

Programme

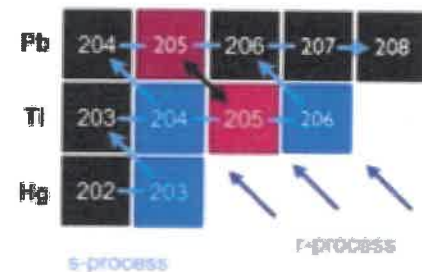
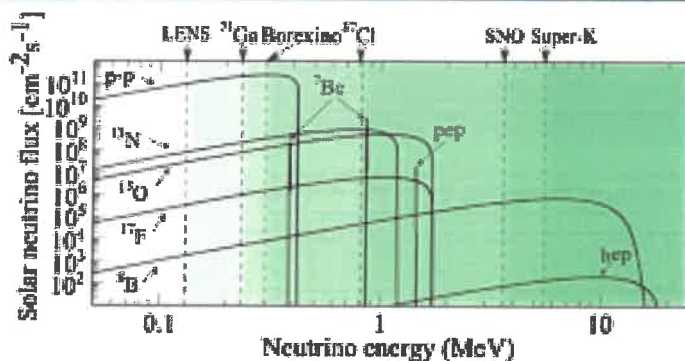
ExtreMe Matter Institute EMMI

EMMI Rapid Reaction Task Force

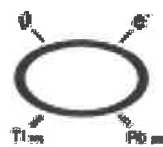
LORandite Experiment (LOREX)

GSI, Darmstadt, Germany

December 12-13, 2019

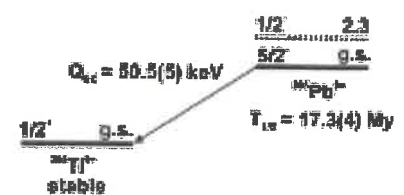
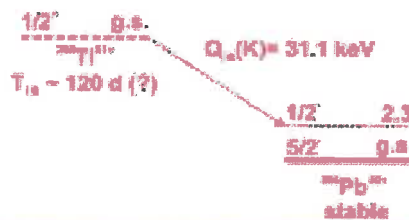


Geochemistry
Astrophysics
Chemistry
Nuclear Physics



LOREX Project

Atomic Physics
Mineralogy
Neutrino Physics
Accelerator Physics



This Rapid Reaction Task Force will discuss the past, present and especially the future of the LOREX project. LOREX is the acronym of LORandite EXperiment, which addresses the long-time detection of solar neutrinos with the ²⁰⁵Tl-bearing mineral lorandite (TlAsS₂) at the mine of Allchar, North Macedonia, via the neutrino-capture reaction ²⁰⁵Tl + ν_e → ²⁰⁶Pb + e⁻. LOREX is the only long-time geochemical solar neutrino experiment still actively pursued.

Organizers:
 Yury Litvinov
 Miodrag K. Pavičević
 Thomas Stöhlker

Information:
www.gsi.de/emmi/rtf

More about EMMI:
www.gsi.de/emmi

EMMI Rapid Reaction Task Force on the LOREX Project

Location: GSI, KBW, Seitenraum Hoersaal

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| Thursday, 12 December 2019 | | |
| Introduction (Chair: Y. Litvinov) | | |
| 10:00 | K. Langanke | Welcome and introduction to GSI |
| 10:20 | Y. Litvinov | Goals of this meeting |
| 10:40 | M. Pavicevic | The LOREX project |
| 11:20 | K. Zuber | Solar neutrinos |
| 12:00 – 13:00 Lunch | | |
| WP 5: Chemical enrichment (Chair: A. Yakushev) | | |
| 13:00 | Ch. Düllmann | Chemistry at GSI and HIM |
| 13:30 | D. Schumann | Chemistry at PSI |
| 14:00 | P.-Braun-Munzinger | What is EMMI? |
| 14:20 | Open discussion | |
| 15:00 | Coffee break | |
| WP 2+3+4: Geology and mineralogy related issues (Chair: G. Amthauer) | | |
| 15:30 | Boev | tba |
| 16:00 | Cvetkovic | Separation of pure lorandite from the excavated ore |
| 16:30 | Jokovic | Background reactions and Geant4 simulations |
| 17:00 | Open discussion | |
| 19:30 Conference Dinner in Weisser Schwann | | |

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| Friday, 13 December 2019 | | |
| WP 6: Mass analysis (Chair: Y. H. Zhang/H. Geissel) | | |
| 09:00 | R. Hollinger | Source-linac-synchrotron chain at GSI |
| 09:30 | T. Uesaka | Facility in RIKEN |
| 10:00 | Y. Yuan | Facilities at IMP and HIAF |
| 10:30 | Open discussion | |
| 11:30 – 13:00 Lunch | | |
| WP 1: Bound state beta decay (Chair: I. Dillmann) | | |
| 13:00 | M. Steck | GSI accelerator facility |
| 13:30 | T. Faestermann | The process of bound state beta decay |
| 14:00 | R. Singh Sidhu | E121 Experiment scheduled for March 2020 |
| 14:30 | Open discussion | |
| 15:00 | Coffee break | |
| 15:30 | Open discussion | |
| Concluding session / Decisions / Writeup (Chair: E. Wiedmann) | | |
| 16:30 | Y. Litvinov/ T. Stöhlker | Concluding remarks |
| 17:00 Adjourn | | |