

Instructions to Prepare a Rigging for Comparison Sounding

PR210147EN-A

VAISALA

Successful Radiosonde Intercomparisons

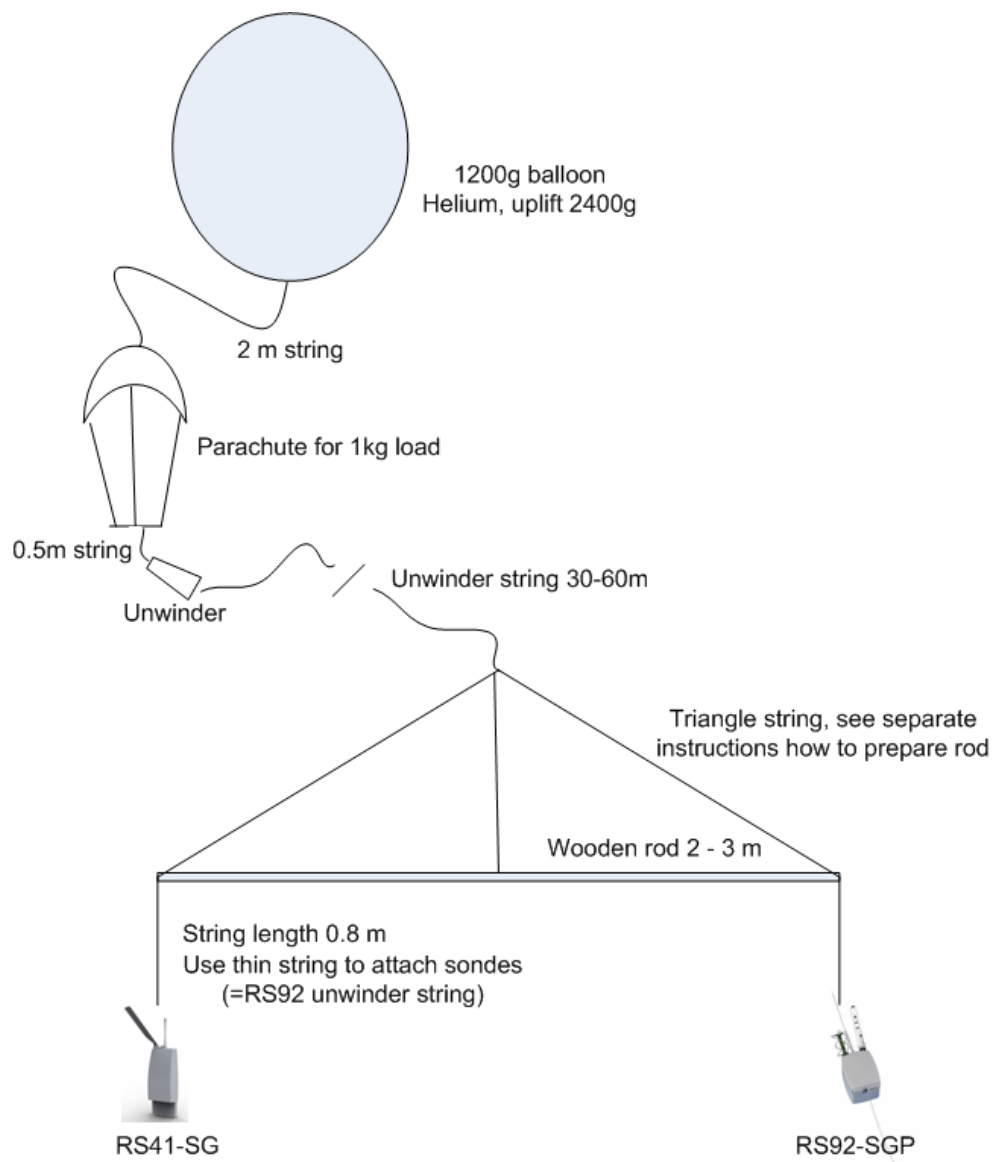
- The key purpose of the Intercomparisons between the radiosonde models is to understand their different behavior in the operational use
- To be successful in this target, it is important to ensure that the test setup does not introduce phenomenon that are not real in the operational use
- The purpose of this document is to give guidance to achieve the goal with Vaisala radiosondes. The most important aspects are:
 - Good enough ascent rate
 - Hanging of radiosondes with 80 cm string

Recommendations for Rig Setup

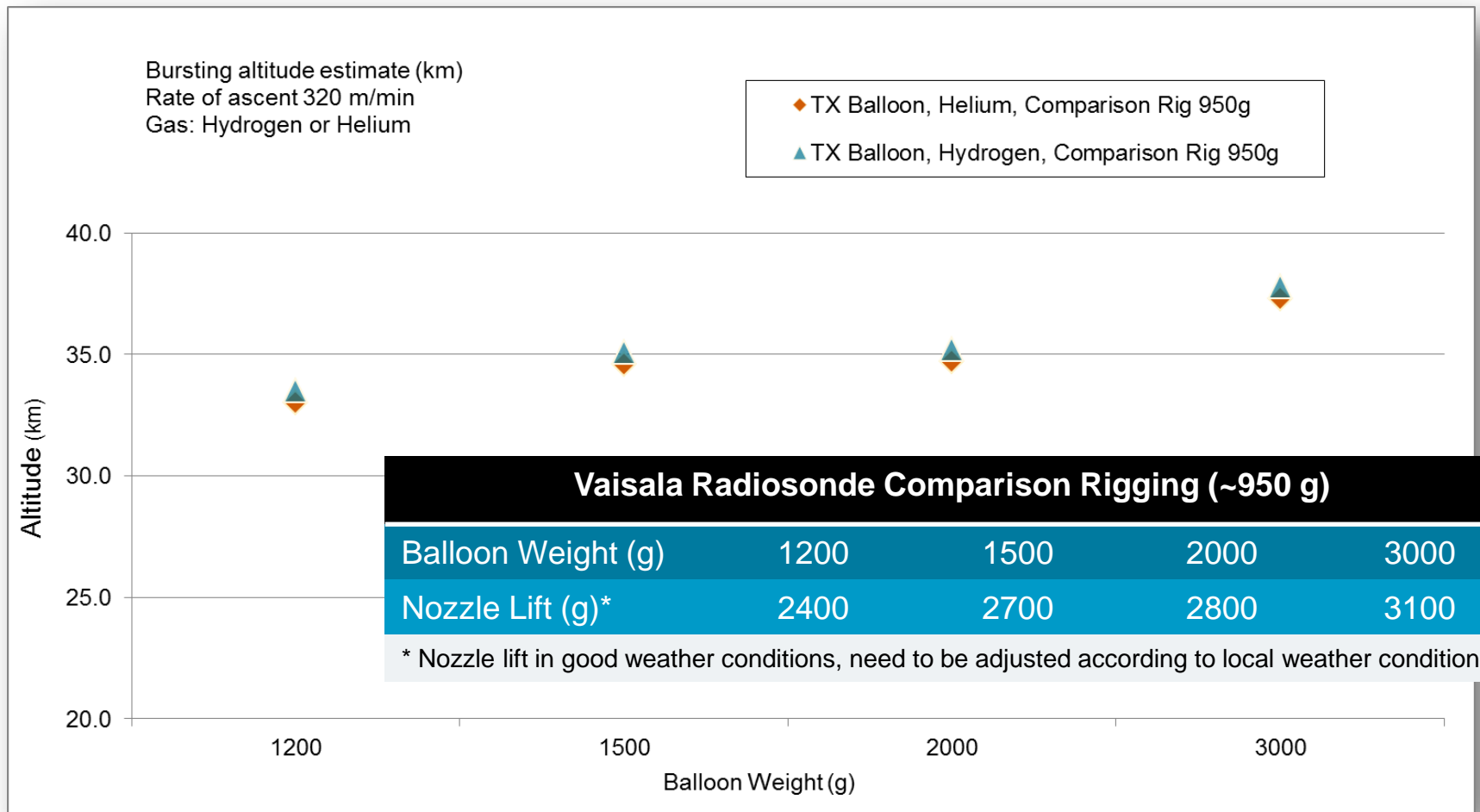
- The optimum ventilation of the radiosondes in comparison rig is eventual for gaining the high quality comparison data
- For the optimum ventilation, ensure that the ascent rate of the rig setup is at least 5 m/s in average and utilize the nozzle lift recommendation as given in slide 4, but remember also to adjust according to local weather conditions
- For the optimum ventilation, allow also movement of the radiosonde when attached to the rod, do not tape directly to the rod but use thin twine to hang radiosondes
- To avoid the unwanted effects caused by the rod, use at least 80 cm long twines to hang the radiosondes to the rod

Recommended Rigging

- The radiosonde shall be hanged with at least 80 cm long string
- The unwinder string length can vary but minimum shall be 30 m, 60 m is recommended
- For safety reasons the parachute shall always be used
- Total payload of the rig setup is about 950 g



Nozzle Lift Recommendation and Estimated Bursting Altitude



Detailed Information on Rigging

- The detailed instructions for radiosonde rigging and sounding preparations are given in Vaisala Guide to Sounding Preparations Technical Reference M211367EN
- The Technical Reference is available on request from your Vaisala contact or can be found from MW41 user documentation folder
- The recommendations are in line with WMO- No 8's proposing ascent rates of 300 to 400 m min⁻¹ (5.0 to 6.67 m/s) to minimize the time required for observation and to provide sufficient ventilation for the radiosonde sensors

