# Mid-infrared spectroscopy of starbursts : from Spitzer-IRS to JWST-MIRI

Martínez-Galarza, J.F.

Stellingen associated with the thesis
***Mid-infrared spectroscopy of starbursts:***
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1. Bayesian SED fitting is a robust method to obtain reliable constrains on the star formation rate, age, compactness and amount of currently ongoing massive star formation in starbursts. *(This thesis)*

2. Starbursts are complex. Not even the prototypical giant H II region 30 Doradus can be modeled using a single coeval stellar population. *(Chapter 2)*

3. The giant star-forming region NGC 604 is more evolved than its larger sibling 30 Doradus. Yet, about 8% of its total stellar mass is contained in young embedded objects. *(Chapter 3)*

4. JWST-MIRI will provide mid-infrared spectroscopy with R=1000-3500 and angular separations of $0''.2$. This combination of sharpness and spectral quality has not been achieved by any previous instrument operating in the same wavelength range. *(Chapters 5 and 6)*

5. MIRI will be able to map the intrinsically weak $H_2$ S(0) and S(1) rotational line emission with sufficient line/continuum ratio in protoplanetary disks.

6. Visiting icy bodies in the Solar System should have a high priority in the exploration plans of international space agencies.

7. State-of-the-art methods for the creation of stem cell lines relieve most of the related ethical concerns. Not using such methods for therapeutic purposes would be a lost opportunity.

8. Scientific outreach should be the second arm of every astronomer. Not only because it does good to society. It also does good to the astronomer's future.

9. Faith is a quantifiable observable. You can use Bayesian statistics to measure it.

10. Academics do not always make good politicians. But society should strongly encourage some academics to go into politics.

11. War on drugs has failed. Controlled legalization is a reasonable alternative.

12. Electoral democracy is beneficial for a country only when certain premises are given. Such premises are not fulfilled in most countries of the world.

Juan Rafael Martínez Galarza,
Amsterdam, May 24, 2012.

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