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 Subject: Can you believe it???  
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Guys, can you take a look at this.

I think that everything I say here is true! But we've got to be sure.

There are more technical things they did wrong that I want to add, but this is the critical bit--what do you think. Comments? Thanks...

mike

The recent paper by McIntyre and McKittrick (Energy and Environment, 14, 751-771) claims to be an "audit" of the analysis of Mann, Bradley and Hughes (1998) or "MBH98". An audit involves a careful examination, using the same data and following the exact procedures used in the report or study being audited. McIntyre and McKittrick ("MM") have done no such thing, having used neither the data nor the procedures of MBH98. Their analysis is notable only in how deeply they have misrepresented the data, methods, and results of MBH98. Journals that receive critical comments on a previously published papers always provide the authors who are being criticized an opportunity to review the study prior to publication, and offer them the chance to respond. This is standard operating procedure in any legitimate peer-reviewed scientific journal. Mann and colleagues were never given this opportunity, nor were any other leading paleoclimate scientists that we're familiar with. It is unfortunate that the profound errors, and false and misleading statements, and entirely spurious results provided in the McIntyre and McKittrick article were ever allowed to see the light of day by those would have been able to detect them. . We suspect the extremely checkered history of "Energy and Environment" has some role to play in this. The authors should retract their article immediately, and issue a public apology to the climate research community for the injustice they have done in publishing and promoting this deeply deceptive and flawed analysis.

Not only were critical errors made in their analysis that render it thoroughly invalid, but there appear to have been several strikingly subjective decisions made to remove key indicators of the original MBH98 network prior to AD 1600, with a dramatic impact on the resulting reconstruction. It is precisely the over which the numerous indicators were removed (pre 1600 period) during which MM reconstruct anomalous warmth that is in sharp opposition to the cold conditions observed in MBH98 and nearly all other independent published estimates that we know of.

While the authors dutifully cite the small inconsistency between the number of proxy indicators reported by, and found in the public data archive, of Mann et al back in time (there indeed appear to have been some minor typos in the MBH98 paper), it is odd that they do not cite the number of indicators in their putative version of the Mann et al network based on the independent collection of data, back time. The reader is literally left to do a huge amount of detective work, based on the tables in their pages 20-23, to determine just what data have been eliminated from the original Mann et al network. It seems odd, indeed, that their "substitutions" of other versions (or in some case, only apparent, and not actual, versions) of proxy data series for those in the original Mann et al (1998) network has the selective effect of deleting key proxy indicators that contribute dramatic cooling during the 16th century, when the MM reconstruction shows an anomalous warming departure from the Mann et al (1998) and all other published Northern Hemisphere temperature reconstructions.

Here are some blatant examples:

1) The authors (see their Figure 4) substitute a younger version of one of the Jacoby et al Northern Treeline series for the older version used by MBH98. This substitution has effect of removing a predictor of 15th century cooling [Incidentally, MM make much of the tendency for some tree ring series, such as this one, to show an apparent cooling over the past couple decades. Scientists with expertise in dendroclimatology know that this behavior represents a decrease in the sensitivity to temperature in recent decades that likely is related to conditions other than temperature which are limiting tree growth]

2) The authors eliminate, without any justification, the entire dataset of 70 Western North American (WNA) tree-ring series available between 1400 and 1600 (this dataset is represented, by MBH98, in terms of a smaller number of representative Principal Component time series). The leading pattern of variance in this data set exhibits conditions from 1400-1800 that are dramatically colder than the mid and late 20th century, and a very

prominent cooling in the 15th century in particular. The authors eliminated this entire dataset because they claimed that the underlying data was not available in the public domain.

In point of fact, not only were the individual WNA data all available on the public ftp site provided by Mann and colleagues:

[1]<ftp://holocene.evsc.virginia.edu/pub/MBH98/TREE/ITRDB/NOAMER/>, but they were also available, despite the claims to the contrary by MM, on NOAA's website as well:  
[2]<ftp://ftp.ngdc.noaa.gov/paleo/treering/chronologies/northamerica/usa>

The deletion of this critical (see Mann et al, 1999) dataset appears to be one of the more important censorings performed by MM that allows them to achieve their spurious result of apparent 15th-16th century warmth.

We have not, as yet, finished determining just how many important indicators were subtly censored from the MBH98 dataset by the various subjective substitutions described on pages 20-23. However, given the relatively small number of indicators available between 1400-1500 in the MBH98 network (22-24) and their elimination of some of the more critical ones, it would appear that this subjective censoring of data, alone, explains the spurious, misleading, and deceptive result achieved by the authors.

Incidentally, MBH98 go to great depths to perform careful cross-validation experiments as a function of increasing sparseness of the candidate predictors back in time, to demonstrate statistically significant reconstructive skill even for their earlier (1400-1450) reconstruction interval. MM describe no cross-validation experiments. We wonder what the verification resolved variance is for their reconstruction based on their 1400-1450 available network, during the independent latter 19th century period?

There are numerous other serious problems that would render the MM analysis completely invalid, even in the absence of the serious issue raised above, and these are detailed below

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## References

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