

# Schedule

## Access to the hall

### b508



Magdalena Kowalska



# ISOLDE schedule – part 1

GPS startup on schedule (end July);  
 HRS – 2 weeks buffer eaten up and physics delayed by ca 1 week (CRIS and IDS runs changed into tests)  
 Magnet cycling and slit position problems

|    |        | v4.51 27Oct   |  |   |
|----|--------|---|--|---|
|    | Info   | GPS   | HRS  |   |
| 31 | 28-Jul | Target change: Ta-W<br>50um foil<br>#508, no mass markers | SEM grid on<br>BTY to HRS setup<br>BTY to HRS setup                        |   |
|    | 29-Jul | FC20 Intervention, etc                                    | Target change: UC W n<br>m.m. Cs, Rb, Tl                                   |   |
|    | 30-Jul | injector MD<br>injector MD                                | separator setup to GLM, GHM<br>sep setup to CAD                            | HT tests with protons   |
|    | 31-Jul |   | p-scan<br>tapestation checks+yields<br>(IS528 -Dy->Tb)                     | HT tests with protons   |
|    | 1-Aug  |   | tapestation checks+yields<br>(IS528 -Dy->Tb)                               | HRS setup<br>ISCOOL setup   |
|    | 2-Aug  |   | collections<br>maybe IDS stable beam                                       | ISCOOL setup<br>ISCOOL setup  |
|    | 3-Aug  |   | collections<br>maybe IDS stable beam<br>IS528 -Dy->Tb                      | ISCOOL setup<br>ISCOOL setup  |
|    | 4-Aug  |   | tapestation checks+yields<br>IS528 -Dy->Tb                                 | ISCOOL setup<br>ISCOOL setup  |
|    | 5-Aug  |   | IS528 -Dy->Tb; mom: shipment   | ISCOOL or CRIS  |
|    | 6-Aug  |   | IS528 -Dy->Tb; mom: shipment   | GPS - p priority<br>ISCOOL or CRIS                                      |
| 32 | 7-Aug  |   | GPS - p priority<br>ISCOOL or CRIS   |   |
|    | 8-Aug  |   | If needed:<br>IS528 -Dy->Tb; mom: shipment<br>(IDS - If collections ready) | GPS - p priority<br>ISCOOL or CRIS                                      |
|    | 9-Aug  |   | IDS - tests  | CRIS or IDS on GPS<br>(to be discussed<br>depending on sep status)      |
|    | 10-Aug |   | IDS - tests  | CRIS or IDS on GPS<br>(to be discussed<br>depending on sep status)      |
| 33 | 11-Aug |   | IDS - tests<br>cooling<br>(long lived ions?)                               |   |
|    | 12-Aug |   | IDS - tests<br>cooling   |   |
|    | 13-Aug | injector MD<br>injector MD<br>no p's 2-4pm                | IDS - tests  | Target change: UC-Ta-q-conv<br>#510, m marker Cs, Cd, (Mn)              |
|    | 14-Aug |   | collections, if needed   | separator setup<br>sep setup to tape station<br>stable beam to ISOLTRAP |
|    | 15-Aug |   |  | p-scan<br>yield checks<br>ISOLTRAP                                      |

|       |        |  |  |  |  |         |
|-------|--------|--|--|--|--|---------|
|       | 16-Aug |  |  | IS574, 129-131Cd   | 4  |         |
|       | 17-Aug |  |  | ISOLTRAP<br>IS574  | 7  |         |
|       | 18-Aug |  | Target change: Pb-VDS<br>#463                                      | IS574  | 10   |         |
|       | 19-Aug |  |  | IS574  | 13   |         |
|       | 20-Aug |  | separator setup to GLM<br>stable beam to GLM<br>stable beam to GLM | IS574  | 16   |         |
| 34    | 21-Aug |  | Hg<br>sep setup to tape station<br>stable beam to LA1 and IDS      |  |  |         |
|       | 22-Aug |  | p-scan<br>yield checks   |  |  |         |
|       | 23-Aug |  | LA1 - Bratislava<br>IS521, 183, 185Hg                              | 4.5  | cooling  |         |
|       | 24-Aug |  | IS521  | 7.5  | cooling  |         |
| 35    | 25-Aug |  | IS521<br>(GLM collections)   | 10   | Investigation of HRS low transm                        |         |
|       | 26-Aug |  | Hg<br>RILIS VADIS tests<br>RILIS tests<br>17h: LA1 again           | 12   | Investigation of HRS low transm                        |         |
|       | 27-Aug | injector MD<br>injector MD<br>16:30 - schedule mee | IS588, IDS<br>207,208Hg  | 3  | Investigation of HRS low transm                        |         |
|       | 28-Aug |  | no p's<br>IS588, IDS   | 5.5  | Investigation of HRS low transm                        |         |
|       | 29-Aug |  | GLM, 187, setup with 10-20kV?<br>IS487, IS492, IS515, IS585        | 3  | p-scan on the target<br>stable beam to LA1<br>CAD free |         |
|       | 30-Aug |  | (IS588 if IS590 ok, in    with GLM)<br>IS487, IS492, IS515, IS585  | 6  | CAD free<br>CAD free                                   |         |
|       | 31-Aug |  | (IS588 if IS590 ok, in    with GLM)<br>IS487, IS492, IS515, IS585  | 9  | CAD free<br>CAD free<br>1152 - Hg, RILIS tests at LA1  |         |
|       | 36     | 1-Sep  |  | Target change: UC-Ta-conv<br>#512, m marker Rb, Mn, In                               |  |         |
|       |        | 2-Sep  |  | Mn<br>separator setup to CAD<br>sep setup to tape station<br>stable beam to GLM, IDS |  |         |
|       |        | 3-Sep  |  | Mn<br>p-scan (on conv+target)<br>yield checks<br>IDS (p's on target)                 |  | cooling |
| 4-Sep |        |  | IDS, IS590, 68Mn   | 4.5  | cooling  |         |
| 5-Sep |        |  | IDS, IS590, 68Mn no p's<br>(tape rewind-shots to GHM)              | 7  | Target change: UC-Ta<br>#507, m markers Cs, Tl         |         |
| 6-Sep |        |  |  |  |  |         |



# ISOLDE schedule – part 1

GPS rather ok  
 HRS: only one smooth run and then target piston problem –  
 rescheduling

|        |                    |   |      |                                 |                                  |
|--------|--------------------|---|------|---------------------------------|----------------------------------|
| 7-Sep  |                    |   |      |                                 |                                  |
| 8-Sep  |                    | Target change: UC-Ta-conv used, no. 509 setup to GLM                |      | separator setup to ISCOOL       | ISCOOL setup                     |
| 9-Sep  |                    | p-scan  |      |                                 |                                  |
| 10-Sep | injector MD        | ISS01, IS576  | 1.5  | separator setup to tape station | p-scan                           |
| 11-Sep | jeune genevois Mn? | In collections: ISS01, IS576  | 4.5  | stable beam to ISOLTR, LA1      | jeune genevois RILIS preparation |
| 12-Sep |                    | IS489 - Fr - GLM  | 7.5  |                                 | yield checks                     |
| 13-Sep |                    |   | 3    | WINDMILL-LA1, ISOLTRAP          | ISS34, ISS34                     |
| 14-Sep |                    |   |      |                                 | 4.5                              |
| 15-Sep |                    | cooling   |      | ISS34                           | 7.5                              |
| 16-Sep |                    | cooling   |      | ISS34                           | 10.5                             |
| 17-Sep |                    | Target change: Sn-VDS #491  |      | ISS34                           | 13.5                             |
| 18-Sep |                    | separator setup to CAD sep setup to tape station stable beam to GLM |      | ISS34                           | 16                               |
| 19-Sep |                    | p-scan yield checks p-sharing                                       |      | (At - p-sharing)                | 19.5                             |
| 20-Sep |                    | GLM IS481, IS487, IS515,  | 4.5  | cooling                         | Collapse stable beam             |
| 21-Sep |                    | GLM   | 7.5  | cooling                         | Collapse stable beam             |
| 22-Sep |                    | GLM   | 10.5 |                                 |                                  |
| 23-Sep |                    | GLM   | 13.5 |                                 | target unclamping problems       |
| 24-Sep | injector MD        | GLM - if p  |      |                                 |                                  |
| 25-Sep | injector MD        | GLM 16.5  |      |                                 |                                  |
| 26-Sep |                    | Target change: Al2O3 or C #516, TISD, B                             |      |                                 |                                  |
| 27-Sep |                    | separator setup to CAD  |      |                                 |                                  |
| 28-Sep |                    | TISD  |      |                                 |                                  |
| 29-Sep |                    | TISD  |      |                                 |                                  |

|        |             |  |      |  |                              |
|--------|-------------|--|------|--|------------------------------|
| 29-Sep |             | sep setup to tape station  |      |  |                              |
| 30-Sep |             | p-scan   |      |  |                              |
| 31-Sep |             | yield checks - TISD  |      |  |                              |
| 1-Oct  |             | TISD   |      |  |                              |
| 2-Oct  |             | yield checks   | 5    |  |                              |
| 3-Oct  |             | Target change: Ta-Re #517, m marker LLBe, Na 20-6-20 um            |      |  |                              |
| 4-Oct  |             | separator setup to CAD sep setup to tape station                   |      |  |                              |
| 5-Oct  |             | p-scan   |      |  |                              |
| 6-Oct  |             | yield checks   |      |  |                              |
| 7-Oct  |             | LA1  |      |  |                              |
| 8-Oct  |             | ISS25, 11LI  | 4.5  |  |                              |
| 9-Oct  |             | ISS25  | 7.5  |  |                              |
| 10-Oct |             | ISS25  | 10.5 |  |                              |
| 11-Oct |             | ISS25  | 13.5 |  |                              |
| 12-Oct |             |  |      |  |                              |
| 13-Oct |             | collections  |      |  |                              |
| 14-Oct |             |  |      |  | Target change: piston checks |
| 15-Oct | injector MD |  |      |  |                              |
| 16-Oct | injector MD |  |      |  |                              |
| 17-Oct |             | Target change: CaO-Vd7 no 518, no O2, sep setup stable beam to IDS |      |  |                              |
| 18-Oct |             | p-scan   |      |  |                              |
| 19-Oct |             | yield checks   |      |  |                              |
| 20-Oct | injector MD | IDS  | 4.5  |  |                              |
| 21-Oct | injector MD | IS476, IS577, 31Ar   | 7.5  |  |                              |
| 22-Oct |             | IS476, IS577   | 10.5 |  |                              |
| 23-Oct |             | IS476, IS577   | 13.5 |  |                              |
| 24-Oct |             | IS476, IS577   | 16.5 |  |                              |
| 25-Oct |             | IDS  |      |  | sep setup                    |

# ISOLDE schedule – part 2

GPS: several new or prototype targets

HRS: COLLAPS and CRIS – require ISCOOL bunching

| Date   | Time              | Activity  | Target  | Notes   | Yield | Other   |
|--------|-------------------|---|---|---|-------|---|
| 20-Oct |                   |   |   |   |       | yield checks  |
| 21-Oct |                   | IDS   |   |   |       | COLLAPS-req 9 shifts 1.5  |
| 22-Oct |                   | injector MD<br>injector MD  | ISOLTRAP stable beam<br>ISOLTRAP 32Ar?                          | stable beam to ISOLTRAP                                   |       | target change: #520   |
| 23-Oct |                   |   | (TISD - before target change)<br>target change: NaF-VDS<br>#520 | p-scan<br>yield checks<br>ISOLTRAP                        | 1.5   | 4.5   |
| 24-Oct |                   |   |   | ISOLTRAP<br>n-rich Sc                                     |       |   |
| 25-Oct |                   |   |   | ISOLTRAP<br>n-rich Sc                                     |       | 4.5   |
| 26-Oct |                   |   |   | IS532   |       | 7.5   |
| 27-Oct | AM<br>PM<br>night | sep setup<br>p-scan<br>ISS09 till 22h                                     |   | ISS32<br>CAO for GPS<br>ISS32 from 22h                    |       | 10.5  |
| 28-Oct |                   | ISS09<br>ISS09<br>ISS09 - till 5am  |   |   |       |   |
| 29-Oct |                   | techn stop - no p (from 5am)<br>techn stop - no p (till 5pm)              |   |   |       |   |
| 30-Oct |                   | ISS09<br>ISS09  |   |   |       |   |
| 31-Oct |                   | (ISS09)   |   | yield checks<br>RILIS yield checks                        |       |   |
| 1-Nov  |                   |   |   | RILIS physics   |       |   |
| 2-Nov  |                   |   |   |   |       |   |
| 3-Nov  |                   | target change:<br>TIC<br>#527 maybe CF4 for 35Ca                          |   | stable beam to LA2<br>LA2- Fr collection<br>LA2- Fr       |       |   |
| 4-Nov  |                   | separator setup to CAO<br>sep setup to tape station<br>stable beam to LA1 |   | cooling   |       |   |
| 5-Nov  |                   | injector MD<br>injector MD  |   | p-scan<br>TISD - yield checks - 37K<br>TISD               | 1.5   |   |
| 6-Nov  |                   | TISD 0.5<br>ISS27<br>ISS27, LA1, 37K                                      |   | target change: UC-Ta-conv<br>mm: Ga+Sr, Zn, BaO<br>#521   | 3     |   |
| 7-Nov  |                   | ISS27, req: 16 shifts   |   | separator setup   |       |   |
| 8-Nov  |                   | ISS27   |   |   | 6     |   |
| 9-Nov  |                   | ISS27<br>LA1  |   |   | 9     |   |
| 10-Nov |                   | ISS27 12.5<br>LA1<br>(ISS27)  |   | ISCOOL setup<br>ISCOOL setup<br>stable beam to COLLAPS    |       |   |
|        |                   | TISD (after p scan), 27Al   |   | Zn p-scan   |       |   |
| 13-Nov |                   |   |   | separator setup to CAO<br>sep setup in CAO                |       | 4.5   |
| 14-Nov |                   |   |   | sep setup to tape station<br>p-scan<br>stable beam to IDS |       | 7   |
| 15-Nov |                   |   |   | TISD, IDS, 112-118Ba                                      |       |   |
| 16-Nov |                   |   |   | TISD  |       | 4.5   |
| 17-Nov |                   |   |   | ISS45<br>tbc  |       | 7.5   |
| 18-Nov |                   |   |   |   |       | 10.5  |
| 19-Nov |                   | injector MD<br>injector MD  |   | target change:<br>TI or UC for 27Mg<br>used target        |       | ISCOOL tests<br>ISCOOL, CRIS, COLLAPS                                 |
| 20-Nov |                   |   |   | separator setup to CAO<br>sep setup to tape station       |       |   |
| 21-Nov |                   |   |   | p-scan<br>yield checks                                    |       | CRIS, Fr<br>#8471, CRIS, Fr ?<br>p-sharing<br>RILIS lasers available? |
| 22-Nov |                   |   |   | ISS453, GHM, 27Mg   | 1.5   | Fr ?<br>#8471, CRIS, Fr ?<br>p-sharing<br>RILIS lasers available?     |
| 23-Nov |                   |   |   | 27Mg-EC-req: 8 shifts<br>GHM                              |       | Fr ?<br>#8471, CRIS, Fr ?<br>p-sharing<br>RILIS lasers available?     |
| 24-Nov |                   |   |   | target change:<br>UC-Re-NANO<br>#525                      |       | 4.5<br>Fr<br>CRIS, Fr<br>#8471  |
| 25-Nov |                   |   |   | separator setup to CAO<br>sep setup to tape station       |       | Fr<br>CRIS, Fr  |
| 26-Nov |                   | injector MD<br>injector MD  |   |   |       | 4<br>CRIS, Fr   |
| 27-Nov |                   |   |   |   |       | 7<br>CRIS, Fr   |
| 28-Nov |                   |   |   | p-scan<br>TISD  |       | min shifts 10<br>CRIS or GPS? tbc                                     |
| 29-Nov |                   |   |   | (IDS, Cs for HRS)   |       | CRIS or GPS? tbc<br>CRIS or GPS? tbc                                  |
| 30-Nov |                   |   |   | (IDS, Cs for HRS)   |       | CRIS or GPS? tbc  |
| 1-Dec  |                   |   |   | p-scan<br>IS tests + yields                               | 1.5   | cooling   |
| 2-Dec  |                   |   |   | IDS, ISS79 (Cs)   | 4.5   | cooling   |

# ISOLDE schedule – summary

|    |        |                            |   |      |                           |
|----|--------|----------------------------|---|------|---------------------------|
| 49 | 3-Dec  | injector MD<br>injector MD | IDS, Cs   |      |                           |
|    |        |                            |   | 7.5  |                           |
|    | 4-Dec  |                            | IDS   |      | target change: UC-Ta-conv |
|    |        |                            |   | 10.5 | #528                      |
|    | 5-Dec  |                            | IDS   |      | separator setup           |
|    | 6-Dec  |                            | IDS   |      |                           |
|    | 7-Dec  |                            | IDS   |      |                           |
|    |        |                            |   | 19.5 |                           |
| 50 | 8-Dec  |                            | VITO - In   |      | ISCOOL setup              |
|    |        |                            |   | 3    |                           |
|    | 9-Dec  |                            | surf collections - Fr, Rb<br>GLM, IS589 - 210Fr<br>GLM<- 83Rb - ALICE |      | p-scan<br>yield checks    |
|    | 10-Dec | injector MD<br>injector MD | IS589 - 210Fr<br>83Rb - ALICE   | Zn?  | tbc                       |
|    | 11-Dec |                            | surface sources?  | Zn?  | physios 1.5               |
|    | 12-Dec |                            | surface sources?  | Zn?  | COLLAPS<br>tbc            |
|    | 13-Dec |                            | cooling   |      | IS519                     |
|    | 14-Dec | proton stop                | cooling   |      | IS519                     |

- Very difficult start-up
  - Still debugging in the online period
- HRS piston problem
- HRS multipoles on – no beam
- B508 delayed – CRIS, COLLAPS, SSP
- Policy: give some beam to every group  
=> **many changes to the schedule**
- Some nice physics in spite of problems

- Rare-earth collections of medical isotopes for PSI, Denmark, Lausanne
- ISOLTRAP: mass of 130-132Cd – 2/3 of programme in 1/3 of time, no Cs contamination
- 206Hg for IDS – reasonable transmission
- The TATRA setup from Bratislava – new ISOLDE group and setup
- Solid-state studies with molten Pb and Sn targets
- In-source spectroscopy of At – WINDMILL and ISOLTRAP
- 11Li for Caen and Madrid groups – 1000 ions/s for > week, neutron detectors at LA1
- 31Ar at IDS, 1-2 ions/s for > week, target survived CERN-wide 3h power cut
- TISD: boron beams, molten salt, ...

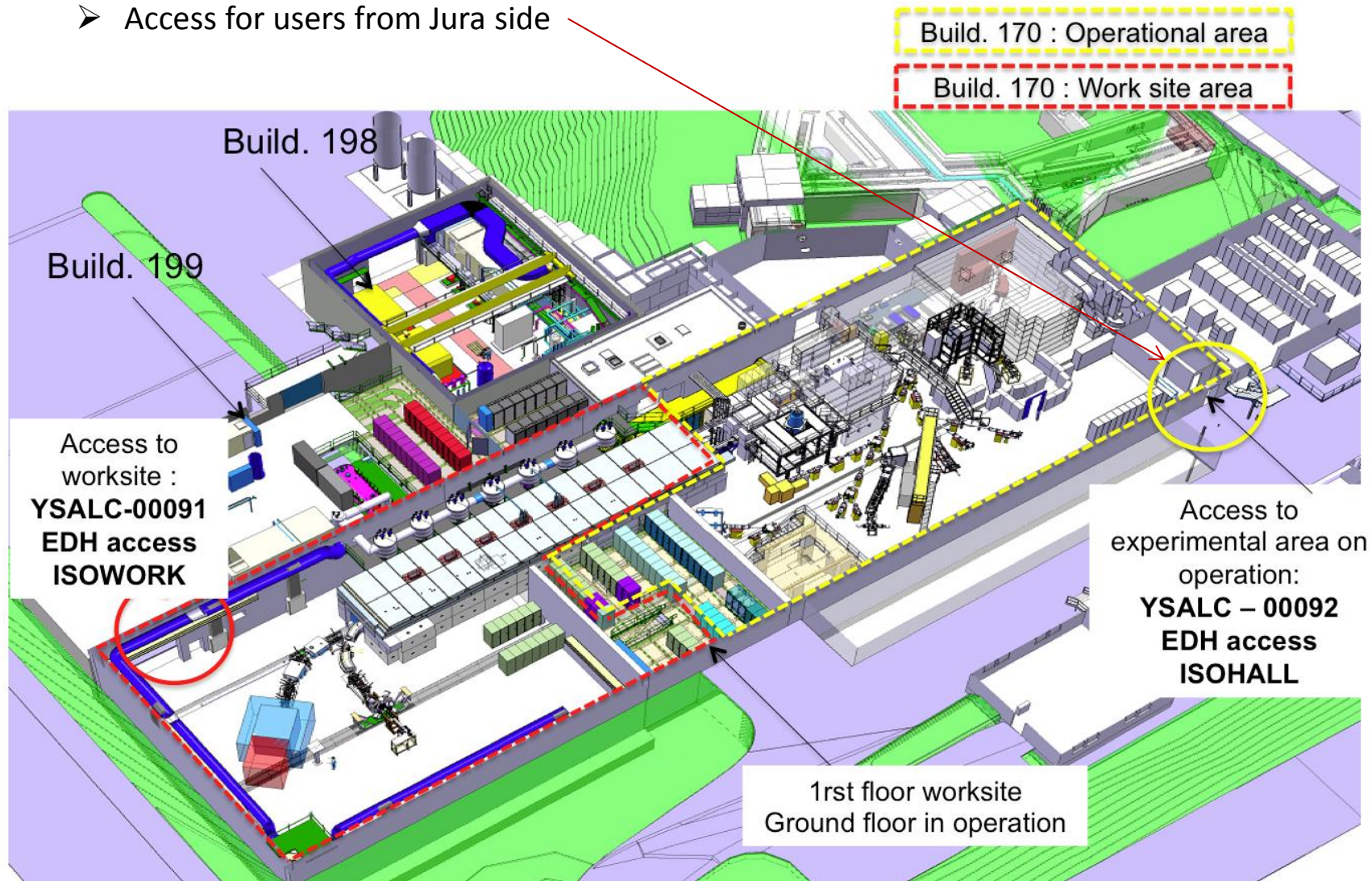
# Proton schedule 2015

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- First protons: around April 5
- First physics: hopefully mid-April
- Stop: mid-November or mid-December

# Access to ISOLDE

- From beginning of July:
  - Access to HIE-ISOLDE worksite: only local physicists when moving equipment
  - Access for users from Jura side



# Access to ISOLDE

**Users requesting dosimeter after Jul 1<sup>st</sup>:** ([www.cern.ch/isolde/get-access-isolde-facility](http://www.cern.ch/isolde/get-access-isolde-facility))

- No temporary dosimeters possible
- To obtain dosimeter:
  - Follow online courses on general safety (as before)
  - Follow online RP course on Supervised Areas (as before)
  - Follow ISOLDE online RP course – **NEW, no complaints until now**
  - Present RP form signed by home institute – **NEW, only 1 complaint until now**
- To access ISOLDE:
  - Follow 2-h RP ISOLDE practical course – **NEW** (2pm Tue, Fri, **no complaints until now**)
  - Follow online electrical awareness course - **NEW**

**CERN staff requesting dosimeters:** as before (online courses + 1-day course)

**Users and staff with valid dosimeters:**

- After July 1<sup>st</sup>: Follow ISOLDE online RP and electrical awareness course
- Follow new procedure when present medical certificate expires

**Access to ISOLDE via dosimeter (once tourniquet behind ISOLDE is ready),  
until then – with CERN card**



# Safety at ISOLDE

- 3 electrical incidents this year – safety teams looking closely
- Safety contacts at ISOLDE
  - General safety aspects, travelling experiments – GLIMOS (me)
  - For fixed-setups: Safety person for every aspect assigned -> CERN courses have to be followed
- Do not perform tasks for which you are not trained or at least briefed
  - Connecting electronics and cabling (before powering up)– no problem
  - Work with open circuits -> CERN “habilitation électrique” (2-day course) needed
  - Filling LN2 – use cryo gloves and safety glasses, get a briefing from the local cryo-safety person
- Electronics tests – electronics lab in b275, detector lab to come in b508

# When at ISOLDE - practicalities

- Toolbox for (mostly) travelling experiments refilled:
  - Mechanical tools
  - Safety equipment: glasses, cryo-gloves, LN2 tubes, electrical insulating gloves and mat
  - Ask before taking tools of other experiments
- Mechanical workshop
  - Soon in b508
  - Before - self-service workshop in Preveessin – contact Ramon Folch
- Make sure that other respect safety rules:
  - E.g. HIE-ISOLDE workers closing the SAS door and the door to the worksite
  - E.g. users filling LN2 in flip-flops

# b508

## ● Hand-over meetings:

- Civil engineering and cooling&ventillations – last week; points to be resolved identified
- Electricity – this Wednesday
- Safety – to be scheduled

## ● Remaining:

- Closed cooling water system
- Vacuum gas exhaust
- Opening for SSP gases and fume cupboard

## ● Move in

- Laser tables for COLLAPS and CRIS – this week
- CRIS laser setup by a technician – next week
- Proper move of all users - January

