



GEMINI: Looking beyond 2014

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Gemini has served the Canadian community well

- Canadians have produced an above average number of papers per unit observing time.
- The impact for Canadian Gemini papers =4.39 (Gemini mean=3.02, Keck mean=3.76)
- Oversubscription rates are healthy (2.5 in 14B). Oversubscription rate for GS has grown in the past few years, due to GPI, GeMS, and F2.
- On a per astronomer basis, Canadians have access to 3 times the nights available to US astronomers.
 - an important advantage when competing with private US facilities
 - More potential access for dissertation programs.
 - potential access to even more time through Large and Long Programs – there was good Canadian interest to the first CfP.



Future Operations & Capabilities:

Efficiency & Flexibility:

- Already highly efficient for ToO programs.
- Fast Turnaround Programs: will allow rapid turnaround between the time that a proposal is submitted and data are recorded. The CGO is leading this effort and a first trial was already run. **Will be useful to characterize objects studied at other facilities.**
- Implementation of large programs. **Will prove useful in the VLOT era.**

Connecting with users:

- a User's Committee has been set up (first meeting has already bore fruit eg: "Bring One, Get one free" program)
- "Priority Visitor Observing": will be the default observing mode for Large programs (20% of the time)
 - **Training the next generation of Canadian astronomers.**
- Eavesdropping available; eventually Remote Observing

Gemini's strengths:

- Two good sites (all sky coverage with good natural IQ)
- Recent commissioning of highly competitive instruments: GeMS, GPI, GRACES (GHOST in pipeline)
- Superb thermal characteristics (good for IQ and thermal IR work). Small M2 (important for deformable secondary).
- Growing acceptance among partners of the usefulness of large programs.



Present – 2020+:

- Gemini will be Canada's forefront optical/infrared facility, until the TMT is commissioned (mid-2020s)

Beyond 2025:

- Gemini-South will be essential for access to the South:
 - synergies with ALMA, SKA, CCAT.
- There is the potential for synergies with the TMT. The experience with CFHT suggests that there will be interest in Large Programs.

Gemini's long term role:

- Gemini will give access to capabilities that may not be available in the early years of the TMT (eg: spectral Resolution > 8000 in optical, or $R > 4000$ in near-infrared, planet finding).
- Subaru is evolving towards visible wide-field capabilities (HSC,PFS).
- One possibility for a niche: moderate-to-high Strehl imaging with multi-arcmin FOVs (JHKL') used in survey and/or Large Program mode. **We need to start this discussion.**