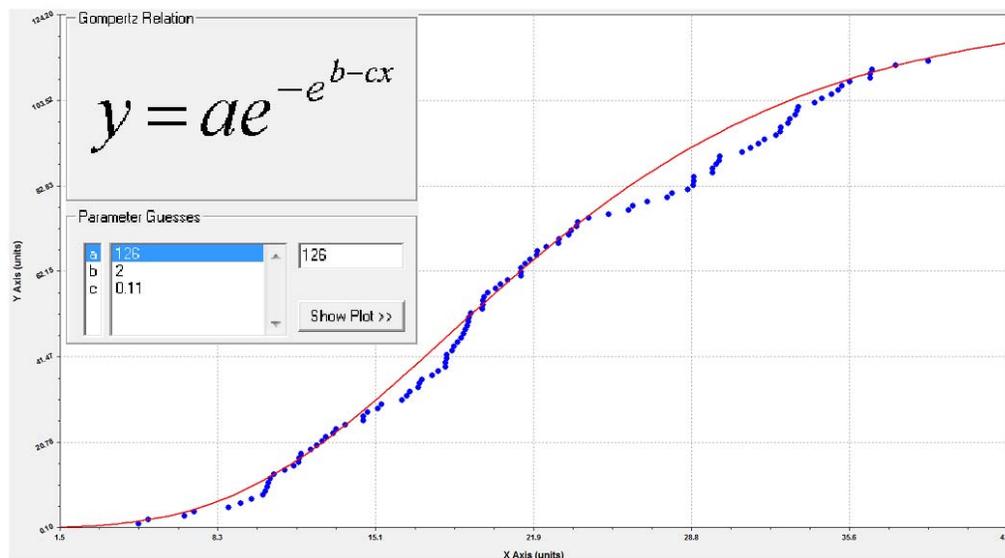# Raza System – IPC Athletics Points Score System

The Raza System replaces the old IPC Points Score tables which were used to calculate results in combined class field events. This system will be in used from 2010 onwards.

The Raza System is based on the following data and statistical analysis:

- All available IPC data from previous Paralympic Games and World Championships (2000 onwards) has been statistically analysed and is used as the basic platform for points calculation;
- The IPC world rankings from 2004 were also used to map trends for each single class;
- Each event and class has their own specific trend;
- A common statistical model* was used to map each event and class specific trend:
    - The statistical model was applied to all classes and provides a point score based on previous comparative performances;
    - The model is also predictive, and is therefore able to provide a score in the event that a new world record is achieved in any given class;
    - The model takes into account population size of each class, set against the available performance data;
- Every year there will be an analysis of results, with updates being applied to the Raza System;

Compared to previous points score tables, new world records and single outstanding performances will have <u>very little</u> impact on the Raza System. Changes to the Raza System will be reflected in the points achieved, but due to the large amount of data being used to calculate the results, the impact of one single performance will be limited. A general increase in the standard of performances in a single class, or several new world records will be needed to dramatically affect the point score resulting from the Raza System.

Men's F36 Discus - Curve Fitting

Sigmoid function:
Many natural processes and complex system learning curves display a history dependent progression from small beginnings that accelerate and approach a climax over time. A sigmoid curve is produced by a mathematical function having an "S" shape (as shown above).The Raza System uses a Gompertz curve, or Gompertz function, named after Benjamin Gompertz. This is a form of sigmoid function and is a type of mathematical model for a time series, where growth is slowest at the start and end of a time period.