RESOLUTION 5.1:
Given the demanding image quality specifications for the Gemini telescopes, the GSC believes that it is essential that a fully costed feasibility study be carried out on the primary mirror heating systems.

RESOLUTION 5.2:
With the elimination of the Nasmyth focus, and the addition of a pier laboratory for high resolution spectroscopy, the GSC recommends that the summary Table at the end of Section 3 of the Science Requirements Document be updated.

RESOLUTION 5.3:
The GSC strongly endorses the continuing efforts by CTIO & AURA to control light pollution at Cerro Pachon.

RESOLUTION 5.4:
The GSC recognizes that observing time will be at a premium on the Gemini telescopes, and that every effort must be taken to obtain observations in a highly efficient manner that exploits the unique characteristics of the telescopes and sites. Although it is recognized that some programs will be carried out in classical observing modes, the GSC also believes that to exploit the best conditions scientifically, be they of seeing, atmospheric emissivity, or conditions suitable for AO, it will be necessary to allocate at least 50% of telescope time on average as queue scheduled observing during the operations phase. To realize effective and reliable queue scheduling, the GSC further recognizes that:

(1) alternative observing modes, such as remote observing and remote monitoring, will need to be investigated,
(2) the time accounting schemes for queue and classical observing modes will have to be different, with time for queue observing based on hours actually used, and time for classical observing based on the total allocated hours,
(3) observing time will have to be allocated internationally, involving both telescopes, to allow the operations team maximum flexibility in optimizing the scientific return to the Gemini Partnership.

RESOLUTION 5.5:
The GSC recommends that the requirements and goals outlined for the AO system in the Science Requirements Document be changed to read as follows:

Requirement:
Delivered Strehl Ratio > 0.5 at 1.6µm in median seeing conditions, with the intent of maximizing image concentration and sky coverage of a natural guide star system for 0.7µm < ? < 5.0µm. This requirement is expected to deliver Strehls ~ 0.2 at 0.7µm in 10th percentile conditions.

The AO system should not increase the total emissivity by more than 15% for 2.2µm < ? < 5.0µm (i.e. a total telescope requirement of =19%).
The throughput of the AO science path should be maximized in the band $0.5\mu m < \lambda < 5.0\mu m$ and should not be less than 50% at any wavelength in this band.

The performance of the AO system as a function of zenith angle should degrade no faster than $\text{Strehl Ratio}(z) \leq \text{Strehl Ratio}(z=0)^n$, where $n = \sec(z)$ and $z$ = zenith angle.

The stability of the AO system should be sufficient to ensure that delivered Strehl ratios be limited only by atmospheric effects for up to a one hour integration.

Goals:
The total AO emissivity should be less than 10% without ADC's in the band $2.2\mu m < \lambda < 5.0\mu m$.

The order of correction should be selectable with the goal that performance of the lower order corrections should not be compromised.

Laser Beacons: The natural guide star AO system should be designed in such a way that it can be upgraded to a laser guide star system with a priority to increase the system's sky coverage at the above performance levels.

RESOLUTION 5.6:
Given the critical scientific importance of the CCD detectors, and the expected difficulty of their meeting the science requirements, the GSC charges the CCD consortium to evaluate the scientific performance of the CCD's which would be available from all potential vendors, with a view to procuring the best possible for Gemini.