

NEW DATA ADVISORIES



Warren H. White, 9/22-23/2009 IMPROVE meeting

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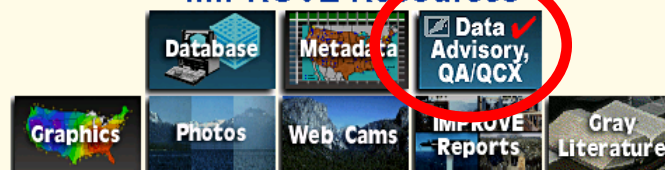
IMPROVE Data Advisories

This is an IMPROVE data user community supported page meant to document interesting findings from the IMPROVE database including data anomalies, potential problems, and new uses for the IMPROVE data. These advisories are not meant to be comprehensive or complete. In addition, unless explicitly stated the data advisories are not necessarily endorsed by the IMPROVE steering committee, National Park Service, CIRA or others.

Contact [Bret Schichtel](#) to submit a data advisory.

Positive interference in PIXE titanium determinations	Submitted by: W.H. White	On: 03/2008	Doc # da0018
Sites: Entire network	Time Period: Before 12/1/2001	Module/Species: A/ Ti	
Changes in sodium data quality	Submitted by: W.H. White	On: 11/2007	Doc # da0017
Sites: Entire network	Time Period: 12/1/2001 – Present	Module/Species: A/ Na	
Shift in EC/OC split with 1 January 2005 TOR hardware upgrade	Submitted by: W.H. White	On: 10/2007	Doc # da0016
Sites: Entire network	Time Period: 1/1/2005 – Present	Module/Species: C/ EC, OC; OC1, OC2, OC3, OC4, OP, EC1, EC2, EC3	

IMPROVE Resources

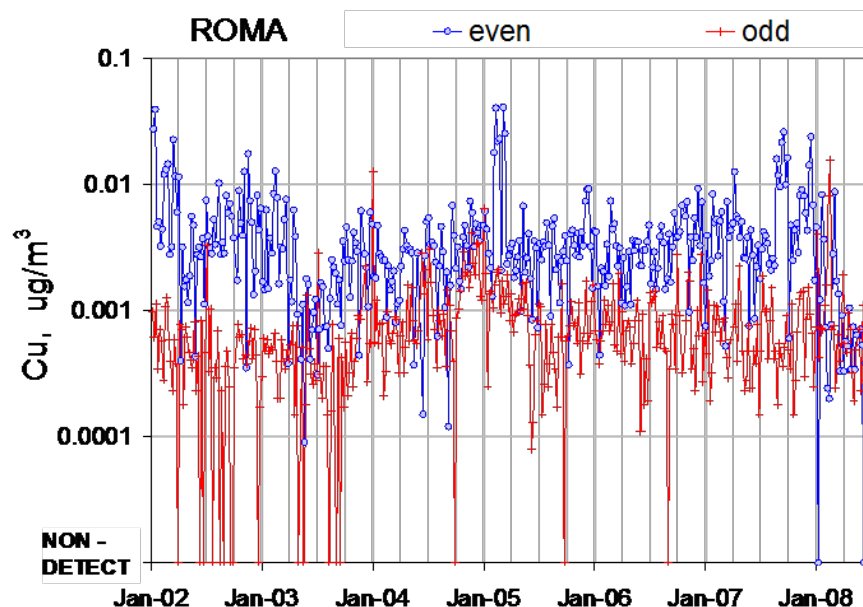


Bulletins

◆ [New data advisory on titanium](#)

Posting type	Advisory	updated May 2009
Subject	1-in-6-day Cu contamination from foreign samplers	
Module/Species	A/ Cu	
Sites and Periods –		
Known	ATLA	May 2004 – August 2005
	BADL	January 2002 – September 2004
	BRMA	January 2002 – December 2003
	LABE	August 2005 – January 2006
	PMRF	July – December, 2002; June 2005 – March 2006; November 2007 – April 2008
	ROMA	January 2002 – December 2007
Potential	Any site not known to be free of Hi-Vol samplers	
Recommendation	Screen Cu data generally for periodic concentration patterns	

Figure 3. Retirement of a hi-vol in 2008 resolved a long-standing interference at Cape Romain NWR.



Posting type

Advisory

Subject

Under-correction of chloride concentrations for filter blank levels

Module/Species

B/ Cl^-

Sites

All

Period

2007 – 2008

Recommendation

Postpone analysis pending redelivery of revised 2005 – 2008 data

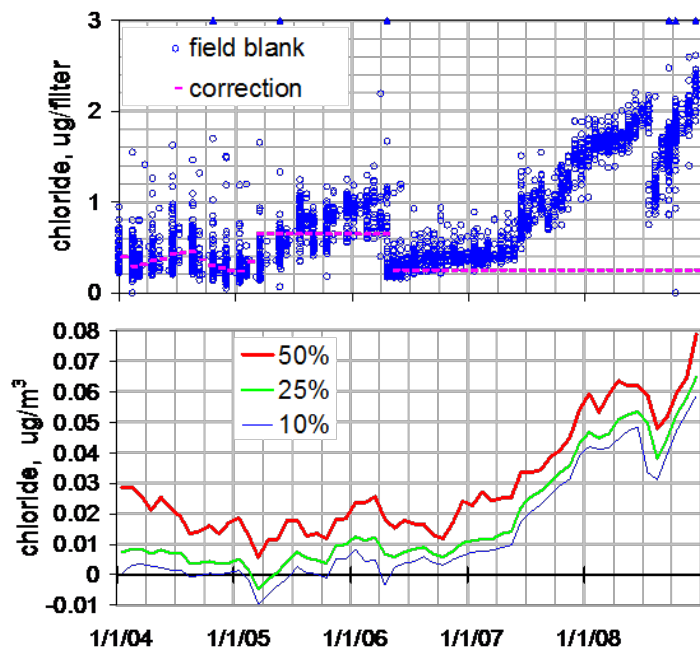


Figure 1. Monthly field blank loadings, filter-blank corrections, and sample-concentration statistics for chloride. The blank values and sample concentrations are plotted to have comparable ranges at the nominal sampling volume of $\sim 33 \text{ m}^3/\text{filter}$. The 10th, 25th, and 50th (median) percentiles of network concentrations track observed field blank trends, which are not captured by the values used for blank-correction.

Posting type **LAST**
Subject **YEAR**

Module/Species

Sites

Period

Recommendation

Advisory

Bias between masked and unmasked
elemental measurements

A/ S

entire network

evident since 2002

Consider masking status when evaluating
small differences in time and space.

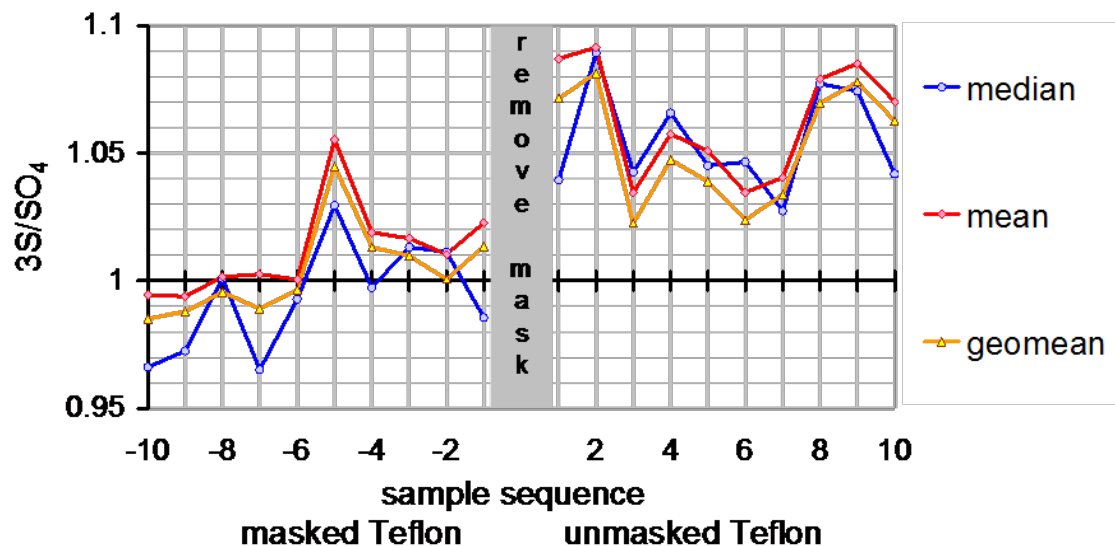


Figure 3. Measured sulfur/sulfate ratios at 55 sites converted from masked to unmasked operation around the beginning of 2004. The 55-site medians, arithmetic means, and geometric means are shown for each of the 10 sampling days immediately preceding and following conversion at each site.