

SPACE DEBRIS SYMPOSIUM (A6)

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THE POSITION OF HUMAN ACTIVITIES ON SPACE DEBRIS

Abstract

Since the beginning of the space programme in the late 1950s and the early 1960s by the former U.S.S.R. (Russian federation) and the United States of America(USA) there has been great achievements and developments in the areas of communication, remote sensing predicting climate change, disaster management, military operations as well as science and technology as a whole. Today there are 50 countries with satellites in orbit with the Malaysian Razak-sat and the United Arab Emirates Dubai sat-1 as one of the youngest at the beginning of this research work in September 2009.

However despite the above mentioned developments in space sciences, but yet there is a new ongoing negative impacts associated with this development in space sciences as a result of space programs.

This negative impact is best described as the "space pollution" this space pollution is caused by the introduction and the increasing numbers of debris in space as a result of human activities associated with space programmes like the destruction of satellites in the outer space for example like the destruction of the failed USA-193 satellite on- orbit by the United States, satellites that have completed their life spans in space or on-orbit collisions; such as the collision of the French military satellite Cerise with a portion of an ariane rocket in the year1996 among many others.

In view of the above there is a significant growing numbers of objects or debris in earth orbit .At present the US department of defense (DOD) using the Space Surveillance Network has tracked 19,000 objects approximatley10 centimeters in diameter or larger. It also estimated that there are over 300,000 objects with a diameter lager than one centimeter, and millions smaller.

Though there are continued efforts towards developing and implementing debris mitigation practice for example the space firing states including China, Japan, Russia, USA and the European Space Agency (ESA) developed the debris mitigation and the limited nations adopting voluntary guidelines with the supports of the UN Committees on the Peaceful uses of Outer Space (COPUOS), but yet the US department of defense (DOD) confirmed the increasing rate of debris in space in recent years.