## What's a proposal?













# A proposal is a piece of text to persuade somebody of something

• Presents the problem, so the reader understands it and sees the opportunity

• Its relevance

- Proposes a solution
  - You show you know how to solve the problem
  - For that you need resources (money, equipment, FTEs, etc)

Report back

### There is a hole to be filled and you know how

### Before that, try to play the Evil Queen & magic mirror

Magic mirror in my hand, who is the fairest in the land?

# My Queen, you are the fairest in the land.

• Ask the mirror:

*Don't waist your time with question you already know the answer!* 

- What is the problem you want to solve
- Why that matters
- How you want to solve it
- Then you have to **pack it** (your idea) right, otherwise you damage yourself (effort to produce ideas and previous work done to get there)
- Lose a chance to improve your reputation (see later the virtuous cycle) [In any arena: proposals, talks, committees... prepare it right]

## Packing your idea











# Writing is an art and can be perfected

- Try to write your proposal being aware of things discussed here
  - Sense of purpose
  - Clarity of idea and what you want to achieve and how
  - Self-contained
- Ask for advice
- Get to know your audience

### Getting help: Local Experts

- Successful/senior colleagues to read your proposal
- Current/former OPC & panel members to have a critical reading of your proposal <u>here</u>
- You have to put energy (and time) in

# As any art – training is the quintessence of growing

• Practice and study, like any art, like anything in life.



### The audience

- We have some experience in writing our ideas
  - Grant proposals, observing proposals, scientific reports, papers, etc.
- One key element: adjust it to your audience (the OPC in our case)

### • Creating effective slides by Jean-luc Doumont

#### Creating effective slides





### Who's the OPC?

- Experienced astronomers (mid-point of their careers +seniors)
- Having a (very good) perspective of what is important in their research fields (i.e., in their panel) but not necessary experts
- Are likely to be overloaded (projects, administration, research, teaching)
- Probably tired and reads your proposal while doing other things
- Gonna read your proposal after have read another >20 or so

## **Psychological** aspects

### Vicious x Virtuous





### How to break a vicious cycle?

### How to break a vicious cycle

- Strengthen your case
  - Archive data, simulations
  - Publish on-going projects
  - Increase your visibility portraying yourself as someone who is able to finish projects (until the paper is out/ presented in a conference)
- Join a virtuous cycle
  - Expand your network (conferences, visits)
  - Offer technical expertise

## ESO proposals

### Writing a successful proposal

- Make your science understandable
  - make it as simple as possible for the panel to understand your science and proposal
    - remember there are broad topical panels
  - get to the point immediately
  - be explicit, do not assume that the panel will work out what you meant
  - it is most likely that your proposal will be the 20<sup>th</sup> proposal to be read during that day ...
  - if the referee does not understand what you say you have lost
    - there is no possibility to check the literature

### Writing an exciting proposal

- Make your science understandable (cont.)
  - avoid jargon
    - expressions in your field may not be used in others
  - avoid acronyms, which may not be clear to everybody

    - $\circ$  H<sub>0</sub> may be understood by most, w' needs explanation
    - $\circ$  if you need acronyms or special terms explain them
  - avoid complicated language
    - use simple English
    - should be correct English have (senior) colleagues or collaborators read your proposal

### The Abstract is important

- Write your abstract first
  - this is the one paragraph that is guaranteed to be read by everybody
  - you have to be able to summarise the excitement in one paragraph
  - revisit your abstract several times during the writing and improve it

### The Abstract is important

#### 2. Abstract

Recent studies have systematically shown that a proper knowledge of the physical characteristics of bars is a key step towards understanding galaxy evolution. We propose to obtain deep measurements of the stellar vertical kinematics in a suitably chosen barred galaxy to test theoretical models on bar structure and evolution. We propose to use Giraffe IFUs and obtain spectral from the different galaxy components, with emphasis on data of the primary and secondary bars outside the bulge region. Firstly, these data will be used to extract kinematical parameters that will enable us to address the bar's origin, which in turn is related to particular properties of the dark matter halo of the galaxy. These data are also of paramount need to test claims concerning methods to estimate bar ages and the bar/bulge connection. Secondly, the kinematical mapping performed in the central region of the galaxy will also allow us to constrain the mass and the mass distribution in this region.

The big picture

How?

What I would like to do and its connection to the big picture (central problem)

The expected goal and the outcome of the observations

### And the title as well...

#### 2. Abstract

Recent studies have systematically shown that a proper knowledge of the physical characteristics of bars is a key step towards understanding galaxy evolution. We propose to obtain deep measurements of the stellar vertical kinematics in a suitably chosen barred galaxy to test theoretical models on bar structure and evolution. We propose to use Giraffe IFUs and obtain spectra from the different galaxy components, with emphasis on data of the primary and secondary bars outside the bulge region. Firstly, these data will be used to extract kinematical parameters that will enable us to address the bar's origin, which in turn is related to particular properties of the dark matter halo of the galaxy. These data are also of paramount need to test claims concerning methods to estimate bar ages and the bar/bulge connection. Secondly, the kinematical mapping performed in the central region of the galaxy will also allow us to constrain the mass and the mass distribution in this region.

Determining the Vertical Evolution of Bars through Stellar Kinematics

The central idea is crystal clear

### Example #2

#### 2. Abstract / Total Time Requested

#### Total Amount of Time:

Accretion plays a fundamental role in the the early depletion of angular momentum. In the so-called disklocking scenario, the stellar magnetic field threads the star's circumstellar disk, truncating it at a characteristic radius, which is set by the balance between accretion rate and magnetic field strength. In a previous work using FLAMES, we studied a sample of 91 low-mass ( $M \leq 0.2M \odot$ ) bona-fide members of the Orion Nebular Cluster (ONC) to understand where those low-mass stars were still locked to their circumstellar disks. Even though the accretion-rotation pattern observed is typical to stars locked to their disks (and therefore accreting), based on the H $\alpha$  width at 10% intensity criteria, none of the low-mass ONC members seem to be accreting. In the present proposal, we aim at taking advantage of XSHOOTER coverage and measure accurate accraetion rates to answer the question whether or not accretion is still on-going among the low-mass members of the ONC.

*Is accretion on-going in the low-mass members of the Orion Nebular Cluster?* 

### Science case (Box 7A)

A) Scientific Rationale: Understanding the processes of galaxy formation and evolution is central to modern astronomy, and much effort has gone into this topic over the last 20 years. Even though the initial formation of galaxies might be achieved by rapid merging in the hierarchical scenario, their subsequent evolution is believed to be substantially determined by slower, secular processes, induced by non-axisymmetric structures, such as bars in disk galaxies (e.g. Kormendy & Kennicutt 2004). These processes occur as a result of angular momentum exchange between the different galactic components, in particular the bar and the dark matter halo. In fact, recent models of the formation and evolution of bars (Athanassoula 2002, 2003, 2005a) brought a change of paradigm, showing that dark matter haloes play a significant role in stimulating the bar instability, rather than prohibiting it as was thought previously.

The bar plays a key role in the galaxy evolution These models have been studied with the help of a large number of simulations and have come with a number of predictions on bar properties (e.g. Athanassoula & Misiriotis 2002, Athanassoula 2005b), many of which are in principle testable by observations. Several studies have attempted such tests using results from barred galaxy photometry, mainly in the near-infrared. So far comparisons concerning the bar shape (Athanassoula et al. 1990), or the m = 2, 4, 6 and 8 components obtained by Fourier analysis of their images (Buta et al. 2006), as well as work in progress by our group on the radial luminosity and radial ellipticity profiles have proved very successful. Similarly, Gadotti & de Souza (2006) used colour information from BVRI and Ks photometry, to test the model prediction that bars grow from inside out. On the other hand, very few comparisons have involved kinematics, although many clear predictions have been made on barred galaxy kinematics. Our proposal aims to collect kinematical data for an appropriate barred galaxy to allow comparisons with models. In particular we want to test two clear model predictions:

a) Strong bars form strong peanuts, which have specific patterns of the velocity dispersion perpendicular to the equatorial plane (work in progress).

b) Bars are thick only in the part that corresponds to the boxy/peanut bulge, but are thin in their outermost

The goal is crystal clear, after reading it, we want to know the result!

#### 7. Description of the proposed programme

A – Scientific Rationale: The angular momentum contained in collapsing cores are a few orders of magnitude larger than that observed in solar-type stars. Actually, a simply back-of-the-envelope computation shows that if conserved most of the young stars (from the pre-main sequence to the ZAMS) would be rotating close to the break-up velocity. In reality, photometric and spectroscopic surveys aiming at measuring rotational periods (Herbst et al. 2000, 2001, 2002) or projected rotational velocities (e.g., Sicilia-Aguilar et al. 2005; Biazzo et al. 2009) show that PMS stars are slowly rotating, even at slower rates than those observed in the young open clusters (e.g. Rebull et al. 2004).

How angular momentum is depleted: Disk-locking scenario. As a result of almost two decades of observations a coherent view emerged to explain the early evolution of angular momentum. The so-called "disk-locking" scenario. According to this model, the stellar magnetic field threads the star's circumstellar disk, truncating it at a characteristic radius, which is set by the balance between accretion rate and magnetic field strength. Accretion of disk material onto the stellar surface occurs along magnetic field lines, producing hot spots near the magnetic poles. At the same time, magnetic torques transfer angular momentum away from the star to the disk. This model, in addition to providing a mechanism for the depletion of stellar angular momentum, provides a unifying framework for many observed properties of TTS: spectroscopic outflow signatures, ultraviolet excess emission and veiling (e.g., Basri & Batalha 1990), hot surface spots (Herbst et al. 1994 and references therein), and truncated circumstellar disks (e.g. Lada & Adams 1992).

As the disk dissipates after a few Myr, the star spins up as it contracts and becomes more centrally-condensed (due to the development of a velocity and the time the star and not enough on the and not enough on the contribution the proposal brings

to the field

### Immediate Objective - Box 7B

B – Immediate Objective: In Biazzo et al. (2009) we used FLAMES/GIRAFFE to characterize a sample of about 91 low-mass ( $M \leq 0.2M_{\odot}$ ) bona-fide members of the Orion Nebular Cluster (ONC). The H $\alpha$  width at 10% intensity as suggested by White & Basri (2003) was used as accretion indicator. According to those authors, accretors would show a 10%-width greater than 270km/s. Thus strictly speaking none of the stars studied in our sample is accreting. However, as shown in Figure 1 and Figure 2, 8 ONC members do show 10%-width larger than the median of the sample (Fig. 1) and also a slow rotation rate resulting from a possible locking with the circumstellar disk.

This proposal aims at confirm whether accretion is still on going on those low-mass members of the ONC. Establishing accretion rates  $(\dot{M})$  and consequently the locking time-scale allows for a better modeling of the early angular momentum evolution and the impact of such evolution in the internal structure of the low-mass stars.

Thanks to its wide coverage and exquisite throughput, XSHOOTER will allow us to cover simultaneously several accretion indicators (Rigliaco et al. 2012). We highlight at least 5 of those indicators: i) the Balmer jump at about 3700Å related to the UV excess (UVB-arm). Accretion rates are derived using Gullbring et al. (1998) relationship between UV continuum excess and accretion; ii) H $\alpha$  intensity (VIS-arm); iii) CaII at 8752Å, HeI 1.038 $\mu$ m and Pa $\beta$  (1.28m $\mu$ ) in the IR-arm. In particular, HeI is interesting since it is sensitive to

Description of the previous result

How accretion is going to be measured

Only here the goal is **briefly** *mentioned*!

### No time granted!

Previous results from a FLAMES/GIRAFFE run, suggest that 8 of 91 surveyed objects in the Orion Nebular cluster might be accreting. The applicants propose to observe those objects with X-SHOOTER to confirm whether accretion is still taking place. A control sample is proposed to be observed as well. After a quite clear description of the disk-locking scenario for the loss of angular momentum in collapsing cores, the planned observations are described. However, very little is written on how these observations can contribute to the disk-locking theories. There is no mention of the evidence of disks on the targeted systems, or whether the FLAMES data confirmed that the target stars are indeed young stars.

Comments are excellent (and right)! They give a clear guidance for improvement B) Immediate Objective: Our aim in this proposal is to obtain kinematical data along the major and minor axes of the bar in one face-on galaxy, as free as possible from contamination of bulge light. These kinematical parameters will be compared to those arising from the bar models discussed above, hence providing constraints to the properties of these models and to the dark matter haloes involved, and will serve as well as a strong feasibility test to our method of estimating bar ages.

We propose to use GIRAFFE IFUs in FLAMES suitably positioned to obtain deep spectra from the different components of the strongly barred galaxy NGC 1291 (see Fig. 1), a close to face-on system with an inclination of about  $8^{\circ}$ ). The spectra will cover the region of the Ca II triplet at about 8600Å, which is well suited to the extraction of kinematical parameters, and will have a velocity resolution of about 30 km s<sup>-1</sup>. This in turn requires a spectral resolution of about 10000, which can only be obtained with the proposed instrument. We considered using the VIMOS IFU, but its spectral resolution is too low for our purposes. We expect the velocity dispersion in the outermost points to be of order 30 - 40 km s<sup>-1</sup> at most, and thus the VIMOS resolution of 2500 is not adequate to measure the dispersion there.

The surface photometry available for NGC 1291 (cf. Fig. 2) shows that at the bar major axis, outside the bulge, we need to integrate for 10 hours to achieve the required S/N. This concerns the 8 boxes along the major axis and the 4 boxes along along another axis (justified below) in Fig. 3, which are distributed using the necessary 11" distance between 2 IFUs and which are well away from the bulge, as required for our science purposes. We propose to observe these 12 points for the total amount of time requested.

#### Recap from above

Velocity dispersion is the main observable here, methodology is explained

### Time granted!

"Very interesting proposal from expert team who convincingly responded to our queries in the last round."

### Be consistent

- Write a consistent proposal
  - have you selected the best suited instrument for your observations?
  - the exposure times and the target sample have to match your science case
  - there is a good chance one referee will pick up on any inconsistencies
  - exposure times have to make sense, use the ETCs
  - figures (tables) should help the text and be relevant

- ESO proposal form
  - particularly important boxes
    - Boxes 3 (run definitions and total times)
    - 4 (previous observations and future needs)
    - 5 (special remarks)
    - 8a (telescope justification)
    - 8 (justification for observing time)
    - 11 (target list)
    - 13 (instrument setup)



European Organisation for Astronomical Research in the Southern Hemisphere

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1. Title	2								Categor	y:	C-4
Is acc	retion on-g	going in the low-	mass men	ibers of the Ori	on Nebula	r Cluste	r?				
2. Abs	tract / Tot	tal Time Reque	sted								
Accre	Amount of tion plays	a fundamental	role in th	e the early der	letion of a	menlar	momen	tum. Ir	n the so	-called	l disk
lockin	g scenario,	the stellar mag	netic field	threads the sta	r's circum	stellar di	isk, tru	ncating	it at a c	haract	eristi
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(ONC	) to under	stand where the	ose low-ma	ass stars were a	till locked	to their	circun	nstellar	disks. I	Even t	hough
the ac on th	cretion-rot e Hα width	tation pattern of h at 10% intensi	oserved is tv criteria	typical to stars none of the l	locked to w-mass O	their dis NC mer	sks (and nbers s	i therefo eem to	be accre	sting), sting.	based In the
preser	it proposal	l, we aim at taki	ng advant	age of XSHOO	TER cover	age and	measu	re accu	rate acci	raction	ı rate
to and	swer the qu	iestion whether	or not acc	retion is still o	i-going am	ong the	low-ma	ess mem	ibers of	the O	NC.
3. Run	Period	Instrument	Time		Month	Moon	Seeing	g Sky	Mode	Туре	2
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4. Nur	nber of nig	ghts/hours		Telescope(s)			Amour	nt of tir	ne		
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3. Run	Period	Instrument	Time	Month	Moon	Seeing	Sky Trans.	Obs.Mode
A	83	FORS2	4.1h	a pr	d	$\leq 1.0^{\prime\prime}$	CLR	s
В	83	FORS2	0.9h	a pr	d	$\leq 0.8''$	CLR	s
С	83	FORS2	6.1h	jun	d	$\leq 1.0''$	CLR	s
D	83	FORS2	1.1h	jun	d	$\leq 0.8''$	CLR	s
4. Numl a) already b) still re	ber of nig / awarded quired to	ghts/hours to this project complete this	t: project:	Telescope UT1 none	(s)		Amount of 6.0h in 281.1 0	time D-5043

5. Special remarks:

The observations should start immediately in Period 83 to optimise the S/N. Two epochs of observations should be separated by at least 50 d to constrain the late-time light-curve slope and study possible dust formation.

C) Telescope Justification: SNF20080723-012 exploded in a faint anonymous galaxy with a spectroscopically determined redshift of z = 0.075. At maximum brightness, which occurred in August 2008, the SN reached an unfiltered magnitude of ~17.3, which corresponds to an absolute magnitude ~ -20 at the given distance (310 Mpc). Ordinary SNe Ia fade by ~8 mag within one year from maximum. Applying this rate to SNF20080723-012, the SN would be at  $V \sim 23.3$  at the time of the first proposed spectroscopic observation, and ~0.6. mag fainter two months later, when a second spectrum shall be taken. This makes the use of an 8 m- to 10 m-class telescope obligatory for low-resolution spectroscopy. VLT-UT1 equipped with FORS2 is the optimal solution in terms of efficiency and quality. Note that 50 to 60 h of observing time would have to be spent to obtain a similar S/N if NTT + EFOSC2 was used instead.

### Box 3

Cumulative probability of seeing at Cerro Paranal for $\lambda = 600nm$							
Seeing [arcseconds]	< 0.4	< 0.5	< 0.6	< 0.8	< 1.0	< 1.2	< 2.0
<b>Cumulative Probability</b>	10%	20%	30%	50%	90%	95%	100%

Using the normalized seeing at the minimal airmass the target can reach, we simply interpolate in the cumulative probability distribution of the seeing to retrieve the OB's  $P_{seeing}$ .



Figure 9. Cumulative Probability Distribution of Seeing at Cerro Paranal

### Box 3

Cumulative probability of sky transparency at Cerro Paranal						
Sky Transparency Photometric Clear Thin Th						
Cumulative Probability	50%	80%	90%	95%		

The probability  $P_{sky}$  is simply interpolated using the OB's requested sky transparency.



Figure 10. Cumulative Probability Distribution of Sky Transparency at Cerro Paranal

3. Run	Period	Instrument	Time	Month	Moon	Seeing	Sky Trans.	Obs.Mode
Α	83	FORS2	4.1h	apr	d	$\leq 1.0^{\prime\prime}$	CLR	s
В	83	FORS2	0/9h	apr	d	$\leq 0.8''$	CLR	s
$\mathbf{C}$	83	FORS2	Ø.1h	jun	d	$\leq 1.0''$	CLR	s
D	83	FORS2	1.1h	jun	d	$\leq 0.8''$	CLR	S

9. Justification of requested observing time and lunar phase

Lunar Phase Justification.

The target is very faint  $(V \sim 23.3-23.9)$ . Therefore, the observations have to be made during dark time.

#### Time Justification: (including seeing overhead)

Spectroscopy: We intend to cover a rest-frame wavelength range of ~3700-8000 Å (corresponding to an observed range of ~4000-8600 Å), where most of the expected emission lines of SNF20080723-012 should be located. We therefore ask for FORS2 with the MIT detector and grism 300V, since this combination provides a relatively homogeneous sensitivity over the desired wavelength range, little fringing, and adequate resolution (~15 Å). According to FORS ETC (v. 3.2.7; point source, blackbody spectrum,  $V \sim 23.3$ , 1" slit, 1" seeing, airmass 1.3, 3 d from new Moon) 3.2 h of exposure time are required to achieve an average S/N of 9–10 in run A. Since the SN is an emission-line object, a higher S/N of 15–25 can be expected in the line peaks, sufficient for the intended analysis. Including the overheads, this corresponds to the execution of 4 OBs with a total duration of 4.1 h. At the second epoch (run C), when we estimate the SN to be at  $V \sim 23.9$ , 4.8 h of exposure time yield an average S/N of 6–7 (and hence 10–15 in the lines), sufficient to detect significant changes in the line profiles. This can be accomplished with 6 OBs with a total duration of 6.1 h.

Imaging: Along with the spectroscopy, we need almost simultaneous (within 10 d) photometry with FORS2 in the bvRI filters to properly anchor the spectrophotometry. For an object of 23.3 mag, we need exposure times of 540–720 s in each filter (split into 3 individual exposures each) in order to achieve a S/N of ~50–60 (20 in I) over the psf area in (MIT detector, point source, 0.8" seeing, airmass 1.3, 3 d from new Moon). Including overheads, this corresponds to a request of 0.9 h in run B. The realisation probability of the requested seeing (0.8") is 65%, yielding a realisation probability of almost 100% over the time span of this proposal. For the second epoch of observations (run D), when the SN has faded to  $V \sim 23.9$ , we would increase the exposure times a bit (600–900 s in each filter), and accept the slightly reduced S/N that results from the SN fading by ~0.5 mag (~30–40 in bvR and ~13 in I). Including overheads, this corresponds to one OB of 1.1 h.

### **ESO ETCs & Simulations**

HOME INDEX SEARCH HELP NEWS

xposure Time Calculators (ETCs) play an important role in the overall process of ESO science operations. They are intended to give astronomers the ability to predict the signal to noise chieved under a set of assumptions about the performance of an instrument and the observing conditions. The accuracy of these predictions will improve as the instrument is calibrated nd tracked under actual operational conditions. For the moment, ETC accuracy is dependent on preliminary calibrations and estimates of operational conditions. Users are advised to xert caution in the interpretation of the results and to report any result which may appear inconsistent.

#### ocumentation

- General descriptions for optical, infrared, UVES and VIMOS instruments.
- Performance statement, Frequently Asked Questions.
- Formula Book for signal and noise estimates.
- Characteristic curves for the various optical components.

	Exposure	Time Calculators & Simulations									
	Observation Domain										
Facility	Opti	ical		Infrared							
racinty	Imaging	Spectroscopy	Imaging	Spectroscopy							
La Silla	EMMI EFOSC2 SUSI 2p2 WFI	EMMI EFOSC2 HARPS FEROS	SOFI	SOFI							
Paranal UT1	FORS2(pre P83, now retired) FORS2(since P83, current)	FORS2(pre P83, now retired) FORS2(since P83, current)	ISAAC SW LW	CRIRES ISAAC SW LW							
		UVES FLAMES+UVES									
Paranal UT2	FORS1(retired)	GIRAFFE FORS1(retired)									
Paranal UT3	VIMOS	VISIR	VISIR								
	<u>VINO5</u>										
Paranal 014			NACO HAWK-I	NACO SINFONI							
Paranal VISTA			VIRCAM								
VLTI Calculators		<u>VisCalc</u> <u>CalVin</u>									
E-ELT		Imaging Spectroscopy									

### Overheads are important

### • From the Call for Proposals

Hardware item	Action	Time (minutes)
La Silla telescopes	Preset (point and acquire target)	4
La Silla telescopes	Preset (NTT with image analysis)	6
HARPS	Read-out	1
SOFI	Imaging	$\sim 30\%$ of total int. time
SOFI	Spectroscopy	$\sim 35\%$ of total int. time
EFOSC-2	Read-out	2
FEROS	Read-out	2
WFI	Move to gap/pixel	7
WFI	Template change (with initial offset $\leq 120''$ )	0.5
WFI	Template change (with initial offset $> 120''$ )	1
WFI	Filter change	1
WFI	Offset + readout	1.17
Paranal telescopes	Preset	6
FORS2	Acquisition (1 cycle w/o exp. time) <sup>[1]</sup>	1.5 or 2
FORS2	Through Slit Image (2 cycles w/o exp. times) <sup>[2]</sup>	4
FORS2	Instrument Setup	1
FORS2	Retarder Plate Setup per PMOS/IPOL OB	1
FORS2	Read-out 100kHz binned (spectroscopy)	0.7
FORS2	Read-out 200kHz binned (imaging)	0.5
CRIRES	Acquisition without AO	3
CRIRES	Acquisition with AO	5
CRIRES	Read-out	10%–60% exposure time <sup>[3]</sup>
CRIRES	Nodding cycle	0.4
CRIRES	Change of wavelength setting	3.5
CRIRES	Change of derotator position angle	1
CRIRES	Attached wavelength calibration	2.5
CRIRES	Attached lamp flat	2

Table 17: Telescope and Instrument Overheads

3. Run	Period	Instrument	Time	Month	Moon	Seeing	Sky Trans.	Obs.Mode
Α	83	FORS2	4.1h	apr	d	$\leq 1.0^{\prime\prime}$	CLR	s
В	83	FORS2	0.9h	apr	d	$\leq 0.8''$	CLR	s
$\mathbf{C}$	83	FORS2	6.1h	jun	d	$\leq 1.0^{\prime\prime}$	CLR	s
D	83	FORS2	1.1h	jun	d	$\leq 0.8''$	CLR	s

12.	List of targets proposed in this programme										
	Run	Target/Field	α(J2000)	δ(J2000)	T₀T	Mag.	Diam. Additional info	Reference star			
	Α	SNF20080723-012	16 16 03.3	$+03 \ 03 \ 17.4$	4.1	23.3	acquisition blind offset	by			
	В	SNF20080723-012	$16 \ 16 \ 03.3$	$+03 \ 03 \ 17.4$	0.9	23.3					
	С	SNF20080723-012	16 16 03.3	$+03 \ 03 \ 17.4$	6.1	23.9	acquisition blind offset	by			
	D	SNF20080723-012	$16 \ 16 \ 03.3$	$+03 \ 03 \ 17.4$	1.1	23.9					

#### 14. Instrument configuration

Period	Instrument	Run ID	Parameter	Value or list
83	FORS2	А	LSS	GRIS300V+20
83	FORS2	В	IMG	b-HIGH+113, v-HIGH+114, R-
				SPECIAL+76, I–BESS+77
83	FORS2	С	LSS	GRIS300V+20
83	FORS2	D	IMG	b-HIGH+113, v-HIGH+114, R-
				SPECIAL+76, I-BESS+77

### Resubmissions

- We all have had proposals rejected
  - and yes, sometimes it really hurts
- Address comments from a previous submission
  - be clear what has changed and how the proposal has improved
- Why did the panel not understand your proposal?
  - this is not only their fault
  - be more explicit, more direct, crystal clear

### Resubmissions

- Continuation of programmes
  - address the new goals
  - explain why you need a bigger sample
  - what has changed since the last proposal?

### Apply!

- Remember this is an international competition
  - explain why your project is interesting
  - use simple language keep it simple
  - try to think like the referee/panel member
    - why is this interesting?
    - why should my proposal be chosen above others?
    - can the proposal be understood quickly, e.g. from the abstract alone?
    - are the figure supporting my story (next page example)?
    - are they clear and to the point?





DON'T LET A COLD TAKE AWAY

Help Mon last better, laster with he days ne, shilly head, some



### Thinking fast & slow



# THINKING,

FASTANDSLOW

### DANIEL KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS

### Thinking fast & slow



- Howdo you feel about your mother?
- Drive a car an empty road
- Answer 2+2

 $\bigcirc$ 

...

- "Bread and …"
- Detect hostility in a voice



- Focus on someone's voice in a crowded room
- Maintain a faster walking speed than is natural for you
- Tell your phone number
- Monitor the appropriateness of your behavior in a social situation
- 17 x 24

### Thinking fast & slow

System 1

THINKING, FAST AND SLOW

### DANIEL KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS



- Automatic
- Frequent
- > Emotional
- Stereotypic
- Subconscious

- System 2
- Slow
- Effortful
- Infrequent
- Logical
- Calculating
- Conscious

### Cognitive ease



Thanks to the way that system 1 works, if it is cognitively easy to understand, it feels familiar, it feels true

### Some biases discussed in the book that affect proposals [and interviews]

- WYSIATI
  - "Will Mindik be a good leader? She is intelligent and strong ..." [Make a good story; marketing]
- Halo effect
  - She knows nothing about this person's management skills. All she is going by is the halo effect from a good presentation" [marketing; increase your influence]
- Loss aversion
  - "We discovered an excellent dish at that restaurant and we never try anything else, to avoid regret."
  - "The salesperson showed me the most expensive car seat and said it was the safest, and I could not bring myself to buy the cheaper model. It felt like a taboo tradeoff."
  - our tendency to fear losses more than we value gains. [decrease the risk perception in your proposal giving confidence you know how to do it]

That's why we need committees and boards – To minimize those individual biases

### Two links

- Daniel's lecture in Zurich
- <u>https://www.youtube.com/watch?v=qzJxAmJmj8w</u>

- Dan Ariel: are we in control of our decisions?
- https://www.youtube.com/watch?v=9X68dm92HVI