

Subject: Re: Conversion between ECMWF surface variable to CRTM surface

From: Ronald.Vogel@noaa.gov

Date: Thu, 06 Aug 2009 19:09:48 -0400

To: Michiko.Masutani@noaa.gov

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----- Original Message -----

From: Michiko Masutani <Michiko.Masutani@noaa.gov>

Date: Thursday, August 6, 2009 3:48 pm

Subject: Conversion between ECMWF surface variable to CRTM surface

Ron Vogel kindly spend weekend to put together conversion table for ECMWF surface type to CRTM surface type. I put together in attached file. I still could not figure out followings.

1. How to decide old and fresh snow? Is there any conventional way?

The snow threshold is very small (0.1 mm snow depth), so check the ECMWF snow-water equivalent values for the smallest non-zero value. If the smallest non-zero value is bigger than 0.00002 m, then it doesn't matter, because all grid cells with a non-zero value will need to be evaluated in CRTM as a snow-covered surface.

Another approximation is to treat glaciers & continental ice sheets (doesn't melt year-to-year) as old snow, and any fallen snow (melts by summer) as fresh snow.

2. Do we have to do differently for MW?

Banghua Yan may be able to help you determine the CRTM Surface structure inputs for MW sensors.

Michiko

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