Geophysical Research Abstracts
Vol. 13, EGU2011-11081, 2011
EGU General Assembly 2011

The development of novel stereo derived smoke plume products for AATSR and their application to the 2010 Russian fire season*

Daniel Fisher, Jan-Peter Muller, and Vladimir Yershov
Mullard Space Science Laboratory, Holmbury St Mary, Dorking, Surrey, RH5 6NT UK

The development of novel stereo derived smoke plume products for AATSR and their application to the 2010 Russian fire season*
Authors: Daniel Fisher [1], Jan-Peter Muller [1] and Vladimir Yershov [1]

[1] Mullard Space Science Laboratory, University College London, Holmbury St Mary, RH5 6NT, United Kingdom
Biomass burning events in Boreal forests generate significant amounts of important trace gases; including CO2, CO, NO_x[1, 2].$When the injection height is above the boundary layer (BL) the life span of these chemicals is greatly extended, a$ $photogrammetry, originally applied to optically thick clouds$[3, 4].
$Here, we present a new stereo matching method for the determination of SPIHs. It is referred to as M6 due to a shared heritage$ $series matchers$[3, 4].$M6 utilizes novel normalization and matching techniques to generate improved results, in terms of cove$ $The SPIH products generated for input into CTMs require effective cloud masking to ensure accurate outputs. Therefore in a$ $band SPIH estimates.$
$* works supported under ESA/ESRIN contract 4200023055/10/I - LG through Noveltis$
[1]$Crutzen, P.J., L.E. Heidt, etal.(1979)."Biomass Burning as a Source of Atmospheric Gases Co, H -$ $2, N2o, No, Ch3cl and Cos."Nature 282(5736) : 253 - 256.$
[2]$Martin, M.V., J.A. Logan, etal.(2010)."Smoke injection heights from fires in North America :$ $analysis of 5 years of satellite observations."Atmospheric Chemistry and Physics 10(4) : 1491 - 1510.$
[3]$Muller, J.P., M.A. Denis, etal.(2007)."Stereocloud-top heights and cloud fraction retrieval from ATSR-$ $2."International Journal of Remote Sensing 28(9) : 1921 - 1938.$
[4]$MULLER, J. - P., A. MANDANAYAKE, etal.(2002).1MISR stereoscopic image matchers :$ $Techniques and results.]IEEE Transactions on Geoscience and Remote Sensing 40 : 1547 - -1559.$