



EMIR Observing Tools: Exposure Time Calculator

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Outline

- What is the EMIR-ETC
- When to use the ETC
- How to use ETC
- Comparisons with Observations

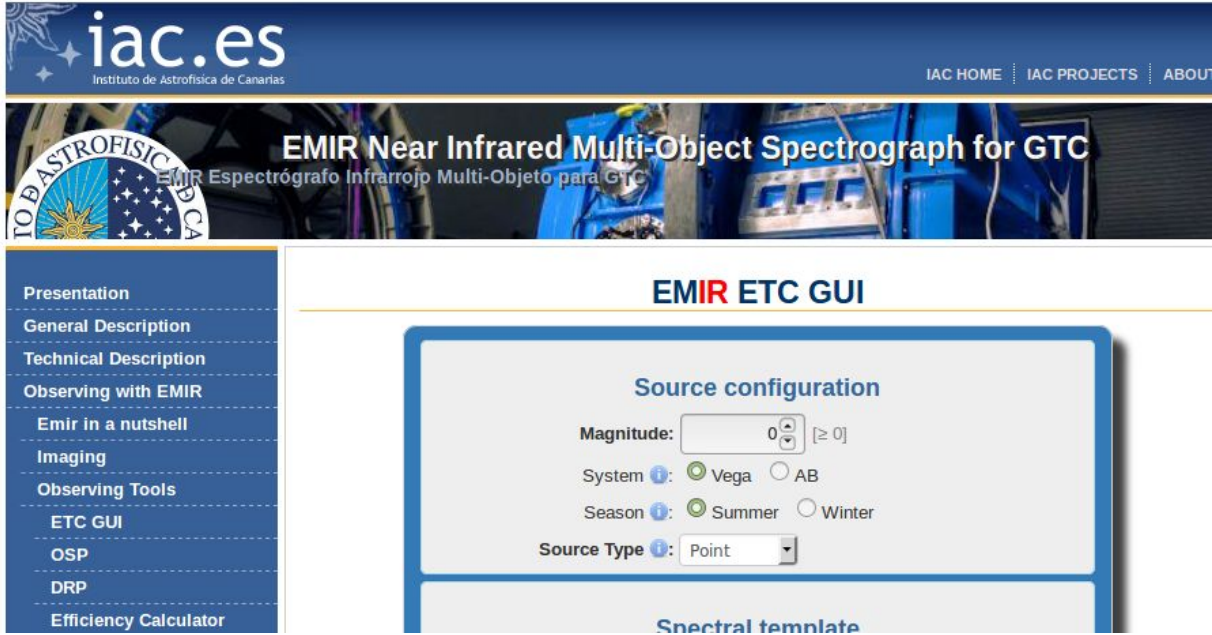
EMIR ETC

- Developed by Carlos Gonzalez-Fernandez and Matteo Miluzio
- Simulate observations with EMIR on GTC
- Trace a photon through the telescope & instrument systems
- Essential for estimating exposure times for EMIR proposals

EMIR ETC: Description

- Four sections:
  - Source Configuration
  - Spectral Template
  - Observing Conditions
  - Instrument Configuration

- Two basic modes:
  - Imaging
  - Spectroscopy



Working Example

- Switch to ETC page ...

Working Example

- Switch to ETC page ...

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Please note, the EMIR ETC does not take into account instrument and telescope overheads. Estimated exposure times could be strongly affected by variations in atmospheric conditions.

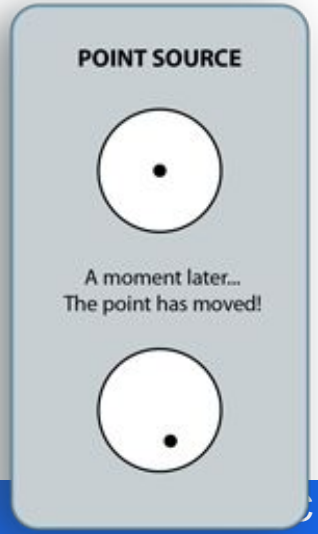
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Working Example

- Some items to highlight:
  - Seasons mode
  - Extended sources
  - Spectral templates: emission lines
  - Number of skies







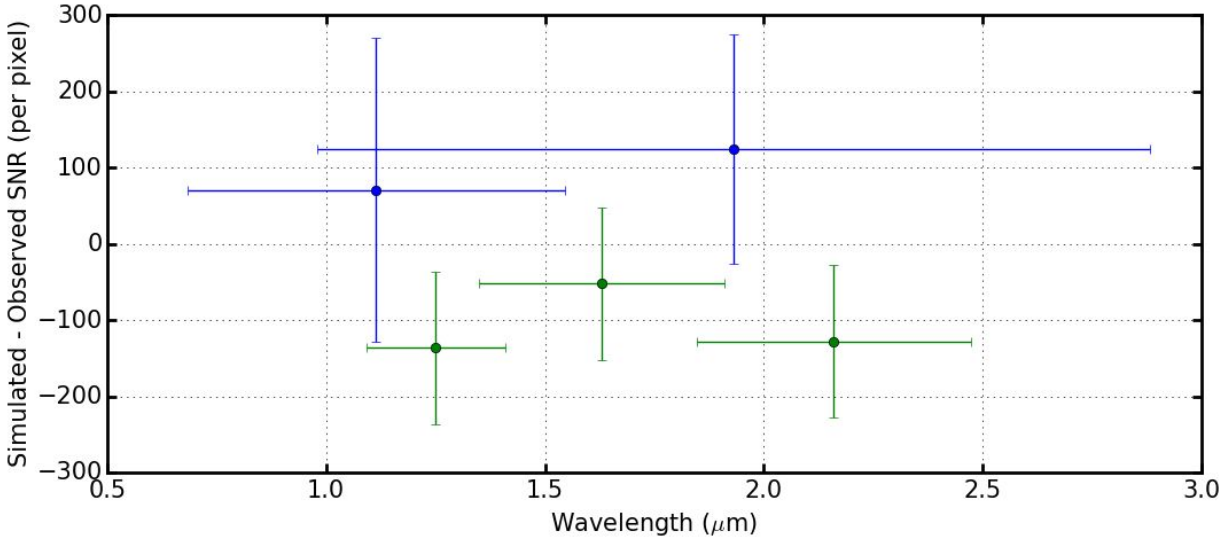


Spring in Scotland



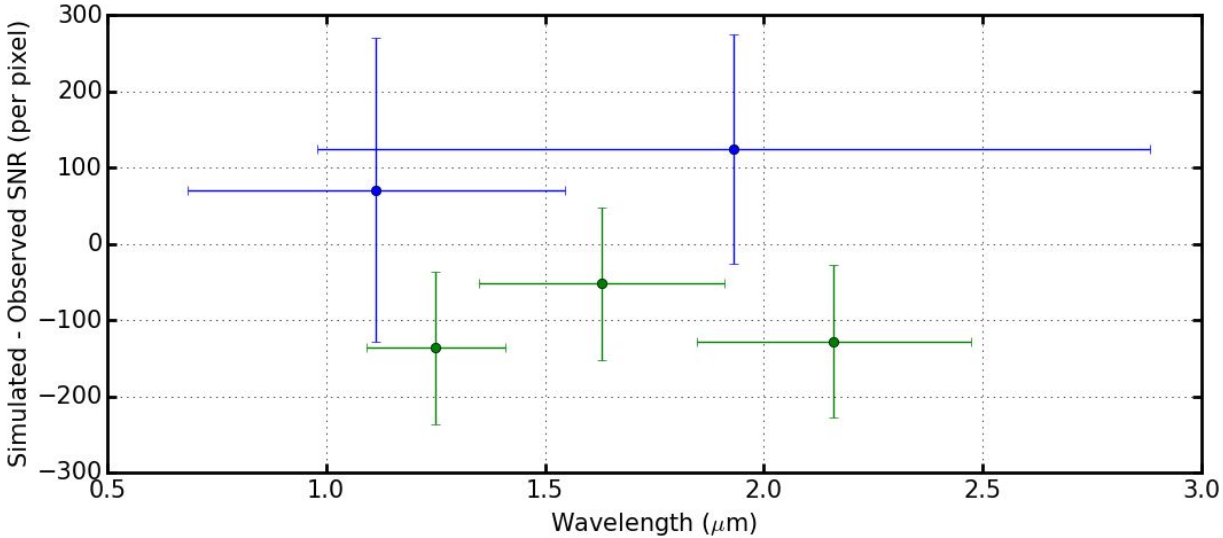
Comparisons with observed data

- Spectroscopy:
  - JHK bands ~15%
  - YJ, HK bands ~10%



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- More Feedback needed!

Conclusions

- Presentation of EMIR ETC v2.0.8
- Walkthrough of “How to Use”
- Demonstrate reliability of tool:
  - Spectroscopy to better than 15%

