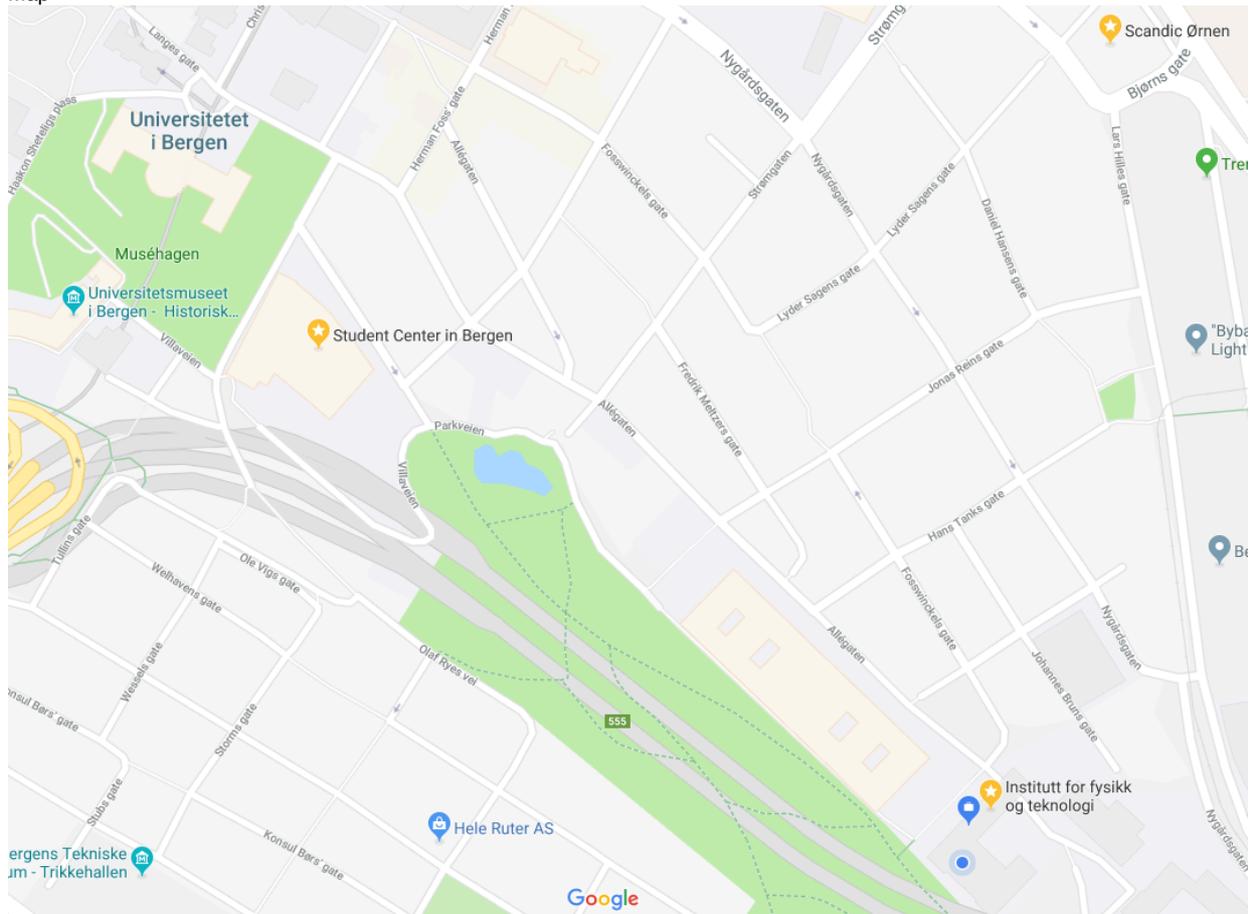


**MONDAY, 11. June** (Allégaten 55, IFT building)

**BREAKOUT SESSIONS**

- 10:00-15:00        FIELDS team meeting (room 359)
- 10:00-15:00        HPCA team meeting (room 366)
- 12:30-15:00        TM team meeting (room 546)
- 15:00-17:00        SPEDAS tutorial (room 546)
- 15:00-18:00        SWG meeting (SWG only, room 359)

**Map**



**TUESDAY, 12. June** (Scandic Ørnen, Lars Hilles gate 18)

8:30-8:40 Hesse, M. Welcome and logistics

DIFFUSION REGION PHYSICS (Chair: Paul Cassak)

8:40-9:00 Burch, Jim Electron Scale Physics of Symmetric and Asymmetric Reconnection from MMS

9:00-9:20 Liu, YH Orientation and stability of asymmetric magnetic reconnection x-line

9:20-9:40 Trattner, Karlheinz The transition between anti-parallel and component magnetic reconnection at the Earth's dayside magnetopause

9:40-10:00 Drake, J.F. A 3D Simulation of a MMS Magnetopause Reconnection Event with a strong guide field

*10:00-10:30 Coffee break and poster viewing*

10:30-10:50 Oieroset, Marit Strongly driven magnetic reconnection with flux pileup at the interface of colliding jets at the magnetopause

10:50-11:10 Cozzani, G. Diffusion region's structure at the subsolar magnetopause using

11:10-11:30 Tang, Binbin MMS observations of electron crescent distributions at the flank magnetopause

11:30-11:50 Pritchard, Kristina Energization and Movement of Electrons within an EDR with emphasis on the role of En

11:50-12:10 Egedal, Jan The kinetic structure of the electron diffusion region observed by MMS during asymmetric reconnection

*12:10-13:30 Lunch (on-site, included) and poster viewing*

DIFFUSION REGION PHYSICS cont'd

13:30-13:50 Yamada, Masaaki The two-fluid dynamics and energetics of the asymmetric magnetic reconnection in space and laboratory plasmas

The July 11, 2017 Event (Chair: Jim Drake)

13:50-14:10 Nakamura, Rumi Current sheet structure and evolution of 20170711 EDR event

14:10-14:30 Nakamura, Takuma Fully kinetic simulation of an EDR crossing event observed by MMS on 11 July 2017

14:30-14:50 Hasegawa, Hiroshi Reconstruction of the magnetotail reconnection region seen by MMS on 11 July 2017

14:50-15:10 Genestreti, K.J. How accurately can we measure the reconnection rate  $E_M$  for the MMS diffusion region event of 2017-07-11?

15:10-15:30 Denton, R.E. Determining the velocity of a magnetic structure, with application to the 11 July 2017 magnetotail reconnection event

*15:30-16:00 Coffee break and poster viewing*

HEATING AND TURBULENCE (Chair: Kevin Genestreti)

16:00-16:20 Eastwood, J.P. Guide field reconnection: exhaust structure and heating

16:20-16:40 Phan, T.D. MMS Observations of Electron Magnetic Reconnection without Ion Coupling in the Turbulent Magnetosheath

16:40-17:00 Ergun, R.E. Magnetic Reconnection, Turbulence, and Particle Acceleration

17:00-17:20 Hesse, Michael The role of separatrix instabilities in heating the outflow region

17:20-17:40 Argall, Matthew MMS observations of kinetic entropy in the reconnection diffusion region

17:40-18:00 Goldman, M. Multibeam energy transport

GROUP PHOTO

18:00 TBD location

**WEDNESDAY, 13. June** (Scandic Ørnen, Lars Hilles gate 18)

8:30-8:40 Announcements

**HEATING AND TURBULENCE cont'd** (Chair: Jason Shuster)

8:40-9:00 Eriksson, Stefan MMS Observations of Magnetic Reconnection Exhausts in the Solar Wind Associated with Tripolar Perturbations of the Out-of-Plane Magnetic Field

9:00-9:20 Graham, D.B. The role of lower hybrid waves in magnetic reconnection

9:20-9:40 Norgren, Cecilia Electron acceleration and thermalisation at magnetotail separatrix

9:40-10:00 Li, Wenya Electron Bernstein Waves driven by electron crescents near the electron diffusion

*10:00-10:30 Coffee break and poster viewing*

10:30-10:50 Eriksson, Elin Electron energization at a reconnecting magnetosheath current sheet

10:50-11:10 Steinvall, Konrad Multi-Spacecraft Observations of Electron Holes

11:10-11:30 Holmes, Justin Interior structure of strong electron phase-space holes

**COLD AND HEAVY ION EFFECTS** (Chair: Tai Phan)

11:30-11:50 Tenfjord, Paul How Oxygen Influences the Reconnection Rate

11:50-12:10 Toledo-Redondo, Sergio Balance of the Ohm's Law under the presence of cold ions of ionospheric origin in magnetic reconnection: PIC simulations and MMS observations

*12:10-13:30 Lunch (on-site, included) and poster viewing*

**COLD AND HEAVY ION EFFECTS cont'd** (Chair: Tai Phan)

13:30-13:50 Alm, Love Influence of cold ions on magnetotail Hall physics

**SHOCK PHYSICS** (Chair: Joachim Birn)

13:50-14:10 Fuselier, Stephen High-speed jets downstream of the quasi-parallel bow shock

14:10-14:30 Schwartz, Stephen Kinetic Aspects of a Hot Flow Anomaly: MMS Observations

14:30-14:50 Johlander, Andreas Shock Ripples Observed by the MMS spacecraft: Ion Reflection and Dispersive Properties

14:50-15:10 Khotyaintsev, Yuri Observation of Electrostatic Potential Structure and Ion Reflection for a Rippled Perpendicular Shock

15:10-16:00 Starkey, Michael MMS Observations of He<sup>+</sup> pick-up ions at Earth's perpendicular bow shock

*15:30-16:00 Coffee break and poster viewing*

**ADVANCED ANALYSIS METHODS** (Chair: Stefan Eriksson)

16:00-16:20 Cassak, Paul Kinetic Entropy as a Diagnostic in Particle-in-Cell Simulations of Magnetic Reconnection

16:20-16:40 Shuster, Jason Resolving Terms of the Vlasov Equation with MMS

16:40-17:00 Escoubet, C. Philippe Cluster MMS conjunctions tail 2018 and Cluster constellation 2019 (presented by Rumi Nakamura)

17:00-17:20 Toth, Gabor Studying reconnection in Earth's magnetosphere using a global MHD with embedded PIC model

17:20-17:40 Paterson, William Tuning Magnetospheric Multiscale's Automated Burst System

17:40-18:00 Reiff, Patricia Using CCMC Modeling as Context for MMS Events

18:00-18:10 Spann, Jim NASA's MMS GI program and other updates

18:30 **WORKSHOP DINNER** (Scandic Ørnen, food included, drinks for purchase)

**THURSDAY, 14. June** (Scandic Ørnen, Lars Hilles gate 18)

8:30-8:40            Announcements

**BBFS AND DIPOLARIZATION FRONTS** (Chair: Bob Strangeway)

8:40-9:00            Breuillard, Hugo    3D ion-scale dynamics of BBFs and their associated emissions in Earth's magnetotail using 3D hybrid simulations

9:00-9:20            Birn, Joachim        Particle acceleration in dipolarization fronts

9:20-9:40            Pan, Dong-Xiao      Properties of electron-scale structures at a dipolarization front

9:40-10:00          LeContel, Olivier    Analysis of kinetic structures embedded in a fast earthward flow during a substorm event

*10:00-10:30        Coffee break and poster viewing*

**FLUX ROPES** (Chair: Elin Eriksson)

10:30-10:50          Hoilijoki, Sanni     Observations of a small-scale flux rope-like structure next to an EDR at the dayside magnetopause

10:50-11:10          Hwang, K.-J.         Magnetotail reconnection following a flapping motion of the magnetotail on 17 July 2017

11:10-11:30          Choi, E.              Substructure of an ion-scale flux rope observed in the magnetotail on 17 July 2017

11:30-11:50          Dogko, K.            Multiple plasma wave modes in the magnetotail separatrix region on 17 July 2017

11:50-12:10          Stawarz, J.E.        Intense electric fields and electron-scale substructure within magnetotail flux ropes as revealed by the Magnetospheric Multiscale mission

*12:10-13:30        Lunch (on-site, included) and poster viewing*

**BROADER MMS RESEARCH** (Chair: Mats Andre)

13:30-13:50          Strangeway, Robert Field-Aligned Currents as Observed by Magnetospheric Multiscale

13:50-14:10          Russell/Strangeway The Case for Dust Comets Striking the Magnetosphere

14:10-14:30          Lavraud, Benoit     Four-spacecraft measurements of the size and dimensionality of magnetic structures

14:30-14:50          Petrinec, S.M.        On the Occurrence of Magnetic Reconnection Along the Dawn and Dusk Magnetopause

14:50-15:10          Le, G.                Poloidal and Toroidal Mode Field Line Resonances Observed by MMS

*15:30-16:00        Coffee break and poster viewing*

**WORKSHOP END**

16:00-17:00          UIB Horizon Lecture

Jim Burch and Michael Hesse: The most powerful explosions in space may not be what you think they are

Location: Egget room, Student Center (Parkveien 1)

15:30-16:00 Reception

16:00-17:00 Lecture

<https://www.uib.no/ift/118210/most-powerful-explosions-space-may-not-be-what-you-think-they-are>

POSTERS

- Graham, D.B. Large-amplitude high-frequency waves at Earth's magnetopause  
André, Mats Cold ions at the magnetopause: Effects at various scales  
Dogko, K. PIC simulation study of nonlinear upper-hybrid waves near EDR  
Choi, E. PIC Simulation of Kelvin-Helmholtz instability at the Dayside Magnetosphere  
Hwang, K.J. FTE generated in the velocity shear layer of Kelvin-Helmholtz vortices  
Moretto, Therese Superdarn / MMS conjunctions  
Payne, Dominic Poynting's Theorem During a Magnetotail EDR Encounter by MMS