

# NDVI Scaling For Interpolation Of METRIC ET Estimates

Prepared for ET Subcommittee of ESHMC  
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$$ET = ETR \times ETrF$$

Evaporative Power  
of the  
Atmosphere

***Available Every  
Year  
From  
Weather Data***

Ability of Crop  
to  
Respond

METRIC  
Is  
Best Method

***NOT  
Available  
Every Year***

# Chronic vs. Acute

- Soil type
- Regional crop mix
- General water supply
- Irrigation system adequacy
- Management skill/intensity

- Crop at pixel
- Change in regional crop mix
- Current-year irrigation supply

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***Warm or Cool  
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**~~Warm or Cool  
Weather?~~**

# Chronic vs. Acute

- Soil type
- Regional crop mix
- General water supply
- Irrigation system adequacy
- Management skill/intensity

***Other-yr METRIC***

- Crop at pixel
- Change in regional crop mix
- Current-year irrigation supply

***NDVI Scaling***

# NDVI Scaling

$$ETrF = ETrF_{(\text{other yr})} \times \text{Multiplier}$$

$$\text{Multiplier} = \frac{\text{NDVI Kc this year}}{\text{NDVI Kc other year}}$$

How Well Does it Work?

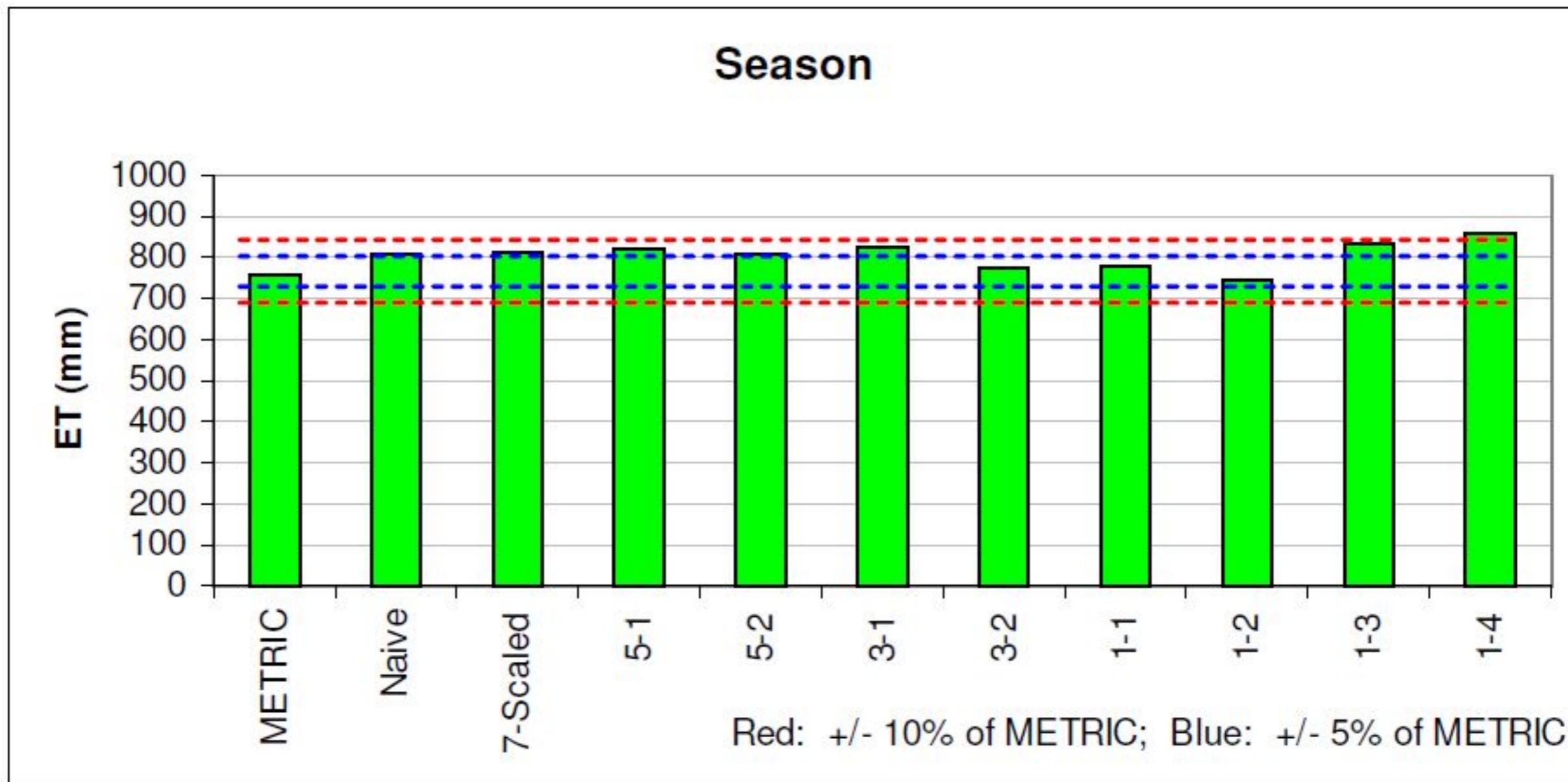


Figure 1. Seasonal ET depths from various methods.

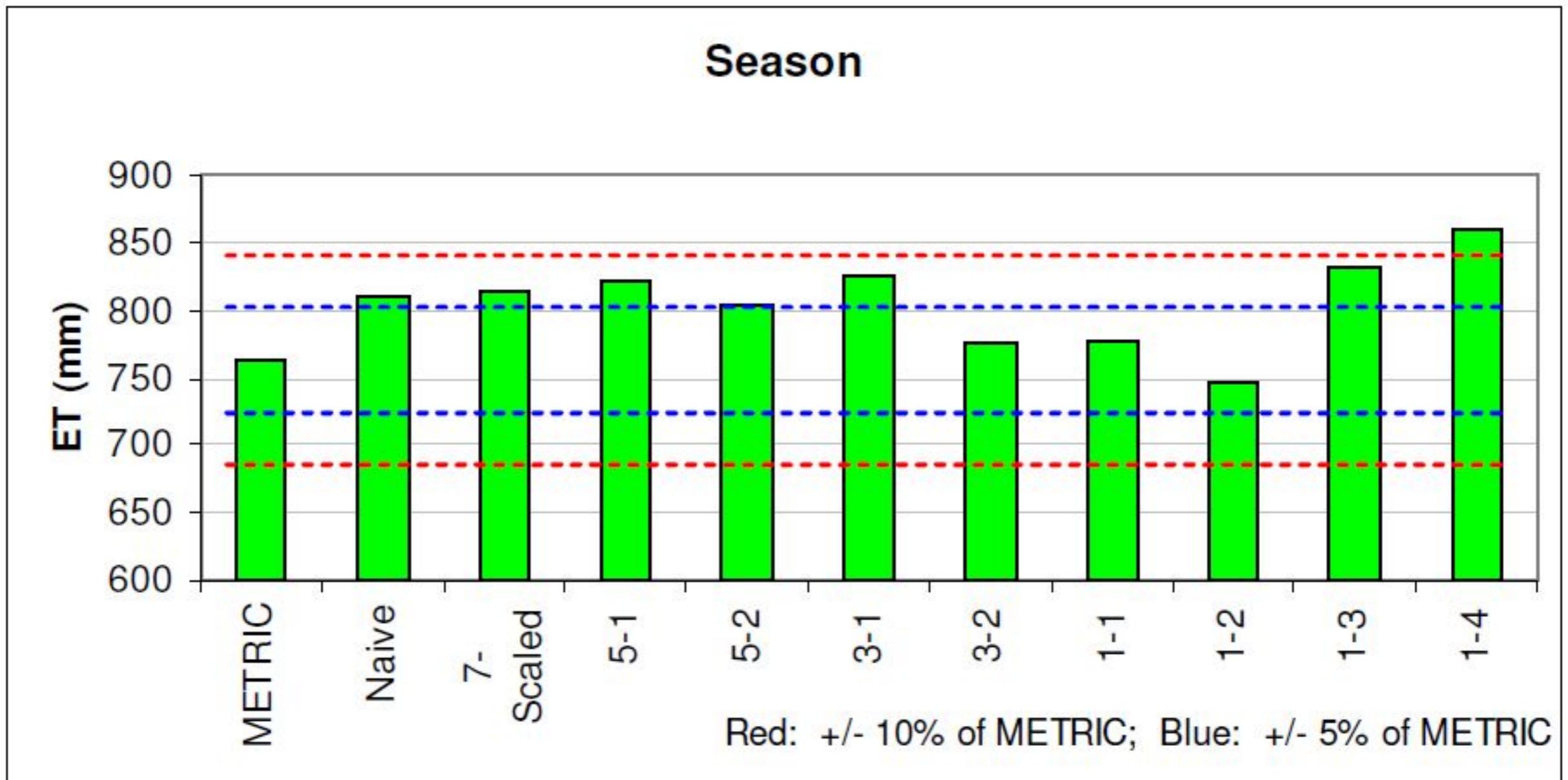


Figure 2. Seasonal ET depths from various methods, with vertical axis adjusted to emphasize differences.

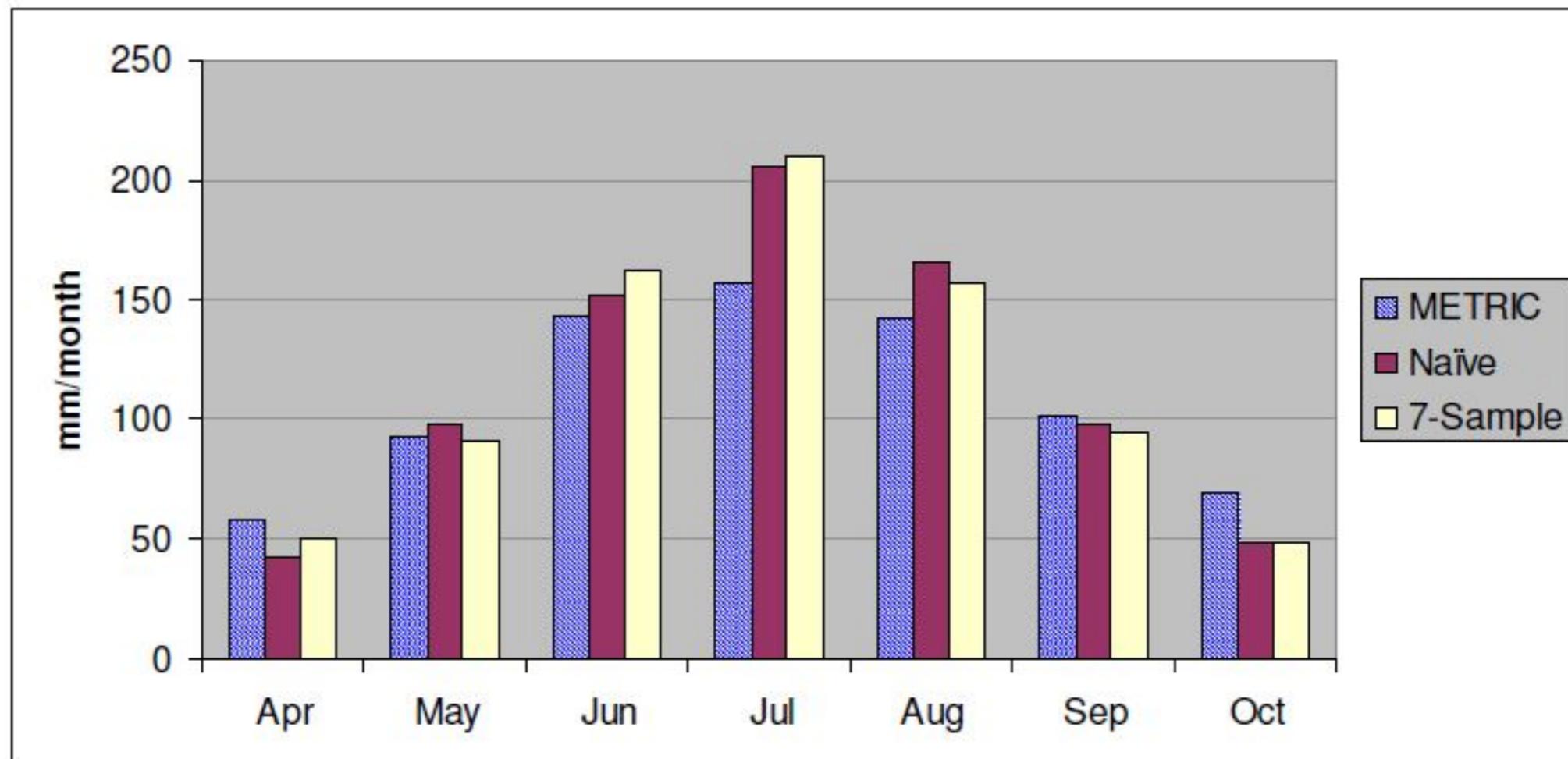


Figure 3. Seasonal pattern of METRIC, naive and 7-Sample scaled estimates.

What happened here?

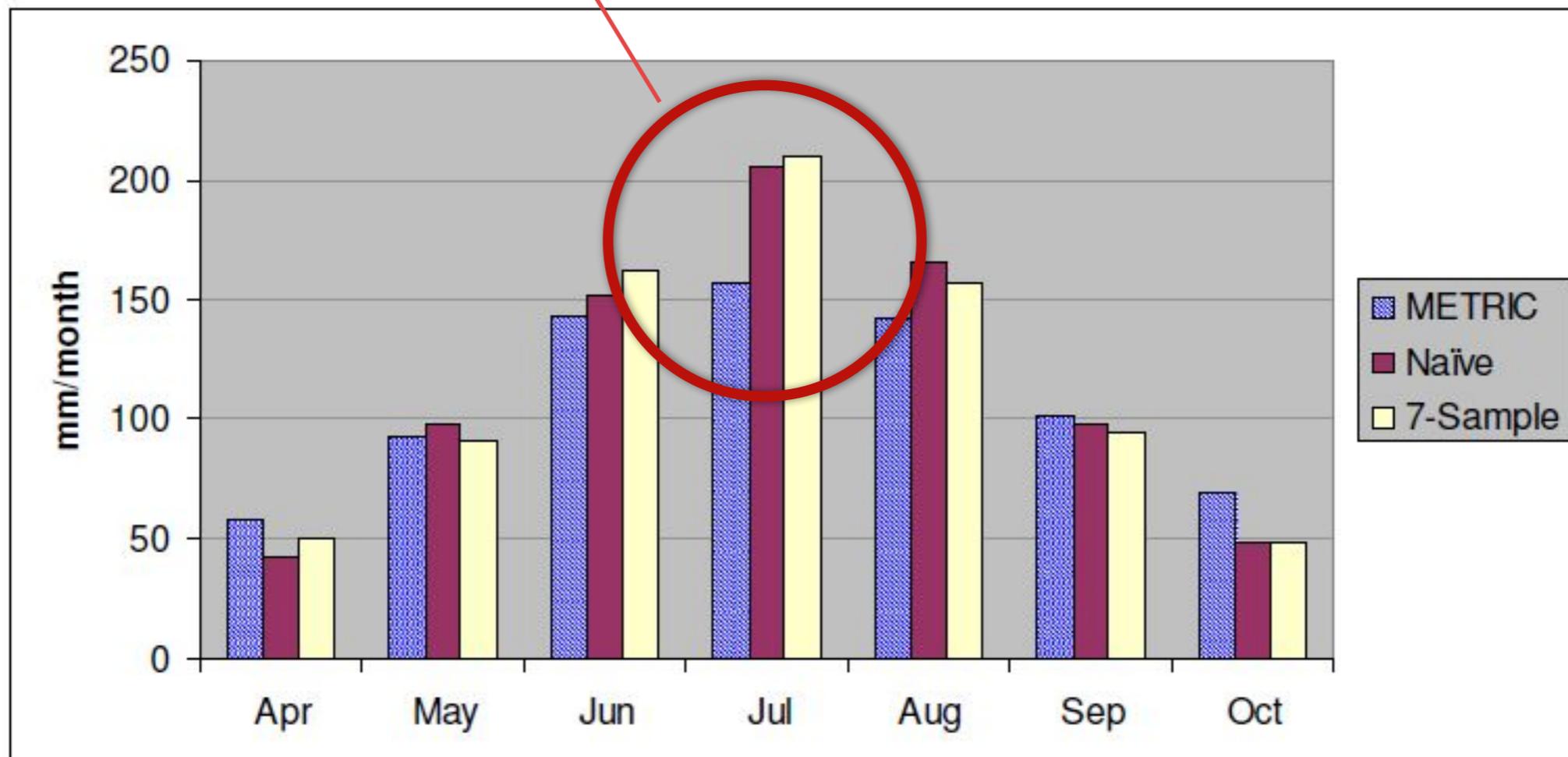


Figure 3. Seasonal pattern of METRIC, naive and 7-Sample scaled estimates.

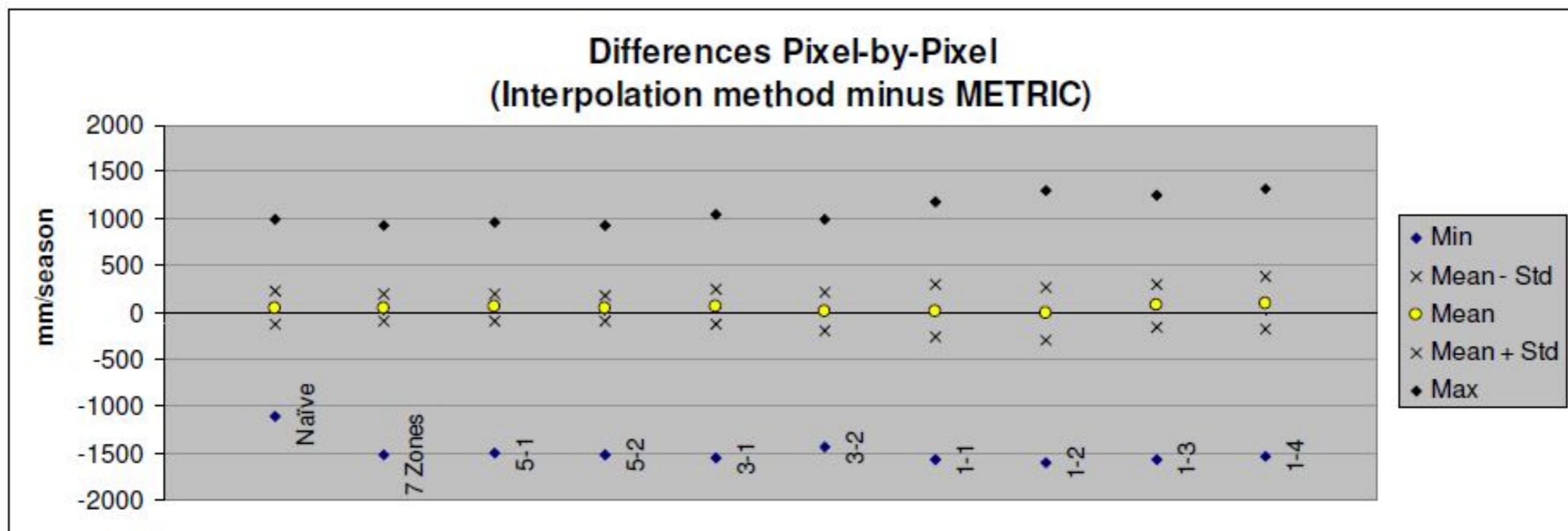


Figure 16. Statistical distribution of full-season differences on a pixel basis.

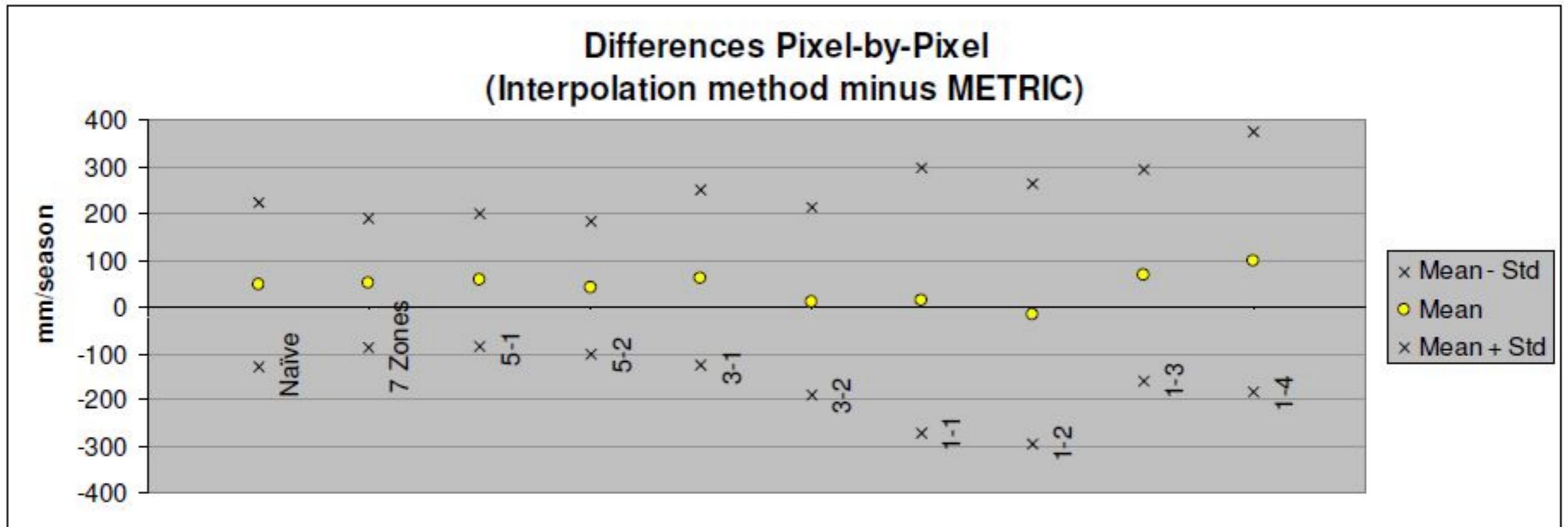


Figure 17. Figure 16 with the vertical axis expanded to exaggerate differences.

## Collective Nouns:

Gaggle of Geese

Giggle of Kindergarteners

Quarrel of Consultants