

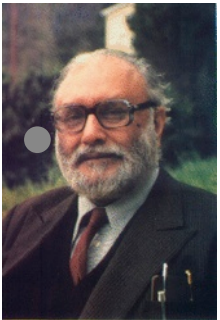
Open academic webcasting

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sdu@ictp.it



the ICTP

the Abdus Salam International Centre for Theoretical Physics



• founded in 1964, by the late Nobel Laureate Abdus Salam

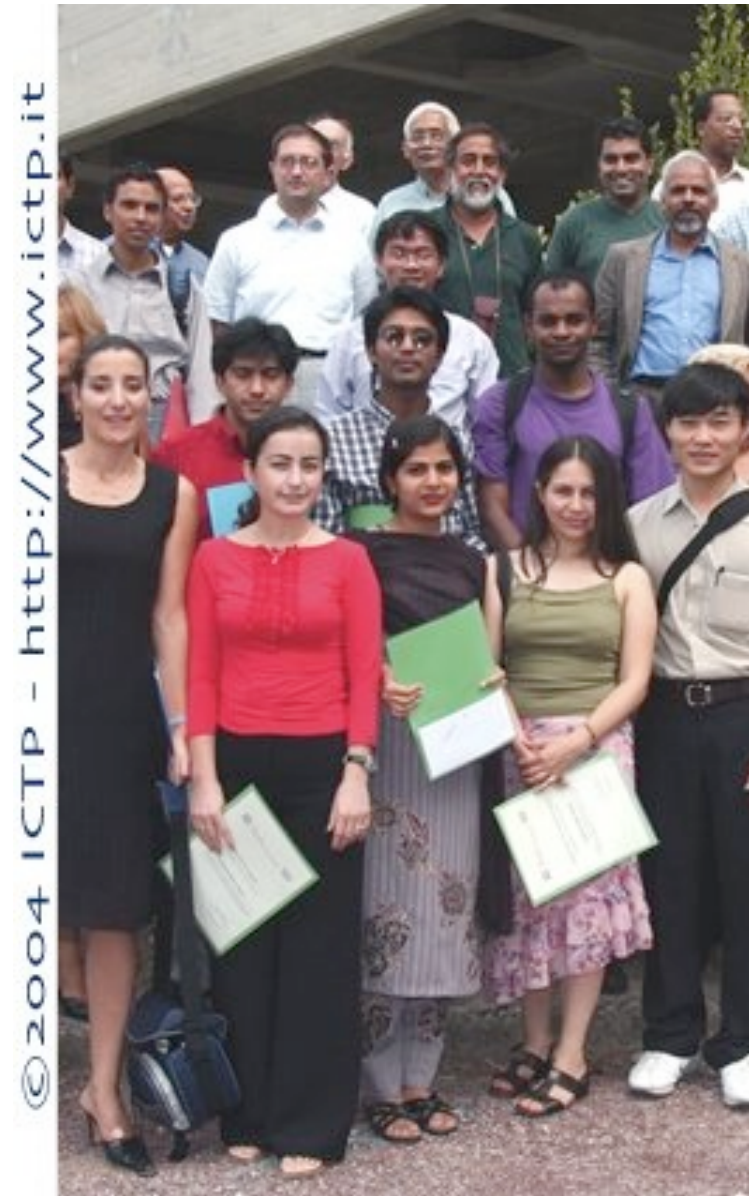
• receives the majority of its funding from the Italian government and is administered by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Atomic Energy Agency (IAEA)

• is located in Trieste, NE Italy



ICTP mandate

- **The ICTP has the mandate**
 - to foster the growth of advanced research in physics and mathematics, especially among **researchers from developing countries**
 - to create an international forum for the exchange of scientific information through courses, workshops and seminars
- ***“Scientific Thought is the common heritage of mankind”***



ICTP statistics

- The ICTP hosts
 - more than 4,000 scientists each year ~ 6,000 in 2009
 - Some 40 training activities per year
 - more than **100,000** visits since 1964
 - **60% from developing countries**
 - 40% from developed countries



Science Dissemination Unit



The SDU has been created with the broad aim of **communicating scientific contents and to more people than are able to visit the to the public in general throughout the any electronic media type.**

- SDU is a concrete example of helping to bridge the digital and scientific divide in developing countries in terms of applying low-cost, open source information and communication technologies (ICT) for dissemination, support and internationalization of science.
- SDU also addresses the ICT skill shortfalls of staff in Universities, Research Centres, Scientific Academies and Ministries of Science and Technology throughout the developing world by organizing training activities in ICT, both on-site and in Trieste.

Workshops in Trieste

- Typically:
- 10 day to 3 weeks
- more than 300 applications: 40 selected
- Hands-on lectures on Networking, Bandwidth Optimization, Wireless Technologies, Antenna Building, Wireless Security, Web – Proxy/Caching Servers...
- Open source based technologies by lecturers and experts from Europe and USA
- all lectures/material are available on the web plus recordings (DVD ROM archive)
- <http://sdu.ictp.it>




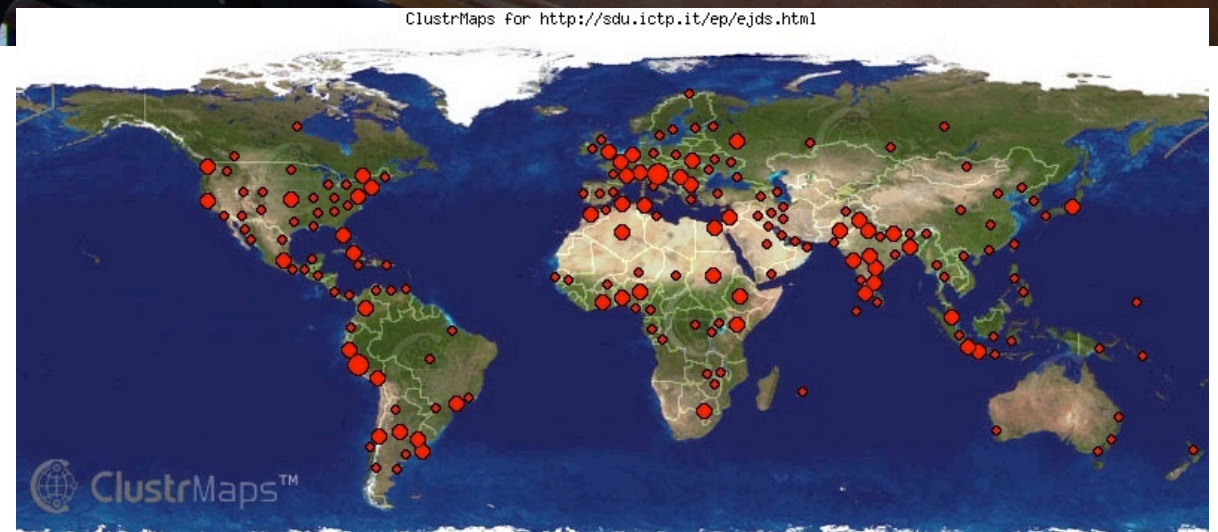


eJDS



electronic Journals Delivery Service (eJDS)

- to facilitate the access to current scientific literature free of cost
- to distribute individual scientific articles via e-mail **to scientists** in Developing Countries with low bandwidth access to Internet
- thanks to agreements with the Publishers
- uses www4mail (finalist in the 2000 Stockholm challenge) 



African Physical Review

- Open Access journal on Physics, publishes special issues dedicated to a rapidly developing field of physics and proceedings of conferences held in Africa.



www.aphysrev.org

2009

Vol 3 (2009)

 The African
Physical Review
Volume 3
Number 1
2009

2008

Vol 2 (2008)

 The African
Physical Review
Volume 2, 2008
Special Issue

Vol 2 (2008)

 The African
Physical Review
Volume 2
Numbers 1&2
2008
Volume 2, Issues 1&2, 2008

2007

Vol 1 (2007)

 The African
Physical Review
Volume 1, 2007
Special Issue
Part I
Special Issue, Part I

Vol 1, No 2 (2007)

Vol 1, No 1 (2007)

 The African
Physical Review
Volume 1
Number 1
July 2007

digital lectures

- Audio/Video streaming and archive of Scientific Lectures at ICTP
- recording lectures is very expensive (200-300\$ per hour)
- synchronized video and slides is needed
- workshop on Rich-Media applications in December 2007

ICTP Science Dissemination Unit Digital Lectures sdu.ictp.it

video streaming and archiving of selected scientific lectures @ ICTP


Video Streaming with Slides – Low Bandwidth

Click on the slide to enlarge

NEIC Sumatra-Andaman Islands Earthquake Response: Timeline

- 00:59 (GMT) Earthquake occurs
- 01:10 Pacific Tsunami Warning Center (PTWC) issues message to other observatories based on M8.0
- 01:14 PTWC issues warning of no threat in Pacific
- 01:15 Initial AUTOMATIC NEIC solution mb 6.2
- 01:24 Final AUTOMATIC NEIC solution mb 6.3
- 02:04 PTWC issues 2nd warning, based on M8.5, of possible tsunami in Indian ocean
- 02:15 REVIEWED solution written Ms 8.5
- 07:11 Magnitude revised to Mw 8.9 (Harvard CMT)
- 21:35 Magnitude revised to Mw 9.0 (Harvard CMT)

"2004 SUMATRA GIANT EARTHQUAKE"
ICTP – March 24, 2005
Karim Aoudia (ICTP-SAND)



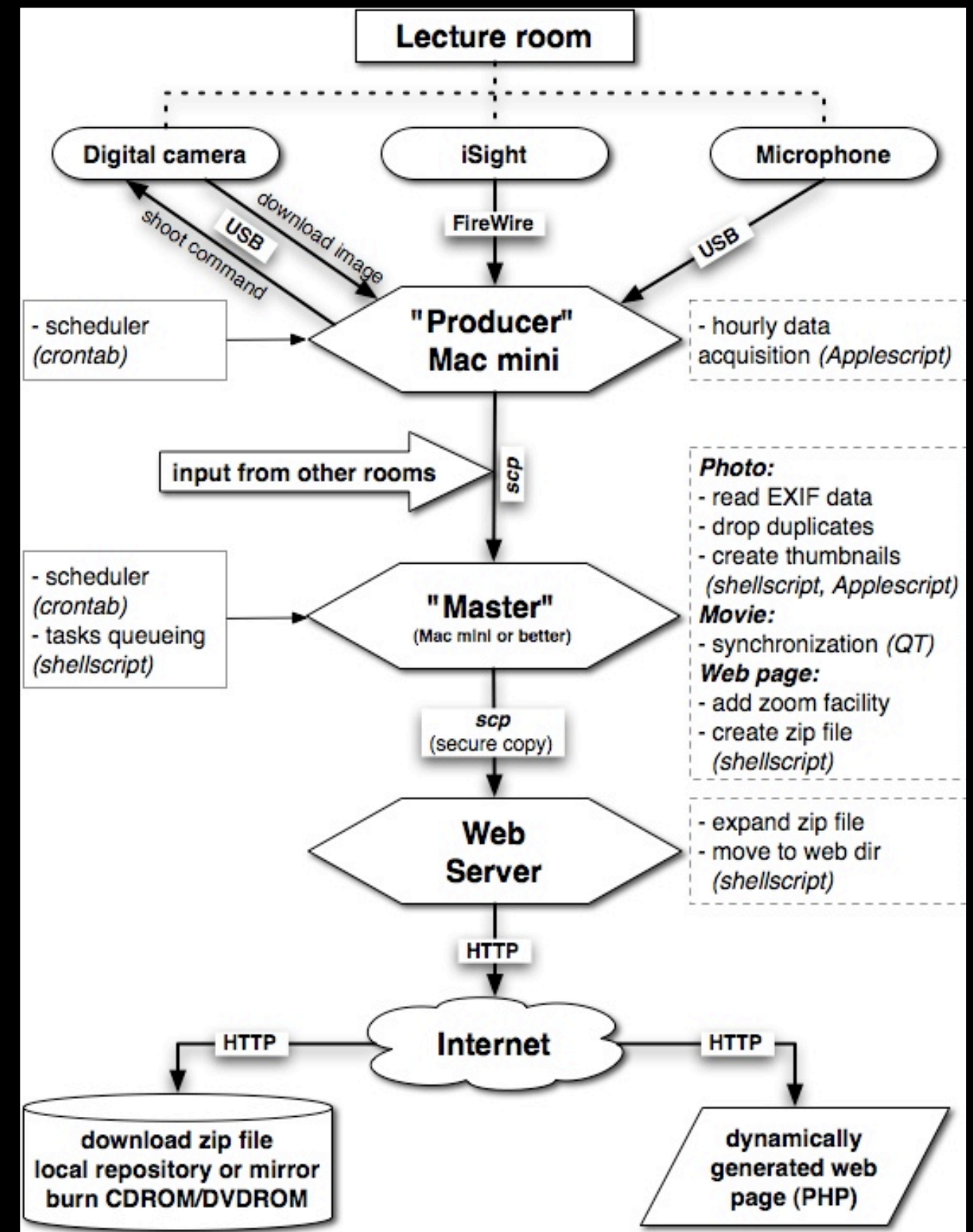
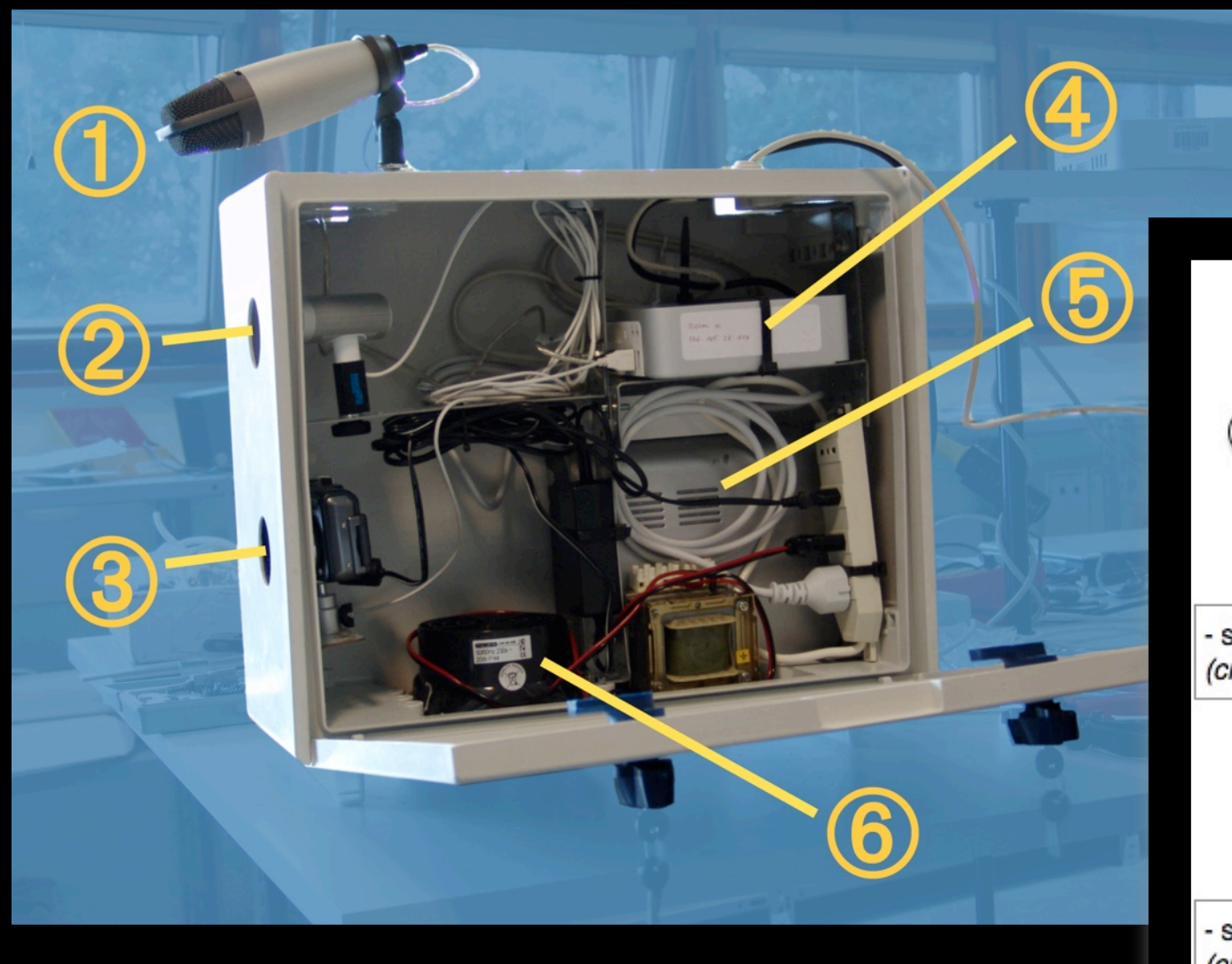
[sdu](http://sdu.ictp.it) Licensed under **Creative Commons** by ICTP—SDU. Since March 2005. **Disclaimer.**
You need the **QuickTime plug-in** to see the movie and the slides.
Prototype Service provided by ICTP—Science Dissemination Unit: contact e-mail sdu@ictp.it. **Close this window.**

our approach

- To have a Digital Lectures system that has:
 - No/minimum human intervention
 - non invasive
 - low cost of equipment
 - continuous service with minimal maintenance (massive recordings along campus)
 - low-bandwidth friendly features (zip, CD/DVD)
 - Web archive



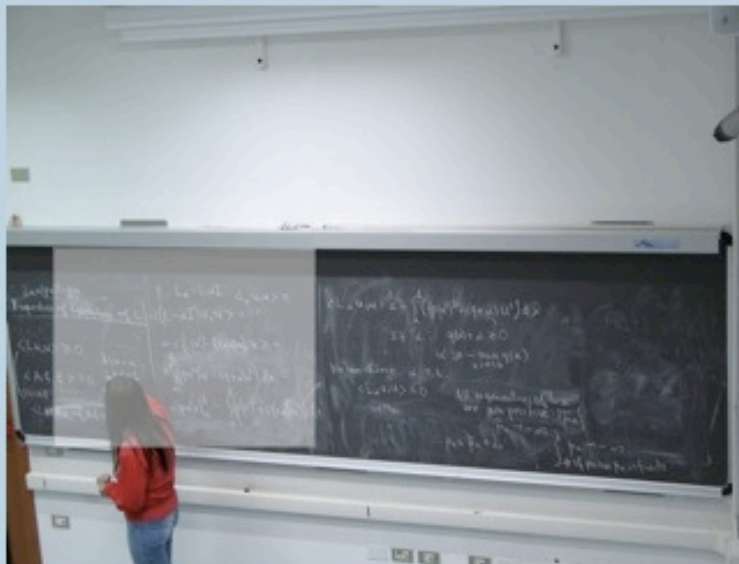
Sdu



Audio/video recording with synchronized slides



Date: 2007/03/08 10:00-10:59



Open the **original image** in a new window.

$$\begin{aligned}
 & \text{of eigenvalues of } L \quad \left| \begin{aligned} & L_\alpha = L - \alpha I : \langle L_\alpha u, u \rangle = \\ & = \langle (L - \alpha I)u, u \rangle = f(x) \\ & = \langle ((pu')' - (q + \alpha)u), u \rangle = \\ & = \int_a^b ((pu')'u - (q + \alpha)u^2) dx - \\ & = pu'u \Big|_a^b - \int_a^b (p(u')^2 + (q + \alpha)u^2) dx \end{aligned} \right. \\
 & \text{Alu} = u \\
 & LAP = f
 \end{aligned}$$

v1.1



Diploma on

www.ictp.tv

Visit ICTP-SDU for info

select diploma course

- « Basic Physics (BP)
- « High Energy Physics (HEP)
- « Mathematics (MTH)
- « Condensed Matter Physics (CMP)
- « Earth Systems Physics (ESP)

archives

- « last year (password required)
- « other recordings

resources

- « www.ictp.tv
- « [Main ICTP Website](#)
- « [About EyA](#)

DIPLOMA COURSE IN BASIC PHYSICS

Disclaimer: ICTP publishes these lectures on the web and distribute them in digital form only for educational purposes. It will not endorse or sponsor any commercial product, service or activity, and does not permit the recorded material to be used for commercial purposes.

For more information about the courses, including the schedule of lessons, please visit the [website of the Diploma Programme](#).

AVAILABLE TOPICS – ACADEMIC YEAR 2007/2008

Mathematical Methods
(recorded hours: 98)

Classical Mechanics
(recorded hours: 40)

Quantum Mechanics
(recorded hours: 62)

Advanced Electromagnetism
(recorded hours: 2)

(4 topics found, for a total of 202 hours)

v1.1



Diploma on

www.ictp.tv

[Go back to the Main Page](#)

select diploma course

« [Basic Physics \(BP\)](#)

« [High Energy Physics \(HEP\)](#)

« [Mathematics \(MTH\)](#)

« [Condensed Matter Physics \(CMP\)](#)

« [Earth Systems Physics \(ESP\)](#)

archives

« [last year \(password required\)](#)

« [other recordings](#)

resources

« [www.ictp.tv](#)

« [Main ICTP Website](#)

« [About EyA](#)

DIPLOMA COURSE IN BASIC PHYSICS (BP)

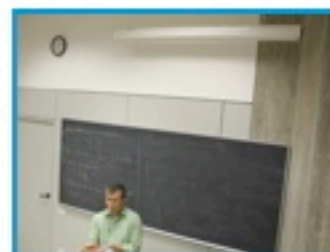
LECTURES ON QUANTUM MECHANICS

A total of 62 hours was found for this topic.

Complete list, in reverse chronological order ([invert](#)):

HOURL 61&62 (2008.01.07)

Lecturer: G. Thompson (ICTP)



Hour 61: 14.00—14.59 (room "H")

Download: [zipfile](#) (QT format, 224.0MB)
or View now: [QuickTime](#), [Flash](#).



Hour 62: 15.00—15.59 (room "H")

Download: [zipfile](#) (QT format, 190.2MB)
or View now: [QuickTime](#), [Flash](#).

HOURL 59&60 (2007.12.18)

Lecturer: L. Velasco-Sevilla (ICTP)



Hour 59: 11.00—11.59 (room "H")

Download: [zipfile](#) (QT format, 169.4MB)
or View now: [QuickTime](#).

Notes: tutorial

differences

- Open academic webcasting presents different problems compared to traditional Open Access:
 - quantity of information (“a video can say 1000 words”)
 - webcasting difficult to tag automatically
 - presentation style is open vs fixed format style
 - webcasting can have different technical formats
 - webcasting difficult to disseminate due to size (150M vs 2M). Especially important for institutions with low-bandwidth
 - difficult to review moderate (much more time-consuming)

Thank you for your attention!

Contact info: sdu@ictp.it

