

MAR11-2010-000748

Abstract for an Invited Paper  
for the MAR11 Meeting of  
the American Physical Society

### **Heike Kamerlingh Onnes and the Road to Superconductivity**

DIRK VAN DELFT, Director Museum Boerhaave

The discovery of superconductivity on 8 April 1911 came as a big surprise. It was stumbled upon in the Leiden cryogenic laboratory of Heike Kamerlingh Onnes in a moment of serendipity. Three years before, the liquefaction of helium on the other hand had been the culmination of a long battle with nature. It was a meticulously prepared operation, “big science” in its first appearance. Until recently, careless notebook entries by Kamerlingh Onnes and his terrible handwriting had hindered a complete view to the road to superconductivity. Even a date of the fascinating discovery was lacking. How did the discovery fit into the Leiden research program? What about the research effort Kamerlingh Onnes had to put in to be sure he had found superconductivity rather than a short-circuit? What about superfluidity? Once the right interpretation of the notebooks is clear, the real story can be told.