

# **New ULF EM resonant structure observed at Teoloyucan geomagnetic station, Mexico, 1998-2001**

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The ULF resonant structure observed at Teoloyucan geomagnetic station has been studied in the period of 1998-2001. This station was equipped with a 3-component fluxgate magnetometer designed at UCLA, operating at 1 Hz sampling rate frequency, with a GPS system for data synchronization. Two resonant lines were observed in the H-component (linear polarization) in the frequency bands  $f_{R2}=10.2-11.1$  mHz and  $f_{R2}=13.6-14.5$  mHz, sometimes accompanied by other (lower) harmonics. Our analysis shows certain correlation of the resonant structure with Sq variation and its moderate dependence on the geomagnetic activity (Dst index). The source of the observed resonances is possibly related with the geomagnetic location of the station (geomagnetic latitude  $\lambda = 29.1^{\circ}$ ) and its proximity to the equatorial electrojet ( $\lambda \sim 30^{\circ}$ ).