

**Vacuum Aspects of the EUTERPE Storage Ring,**  
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The electron storage ring EUTERPE under construction  
at the Eindhoven University is a low cost project with  
400 MeV/200 mA electron beam. In order to reduce  
the price of power supplies and dipoles, these magnets  
have a gap of only 25 mm. A vacuum of  $< 10^{-9}$  mbar  
in the beam chamber is necessary to obtain sufficient  
beam lifetime  $> 4$  hrs. The photon stimulated  
desorption caused by synchrotron radiation in the  
dipole chambers is estimated to amount at least  $\sim 2.5$   
 $10^{-7}$  mbar.l/s of gas per dipole. Consequently a  
minimum average pumping speed of  $>250$  l/s is  
required. Such a value can hardly be obtained by  
means of external pumps as it is limited by the  
molecular conductance of these vessels. This problem  
is solved by a design in which the synchrotron radiation  
escapes from the dipole into a large pumping chamber.  
This will be equipped with integrated titanium  
sublimation pumps, giving rise to a high pumping  
speed at low cost. An external getter ion pump of  
 $\sim 60$  l/s provides for the pumping of methane. The  
dipoles will be mounted on a very accurate slide system  
which locks the dipole position. This allows in-situ  
bake-out of the ring.