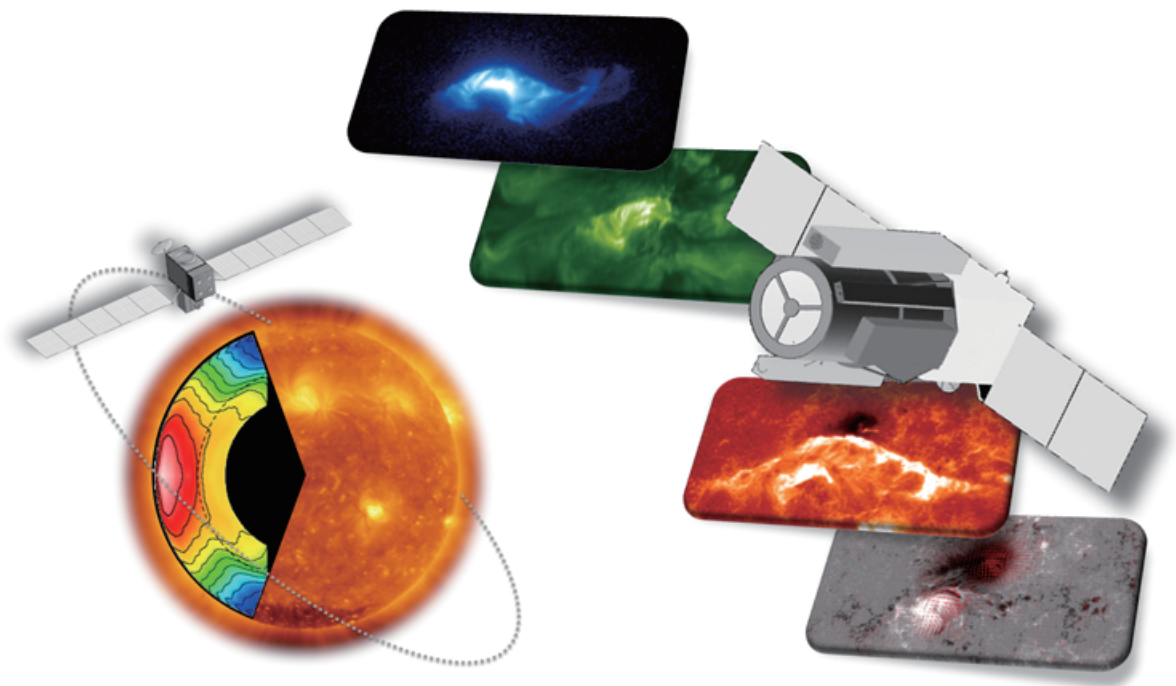


# Interim Report on the SOLAR-C Mission Concept



SOLAR-C Working Group



## Preface

This document describes the current status of the Solar-C mission concept studies. The ISAS/JAXA Solar-C working group (WG) have been studying two options; the plan A (out-of-ecliptic mission) and the plan B (high resolution spectroscopic mission), involving the international sub-WG formed with our US and European colleagues. Domestic and international Solar-C science definition meetings have been held a couple of times to discuss all aspects of Solar-C science. Domestic town meetings open to the science community have been held, as well, including the latest one held on 2011 January 17 – 18 at ISAS. The output of these activities are summarized and arranged now to the form of the interim report.

The WG recognize the very important scientific goals of the plan A mission, namely helioseismic investigation of the internal structure of the Sun, and understanding of the dynamo process through possible heliospheric observations. The great importance of the plan B mission is also recognized for understanding of the fundamental physics that forms and maintains the solar atmosphere, as well as that drives solar activity. The both missions are concluded as equally important and attractive for the promotion of space solar physics.

In the meantime we also had to make efforts for prioritizing the two options, in order to proceed to next stage of requesting the launch of Solar-C mission at the earliest opportunity; in winter of Japanese FY 2018. The single-option mission proposal will be needed, to be reviewed by the ISAS/JAXA Space Science Steering Committee.

Therefore, we have intensively and extensively discussed in the above-mentioned meetings, and among the WG core members, from the viewpoints of technical maturity, cost effectiveness, and scheme of international task shares, not to mention science.

Since the both missions are scientifically important, and that it will take a long time before the selected mission is ready to go for launch, we have finally decided that we should present the plan B option as the first-priority Solar-C mission to ISAS/JAXA, and the science community. At the same time, we consider it equally important that we should continue our efforts to realize the plan A as a part of Solar-D program, a mission following Solar-C in the middle of 2020s.

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