



**UNIVERSITÉ  
DE GENÈVE**

**FACULTÉ DES SCIENCES**  
Département de physique  
nucléaire et corpusculaire

## **SÉMINAIRE DE PHYSIQUE CORPUSCULAIRE**

**SUJET :** Ultra low-noise amplifiers for silicon and diamond detectors

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**LIEU:** Science III, Auditoire 1S081  
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### **RÉSUMÉ:**

Thanks to the SiGe heterojunction, in the last years the BJT transistor technology has been experiencing a great development for high frequency and low-noise operation. The performance of an ultra-low-noise preamplifier (500 e<sup>-</sup> RMS) with low frequency (100 MHz BW) will be shown. This amplifier, given the low dependence of the noise from the source capacitance (up to 1 nF), the very fast rise time (up to 100 ps) and the 50 Ohm input impedance, is particularly promising for silicon, diamond and high rate gas detectors.

INFORMATION : <http://dpnc.unige.ch/seminaire/annonce.html>  
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