



**WORLD SPACE
RISK FORUM**

Thursday, 15th June 2017, London
THE WORLD'S LEADING SPACE RISKS CONFERENCE

In association with:



KEY NOTE:

“SCIENTIA IN ABSENTIA: AN INCONVENIENT TRUTH ABOUT SPACE TRAFFIC”

DATE: Thursday, 15th June, 2017, 4:00pm to 4:20pm

VENUE: etc. Venues, Fenchurch Street, 8 Fenchurch Place, London EC3M 4PB

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SYNOPSIS

Dr. Jah's motto in research is, “if you want to know it, you must measure it; if you want to understand it, you must predict it!” Our ability to measure and predict space object motion and behavior is in many instances, poor.

The largest available space catalog of space objects, while having ~23000 of them, is far from tracking all of the objects hypothesized to exist. It's a sort of iceberg! One reason we don't track more is because every single space object is represented and modeled as a uniform sphere, with no exceptions! This is a known bias and limitation.

In citing an example, we regulate transit / large trucks very differently than we do Vespa scooters, on the seaways we regulate oil tankers quite differently than kayaks and canoes... why would we treat satellites all the same? What we are in desperate need of is a scientifically and empirically informed taxonomy (read classification scheme) for man-made space objects whereby we can assign to this taxonomy risk factors. These will naturally be specie-dependent and habitat (orbital regime) dependent. Satellite capability and maneuverability will likely be classification parameters that make sense. The key to any parameters chosen is that they **MUST** be quantifiable and measurable (thus verifiable and predictable). With a rigorous scientific study we can even ascribe patterns of behavior for each class/specie of space object and even which data are most optimal for observing and keeping “custody” of them. We must strive to achieve Unique Space Object Identification (USOI).

Once we can achieve the above, we can begin to get insight into what the risks really are and how best to both regulate space traffic and underwrite insurance along with it.

The bonanza in space is put as many resources up there as possible to make as much money as possible for communications, and Earth observation for a plethora of customers. That major investment in hundreds to thousands of orbital platforms is being made in extreme ignorance to the real risk of operating in that environment.