

Dispute over 'threshold' explosions could disrupt test ban negotiations

Paris. International efforts to negotiate a Comprehensive Test-Ban Treaty (CTBT) are in the balance because of proposals by nuclear weapons states to exempt low-yield nuclear explosions. Non-nuclear weapons nations seem prepared to abandon efforts to agree on a treaty altogether rather than to accept the proposals in their current form.

A comprehensive test-ban is widely considered to be the price that nuclear weapons states promised to pay earlier this year for agreement among non-nuclear states on an indefinite extension of the Nuclear Non-Proliferation Treaty (NPT).

But whereas the non-nuclear states have until recently seemed ready to agree to a sufficiently comprehensive ban to encourage disarmament as well as non-proliferation, they fear that the new proposals would drop disarmament from the CTBT's goals.

The controversy over the CTBT — now being negotiated at the Conference on Disarmament at Geneva — centres on closed talks among the permanent five nuclear weapons state members of the United Nation's Security Council, known as the P5. These talks are intended to fix the threshold below which explosions would be exempt from the ban, the main issue within the so-called "activities not prohibited" section of the treaty.

The official position of the United States is that only hydronuclear experiments (HNEs) with yields below 1.8 kg equivalent of TNT should be exempt from the ban. Such small HNEs are not very useful for designing weapons, but they are widely accepted as useful for testing the safety of stored weapons. What distinguishes HNEs from full-blown nuclear tests is that the chain reaction is stopped before a full-yield explosion occurs.

Last month, however, William Perry, the US defence secretary, announced that the United States had reopened discussions on the level of this threshold. The Pentagon has since argued that tests with yields as high as 500 tonnes should be exempt from the ban, although the White House has, for the present, rejected this proposition.

The US announcement followed a demand by France that the threshold be fixed at 200–300 tonnes. The United Kingdom, whose official position calls for a threshold of 45 kg, is also said in some circles to be keen on raising this to 500 tonnes. "I think the hawks in the nuclear weapons states are working together on this to undo the treaty", says Christopher Paine from the Natural Resources Defense Council (NRDC), based in Washington, DC.

The proposals have been greeted with

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dismay by non-nuclear states, which see them as evidence that the P5 states are not genuinely committed to a comprehensive test-ban. India, the *de facto* leader of the non-aligned states, has retaliated by proposing that the treaty should ban all tests involving fissile material, which would even outlaw HNEs with yields of only a few kilograms.

India's proposal represents a hardening of the position of the non-nuclear states. Until recently, these seemed ready to accept not only 1.8-kg-yield HNEs, but also a request by Russia that HNEs of up to 10 tonnes should be allowed. Russia has difficulty controlling HNEs, and its case for what is often referred to as a 'whoops factor' has been widely accepted as justified.

According to Rebecca Johnston, the Geneva representative of the London-based Verification Technology Information Centre (VERTIC), India is sending a "strong signal to the nuclear weapons states that if they do not agree to a comprehensive test ban, there will be no test ban at all".

Johnston claims that non-nuclear states have hardened their positions because they feel the P5 have failed to respect the "gentlemen's agreements" given to win their consent to the NPT. The ink on the NPT had barely dried, she points out, before China exploded a bomb, France announced its decision to resume testing, and the United States reopened the debate over thresholds.

Speaking at Geneva earlier this month, Boutros Boutros Ghali, the secretary general of the United Nations, warned that failure to reach agreement quickly on nuclear ►

France keeps the experts guessing

Paris. France's proposal to exempt low-yield explosions from the Comprehensive Test-Ban Treaty (CTBT) (see above), combined with its recent decision to resume nuclear testing, has provoked a vigorous debate about the goals of its nuclear weapons programme.

Jacques Chirac, the French president, has stated that one or two of the eight proposed tests are needed to qualify the TN75, a miniaturized, 100-kilotonne warhead for the M5 intercontinental ballistic missile (ICBM) designed for the next generation *Triomphant*-class submarines. Another two tests are needed to maintain the existing French stockpile, he says, and a further four for calibrating simulation techniques.

French officials also argue that they need a new generation of weapons that would be less "sensitive" to ageing and could be remanufactured reliably. They point out that France gets less information from its tests than the United States because of technical problems, a claim supported by reports

from the US Central Intelligence Agency.

Christopher Paine, a senior research associate at the Natural Resources Defense Council (NRDC) in Washington, DC, says that France "seems to have a reasonable case" for testing the TN75 warhead. But he contests claims by France that further tests are needed to ensure the reliability of the stockpile — although admitting that outside access to data on the state of French weapons makes it difficult precisely to evaluate French arguments in favour of testing.

But many suspect that France is developing tactical warheads. Indeed, although the government says that its policy of nuclear deterrence remains unchanged, some parts of the French military argue that variable-yield designs are needed, including weapons with lower yields. But one senior military official, who supports this position, argues that the aim is not to develop battlefield weapons, but to provide a deterrent more suited to the post-Cold-War geopolitical situation. **D. B.**