Smithsonian's
Museum Conservation Institute

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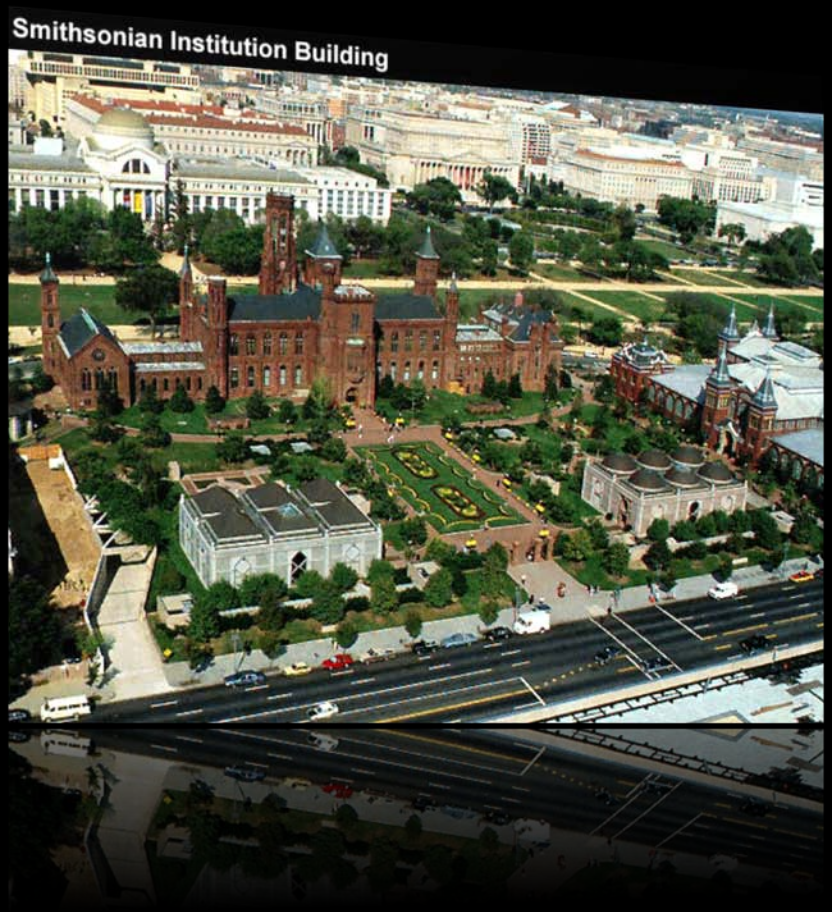
Smithsonian Institution

The world's largest museum and research complex



- 19 museums and galleries
- The National Zoo
- 9 research centers
- Over 20 million visits annually
- A pilgrimage destination
- Federal and public trust
- 137+ million objects

Museum Conservation Institute

the center for specialized technical collection research and conservation for all Smithsonian museums and collections

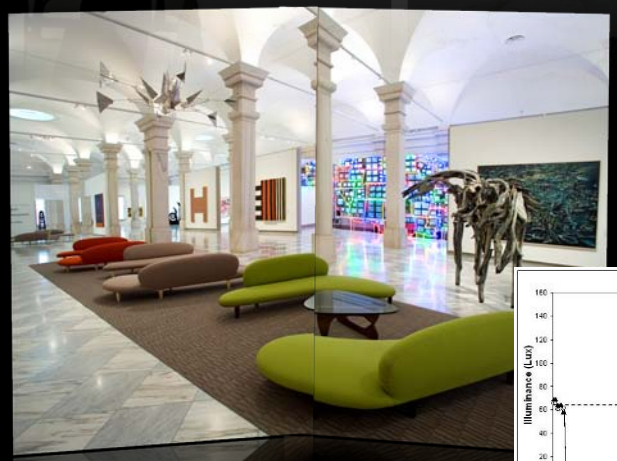
- Science research center
- Created in 1963 as Conservation Research Laboratory
- Located since 1983 “off the mall” in Suitland, MD
- International collaborations
- Federal appropriation with an endowment campaign

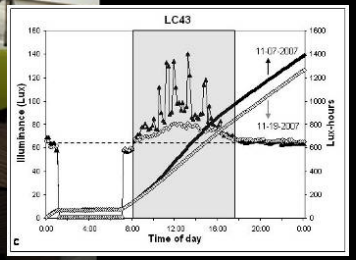
Smithsonian's Museum
Conservation Institute

Bridging Science and Art

Conservation:
hands-on treatments

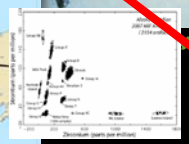
Technical studies:
the CSI for museums





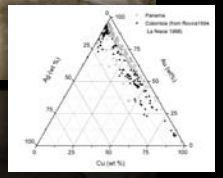
Applied Scientific Research:
guidelines for museum environments

Bridging Science and Archaeology



Alaska/Siberia: Pleistocene Obsidian

Mongolia:
Bronze Age Deer Stone



Panama: Pre-Columbian Gold

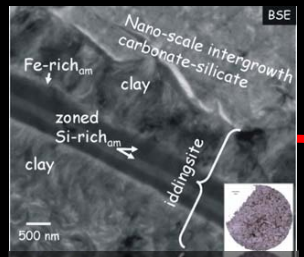
Jamestown, VA: Colonial Slate Tablet

Bridging Science and Time

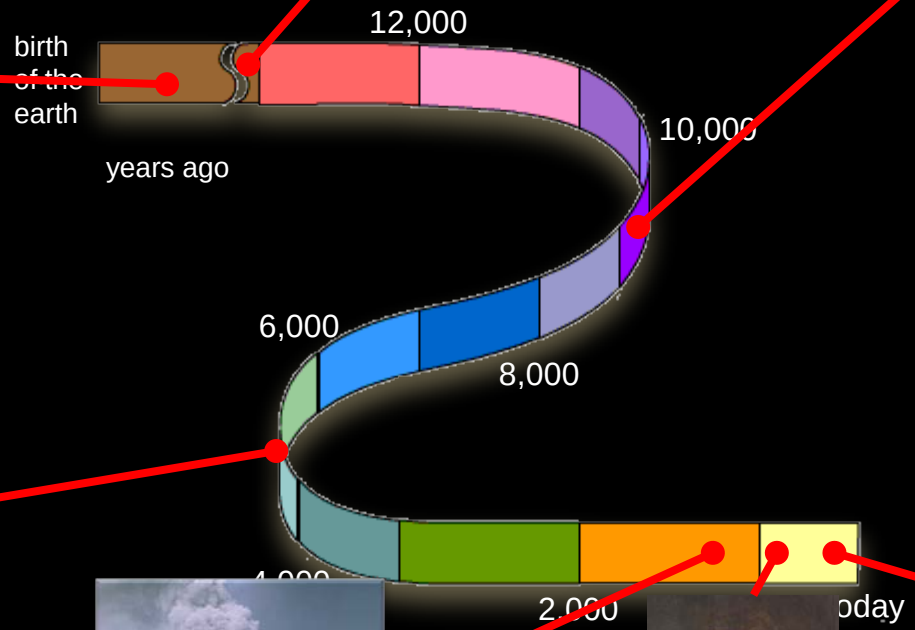
Smithsonian's Museum Conservation Institute

Prehistoric projectile point, ca. 14,000 BC

'Ain Ghazal 7250 BC



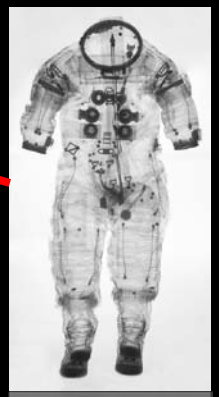
Martian meteorite with water



Iranian cuneiform mold, ca. 3000 BC

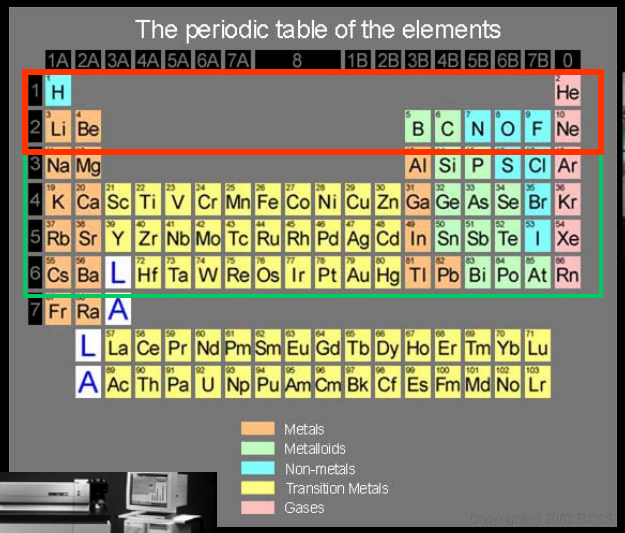
Sunset Crater Volcano eruption ca. 1100

Shakespeare portrait ca. 1610

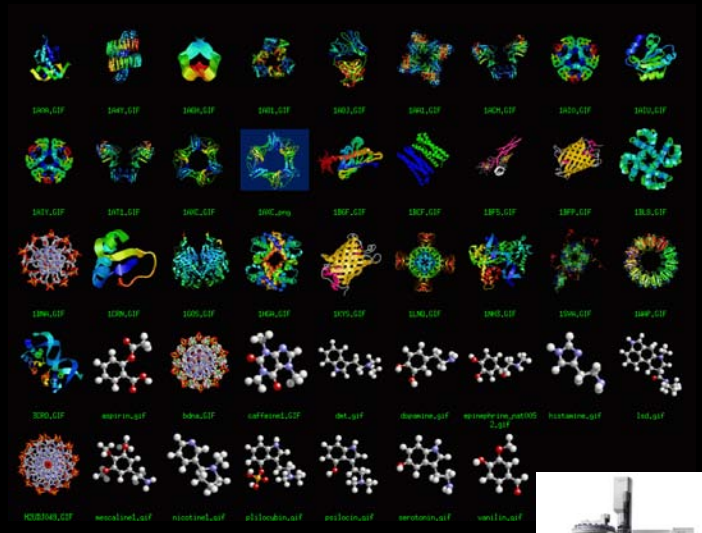


Apollo 14 – A. Shepard 1970

Instruments – constantly upgrading



IRMS



ICP-MS

Py-GC-MS

XRD

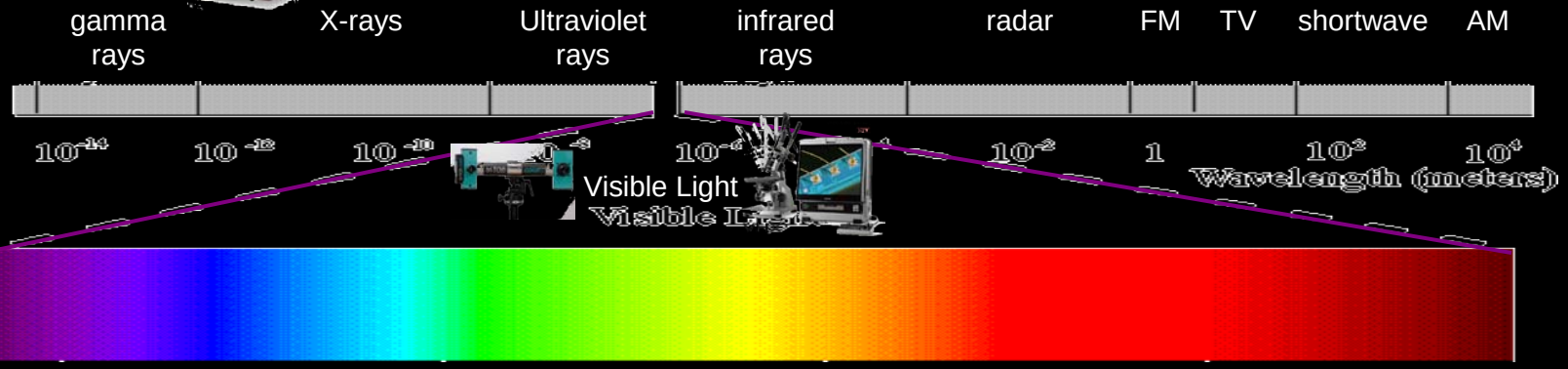
SEM

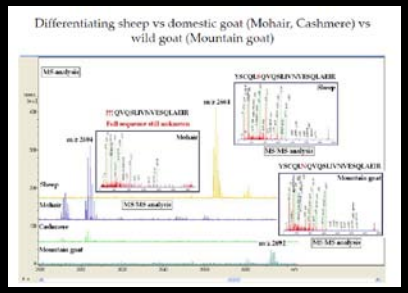
EDS

XRF

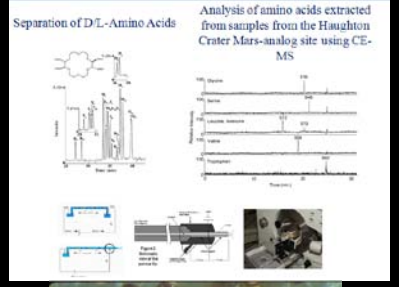
Raman

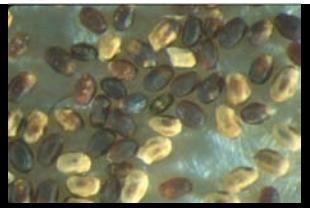
FTIR





Species identification &
Biological deterioration





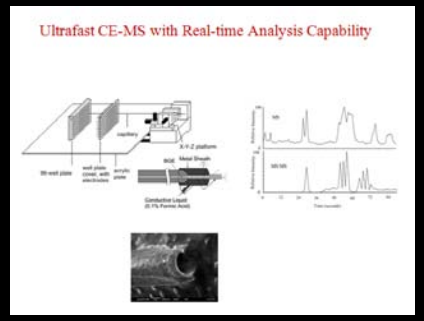
Dating of Museum's
Biological Samples

Mass Spectrometry
& proteomics

American Indian arrow quiver, @
Tibetan leather horse armor

Protein i.d.

Surface Analysis
& Imaging



Instrument Development

Partnerships – allow each of us to do more

Zavod za varstvo kulturne dediščine Slovenije
Institute for the Protection of Cultural Heritage of Slovenia

LASCAUX ET LA CONSERVATION
EN MILIEU SOUTERRAIN
Lascaux and preservation issues in a subterranean environment
AuditoriumColbert•2rueVivienne,75002Paris
jeudi 26 & vendredi 27 février 2009

WORLD MONUMENTS FUND

故宮博物院
THE PALACE MUSEUM

The Metropolitan Museum of Art
www.metmuseum.org

Smithsonian

Univerza *v Ljubljani*

breuckmann

Arctic Studies Center

BCIN

NIST
National Institute of Standards and Technology
U.S. Department of Commerce

SOLEIL SYNCHROTRON

THE UNIVERSITY *of York*

The Andrew W. Mellon Foundation

ICOMOS

ICCROM

CANADIAN CONSERVATION INSTITUTE
INSTITUT CANADIEN DE CONSERVATION

ICOM
INTERNATIONAL COUNCIL OF MUSEUMS
CONSEIL INTERNATIONAL DES MUSÉES
CONSEJO INTERNACIONAL DE MUSEOS

UNIVERSIDAD POLITECNICA DE VALENCIA

Partnerships – allow each of us to do more

MCI Collaborations:

Synchrotron SOLEIL and IPANEMA – Memorandum of Understanding signed June 10, 2010.

Centre de recherche sur la conservation des collections (CRCC) – Fading of Prussian blue and early cyanotypes.

Councils and Panels:

Conseil scientifique de la grotte de Lascaux, named February 16, 2010 .

International Symposium Lascaux and Preservation Issues in Subterranean Environments, February 26-27, 2009 – Chaired "Microorganisms in subterranean environments."

Smithsonian

SOLEIL SYNCHROTRON

MCI Postdoctoral Fellows:

Laure Dussubieux **-** ICP-MS methods to determine the provenience of glass beads -Currently at the Field Museum in Chicago.

Amandine Pequignot - Preservation of natural history collections, - Currently a researcher and lecturer at the Centre de recherche sur la conservation des collections (CRCC), Muséum National d'Histoire Naturelle, Paris.

Caroline Solazzo – Application of proteomics in archaeology. Currently a **Marie Curie International Outgoing Fellow** for work with MCI and NMAI on sheep and goat fibers in ancient, historical, and ethnographic textiles.

Claire Gervais **-** Leading the Smithsonian-SOLEIL synchrotron project on the fading of Prussian blue. – Currently a Research Fellow at MCI and SOLEIL/IPANEMA.

Fellowships & Internships

•**Smithsonian Institution Fellowship Program (application) http://www.si.edu/ofg/fell.htm**

Stipends:
Senior and Postdoctoral - $42,000 per year
Earth and Planetary Sciences Senior and Postdoctoral - $47,000 per year
Predoctoral - $27,000 per year
Graduate Students - $6,000

•**Smithsonian Postgraduate Fellowships in Conservation of Museum Collections Program**
http://www.si.edu/ofg/Applications/CFELL/CFELLapp.htm

•New Interdisciplinary Postdoctoral Fellowship in the Area of Stable Isotope Biogeochemistry

Deadlines: January 15, 2010

•**2010 Internships for Research Projects at MCI**
http://www.si.edu/mci/english/professional_development/2010ResearchInternships.html

http://www.si.edu/mci/english/professional_development/fellowships_internships.html