INTRODUCTION

An international conference on the Risk of Accidental Nuclear War was held on 26-30 May 1986, in the Chapel of the Vancouver School of Theology at the University of British Columbia. The conference was sponsored by Science for Peace, the Vancouver branch of the United Nations Association in Canada, and the Peace Research Committee of the International Political Science Association. Major funding for the conference was provided by the Canadian Institute for International Peace and Security, the Disarmament Fund of the Department of External Affairs, the Gordon Foundation, and Science for Peace. Additional support and assistance was provided by the deans of Arts and Science of the University of British Columbia, the Centre for Continuing Education, the Vancouver School of Theology, and the Vancouver branch of the United Nations Association in Canada. Twenty-four speakers addressed the conference; a list of their names, current work and institutional affiliations is appended to this report. In addition, thirty-two academics, professionals, and representatives of peace groups registered for the entire week, while many others participated in one or more of the public sessions.

The Background and Rationale of the Conference

For a number of years, there has been growing concern in academic and policy-making circles alike, about the possibility that a strategic nuclear exchange might be initiated inadvertently or accidentally, or as a result of the mistaken belief that an attack from the other side was imminent or already underway. The reasons for this anxiety are threefold.

First, a growing number of military strategists have begun to worry lest the deployment of new strategic and theatre weapons systems, together with consequent changes in strategic doctrine and operations policies, prove highly destabilizing. The short flight-times of the new intermediate-range nuclear forces (INF) and forward-based submarine-launched ballistic missiles (SLBMs) render both sides' command and control vulnerable to "decapitation" and thus reduce the decision time available during crises. In response to these developments both sides may have adopted strategic postures and operating policies which amount to a virtual launch-on-warning* in time of crisis.

A second source of anxiety, about which computer scientists are expressing concern, is the growing tendency to automate decision-making within nuclear command and control systems. This process of automation, which has been developed in response to shortened warning times, carries with it the twin dangers of an increased number of errors and failures within command and control systems, and a decreased ability to check and rectify these errors while maintaining operational control.

* The definition of launch-on-warning is currently the subject of considerable controversy.