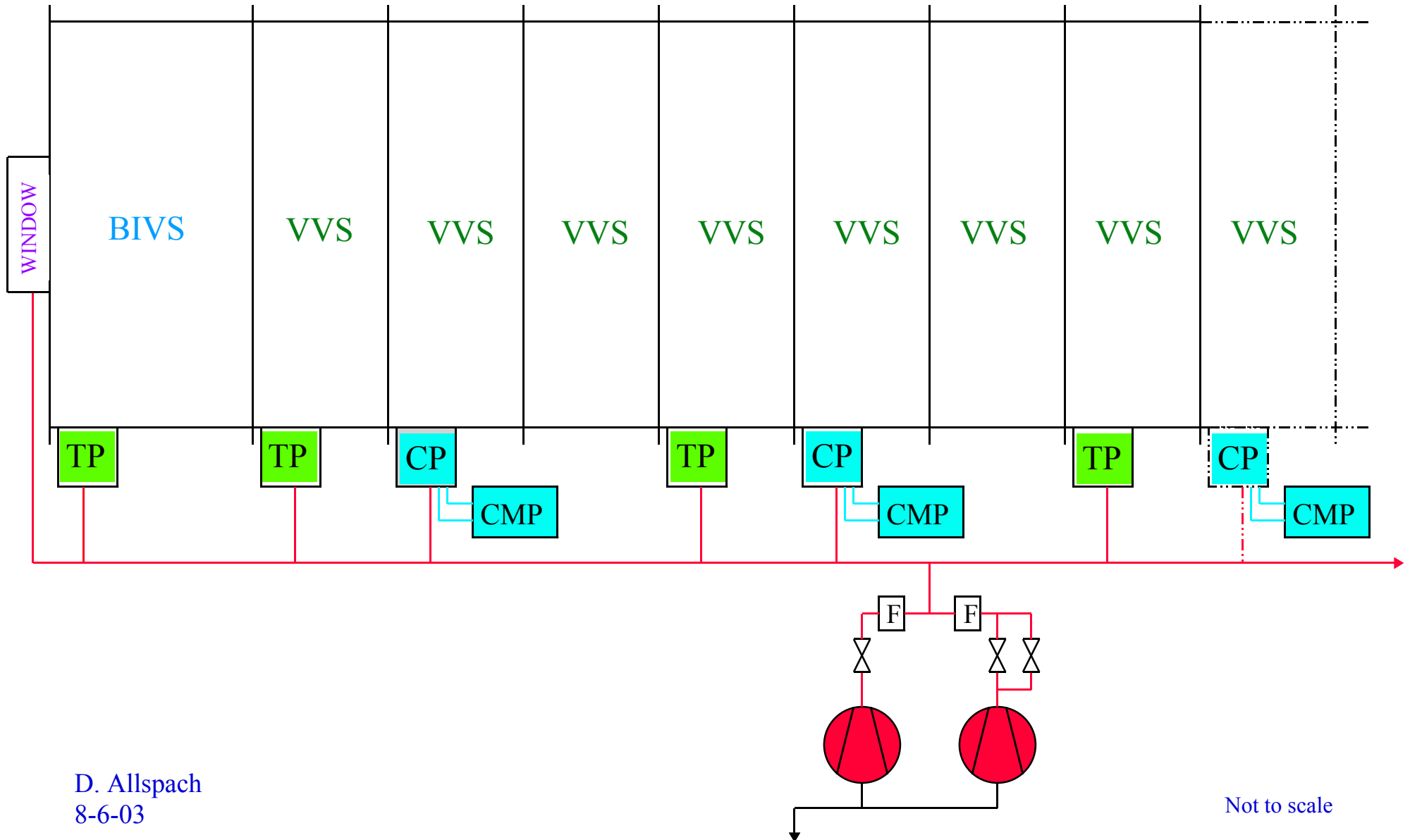


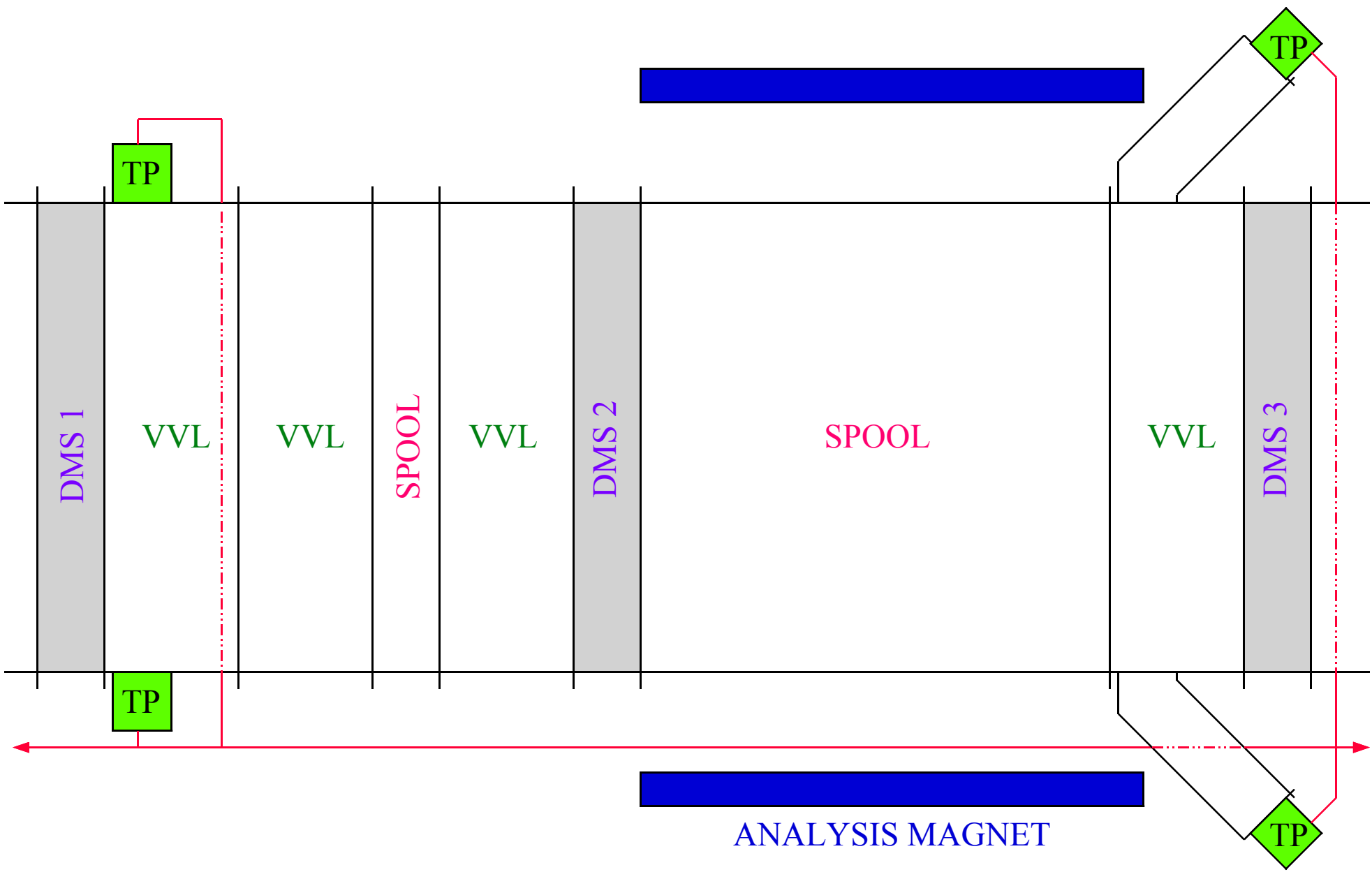
UPSTREAM VACUUM VETO SYSTEM

Conceptual Layout of Vacuum Pumping System



D. Allspach
8-6-03

Not to scale

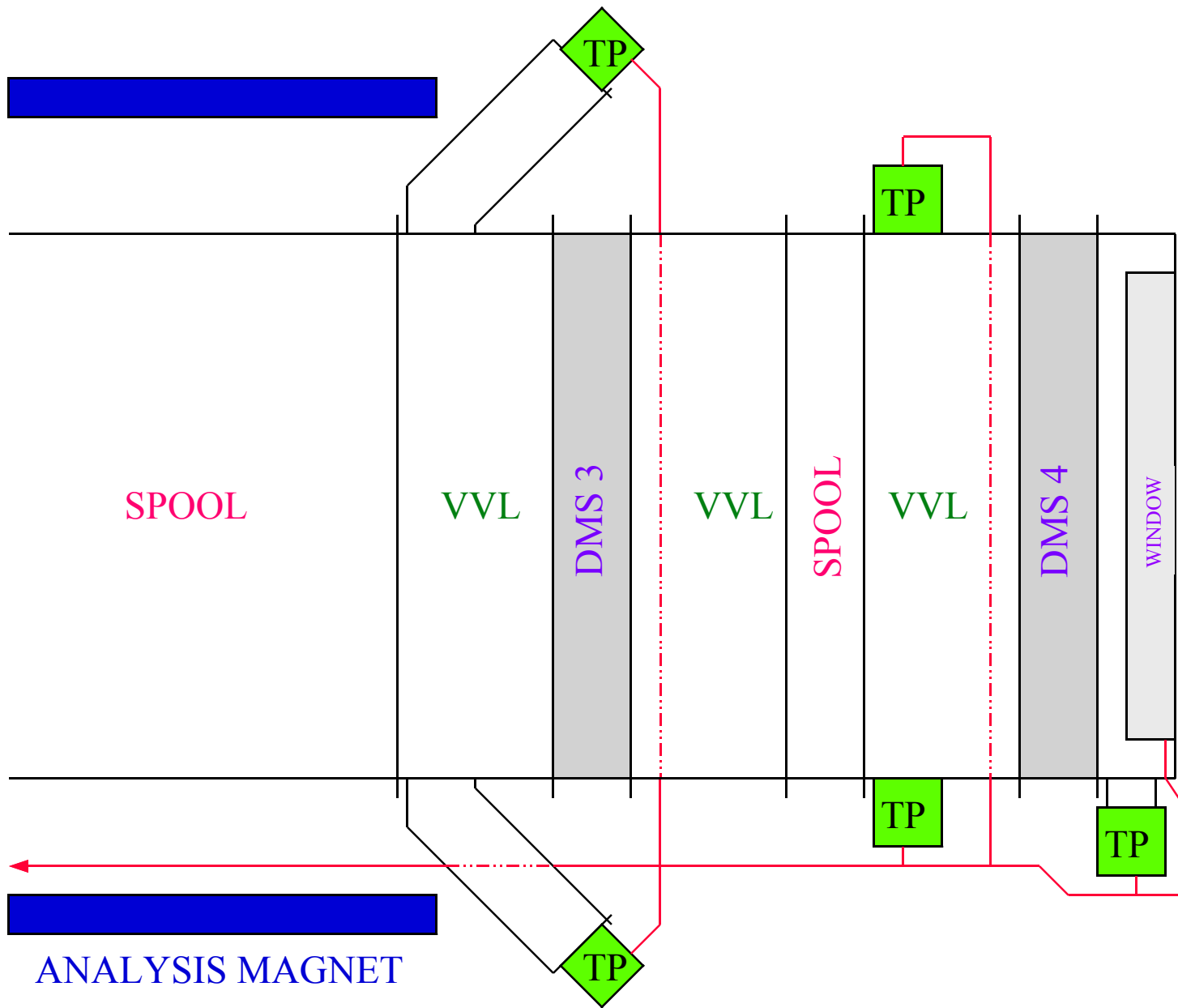


DOWNSTREAM VACUUM VETO SYSTEM

Conceptual Layout of Vacuum Pumping System

D. Allspach
8-6-03

Not to scale



The illustrations above assume a hybrid vacuum system consisting of turbo molecular pumps (TP) and cryo pumps (CP) which require compressors (CMP).

The Alcatel model 1600 is one possible TP choice for this system. If chosen, approximately 20 are required including those designated for the DMS region.

A possible cryo pump choice is the Leybold 3000. If chosen, six would be needed.