

ATTO fact sheet



In 2009, a joint German-Brazilian project was started under the name "ATTO," the Amazonian Tall Tower Observatory, coordinated by the Max Planck Institute for Chemistry with the aim of providing groundbreaking findings and foundations for improving climate models. With a height of 325 meters, the tower is designed to extend high above the rainforest and to

collect information from an area spanning roughly 100 square kilometers from the world's largest continuous tropical forest area. The Amazon region has worldwide significance: It produces half of the global photosynthetic oxygen, has an enormous influence on the water cycle and stabilizes the regional and global climate. The tower is equipped with devices to measure various greenhouse gases such as CO₂, aerosols and weather data.

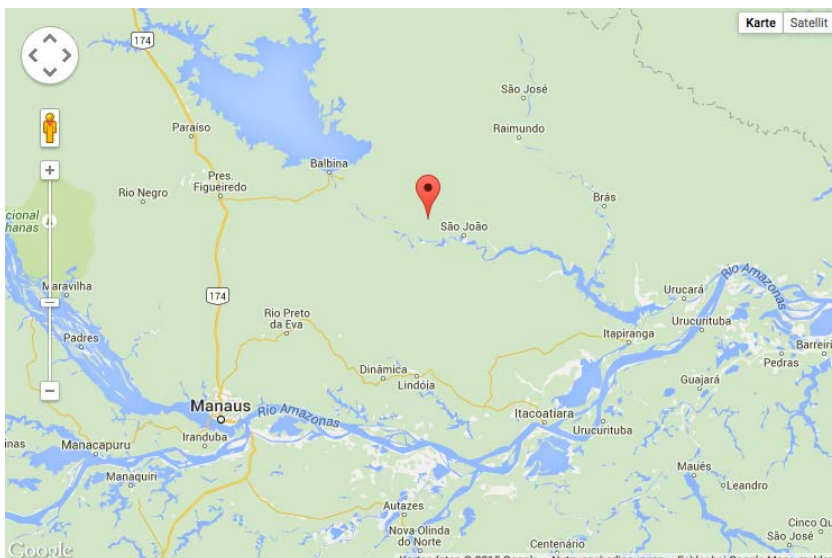
All data will be incorporated into models to allow better statements about the condition of the atmosphere and our climate, particularly with regard to global climate change. At the same time, the ATTO data can also be used as a basis for environmental regulations for sustainable development of the Amazon region.

What

325-meter-tall measurement tower in the Amazonian rainforest

Where

150 kilometers north of Manaus, Brazil, coordinates S 2° 08' 45.13" W 59° 00' 20.12"



Source: Google maps

Dates

Inauguration on 8.22.2015
Foundations laid on 8.15.2014
Completed in summer 2015
Project start 2009

Co-operation

German-Brazilian

- Max Planck Institute for Chemistry—Mainz, Germany
- Max Planck Institute for Biogeochemistry – Jena, Germany
- Instituto Nacional de Pesquisas da Amazonia (national institute for Amazon research)—INPA, Manaus, Brazil
- Universidade do Estado do Amazonas (university of the state of Amazonas) UEA—Manaus, Brazil

Research objective

- To collect data on how the enormous, largely untouched rainforest affects the climate
- To detect sources and sinks of greenhouse gases such as CO₂, methane, and N₂O
- To research the formation of aerosols, which are important for the formation of clouds
- To study the transport processes of air masses that occur across several hundred kilometers

Location

In direct proximity to an 80-meter-tall measurement tower, which in 2011 began regular preliminary research into weather conditions, ozone and CO₂ values, volatile organic compounds and nitrogenous trace gases, in addition to aerosols.

Funding

The costs (8.4 million euros) are equally shared between Germany and Brazil.

The project is funded by the German Federal Ministry for Education and Research (BMBF), which provided a grant of 4.5 million euros in the period from 2010 to 2015.

Technical data:

Ground area: 3 x 3 meters

Height: 325 meters, with lightning conductor 331 meters

Weight: 142 metric tons

Material: 15,000 individual parts plus 24,000 bolts and screws

Steps: 1,500

Strutting: 26 kilometers of steel rope

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