

SuperDARN Workshop 2017



Programme
5-9 June 2017

Sunday, 4 June

17:30-18:30	Registration and Ice-breaker
18:30-20:30	(Palazzo Chigi-Zondadari)

Monday, 5 June

Chair

Maria Federica Marcucci

09:00-09:10	Welcome from the organizers
09:10-09:40	Superdarn status report <i>M. Lester</i>
09:40-09:50	Scheduling Working Group report <i>E. G. Thomas</i>
09:50-10:00	Spacecraft Working Group report <i>M. Ruohoniemi</i>
10:00-10:10	Data analysis Working Group report <i>P. Ponomarenko</i>
10:10-10:20	Data distribution Working Group report <i>K. Krieger</i>

10:20-10:40 Coffee Break

Chair

Akira Sessai Yukimatu

11:00-11:20	Site selection of the HF coherent scatter radar network of Meridian Project II <i>J. Zhang</i>
11:20-11:40	Update on the BAS SuperDARN data hub <i>G. Chisham</i>
11:40-12:00	Update on calibrating SuperDARN interferometers using meteor backscatter <i>G. Chisham</i>

12:30 PM Lunch at Trattoria Toscana Al Vecchio Forno

Chair

Evan Thomas

14:00-14:30	Importance of Elevation Angle Measurements in SuperDARN <i>R. A. Greenwald</i>
14:30-14:50	New insight into Tohoku earthquake signatures observed by the Hokkaido East SuperDARN radar <i>P. Ponomarenko</i>

14:50-15:10	A modeling study of ground-range estimation for SuperDARN data without angle of arrival measurements <i>W. A. Bristow</i>
15:10-15:30	Statistical Virtual Height Models <i>S.G. Shepherd</i>

15:30-15:50 Break

Chair

Jean-Pierre St. Maurice

15:50-16:10	E- and F-region electron density measurements over Svalbard <i>E.C. Bland</i>
16:10-16:30	High-latitude and mid-latitude E region plasma irregularities observed during storm and quiet conditions using spread-spectrum, multi-static, and/or multi-frequency radar observations <i>J. L. Chau</i>
16:30-16:50	What density gradients are responsible for SuperDARN backscatter? <i>R.A. Makarevich</i>
16:50-17:10	Velocity distribution analysis of the E region irregularities and zonal component of convection in the high-latitude Southern Hemisphere <i>V.V. Forsythe</i>
17:10-17:30	GPS scintillation fluctuations associated with high speed flows in the cusp ionosphere <i>Q. -H. Zhang</i>
17:30-17:50	Hemispheric asymmetry of ionospheric scintillations during the 2015 St. Patrick's Day storm <i>Giulia D'Angelo</i>

18:30 Dinner at Trattoria Toscana Al Vecchio Forno

20:00 PI's Meetings

Tuesday, 6 June

Chair

Pavlo Ponomarenko

09:00-09:20	What's In A Grid File? <i>E.G. Thomas</i>
09:20-09:40	A revised statistical model of ionospheric potential <i>E.G. Thomas</i>
09:40-10:00	A retrospective on Farley-Buneman waves in relation to HF and VHF radars <i>J.-P. St-Maurice</i>
10:00-10:20	Farley-Buneman dispersion relation asymmetry caused by parallel electric field and parallel density gradient <i>V.V. Forsythe</i>

10:20-10:50 Coffee Break

Chair

J. Michael Ruohoniemi

10:50-11:10	First-Principle Error Bar Calculations for Improved SuperDARN Data Products <i>G.C. Hussey</i>
11:10-11:30	Comparison of PolarDARN radar velocity and RISR-N plasma drift <i>A.V. Koustov</i>
11:30-11:50	Neutral Wind Contributions to Ionospheric Joule heating at High Latitudes <i>D.D Billett</i>
11:50-12:10	Measuring F-region ion-neutral coupling in response to increases in auroral precipitation <i>A. Kiene</i>

12:30-14:00 Lunch at Trattoria Toscana Al Vecchio Forno

Chair

Igino Coco

14:00-14:20	Effect of ray and speed perturbations on ionospheric tomography by over-the-horizon radar: A new method, useful for SuperDarn data <i>G. Occhipinti</i>
14:20-14:50	The Swarm mission: three years of data exploitation (Invited) <i>G. Ottavianielli</i>
14:50-15:10	The Electric Field Instrument (EFI) on board Swarm: data quality and scientific results <i>R. D'Amicis</i>

15:10-15:30	Scientific results from SIFACIT, Swarm-SECS, Swarm-Aurora and SwarmSuperMAG_2015 projects <i>L. Trenchi</i>
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15:30 Beer Break

15:30	Poster Session
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18:30 Dinner at Trattoria Toscana Al Vecchio Forno

20:00 WG Meeting

Posters

1	Characterizing the spatio-temporal response of high latitude convection using SuperDARN, DMSP, and ACE	<i>Angeline Burrell</i>
2	Halley breakup, Falklands makeup	<i>Gareth Chisham</i>
3	Impact of IMF conditions and geomagnetic activity level on high latitude magnetic field fluctuations and plasma parameters at Swarm altitude	<i>Giuseppe Consolini</i>
4	High frequencies waves propagation in the Earth ionosphere	<i>Etienne Foucault</i>
5	Angle-of-arrival interferometry and riometry on a SuperDARN radar using FPGA technology	<i>M.J. Kosch</i>
6	Digital Radar Design for SuperDARN using Software-Defined Radios	<i>K. Kotyk, K. Krieger, M. Detwiller</i>
7	An examination of the relationship between Sub-Auroral Polarization Streams (SAPS) and the mid-latitude ionospheric trough as mapped by Total Electron Content (TEC).	<i>Bharat Kunduri</i>
8	A method used to measure the variance among antennas of AgileDARN	<i>Ailan Lan</i>

9	Observations of Polar Mesosphere Summer Echoes by SuperDARN Zhongshan radar	<i>Erxiao Liu</i>
10	Development of new ionospheric on-line tools in the frame of CDDP	<i>Aurélie Marchaudon</i>
11	Origin of Pc5 waves observed at a polar cap station and in the near cusp ionosphere	<i>M. F. Marcucci</i>
12	Comparison of Plasma Drifts in the Subauroral Ionosphere with Drifts in the Inner Magnetosphere and TIE-GCM	<i>John Michael Ruohoniemi</i>
13	Monitoring Shortwave Fadeout across North America following a Solar Flare using Daytime SuperDARN Ground-Scatter Observations	<i>John Michael Ruohoniemi</i>
14	Recent Upgrades to RST	<i>Simon G. Shepherd</i>
15	Comparing SuperDARN and Swarm ion velocity measurements	<i>Jean-Pierre St.-Maurice</i>
16	Ionospheric scintillations during 20-21 January 2016 as observed at Sanae	<i>Judy A.E. Stephenson</i>
17	Syowa SENSU radar antenna upgrade	<i>Akira Sessai Yukimatu</i>

Wednesday, 7 June

Chair

Steve Milan

09:00-09:20	A self-consistent method for deriving polar ionospheric convection from eigenanalysis of SuperDARN radar data <i>G. Chisham</i>
09:20-09:40	On the presence of Type 1 echoes in SuperDARN data <i>P. Ponomarenko</i>
09:40-10:00	Polar cap blobs: enhanced density structures different from polar cap patches in the polar cap ionosphere <i>Q. -H. Zhang</i>
10:00-10:20	Reversed Flow Events in the Polar Ionosphere <i>K. Oksavik</i>

10:20-10:50 Coffee Break

Chair

Kjellmar Oksavik

10:50-11:10	A new approach to SuperDARN convection mapping <i>C. L. Waters</i>
11:10-11:30	Convection flow structure in the central polar cap <i>W. A. Bristow</i>
11:30-11:50	Inter-hemispheric asymmetry of the sunward plasma flows for strongly-dominated IMF $B_z > 0$ <i>A. V. Koustov</i>

Workshop Excursion to Siena

12:30 Coach leaves for Siena (box lunch)

13:30 Coach arrives to Siena

17:00 Coach leaves for Pienza

19:00 Dinner at Pienza "La Terrazza del Chiostro"

22:00 Coach leaves for San Quirico

Thursday, 8 June

Chair

Qing-He Zhang

9:00-09:20	Methods for characterising and validating SuperDARN convection maps <i>H. Laurens</i>
9:20-09:40	Statistical Study of Nightside Quiet Time Subauroral Ionospheric Convection <i>J. M. Ruohoniemi</i>
09:40-10:00	Case study on the ionospheric convection during storm main phase <i>J. Liu</i>
10:00-10:20	Dynamics of the ionospheric convection during disturbed periods observed by the SuperDARN radars in the premidnight and postmidnight sectors <i>N. Nishitani</i>

10:20-10:40 Coffee Break

Chair

Aur lie Marchaudon

10:40-11:00	Validation of Rankin Inlet electron density measurements with the RISR-C incoherent scatter radar <i>A.V. Koustov</i>
11:00-11:20	Statistical characterization and modeling of the Sub-Auroral Polarization Stream (SAPS). <i>B.S.R. Kunduri</i>
11:20-11:40	Simultaneous observations of drift velocity of omega band auroras and ionospheric flow velocity obtained by SuperDARN <i>N. Sato</i>
11:40-12:00	Timescales of convection pattern reconfiguration following IMF transitions <i>M. Walach</i>

12:15 Lunch at Trattoria Toscana Al Vecchio Forno

Chair

Emma Bland

13:50-14:20	The current status of ERG/Arase satellite mission and ionospheric convection and ULFs during the 27 March 2017 storm observed by the SuperDARN-Arase campaign (Invited) <i>T. Hori</i>
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14:20-14:40	A Survey of ULF Wave Signatures in SuperDARN THEMIS-Mode Data. <i>J.M. Ruohoniemi</i>
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Chair ***Mark Lester***

15:00-16:00	WG reports and discussion
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16:30 **Coach leaves for Castello Banfi**

19:00 **Conference dinner at Castello Banfi**

