

J104(A83)

J104(A83)

Proposal Abstract J104(A83)

1. **Arms Control Problem:**
Nuclear weapons - cruise missiles
2. **Verification Type:**
Remote sensors - satellite
3. **Source:**
Hagen, Lawrence. Air-Launched Cruise Missiles: Implications for Deterrence Stability, Arms Control and Canadian Security. Ottawa: Operational Research and Analysis Establishment, Department of National Defence, October 1983. Project Report No. 214.
4. **Summary:**
This report addresses three questions about the air-launched cruise missile (ALCM): whether the ALCM is a stabilizing or destabilizing weapon system, what the impact of the ALCM will be on the prospects for successful arms control and what effect deployments of ALCMs would have on Canadian security. The report reviews the negotiating experiences with cruise missiles during the SALT II discussions and the author concludes that both superpowers "have been satisfied with the verifiability of air-launched strategic cruise missiles in the past" (p.23). SALT II handled verification problems by counting cruise missile carriers (heavy bombers) rather than missiles themselves. Submarine- and ground-launched cruise missiles (SLCM, and GLCMs) are more difficult to verify; national technical means can verify numbers of bombers for ALCMs, but not warhead type for SLCMs and GLCMs. Light nuclear warheads can be substituted for heavier conventional warheads thereby extending the range of the missile. However, the author asserts that because of their slowness in comparison with ICBMs, the three types of cruise missiles are not destabilizing first-strike weapons, therefore "the need for precise verification is arguably less severe than with other systems" (p.25). Hence confidence with regard to precise numbers of SLCMs and GLCMs is not necessary. Furthermore, current verification methods can create high confidence by detecting deployments of GLCMs. Satellites can 'sample' deployment sites to determine adherence and can monitor the deployment pattern of cruise missiles and the size of garages for potential reloads or refires. Verification of cruise missiles was an issue at the INF negotiations in Geneva and the US appeared confident that the problem could be dealt with. Verification of ALCMs in START negotiations could utilize the same formula as that used in SALT II.