



- [+ Importance](#)
- [+ Science](#)
- [+ History of Contrails](#)
- [+ Satellite Imagery](#)
- [+ Reporting Instructions](#)
- [+ Resources](#)
- [+ Contrail Gallery](#)
- [+ FAQ](#)
- [+ Team Page](#)
- [+ Glossary](#)

## Contrails - Short Lived



### Classic Short-Lived Contrail

This is a beautiful example of a short-lived contrail. The plane generating the contrail is at the head of the contrail. The contrail thins and then disappears completely a short distance behind the plane. Photo by Doug Stoddard in Kiev, Ukraine.



### Very Short Short-Lived Contrail

This is a very short, a short-lived contrail. The plane generating the contrail is at the head of the contrail. The contrail thins and then disappears completely a very short distance behind the plane. Photo by Carol Clark in Oregon, USA.



### Short-Lived Contrail with Good Detail

This photo captures the detail in a short-lived contrail. Typically a contrail starts as two separate cloud 'streams' coming from the engines on either side of the plane. Due to the air motions behind the plane, these two 'streams' combine fairly rapidly into one single contrail line. This contrail is a bit longer than the first two examples, but clearly is vanishing near the top of the photo. Photo by Carol Clark in Oregon, USA.

### Short-Lived Contrail with Some Detail

This photo also shows separate streams in a short-lived contrail, although it is not as



clear as the previous example. Again the contrail clearly evaporates completely a short distance behind the plane. Photo by Doug Stoddard, Kiev, Ukraine.



#### **Faint Short-Lived Contrail**

This photo shows a much fainter short-lived contrail; but it is still very clearly visible from the ground. As with the rest, the contrail disappears a short distance behind the plane, although if you stay at the picture you may see a very faint line extending farther back. The rate at which the ice particles in a contrail actually evaporate is controlled by the local conditions in the air around it. Photo by Doug Stoddard, Kiev, Ukraine.



#### **Short-Lived Contrail with Trees**

This is a nice photo with the plane visible at the head of the contrail. This contrail becomes very fuzzy then disappears a significant distance behind the plane. Photo by Carol Clark, Oregon, USA.



#### **Two Short-Lived Contrails**

This picture shows two short-lived contrails created by planes moving in opposite directions. This is an early morning shot, with the sun behind the building nicely illuminating these short contrails. Note that the length of the two contrails is about the same, indicating similar atmospheric conditions in that portion of the sky. Photo by Lin Chambers, NASA Langley, USA.

#### **Tropical Contrail**

Here is a nice tropical contrail. This contrail is very thin and intermittent, therefore I am classifying it as short-lived. Most short-lived contrails are shorter than this. Photo taken by



Doug Stoddard in March 2002 in St. Thomas, Virgin Islands.



### Contrail over the Rocky Mountains

This contrail is being formed by an aircraft heading off towards the top right of the photo. It is showing some tendency for persistence near the mountains (note also the contrail on the left), but is still quite thin and patchy. Classification as a short-lived contrail is also based on observation of the sky at various times over the course of the day: none of the contrails were sticking around very long. Photo by Lin Chambers in December 2002 in Fort Collins, Colorado.



Last Updated: 05/11/2009 00:38:06  
 Web Curator: Joyce D. Fischer, [j.d.fischer@larc.nasa.gov](mailto:j.d.fischer@larc.nasa.gov)  
 Responsible NASA Official: [Lin H. Chambers](#), GLOBE Contrail Scientist