

## **5241: GLACIERS AND ICE SHEETS: SCIENCE**

### **GLACIER/ICE MOTION (L. AGASSIZ 1840-50s)**

#### **ICE AGE THEORIES –**

**J. Croll (1875, 1886) – orbital eccentricity**

**M Milankovitch (1920, 1941) –orbital cycles**

#### **ICE FLOW MODLS:**

**E. Orowan 1949**

**J. Glenn 1954-6**

**J. Nye (Physicist, Bristol U.) 1951-76**

**L. Lliboutry (1964-78)**

**J. Weertman (1957-79)**

#### **ICE CAP/ICE SHEET MODELS**

**M Mahaffy (1976)**

**W. Budd, R. Jensen, I Smith and U. Radok (1981)**

### **GREENLAND –EGIG SURVEY LINE, 1949-50 (P. E.Victor)**

#### **ICE SHEET SNOW FACIES – C. Benson (1960)**

#### **ICE SHELF STUDIES :**

**J-9 drill hole (1974); RISP, C. Bentley (1973-8),**

**Dynamics;Buttressing concept: R Thomas (1979)**

#### **ICE STREAMS –T Hughes (1977)**

**DEEP ICE CORES: - Camp Century, W. Dansgaard (1971);  
Byrd; Vostok; GISP/GRIP 1989-93.**

**RADIO-ECHO SOUNDING – G. Robin and C. Swithinbank  
SPRI, (1969)  
Lake Vostok – P. Kapitsa (1996)**

**AVHRR - T. Scambos (2000)**

**PASSIVE MICROWAVE – snow melt (Abdalati and Steffen,  
Mote and Anderson) 1990s**

**RADAR MAPPING (RAMP) - RadarSat (1997)**

**SAR INTERFEROMETRY – ice velocity determinations  
(1993)**

**LASER ALTIMETRY a/c and IceSat (2003)  
<http://icesat.gsfc.nasa.gov/>**