

International Laser Ranging Service ILRS

Current and future satellite missions tracked by SLR

(December 2007, WG)

Current missions

| Mission | Sponsor | Expected Life time | Main purpose | Launch |
|----------------------------|---------------------------------|--------------------|---|-----------|
| Geodetic Satellites | | | | |
| Ajisai | JAXA | ∞ | Geodesy | 1986 |
| Beacon | NASA | ∞ | Now: Gravity field | 1965 |
| Champ | GFZ, NASA, CNES | 5 years | Gravity field | 2000 |
| Etalon 1+2 | Russia | ∞ | Geodesy | 1989 |
| GLONASS (n=3) | Russia | open | Positioning, navigation, timing, geodesy | |
| GPS (n=2) | US DoD, DoT | open | Positioning, navigation, timing, geodesy | |
| Grace A+B | NASA, GFZ | 5 years | Gravity field | 2002 |
| Lageos 1+2 | NASA, ASI | ∞ | Geodesy | 1976,1992 |
| Larets | IPIE Russia | ∞ | Geodesy, experimental | 2003 |
| Starlette+Stella | NASA, CNES | ∞ | Geodesy | 1975,1993 |
| Other Satellites | | | | |
| Ande-RR A+P | US National Research Laboratory | 1-3 years | Atmospheric density | 2006 |
| Envisat | ESA | 5 years | Remote sensing and environmental monitoring | 2002 |
| ERS-2 | ESA | 3-4 years (!) | Remote sensing and environmental monitoring | 1995 |
| ETS-8 | JAXA | 3 years | Experimental (Western Pacific only) | 2006 |
| GFO-1 | US Navy | 10 years | Oceanography | 1998 |
| GIOVE-A | ESA | 2-3 years | Test PosNavTime | 2006 |
| Icesat | NASA | 3-5 years | Ice, Cloud, and land Elevation Satellite | 2003 |
| Jason-1 | NASA, CNES | 5 years | Oceanography and climate change | 2001 |
| TerraSAR-X | EADS-Astrium, DLR, GFZ | 5 years | Remote Sensing, Laser communication | 2007 |

Future missions with expected SLR support

| Mission | Sponsor | Expected Life time | Main purpose | Launch |
|----------------------------------|------------------------------------|--------------------|---|------------|
| Geodetic Satellites | | | | |
| Galileo (n=30) | ESA, EU | | Pos, nav, timing, geodesy | 2009 ff |
| GPS-3 (n=??) under discussion | DoD, DoT | | Pos, nav, timing, geodesy | |
| GOCE | ESA | 2-3 years | Gravity | 2008 |
| Lageos-3 under discussion | USNA, NASA | ∞ | Lense-Thirring, geodesy | 2011 |
| Other Satellites | | | | |
| AltiKa/SARAL | CNES | 5 years | Altimetry, water surfaces | 2010 |
| ANDE (n=2) | US National Research Laboratory | | Atmospheric density, composition, winds | 2009 |
| Astro-G | JAXA | | Space VLBI | 2012 |
| Compass (n=??) | China | | Pos, nav, timing | |
| Cryosat-2 | ESA | 3-4 years | Ice Shields | 2009 |
| GIOVE-A2 | ESA | | Test PosNavTime | 2008 |
| GIOVE-B | ESA | | Test PosNavTime | 2008 |
| HY-2A | CNES, CNSA | | Earth observation | 2009 |
| Jason-2 | NASA, CNES, Eumetsat, NOAA | 5 years | Oceanography, climate change | 2008 |
| Jason-3 | NASA, CNES, Eumetsat, NOAA | | Oceanography, climate change | |
| KOMPSAT-5 | KARI, Korea | | Earth observation | 2009/2010 |
| LARES | ASI, ESA | | Relativity | |
| LRO-LR | NASA | 1 year | Lunar investigations | Oct 2008 |
| Luneberg sphere | Russian Space Agency | | Experimental SLR target | 2008 |
| MicroSCOPE | CNES | 2 years | Equivalence principle tests | March 2009 |
| NPOESS | NOAA, NASA, DoD | 7 years | Sea surface height | 2013 |
| PROBA-2 | ESA | 2 years | Sun observations; technology demonstration | Dec 2007 |
| QZS-1 | JAXA | | PosNavTime | 2009 |
| Sentinel-3 | ESA (GMES) | | Oceanography | 2011/2012 |
| SOHLA-1 | JAXA | 1 year | Experimental, technologies | 2008 |
| SWARM (3) | ESA, CNES | | Earth's Magnetic Field | 2010 |
| STSAT-2 | KARI Korea | 2 years | Atmosphere and earth radiation | 2007/2008 |
| TanDEM-X | EADS-Astrium, DLR, GFZ | | Remote sensing | 2009 |
| WATER | CNES, NASA | | SAR Altimeter | >2013 |