ISAS/NASA Summary of Discussions
on the Mu Space Engineering Spacecraft-C (MUSES-C)

The Institute of Space and Astronautical Science (ISAS) and the National Aeronautics and Space Administration (NASA) have discussed the possibility of collaboration on the ISAS MUSES-C engineering mission. As a result of these discussions, the items described below have been identified as potential collaborative activities. The final collaborative activities will be defined in the near future by mutual agreement considering the balance of benefits to each of the Parties. Overall authority to collaborate would be provided by a formal Implementing Arrangement (Memorandum of Understanding), and detailed implementation parameters would be based on the documented MUSES-C Implementation Plan (MIP).

Should the Parties agree, ISAS would consider: 1) delivery of a NASA Small Separable Vehicle(s) with a mass goal of 1 kg to an asteroid by MUSES-C for surface science investigations; 2) provision of information on the ISAS MUSES-C sampling mechanism design; and 3) access to the asteroid samples, under the following potential conditions--U.S. scientists' participation in the sample analysis at the Japanese facilities for nominally one year following the recovery, after which a yet-to-be-determined small fraction of the sample would be transferred to NASA, and Japanese scientists would be able to participate in further sample analysis in U.S. facilities. ISAS also would consider: 1) support of one or two exchange scientists to participate in the SSV science; 2) support of mission design and operations for the SSV(s) to fulfill the scientific objectives; and 3) support of advisory reviewers for the NASA science AO process that selects NASA Co-investigators in MUSES-C orbiter instruments and samples.

NASA would consider the provision of: 1) Small Separable Vehicle(s) for the surface science observation; 2) Deep Space Network tracking for MUSES-C; 3) radiometric navigation support for MUSES-C from launch up to re-entry; 4) test time in the Ames Research Center for heat shield testing and a technical review of the ISAS re-entry shield for performance and space storage, consistent with the U.S. Government's laws, regulations, and policies; and 5) results of observations of Nereus by the Keck telescope during the summer of 1997 and additional optical and radio frequency observations results in apparitions close to launch. NASA also would consider support of: 1) Co-investigators for instruments to be carried by the MUSES-C spacecraft; and 2) advisory reviewers to ISAS science AO process that selects ISAS Co-investigators for the SSV instruments. In addition, NASA would seek to coordinate arrangements for the use of the Utah Test and Training Range (UTTR) in the recovery of the MUSES-C sample capsule.