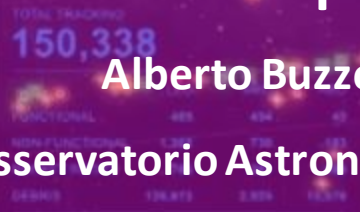


Space Situational Awareness activities @INAF:

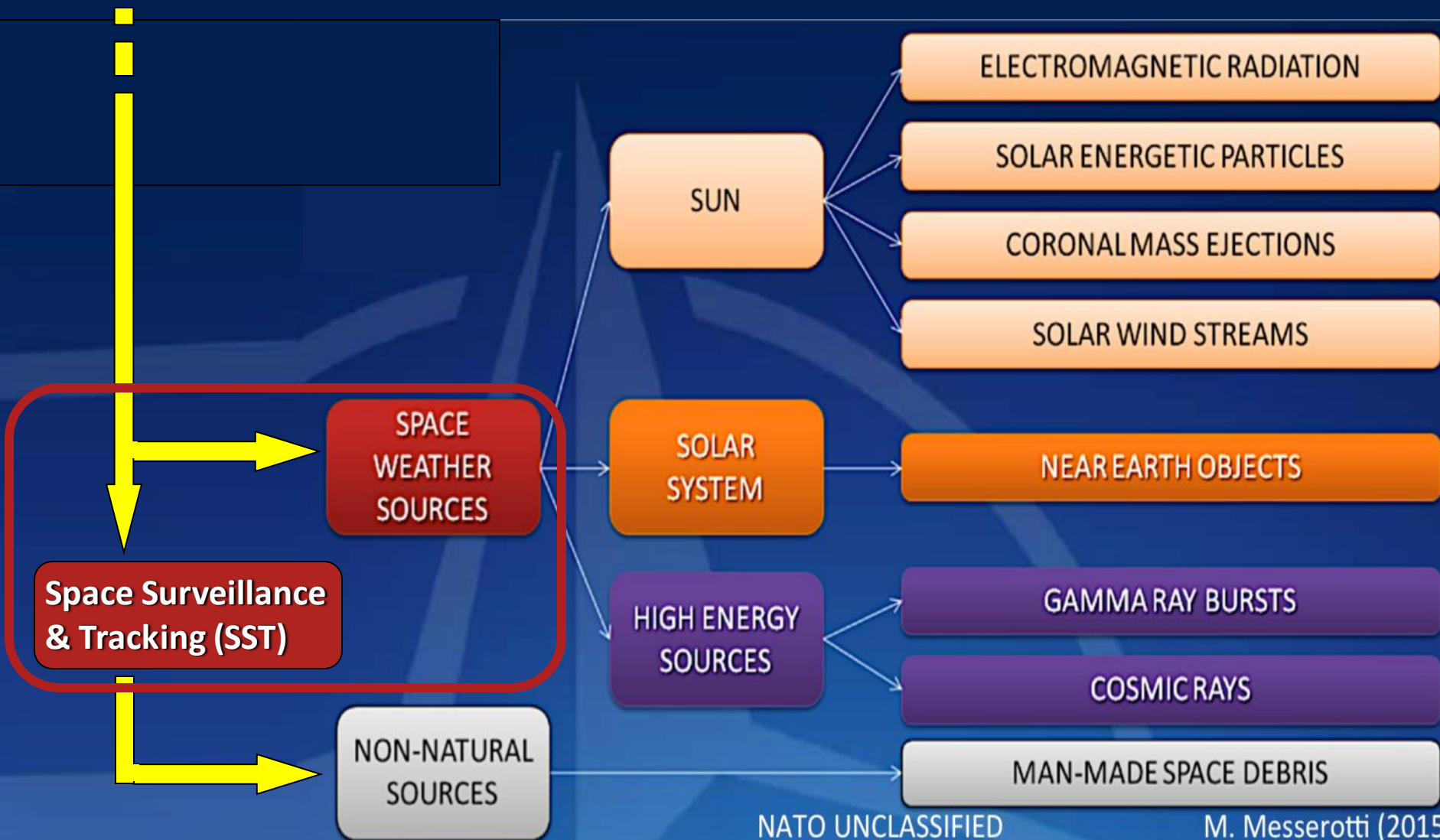
current status & perspectives

Alberto Buzzoni

INAF – Osservatorio Astronomico di Bologna



Space Situational Awareness (SSA) deals with...



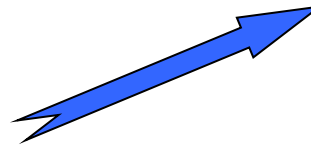
SSA/SST coordination in Italy

OCIS

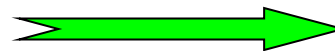
Organismo di Coordinamento e di Indirizzo delle attività relative all'iniziativa "Space Surveillance and Tracking Support" (SST) della Commissione Europea

OCIS is composed by

Agenzia Spaziale Italiana (ASI)*



Istituto Nazionale di Astrofisica (INAF)



Aeronautica Militare (AM)



(*) ASI is the National Entity (NE) and Italian Representative in the SST European Consortium

SSA@INAF in a nutshell

17 Research Institutes

587 Staff Researchers +
~800 Associates & PhDs etc.

Observing Facilities

(operating in Italy)

Optical telescopes

182_{cm} - Asiago/Padova

152_{cm} - Loiano/Bologna (SST)

92_{cm} - C. Imperatore/Teramo

Radiotelescopes

564x640m N. Cross – Medicina/Bologna (SST)

64m SRT – Cagliari

32m Noto/Bologna

Dedicated Solar facilities

Roma – Sun & Planetary (SW)

Trieste – Radio Monitoring (SW)

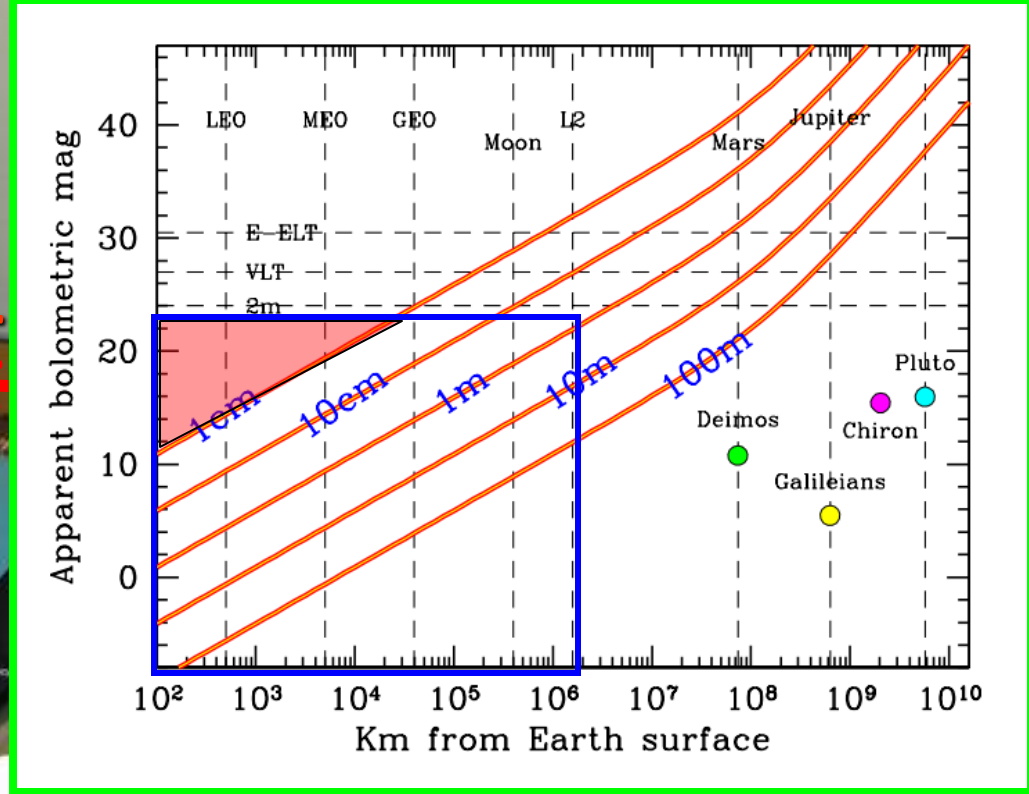
Catania – Optical (SW)

Torino – Sat Archives (SOHO) - Corona

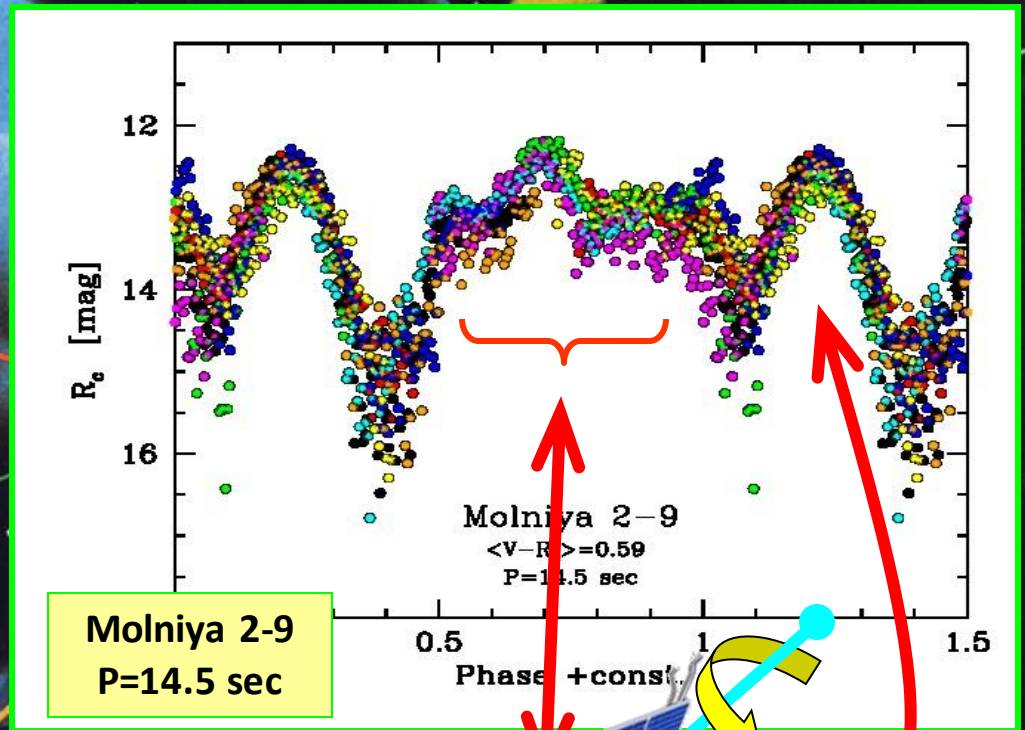
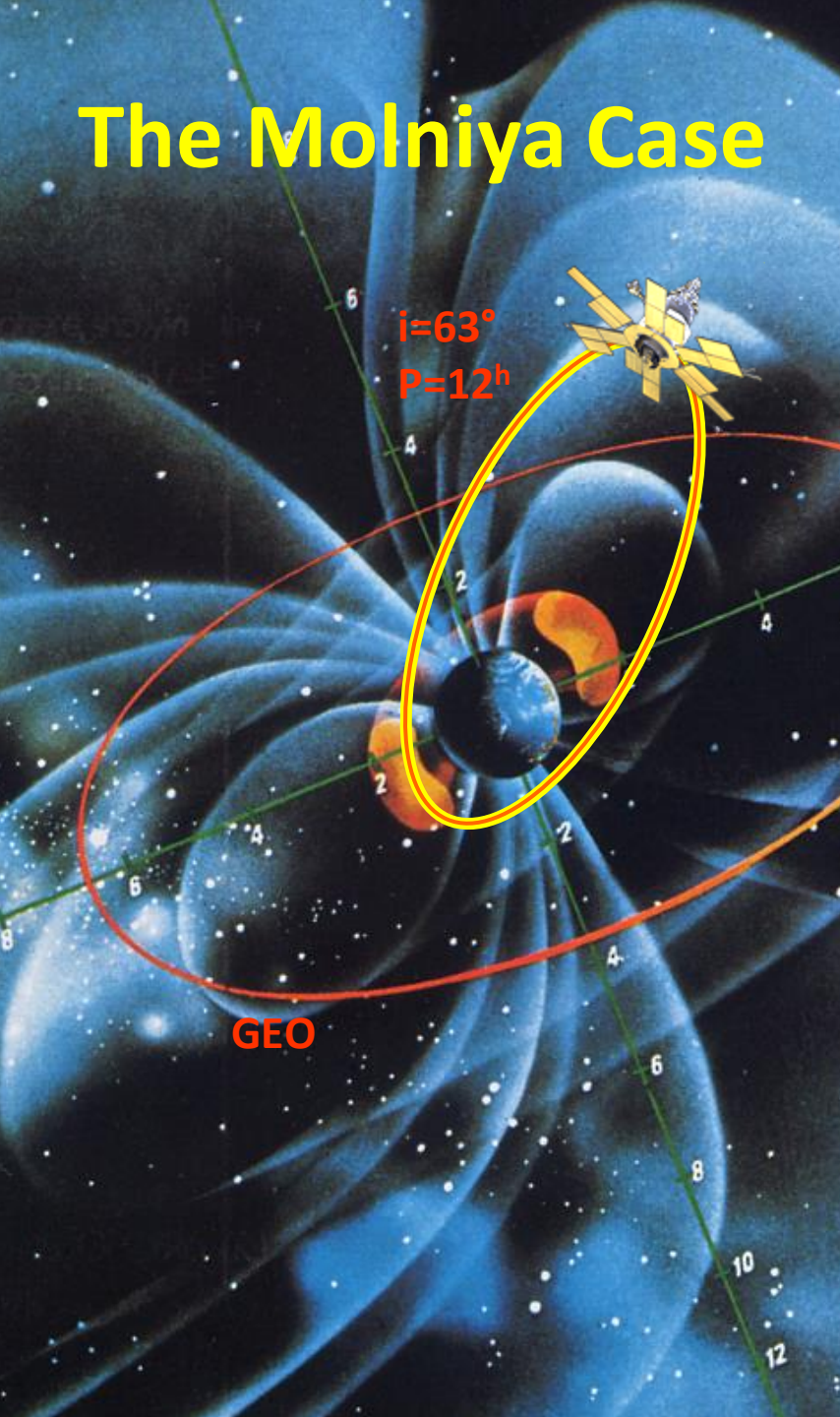
Napoli – Optical



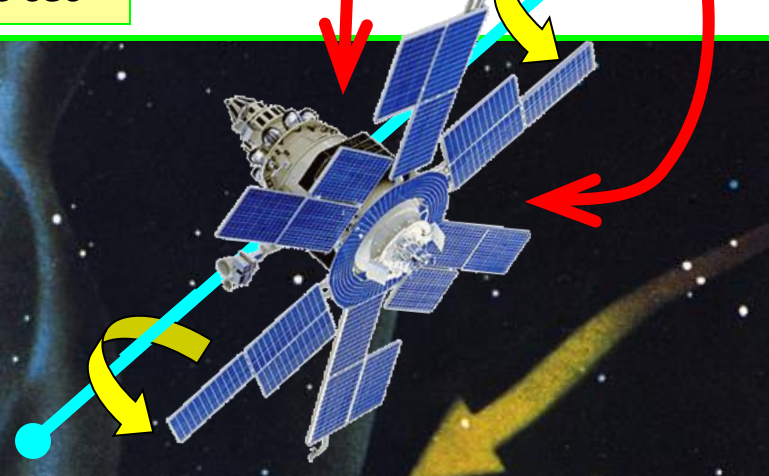
The "Cassini" Telescope INAF - Bologna



The Molniya Case



Molniya 2-9
 $P = 14.5$ sec



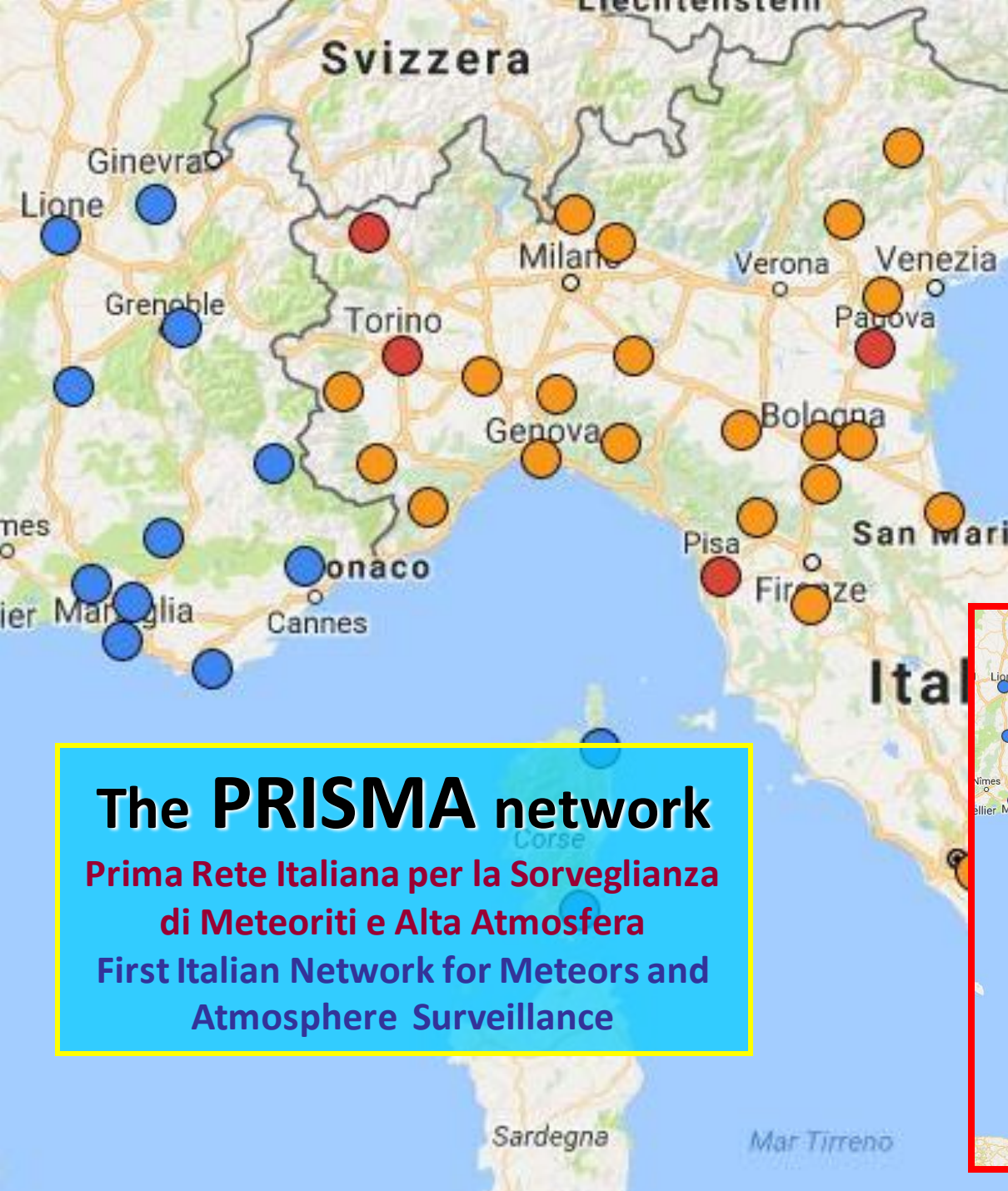
Visually Observed Natural Re-entries of Earth Satellites along Jan-Oct 2016 (compiled by Ted Molczan)

DATE	COSPAR	Object	Mass(kg)	Sighting Location(s)
Jan 01	2015-074C	Russia Zenit-2SB stage 2	8900	Thailand, Vietnam (debris found)
Jan 03	1986-052D	Russia Cosmos 1763 deb	~100	Belarus, Russia, Ukraine: recorded by cameras of Meteors
Jan 15	2015-059B	China		
Jan 30	2015-046B	China		
Mar 10	2000-050A	China		
Jul 19	2016-045B	Russia		
Jul 28	2016-042E	China CZ-7 Stage 2	?	California, Nevada, Arizona, Colorado
Oct 24	1998-067H	USA Flock 2b-2	4.5	Southern England, Northern France

**8 re-entry sighting reports
(Jan-Oct 2016)**



**41 expected re-entries along
September 2016 ALONE
(NORAD/Celestrack)**



Courtesy A. Carbognani (OAVdA)

The PRISMA network
Prima Rete Italiana per la Sorveglianza
di Meteoriti e Alta Atmosfera
First Italian Network for Meteors and
Atmosphere Surveillance



The IRIDIUM flares as a pilot case



INAF – Bologna

FRIPON/PRISMA
Network

Apr 29, 2017 – 20:27 UTC

