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Asia VLF/LF wave observation network (AVON) system for monitoring of the lower ionosphere and lightning

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We explain the scientific goals and instrumentations of Asia VLF Observation Network (AVON) system for monitoring the lower ionosphere and lightning. The system consists of three observation sites: Tainan site (23.08N, 120.12E) in Taiwan, Saraburi site (14.53N, 101.03E) in Thailand, and Pontianak site (0.00N, 109.37E) in Indonesia. At each site, we use a monopole antenna and a dipole antenna for the electric field measurements and an orthogonal loop antenna for the magnetic field measurements. The signals detected through these antennas are split into three PCs and used for the monitoring of broadband lightning atmospherics (0.1-40.0 kHz), tweek atmospherics (0.1 ? 10.0 kHz), and transmitter signals (40.0 and 60.0 kHz etc). Analyzing the VLF/LF data obtained at three sites, we can monitor the lower ionosphere and lightning in Southeast Asia. This network system is utilized in cooperation with other ground-based and satellite-based observation projects to clarify the meteorological aspects of lightning activity and their effects on the middle/upper atmosphere, ionosphere, and magnetosphere. In the presentation, we introduce the AVON system and show the initial results.