

R010-09

Zoom meeting B : 11/3 AM2 (10:45-12:30)

11:30~11:45

A machine learning approach to fill the data gaps of the solar wind profiles causing large magnetic storms

#Ryuho Kataoka¹, Shin ya Nakano²)

⁽¹NIPR, ⁽²The Institute of Statistical Mathematics

The solar wind data at the Earth's position have data gaps for many of large magnetic storms. The data gaps have prevented the detailed understanding of the solar wind structures which can drive large magnetic storms. We used a limited number of recent magnetic storms without data gaps in the solar wind parameters as the training data set for a machine learning technique called Echo State Network, to output the continuous solar wind data. The obtained metrics have merit and demerit, compared with the other gap-filling methods. Based on the continuous solar wind profiles via the machine learning technique, we discuss the solar wind structures causing large magnetic storms.