

Installation and Commission of Monitoring Laser Source at H4

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Caltech

CMS ECAL Week, CERN

September 4, 2001

Presented by Maurice Haguenaer

- Overall Schedule of I&C;
- Three Remaining Issues.

Monitoring Laser I&C Schedule

- Packing and Shipping: July 31 to August 13.
- Caltech team at CERN: August 14 to 31.
- Unpacking laser cargo: August 17;
- Electricity power installation: August 18 and 19;
- Chilled water installation: August 20 and 21;
- Laser installation: August 22;
- Laser commissioning and fine tuning: August 23 to 24;
- Training David Bailleux: August 25 to 28;
- Interfacing with DAQ and Level 2: August 28 to 30.

1.1 mJ/pulse at 440 nm was achieved on August 24.
Interfacing DAQ and Level 2 completed on August 30.
Laser source is ready for ECAL monitoring at H4.

The Laser System at Caltech before Shipping

July 30, 2001



J. Hanson with Laser Cargo (32 Boxes) on Way to CERN

August 3, 2001



Laser Cargo (4 Crates) at CERN

August 17, 2001



K.J. Zhu is Wiring Transformer

August 18, 2001



Two Laser Power Transformers Wired

August 19, 2001



Chilled Water Supply Installed

August 21, 2001

Note the Blackened Filter due to Dirty Water



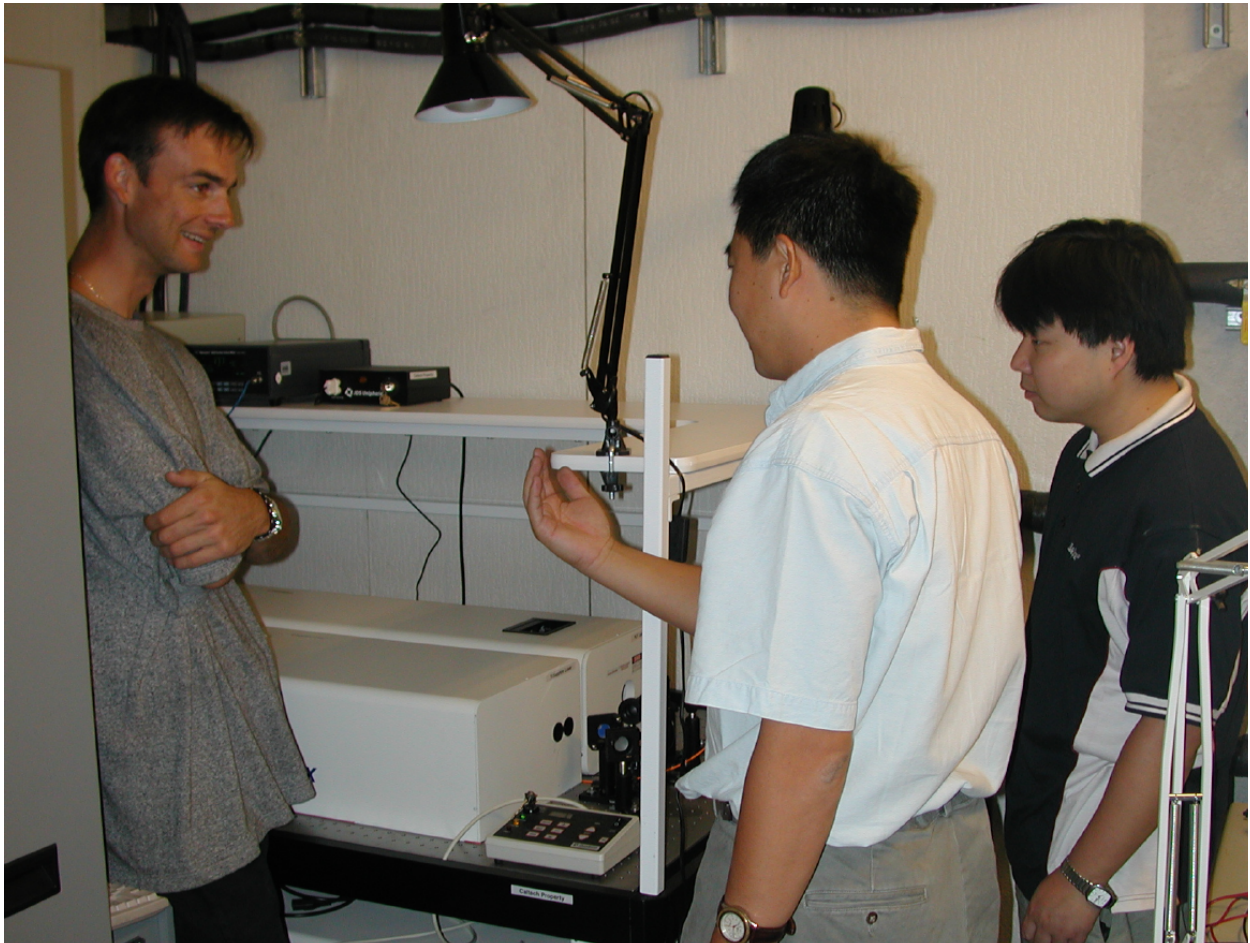
L.Y. Zhang is fine Tuning Laser

August 24, 2001



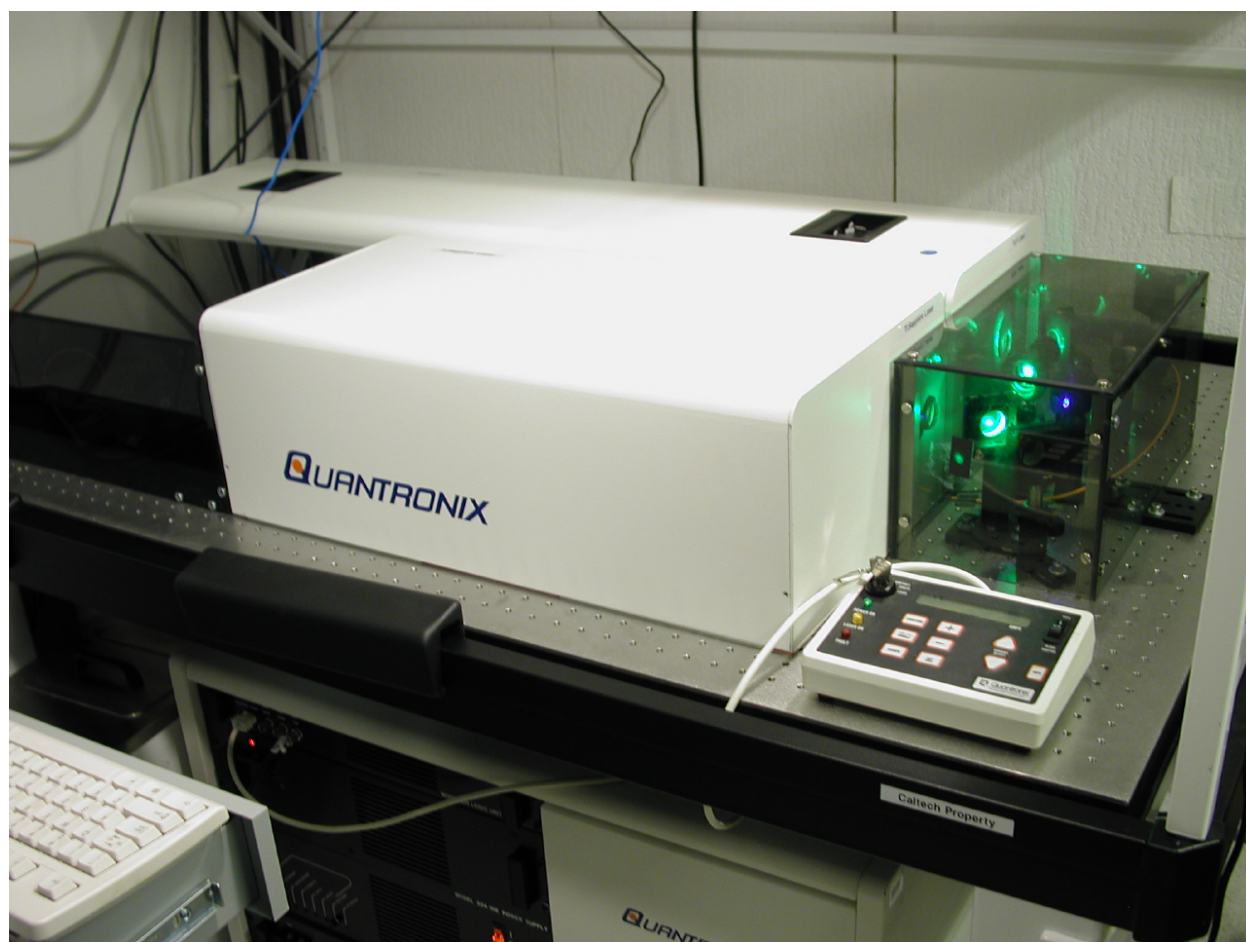
D. Bailleux being Trained for Laser M&O

August 26, 2001



Laser System Reaches 1.1 mJ/pulse

August 24, 2001



Remaining Issues to be Resolved

- Inspection by TIS indicates the following safety measures which will be implemented when barracks construction is finished.
 - Door interlock;
 - Walls paint to gray;
 - Flashing warning lamp when laser in operation.
- The air-conditioning is yet to be installed to remove heat generated by electronics and Neslab in laser room.
- The quality of Chilled water needs to be improved:
 - CERN chilled water is too dirty, which may damage laser cooler.
 - Both calorimeter and laser share the same pipe of chilled water, the fluence for laser is not enough if calorimeter cooler is used.
 - Solution: A separate heat exchange for laser system is required.

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for the Help during Laser I&C**