# **AIRS-only Product in Giovanni for Exploring Up-to-date AIRS Observation and Comparing with AIRS+AMSU Product**

# Users are invited to take advantage of Giovanni to explore the 15-year long AIRS Version 6 products at GES DISC: https://giovanni.gsfc.nasa.gov/

## Abstract

The NASA Goddard Earth Sciences Data and Information Services Center (GES DISC) has been the home of processing, archiving, and distribution services for the Atmospheric Infrared Sounder (AIRS) mission since its launch in 2002 for global observations of the atmospheric state. Giovanni, a Web-based application developed by the GES DISC, provides a simple and intuitive way to visualize, analyze, and access vast amounts of Earth science remote sensing data without having to download the data. Most important AIRS variables, including temperature and humidity profiles, outgoing longwave radiation, cloud properties, and trace gases, are available in Giovanni.

AIRS is an instrument suite comprised of a hyperspectral infrared instrument (AIRS) and two multichannel microwave instruments, the Advanced Microwave Sounding Unit (AMSU) and the Humidity Sounder for Brazil (HSB). As HSB ceased operation in the very early stages of the AIRS mission, the AIRS project operates two parallel retrieval algorithms: one using both IR and MW measurements (AIRS+AMSU) and the other using only IR measurements (AIRS-only), which covers most of the mission duration. The AIRS+AMSU product is better quality, and the variables in Giovanni are from this product. However, generation of the AIRS+AMSU product has been suspended since the AMSU instrument anomaly occurred in late September 2016. To continue exploring up-to-date AIRS observations, the same set of variables from the AIRS-only product have been added to Giovanni by the GES DSIC. This will also support comparison of AIRS-only with AIRS+AMSU retrievals. In this presentation, we demonstrate the visualization of the AIRS-only product and plots/statistics of comparison with AIRS+AMSU product using Giovanni.

## 92 AIRS-only Retrieval Variables in Giovanni

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Geopotential (4)			Water Vapor Mass Mixing Ratio at Surface (Davtime/Ascending) (AIRX3STM v006)		AIRS	Monthly	1°	2002-09-01	2016-09-30	g/kg	-	
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Surface Temperature Ano	omaly (2)		(Nighttime/Descending) (AIRX3STM v006)		AIRS	Monthly	1*	2002-09-01	2016-09-30	g/kg	-	
Surface Temperature (6)			Relative Humidity at Surface		AIRS	Monthly	1 °	2002-09-01	2016-09-30	percent	-	
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AIRS (20)			(Nighttime/Descending) (AIRX3STM v006)		AIRS	Monthly	1°	2002-09-01	2016-09-30	percent	-	
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working period, which is not found for ozone and carbon monoxide.

# **AGU Fall Meeting, New Orleans, LA** Dec 11–15, 2017 A11A-1867



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