

I will present the preliminary baseline concept of NAOMI, the future adaptive optics system for the Auxiliary Telescopes (ATs, 1.8 m diameter) of the very large telescope interferometer.

Currently the ATs are equipped with a fast, visible tip-tilt sensor called STRAP, and the corrections applied through a tip-tilt mirror. This gives a good correction of the atmospheric turbulence in K and N bands for good seeing conditions, but insufficient for seeing beyond 1'' specially in J band.

In the context of the new VLTI instruments (PRIMA, MATISSE, MIDI) it has been decided to replace STRAP and the steering mirror with a low-order adaptive optics system (SCAO), "NAOMI" consisting in a SHS wavefront sensor and a deformable mirror. The new AO system will ensure better energy injection on the fiber avoiding PSF explosion and therefore allowing VLTI instruments operation under shorter wavelengths.