

## Deep Impact Follow On Mission Fuel Budget as of 7-20-05



Event	Delta V or Total Impulse	Fuel Use	Total Fuel Expended
Fuel use through 7- 20-05 (TCM-8)	239.1 m/s	64.95 kg	64.95 kg
Follow on RCS fuel use (127 desats and DSM clean ups)	770 N-s	0.56 kg	65.51 kg
DSM 2-11	9.9 m/s	2.66 kg	68.17 kg
Remaining Fuel	65 m/s	15.68 kg	83.85 kg
Unusable Fuel	n/a	1.15 kg	85.0 kg
Total	314.0 m/s, 1785 N-s	85.0 kg	n/a

## • Fuel remaining is through 7-20-05 (TCM-8)

- Fuel used after 7-20-05 is not accounted for or estimated in this budget
- Extended mission fuel consumption basis is from May '05 mission planning
  - RCS fuel includes 5.5 N-s for 127 desats scheduled evenly throughout the remaining mission
  - DSM 2-11 are the trajectory corrections required per the May '05 mission plan
- Assumes that 1.15 kg is not usable due to tank, lines and components hold up
- Delta V performance includes taper burn to 10% for the last 2 m/s
- If remaining fuel (15.68 kg) is used at an lsp of 225 sec, delta V remaining is 65 m/s
  - Delta V margin is 20%



## Deep Impact Follow On Mission DSM 2-11 Delta V



- DSM 2-11 delta V magnitude provided in May '05
  - DSM 2 = 2.75 m/s
  - DSM 3 = 0.08 m/s
  - DSM 4 = 0.11 m/s
  - DSM 5 = 0.55 m/s
  - DSM 6 = 0.10 m/s
  - DSM 7 = 1.27 m/s
  - DSM 8 = 1.65 m/s
  - DSM 9 = 0.87 m/s
  - DSM 10 = 1.96 m/s
  - DSM 11 = 0.53 m/s
- Total = 9.87 m/s