1   Title: The Title of the Survey

PI: PI's Intials and Name, PI's affiliation, Country

1.1   Background

Guidelines – The Principal Investigators (PIs) whose KMOS Public Survey (KPS) proposal have been reviewed by the Public Survey Panel (PSP) and recommended by the Observing Programme Committee (OPC) are now asked to submit the Survey Management Plan (SMP). For the preparation of the SMP, please follow the Guidelines illustrated at the beginning of each section below.

Once the KPS SMPs are approved, they will be made public via the ESO public surveys web pages and referred to in the ESO calls so that users of the Normal ESO programmes are informed about the target lists and observing strategies. Duplications will then be avoided. Examples for previously approved SMPs for spectroscopic surveys are available here: `https://www.eso.org/sci/observing/PublicSurveys/docs/SMP-vanderwel-v4.pdf`

The PIs should use this section to provide high level information that are considered useful for the ESO Survey Team (EST) in supporting the KPS.

The max number of pages available for this section is one page.
End Guidelines

2   Survey Observing Strategy

Guidelines – The start of data acquisition for the KPS is January 1st 2026. Observations for the KPS will be executed either in Designated Visitor mode (remotely) or in Visitor mode on Paranal or in service mode; the total allocation approved by the OPC is 140 nights maximum for Galactic and 145 nights maximum for Extragalactic KPS.

The runs to be scheduled in P116 are all allocated in visitor mode (VM). It will be the opportunity for the survey teams to get "hand-on" their observations, gaining experience in sight of the very large allocation they will have in the future. ESO would then consider a time-variable SM/VM fraction as of P117, starting with 50/50 VM/SM and with a possible ramp down (30/70 VM/SM) towards the completion of the surveys.

The KPS observers must prepare the observing blocks (OBS) before each dVM runs, and at the Phase 2 submission milestones for Service Mode runs. These OBs will be checked in the ESO repository and executed via the Observing tool (OT) for service mode OBs or via OTTO for dVM OBs by the Telescope Operator/Support Astronomer at the telescope. Whenever OBs are updated or changed, these OBs must be checked in and executed via OT/OTTO.

The KPS teams will be asked to submit a survey report to the OPC after the completion of each period. These reports should contain the list of executed OBs IDs, their status and QC grade. For those OBs graded "D", upon quality assessment by KPS teams, time can be requested for their repetition.

The max number of pages available for Section 2 is six pages, including text and figures.
End Guidelines

2.1   Scheduling requirements

Guidelines – The PIs and their teams must provide the observing plans for the duration of the entire surveys. The observing plan must illustrate the total number of requested observing dVM **(and Visitor mode)** runs, the observing conditions and average run lengths. For the service mode observations please detail the number
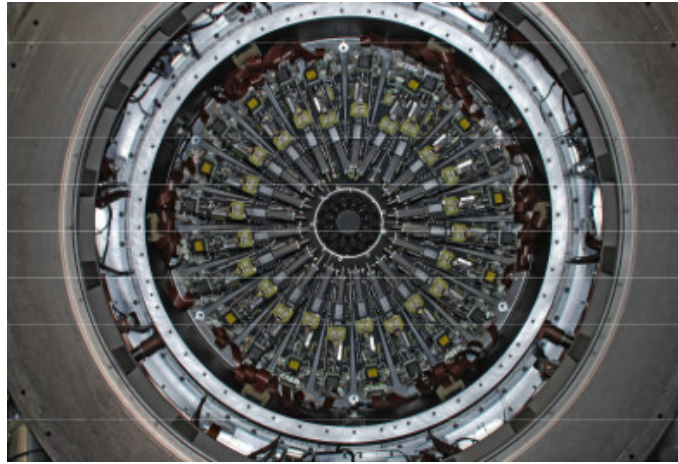
Figure 1: This is the caption.

Table 1: Scheduling requirements for dVM

Period	Number of nights	Number of runs per period	Average run length
P116			
P117*			
P118*			
P119*			
P120*			

of OBs, their cadence and whether they structure them in containers (e.g. groups, concatenations). Survey teams are asked to provide

- Cadence for OB submissions: given the unpredictable performance of the KMOS pick-off arm, it would be unpractical to prepare all OBs at once at the start of the period. A phased submission schedule is more sustainable and recommended.

- Structure of the OBs: It would be helpful to define a baseline structure (e.g., concatenation/group containers vs. individual OBs), to serve as a reference and ensure consistency.

More tables can be added to this section, if required. During the review by the EST, these requests will be compared with those stated in the KPS proposal.
End Guidelines

2.2 Observing requirements

Guidelines − The PIs and their teams must provide the observing requirements for the duration of the entire surveys. The observing requirements must illustrate the distribution of targets in RA and total observing time in each RA bin, priorities for the RA ranges in different semesters, and observing conditions. Priorities: $1->$ High, $6->$ Low . More than one table can be added, depending on the number of targets and the scheduling requirements.

In the review by the EST these requests will be compared with those stated in the submitted proposals.
End Guidelines

Table 2: Scheduling requirements for Visitor mode runs

Period	Number of nights	Number of runs per period	Average run length
P116			
P117*			
P118*			
P119*			
P120*			

(*) Yearly cycle

Table 3: Cadence for the submission of the OBs and containers for SM runs

Period	Frequency biweekly/monthly etc.	Number of OBs	Average OBs properties
P116			
P117*			
P118*			
P119*			
P120*			

(*) Yearly cycle

Table 4: Observing requirements for SM

Period	Req. Time (h) (incl. overheads)	Exp. Time (h)	Mean RA or RA range	Priority	Moon	Seeing "	Spectral bands	Transpa- rency	Contai- ners
P116	230	180	18h	1	full	0.6-1.0	H, K, H+K	phot.	# concat.
P117*	170	120	08-18h	3	grey	0.6-1.0	IZ, YJ	clear	# group
P117*	170	120	08-18h	2	grey	0.6-1.0	IZ, YJ	clear	# concat.
P118*	230	160	08-18h	..	full	0.6-1.0	H, K, H+K	phot.	# concat.
P118*	230	160	08-18h	.	full	0.6-1.0	H, K, H+K	phot.	# group
P119*	230	150	08-18h		grey	0.6-1.0	IZ, YJ	thin	# group.
P120*	270	150	08-18h		full	0.6-1.0	IZ, YJ	thin	# concat.

(*) Yearly cycle

3 Survey data calibration needs

Guidelines − The PIs should describe the type of calibration required, frequency and their application to the data. Indicate whether special calibrations are needed in addition to the standard calibration plan for KMOS service observing.

The max number of pages available for Section 3 is one page, including text and figures.

End Guidelines

4 Data reduction process

Guidelines − The PIs must submit detailed descriptions of their data reduction process as executed by the pipeline to be used. A block diagram synthesizing each step from the raw data to the calibrated products should be presented. Such a diagram must be accompanied by a detailed description for each step of the data reduction.
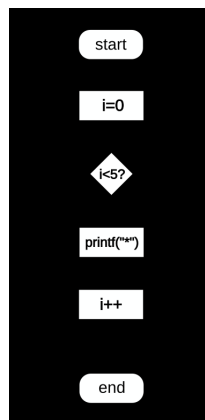
Figure 2: A block diagram synthesizing each step from raw data to the calibrated product should be presented.

As the KMOS instrument is supported by the internal data products (IDPs) stream (the link to the KMOS data stream is available from the Phase 3 page `https://www.eso.org/sci/observing/phase3/data_streams.html` and here that of the KMOS IDPs release description https: `www.eso.org/rm/api/v1/public/releaseDescriptions/156`), please illustrate the additional steps of the data reduction with respect to those described in the KMOS IDPs release description to reach the science data products required for the scientific goals of the surveys.

The max number of pages available for Section 4 is three pages, including text and figures.

End Guidelines

5 FTEs and hardware capabilities devoted to data reduction and quality assessment

Guidelines − The PIs must provide a description of the detailed responsibilities of the members of their survey teams; the observers and expected FTEs already committed or to be allocated.

Table 5: Allocation of resources within the team

Name	Function	Affiliation	Country	FTE allocated to project
J. Smith	PI	XXX Observatory	F	0.5
P. Ters	Pipeline	University of YYY	Fin	0.2
A. Bigail	Photometry	ZZZ University	P	..
B. Good	Astrometry	XXX Observatory	RCH	..

The PIs must describe the tools, procedures and available hardware to deal with the data flow from the ESO telescope.

The max number of pages available for Section 5 is two pages, including text, tables and figures.
End Guidelines

6   Data quality assessment process

Guidelines −   Although each product or set of products from KPS will be delivered with a measurement of fundamental quality parameters and their errors, the SMP must contain a section describing in detail the quality control process to be applied to the data.

Specifically, this section should describe: quality control criteria and samples of control data to be used for validation; any other procedures that the teams intend to implement for quality assurance purposes; software tools to be used; planned validation of tools and procedures.

The PIs and their teams are reminded that they have the sole responsibility of the quality and accuracy of the data products delivered to the ESO archive, even if ESO reserves the right to carry out independent validation of representative parts of the delivered datasets.

The max number of pages available for Section 6 is three pages, including text and figures.

End Guidelines

7   External Data products and Phase 3 compliance

Guidelines − In this section the PIs should describe the data products that are part of the Phase 3 submissions from the KPS to ESO. Depending on the scientific goals and observing strategy of the programme, KPS are prompted to deliver a wide range of science data products which should include:

1. Stacked KMOS IFS for each target[1]. KMOS IFS cubes must be compliant with the Phase 3 standard. Please detail whether stacked IFS cubes are obtained utilizing IDPs (e.g. OB level products) or from stacking raw IFS cubes.

2. KMOS IFS time series, that is one KMOS IFS per target per epoch for variability surveys. We suggest that these cubes are binned to the same scale.

3. Catalogs of targets and their physical parameters measured to achieve the survey scientific goals [for example: radial velocities, object classifications, calibrated EW of emission/absorption lines, line ratios, element abundances etc.].

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[1]KMOS IFS OB level products will become available in the KMOS data stream as part of ESO IDPs processing.

4. 2D KMOS maps for the velocity fields, metallicity or any spatially resolved physical parameters measured from the KMOS IFS for each target.

The data to be delivered during the Phase 3 process must comply with the data standard specifications which are published on `http://www.eso.org/sci/observing/phase3.html`.

The max number of pages available for Section 7 is four pages, including text and figures.

End Guidelines

8   Timeline delivery of data products to the ESO archive

Guidelines − The PIs must provide time-plans which describe the data product deliveries to the ESO archive as the telescope observations progress. The first data release must occur at least after one year from the start of the KMOS PS and be completed before the end of the data acquisition. All products from the KPS should be release 1.5 year after the termination of the data acquisition.

The raw data for the KMOS Public surveys can be accessed via the ESO User Portal as soon as they become available in the ESO Science Archive Facility (SAF). The raw data will become immediately public via the ESO SAF web pages.

The max number of pages available for Section 8 is two pages, including text and figures.

End Guidelines