

Scientific Instrumentation Ltd



- Incorporated 1980
- Payload Engineering
- Flight support
- Instrument design and manufacture
- Space, Near Space applications
- Balloon launch capability since 1987
- ISO 9001:2008 registered

Recent Balloon Facilities

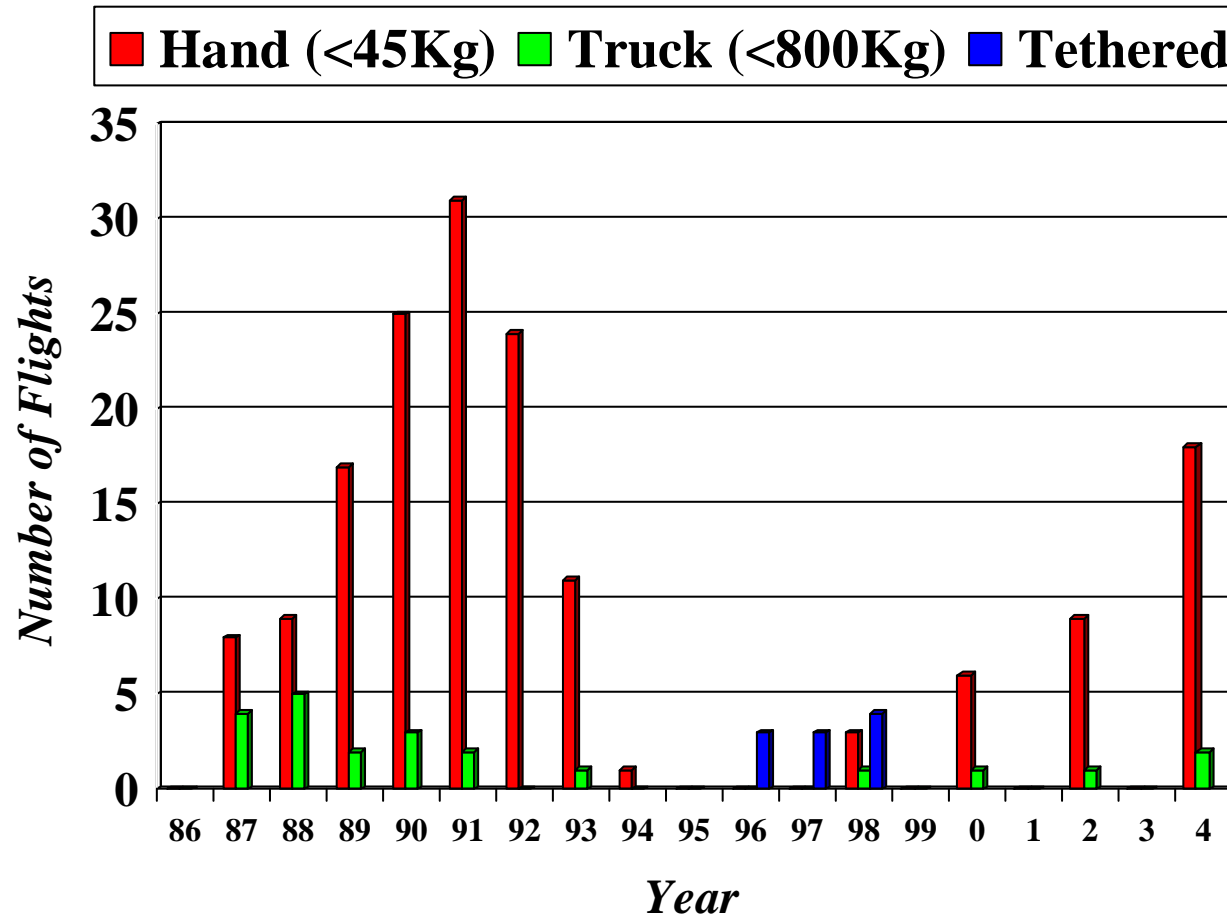
1975 SFRB develops mobile launch team

1979 Team moves to permanent facility at Gimli

**1986 Facility closes, equipment transferred to EC
Equipment moved to Vanscoy**

2009 Facility closed and equipment stored

SIL Balloon launch Activity



Remote Launches



- Alert 76
- Churchill 2
- North Bay 1
- Eureka 1
- Bratts Lake 4

WMO payload

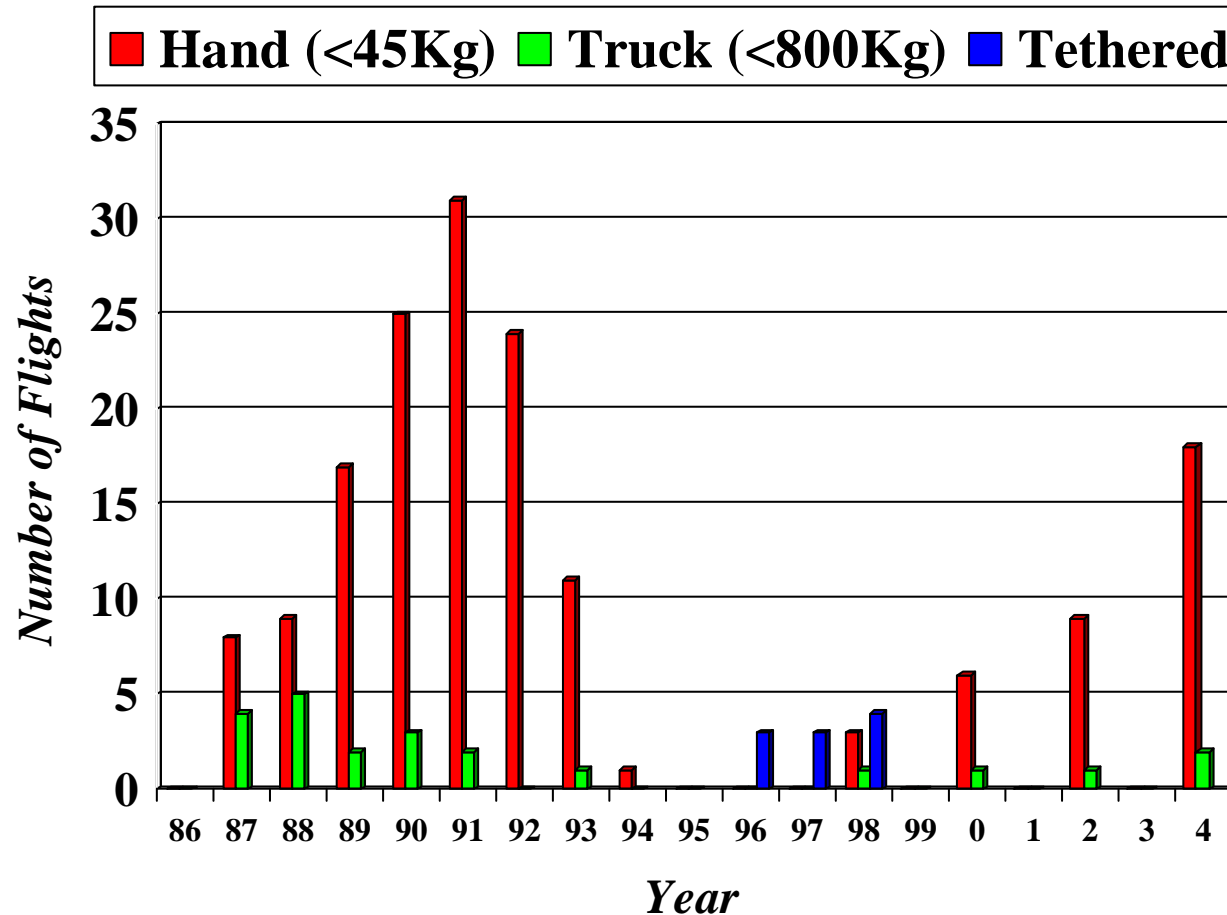


- **Ozone Intercomparison**
- **6 country participation**
- **8-10 sondes per flight**
- **10 flights in 9 days**

SIL Launch & Flight Success

		Science data lost
● Small (hand launch)		
Failure due to equipment	1	0%
Failures prelaunch	4	0%
Total flights 200+		
● Medium (truck launch)		
Failure due to equipment	3	50%?
Failure- premature termination	1	100%
Fail to terminate	1	0%
Failures prelaunch	2	0%
Total flights 22		

SIL Balloon launch Activity



Launch Cost Comparison

	Small	Medium
Altitude (Km)	36-40	36-40
Balloon (mcf)	0.1 to 1.0	2-20
Science (Kg)	1-25	50-900
Float time (hrs)	<16	<24
Balloon & gas(\$000)	3-6	12-150
Launch & Recovery (\$000)	10-20	40-80

Infrastructure Available

Equipment & electronics

- Able to support small launches
- Equipment held by EC

Technical Expertise/experience

- Able to support small and medium launches

CSBF

- Able to support large and LD flights

Infrastructure Upgrade

Small (<\$200,000)

- Minor equipment refurbishment

Medium (<\$5,000,000)

- Launch vehicle
- Balloon spool
- Helium trailer
- Flight train components
- Flight control electronics
- Upgraded telemetry station & downrange
- Engineering
- Facility & land

Large & LD (<\$3,000,000)

- Medium requirements plus additional training of launch crew

Operational Costs – Medium size facility

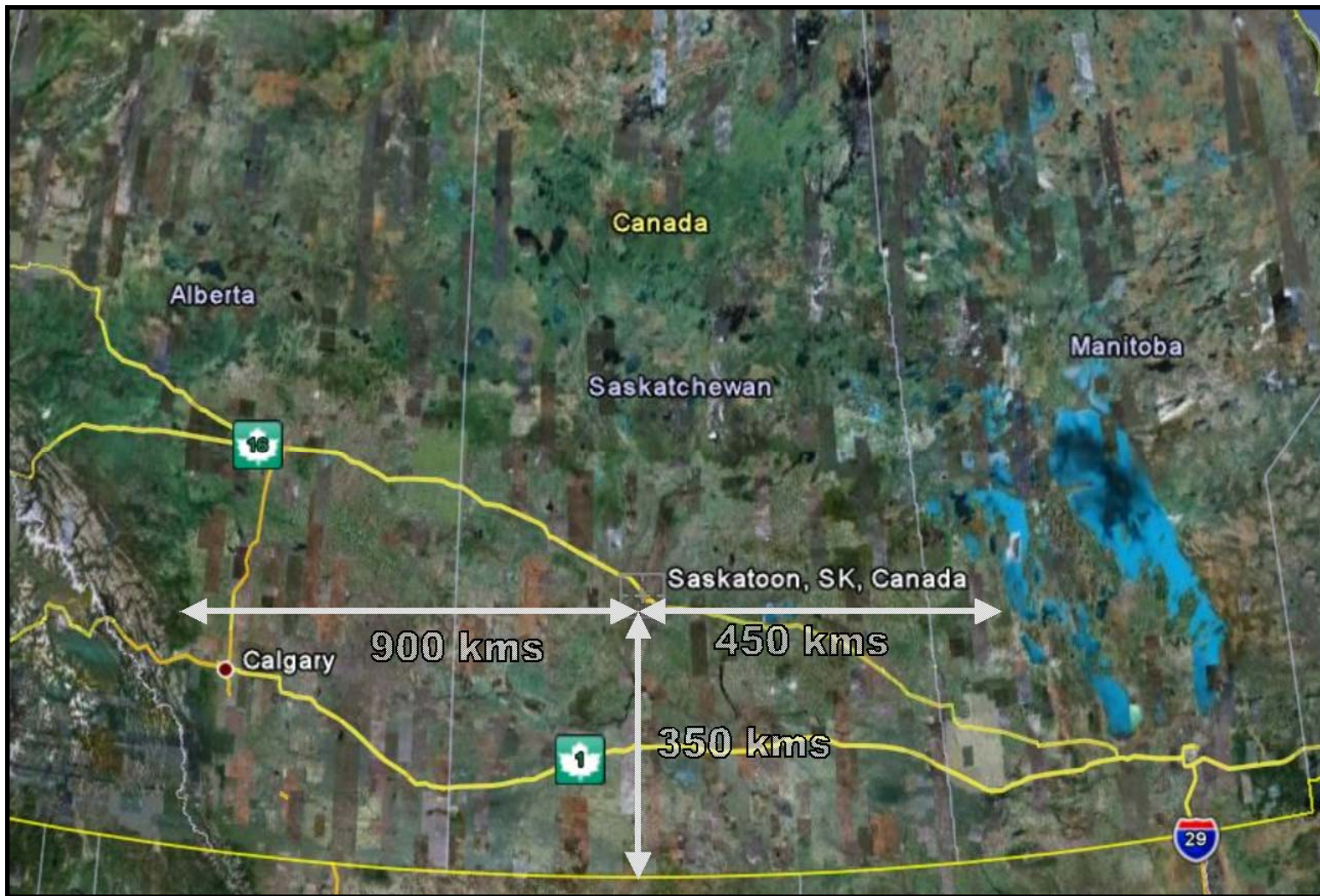
- Lease/Rent
- Operations (utilities, security, etc.)
- Insurance
- Staff (2-4 Full Time, 6-8 Part Time)
- Total Cost <\$1,000,000/year

Location



- Many good weather days
- Delay due to weather 1.66 days
- Support facilities close by
- Distant from US border
- Good range in all directions
- Below tree line

Location



Questions?

