Removing some cloud seeds of doubt

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A team of researchers at Monash University has released a new analysis of precipitation records from the long-term cloud seeding operation in Tasmania that shows a promising increase in rainfall during periods of seeding.

The team worked with Hydro Tasmania analysing the cloud seeding activity over the hydroelectric catchment area in central Tasmania for more than four decades - from 1960 - 2005.

Associate Professor Steven Siems, Faculty of Science said the analysis used monthly rainfall figures in the catchment area where the seeding took place and compared it with data from nearby control areas.

"A number of independent statistical tests showed a consistent increase of at least 5% in monthly rainfall over the catchment area. This is the first time that an independent analysis of cloud seeding data over several decades has shown a statistically significant increase in rainfall," Associate Professor Siems said.

However, the team of Monash scientists have also cautioned against becoming too excited by the initial results.

Anthony Morrison, a PhD candidate on this research said the clouds over the Southern Ocean and Tasmania are unique in that they can contain vast amounts of supercooled liquid water and are unusually clean.

"They're really not comparable to clouds that have been seeded

anywhere else in the world. Further field measurements of cloud microphysics over the region are needed to provide a physical basis for these statistical results," Mr Morrison said.

Associate Professor Siems said the statistical analysis of the data suggests positive results from cloud seeding but more research needs to be done.

"We need to support our findings with a greater scientific understanding. There could be other explanations for the increased rainfall - although we suspect that cloud seeding is a significant contributor," Associate Professor Siems said.

The practice of cloud seeding remains a contentious issue in the scientific community with many attempts having been made since the beginning of cloud seeding programs in the 1940s to measure and explain rainfall levels. Tasmania has long been a location for cloud seeding programs, following apparent success with the programs in the 1960's and 1970's when significant rainfall increases of more than 30 per cent were measured and reported by CSIRO scientists.

Source: Monash University