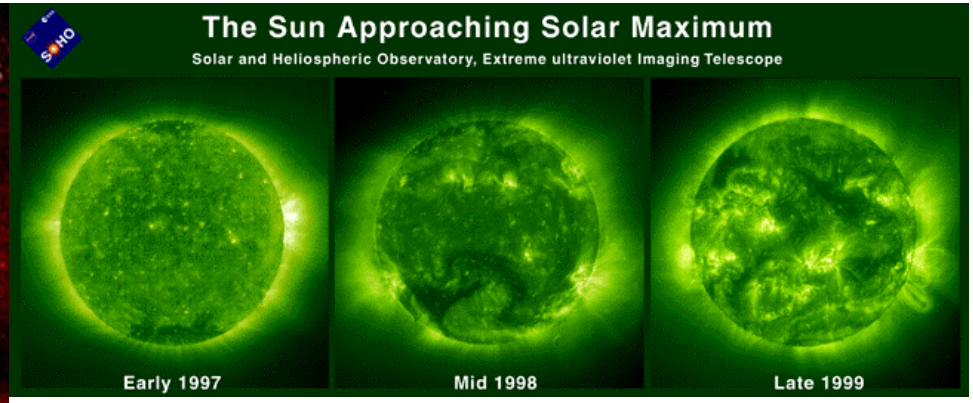
SOHO stands for Solar and Heliospheric Observatory and is a satellite that studies the Sun 24 hours a day, 365 days a year without interruptions. The spacecraft has 12 scientific instruments collecting information about the Sun ranging from activity in the Sun's corona to vibrations deep in the Sun's interior.

SOHO was launched on December 2, 1995. The SOHO spacecraft was built in Europe by an industry team led by Matra, and instruments were provided by European and American scientists. There are nine European Principal Investigators (PI's) and three American ones. Large engineering teams and more than 200 co-investigators from many institutions supported the PI's in the development of the instruments and in the preparation of their operations and data analysis. NASA was responsible for the launch and is now responsible for mission operations. Large radio dishes around the world which form NASA's Deep Space Network are used to track the spacecraft beyond the Earth's orbit. Mission control is based at Goddard Space Flight Center in Maryland.



Because the Sun is the only star close enough to have real and dramatic effects on our life here on Earth, we certainly expect and hope that improving our observations and our understanding of this beautiful, awesome object will in the course of time bring about beneficial applications. While it's never possible to tell where the quest for knowledge will lead, at this time the area where we have the greatest expectation of useful fallout is in the "space weather" arena.

"Space Weather" may sound abstruse, but it's a concept that is growing in importance as mankind pushes further and further against the limits within which we live. When a farmer had only an acre or two to worry about, a look out the window was a good enough weather forecast for the day's plowing. When he has thousands of acres to plow, seed, and fertilize, he may find it necessary to plan on a much broader scale in order to avoid disaster; thus, we need weather satellites and global forecasting systems for tropospheric weather. Similarly, when communication and electrical grids connected only local communities, the worst threat might have been a lighting strike on a local utility pole. But today, our electrical power grids span entire continents, and our communication lines reach across hemispheres, linked by synchronous-altitude satellites. It's not too early to be thinking about the effects on these extended systems, of vast clouds of atomic particles and magnetic fields thrown out by the Sun on an almost daily basis.

SOHO is in orbit between the Earth and the Sun.

Source: http://sohowww.nascom.nasa.gov/