Concluding Thoughts

• A time of many projects... and not much (uncommitted) money.

• The ELTs are dominating long-term strategies, but... this should not preclude smaller-scale facilities that would ultimately enhance their best use.

• Scientific demand for a wide-field, 10m MOS is greater than ever before.
  - coldness/clumpiness of stellar streams, tests of LCDM on galaxy scales, calibration of photo-zs, dual halos, spectroscopic follow-up of transients, mass of the MW and orbits of satellites, clump giants as probes of fossil relics of the early disk, tidal stripping via lensing signatures, a protogalactic track?, serendipitous SN, etc.
  - having wide-field MOS access to both hemispheres is crucial.
  - so too is collecting area ⇒ 10m is the minimum.
  - there are many more projects than there is time available ⇒ a dedicated facility.
  - the case for a spectral resolution of ~20,000 (and even higher) is stronger than ever.
  - breadth of science.
### Representative Surveys (from Nov. 2013)

<table>
<thead>
<tr>
<th>Survey</th>
<th>$u_{\text{sky}}$</th>
<th>Area (deg$^2$)</th>
<th>Resolution</th>
<th>$\lambda$ (nm)</th>
<th>$g_{\text{lim}}$ (mag)</th>
<th>$T$ (ngts)</th>
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<tbody>
<tr>
<td>Multiplicity and Exoplanets</td>
<td>bright</td>
<td>115</td>
<td>20,000</td>
<td>425-491; 585-675</td>
<td>16.0</td>
<td>110</td>
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<td>20,000</td>
<td>369-425; 761-879</td>
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<td>425-491; 585-675</td>
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<td>381-439; 770-889</td>
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<tr>
<td>Andromeda</td>
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<td>6,500</td>
<td>436-504; 770-889</td>
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<tr>
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<td>0.37-1.3</td>
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<tr>
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<td>600</td>
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</table>

Monday, April 1, 13
Concluding Thoughts

- For several communities, a need to balance their optical/IR portfolio in terms of intermediate-sized telescopes as the era of ELTs approaches is a priority.
  - don’t forget that a dedicated, 10m-class spectroscopic facility could be an attractive element in such plans.

- Mauna Kea remains the world’s preeminent observing site (at ~equatorial latitudes) and the portfolio of facilities is evolving rapidly (i.e., CFHT + UKIRT).

- A number of important issues raised during the workshop:
  - choice of optical design, S/N-resolution balance for GA, planning for transient follow-up, optimization of wavelength channels, ultra-high-resolution mode?, “chemistry is hard” → collaboration and planning, upgrade paths, deep imaging for z>1 redshift surveys, data distribution policies, spectrophotometric calibration and sky subtraction, etc.

  - Who can answer these questions?
Concluding Thoughts

- ngCFHT needs champions in the various communities.
- The timing is excellent for a number of upcoming community “strategic plans”.
- The workshop talks will be made available online.
- Please share and discuss with your communities. Feedback would be welcome.
- Recall the two-stage development plan from D. Crampton:

  1. **2014–2015:** ngCFHT project office (level ~$100–200k per year). Chinese willing to send a senior scientist.

  2. **2015 onwards:** partnership created and design/construction begins.

- Plans are already underway for a technical meeting in the fall. Please stay tuned.
Concluding Thoughts

CFHT Users’ Meeting: May 6-8, 2013, Campbell River, BC, Canada.

• A key step in consolidating community support.
  Attendance would be invaluable.
• Letters to the director expressing potential interest from other communities would be most welcome.

• The project must maintain momentum and the lines of communication → project office.

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