All conventional solar telescopes, including some planned new solar instruments, suffer from the problem of instrumental scattering, starting from the diffraction at the edge of the pupil, without taking into account the fatal effect of a central obscuration. 90 years ago, B. Lyot proposed the use of a free aperture apodized system to resolve this problem and he succeeded in showing for the first time the solar corona outside of total solar eclipses. Low level linear polarization measurements were also done. Several fundamental problems of solar physics (origin of the coronal and2-brake heating, mass losses, explosive release of energy, etc.) are still waiting the development of a large aperture coronagraph-quality instrument capable of providing measurements out of the photospheric limb, from the mesosphere to the corona, with appropriate resolutions. The so-called transition region could finally be resolved and the feet and origin of spicules be discovered, as well as coronal jets be studied simultaneously with what is done with space-borne instruments. In addition, such instruments would offer new unique phenomena at high-spectrophoto-temporal resolution for resolving the complex MHD problems, including the ubiquitous magnetic reconnections in turbulent plasma structures and the generation of waves eventually leading to eruptive processes at different scales. The upward propagation of coronial Alfven and kink waves generated near the surface could also be directly measured, including the spatio-temporal variations of the magnetic vector. Even flare kernels above the limb could be spectrally be studied to analyze the processes of release leading to high amplitude accelerations. The concept of such new instrument was proposed and tested more than 20 Years ago. It is the Mirror Advanced Technology Coronagraph (MAC). The concept is used in the giant ATST which, for additional reasons, became a new generation solar telescope to be put at Haleakala-Hawaii, with great hope that it could also be used as a coronagraph in the thermal IR. We still believe the concept could also work in the near IR, the visible and even the near UV region, where, beside cool emission lines, many forbidden coronal lines of different temperature sensitivity are available with adequate Doppler-Fizeau and polarization response to the emerging magneto-plasma structures. We remind what should be the main parameters of such a coronagraphic instrument with a design using an additional apodization system of the main super-polished mirror that is now proposed to incorporate (Cl. Aime). Such fundamental research should be put at a high altitude site with low levels of solar aureole effects, like the Pic du Midi site in France, or sites available in China, India, USA, Russia and other countries, even at the S-pole, following carefully planned steps which include low-cost prototypes like the Mirror Advanced Coronagraphs (MAC). Finally, this coronagraph could be a unique polarimetric instrument for the search of exo-planets and accretion disks at night.