International Symposium
MARCO POLO and other Small Body Sample Return Mission

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In the early solar nebula, the dust accreted to form planetesimals and the planetesimals accreted to form planetary embryos. In the asteroid belt this process was stopped when Jupiter formed.
Scientific objectives of MARCO POLO

What were the initial conditions and evolution history of the solar nebula?

Do primitive classe objects contain presolar material yet unknown in meteoritic samples?

Which were the properties of the building blocks of terrestrial planets?

What was the role of NEO impacts in the origin of life?

Composition of primitive material

How did composition vary with geological context?

How did space weathering and collisions affect NEO composition?

Elemental/Isotopical composition  
Nature of organics  
Mineralogy  
Surface morphology  
Mass, gravity density  
Internal structure  

Interior

Sample collection & return  

Orbiter
A NEO-SR mission is in the priority of CV

1. What are the conditions for Planet formation and the emergence of Life?

2. How does the Solar System work?