

Séminaire



Partenariat Haute résolution Angulaire Sol-Espace

Salle de réunion du bâtiment **17**

8 janvier 2008, **11 h 00**

Observatoire de Meudon
5, Place Jules Janssen
92195 Meudon

Ground-layer adaptive optics with Rayleigh laser guide stars

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Résumé

Adaptive optics is one of the major astronomical techniques, but, so far, only in the infrared. However, partial correction ("seeing improvement") can bring significant gains in resolution and sensitivity even in the optical range. One such promising concept is the selective correction of low-altitude turbulence - Ground-Layer AO (GLAO). Extensive data on turbulence profiles accumulated in recent years at several sites world-wide show that GLAO will indeed bring a substantial gain for all observations except wide-field. The theory of partial correction developed to evaluate GLAO performance and various approaches to wave-front sensing will be briefly presented. A GLAO instrument SAM, now under construction at CTIO, will be described in some detail and compared to alternative GLAO systems developed elsewhere. Prospects of GLAO at existing and exotic (Dome C) sites will be outlined.