

**INDIGO: Comparison Chart**  
**– Service Information –**

<b>Item</b>	<b>IGS</b>	<b>ILRS</b>	<b>IVS</b>
Service Inauguration	1994	1999?	1999
Organization (Chart)	<a href="http://igscb.jpl.nasa.gov/organization/figure1.html">http://igscb.jpl.nasa.gov/organization/figure1.html</a>	<a href="http://ilrs.gsfc.nasa.gov/about_ilrs/organiza.html">http://ilrs.gsfc.nasa.gov/about_ilrs/organiza.html</a>	<a href="http://ivscc.gsfc.nasa.gov/about/org/index.html">http://ivscc.gsfc.nasa.gov/about/org/index.html</a>
Terms of Reference	<a href="http://igscb.jpl.nasa.gov/organization/bylaws.html">http://igscb.jpl.nasa.gov/organization/bylaws.html</a>	<a href="http://ilrs.gsfc.nasa.gov/about_ilrs/termsref.html">http://ilrs.gsfc.nasa.gov/about_ilrs/termsref.html</a>	<a href="http://ivscc.gsfc.nasa.gov/about/org/documents/ivsTOR.html">http://ivscc.gsfc.nasa.gov/about/org/documents/ivsTOR.html</a>
Publications	Annual Reports, Technical Reports, Workshop Proceedings	SLR Performance Report Cards, Special Reports, Station Status Reports, CSTG SLR/LLR Annual Reports	Annual Reports, Newsletters, General Meeting Proceedings
Meetings	IGS Workshop	General Assembly, Technical Workshop	General Meeting (bi-annual), Technical Meeting, Workshop
Working Groups	<a href="http://igscb.jpl.nasa.gov/projects/projindex.html">http://igscb.jpl.nasa.gov/projects/projindex.html</a>	Analysis, Data Formats and Procedures, Missions, Networks and Engineering, Predictions Format, Refraction, Signal Processing	GPS Phase Center Mapping, IVS Product Specification and Observing Programs, VLBI2010
Pilot Projects			tropospheric parameters (closed), baseline products
Mailing Lists	<a href="http://igscb.jpl.nasa.gov/mail/mailindex.html">http://igscb.jpl.nasa.gov/mail/mailindex.html</a>	<a href="http://ilrs.gsfc.nasa.gov/contact_ilrs/mail_services/">http://ilrs.gsfc.nasa.gov/contact_ilrs/mail_services/</a>	<a href="http://ivscc.gsfc.nasa.gov/mailman/listinfo">http://ivscc.gsfc.nasa.gov/mailman/listinfo</a>
FTP Archives	<a href="ftp://igscb.jpl.nasa.gov/igscb/">ftp://igscb.jpl.nasa.gov/igscb/</a>	<a href="http://ilrs.gsfc.nasa.gov/products_formats_procedures/ftp_archives/index.html">http://ilrs.gsfc.nasa.gov/products_formats_procedures/ftp_archives/index.html</a>	<a href="ftp://ivscc.gsfc.nasa.gov/pub/">ftp://ivscc.gsfc.nasa.gov/pub/</a>

**INDIGO: Comparison Chart**  
**– Data –**

<b>Item</b>	<b>IGS</b>	<b>ILRS</b>	<b>IVS</b>
Data Storage at ...	Global, Regional, and Local Data Centers	Global, Regional, and Operational Data Centers	Data Centers
Primary (Global) Data Centers	CDDIS (USA), SIO (USA), IGN (France)	CDDIS (USA), EDC (Germany)	CDDIS (USA), BKG (Germany), OPAR (France)
Regional Data Centers	BKG (Germany), AUSLIG (Australia), NRCAN (Canada), GODC (USA), JPL (USA)	Shanghai (China)	CNR (Italy), GeoDAF (Italy), NICT (Japan)
Data Availability	1990 to today	1976 to today	1979 to today
Data File Organization	daily files per station (grouped by year and day-of-year)	daily and monthly files per satellite and station (grouped by year and satellite)	sessionwise (grouped by year and session)
Format of Data Files	RINEX (obs, nav, met)	NP Format (quick-look), Fullrate Format	Goddard data base format (binary), NGS card format (ASCII)
Example for Data Base File			<a href="ftp://cddisa.gsfc.nasa.gov/pub/vlbi/ivsdata/db">ftp://cddisa.gsfc.nasa.gov/pub/vlbi/ivsdata/db</a>
Auxiliary Data Files	official abbrev. for rcvr, ant, radomes (rcvr_ant.tab); ant. phase center (igs_01.pcv); reference pt info (antenna.gra)	Tuned Inter-Range Vector (TIRV, satellite predictions, by email or ftp)	Observing schedules, session logs, met data, notes
Standard compression software	Z compressed format	Z compressed format	Z compressed format
Special compression software	<a href="#">Hatanaka</a>	–	–
Data Transfer Mechanism	FTP	FTP	FTP

– non-existent; n/a not applicable

**INDIGO: Comparison Chart**  
**– Products –**

Item	IGS	ILRS	IVS
Analysis Centers (AC)	about 10 ACs	DEOS (The Netherlands), CNSS (Russia), CSR (USA) plus about 20 Associate ACs	about 20 ACs
Softwares	Gipsy/OASIS, Bernese, GAMIT	Geodyn and others	Calc/Solve, Modest, Occam, Gloria, SteelBreeze, Geosat
Combined Solution	Analysis Center Coordinator	ASI (Italy) primary, DGFI (Germany) backup	Analysis Coordinator (Axel Nothnagel, Univ Bonn)
Products Overview	<a href="http://components/prods.html">components/prods.html</a>	<a href="http://products_formats_procedures/index.html">products_formats_procedures/i ndex.html</a>	<a href="http://products-data/products.html">products-data/products.html</a>
<b>Product Types:</b>			
Satellite Orbit Prediction	–	daily TIRVs (Tuned Inter- Range Vector), Rapid LEO Predictions Team	n/a
Satellite Orbit Determination	satellite ephemerides for GPS (3 types) and GLONASS	{satellite ephemerides}	n/a
Satellite Clocks	GPS clock information	n/a	n/a
EOP	Polar Motion, Polar Motion Rates, Length-of-day	{polar motion, length-of-day}	session-wise EOP solution (EOP-S)
			1-hour Intensive EOP solution (EOP-I)
TRF	IGS tracking station coordinates and velocities	TRF solution (station positions and velocities)	TRF solution (station positions, velocities, correlations) roughly every 3 months
CRF	n/a	n/a	CRF solution at irregular time schedule
SINEX		n/a	daily EOP & position (DSNX)
TROP	zenith tropospheric path delay estimates	–	troposphere parameters per session and station
IONO	global ionospheric maps	–	–

– non-existent; n/a not applicable; { } planned

**INDIGO: Comparison Chart**  
**– Site Information –**

<b>Item</b>	<b>IGS</b>	<b>ILRS</b>	<b>IVS</b>
Clickable Map	<a href="http://network/maps/allmaps.html">network/maps/allmaps.html</a>	<a href="http://stations/index.html">stations/index.html</a>	<a href="http://stations/ns-map.html">stations/ns-map.html</a>
Clickable List	<a href="http://network/list.html">network/list.html</a>	<a href="http://stations/sitelist/index.html">stations/sitelist/index.html</a>	<a href="http://about/org/components/ns-list.html">about/org/components/ns-list.html</a>
Form of Site Log	ASCII file, Unix format	HTML document or ASCII file	ASCII file, DOS format
Example Site Log (Greenbelt)	<a href="http://igscb/station/log/gode_2003091_1.log">igscb/station/log/gode_2003091_1.log</a>	<a href="#">GODL (Greenbelt): Site Log</a> or <a href="http://pub/reports/slrlog">pub/reports/slrlog</a>	<a href="http://pub/config/ns/ggao.config.txt">pub/config/ns/ggao.config.txt</a>
Site Identification	[Sec 1] site name, 4-character ID, DOMES, CDP number	[Sec 1&3] site name, DOMES, CDP number, 4-char code	[Sec 1] site name, 8-letter code, DOMES, CDP number
Approx. Station Coordinates	[Sec 2]	[Sec 2]	[Sec 2.1]
Tectonic Plate	[Sec 2]	[Sec 2]	[Sec 2.1]
Geologic Information	[Sec 1]	[Sec 1]	–
Monument/Marker Description	[Sec 1]	[Sec 1]	–
Local Surveys	–	–	[Sec 2.2]
Local Ties, Collocation	[Sec 5&7] local vectors between collocated techniques	[Sec 13] local vectors between collocated techniques, vectors between collocated SLR systems	[Sec 10] list of techniques, no local difference vectors
Instrument Information (antenna, receiver, laser)	[Sec 3&4] incl. history of antenna and receiver changes	[Sec 4&5&6]	[Sec 3&4]
Local Events (possibly affecting position)	–	[Sec 14]	–
Time/Frequency Standards	[Sec 6]	[Sec 9]	[Sec 8]
Meteorological Instrumentation	[Sec 8]	[Sec 12]	[Sec 7]
Field System Computer	–	–	[Sec 11]
Aircraft Detection	n/a	[Sec 11]	n/a
Local Contact Information	[Sec 11]	[Sec 15]	[Sec 13]

[Sec ?] Section in site log file; – non-existent; n/a not applicable