

## PURCHASE CONTRACT

concluded pursuant to the provisions of Section 409 et seq. of Act No. 513/1991 Sb., the Commercial Code, as amended,

on the day, month and year set out below between:

**Centrum výzkumu globální změny AV ČR, v. v. i.**  
**with registered office at:** Bělidla 986/4a, Brno, Post Code 603 00  
**represented by:** director Prof. RNDr. Ing. Michal V. Marek, DrSc.  
**ID. No.:** 67179843; **VAT No.:** CZ67179843  
incorporated in the Register of Public Research Institutes administered by the Ministry of Education, Youth and Sports of the CR  
**bank connection:** 61722621/0710

hereunder referred to as the „Buyer“

and trading company

**Picarro Inc.**

**with registered office at:** 3105 Patrick Henry Dr., Santa Clara, CA, Post Code 95054,

**represented by:** Rob Peters

**ID. No.:** 77-0494406 **VAT No.:** Not Applicable.

incorporated in the Business Register administered by the United State of America Court in Delaware.

**bank connection:** SILICON VALLEY BANK, 3003 TASMAN DRIVE SANTA CLARA, CA 95054

ACCNT: #3300644467, Routing Transit:121140399, Swift Code: SVBKUS6S

hereunder referred to as the “Seller“

### I. Subject of the Contract

1. The Seller undertakes to deliver to the Buyer Analyzer and accessory equipment. The Buyer undertakes to take the subject of the purchase from the Seller and pay the purchase price agreed under Clause V herein.
2. Analyzer means **Picarro analyser G2301 CO<sub>2</sub>, CH<sub>4</sub> and H<sub>2</sub>O Analyzer**: (Concentration measurements of CO<sub>2</sub>, CH<sub>4</sub> and H<sub>2</sub>O in air. Highest precision; highest sensitivity; easiest to use.)-
3. Accessory equipment means
  - Rack Mount Configuration for 2000 Series Analyzers
  - 19" screen

### II. Time, place and manner of delivering the subject of the purchase

1. The Seller undertakes to deliver (incoterm 2010) DAP-Belidla the subject of the Contract to the Buyer **no later than 4 weeks from the Contract execution**. The Seller meets his duty to deliver the subject of the purchase when the Buyer takes over the subject of the purchase in a complete and perfect condition.
2. The Seller shall deliver the subject of the purchase to the Buyer to the place of destination, being the head office of the **Centrum výzkumu globální změny AV ČR, v. v. i** (*Global Change Research Centre of the ASCR, v. v. i*), at Bělidla 986/4, Brno, 603 00, unless the Parties agrees otherwise.



3. The Seller undertakes to deliver to the Buyer, along with the subject of the purchase, all documents related to the subject of the purchase, in particular: detailed operating instructions or manuals related to the subject of the purchase, certificates of warranty related to the subject of the purchase.

### III. Duties of the Parties

1. The Seller shall provide the subject of the purchase to the Buyer within a specified period and defined place, in the required quantity, quality, workmanship and packaging and provide the Buyer with documents related to the subject of the purchase and allow the Buyer to acquire the title to the subject of the purchase.
2. The Buyer shall take over the subject of the purchase delivered in a due and timely manner, inspect it and pay the agreed purchase price.
3. The Seller acknowledges to be an entity obliged to cooperate on financial checks in Public Administration.
4. The Seller shall enable inspection and access by inspection bodies also to the premises of potential subcontractors. The Seller furthermore undertakes to provide cooperation to the inspection bodies with respect to provision of information and documents on his activities under this Contract.
5. The Seller shall also ensure the fulfilment of all duties imposed on the Seller under this Contract under potential subcontracts.

### IV. Purchase price

1. The Buyer undertakes to pay the Seller a purchase price specified below for the delivery of the subject of the Contract set out under Clause II herein:

Price excl. VAT                      **50.755,-USD**

2. The agreed purchase price is agreed as the **highest permissible unexceedable price** and covers all costs incurred by the Seller in relation to the delivery of the subject of the purchase to the destination defined under Clause II (2) herein.
3. The Seller is not entitled to request any advance payments from the Buyer.
4. The purchase price is payable on the basis of an invoice issued by the Seller.
5. Payment is agreed as 30 days after the invoice date.
6. The invoice shall be issued by the Seller following the handover and takeover on the subject of the purchase based on a protocol by the Buyer, and the copy of the handover and takeover protocol regarding the complete and perfect subject of the purchase signed by both Parties shall become an integral part and annex to the invoice.
7. The invoice issued by the Seller under this Contract shall meet the statutory requirements for a tax document. Likewise, each tax document shall contain the registration number and project title reading as follows: CZ.1.05/1.1.00/02.0073, CzechGlobe – Centrum pro studium dopadů globální změny klimatu. If the invoice fails to meet the aforesaid requirements, the Buyer will be entitled to return it to the Seller and the Seller shall issue a new invoice with a new due date. In such a case, the Buyer will not be in default of payment of the invoice.
8. The Buyer is entitled to suspend any payment in favour of the Seller if the Seller delays the performance of any obligation towards the Buyer under this Contract.
9. The Buyer's obligation to pay the agreed purchase price is met on the day when the invoiced amount is debited from the bank account held by the Buyer.
10. The Seller undertakes not to assign any receivable related to the Buyer under the Contract to a third party.



#### V Guarantee period, defect liability, claim terms

1. The Seller shall provide a quality guarantee for the subject of the purchase for a period of **12 months**. The guarantee period commences on the handover and takeover of the complete and perfect subject of the purchase to the Buyer in the form of a protocol.
2. Defect claims during the guarantee period shall be filed by the Buyer with the Seller in writing without undue delay after identifying such a defect. The Seller undertakes to respond to the claim no later than 5 days from its delivery.
3. The guarantee period will be extended by the period commencing on the date of the claim filing and terminating on the date when the defect is made good. If the Seller fails to respond to the claimed defect it is understood that the defect has been recognised.
4. The Seller undertakes to **make good the claimed defect** as quickly as technically feasible; however, no later than **60** days from the date of receiving a written claim from the Buyer unless the Parties agree otherwise.
5. During the guarantee period, the Seller shall make good all identified defects and deficiencies of the subject of the purchase at his own expense and responsibility. If the Seller fails to make good the claimed defect in a due and timely manner within the specified period, the Buyer shall be entitled to have the defect rectified at the Seller's expense.

#### VI. Sanctions, fiction of service

1. If the Seller delays the delivery of the complete and perfect subject of the purchase, the Parties agree on the duty of the Seller to pay the Buyer a contractual penalty of 0.02% of the price of delivery for each day of the Seller's delay.
2. If the Buyer delays the payment of the purchase price, he shall pay the Seller a contractual interest on late payment of 0.02 % of the due amount for each day of delay.
3. The Parties agree that all deliveries duly sent by any of the Parties shall be considered delivered on the fifth day from the demonstrable sending, regardless whether the Party that is the recipient has taken over the delivery or not.

#### VII. Withdrawal from the Contract

1. The Contract may only be terminated in cases defined herein or under law.
2. The Parties agree that a **material breach of the Contract** under which the affected Party is entitled to withdraw from the Contract in **understood, in particular, as** :
  - commencement of insolvency proceedings against the Seller, commencement of liquidation of the Seller or if the trade licence of the Seller is revoked
  - Seller's delay in delivering the subject of the purchase in a duration over 30 days
  - Seller's delay in eliminating guarantee defects in a duration over 30 days
  - if the Buyer fails to pay the purchase price to the Seller for subject of the purchase within a reasonable period (*however, a min. of 2 weeks*) determined in a written payment reminder delivered to the head office of the Buyer
  - if the Seller assigns his duty to deliver the subject of the purchase or a part thereof to a different Seller without a written consent of the Buyer.
3. The notice of withdrawing from the Contract shall be made in writing and becomes effective upon delivery to the other Party. The notice of withdrawal shall specify the reasons for the withdrawal.



4. All right and duties of the Parties under the Contract shall terminate upon the withdrawal from the Contract. Notwithstanding this fact, the withdrawal from the Contract does not cover the claim for damages incurred as a result of a breach of the Contract, nor the contract provisions concerning dispute settlement between the Parties and the claim for contractual penalties.

5. The Party receiving a consideration from the other Party prior to the withdrawal from the Contract shall return the consideration. If the consideration is returned by a Party withdrawing from the Contract, this Party is entitled to the settlement of related expenses.

### VIII. Other and final provisions

1. This Contract has been executed upon agreement between the Parties on its entire content.

2. The legal relationships between the Parties arising out of this Contract and legal relationships between the Parties not explicitly stipulated herein shall be governed by the legal regulations of the CR, in particular, the relevant provisions of the Commercial Code, as amended.

3. The Parties agree that the court competent to adjudicate and rule over all disputes arising between the Buyer and Seller out of or in connection with the Contract is the **general court of the Buyer**.

4. The Contract may only be changed or amended by written amendments consecutively numbered in an ascending order, explicitly declared as amendments hereto and signed by authorised signatories of the Parties.

5. This Contract shall come into force and effect upon signature by both Parties.

6. The Parties declare that this Contract has been executed as their free act and deed and in witness whereof they affix their signatures.

7. The following annexes form an integral part hereto:

#### Annex No. 1 – Product proposal

8. This Contract has been executed in two counterparts and each of the Parties shall receive one of them ..

Done at .....on *April 15th, 2013*

Done at *12:15* on *April 4th, 2013*

for the Buyer  
**Centrum výzkumu globální změny AV ČR, v. v. i.**  
Prof. RNDr. Ing. Michal V. Marek, DrSc.

for the Seller  
**Picarro**  
Rob Peters, Sales Specialist

**Annex No. 1 – Product proposal**

**Attachment I - quote 120419AB01-5 - Czeckglobe - G2301**

Item	Description	Qty	Unit Price	Total
0001	<p>0001 - [Faint description text]</p>			
0002	<p>0002 - [Faint description text]</p>			
0003	<p>0003 - [Faint description text]</p>			

## Product Proposal

Quote # 120419AB01-5

Date: March 27, 2013

Currency USD

Project CO2/CH4 analyzer for ICOS ATC

Customer Vlastimil Hanuš

Company CzechGlobe

Phone: +420 511 192 292

Email: [hanus.v@czechglobe.cz](mailto:hanus.v@czechglobe.cz)

Proposal By: Rob Peters

Validity: April 20th, 2013

Phone: +31629437116

Email: [rpeters@picarro.com](mailto:rpeters@picarro.com)

Model	Description	Qty	Unit List Price in USD	Extended Price in USD
<b>Picarro CO/CO2/H2O analyzer</b>				
<b>G2301</b>	<p><b>CO2, CH4 and H2O Analyzer:</b> Concentration measurements of CO2, CH4 and H2O in air. Highest precision; highest sensitivity; easiest to use.</p> <ul style="list-style-type: none"> <li>- Leverages Picarro's unique Cavity Ring-Down Spectroscopy (CRDS) technology; time-based laser measurement that quantifies spectral features of molecules in an optical cavity.</li> <li>• Cavity has a sample volume less than 35 ml; extremely fast sample turnover rate</li> <li>• Optimal field deployability; cavity is temperature stabilized to within 0.002 °C and pressure stabilized to within 0.003 atm using 24 bit ADC sensors</li> <li>• Wavelength monitor controls the wavelength of the laser to within 2MHz; extremely precise quantification of all required spectral features</li> <li>• Reports dry mol fraction through Picarro's unique water correction algorithms</li> <li>• Guaranteed, tested and certified drift specifications for CO2, CH4, H2O</li> <li>• Digitization speed of ring-down ADC is at least 25 MHz</li> <li>• Capability for 4 separate lasers, potentially providing future extensibility for additional applications</li> <li>• Analyzer is subjected to, and must pass: mil-spec drop test; vibration test on both axes; environmental chamber test</li> <li>• All data recorded in csv compatible format; easy export and post-analysis</li> </ul>	1	55.000,00	55.000,00
<b>A0950</b>	<p><b>Rack Mount Configuration for 2000 Series Analyzers</b> Hardware to enable rack mount installations.</p>	1	550,00	550,00
<b>Installation support</b>				
<b>S2082</b>	<p><b>Technical Jumpstart - Remote</b> This program is designed to assist you with start-up of your system, verify initial results, and check instrument performance. Technical Jumpstart provides above-and-beyond the standard assistance available by contacting Picarro and is ideally suited for those who are new to CRDS or want to deploy even faster and, additionally, would like performance verification of the commissioned instrument in the lab or field setting.</p>	0	1.760,00	Not Included



# PICARRO

The World's Highest Performing  
and Easiest to Use Analyzers

## Product Proposal

**Quote # 120419AB01-5**

Date: March 27, 2013

Currency USD

Project CO2/CH4 analyzer for ICOS ATC

Customer Vlastimil Hanuš

Company CzechGlobe

Phone: +420 511 192 292

Email: [hanus.v@czechglobe.cz](mailto:hanus.v@czechglobe.cz)

Proposal By: Rob Peters

Validity: April 20th, 2013

Phone: +31629437116

Email: [rpeters@picarro.com](mailto:rpeters@picarro.com)

Model	Description	Qty	Unit List Price in USD	Extended Price in USD
	Miscellaneous			
	<p><b>Collaborator Credit.</b> Credit provided for future efforts and collaboration in the areas of joint publication, website testimonials, field data analysis/usage, poster/presentations, product enhancements and/or customer visits to University/Institute labs.</p> <p><i>Collaborator credit available for instruments purchased in the framework of ICOS network</i></p> <p><i>This program is only available during key production planning times and for selected customers. While the credit is designed to help defray the full cost of the system, it is only available at predetermined manufacturing dates.</i></p> <p><b>Available ONLY until 20st of April 2013</b></p>	1	-6.000,00	-6.000,00
A0901	19" screen	1	325,00	325,00
DAP	<p><b>Shipping charges (Incoterms DAP)</b></p> <p>Shipping costs includes packing, shipping and insurance to customer site</p>	1	880,00	880,00
<b>Total price in USD :</b>				<b>50.755,00</b>

### Terms & Conditions

**Lead time:** To be negotiated with respect to project planning, typically 6-8 weeks

**Delivery terms:** EXW - Santa Clara - Unless Shipping DAP selected as an option

**Warranty:** 12 months as described in terms and conditions

**Payment :** Net 30 days after reception of invoice (Invoice sent by pdf/fax when instrument is shipped)

**Prices:** Prices are in USD and do include import taxes

**Please see attached sheets for detailed Product Specifications and Terms and Conditions.**

Thank you very much for choosing PICARRO products.

Yours sincerely,

PICARRO Inc  
Rob Peters



# CRDS Analyzer CO<sub>2</sub> CH<sub>4</sub> H<sub>2</sub>O Measurements in Air Model G2301

# PICARRO

World's Leading Instruments for  
Carbon and Water Cycle Measurement

The world's highest precision analyzer for the top three  
greenhouse gases

- Global #1 in precision and accuracy, and portability
- The lowest guaranteed drift of any instrument
- Unique water correction feature automatically reports dry mol fraction
- Innovative software featuring intuitive user interface & customization tools
- World class customer service and technical support

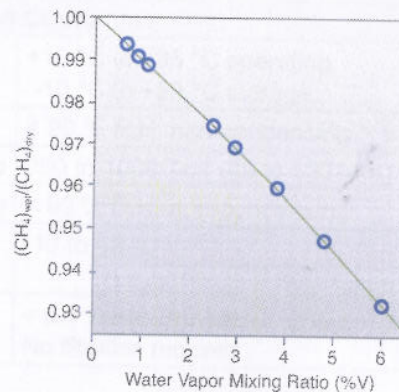
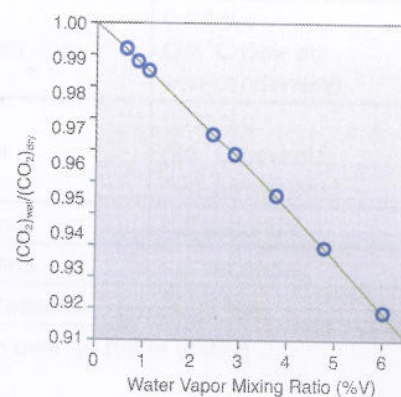


**Advantage Note:** Our patented Cavity Ring-Down Spectroscopy (CRDS) technology is capable of measuring the three primary greenhouse gases, CO<sub>2</sub>, CH<sub>4</sub> and water, down to parts-per-billion (ppb) sensitivity with negligible long-term drift (months). In order to ensure measurement fidelity even over years of operation in the harshest environments, Picarro incorporates amazingly precise temperature and pressure control along with careful material selection and meticulous mechanical design. Scientists from the Ascension Islands to the oil spill zone in the Gulf of Mexico have reported the highest quality data, day in and day out, with fewer calibrations than other spectral absorption-based instruments.

**Picarro's Patented CRDS Technology:** The heart of the Picarro is a sophisticated time-based measurement that uses a laser to quantify spectral features of gas phase molecules in an optical cavity. Picarro's unique design enables an effective measurement path length of up to 20 kilometers in a compact cavity, which results in exceptional precision and sensitivity in a small footprint. Picarro uses a patented, high-precision wavelength monitor to maintain absolute spectral position, which combats the drift inherent in all lasers and ensures accurate peak quantification.

**Guaranteed Performance:** In order to ensure every analyzer meets our exacting performance standards in the lab and in the field, Picarro instruments undergo thorough precision and drift testing along with a rigorous set of thermal, shock & vibration tests.

Picarro Environmental, Shock and Vibration Testing (Performed on Every Analyzer)	
Thermal Ramp Testing (whole instrument):	> 12 hours operational temperature step testing from 5° to 40 °C with 40 minute soak at each 5 °C increment. Performance specs verified throughout the testing range.
Long-Term Thermal Testing (whole instrument)	One week operational temperature step testing from 30° to 40 °C with 40 minute soak at each 5 °C increment. Performance specs verified throughout the testing range.
Storage Testing (whole instrument)	-10 °C & 50 °C soak (non-oper) + post test performance confirm
Vibration Testing	2 axis, 25 Hz, 1gp-p acceleration, 15 minutes on each axis
Shock Testing Using MIL-STD 810F	Pivoted edge drops onto a hard surface (lab bench), from 4" height, all 12 edges (x,y,z axes), 2 drops each edge
Power Interruption Testing	Minimum 5 successful AC power cycle startups



Mixing ratios for carbon dioxide and methane are only meaningful when extrapolated back to dry-gas conditions. Picarro's G2301 analyzer enables you to measure dry-gas mixing ratios for carbon dioxide and methane directly in the wet gas stream. Only Picarro includes automated water vapor corrections which have been independently validated by top labs: NOAA, MPI, LSCE.

**Figure 1.** On the top, Quadratic fit of CO<sub>2</sub>wet/CO<sub>2</sub>dry mixing ratios and on the bottom, quadratic fit of CH<sub>4</sub>wet/CH<sub>4</sub>dry vs. H<sub>2</sub>O mixing ratios.



**Easy Data Management & Instrument Control:** The Picarro is customizable to deliver data in the format best suited to the application. Data is stored locally on the analyzer's hard drive, but can also be streamed in real time either via RS-232, or as analog output. Users can also choose to rout data via an Ethernet connection in real time or at user-defined intervals. Using standard Remote Desktop connection, users can remotely check and control the analyzer's internal, Windows-based PC.

# PICARRO

World's Leading Instruments for  
Carbon and Water Cycle Measurement

Guaranteed Performance Specifications, in air	CO <sub>2</sub>	CH <sub>4</sub>	H <sub>2</sub> O
<b>Precision (1-σ of: Raw 5 sec / 5 min avg data)</b> <i>Guaranteed over operating conditions specified below</i>	< 70 ppb / 25 ppb	< 0.5 ppb / 0.22 ppb	< 80 ppm / 30 ppm
<b>Max Drift at STP (over 24 hrs / 1 month)</b> <i>*(peak-to-peak, 50-minute average)</i> <i>Guaranteed over operating conditions specified below</i>	< 120 ppb / 500 ppb	< 1 ppb / 3 ppb	< 100 ppm ± 0.5% of reading
<b>Automated Determination of Dry Mol Fraction</b>	Included	Included	n/a
<b>Operating Range</b>	0 - 1000 ppm	0 - 20 ppm	0 - 7 %v (39 °C dew pt) non-condensing
<b>Guaranteed Specifications Range</b>	300 - 700 ppm	1 - 3 ppm	0 - 3 %v (25 °C dew pt) non-condensing
<b>Measurement Interval (Data Rate)</b>	< 5 seconds	< 5 seconds	< 5 seconds
<b>Gas Response: Rise/Fall time (10-90 % / 90-10 %)</b>	< 3 seconds	< 3 seconds	< 3 seconds
<b>Measurement Cell Control</b>	Temperature: +/- 0.005 °C & Pressure: +/- 0.0002 atm		

\* Picarro calculates drift by subtracting the min from the max of 50 min averages taken over 30 hrs of testing

Available Advanced Service and Monitoring		Guaranteed Operating Conditions	
<b>Technical Jumpstart</b>	Customized Start-up Assistance designed to get you and your staff and colleagues up and running as fast as possible	<b>Ambient Temperature Range</b>	+10 °C to +35 °C operating -10 °C to +50 °C storage
<b>Instrument Performance Verification (IPV)</b>	Confirm the validity of measured data via continuous and autonomous monitoring of multiple on-board sensors, automatic alerts, reporting and email notifications	<b>Ambient Humidity</b>	< 99 % R.H. non-condensing
<b>Performance Package (IPP)</b>	Service bundle of IPV subscription plus an extended 24-month factory warranty and 24-month supply of spares	<b>Sample Gas Pressure</b>	300 to 1000 Torr (40 to 133 kPa)
		<b>Sample Gas Humidity</b>	< 99 % R.H. non-condensing
		<b>Sample Gas Temperature</b>	-10 to 45 °C
		<b>Sample Gas Flow Rate Req.</b>	< 0.4 slm at 760 Torr No filtration required

**Included Accessories:** External vac pump, vac line & fittings, keyboard, mouse, LCD monitor, internal 160 GB hard drive

**Installation:** Bench-top (standard) or 19" rack mount (optional)

**Data Outputs:** RS-232, Ethernet, USB, Analog (optional) 0-10 V

**Optional Accessories:** Integrates seamlessly with Picarro's 16-Port Distribution Manifold to simplify multi-point sampling

System Specifications	
<b>Dimensions</b>	Analyzer: 17" w x 7" h x 17.5" d (43.2 x 17.9 x 44.5 cm) not inc. 0.5" feet, External pump: 7.5" w x 4" h x 11" d (19 x 10.2 x 28 cm)
<b>Weight</b>	56 lbs (25.4 kg), including external pump
<b>Power Requirements</b>	100 - 240 VAC, 47 - 63 Hz (auto-sensing), < 260 W total at start-up 110 W (analyzer) + 35 W (pump) at steady state
<b>Gas Inlet Fittings</b>	¼" Swagelok ®