A large number of multiple-spacecraft missions are planned for the future of SEC science. Cost-effective implementation of these missions will require new information technology: tools, systems and architectures for mission planning, implementation, and operations; and science data processing and analysis that facilitate scientific understanding. Specific research areas of interest for these SEC multi-spacecraft missions include the following items below.

**Information Technology for Cost-Effective Mission Planning and Implementation**

Tools or systems are needed that improve the system engineering, integration, test, and synchronous operations of semiautonomous multispaceship missions with intermittent contact and large communication latencies; automated approaches to onboard science data processing and reactive onboard instrument management and control; and tools that capture and represent scientific objectives as preplanned and reactive onboard autonomous drivers.

**Data Analysis**

Items of interest in this area focus on innovative approaches and the tools necessary to support space and solar physics virtual observatories (physically distributed heterogeneous science data sources considered as a logical entity).

Tools are needed for enabling automated systematic identification, access, ad hoc science analysis, and distribution of large distributed heterogeneous data sets from space and solar physics data centers; and technologies and tools supporting inclusion of individual researcher provided, ad hoc, science analysis modules as a component of search criteria for remote data mining at space and solar physics data centers.