Given the signal-to-noise ratio for the main Indian explosion on May 11, the Nilore station should have seen explosions on May 13 as low as mb=2.5, or about 10 tonnes. As in the story of the dog that did not bark, the fact that neither Nilore nor any other outside station registered the sub-kt Indian explosions of May 13 raises interesting questions, which are at this time unresolved. Either the blasts were more decoupled than appears to be the case, their yields were much smaller than announced, they did not take place, or the detection and calibration system failed in some yet-to-be-explained way.

Detecting simultaneous explosions is not essential for the purposes of the CTBT. One explosion is enough to constitute a violation of the treaty. The Pakistani sub-kt tests of May 28 and the Indian sub-kt test of May 11 were set off simultaneously with much larger explosions, making them very difficult to detect. Given that the system did not see the Indian sub-kt explosions of May 13 on their own, it is not surprising that it did not detect the sub-kt blasts set off simultaneously with larger blasts. Even larger blasts could be hidden from teleseismic observation in a 15 kt event if the delay in firing is less than 0.3 sec for 1 km separation.

5C. India and Pakistan as Test Cases

It should be stressed that the India and Pakistan explosions do not represent the kinds of situations that the CTBT monitoring system would likely have to deal with under the Treaty. This would be the case even if the system were fully operational, although a complete system would undoubtedly be more effective. Infrasound and hydroacoustic stations probably would not have added much in the Indian and Pakistani cases. Radionuclide monitoring, especially from close-in stations, might have helped to detect any venting that might have occurred. The nearest operating radionuclide station in the IMS network to India and Pakistan was probably in Kuwait, a good distance away.[47] However, there are also a number of institutional reasons why the system did not have the advantages it would have in seeking to detect clandestine nuclear explosions by States Party to the CTBT, as outlined below.[48]

Despite conclusions by some analysts that sub-kt tests have little military value, India and Pakistan must have felt their sub-kt tests had military or political value, because they carried them out. However, their situation is different from that of States Party to the CTBT. Indian and Pakistan obtained the benefits of knowledge from both smaller and larger blasts because they did not fear detection. A State Party to the CTBT trying to conceal a test explosion would not set off a larger explosion and would be probably be constrained by fear of detection to the sub-kt range, of lesser military value by itself.

India and Pakistan are not signatories to the CTBT and are not bound by it. Monitoring of States Party (or signatories, prior to entry into force) would be much more effective, as they would agree to have monitoring stations on their territories. If they were States Party to the

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47 van Moyland and Clark, 1998.

48 Findlay, 1998.