Background information

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Space law and its application to the ROSAT mission

Space law relates to the non-territorial region of outer space, an area where territorial acquisition is forbidden, which means that national legislation does not apply. Consequently, a legal regime capable of assuring a proper framework for actions taken up in space is required. That is the role performed by the United Nations Treaties and Principles on Outer Space. The UN Outer Space Treaty of 1967 set out the basic principles and, in the following years, the UN Office passed other special treaties to cover subjects such as rescue and the provision of assistance, as well as liability and registration. These follow on the principles of the Space Treaty with specific details. Later, all this was followed by the Moon Agreement.

To all practical intents and purposes, space missions invariably involve several participating countries. If we wish to launch a satellite here in Germany, since we have no rocket launching facility, we need to seek the assistance of a launch service provider, that is, a partner in our project. At that point, the project already involves two countries. These countries must then reach an agreement on which of them assumes the responsibility, for example the one holding 'registration status'. Then, further to the law on registration, that decides which legal regime is then applicable. As a general rule, this is the party who has the interest in the launched object, i.e. the satellite operator.

In the case of ROSAT, three countries were involved: the United States was the launch service provider, but was also a scientific partner on the project; the majority of the scientific payload came from Germany, and one additional instrument came from the UK. There are project agreements between all three partners.

The liability regime in space is very 'friendly to the injured party', which means that to any external party, all involved countries share liability on a joint basis. Accordingly, in this case, three countries are involved, so any plaintiff would be entitled to press charges against all three. Between the parties, agreement is reached upon how to divide up this shared liability, and this is repeated countless times in project agreements. But another principle can be applied –corresponding to the scope of those individual shares – which allows for the plaintiff to proceed against each of the countries involved separately, in each case for the full amount of compensation.

The liability regime in space distinguishes between two major categories: firstly, damages incurred here on Earth, independently of where, i.e. in which country, these arise. Secondly, any damage to aircraft in flight. That is the category of uninvolved third parties who enjoy comprehensive protective cover. In this case, liability applies irrespective of direct fault. In other words there is no need to provide evidence that an infringement has taken place. Instead, the simple fact of physical damages having occurred provides the basis for pressing liability claims against the countries involved.

Despite the large number of objects that have already fallen back to Earth, to date, virtually no incidents of damage or injury have been reported. The only known case of damage to have received widespread publicity was Kosmos 954, in which a Russian surveillance satellite came down in Canada. It did not injure anyone but it did have a nuclear power unit on board, and the spreading of these particles of scrap gave rise to a clean-up campaign to dispose of this debris. The cleaning costs for this incident amounted to about 10 million dollars, so a relatively small sum under the circumstances. In this instance, Russia and Canada reached an amicable agreement with one another. Apart from Kosmos 954, no other major incidents are known.

There is a significant loophole, especially given the increasing level of activity in space, which could be designated the 'Space Traffic Law': after all, without traffic regulations, it is difficult to reach any objective view on the causes of damage. If for example two satellites were to collide, it would at the present time be difficult to establish whether this arose because one was unable to take evasive action, or because neither

was able to take evasive action, simply because there are no ‘objective traffic regulations’. In future, this is certainly going to become an area that will require much closer attention by the legislators.