

# Nuclear carnage would claim 44 million

By BILL WAINWRIGHT

## NEW ACCOUNT of the horrific carnage caused by a large-scale nuclear attack on his country, where "most human life would simply cease to exist," was reported to scientists yesterday.

We could expect 44 million to be killed outright or to die within two weeks of the nuclear attack, said Dr. Stan Openshaw of Newcastle University.

For most of the remaining 1 million or so, prospects of survival are "grim, to put it mildly," he added. Even the most limited of nuclear wars "would result in

the most grotesquely unacceptable casualty levels," he said.

Dr. Openshaw was presenting the results of a recent study he had completed using 1981 census figures which updated previous research he and colleagues had published in a book called "Doomsday" last year.

Giving a step-by-step account of each stage in his computerised calculations, he explained the meticulous care he had taken to avoid exaggeration.

An important new feature of his report was a list of survival of each of the 458 districts into rate forecasts for the populations

which the country is divided.

If anything, his figures may err on the low side. They are based on the best available information of the effects of the enormous heat, blast and low local radioactive fallout produced by nuclear explosions.

His calculations involve a 'World War III' "minimum level nuclear attack" on pre-selected targets by 342 separate warheads with a total explosive power of 219 megatons.

After working out casualties from burns, he said: "The burn survivors and burned injured now face blast effects. Many

people who live near major targets would be killed several times over from the effects of different weapons."

The nuclear explosion "would cause immense waves of increased atmospheric pressure which can cause buildings to collapse and people and debris to be propelled at high speed into or out of buildings," he said.

But his calculations do not take into account the likely deaths and casualties resulting from the nuclear winter or other climatic effects, or from starvation, disease, lack of shelter, or from serious injuries which are

not immediately fatal during the two-week period after the nuclear attack.

Nor do they include the effects of the longer lasting fallout from attacks on nuclear establishments such as nuclear power stations.

By excluding calculations on these sources of casualties Dr. Openshaw considered he would make up for many uncertainties in the estimates of the nuclear weapon effects on which he based his study.

So far, the only estimates of nuclear war casualties published by the Home Office, which put

the deaths at just under 1 million, have been withdrawn. "Their assumptions are seemingly obsolete, probably wrong and are being revised," Dr. Openshaw said.

His estimates show that "many of the major cities the survival rate is either zero or on a few per cent.

"The highest survival rates would be the Scottish Highlands, the Border counties North Wales, parts of the West Country, and a few other locations.

"However, before these places become too excited about the chances of survival, it should be noted that high survival locations are also the optimum locations for Cruise missiles launched by he said.