



**MINCE**  
**Measuring at Intermediate metallicity Neutron Capture Elements**  
Minutes of meeting 05/04/2022

April 6, 2022  
MINCE\_MAN\_003  
Issue 00 Revision 01  
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## MINCE

### ABSTRACT

Minutes of the meeting of 06/04/2022 at Osservatorio Astronomico di Trieste (Virtual)

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## 1 INTRODUCTION

The meeting took online on 06/04/2022 14:20. Present 18 persons:

Alessio Mucciarelli (AM) DIFA-UNIBO

Andreas Korn Uppsala (AK) University

Arunas Kunciskas (ArK) Vilnius University

Camilla Hansen (CH) Goethe University Frankfurt, Institute for Applied Physics

Elisabetta Caffau (EC) GEPI, Observatoire de Paris, Universite' PSL, CNRS

Emanuele Spitoni (ES) Observatoire de la Cte d'Azur, Nice (France)

Francesca Lucertini (FL) ESO, Vitacura, Santiago, Chile /UNAB

Gabriele Cescutti (GC) Istituto Nazionale di Astrofisica (INAF)

Jonas Klevas (JK) Vilnius University

Laura Magrini (LaM) INAF Osservatorio Astrofisico di Arcetri

Linda Lombardo (LL) GEPI, Observatoire de Paris, Universite' PSL, CNRS

Lorenzo Monaco (LM) UNAB

Mariagrazia Franchini (MF) INAF - Osservatorio Astronomico di Trieste (Italy)

Marica Valentini (MV) Leibniz Institut f ur Astrophysik (AIP)

Paolo Di Marcantonio (PM) Istituto Nazionale di Astrofisica (INAF)

Patrick François (PF) GEPI, Observatoire de Paris, Universite' PSL, CNRS

Piercarlo Bonifacio (PB) GEPI, Observatoire de Paris, Universite' PSL, CNRS

Vidas Dobrovolskas (VD) Vilnius University



telescope	instrument	time	targets	status
A40-41 TNG	HARPS-N	21 h	31	observed
A42 TNG	HARPS-N	1n	12	observed
A43 TNG	HARPS-N	1n	16	observed
CFHT 2019B+20A	ESPaDOnS	30h	12	observed
CFHT 2020B	ESPaDOnS	24.5h	6	observed
OHP 2019B+20A	Sophie	6n	42	observed
TBL 2020A	NeoNArval	13h	12	observed (reduction problematic)
2019B 2.2m	FEROS	4n	65(72)	observed (2n cancelled)
2020B 2.2m	FEROS	2n	65	observed
Magellan	MIKE	2n	14 (20)	observed (1 night cancelled)
VLT ESO period 105-107	UVES	50h	50	observed
VLT ESO period 106	UVES	50h	50	observed
period 61, NOT	FIES	3n	16	observed
period 62, NOT	FIES	8h	8	observed
ChETEC-INFRA 1, NOT	FIES	3n	16	not taken due to eruption
Moletai 1.65m	VUES	38n	24	observed

Figure 1:

## 2 STATUS of the OBSERVATIONS

3 nights at NOT next 16-18 April within the ChETEC INFRA frame work (AK)

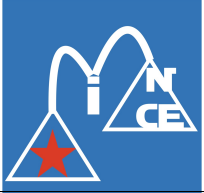
## 3 SUMMARY OF DEADLINES FOR OBSERVATION PROPOSALS

Not discussed. Idea is to have at least PAPER I submitted before keep going with new submission. Exceptions can be the ChETEC INFRA proposal.

Targets selection for the new sample will use Gaia DR3 catalogue and they will not be based on kinematics (strong point by PB)

## 4 PAPERS

Briefly discussed at the end of the meeting the point on publications and authorship. Main idea (PB and GC), each group finalises their data in a paper (o more papers), including in the authorships

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the contributors to that paper (those papers) within the MINCE project. For the first paper, all the collaborators will be included.

Main goal of MINCE is to provide a database with all the abundances of the project (already published by the different groups).

- Paper I was presented (next section detailed descriptions of the actions required) It included survey presentation, stellar parameters and chemical abundances O to Zn fo 40 stars already observed with SOPHIE, FIES, HARPS-N and ESPaDOnS. 6 stars exluded because thin disc stars (propose sent to LM-not discussed) It will include also Dynamics and the putative connection to 2 substructures (GES and sequoia) thanks to the work by LM and MF
- Paper II PF et al. Chemical abundances Ga-U for stars in Paper I. analysis going on (possible some preliminary results next meeting)
- Paper III LM and FL al. (Mike + UVES data) first results expected in summer
- Paper IV CH FEROS data started to work on the data (PhD student involved)
- Paper V (ArK) et al Moletai data. about 20 with enough quality, around 30 in total.

## 5 DATABASE

PM voluteered to be in charge of the interactions with IA2. GC has provide a crude database scheme (Database with all the elements + stellar atmosphere parameters)

Possibility to do this with ESO database archive (Magda Arnaboldi)

## 6 ACTIONS

At the end of the meeting the following general actions are agreed upon

1. GC: write minutes of meeting
2. PB: cross check of the binary dabatase (Gaia) and sample paper I
3. PB: inform CH on the 2 possible binaries (+ other from cross check?)
4. GC: pass the full sample at the present date to MV for possible asterosismology targets
5. PB: pass the known Kepler stars spectra to MV (done!)
6. PF: finalise the analysis of the nc elements sample



7. LM: working on the ESO UVES + MIKE sample with FL (about 110 targets)
8. ArK: pass VUES spectra to Paris to run mygisos on the spectra collected with the parameters determined by PB
9. CH: work with a new PhD student on the 150 spectra + request more targets for FEROS (goal 200 targets). Not sure about the parameters for the already taken stars (to be done by Paris?)

At the end of the meeting the following actions connected to PAPER I are agreed upon

1. LM: write the section on the dynamics (using the RV obtained with MINCE spectra) of the stars and the subdivision of the stars into halo substructures
2. GC: change the plots color coding following the substructures
3. GC: sent to Alessio the color coded version with Na and Mg(?)
4. GC (not discussed): update the database with the new Sc measurements
5. CH: find two stars in paper I with parameters similar to her PEPSI sample for which NLTE is available for many elements and write the results in the paper

## **7 ACTIONS previous meeting**

Meeting April 2021

1. PB: verify PF has the material for paper II (closed)
2. GC: organise an All-Hands virtual Meeting (closed)
3. GC: prepare the scheme for the database (closed)
4. GC: write minutes of meeting (closed)
5. GC: finalised Paper I (closed)
6. LOGO (closed)

Meeting November 2020

1. PB: ask L. Monaco to compute orbital parameters for MINCE targets (closed)
2. GC: organise an All-Hands virtual Meeting (closed)



3. GC: talk to C. Knapic for a web-base collaborative platform (open)
4. PB: write minutes of meeting (closed)
5. PB: prepare a draft of documentation management plan, document template and organigram (closed)
6. EC: analyse SOPHIE observations with A.d.M. Matas Pinto (closed)
7. ALL: think about a logo for MINCE (closed)

## **8 NEXT MEETINGS**

proposal: keep same day of the week of the current meeting (Tuesday at 14:30 CEST)

next meeting: 10 May 2022 (to be agreed)