SAR INTER-COMPARISON We have been busy presenting our new introduction to SAR course with our partners from Carleton University. Additionally we have been working through the results of the 1st activity and writing up articles with several on the go!

Vol. 15 January/February 2019

Introduction to Synthetic Aperture Radar for Agriculture

Carleton University and AAFC teamed up to deliver a 4-day course unlocking the world of SAR for Agriculture monitoring. Topics of the week included: SAR Basics: Understanding polarization, frequency, incident angle; accessing SAR data and knowing what to order; SAR Polarimetry; Using SNAP software for SAR processing; SAR system characteristics and the target; leading users through step by step preprocessing of SAR; and several case studies. Additionally we had two guest lectures by Dr. Brian Brisco and Dr. Vern Singhroy from Natural Resources Canada on applications of SAR and InSAR for water and land processes. Participants included graduate and undergraduate students of Carleton and interested scientists from other Government of Canada departments and industry. We now look to expand this course and make it available for JECAM Partners in the future. Stay tuned for further details!



Participants of the inaugural SAR Training Course held at Carleton University February 19-22, 2019, with the RADARSAT-Constellation displayed on the screen.

EVENTS

<u>Past</u>

December 2018

AGU 2018 Washington, DC Laura attended

January 2019

ESA PolinSAR 2019 Frascati, Italy Mehdi attended

<u>Upcoming</u>

May 2019 Living Planet Symposium Milan, Italy Heather & Andrew attending

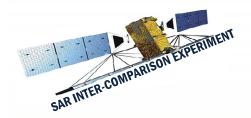
July 2019 IGARSS 2019 Yokohama, Japan Heather & Mehdi attending



CONTACTS:

CTS: <u>LAURA.DINGLE-ROBERTSON@CANADA.CA</u> <u>MEHDI.HOSSEINI@CARLETON.CA</u>







Mehdi presenting at ESA PolInSAR in Frascati, Italy, January 2019.

Activity 1 & 2 - C-band SAR for Crop Classification and LAI & Biomass Estimation

We are completing the first journal articles on the results obtained using Agriculture and Agri-Food Canada's methods on the data stacks for the first Activity of the Experiment. We will be sending drafts of those articles to those Partners whose data were used. As referred to in the Authorship agreement, when data are used for a journal article those contributing the data will be listed as authors. Please see the agreements on www. Jecam.org for further details.

We will also be emailing those Partners who were applying their classification methods to the data stacks for their results for that comparison shortly.

Activity 3 - Compact Polarimetry

The compact polarimetry data have been generated for all participating sites. Mehdi and Laura have begun initial data analysis on the over 42 compact pol variable per each of ~400 images that were created. Mehdi presented some of these results at ESA's PolInSAR in Italy. We will be determining the best method to send these data out to the participating JECAM sites, along with the associated field data. Stayed tuned for further details.

Activity 4 - Multi-frequency SAR

We have now received commitment from the DLR for the collection of TerraSAR X-band data over some JECAM Partner sites. This is in addition to the commitment we have received from JAXA and the CSA for L- and C-band acquisitions. We have been contacting Partners to confirm field data collections for the 2019 growing seasons and for signatures on User Agreements. Please respond as quickly as you can to these requests, as they are often timely in nature.

JECAM Website

We are now ready to give access to JECAM site leads to control the content your individual JECAM sites' information on the website. We will be rolling this out in a staggered fashion so as not to overwhelm the system. You will receive a copy of your log-on credentials along with a link to the JECAM YouTube channel for helpful videos on how to use the website. Watch for the email for your credentials and we can all look forward to an updated, JECAM Team led, content-controlled website soon!



CONTACTS: <u>LAURA.DINGLE-ROBERTSON@CANADA.CA</u> <u>MEHDI.HOSSEINI@CARLETON.CA</u>

