Hayabusa Mission Update
Mike Zolensky
Capsule Main Component Cross Section

- After-Landing Mass (Main Component only): 6.3 kg
- Re-entry Mass (all the four components): 16.8 kg

Dimensions:
- ~350 mm
- ~200 (220)
- (404)
Landing Locations of Each Component

Wind Vector

7.3 kg

2.2 kg

15-20 km

6kg

1kg

F-ABL

Parachute Cover

Woomera Prohibited Area

Main Component

Parachute Separation

Successful Triggering

Triggering Failure

Altitude [km]

DownRange [km]

7.3 kg 2.2 kg 6kg 1kg
Final calculated landing ellipse measured ~100 km by 15 km, the actual landing site was very near the center of this ellipse.
Hayabusa re-entry
June 13, ~midnight
Two Indigenous People who were taken to the recovery site first, in order to determine whether any cultural precautions had to be taken at the site.

Photo by Mike Zolensky, NASA JSC
Aerial view of the landing site of the Hayabusa Instrument Package

Photo by Mike Zolensky, NASA JSC
Hayabusa Instrument Package as found – it apparently landed and turned over as the parachute caught against a bush

Photo by Mike Zolensky, NASA JSC
Technicians approach the Hayabusa Instrument Package to cut battery wires.

Photo by Mike Zolensky, NASA JSC
Heat-sealing the Hayabusa Instrument Package into a temporary transport bag

Photos by Mike Zolensky, NASA JSC
Hayabusa Instrument Package after up-turning

Photo by Mike Zolensky, NASA JSC
Dr. Hajime Yano (left) (Recovery Lead and former PostDoc at JSC), Mike Zolensky (center), Australian Quarantine Lead at far right

Photo by Mike Zolensky, NASA JSC
Packing the Hayabusa Instrument Package into its transport case – inflating cushions, Dr. Kuninaka at right

Photo by Mike Zolensky, NASA JSC
Gathering up the parachute

Photos by Mike Zolensky, NASA JSC
Delivery of the Hayabusa Instrument Package leaving the field

Photo by Mike Zolensky, NASA JSC
Delivery of the Hayabusa Instrument Package at the Woomera Ops Center

Photo by Scott Sandford, NASA ARC
Hajime Yano with Hayabusa Instrument Package as received from the field

Photo by Mike Zolensky, NASA JSC
Sample cabinet in Hayabusa Curation Lab. Blue arrow indicates vacuum chamber, red arrow indicates N2-flooded chamber.
Tomoki Nakamura opening the Hayabusa Instrument Package in the Hayabusa Curation Lab

Photo by JAXA
View into the top chamber of the Hayabusa Instrument Package Sample Catcher
The grains that can be seen are still of uncertain origin

Photo by JAXA
The first grain being removed from the Sample Catcher, on the end of a quartz glass fiber. The Grain is arrowed.

Photo by JAXA
Hayabusa PET Plan

• Grains are currently being removed from the Sample Catcher
• These will first be analyzed by IR spectrometry and SEM/EDX in the Hayabusa Curation Lab
• Likely asteroid grains will then be analyzed elsewhere in Japan by a dedicated team for the next ~10 months
• Following PET samples will be made available to scientists worldwide, and 10% of the sample will come to NASA by agreement