

SOLAR FLARES AS NATURAL PARTICLE ACCELERATORS:
A HIGH-ENERGY VIEW FROM X-RAY OBSERVATIONS AND
THEORETICAL MODELS

Wei Liu
NASA Goddard Space Flight Center

To my wife
Li Jin

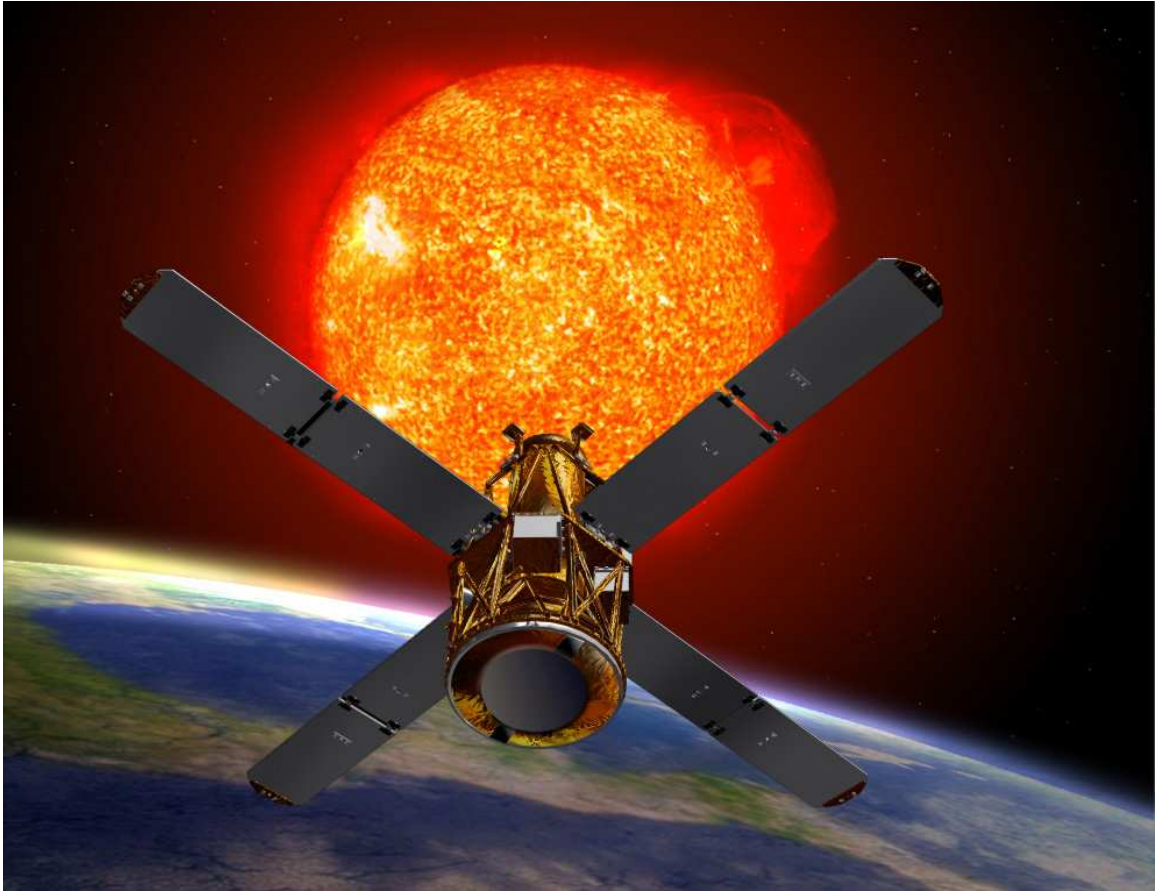


Figure 1: Artistic view of *RHESSI* observing the Sun from a near-earth orbit. *RHESSI* is a NASA Small Explorer mission designed to investigate particle acceleration and explosive energy release in solar flares. Since its launch on 2002 February 5, *RHESSI* has been providing scientists with unprecedented data revealing new physics and challenging existing theories. This mission inspired the work that eventually led to the production of this book [Courtesy of *RHESSI* Team].

Front cover picture — A full Sun image showing a flare near disk center and an eruptive prominence on the west limb.

