Shifting and rolling ballast nail panel segments for steering purposes.

The ballast panel segments (here BA, BC, BD and BE) are thought to be the ones that are moving along with the rolling and unrolling of the on and off their sail panel rows. As they have to be as thin and as low as possible to work as ballast mass for steering purposes.

In front of the ballast panel segments (here BA, BC, BD and BE) top edges, the ballast panel segments are closer to the sail panel rows (here BA, BC, BD and BE). This would enable a very large ballast mass, avoiding the limitation of the sail mass due to height of the sail row.

It avoids the stressing and problematic folding and unfolding process. In addition mounting of the sail row on its rails is easy, as just pushing them into their brackets. The Inner boom is not made of the sailweight and connecting their end 2.8 m to those at centers of location of the sail row.

In contrast the RIGfot Solar Sail, the System of the Launch System has rigid telescope mast which are quite heavy compared to those of the solar sail with unrolling skeleton system.

Fig. 3 - System Sail
of the Solar Sail Launch System – fully enhanced

Fig. 8, Solar Sail Launch System
consisting of System Launch and System Sail

The System Launch does not yet launch the sail. It is part of the sail launching effort and helps to spread out and inflate the sail telescope mast 5.12 shown on fig. 8, and it 8.05. Unrolling of the sail full lengths of the solar sail is done by opening up the launch packages if they are segments, each pulling one sail cell on their bracket overlaps. Engagement of the solar sail happens through engaging the sail with the stationary references platform 5.13 which is installed on the Launch System.

The System Launch uses the functionality of the launch packages to pull the sail cells of the entire sail into place. The launch packages consist of several modules, each pulling one sail cell with all its electrical instrumentation, docking station, etc. Such launch configuration is in more detail shown in fig. 8.13.

The docking station 5.15 has a quite large volume and would hold the daughter unit (like the Vaisala or equivalent name) observation already docked in / or launched. Stowing of parts 5.15 and 5.16 around the solar sail (i.e., gravity, etc.) allows efficient use of the whole sail area as additional means of propulsion.

The express open launch would be profiting a large augment for the driver of the Earth's orbit by reducing the sail speed. In contrast, the fast exit is a matter of mechanical means only.

The sail system launch would have a similar launcher, like a converted ICBM, to carry the load into the NRO. After separation the sail will use its thrust, to get out of the influence of Earth's atmospheric zone, while the sail cells are still folded onto their rails.