

EXTRATERRESTRIAL MEASUREMENT IN JAIN LITERATURE**A. Jain¹, J. L. Jain² and R. Kumari³**^{1,2}Department of Arts, Mangalayatan University, Aligarh³Faculty of Journalism & Mass Communication, Usha Martin University, Ranchi, Jharkhand²jl.jain@mangalayatan.edu.in**ABSTRACT**

This paper aims at exploring a part of extraterrestrial measurement in Jain Literature. If we see in modern mathematics, we have now defined many values to measure and weigh, which in Jainism has done two parts. The first part deals with measurement of finite objects and extraterrestrial (alokik) mathematics has been told in the second part. The second measurement pertains to four parts: Matter, Space, Time, Thoughts. In this paper, the measurement of extraterrestrial in general is discussed but reference has also been made to measurement in terms of numbers of matter (atoms) has been explained. This has been done in three parts : countable, uncountable, infinite. The smallest value of matter is taken as 2 because multiplying or dividing 1 by anything gives the same value and the largest value has been taken up to the maximum infinity, which is also called the undivided intersection of Kevalagyaan, in this manner, from the smallest unit to the largest unit of measure of matter in terms of infinity has been narrated.

Keywords: Extraterrestrial, Infinite, Matter, Uncountable, Omniscience

Introduction

To become a connoisseur of something, the eye of knowledge is needed, and the list of knowledge can be said as follows: Size, Type, Value, Measurement, Appearance etc. If we look at any object from the point of view of testing, then two types come to the fore, the gross vision and the subtle vision; Let us understand this with an example, how that object looks, it attracts. Like when a child goes to a shop to get a toy, he urges the father to buy it without taking it in his hand, because the size, appearance of that toy has attracted that child, when viewed from a macro point of view, the shape and color etc. are seen; But his father standing near that child sees from a subtle point of view, how durable this toy is, how much weight, whether it is worth using or not, thus looking at the object from a microscopic point of view, measure, value, weight etc. This is taken in the subject of mathematics. It is only from mathematics that any object is correctly identified, so mathematics has been given a lot of importance in the scriptures. The subject of mathematics comes under *Karaṇānuyōga* in Jainism. The subject of mathematics is said to be very deep and complex,

There are two parts of knowledge: alphabet knowledge and numerology, Lord Adinath taught alphabet knowledge to daughter Brahmi and numerology to Sundari, hence alphabet knowledge is called Bramhilipi and numerology is called Sunderlipi. Sunderlipi i.e.

numerology (mathematics) is important for every subject, There are 8 general ways of mathematics (which comes under matter part of extraterrestrial part of mathematics), which are called "*Parikarmashtak*". The eight names of are as follows: Addition - Subtraction - Multiplying – division-Square - Square Root - Cube - Cube Root.

When these expressions are used with 'zero', then it is called "*zero parikarmastak*". When used with numbers other than zero, then it is called "*different parikarmastak*". The vastness of mathematics is enormous. A part of it only comes in our knowledge. A story is also told to explain this clearly, a flamingo and a frog of a well were talking, so the frog asks the flamingo how big is your palace. The flamingo says it's too big, the frog speaks with a jump it's big? The flamingo says no, very big, the frog takes another jump and asks it's big. The flamingo again says no, it's too big, then he jumps, and says that it cannot be bigger than this, then the flamingo says no, very big and thinks that its thinking is limited to well, so it is useless to talk to it and the flamingo leaves for his house.

Similarly, it is explained that one whose intellect is narrow *or kupmandup*, that is, like a frog living in a well, which can think only till the well, cannot move forward from the well. In the same way, it is difficult to understand the extent of mathematics for the one who has limited intellect.

Extraterrestrial Measurement

Two types of mathematics have been defined as Temporal measure and Extraterrestrial (*Alokik*) measure. Explanations of temporal measures are: *Mann*: counting e.g, rupees, coins etc, *Unman*: - weighing in scales. (Kilo, Pound etc): Measurement of liquids- (Liter etc) and so on. Extraterrestrial (*Alokik*) mathematics is used in measurement of 4 types which are as follows: All the types have their own units defined in the table 1.1 that are as follows: There are four distinctions of Extraterrestrial mathematics – matter (number)

, area, time, thoughts and their different scales of all have been told. As the minimum value of mass is one (*ek*) *parmanu* and the maximum value is the collection of all substances, and the minimum value of the area value is a region and the maximum value is the whole sky, the minimum value in the time value is a *samay* and the maximum value is the group of 3 eras. The minimum value in the sense of value is the *subtle nigodiya labdhiaparyaptak ka labdhi akshargyan* , and the maximum value is only *kevalygyan*. This is shown by the table given below

Table 1. Units of Extraterrestrial (*Alokik*) types

Types	Units of minimum (heinous) Value	Units of maximum(sublime) value
Matter Measure	An atom (<i>ek parmanu</i>)	Collection of all matters/atoms(infinite)
Area Measure	One space unit(<i>ek pradesh</i>)	Entire space(mainly occupied Universe)
Time Measure	One time unit(<i>ek smay</i>)indivisible unit of time	Groups of three era (Total time units of all eras)
Thoughts Measure	Knowledge of Subtle life (<i>nigodiya labdhiaparyaptak</i>) – smallest knowledge of omniscient	<i>Kevalagyaan</i> (omniscience)

Now, the types of Matters has divided on the basis of capacity of your mind (*gyan*) or how much our mind (*gyan*) capable to gain knowledge.

The types of *gyan* that are as follows: (1) Knowledge based on Senses (*Mati gyan*) – The knowledge which comes from the cause of the senses and the mind is called *Mati Gyan*. (2) Knowledge based on thinking/recollection (*Shruta Gyan*) - By relying on the things that are known through *Mati Gyan*, knowledge of other things is obtained, that is *Shruta Gyan*. (3) Limited Duration Knowledge (*Awadhi Gyan*) - which clearly knows the objects of liquid, field, time and matter having the limits of duration, that knowledge is called *Awadhi Gyan*. (4) Telepathy (*Manah Parya Gyan*).- The knowledge that clearly knows the things that are situated in the mind of others is called *manah parya gyan*. (5) Omniscience (*kevalagyaan*) - The knowledge which knows all the three worlds and all the things of the three periods simultaneously and clearly knows that knowledge is called *kevalagyaan*.

We are people who are having *mati gyan and shrut gyan* , so we are only capable to gain or understand the knowledge till countable. Those who are having *avadhi gyan and manah pariya gyan* can understand the second type of number. i. e uncountable. One who is having *kevalagyaan* will understand all the types, subtypes of matter, thus infinite can only be understood by omniscience.

Detail Explanation: The Mass (matter) description on the basis of numbers:

- Ek = 1
- Das =10
- Shat = 100
- Shahastra = 1000
- Das shahastra = 10,000
- Shat shahastra = 100,000
- Das shat shahastra = 1,000,000
- Koti = 10,000,000
- Pakoti = (10,000,000)²
- Kotippkoti = (10,000,000)³
- Nahut = (10,000,000)⁴
- Nihhut = (10,000,000)⁵
- Akhobhini = (10,000,000)⁶

- Bindu = (10,000,000)⁷
- Abundh = (10,000,000)⁸
- Nirbbuta = (10,000,000)⁹
- Ahah = (10,000,000)¹⁰
- Abab = (10,000,000)¹¹
- Atat = (10,000,000)¹²
- Soghandik = (10,000,000)¹³
- Uppal = (10,000,000)¹⁴
- Kumud = (10,000,000)¹⁵
- Pundrikh = (10,000,000)¹⁶
- Padhum = (10,000,000)¹⁷
- Kathan = (10,000,000)¹⁸
- Mahakathan = (10,000,000)¹⁹
- Asankhiyey = (10,000,000)²⁰
- Pudhathi = (256)²
- Badaal = (Pudhathi)²
- Ikatathi = (badaal)²

Moving further with the parts of matter under Extraterrestrial (*Alokik*) mathematics, which has three types that are countable, uncountable and infinite.

Three types of countable are as follows:

Minimum of <i>parita</i> uncountable number	Measure of Mustard of last <i>Anavastha Kund</i> , (45 digit number) where huge pit is filled and emptied several times
Medium of <i>parita</i> uncountable number	(Minimum + 1) to (Maximum - 1)
Maximum of <i>parita</i> uncountable number	Minimum value of <i>yukta</i> uncountable number - 1
Minimum of <i>yukta</i> uncountable number	(Minimum value of <i>parita</i> uncountable number) ^ (Minimum value of <i>parita</i> uncountable number)
Medium of <i>yukta</i> uncountable number	Minimum + 1) to (Maximum - 1)
Maximum of <i>yukta</i> uncountable number	Minimum of uncountable number countable times - 1
Minimum of uncountable number countable times	(Minimum value of <i>yukta</i> uncountable number) ²
Medium value of uncountable number countable times	Minimum + 1) to (Maximum - 1)
Maximum of uncountable number	Minimum value of <i>parita</i> infinite - 1
Minimum of <i>parita</i> infinite number	By categorizing the minimum innumerable number three times, adding some numbers to it, then the number that comes out is called as <i>parita</i>
Medium of <i>parita</i> infinite number	(Minimum + 1) to (Maximum - 1)
Maximum of <i>parita</i> infinite number	Minimum of <i>yukta</i> infinite number - 1
Minimum of <i>yukta</i> infinite number	(Minimum value of <i>parita</i> infinite number) ^ (Minimum value of <i>parita</i> infinite number)
Maximum of <i>yukta</i> infinite number	Minimum value of infinity infinite number - 1
Minimum of infinity x infinite number	(Minimum value of <i>yukta</i> infinite number) ²
Medium of infinity x infinite number	Minimum + 1) to (Maximum - 1)
Maximum of infinity x infinite number	Known in Omniscience

Applications/Uses

Thus, one finds unique way in which the most difficult concepts of infinite and other related concepts have been described in Jain literature which provides the methodology to gauge the depth of it and at least visualize them for our understanding. These measures are used to (1) know the distance and size of lower, (2) middle and (3) upper parts of Universe, (4)

Minimum (heinous) numbers, Medium number, and Maximum (sublime) numbers. Three distinctions of uncountable have been told as *Parita* uncountable, *Yukta* uncountable, *Asankhiyatasankhiyata* uncountable. The minimum, medium and maximum of these three are thus called as 9 distinctions. Now the differences of infinity are called as *Parita* infinite, *Yukta* infinite and Infinity infinite. Of these three also nine types have been said, saying that minimum, medium and maximum. There are 21 differences of such matter. In which the value of the minimum number is 2, because if we do any work on one, then there is no harm or increase in it, that's why 2 has been taken as the distinction of the number, not one or three etc then the medium number is called a maximum -1, and the maximum number is called minimum *Parita* uncountable number -1.

The values of uncountable and infinite are as follows:

counting of (5) islands and (6) oceans in the middle part of Universe, (7) transmigration of soul into several modes, (8) infinite time and (9) infinite transmigration, (10) the number of liberated souls, (11) number of species inhabited in upper, lower and middle parts of Universe, (12) space points in Universe and so on. More research on these lines is warranted to really appreciate these measurements.

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