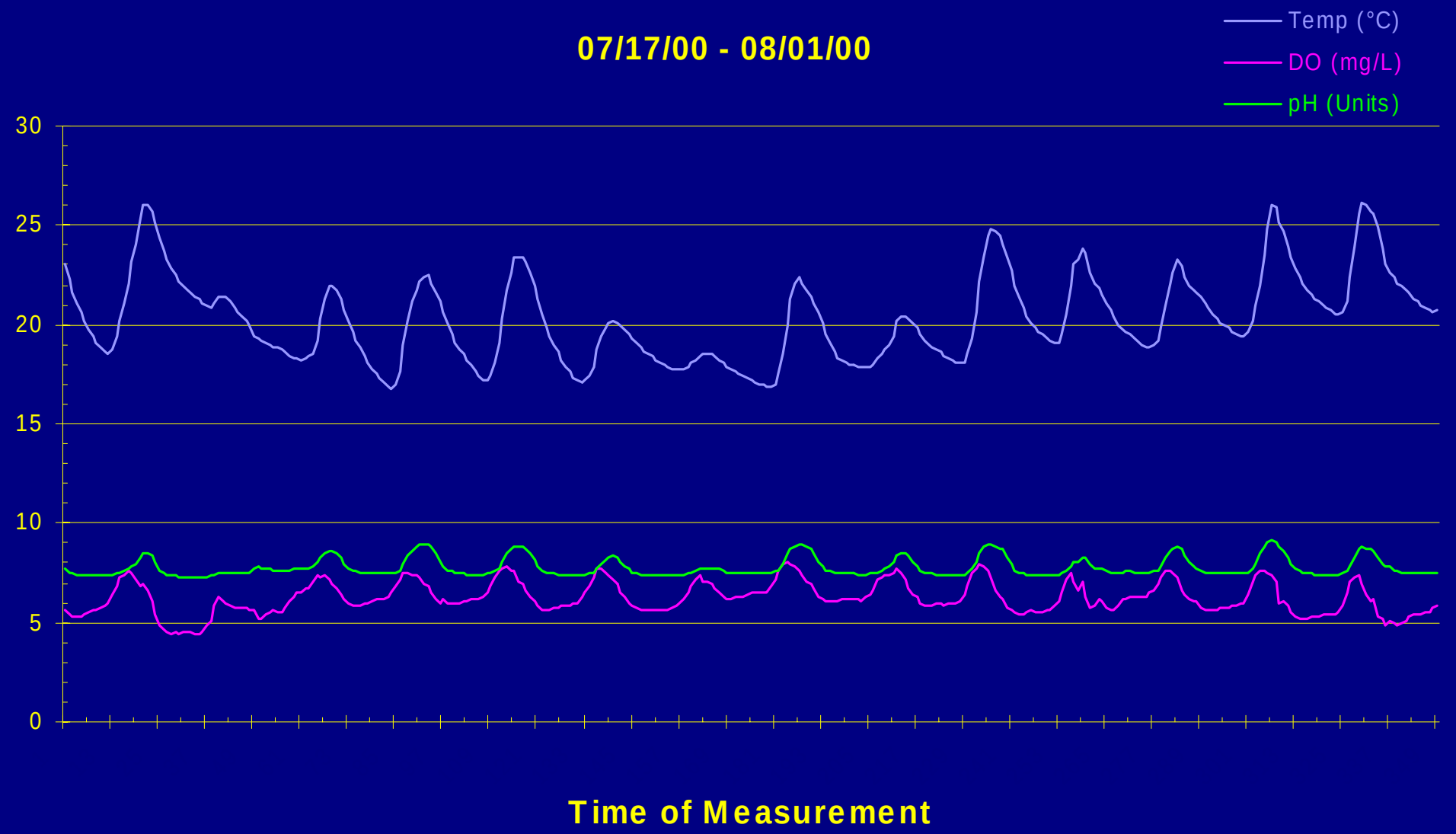
Seasonal Variability



Seasonal Variability



Daily Variability



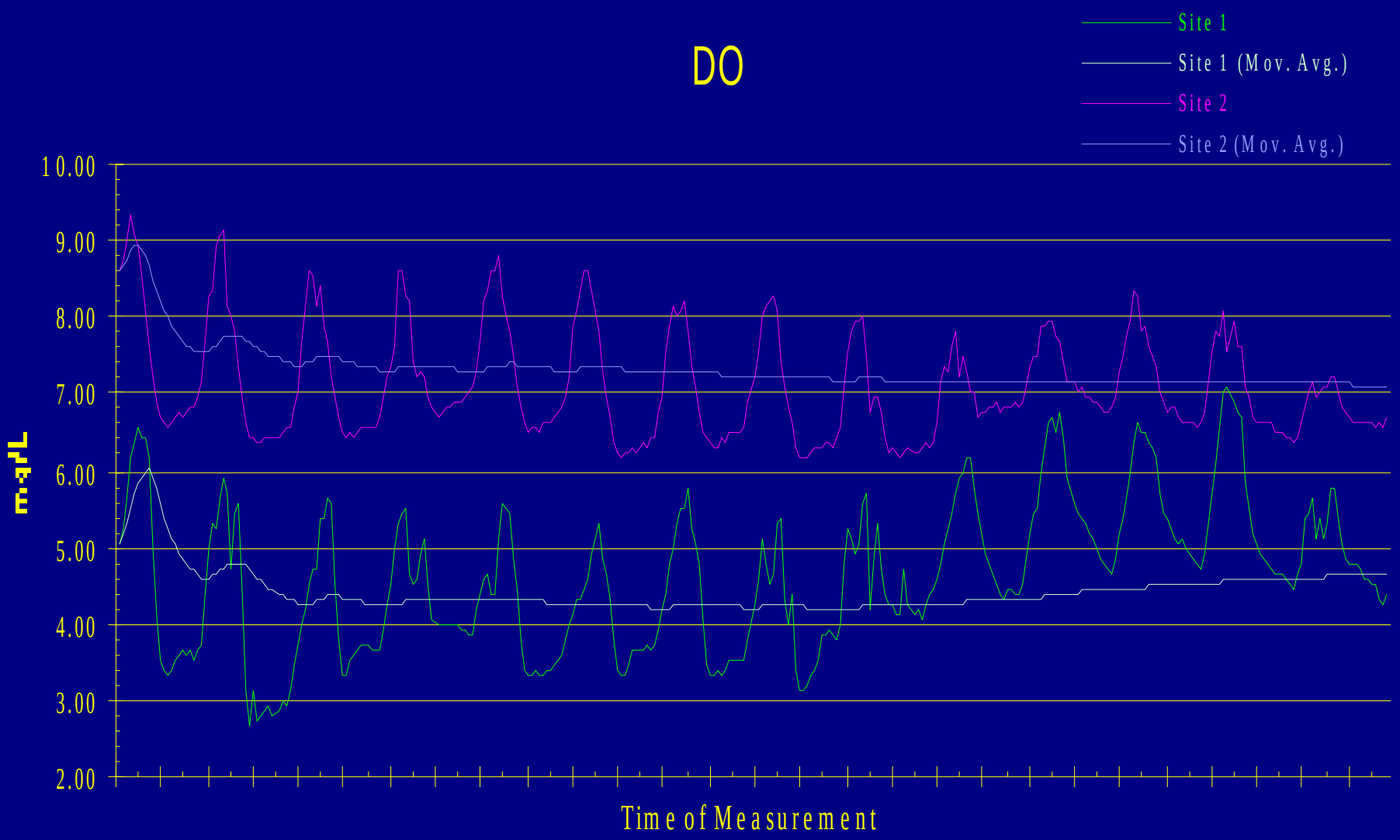
What Do We Do with the Data?

- Comparison of Means/Deviations
- Comparison of Sites Using ΔMeans
- Time Series Analysis
- Circular Statistics

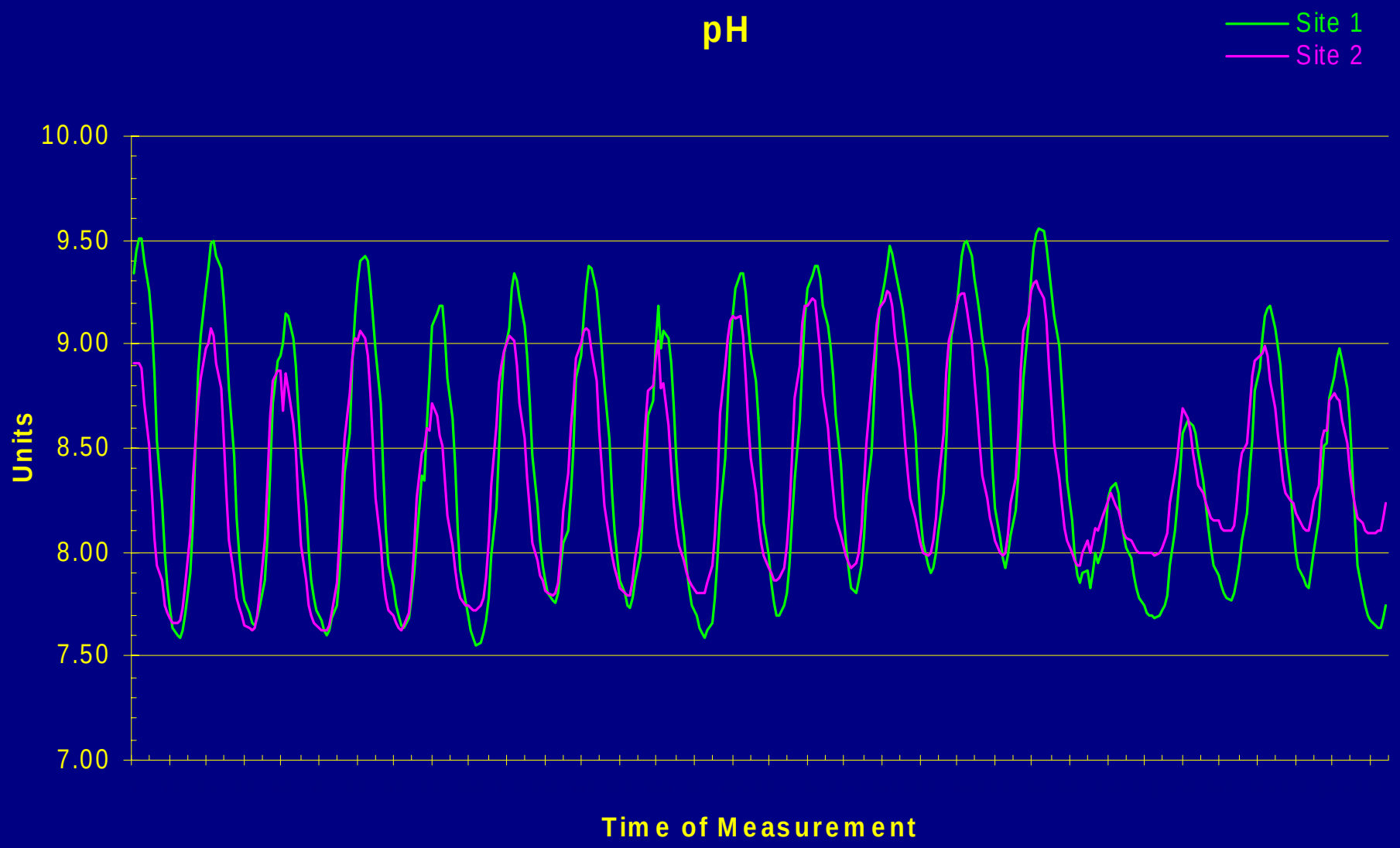
Comparison of Means

	pH	
	Grab Sampling	Hydrolab
Mean	8.74	7.70
N	3	677

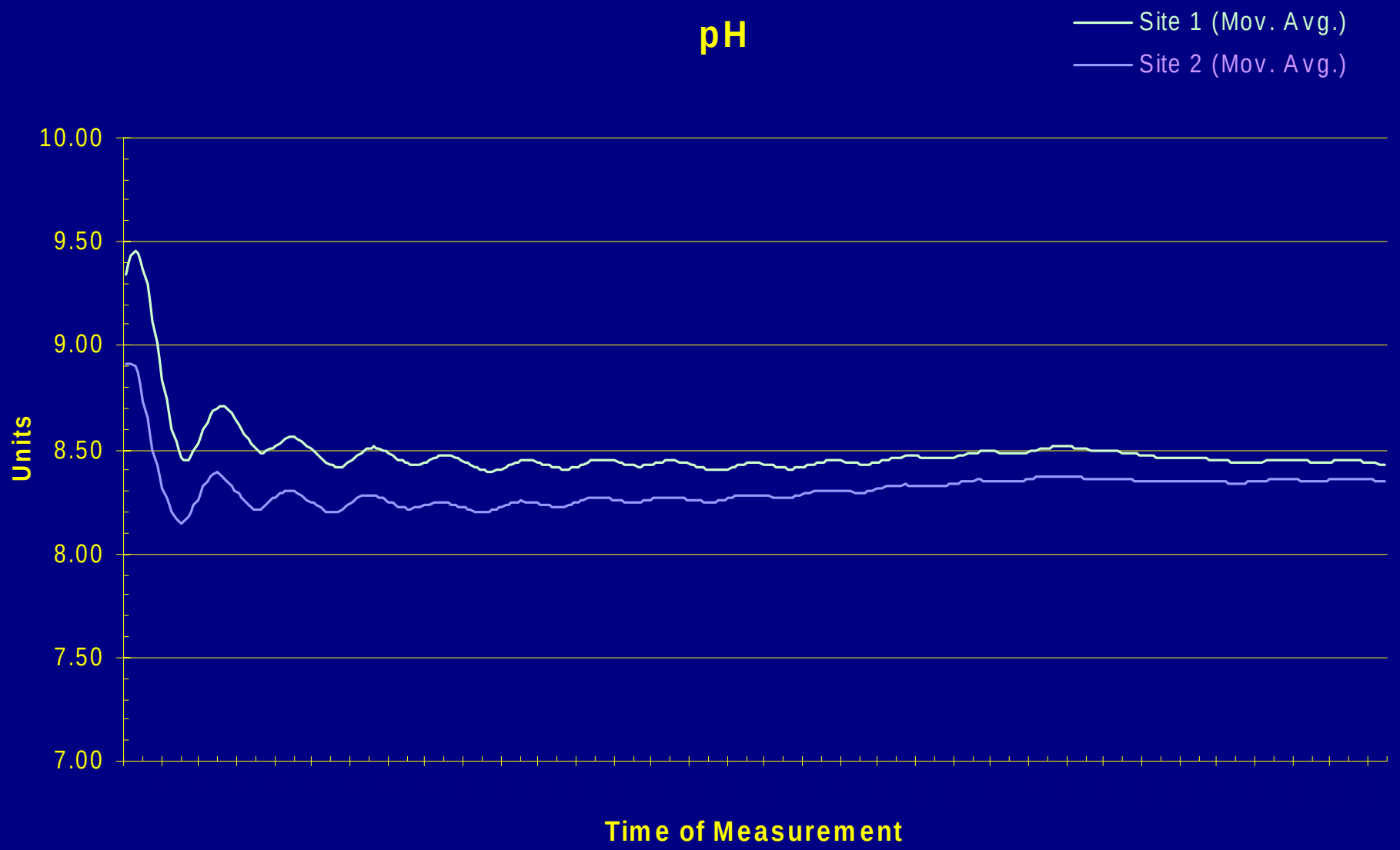
Comparison of Sites Using ΔMeans



Comparison of Sites Using ΔMeans



Comparison of Sites Using ΔMeans



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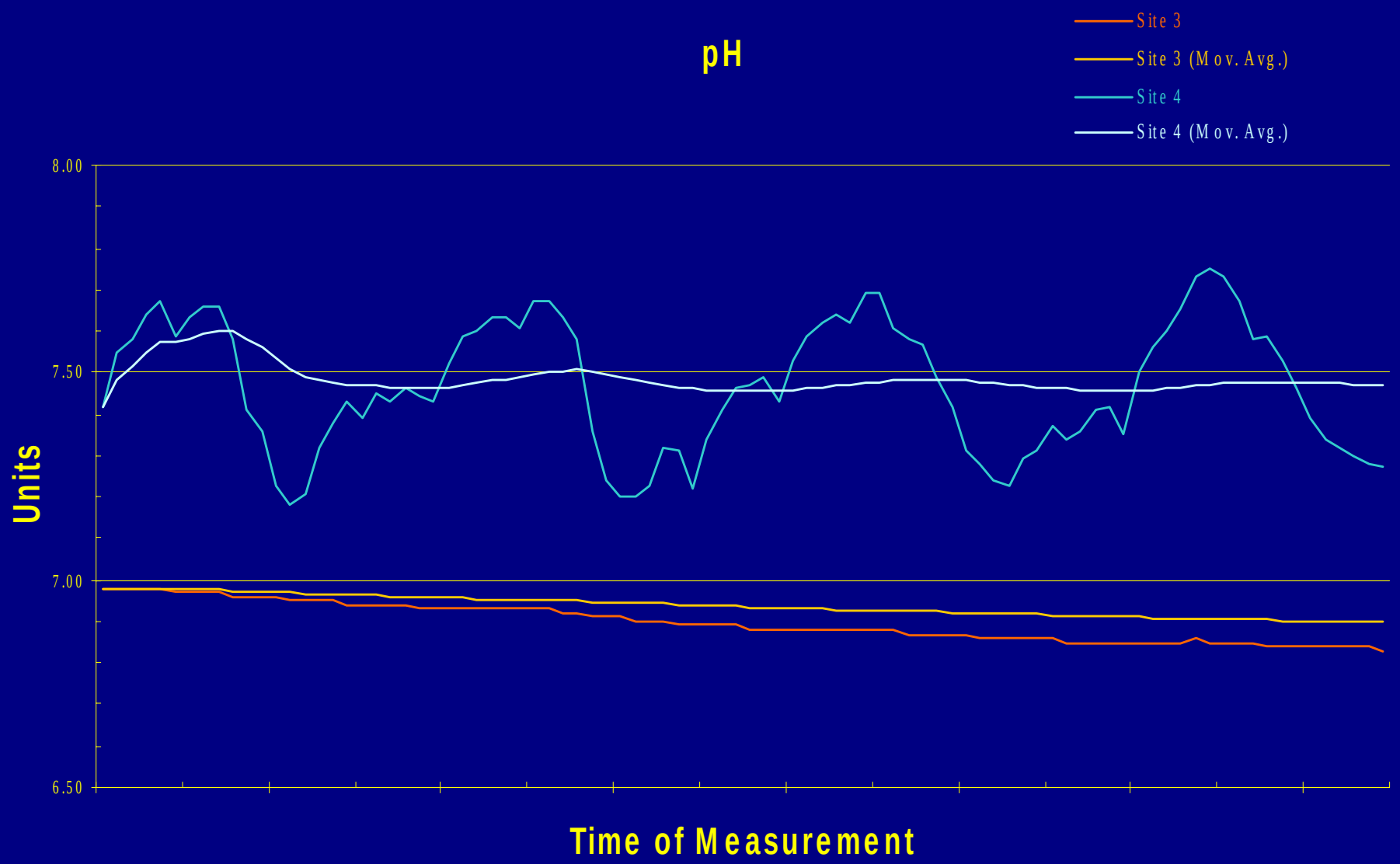
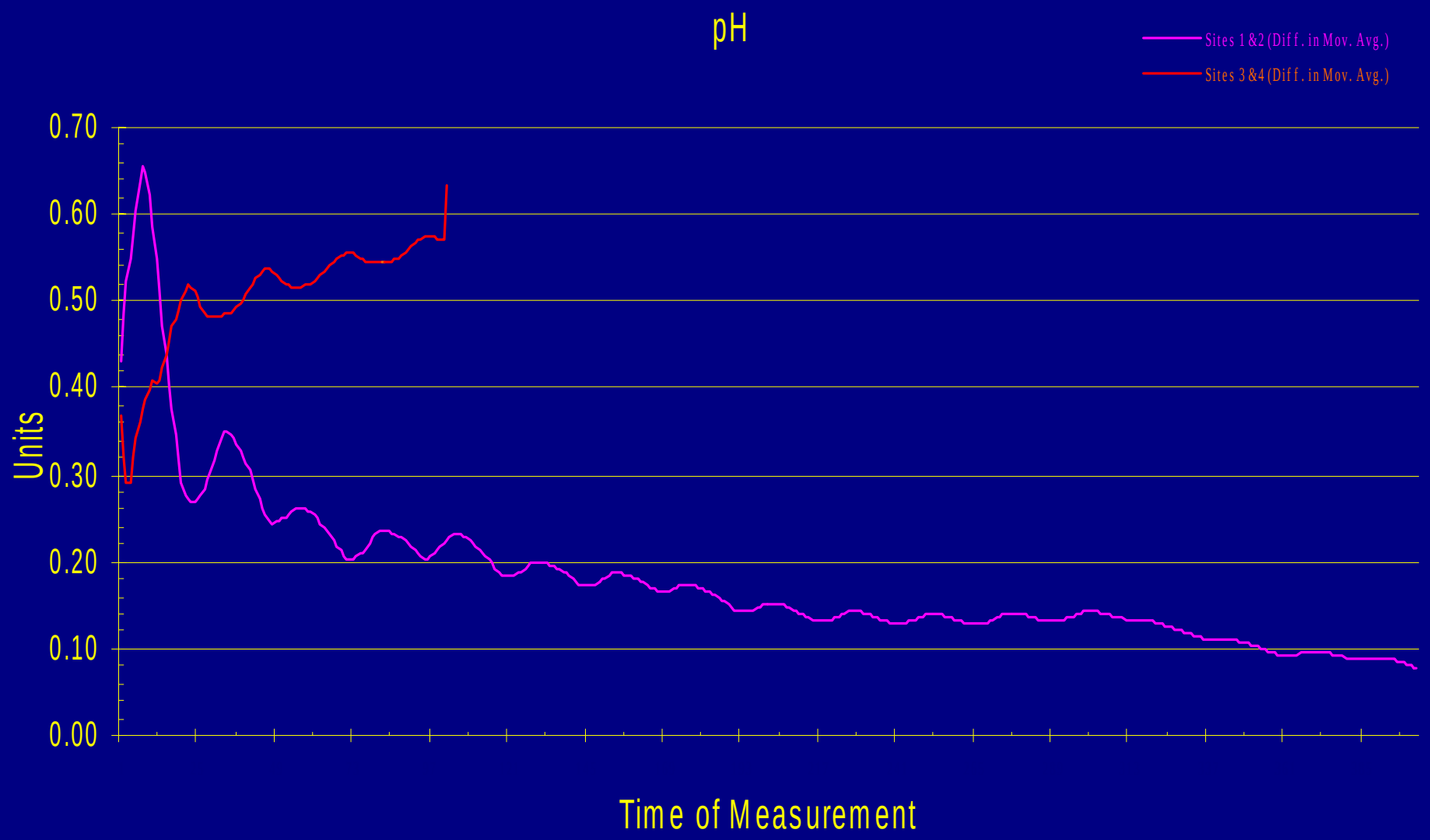
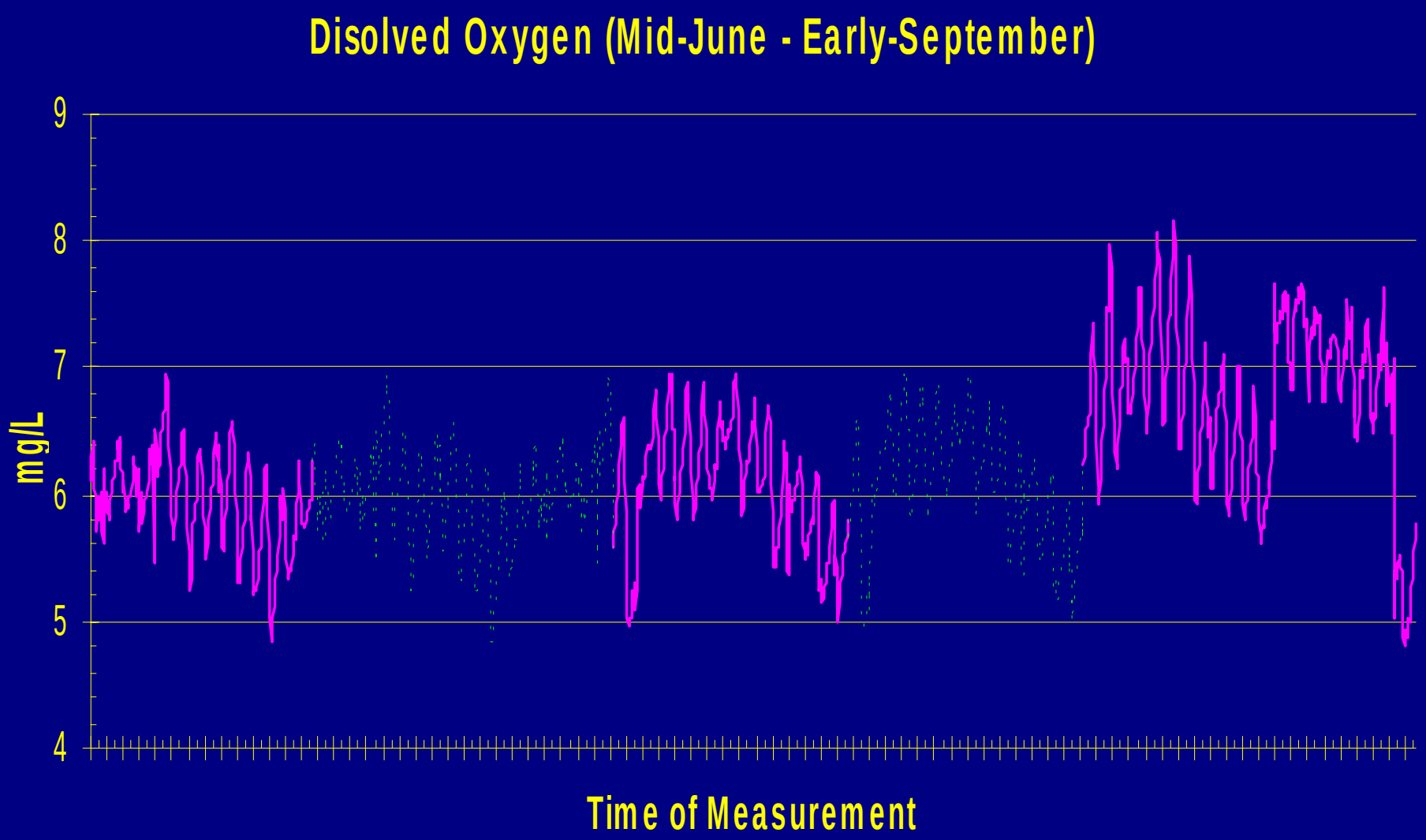


Comparison of Sites Using ΔMeans



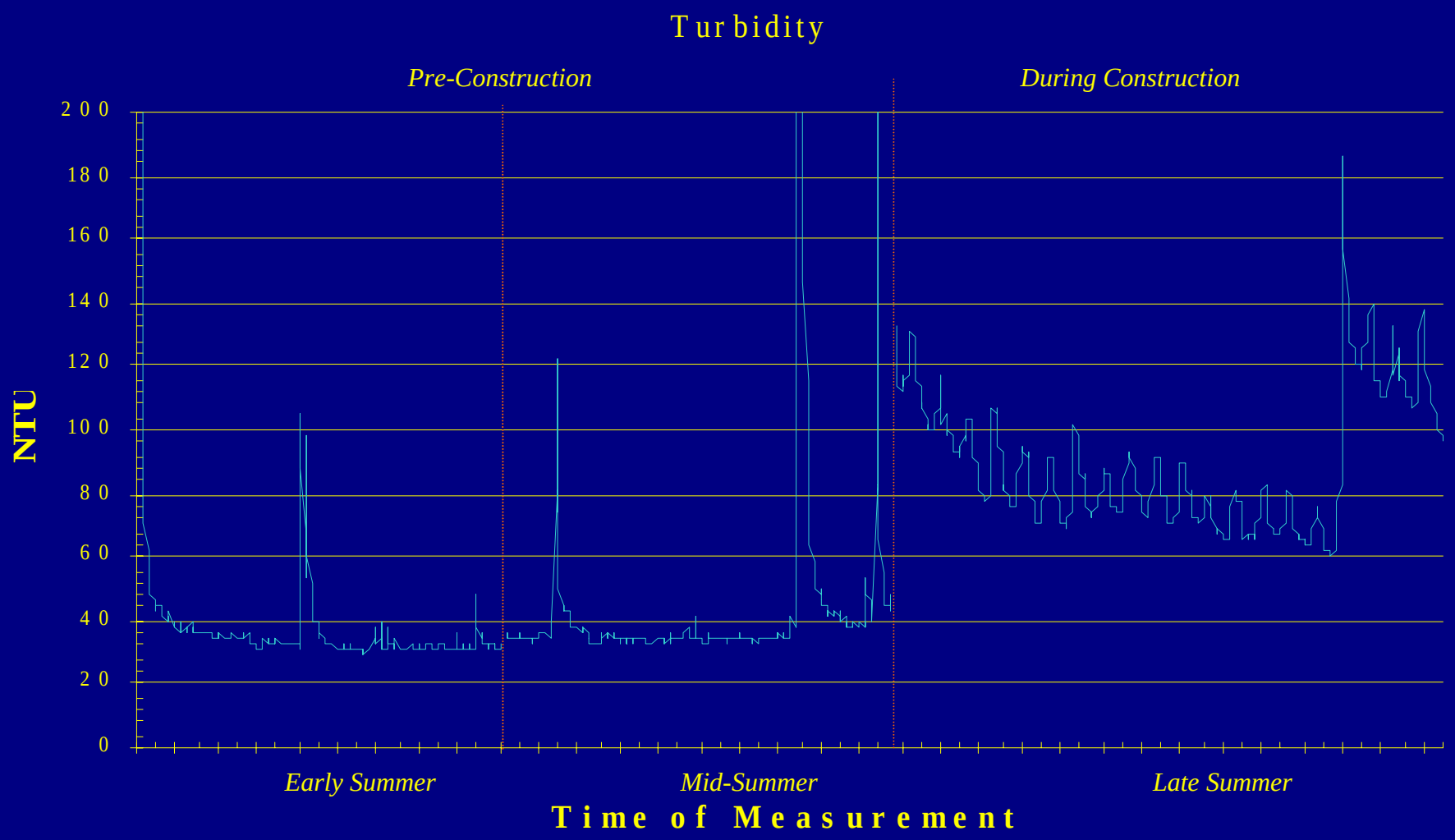
Time Series Analysis

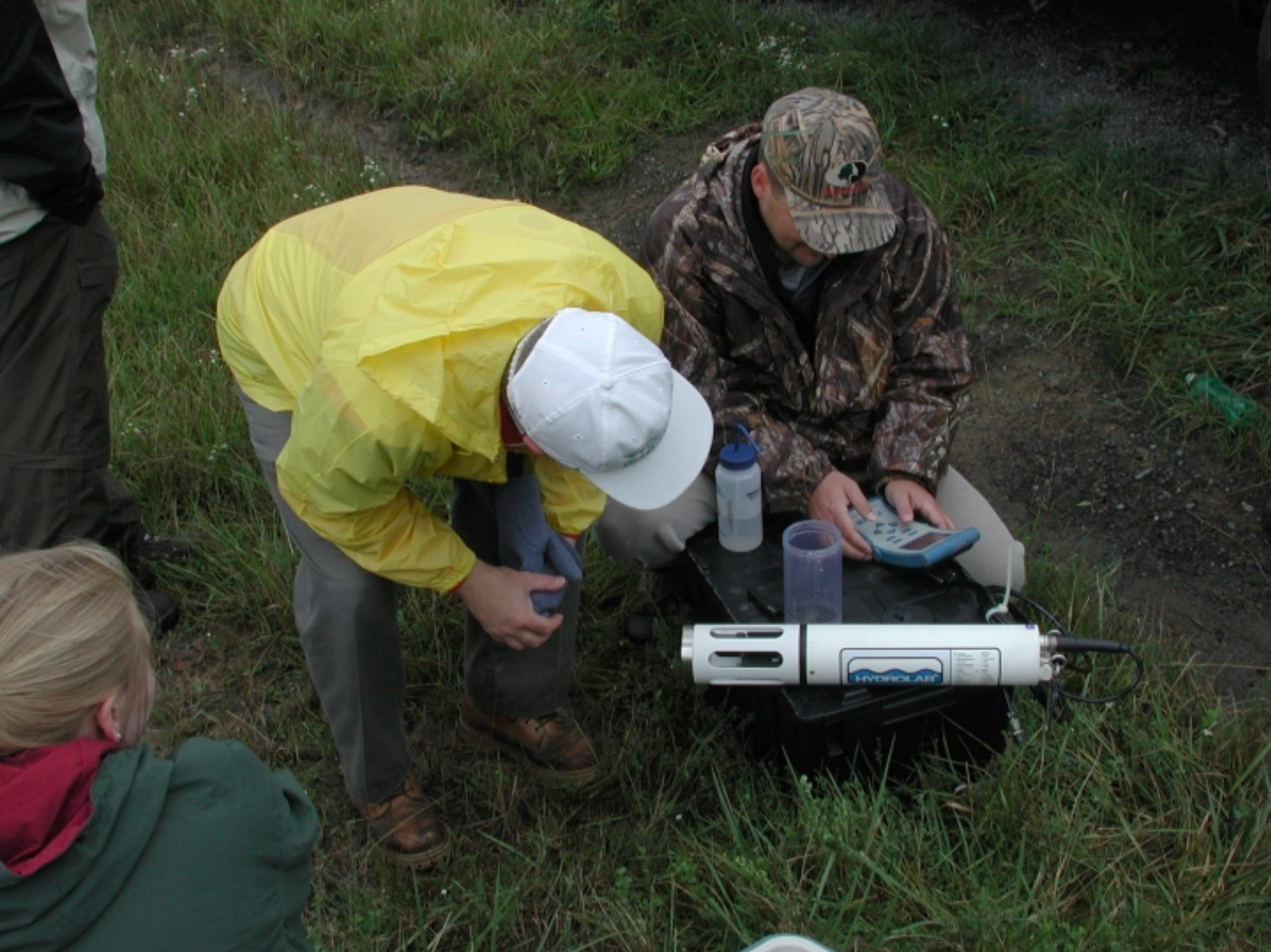


Circular Statistics

- Linear data with 24 hour periodicity
- Convert linear data in circular graphs
- Calculate mean periodicity with variation terms
- Compare sites and times for changes in periodicity

Back To Reality




HYDROLAB