# DESCRIPTION OF THE PROPOSED PROGRAMME

## A- Scientific Rationale & Immediate Objectives

This template is for **4MOST GTO SURVEY PROPOSALS**.

The full text must be 8 pages or less (longer documents will be rejected), distributed as follow:

1. Scientific Rationale and Immediate Objectives: max 3p + max 2p for figures
2. Survey metrics: max 3p

The following settings should not be modified for the main text:

* Margins set to 2.5cm (top), 1.5cm (bottom, left, right)
* Font of the main text set to Arial, 10pt
* Spacing set to 0pt before a paragraph, 5pt after a paragraph

***Discuss the scientific background of the project; state what are the scientific objectives of the survey. It would be beneficial to put the proposed survey in the international context of past, present and future surveys.***

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## References

The references *can* use a smaller font (eg 8pt). A suitable format can be generated by ADS using the following custom format: %z0%3i (%Y) "%T," %q, %V, %p ---What follows is an example, not a strict guideline.

**1.** Kuijken, K., et al. (2015) "Gravitational lensing analysis of the Kilo-Degree Survey, " MNRAS, 454, 3500 -- **2.** de Jong, J. T. A., et al. (2015) "The first and second data releases of the Kilo-Degree Survey, " A&A, 582, A62 -- **3.** Sobral, D., et al. (2015) "Evidence for PopIII-like Stellar Populations in the Most Luminous Lyman-&alpha; Emitters at the Epoch of Reionization: Spectroscopic Confirmation, " ApJ, 808, 139 -- **4.** Massey, R., et al. (2015) "The behaviour of dark matter associated with four bright cluster galaxies in the 10 kpc core of Abell 3827, " MNRAS, 449, 3393 -- **5.** Le Fevre, O., et al. (2015) "The VIMOS Ultra-Deep Survey: ~10 000 galaxies with spectroscopic redshifts to study galaxy assembly at early epochs 2 < z < 6, " A&A, 576, A79 -- **6.** Smette, A., et al. (2015) "Molecfit: A general tool for telluric absorption correction. I. Method and application to ESO instruments, " A&A, 576, A77 -- **7.** Grazian, A., et al. (2015) "The galaxy stellar mass function at 3.5 &le;z &le; 7.5 in the CANDELS/UDS, GOODS-South, and HUDF fields, " A&A, 575, A96 -- **8.** Bacon, R., et al. (2015) "The MUSE 3D view of the Hubble Deep Field South, " A&A, 575, A75

This section A should be 3p or less.

## Figures



**Fig.1** (left) This is the caption of the first figure. This plot is just an example illustrating the power of Python’s Matplotlib package. **Fig.2** (right). Feel free to use a Table to structure the plots and captions.



**Fig.3** (left) This is the caption of the next figure. More of the same. **Fig.2** (right). Feel free to use a Table to structure the plots and captions.

You can have up to 2p of figures.

## B- Survey Metrics

***This section should include the following standard information to facilitate the work of the PSP. It must be 3 pages or less***

Replace this text by your justification (you can remove all the text in black ink).

### Targets density as a function of RA & Dec.

*Please see the example plot form the “*[*4MOST Survey Strategy Plan*](https://www.eso.org/sci/publications/messenger/archive/no.175-mar19/messenger-no175-17-21.pdf)*”*

*Example:*



### Targets distribution as a function of RA

*Please provide the histogram with the following specifications:*

* *RA bin width: 1 hour*
* *Separated histograms for LR and HR*
* *Please see the example plot form the “*[*4MOST Survey Strategy Plan*](https://www.eso.org/sci/publications/messenger/archive/no.175-mar19/messenger-no175-17-21.pdf)*”*



### Targets distribution as a function of magnitude

*Please provide the histogram with the following specifications:*

* *Use either G band GAIA magnitude (Vega) or Cousins R band magnitude (AB)*
* *Bin in magnitude: 0.1 mag*
* *Separated histograms for HR and LR*
* *Please see the example plot below:*



### Survey table

*Please use the following columns:*

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Survey Regions | RA(deg) | Dec(deg) | Area(Deg2) | Spectrograph (Lrs/Hrs) | Range of Targets Density (Targets/Deg2) | Range and Average Texp(Hours) | Magnitude Range | Execution Priority | Spectral Success Criteria |
|   |  |  |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |  |  |
|   |  |  |  |  |  |  |  |  |  |

Table Notes:

* Survey regions: a contiguous patch of the sky covered by the survey (e.g. COSMOS field, or a single stellar cluster)
* Magnitude range: G band GAIA magnitude (Vega) or Cousins R band (AB)
* Execution priority: the relative priority of the execution of a survey region over the other regions of the same survey along the 5 years survey time.