

National Aeronautics and  
Space Administration



# EXPLORE SCIENCE

**Citizen Scientist Spurs 36% Increase in Satellite Data Matches**  
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# Citizen Scientist Carmen Mandel Adds More than 54,000 New Data Points to GLOBE Observer Clouds



In May 2020, citizen scientist [Carmen Mandel](#) met two major milestones: she marked her one-year anniversary of being a GLOBE Observer and she single-handedly expanded the [Clouds satellite match](#) data by 36%. Carmen uses GLOBE Observer to record clouds 2-3 times daily every time she gets a notification that a NASA satellite is overhead. She sends her data to GLOBE, but then she records her observation in her own clouds journal. When she receives an email from NASA Langley Research Center matching her observation to satellite data, she adds that to her journal as well.

On May 19, Carmen received an alert that the Terra satellite was overhead, so she took an observation, but never received the satellite match. She contacted GLOBE Observer and the GLOBE Clouds Team investigated. The team identified that the code used to match citizen science observations to GLOBE Observer ground observations was too restrictive. The team modified the code to improve match rates. The re-run new match code identified an additional 54,000 citizen science observations that can be matched to NASA satellite data. This reprocessing expands the matched data available for research by 36 percent.

