

NEW UNITED STATES BALLOON LAUNCHER

The NOAA Office of Global Programs and the National Center for Atmospheric Research have developed a new, portable balloon launcher that may be used on ASAP ships. The design concept for the launcher is to give ASAP operators aboard ship a relatively lightweight, portable, and marine hardened device for launching balloons. The unit is constructed of fiberglass and stainless steel and uses a “bag launcher” concept for holding the balloon until launch. The unit is rugged enough for commercial shipping and may be easily moved aboard ship to minimize balloon launching problems.

Figure (1) shows the side view of the launcher. Note the fiberglass construction, Delrin leg and wheel assembly and sturdy locking devices

Figure (2) shows the rear stainless steel leg assembly.

Figure (3) shows the launcher deployed with the supporting legs extended

Figure (4) shows the launcher open. Note the balloon support flap that will be extended for launch.

Figure (5) Close up of the support flap with Velcro launcher bag attachment.

Figure (6) Close up of Radiosonde holder

Figure (7) Inside of launcher showing power supplies for fan for radiosonde ventilation

Figure (8) Launcher deployed with launcher bag attached

Figure (9) Balloon inflated and held in place by launcher bag

Figure (10) Side view of inflated balloon in launcher bag, with radiosonde held in place, and ventilator piping for stabilizing radiosonde sensors

Figure (11) Balloon being released using heavy-duty zipper

Figure (12) Balloon launched with radiosonde attached

Figure (13) Photograph of front view of launcher showing relative size to an operator.