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China EO system and virtual ground station: A new way to access remote sensing satellite image

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This presentation introduces major Chinese satellites program, including satellite classification, specification, time-line and ground station system. On second part, it introduces a virtual ground station technology. It presents some disadvantages of the current remote sensing data distribution mode and proposes a new way to access remote sensing satellite image. The new way, by making use of strong capacity nowadays, transfer, calculate, and compress the remote sensing data immediately after data reception from a satellite, and provide the image in near real-time to users. The major functions include full resolution, overlaid with vector data such as longitude/latitude and administrative name, image zooming/panning, satellite/sensor information, data reception schedule, etc. Data can be searched by key words to find a path or location. The technical system is composed of four parts, which are respectively data comprehensive processing component, data management component, product distribution component and data display component. Virtual ground station users can access satellite image directly and timely. We expect that this kind of system is able to promote some new remote sensing applications fields, such as disaster monitoring, monitoring of progress for a big construction project, monitoring of natural heritage site, or monitoring of current events from the news.

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Determination of meteoroid characteristics, exploded in Khakassia 06.12.2016 according to seismic and video data

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6.12.2016 at 18:36 local time (18-36 UTC) on the territory of the Republic of Khakassia, there was a rare astronomical phenomenon that thousands of people could see—it was a fall of large enough astronomical body. In spite of the fact that this fall didn't cause damage it was necessary to say that the most powerful impact wave was near high-security objects—Maina and Sayano-Shushenskaya HPP. The last one was equipped with the local seismological net which the explosion impact wave was recorded on (Figure 1). The analysis of data from surveillance cameras and dashboard cameras showed that the azimuth of meteoroid trajectory was $135^{\circ} \pm 10^{\circ}$, and the luminous trace finished over the seismological net surrounding Sayano-Shushenskaya HPP. The interpretation of seismologic data let us specify in a substantial way the trajectory of bolide flight and determine the territory of potential falling out of meteor body fragments. At the moment of explosion, there was a surface seismic wave, amplitude was incomparably lower than same of Chelyabinsk meteoroid explosion and it was recorded only by seismic stations situated at the distance of 10 km from the epicentrum.

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