

## SEISMOLOGY

# Scientists on trial over L'Aquila deaths

*Seismologists charged for giving apparent reassurances on Italian earthquake risks.*

BY NICOLA NOSENGO IN ROME

The perils of communicating scientific uncertainty when under the media spotlight are set to be probed in an Italian court later this year. The case, which was given the go-ahead by a judge last week, involves six Italian seismologists and one government official. They will be tried this autumn for the manslaughter of some of the 309 people who died in the earthquake that struck the city of L'Aquila on 6 April 2009. If convicted, they could face jail sentences of up to 12 years.

The seven were on a committee tasked with assessing the risks of increased seismic activity in the area. At a press conference following a committee meeting a week before the earthquake, some members assured the public that they were in no danger. After the quake, many of the victims' relatives said that because of these reassurances they did not take precautionary

measures, such as leaving their homes.

L'Aquila's public prosecutor, Fabio Picuti, argued last week that although the committee members could not have predicted the earthquake, they had translated their scientific uncertainty into an overly optimistic message. The prosecution has focused on a statement made at the press conference by accused committee member Bernardo De Bernardinis, who was then deputy technical head of Italy's Civil Protection Agency. "The scientific community tells me there is no danger," he said at the time, "because there is an ongoing discharge of energy. The situation looks favourable."

Many seismologists — including one of the accused, Enzo Boschi, president of the National Institute of Geophysics and Vulcanology in Rome — have since criticized the statement as scientifically unfounded. The statement does not appear in the minutes of the committee meeting itself, and the accused seismologists

say they cannot be blamed for it. De Bernardinis's advocate insists that his client merely summarized what the scientists had told him. The prosecutor claims that because none of the other committee members immediately corrected De Bernardinis, they are all equally culpable.

Boschi says that he is "devastated" by the ruling. He notes that there are hundreds of seismic shocks every year in Italy: "If we were to alert the population every time, we would probably be indicted for unjustified alarm," he said, adding that poor building standards were the main cause of the tragedy.

Vincenzo Vittorini, a physician in L'Aquila whose wife and daughter were killed in the earthquake and who is president of the local victims' association, hopes the trial will lead to a thorough investigation into what went wrong. "Nobody here wants to put science in the dock," he says. "All we wanted was clearer information on risks in order to make our choices". ■

## ENERGY

# Japan quake rocks fusion project

*Damaged facilities force further delay to ITER experiment.*

BY GEOFF BRUMFIEL  
IN ST-PAUL-LEZ-DURANCE, FRANCE

The world's largest fusion experiment is finally beginning to take shape. Workers at a vast site in southern France have dug the 17-metre-deep pit that will house the ITER reactor, and will soon install 500 pillars of steel-reinforced concrete that should protect the machine during an earthquake. But even as they toil, a quake halfway around the world has struck a blow to the project.

The 11 March earthquake and tsunami that hit Japan, one of seven partners in ITER, severely damaged key facilities for testing the reactor's components. Unless repairs can be made or work reassigned quickly, the damage could cause a delay of "perhaps several years", according to Osamu Motojima, ITER's director. Motojima says that he and his team are looking at ways to reduce the impact. "At present my target is less than one year's delay," he says.

ITER's first experiments have already been pushed back from 2016 to 2019, and the project has suffered serious cost overruns since its partners agreed to go ahead in 2006. Any extra delays are likely to increase political pressure to find cost savings and speed up work.

The giant reactor is designed to prove that useful energy can be extracted from the fusion of hydrogen isotopes. By trapping the hydrogen using powerful superconducting magnets and heating it to the point of fusion at 150 million °C with specially designed ▶



Construction of the ITER fusion reactor in France is beset by financial and technical problems.

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