2009 Commercial Space Transportation Forecast for Non-Geosynchronous Orbits

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Office of Commercial Space Transportation (AST)
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AGENDA

• Market Description
• Methodology
• Satellite/Payload Demand Forecast
• Launch Demand Forecast
• Trends
• Conclusions
Market Description

• Satellite Manufacturers
  • Swedish Space Corp., Orbital Sciences, MDA, Thales Alenia, et. al.

• Satellite Operators
  • Globalstar, Iridium, ORBCOMM Global, Aprize, O3b, RapidEye, InfoTerra, GeoEye, DigitalGlobe, et. al.

• Launch Vehicles
  • Delta 2, Falcon 1/1e, Rockot, Soyuz 2, Dnepr, Falcon 9, Zenit 3SL, Taurus II, et. al.
Methodology

• Data Collection
  • Performed by Futron (Under Contract)
  • Public Sources
  • Direct Communication w/Companies

• Synthesis
  • Tabulate Demand By Est. Launch Year
  • Report Reviewed by Industry, Government

• Definition of “Commercial Launch”
  • Internationally Competed and/or FAA licensed
Satellite/Payload Demand Forecast

2008 Forecast

Year

# Satellites

- LEO Telecomm (1.5 GHz < freq. < 2.5 GHz)
- LEO Telecomm (freq. < 1 GHz)
- Broadband LEO Telecom
- Commercial Remote Sensing
- Orbital Facility Assembly and Services
- International Science/Other
Remote Sensing Demand Forecast

Year

# Satellites


RapidEye
RADARSAT
InfoTerra
ImageSat International
GeoEye
DigitalGlobe
Launch Demand Forecast

- 2008 Forecast

Year: 2009 to 2018

- Medium to Heavy (>2,268 kg LEO)
- Small (<2,268 kg LEO)

Launches:
- ORBCOMM
- International Science / Other

Forecasted launches for each year are represented as follows:

- 2009: 8
- 2010: 14
- 2011: 9
- 2012: 8
- 2013: 6
- 2014: 14
- 2015: 16
- 2016: 15
- 2017: 14
- 2018: 6
2009-2018 Launch Forecast by Industry Sector

- **International Science/Other**: 39, 34%
- **Commercial Remote Sensing**: 14, 13%
- **Orbital Facility Assembly and Services**: 36, 33%
- **Big LEO Telecom**: 16, 15%
- **Broadband LEO Telecom**: 2, 2%
- **Little LEO Telecom**: 3, 3%

**TOTAL # LAUNCHES**: 110
## Comparison to 2008 NGSO Forecast

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<tr>
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<tbody>
<tr>
<td># Sats/Payloads</td>
<td>276</td>
<td>260</td>
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<tr>
<td># Small Launches</td>
<td>31</td>
<td>27</td>
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<tr>
<td># Mid-Heavy Launches</td>
<td>81</td>
<td>83</td>
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<tr>
<td>Total # Launches</td>
<td>112</td>
<td>110</td>
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NGSO Conclusions

• Long-Term Market Mostly Government
  • 67% is Stable Gov’t Demand
  • 33% is Private Demand: 11 Companies (5 Telecom, 6 Remote Sensing)

• Stable Components of Launch Demand
  • Sat/Payload Demand Down Slightly
  • International Science/Other = 2 Small + 1 Medium Launch / Year
  • OFAC = 4 Medium Launch / Year
The Forecast Report...

• Currently In Final Production
• Available Soon at ast.faa.gov
• For Personalized Service...
  • Send an Email to ken.davidian@faa.gov
  • Give Me Your Business Card
    • Write “Forecast” on the back