



## **VLBI as a tool to probe the ionosphere**

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Like other space geodetic techniques Very Long Baseline Interferometry (VLBI) observations are carried out at two distinct frequencies in order to determine ionospheric delay corrections. Each ionospheric delay corresponds to the slant total electron content (STEC) along the ray path through the ionosphere. Because VLBI is a differential technique the observed ionospheric delays represent the differences of the behaviour of the propagation media above each two stations. Additionally an instrumental offset per station, independent of azimuth and elevation in which the antennas point, is contained in the observables. Due to the sparse geographical distribution of VLBI stations and the fact that this technique is not observing every day it is suggested to derive station-specific TEC values only. An appropriate algorithm that deals with the special features of VLBI will be presented and outcomes will be shown. These results can be used to validate the TEC values determined by other space geodetic techniques or they can be incorporated into long-term studies of the ionosphere because already now VLBI observations cover more than two complete solar cycles.