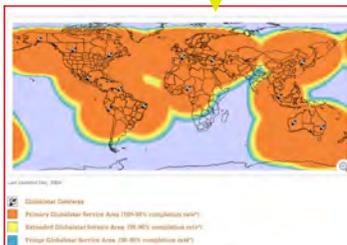




Turning Tracking and Monitoring into Knowledge

Globalstar tracking collars provide GPS data from the field to the www in real time

- ◆ Collars as small as 400 grams (C-cell)
- ◆ Data available in real time at www.sensorlink.biz; mapping display on Google maps with satellite and street overlays; or view data on Google Earth™
- ◆ Drop-offs and VHF transmitters available, as well as interior padding (i.e. for smaller neck sizes and/or to avoid neck abrasion)
- ◆ Mortality sensor available on VHF transmitters
- ◆ Not moving alarm available, as well as Geo-Fence alarm if animal moves outside a given region
- ◆ Small patch antennas (i.e., no chewable whip antennas)
- ◆ Collars can store up to 50,000 GPS locations; you can use them as logging collars that transmit a location less frequently (saves airtime)
- ◆ C-cell, D-cell and 2D-cell configurations available (some in "low profile" enclosures); battery life measured in years
- ◆ Globalstar satellite system consists of 50+ satellites; 2-4 satellites are always in view from any location (except at poles)
- ◆ Satellite ground station coverage available throughout much of the world





Turning Tracking and Monitoring into Knowledge

North Star Science and Technology, LLC has been in business since 1998. Our founders and management staff are wildlife scientists and environmental scientists who helped to pioneer the technology that we provide today. We are not the largest wildlife telemetry company in the world, but we are one of the very finest; and thus, you can trust your project to North Star. We stand behind our products like no other company in the business, and we offer the highest level of customer service possible. Ask me for a few examples, and I will be happy to share (blakehenke@msn.com). Furthermore, we are always developing new products and enhancing the ones that we have, so if we do not have exactly what you are looking for “off the shelf”, please inquire with us; as we may be developing what you are looking for.

Regarding our Globalstar tracking collars, these were the first “non-Argos” satellite collars available in the world. Now, finally, you have a choice in satellite systems, and Globalstar has several key advantages over Argos. First of all, Globalstar offers truly real time data, from the field to the www. There is no delay and no latency in data delivery. The Globalstar constellation includes 50+ satellites, so there are always 2-4 satellites in view from any location on the ground at any time. [Argos has 5 satellites.] And the satellite airtime is much less expensive for Globalstar than for Argos. For example, to receive data every third day via Argos would cost approximately \$56-60 per month per collar, whereas to receive 3 real time GPS locations per day via Globalstar would cost a mere \$36 per month per collar.

And in terms of the hardware pricing, Argos collars are selling for roughly \$3,000 – 4,500 each, whereas our Globalstar collars are priced at \$1,700 – 1,900 each. We can add a VHF transmitter for an additional \$350 and a drop-off mechanism for an additional \$400 per collar. So even if you get both additional options (i.e., VHF and drop-off), your final cost is \$2,400 – 2,600 per collar, which competes very well against any Argos collar. Internal padding is also available inside the collars for an additional fee.

Our Globalstar collars can be configured to transmit every GPS location that they acquire in real time (typical), **or** they can be configured to log GPS locations more frequently than they transmit; in which case they store the rest for later retrieval (like a “GPS logging” collar, which are so popular these days). For example, our collars can be configured to acquire a GPS location 8 times per day and to transmit out only 1 GPS location per day, or per week (which saves on airtime costs). We can program them any way that a user might want.

So if you were considering using a “GPS logging” collar, you should think seriously about using our Globalstar collars instead. This way, you will get all the benefits of a traditional logging collar with the added advantage of being able to have the collar transmit a new GPS location on a schedule via satellite. Thus, you will know where your collar is and that it is working properly on a pre-determined transmit schedule.

Perhaps our greatest advantage over Argos collars is our www data delivery portal, located at www.sensorlink.biz. The data delivery portal is password protected, and it provides the data from our Globalstar collars in map and tabular formats in real time. You can view your data on zoomable maps (including Google maps), or you can download it (as a comma delimited text file), or forward it to an e-mail address or to another server. Also, through the use of the data delivery portal, we can offer several alarms that are new to the wildlife tracking industry. These include a “not moving” alarm (i.e., the collar has not moved outside a given radius in x days); a “no messages sent” alarm (i.e., the collar has sent no messages in x days); and a GeoFence alarm. The GeoFencing capability allows users to define a boundary of “acceptable” ranging for their animals. If the target animals move outside the GeoFence boundary, an alarm message is sent to a pre-defined recipient list. Unlike other GeoFencing methods that require laborious programming, North Star’s system allows users to simply draw a polygon directly on a map in Google Earth to define their GeoFencing area. Multiple areas can be defined, saved, and applied to various collars in the field. The data delivery portal identifies GeoFencing violations and sends e-mails, text messages, or other alarms to user PCs and wireless devices.

